

Received via email 27/11/2012

From: [Hope, Rob](#)
To: [ENV Development Control](#)
Subject: FW: Bowland High School
Date: 27 November 2012 10:20:30
Attachments: [BOW17-426 Bowland High school Bat report 151012.pdf.pdf](#)

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Please add to the received 1 app submission along with the 2 other bat reports.
I'm just checking with Sarah if the app can be validated.

From: Paul Tunstall [<mailto:ptunstall@jwpc.co.uk>]
Sent: 16 October 2012 12:13
To: Hope, Rob
Cc: McKeown, Patrick (ENV); Judy Bateman; Richard Maudsley
Subject: Bowland High School

Dear Rob,

Further to our conversation last week, I have now received the contemporary bat survey carried out by Bowland Ecology and I attach it here.

You will see that it confirms the presence of bats and that a Natural England License will be required. The development of a new building(s) also provides an opportunity to mitigate for any habitat loss – the requirements for which will be informed by a further assessment. The report guards against disturbance from November to February and May to August. At this point in time it is anticipated that demolition will take place in the Easter holidays 2013 (28th March – 15th April).

I trust this is now sufficient to validate the planning application.

Regards

Paul Tunstall
Director

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BOW17/426 Bowland High School

Bat Inspection and Emergence Survey Report

October 2012

Control sheet

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Project No. & Title: BOW17/426 Bowland High School
Bat Inspection and Emergence Survey Report

Client: Bowland High School

Prepared by: Gemma Waddington *Technical Officer*

Checked by: Jules Wynn, Principal Ecologist

Date of issue: October 2012

Status: Final

Version No: 1

Revisions: 0

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1. Introduction

- 1.1 Bowland Ecology Ltd was commissioned by Bowland High School to undertake a bat inspection survey and evening emergence survey of one of the buildings on the school grounds. The school is situated on the edge of Grindleton within Lancashire (SD 76965 46198).
- 1.2 The building is currently being used by the school and houses the hall, kitchen, classrooms and a number of offices.
- 1.3 The aim of the surveys and desk study was to make an assessment of wildlife interests at the site with particular reference to legal requirements and potential constraints to the demolition works required, with specific reference to bats.
- 1.4 Previous surveys have been carried out on part of the building for remedial works to the roof and fascia boards. These surveys found evidence of bats and a licence from Natural England was sought.
- 1.5 This report includes a description of survey methods; a summary description of the buildings and their potential to support protected species; an impact assessment and outlines recommendations.

2. Methodology

Desk Study

- 2.1 A desk study for bat records was undertaken for the site and a 1.5 km buffer zone around the site with East Lancashire Bat Group. A search of online resources was also undertaken to check for bat records in the vicinity.

Internal and External Building Inspection

- 2.2 The bat internal and external inspection was undertaken by David Fisher (Natural England Licence Number 20122876) and Gemma Waddington, BSc (Hons) AIEEM on 5th September and 10th October 2012.
- 2.3 A search of the building which is to be demolished was undertaken, checking for bats and the field signs of bats such as bat droppings, urine stains, bat feeding remains (moth wings, insect cases), bat staining, distinctive smell of bats, bats themselves or bat corpses, scratch marks and smoothing of surfaces which would indicate a roost site. An assessment of the potential of the building to support a bat roost was also made during the survey i.e. searching for suitable roosting crevices. All roof spaces were accessed and searched for evidence of bats.
- 2.4 High power torches (Cluson Clu-lite 500,000 candlepower) and close focus binoculars were used to aid the survey. Ladders and an endoscope were also available should they have been required.
- 2.5 The survey was undertaken in accordance with the methodology for building surveys outlined in The Bat Conservation Trust, Good Practice Guidelines, 2nd

Edition, 2012. The timing was within the optimal period for such a survey. All areas of the building were accessible for survey.

- 2.6 Natural England's Bat Mitigation Guidelines (2004) state that a significant bat roost can normally be determined on a single visit at any time of the year, provided that the entire structure is accessible and that signs of bats have not been removed by others.

Dusk Emergence Surveys

- 2.1. A dusk emergence survey was carried out on the building on 19th September 2012 by David Fisher, Gemma Waddington, Mark Brakes and David Anderson. The survey was undertaken from 18.55 until 20.45 with sunset at approximately 19.14. Surveyors were positioned to give the best coverage of the entire building and to cover all possible emergence locations as informed by the day-time inspections. Surveyor locations are shown on Figure 2 below.



- 2.2. The surveys were undertaken with the aid of dual heterodyne and frequency division detectors (Bat Box Duet and Petterson D230) and Wildlife Acoustics Echo Sonic EM3 detectors. The recordings were then analysed using sound analysis software (Analook). Species identification was confirmed with a combination of the use of detectors, sound analysis and the experience of the surveyors.

3. Results

Desk Study

- 3.1 Online resources suggest that brown long-eared, common pipistrelle, soprano pipistrelle, Daubenton's and whiskered/Brandt's species are present in the area.
- 3.2 The data search with East Lancashire Bat Group shows two records of pipistrelle roosts approximately 1 km to the west in Grindleton village and one record of a grounded bat in approximately the same location as the roosts.

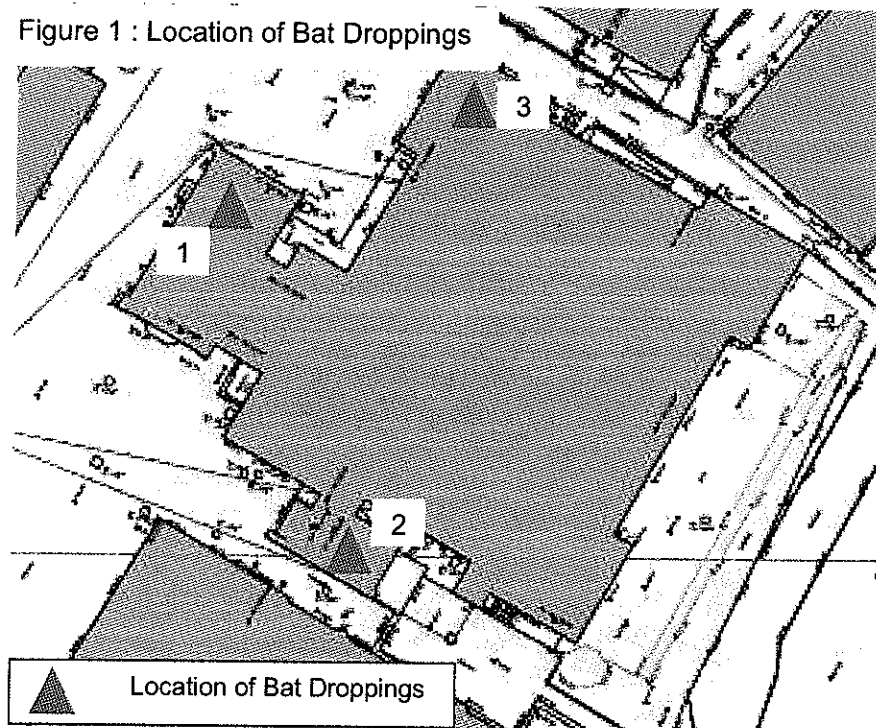
Building descriptions

- 3.3 The building is a complex building housing classrooms, offices, kitchen and main hall. A number of rooms are being used for storage. The building is of a pebble dashed brick construction. The building is painted and in good condition.
- 3.4 Some of the floor space is raised with a crawl space beneath the floor. This space is completely sealed externally with access hatches in a number of rooms.
- 3.5 The slate roof is a complex multi pitched construction which is in a reasonable condition (see Photo 1 – Appendix 1). Flashing is common throughout, (concentrated in hip joints, chimneys, and valleys) and provides gaps that are potential roost access points.
- 3.6 The main hall is open to the roof structure and is underdrawn with boarding, as are the two parallel loft spaces; insulation in these spaces looks recent and is clean showing little signs of debris. Other loft spaces are not lined or underdrawn. The insulation in these loft spaces is old with lots of debris. All loft spaces are split into sections by brick partitions – access can be gained through the partitions to all areas of the roof structure.

Internal and external inspection results

- 3.7 Bat droppings were found in a number of places within the loft enclosures and are shown in Figure 1. From the droppings, the species are likely to be brown long eared/natterer's and pipistrelle species.
- 3.8 The droppings in location 1 on the plan below were found in the two far sections of the roof on top of newspaper dated 2009. The droppings were from brown long eared and pipistrelle species. Large amounts of older droppings were found beneath the newspaper. The droppings were concentrated under the ridge beam with higher concentrations found below the north gable wall and the second internal brick wall. The number of droppings suggests a maternity roost of brown long eared and pipistrelle bats. See photos 7 and 8 in Appendix 1.

Figure 1 : Location of Bat Droppings



- 3.9 In the section of the roof where droppings were found the ridge beam had fewer cobwebs than elsewhere, and oil staining from the bats' fur was evident on the ridge beam (see photo 9 Appendix 1).
- 3.10 Externally a small number of droppings were seen on and around the fascia boards at point 1 above.
- 3.11 Location 2 had a small number of droppings from brown long eared and pipistrelle bats, indicating a small summer roost is present.
- 3.12 In location 3, a small number of scattered pipistrelle droppings were found indicating a small summer roost.

Emergence survey

- 3.13 A number of bats were seen to emerge (8 common pipistrelle) from the building during the emergence survey (results summarised in table 1 with emergence locations if figure 3). Activity around the building was constant and with a number of common and soprano pipistrelles foraging throughout the survey. Other species were heard brown long eared and myotis sp.

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Table 1: Emergence Survey Results

Surveyor Location	Time	Comment
A	19.17	Common Pipistrelle emerge - 7 in total
	19.53	Brown long eared
	20.17	Brown long eared
B	19.29	Soprano pipistrelle flew low over roof of old building - possible emergence?
	19.32	Soprano pipistrelle flew over yard into tree line
	19.35	Soprano pipistrelle foraging around library building
	19.52	Brown long eared briefly heard not seen at corner of library (possibly myotis?)
	19.53	foraging Common pipistrelle then Soprano pipistrelle foraging
	20.00	foraging Common pipistrelle in yard
	20.06	Soprano pipistrelle social calling in yard
	20.15	Common pipistrelle social calling
	20.16	myotis sp. echolocation in yard
	20.20	Soprano pipistrelle social calling in yard
	20.32	Common pipistrelle social calling, lekking persistently over site / foraging
C	19.35	Soprano pipistrelle fly pass
	19.37 – 19.42	Soprano pipistrelle foraging over car park area
	19.55	Brown long eared foraging
	19.57	Brown long eared and Soprano pipistrelle
	20.00	Soprano pipistrelle
	20.05 – 20.17	Soprano pipistrelle foraging
	20.19	Common pipistrelle
	20.37	Soprano pipistrelle foraging
	20.37	Brown long eared
D	19.30 – 20.45	Constant Common pipistrelle foraging activity throughout the survey
	19.40	Common pipistrelle emerge lower corner of roof.
	19.55	Brown long eared foraging along edge of building

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Figure 3 – Bat Emergence Locations marked in red



4. Recommendations

- 4.1 The demolition of the building or any works to the roof is likely to result in adverse effects on a number of bat roosts, which would be contrary to wildlife legislation. Therefore, a licence from Natural England would be required. In order to provide sufficient information for the licence application, further surveys during 2013 are required to provide more detailed information on the species and numbers of bats and the types of roost present.
- 4.2 No works to the roof should be undertaken without advice from a licensed ecologist. The areas where bat droppings were found should be avoided in the periods where bats are most at risk from disturbance – the breeding period (May-August) and the hibernation period (November-February). However, due to the mobility of this species, no works to the roof should be undertaken without advice.
- 4.3 Mitigation will be required as the building is to be demolished, this will be tailored to the species and type of roost once a full assessment of the use of the building by bats has been made. As a minimum, any roosts lost would have to be replaced, either within the new building or in close proximity.

References

Bat Conservation Trust. Bat Surveys – Good Practice Guidelines, 2nd Edition. 2012.

Appendix A – Photographs

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Photo 1 – View of multi pitched roof



Photo 2 – Typical view of building on northern elevation



Photo 3 – Typical view of building on southern elevation

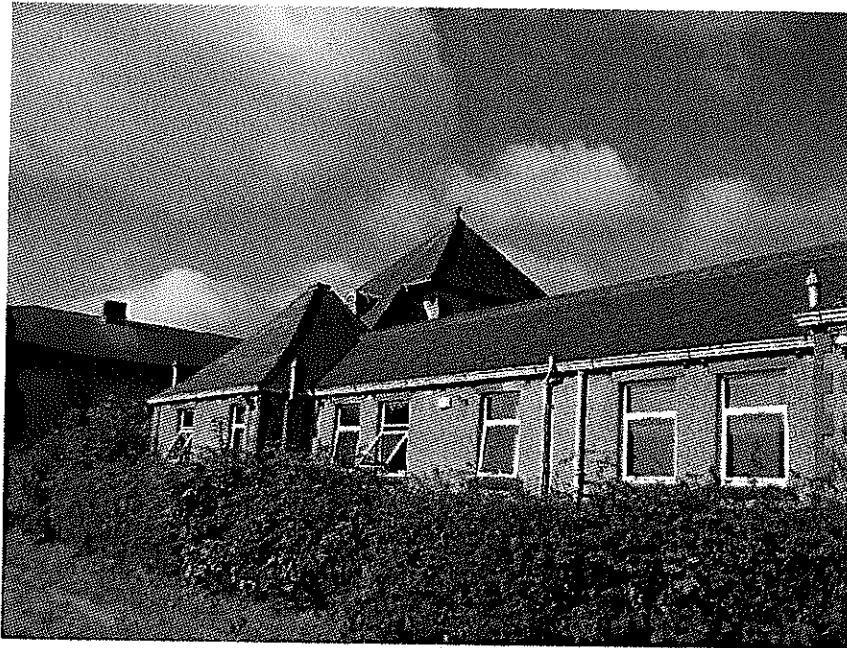
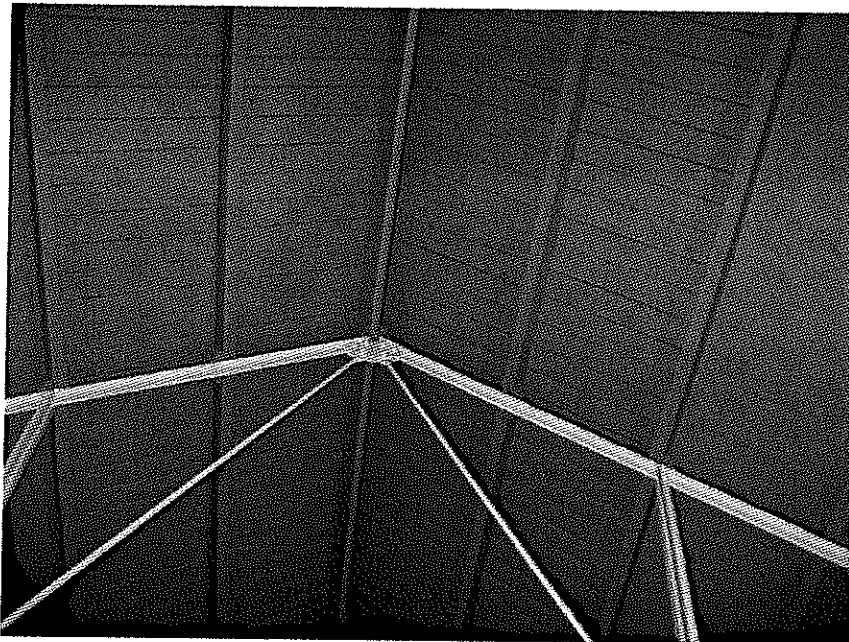


Photo 4 – Main Hall roof structure



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Photo 5 – Typical photo on underdrawn roof structure

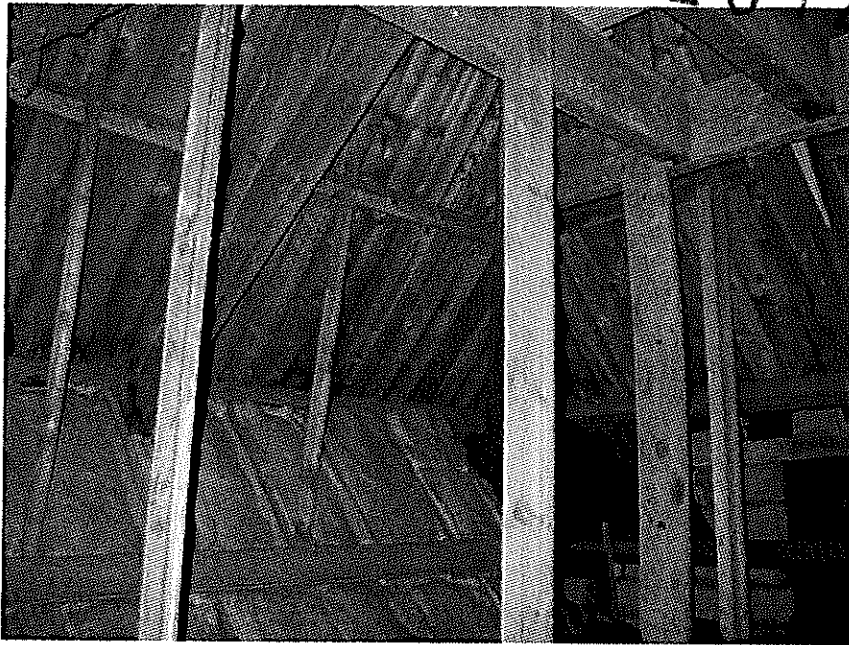
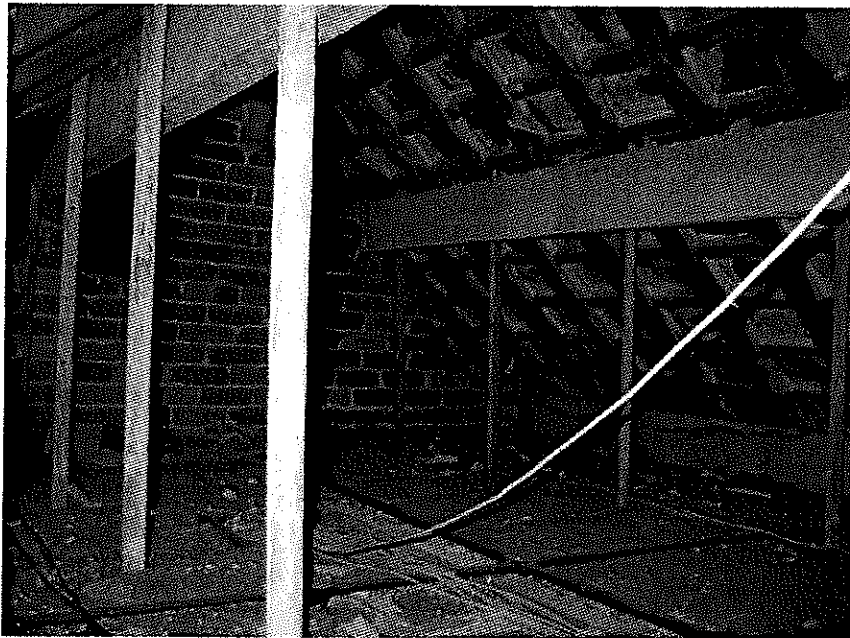


Photo 6 – Typical photo of unlined roof structure



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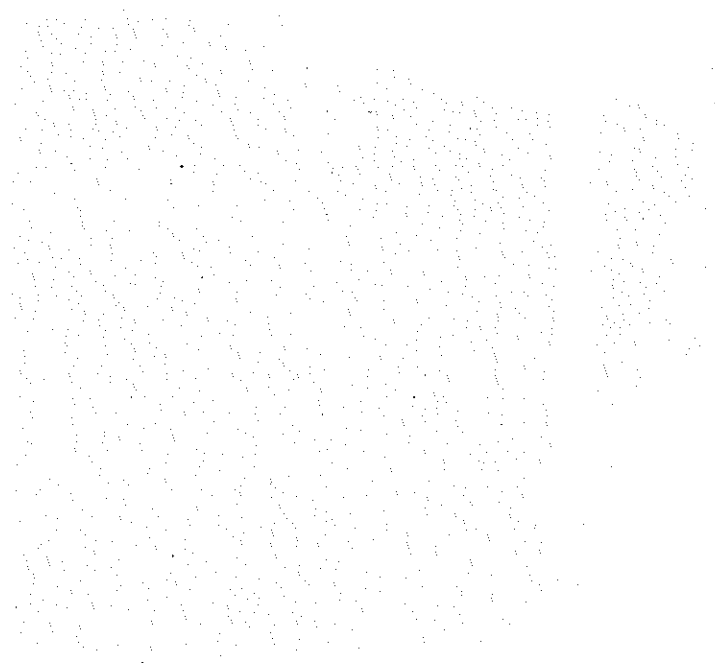


Photo 7 – Photo of droppings on newspaper below ridge at gable end



Photo 8 – Photo of droppings at ridge



Photo 9 – Photo of likely roosting space along ridge with oil staining

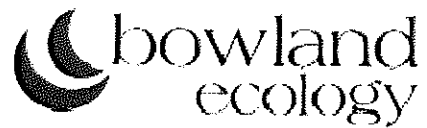


Photo 10 – External view of gable end where droppings were found



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Received via email on 22 November 2012



Bowland High School

Bat Licence Method Statement

November 2012

Control sheet

Project No & Title: BOW017/426 – Bowland High School– Bat Licence Method Statement

Client: Bowland High School

Prepared by: Gemma Waddington, Technical Officer

Checked by:

Date of Issue: November 2012 **Status:** Final

Version No: 1

Revisions: 0

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Document 1 – Background Information

A Executive Summary

B Introduction

B.1 Background to the Activity/Development

- B.1.1 Bowland High School has received funding to update the facilities that are contained within an old building used by the school. To do this they need to demolish the building so that a new purpose built building can be put in its place.

B.2 Full Details of Proposed Works on Site that are to be Covered by the Licence

- B.2.1 Bats (brown long eared and pipistrelle) have been confirmed to be roosting within a number of the roof spaces of a school building at Bowland High School. Evidence indicates that there are a number of roosts including a maternity roost of brown long eared and pipistrelle bats along with temporary roosts for both species. The works that require licensing include the removal of the roof prior to demolition of the school building. The building will be replaced with a modern up to date building.

C Survey and Site Assessment

C.1 Pre-existing Information in the Bat Species at the Survey Site

- C.1.1 Internet sources were consulted; there were no records to indicate that bats have roosted within any of the buildings on site. However, the following bat species have been recorded within the 10 km square that the site is situated (NY51); brown long eared, Brandt's, whiskered, soprano pipistrelle, common pipistrelle, Daubenton's, and noctule.

C.2 Status of species

Species	Local status*	County Status**	National Status***
Brown long eared	A common species commonly found roosting in large open roof spaces such as barns.	Widespread and reasonably common but only in small colonies.	The brown long-eared bat is one of the commonest species in Britain and is found throughout the UK, Ireland and the Isle of Man.
Common and soprano pipistrelle	Our smallest bat species.	Large breeding colonies occur.	Pipistrelles are the commonest and most widespread of all British bat species.

* Local status is derived from the East Lancashire Bat Group Website (www.eastlancsbats.org). **County status taken from the Lancashire Bat Biodiversity Action Plan. ***National status taken from a BCT Species Information Leaflet.

C.3 Objectives of the Survey

- C.3.1 The aim of the surveys was to determine presence/absence of bats and characterise their usage (if present) of the building that requires demolition. Following identification of any roosts, the number and species of bats was investigated. The information gathered was used to propose the most suitable timings for works to minimise impacts on bats. The bat activity (commuting/foraging) levels at the site were also assessed. The surveys included a building inspection and one emergence surveys.

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1010 UV-Visible Spectrophotometer. The concentration of chlorophylls was expressed in $\mu\text{g mL}^{-1}$ of the sample.

Figure 1: Plan showing the building to be demolished



An aerial photograph showing a large, irregularly shaped building complex. A rectangular area within the complex is outlined with a white line. An arrow points from the text 'Building to be demolished' to this outlined area. The surrounding area appears to be a mix of open land and other structures.



- C.5.1 The building that is to be affected by the demolition works is situated within the school grounds of Bowland High School between two buildings (to the north and south/southwest) The school is situated in a rural location on the edge of Grindleton a small village within the Ribble Valley. Immediately to the north west of the site is a small woodland clough. The land in the wider landscape is dominated by cattle and sheep grazed pastures. Small blocks of woodland occur within the landscape connected by hedgerows and mature trees. The River Ribble is located to the east of the site and is at its closest 350m.
- C.5.2 The building is a complex building housing classrooms, offices, kitchen and main hall. A number of rooms are being used for storage. The building is of a pebble dashed brick construction. The building is painted and in good condition.
- C.5.3 The slate roof is a complex multi pitched construction which is in a reasonable condition (see Photo 1 – Appendix 1). Flashing is common throughout, (concentrated in hip joints, chimneys, and valleys) and provides gaps that are potential roost access points.

C.5.1 The building that is to be affected by the demolition works is situated within the school grounds of Bowland High School between two buildings (to the north and south/southwest) The school is situated in a rural location on the edge of Grindleton a small village within the Ribble Valley. Immediately to the north west of the site is a small woodland clough. The land in the wider landscape is dominated by cattle and sheep grazed pastures. Small blocks of woodland occur within the landscape connected by hedgerows and mature trees. The River Ribble is located to the east of the site and is at its closest 350m.

C.5.2 The building is a complex building housing classrooms, offices, kitchen and main hall. A number of rooms are being used for storage. The building is of a pebble dashed brick construction. The building is painted and in good condition.

C.5.3 The slate roof is a complex multi pitched construction which is in a reasonable condition (see Photo 1 – Appendix 1). Flashing is common throughout, (concentrated in hip joints, chimneys, and valleys) and provides gaps that are potential roost access points.

- C.5.4 The main hall is open to the roof structure and is underdrawn with boarding, as are the two parallel loft spaces; insulation in these spaces looks recent and is clean showing little signs of debris. Other loft spaces are not lined or underdrawn. The insulation in these loft spaces is old with lots of debris. All loft spaces are split into sections by brick partitions – access can be gained through the partitions to all areas of the roof structure.

C.6 Field Surveys

- C.6.1 The bat internal and external inspection was undertaken by David Fisher (Natural England Licence Number 20122876) and Gemma Waddington, BSc (Hons) AIEEM on 5th September and 10th October 2012. External inspection involved the surveyors walking the entire perimeter of the building looking for access points that bats could use to enter the building (e.g. lifted roof tiles, open doors and windows etc). The surveyors also looked for signs that would indicate that bats had entered the building including droppings and staining. The surveyors used close focusing binoculars to help with the survey. The surveyors then undertook an internal inspection of the building looking for bat droppings, live and dead bats, feeding remains (beetle, moth and butterfly remains) urine staining and to listen for noises such as squeaking. In addition, the surveyors sought gaps and cavities that bats could choose to roost in. A Cluson Clu-lite 500,000 candlepower lamp was used for this survey. Ladders were used to access the loft spaces and an endoscope was available should it have been required.
- C.6.2 One emergence survey was undertaken. This was undertaken during suitable weather conditions and at a suitable time of year for bats to be active.

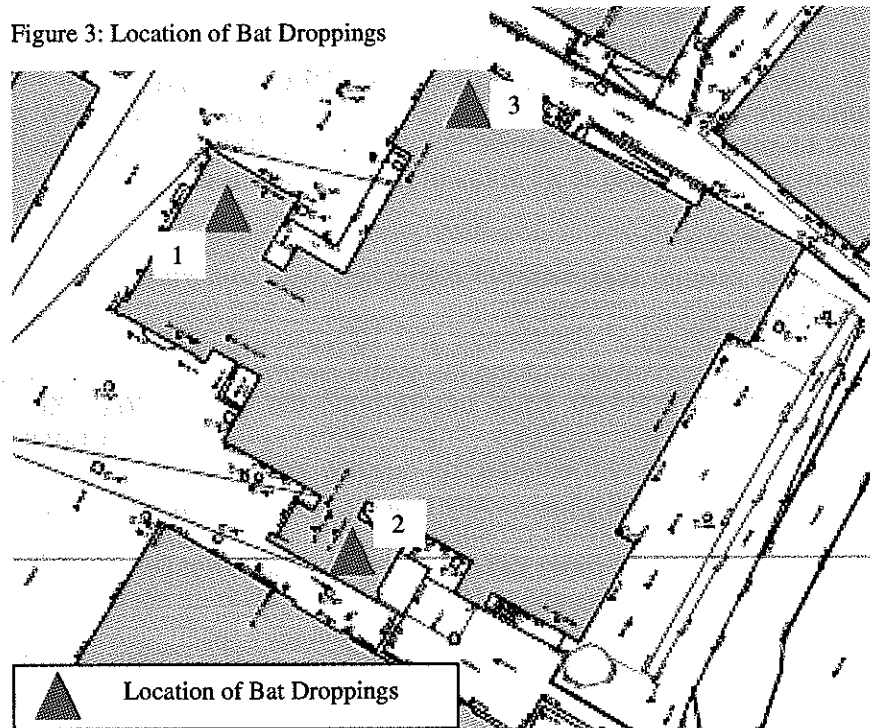
Date of Survey	Surveyors	Weather Conditions
19/09/12	David Fisher (Licensed), Gemma Waddington, Mark Brakes and David Anderson (Licensed)	Start - clear sky 20% cloud, light SW breeze, cool and dry 11°C, shower 19.40 End – clear sky, moonless 8.4°C, Humidity; 89%

C.7 Survey Results

Internal and External Building Inspections

- C.7.1 Bat droppings were found in a number of places within the loft enclosures and are shown in Figure 1. Visual analysis of the droppings suggested that brown long eared/natterer's and pipistrelle species are present. However, DNA analysis of the droppings has indicated that only pipistrelle species are present.
- C.7.2 The droppings in location 1 on the plan below were found in the two far sections of the roof on top of newspaper dated 2009. The droppings were from brown long eared and pipistrelle species. Large amounts of older droppings were found beneath the newspaper. The droppings were concentrated under the ridge beam with higher concentrations found below the north gable wall and the second internal brick wall. The number of droppings and the results of the DNA analysis suggest that a pipistrelle maternity roost is present.

Figure 3: Location of Bat Droppings



C.7.3 In the section of the roof where droppings were found the ridge beam had fewer cobwebs than elsewhere, and oil staining from the bats' fur was evident on the ridge beam (see photo 9 Appendix 1):

Externally a small number of droppings were seen on and around the fascia boards at point 1 above.

Location 2 had a small number of pipistrelle droppings, indicating a small summer roost is present.

In location 3, a small number of scattered pipistrelle droppings were found indicating a small summer roost.

Emergence survey

Table 1: Emergence Survey Results

Surveyor Location	Time	Comment
A	19.17	Common Pipistrelle emerge - 7 in total
	19.53	Brown long eared
	20.17	Brown long eared
B	19.29	Soprano pipistrelle flew low over roof of old building - possible emergence?
	19.32	Soprano pipistrelle flew over yard into tree line

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	19.35	Soprano pipistrelle foraging around library building
	19.52	Brown long eared briefly heard not seen at corner of library (possibly myotis?)
	19.53	foraging Common pipistrelle then Soprano pipistrelle foraging
	20.00	foraging Common pipistrelle in yard
	20.06	Soprano pipistrelle social calling in yard
	20.15	Common pipistrelle social calling
	20.16	myotis sp. echolocation in yard
	20.20	Soprano pipistrelle social calling in yard
	20.32	Common pipistrelle social calling, lekking persistently over site / foraging
C	19.35	Soprano pipistrelle fly pass
	19.37 – 19.42	Soprano pipistrelle foraging over car park area
	19.55	Brown long eared foraging
	19.57	Brown long eared and Soprano pipistrelle
	20.00	Soprano pipistrelle
	20.05 – 20.17	Soprano pipistrelle foraging
	20.19	Common pipistrelle
	20.37	Soprano pipistrelle foraging
	20.37	Brown long eared
D	19.30 – 20.45	Constant Common pipistrelle foraging activity throughout the survey
	19.40	Common pipistrelle emerge lower corner of roof.
	19.55	Brown long eared foraging along edge of building

Figure 4 – Bat Emergence Locations marked in red



Bats could gain access to the building through a number of locations including under the fascia boards (where present), gaps in slates/ridge tiles and through the large main barn door and a series of small barn doors which appear as though they are left ajar permanently. In addition, there are open windows and air slits within the stone work that bats could use to access the building. Bats could also access the building where the roof meets the top of the stone wall as there are gaps present.

C.8 Interpretation/Evaluation of Survey Results

- C.8.1 A number of bats were seen to emerge (8 common pipistrelle) from the building during the emergence survey (results summarised in table 1 with emergence locations if figure 3). Activity around the building was constant and with a number of common and soprano pipistrelles foraging throughout the survey. Other species heard were brown long eared and myotis sp.
- C.8.2 The results of the internal and external inspections, the emergence survey and the DNA analysis of bat droppings collected indicate that the building is used as a maternity roost for pipistrelle bats. This information is assumed by the number and location of droppings present within location 1 on figure 3 above. A number of smaller transitional/summer roosts are thought to be present in locations 2 and 3. It is also likely that brown long-eared bats use the building as a transient roost and that no brown long-eared droppings were collected for DNA analysis because of the relatively small number of droppings that would be present compared to those from a maternity roost.

D Impact Assessment/Evaluation in absence of mitigation

D.1 Short-term Impacts: disturbance

- D.1.1 If bats are present at the time of commencement of works then the short-term impacts could result in:
- Threat of injury or killing
 - Disturbance due to noise
 - Potential obstruction of access points due to scaffolding

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F Annexes
Not applicable

End of Document 1 – Background Information

Document 2 – Delivery Information

A Mitigation and Compensation

A.1 Summary of Mitigation Strategy

The school building is used by pipistrelle as a maternity roost and by pipistrelle and brown long-eared bats as transient roosts in other parts of the building. The proposed work will result in total loss of the roost sites.

- Contractor induction on bat presence, including provision of a copy of the licence and method statement to be kept on site throughout the contract.
- Bat boxes will be placed on trees with a heated bat box being placed on an adjacent building.
- Works to soft strip the building will take place before demolition. Ecologist to be kept up to date with the progress and on call if any bats are found during any works.
- Roof tiles will be removed by hand in the presence of the licensed ecologist or their accredited agent. If bats are found during the removal of the roof these bats will be relocated to a bat box by the licensed ecologist or their accredited agent.
- Demolition of the building is planned for the Easter holidays (April 1st for 2 weeks). As this is when the school is not occupied as a health and safety risk is considered from demolition when children are present. This will cause the least disturbance to bats as they will not be present in the maternity roost at this time.
- A new roost will be created in an adjacent building.

B Works to be Undertaken by the Ecologist or Suitably Experienced Person

B.1 Capture and Exclusion

- B.1.1 The licenced ecologist will inspect the roof spaces for bats prior to the roof being removed. If found bats will be removed to enable works to continue. The bats will be held within a suitable container until the evening and then release on site so that the bats can relocate themselves.
- B.1.2 The licenced ecologist or their accredited agent will then supervise the removal of roof tiles. As bats are present in a number of areas of the roof space a licensed ecologist or their accredited agent will be present on site while all the roof is to be removed.
- B.1.3 The licenced ecologist or their accredited agent will inspect each section of roof before works start on that section and periodically through out works. If bats are found they will be relocated into a suitable container until the evening when the bats will be released on site.
- B.1.4 Bats found during any of the works will only be released if they are fit for release and weather conditions are suitable. The licenced ecologist is an experienced bat carer and will look after the bats if it is found that conditions are not suitable for immediate release.

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C Works to be Undertaken by the Developer/Landowner

- C.1.1 In-situ Retention of roost(s)
Not applicable as the roost will be lost.
- C.1.2 Modification of existing roost(s)
Not applicable as the roost will be lost.
- C.1.3 New Roost Creation – A new roost will be created approximately 10-15 m to the west of the existing roost. The roost being created will be of similar construction to the existing roof construction in the area where the bats are present.
- C.1.3.2. Bat boxes will be placed on trees in the adjacent woodland strip as advised by the ecologist. They will consist of Sweglers 2f type boxes and wooden boxes. A heated bat box will be placed on the in the location marked on the plan below – this will be a temporary roost while the replacement is being built.
- C.1.4 Scaled Maps/Plans –
Plans of building/ roost location – to be confirmed.

D Post-development Site Safeguard

- D.1 Habitat/Site Management and Maintenance
The school, including the new roost will be under the same ownership. The lower part of the structure will be used as a caretaker's storage. The structure will be kept in a good state of repair and fit for purpose.
- D.2 Population Monitoring
It is considered that monitoring of this roosting site is required for the year during construction and 2 years post construction.
- D.3 Mechanism for ensuring delivery of post-development works:
An ecologist will be instructed to undertake the post development works and issued with a purchase order for the works.

E Landownership of Off Site Mitigation

Not applicable

F Timetable of Works

Proposed timetable of works:

Time of year	Proposed action	Impact on bats and mitigation
--------------	-----------------	-------------------------------

January/February 2013	Install bat boxes on trees.	Provide alternative roosting habitat before works commence and potential receptor habitat for any bats found during works
January/February 2013	Installation of heated bat box	Provide alternative roosting habitat.
February 25th	Building taken out of commission	Lack of heating may reduce use of building by bats at this time.
February 25 th – 1 st April	Soft strip occurring	Some disturbance may occur from noise.
1 April – 2 Weeks	Removal of roof and demolition of building	Roof will be removed by hand
January 2013-March 2013 (before demolition occurs)	Construction of new roost	Provide alternative roosting habitat.

End of Document 2 – Delivery Information

Summary

In order to obtain a Natural England licence, the three tests set out in the Conservation of Habitats and Species Regulations 2010 (as amended) have to be met. Evidence that these tests can be met is set out below:

- The development is of overriding public interest.

Bowland High has seen a dramatic increase in the number of pupils since it was first opened in 1949 as Riversmead School. At that time it accommodated up to 200 pupils. The current school roll is 560 pupils and whilst some new classrooms have been erected in that period, the increase in floor area has been outstripped by the number of pupils. The schools catchment is the Ribble Valley parishes and the school's target areas represents a large catchment : Bashall Eaves, Bolton by Bowland, Bowland Forest Low, Bowland Forest High, Bowland with Leagram, Chatburn, Downham, Dunsop Bridge, Easington, Gisburn, Gisburn Forest, Great Mitton, Grindleton, Horton, Middop, Newsholme, Newton, Paythorne, Rimington, Sawley, Slaidburn, Twiston, Waddington and West Bradford.

At present classroom space is inadequate, there is insufficient space to accommodate ICT requirements, accessibility to many areas is poor or impossible for those with mobility issues. In addition, the existing dining hall (which serves as an assembly hall) is only 138m² but accommodates over 500 pupils. The recommended space requirement for such a hall is 0.9m² per person or around 500m². Moreover, the existing building has extremely poor thermal insulation properties and exhibits signs of damp and water ingress. It also houses an old oil fired boiler which heats the school – however, this has a very poor energy performance and requires replacement.

A case for a qualitative and quantitative improvement to school facilities was submitted to the DfE under the auspices of a bid under the Academies Capital Maintenance Fund and this has been successful in securing funding of around £3.3m. In a highly competitive bidding process, Bowland would not have succeeded if the DfE did not consider the public interest of the proposal was significant. The proposed replacement building will complete the schools transformation into a modern day educational facility, capable of ensuring the delivery of the national curriculum to the benefit of its pupils and the wider community.

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- There is no satisfactory alternative.

This is an existing school campus within the Forest of Bowland Area of Outstanding Natural Beauty. Given the nature of the facilities proposed (dining hall, kitchens, staff offices, classrooms, ICT suits etc) it would not be practical to locate these off campus. If it were practicably possible it would not represent a sustainable form of development. It therefore follows that the redevelopment of the existing site is the only viable option from a planning and visual impact perspective. Indeed, the Landscape and Visual Impact Assessment submitted with the application demonstrates that it is the best proposal for the site, in order to accommodate the required floor space. The proposal represents the redevelopment of previously developed land and buildings in a sustainable manner which is sympathetic to its sensitive landscape setting.

- The development would not be detrimental to maintaining the population of the species concerned at a favourable conservation status.

The mitigation strategy described above ensures that alternative and appropriate bat roost habitat will be provided for both the maternity roost and transient roosts in advance of any works that would affect the location of bat roosts within the building. The works will be undertaken at an appropriate time of year to minimise the risk of disturbing bats, supplemented by inspections and supervision by an appropriately licensed ecologist. Therefore, the populations of bats are expected to be maintained at the current level, in terms of species, numbers and the type of roost.

**SIMPLY
ECOLOGY**

320121059P

Bowland High School, Grindleton, Lancashire.

Bats: Building Survey

Simply Ecology

April 2009

For

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1.0 INTRODUCTION

1.1 Background Information

- 1.1.1 Simply Ecology Consultants were commissioned by Lancashire Property Group in March 2009 to undertake a bat survey at Bowland High School, Grindleton, BB7 4QS (O/S Grid Reference SD764460).

1.2 Aims

- 1.2.1 The aims of this survey were to gather up-to-date information on the presence of bats at the property and to assess the surrounding habitat quality for bats. This report will be used to assist planning of the re-roofing works. The work proposed will result in the roof being stripped of slates and reinstated with underfelt and without any further modifications to the existing structure. The survey encompassed the entire property as this may be affected during and after the development.

1.3 Site Description

- 1.3.1 The building inspected is the brick built school building which is situated on in a rural part of Lancashire, approximately 3 miles northeast of Clitheroe. (See Map 1 showing the Location Plan). The building is part of Bowland High School, it adjoins another building to the south and on the other three sides is surrounded by farmaced hardstanding. The building is currently in use, prior to re-roofing. Approximately 20m to the north is a strip of woodland and adjoining permanent pasture farmland.

2.0 STATUTORY AND PLANNING CONTEXT

- 2.0.1 Bats and all places they use for shelter are afforded full protection by the *Wildlife and Countryside Act 1981* (as amended) (Section 9, Schedule 5). In addition to the above protection, bats are also protected under European legislation which is implemented in England via The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) (Regulation 39).
- 2.0.2 If both national and international legislation are taken together, the legislative protection afforded to the species makes it an offence to:
- Intentionally/deliberately kill, disturb, injure or capture a bat.
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may affect a protected species. The planning authority may require mitigation or compensatory proposals in order to an activity to be granted planning permission.

- 2.0.6 In addition to bats, many species of bird commonly roost and nest in buildings. All wild birds are protected against killing or injury under *The Wildlife and Countryside Act 1981* (as amended). This protection extends to birds nests during the breeding season, which makes it an offence to damage or destroy nests or eggs.

3.0 SURVEY METHODOLOGY

3.1 Building Survey

- 3.1.1 The building survey was undertaken in accordance with the standard methods described in the 'Bat Worker's Manual' (JNCC 1999). The survey was carried out by Jason Reynolds MSc MIEEM, an experienced bat surveyor with over ten years of bat survey and research experience. In accordance with best practice, the survey comprised the following elements:

- A systematic inspection of the exterior of the property to look for obvious signs of bat activity (such as droppings on windowsills) and assessing the potential for entry/exit into the roof.
- A systematic internal inspection of the underside of the roof and within any enclosed loft spaces in the property (if present) to determine whether bats were present, to look for signs of bat activity (such as discarded prey items and droppings) and to assess potential suitability for bats. Lighting was provided by a million candle power Cluson Clulite CB2.
- An assessment of the surrounding habitat quality for bats was carried out by walking the area on foot and later from reference to aerial images (Google Earth). These searches were used to identify important land use and habitat features known to be favoured by bats.

3.2 Timing, Weather and Constraints

- 3.2.1 The survey was carried out on 20th March 2009. This is towards the end of the over-winter hibernation period and bats are becoming active on warmer days. Building inspections to search for signs of roosting bats can be undertaken at any time of year and assessments of potential to support roosting bats made according to the evidence found, building condition, location and the experience of the surveyor. This is in accordance with the Bat Conservation Trust Bat Survey Good Practice Guidelines 2007.
- 3.2.2 At this site there were no constraints to accessing the property or carrying out a complete and thorough inspection. Weather at the time of survey was mild (10° C), bright with little cloud and a light breeze.

4.0 SURVEY RESULTS

4.1 External Inspection

- 4.1.1 The property is a three storey building that dates from the 1940's and measures approximately 12x7m. It is a brick construction with a mixture of pebbledash and smooth render external finish on different walls. The building has a double pitch slate roof with gable ends. The north-facing pitch has a wall dormer pitch with valleys onto the main roof. The building has no chimneys.

- 4.1.2 The building was occupied and heated at the time of survey. The main fabric of the building was in fair cosmetic condition and structurally sound to enter and inspect throughout.

Plates 1 & 2: General views of the school building (eastern gable and north wall).

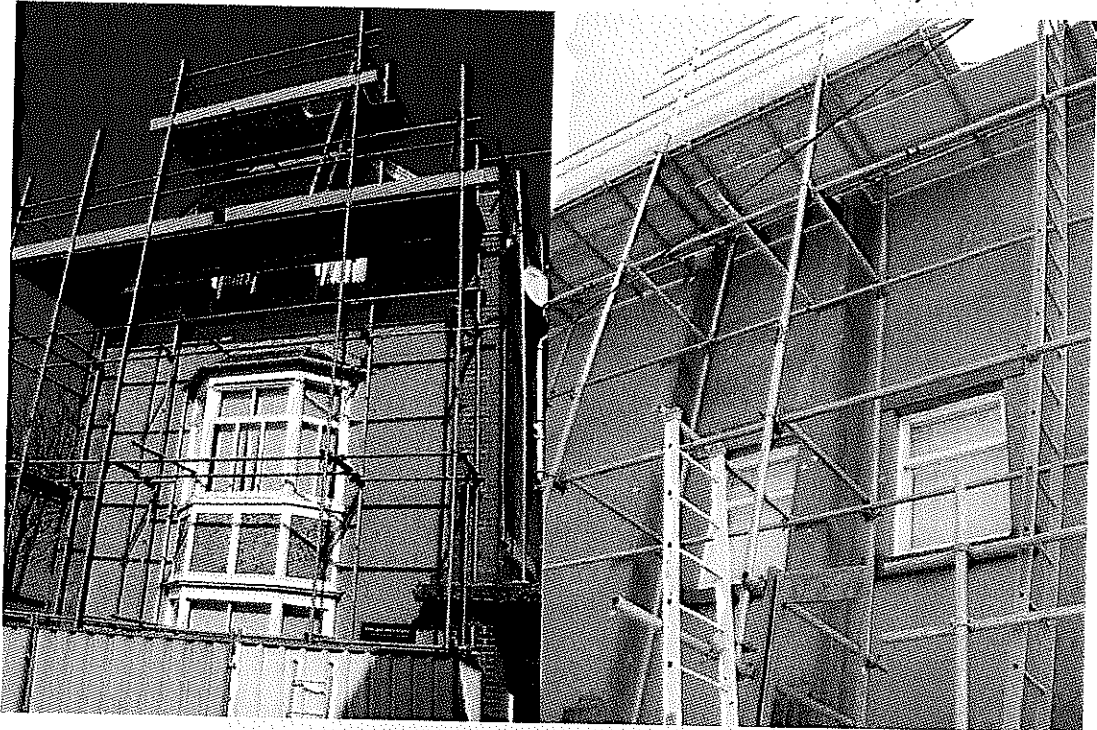


Plate 3: Roof detail. The main area of the roof was in a reasonable state of repair and there were limited opportunities for bat entry/exit. Gaps around the skylight are considered unlikely to be suitable for bats.

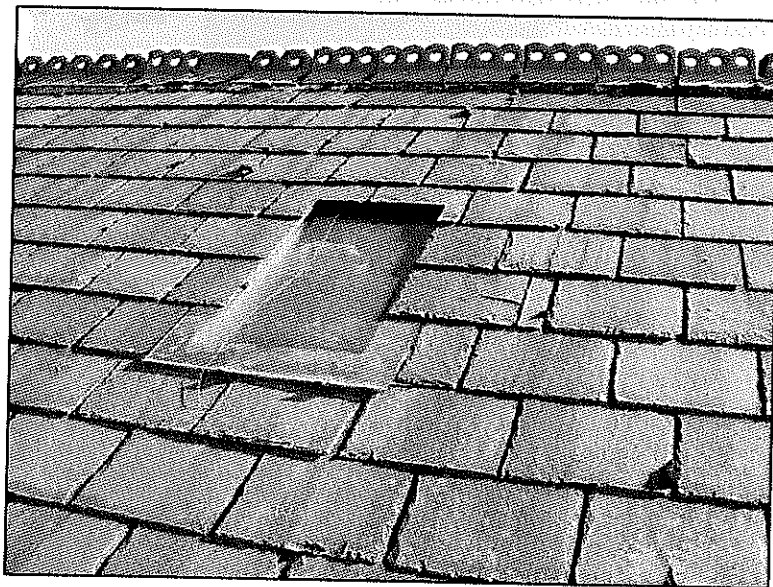


Plate 4: The Eastern roof apex and ridge, below which droppings were found.



Plate 5: Detail of eastern gable end, showing gaps with excellent potential for entry/exit by bats.



Plate 6: Bat droppings found on external feature directly below ridge apex.



- 4.1.3 As can be seen from Plates 1-6, although the roof is in reasonable state of repair, the exterior of the building provides opportunities for bats to gain entry to the building. All of the typical areas of a roof which bats tend to use for entry/exit were searched. The entire roof was in reasonably good condition, with no slipped or missing tiles (Plate 3). The pointing at the western gable end was well cemented and no gaps were present at the edge of the roof tiles. Other possible bat entry/exit points such as the ridge tiles were in fair condition and well cemented, with the exception of the eastern gable end ridge (Plate 4). Also, there was a 3cm gap between the bargeboards and the wall on the eastern gable and this provided excellent possibilities for bats to enter the roof (Plate 5).
- 4.1.5 The eastern gable end could provide access into the building and a search of a projecting brickwork feature below the ridge apex found fresh bat droppings (Plate 6). The whole barge board and ridge tile at the eastern end of the main building has a gap behind it and could be used by bats.
- 4.1.6 In addition, there is a hole approx 5 x 5cm under the eaves on the northern wall. This was heavily stained with bird droppings. Bats could also potentially gain entry to the building via this point. A further search of all external doorways, windows, openings and vertical surfaces were checked for signs of droppings, staining and prey items on any ledges but none were found. **The inspection of the outside of the building showed good potential and found fresh signs of bats.**
- 4.2 Internal inspection**
- 4.2.1 It was possible to gain entry into the entire loft space, which is divided into three separate areas by partial brick divisions (Plate 7). The interior of the loft was also thoroughly searched for any signs of bat activity. A skylight is present in the first part of the loft at its eastern end.

Plate 7: General view of the loft void, showing the partial divisions.

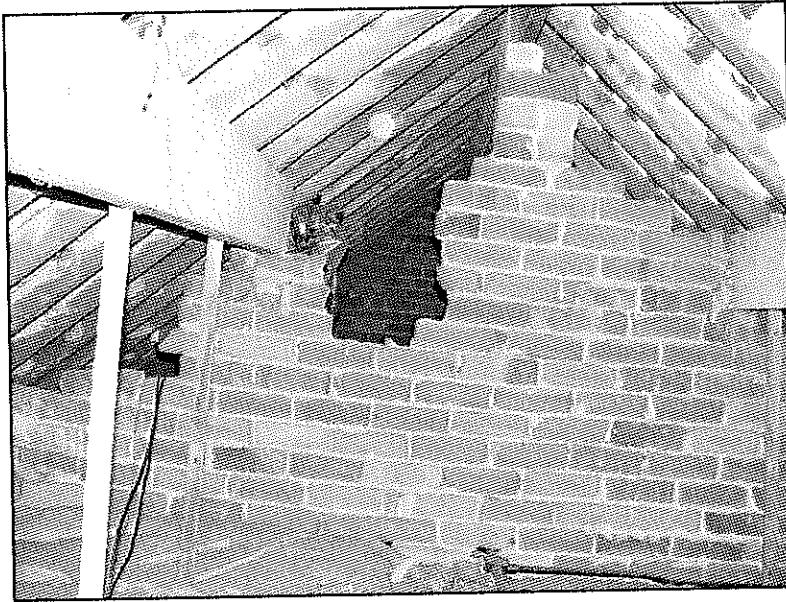


Plate 8: Underside of roof showing the good condition of the roof tiles and lack of roof underfelt/sarking.

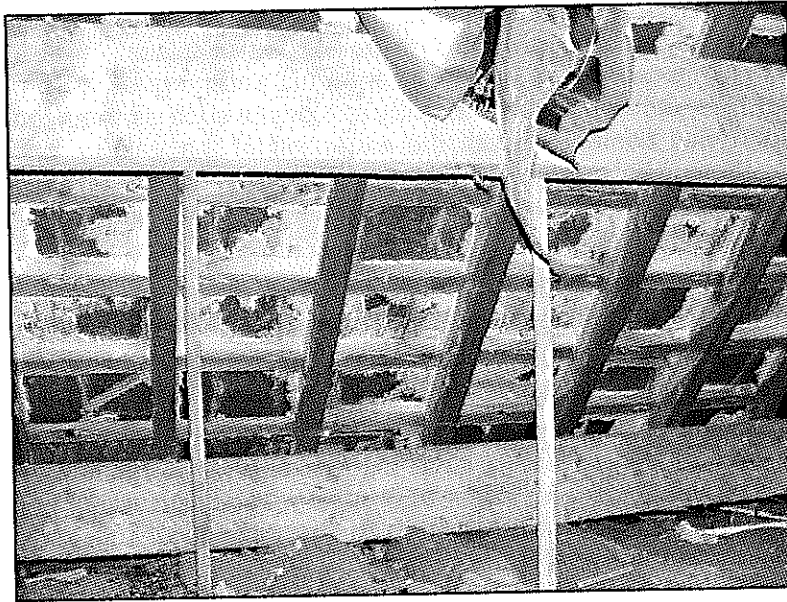


Plate 9: Large number of bat droppings present along the central joist.



Plate 10: Underside of ridge beam showing lack of cobwebs. Bats may be roosting above the beam, underneath the ridge tiles.

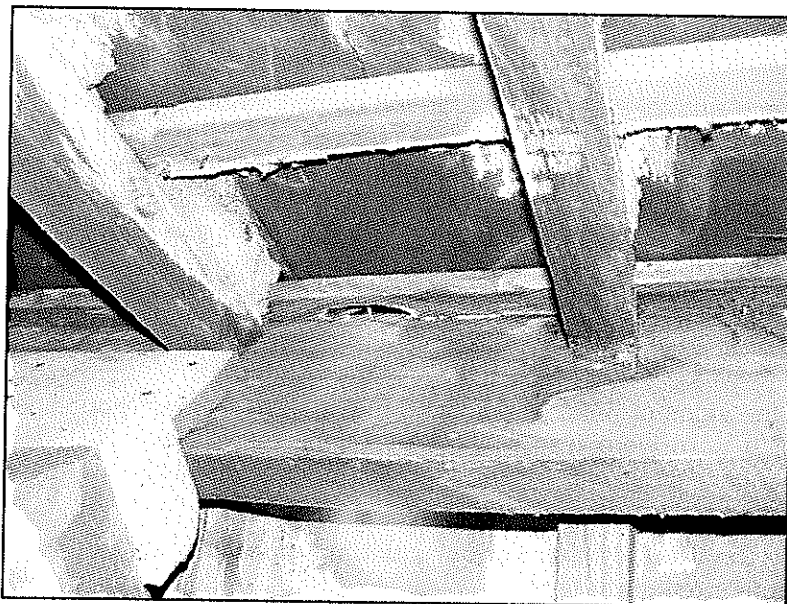


Plate 11: Evidence of activity was abundant within the loft and a wren was observed.



- 4.2.2 A thorough search of the roof space was carried out. The roof slates were laid directly onto battens, with no sarking or underfelt present (Plate 8). A search of all surfaces including the loft insulation fibre and beams was undertaken to look for signs such as droppings or discarded wings from prey items.
- 4.2.3 *Within the second and third sections of the loft numerous droppings and discarded prey items were found which indicate the presence of bats.* The number of droppings increased with distance away from the skylight. Plate 9 shows a small large of droppings directly beneath the ridge beam. Samples of these droppings were visually analysed. The findings indicate the likely presence of *Plecotus* or *Myotis* species. In addition, the varied shape and size of droppings present also indicates likely presence of *Pipistrellus* species. In addition to the droppings, the lack of cobwebs on the ridge beam is a typical indicator of bat activity (Plate 10). Despite a through search, no single location could be pinpointed as an obvious roost entry/exit point.
- 4.2.4 In addition to the signs of bats, bird nesting material, numerous droppings and a direct observation of a wren were also recorded within the roof (Plate 11). The birds were gaining entry into the roof via the hole under the eaves on the northern wall of the building.
- 4.2.7 **To conclude, the roof of the school building contains an active bat roost of potentially quite significant size.**

4.3 Site Status Assessment

- 4.3.1 The presence of a large number of bat droppings (several thousand) scattered along the line of the centre joist is indicative of a well used roost, potentially by a large number of bats. The roof space with large open void provides the type of large space which can be used by *Plecotus* or *Myotis* spp of bat. This takes into account the evidence of use the surrounding habitat which is well-suited to these species (see section 4.4). It is possible that this is a maternity roost, which is used by female bats. Further emergence survey of the building will be required to determine the number and species of bat using the roost.

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4.4 Habitat Assessment

- 4.4.1 The building is in a rural area, the great majority of which is permanent pasture with hedgerows and scattered woodland cover (Plate 12). The surrounding area within 1km has a few minor roads, with farms and small villages. The nearest waterbody which could potentially be used by bats is the River Ribble which is only 400m to the East.

Plate 12: Facing North (from the roof of the school building).



- 4.4.2 Overall, this habitat is likely to have a relatively good value for many species of bat.

5.0 CONCLUSIONS AND RECOMMENDATIONS

- 5.0.1 The inspection of the building found evidence of a bat roost. If the works were undertaken at the present time this would result in the disturbance and potential loss of a known bat roost. This would constitute an offence under The Conservation (Natural Habitats &c.) Regulations 1994 (as amended).
- 5.0.2 Without mitigation, the scale of impact upon bats is considered to be high. Although the re-roofing will re-instate the roof back to its former condition, the complete removal of the roof prior to reinstatement could potentially have a detrimental impact upon bats and potentially block up the entry/exit points. This could potentially result in loss of the roost altogether. However, it is understood that the client wishes to retain the bats within the building after the re-roofing work has taken place. With the right planning this will provide a favourable outcome.
- 5.0.3 Given the above findings, the strict legal protection afforded to bats is brought to the client's attention (See Section 2.0). The following actions are recommended at this site:
- The client is advised that re-roofing works can still occur, but that they must be carried out under a Licence issued by Natural England. The Appointed Ecologist will need to oversee that the re-roofing is carried out to retain suitable entry/exit points and the works could be planned for the Autumn.
 - No work must be undertaken upon the school roof until a European Protected Species Licence (EPSL) has been issued by Natural England to make legal the works affecting the bats.
 - **Additional bat surveys will be required during June-August to determine the location of the roost entrance, roost location, the number and species**

of bat present. A minimum of 3 visits will be needed, depending upon the results obtained.

- Once the emergence survey is complete, mitigation proposals will be agreed with the owner to ensure that bats can continue to use the roof space. This will ensure that there is no net loss of bat roosting opportunities and will potentially increase the suitability of the building for bats so that biodiversity benefits arise from the works.
- No planning permission for the works should be granted until the additional surveys have been completed and mitigation agreed.

5.0.4 Finally, it was noted that birds also nest within the roof. When the works are taking place under EPSL for bats, care should be taken not to disturb any breeding birds. This will ensure that no offences are committed under the Wildlife and Countryside Act 1981 (as amended) which protects breeding and nesting birds. The bird-nesting season is generally regarded to extend between March and July inclusive. Carrying out work in the Autumn will avoid this risk.

6.0 REFERENCES

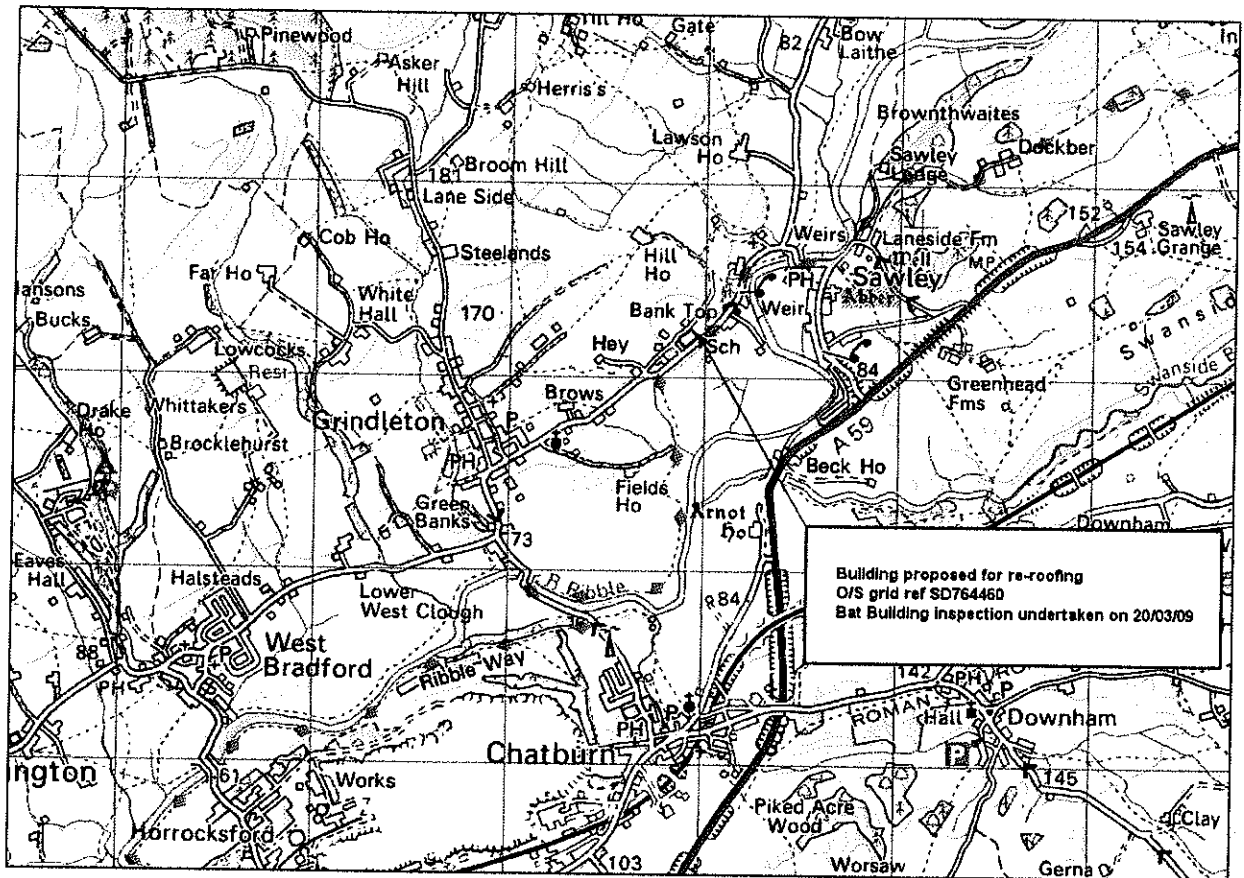
Bat Conservation Trust (2007). Bat Surveys – Good Practice Guidelines. Bat Conservation Trust, London.

JOINT NATURE CONSERVATION COMMITTEE (2001) *Bat Workers' Manual* (1999 version). JNCC, Peterborough.

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MAPS

Map 1: Site Location Plan



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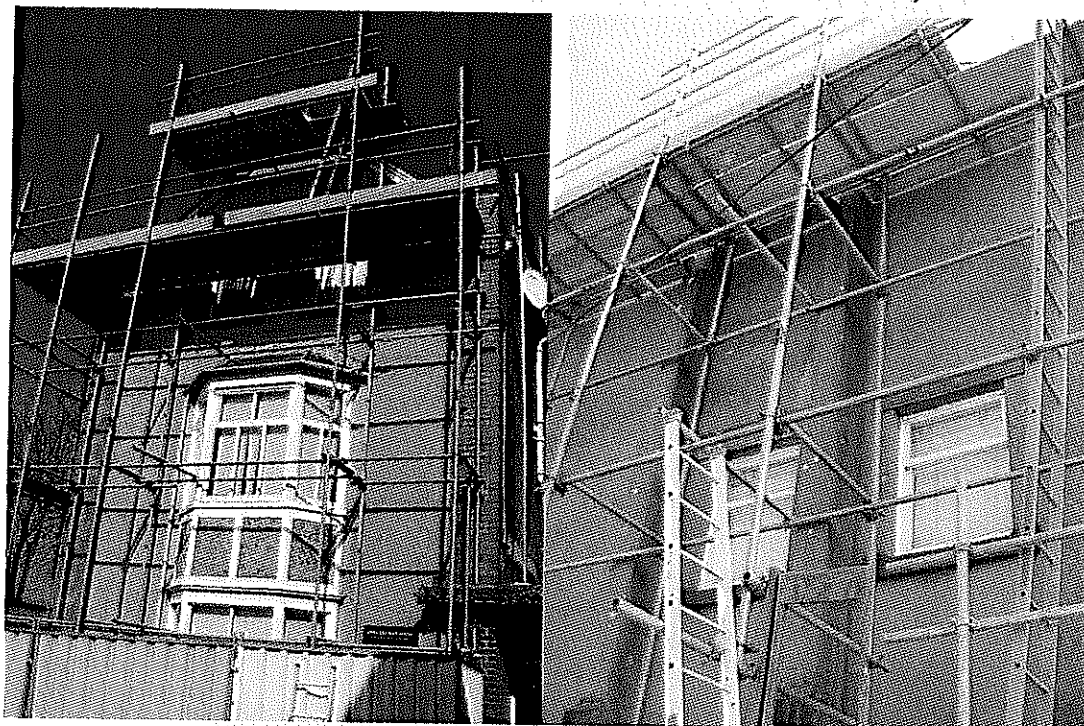


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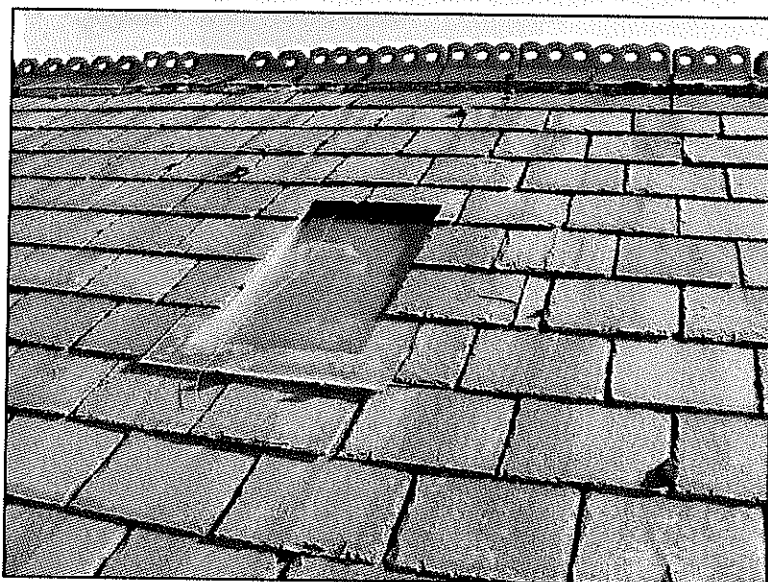


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Plate 7: General view of the loft void, showing the partial divisions.

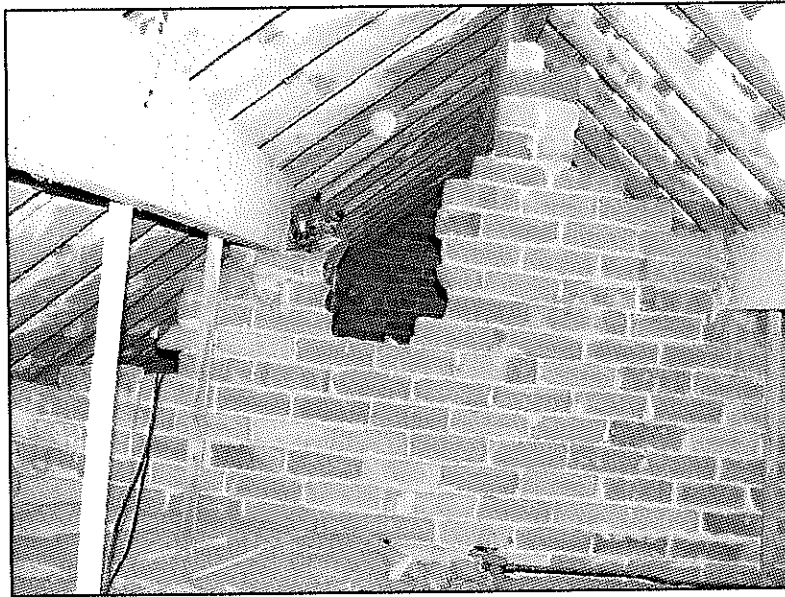
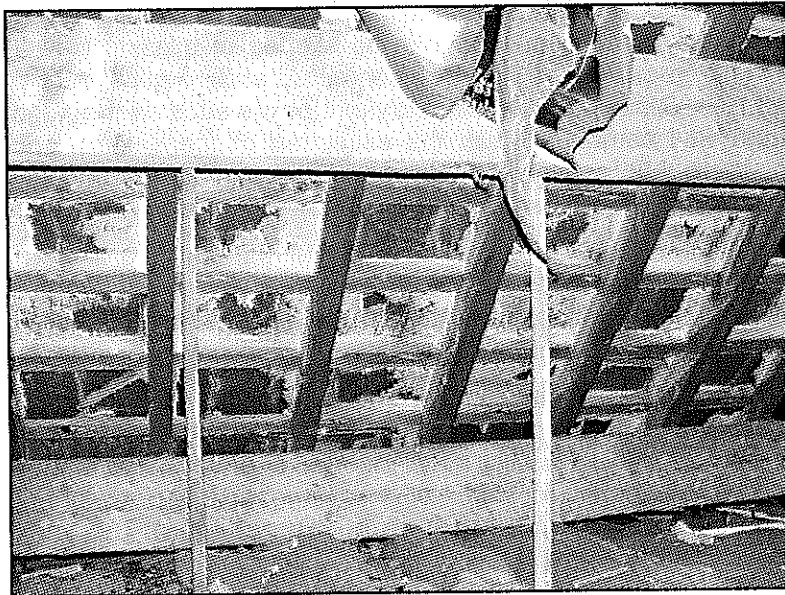


Plate 8: Underside of roof showing the good condition of the roof tiles and lack of roof underfelt/sarking.

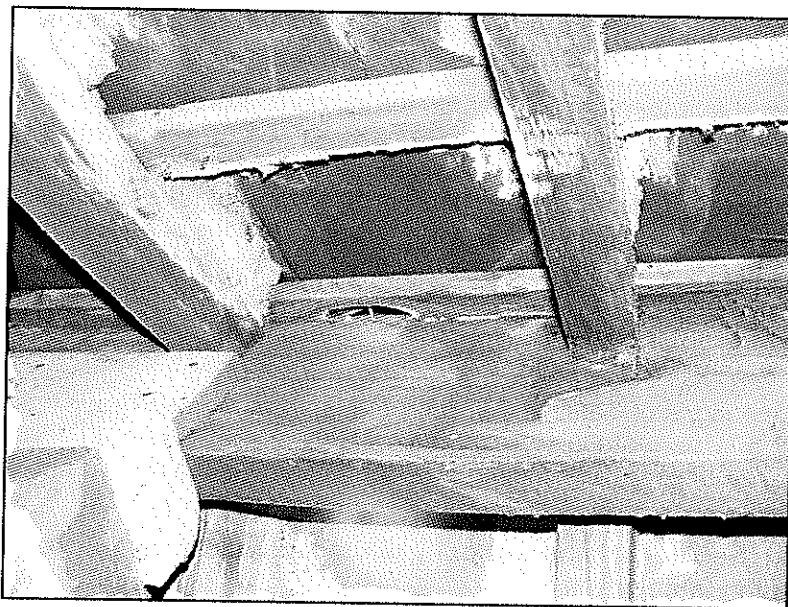


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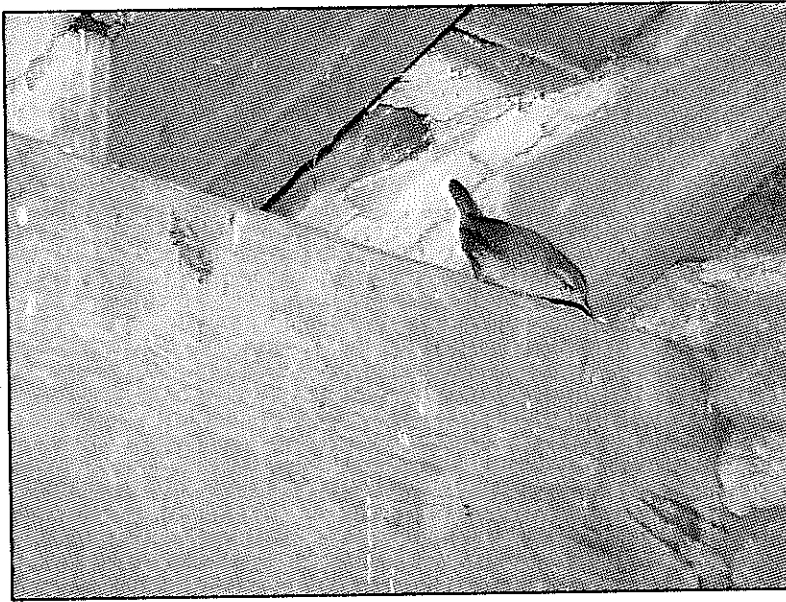
Plate 9: Large number of bat droppings present along the central joist.



Plate 10: Underside of ridge beam showing lack of cobwebs. Bats may be roosting above the beam, underneath the ridge tiles.



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Plate 11: Evidence of activity was abundant within the loft and a wren was observed.



- 4.2.2 A thorough search of the roof space was carried out. The roof slates were laid directly onto battens, with no sarking or underfelt present (Plate 8). A search of all surfaces including the loft insulation fibre and beams was undertaken to look for signs such as droppings or discarded wings from prey items.
- 4.2.3 *Within the second and third sections of the loft numerous droppings and discarded prey items were found which indicate the presence of bats.* The number of droppings increased with distance away from the skylight. Plate 9 shows a small large of droppings directly beneath the ridge beam. Samples of these droppings were visually analysed. The findings indicate the likely presence of *Plecotus* or *Myotis* species. In addition, the varied shape and size of droppings present also indicates likely presence of *Pipistrellus* species. In addition to the droppings, the lack of cobwebs on the ridge beam is a typical indicator of bat activity (Plate 10). Despite a thorough search, no single location could be pinpointed as an obvious roost entry/exit point.
- 4.2.4 In addition to the signs of bats, bird nesting material, numerous droppings and a direct observation of a wren were also recorded within the roof (Plate 11). The birds were gaining entry into the roof via the hole under the eaves on the northern wall of the building.
- 4.2.7 **To conclude, the roof of the school building contains an active bat roost of potentially quite significant size.**

4.3 Site Status Assessment

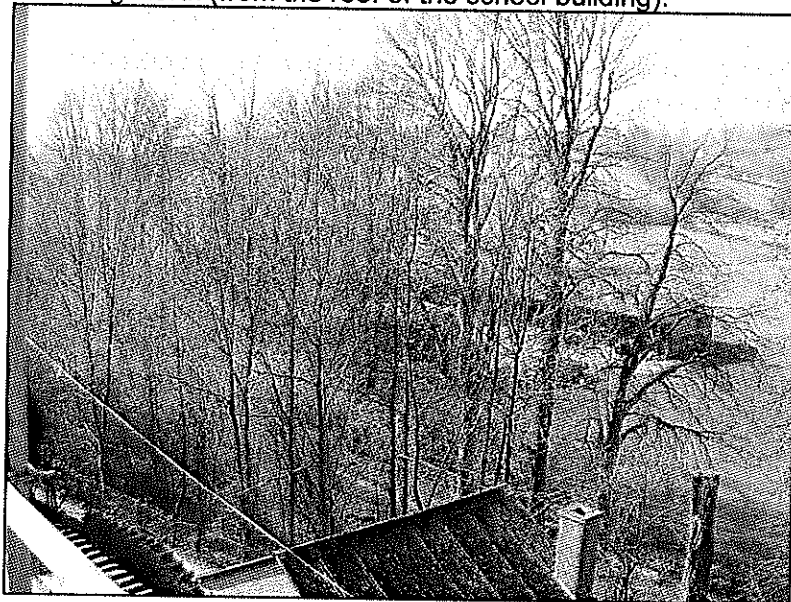
- 4.3.1 The presence of a large number of bat droppings (several thousand) scattered along the line of the centre joist is indicative of a well used roost, potentially by a large number of bats. The roof space with large open void provides the type of large space which can be used by *Plecotus* or *Myotis spp* of bat. This takes into account the evidence of use the surrounding habitat which is well-suited to these species (see section 4.4). It is possible that this is a maternity roost, which is used by female bats. Further emergence survey of the building will be required to determine the number and species of bat using the roost.

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4.4 Habitat Assessment

- 4.4.1 The building is in a rural area, the great majority of which is permanent pasture with hedgerows and scattered woodland cover (Plate 12). The surrounding area within 1km has a few minor roads, with farms and small villages. The nearest waterbody which could potentially be used by bats is the River Ribble which is only 400m to the East.

Plate 12: Facing North (from the roof of the school building).



- 4.4.2 Overall, this habitat is likely to have a relatively good value for many species of bat.

5.0 CONCLUSIONS AND RECOMMENDATIONS

- 5.0.1 The inspection of the building found evidence of a bat roost. If the works were undertaken at the present time this would result in the disturbance and potential loss of a known bat roost. This would constitute an offence under The Conservation (Natural Habitats &c.) Regulations 1994 (as amended).
- 5.0.2 Without mitigation, the scale of impact upon bats is considered to be high. Although the re-roofing will re-instate the roof back to its former condition, the complete removal of the roof prior to reinstatement could potentially have a detrimental impact upon bats and potentially block up the entry/exit points. This could potentially result in loss of the roost altogether. However, it is understood that the client wishes to retain the bats within the building after the re-roofing work has taken place. With the right planning this will provide a favourable outcome.
- 5.0.3 Given the above findings, the strict legal protection afforded to bats is brought to the client's attention (See Section 2.0). The following actions are recommended at this site:
- The client is advised that re-roofing works can still occur, but that they must be carried out under a Licence issued by Natural England. The Appointed Ecologist will need to oversee that the re-roofing is carried out to retain suitable entry/exit points and the works could be planned for the Autumn.
 - No work must be undertaken upon the school roof until a European Protected Species Licence (EPSL) has been issued by Natural England to make legal the works affecting the bats.
 - **Additional bat surveys will be required during June-August to determine the location of the roost entrance, roost location, the number and species**

of bat present. A minimum of 3 visits will be needed, depending upon the results obtained.

- Once the emergence survey is complete, mitigation proposals will be agreed with the owner to ensure that bats can continue to use the roof space. This will ensure that there is no net loss of bat roosting opportunities and will potentially increase the suitability of the building for bats so that biodiversity benefits arise from the works.
- No planning permission for the works should be granted until the additional surveys have been completed and mitigation agreed.

5.0.4 Finally, it was noted that birds also nest within the roof. When the works are taking place under EPSL for bats, care should be taken not to disturb any breeding birds. This will ensure that no offences are committed under the Wildlife and Countryside Act 1981 (as amended) which protects breeding and nesting birds. The bird-nesting season is generally regarded to extend between March and July inclusive. Carrying out work in the Autumn will avoid this risk.

6.0 REFERENCES

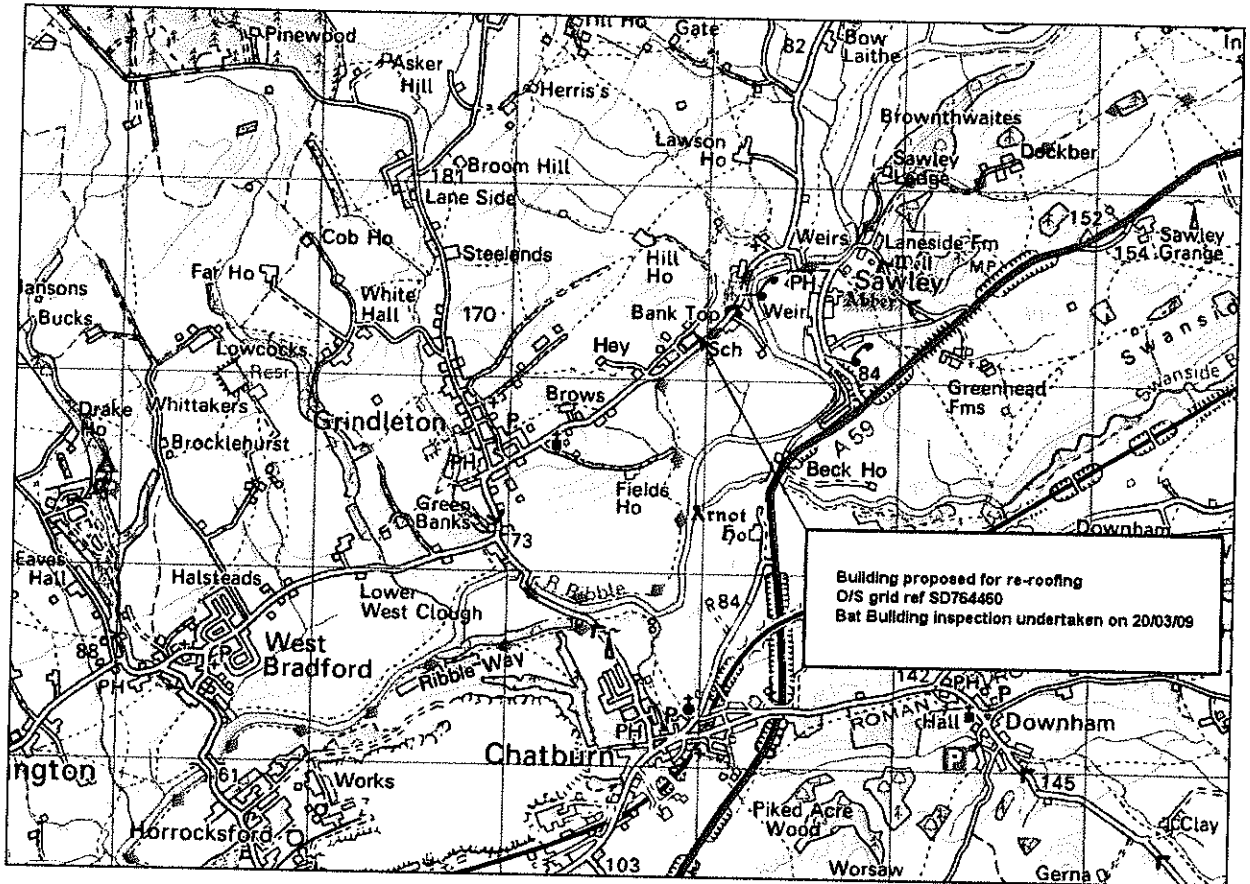
Bat Conservation Trust (2007). Bat Surveys – Good Practice Guidelines. Bat Conservation Trust, London.

JOINT NATURE CONSERVATION COMMITTEE (2001) *Bat Workers' Manual* (1999 version). JNCC, Peterborough.

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MAPS

Map 1: Site Location Plan



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