Whitcher Wildlife Ltd.
Ecological Consultants.

PLASHWOOD STABLES, GREEN MOOR.

BAT SURVEY.

Ref No:- **150748.**

Date: **26th July 2015.**

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1. INTRODUCTION.

1.1. A planning application was granted to convert the Plashwood Stables for residential use in 2013. A bat survey was carried out in support of that application.

1.2. A further planning application has been submitted for amendments to the original application and therefore the Local Authority has asked for a further bat survey and report.

1.3. Whitcher Wildlife Ltd was therefore commissioned to carry out a further bat survey of the site to establish whether there are any issues that may affect the proposed works.

1.4. The first survey was carried out on 4th October 2012 and the second survey on 26th July 2015. This report outlines the findings of both surveys and makes appropriate recommendations.

1.5. Appendix I of this report provides background information with respect to bats and the legal protection afforded to them.

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2. SURVEY METHODOLOGY.

2.1. The buildings were thoroughly checked internally and externally for potential bat roosting sites in line with L Hundt (2012). *Bat Conservation Trust Good Practice Guidelines* by looking for the following signs:-

* Holes, cracks or crevices.
* Bat droppings.
* Prey remains.
* Staining on external walls.

2.2. Unless otherwise stated, all lofts were accessed and inspected using a high powered torch and where necessary an endoscope.

2.3. A thorough external inspection was carried out from ground level for any gaps or openings in the roof and ridge tiles, behind soffits and fascias and in the walls of the structure for suitable roost access points and field signs to indicate possible use by bats.

2.4. All window cills, walls and the ground around the structure were checked for signs of bat droppings or staining to indicate possible use by bats. Where necessary, ladders were utilised to gain access within the limits of health and safety.
Any access constraints encountered are outlined within the following report.

2.5. All survey work was carried out in line with the Bat Conservation Trust, Good Practice Guidelines

2.6. This was followed by a dusk emergence survey as bats are in hibernation at this time of year.

2.7. The survey was undertaken by Derek Whitcher who has over twenty year's experience of surveying for wildlife and has run his own wildlife consultancy since 1998. He has extensive experience of a wide variety of survey techniques for a variety of species of protected wildlife supplemented by attendance on a wide range of training courses through IEEM, FSC and BCT. As a member of IEEM he is committed to continuous professional development, a continual process of learning and career development, a condition of IEEM membership. He holds current Natural England survey licences for barn owl, bat, great crested newt and white clawed crayfish.

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3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. A data search request has been submitted to South Yorkshire Bat Group for existing records of bat roosts within 1km of the site.

3.1.2. The group holds two records in the surrounding area. One is a Pipistrelle roost in Green Moor dated 2011 and the other a grounded bat from 2006 as shown in the table below.

Grid square	Date	Location	Recorder	Survey type	Species	Roost/type	Notes
SK2899	2011	Pelph Mews, Green Moor	SYBG/ M Derbyshire	SYBG enquiry	Pipistrelle	Emergence roost	42+ counted
SK2800	2006	Huthwaite Lane, Thurgoland	English Nature	Call out	Pipistrelle		Grounded bat found and taken into care

3.2. Site Description.

3.2.1. Plashwood Stables is located on a hillside below Green Moor, surrounded by open grazing fields and clumps of woodland, as shown in the aerial photograph below.

3.3. Day Time Survey Results.

3.3.1. The Stables is a group of stone buildings in three separate parts forming one block, as shown in the photograph below.

3.3.2. The main block is a two storey section with stables and storage on the ground floor and a with a mezzanine floor with more storage space above.

3.3.3. The walls are built from stone that is generally well pointed but with a few open joints and cracks low down on the walls. There is a large clump of ivy growing against the eastern elevation.

3.3.4. The roof is supported on a traditional purlin timber frame and is covered with stone slates with no lining. All roof slates are in place and the ridge tiles are well pointed although further deterioration since the previous survey has resulted in larger gaps beneath the stone slates. The photograph below shows the underside of the roof.

3.3.5. No bat droppings or field signs were identified on the outside of the building. No bat droppings or field signs were found inside the building. The photograph below shows the mezzanine floor.

3.3.6. On the northern end of the building there is a single storey lean-to section that was originally used as a further stable. The walls are a similar stone construction but the stone slates have been removed as the roof was becoming unstable.

3.3.7. Internally the walls have been whitewashed and are in good condition.

3.3.8. No bats or bat field signs were identified inside or outside this part of the building.

3.3.9. To the rear of the buildings there is a further single storey lean-to section that is built low into the ground as shown in the photograph below. The walls are mainly below ground level and the roof is covered with stone slates. Some of these are misplaced but all are present.

3.3.10. Internally the walls have been whitewashed and there is no lining beneath the stone slates, as shown in the photograph below. This building is quite damp.

3.3.11. No bat field signs were identified inside or outside this section of the building.

3.4. First Dusk Emergence Survey Results.

3.4.1. Two surveyors carried out a dusk emergence survey of the stables on 4th October 2012. The evening was mild, still and clear with a temperature of 13°C at 19-30.

3.4.2. The two surveyors were positioned one at either side of the buildings in order to be able to view all sides at once. Each surveyor was equipped with a Batbox Duet detector and a two way radio. Three static Anabat recorders were deployed to record bat activity for subsequent computer analysis using Analook software.

3.4.3. The following aerial photograph shows the positions of the surveyors and the Anabat recorders. Anabat 3 was placed inside the buildings.

3.4.4. The following bat activity was identified by the two surveyors.

Surveyor 1.

18:45. Pipistrelle 45 foraging to the north of the site.
18:50. Pipistrelle 45 foraging around trees to the north of the site.
18:52. Pipistrelle 45 foraging in circles around the northern side of the stables. This foraging activity continued throughout the survey.
19:01. Two quiet bats flew across the site seen but not heard.
19:13. Pipistrelle 55 flew across the site from the east over the site to the west.
19:30. Two Pipistrelle 45s foraging over Surveyor 1 and left to the west.

Surveyor 2.

18:44. Pipistrelle 45 flew from the west across the field to the south of the stables and away.
18:54. Pipistrelle 45 foraging high over the garden to the west of the stables. This continued until 19:03.
19:05. Pipistrelle 45 flew round the east side of the stables.
19:07 to 19:10. Pipistrelle 45 foraging over garden to the west of the site and away to the north.
19:13. Brief Pipistrelle 55 call heard not seen.
19:20. Brief bat call unidentified.
19:23. Brief bat call unidentified.

3.4.5. The following bat activity was recorded on the static Anabat recorders.

Anabat 1.

This Anabat recorded continuous Pipistrelle 45 activity throughout the survey with two Myotis calls, possible Whiskered or Brandt's bats at 19:01 and 19:12.

Anabat 2.

This Anabat recorded occasional Pipistrelle 45 calls throughout with one pipistrelle 55 call at 19:11 and three Myotis calls at 19:02, 19:20 and 19:23.

Anabat 3.

No bat activity was recorded on this Anabat placed inside the buildings.

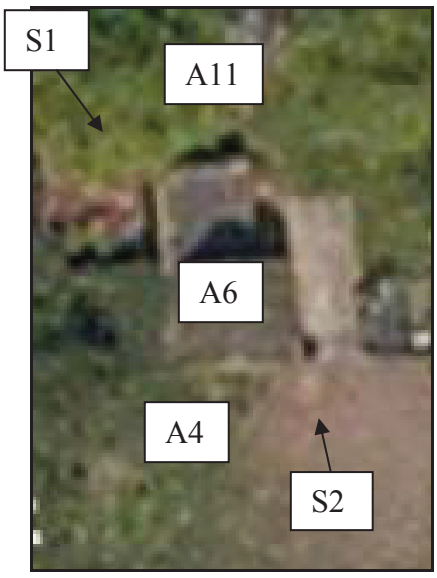
3.5. Second Dusk Emergence Survey Results.

3.5.1. Two surveyors carried out a dusk emergence survey of the stables on the evening of 26th July 2015. The evening was clear and still with a temperature of 13°C at 21-30.

3.5.2. One of the surveyors holds a current Natural England Class Survey Licence for bats and the other is an experienced surveyor.

3.5.3. The two surveyors were positioned one at either side of the buildings in order to be able to view all sides at once. Each surveyor was equipped with a Batbox Duet detector and a two way radio. Three static Anabat recorders were deployed to record bat activity for subsequent computer analysis using Analook software.

3.5.4. The following aerial photograph shows the positions of the surveyors (S) and the Anabat recorders (A). Anabat 6 was placed inside the buildings.



3.5.4. The following bat activity was identified by the two surveyors.

3.5.4.1. Surveyor 1.

21:31. Common Pipistrelles heard foraging but not seen.
21:33. Common Pipistrelle from the west, curled round the site and away to the east.
21:35. Common Pipistrelle heard not seen.
21:37 to end of survey. Continual Common Pipistrelle foraging along trees to the north of the site.
21:39 to end of survey. Continual Common Pipistrelle foraging over garden and lane to the west of the site.
21:51. Common Pipistrelle from the east, circled and returned east foraging.
21:55. Two Common Pipistrelles from the west foraging and away to the east.
22:17. Common Pipistrelles still foraging over garden to the west and along trees to the north.

3.5.4.2. Surveyor 2.

21:31. Noctule seen high over site flying west but not heard.
21:33. Common Pipistrelle from the west, over S1 and away to the east.
21:38. Very faint and distant Common Pipistrelle heard not seen.
21:38. Common Pipistrelle seen foraging over garden to the west but very faint call only. This foraging activity continued throughout the survey.
21:50. Common Pipistrelle from the west, circled overhead and returned.
21:55. Two Common Pipistrelles from the west and away to the east.
21:57. Common Pipistrelle from the west past the south end of the site and away to the east.
22:02. Common Pipistrelle heard not seen.
22:03. Common Pipistrelle heard not seen.
22:04. Common Pipistrelle east to west across south side of site.
22:07. Common Pipistrelles foraging around southern end of the stables.
22:08.Common Pipistrelle heard not seen.
22:09. Common Pipistrelle foraging around south end of stables.
22:13. Soprano Pipistrelle foraging around south of the site.
22:15. Myotis bat flew east to west over southern end of site.

3.5.5. The following bat activity was recorded by the three Anabat recorders.

- Anabat 6, inside the building recorded no bat activity

- Anabat 4 at the southern end of the site recorded a sixteen Common Pipistrelle calls between 21:33 and 22:18, one Noctule at 21:30, Myotis at 21:49, 21:56 and 22:14 and one Soprano Pipistrelle at 22:13.

- Anabat 11 at the northern end of the site recorded forty-one Common Pipistrelles between 21:33 and 22:19, one Noctule at 21:31, Myotis at 21:55 and 22:15 and one Soprano Pipistrelle at 22:14.

3.5.6. No bats emerged from the stable buildings.

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4. EVALUATION OF FINDINGS.

4.1. The stable buildings were assessed during the first survey to have minimal bat roosting potential limited to occasional voids in the walls and small gaps between the stone roof slates where they do not sit flat to each other. These would be unsuitable for anything more than the occasional male Pipistrelle. During the second survey the situation had become worse with one roof having been removed and further deterioration of the other.

4.2. The inside of the stables and the underside of the roof were assessed to be totally unsuitable for roosting bats during both surveys.

4.3. The first dusk emergence survey identified a small number of Common Pipistrelle bats continually circling and foraging throughout the survey. These appeared initially from the west of the site. One Soprano Pipistrelle flew directly over the site and there were three Myotis passes over the site. The calls were brief but appear to be Whiskered or Brandt's bats.

4.4. The survey results during the second dusk emergence survey were unbelievably similar. Common Pipistrelles came initially from the west and were present throughout the survey foraging over the garden to the west and in the tree line to the north with occasional incursions over the site. One Noctule was recorded early in the survey, one Soprano Pipistrelle and occasional Myotis, identified to be Whiskered/Brandt's bats.

4.5. No bat field signs were identified inside or outside the stable buildings and no bats emerged from any of the buildings during either survey.

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5. RECOMMENDATIONS.

5.1. As the buildings were assessed to have a low potential for roosting bats and no bats emerged from the buildings during the dusk emergence survey, the results indicate there are no bat roosts present in the stable buildings and therefore no further surveys are recommended.

5.2. Because of the time elapsed since the first survey a second survey was carried out and provided an almost identical set of results. Therefore the following recommendations remain as previously stated.

5.3. Nevertheless, all works to the buildings should be undertaken with care and all personnel employed on the works should be briefed to be observant. In the unlikely event that a bat is found during the works, the bat should be covered and protected, work should cease at that location and the undersigned contacted for further advice.

5.4. To increase the biodiversity of the site, it is recommended that bat roosting opportunities are designed into the converted stables. These can take the form of a roost built into the external stone walls or bat roosting opportunities beneath the ridge tiles. Examples of each of these are provided in the Appendices of this report.

5.5. It is recommended that the ivy on the walls of the building is removed outside the nesting bird season, which extends from March to September as the ivy provides ideal nesting bird potential.

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Prepared by:	
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Checked by:	
Steven Whitcher, MCIEEM.	Date: 30th July 2015

Appendix I. BAT INFORMATION.

It is necessary to understand a little about bats, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

Over 15 species of bat have been recorded in Britain. These fall into two families, the horseshoe bats and the 'ordinary bats'. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to shortage of food, caused by pesticides, as insects are their sole diet, and habitat change.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to man made structures and will readily use these to roost and to rear their young.

Bats are protected under the Wildlife and Countryside Act 1981, The Habitats Regulations 1994 and the Countryside & Rights of Way Act 2000.

It is an offence to intentionally or recklessly kill, injure or capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

A breeding or resting site of any bat is known as a bat roost. A bat roost is therefore any structure a bat uses for shelter or protection. Because bats tend to use the same roosts each year, legal opinion is that the roost site is protected whether or not the bats are present at that time.

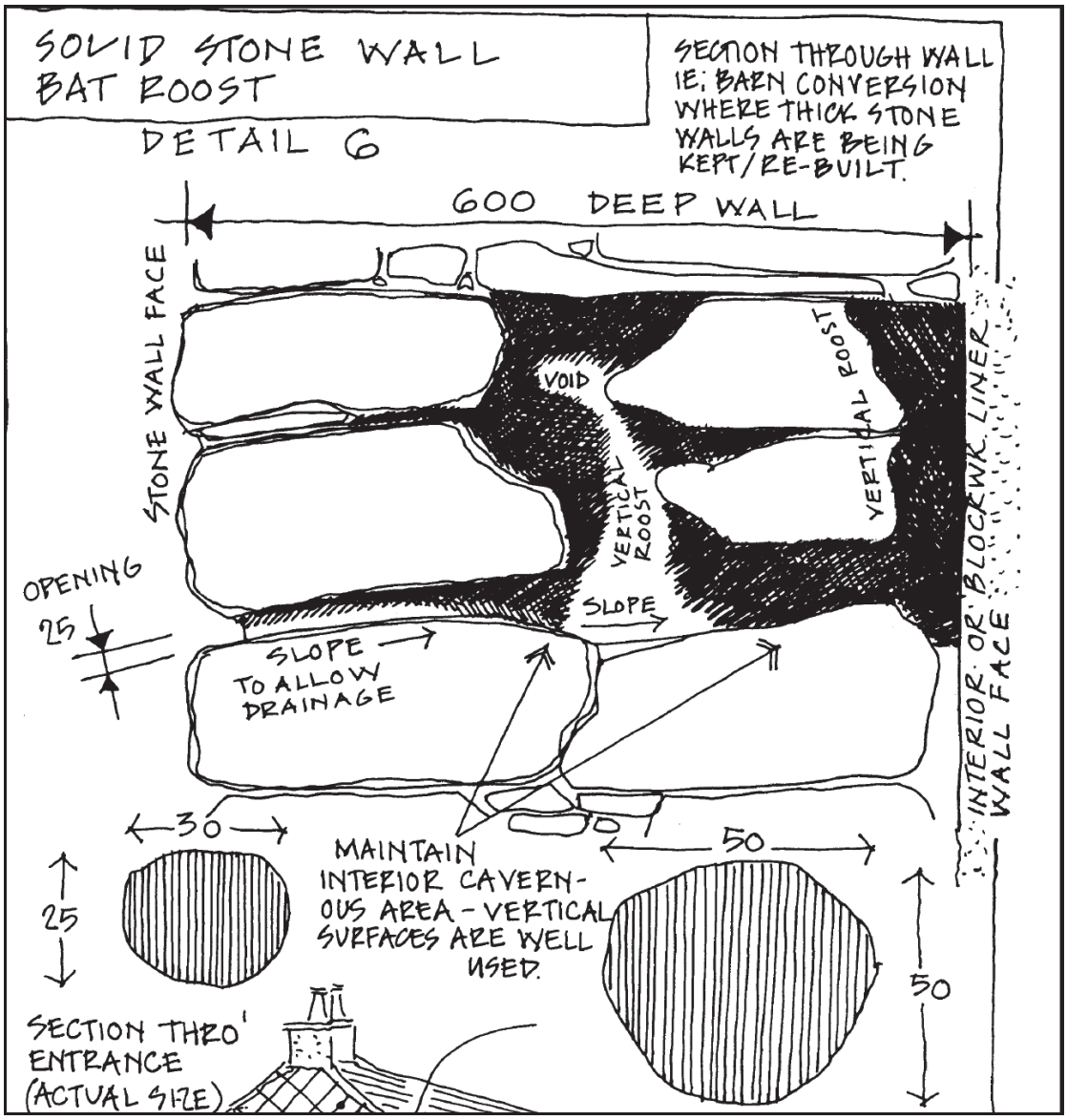
Bat roosts can be identified by looking for:-

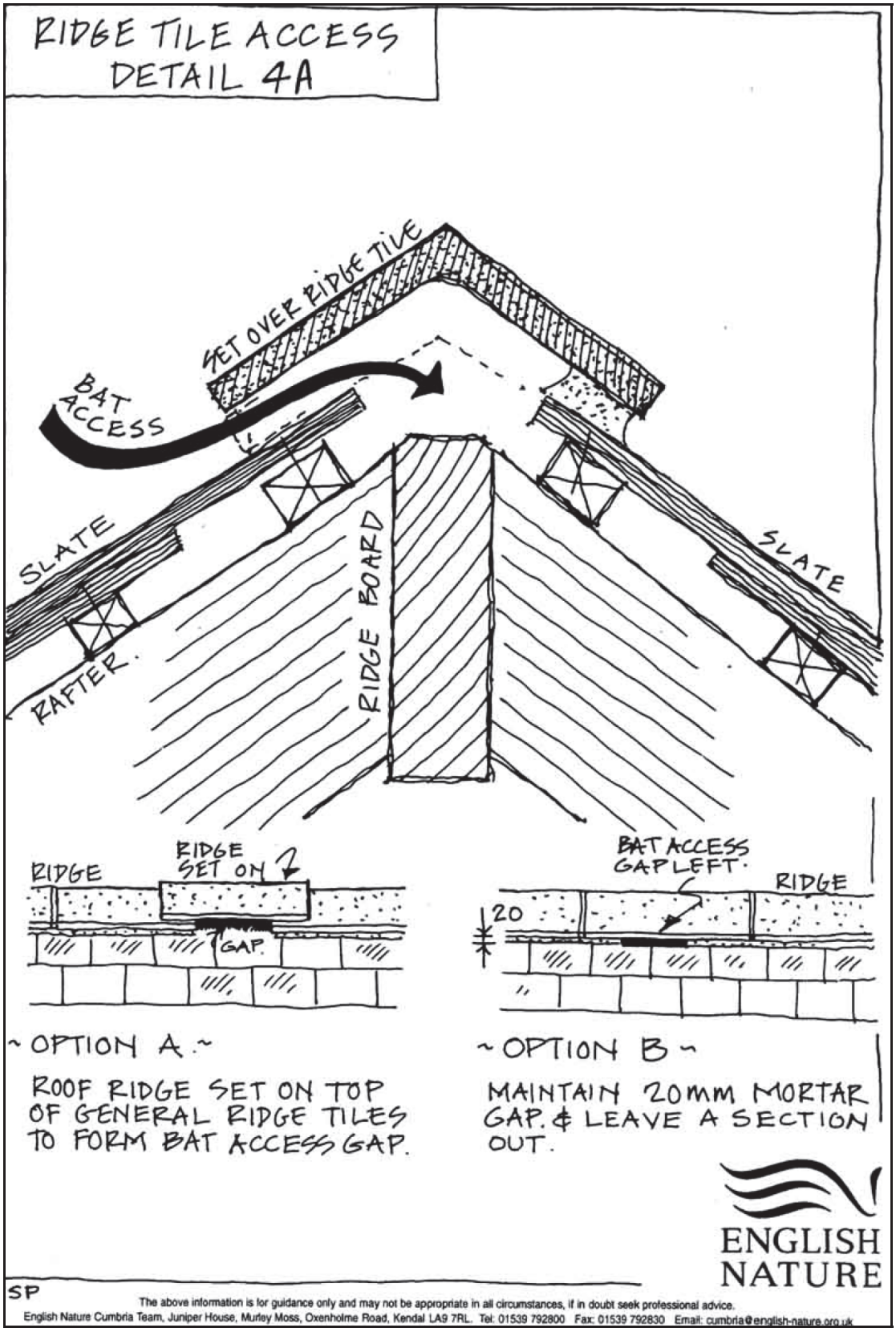
- Suitable holes, cracks and crevices.
- Bat droppings.
- Prey remains.
- By carrying out night observations using a bat detector.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

The person applying for that licence has to be suitably qualified and experienced in bat matters. That person is then responsible for ensuring that the measures contained in the licence are carried out.

Appendix II. EXAMPLE BAT ROOSTING OPPORTUNITIES.




RIDGE TILE ACCESS
DETAIL 4A
SET OVER RIDGE TILE
BAT ACCESS
SLATE
RAFTER
RIDGE BOARD
SLATE
RIDGE
RIDGE SET ON
GAP
BAT ACCESS GAP LEFT
RIDGE
20
~ OPTION A ~
ROOF RIDGE SET ON TOP OF GENERAL RIDGE TILES TO FORM BAT ACCESS GAP.
~ OPTION B ~
MAINTAIN 20mm MORTAR GAP. & LEAVE A SECTION OUT.
ENGLISH NATURE
SP
The above information is for guidance only and may not be appropriate in all circumstances, if in doubt seek professional advice.
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