

Baldock, St Mary's Church Hall, Bat Survey 2024

1. Location as shown below



2. Grid reference: 524351, 233930

3. **Gradient** The building in question lies at an altitude of 63 metres Above Sea Level. The land gently slopes down to the east to the Church gate, Church Street, at 62 metres ASL. The land to the west southwest again slopes down from the high point at the 63 metres ASL Church Hall to 62 metres ASL where the Church land meets North Road

4. Site history

Copied from the Church History Wikipedia

The **Church of St Mary the Virgin** is a parish church of the Church of England in Baldock in Hertfordshire. Dedicated to the Virgin Mary, the original church on the site dated to about 1150 and was built by the Knights Templar before being largely rebuilt in about 1330 by the Knights Hospitaller. It is a Grade I listed building

The Church Hall was completed in 1983 and apart from the recent vandalism described below, was, for the most part, a sound modern building. The exceptions were the outer parts of the four windows on the southeast elevation. The wooden surroundings are progressively rotting but is still largely intact. On close examination, there appeared to be no opportunities for entry or roosting.

It is quoted on the Church's website In the early hours of the morning on Friday 19th July, St. Mary's Church sadly suffered from a significant act of vandalism. Several gravestones in the churchyard were severely damaged and almost every window and door in the church hall were smashed.

5. Date and surveyors

The site was visited at 18.20 hrs. until 21.50 hrs. on Wednesday 18th September.

Surveyors were A. R. Arbon MBE, Consultant Ecologist, (35 years) and T. C. Cross Architect and experienced observer re Chiropteran emergence surveys, Collins 4th Edition.

6. Equipment used.

- 300 mm Parabolic Microphone to record any pre-emergence chattering. All accessible parts of this building were surveyed by this method.
- Topdon TC004 Thermal Imaging Camera in continuous use. Various still images from this TI camera survey are in this report
- 36 MP Night Vision 4K UHD Infra-Red Camera and Video.
- Magenta Bat 4 Heterodyne Bat Detector
- Pettersson D240x Time Expansion and Heterodyne detection.
- 16 MP camera
- BetaOptics The 144X Military Zoom Binoculars 20-144x70mm

7. Methodology BCT Collins' 4th Edition 2023 Chapter 5 and Chapter 6

8. Survey conducted to, Bat Surveys for Professional Ecologists, Good Practice Guidelines Collins Edition 4, published September 2023 by The Bat Conservation Trust, editor Jan Collins.

Edition 4, Table 2.2

Table 2.2 Recommended UK survey times for survey types described in these guidelines.												
Survey type	Month											
	J	F	M	A	M	J	J	A	S	O	N	D
Daytime Bat Walkover (DBW)												
PRA – structures ^a												
Emergence survey for maternity or summer roosts ^b												
Emergence survey for transitional/occasional roosts ^b												
Re-entry surveys ^c												
Emergence survey for mating roosts ^b												
Hibernation survey – structures ^a												
GLTA ^d												
PRF inspection survey – trees												
Ground-level bat activity survey – night-time walkover surveys and automated/static												
Pre-, during and post-hibernation – automated/static bat activity survey												
Swarming survey ^e												
Back-tracking survey												
Trapping and radio-tagging survey ^f												

 = optimal period  = sub-optimal period

 = weather or location dependent (i.e. may not be suitable due to spring and autumn conditions in any one year or in more northerly latitudes). Note that October emergence surveys are not acceptable in Scotland.

 = it is not acceptable to trap bats when they are heavily pregnant and have dependent pups. Mothers need to optimise foraging due to the physiological demands of pregnancy and lactation, and pups need to be regularly fed. Interrupting these activities could potentially have an impact on breeding success in the year in question. The timing of birth can vary between years – it may be as early as the end of May or as late as the start of August, therefore caution should be exercised and local information gained on birth dates before trapping activities are carried out during the summer months. Any information gained and decisions made should be kept as a record.

Bat roost inspection surveys – buildings, built structures and underground sites

Surveying trees and woodland for bat roosts

Guidelines in Chapter 5 and Chapter 6 for surveying were followed.

9. Sunset time Baldock 18th September 2024

Sunset was at 19.07 hrs

10. Weather Conditions

The weather conditions were ideal for an emergence survey.

Temperature Start 17 degrees C End 14 degrees C

Wind Speed Start Beaufort 1 Light Air End Beaufort 1 Light Air

Wind Direction East to Northeast

Precipitation 0 Last precipitation 20.00 hrs 14th September 2024

Flying Invertebrates Very few at ground level to 2000 m. More plentiful and recordable with Infra-Red camera at 2000 – 20000 mm above the ground.

11. Examination of the Church Hall building

Daytime walkover and Preliminary Roost assessment.

As the numerous images demonstrate below, all accessible parts of the building were examined for entry points and Potential Roost Features. Initial observations indicated one broken tile on the south facing roof to the west of the entrance. This was examined with the binoculars, as stated above, and found to be sound with no entry point. The tile had broken in half, but the remaining section had stayed in situ; no cavity or hole.

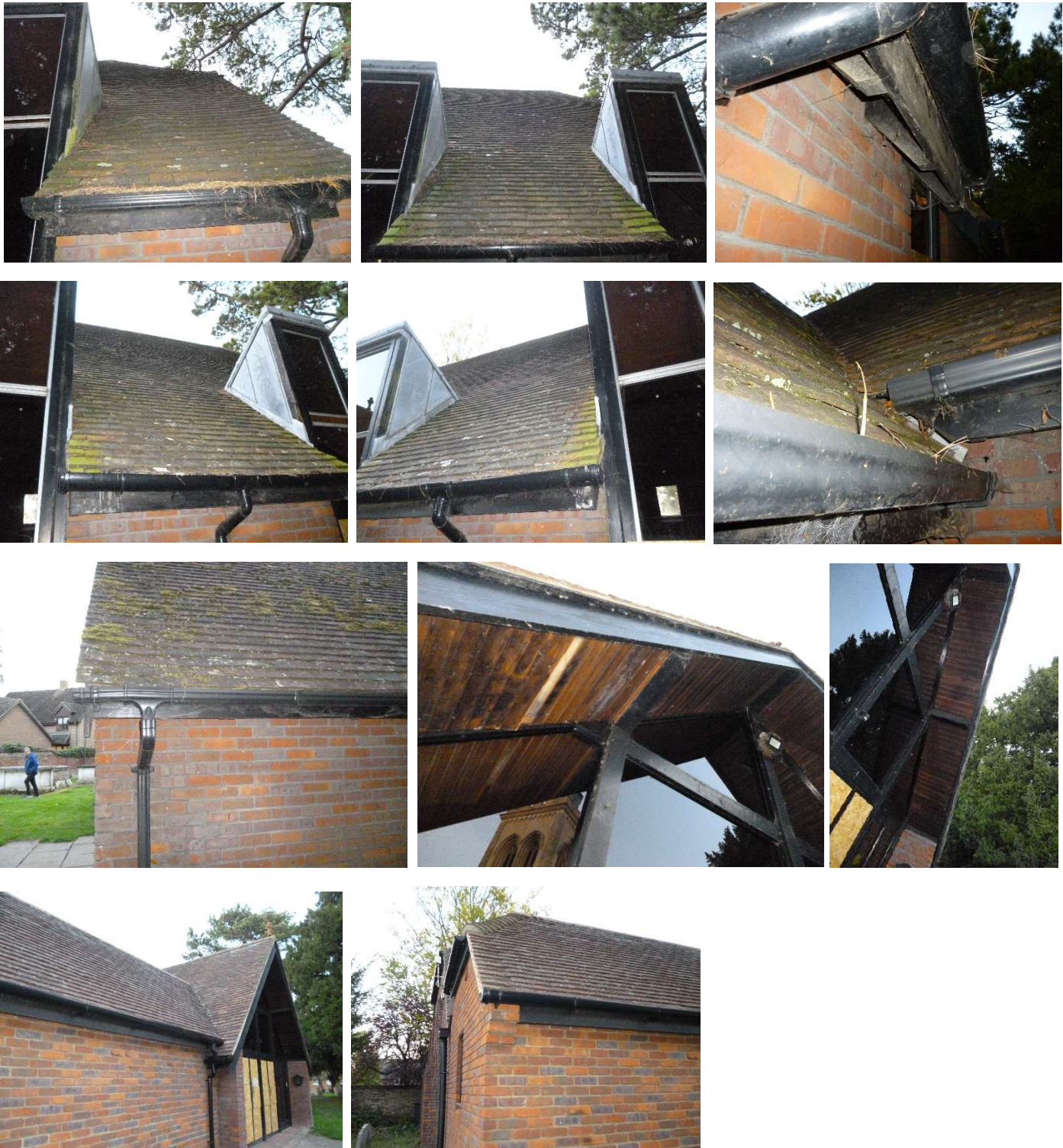


North side no obvious cavities or crevices; access difficult





East elevation, no obvious cavities or crevices.





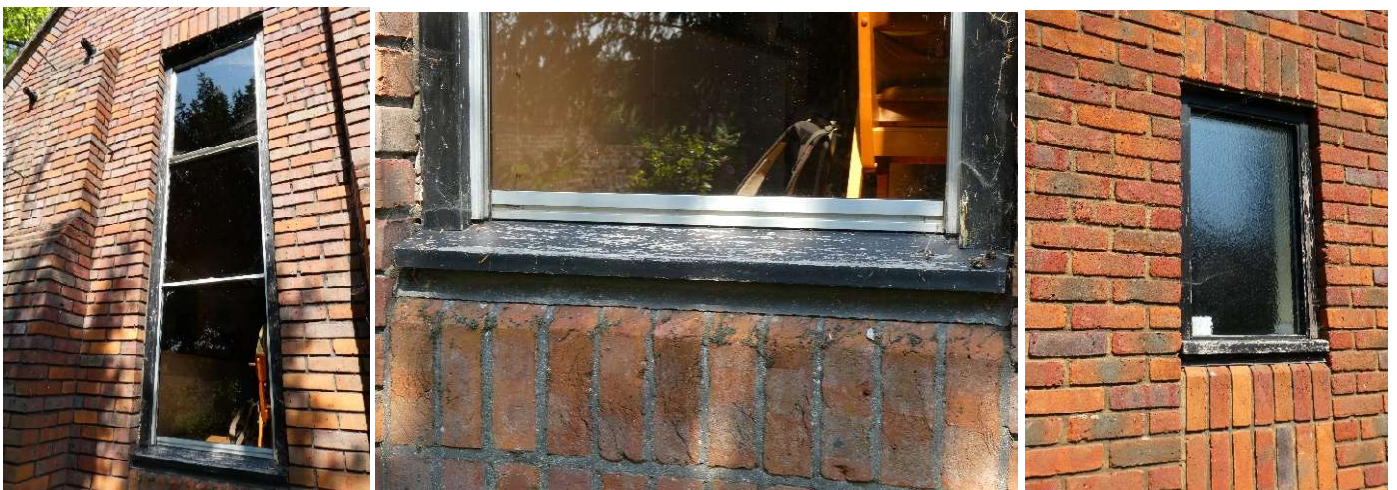
Western elevation also crevice and hollow free. All in very good condition.

All mortar, cloaking material, brickwork, fascias and soffits were found to be in perfect condition or slightly degraded but certainly Bat proof.

All other possible entry points were obscured with Cobwebs, i.e., valley bottoms and guttering attachments and windows etc.



Windowsills: all accessible windowsills were examined for faeces and urine splatter and staining; absent from all.



All windows and ledges checked for faeces and urine splatter etc.

Inside the building, which prior to the vandalism in July, was regularly used and well maintained. There is no cavity between the tiles and the boarded inside, just insulation.



All joints still perfectly sealed

To aid the initial ground level walkover a 300 mm parabolic microphone was used to record any pre-emergence chattering, nothing was recorded.

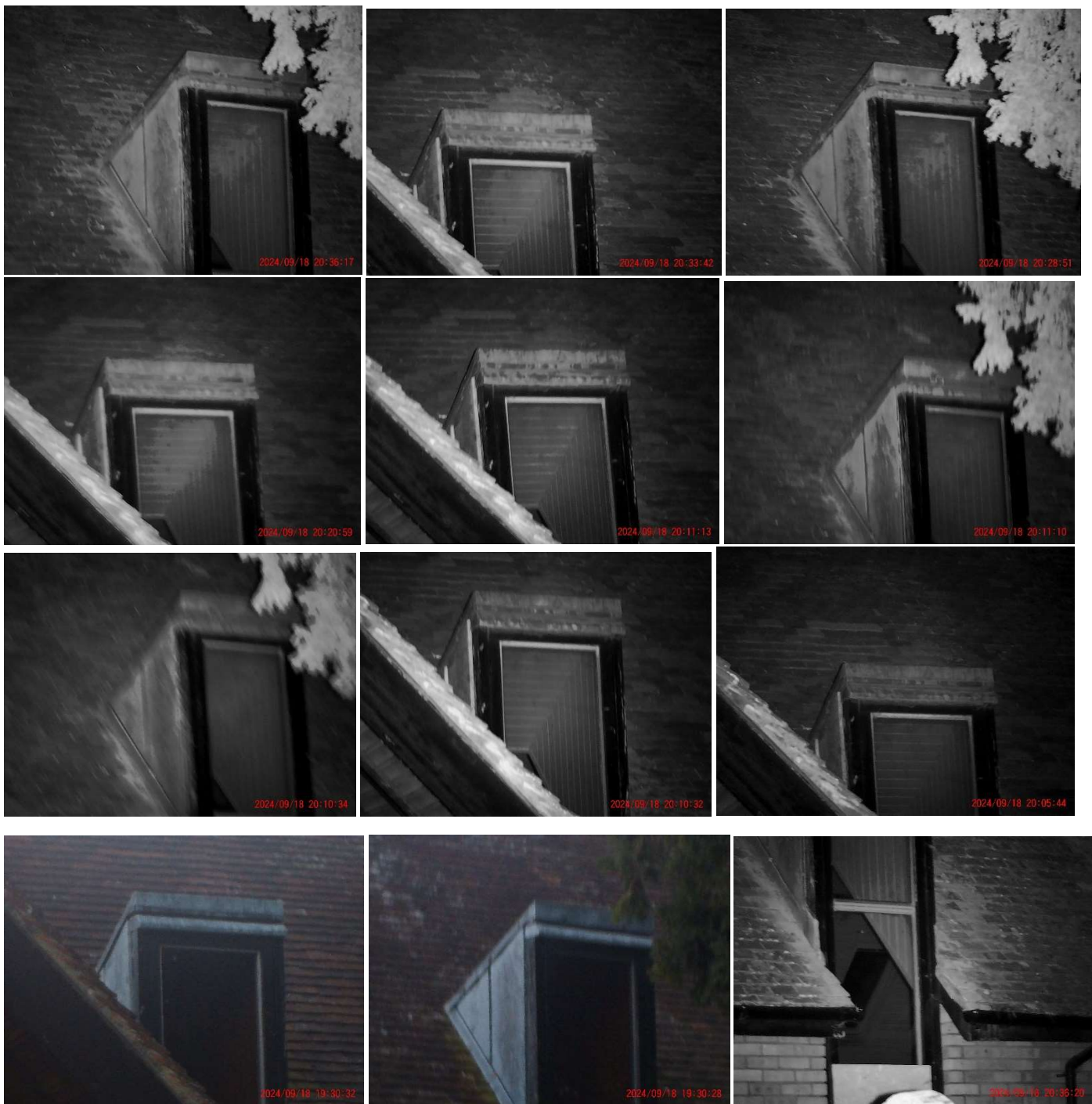


The conclusion was that there are no potential entry points and no roosting opportunities in this building. The potential suitability for this building is therefore negligible.

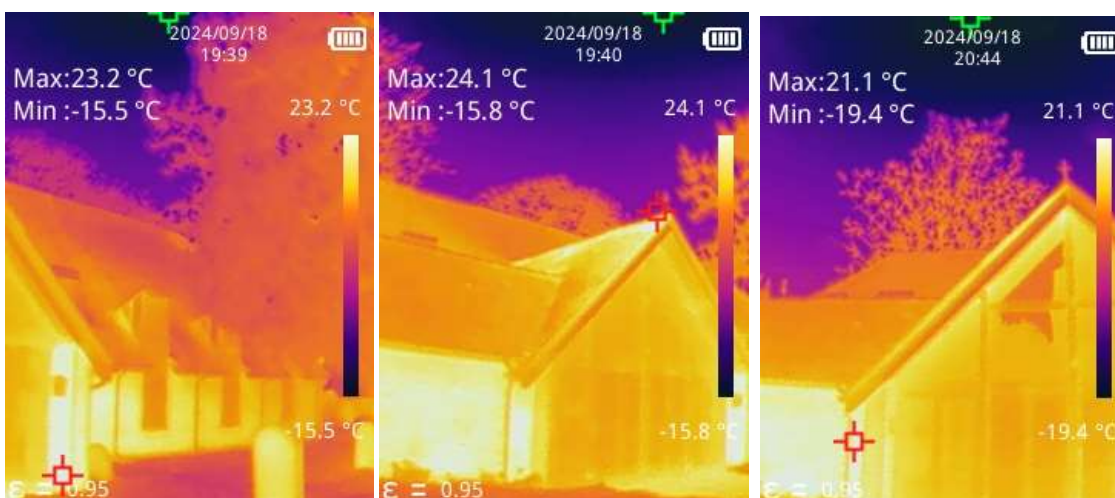
12. Emergence survey.

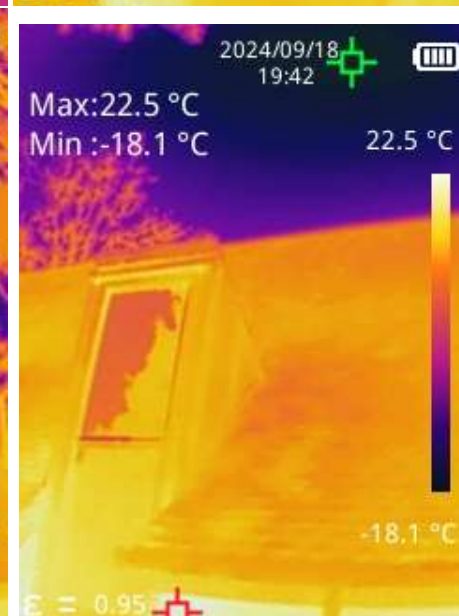
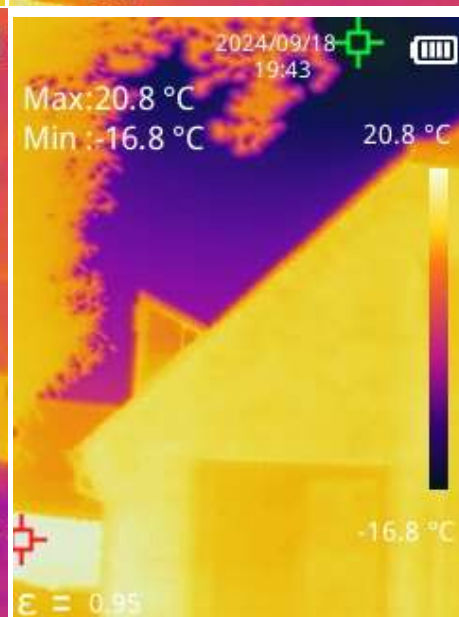
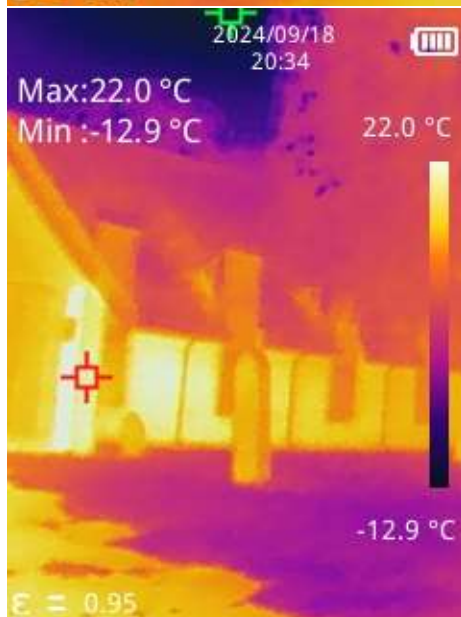
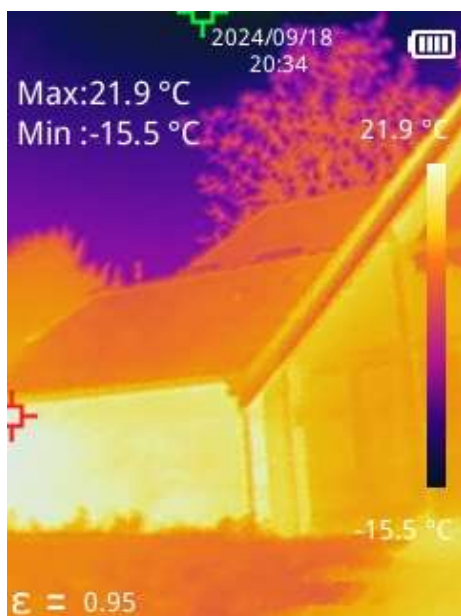
Notwithstanding the conclusion stated above, the majority of native species are small. Crevices of less than 19 mm can allow access with relative ease. The precautionary principle must always be applied, particularly if initial findings are predicting an absence. That being the case a full emergence survey was carried out between 18.35 hrs. and 21.35 hrs. Initially unaided or with binoculars, then as the light levels fell both Thermal Imaging and Infra-Red equipment used.

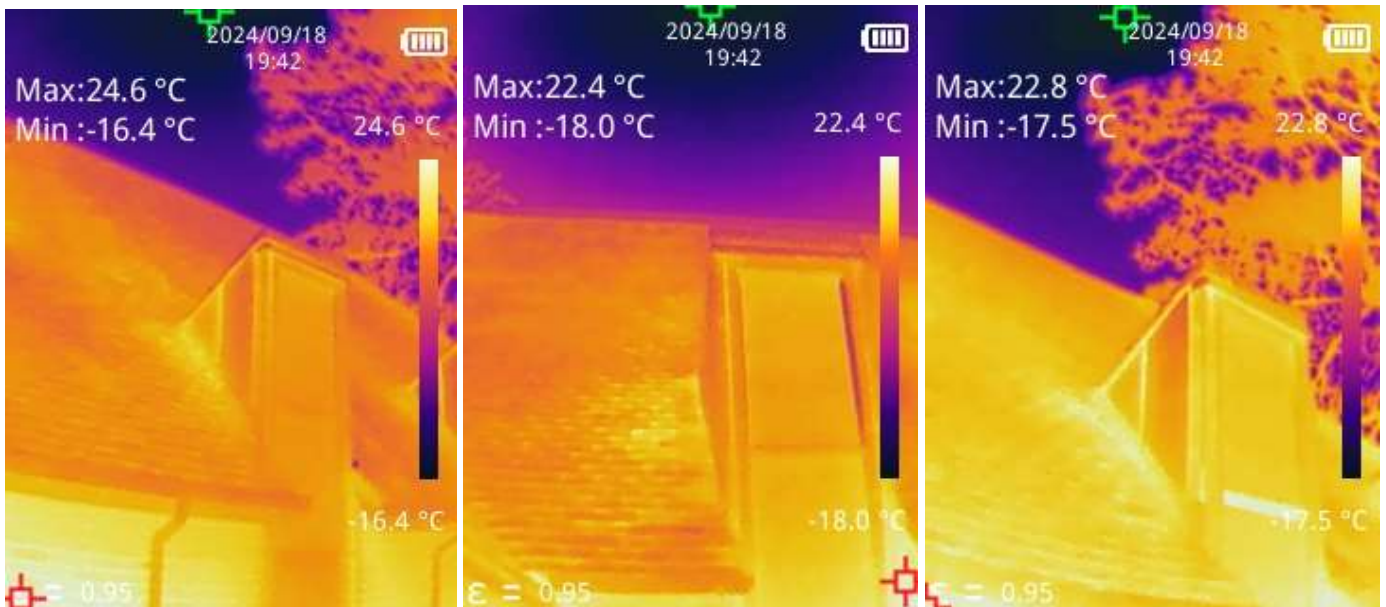
Infra-Red images below



Thermal Imaging







No record of emergence from anywhere around the building.

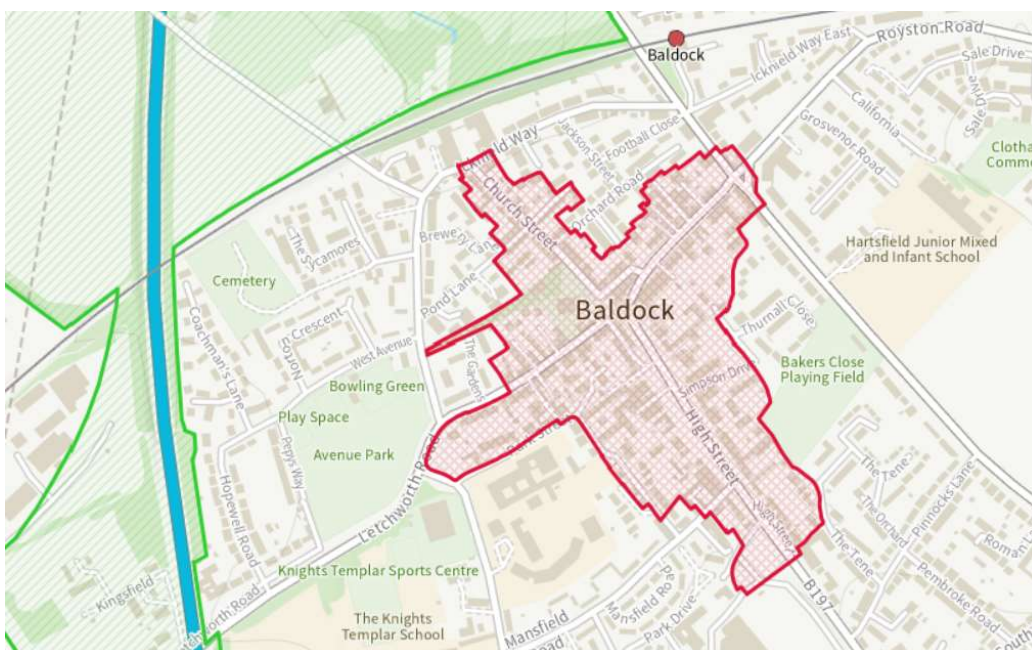
The above images of the survey with binoculars, cameras etc. are a selection from those recorded from this site. There are another 80 supporting images if required..

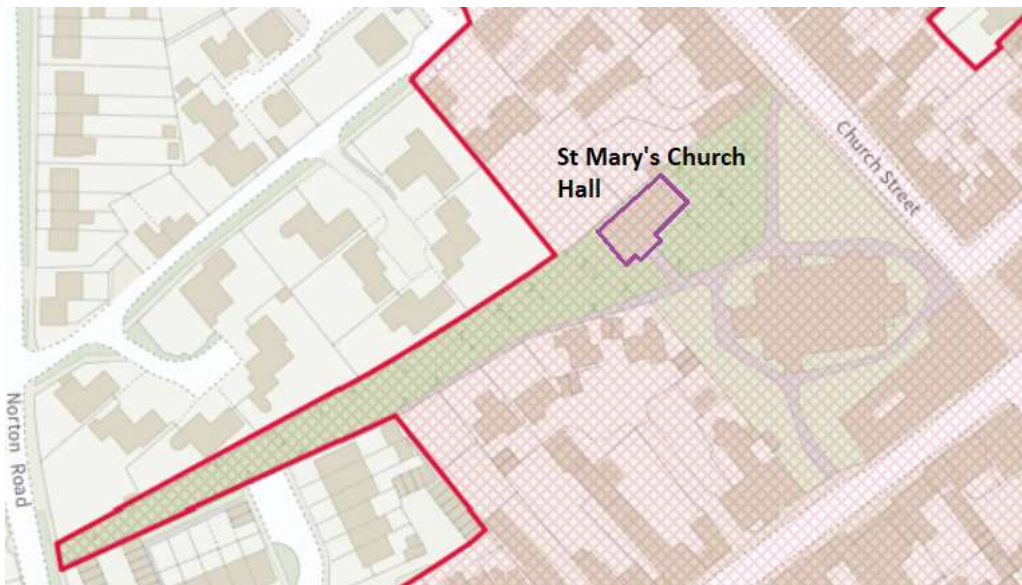
13.Tree Preservation Orders

I searched the internet to research any application site or nearby Tree Schedules, for the specific purpose of determining the status of the five trees in the proximity of St. Mary's Church Hall. Having found no information on the internet, I rang North Herts District Council at 09.00 hrs. on Thursday 3rd October 2024 and was promptly put through to the Duty Planning Officer. He searched for a while and then declared that North Herts District Council does not have an internet record of Tree Preservation Orders.

14.Conservation Area

The entire application site is within the Baldock Conservation Area so all trees larger than are protected under the





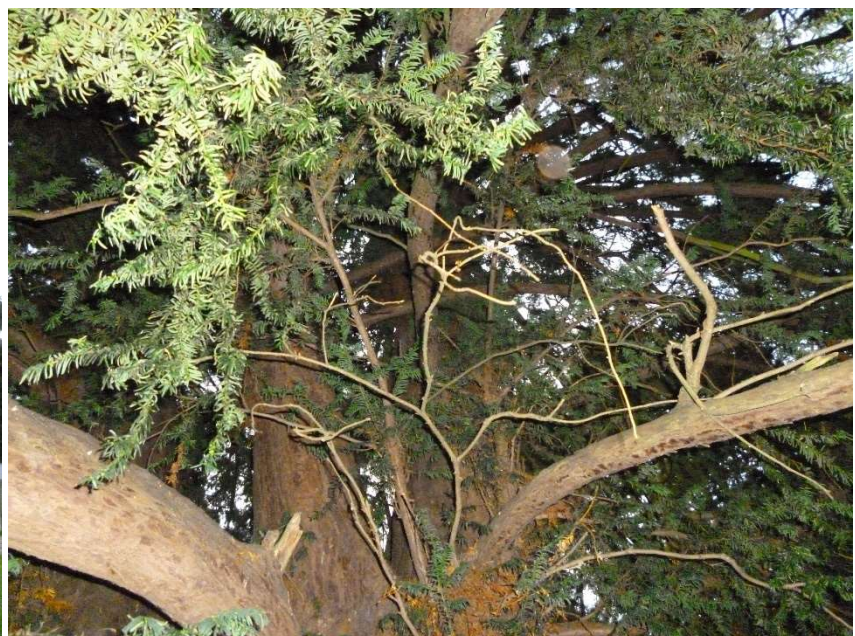
15. Trees

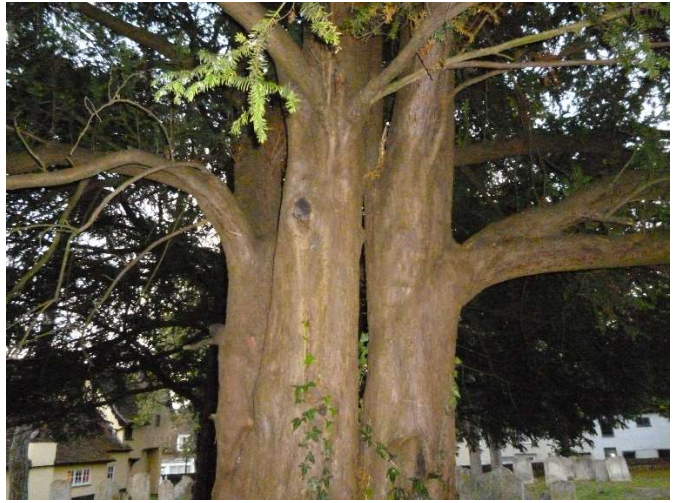
In close proximity to St Mary's Church Hall are five significant trees. There are three mature *Taxus baccata*, English Yew, not *Taxus baccata fastigiata* The Irish Yew a fastigiate form commonly planted in Churchyards. In addition, there are two *Pinus nigra* subsp. *salzmannii* var. *corsicana* (syn. *Pinus nigra* subsp. *laricio*, *Pinus nigra* var. *maritima*). All of these trees have Statutory Protection under the provisions in section 211 of the Town and Country Planning Act 1990.

GTLA Ground Level Tree Assessment

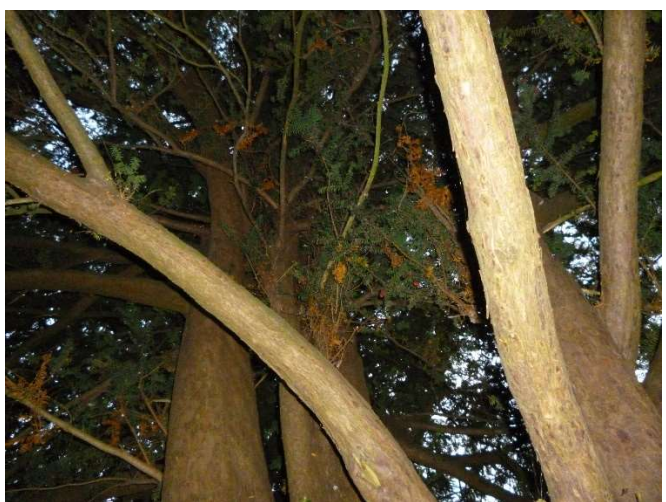
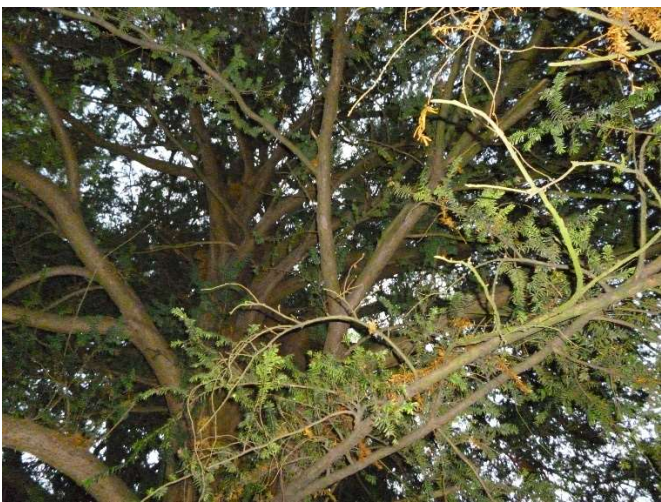
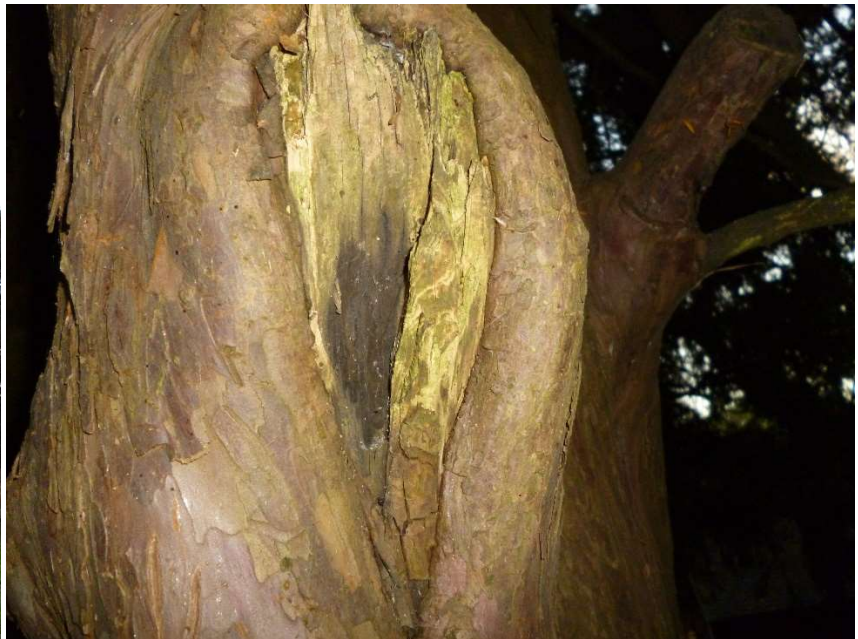
Ground Level Tree Assessments are usually undertaken in the winter months. The lack of leaves enables the observer to examine all aerial parts of the tree. For evergreen tree species it is more difficult as there is no dormant season re: the leaves.

T1 *Taxus baccata*, English Yew, T2 *Taxus baccata*, English Yew, T3 *Taxus baccata*, English Yew, T4 *Pinus nigra* subsp. *salzmannii* var. *Corsicana*, Corsican Pine, T5 *Pinus nigra* subsp. *salzmannii* var. *Corsicana*, Corsican Pine; dead.

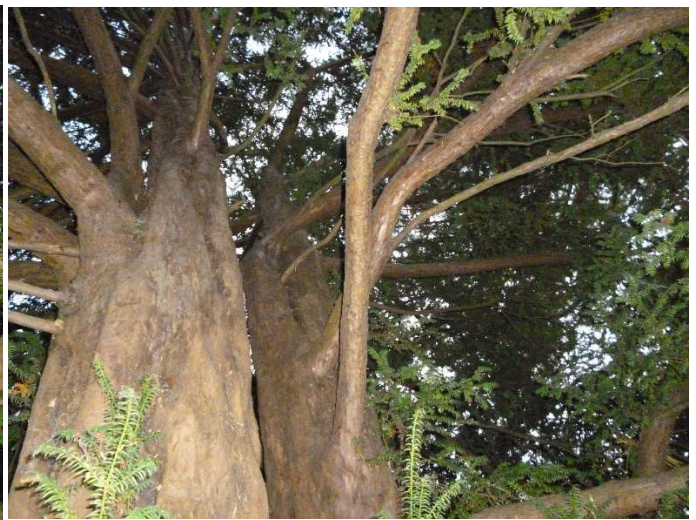
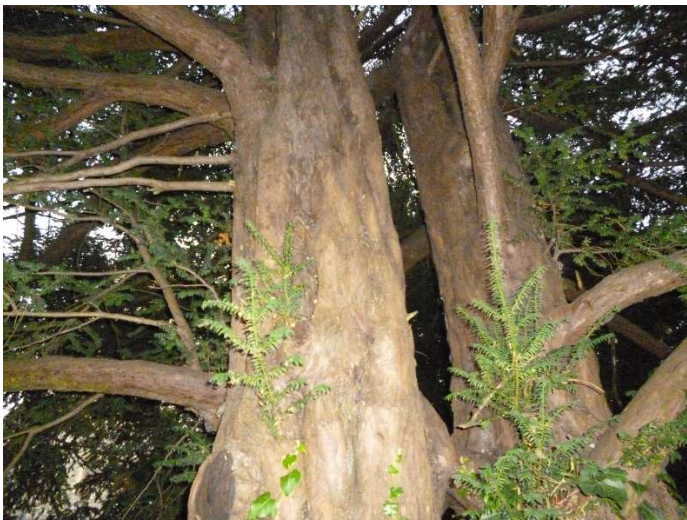
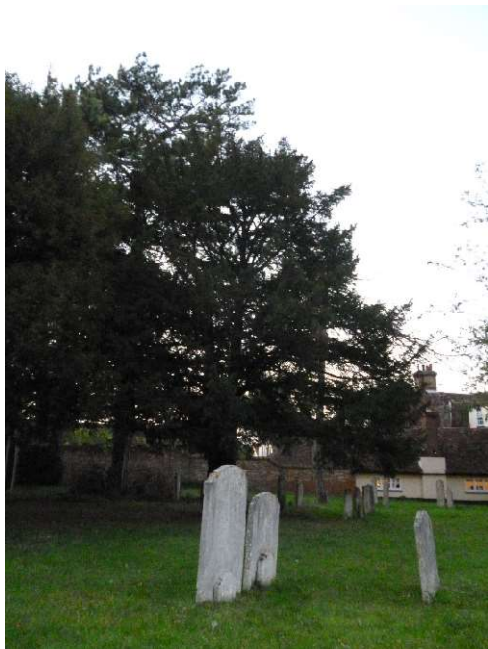




T1 various splits and bark peeling as is common in this species, but no obvious crevices or hollows. Potential suitability negligible.



Tree T2, mostly sound without any obvious crevices or hollows. Historic limb failure has healed without issue, leaving no potential roosting features. Potential suitability negligible.



Tree T3, in good condition, no fissures, crevices or hollows visible from the ground. Epicormic growth ground. Epicormic growth causing no issues. Previous surgery appears to have been done to BS 3998: 2010. Potential suitability negligible.

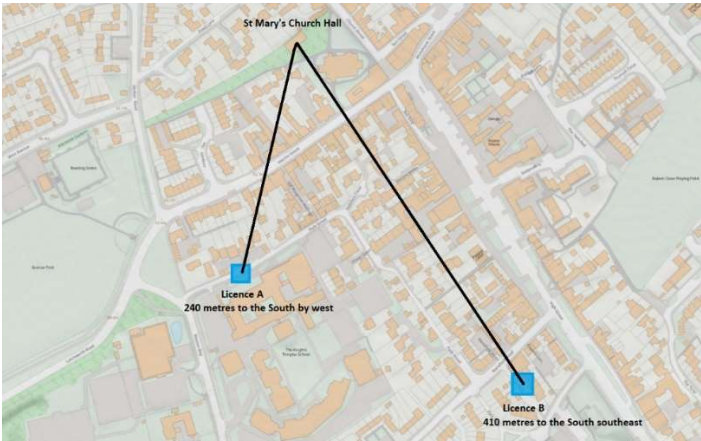


Tree T4, canopy open to apex, completely sound, no crevices or hollows, all exposed to the elements. Potential suitability negligible.



Tree T5 dead, at present there appear to be no roosting opportunities, even within the crown. As this tree is obviously dead and decaying, if left it could develop good potential roosting features in the mid to long term. On the date of the survey, potential suitability negligible.

16.Licenses and wider environment.



Site Check Results	
Site Check Report Report generated on Mon Oct 07 2024 You selected the location: Centroid Grid Ref: TL24293369 The following features have been found in your search area:	
Granted European Protected Species Applications (England)	
Case reference of granted application	EPSM2011-3393
Species group to which licence relates	Bat
Species on the licence	C-PIP;BLE
Site county of licence	Northamptonshire
Licence Start Date	19/09/2011
Licence End Date	31/12/2012
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	
Does licence allow damage of a resting place	
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown

Licence A

Site Check Results	
Site Check Report Report generated on Mon Oct 07 2024 You selected the location: Centroid Grid Ref: TL24593361 The following features have been found in your search area:	
Granted European Protected Species Applications (England)	
Case reference of granted application	2015-8048-EPS-MIT
Species group to which licence relates	Bat
Species on the licence	C-PIP
Site county of licence	Hertfordshire
Licence Start Date	18/03/2014
Licence End Date	30/09/2016
Does licence impact on a breeding site	N
Does licence allow damage of breeding site	N
Does licence allow damage of a resting place	Y
Does licence allow destruction of breeding site	N
Does licence allow destruction of a resting place	Y
Does licence impact on a hibernation site	Unknown

Licence B

There is a Bat Box at the Rectory a few tens of metres away to the northwest. Personal comment from the owner / occupier.

It is axiomatic that the Grade 1 listed Church of St. Mary the Virgin with all its crevices and hollows, has numerous potential roost features. It is logical, therefore that for all types of roost and most Hertfordshire species, this building dating back to late mediaeval times would be the preferred place of permanent shelter.

The row of *Tilia x europaea* Common Lime Trees along the eastern boundary, although not closely inspected, appear to have a far higher potential for roosting. No evidence to suggest that they do.

17.Planning Application

The planning application is to renovate or replace the windows to the east of the entrance

18.Observation results

Using the equipment stated above, observations and emergence surveys were carried out between 18.35 hrs and 21.36 hrs.

Sightings and recordings mostly the Pettersson D240x. No BLE's surprising.

1. *Pipistrellus pipistrellus*, Common Pipistrelle 44 kHz flying south to north around Tree T1 at approximately 12 metres high at 19.25 hrs
2. *Pipistrellus pipistrellus*, Common Pipistrelle 44 kHz flying south to north around Tree T1 at approximately 10 metres high at 19.45 hrs
3. *Pipistrellus pipistrellus*, Common Pipistrelle 44 kHz flying south to north around Tree T1 at approximately 12 metres high at 19.46 hrs
4. *Pipistrellus pipistrellus*, Common Pipistrelle 44 kHz flying south to north around Tree T1 at approximately 18 metres high at 19.47 hrs
5. *Pipistrellus pipistrellus*, Common Pipistrelle 44 kHz flying south to north around Tree T1 at approximately 8 metres high at 19.50 hrs
6. *Pipistrellus pipistrellus*, Common Pipistrelle 46 kHz flying west to east past Tree T1 at approximately 15 metres high at 20.21 hrs.

The emergence survey continued with the Thermal Imaging and Infra-Red cameras, until 21.36 hrs. Nothing emerged from the building.

19.Conclusion

After an extensive survey on the evening of Wednesday 18th September, there appeared to be no entry points or opportunities for shelter in St Mary's Church Hall. The Hall was built in 1983 and is generally sound. The GTLA, also revealed no obvious roosting opportunities.

One concludes that no further surveys are necessary and that works to this building can be undertaken without the need for a European Protected Species Licence from Natural England.

A. R. Arbon MBE, Consultant Ecologist, 35 years and NPTC Qualified Tree Surgeon 1992

1, Wren Park, Whittlesford, Cambridge. CB22 4LY 5th October 2024