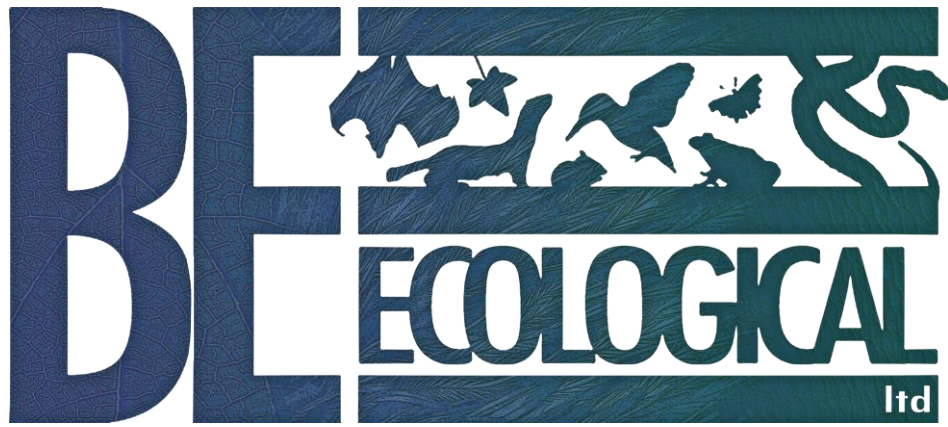




TREHARRIS LIBRARY, TREHARRIS, MERTHYR TYDFIL

**BAT SURVEY
ISSUE 1, VERSION A**

OCTOBER 2022

TREHARRIS LIBRARY**Bat Survey Report**

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EXECUTIVE SUMMARY

It is proposed to re-roof Treharris Library, a listed building in Treharris, Merthyr Tydfil.

An initial bat inspection survey was undertaken in May 2022 in order to inform Listed Building Consent to re-roof the property. The results indicated that the building is of moderate potential for roosting bats and as such further surveys were recommended.

Subsequent emergence surveys revealed that the building is a roost for a single common pipistrelle bat.

A European Protected Species Licence will be required along with mitigation and compensation prior to any works re-commencing on the building.

No evidence of breeding birds was found on the exterior or interior of the building.

1 INTRODUCTION

1.1 Background

BE ECOLOGICAL LTD was commissioned by the client to undertake an initial bat inspection survey and subsequent activity survey of Treharris Library, Merthyr Tydfil in support of listed building consent to re-roof the property.

This report includes the findings of the aforementioned bat activity surveys undertaken in the appropriate season.

The surveys were undertaken in line with the current guidance on standards for bat surveys (Bat Conservation Trust, 2016¹).

1.2 Site description

The property subject of this survey is located at Treharris Library, Treharris, Merthyr Tydfil (Figure 1).

The property is a Grade II Listed Building that is comprised of brick beneath a pitched slate roof. The property is a U-shaped building with the main ridge running from north to south, there are various hips running from the main ridge. Generally the brick work is well pointed with a number of pillars attached to it. There are gutters present but no fascias or barge boards as such. There are two gables on the property that face west.

The library is situated on the edge of a wholly urban environment, however there is good connectivity to the wider landscape to the east which comprises of broad-leaved woodland and the River Taff Bargoed.

¹ *Bat Surveys for Professional Ecologists - Good Practice Guidelines* (Collins, J (Ed). BCT, 2016)



Figure 1: Building (arrowed red) (Google Maps 2022)



Figure 2: Detailed view of property (Image courtesy of Google 2022)

1.3 Proposed development

It is proposed to refurbish a listed building, the property will be re-roofed as part of the proposals



2 LEGISLATION & POLICIES

2.1 Conservation of Habitats & Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) provides safeguards for European Protected Species (those listed under Annex IV Habitats Directive). With regards to bats, this makes it an offence to:

- Deliberately (or recklessly in Scotland) capture, injure or kill a bat
- Deliberately (or recklessly in Scotland) disturb a bat in a way that would (significantly in Scotland) affect its ability to survive, breed or rear young (or hibernate or migrate in England, Wales and Northern Ireland) or (significantly in England, Wales and Scotland) affect the local distribution or abundance of the species.
- Damage or destroy a roost (this is an 'absolute' offence)
- Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat

2.2 Wildlife & Countryside Act 1981

The Wildlife & Countryside Act 1981 (as amended) is the legislation for England and Wales for nature conservation, making it an offence to:

- Intentionally or recklessly disturb a bat at a roost
- Intentionally or recklessly obstruct access to a roost

2.3 The Environment (Wales) Act 2016

The Environment (Wales) Act 2016 requires that all public authorities, when carrying out their functions in Wales, seek to "maintain and enhance biodiversity" where it is within the proper exercise of their functions. In doing so, public authorities must also seek to "promote the resilience of ecosystems". This ensures that biodiversity is an integral part of the decisions that public authorities take in relation to Wales. It also links biodiversity with the long term health and functioning of our ecosystems, therefore helping to align the biodiversity duty with the framework for sustainable natural resource management provided in the Act. In Wales, this legislation replaces and enhances the Natural Environment and Rural Communities Act (2006) which sought to raise the profile of biodiversity and to make sure that it is considered in all local authority decisions by ensuring that "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.". Other elements of NERC 2006 may still apply.

3 METHODOLOGY

3.1 Data Search

The South East Wales Biodiversity Records Centre (SEWBrEC) were formerly requested to supply a Bat and Roof-nesting Birds (BARB) survey for the site (0223-326). The survey to provide; bat records within a 2km buffer, roof nesting birds within 150m buffer plus a list of all Special Areas of Conservation (SAC) and sites of Special of Special Scientific Interest (SSSI) designated for bat species within a 10km site buffer.

3.2 Survey Objectives

- To carry out an initial bat inspection survey along with the recommended activity surveys
- To present the above details and if necessary recommendations for mitigation, future research and compensation within this report.
- To carry out a scoping survey for breeding birds

3.3 Survey Summary

The bat survey comprised of five parts:

- Part 1- Initial bat inspection survey
- Part 2- A data search
- Part 3- A single activity survey
- Part 4- A second activity survey
- Part 5- A third activity survey

3.4 Surveyor Information

The survey was run by Beth Evans. Beth is the owner of BE ECOLOGICAL LTD and has a postgraduate degree in Environmental Biology: Conservation & Resource Management, specialising in British bats. Beth has six years' experience of ecological surveys, both in a small scale and large multi-disciplinary context. Beth also holds Natural Resources Wales and Natural England bat licences to disturb and handle bats.

Beth Evans was assisted during the activity surveys by Stephen Shutt, Gavin Vella and Michael Rogers

3.5 Internal & External Inspection

An initial inspection survey was carried out on 19th May 2022 to search all buildings, both externally to identify potential bat roosting areas and signs of bat use including; live bats, dead bats, droppings, urine staining, grease marks and discarded prey items. The buildings and all areas/items of interest were recorded and photographed. Extension ladders/steps were used to safely access roof areas and fascia boards etc; where no safe access was available the survey was conducted using, close focus binoculars and/or a high powered lamp.

3.6 Activity Surveys (emergence/re-entry surveys)

Building 'emergence' and 're-entry' surveys were carried out on the following dates, times and weather conditions. Climatic conditions including rain, wind, temperature and cloud cover were recorded for each survey using a hand held Kestrel 4500 weather station.

3.6.1 Survey 1- 6th June 2022

A dusk survey was carried out on 6th June 2022 using surveyors and a thermal imaging camera, positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors and cameras were equipped with Batlogger M detectors.



Figure 3: Approximate surveyor locations

3.6.2 Survey 2- 29th June 2022

A dusk survey was carried out on 29th June 2022 using two surveyors and a thermal imaging camera, positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors and cameras were equipped with Batlogger M detectors.

3.6.3 Survey 3- 14th July 2022

A dusk survey was carried out on 14th July 2022 using surveyors, and a thermal imaging camera, positioned in such a way that as much of the building was visible to surveyors as possible. Surveyors were equipped with Batlogger M detectors.

3.7 Survey limitations

Any survey for bat species can only be a series of snapshots in time. Bats are highly mobile, long lived creatures (capable of living up to 30 years, sometimes longer) with complex social structures and utilising multiple roost sites within a year. The implications of this are that surveys and surveyors have to make informed assumptions based on observations, recorded data, local information and a detailed knowledge of the species.

4 RESULTS

4.1 Data Search

This site is not within 10km of either a SSSI or SAC that has been designated for bat species within Wales.

A total of 155 records were returned within the data search. The closest bat record appears to be of a common pipistrelle bat 248m from the site. Other species within the data search include soprano pipistrelle, noctule, brown long-eared, myotis sp and records that refer to chiroptera sp.

58 bird records were returned within the data search. A number of these were from approximately 600m from the site with species such as swallow, house sparrow, great tit, lesser black backed gull and starling.

4.2 Inspection survey

4.2.1 External survey results

The survey carried out by BE Ecological Ltd revealed no droppings or evidence of bats on the exterior of the building. A small number of access points were noted on the exterior of the building

- Small number of potentially slipped slates
- Possibly gaps beneath ridge tiles

Please see appended plates for photographs of the property exterior. Other than these areas, the building appears to be well sealed due to its design.

Please note, the western pitch of the roof is difficult to view from the ground due to the height of the building and the fall of the ground surrounding it.

As such, the property was categorised as being of low potential for roosting bats and further emergence/re-entry surveys were recommended.

Pigeons were noted roosting above the main entrance during the scoping survey (not nesting).

4.2.2 Internal survey results

Internally, there is a very large roof void above the property that spans the whole of the building. Some areas are safe to walk on, however, the structural stability of some areas was questionable. The roof is completely unlined with numerous light ingress' where slates have slipped or are missing. The whole roof void is extremely dusty and dirty. There is an upper level to the north of the void. The roof is not insulated at joist level.

The whole roof is extremely exposed to the elements due to the gaps from missing slates.

No bats or evidence of bats was found in this location. Please see appended plates for photographs

4.3 Activity surveys

The surveys were undertaken as per the table below:

4.4 Survey Schedule and Weather Conditions

Table 1: Schedule and weather conditions

Visit	Date (sunrise) (sunset)	Start End	Time	Temp C	Wind	Cloud Cover	Notes
Survey 1 06/06/2022	21:28	Start	21:10	14	Low	25%	Dry evening, insects flying
		End	23:00	13	Low	30%	
Survey 2 29/06/2022	21:36	Start	21:15	16	Low	100%	Small amount of drizzle at start of survey
		End	23:30	14	Low/moderate	100%	
Survey 3 14/07/2022	21:27	Start	21:12	15	Low	30%	Dry evening, insects flying
		End	23:15	14	Low	40%	

4.5 Activity Survey Results

4.5.1 Survey 1- 6th June 2022

A small number of common and soprano pipistrelle bats were heard and seen throughout the survey.

The first bat heard was a common pipistrelle, the bat was seen flying from west to east and via the alley way to the side of the property at the northern end of the building. This was shortly followed by a further five bats.

Common and soprano pipistrelle bats were heard and seen foraging and commuting along the street to the west of the property and the vegetation to the rear of the property.

No bats emerged from the building on this date.

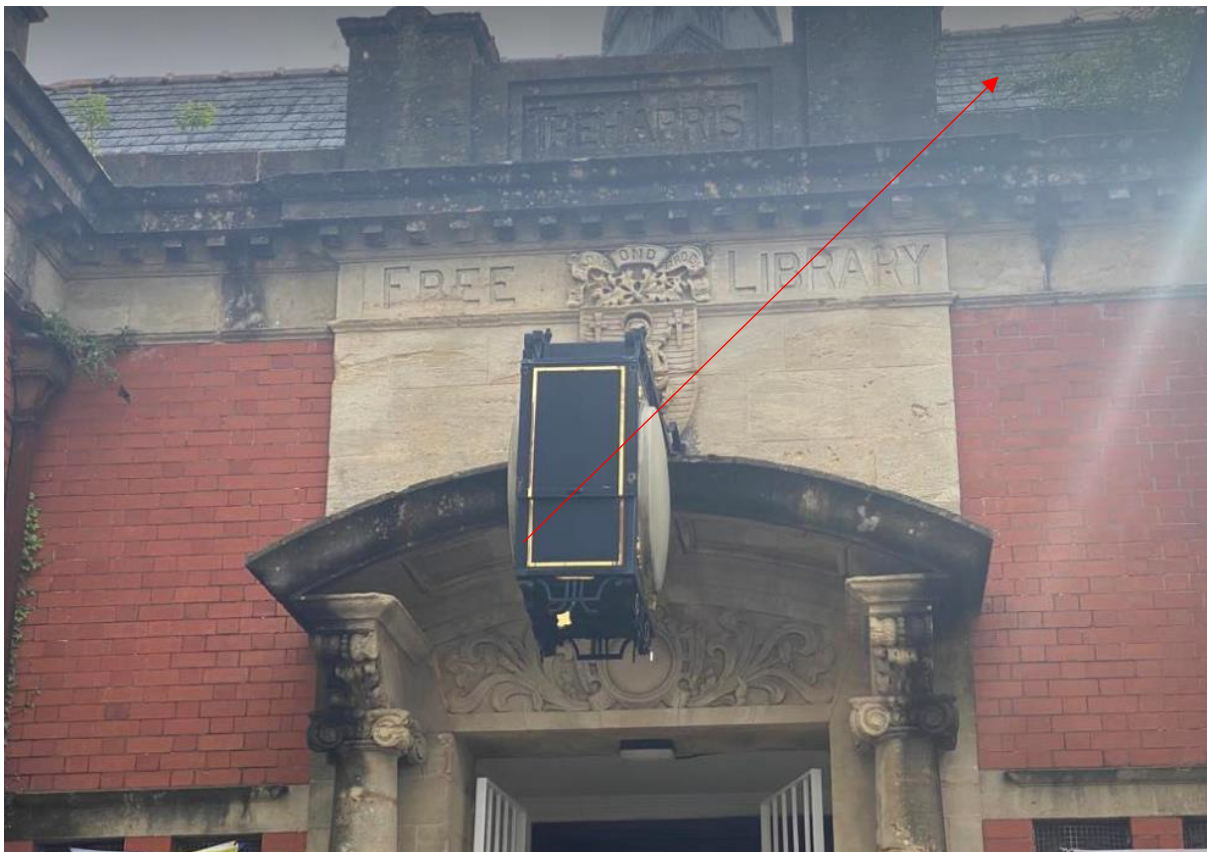
4.5.1 Survey 2- 29th June 2022

There was a small amount of rain at the start of the first survey. However, the first bat call heard was a common pipistrelle approximately 20 minutes post sunrise. This was shortly followed by a flurry of activity from the west (it is likely there is a maternity roost of common pipistrelles in close proximity to the site). The bats again commuted via the alley way to the north of the property.

Common and soprano pipistrelle activity was intermittent throughout the survey, however, no bats were seen emerging from the property by neither the cameras nor surveyors.

4.5.2 Survey 3- 9th June 2022

A number of common and soprano pipistrelles were heard throughout the course of the survey. Again bats appeared to commute from the west along the alley way. At 21:47, a common pipistrelle bat was seen emerging from the roof of the building, the exact location was not identified but it was highly likely to have been from a hole from a slipped slate. The bat did not fly over the roof and appeared from the pitch of the roof (figure 4, arrowed red). The bat commuted west.



No other bats emerged from the building on this date

4.5.3 Identified flight paths (arrowed red) (Google Maps, 2022)

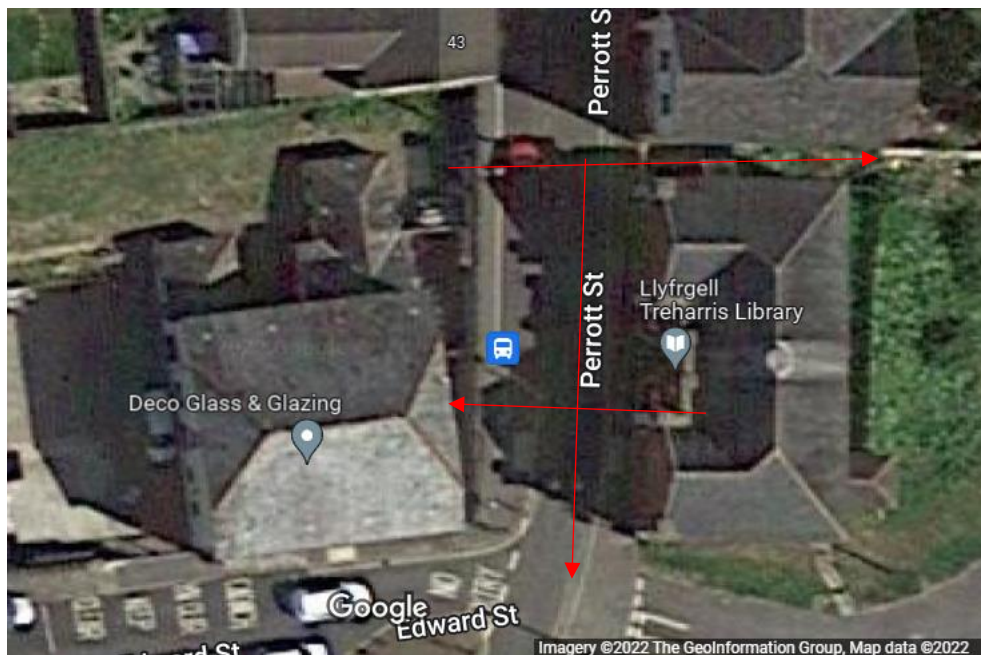


Figure 5: Identified flight paths

4.6 Identified Roosts

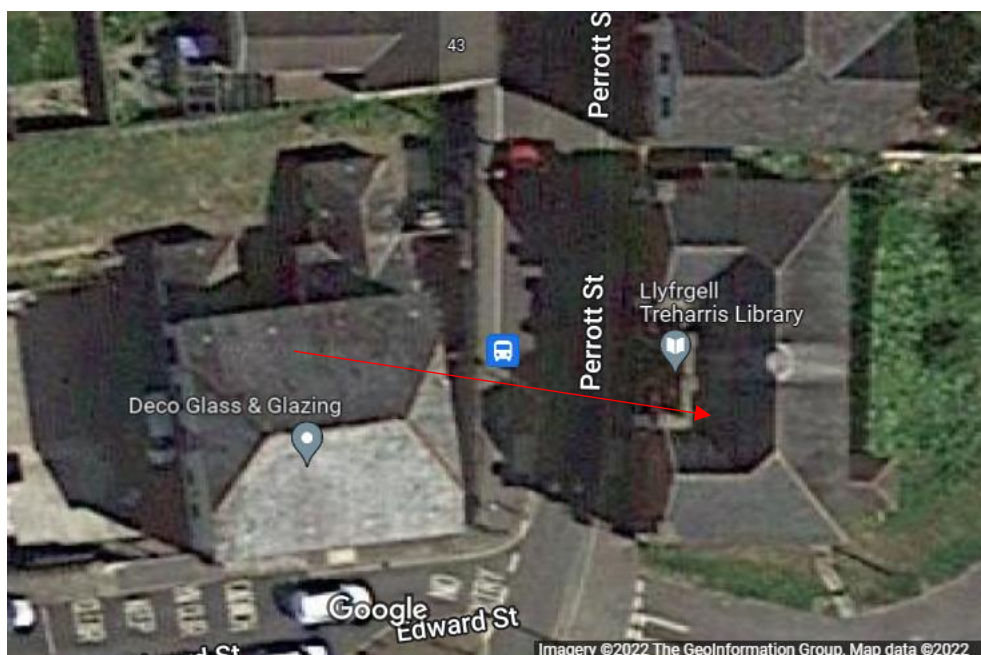


Figure 6: :Location of roost

Figure 7: Photograph of pillar being removed where bats were seen near to soffit

4.6.1 Survey 1

The property was not identified as a roost.

4.6.2 Survey 2

The property was not identified as a roost

4.6.3 Survey 3

The property was identified as a roost for a single common pipistrelle bat.

Conclusion

Generally bat activity at the site is low with only two species heard throughout the survey, common and soprano pipistrelle. There appears to be a favoured flight path to the north of the building along the alley way that leads to the rear.

The property was identified as a roost for a single common pipistrelle bat.

A licence from Natural Resources Wales will be required prior to any works being undertaken on the building.

Breeding Birds

No evidence of breeding birds was found throughout the property. Pigeons were seen roosting on the front of the property (exterior only). The birds were not nesting.

5 INTERPRETATION & IMPACT ASSESSMENT

5.1 Active Season Usage

It is considered that the property is a roost for a single common pipistrelle bat.

5.2 Hibernation Season Usage

It is possible that bats will use the property over winter.

5.3 Breeding Birds

No evidence of breeding birds was found throughout the property.

5.4 Ecological Impacts of development

The impacts of the development have been assessed using the current information of the proposed works. Should any changes be made to the proposed works, the assessment will need to be reviewed and amended as necessary.

It is considered likely that the property is a roost for a single common pipistrelle bat. If the bat is present during the works, it may be subject to disturbance, killing or injuring. It is likely that the roost will be lost as a result of the re-roof.

6 MITIGATION/COMPENATION /ENHANCEMENT

6.1 Bats

Two bat access slates will be installed on the western pitch of the roof <https://www.nhbs.com/habibat-bat-access-slate> to allow the bat to gain access to the roof where it does currently. As the property is to be re-roofed only, the bat will continue to have access to the whole of the roof that it does currently.

Two Schwegler 1FF bat boxes will be attached to retained vegetation to the rear of the site. Should the 1FF prove difficult to source, an eco bat box (crevice box) <https://www.nhbs.com/title?slug=eco-bat-box> will be installed in its place. One of these bat boxes will be used as temporary mitigation and the other as an enhancement. Both will be retained in situ. The bat boxes will be positioned at a height of no less than 3.5m from the ground and will face either south or east.

6.2 Birds

A Schwegler 1SP Sparrow Terrace or the following <https://www.nhbs.com/sparrow-terrace-nest-box> will be attached to the eastern elevation of the property.

7 RECOMMENDATIONS

7.1.1 Timing

It is considered that the building is a roost for single bats only. It is possible but unlikely that single bats will remain in the roof over the winter, the winter period should be avoided if possible. If the work is carried out in the winter, any licence application will need to take into account hibernating bats.

7.1.2 Timber/roofing materials

The roof of the building will be lined with BS747 Type 1F bitumen roofing felt ONLY throughout. No breathable membrane will be used.

Where treatment of existing timbers is required in-situ, only products suitable for use around bats will be used, as specified by Natural England and DEFRA at <https://www.gov.uk/guidance/bat-roosts-use-of-chemical-pest-control-products-and-timber-treatments-in-or-near-them>. A copy of the approved list will be issued to all contractors. New timbers will be pre-treated prior to installation.

7.1.3 Lighting

Newly created access points and bat boxes will not be directly illuminated. All external lighting will face downwards and be set on timers to ensure that bats can use the area should they wish. – In addition to this, any onsite lighting will conform to the following guidelines:

<https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/>

Flight paths to the bat boxes and the newly created bat mitigation will be kept dark at all times. The flight path to the north of the building (alley way) must remain in darkness to prevent impacts on neighbouring roosts.

7.1.4 Bat Licensing

A European Protected Species Licence obtained from Natural Resources Wales will be required before any works commence.

7.1.5 Supervision

Supervision for the removal of the roof will be required.

8 METHOD STATEMENT (ONCE A LICENCE HAS BEEN OBTAINED)

1. A suitably licenced and experienced ecologist will be on site/call for the duration of the works.
2. Before any work begins on site, a briefing for contractors and other site-staff 'toolbox talk' will be given by an ecologist. The briefing will cover the issues in respect of protected species they may encounter on site, where they might find them, methods of working, and what they need to know to avoid committing an offence. Every briefing attendee will be provided with a copy of a Method Statement and the contact details of an ecologist and Natural Resources Wales.
3. Prior to works commencing, the bat boxes will be erected within the retained trees of the site under the supervision of the licensed ecologist.
4. All suitable bat roosting features will need to be removed by hand (slates) and inspected by the onsite bat ecologist.
5. The tiles will also need to be removed manually, one at a time, with the bed and underside inspected for bats/sign of bats by the onsite ecologist before moving onto the next.
6. If at any point bats are encountered, all works will cease until such a time the supervising ecologist has captured the bat and moved it out of harms way and into the previously erected bat boxes. Works will not recommence until such a time that the supervising ecologist has given permission to do so.
7. If at any point more bats than stated in the licence are discovered or bats of any other species not named in the licence are encountered, all works will cease and NRW will be consulted. Works will not recommence until such a time NRW have given the permission to do so. This may involve further survey effort or an amendment to the licence.
8. Only when the onsite bat ecologist is happy that there is no further potential for bats, may he/she leave and the works continue with no supervision. A licensed bat ecologist will be on call for the remainder of the works. In the unlikely event that bats are found during a period that the licensed bat ecologist is not present on site, all works must cease and the licenced bat ecologist engaged.

9 REFERENCES

Bat Conservation Trust. (2016) *Bat Surveys - Good Practice Guidelines*. Bat Conservation Trust, London.

Mitchell-Jones, A.J. & McLeish, A.P. (2004) *The bat workers' manual (3rd Edition)*. Joint Nature Conservation Committee.

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. Natural England

The Conservation of Habitats and Species Regulations 2017 (as amended) (HMSO).

The Natural Environment and Rural Communities Act (2006) (as amended) (HMSO).

The Wildlife and Countryside Act 1981 (as amended) (HMSO).

APPENDIX A- SITE PHOTOGRAPHS







