

THE TYRER PARTNERSHIP



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St Mary Magdalene's Church, Tallarn Green, Malpas, SY14 7JH

Updated Surveys in Relation to Bats

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St Mary Magdalene's Church, Tallarn Green, Malpas, SY14 7JH
Dusk/Dawn Surveys in Relation to Bats & Mitigation

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APPENDIX I - Bat Roost Designs

1.0 Introduction & Background

- 1.1 As part of a proposed Planning Application at St Mary Magdalene's Church, Tallarn Green, a daytime inspection and assessment was originally undertaken in relation to bats on the 3rd August 2010; the aim of the inspection was to ascertain if potential existed for bats and if evidence of use was present. The status of the building in relation to bats was deemed to be of low value and potential for a breeding roost for loft and crevice dwelling species; typically Brown Long Eared and Pipistrelle bats, (*Plecotus auritus* and *Pipistrellus pipistrellus*) was found to be absent.
- 1.2 Subsequently, dusk emergence and dawn re-entry surveys were undertaken and completed on the 12th August and 26th August 2010 respectively, these further surveys were undertaken by two bat licensed surveyors and one highly experience surveyor in the latter stages of obtaining a Natural England Class 2 bat licence. Furthermore, they were conducted during a time when bats are within their breeding season. The surveys revealed an absence of bats emerging or re entering the building and it was concluded that:

"From the daytime, dusk and dawn survey results it can be concluded that the building for which the survey was conducted offers minor potential for crevice dwelling bats, however, no evidence was found that would suggest a breeding roost of any species. It appears that singular Long Eared and Pipistrelle bats are gaining access to the church interior by an unidentified route and that the building could be used for occasional roosting. The two outbuildings offer limited potential for bats, notably at the ridge of both structures and under slate of the one"

"The cellar could be used for hibernation purposes as the conditions are suitable and evidence of bat use was found".

In addition to the dusk surveys mitigation for the loss of a place that is used by bats will be required as part of the Planning process.

2.0 Current situation

- 2.1 As no further surveys had been undertaken since 2010, two dusk surveys were requested by the Local Planning Authority in order to update the status of the building in relation to bats; therefore a further inspection and assessment followed by the emergence surveys were undertaken in 2013. Heritage Planning Consultancy, on behalf of the site owner, commissioned the updated surveys. It is understood that the proposals for the site involve the conversion of the church into a residential dwelling, which will include re-roofing. As part of the Local Authority's Planning Policies ecological surveys are generally required, particularly where a specially protected species is or may be present and could be affected by the proposals for which the Application seeks consent.
- 2.2 The Tyrer Partnership conducted the further emergence/re-entry surveys, which were completed on 03rd September and 18th September 2013. The aim of these surveys was to ascertain if since 2010 the building is of more or less value to bats, if the status quo exists or if bats were present.

The updated internal inspection was undertaken by an experienced surveyor who is registered as a Class 2 Natural England bat licensed person; during the updated site visit access was achievable into the church and it was noted that recent evidence of use by either Brown Long Eared or Pipistrelle bats was absent, additionally; the inspection of the cellar mirrored these findings.

- 2.3 The roost potential that was originally identified during the daytime inspection during 2010 remains the same, and thus the status quo of the church in relation to bat roost potential remains, i.e. the number of potential access opportunities for bats that were previously identified at all elevations of the building are still available; bat access was also noted at the open eaves above the stone work and at the west gable elevation roof verge below the coping stones.
- 2.4 The updated assessment of the structure in relation to bat roost potential remains as offering low value opportunities for bats; notwithstanding this assertion, bats are a highly transient species and can use buildings at any time of the year.

3.0 Personnel

- 3.1 Mr H Green: Highly experienced surveyor holds Class 2 Natural England bat licence.
Ms Katie Swift: Experienced surveyor and in the latter stages of Natural England Class 2 bat licence training with the Tyrer Partnership.
Ms Jenny Taylor: Experienced surveyor and in the latter stages of Natural England Class 2 bat licence training with the Tyrer Partnership

4.0 Constraints

- 4.1 There were no survey constraints that would prevent a full inspection of the church; the dusk surveys were undertaken outside of the breeding season; however surveys undertaken outside of this time, particularly during autumn can be equally productive as surveys conducted during the breeding season as at this time bats can be present in buildings that are not necessarily used over the summer season. Additionally the previous 2010 surveys were undertaken during the breeding season.
- 4.2 In context with the above it is considered that there were no survey constraints that would prevent the gathering of information on which to base conclusions and recommendations for the updated survey.

5.0 Survey Results

- 5.1 In order to update the initial 2010 surveys two dusk emergence surveys were conducted; the results are shown below in the following tables.

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Survey	Date	Timings	Weather Conditions
Dusk emergence	03.9.13	1930 - 2105 (sunset 1956)	Dry, still, 15% cloud cover Start temp: 18.5 ° C End temp: 18 ° C
Dusk emergence	18.9.13	1900 – 2030 (sunset 1920)	Damp, light wind, 10% cloud cover Start temp: 10 ° C End temp: 10 ° C

Date	Building	Observations
03.9.13	Church	No emergence from building during observation period. 2018 hrs: Single Common Pipistrelle bat commuted through site from a north east direction 2022 & 2030 hrs: Two additional Common Pipistrelle bats commuted onto the site from the above direction. 2024 – 2030 hrs: Up to three Soprano Pipistrelle bats noted foraging around the church and woodland edge. 2030 – 2042 hrs: Brown Long eared bat recorded on three occasions foraging around site.
18.9.13	Church	No emergence from building during observation period. 1940 hrs: Single Common Pipistrelle bat entered site from a north east direction with foraging activity noted to along the rear woodland edge until 1956 hrs. 1941 hrs: Single Common Pipistrelle bat commuted across the site in a south east direction. 1943 hrs: Single Whiskered/Brandt's bat recorded foraging along the woodland edge. 1950 – 2020 hrs: Continual foraging activity by single Common Pipistrelle bat around the church and associated grounds.

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-  Location of surveyors
-  Commuting flight paths
-  Main foraging activity

6.0 Conclusions

- 6.1 From the results of the dusk surveys it can be concluded that evidence of bat use, or bat emergence by any bat species was not recorded during the 2013 surveys. The status quo in relation to bats remains and potential ingress points identified during the 2010 survey still exist.
- 6.2 Taking into consideration the above assertion and that bats are a highly transient species it is recommended that precautionary measures be adopted during the conversion.

7.0 Work Procedures & Bat Roost Retention/Enhancement

- 7.1 A small amount of evidence of Brown Long Eared and Pipistrelle bats was located during the initial inspection at the building during 2010, however bat presence was found to be absent during the subsequent dusk/dawn surveys in 2010 and the recent 2013 surveys, notwithstanding this absence, features are to be incorporated within the converted structure to ensure that opportunities for bats are retained.
- 7.2 Conversion work of the building will take place over late autumn or early spring to avoid the hibernation season; where considered necessary roof tiles and coping stones will be removed in a careful and controlled manner under the supervision of a bat licensed ecologist. A number of trees are present within the grounds and to the south west perimeter that will be able to support bat boxes therefore, four Schweglar 2f bat boxes, will be fixed on to the trees by the ecologist, which will provide roost opportunities for bats whilst the conversion takes place; they will then be left in situ as a permanent feature.
- 7.3 During the re-roofing work two ridge tiles will be adapted to allow bats to gain access beneath the tiles. To facilitate full access under the ridge, the tiles will be fixed by edge pointing as opposed to setting the tiles on a 'bed' of mortar, this provision will not only compensate for the loss of roost potential in relation to the number of bats that were present but will provide additional roost opportunities over the full year. It is understood that a breathable membrane will be used in the newly converted structure; this type of membrane has been shown to cause problems in bat roosts whereby over time bats have become entangled in the fibres following the breakdown of the material associated with the fine claws of bats. Therefore the membrane will not overlap under the ridge tiles or alternately it should cover with traditional bitumen underfelt.
- 7.4 During the conversion work one 1FQ bat box will be installed on the external north west elevation of the former church, and one 1FE bat access panel will be fixed to the south east elevation. They will be a permanent and dedicated feature for bats, and the position of the roosts on opposite elevations will offer alternative climatic conditions for bats and thus maybe used at anytime of the year.

8.0 Post development site safeguard

The bat roost provision within the converted church will be permanent and dedicated for bats, management requirements of the roost are considered to be absent; lighting will not be directed at the roost areas or close to nearby foraging places such as the rear woodland edge.

9.0 Impact Assessment

Despite a small number of Brown Long Eared bat droppings (i.e. total of six), combined with several yellow under wing remains being located during the 2010 inspection it is considered that short or long term impacts upon this species will not be applicable. The amount of evidence found combined with an absence of emergence during the subsequent surveys would suggest that a single Brown Long Eared bat had used the building on a single occasion to use as a 'feeding station', thus, the proposed conversion will not result in the loss of a site that is regularly used by this species.

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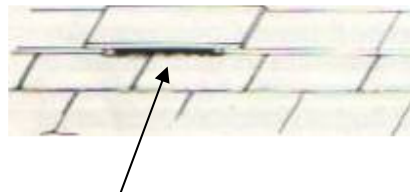
- 9.1 Notwithstanding the absence of emergence by Pipistrelle bats, droppings were located within the structure in 2010 thus without opportunities for bats being retained short/long term impacts by this development would result in the loss of roost potential for small numbers of crevice dwelling bats. If the work was undertaken when bats are more likely to be in hibernation then disturbance and possible direct harm to bats would occur during a time when bats are particularly vulnerable. Without roost retention the impact on bats at a local scale would be low as other properties, which are typically used by species such as Pipistrelle bats.
- 9.2 By undertaking the work outside of the hibernation, season, and alternative roosts are in place the impact can be significantly reduced.
- 9.3 It should be noted that if bat/s or evidence of use is/are found during the supervision, work then as a legal requirement work must cease and the roof or any other component of the building made good to its prior condition with bat access retained. Furthermore, the work at the site would be delayed until such time that a European Protected Species Mitigation Licence (EPSML) is applied for and granted to allow any work to legally commence, which would affect bats or their roost. Notwithstanding the granting of a licence, works that would affect the roost cannot take place if a maternity colony is in occupation.
- 9.4 Long term or any other impact upon the immediate foraging or commuting habitat is absent; it is therefore clear that isolation from those places will not happen as a result of the development. St Mary's Church is located amid habitat that is favourable for foraging but it will not be affected by the proposals; therefore an adverse impact on the local, regional or national populations is considered to be absent but positive impact is predicted as roost opportunities will be retained.
- 9.5 Subject to Planning Consent being approved it is anticipated that a Condition/s would be attached which requires the current or future owner/developer to ensure that the above measures are fully implemented as part of the approval and such measures retained indefinitely at the development thereon after.

**Appendix I –
Bat Roost Provision**



2F Bat Box

Ridge tile access



This area to be coarse or grooved to allow bats to crawl into gap of 20 mm deep x 100 mm long and access the space underneath the ridge tiles

1FQ Bat Box

This is a latest model, designed specifically to be fitted on the external wall of a house, barn or other building. The shape and design make it equally attractive to bats as a roost or a nursery. It is also pleasing to the human eye, an important consideration. It is easy to attach to most types of walls; it features a special porous coating to help maintain the ideal temperature inside. It requires no maintenance or cleaning and its tough construction will ensure that it helps bats for decades.

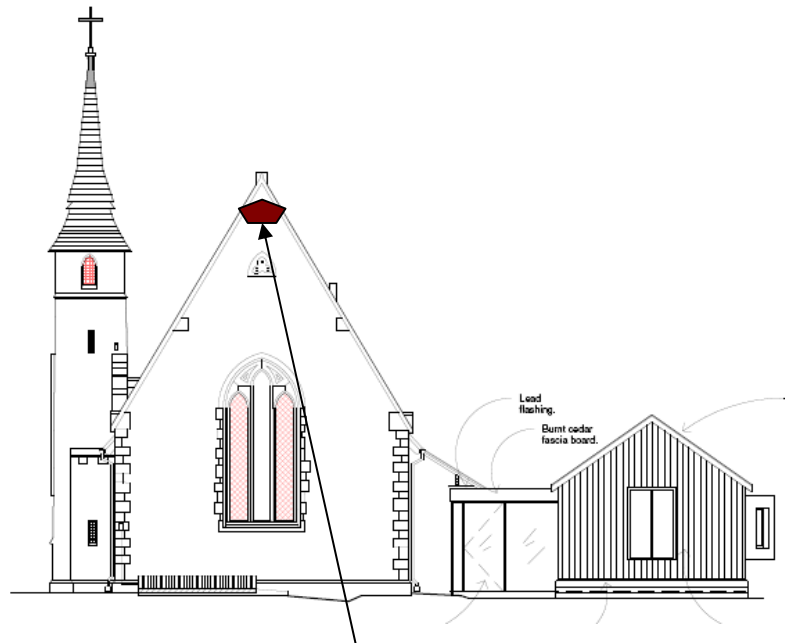


1FE Bat Access Panel

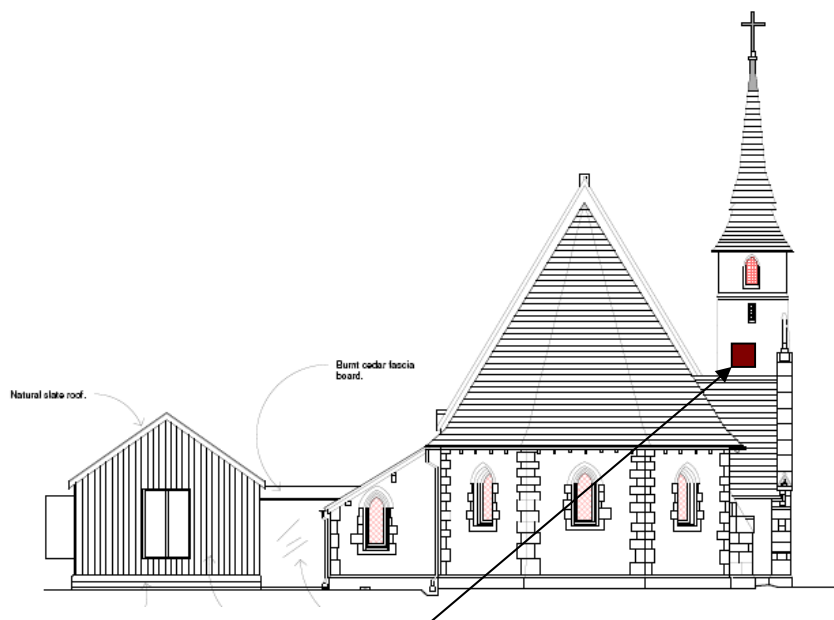
This is a panel for installing on or in the surface of exterior walls. The open back enables bats to continue to use existing nesting sites in walls. The 1FE is especially suitable for use during conversions, renovations or insulation work on older types of buildings and historic buildings.



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North west elevation – 1FQ Bat Roost



South east elevation – 1FE Bat Panel