Tyrer Ecological Consultants Ltd
Specialist in Protected Species

Bringing Together Over 20 Years of
Ecological Excellence

Tyrer Ecological Consultants Ltd, Formby Business Centre, 42 Duke Street, Formby, L37 4AT

Inspection and Assessment in Relation to Bats and Birds

February 2021

10 Bradyll Court,
Brockhall Village,
Old Langho,
BB6 8AS

National Grid Ref: SD70413653

Document Title	Inspection & Assessment in Relation to Bats & Breeding Birds
Prepared for	Ms Susie Cross
Prepared by	Tyrer Ecological Consultants Ltd
Authors	Dr Rosalind King MCIEEM
Surveyor	Dr Rosalind King MCIEEM
Survey Date	10/02/2021
Reviewed by	Mrs Kylee Wilding MIEMA CEnv
Review date	23/02/2021
Approved by	Mrs. Kylee Wilding MIEMA CEnv
Date of Issue	23/02/2021

Terms of use:

This report has been prepared by Tyrer Ecological Consultants Ltd with all reasonable skill, care and diligence within the terms of the instruction and permissions granted by the client. The results, conclusions and recommendations of this report are proportionate and in line with the British Standard 42020:2013.

Tyrer Ecological Consultants Ltd have produced this report with all due integrity and adhere to the CIEEM Professional Code of Conduct, with the aim of upholding these objectives and the reputation of the profession.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client.

This report and contents therein are to be used only in conjunction with the Planning Application for which the report has been produced. It must not be used for any other purpose, copied, re-produced or sent to any other party other than the Local Planning Authority Department without the express permission of Tyrer Ecological Consultants Ltd. Furthermore the data contained herein must not be copied, re-produced or sent to any other party/organisation whatsoever without the express permission of Tyrer Ecological Consultants Ltd.

Tyrer Ecological Consultants Ltd will however consider forwarding data that is collected as part of its reports to the relevant wildlife records centre.

Executive Summary

As part of a proposed planning application in relation to an extension above the garage of 10 Bradyll Court, Brockhall Village, Old Langho, BB6 8AS, Tyrer Ecological Consultants Ltd carried out a daytime inspection and assessment in relation to bats and breeding birds in February 2021. The survey was commissioned by Ms Susie Cross; proposals are understood to involve construction of an extension to the first floor of the dwelling, above the existing garage.

The following key ecological features and associated recommendations have been identified:

Bats: Based on the site-specific assessment, risks of impacts to bats can be considered highly unlikely and the property is duly categorised as offering 'Negligible' bat roost potential in accordance with Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' (2016); no further surveys in the form of dusk/dawn observation are required in relation to bats. *Should any evidence of bats be identified by the attending ecologist, works must cease immediately and a Natural England European Protected Species Mitigation Licence (EPSML) may be required.*

Breeding Birds: The building contains no habitats suitable for use by nesting birds. *As such no restriction of timing of works to avoid harm to nesting birds is required.*

Biodiversity Enhancements: A series of biodiversity enhancement measures are recommended within Appendix II which entail enhancement for bats, nesting birds, invertebrates and hedgehogs together with recommended plants for newly created habitats.

Table of Contents

1.0 Introduction & Reasons for Survey

2.0 Legislation & Policy

3.0 Protected Species in Lancashire

4.0 Survey Methods

5.0 Limitations

6.0 Desk Study Results

7.0 Field Study Results

8.0 Conclusions & Recommendations

9.0 Bibliography

Appendix I: Site Photographs

Appendix II: Biodiversity Enhancement

1.0 Introduction & Reason for Survey

1.1 As part of a proposed planning application in relation to an extension above the garage of 10 Bradyll Court, Brockhall Village, Old Langho, BB6 8AS, Tyrer Ecological Consultants Ltd carried out a daytime inspection and assessment in relation to bats and breeding birds in February 2021. The survey was commissioned by Ms Susie Cross; proposals are understood to involve construction of an extension to the first floor of the dwelling, above the existing garage (Figure 1.1).

Figure 1.1: Existing (top) and proposed (bottom) drawings of 10 Bradyll Court (Provided by the client)

1.2 As part of the Local Authority's Planning Policies ecological surveys are generally required, particularly where a specially protected species is or may be present and could be affected by the proposals for which the application seeks consent.

1.3 The aim of the inspection was to ascertain if the building is of value to bats and breeding birds; if found to be suitable for bats or signs of use was located then more detailed surveys would be recommended i.e. dusk/dawn emergence/re-entry surveys during the main active season of bats which is May – August. If bat/s or their roost/place of rest/shelter is subsequently affected by the work, then a European Protected Species Mitigation Licence (EPSML) would be required to proceed with the development.

1.4 The optimum time to investigate buildings for evidence of a bat roost is May – August, however that is not to say they cannot be inspected and assessed outside of that time and frequently the results can be conclusive, which can save time and expense for planning applicants, but it should be borne in mind that equally the inspection can be inconclusive.

1.5 In addition to bats the site was assessed for its potential to offer nesting provision for breeding birds; if the survey results indicate that such species may be affected by the proposals then recommendations would be made accordingly.

1.6 If additional surveys are required following the initial site visit the report will outline the details of those further requirements.

2.0 Legislation & Policy

2.1 All British bats and their **roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed in Schedule 2 of the Conservation of Habitats and Species (amendment) (EU exit) Regulations (2019). When dealing with cases where a European Protected Species (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the 2017 Regulations and therefore has a statutory duty to have due regard to the provisions of the Regulations in the exercise of its functions.

2.2 Use of buildings by Bats

a) Summer breeding roost.
b) Hibernation.
c) Transitional or temporary roost.

Roost selection is often closely correlated to suitable foraging habitat within a reasonable commuting distance from the roost and different sites are used depending upon insect densities and abundance, climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

** The term roost is generically referred to as a place that bat/s use for the any of the above reasons, however it should be noted that under the Conservation of Habitats & Species (amendment) (EU Exit) Regulations 2019 (Regulation 41) the term roost is not used but refers to "*a breeding site or resting place of such an animal"* and is afforded legal protection. The roost, breeding site or resting place of bats, which ever terminology is used is legally protected whether or not bats are in occupation.

2.3 All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected under the Wildlife & Countryside Act 1981 (as amended); birds listed on Schedule 1 e.g. Barn owls (*Tyto alba*) are afforded a greater level of protection. Where nesting birds are present, then work should be timed outside of the main nesting season (March – August) so as to avoid disturbance.

Policy

2.4 The National Planning Policy Framework (NPPF) has replaced the existing Planning Policy Guidelines (PPG's). In relation to wildlife PPG 9 was one of the documents to which Planning Authorities referred to, particularly where a specially protected species is or may be present and will be affected by a development for which a Planning application seeks consent. The aims of the NPPF in relation to species and habitats are that it 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 they may be affected by development. 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 dependant upon built structures for survival and that roosts can be easily incorporated into existing and new developments/conversions to benefit these species.

When determining planning applications, Local Planning Authorities should aim to conserve biodiversity by applying the following principles:

"*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."*

2.5 Further to mitigating / compensating for the loss of biodiversity, LPAs should also aim to enhance existing biodiversity and provide clear and measurable net gains. Paragraph 174 of the NPPF states the following:

"*To protect and enhance biodiversity and geodiversity, plans should promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*"

2.6 Policy EN4 of Ribble Valley Borough Council Core Strategy 2008 – 2028 states:

"The Council will seek wherever possible to conserve and enhance the area's biodiversity and geodiversity and to avoid the fragmentation and isolation of natural habitats and help develop green corridors. Where appropriate, cross-Local Authority boundary working will continue to take place to achieve this. Negative impacts on biodiversity through development proposals should be avoided."

Policy DME3: Site and Species Protection and Conservation also states:

"Development proposals that are likely to adversely affect the following will not be granted planning permission. Exceptions will only be made where it can clearly be demonstrated that the benefits of a development at a site outweigh both the local and the wider impacts. Planning conditions or agreements will be used to secure protection or, in the case of any exceptional development as defined above, to mitigate any harm, unless arrangements can be made through planning conditions or agreements to secure their protection:

1. Wildlife species protected by law"

2.7 Guidance for Local Authorities: Extract from Office of the Deputy Prime Minster: Circular 06/2005

"*It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision."*

2.8 Where more detailed surveys are recommended by the ecologist following a daytime assessment, then the Local Planning Authority, upon the advice of their ecological advisors, should not determine an application until such time that all relevant information is gathered, i.e. - until all required survey work has been completed. This is in accordance with the obligations placed upon Local Authorities in the exercise of its functions by way of its duties under the Conservation of Habitats & Species Regulations 2019 (EU Exit).

2.9 Figure 2.1 overleaf provides a useful and indicative visual representation of how ecological issues are dealt with in the context of the planning process.

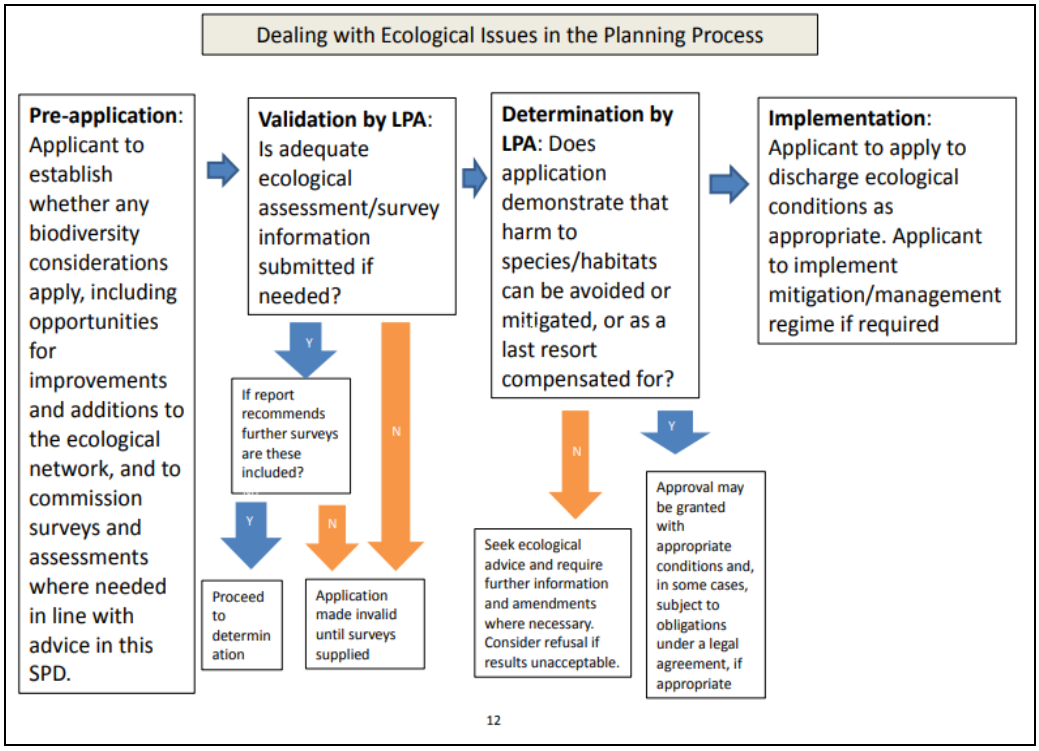


Figure 2.1: Dealing with ecological issues in the planning process

3.0 Protected Species in Lancashire

3.1 Up to eleven bat species have been recorded in Lancashire, many of which use built structures and trees for roosting. A variety of building types and features are utilised by bat species at different times of year, ranging from occupied residential dwellings to disused barns and bridges. The most frequently encountered species is the common pipistrelle bat (*Pipistrellus pipistrellus*) and its abundant status in Lancashire is mirrored throughout the UK.

3.2 The number of breeding Barn owls (*Tyto alba*) within rural Lancashire is moderately high across areas of countryside where suitable environs exist; they are constantly under threat from loss of habitat and nesting opportunities.

4.0 Survey Methods

4.1 BCT Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' 3rd edition (2016) state:-

"*The guidance should be interpreted and adapted on a case-by-case basis, according to the expert judgement of those involved. There is no substitute for knowledge and experience in survey planning, methodology and interpretation of findings, and these guidelines are intended to support these. Where examples are given they are descriptive rather than prescriptive."*

Desktop Study

4.2 Prior to a site visit a desktop study was conducted using online resources to obtain information pertaining to any sites afforded statutory (e.g. SSSI) and non-statutory (e.g. LWS) designations within 2km of the site boundary. To do so, the Multi Agency Geographic Information for the Countryside (MAGIC – provided by Defra) was accessed to gather such information; this interactive mapping service was also used to locate any locally granted European Protected Species Mitigation Licenses (EPSML) to further inform conclusions concerning such species in the context of the study site and its proposed development.

4.3 Satellite imagery was reviewed using sources such as Google Earth (© 2021) to determine the nature of adjoining and extending habitats; such information aids in the understanding of how the site might interact with its surroundings ecologically and its value in that context, and how the development may impact at a wider scale.

Field Survey

4.4 The daytime survey was conducted on 10th February 2021 when the building was inspected for potential places that may be of value to bats and to determine if evidence of use was present. An internal investigation into the building was conducted with the employment of high-powered torchlight including an inspection of all loft spaces (where present), along with a full external assessment of the structure whereby all external facets were inspected for viable ingress/egress opportunities for loft or crevice-dwelling bats. The building was consequently assessed for its suitability for bats in line with the previously mentioned Bat Conservation Trust 'Good Practice Guidelines'.

4.5 Trees will not be impacted by the proposals, so trees in the vicinity of the site were not inspected in this instance.

4.6 The criteria for roost assessment is based upon the Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' 3rd edition (2016) (see Figure 4.1).

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[a] and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation[b]). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.[c]	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions[a] and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions[a] and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

[a] For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.
[b] Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.
[c] This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

Figure 4.1: BCT guidelines extract

4.7 The survey was conducted at a time when bats are outside of their main active season and in their typical hibernation season (November - March) by the following surveyor:

Table 4.1: Surveyor credentials

Name	Description
Dr Rosalind King MCIEEM	Senior Ecologist at Tyrer Ecological Consultants Ltd, with 13 years relevant ecological experience and full member of CIEEM. Natural England Great Crested Newt Licence (Class 1) held since 2007 (2015-18633-CLS-CLS). Natural Resources Wales Great Crested Newt Licence SO88579/1 held since 2015 Accredited agent on the Class 2 Natural England bat license of Mrs K Wildling MIEMA CEnv (CLS-14227).

4.8 The UK Guidelines for Accessing and Using Biodiversity Data (CIEEM, 2020) stipulates that *'"In some cases, it may be acceptable to not undertake a data search with the LERC or other relevant NSS or local interest groups. For example: ii) Situations where the data search would be extremely unlikely to provide information needed to inform the assessment, due to the scale and location of the proposed development. The appropriateness of excluding a data search will need to be judged on a case-by-case basis as, in most situations, it will be essential to carry out such a search even if the development is very small or is likely to have a low impact. It can be very difficult to demonstrate that a data search would not have provided relevant information without obtaining and reviewing those data".*

Given the nature of the proposed development and outcomes of the assessment, it has been deemed unnecessary to conduct a data search for protected species or designated sites in the vicinity. Species/habitat information relevant to the application site and its immediate environs was obtained at the time of the survey from habitat information and readily available information online.

4.9 The results, conclusions and recommendations are based on multiple factors including:

- Practical experience of surveyor
- Knowledge of bat/bird species relevant to the site location and geographical range
- Nature of the immediate and surrounding habitat in relation to foraging/hunting opportunities
- Condition of the building
- Presence/absence of a loft space
- Presence/absence of roost/nesting potential
- Value of roost/nesting potential – if present

4.10 An assessment of the building and developmental footprint in relation to breeding birds was conducted in tandem with the investigation for bats, when birds are outside of their main breeding season (March-August inclusive). Both interior and exterior elevations of the building were inspected for current or historic signs of birds that show a high dependency upon built structures, of which some of these species are in a state of decline. These might include the following:

- **Starling (*Sturnus vulgaris*):** Birds of Conservation Concern (BoCC) red status
- **House sparrow (*Passer domesticus*):** BoCC red status
- **House martin (*Delichon urbica*):** BoCC amber status
- **Swift (*Apus apus*):** BoCC amber status

4.11 Additional to the capacity to support common species of bird for breeding purposes, the application site was also subject to an assessment for its ability to support particularly notable species. This includes specially protected species such as Barn owl, protected under Schedule 1 of the Wildlife & Countryside Act (1981) (as amended).

4.12 Although the focus of the study was bats and breeding birds, the site was surveyed for other key species, or habitat that could support other key species, including invasive species, in line with the Chartered Institute of Ecology and Environmental Management (CIEEM) Technical Guidance Series (Guidelines for Preliminary Ecological Appraisal, and the Ecological Impact Assessment (CIEEM, 2018; 2017)).

5.0 Limitations

5.1 The space between the roofing felt and the tiles could not be fully investigated as detailed investigation would damage the roof structure. In addition the minor gap near where missing mortar had been repaired could not be investigated. Whilst these features could not be fully accessed in order to establish evidence of bat use, the character of the roof space as a whole was recorded and assessed in terms of its value for bats and if any obvious signs of bats existed.

5.2 A record search from the local records centre was not obtained. As discussed in 4.8, this decision has been taken based on the nature of the habitats on the site and the proposals. It is considered that there were no significant constraints that would otherwise hinder the gathering of information on which to base conclusions and recommendations.

6.0 Desk Study Results

6.1 The property is located approximately 2.6km west of Whalley and 6.3km south west of Clitheroe, within the rural development of Brockhall Village. The property comprises a two storey house with integral garage, driveway and small turfed rear garden, and the immediate habitat includes properties of a similar nature, sports fields and a community centre set amongst areas of mature woodland. Brockhall Village is a small residential development within the pastoral landscape of rural Lancashire with the Ribble River lying approximately 600m north of the application site (Figure 6.1).

Figure 6.1: Aerial imagery of the property (upper photo) and location of the property (red boundary) within the contiguous landscape (lower photo) (Google Earth 2021).

6.2 The contiguous landscape extends in all directions featuring similar habitats to those adjacent to the site, including small scale residential areas, pastoral farmland, pockets of woodland, hedgerows and trees set within the Ribble Valley. These habitats in proximity to the survey area can be considered as being of high ecological value for many of the species for which the survey was undertaken (i.e. bats and breeding birds), subject to them being present in the locality. Where good quality habitat is present close to buildings then the percentage use of those buildings, by bats/birds increases given that roost/nest opportunities are available and vice versa.

6.3 No statutory designated sites lie within 2km of the application site. In addition the application site does not fall within an impact risk zone (IRZ) of any Sites of Special Scientific Interest (SSSI). Therefore the prospective development is highly unlikely to have any direct impact upon the SSSI or the designation features as the proposals are small scale and do not trigger consultation with Natural England in relation to the nearby SSSI.

Where no impact to Sites of Special Scientific Interest (SSSIs) is predicted however, Natural England issues the following advice within their standing advice on SSSI impact zones (NE, 2019): "*It is important to note that the SSSI IRZs only indicate Natural England's assessment of likely risk to the notified features of SSSIs. Where they indicate such a risk is unlikely, this does not mean that there are no potential impacts on biodiversity or the wider natural environment*."

6.4 Due to the small scale nature of the proposals, for a single householder development, it was also considered adverse impacts to non-statutory designated sites that may be in the vicinity of the proposals would be highly unlikely. Non-statutory sites are therefore not considered further within this assessment.

6.5 An online search of Magic Maps revealed no European Protected Species Mitigation Licence (EPSML) within a 2km radius of the application site. The nearest is located approximately 3.2km to the south west of the application site licencing destruction of a resting and breeding site of Common Pipistrelle and Whiskered (*Myotis mystacinus*) (Figure 6.2). A search of extensive bat records held by Tyrer Ecological Consultants Ltd revealed the nearest record approximately 5.2km west of the application site. This record is of a roost of 2 Common Pipistrelle within an agricultural building. The surveys were undertaken in 2019 and submitted to the Local Environmental Records Centre for the area.

6.6 The habitats in the immediate area provide good quality foraging and roosting opportunities for bats.

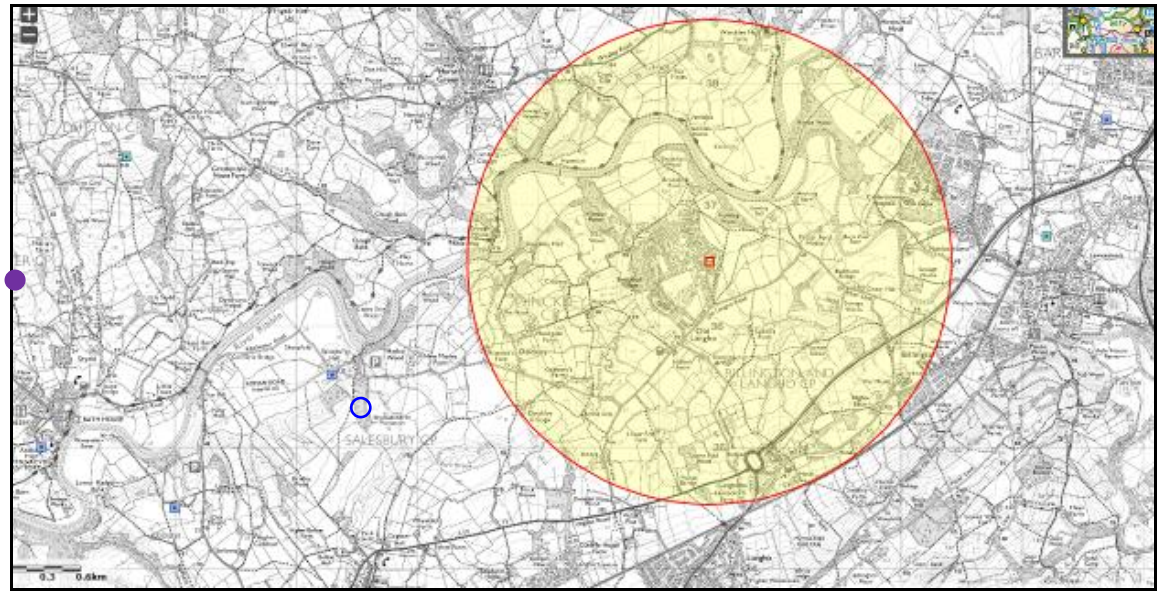


Figure 6.2: Magic map 2km radius search from the application site marked by yellow circle. The nearest granted bat EPSML has been highlighted with a blue ring, the nearest bat records held by Tyrer are marked with a purple dot (MAGiC Maps 2021).

7.0 Field Study Results

Bats

7.1 The double storey occupied residential dwelling, built in the early 2000's is of brick construction with both pitched and hipped tiled roof. A flat roofed, single storey brick extension has been added to the rear (west) in 2017. On the day of the survey the building was considered to be in a favourable aesthetic condition representative of its purpose with an absence of any significant damage. The building covers an approximate footprint of 11.5m x 11.2m x 7m (L x W x H).

7.2 Internally, the loft is slightly lit from daylight emanating via the soffit vents it is approximately 5m x 8m x 2m (L x W x H) and cluttered by roofing trusses. Although the house is heated, the loft remains cool due to Rockwool insultation on the loft floor. The loft is in use as a storage area and accessed by the owners regularly, therefore, due to the cluttered interior, the loft is deemed unsuitable to meet the typical breeding requirements of loft-dwelling bat species such as the brown long-eared, which is a genus that prefers large, warm, unrestrictive, darkened and non-draughty loft spaces which allow free flight and offers consistent thermal qualities. However, loft-dwelling bats will use buildings which do not meet these criteria for purposes other than breeding. Furthermore no evidence of bat droppings or feeding remains were noted which, if void dwelling bats have occupied the building, would be apparent, especially in unused areas are not regularly accessed including over the porch and garage.

7.3 The tiles are lined with bitumen roofing felt in a good state of repair. Where present, traditional bitumen 1F underfelt or similar underlining will significantly increase the probability of occupancy by crevice-dwelling species of bat such as the Common Pipistrelle, whereby bats are able to roost between external materials and underling material, provided external access opportunities exist. No evidence of crevice-dwelling bats was identified during the inspection of the building; however, this is often the case due to the cavity-inhabiting nature of this species group and absence of crevice-dwelling species cannot solely be relied upon.

NB: *Bats are opportunistic in their roost choice, and will use different structures throughout the year for roosting purposes, depending on habitat quality, climatic conditions and opportunities present in proximity to food/other bat(s)/roosts.*

The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings were the warm, dry conditions favour the requirements of a maternity colony, but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.

7.4 Externally the brickwork is sealed and the slates and ridge tiles well pointed with no signs of cracked or lifted tiles. General soffits, fixtures and fittings were all in a good state of repair, similarly, the flat roof of the extension was also well sealed. There were minor sections of loose mortar to the roof verge at the western aspect gable end, some of which had been recently repaired but these appeared be non-progressive and do not provide bat access opportunity to any significant viable roost opportunities. In addition these sections of loose mortar were on the side of the property that will remain unaffected by the proposed works.

7.5 Therefore, due to aforementioned findings despite the adjacent suitable bat foraging and commuting habitat, the property is considered to offer 'Negligible' bat roost potential in accordance with Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) and further surveys will not be recommended.

Birds

Breeding birds

7.6 In relation to Schedule 1 (WCA) specially protected bird species such as Barn owl, no suitability exists for breeding given the nature of the building and it being constantly in use. This species is likely to be present in the surrounding landscape given the rural nature of the area, however no value for barn owl exists on the proposed development site for breeding or hunting given the habitats (managed amenity grassland, building and hardstanding). No areas considered to be suitable for the breeding habits of any other Schedule 1 WCA-listed species were identified on site and no evidence of such species was located across the full extent of the survey area.

7.7 No evidence of current or historic nesting by other birds was identified anywhere within the building, and there are no areas which birds could use to access the building in the immediate future.

7.8 During the survey, Starling (*Sturnus vulgaris*) was noted territorially singing on the roof of the adjacent property to the north of the proposed development. This species, although fairly common and widespread, is in decline and is therefore red listed.

8.0 Conclusions & Recommendations

Bats

8.1 Based on the site-specific assessment as described, risks of impacts to bats can be considered highly unlikely and the building is duly categorised as offering 'Negligible' bat roost potential in accordance with Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' (2016) (see Figure 8.1); no further surveys are required in relation to bats.

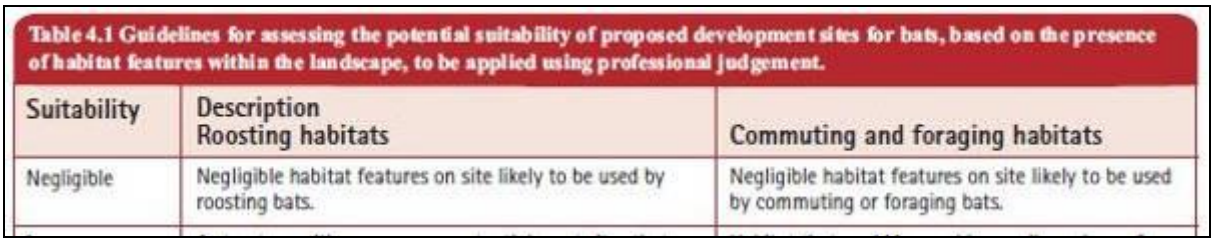


Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

Figure 8.1 - *Bat Conservation Trust extract*

8.2 No further surveys in the form of dusk/dawn emergence / re-entry surveys are recommended. In addition, there are no obvious gaps that would require any precautionary supervision of initial roofing works.

.

8.3 Although the property provides negligible habitat suitability for roosting bats, this species is anticipated to be present in the wider area. Installation of overly harsh artificial lighting as part of any development that exceeds current levels may have a negative impact upon foraging/commuting bats in the landscape, particularly if increased light spillage occurs in areas of that are currently free from illumination. In considering appropriate light sources to use, the following should be considered:

Type of lamp (light source)

The impact on bats can be minimised by the use of low pressure sodium lamps or high pressure sodium instead of mercury or metal halide lamps where glass glazing is preferred due to its UV filtration characteristics.

Lighting should be directed to where it is needed and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only. Planting can also be used as a barrier or manmade features that are required within the build can be positioned so as to form a barrier.

Predicting where the light cone and light spill will occur

There are lighting design computer programs that are widely in use which produce an image of the site in question, showing how the area will be affected by light spill when all the factors of the lighting components listed above are taken into consideration. This should be a useful tool to inform the mitigation process.

Light levels

The light should be as low as guidelines permit. If lighting is not needed in any particular area, do not light. Numerous software programmes are currently available which can be used inform lighting plans, demonstrating how lighting decisions will illuminate a site - refer to the Bat Conservation Lighting Guidelines for further information.

Birds

8.8 The building does not provide a suitable nesting platform for bird species associated with building, although there is some limited suitability for nesting birds within the garden, which will be unaffected by the proposals. No nests were noted within the building at the time of survey; and it is unlikely the building could be used by nesting birds in the immediate future as no access opportunities to the roof void exist. Therefore

it is considered that timing restrictions on works to avoid harm to nesting birds is not required in this instance.

NB: *All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected under the Wildlife & Countryside Act 1981 (as amended); it is a punishable offence to destroy, damage or interfere in any way with an active nest, including disturbance.*

Other Species

8.9 Due to the small scale nature of the proposals it is considered other species are highly unlikely to be adversely impacted as a result of the works.

Biodiversity Enhancements

8.10 To improve opportunities for bats, nesting birds and invertebrates on site, enhancement is recommended to be incorporated into any new development as per Appendix II.

9.0 Bibliography

- **Bat Conservation Trust (BCT)**, 2018. *Bats and artificial lighting in the UK: Bats and the Built Environment series*. Available from: https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

- **Chorley Council, Preston City Council, and South Ribble Council,** 2015. *Central Lancashire Biodiversity and Nature Conservation Supplementary Planning Document.* Available from: https://centrallocalplan.lancashire.gov.uk/media/1049/july-2015-biodiversity-and-nature-conservation-spd-v1.pdf

- **CIEEM *et al***, 2019. *Biodiversity Net Gain: Good practice principles for development*. Available from: www.cieem.net/data/files/Publications/Biodiversity_Net_Gain_Principles.pdf

- **CIEEM**, 2017. *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Available from: www.cieem.net/data/files/Publications/Guidelines_for_Preliminary_Ecological_Appraisal_Jan2018_1.pdf

- **CIEEM**, *2018. Guidelines for Ecological Impact Assessment in the UK and Ireland, 3rd edition.*

- **CIEEM**, 2020. UK Guidelines for Accessing and Using Biodiversity Data.

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

- **Communities & Local Government (C&LG)**, 2018. *National Planning Policy Framework*. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

- **Magic Maps Application**, 2020. Available from: www.natureonthemap.naturalengland.org.uk/MagicMap.aspx

- **Mitchell-Jones, A. J.**, 2004. *Bat mitigation guidelines*. External Relations Team, English Nature, Northminster House, Peterborough, PE1 1UA.

- **Mitchell-Jones, A. J. (ed.)**, 1987. *The bat worker's manual*. Dept. BWM, Nature Conservancy Council, Northminster House, Peterborough, PE1 1UA.

Appendix I: Site Photographs (taken 10th February 2021)

Plate 1: North eastern aspect of the property. The proposed extension will replace the roof over the double garage and connect with the main house roof.

Plate 2: The south western elevation. The proposed extension will replace the roof over the single storey section and connect with the main house roof.

Plate 3: Character of the soffits along the garage, showing them to be fixed tightly to the wals with no ingress opportunities for bats.

Plate 4: Minor gap within soffit where the garage meets the rear extension, approximatley 2m above ground. No signs of staining or scratching were noted around the gap, including on the paintwork, suggesting bats are unlikely to have used this feature.

Plate 5: Section of the south west elevation showing tiles and flat roof in the area of the proposed extension are in good condition

Plate 6: Close up of the north west facing roof which will be impacted by the proposals, showing the tiles to be in good condition.

Plate 7: Minor sections of missing mortar at the roof verge to the south west elevation. The mortar has been recently (2020) repaired in places (see the section above the top red arrow) therefore these sections ofmission mortar are unlikely to be progressive as they have not been included in the recent repairs.

Plate 8: The loft void in the main house in the vicinity of the proposed works showing cluttered nature unsuited to void dwelling species for use as a maternity roost..

Plate 9: The loft void above the garage, which will be lost to the proposals.

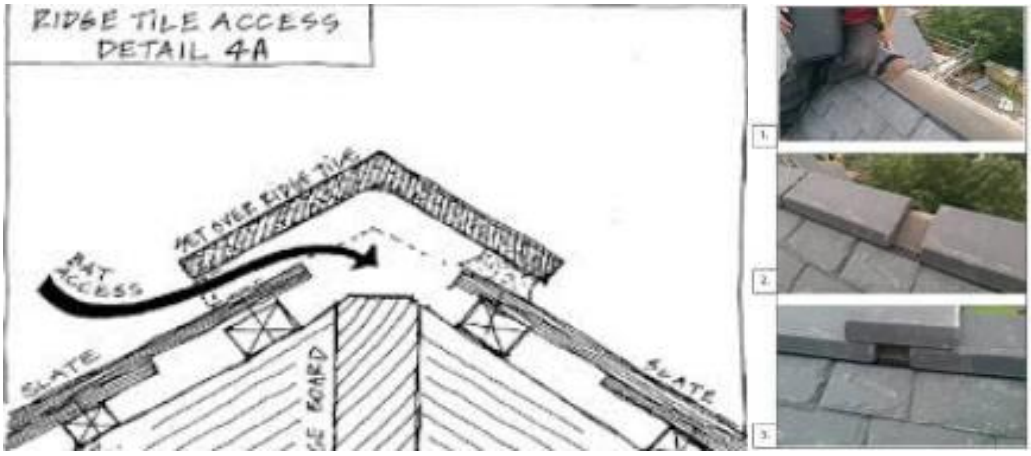
Plate 10: Minor loose section of roofing felt wihtin the garage loft revealing cavity between felt and tiles.

Appendix II: Biodiversity Enhancement

Enhancement for Bats

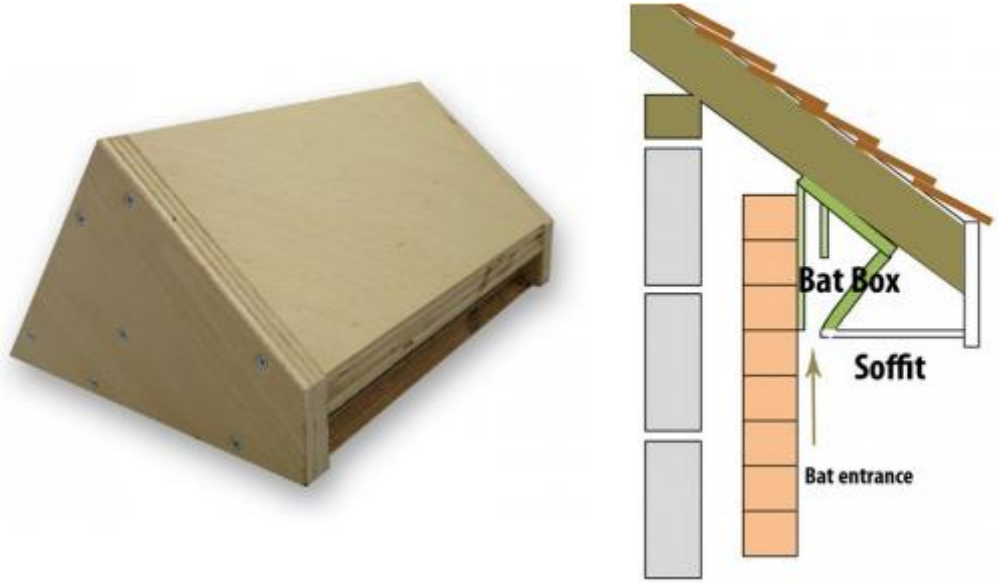
Ridge access

Where appropriate, ridge tile access should be made with the incorporation of traditional Bitumen 1F underfelt immediately beneath ridge tiles. Breathable BRM membrane can cause significant problems where bats are in contact with it, whereby their fine claws become entangled within the fibres of the membrane, entrapping and killing bats.



Soffit access

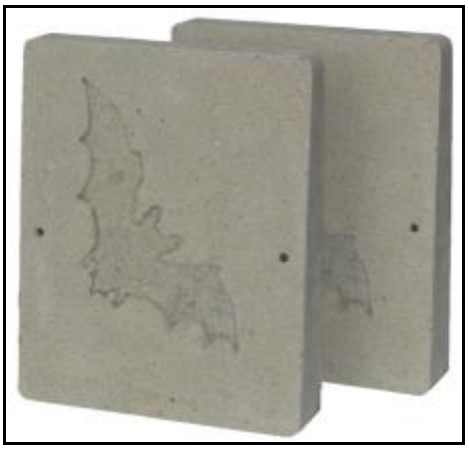
Where soffits are instated at gable elevations, roost provision may be instated in the form of a soffit bat box with internal roosting space.



Externally fitted boxes

A large number of externally fitted box models for bats exist for buildings and trees. Suitable models for both buildings and trees which may include the Beaumaris, low profile woodstone, or Schweglar bat boxes.





Enhancement for Birds

House sparrow

The 'Sparrow Terrace' has been designed to help redress the balance of falling house sparrow numbers. The current UK population is half what it was in 1980 and this is thought to be due to habitat destruction and lack of suitable nesting spaces. Sparrows are social birds and like to nest in company, therefore, this terrace provides ideal nesting opportunities for three families.

The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of buildings under eaves or overhanging roofs on a North - North East elevation

http://www.nhbs.com/title/174850/1sp-schwegler-sparrow-terrace

Nesting Birds - Common/Woodland/Garden

This traditional design has proved to be highly effective in attracting robins, as well as other small species such as black redstart, spotted flycatcher and wren. It is designed to be installed on the walls of houses, barns, garden sheds or other buildings and should be hung so that the entrance is to one side (at an angle of 90° to the wall). The front panel can be easily removed for cleaning.

This type of box should not be made conspicuous on a tree or bush because small predators can enter through the unprotected opening. By hanging on a wall, predators won't be able to reach the box. Alternatively hide the box in ivy, honeysuckle or other climbing plants.

See - www.nhbs.com/2h-schwegler-robin-box

Enhancement for Invertebrates

Bee and Bug Houses will provide valuable habitat on site for solitary bees and other insects. At a time when many of our native insects are struggling, this is a fantastic way to give them a helping hand. Top chambers can feature wooden nesting tubes in wooden blocks, together with bamboo tubes of various sizes. Alternatively holes can be drilled into existing timber to create novel designs - perfect for attracting ladybirds, earwigs and lacewings. Other chambers can be filled with miscellaneous items such as pine cones to provide nooks and crannies for insects, aiding to provide habitat for insects that predate natural garden pests such as aphids. Natural materials, such as straw or bark, will provide an excellent winter habitat for lacewings, ladybirds, woodlice, earwigs and many other bugs. A range of other novel ideas can be used.

For example, see link - www.nhbs.com/bee-and-bug-biome

Alternatively, a Bee Brick can be used in place of a standard brick or block in construction to create habitat for solitary bees or as a standalone bee house in your garden or wild patch. It will provide much needed nesting space for solitary bee species such as red mason bees and leafcutter bees, both of which are non-aggressive.

Each Bee Brick contains cavities in which solitary bees can lay their eggs before sealing the entrance with mud and chewed-up vegetation. The offspring will emerge the following spring and the cycle will begin again. Each cavity goes part way into the brick, which is solid at the back. Bee Bricks should be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. It

is highly recommended that bee-friendly plants should be located nearby so that the bees using the bricks have food, otherwise it is unlikely that the brick will be used.

Available in a choice of four colours: white grey, dark grey, yellow and red.

Specification
* Material: Concrete
* Origin: Cornwall, UK
* Dimensions: W 215mm x D 105mm x H 65mm
* Weight: 2.9kg
* Colours: White grey, yellow, dark grey and red