



Template Method Statement to be used within a Bat Development Licence Application

This template Method Statement is to be used to form part of your Licence Application for a European Protected Species Development Licence. It will be used to determine the impact of the application on the favourable conservation status of the species concerned (Regulation 55(9) (b) of the Conservation of Habitats and Species Regulations 2017). It must be prepared by a consultant ecologist or other suitably qualified person. You are strongly advised to refer to the Bat Mitigation Guidelines¹, and The Bat Survey Guidelines (3rd Edition). Please submit your Application and supporting Method Statement electronically to the contact details provided below.

Please note as of the 1st March 2018 the declaration box found at the end of this template must be included on any Method Statements submitted in support of a licence application, and must be signed and dated by the applicant and ecologist. Any application containing a Method Statement without this declaration will be rejected.

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Method Statement Title:	Pigeon House
Method Statement Version Number:	1
Method Statement Issue Date:	
Site Address:	Pigeon House, Hanmer

¹ Bat Mitigation Guidelines (IN136) available to download from the Natural England website

Background and Supporting Information

A Executive Summary. No more than one side of A4

Part of a redundant barn range will be renovated into residential accommodation at Pigeon House, Hanmer. This proposal sees most of the ground floor continuing to be used for storage and stabling with a section of the ground floor being used as a modest reception area and stairs affording access to the first-floor domestic accommodation.

The existing roof of the barn will be repaired which may require partial removal. A single storey lean-to at the south-east facing gable end of the barn will be removed during works.

The work to repair the roof and renovate the internal space will begin November 2021 with the basic shell of the building being entirely sealed before March 2022 to discourage the return of bats and prevent individuals gaining access into working areas.

A maximum of three common pipistrelles are using the loft above the west wing as a night time roost. Common pipistrelle were found to be resting/sheltering at night time but were not suspected of roosting within the barn during the day time.

A maximum of three soprano pipistrelles are using the loft above the west wing as a day time roost. Internal detectors indicate that soprano pipistrelle were roosting within the barn throughout the day and emerged to feed at night time.

A maximum of one brown long-eared is using the west end of the north wing as a day time roost. A maximum of two Brandt's bats are using the hay loft of the north wing as a day and night time roost. This species was not recorded outside of the barn during the activity surveys. Two Brandt's bats were observed feeding and flying within the hay loft and internal detectors indicate that they were also roosting here during the day time.

The conversion of the west wing and part of the north wing of the barn into a residential property will result in the loss of day and night time roosting sites for four bat species. None of the roost sites have been proven to support a maternity roost. Noctule was incidentally recorded and was not roosting within the barn.

The destructive parts of the work will be timed to avoid the possibility of disturbing roosting bats, so they will take place between November 1st 2021 and March 31st 2022.

A purpose-built bat loft will be constructed in the north wing of the barn range, adjacent to the renovated areas in order to replicate the enclosed loft space to be lost above the west wing. The bat loft will be ready by March 2022 in time for the return of bats from their hibernation sites.

The bat loft will have an internal height from the ridge of 2.5m and internal dimensions of 4.91m x 4.18m. Access into the bat loft will be through a series of bat access slots created at the existing opening into the hay loft. The opening will be sealed with timber boarding and four access slots will be created at varying heights in the doorway. The access slot will be 20cm wide x 10cm high and will be fitted with a downward facing baffle to prevent light and birds gaining access into the loft.

An internal compliance audit will be undertaken by the named ecologist, who will inform NRW if the licence conditions are not adhered to, and an external auditor will confirm compliance with a single visit following completion of the development.

Post construction monitoring will be carried out for a period of three years. This will include an annual inspection of the bat loft by the named ecologist or assistant holding the appropriate licence. Passive monitoring will also be carried out annually with static bat detectors being deployed into the bat loft and hay barn for a period of 7 days. Results will be analysed and recorded.

B Introduction

B.1 Background to activity/development

Part of a redundant barn range will be renovated into residential accommodation at Pigeon House, Hanmer.

B.2 Full details of proposed works on site that are to be covered by the licence

Prior to works commencing on site, bespoke alternative roosting sites will be constructed in the adjacent barn which will be left free from disturbance.

This proposal sees most of the ground floor continuing to be used for storage and stabling with a section of the ground floor being used as a modest reception area and stairs affording access to the first-floor domestic accommodation.

The areas of the barn intended for living space will be entirely renovated and sealed, retaining the existing windows and doors in place but updating the fixtures. The existing roof of the barn will be repaired which may require partial removal. A single storey lean-to at the south-east facing gable end of the barn will be removed during works.

The work to repair the roof and renovate the internal space will begin November 2021 with the basic shell of the building being entirely sealed before March 2022 to discourage the return of bats and prevent individuals gaining access into working areas.

Outline planning consent has been granted (05/03/2021) under application number P/2020/0764. Condition 9 of the consent states that “No development shall commence until a Bat Conservation Plan has been submitted to and approved in writing by the LPA”. The EPSL Method Statement will be used in order to discharge this condition.

B.3 Actions requiring licensing,

The timing of works has been decided so as to try to avoid the disturbance of roosting bats. However, it is possible that some bats could remain within the building and therefore appropriate risk assessments will be undertaken.

During the works, bats could be **disturbed** by noise, vibration, etc., and the removal of roof tiles, and the subsequent exclusion of bats from the building, will constitute **roost destruction**. Before works commence on the building, all known roost sites will be inspected, and any bats present will be **captured** and relocated to the purpose-built compensatory bat roost.

C Survey and site assessment

C.1 Existing information on the bat species at the survey site.

Prior to the surveys carried out to inform the planning permission application, there were no historical records of bats specifically from the site or within a 2km range.

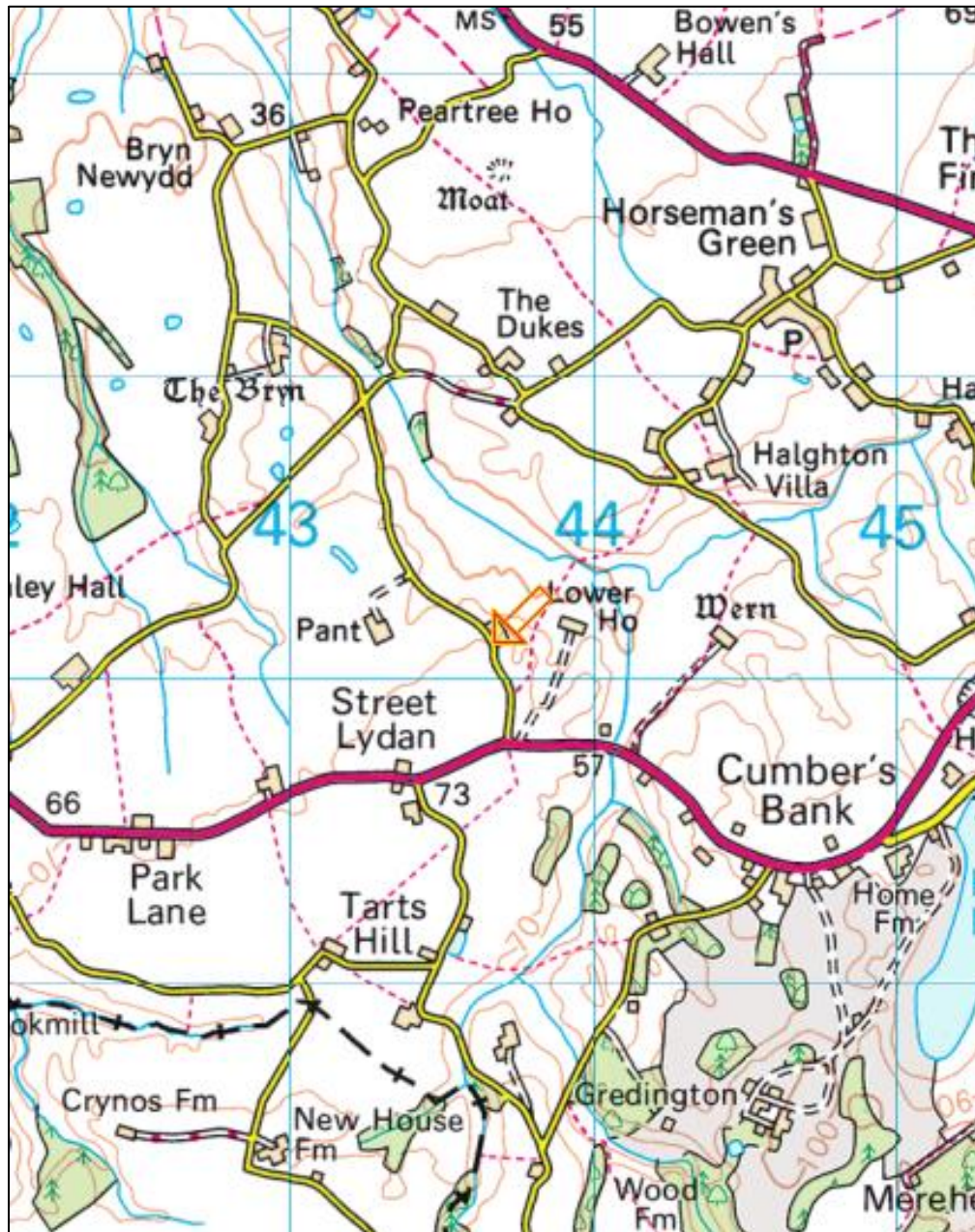
C.2 Statutory sites notified for the species (SSSIs or SACs) within 10km

There are no sites notified for bat species present within 10km of the site.

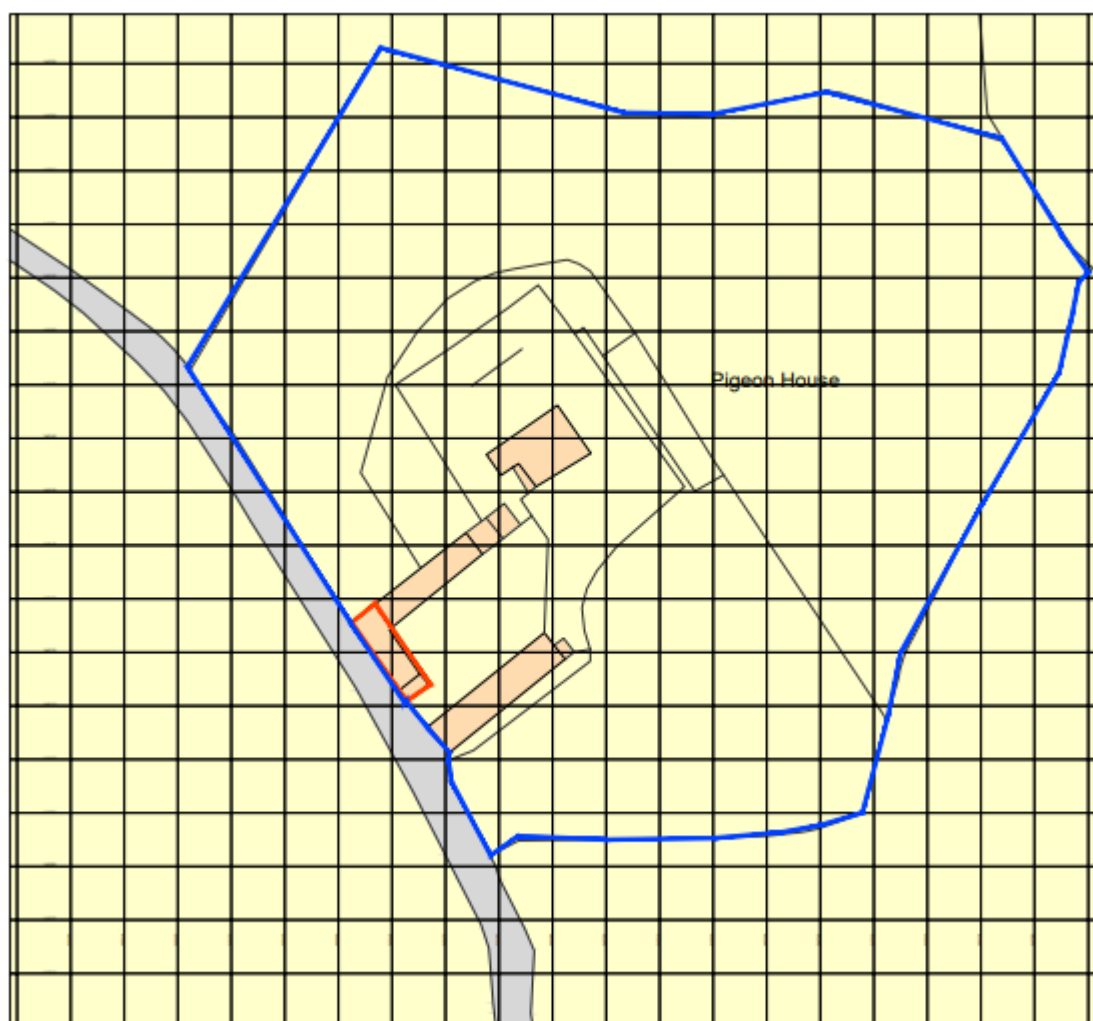
C.3 Objectives of the survey.

The aims of the surveys were 1) to establish the presence or likely absence of bats on the site, and 2) if they are found to be present, to carry out further survey work to determine the species and types of use so that a suitable management strategy can be implemented, i.e., mitigation and/or compensation measures.

C.4 Scaled plan/map of survey area



1:50,000 map of site. Pigeon House indicated by red arrow.



Ordnance Survey, (c) Crown Copyright 2020. All rights reserved. Licence number 100022432

1:1250 site layout. Building to be converted indicated by red line.

C.5 Site/habitat description (relevant to bats)

The property is set amongst extensive countryside, including pasture and arable land with other properties throughout. Woodland cover in the landscape is minimal although there is a well-connected hedgerow system in place. Hedgerows surrounding the site include mature individual trees and there are some small groups of trees and wooded corridors found throughout. There are numerous waterbodies of differing sizes present within the landscape surrounding the site, including Hanmer Mere, which sits 1.6km south east.

There is a row of mature trees to the east of the barn and property on site which connects the buildings to adjacent hedgerow and wooded corridors.



Aerial photograph showing the landscape character around Pigeon House.

C.6 Field survey(s).

Preliminary roost assessments (PRA's) and dusk/dawn activity survey methodologies follow the guidelines published in Mitchell-Jones & McLeish (2004) and Collins (2016), and there were no significant deviations from those guidelines.

One Preliminary Roost Assessment was carried out in August 2020 by Will Prestwood of Arbor Vitae Environment. This involved an external and internal examination of the building to check for bats and the field signs that they produce, and an assessment of the habitats in the immediate vicinity to assess their suitability for commuting and foraging bats. The PRA concluded that feeding signs and bat droppings were found within the loft above the west wing of the barn along with a large number of potential roosting features. The section of barn to be converted has 'high' potential as a bat roost.

Two dusk emergence surveys and one dawn re-entry survey was carried out between August and September 2020. Bat activity was registered and recorded using Anabat Express and Anabat II detectors with Echometer 2 Pro with iPad Air and Android device.

Survey personnel used included Will Prestwood (Natural England licence no. 2020-49192-CLS-CLS), Phillippa Stirling (Natural Resources Wales licence no. S089403-1), Joy Williams and Hannah Williams both of whom are experienced but unlicensed bat surveyors. Location of surveyors can be seen below.

DATE	SURVEY TIME	SUNSET	WEATHER	SURVEYORS	STATIC RECORDERS
18.08.2020	20:17-22:02	20:32	Cloud: 10% Rain: 0 Wind: 0 (BFT) Temp: 18°C	Will Prestwood Phillipa Stirling Joy Williams Hannah Williams	Anabat Express x2 Anabat II x1 inside barn lofts.
03.09.2020	19:40-21:24	19:54	Cloud: 50% Rain: 0 Wind: 2 (BFT) Temp: 15°C	Will Prestwood Phillipa Stirling Joy Williams Hannah Williams	Anabat Express x2 Anabat II x1 inside barn lofts.
18.09.2020	05:15-07:05	06:50	Cloud: 0% Rain: 0 Wind: 0 (BFT) Temp: 10°C	Will Prestwood Phillipa Stirling Joy Williams Hannah Williams	Anabat Express x2 Anabat II x1 inside barn lofts.

Bat droppings were collected from beneath a suspected roosting site within the loft space above the west wing. Samples were collected and placed into an Eppendorf tube, a duplicate sample also being taken. Samples were then sent to ADAS for analysis. The analysis method used by ADAS is as follows: DNA extraction from a single dropping followed by PCR amplification of a short fragment of the COI gene, DNA sequencing and comparison to a database of known DNA sequences for species identification.



Vantage points used during dusk and dawn activity surveys.

C.7 Survey Results.

Preliminary Bat Roost Assessment

The enclosed loft spaces within the barn provide suitable opportunities for a range of roosting bat species. The original timbers provide small crevices which could be exploited by crevice dwelling species and several accumulations of droppings were found beneath such crevices. Other internal roosting features exist such as gaps between the lintels and the brickwork above, joins between large roof timbers and gaps between brickwork where mortar has crumbled away. There are also aeration gaps in the brickwork which could be used as entrance points into the building and a gap between the top of the wall plate and the roof structure also provides ample access opportunities. Feeding signs and bat droppings were found within the loft above the west wing of the barn along with a large number of potential roosting features. The section of barn to be converted has 'high' potential as a bat roost.

Activity surveys

Date	Activity observed
18/08/2020 Dusk	A total of three soprano pipistrelle, three common pipistrelle, two Brandt's and one brown long-eared bats were observed emerging from/flying within the barn.
03/09/2020 Dusk	A total of two common pipistrelle, one soprano pipistrelle, two Brandt's and one brown long-eared bats were observed emerging from/flying within the barn.
18/09/2020 Dawn	A total of one Brandt's bat, one brown long-eared and three soprano pipistrelle bats were observed re-entering the barn to roost.



Approximate roost locations for individual species.



One of the suspected roosting sites for soprano pipistrelle within the loft above the west wing.



Enclosed area within loft space above the west wing. Suspected common pipistrelle night time roosting area.



Hay barn extending into north wing of the barn range. This area was in use by Brandt's bats for foraging and will remain undeveloped but will house the compensatory roost sites.



Lower door used by brown long-eared to enter and leave roosting site. BLE observed flying around within the ground floor section. Common pipistrelle also observed emerging through ground floor door.



Soprano and common pipistrelle observed emerging from gaps at the eaves of the barn and re-entering through aeration holes in the brickwork.



Single storey lean-to to be removed. Soprano pipistrelle observed emerging from lean-to. Brown long-eared observed entering at top floor window.

C.8 Interpretation/evaluation of survey results

Five bat species were recorded at the site during the surveys: Common pipistrelle, soprano pipistrelle, brown long-eared, Brandt's and noctule.

A maximum of three common pipistrelles are using the loft above the west wing as a night time roost. Common pipistrelle were found to be resting/sheltering at night time but were not suspected of roosting within the barn during the day time.

A maximum of three soprano pipistrelles are using the loft above the west wing as a day time roost. Internal detectors indicate that soprano pipistrelle were roosting within the barn throughout the day and emerged to feed at night time.

A maximum of one brown long-eared is using the west end of the north wing as a day time roost. A maximum of two Brandt's bats are using the hay loft of the north wing as a day and night time roost. This species was not recorded outside of the barn during the activity surveys. Two Brandt's bats were observed feeding and flying within the hay loft and internal detectors indicate that they were also roosting here during the day time.

The conversion of the west wing and part of the north wing of the barn into a residential property will result in the loss of day and night time roosting sites for four bat species. None of the roost sites have been proven to support a maternity roost. Noctule was incidentally recorded and was not roosting within the barn.

D Impact assessment

D.1 Short-term impacts: disturbance

If bats are present during the renovation, they will be disturbed by the proposed works due to noise, vibration, dust, lighting, etc. In the absence of any mitigation, this will have a major negative impact on any bats present at a site level. In the wider context, given the number of bats roosting the impact will not be significant at any larger scale.

D.2 Long-term impacts: roost modification

Not applicable for this application.

D.3 Long-term impacts: roost loss.

The existing roosting sites within the building will be lost as a result of the development.

Population data below has been taken from the National Bat Monitoring Programme Annual Report (2020).

Common pipistrelle: the population of common pipistrelle in Great Britain is considered to have increased since 1999. The population estimate for GB in 2020 was 3,040,000. Given the small number of this species present on site and the overall success of the national population, the impact of the loss of this roost is unlikely to be significant at any scale wider than a local level.

Soprano pipistrelle: The population of soprano pipistrelle in Great Britain is considered to have increased since 1999. The population estimate for GB in 2020 was 4,670,000. Given the small number of this species present on site and the overall success of the national population, the impact of the loss of this roost is unlikely to be significant at any scale wider than a local level.

Brown long-eared: The population of brown long-eared bat in Great Britain is considered to have been stable since 1999. The population estimate for GB in 2020 was 934,000. Given the small number of this species present on site and the overall success of the national population, the impact of the loss of this roost is unlikely to be significant at any scale wider than a local level.

Brandt's: according to the National Bat Monitoring Programme Annual Report (2020) "Populations of whiskered and Brandt's bat combined are considered to have been stable in Great Britain since 1999. The two species are uncommon but widespread in England and Wales." There are no population estimates for Great Britain. Given the difficulty of separating Brandt's from whiskered bats during field counts, data on these species is unreliable. Brandt's bats are documented as 'uncommon' and therefore roost loss would be significant at a local level.

D.4 Long-term impacts: fragmentation and isolation.

None of the existing vegetation or habitats in the immediate vicinity of the development will be altered as a result of this development.

D.5 Post-development interference impacts.

The barn is already fitted with security lighting on a motion sensor and switch control within the courtyard which doesn't appear to have deterred bats from the area. Additional lighting on site will be minimal, if any, and is not expected to have any impact.

D.6 Predicted scale of impact

In the absence of mitigation, the development would have a low negative impact on a small number of bats at a local level. The roost significance for common pipistrelle, soprano pipistrelle and brown long-eared would be 'low' and roost significance for Brandt's would be 'low-medium'.

Delivery Information – Mitigation, compensation and monitoring

E Works to be undertaken

E.1 Capture and exclusion (if applicable).

The destructive parts of the work will be timed to avoid the possibility of disturbing roosting bats, so they will take place between November 1st 2021 and March 31st 2022.

Sue Worsfold the Licenced Ecologist will be responsible for carrying out or overseeing the works outlined below.

All site workers will receive a toolbox talk on the legal protection of bats and how to proceed if a bat is encountered at any other time during the course of the development – namely, re-cover the bat if possible, without causing harm, stop all work and notify the ECoW.

The existing roost will be inspected prior to the start of any works, and in the unlikely event that any bats are present, the work will be postponed until such time as no bats are present. The shell of the building will be entirely sealed before March 2022 so that bats returning from hibernation are not able to gain access.

E.2 Bat roosts and habitat

E.2.1 In-situ retention of roost(s)

Not applicable to this application.

E.2.2 Modification of existing roost(s)

Not applicable to this application.

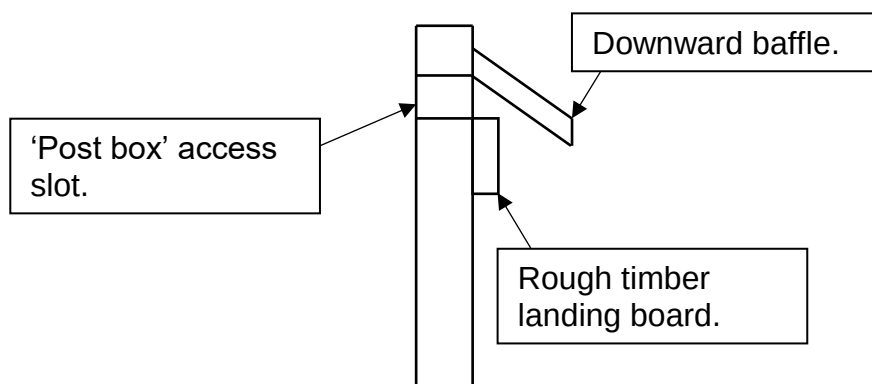
E.2.3 New roost creation (including bat houses and bat boxes)

Only the central stall within the ground floor of the barn will be renovated and therefore these areas will remain as potential roosting and foraging sites. Specifically, the ground floor area at the north facing gable where the majority of brown long-eared activity was observed.

A purpose-built bat loft will be constructed in the north wing of the barn range, adjacent to the renovated areas in order to replicate the enclosed loft space to be lost above the west wing. The bat loft will be ready by March 2022 in time for the return of bats from their hibernation sites. The remainder of the north wing will remain open to the rafters as a hay barn to provide vital indoor foraging areas for Brandt's.

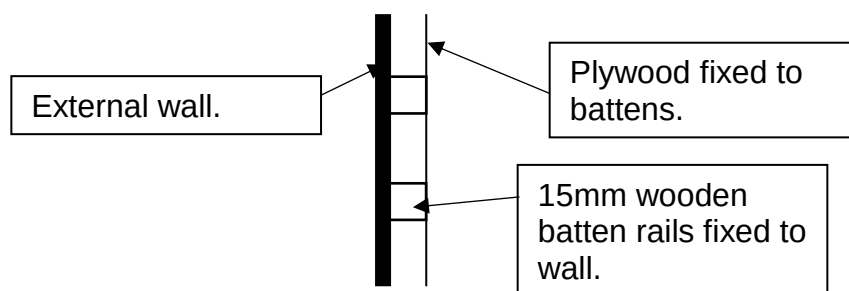
The north wing of the barn has several large open apertures at the south facing elevation which were used by bats during the surveys and therefore 'new' access points into the barn will not be necessary.

The bat loft will have an internal height from the ridge of 2.5m and internal dimensions of 4.91m x 4.18m. Access into the bat loft will be through a series of bat access slots created at the existing opening into the hay loft. The opening will be sealed with timber boarding and four access slots will be created at varying heights in the doorway. The access slot will be 20cm wide x 10cm high and will be fitted with a downward facing baffle to prevent light and birds gaining access into the loft.



Access into the bat loft will also be possible via the eaves of the barn which are currently open and will remain so.

Four crevice roosts suitable for vesper bats will be provided within the loft space. These will be created by fixing ply boards to the wall with 15mm batten spacers. The use of breathable roofing membranes within a bat loft is prohibited. The roof will remain unlined.



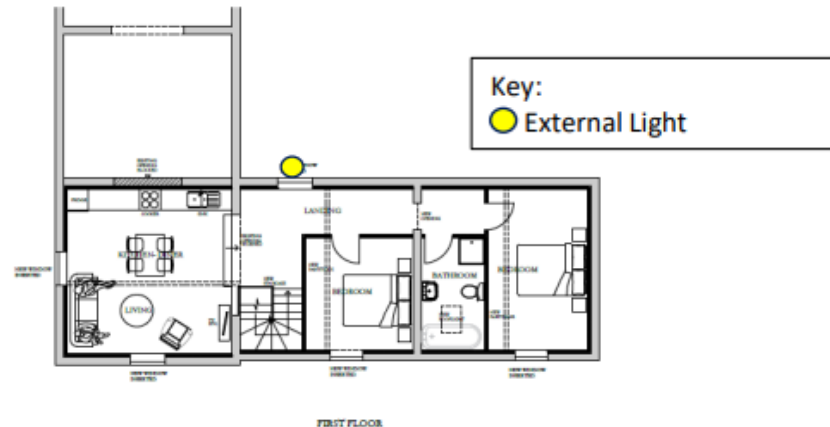
The loft space will not be used for storage and access into this area will be restricted to a small opening in the floor of the loft space. This will remain open as an additional access point for bats and be positioned near to the north facing gable where bats have been observed emerging from a ground floor door. This access hatch will also be used for post-construction monitoring inspections. The access hatch will measures 600x600mm.

E.2.4 Maintenance &/or modification of new and existing habitat

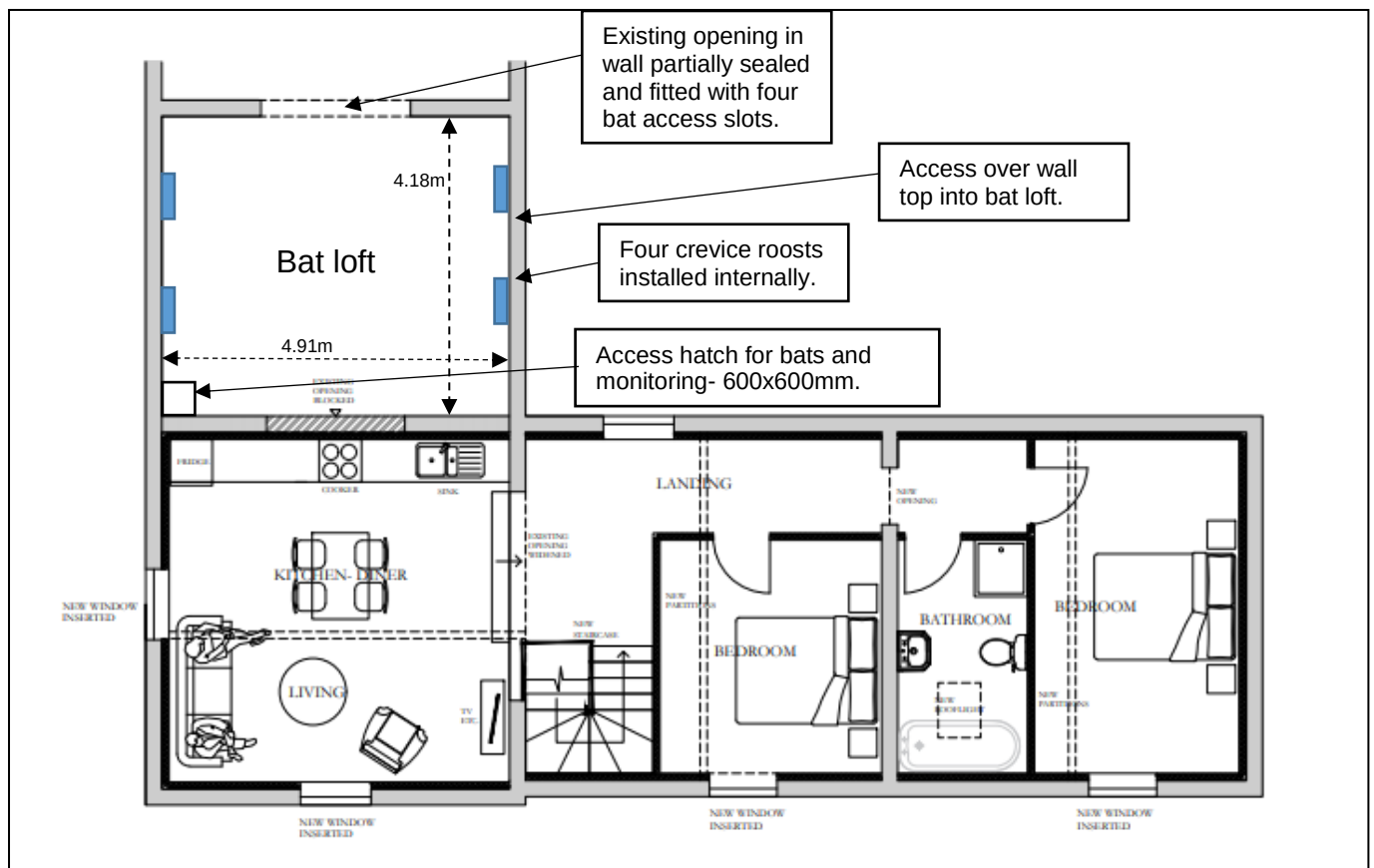
There will be no changes to the structure of habitat features in the vicinity of the renovated barn or the new bat loft.

A single external light will be fitted to the north facing elevation of the barn, within the courtyard area. The light will be no more than 2m from the ground and will adhere to the following guidance:

- The external lighting will not be permanently left on. They will be on short period timers (≤ 1 minute) activated by movement-sensitive Passive Infra-Red (PIR) sensors.
- Metal halide fluorescent sources will not be used. LED luminaires will be used due to their sharp cut-off, lower intensity, good colour rendition and dimming capability;
- 'Warm white' long-wavelength bulbs (ideally $>510\text{nm}$, $<2700\text{Kelvin}$) with reduced UV output will be used, blue/white bulbs will be avoided;
- Internal luminaires will be recessed where installed in proximity to windows to reduce glare and light spill.



E.2.5 Scaled maps/plans



E.3 Mechanisms for ensuring delivery of mitigation and compensation measures

An internal compliance audit will be undertaken by the named ecologist, who will inform NRW if the licence conditions are not adhered to, and an external auditor will confirm compliance with a single visit following completion of the development.

E.4 Mitigation contingencies

If bats are found to be present within the barn during the pre-works inspection, works will be postponed until such a time that bats are not present.

E.5 Biosecurity risk assessment

Not applicable to this project.

F Post-development site safeguard

F.1 Habitat/site management and maintenance

Mr Anson owns the barn and surrounding property and will be responsible for all site maintenance works and management.

F.2 Population monitoring, roost usage etc.

Post construction monitoring will be carried out for a period of three years. This will include an annual inspection of the bat loft by the named ecologist or assistant holding the appropriate licence. Passive monitoring will also be carried out annually with static bat detectors being deployed into the bat loft and hay barn for a period of 7 days. Results will be analysed and recorded.

F.3 Post-development mitigation contingencies

If monitoring reveals that the bat loft is not in use by bat species, activity surveys will be carried out to investigate bat number and species at the site. Further compensation measures may be necessary such as more bat boxes at different aspects/positions.

F.4 Mechanism for ensuring delivery of post-development works

The applicant will inform the named ecologist when work is complete and therefore available for checking. Subsequently the ecologist will arrange suitable dates with the applicant for monitoring and inform NRW of any failure to comply.

G Timetable of works.

Timing	Action
Before March 31 st 2022	Construction of bat loft and all associated roosting features.
November 1 st 2021-March 31 st 2022	Destruction of existing roosting sites and barn shell to be renovated sealed to prevent access by bats. Inspection by named ecologist to confirm absence of bats.

April 2022 onwards	Renovation of barn to continue as necessary.
July 2023, July 2024 and July 2025	Post-development monitoring carried out.

H Land Ownership – Mitigation Site

H.1 Mitigation Site/Compensation Site Ownership

All mitigation will be implemented on the development site which is owned and managed by Mr Anson.

H.2 Mitigation Site/Compensation Ownership post construction

Site ownership will not change in the foreseeable future. After the development has been completed, the bats and their roosts will revert to having the standard legal protection.

I Declaration

I declare that should a licence be granted, the work as proposed in this Method Statement will be strictly adhered to. I understand that any deviation from the works as proposed in this Method Statement without agreement from NRW would result in a breach of the licence. NB. Applicants should note that it is an offence under regulation 59 of the Conservation of Habitats and Species Regulations 2017 to knowingly or recklessly provide false information in order to obtain a licence.			
Signature of the Applicant		Date	
<i>For electronic submissions please insert an electronic signature above or place an x in the box opposite to confirm agreement with the declarations above.</i>			× ☐
Full name in BLOCK LETTERS		MR ANTHONY ANSON	
Signature of the Ecologist		Date	
<i>For electronic submissions please insert an electronic signature above or place an x in the box opposite to confirm agreement with the declarations above.</i>			× ☐
Full name in BLOCK LETTERS		MS SUE WORSFOLD	

J References

Collins, J. (Ed.) (2016) 'Bat surveys for professional ecologists: Good practice guidelines'. 3rd Edition, The Bat

Conservation Trust, London.

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Mitchell-Jones, A.J. (2004) 'Bat mitigation guidelines.' English Nature, Peterborough.

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Russ, J. (2012) 'British Bat Calls – a guide to species identification'. Pelagic Publishing, Exeter

K Annexes

K.1 Protected Species Survey_Bats-Pigeon House (Arbor Vitae, 2020).

K.2 Raw survey data.

K.3 Compliance audit template.