



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.

Contact Details

Natural Resources Wales
Species Permitting Team
Maes Y Ffynnon
Penrhosgarnedd
Bangor
LL57 2DW

03000 654974 / 03000 654921

specieslicence@naturalresourceswales.gov.uk

trwyddedrhywogaeth@cyfoethnaturiolcymru.gov.uk

Method Statement Title:	Broad Oak Barns
Method Statement Version Number:	02
Method Statement Issue Date:	19/02/2024
Site Address:	Broad Oak Farm, Llyndir Lane, Rossett, Wrexham LL12 0AU

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

The Site consists of Broad Oak Farm, located within a rural setting, on the fringe of the village of Rossett and comprises a large range of traditional and modern red brick agricultural buildings and numerous lean-to extensions with either slate or corrugated fibre cement roofing (Figure C4.1). The buildings at Broad Oak Farm are no longer viable for modern farming practices, and therefore, planning permission to demolish some and convert other buildings into residential properties, gardens and parking structures has been granted.

Bat surveys were first undertaken in 2008 by The Tyrer Partnership on behalf of Environmental Research and Advisory Partnership (2008 Surveys) in relation to a previous application on this Site. As part of a further Ecology Appraisal, Bowland Ecology then undertook an external and internal inspection of the barns within the Site in September 2016 (2016 Ecology Appraisal).

In 2017, Accredited Agent, Rebecca Sambrook MCIEEM, of Sambrook Associates Ltd was instructed to undertake the ecological consultation of the project and carried out bat surveys, assessment and mitigation design in relation to the proposed development at Broad Oak Farm. At the time, the proposed development site was reduced to contain only Buildings 5, 8 – 14.

In September 2018, Rebecca Sambrook was instructed as principle ecologist and carried out the ecological assessments and updated preliminary roost inspections on all remaining barns on the Site; Buildings 1-7. A Bat Survey and Mitigation Report (2018 Bat Report) was produced on behalf of the applicant, Shaun Trowbridge to inform the planning Application. Bat surveys were repeated in 2019 and 2022 to inform this license application. The extent of the proposed development Site has decreased in size to its current plan (see C4.1 below), excluding the farmhouse.

The results of surveys in 2008 and 2016 were reviewed and summarised in the 2018 Bat Report. Building reference numbers used in the 2018 Bat Report correspond with the numbers assigned in the 2016 Ecology Appraisal. See development plan attached to this application; reference "Contractors Development Plan.pdf", for the alternative building references used by development contractors and proposed works for the Site, e.g. Building B13 is Barn A. Both the building numbers and development building references are used in this document, for ease of reference to other attached documents.

Activity across the Site is generally low despite the rural setting of the Site, the suitability of the buildings for roosts and the good connectivity to good quality bat habitat in the wider area.

The presence of bat roosts has been established within four of the buildings (Building 2, 9, 13 and 14). Building 2 is considered to be a transient roost of opportunistic individuals of Soprano pipistrelle (Roost R1). Building 9 supports a single Common pipistrelle bat and is likely used as a transient summer roost (R2). Building 13 has day roosts of Common (R3 & R4) pipistrelles and Brown Long Eared (R5). Building 14 supports a maternity colony of Brown long eared bats (R8; 41 max. count of BLE during Visual Assessment on 11.09.2019), and Soprano (R6) and Common (R7 and R9) pipistrelle day roosts. See Figure C8.1 for bat roost locations.

The demolition/conversion of the buildings will result in the loss of these nine roosts. However, the mitigation and compensation that is proposed is aimed at replicating these roosts by providing features within a dedicated bat barn, located adjacent or in close proximity to the existing roost buildings. The bat barn will be located in the corner of the Site so that it is more sheltered from activity around the residential grounds. The overall aim of the mitigation proposals is to ensure that there will be no detriment to the conservation status of bats and improve the long term viability of the populations. The bat barn has been agreed to be maintained in perpetuity.

The subsequent scheme of monitoring and maintenance of the new bat mitigation barn has been devised in consultation with Matthew Ellis of Natural Resources Wales who has kindly advised on the requirements of NRW to satisfy this licence application.

B Introduction

B.1 Background to activity/development

Include a brief summary of what the proposed activity is and why it is necessary.

Development of the site to create 10 residential properties, including the demolition of some buildings and renovation of other existing barn structures, building new parking structures and building a bespoke mitigation and compensation bat barn. The existing barns are not viable for modern farming practices, due to their rapid deterioration making them unsafe, and the target of vandalism and theft, evidence of which has already taken place across the site. As the buildings deteriorate, they risk becoming less viable to host roosting bats due to roost features being lost, unstable thermal regimes being created and too open access within the buildings. Demolishing/renovating the barns allows for freedom of design and building a specialised bat barn to enhance the site for bat roosting opportunities and conservation of the species.

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

Please ensure sufficient detail is provided on the proposed works e.g. barn/loft conversion to new dwelling, demolition of buildings, re-pointing of bridges and tunnels, lime kilns etc. Include the current status of planning permission or other consents (if applicable) and any outstanding conditions/reserved matters. Include timescales and order of work.

Planning permission has been granted subject to conditions, reference ROS P/2018/0888. General tidying of the site, i.e. cutting back vegetation, will commence asap (January/February 2024). Ecology pre-commencement checks will take place and alternative bat roosts will be installed before any demolition takes place. A staggered demolition/renovation of buildings will take place to minimise impact on roosting bats. The demolition schedule will start (April 2024) including demolishing Building 9 (Barn D) to allow the mitigation bat barn to be built in its stead (refer to development plan "Contractors Development Plan.pdf" attached with this application). The buildings with no recorded bat roosts will be demolished between April and August 2024 to minimise bat disturbance during breeding season. The renovation of Buildings 13 and 14 (Barns A and B) and demolition of Building 12 (Barn C) will start from September 2024 to allow the bat breeding season to end and minimise disturbance to the brown long eared maternity roost within Building 14. The remaining schedule of works will be as follows:

Development Works	START	FINISH
Ecology pre-commencement checks, install alternative roosts (tree/building boxes only)	15/03/2024	15/04/2024
Site establishment (office/welfare)	15/03/2024 or on receipt of license	15/04/2024
Drainage	01/05/2024 or asap post mobilisation of site.	15/12/2024
Demolition and clearance of existing buildings (NOT BUILDINGS WITH ROOSTS OR BUILDINGS THAT COULD EFFECT ROOSTS)	01/05/2024	01/08/2024
Demolition of Building 9 (Barn D) with Roost R2 to enable bat building to be built	01/05/2024	01/08/2024
Completion of bat house	01/07/2024	30/07/2024
Transplant road hedge in prep for road works in winter	05/04/2024	12/01/2025

Structural works / flooring / to barns supporting roosts	01/10/2024	01/12/2025
Roof works to barns	02/10/2024	01/12/2025
Road Improvements	09/01/2025	01/12/2025
Internal fixtures / fittings	09/01/2025	01/12/2025
Window / door fittings	09/01/2025	10/05/2025
Build Garages	09/01/2025	01/07/2025
External landscaping	15/07/2025	01/03/2026

B.3 Actions requiring licensing,

Eg disturb, capture, damage or destroy breeding site or resting place. Briefly explain why these actions are necessary.

The licence will cover the destruction of the following roosts:

- R1 - Day roost of two soprano pipistrelle (Building 2 (Barn M))
- R2 - Day roost of a single common pipistrelle (Building 9 (Barn D))
- R3 - Day roost of a single common pipistrelle (Building 13 (Barn A))
- R4 - Day roost of a single common pipistrelle (Building 13 (Barn A))
- R5 - Day roost of five brown long eared bat (Building 13 (Barn A))
- R6 - Day roost of a single soprano pipistrelle (Building 14 (Barn B))
- R7 - Day roost of four common pipistrelle (Building 14 (Barn B))
- R8 - Maternity roost of approximately thirty brown long eared bat (Building 14 (Barn B))
- R9 - Day roost of two common pipistrelle (Building 14 (Barn B))

The licence will cover the potential capture, and transport, of upto ten common Pipistrelle and ten soprano pipistrelle bats and upto twenty Brown long eared (BLE) bats. No works will take place within the maternity season but it is assumed that some bats may still be present once the maternity roost has started to disband. A 'soft demolition' approach will be undertaken to strip the roof tiles off all buildings and destroying any known bat roost features. If any bats are found during this process, the bats will be captured with a gloved hand or hand-held net, given a health check and then placed carefully inside a drawstring, calico cloth holding bag or similar for transport. The bat will be transferred to the temporary alternative bat boxes or into the bat loft

These licensable actions are required as part of demolition/renovation works, which are necessary due to rapid deterioration of the buildings.

C Survey and site assessment

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

Provide records from local environmental records centres, local bat groups, and previous survey work by the applicant or others. Include records from within 2km (or a larger area depending on the scale of the scheme & the species involved - see Bat Survey Guidelines 3rd Ed).

Bat surveys were first undertaken in 2008 by The Tyrer Partnership on behalf of Environmental Research and Advisory Partnership in relation to a previous planning application on this Site. The results of which were reviewed and utilised to provide contextual information for the 2018 Bat Survey and Mitigation Report produced by Sambrook Associates. In addition, as part of the previous Ecology Appraisal, Bowland Ecology undertook an external and internal inspection of the barns within the Site in September 2016. This appraisal highlighted the need to undertake follow up activity surveys in accordance with advice provided in the Bat Conservation Trust (BCT) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).

Table C1.1. Summary of details and results of the 2008 bat surveys and 2016 Ecology Appraisal.

Year	Date	Survey Type	Building No.	Results
2008		Building Inspection	13, 14	Building 13 (Barn A): droppings found and 5 individuals. Building 14 (Barn B): droppings.
2008	Sept	Activity surveys	13, 14	Up to 7 BLE present across both buildings but not a breeding roost.
2016	Sept	Building Inspection	1, 3, 4, 5-11	Low potential for roosting bats. Butterfly wings scattered throughout buildings and considered unlikely feeding remains of BLE.
2016	Sept	Building Inspection	12	Low-negligible potential for roosting bats and no evidence of bat activity.
2016	Sept	Building Inspection	2	Moderate-High potential for roosting bats. Upper floor could not be inspected due to lack of safe access and no evidence of bat activity within lower floor.
2016	Sept	Building Inspection	13, 14	High potential for roosting bats as dropping and feeding remains of BLE found.

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

None

C.3 Objectives of the survey.

E.g. to determine presence/absence of bats, bat usage of site (e.g. maternity, hibernation, night roosts; foraging, commuting, swarming sites).

To determine presence/absence of bats and identify bat usage and roost type so that suitable mitigation and compensation strategy can be devised to address impacts.

C.4 Scaled plan/map of survey area

This should be of appropriate scale and orientation with integral or separate location map at 1:50,000 or 1:25,000 scale and aerial photographs.

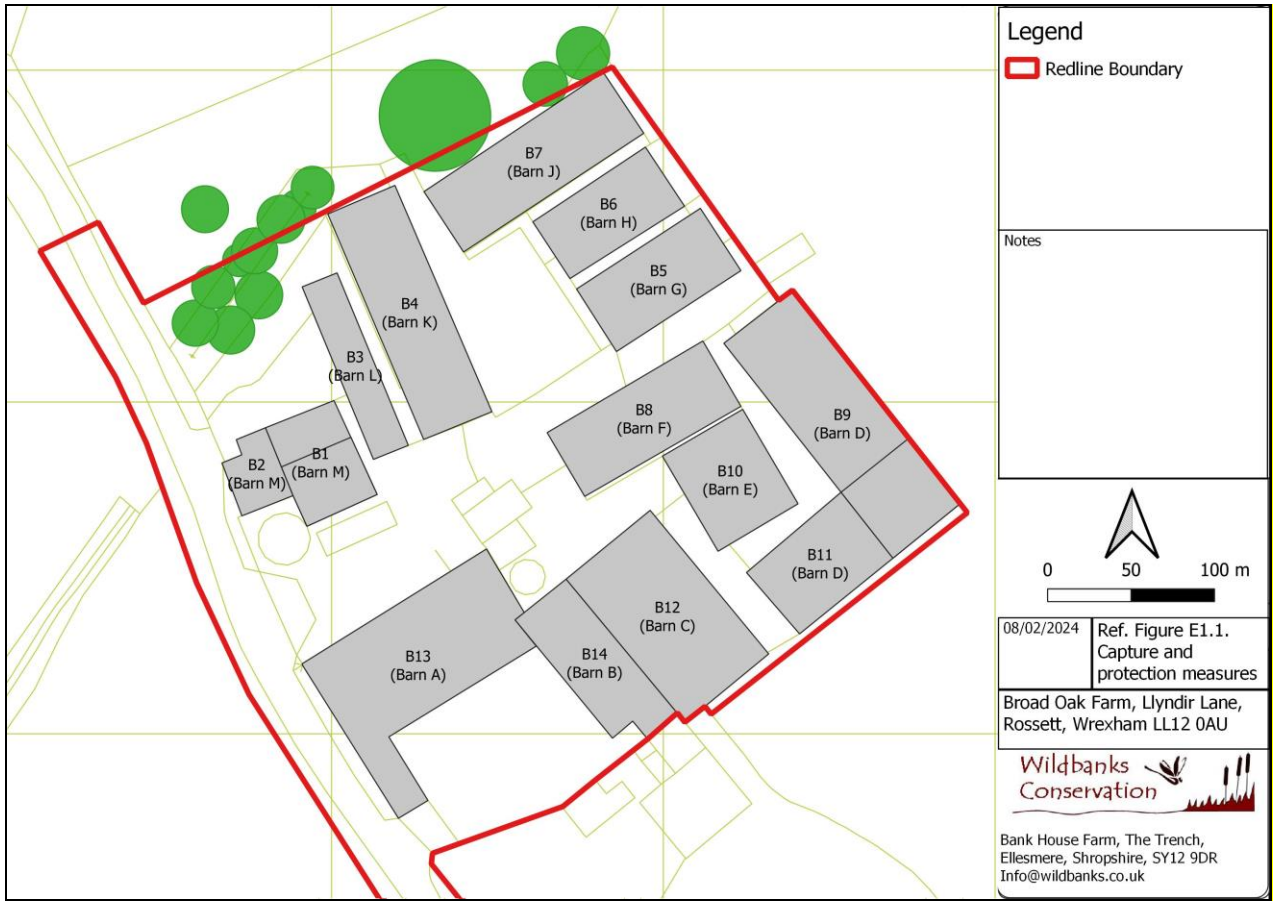


Figure C4.1. Site plan.

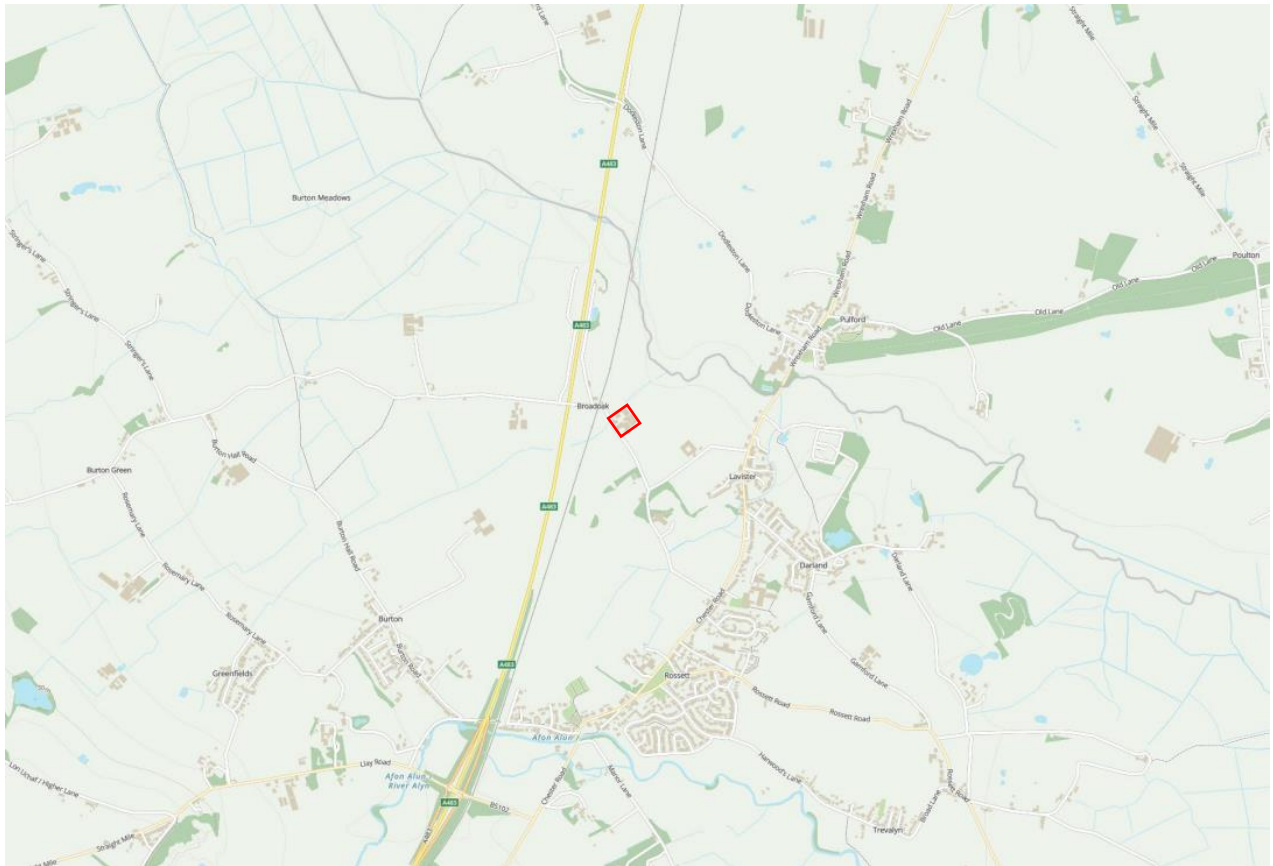


Figure C4.2. Site location plan (OS Maps, 2024).

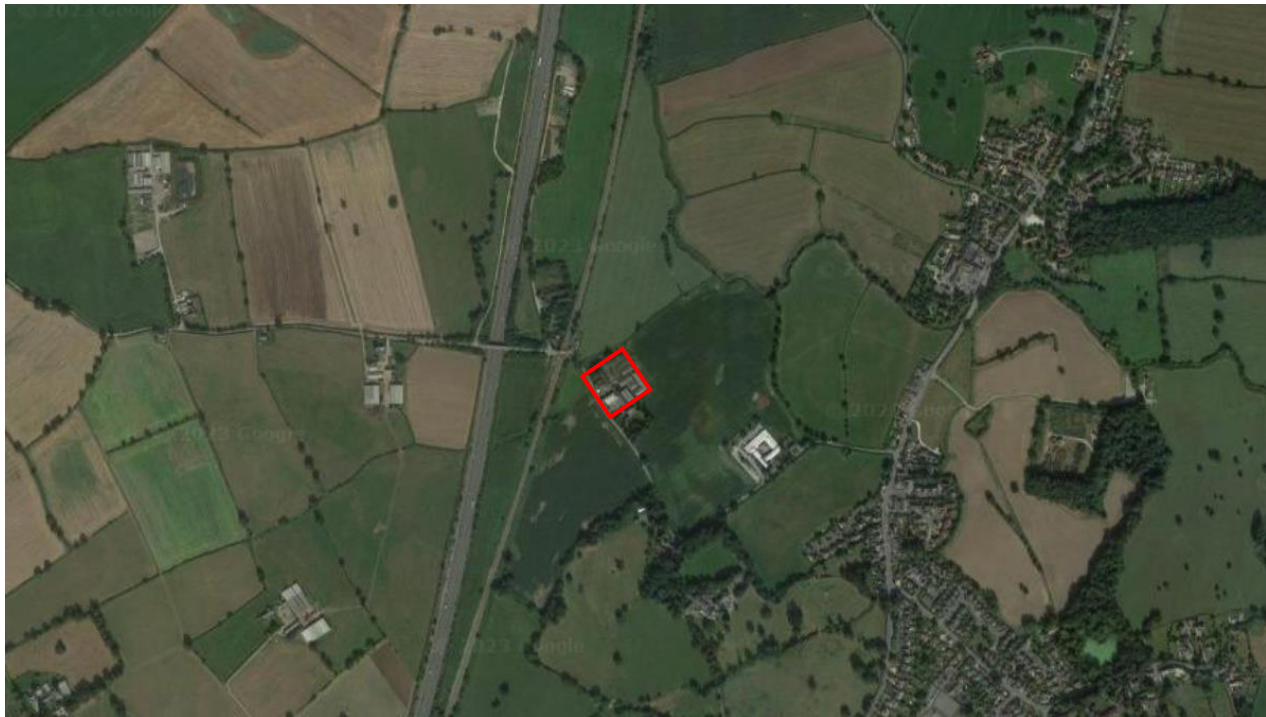


Figure C4.3. Aerial photo (Google Maps, 2024).

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

This should be based on daytime visits (to include description of roost and habitat relevant to bat commuting/foraging behaviour). Include annotated photographs if applicable and aerial photographs if available (to show habitat connectivity).

The site consists of an old pig farm with associated barns and buildings, on the fringe of the village of Rossett and comprises of fourteen agricultural buildings. The adjacent farmhouse and office, to the south of the Site, are subject to a separate planning application and are excluded from this licence application.

Broad Oak farm consist of 7 single storey pig sheds, red brick with cement fibre board roof and 7 buildings of red brick and slate or cement fibre board roof. Some of the buildings are attached, others are detached. The buildings have clearly had different uses from open fronted buildings for storing hay and straw, to enclosed sectioned buildings used for housing animals and offices and workshops.

The farm is surrounded by arable and pasture fields and there are a number of mature trees in close proximity, many of which are within the garden of the farmhouse. The railway line that runs close to the farmstead and the adjacent lane provide potentially good commuting habitat for bats.

For locations of each of the buildings referenced in the following Table C5.1, please refer to Figure C4.1.

The habitats on Site provide low value commuting and foraging habitat for bats. However, the adjacent mature roadside hedgerows, scattered scrub and mature trees provide foraging and commuting habitat for bats.

Table C5.1. Photos of each building on the Site. Source of photos include 2016 Ecology Appraisal, 2018 Bat Report and/or taken during the site visit on 11 January 2024.

Building No.	Description	Photographs

1	External eastern elevation connected to Building 2 to the southwest.	
2	External northwest elevation connecting to Building 1 to the northeast. Internal building B2	 

3	Southwest elevation	 A photograph showing the southwest elevation of a brick building. The wall is made of red and dark bricks, with a corrugated metal roof. A white downspout is visible on the right side. The ground in front is covered with moss and a concrete path.
4	Northeast elevation	 A photograph showing the northeast elevation of a brick building. The wall is made of red bricks, and there are several white rectangular panels or doors. A green utility pole is visible on the left. The ground is covered with moss and a concrete path.
5	Southeast elevation	 A photograph showing the southeast elevation of a brick building. The wall is made of red bricks, and there are several white rectangular panels or doors. A green utility pole is visible on the left. The ground is covered with moss and a concrete path.

6	Southwest elevation	
7	Northeast elevation	
8	Southwest elevation	

9	Southwest elevation connected to Building 11 to the south. Location of Roost R2 shown Internal	 
10	Northeast elevation	

11	Southeast elevation	
12	Northwest elevation connecting to Building 14 to the southwest.	
13	Southeast elevation connecting to Building 14 to the east. Internal view of the barn proportion of the building.	

	Internal view of the living quarters of the building.	
14	Southwest elevation connecting to Building 12 to the northeast. Internal view of the underside of the roof tiles within the open entryway (photo right) and within the upper floor room to the southeast of the building (bottom right photo).	 



C.6 Field survey(s).

Include survey method (emergence counts, dawn surveys, site inspections), timings (day/evening), weather conditions (wind, rain, temperature – tabulated for multiple survey visits), personnel involved (provide individual licence numbers, if held) and details of experience/competence in this type of work, and equipment used (type of bat detectors and logging equipment). Also include any constraints and justifications for departures from best practice.

The barns were inspected both externally and internally for evidence of the presence of bats. The survey started with an examination of the external parts of the barn to locate potential roosting features such as lifted/missing tiles, gaps around soffits, barge boards and similar. Evidence such as staining, droppings, urine splashes and individuals were also searched for. With no evidence externally, an internal inspection was undertaken, searching for the same evidence. A sample was taken of any droppings found, sent for DNA analysis.

Dusk and dawn surveys were undertaken during appropriate weather conditions. The dusk surveys commenced 15 minutes before dusk until 1.5-2 hours after and the dawn survey commenced 1.5-2 hours before dawn until 15 minutes after.

All of the surveyors are experienced in bat activity surveys; Rebecca Sambrook BSc (Hons) MCIEEM (lead surveyor), Dr Martin Page MCIEEM, Jack Halpin MCIEEM BSc (Hons), Tim Green, Carl Capewell (NRW licence 78232:OTH:CSAB:2018), Mark Benson, Mick Smith MCIEEM (NRW licence S092489/1), Lisa Borghesi, Chris Gosset, Joe Taylor, , Chris Grindle, Alex Jones, Luke Osman, Vincent Riozzi and Taylor Lewis. Surveyors were positioned strategically so that good coverage of the building/s was achieved. The surveyors used the following bat detectors; a Wildlife Acoustics' EM3+, an Anabat SD2, an Elekon Batlogger M Bat, an Anabat Walkabout and Wildlife Acoustics' EM Touch detectors. The data was analysed by the surveyors using Wildlife Acoustics' Kaleidoscope 3.1.1 software and BatSound software and reviewed by Rebecca Sambrook. A night vision camera was also used.

In 2017, eight buildings (B5, 8 – 14) within the red line boundary were identified for survey. In 2018, the size of the development expanded to include Buildings 1-7, which were then also subject to bat activity surveys.

All surveys followed best practice with no significant limitations.

An additional site visit was undertaken on 11 January 2024 by Rebecca Sambrook, Licensed Ecologist, Mick Smith (Wildbanks Conservation Limited; NRW bat licence number S09289/1), Accredited Agent, Jack Halpin, and Licensed Assistant, Tanya Cobb, to familiarise themselves

with the Site. Known roost features were inspected for change of bat activity and updated photos taken of relevant areas.

Table C6.1. 2017, 2018, 2019 and 2021 Survey Data.

Date	Building Number	Survey Method	Time	Temperature	Weather conditions
22.06.2017	13 & 14	Emergence count	Dusk	18°	Dry, mild, bright
29.06.2017	8, 9, 10, 11, 12	Emergence count	Dusk	13°	Damp, mild, cloudy, light drizzle until 22.00
30.06.2017	5, 8, 9, 10	Emergence count	Dusk	15°	Mild, dry
07.07.2017	9, 13 & 14	Dawn survey	Dawn	15°	Mild, dry
26.07.2017	8, 9, 10, 11, 12,	Building inspection	AM	16°	Warm and dry
26.07.2017	13 & 14	Building inspection	PM	16°	Warm and dry
27.02.2018	1, 2, 3, 4, 5, 6, 7	Building inspection	AM	0°	Cold, snowy
14.09.2018	2	Building inspection	AM	16°	Mild, dry
14.09.2018	2	Emergence count	Dusk	15°	Dry, mild, calm
30.09.2018	2	Dawn survey	Dawn	10°	Dry, cool, calm
03.06.2019	2	Emergence count	Dusk	14°	Mild, dry, overcast
15.06.2019	13, 14	Emergence count	Dusk	17°	Dry, warm, still
01.08.2019	2	Dawn survey	Dawn	14°	Dry, mild, slight breeze
05.08.2019	13, 14	Dawn survey	Dawn	14°	Dry, mild, slight breeze
10.09.2019	2	Emergence count	Dusk	16°	Dry, mild, still
11.09.2019	All 14 buildings	Building inspection	PM	16°	Dry, mild, still
11.09.2019	13, 14	Emergence count	Dusk	15°	Dry, mild, still
13.07.2021	2	Emergence count	Dusk	15°	Dry, warm, still
14.07.2021	12	Emergence count	Dusk	16°	Dry, mild, still
19.07.2021	3, 4	Emergence count	Dusk	17°	Warm, dry, still
21.07.2021	1	Emergence	Dusk	22°	Very warm, dry, still

		count			
30.07.2021	13, 14	Emergence count	Dusk	15°	Dry, mild, still
16.08.2021	8, 10	Emergence count	Dusk	15°	Dry, mild, still
18.08.2021	5, 6, 7	Emergence count	Dusk	16°	Dry, mild, still
19.08.2021	9, 11	Dawn survey	Dawn	15°	Still, mild, dry
09.09.2021	All 14 buildings	Building Inspection	PM	15°	Cool with light breeze
11.01.2024	All buildings	Site visit	PM	8°	Cold and dry

C.7 Survey Results.

Summarise findings in table form (if appropriate); provide clear, annotated and cross-referenced maps/plans/photographs to show roost locations, flight lines, access points, dimensions of existing roosts etc.). Raw data must be appended, including samples of sonograms, results of DNA analysis of droppings.

Table C7.1. Preliminary Building Inspection Results from inspection on 27 February 2018.

Building Number	Potential to support bats	Evidence of bats
1	Low	None
2	Low	Single butterfly wing in first floor
3	Low	None
4	Low	None
5	Low	None
6	Low	Occasional butterfly wing
7	Low	Occasional butterfly wing
8, 9, 11	Low: for crevice dwelling species	Within Building 9 & 11 butterfly wings were found, though considered unlikely roosting brown long eared
10	Low	None
12	Low/negligible	None
13	High	Brown long eared droppings and feeding remains
14	High	Brown long eared droppings and feeding remains. 12 brown long eared bats identified hanging up on the main ridge beam.

Table C7.2. Results of activity surveys and building inspections throughout 2017, 2018, 2019 and 2021.

Date	Survey Type	Result
22.06.2017	Dusk	3-4 BLE emerged from southern-most broken window on northeast elevation of Building 13 (Roost R5; see Figure C7.1). 4 BLE recorded flying in roof void of Building 14; 3 left building via hole in roof, 1 left via large open doorway (Roost R8; Figure C7.2). 3 Common pipistrelle and 1 Soprano pipistrelle emerged from large open doorway of Building 14 (Roost R7 and R6, respectively; Figure C7.2).
29.06.2017	Dusk	Potential emergence of Common pipistrelle between Building 9 and 10. Confirmed as Roost R2 during dawn

		survey 7/7/17.
30.06.2017	Dusk	1 Common pipistrelle emerged from air vent on Building 9 (Roost R2; Figure C7.3).
07.07.2017	Dawn	5 BLE entered Building 13 through broken window (Roost R5; see Figure C7.1). 3-4 BLE entered Building 14 through hole in roof (Roost R8; Figure C7.2). 1 Common pipistrelle entered Building 9 through air vent (Roost R2; Figure C7.3).
26.07.2017	Building Inspection	12 BLE hanging up from ridge beam in Building 14 (Roost R8; Figure C7.2).
27.02.2018	Building Inspection	No results of note.
14.09.2018	Dusk	2 Soprano pipistrelle emerged from under rafters of Building 2 northwest aspect (Roost R1; Figure C7.4). Roost suspected to be located under rafters, however, daylight shining through the inside of roof space, could provide bats with access to entire roof space for roosting.
30.09.2018	Dawn	No bat entries recorded during survey.
03.06.2019	Dusk	No emergence
15.06.2019	Dusk	1 Soprano pipistrelle, 1 Common pipistrelle and 1 BLE emerged from large open doorway in Building 14 (Roosts R6, R7 and R8, respectively; Figure C7.2). 1 BLE emerged from the hole in the roof of Building 14 (Roost R8; Figure C7.2). 1 Common pipistrelle emerged from an open window in Building 13 (Roost R4; Figure C7.1).
01.08.2019	Dawn	No bat entries recorded during survey.
05.08.2019	Dawn	1 Soprano pipistrelle and 1 Common pipistrelle re-entered Building 14 via the large open doorway (Roosts R6 and R7, respectively; Figure C7.2). 1 Common pipistrelle re-entered Building 13 through an open window (Roost R4; Figure C7.1).
10.09.2019	Dusk	No emergence
11.09.2019	Building Inspection	41 BLE hanging up from ridge beam in Building 14 (Roost R8; Figure C7.2).
11.09.2019	Dusk	2 Common pipistrelles emerged from Building 14; one from the large open doorway and one from the hole in barn roof (Roosts R7; Figure C7.2). 1 Common pipistrelle emerged from a gap in the verge in the roof of Building 13 (Roost R3; C7.1)
13.07.2021	Dusk	1 Common pipistrelle emerged from under rafters of Building 2 northwest aspect (Roost R1; Figure C7.4).
14.07.2021	Dusk	No emergence
19.07.2021	Dusk	No emergence
21.07.2021	Dusk	No emergence
30.07.2021	Dusk	2 Common pipistrelle from under a ridge tile of Building 14 (Roost R9; Figure C7.2)
16.08.2021	Dusk	No emergence
18.08.2021	Dusk	No emergence
19.08.2021	Dawn	No re-entries
09.09.2021	Building Inspection	Large pile of BLE droppings found under ridge beam of

		Building 14 (Roost R8). Sample taken and eDNA results attached to this application, reference "ADAS Bat Speciation Results Letter - 1040030 R Sambrook 4648221[70].pdf". (Figure C7.2).
11.01.2024	Site visit	1 BLE hanging from roof beam of Building 14 (Roost R8; Figure C7.2).

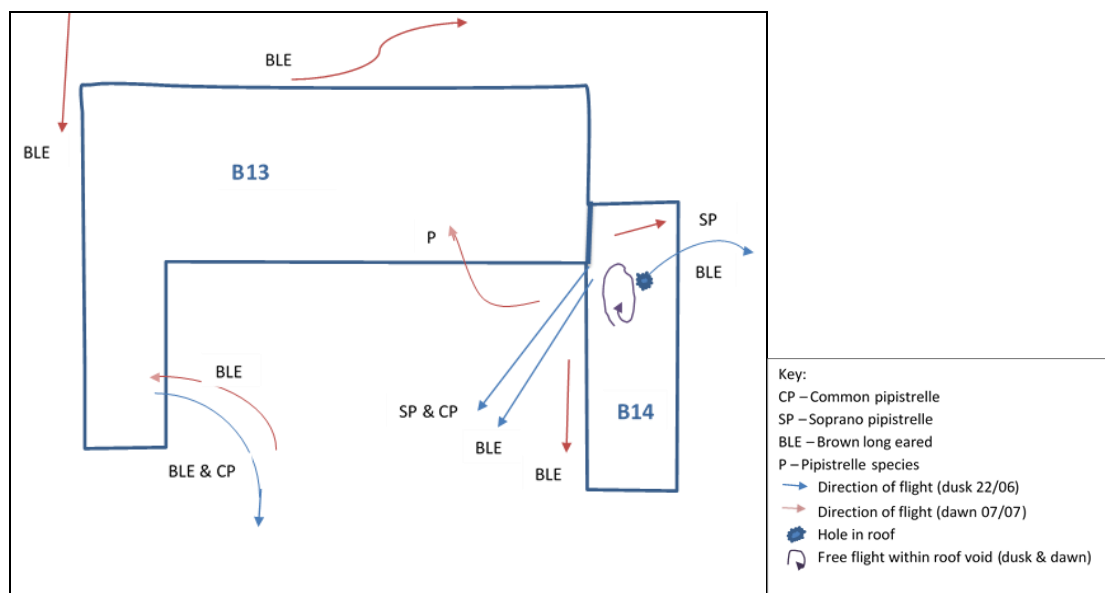


Figure C7.5. Diagram showing flight lines of bats recorded in the dusk survey on 22.06.2017 and the dawn survey on 07.07.2017 around Buildings 13 and 14. Diagram taken from the 2018 Bat Survey and Mitigation Report.

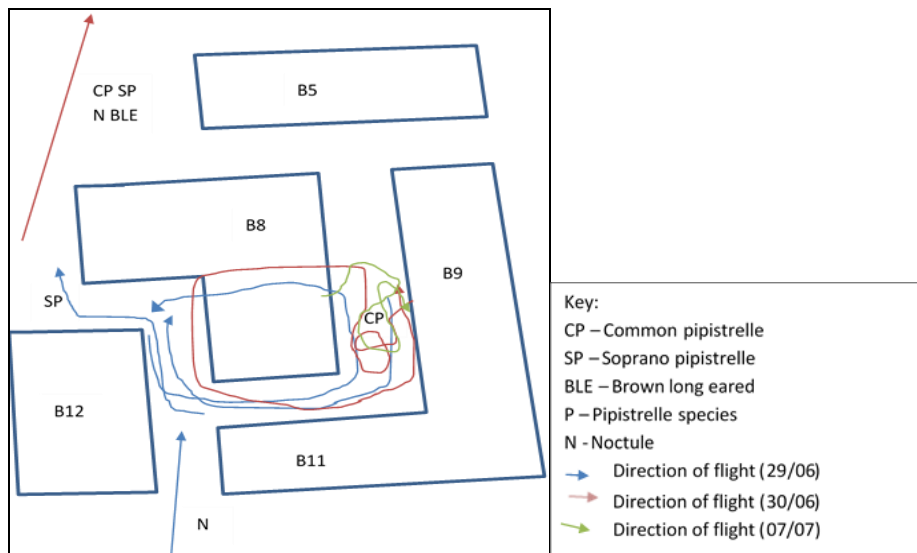


Figure C7.6. Diagram showing flight lines of bats recorded in dusk surveys on 29.06.2017, 30.06.2017 and the dawn survey on 07.07.2017 around Buildings 8-12. Diagram taken from the 2018 Bat Survey and Mitigation Report.

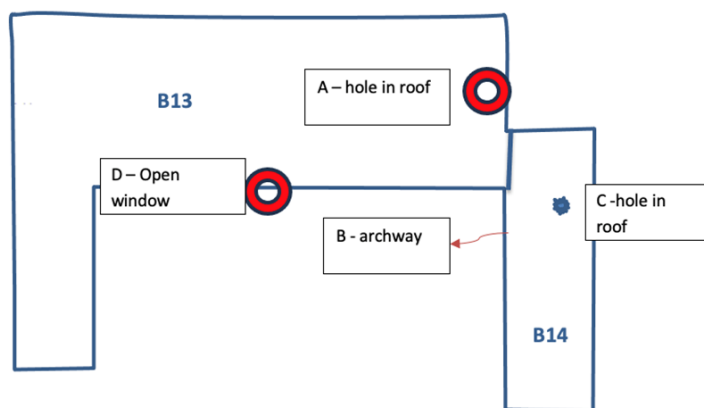


Figure C7.7. Diagram showing flight lines and emergence locations of bats recorded in dusk surveys on 15.06.2019, 11.09.2019 and the dawn survey on 05.08.2019 around Buildings 13-14. Diagram taken from Sambrook Associates 2019 bat activity survey results.

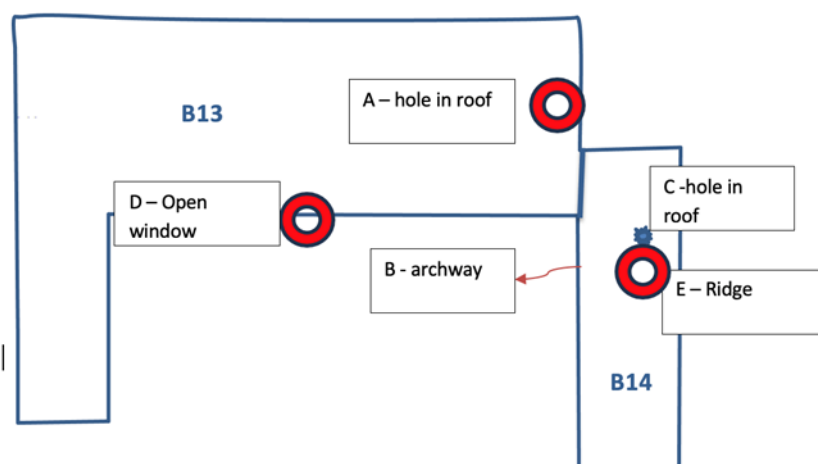


Figure C7.8. Diagram showing flight lines and emergence locations of bats recorded in dusk surveys on 30.07.2021, around Buildings 13-14. Diagram taken from Sambrook Associates 2021 bat activity survey results.

C.8 Interpretation/evaluation of survey results (See Bat Mitigation Guidelines section 5.8 and Bat Survey Guidelines Ch11)

Provide count/estimate of bat numbers, status of site (e.g. hibernation, maternity or feeding roost, swarming site etc), roost significance, constraints on survey (e.g. time of year, cold weather, access problems – justify as necessary).

Table C8.1. Assessment of bat roost status, conservation significance and scale of impact on local population viability.

Roost Ref.	Building Number	Identified when	Bat Species	Peak Count of Bats	Roost status	Conservation Significance	Scale of Impact on Population Viability
R1	2	2018,2021	Soprano pipistrelle	2	Transient	Low	Low
R2	9	2017	Common pipistrelle	1	Transient	Low	Low
R3	13	2019	Common pipistrelle	1	Day	Low-moderate	Medium
R4		2019	Common pipistrelle	1	Day	Low-moderate	Medium
R5		2017	Brown long eared	5	Day	Moderate	High
R6	14	2017,2019	Soprano pipistrelle	1	Day	Low-moderate	Medium
R7		2017,2019	Common pipistrelle	4	Day	Low-moderate	Medium
R8		2017,2019, 2021,2024	Brown long eared	41, including young	Maternity	Moderate-high	High
R9		2021	Common pipistrelle	2	Day	Low	Low

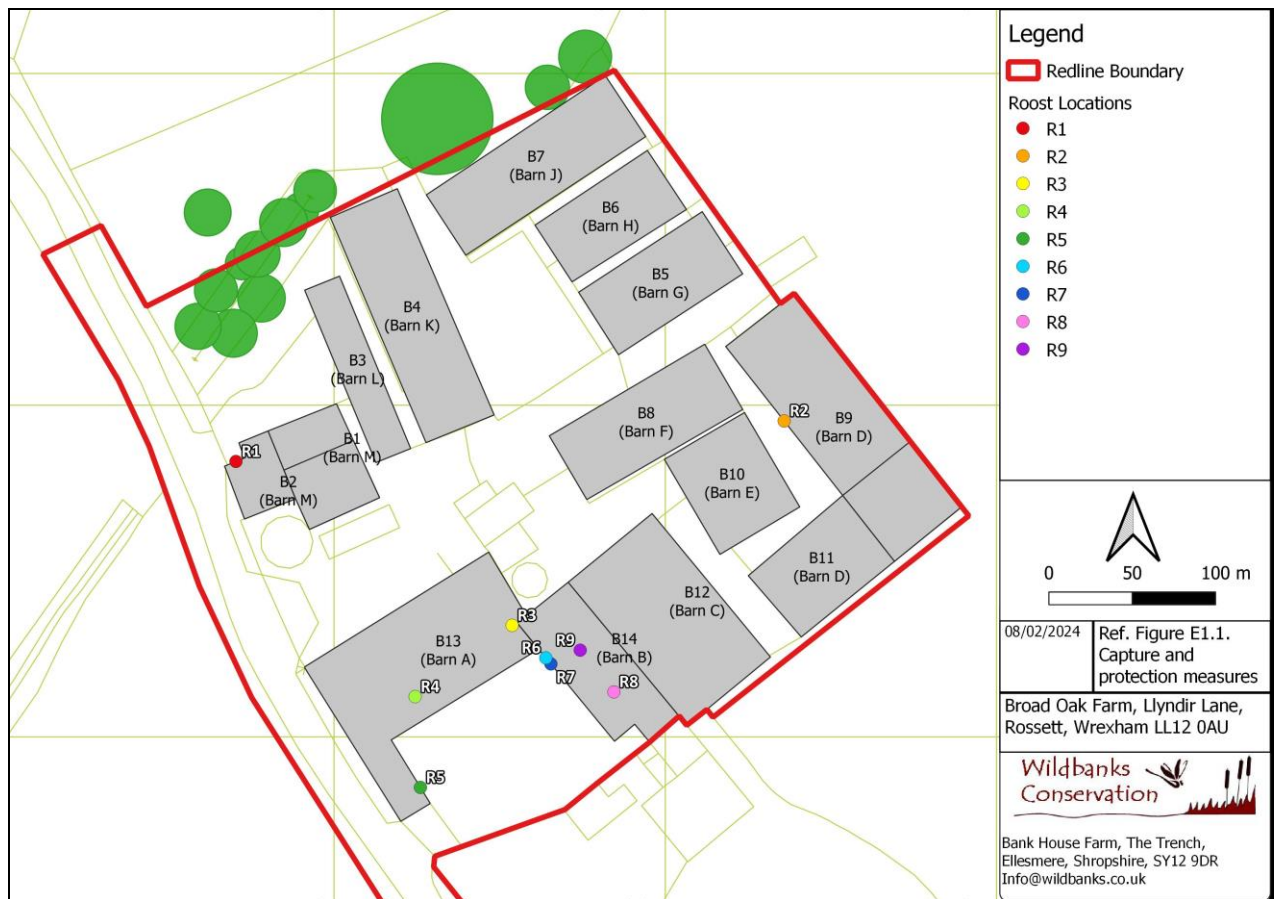


Figure C8.1. Location of bat roosts.

The only survey constraints of note include: the survey on 29 June 2017 started with light drizzle but this did not stop the emergence of bats and the level of activity was in fact higher than that encountered on the drier evening of the 30 June 2017.

During the 27 February 2018 building inspection, some of the ground immediately adjacent to barn walls was covered in snow and therefore may be covering evidence, however, due to the time of year it is unlikely that evidence such as droppings, staining etc would be present anyway.

The 2018 activity surveys were undertaken later in the season (September) which can often result in maternity colonies being missed. However, Building 2 (Barn M), the subject of these activity surveys, was also inspected internally at this time and no evidence of accumulations of droppings or feeding remains or live bats were identified throughout the building and there are no cracks, crevices, roofing membrane or cavities that large groups of bats, such as maternity colonies could use.

Many of the buildings are attached to each other and so some of the buildings were surveyed collectively. Nevertheless, all of the external walls were covered by strategic positioning of the surveyors.

D Impact assessment – potential impacts in absence of mitigation/compensation. See Bat Mitigation Guidelines (section 6.2) and Wray et al (2010)²

D.1 Short-term impacts: disturbance

E.g. noise, vibration, dust, lighting, access, or obstruction due to scaffolding and plastic sheeting.

² Wray, S., Welss, D., Long, E. & Mitchell-Jones, T. (2010) Valuing bats in ecological impact assessment. In Practice, No 70, Institute of Ecology and Environmental Management

Demolition work will commence before the bat breeding season (early April), when bats are not likely to be present. A staggered approach to building demolition and roost destruction allows for low bat potential buildings e.g. Buildings 3, 4, 5, 6, 7, 8 and 10, do be demolished from April to August, during bat breeding season, with no disturbance to the roosts within Buildings 2, 13 and 14. Buildings 2, 13 and 14 will be compartmentalised from the development works by clear signage and/ or Heras fencing with mesh covering. The recorded southern flight access to these roosts will remain intact until September, when breeding season ends and risks to disturbing breeding/feeding/commuting bats decreases. Short term disturbance impacts include noise from human presence, construction machinery and hand-tools causing disturbance during the day during the spring and summer of 2024.

One mature hedge on the opposite side of the road to the site along the southwestern boundary will be moved 1-3m further west, into the adjacent neighbour's land as part of a requirement by planning to achieve sight lines for access on to the highway. This is to improve sightlines up and down the road when exiting the Site. The current hedge provides a linear feature by which bats use to commute along Llyndir Lane. In place of the mature hedge, a temporary fence will be installed in place of the hedge before a new hedge is planted. This fence/new hedge will maintain the linear feature for bats to use whilst commuting and limits disturbance. The western aspect of Building B13 and boundary walls will remain opposite the altered hedgerow and allow the continued linear feature of the lane to be commutable by bats.

D.2 Long-term impacts: roost modification

E.g. new entrances (including human access e.g. for servicing/maintenance), change in size of roost space, changes in airflow etc., temperature, and humidity. Note that impacts can be positive or negative as this is in absence of mitigation.

Not applicable – All current roosts are being permanently lost.

D.3 Long-term impacts: roost loss.

Impact on different species populations to be taken into account at local, regional, and national level.

In the absence of mitigation, the demolition/renovation of the buildings will result in the loss of nine roosts, including a Brown long eared maternity roost and a loss of large numbers of roosting opportunities for bats.

Eight of the roosts are Pipistrelle spp. and Brown long eared day roosts with low impact on the local, regional and national populations of this species.

One Brown long eared maternity roost is present with moderate impact on the local population, and low impact on the regional and national population of the species.

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

E.g. loss of linear features such as hedges, tree lines, increased lighting, severance of flight lines by roads/rail lines.

Lighting will be designed in accordance with the recent guidance Bats and Artificial Lighting at Night Guidance Note 08/23, a joint publication between the Institute of Lighting Professionals and the Bat Conservation Trust. The proposals do not include widespread lighting and so flight lines will not be lit.

D.5 Post-development interference impacts.

E.g. extra street lighting, use of loft space as storage.

No street lighting proposed.

Bats will not be able to access the loft spaces of any of the renovated buildings and, therefore, no impacts are anticipated if future residents wished to use the lofts.

No other post-development interference impacts identified.

D.6 Predicted scale of impact on species status at the site, local county and regional levels.

Include a scaled plan/s showing location and extent of vegetation to be cleared in the context of the current site, results of the survey information, bat exit points and flight routes etc

Removal of the mature hedge should not be detrimental to the local population of bats, as the linear feature is being replaced by a temporary fence and a new hedge planted as compensation plus the retention of the walls of Building B13 etc. This should also not impact the status of Pipistrelle spp. and Brown long eared bat populations at a county and regional level as there are other significant linear features in the area, such as railway lines, roads and hedges.

No other substantial vegetation or flight lines are being cleared or altered, so scale of impact at county and regional level are predicted to be low.

Delivery Information – Mitigation, compensation and monitoring

Description of how the impacts will be addressed in order to ensure no detriment to the maintenance of the population at a favourable conservation status.

E Works to be undertaken

Please identify which works will be undertaken or supervised by a licensed ecologist

E.1 Capture and exclusion (if applicable).

Timings, effort, methods to be employed, care of bats, release sites etc. Include diagrams to show capture/exclusion apparatus if non-standard techniques are proposed. The method statement should also include contingency plans for dealing with any bats found during the course of the works.

Prior to works commencing, the whole Site will be inspected for any new evidence of bat activity. The areas around known roosts, accessible holes and crevices will also be checked by the named ecologist for roosting bats, including using an endoscope where necessary. Building B9 which has Roost R2 within it (x2 Com pip) will be demolished to allow the construction of the bat barn. A licensed ecologist or Accredited Agent will inspect the roost, capture any bats and be on site to oversee the building demolition, there are no timing constraints to this work. Due to the size and scale of the rest of the buildings, it is not possible to inspect every potential feature, therefore, a licenced ecologist will be on Site during the roof stripping of buildings B2, 9, 13 and 14 to oversee works within the vicinity of roosts and other areas as deemed necessary. If bats are found to be present, works will stop immediately, and the licensed ecologist will transfer the bats to the alternative bat boxes installed on a suitable tree to the north of the Site or the bat loft. If bats are not found, works will continue.

If bats are found during the works at any stage while the named ecologist or accredited agent is not present, all works will stop immediately, and they will be called and will decide on what should happen. Which may include stopping work until they can come to site to assess the situation.

The staggered approach to building demolition and roost destruction allows for low bat potential buildings e.g. Buildings 3, 4, 5, 6, 7, 8 and 10, do be demolished from April to August, during bat breeding season, with little disturbance to the roosts within Buildings 2, 13 and 14. Heras fencing will be installed around the perimeter of Building 12, 13 and 14 (Barns A, B and C), during the initial demolition works of the low bat potential buildings (Figure E1.1. Capture and protection measures), to prevent the disturbance of Roosts R3, R4, R5, R6, R7, R8 and R9 before the end of the bat breeding season.

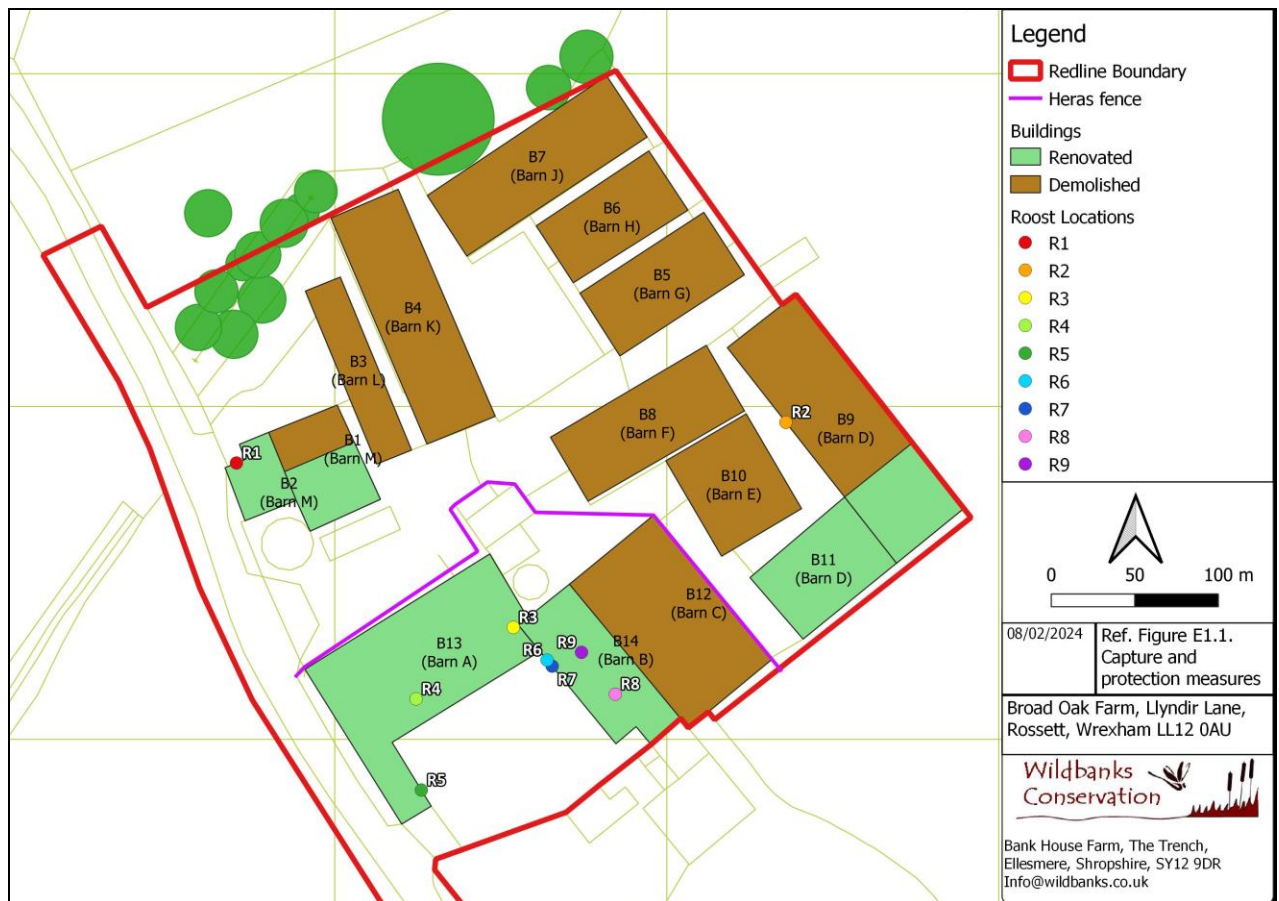


Figure E1.1. Capture and protection measures.

E.2 Bat roosts and habitat

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

Provide details of all re-roofing works for example, replacement of tile type, specification of roofing membrane, use of insect guards, timber treatment; also include addition or changes in insulation and any impact on temperature/humidity. Explain how roost entrances will be retained and if purpose built entrances are required a scaled drawing of their design is required. Any enhancements to the roosts such as crevice provision should also be detailed.

No roost to be retained.

E.2.2 Modification of existing roost(s)

Include dimension details, scale drawings of the roost and access points, orientation. State which services will be incorporated in the roost that might require regular servicing, for example, lift winding gear, electrical or plumbing services, gas boilers; partitioning of voids where a large property is being converted to a number of units, etc..

No roost to be modified.

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

Include dimension details including access points, location details, materials to be used e.g., timber, sarking felt, etc., aspect, justify variation from the original roost. Diagrams of widely available standard bat box designs are not required; just refer to bat box name and reference number, e.g., FF 1 Schwegler.

Temporary bat boxes will be installed on a suitable tree to the north of the Site to house bats found during the works.

The dedicated bat barn will be built within the part-demolished/modified Building 9 (Barn D). The bat barn will not be used or considered to be available for use by anybody for any means. The barn will be locked and only named individuals will have a key to access it. See Figure E2.3a Mitigation Plan.

Building 9 (Barn D) will be partly demolished but the southern-most end will be retained and modified to provide a dedicated structure that aims to provide suitable, long term, secure roosting opportunities for all of the roosts on Site which will be destroyed as part of the development. See Figure E2.3b Design of Bat Barn. uploaded with this application for bat barn design. The bat barn will comprise:

- 12250mm x 12250m x 6080mm building which will be split over two floors creating a loft space with a minimum height of 2.2m floor to apex. A loft hatch will be constructed within the loft floor/ground floor ceiling. A locked door for restricted personnel to enter the building for monitoring/management.
- The building will include:
 - a 400mmx200m letter box style entrance at c. 4m height on the southeast gable end (baffled internally to reduce light/drafts)
 - 2no. Habibat access slates on Northeast elevation
 - raised ridge tiles
 - gaps at eaves to allow access into building
 - integrated bat box (e.g. Ibstock C or similar) on the southeast gable end.

An integrated Ibstock bat roost will also be installed on the western gable wall of the renovated Building 2 (Barn M). This will directly compensate for the loss of the roost in this building.

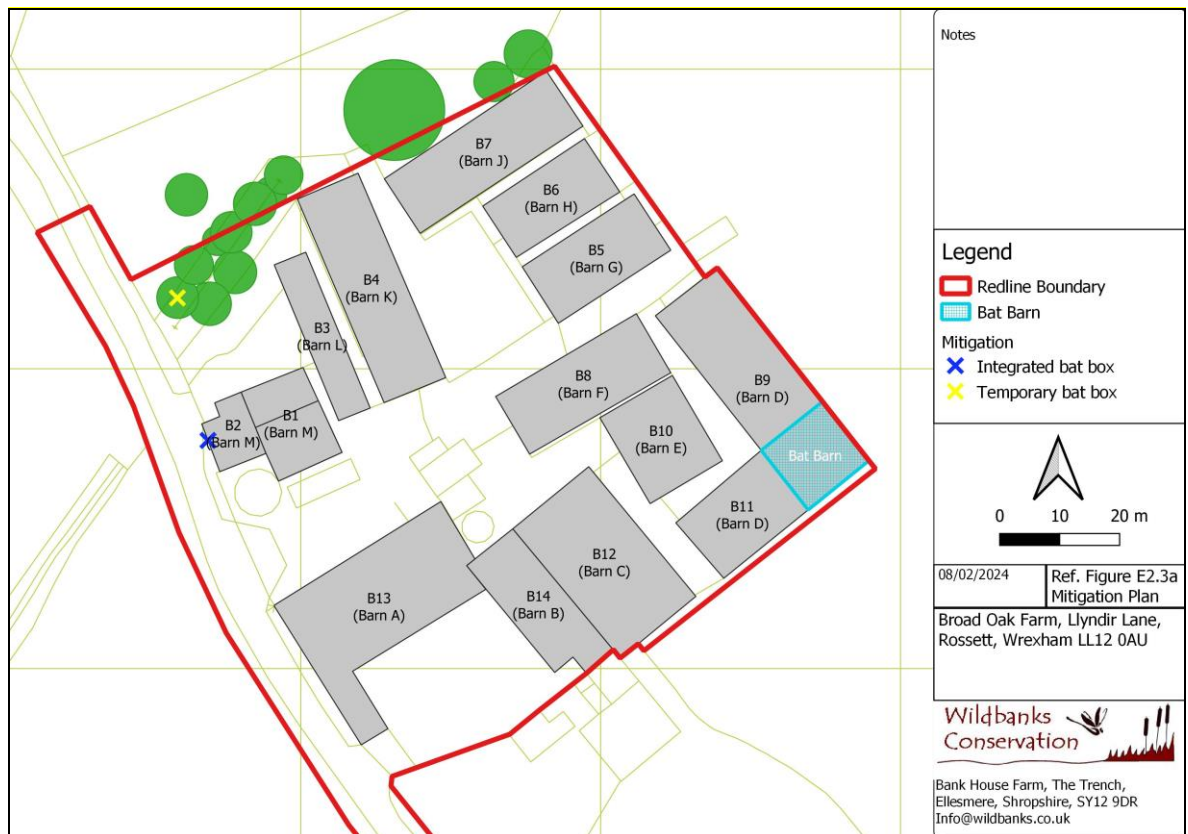


Figure E2.3a. Mitigation Plan

Figure E2.3b. Bat House Design Plan - appended

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

Include details of measures to ensure that existing bat habitat (e.g. vegetation features close to roosts and/or used as flightlines; foraging habitat) will be retained and not damaged during construction. For new or modified habitat, specify design, habitat type, planting schemes & locations, provenance of imported plants, consideration of biosecurity impacts.

A landscaping scheme will be designed for the benefit of wildlife, including the use of native shrubs and plants and nectar rich species. This would improve invertebrate populations around the Site and, hence, increase foraging resources for bats.

E.2.5 Scaled maps/plans

To show proposals/mitigation outlined above in relation to existing and proposed habitat features. A GIS data layer may be included with your application to illustrate locations of roosts and features in E.2.1 to E.2.3.

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

Include measures to ensure compliance with this method statement.

Regular audits to be undertaken by the named Ecologist or his nominated person to ensure compliance with this method statement. A final sign off visit will be undertaken to audit the mitigation and compensation measures are appropriately sited and installed.

The named ecologist or their accredited agent will be in attendance on site to observe and advise as required by the mitigation strategy and licence. The Ecologist will be employed on a call-on basis to provide advice throughout the development works and will undertake two audits: one mid-way through the works, and the other at the end of works, providing a final sign off.

E.4 Mitigation contingencies

Describe any contingency proposals including circumstances when the contingencies will be instigated.

As planning permission has been granted based on the current bat barn structural specifications and designs, it is not possible to change location or structure of the mitigation bat barn as a contingency. However, in the unlikely event that the internal design or layout requires alteration to improve its function as a BLE roost, the Lead Ecologist and Accredited Agents, will consult NRW to discuss any improvements. Regular internal monitoring of the bat loft including installation of data logger to record temperature and humidity will be carried out.

In the event that bat species, or more individuals than are covered under this licence are found during the course of the works, works will cease immediately, and the Ecologist will review the strategy, consult with NRW and devise way forward. Works will not be re-started until any required licencing modifications are in place.

Should the demolition of Building 13 & 14 not be complete in autumn/winter 2024, for any reason, the demolition will be completed the following autumn/winter (2025) and protection measures maintained until then to avoid disturbance during bat breeding season of the maternity roost (R8).

E.5 Biosecurity risk assessment

Consider presence of non-native species and disease on site and actions to be undertaken that will prevent their spread onto or off the site.

No INNS have been identified on Site. However, should they be subsequently identified on Site, a biosecurity method statement will be devised to control or prevent the spread. To prevent spread of disease (if present), a foot wash of a disinfectant such as FAM30 will be available for all visitors to use.

Anybody handling bats must be licenced and be up to date with their rabies vaccination and wearing appropriate protective equipment including gloves.

After handling any materials that may have bat droppings or urine (as identified by Licensed Ecologist or AA features), all operators will be advised to follow hand washing protocols as identified within the Site Tool Box Talk. Washing facilities will be provided on site.

F Post-development site safeguard

F.1 Habitat/site management and maintenance

Include ongoing land management proposals, details of who will be responsible for management and maintenance, on going running costs, site/structure ownership and monitoring development of new habitats.

The scheme of monitoring and maintenance of the new bat mitigation barn has been devised in consultation with Matthew Ellis of Natural Resources Wales who has kindly advised on the requirements of NRW to satisfy this licence application.

NRW has recommended that the management of the bat barn is secured in the long term by engaging a third sector body to purchase and then maintain and monitor the building. The conservation organisation that has been selected is Holding Habitats Community Interest Company (HHCIC) in Wrexham.

The site owner Funky Furniture Hire (Properties) Limited (FFHPL) has committed to sell the freehold bat mitigation barn to HHCIC. Please see "TP1 for Bat Barn" uploaded with this application, for the draft sale of contract and the TP1 form. The contracts will be signed upon granting of the NRW EPS Development licence.

A maintenance schedule has been devised and will be undertaken by HHCIC as follows:

- undertake monthly inspections to check the integrity of the building and confirm no signs of defect or damage. External check only, no admission to inside bat loft.
- undertake annual repair and maintenance work to the Property (i.e. gutter cleaning, bat access point maintenance, vegetation management) to ensure flight lines are maintained to/from the building.
- Internal cleaning of the building including removal of large accumulations of bat droppings, feeding remains and other debris, where necessary. During the maintenance, numbers of bats, droppings etc will be noted and form part of the monitoring results. Under direct supervision of Licenced ecologist or Accredited Agent.

F.2 Population monitoring, roost usage etc.

Include details of monitoring effort, timing, personnel involved and equipment to be used.

A monitoring programme will be implemented for the first 10 years and responsible for delivery on HHCIC in Years 1, 3, 5 and 10 to comprise: Monitoring programme to be undertaken by Licensed Ecologist and/or Accredited Agent to ensure compliance with license.

- Dusk survey in June or July undertaken in accordance with best practice guidance relevant at the time of the survey (Bat Conservation Trust Handbook Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition) (Collins, 2016)). Survey to include maximum of three surveyors (which will provide ample coverage of the building) using handheld (preferably full spectrum) detectors to record activity around the building, specifically focussed on any emergences or re-entries. Timing, species, number of individuals and behaviour to be recorded.

- A physical inspection of the building to search for signs of use including (but not limited to), staining, droppings, feeding remains, individuals. This can be undertaken on the same day as the dusk survey. A thermal data logger will also be checked.

Results are to be provided to Cofnod after each of the surveys via the 'Submit Records' option at <https://www.cofnod.org.uk/Recording>.

Table F2.1 This table shows the proposed schedule of monitoring and maintaining the bat mitigation barn after the completion of the bat barn.

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr10
Population monitoring 1x dusk survey (Overseen by LE)	✓		✓		✓					✓
Internal Monitoring (carried out by LE or AA)	✓	✓	✓		✓					✓
External Maintenance (Overseen by LE or AA or carried out by AA)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Third party will take responsibility for the maintenance of the bat house. Any access internally will require the accompaniment of license holder or an Accredited Agent or be an Accredited Agent on the license

F.3 Post-development mitigation contingencies

Describe the action that you will take if monitoring results are unfavourable.

Where monitoring results are unfavourable, a review of the bat barn provision and connectivity to the surrounding landscape will be undertaken. This may require remedial action to be undertaken such as provision of additional mitigation or compensation habitats, and/or additional habitat creation and enhancement measures.

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

As appropriate e.g. Section 106 Agreement, to include details of who will undertake the work and reporting details, other covenants, contractual agreements or wardening schemes.

A restricted covenant will be drawn up upon the sale of the building which will restrict the use of the bat barn to parking space/bat monitoring only. This would be in place for successive purchasers/owners of the property.

G Timetable of works.

Include timings of exclusion operations, demolition and construction works, creation of mitigation measures, timing of other post development works and monitoring.

Table G.1. Summary of timetable of development works.

Development Works	Start	Finish
Ecology pre-commencement checks, install alternative roosts (tree/building boxes only)	15/03/2024	15/04/2024

Site establishment (office/welfare)	15/03/2024 or on receipt of license	15/04/2024
Drainage	01/05/2024 or asap post mobilisation of site.	15/12/2024
Demolition and clearance of existing buildings (NOT BUILDINGS WITH ROOSTS OR BUILDINGS THAT COULD AFFECT ROOSTS)	01/05/2024	01/08/2024
Demolition of Building 9 (Barn D) with Roost R2 to enable bat building to be built	01/05/2024	01/08/2024
Completion of bat house	01/07/2024	30/07/2024
Transplant road hedge in prep for road works in winter	05/04/2024	12/011/2025
Structural works / flooring / to barns supporting roosts	01/10/2024	01/12/2025
Roof works to barns	02/10/2024	01/12/2025
Road Improvements	09/01/2025	01/12/2025
Internal fixtures / fittings	09/01/2025	01/12/2025
Window / door fittings	09/01/2025	10/05/2025
Build Garages	09/01/2025	01/07/2025
External landscaping	15/07/2025	01/03/2026

Post-development work monitoring and maintenance will follow the schedule within Table F2 above, starting in 2025.

H Land Ownership – Mitigation Site

H.1 Mitigation Site/Compensation Site Ownership

If mitigation is to be undertaken at a location not owned by the applicant, you must provide the written consent of the relevant land owner(s). You must also provide details of how the mitigation is to be maintained in the long term (e.g. a legal agreement).

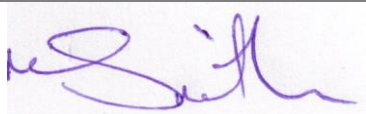
Not applicable as applicant owns the location.

H.2 Mitigation Site/Compensation Ownership post construction

If the ownership of the mitigation site will change after construction please confirm the identity of the prospective owners/occupiers together with timescales associated with transfer of occupancy or other forms of legal interest. You must also provide details of how the mitigation is to be maintained in the long term (e.g. a legal agreement)

The site owner Funky Furniture Hire (Properties) Limited (FFHPL) has committed to sell the freehold bat mitigation barn to HHCIC. Please see “TP1 for Bat Barn” uploaded with this application, for the draft sale of contract and the TP1 form. The contracts will be signed upon granting of the NRW EPS Development licence.

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	Gary Mansfield	Date	19/2/24
<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>			X ☐
Full name in BLOCK LETTERS	Gary Mansfield		
Signature of the Ecologist		Date	19/2/24
<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>			X ☐
Full name in BLOCK LETTERS	Mick SMITH		

J References

Credits for source information.

K Annexes

K.1 Pre-existing survey reports

K.2 Raw survey data.