BRYMBO METHODIST CHURCH AND ENGEDI CHAPEL, BRYMBO

PRELIMINARY ROOST ASSESSMENT AND EMERGENCE SURVEYS

DATE	ECOLOGIST	APPROVED	VERSION	COMMENTS
04/09/23	Lucy Boyett	Dr Katy Read CEcol MCIEEM CEnv DipSM	V1	
28/02/24	Lucy Boyett	Rhian Hughes	V2	Removal of mitigation and compensation measures as a separate Mitigation Strategy has been produced (Enfys Ecology, 2024)

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Executive Summary

Site	Brymbo Methodist Church and Engedi Chapel
Surveyors	Preliminary Roost Assessment (PRA) and two emergence surveys led by Lucy Boyett (accredited agent on bat licence number S087351/1) with five additional surveyors including Keymar Wake (licence No. S092545/1) and Ash Payne (accredited agent on licence No. S092545/1).
Proposed work	Demolition of Brymbo Methodist Church and Engedi Chapel, to be replaced with two apartment buildings and associated parking, access road and landscaping.
Structures affected	The entire buildings of Brymbo Methodist Church and Engedi Chapel.
Type of survey	Preliminary Roost Assessment - 20/06/2023, Emergence Surveys 10/07/23 and 25/07/23 Static detector left within Engedi Chapel for two weeks (10/07/23 to 25/07/23)
Main results of survey	*Brymbo Methodist Church* • PRA found it to have low potential for roosting bats and no bats were seen to emerge. • Approximately three old droppings, likely to be from a crevice dwelling bat, were found in the toilet block. *Engedi Chapel* • High number of potential roosting features recorded and highly suitable for bats. • Previous surveys from 2007 to 2021 found it to be a day and night roost for a low number of lesser horseshoe (LHS) and a day roost for a low number of common pipistrelle, soprano pipistrelle and brown long-eared (BLE) bats. An internal inspection in winter 2007, found no evidence of hibernating bats. • During the PRA, droppings consistent with LHS, BLE and pipistrelles were found scattered throughout the buildings. • During the emergence surveys, nine LHS were seen emerging and a further six were seen to cross to the woodland and are likely to have also emerged but were not seen. • Static detector left within the former school building recorded common pipistrelle, soprano pipistrelle, BLE, LHS and Myotis sp. • High number of common pipistrelle social calls. • No birds were observed using the buildings during the survey, however the buildings are suitable for use by nesting birds.
Survey conclusions	• Brymbo Methodist Church - Historic roost of a single crevice dwelling bat, unlikely to return. • Engedi Chapel - Day and night roost for approximately 15 lesser horseshoe and individual/low number of common pipistrelle, soprano pipistrelle, brown long-eared and *Myotis* sp.
Mitigation Compensation and Enhancement	**As the buildings have known bat roosts, no works to the buildings must commence until a licence has been obtained from NRW.** A separate Mitigation Strategy (Enfys Ecology, 2024) has been written, which details mitigation, compensation and enhancement measures.

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1.0 Introduction

1.1 Enfys Ecology Limited were commissioned by Wales & West Housing to carry out a Preliminary Roost Assessment (PRA) for bats, and bat emergence surveys of Brymbo Methodist Church and the adjacent Engedi Chapel.

1.2 The proposed works are for the demolition of the two buildings, which are to be replaced with two apartment buildings, parking areas, access road and landscaping.

1.3 Engedi Chapel has been previously surveyed on a number of occasions between 2007 and 2021, which found it to be a day and night roost for a low number of lesser horseshoe (LHS) bats and a day roost for a low number of common pipistrelle, soprano pipistrelle and brown long-eared (BLE) bats (Greenscape Environmental, 2017 & Greenscape Environmental, 2021).

1.4 The surveys detailed in this report provide an update to these previous surveys, to further inform whether the proposed works would affect protected species, specifically bats and nesting birds. The survey work to inform this report was carried out in July 2023. This report is valid for a period of eighteen months in accordance with best practice.

1.5 All British bats (and roost sites) are protected under the Wildlife and Countryside Act 1981 (as amended). In addition, all bats are classified as European Protected species by The Conservation of Habitats and Species Regulations 2017 (as amended). Under this legislation, it is an offence to kill, injure or disturb a bat, or to destroy any place used as a shelter by bats.

1.6 All birds (and their nests) are legally protected under the Wildlife and Countryside Act 1981 and it is an offence to intentionally take, damage or destroy the nest of any wild bird while it is in use or being built (as well as kill or injure wild birds of their eggs).

1.7 Should evidence of bats be found and it is deemed likely that the proposed works will disturb them; a licence from Natural Resources Wales (NRW) must be obtained before any work may proceed.

1.8 A separate Mitigation Strategy (Enfys Ecology, 2024), which is to be read alongside this document, has been written, detailing mitigation, compensation and enhancement measures required as a result of the proposed works and the results of the surveys.

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2.0 Site Description

2.1 *Survey Area*

2.1.1 The site comprised Brymbo Methodist Church in the south of the site and Engedi Chapel to the north (see Figure 2.1).

2.1.2 The area immediately surrounding Engedi Chapel was overgrown with young trees including ash, silver birch, scrub and tall ruderal vegetation, particularly to the east of the former school house and the narrow area immediately to the south and west of the former school building.

2.1.3 The site is located within the residential area of Brymbo village (see Figure 2.2). The site had good connectivity with an area of woodland, approximately 20m to the west of Engedi Chapel, which ran southwards connecting to further areas of woodland and hedge and tree lined fields to the south.



FIGURE 2.1. THE SITE AND SURVEYED BUILDINGS (RED).
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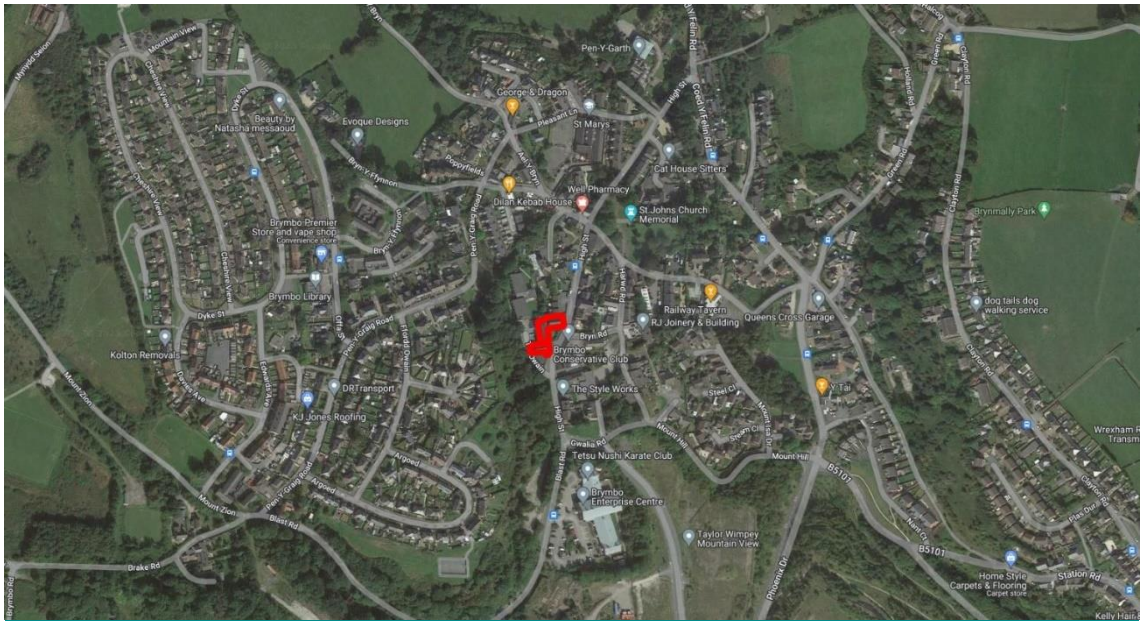


FIGURE 2.2. THE WIDER LANDSCAPE - THE SURVEY SITE IS SHOWN IN RED.
BASE IMAGE © GOOGLE 2023

3.0 Methodology

3.1 *Preliminary Roost Assessment*

3.1.1 The buildings were assessed for any signs of bats; these included droppings, feeding remains, and other indicative marks, plus features of potential use to bats such as crevices, cracks and other holes, and any potential access points into the buildings. High powered torches were used to inspect any identified features, and an endoscope was used to investigate any gaps or crevices, where appropriate.

3.2 *Survey Details*

3.2.1 The external and internal building inspections were carried out on the 20th June 2023 by Lucy Boyett (accredited agent on bat Licence No.S087351/1), Keymar Wake (Licence holder S092545/1) and Ashley Payne (accredited agent on bat licence No.S092545/1). Potential roost assessments were carried out following the guidelines set by the Bat Conservation Trust 'Bat Surveys for Professional Ecologists – Good Practice Guidelines' (Collins, 2016). Photographic evidence was taken where necessary.

3.3 *Dusk Emergence Surveys*

3.3.1 Two emergence surveys were carried out on 10th July 2023 and 25th July 2023; both led by Lucy Boyett (accredited agent on bat survey licence S087351/1) and five other surveyors. Surveyors were positioned to be able to observe and monitor all elevations of the buildings (shown in Figure 3.1), using Anabat scout detectors.

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3.3.2 Night vision aids (NVAs) were used to support the emergence surveys, as per current guidance from the Bat Conservation Trust (2022); these NVAs can allow bats to be observed which may otherwise not be visible to the surveyors when the light levels drop. Canon XA60 video cameras in infrared (IR) mode were used to record footage throughout the surveys, with a combination of IR floodlights and spotlights used to illuminate the buildings. These IR lights do not produce visible light and cause no disturbance to emerging bats.

3.3.3 Records were taken of any bats observed emerging from the buildings, and of any other bat activity taking place in the area during the survey. The survey began approximately half an hour before sunset and continued for 90 minutes after sunset.

3.3.4 The bat call data was analysed using Anabat Insight Software with the BatClassify plugin set at 70% confidence to auto analyse the bat calls; all of the calls were then reviewed and re-assessed as required.

3.4 *Static Detector*

3.4.1 An Anabat Express detector was left within the former school building of Engedi Chapel for fifteen nights from 10th to 25th July 2023, which recorded activity within this space (see Figure 3.1 for detector location).

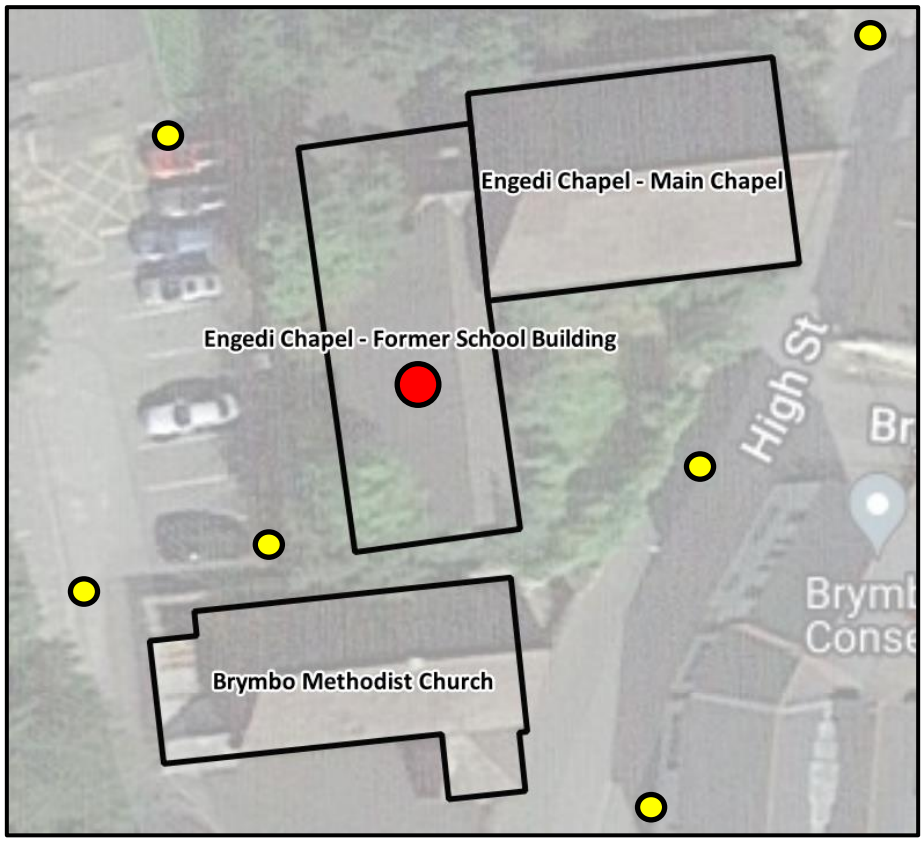


FIGURE 3.1 SURVEYOR POSITIONS SHOWN BY THE YELLOW SPOTS AND PLACEMENT OF STATIC DETECTOR SHOWN WITH THE RED SPOT

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3.5 *Nesting Birds*

3.5.1 The site was assessed for any signs of nesting birds, previous nests, or other signs of bird activity such as droppings or feeding remains. Features of potential use to nesting birds, such as crevices, cracks and other holes, were also noted and (where accessible) high-powered torches were used to inspect them. Observations were made of bird activity within the site during each of the visits.

3.6 *Desk Study*

3.6.1 Reports detailing previous survey work and records of bats at Engedi Chapel, were accessed through the publicly accessible Wrexham County Borough Council planning portal and have been referenced, where used, throughout.

3.6.2 The desk study also included a consultation with Cofnod, the North Wales Environmental information Service, to determine the presence of statutory and non-statutory sites for nature conservation, and records of bats and birds from within and around the proposed development within a 1km radius of the site. The records were used to inform the survey and recommendations, and to provide context for evaluating the species found during the survey.

3.7 *Limitations*

3.7.1 Both the exterior and interior of Brymbo Methodist Church was inspected, however, the ceiling was vaulted and not accessible. Engedi Chapel was surveyed externally, however not all internal areas could be accessed as some areas were not deemed to be structurally safe.

3.7.2 Bats are highly mobile animals and it is possible that they may move into a building after the survey has occurred. Therefore, absence of bats cannot be absolutely guaranteed. The surveys were carried out in July 2023, which is within the appropriate survey window as per bat survey guidelines (Collins, 2016).

3.7.3 It is possible that birds can nest on or within a building at any point during the nesting bird season (generally March – September inclusive). Therefore, absence of nesting birds cannot be absolutely guaranteed.

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4.0 Building Descriptions

4.1 Brymbo Methodist Church comprised a single storey, brick-built building with a slated roof, a small entranceway section, pent roofed toilet block with corrugated metal roof and lean-to kitchen area. There was a high vaulted ceiling within the main space.

4.2 Engedi Chapel comprised the main stone-built chapel and a brick built former school house.

4.3 The basic layout of the buildings is shown in Figure 4.1 with a description in Table 4.1.

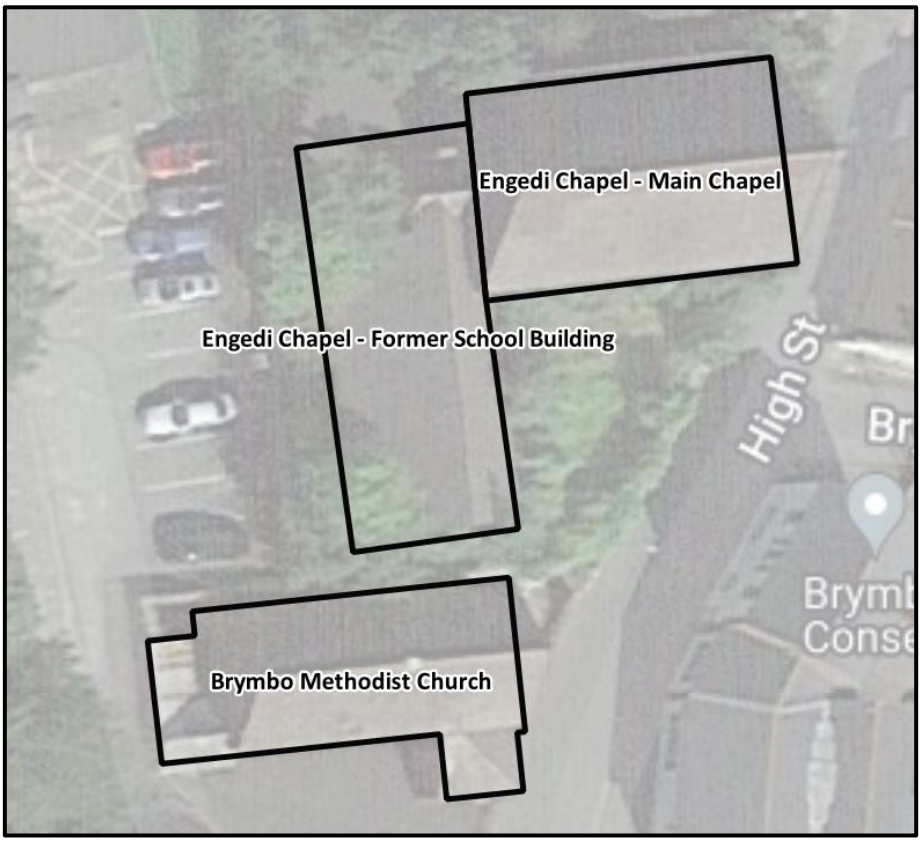


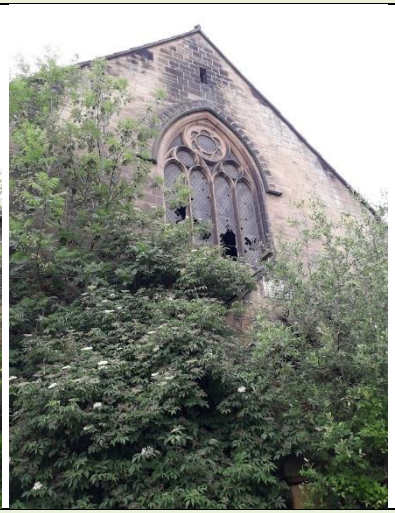
FIGURE 4.1: LAYOUT OF BRYMBO METHODIST CHURCH AND ENGEDI CHAPEL

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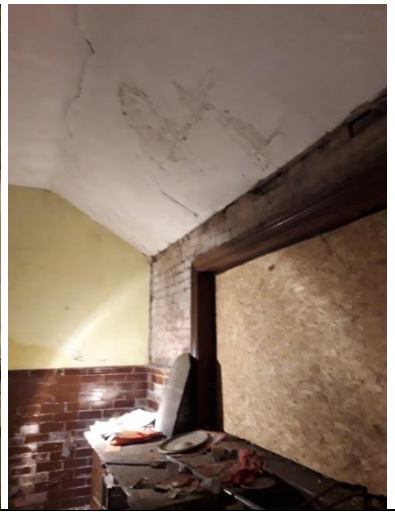
TABLE 4.1: BUILDING DESCRIPTIONS

Description	Photo
Brymbo Methodist Church - External	
• Brick built with slated pitch roof. • Small single height entranceway section and pent roofed toilet block with felt and corrugated metal roof on the western elevation. • Single height lean-to kitchen area on the southern elevation. • Small porch on eastern elevation.	 
Brymbo Methodist Church - Internal	
• The main space was double height with a vaulted ceiling. The space was light with large windows on all sides. • The building was in good condition and had been in regular use until recently. • The toilet area had a felted flat roofed section and a corrugated metal pent roof section, which was lined internally.	 

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Description	Photo
Main Chapel Building, Engedi Chapel - External	
• Stone and brick built with a slated pitched roof. • On the eastern elevation was a porch and on the western elevation were service rooms. • The building was in a state of disrepair and had scaffolding on the northern aspect due to slipping slates.	 
Main Chapel Building, Engedi Chapel - Internal	
• Main area was large and open with a vaulted ceiling. • Most windows were boarded up, apart from the large eastern window, which was damaged. • To the rear of the building was a small basement.	 

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Description	Photo
Former School Building, Engedi Chapel - External	
• Large single storey brick-built building, with a concrete tiled roof. • Eastern elevation over-grown with vegetation, and scrub and saplings along the southern and western elevations.	 
Former School Building, Engedi Chapel - Internal	
• One large open room, with a vaulted ceiling. • Space was dark with all windows boarded up.	 

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5.0 Desk Study

5.1 Table 5.1 provides a summary of findings from previous surveys undertaken at Engedi Chapel. This information has been summarised from Greenscape (2017) and Greenscape (2021) reports.

TABLE 5.1: SUMMARY OF FINDINGS FROM PREVIOUS BAT SURVEYS OF ENGEDI CHAPEL

Survey Type	Survey Date	Findings	Report Ref.
Hibernation	November 2007	After an internal inspection, including the cellars, there was no evidence of hibernating bats. '*Droppings commensurate with lesser horseshoe bats were recorded in the buildings*'	Greenscape Environmental, 2017
Dusk Emergence	07/07/2016	1x pipistrelle emerged from western gable of chapel building. 1x LHS observed in the building and BLE recorded within roof void.	Greenscape Environmental, 2017
Dawn Re-entry	19/07/2016	No re-entries recorded	Greenscape Environmental, 2017
Dusk Emergence	02/08/2016	1x BLE emerged from western gable end of chapel	Greenscape Environmental, 2017
Dusk Emergence	14/09/2020	Pipistrelle & LHS droppings identified with the buildings. From the western gable end of the chapel 1x LHS, 1x BLE & 1x soprano pipistrelle emerged	Greenscape Environmental, 2021
Dusk Emergence	22/07/2021	1x LHS seen within chapel. 1x common pipistrelles emerged from eastern elevation of the chapel. 1x unidentified bat from S.E elevation.	Greenscape Environmental, 2021
Dusk Emergence	03/08/2021	1x common pipistrelle emerged from eastern gable of chapel, 1x silent bat presumed to be a BLE emerged from eaves. 1x LHS emerged from western gale of chapel.	Greenscape Environmental, 2021
Dusk Emergence	24/08/2021	1x common pipistrelle emerged from eastern gable of chapel, 1x silent bat presumed to be a BLE emerged from eaves.	Greenscape Environmental, 2021

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5.2 *Cofnod Data Search*

5.2.1 Records of common pipistrelle, daubenton's, LHS, *Myotis* and noctule within a 2km search radius (2003 – 2023) were provided. The nearest records are of common pipistrelle and *Myotis* recorded at Brymbo heritage centre 400m to the south in 2020.

5.3 *Incidental Records*

5.3.1 Surveys of buildings, approximately 300m to the south, by Enfys Ecology Ltd in 2020 – 2023, found there to be a non-breeding day and night roost for a small number of LHS and BLE bats.

5.4 *Designated Sites*

5.4.1 The nearest statutory designated site is Brymbo Fossil Forest, designated as a Site of Special Scientific Interest (SSSI) for its geological features. There is one statutory site designated site, which is notified for bats within a 10km radius of the site. This is Ruabon/Llantysilio Mountains and Minera SSSI, located 5.8km to the west, where a number of disused mines are used by hibernating bats including LHS.

6.0 Preliminary Roost Assessment: Results

6.1 *Brymbo Methodist Church*

6.1.1 Brymbo Methodist Church was generally in good condition having still been in use until recently. The roof and roof line were in good condition with just a small number of slightly raised ridge tiles and slates. The corrugated metal roof of the toilet block was slightly bent creating a gap underneath. Examples of these features are shown in Table 6.1.

6.1.2 Approximately three old and partially disintegrated bat droppings were found on the walls within the toilet (see Figure 6.1). A sample of these were sent for DNA analysis, however due to the age and condition of the sample, it was not possible to identify the species.

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FIGURE 6.1: BAT DROPPINGS ON WALL OF TOILET WITHIN BRYMBO METHODIST CHURCH

6.2 *Engedi Chapel – Main Chapel Building*

6.2.1 The main chapel was in a poor condition with a number of points of access into the building and potential roosting features. There were two large vents at the apex at each gable end giving access into the roof space and a large broken window at the eastern gable providing access into the main chapel space. Other potential roosting features included gaps under ridge tiles and slates, behind wooden boarding and within gaps in the stone work.

6.2.2 Droppings consistent with LHS, BLE and pipistrelle sp. were found scattered throughout the building (see Figure 6.2).



FIGURE 6.2: BAT DROPPINGS SCATTERED THROUGHOUT THE BUILDING

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6.3 *Engedi Chapel – Former School Building*

6.3.1 Externally the former school building was in good condition, with one missing concrete tile, which created a hole through to the inside and there also looked to be small gaps behind the boarded-up windows at the southern gable end. This building and the main chapel building were open to each other through a doorway, allowing bats to travel freely between them.

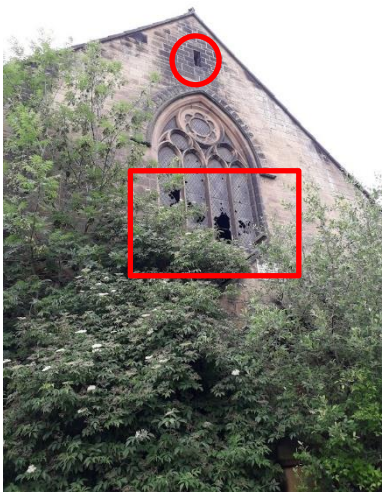
6.3.2 As with the main chapel building, there were scattered droppings consistent with LHS, BLE and pipistrelle throughout the room.

6.4 *Nesting Birds*

6.4.1 No nesting birds were seen during the survey, however there is high potential within the site for birds to nest, including both on and within the buildings and also within the surrounding scrub vegetation.

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TABLE 6.1: EXAMPLES OF POTENTIAL ROOSTING FEATURES FOR BATS AND NESTING BIRDS

Description	Example Photos
Brymbo Methodist Church	
Gaps under a small number of ridge tiles and a few raised and slipped slates. Small gap at edge of corrugated metal roof of toilet section. Vent in apex of western gable, potentially giving access into roof void.	  
Main Chapel Building, Engedi Chapel	
Open vents at apex at each gable end, access into roof void. Gaps under a number of ridge tiles and a few slipped slates. Gaps behind boarding covering the windows. Broken window on eastern elevation providing direct access into the main chapel space. Large gap in stone work on north eastern corner.	   

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Former School Building, Engedi Chapel	
Missing tile on the western roof pitch leaving a large gap. Gaps behind boarded up windows at southern gabel end.	 

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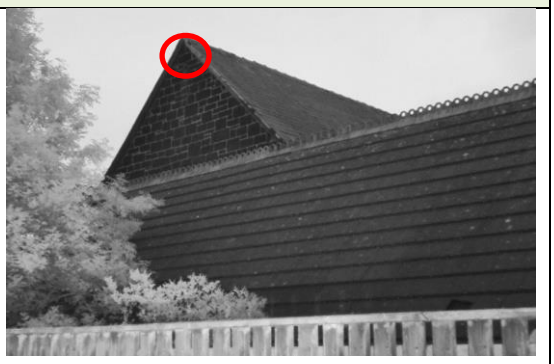
7.0 Survey Results – Dusk Emergence Survey: 10th July 2023

7.1 Table 7.1 provides details of the dusk survey, including timing and weather conditions and Table 7.2 provides details of any emergences and general bat activity during the survey.

TABLE 7.1: SUMMARY OF SURVEY DETAILS

Date	Start time	Sunset time	End time	Temp. at start	Weather
10/07/23	21:04	21:34	23:04	15°C	Dry with a light breeze Very light rain 22:10 – 22:20

TABLE 7.2: SUMMARY OF EMERGENCES AND DUSK SURVEY ACTIVITY

Emergences			
Time	**Species**	**Emergence Location**	**Photo**
21:55 – 22:03	LHS	7x LHS were seen passing up and down the narrow vegetated gap between Brymbo Methodist Church and the former school building before leaving towards the woodland to the west. After reviewing the NVA footage, two LHS were seen to emerge from the vent on the western gable end of the main Engedi chapel between these times. It is thought the other five are also likely to have come from the chapel.	

General Activity

- On the eastern side of the buildings, a small number of common pipistrelles were recorded passing during the survey. One pass from a LHS was noted at 22:52.
- On the western side of the buildings, the first call to be heard was from a common pipistrelle at 21:52, which then foraged around the car park. Foraging along the woodland edge by a common pipistrelle was recorded from 22:08 to 22:48.
- A *Myotis* sp. was heard briefly but not seen at 22:07 and 22:41.

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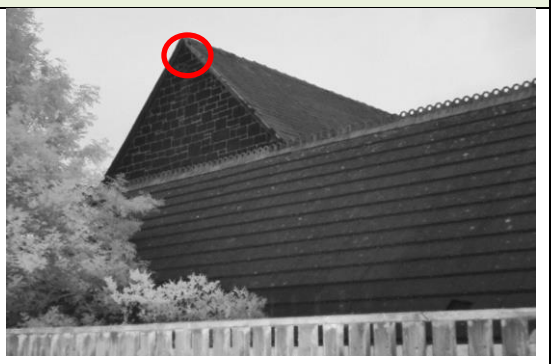
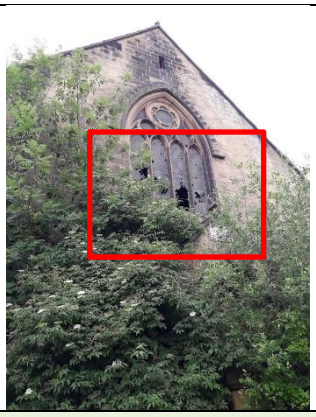
8.0 Survey Results – Dusk Emergence Survey: 25th July 2023

8.1 Table 8.1 provides details of the dusk survey, including timing and weather conditions and Table 8.2 provides details of any emergences and general bat activity during the survey.

TABLE 8.1: SUMMARY OF SURVEY DETAILS

Date	Start time	Sunset time	End time	Temp. at start	Weather
25/07/23	20:47	21:17	22:47	12°C	Dry and clear

TABLE 8.2: SUMMARY OF DUSK SURVEY ACTIVITY

Emergences			
Time	**Species**	**Emergence Location**	**Photo**
21:37 – 21:50	LHS	13 x LHS flew south following the vegetation along the western side of the former school building and then passed up and down between the Methodist church and school building, before leaving towards the woodland to the west. Seven of these were seen to emerge from the western gable end of Engedi chapel (Figure 8.1).	
21:40 & 21:41	LHS	2 x LHS emerged from the broken window at eastern gable end of Engedi Chapel and then flew northwards.	

General Activity

- An Anabat Express placed near to the broken window on the eastern gable end of the main Engedi Chapel, recorded LHS calls from 22:05 to 22:19 and then again at 22:43. These bats were not seen or heard by the surveyors.
- On the eastern side of the buildings, a small number of common pipistrelles were recorded passing during the survey and also one pass from a soprano pipistrelle.
- On the west side, a few common pipistrelle passes were recorded foraging at 21:38.
- A *Myotis* sp. was heard but not seen at 22:39.

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8.2 Figure 8.1 below shows the route taken by approximately thirteen LHS. Seven of these were seen to emerge from the western gable end of the Engedi Chapel and the other six were first seen passing up and down between the buildings. On emerging, the LHS flew down the vegetation along the western side of the school building, passed up and down between the Methodist church and the school building, before commuting across to the woodland to the west.

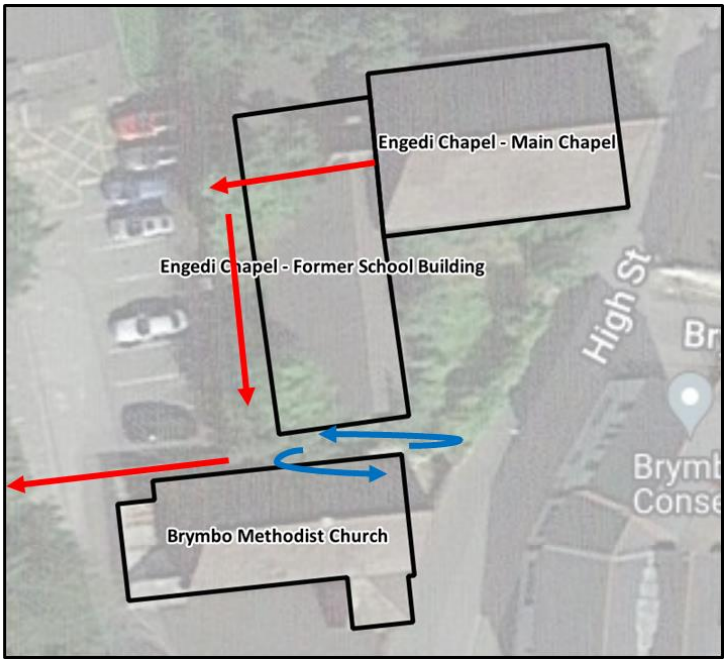


FIGURE 8.1: ROUTE TAKEN BY A NUMBER OF LHS, AFTER EMERGING FROM THE WESTERN GABLE END OF ENGEDI CHAPEL.

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9.0 Survey Results – Static Detector 10th - 25th July 2023

9.1 An Anabat Express detector was placed on the floor in the centre of the Engedi Chapel former school building, for 15 nights, from 10th July to 25th July 2023, to record any bat activity within the building. The weather throughout the static survey period was generally agreeable with typical bat survey conditions. Table 9.1 shows the sunset and sunrise times at the start and end of this period. Table 9.2 provides a summary of the bat activity recorded.

9.2 Species recorded included common pipistrelle, soprano pipistrelle, BLE, LHS and *Myotis* sp. There was also a significant number of common pipistrelle social calls throughout the night.

TABLE 9.1: SUNSET AND SUNRISE TIMES 10TH AND 25TH JULY 2023

Date	Sunset Time	Sunrise Time
10th July 2023	21:34	04:59
25th July 2023	21:17	05:19

TABLE 9.2: TOTAL NUMBER OF ANABAT EXPRESS CALL FILES PER HOUR FOR EACH SPECIES 10TH – 25TH JULY 2023

Time (hour)	Common pipistrelle	Soprano pipistrelle	BLE	LHS	*Myotis* sp.	Common pipistrelle Social Calls
21:00	0	0	0	13	1	0
22:00	21	0	0	14	0	9
23:00	7	2	0	0	2	55
00:00	11	5	10	2	0	138
01:00	16	1	2	1	2	204
02:00	4	2	2	1	4	219
03:00	4	6	2	2	3	187
04:00	6	5	0	1	2	43

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10.0 Discussion and Evaluation

10.1 *Proposed Works*

10.1.1 The proposed works involve the demolition of both Brymbo Methodist Church and Engedi Chapel, and removal of all vegetation. In place of Brymbo Methodist Church to the south of the site, will be a block of four apartments over two storeys and in place of Engedi Chapel, will be a block of twelve apartments over two floors, with under croft parking for twelve cars (Figure 10.1). The final plan is still to be finalised.



FIGURE 10.1: PROPOSED LAYOUT OF NEW APARTMENT BLOCKS (CREU LTD PROJECT C484 DRAWING NO.020 REV B)

10.2 *Designated Sites*

10.2.1 Ruabon/Llantysilio Mountains and Minera SSSI is located 5.8km to the west, where a number of disused mines are used by hibernating bats including LHS. Given the relatively close distance, it is possible that bats present at the site, in particular LHS, BLE and *Myotis* sp., may travel to hibernate with the SSSI.

10.2.2 The proposed works should not have a significant detrimental impact on the SSSI, bat populations within the local area, or the favourable conservation status of the species concerned, as long as mitigation measures detailed within this report and subsequent Natural Resources Wales licence application method statement are followed.

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10.3 *Commuting and Foraging Habitats*

10.3.1 The suitability of the surrounding habitats for commuting and foraging was moderate, with scrub vegetation surrounding the buildings for foraging and good connectivity to the surrounding area along the woodland 20m to the west. LHS bats were seen to use the vegetation down the western and southern sides of the former school building for light sampling and foraging, immediately after leaving the roost, before commuting over to the woodland. All vegetation within the site boundary will be lost, however planting of trees and scrub will be incorporated into the final landscaping plan to ensure foraging habitat and cover for bats at the site will be maintained and enhanced.

10.4 *Brymbo Methodist Church*

10.4.1 The church was in good condition and there were only a small number of potential roosting features present. Under the Good Practice Guidelines (Collins, 2016), this building is regarded as having a low suitability for roosting bats.

10.4.2 During the PRA, a small number of old and partially disintegrated droppings were found on the wall within the toilet section, on the western side of the building. No evidence of recent use was seen and no bats were seen to emerge during the emergence surveys.

10.4.3 Given the evidence found, it is likely that a crevice dwelling bat, has historically used the toilet section to roost, on one or a small number of occasions and is unlikely to return.

10.5 *Engedi Chapel*

10.5.1 The chapel and former school building were in a poor state of repair, resulting in a high number of potential roosting features and was regarded as having high suitability for bats (Collins, 2016).

10.5.2 Previous surveys between 2007 and 2021, found it to be a day and night roost for a low number of LHS and a day roost for a low number of common pipistrelle, soprano pipistrelle and BLE. An internal inspection in 2007 found no evidence of hibernating bats (Greenscape Environmental, 2017; Greenscape Environmental, 2021).

10.5.3 During the PRA, droppings consistent with LHS, BLE and pipistrelles were found scattered throughout the buildings.

10.5.4 During the emergence surveys, nine LHS were seen emerging but a further six were seen to cross to the woodland and are likely to have also emerged but were not seen. As no LHS were seen to return during the survey and there was limited activity recorded during the night, it is thought to be a non-breeding day and night roost.

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10.5.5 The static detector left within the former school building recorded a number of species including common pipistrelle, soprano pipistrelle, BLE, LHS and *Myotis* sp, with a relatively low number of calls for each. It is therefore a day and night roost for these species.

10.5.6 A significant number of common pipistrelle social calls were recorded each night, with most calls between 00:00 and 04:00. Given the time of year, these could either be mother's communicating with their young or a single males 'songflight' to attract females. As no common pipistrelles were seen to emerge, it is not thought to be a maternity roost.

10.5.7 Table 10.1 provides a summary of the species and roost types present within Engedi Chapel and their relative importance on a site, local or district scale.

TABLE 10.1 SUMMARY OF SPECIES AND ROOST TYPES PRESENT WITHIN ENGEDI CHAPEL

Species	No. Individuals	Species Rarity Category (Reason & Wray, 2023)	Roost type	Roost Importance (Reason & Wray, 2023)
LHS	≥ 15	Rarer or restricted distribution	Non-breeding day & night roost	Local
BLE	Low number of individuals	Widespread	Non-breeding day & night roost	Site
Common pipistrelle	Low number of individuals	Widespread	Non-breeding day & night roost	Site
Soprano pipistrelle	Low number of individuals	Widespread	Non-breeding day & night roost	Site
Myotis Sp.	Low number of individuals	Widespread in many geographies, but not abundant in all	Non-breeding day & night roost	Site

10.5.8 The importance of the bat assemblage was assessed using the calculations set out in Reason and Wray (2023), and the assemblage does not meet the threshold for County Importance.

10.6 **As the buildings are a known bat roost, a licence will be required from NRW before any works can commence.**

10.7 *Birds*

10.7.1 No birds were observed using the buildings during the survey, however the buildings are suitable for use by nesting birds. There were potential areas for nesting both internally and externally within the cracks in the walls and various crevices.

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11.0 Mitigation, Compensation and Enhancement

11.1 A separate Mitigation Strategy (Enfys Ecology, 2024), which is to be read alongside this document, has been written, detailing mitigation, compensation and enhancement measures required as a result of the proposed works and the results of the surveys.

12.0 Legislation

12.1 *Bats*

12.1.1 All species of bat, their breeding sites and their resting places in England and Wales are protected through a 'dual' system of protection, under the England and Wales Habitats Regulations and W&CA. Because two regimes give legal protection to bats, the implications of both regimes must be fully understood (Reason & Wray, 2023).

12.1.2 Regulation (Reg.) 43 of the England and Wales Habitats Regulations makes it an offence to:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats (which includes any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate or to affect significantly the local distribution or abundance of the species to which they belong);
- damage or destroy a breeding site or resting place of a bat; or
- possess, control, transport, sell or exchange, or offer for sale or exchange, any live or dead bat or part of a bat or anything derived from a bat or any part of a bat.

12.1.3 Under Section 9 of the W&CA (s.9(4)(b), 9(4)(c) and 9(5) only), it is an offence (in relation to bats) to:

- intentionally or recklessly disturb a bat while it is occupying a structure or place of shelter or protection;
- intentionally or recklessly obstruct access to any structure or place used by a bat for shelter or protection;
  or
- sell, offer or expose for sale, or have in their possession or transports for the purpose of sale, any live or dead bat or any part of, or anything derived from a bat (or be responsible for adverts suggesting the intention to do this).

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12.2 *Birds*

In addition, under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000, all wild birds, their nests and eggs are protected during the breeding season (typically March to August inclusive). This makes it an offence to:

- Intentionally kill, injury or take any wild bird.
- Take, damage or destroy the nest of a wild bird included in Schedule ZA1.
- Take, damage or destroy the nest of any wild bird while that nest is in use or being built.
- Take or destroy an egg of any wild bird.

12.3 *Biodiversity Net Gain – Relevant sections of legislation*

- Section 6 of the Environment (Wales) Act 2016:

Biodiversity and resilience of ecosystems duty

(1) A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions.

(2) In complying with subsection (1), a public authority must take account of the resilience of ecosystems, in particular the following aspects—

(a)diversity between and within ecosystems;

(b)the connections between and within ecosystems;

(c)the scale of ecosystems;

(d)the condition of ecosystems (including their structure and functioning);

(e)the adaptability of ecosystems.

…. (5) In complying with subsection (1), a public authority other than a Minister of the Crown or government department must have regard to—

(a) the list published under section 7;…..

- Section 7 of the Environment (Wales) Act 2016:

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Biodiversity lists and duty to take steps to maintain and enhance biodiversity

(1) The Welsh Ministers must prepare and publish a list of the living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales.

(2) Before publishing a list under this section the Welsh Ministers must consult the Natural Resources Body for Wales ("NRW") as to the living organisms or types of habitat to be included in the list.

(3) Without prejudice to section 6, the Welsh Ministers must—

(a) take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and

(b) encourage others to take such steps

13.0 References and Information Sources

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