

Report Title	Proposed Garage Conversion at Meadow Barn, Holt Road, Ridley Wood, Wrexham, LL13 9YA – Preliminary Roost Assessment and Bird Survey
Date issued	13th June 2019
Author	Kylee Wilding
Report Version	C403/ 1.0
Client	Mr. N. Route
Contract Ref.	C403

this report was produced by Tyrer Ecological Consultants Ltd on behalf of

marches ecology

**Unit 23, The Malthouse Business Centre,
Regent Street, Llangollen, Denbighshire, LL20 8HS
01978 860889**

Marches Ecology is the trading name of Marches Ecology LLP, Partnership No. OC362423, Registered in England and Wales. Registered address: Unit 23, The Malthouse Business Centre, Regent Street, Llangollen, Denbighshire, LL20 8HS.

Quality Assurance**Survey/ Assessment Work Schedule**

Survey/Assessment Type	Surveyors/ Author	Date
Preliminary (Bat) Roost Assessment and Bird Survey	Kylee Wilding	28/05/19

Review Schedule

Issue	Date	Author	Reviewed by	Approved by
1.0	13/06/19	Kylee Wilding	Tom Knight	Tom Knight

This report has been prepared by Marches Ecology with all reasonable skill, care and diligence within the terms of the Contract with the client.

The terms of this Contract have been fulfilled by Marches Ecology in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.

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 and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

The conclusions and recommended actions provided in this report are specific to the iteration of the proposal detailed in this report. It would no longer be valid should the proposal be changed in anyway, should the report be used for a different proposal at the same site or should it be used a maximum of 12 months after the date of issue.

CONTENTS

1	SUMMARY	4
2	INTRODUCTION.....	5
3	PROPOSED DEVELOPMENT	5
4	SURVEY METHODOLOGY	7
4.1	BATS	7
4.2	BIRDS	7
5	SURVEY CONSTRAINTS	8
6	SURVEY RESULTS.....	9
6.1	BATS	9
	BATS IN NORTH WALES	9
	HABITAT ASSESSMENT	9
	PRELIMINARY ROOST ASSESSMENT	10
	SITE PHOTOGRAPHS	11
6.2	BIRDS	13
7	CONCLUSIONS.....	14
7.1	BATS	14
7.2	BIRDS	14
8	RECOMMENDATIONS.....	14
8.1	BATS	14
	GENERAL.....	14
	ROOFING FELT.....	15
	TIMBER TREATMENT CHEMICALS.....	15
8.2	BIRDS	15
	APPENDIX 1 – LEGISLATION	16
	BATS	16
	BIRDS.....	16

1 SUMMARY

A planning application in relation to Meadow Barn proposes the conversion of the existing garage to provide additional living accommodation to include a living room with a single storey glass link to the main house. A day-time assessment of the building with regards bats and breeding birds was undertaken on Tuesday 28th May 2019 in order to provide supporting information for this planning application.

The site comprises a house and associated garage, which are situated on an operational and active dairy farm in rural north Wales. The structure that was investigated is one of a number of out-buildings on the site.

Bats: Assessment of the garage to be converted found one exceptionally minor and limited potential roost feature (PRF) within the brick-work; all other aspects of the garage and house were identified as tight-fitting and well-pointed. Furthermore, no PRFs exist at the house within the vicinity of the proposed works. Consequently, the inspected garage is categorised as 'negligible' with regard to existing bat roost suitability, in line with BCT guidelines (Collins 2016¹).

Notwithstanding the 'negligible' categorisation of the existing bat roost suitability, a precautionary approach is recommended at the garage. In the unlikely event that bat/s or evidence of bats is found, works are to cease immediately and an ecologist contacted for further advice.

Nesting Birds: No evidence or suitability for any species of nesting bird was identified at the time of the survey; the likelihood of nesting birds being impacted by the proposal is considered to be negligible.

In the unlikely event that nesting birds are found at the garage during the construction phase, a 5-metre buffer is to be established around the nest until all young have fledged.

¹ Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)*. The Bat Conservation Trust, London.

2 INTRODUCTION

Marches Ecology was commissioned by Mr. N. Route to undertake a Preliminary Roost Assessment (PRA) and bird survey of a single existing detached garage building. The garage is at Meadow Barn, Holt Road, Ridley Wood, Wrexham, LL13 9YA (Approximate OS Grid Ref. SJ 39954 51768). The existing building is proposed for conversion to form additional living accommodation that will be linked to the adjacent house. This report is provided as supporting information to the planning application.

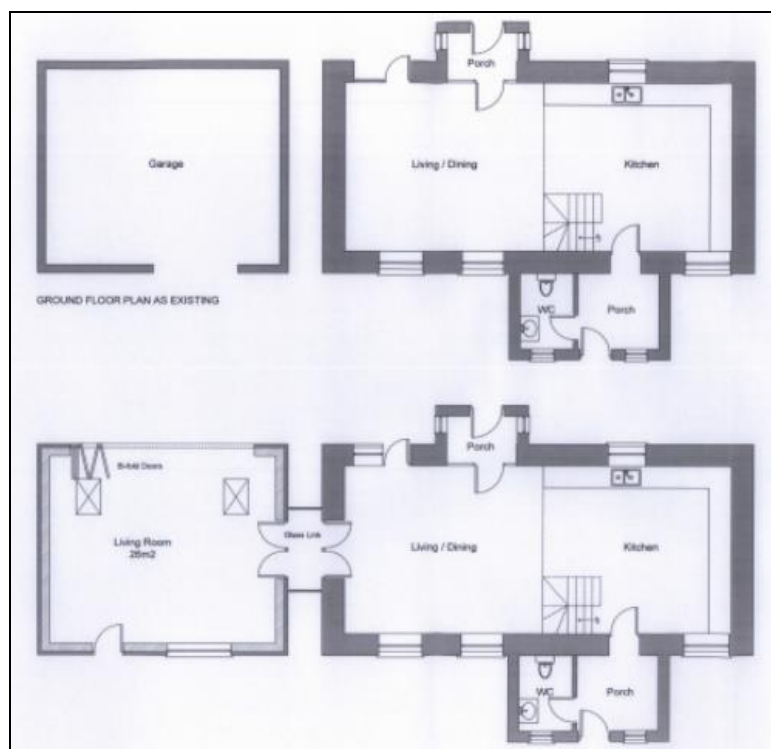
The PRA/ bird survey was required to establish the presence or potential presence of roosting bats and/ or nesting birds. Should bats/ birds be present or features of potential value for roosting/ nesting be identified or the survey was inconclusive then the requirement for further survey would be considered. Potential development constraints and outline mitigation measures would be identified if relevant. If bat/s or their roost/place of rest/shelter is subsequently affected by the work then a European Protected Species Development Licence granted by Natural Resources Wales would be required to proceed with the development.

Legislation relevant to bats and birds is summarised in *Appendix 1* at the end of this report.

The location of Meadow Barn is shown on an HDS Architectural Services plan entitled '*Block Plan & Location Plan*', Dwg. no. MB/PD/04, dated March 2019. The site boundary is indicated by a solid red line.

3 PROPOSED DEVELOPMENT

It is understood that the existing garage would be converted to provide additional living accommodation to include a living room with a single storey glass-link to the main house.



**Figure 1: Existing (top) and proposed (bottom) plans
(Reproduced from a plan by HDS Architectural Services).**

It is assumed that no trees would be impacted by the proposed development and as such no trees were subject to assessment for their potential value to roosting bats/ nesting birds.

4 SURVEY METHODOLOGY

4.1 Bats

The day-time inspection of the building was conducted on the 28th May 2019 by Mrs. K. Wilding. It followed the guidance for a Preliminary (bat) Roost Assessment (PRA) in accordance with the current best practice guidelines (Collins 2016), which state the following:

'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.'

Taking the above into consideration the survey and interpretation of the findings was undertaken by Mrs K. Wilding a highly experienced bat surveyor. Mrs. Wilding holds a Natural Resources Wales Licence (No. S086297/1) and Natural England Class 2 bat licence (CLS - 14227).

The garage at Meadow Barn was inspected for potential places that may be of value to bats and for actual evidence of use (e.g. droppings, prey items, etc). The external elevations were investigated from ground floor level with the aid of close focussing binoculars for places that are frequently used by bats as roosts, or ingress points that may provide access into roost chambers. The interiors were inspected with the aid of a high-powered torch. During the survey the surrounding habitat was evaluated in relation to bats as very often roost selection is closely correlated with the surrounding habitat.

Potential suitability of features that may be used by roosting bats was assessed in accordance with the categories provided in Table 4.1 in Collins (2016). The potential roost feature suitability categories are negligible-low-moderate-high.

The results, conclusions and recommendations included in this report are based on a number of factors such as:

- Practical experience of the surveyor;
- Knowledge of bat species relevant to the site location;
- Nature of the immediate and surrounding habitat in relation to foraging opportunities;
- Condition of the structure; and
- Presence/ absence of roost potential and value of roost potential if present.

4.2 Birds

The building was inspected and assessed for nesting birds at the same time as the PRA. Features were inspected with binoculars where necessary. The quality of the surrounding habitat for nesting birds was also considered.

5 SURVEY CONSTRAINTS

The day-time inspection was conducted within the breeding season of bats. The optimum time to investigate any structure 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. Whilst the survey was conducted in the appropriate period the results can in some instances be inconclusive, for example where it has not been possible to inspect a feature in detail.

No access restrictions were experienced that may have prevented a full inspection and assessment of the building.

The bird survey was also undertaken within the nesting season. Birds which frequently nest within buildings such as House Sparrows (*Passer domesticus*), Swallows (*Hirundo rustica*), Swifts (*Apus apus*) and House Martins (*Delichon urbicum*) would generally be present at their nest sites. Furthermore, historic evidence of past use is often evident therefore no seasonal constraints were experienced.

Taking into consideration the above it is deemed that there were no significant survey constraints that would prevent the gathering of information on which to base conclusions and recommendations.

6 SURVEY RESULTS

6.1 Bats

Bats in North Wales

Up to eleven bat species have been recorded in North Wales most of which use built structures, notably occupied residential properties for roosting. The most frequently encountered species is the Common Pipistrelle (*Pipistrellus pipistrellus*); its abundant status in North Wales is reflected throughout the UK.

Habitat Assessment

Meadow Barn is located on an operational and active dairy farm, set back off the B5130 road. It stands within its own grounds. It is located approximately 2.6 km north-east of Wrexham Industrial Estate and 4.5 km east of Wrexham centre. Broadly, the wider site comprises of a number of associated farm buildings and the immediate habitat is represented by agricultural arable and pastureland, incorporating typical boundary features, notably hedgerow and intermittent tree lines.

The surrounding habitat beyond the site boundaries is dominated by agricultural land in which trees and hedgerow features cross the expanse of pasture providing both connectivity and a foraging resource for bats. Land further to the west of the site comprises of industrial use (Wrexham Industrial Estate) while the River Dee is located approximately 1.7 km to the east. The immediate and surrounding landscape is considered to offer a moderate level of suitable habitat for bats. Where such habitat is present close to built structures (and those structures contain roosting opportunities) the likelihood that the building may be used is increased.

The location of Meadow Barn and the immediate surrounding habitat is shown on the aerial photograph below.

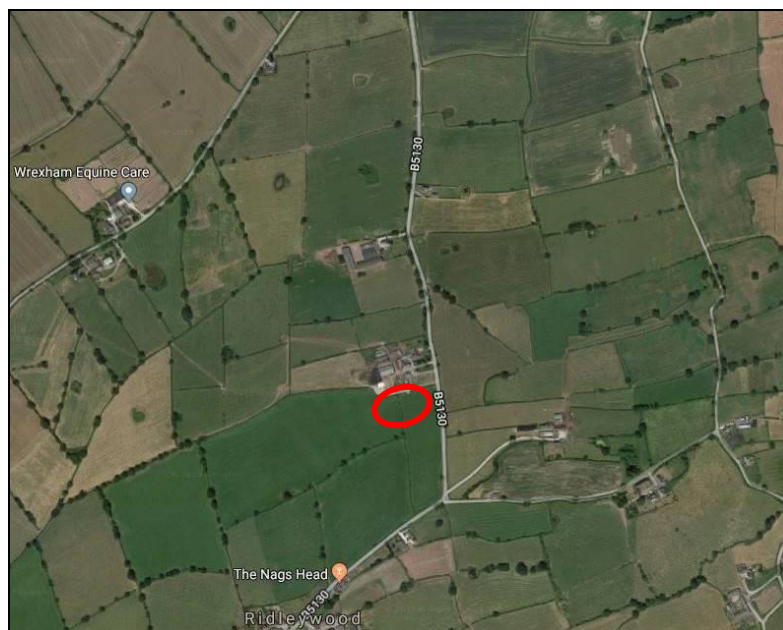


Figure 2: Location of Meadow Barn within the immediate habitat (Source: Google Earth 2019).

Preliminary Roost Assessment

The garage at Meadow Barn is a single-storey detached building of double brick construction, with a corrugated metal mono-pitched roof. The approximate dimensions are 6 m x 4 m x 3 m (L x W x H). At the time of the survey it appeared to be in a visually deteriorated condition with remedial and modernisation work likely to be required to restore the structure to any viable purpose.

During the internal investigation it was confirmed that there are no loft spaces or upper floors. The internal condition was noted to be partially illuminated, cold, cluttered and currently utilised for storage purposes. Therefore, the interior of the building is concluded to be unsuitable to provide the typical breeding/ roosting preferences of loft-dwelling species such as the Brown Long-eared bat (*Plecotus auritus*). This is a species that typically favours large, darkened and unrestricted loft spaces that allows free flight, with consistent thermal qualities.

Furthermore, despite some of the immediate habitat being considered as offering potential to meet the specific foraging requirements of this species, no recent or historic evidence to suggest the presence of loft-dwelling bats was observed during the inspection.

There is no underfelt or equivalent roof lining beneath the metal roof. Where present, such features may significantly increase the probability of occupancy by crevice-dwelling species of bat, notably the Common Pipistrelle. This species often roosts between external and internal roofing material provided that external ingress opportunities exist. However, no evidence of any crevice-dwelling species was located, though this is often the case given the cavity-inhabiting nature of this species group.

The external inspection confirmed that there is no cavity wall. The exterior of the structure is largely tight-fitting with the exception of an area where the brick-work has slipped out of alignment on the southern elevation. This gap was found to be covered in cobwebs and limited in its capacity to support roosting bats. There is also a missing ridge tile at the north-east elevation.

Notwithstanding the aforementioned limited gap and missing ridge tile, the remainder of the structure is tight-fitting and is therefore deemed to provide 'negligible' bat roost suitability in line with the existing BCT guidelines.

There are no external potential roost features within the gable elevation of the residential dwelling to which the garage will be linked.

Site Photographs



Plate 1: Southern elevation of garage showing gaps in the boarded-up windows.



Plate 2: North-east elevation of garage showing missing ridge tile.



Plate 3: Eastern elevation.



Plate 4: Close-up view of the missing ridge tile.



Plate 5: South elevation where the brick-work has slipped out of alignment.

6.2 Birds

The number of breeding Barn Owls (*Tyto alba*) within north Wales is moderately high across areas of countryside where suitable habitat exists. The surrounding landscape provides some potential hunting habitat.

No evidence of use or suitability for roosting/ breeding Barn Owl exists within either the garage or Meadow Barn itself. It is considered highly unlikely that *Schedule 1* species such as the Barn Owl would use either the garage or Meadow Barn.

No evidence or suitability for any other species of bird was recorded during the inspection of the garage and the presence of nesting birds in the garage is concluded to be unlikely.

7 CONCLUSIONS

7.1 Bats

No physical evidence was identified during the inspection that would suggest the current or recent presence of loft or crevice-dwelling bats. The garage provides 'negligible' bat roost suitability. No potential roost features were identified in Meadow Barn in the vicinity of the proposed link. The proposed development would have no significant impact on bats.

7.2 Birds

No physical evidence was identified during the inspection that would suggest the use of the structure by nesting birds. No features of potential value for nesting birds were recorded.

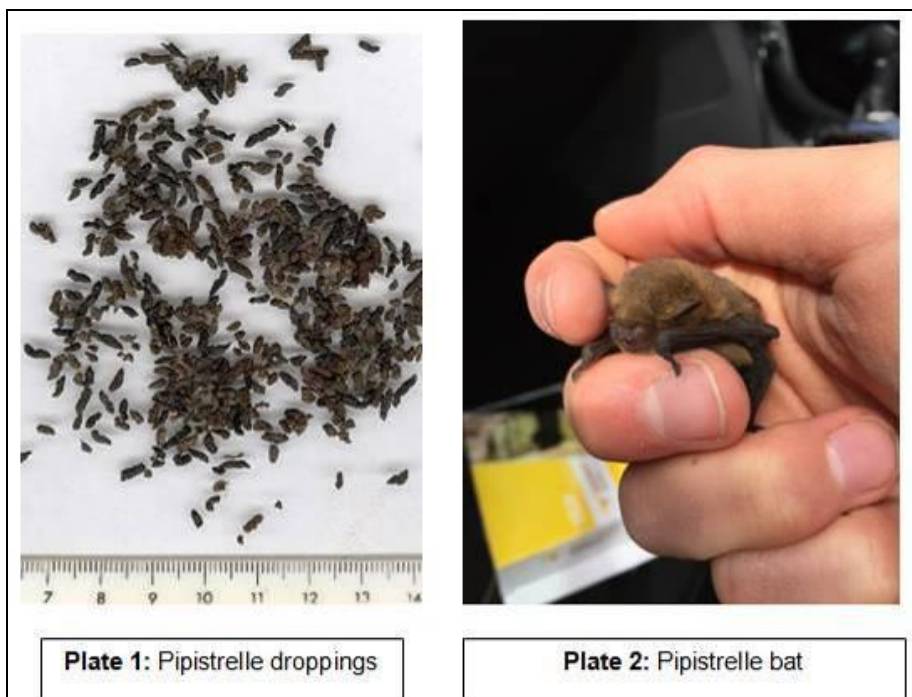
8 RECOMMENDATIONS

8.1 Bats

General

No further survey for bats is considered necessary at this time. Should the development not be implemented within 12 months of the date of the inspection then it may be necessary to repeat the inspection of the building (prior to any works commencing).

No specific mitigation measures are proposed. However, it is recommended that purely as a precautionary measure that the last ridge tile on the mono-pitched roof at the north-east elevation be removed slowly and with caution. If bat(s)/ evidence of bats are found when the ridge tiles are removed the area/s will need to be made good to its/their original condition and the bat/s if present left in situ and an ecologist contacted for further advice (see Plates 1 and 2 below).



Notwithstanding the above, if bat(s)/ evidence of bats are found at any time during the proposed development all work at the site should immediately cease and a suitably qualified bat ecologist should be contacted for further advice. The work should not re-commence until this has been confirmed by the ecologist.

It should be noted that where bat/s or their roost/ place of rest/ shelter will be affected by proposed works a Natural Resources Wales 'development' licence would be required for the works to legally proceed. Notwithstanding the granting of a licence works that would affect a roost cannot take place if a maternity colony is in occupation. Before a licence application can be submitted all planning issues related to bats should be resolved.

Roofing Felt

Modern breathable roofing membranes have been responsible for the entanglement and subsequent death of bats though the potential impacts of this are still being investigated at the present time. The use of such materials should ideally be avoided.

The new roof should be lined with bituminous roofing felt only that does not contain polypropylene filaments (e.g. Bitumen felt type 1F, which is hessian reinforced)². Modern breathable roofing membranes should not be used.

Timber Treatment Chemicals

Chemicals used for timber treatment and insecticide pest control in roofs can be toxic to bats that roost within that roof. However, there are timber treatment/ pest control products available that are suitable for use in bat roosts³.

Any new roofing timbers which bats are able to access should be non-treated or otherwise treated in accordance with the advice provided in the Natural England Technical Information Note TIN092⁴ and Technical Information Note TIN146⁵. Retained existing timbers should also only be treated, if required, in accordance with TIN092/ TIN146.

8.2 Birds

It is considered unlikely that nesting birds would be present in the garage.

The destruction of any bird nests that are in use is illegal. Should any occupied nests be found during the construction phase, a buffer zone (determined on the basis of the species concerned and the location of the nest in the context of the surrounding habitat, but no less than 5 m) would be retained until it can be ascertained that the chicks have left the nest. The buffer zone will be appropriately fenced and signed.

² http://www.bats.org.uk/news.php/254/bats_and_breathable_roofing_membranes_update_of_findings_%20

³ http://www.bats.org.uk/pages/treating_flies_vermin_in_roof.html

⁴ Natural England (2013). *Bat Roosts and Timber Treatment Products*. Natural England Technical Information Note TIN092: Second Edition 04 February 2013.

⁵ Natural England (2013b). *Bat Roosts and Insecticide Pest Control Products*. Natural England Technical Information Note TIN146: First Edition 25 February 2013.

APPENDIX 1 – LEGISLATION

Bats

All species of British bat are listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. They are also listed as European Protected Species on *Schedule 2* of *The Conservation of Habitats and Species Regulations 2017* which gives them full protection under *Regulation 42(1)*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CROW Act 2000).

Under the above legislation it is an offence to intentionally or recklessly:

- kill, injure or take an individual of such a species;
- possess any part of such species either alive or dead;
- damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;
- disturb such a species whilst using any place of shelter or protection; or
- sell or attempt to sell any such species.

Several species of bat are included on *Section 7* of the *Environment Act 2016*.

All species of British bat are also protected under *Schedule 6* of the *Wildlife and Countryside Act 1981* (as amended). This protection relates specifically to trapping and direct pursuit of the species.

Birds

All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the CROW Act 2000.

The legislation makes it an offence to intentionally:

- kill, injure or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use or being built; or
- take or destroy an egg of any wild bird.

Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4)* and *1(5)* of the Act. The legislation confers special penalties where the above mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

- disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or
- disturb the dependant young of such a bird.

Section 7 of the *Environment Act 2016* includes several birds.