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 of other suitably qualified person. You are strongly advised to refer to the Bat Mitigation Guidelines[1], 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.

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

Contact Details

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Method Statement Title:	EE.4446.LMS.24.JF - Silverdale Method Statement
Method Statement Version Number:	1
Method Statement Issue Date:	26/03/2024
QA by:	Keymar Wake
Site Address:	Silverdale, Tainant, Penycae, Wrexham, LL14 1UG

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Background and Supporting Information

An Executive Summary. No more than one side of A4

Executive Summary

Site	Silverdale, Tainant, Penycae, Wrexham, LL14 1UG SJ 27219 46401
Surveyors	Preliminary Roost Assessment by Rhian Hughes (NRW bat licence No. S087351/1, on behalf of marches Ecology) Emergence Surveys led by Lucy Boyett (accredited agent under NRW Licence number S090407/1, on behalf of Marches Ecology). Updated PRA by Keymar Wake (NRW bat licence no. S092545/1) (Enfys Ecology).
Proposed work	The building is proposed to be demolished and a new property constructed on the plot. The sheds present on site are to be moved during the works.
Reason for licence	The actions requiring licensing are "disturb, destroy, capture, and modification of a resting place" for an individual/ small number of soprano pipistrelle bats, and potentially common pipistrelle bats too. Capture any active bats found during the works under supervision by accredited agent on licence and move to onsite bat box (one will be provided and more made available if required).
Species affected	Soprano pipistrelle (*Pipistrellus pygmaeus*) Common pipistrelle (*Pipistrellus pipistrellus*)
Type of survey	Preliminary Roost Assessment – 25th November 2021. Emergence Surveys – 10th and 31st May 2022. Updated PRA - 12th December 2023.
Main results of survey	• A number of potential roosting features were identified within the building • Bat droppings were found both internally and externally – these were sent away for DNA analysis – both were identified as soprano pipistrelle (*Pipistrellus pygmaeus)* • The building had moderate potential for roosting bats, and the sheds had low potential. • One bat, a soprano pipistrelle, emerged from the building during the second survey, therefore, the building is considered a summer day roost for a small number of pipistrelle bats. • Other species of bat active around the site included common pipistrelle (*Pipistrellus pipistrellus).*
Effects of works on local bat populations	Works will not affect the favourable conservation status of local bat species as only a low number of common species will be affected. The Continued Ecological Functionality of the site will be temporarily lost for one species during the works but will be compensated for by the provision of roosting space in the form of bat boxes.
RAMs and Mitigation	All works to the roof areas will be carried out by hand and under ecological supervision. Any bats found will be captured and transported to a bat box that will be made available on site; one bat box will available on site during the works, and three boxes in total will form the mitigation. Mitigation and enhancement will be in the form of bat boxes and gaps behind the barge boards.

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B Introduction

B.1 Background to activity/development

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

The proposed works include the demolition of the existing building which will be replaced by a new, larger two-storey building with adjoining outbuilding. The new building will feature large bi-folding doors, Velux rooflights, solar panels, and a balcony accessible via doors.

The works are necessary due to the building being in a poor state of repair. Since the original surveys in 2021, the building has deteriorated further, it is now showing signs of excessive damp. Currently, the building is not habitable and therefore not viable as housing stock in its current state. The demolition of the existing building and the construction of the new proposed building will provide much needed housing that will remain in service for many years. Additionally, the proposed new building has solar panels incorporated into the designs which will help reduce the reliance on non-renewable energy sources. Furthermore, the works will provide local businesses and tradespeople with work during construction. The works are scheduled to be completed by 31/05/2025.

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.

This licence will cover the possible disturbance in the form of noise, of day roosting pipistrelle bats, as well as the destruction of two known soprano pipistrelle roosts. The mitigation strategies have been incorporated into the final design, and are therefore included in the licence.

The schedule of works is below.

Spring 2024 (subject to the licence being granted by May 2024)

- Demolition of the existing buildings and associated roosts.

Summer - Autumn 2024 – Ground works, laying of foundations, construction of new building.

- Preparing the area for construction works
- Laying of foundations for the new building
- Construction of the new building walls and roof.
- Rendering of the external walls
- Final exterior finishing (guttering, fascias, and barge boards)

Autumn/Winter 2024 – May 2025 – Internal fitting out and other outstanding work.

- These works will comprise of internal wiring, plumbing, plastering, and any outstanding joinery works to ensure the property is habitable.
- The internal works should not result in any licensable destructive works but have the potential to cause disturbance to bats using the site, although unlikely.

B.3 Actions requiring licensing,

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

The actions requiring licensing are “disturb, destroy, capture, and modification of a resting place”. These actions are necessary for the works as the building is a known day roost for an individual/small number of soprano pipistrelle bats.

The destructive works are planned to commence from May (licence dependent) and it is therefore possible that bats will be present within the site, and thus disturbed, during the works period. The works also have the potential to disturb bats that are active within and around the site through additional light and noise.

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)

The COFNOD data search identified records of bats within 2km, shown in Table C.1.1 below.

Table C.1.1: A record of all bats observed within 2km of the site

Scientific Name	English Name	Latest Year	Distance from site (m)	Total Records
Chiroptera	Bat	2005	755	8
Pipistrellus pipistrellus	Common Pipistrelle	2016	1090	5
Myotis mystacinus	Whiskered Bat	2000	1806	1
Pipistrellus pygmaeus	Soprano Pipistrelle	2016	1818	1

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

Figure C.2.1 and Table C.2.1 below show any SSSI's or SAC's notified for bats within 10km of the site.

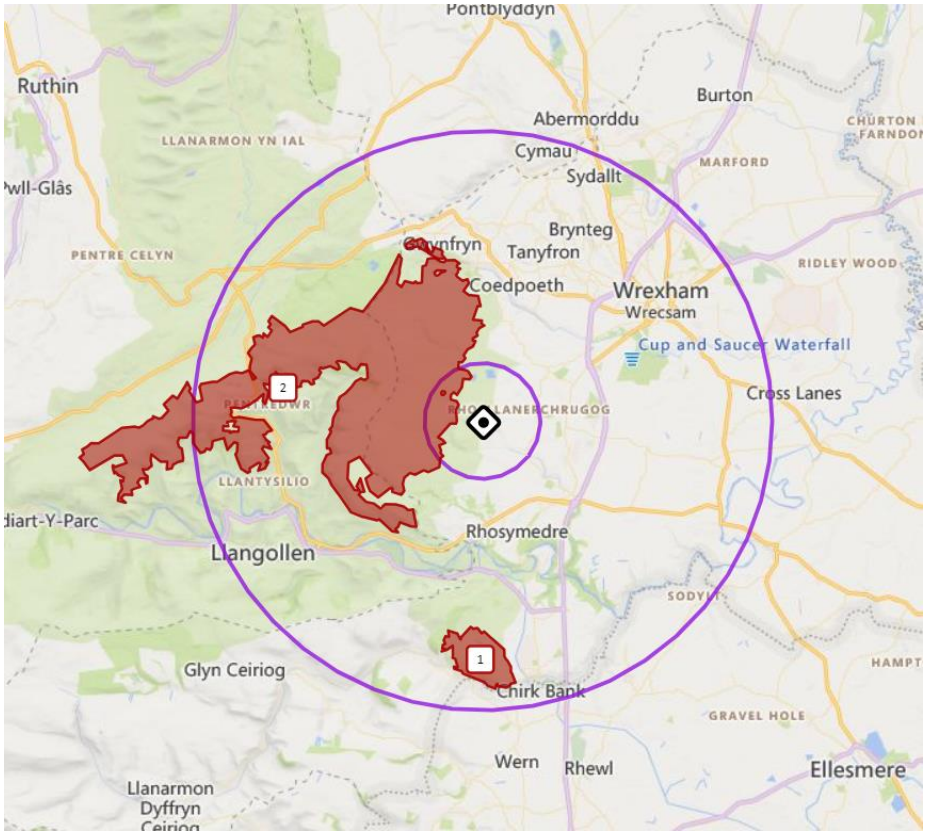


Figure C.2.1: Designated sites marked in brown within 10km of the survey area (shown by the central white diamond). Image © COFNOD

Table C.2.1: A description of the site and the reason for its designation

Name and designation	Distance from survey area	Reason for Designation
Chirk Castle and Parkland (SSSI)	7.0 km (approx. at closest point)	For its breeding lesser horse-shoe population in the castle.
Ruabon/Llantysilio Mountains and Minera (SSSI & SAC)	0.8km (approx. at closest point)	Use of the mines and caves by hibernating bats, in particular lesser horse-shoe.

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).

Bat surveys were carried out by Marches Ecology in 2021, 2022, and 2023 to support a planning application. A preliminary roost assessment was carried out on 25/11/2021 and the following additional surveys were carried out on the building: Emergence Surveys on the 10/05/2022 and 31/05/2022, and an additional updated PRA on the 12/12/2023 due to the time elapsed since the original PRA.

The surveys were commissioned to assess if the building and site were being used by bats, and if so, what species, how many of them, and how they were using the site.

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 C.4.1 below shows an aerial view of the site.



Figure C.4.1: Site location map at scale 1:10,000. Site at red dot.
Image © Magic 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 was located within a rural area, approximately 1.7km to the south west of Rhosllanerchrugog, Wrexham. The wider area comprised pastural fields and hedgerows and a wooded valley with Nant Crogfryn running through, this was adjacent to the property and ran a total of 2km from the north west to Stryt Issa to the south east. The survey area is shown in Figure C.5.1.



Figure C.5.1: The site and surveyed building (red)
Base image © Google Maps 2023

Building Descriptions

The main building was rendered and had a pitched slate roof and two sections of flat roof, one on the eastern elevation (front porch) and a large flat roofed section to the west. The building was approximately 8m x 5 m (main section) and 3m x 5 m for the western flat roofed section.

The walls of the building were rendered. There were wooden fascias running along all sections of the building, apart from the gable ends.

The main section of roof was pitched and slated.

The basic layout of the building is shown in Figure C.5.2 and the details of the external and internal features of the main house and extension are described in Table C.5.1 below.

Table C.5.1 Building Descriptions

<table>
<tr><th colspan="4">Bungalow</th></tr>
<tr><th>External Descrition</th><th>External Photo</th><th>Internal Description</th><th>Internal Photo</th></tr>
<tr>
<td>The building was approximately 8 x 5 m (main section) and 3 x 5 m for the western flat roofed section.

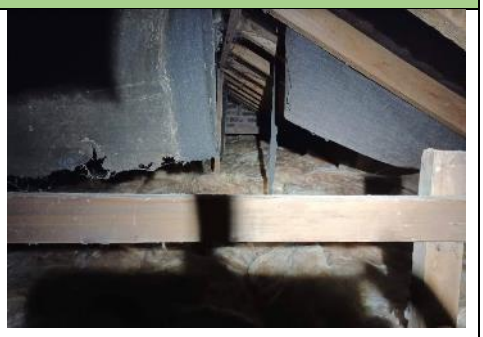
The walls of the building are brick and rendered. There are wooden fascias running along all sections of the building, apart from the gable ends (no bargeboards).

The roof of the main section was a pitched slate roof.</td>
<td>Eastern Elevation

North western elevation

Southern Elevation
</td>
<td>Internally there was a small loft space running the length of the main section of the building, this was insulated with rockwool. The loft was approximately 1.2 m in height.

The roof was lined with bitumen felt, there were exposed brick walls at both gable ends.

The loft space was subject to some air flow due to gaps present in the slates and torn bitumen felt.</td>
<td>
</td>
</tr>
<tr><th colspan="4">Sheds</th></tr>
<tr><th>External Description</th><th>External Photo</th><th>Internal Description</th><th>Internal Photo</th></tr>
<tr>
<td>Two sheds were present on site, these were traditional timber sheds with flat bitumen felt roofs. The shed to the east of the property had windows present and was used for storage; the shed to the north had no windows present.</td>
<td>
</td>
<td>N/A – The sheds were locked and not accessible</td>
<td>N/A</td>
</tr>
</table>

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.

Table C.6.1 presents the details of the bat surveys completed in 2022. Table C.6.2 provides a summary of the surveyors and equipment used.

Table C.6.1: Details of the surveys carried undertaken

Ref no.	Survey	Date	Start time	Sunset / sunrise time	End time	Temp. at start	Weather
1	PRA	25/11/2021	N/A	N/A	N/A	N/A	N/A
2	Dusk Emergence	10/05/2022	20:25	20:55	22:25	12°C	Dry, light breeze.
3	Dusk Emergence	31/05/2022	20:56	21:26	22:56	12°C	Dry, mild, still.
4	Updated PRA	12/12/2023	N/A	N/A	N/A	N/A	N/A

Table C.6.2: Summary of the surveyors and equipment used

Ref no.	Lead Surveyor	Licence number	Equipment used	Number of Assistants
1	Rhian Hughes	S087351/1	High powered torches, endoscope, where necessary	1
2	Lucy Boyett	Accredited agent on NRW Bat Licence S090407/1	Anabat Scouts, Anabat Express, and Bat Box Duet detectors	2
3	Lucy Boyett	Accredited agent on NRW Bat Licence S090407/1	Anabat Scouts, Anabat Express, and Bat Box Duet detectors	3
4	Keymar Wake	S092545/1	High powered torches, endoscope, where necessary	0

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.

The PRA identified a number of potential roosting features (PRFs) which would provide bats with roosting areas and access into building. In addition to the PRFs, bat droppings were found beneath the south-western fascia and in the loft space. From the evidence found, and the number of bat droppings present, it is considered that the building is in use by a small number of bats. The bat droppings were sent away for DNA analysis and the results show that they were soprano pipistrelle (*Pipistrellus pygmaeus*) – this was the case for both the samples from within the loft and behind the fascia. The sheds on site offered limited roosting opportunities for bats. These are described in Table C.7.1 and the location in relation to the site are shown in Figure C.7.1. Additionally, the updated PRA found the situation on site was basically the same, with the addition of another bat dropping beneath the fascia on the south-western elevation. The results are described in Table C.7.2.

Table C.7.1: Potential bat features and photographs

Location	Feature Description	Example Photos
Loft - Internal	Ripped bitumen felt with exposed slates behind	 
Loft Internal	Droppings	
A	Small gaps present under ridge tiles and some raised slates	

		
B	Missing mortar from end of the gable	 
C	Gaps behind the fascias	
C	Behind the fascia	

Sheds	Gaps behind felt	

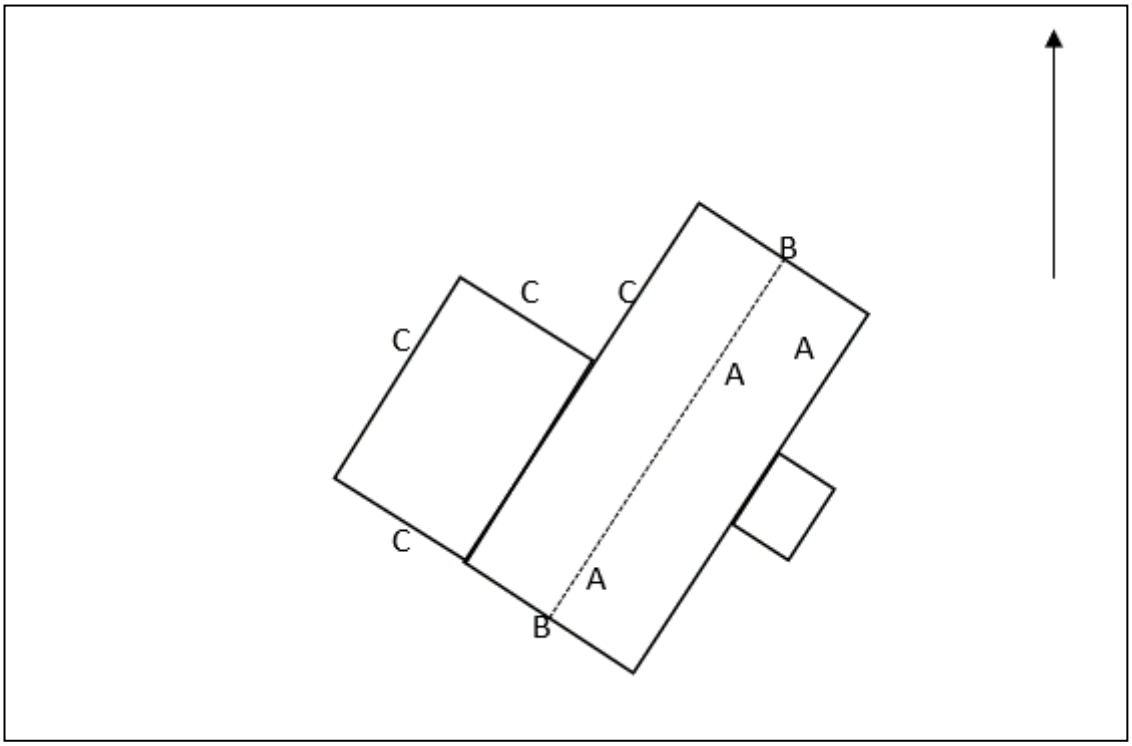
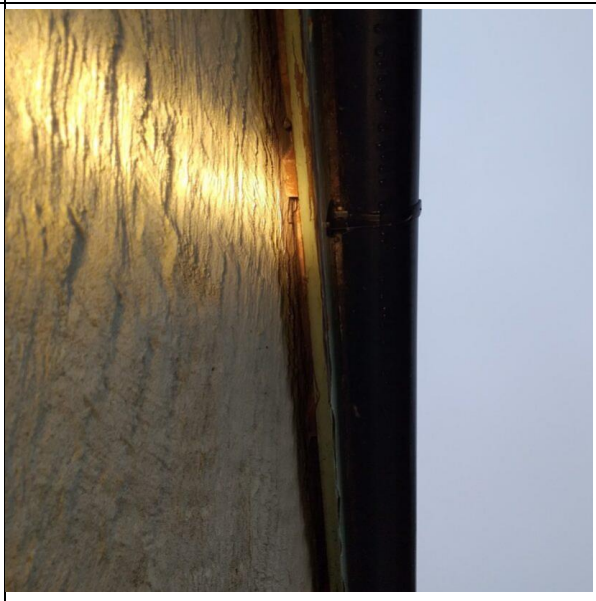


Figure C.7.1 – Location of features identified in Table C.7.1 above.

Table C.7.2 - Updated PRA Potential bat features and photographs

Location	Feature Description	Example photos
A	Small gaps present under ridge tiles and some raised slates.	

B	Missing mortar from end of the gable	
C	Gaps behind the fascias.	
C	Dropping underneath the south-western fascia.	

C7.2 Activity survey results

The results from the dusk emergence surveys carried out at the site can be seen below in Tables C.7.3 and C.7.4.

Table C.7.3: Summary of first emergence survey activity – 10/05/2022

General Activity
The first bat to be detected was a soprano pipistrelle at 21:14 that was seen but not heard. There was a call at 21:19 and 21:31 recorded from a common pipistrelle. Two soprano pipistrelles were heard and observed passing over the house from south to north at 21:33. A common pipistrelle was observed flying south west to north east and back at 21:51. At 22:04 a noctule was heard but not seen.

Table C.7.4: Summary of second emergence survey activity – 31/05/2022

Time	Species	Activity	Emerge?	Location
21:25	Soprano pipistrelle	Emerged from under the fascia board of the flat roofed section on the south west elevation where droppings had previously been found. An Anabat placed close by confirmed it was a soprano pipistrelle. It flew directly into the woodland to the south west.	Yes	
General Activity The first bat to be detected was the soprano pipistrelle that emerged at 21:25, four calls were then heard between 21:59 and 22:45 with a number of foraging calls heard at 22:45. At 22:02 a soprano pipistrelle was observed passing west to east down the side of the house. There were four common pipistrelle calls between 21:51 and 22:09. A noctule was heard at 22:08 and a *Myotis* was heard at 22:38.				

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).

During the second emergence survey, a soprano pipistrelle was seen to emerge from under the fascia board by the flat roof section on the south western elevation. No bats were seen to emerge during the first emergence survey. The site as a whole was not considered to be used by large numbers of bats, shown by the lack of activity recorded during the two emergence surveys. The only bats recorded on site included common and soprano pipistrelle, as well as an unseen *myotis species* and a noctule.

Soprano pipistrelle droppings had previously been found under the fascia board and inside the loft space. Closer inspection under the fascia board where the bat emerged show a small gap at the top of the wall where the bat was most likely gaining access under the flat roof. Silverdale was therefore used by at least one soprano pipistrelle as a day roost and the main loft space has been used by soprano pipistrelle bats in the past, based on the droppings present.

The updated PRA found droppings in a new location to the previous PRA. The dropping was characteristic of pipistrelle bat, so either species should be presumed to be using the site. This suggests that bats are using numerous potential roosting features and access points around the building on an occasional basis.

The survey results indicated that the site had moderate potential to support roosting bats, and that the roosts present were used occasionally by pipistrelle species of bat. The site was only used by small numbers of common species and not a maternity site. The building had low potential for hibernation,

however, it cannot be discounted that pipistrelle bats may use the building during the winter. Following the bat mitigation guidelines (Reason & Wray, 2023), the mitigation requirements for a non-breeding day roost for a small number of bats of common species can be flexible in timing and type. Due to pipistrelles being present and the building having non-classic hibernation roost potential, licensable works will avoid the winter months.

The sheds were not accessible during the PRA, and as they had low potential to support bats they have been included on the licence.

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.

In the absence of mitigation, disturbance from the works would be in the form of increased activity in and around the site, noise from the demolition and construction works, placement of scaffolding, and the removal of any roof furniture and demolition of the walls.

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.

N/A – The roosts are being destroyed

D.3 Long-term impacts: roost loss.

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

The works will result in the destruction of at least three bat roosting areas within and around the building (based on locations of droppings found).

In the absence of mitigation, the works would result in the loss of a day roost for at least an individual soprano pipistrelle, and the potential for occasional day roost for an individual/small number of common pipistrelle bat/s. The roost that will be lost will be for individual/low numbers of a widespread species, which classify as low in conservation status (Reason & Wray, 2023), which therefore will have a negligible impact on the local population of bats and no impact on the wider local, district, county, or regional level.

With mitigation in place the loss of roosting areas will be compensated and roosting opportunities will be made available for bat species within the area. Three bat boxes have been incorporated into the design of the site. Two of the boxes will be sited on the southern elevation of the new building, and one will be sited on the western elevation/in the grounds of the site. Additionally, six crevices behind the barge boards on the southern elevation will be created to enhance the site for bats.

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.

The works only comprise the demolition of the existing building and no bat foraging habitat or connective features will be lost as a result of the works.

D.5 Post-development interference impacts.

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

The proposed plans at the time of writing do include the addition of three externally mounted lights in total next to the doors on the western, southern, and eastern elevations (See figure D.5.1 below)

[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

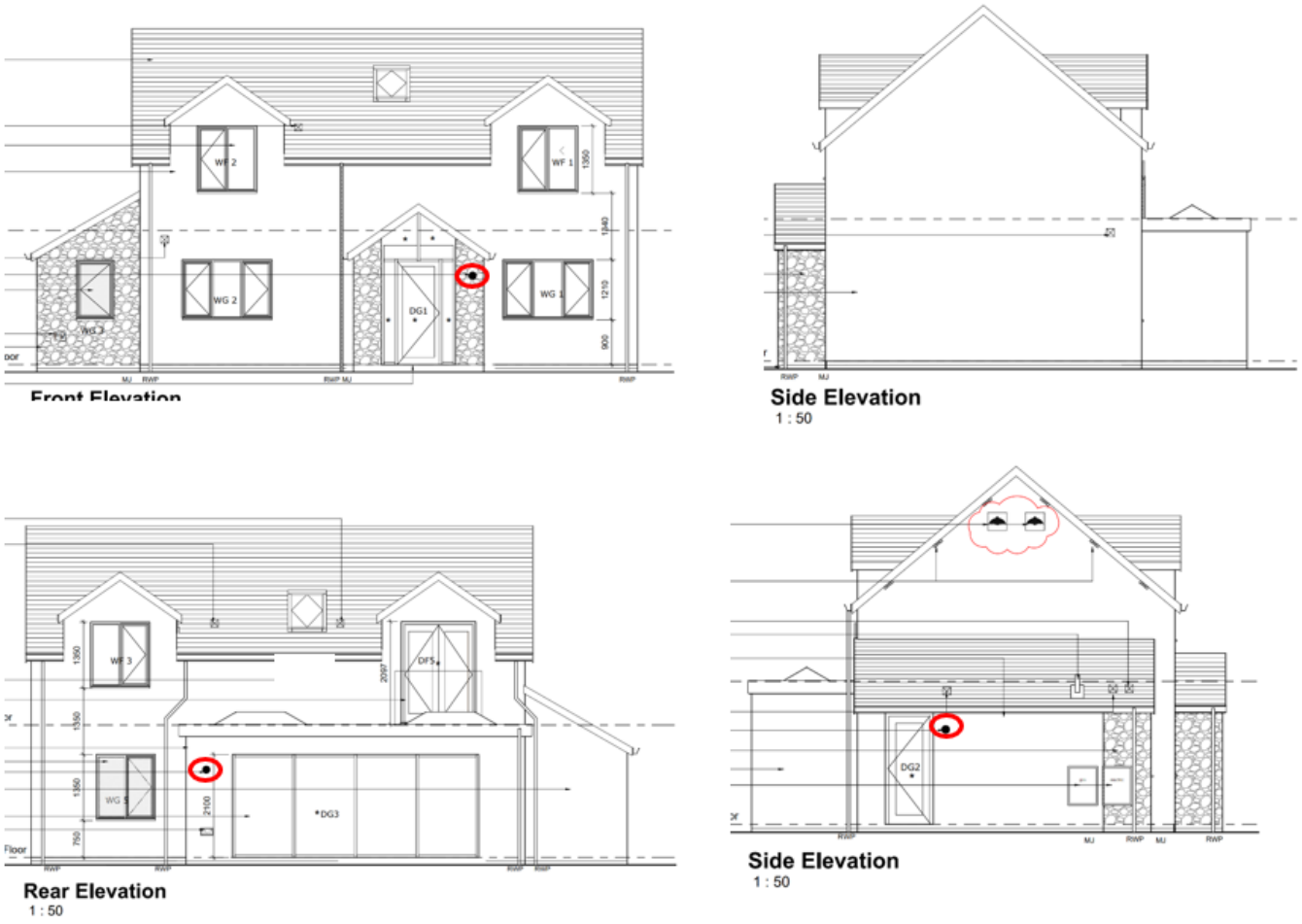


Figure D.5.1: Locations of the external lights (red circles), and the proposed bat compensation and enhancements (red cloud and barge boards)

Additionally, there will be an increased number of windows in the building due to the works and these could result in light spillage.

As the habitats surrounding the site were moderately suitable for bats, and the emergence survey showed bats using these areas to commute, forage, and roost, any lighting attached to the building, or spilling from it, during and after the works has the potential to impact bats and nocturnal birds.

To reduce the potential impact of any light spillage on commuting bats during the construction and post construction phases of the development, lighting design for the site (both during the works and of the completed building) should seek to minimise the levels of light along any areas used by bats, i.e. the area to the south, and south-west and all tree and hedge boundaries.

This will be achieved by implementing the following:

- There will be no lights focused on any surrounding trees or hedgerows, or the mitigation bat roosting areas. There will be a dark ‘buffer zone’ to south and south west of the site that will not be subject to light spillage. There will be no illumination of the recommended bat mitigation once the works are complete.
- The external lighting will be on a timer (no more than one minute), and motion activated to ensure that the areas do not remain illuminated for extended periods of time.
- Downlighting with a warm light (no more than 3000 kelvin) with no upward light spill should be used.
- External cowls will be fitted to the lights to ensure the light is channelled downwards towards the ground and not outwards into the surrounding area, but this should be used as a last resort.
- Internal luminaires will be designed to minimise light spill and glare via windows and skylights; either through being recessed, using dimmer switches, lamp shades, directed away from windows, and through the use of blinds or curtains.
- Construction should start at least one hour after dawn and finish at least hour before dusk during the summer months (May – August) to prevent light and noise levels disturbing the

- bats using the site
- If any additional external lighting is to be implemented into the site at a later date, NRW will be consulted.



Figure D.5.2: Habitat that will not be illuminated (blue area)

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

The works are restricted to the demolition of the building and re-building works, there will be no adverse change to any surrounding habitat features. The roost for a small number of a common species will be lost, but will be replaced as part of the proposed mitigation. The favourable conservation status of the species present will not be affected at a local, district, county or regional level by the proposed works. If the mitigation below is carried out correctly, there would not be a long-term negative impact on the bats that currently use the site. Further roosting areas will be provided for the bats to replace and enhance the existing roosts that will be lost a result of the works.

The nearby SSSI and SAC (Ruabon/ Llantysilio Mountains and Minera), and Chirk Castle and Parkland (SSSI) which were designated for LHS's use of the mines and caves for hibernation, and for its breeding roost, respectively, will not be impacted by the works. The site does not provide any suitable features for LHS, therefore, no LHS will be impacted by the works, nor will the designated sites.

The Continued Ecological Functionality (CEF) of the site will be temporarily disturbed during the works. However, it would be reinstated upon the completion of the works if the mitigation is implemented correctly.

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.

The works are proposed to start in May, (subject to the licence approval) and are intended to be carried out over the following 12 months. The building is used by an individual/small number of pipistrelle bats, as a day roost, and therefore it is possible that bats could be encountered during the works. To reduce the impact of disturbance on any bats (if present), **any works** to or around the roof and roost entrances must be carried out by hand and supervised by a suitably qualified ecologist who is named on the appropriate licence. The ecologist will inspect any suitable potential roosting features prior to any work commencing to ensure no bats are present.

Any potential roosting features in the roof structure, or other areas known for roosting such as the fascias of the building will be inspected for bats by the ecologist prior the removal of any roof furniture or fascia/barge boards. This will ensure all potential features are clear of bats prior to the feature's removal, or any works that have the potential to cause damage to a roosting area or bat.

Mitigation - Destructive Works

- Prior to the start of works, a toolbox talk will be given to everyone involved in the project and a log of this will be kept.

- Any destructive works that would interfere with potential bat roosting areas will be carried out and completed under the supervision of an ecologist where necessary. The destructive works are due to start during May 2024; therefore, it is possible that bats may be present in small numbers during this time.

- To reduce the impact of disturbance on the bats (if present), the works to all of the following structures will be carried out by hand and inspected prior to works by/ supervised by a suitably qualified and licenced ecologist.

    - Removal of any roof structure/component.
    - Slates to be slightly lifted to be inspected for bats prior to any works commencing in the area.
    - Any fascia/bargeboards that are to be removed.
    - Internal inspection of the sheds, and shed roofs if deconstruction is required.

- The ecologist will carry out an inspection of the potential roosting areas and loft space of the building prior to the start of any works using an endoscope and high-powered torch where necessary. If it can be determined that no bats are present then works can continue in these areas without supervision. If there are any areas that cannot be inspected fully then works to these areas will be carried out under supervision.

- All walls that need to be dismantled or demolished as part of the works will be fully inspected by an ecologist prior to works starting. If it can be confirmed that there are no bats present within the walls the works can be carried out with machinery. If there are features that cannot be inspected fully that show potential for bats, these areas will either be dismantled by hand under the supervision of the ecologist, or following an emergence survey to ensure any bats have left the feature and blocked up prior to demolition with machinery.

- As the new roof will be lined with breathable membrane, the roof and loft space will be completely sealed and inaccessible to bats; this includes through the eaves, soffits, and underneath any slates or ridge tiles.

- If an active bat is found and is not accessible, works will start from the furthest point from the bat and continue in a directional manner to encourage the bat to leave of its own accord. If this is not possible without the possibility of causing harm, work will stop until the bat has left the building and the roost will be removed/ blocked. If this is the case, a visit in the evening may be needed and the roost blocked once the bat has emerged and once the ecologist is confident no other bats remain in the roost. A check will be carried out the following day and if the bat is gone, the works can then proceed under supervision.

- If, when carrying out the pre-works checks and supervision works, it becomes apparent that more bats than expected, a different species, are to be affected by the works than first thought, or any hibernating bats are encountered, works will be stopped until the working method and type/scale of compensation measures can be reviewed and agreed with NRW.

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.

N/A – The existing roosts will be lost as a result of the works.

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.

N/A – The existing roosts will be lost as a result of the works.

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.

Three bat boxes have been incorporated into the design of the site. The boxes utilised in the building's design will comprise two built-in bat boxes, similar in form to Vivara Pro Build-in Woodstone Bat Tube, and one external bat box such as a Beaumaris style bat box. Many bat boxes are out of stock online at the time of writing, therefore, an ecologist will recommend suitable bat boxes to the client when they are required. Two of the boxes will be incorporated into the south facing elevation of the new building, and one will be sited on the western elevation/in the grounds of the site. This will provide bats with multiple roosting options depending on the conditions.

In addition to the bat boxes, crevices will be left between the bargeboards and the building on the southern elevation. Figure E.2.1 below shows the location of the bat boxes and the bargeboard roosting areas.

Prior to the works commencing, at least one bat box will be present on site and mounted onto a south, south-western, or west facing elevation of either a building or tree that is within the site boundary, or in ownership of the licence holder, and not subject to any works for the duration of the licence. In the event a bat is encountered they will be placed into the box. If other species of bat that are on the licence are found an additional box per species found will be erected on site to cater for that species.

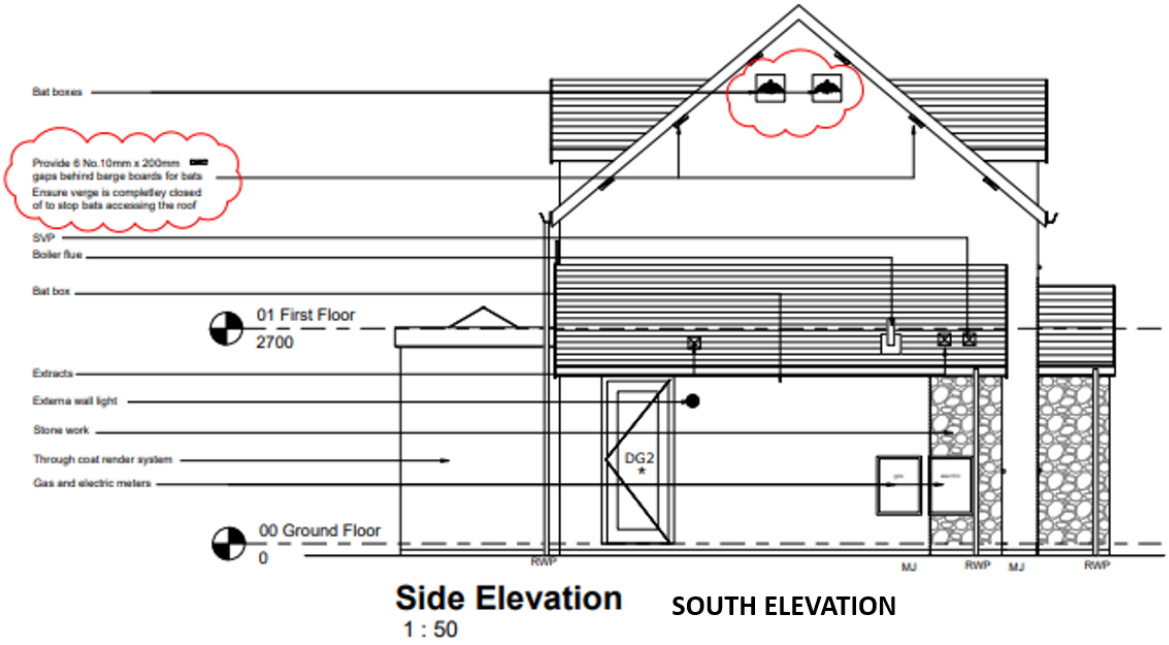


Figure E.2.1: Locations of the bat boxes (red clouds) and the barge board gaps (black rectangles) upon completion of the works

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 flight lines; 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.

No habitat used by bats will be affected by the proposed works.

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.

N/A

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

Include measures to ensure compliance with this method statement

Where appropriate, the works will be supervised by a licenced ecologist. All of the mitigation measures will be inspected to ensure that they comply with the measures detailed in this method statement. An Ecological Compliance Audit will be completed following the works to document and evidence that this method statement has been suitably followed. The licensed ecologist will be available throughout the duration of the project to provide advice where necessary. Tool box talks and records of visits will be provided and kept for everyone who will be involved in the project. This will include a signed log of all attendees. Any documentation relating to the presence of bats, and the compensation measures, will be given to the site owner/s so that they are aware of their legal obligations. This will include a copy of this document.

E.4 Mitigation contingencies

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

If, during the course of the pre-works checks and supervision works, it becomes apparent that there are a greater number of bats present, bats of a different species to those on the licence, bat are using the site in an unexpected way, or that any bats will be impacted in an unforeseen way, works will stop immediately. NRW will be contacted, the working method statement and type/scale of the compensation measures can be reviewed, and agreed with NRW. Further surveys may be required.

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

The biosecurity risk assessment in Table E.5.1 relates to any ecologists employed to monitor bat populations and that come into direct contact, such as handling bats. The licenced and accredited ecologists detailed on this licence application do not regularly hand bats elsewhere in the country. Therefore, the risk of spreading disease is low, however, clean gloves will be worn whenever handling is required.

White Nose Syndrome (WNS) has been recorded in UK bat populations, however, these were from 2014. There are currently no reported cases of WNS in Wales or the UK as a whole.

Table E.5.1: Biosecurity Risk Assessment

Risk	Transmission Vector	Level of Risk	Consequences	Control Measures
Introduction of White Nose Syndrome to the bat population.	Bat ecologists, their equipment & clothing	High if ecologists have taken part in bat work in areas of known infection outside the UK. Low if ecologists have not taken part in bat work in areas of known infection outside the UK.	The spread of the disease throughout the bat population. Due to bats being very mobile animals the infection could eventually spread throughout the UK.	The most effective way of preventing the spread of white nose syndrome is to use 'site specific' equipment such as gloves and holding bags. This is the approach that will be adopted for this site. Avoid capturing and/or handling bats unless absolutely necessary. The Bat Conservation Trust Guidelines for reducing the risk of transmission of white nose syndrome will be adhered to at all times.
Covid 19	Bat ecologists	Low	A risk of passing Covid 19 on to bats. The virus that causes COVID-19 hasn't been isolated from any of the UK's 17 resident breeding bat species.	When handling bats, practice good hygiene and wear a facemask to reduce the risk of possible transmission. No surveyors showing any Covid symptoms or feeling generally unwell will attend 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.

As the proposed site will contain designated areas for bats, these areas will be protected by the current bat legislation and will be retained, and not be disturbed. Any potential works to the site in the future that could have direct/indirect impacts on the bat roosting areas, including any future lighting schemes, may be subject to further licencing requirements and will require consultation with an ecologist and NRW.

The building will remain in the ownership of Helen Garrett for the foreseeable future, and therefore, they be responsible for the up-keep of the building and bat mitigation. The legal responsibilities that accompany these works will be written into the deeds of the property and will be the responsibility of the new owners to ensure that they are adhered to in the event the building changes ownership.

F.2 Population monitoring, roost usage etc.

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

As the site supports a small non-breeding day roost of a widespread species, minimal monitoring efforts are required (Reason & Wray, 2023). Monitoring will be in the form of an emergence survey of the building and a bat box check the third summer following the completion of the works. Research has suggested that year one checks of bat boxes do not provide adequate information into whether the mitigation has been successful because bats often taken more than one year to find the new roosts (McAney & Hanniffy, 2015; Poulton, 2006).

F.3 Post-development mitigation contingencies

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

Due to the low numbers of bats recorded using the site, monitoring would not be considered unfavourable if bats are not found during the emergence survey and bat box check. As long as the method statement is followed and all new roosting opportunities have been provided as planned then the mitigation will be considered a success.

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.

N/A – Helen Garrett will maintain the building and any bat mitigation installed**.**

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.

The timetable for the proposed works can be seen below in table G.1.

G.1: Timetable of Works for P1

	May 2024	**June - September 2024**	**September 2024 – May 2025**
Erection of bat box on site. Demolition of the existing buildings and associated roosts.			
Preparing the area for construction works, Laying of foundations for the new building, Construction of the new building walls and roof, Rendering of the external walls, Final exterior finishing (guttering, fascias, and barge boards).			
These works will comprise of internal wiring, plumbing, plastering, and any outstanding joinery works to ensure the property is habitable. The internal works should not result in any licensable destructive works but have the potential to cause disturbance to bats using the site, although unlikely.			

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).

N/A – Mitigation is on site.

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)

N/A – Mitigation is on site and addressed in F.1.

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**	HELEN GARRETT	**Date**	22.3.24
For electronic submissions please insert an electronic signature above or place an x in the box opposite to confirm agreement with the declarations above.			X
Full name in BLOCK LETTERS	HELEN GARRETT		
Signature of the **Ecologist**	K.WAKE	**Date**	26/03/2024
For electronic submissions please insert an electronic signature above or place an x in the box opposite to confirm agreement with the declarations above.			☒
Full name in BLOCK LETTERS	KEYMAR WAKE		

J References

Credits for source information.

Hughes, R., & Kinglsey, J., (2021). Proposed Demolition of Silverdale, Tainant, Wrexham – Preliminary Roost Assessment and Emergence Survey.

McAney, K. & Hanniffy, R. (2015) *The Vincent Wildlife Trust's Irish Bat Box Schemes*

Poulton, S.M.C. (2006) An Analysis of the Usage of Bat Boxes in England. Wales and Ireland, Vincent Wildlife Trust

K Annexes

K.1 Pre-existing survey reports (Marches Ecology)
K.2 Decision Notice
K.3 Delegated Report
K.4 LPA EPS Form