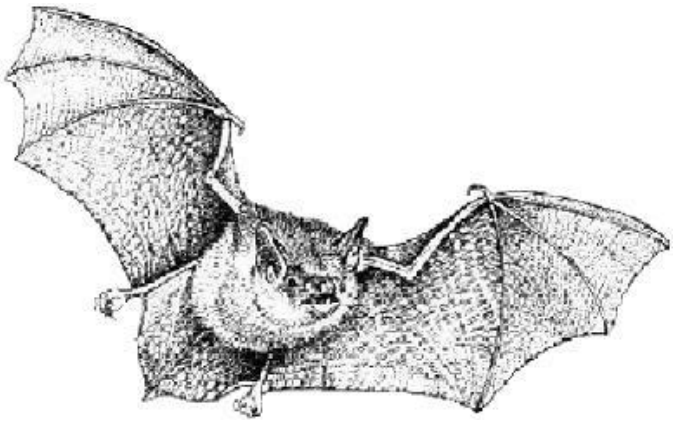
1 Parsonage Avenue,
Ribchester,
Preston
Lancashire
PR3 3ZH

Preliminary Survey & Assessment
in Respect of Bat Species and Nesting Birds.

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

2nd June 2022

1. Introduction.

1.1 Reason for Survey.

As part of the process to obtain planning permission to develop the site, a preliminary daytime evidence and opportunity bat survey, a separate evening bat emergence survey, and a nesting bird survey were requested, on the targeted dwelling, any outbuildings, 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 assess the site for the presence, or potential of protected species, within the proposed development site.
- To identify any ecological constraints, on future development.
- To provide clear advice to the client, and the Local Planning Authority, on the nature conservation value of the site, and surrounding area.
- 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 establish the need for any further surveys and assessments.
- To make nature conservation recommendations.

1.3 The Site.

The site was positioned along the eastern edge of Parsonage Avenue, in the Ribchester area of Preston in Lancashire, and consisted of an end-terraced dwelling and its extensions, and also several detached outbuildings, all of which were positioned within a large area of surrounding land, which from now on is referred to as the “site”, at OS grid reference: SD 64889 35233, (refer to **Fig 1** - **The Site Location**).

1.4 The Buildings.

The targeted building was an dwelling, with attached kitchen extension and conservatory, and three separate detached storage sheds all positioned within a sizable area of land.

1.5 Surrounding Land.

The dwelling was an end-terrace building with gardens to both the north and south aspects, and a long drive immediately to the east of it. There were similar buildings to the south-west along Parsonage Lane, most with their own gardens containing lines of hedgerow and a few shrubs.

There were numerous extensive areas of open pasture bordered by lines of hedgerow to both the north-west, west and south of the site, and with a few farms scattered amongst them.

The main part of Ribchester stretched away to the north and the north-east from the site, and contained within it were a mixture of dwellings, industrial buildings, and shops, and with further areas of hedge-bordered pasture further north.

There was a large public car park lying immediately to the south-east of the site’s southern boundary, with the Ribchester Tennis Club and Playing Fields lying in a north-east to south-west

orientation just beyond the car park. Whilst further to the south-east in the same orientation was St Wilfred's Church and its grounds, and also the area containing Ribchester's Roman Museum and the remains of some Roman ruins, positioned amongst a shelterbelt of mature trees and shrubs lying approximately 0.23 km away to the south-east of the site.

River Ribble flowed from the south-east in a northerly loop, before flowing away in a south-westerly direction, and which was approximately 0.26km away from the site at its nearest point. There were also several brooks in the area, the nearest was Boyce's Brook which meandered from the north-west approximately 0.25km to the north of the site, and Duddel Brook flowing from the north-east in a south-westerly direction, and this lay approximately 0.23km from the site at its nearest point.

However, other than a few isolated small ponds in the surrounding area, and the above-mentioned habitats, there were no large areas of woodland, or large bodies of water, in the nearby vacinity, (refer to **Fig 1 -The Site Location, Fig 2** – **Google Map of Area, Fig 3 – Main Plan Showing the Local Area and Habitats, Fig 4 - Plan of Photographs,** and **Fig 5 - Plan Showing Results of Preliminary Evidence and Opportunity Survey and Evening Bat Emergence Survey**).

2. Methods

2.1 Risk Assessment, Possible Hazards.

The required access to the site was easy, but as the dwelling was an end terrace, only 3 external elevations could be surveyed and these could be searched with ease, as could the 3 sheds positioned within the overall site. All buildings within the dwelling complex were in excellent condition, and the gardens were well maintained without obstacles, and as such there were no more hazards, other than those normally associated with surveying both the inside and outside of this type of building and gardens.

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.
- Presence/absence of roost potential.
- Value of roost potential – if present.
- Condition of nearby trees, shrubs, and any water bodies

2.3 Daylight Evidence and Opportunity Survey.

The preliminary daylight evidence and opportunity survey took place on 24th May 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 currently nesting birds, active nests and feathers**.**

Areas within the targeted building searched were:

- Inside the dwelling, conservatory, and the sheds, on the floors and roof trusses of any roof voids, door lintels, window ledges, or on items stored in the voids, and inside chimneys where possible, also in spider's webs and other places where droppings or prey remains may collect.

likewise noting any noises such as scratching and squeaking which may be made by roosting bats.

- Outside the dwelling and sheds, the eaves, gables, soffits, and walls for signs of potential bat access holes, also, the ground, windowsills, and any other surfaces, such as low roofs, vehicles, refuse bins, or pieces of equipment and garden furniture, which may occur underneath the eaves, and around the perimeter of the building, any of which may catch bat droppings.

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. However, preliminary 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.

All evidence of current or previous nesting bird species observed during the survey, was recorded.

2.4 Equipment.

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

2.5 Evening Bat Emergence Survey

An evening bat emergence survey was carried out to further assess the site, by observing how bats utilise the site, and observe if any bats emerged from possible roosts within any part of the dwelling, its extension, conservatory and the detached sheds, or from any nearby trees, shrubs, or from the hedgerow growing around the site. This survey also took place on 24th May 2022.

2.6 Equipment

The equipment used during the survey, consisted of close-focus binoculars, powerful hand-held torches, an Echo Meter Touch 2 real-time expansion detector for Android, a Bat Box 3D heterodyne bat detector, and a magenta heterodyne bat detector, both with earphones.

3. Results

3.1 Daylight Survey.

3.1.1 Weather.

Although there had been a small amount of rain earlier in the day, weather conditions at the start of the survey on 24th May 2022 were good. There was a small amount of cloud cover, and a light breeze, (Beaufort Scale 2). However, as the temperature taken at the start of the survey was 13°C, such conditions were acceptable for a survey of this type.

3.2 Possible Roost Sites.

3.2.1 The Buildings.

The targeted dwelling was an end-terrace building, with attached kitchen extension and conservatory, and there were 3 detached storage sheds, also within the site.

The Dwelling.

The dwelling was an end-terrace, running in a north-east to south-west orientation, and was a two story building, constructed from brick with a pitched roof covered in under-boarded concrete tiles, and with a fully insulated roof void, (refer to **figs 3, 4** and **5,** and **photos 1** to **5, 16** to **18** and **21).**

There was an entrance porch positioned centrally within the northern elevation, and this was a horizontal piece of concrete supported by timber brackets, with no potential bat access points, (refer to **figs 3, 4** and **5,** and **photos 1** and **2).**

Attached both externally and internally to the eastern elevation, was a single storied, rectangular kitchen extension, built from similar bricks to the main dwelling and with a flat roof covered in roofing felt and with no roof void, (refer to **figs 3, 4** and **5,** and **photos 12** to **16,** and **18).**

Positioned centrally, and attached both externally and internally to the southern elevation of the dwelling, was a single storied conservatory. The lower walls were constructed from brick, with upper walls consisting of a UPVC frame and glass windows, and with a simple hip, pitched roof, again of plastic and glass, but with no roof void, (refer to **figs 3, 4** and **5,** and **photos 16, 18** to **20).**

All parts of the dwelling, the extension and its conservatory, were all in excellent condition, being well-maintained, with well-sealed walls, windows, doors, gables, soffits and roof, and offered negligible opportunities for roosting, and therefore all were judged to be of low bat roost suitability.

There were limited potential bat access points however, and these were:

- There was a central heating ventilation pipe positioned high up in the eastern elevation, which was thought to have some bat roosting potential, but close inspection using close-focus found it to be internally meshed, and therefore the pipe was deemed to offer negligible bat roosting potential, (refer to **figs 3, 4** and **5,** and **photo 5**).

- At the south-western corner of the kitchen extension at its junction with the conservatory, there was an open vertical drain pipe, however an inspection of this found the pipe to be open both at its base and at its top, and therefore was judged to offer no bat roosting potential, (refer to **figs 3, 4** and **5,** and **photo 14**).

- An inspection of the chimney positioned centrally on the roof, found a strip of flashing at the base of the chimney stack to have lifted, resulting in a gap large enough for bats to potentially use. However, a close inspection of the gap using close-focus binoculars, and also a visible search of the roof beneath the gap, found neither bat droppings, invertebrate prey remains, urine staining, nor any fur staining from continual passage between the sides of the gap, nor were any bats themselves found, and therefore the gap was deemed to offer low bat suitability, (refer to **figs 3, 4** and **5,** and **photo 17**).

The Sheds.

There were three sheds positioned at various locations around the site, and the first was placed close to the north-eastern corner of the dwelling. This was a rectangular storage shed, with plastic walls and plastic roof, (refer to **figs 3, 4** and **5,** and **photos 6** to **8).**

The second shed was located at the south-eastern corner of the complex and it was a rectangular building used for storage, and was constructed from timber with a pitched roof of timber planking covered in felt. but with no roof void, (refer to **figs 3, 4** and **5,** and **photos 9** to **11).**

Placed at the south-western corner of the overall site was the third shed. This was also rectangular and made from plastic planking, and with a pitched roof covered in plastic sheeting but with no roof void, (refer to **figs 3, 4** and **5,** and **photos 22** to **24).**

Although all three of the sheds were structurally sound and in good condition, with negligible bat access potential, they were all only used for storage, and were all unheated, uninsulated, and would be draughty and cold throughout most of the year, and therefore the sheds was all deemed unsuitable for either feeding bats, daytime roosting bats, or breeding bats. It was also concluded that the sheds would all be damp and cold when penetrated by inclement weather or by frost in winter, thus making them also unsuitable for hibernating bats.

No evidence of either current or historical roosting bats, either internally or externally was detected in, on, or around, any part of the dwelling, its extension, its conservatory, or in the three sheds.

The search also found no evidence to suggest that any part the building complex, nor anywhere within the overall site, had been used historically by nesting or roosting birds. It was also surmised that due to the time of year, most birds will have already set up territories for the 2022 breeding season, and some species will have already started to breed, but not within any part of the site, (Refer to **Appendix 1**).

3.3.2 Trees and Shrubs.

There were a few shrubs growing within the southern garden, and lines of hedgerow growing along both the western and northern site boundaries. There were also some hedgerows and small shrubs in neighbouring gardens, and where possible these were inspected, but none were found to have any lifted bark, cracks or holes suitable for roosting bats, and as such were judged to be Category 3 (of negligible value for roosting bats) in accordance with **Appendix 2.**

It was thought likely that some of the trees and hedgerows 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, no active nests were found amongst the vegetation, but it was also surmised that due to the time of year, most birds will already be breeding.

3.2.4 Foraging Potential and Alternative Bat Roost Potential.

The site is in a suburban area, and contained the targeted dwelling, the conservatory, and the adjacent sheds, together with its gardens bordered by a mixture of hedgerow and fencing, all positioned amongst other properties within the terraced blocks, most with their own gardens containing a few small shrubs and also bordered by a mixture of fencing and hedgerows. Whilst beyond these to the north-west, west, and south of the site, there were large areas of open pasture bordered by lines of hedgerow, and with a few farms scattered amongst them.

The main part of Ribchester lay to both the north and the north-east and contained within it were a mixture of dwellings, industrial buildings, and shops, and with further areas of hedge-bordered pasture further north. Whilst immediately to the south of the site, there was a large public car park and with the Ribchester Tennis Club and Playing Fields lying just beyond this, and also further to the south-east was St Wilfred's Church and its grounds, and the Roman remains close to Ribchester's Roman Museum, positioned amongst a shelterbelt of mature trees and shrubs.

River Ribble flowed in a loop not far away to the south-east of the site, plus, there were also several brooks in the area, and a few isolated small ponds in the surrounding area, and all these water features, together with the surrounding gardens and the areas of open pasture, were all beneficial to insect species, and the nearby buildings themselves, 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, (paragraph 1.5).

However, as there were no large areas of woodland, or other bodies of open water in the nearby vicinity, the nearby area overall, was assessed to offer only 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.

3.3 The Evening Bat Emergence Survey.

An evening bat emergence survey was carried out in order to further assess the site, and observe if any bats emerged from roosts within the various parts of the complex, or from any vegetation nearby. This survey also took place on 24th May 2022.

3.3.1 Weather

The weather conditions at the start of the survey on the 24th May 2022 were reasonable. There was some cloud cover and a light breeze, (Beaufort Scale 2), and the temperature at the start of the survey was 12°C, and such conditions were suitable for a survey of this type.

3.3.2 The Survey

The sunset on the 24th May 2022 was 21.19 hrs, and the survey started 16 minutes before the sunset at 21.03 hrs, and ended when it was too dark to observe the bats well.

The first two bats recorded were both common pipistrelle, (*Pipistrellus pipistrellus),* and both were heard but not seen. The first was at 21.25 hrs, over the trees along the southern edge of the car parking area to the south of the site, whilst at 21.31 hrs the second bat was recorded, also to the south-west of the previous bat, but still amongst the trees. As some feeding buzzes were heard it was thought that these were two sitings of the same bat, (refer to **pink arrows 1** and **2** on **fig 5**).

At 21.34 hrs a single pipistrelle was observed commuting from the north-west of the site before flying away in an easterly direction, (refer to **pink arrow 3** on **fig 5).**

Beginning at 21.44 hrs, a pipistrelle began to forage in a loop over Parsonage Lane and the neighbouring gardens, to the south-west of the site, and this behaviour continued until the survey ended, and during which time numerous feeding buzzes were heard, (refer to **pink arrow 4** on **fig 5).**

No other bat activity was observed around the site, and at no time were bats seen to have emerged from any part of the dwelling, its extension, conservatory, the sheds, nor from any of the nearby foliage

During the survey, although a few birds were observed around the site, but none were seen showing any roosting or nesting behaviour, and therefore it was concluded, that neither the dwelling or the hedgerows growing within the site, were currently being used by nesting birds.

4. Conclusions.

4.1 In summary, during the current surveys (24th May 2022), neither current, nor historic evidence of roosting bats was found in any part of the dwelling, the sheds, or elsewhere within the targeted site.

4.2 The all parts of the dwelling were occupied, heated, fully-insulated, and in an excellent overall condition, being well maintained, with well-sealed windows, doors, roofs, soffits and gables, resulting in an overall low bat roost suitability, (Refer to **Appendix 2**).

4.3 All three sheds were only being used for storage, and as such they were unheated and uninsulated, and would be draughty and cold throughout most of the year, and therefore they were deemed unsuitable for either daytime roosting bats, or breeding bats. It was also concluded that as frost and bad weather was likely to penetrate the shed interiors, that none of them offered the

optimum humidity and stable low temperatures that are required for hibernating bats. It was concluded therefore that all three sheds were deemed to offer extremely low bat roosting suitability, (refer to **Appendix 2**).

4.4 None of the hedgerows growing around the northern site boundaries, offered any cracks, lifted bark, or holes that could be used by roosting bats of any species, and therefore, they were all concluded to offer low bat roost suitability, (refer to **Appendix 3**).

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 is concluded that since there is currently no evidence of the presence of bat roosts within any part of the site, that any proposed modifications to the dwelling, 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.

4.6 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 24th May 2022, then a single visit to the site to carry out a daylight evidence and opportunity bat survey, and an evening bat emergence survey, were considered sufficient for a preliminary assessment of 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 Since bats, particularly Pipistrelles, are opportunistic, an absence of roost evidence 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.

4.7 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 hedgerows around the site will be unaffected by the work, 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 affect the overall foraging or commuting potential for bats in the area.

4.10 All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) while they are breeding. There was potential for the hedgerows around the sites' perimeter, to be used by birds for both roosting and nesting purposes, but neither active nor historic nests were found during the surveys. It was also surmised that due to the time of year, most birds will have already set up territories for the 2022 breeding season, and some species may have already started to breed, (Refer to **Appendix 1**).

5. Recommendations.

5.1 The proposed changes to the dwelling, as laid out in the planning application, can commence with minimal risk to roosting bats or nesting birds.

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 dwelling, (not considered suitable for hibernation), especially its roof, 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, as is likely that the building will be worked on at other times, it will be very unlikely that roosting bats will be disturbed, but it is recommended that work starts as soon as possible after this survey, and that any ridge tiles, slates or sheeting over walls and gables, be carefully removed by hand, (the ridge and edge tiles, and copingstones, are the features most likely to harbour potential for the support of roosting bats).

5.4 Although the dwelling has negligible bat roosting potential, it is recommended that if the building work is delayed until the summer, or later in the year, then further surveys may be required, including a suitable number of evening bat emergence surveys and a possible dawn re-entry survey.

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 hedgerows around the northern garden perimeter, it is recommended that where possible, these are to be left untouched, to encourage future bird nesting, and to maintain navigation, foraging and commuting routes for bats.

5.7 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. These can be attached to the dwelling after completion of the planned works, as well as to any surrounding suitable trees at a minimum height of 4m off the ground. Also, it is recommended that these measures are implemented to maximise the opportunities for wildlife at the site, (refer to **Appendix 6** for details).

5.8 However, it must be remembered, 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, is carried out within a 4m 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.

5.9 It is also recommended that some wooden nest boxes are erected around amongst the shrubbery around the site. 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 bird species, (refer to **Appendix 7** for details).

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 It is also recommended that, if any piles of building materials around the site perimeter, or anywhere within the site itself are removed, or disturbed during building works, then this ideally should be undertaken outside the hedgehog hibernating months, November to mid-March. If this is not possible however, a suitably experienced ecologist must be present to oversee all removal, to

ensure that no hedgehogs are disturbed or harmed, whilst either hibernating or daytime nesting, (Hedgehogs are a UK BAP Priority species).

5.13 Once all building work has been finally completed within the site, then a complete careful search needs to be carried out amongst any remaining piles of building equipment or materials, to ensure that neither nesting birds or hedgehogs, are disturbed or hurt. Once this has been carried out successfully, only then can the removal of all materials from the site be carried out.

5.14 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.

5.15 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.

5.16 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.

5.17 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. References

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7. 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)

He was assisted on the survey by Dylan Platt who is experienced in the use of heterodyne bat detectors and bat surveys.

8. Plans & Photographs

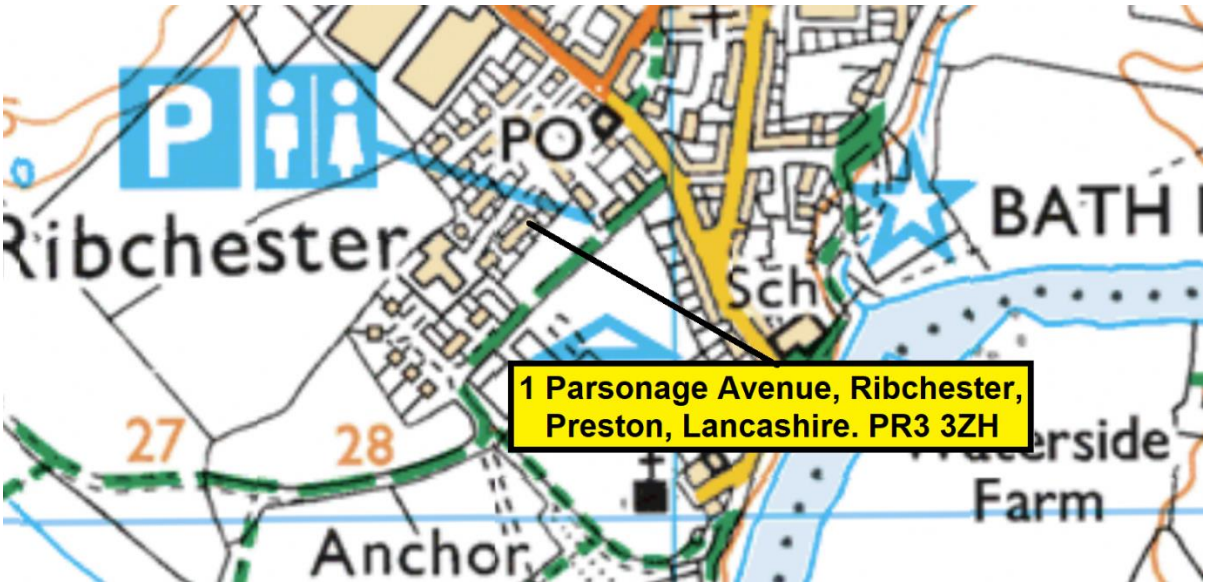


Fig 1 - The Site Location

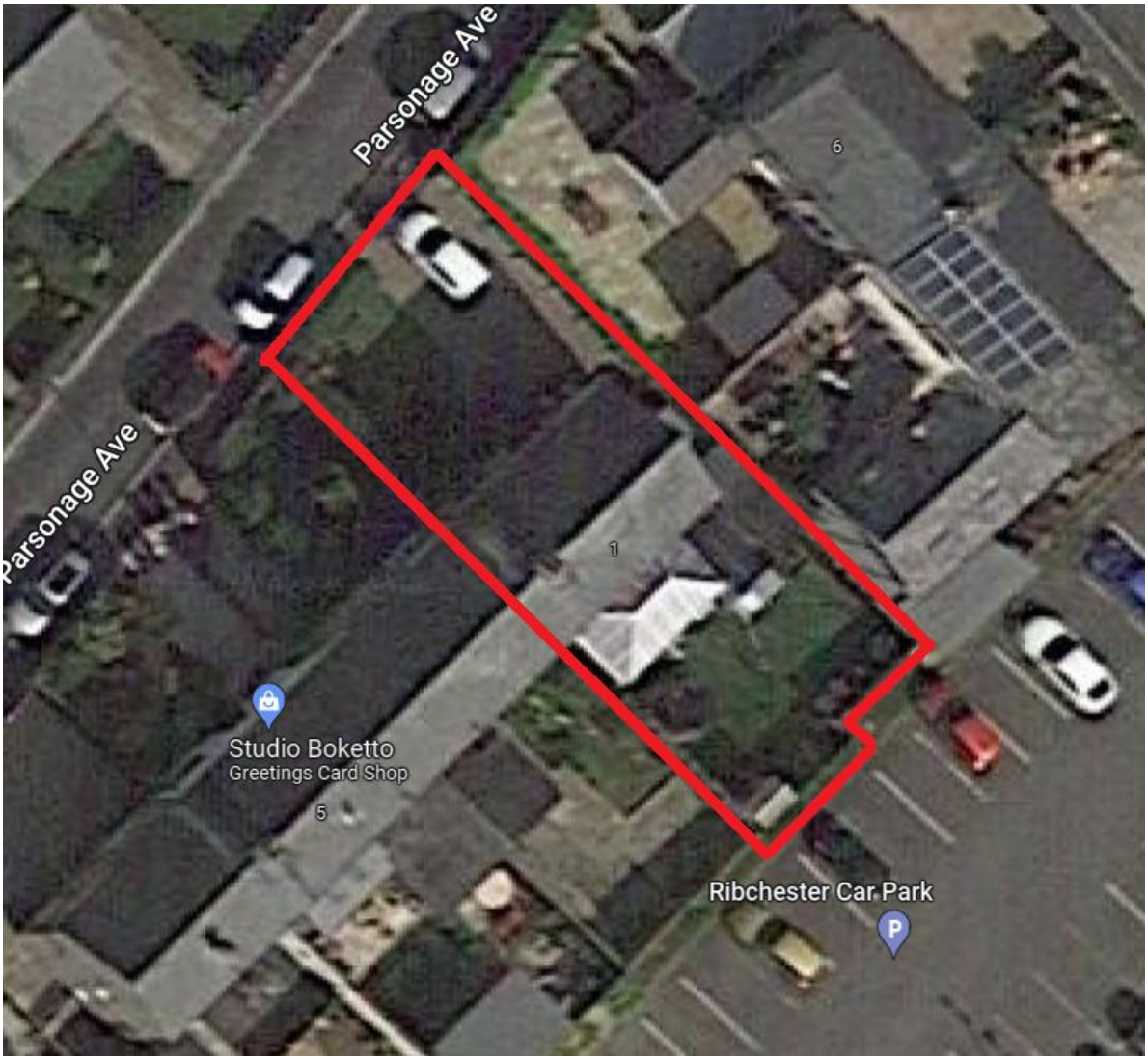


Fig 2 – Google Plan

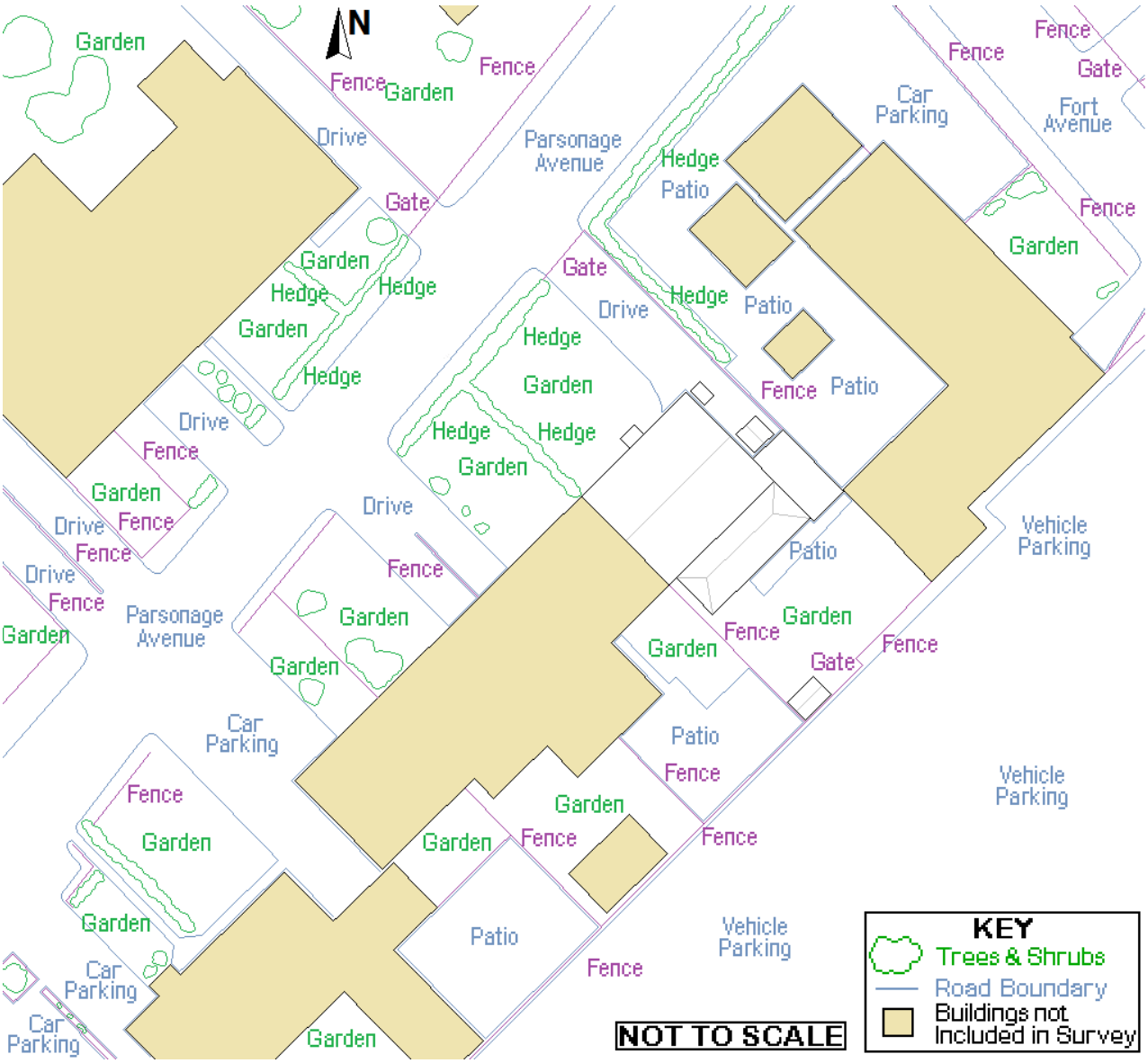


Fig 3 – Main Plan
Showing the local area and habitats

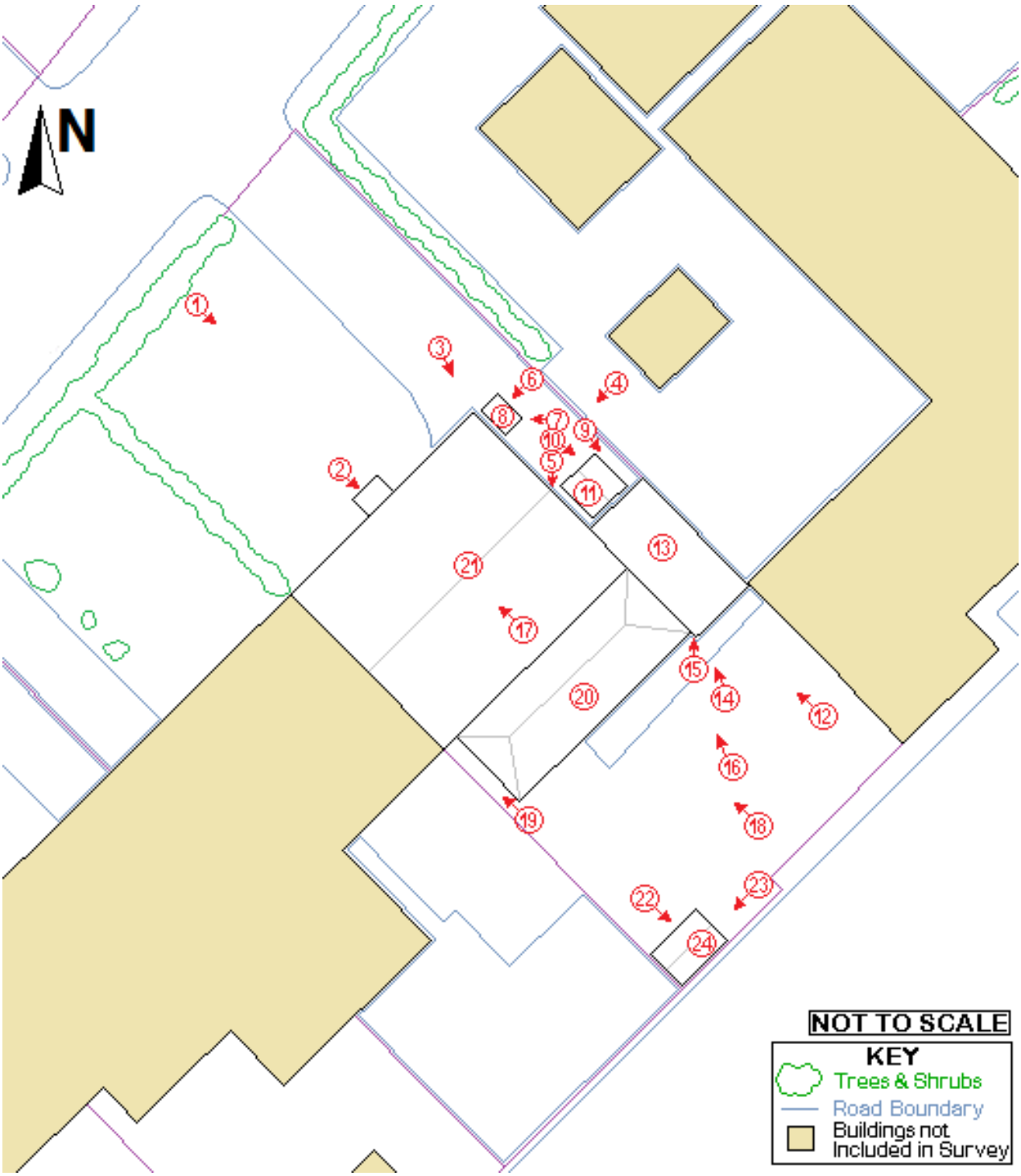


Fig 4 - Plan of Photographs.

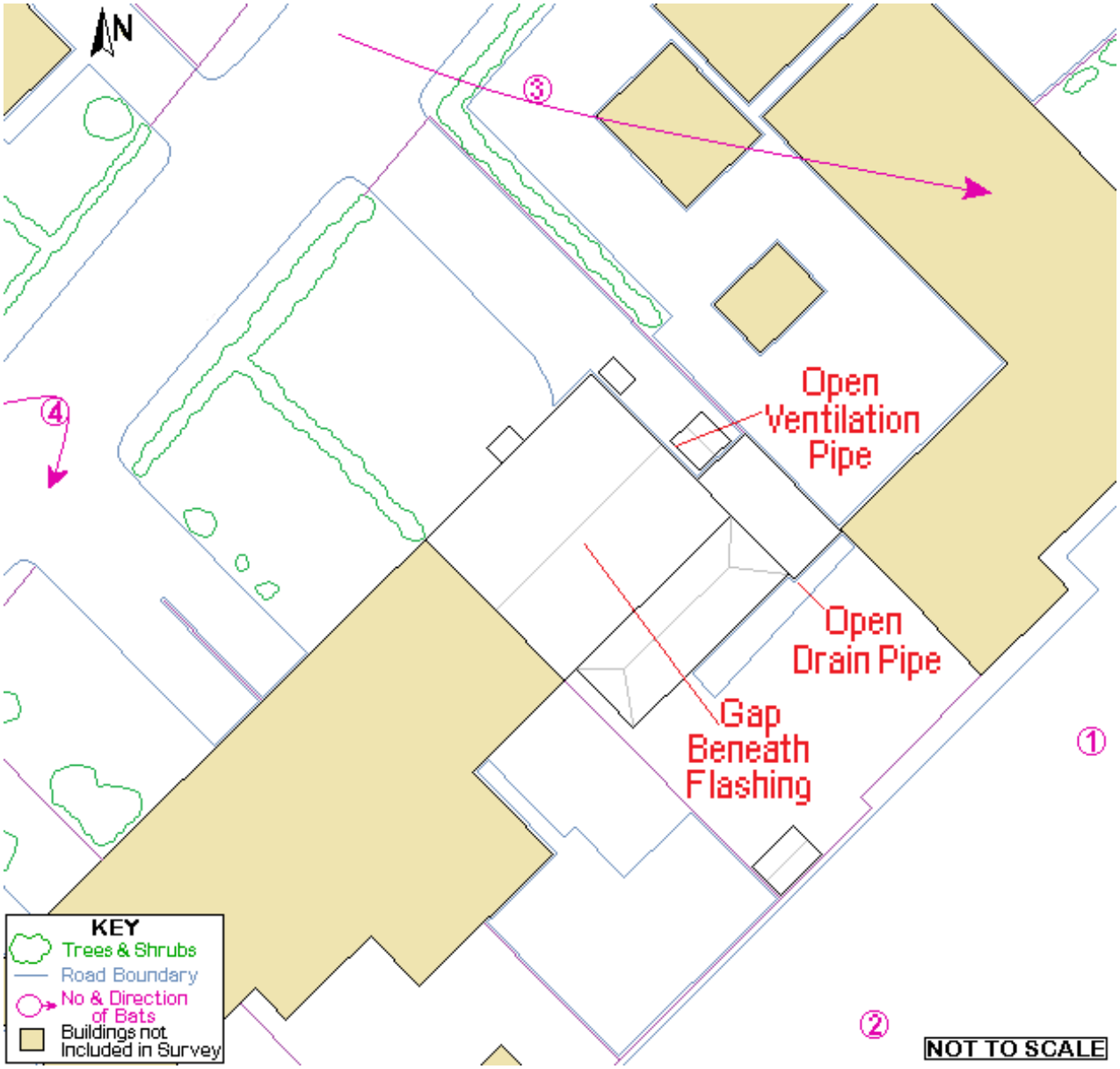


Fig 5 – Plan Showing Results of Preliminary Evidence and Opportunity Survey and Evening Bat Emergence Survey.

PHOTO 1
Northern Elevation of Dwelling

PHOTO 2
Underside of Front Porch

PHOTO 3
North-eastern Corner of Dwelling

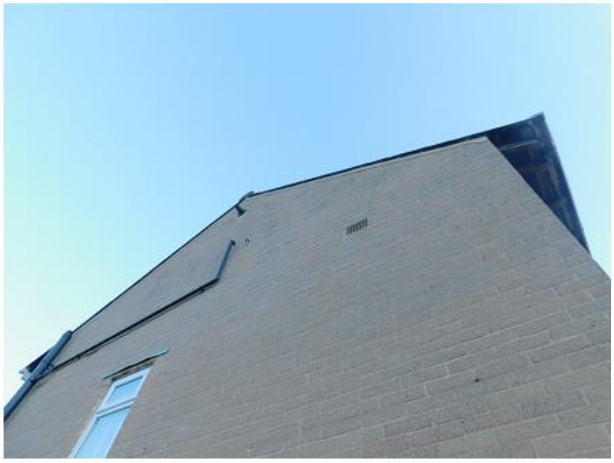


PHOTO 4
Eastern Elevation of Dwelling

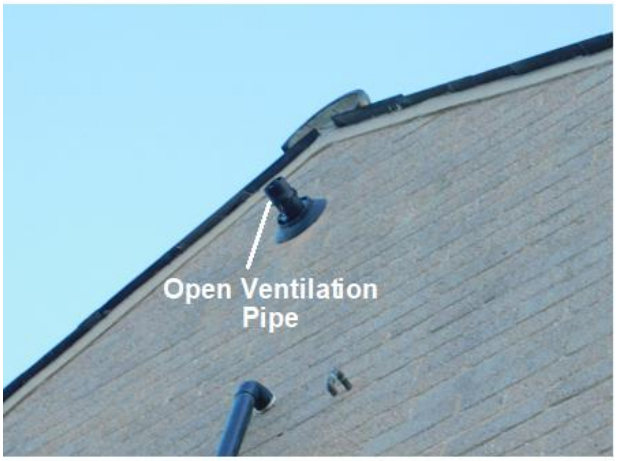


PHOTO 5
View of Ventilation Pipe

PHOTO 6
Eastern Elevation of Plastic Shed

PHOTO 7
South-eastern Corner of Plastic Shed

PHOTO 8
Inside of Plastic Shed

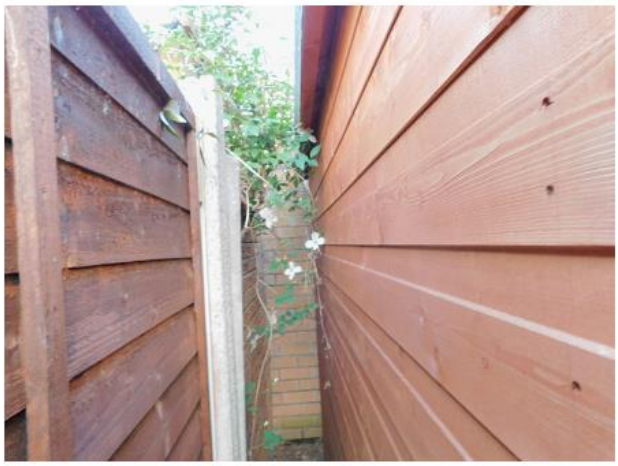


PHOTO 9
Eastern Elevation of Wooden Shed

PHOTO 10
Northern Elevation of Wooden Shed

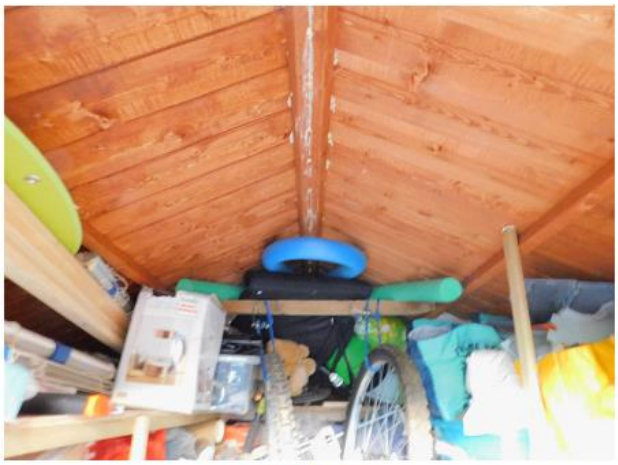


PHOTO 11
Underside of Wooden Shed Roof

PHOTO 12
Southern Elevation of Kitchen Extension

PHOTO 13
Underside of Kitchen Extension Roof

PHOTO 14
South-western Corner of Kitchen Extension

PHOTO 15
Underside of Drain Pipe

PHOTO 16
Southern Elevation of Dwelling

PHOTO 17
Southern View of Chimney

PHOTO 18
Southern Elevation of Conservatory

PHOTO 19
Western Elevation of Conservatory

PHOTO 20
Underside of Conservatory Roof

PHOTO 21
Underside of Main Roof

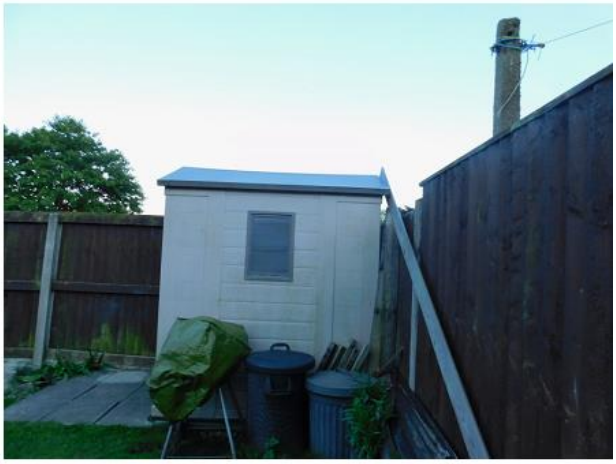


PHOTO 22
Northern Elevation of Garden Shed

PHOTO 23
Eastern Elevation of Garden Shed

PHOTO 24
Underside of Garden Shed Roof

2nd June 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.

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.

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 and Bat Brick.

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 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.

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.

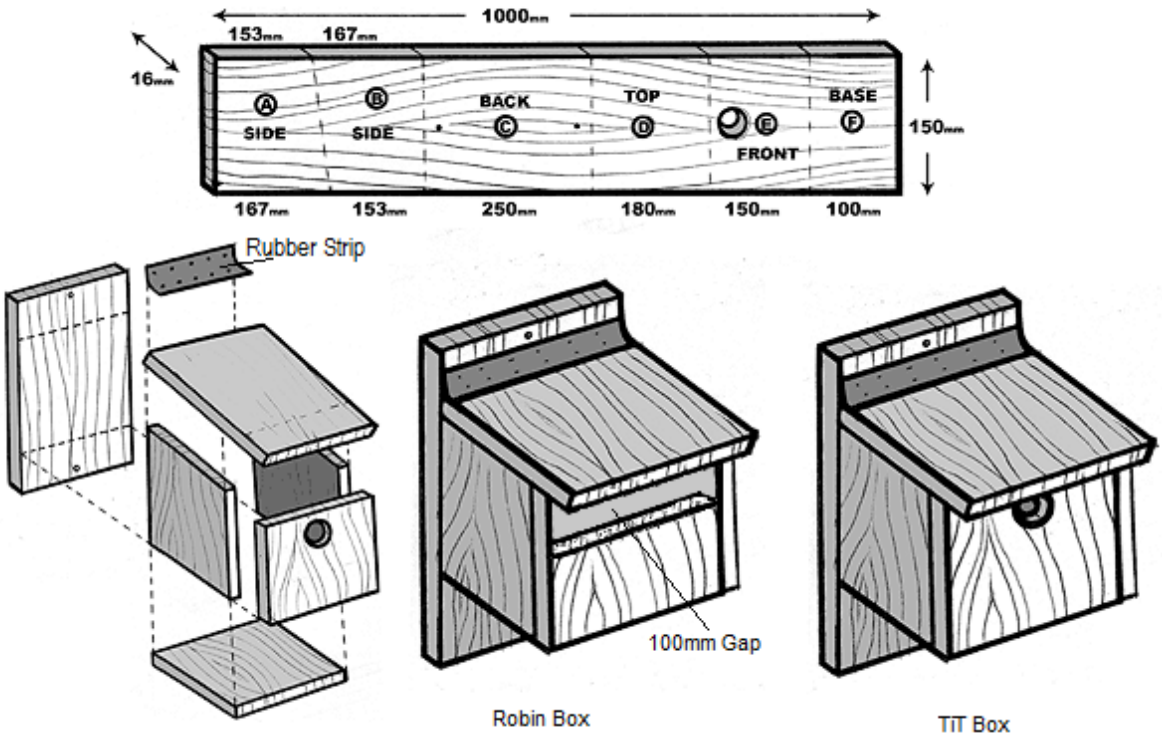
Putting it together

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.


1000mm
153mm
167mm
16mm
A
SIDE
B
SIDE
BACK
C
TOP
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E
FRONT
BASE
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150mm
167mm
153mm
250mm
180mm
150mm
100mm
Rubber Strip
100mm Gap
Robin Box
TIT Box