Whitcher Wildlife Ltd.
Ecological Consultants.

FIDDLER FARM, THURGOLAND.

OS REF: SK 28283 99999.

BAT SURVEY.

Ref No:- **170411.**

Date: **9th August 2017.**

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TABLE OF CONTENTS.

	Page Number
1. INTRODUCTION.	**3**
2. SURVEY METHODOLOGY.	**4**
3. SURVEY RESULTS.	**5**
4. EVALUATION OF FINDINGS.	**19**
5. MITIGATION STRATEGY.	**21**
6. REFERENCES.	**26**
Appendix I. BAT INFORMATION.	**27**

1. INTRODUCTION.

1.1. There are plans to convert a barn at Fiddler Farm, Thurgoland.

1.2. Whitcher Wildlife Ltd was therefore commissioned to carry out a daytime and dusk emergence bat survey of the site to establish whether there are any issues that may affect the proposed works. This survey was carried out on 15th June 2017.

1.3. During this survey bats were seen to emerge from the building so further bat surveys were recommended.

1.4. A bat dawn swarming survey was carried out on 30th June 2017 and a second dusk emergence survey was carried out on 31st July 2017.

1.5. This report outlines the findings of the above surveys and includes a mitigation strategy outlining mitigation and timings etc.

1.6. Appendix I of this report provides additional information on bats and the protection afforded to them and is designed to assist the reader in understanding the contents of this report.

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2. SURVEY METHODOLOGY.

2.1. The buildings were thoroughly checked internally and externally for potential bat roosting sites 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 Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition),* with an assessment of the buildings suitability for roosting bats made in accordance with these guidelines.

2.6. The subsequent dusk emergence and dawn swarming surveys were also conducted in accordance with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition).* They were conducted by a sufficient number of surveyors to cover all areas of roosting potential, in suitable weather conditions from fifteen minutes before sunset to at least an hour and half after for the dusk emergence and from at least an hour and a half before sunrise to fifteen minutes after for the dawn swarming.

2.7. All surveyors were equipped with BatBox Duet bat detectors, or similar. The use of static recording devices such as Anabat SD2's and video cameras with infrared lights were also utilised were appropriate.

2.8. The daytime and dusk emergence survey was carried out by Jenny Whitcher Roebuck MCIEEM and Stevan Roebuck.

2.8.1. Since 2001 Jenny has had experience in a professional capacity as a Wildlife Consultant carrying out Ecology Surveys and Phase 1 Habitat surveys. Jenny holds Natural England Survey Licences in respect of bats, great crested newts, crayfish and barn owls, NRW and SNH Survey Licences in respect of bats and great crested newts. She has also successfully completed a number of courses run by the Chartered Institute of Ecology and Environmental Management (CIEEM), the Bat Conservation Trust (BCT) and the Field Studies Council (FSC) in the relative protected species, plant species and in carrying out Phase 1 Habitat Surveys. As a full member of CIEEM she is committed to continuous professional development, a continual process of learning and career development, a condition of CIEEM membership.

2.8.2. Since 2011 Stevan has had experience carrying out great crested newt and bat surveys. Since 2013 Stevan has had experience in a professional capacity as a Wildlife Consultant carrying out ecology surveys, badger, great crested newt and bat surveys. Stevan holds a Natural England Survey License for Great Crested Newts and Bats and is currently working towards gaining further Natural England, NRW and SNH survey licences. Stevan is also a Qualifying Member of CIEEM.

2.9. The dawn swarming survey and second dusk emergence survey were carried out by Jenny Whitcher Roebuck MCIEEM and Steven Whitcher MCIEEM.

2.9.1. Since 2002 Steven has gained extensive experience in a professional capacity as an ecological consultant carrying out ecology, protected species and Phase 1 Habitat surveys. Steven's knowledge has been supplemented through the attendance of a variety of courses run by the Chartered Institute of Ecology and Environmental Management (CIEEM), the Bat Conservation Trust (BCT) and the Field Studies Council (FSC) in the relative protected species, plant species and in carrying out Phase 1 Habitat Surveys. Steven holds Natural England Survey Licences in respect of bats, great crested newts, crayfish and barn owls, NRW Survey Licences in respect of bats and great crested newts and an SNH Survey Licence in respect of bats. Steven is also a Registered Consultant with Natural England and is confined spaces trained and qualified in tree climbing and aerial rescue.

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3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. Data searches were requested from Barnsley Biological Records Center and from South Yorkshire Bat Group for records of bats and bat roosts within 2km of the survey area.

3.1.2. Barnsley Biological Records Center.

3.1.2.1. There are a number of records of bats within 2km but the nearest record is approximately 1km to the southwest of the survey area.

3.1.2.2. There are two records of Barn Owl from 2013 with both records 1.3km to south of the survey area.

3.1.2.3. There are no records specific to the survey area.

3.1.3. South Yorkshire Bat Group.

3.1.3.1. There are a number of records of bats and bat roosts within 2km of the survey area. However, the nearest record is 375m to the southwest of the survey area. There are no records relevant to the survey area.

3.1.4. The full data searches are available to the client on request.

3.2. Site Description.

3.2.1. The survey area is a barn at Fiddler Farm in Thurgoland. The barn is joined to the house at the northern end of the barn. The aerial photograph below shows the surveyed building at the farm.



3.2.2. The photograph below shows the survey area and the wider surrounding area.



3.2.3. The barn is two storey and is constructed of rubble filled stone walls with a pitched slate roof. The walls of the building are generally in good condition but there are some small cracks and pointing gaps.

3.2.4. The roof is generally in good condition but there are a few lifted and slightly slipped slates and a small gap in the pointing on the western side of the ridge.

3.2.5. The windows and doors are all in place and sealed. There are some small gaps on the northern end of the building under the lead flashing where the barn roof joins the house roof.

3.2.6. There are wooden fascia's on the west and east sides of the building and there are some gaps behind the fascia boards.

3.2.7. Internally the first floor of the building is open to the roof space with wooden king post beams. The underside of the roof slates us unlined on the eastern side of the roof and on the western side of the roof there is wooden sarking with some gaps where the slates can be seen to be generally tight fitting.

3.2.8. On the southeast corner of the barn there is dense ivy and Virginia creeper growing up the wall. There is also a second area of Virginia creeper growing up the eastern wall of the barn.

3.2.9. Photograph showing the western side of the surveyed barn.



3.2.10. Photograph looking at the southeast corner of the barn.



3.3. Daytime Survey Results.

3.3.1. The walls of the barn are generally in good condition but there are some pointing gaps internally and externally that could provide bat roost potential.

3.3.2. The roof is generally in good condition, although there are some slipped and lifted slates and a small gap in the pointing of the ridge on the western side.

3.3.3. Internally the roof is covered with thick cobwebs. There are a number of insects in the cobwebs including a number of butterflies with a number of butterfly wings on the floor below. These wings are due to spiders, not due to bats.

3.3.4. No bat droppings were identified internally or externally around the barn.

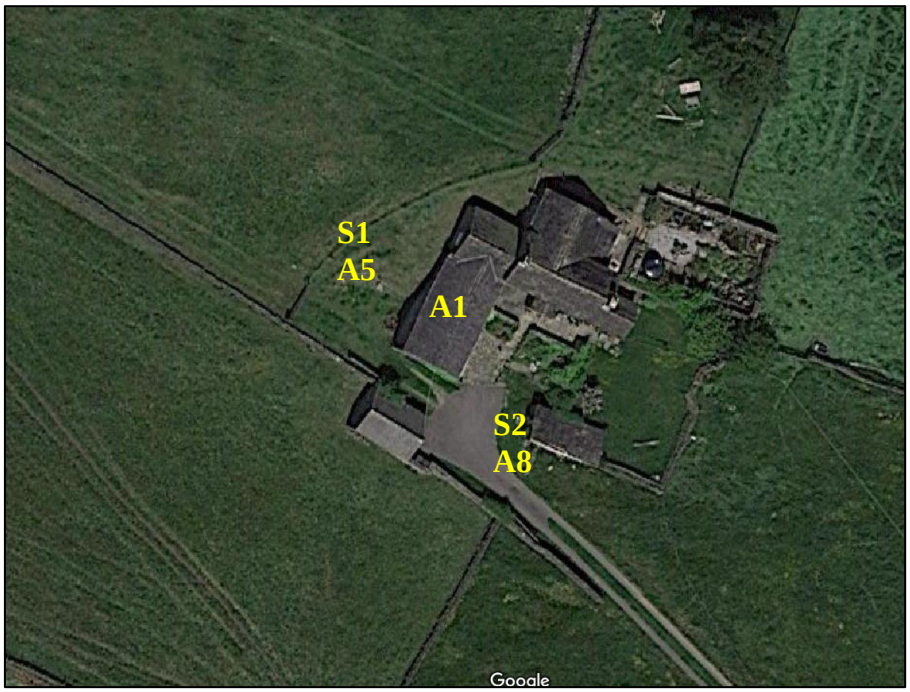
3.3.5. From the daytime assessment, the barn was assessed as providing **low** bat roost potential.

3.3.6. The Virginia Creeper growing on the barn is an invasive plant species listed under Schedule 9 of The Wildlife and Countryside Act 1981 and it is an offence to cause this plant to spread.

3.4. Dusk Emergence Survey Results, 15th June 2017.

3.4.1. Two surveyors carried out a dusk emergence survey of the building on the evening of 15th June 2017. Both surveyors hold current Natural England class licences for surveying bats.

3.4.2. The surveyors were positioned on opposite sides of the building in order to view the whole building. Each surveyor was equipped with a Batbox Duet detector and a two-way radio for communications. In addition, three static Anabat recorders were deployed to record bat activity for subsequent computer analysis using Analook software. The positions of the surveyors (S) and the Anabat recorders (A) were as shown below.



3.4.3. The evening was mild with a temperature of 16.5ºC at 21:30, there was gusty wind to 2 Beaufort and the sky was overcast. There was some rain before the survey but this stopped at approximately 21:15. Sunset was at 21:36.

3.4.4. The following are the observations of the surveyors: -

3.4.4.1. Surveyor 1.

- 22:11 – Common Pipistrelle emerged from a gap under a lifted roof slate on the western side of the roof at the northern end of the barn. The bat then flew north.
- 22:17 – Common Pipistrelle flew round the south end of the barn from the east, foraged briefly then flew south.
- 22:28 – Common Pipistrelle flew round the south end of the barn from the east, foraged briefly then flew south.

3.4.4.2. Surveyor 2.

- 21:36 – Common Pipistrelle emerged from the barn, from under the fascia board on the eastern side towards the center of the barn and flew south.
- 21:49 – Common Pipistrelle emerged from the barn, thought to have come from under the fascia board at the northern end of the barn on the eastern side then flew south.
- 22:04 – Common Pipistrelle emerged from the barn, from the roof on the eastern side towards southern end of the barn then flew south.
- 22:17 – Common Pipistrelle flew past the site from southeast to northwest.
- 22:18 – Common Pipistrelle flew past the site from southeast to northwest.
- 22:27 – Common Pipistrelle flew past the site from north to west.

3.4.5. Anabat 1 was inside the barn and recorded no bat activity during the survey.

3.4.6. Anabat 5 recorded ten Common Pipistrelle calls between 22:16 and 22:32. Low levels of bat activity were recorded, in line with the observations Surveyor 1.

3.4.7. Anabat 8 recorded a five Common Pipistrelle calls between 21:49 and 22:27. Low levels of bat activity were recorded, in line with the observations Surveyor 2.

3.4.8. No other species of bat was recorded by the surveyors or the Anabats during the survey.

3.4.9. During the survey four Common Pipistrelle bats were seen to emerge from the barn in four separate locations during the survey.

3.4.9.1. The photograph below shows the location the bat emerged from on the western side of the barn.



3.4.9.2. The photograph below shows the approximate locations from which the three bats emerged from on the eastern side of the barn.



3.4.10. Very little bat activity was recorded around the site during this survey.

3.5. Dawn Swarming Survey Results,

3.5.1. Two surveyors carried out a dawn swarming survey of the building on the morning of 30th June 2017. Both surveyors hold current Natural England class licences for surveying bats.

3.5.2. The surveyors were positioned on opposite sides of the building in order to view the whole building. One surveyor was equipped with a Batbox Duet detector and the other with an Anabat Walkabout detector and both surveyors had a two-way radio for communications. In addition, two static Anabat recorders were deployed to record bat activity for subsequent computer analysis using Analook software. The positions of the surveyors (S) and the Anabat recorders (A) were as shown below.



3.5.3. The morning was mild and still with a temperature of 13.5ºC at 02:30 and 10.5°C at 04:30. Sunrise was at 04:41.

3.5.4. The following are the observations of the surveyors: -

3.5.4.1. Surveyor 1.

- 02:50 – Myotis flew over the site from east to west.
- 02:55 – Common Pipistrelle flew from the north, foraged and then flew south.
- 03:00 – Common Pipistrelle flew from the north, foraged then flew west.

- 03:01 – Common Pipistrelle flew from east to west past the south of the barn.
- 03:02 – Common Pipistrelle flew from east to west past the south of the barn.
- 03:06 – Common Pipistrelle passed by and was heard but not seen.
- 03:08 – Common Pipistrelle passed by and was heard but not seen.
- 03:10 – Common Pipistrelle passed by and was heard but not seen.
- 03:11 – Common Pipistrelle passed by and was heard but not seen.
- 03:13 – Common Pipistrelle flew from south to north over the site.
- 03:17 – Common Pipistrelle passed by and was heard but not seen.
- 03:19 – Common Pipistrelle flew from north to south over the site.
- 03:20 – Common Pipistrelle flew from east to west past the south of the barn.
- 03:22 – Common Pipistrelle was heard foraging to the south but was not seen.
- 03:23 – Common Pipistrelle was heard foraging to the south but was not seen.
- 03:23 – Common Pipistrelle flew from west to northeast over the site.
- 03:25 – Common Pipistrelle passed by and was heard but not seen.
- 03:26 – Common Pipistrelle passed by and was heard but not seen.
- 03:31 – Common Pipistrelle passed by and was heard but not seen.
- 03:34 – Common Pipistrelle passed by and was heard but not seen.
- 03:38 – Common Pipistrelle flew from north to southeast past the site.
- 03:39 – Common Pipistrelle passed by and was heard but not seen.
- 03:40 – Common Pipistrelle flew from east to west past the site.
- 03:44 – Common Pipistrelle flew from the south then flew east past the barn.
- 03:46 – Common Pipistrelle flew from east to west past the site.
- 03:49 – Common Pipistrelle was heard foraging to the south but was not seen.
- 03:51 – Common Pipistrelle was heard foraging to the south but was not seen.
- 03:53 – Common Pipistrelle flew from south to north over the site.
- 03:56 – Common Pipistrelle flew from the north, foraged, then flew south.
- 04:08 – Common Pipistrelle flew from north to south over the site.

3.5.4.2. Surveyor 2.

- 02:48 – Soprano Pipistrelle passed by and was heard but not seen.
- 02:50 – Common Pipistrelle passed by and was heard but not seen.
- 02:52 – Soprano Pipistrelle passed by and was heard but not seen.
- 02:55 – Common Pipistrelle flew from east to west past the south of the barn.
- 02:59 – Common Pipistrelle flew from east to west past the south of the barn.
- 03:01 – Common Pipistrelle flew from north to south over the site.
- 03:06 – Common Pipistrelle passed by and was heard but not seen.
- 03:09 – Common Pipistrelle passed by and was heard but not seen.

- 03:11 – Common Pipistrelle passed by and was heard but not seen.
- 03:16 – Common Pipistrelle was heard foraging to the south but was not seen.
- 03:19 – Soprano Pipistrelle was heard foraging to the south but was not seen.
- 03:23 – Common Pipistrelle was heard foraging to the south but was not seen.
- 03:31 – Common Pipistrelle flew from south to north over the site.
- 03:32 – Soprano Pipistrelle foraging to the south.
- 03:34 – Common Pipistrelle flew from north to south over the site.
- 03:37 – Common Pipistrelle flew from west to east past the site.
- 03:40 – Common Pipistrelle flew from west to south and foraged to the south.
- 03:42 – Common Pipistrelle flew around the house roof then flew north.
- 03:43 – Common Pipistrelle flew from the south, foraged at the southern end of the barn then flew north.
- 03:46 – Common Pipistrelle flew around the house roof then flew north.
- 03:49 – Common Pipistrelle flew from the west, foraged to the south then flew east.
- 03:51 – Common Pipistrelle was heard foraging to the south but was not seen.
- 03:52 – Common Pipistrelle foraging to the south of the barn.
- 03:55 – Common Pipistrelle foraging to the south of the barn.
- 03:58 – Silent bat flew from east to north over the site.
- 04:00 – Common Pipistrelle flew from north to south over the site.

3.5.6. Anabat 4 recorded twenty six Common Pipistrelle calls between 02:45 and recorded. Six Myotis calls were also recorded between 02:49 and 02:58, but these were faint calls from bats passing by and a positive species identification could not be made from these calls. These recordings confirm the observations Surveyor 1.

3.5.7. Anabat 7 recorded thirty seven Common Pipistrelle calls between 02:49 and 04:01. Six Soprano Pipistrelle calls were recorded passing the site between 02:47 and 03:33. Two Myotis calls were also recorded at 02:54 and 03:13, but these were faint calls from bats passing by and a positive species identification could not be made from these calls. These recordings confirm the observations Surveyor 2.

3.5.8. During the survey no bats were seen to enter a roost within the barn. Two bats were seen to fly around the roof of the house briefly but neither bat entered a roost.

3.5.9. The main activity recorded during the survey were bats passing by the site and foraging to the south and west of the barn.

3.6. Dusk Emergence Survey Results, 15th June 2017.

3.6.1. Two surveyors carried out a dusk emergence survey of the building on the evening of 31st July 2017. Both surveyors hold current Natural England class licences for surveying bats.

3.6.2. The surveyors were positioned on opposite sides of the building in order to view the whole building. Each surveyor was equipped with a Batbox Duet detector and a two-way radio for communications. In addition, three static Anabat recorders were deployed to record bat activity for subsequent computer analysis using Analook software. The positions of the surveyors (S) and the Anabat recorders (A) were as shown below.



3.6.3. The evening was mild with a temperature of 15ºC at 21:00, there was light breeze to 2 Beaufort and the sky was partly cloudy. There was some light rain before the survey but this stopped at approximately 20:40. Sunset was at 21:04.

3.6.4. The following are the observations of the surveyors: -

3.6.4.1. Surveyor 1.

- 21:14 – Common Pipistrelle seen in the distance flying from east to west.
- 21:29 – Common Pipistrelle flew from the north, foraged then flew south.

- 21:31 – Common Pipistrelle seen foraging over the fields to the north.
- 21:34 – Common Pipistrelle flew from the south, passed the southern end of the barn and flew north.
- 21:35 – Common Pipistrelle flew from the south, passed the southern end of the barn and flew north.
- 21:39 – Common Pipistrelle was heard in the distance but was not seen.
- 21:41 – Common Pipistrelle flew from south to north past the barn.
- 21:42 – Common Pipistrelle flew from the western end of the house roof and flew north. This bat appeared to have emerged from the southern side of the house roof at the western end.
- 21:43 – Common Pipistrelle flew from the western end of the house roof and flew north. This bat appeared to have emerged from the southern side of the house roof at the western end.
- 21:44 – Common Pipistrelle flew from north to south past the barn.
- 21:47 – Common Pipistrelle flew from north to south past the barn.
- 21:50 – Common Pipistrelle flew from east to west past the barn.
- 21:52 – Common Pipistrelle flew from south to north past the barn.
- 21:56 – Bat heard foraging to the west.
- 21:58 – Common Pipistrelle heard foraging but not seen.
- 22:00 – Common Pipistrelle heard foraging but not seen.
- 22:02 – Common Pipistrelle flew from the north, foraged then flew northeast.
- 22:02 – Common Pipistrelle flew from the north, foraged around the western side of the barn then flew south.
- 22:06 – Common Pipistrelle flew from north to southeast past the barn.
- 22:07 – Common Pipistrelle flew from north to southwest past the barn.
- 22:08 – Common Pipistrelle flew from the north, foraged then flew south.
- 22:10 – Common Pipistrelle flew from north to southwest past the barn.
- 22:11 – Soprano Pipistrelle flew from the south, foraged then flew north.
- 22:12 – Bat flew from the south, foraged then flew north.
- 22:13 – Common Pipistrelle flew from north to south past the barn.

3.6.4.2. Surveyor 2.

- 21:14 – Common Pipistrelle emerged from the eaves of the barn along the eastern side.
- 21:27 – Common Pipistrelle flew from the west, foraged then flew to the west.
- 21:39 – Common Pipistrelle flew from the western end of the house roof then flew north. Possibly emerged from southern side of house roof at western end.

- 21:45 – Noctule heard pass but not seen.
- 21:48 – Common Pipistrelle flew from the east and flew north over the house.
- 21:55 – Common Pipistrelle flew from the east, foraged then flew north over the house.
- 22:04 – Common Pipistrelle heard pass but not seen.
- 22:07 – Common Pipistrelle heard pass but not seen.
- 22:09 – Common Pipistrelle heard pass but not seen.
- 22:11 – Common Pipistrelle flew from the east, foraged to the south of the barn then flew west.

3.6.5. Anabat 3 recorded thirty Common Pipistrelle calls between 21:26 and 22:11. Two Noctule calls were recorded at 21:45 and 21:57. One brief Soprano Pipistrelle call was recorded at 22:11. Two Myotis calls were recorded at 21:26 and 22:09, but these were faint calls from bats passing by and a positive species identification could not be made from these calls. Moderate levels of bat activity were recorded, in line with the observations Surveyor 1.

3.6.6. Anabat 7 recorded a fourteen Common Pipistrelle calls between 21:18 and 22:16. Low levels of bat activity were recorded, in line with the observations Surveyor 2.

3.6.7. No other species of bat was recorded by the surveyors or the Anabats during the survey.

3.6.8. During the survey one Common Pipistrelle bat was seen to emerge from under the eaves of the barn on the eastern side. No other bats were seen to emerge from the barn.

3.6.9. During the survey three bats were seen to emerge from the southern side of the house roof at the eastern end. This area will be unaffected by the proposed works.

3.6.9.1. The photograph below shows the locations from which the bats emerged from on the eastern side of the barn and the approximate location on the roof of the house where the three bats appeared to have emerged from.



3.6.10. The bat activity recorded is mainly foraging bats to the south, west and north and bats passing by the site.

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4. EVALUATION OF FINDINGS.

4.1. During the daytime inspection survey carried out on 15th June 2017 no bat field signs were identified around the interior or the exterior of the barn.

4.2. During the dusk emergence survey carried out on 15th June 2017 four Common Pipistrelle bats were seen to emerge from four locations. Low levels of Common Pipistrelle activity were also recorded on the site with no other species of bat recorded.

4.3. During the dawn swarming survey carried out on 30th June 2017 no bats were seen to enter a roost in the barn or the adjacent house. The foraging activity recorded was higher than during the dusk emergence survey with Common Pipistrelle the main species recorded and with a few Soprano Pipistrelle and unidentified myotis bats passing by the site.

4.4. During the dusk emergence survey carried out on 31st July 2017, one Common Pipistrelle bat was seen to emerge from under the eaves of the barn on the eastern side. Three Common Pipistrelles were also seen to emerge from the house roof during the survey but in a location that will remain unaffected by the proposed works to the barn.

4.7. From the findings of the surveys it is assessed that the barn is used by occasional, individual, crevice dwelling bats with small individual bat roosts present in a number of locations where there are opportunities to roost. The bats are using gaps under roof tiles and gaps behind the fascia boards to roost with four locations seen to be used during the three surveys carried out. There is no significant roost present in the barn.

4.8. The roof of the house appears to be used in the same way with bats seen to emerge from under roof slates in the third survey only.

4.9. The barn is assessed as unsuitable for hibernating bats as the areas where there are potential roost features will not provide a stable temperature in the winter for bats to hibernate.

4.10. Without mitigation, there will be a high impact on roosting bats and opportunities for individual bats to roost will be permanently lost.

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5. MITIGATION STRATEGY.

5.1. The following mitigation strategy outlines the working methods that will be adopted on the site including timings and mitigation.

5.2. Due to the presence of small transitional roosts of Common Pipistrelle bats within the building with various entrance points around the eaves and under a lifted roof slate no works will be carried out to the barn until a Natural England Bat Mitigation Licence has been applied for and has been granted.

5.3. Once planning permission has been granted a licence application will be prepared and submitted to Natural England.

5.4. All personnel working on the site will be briefed on the contents of the licence before any works begin on the site.

5.5. Working Methods.

5.5.1. Work on the site will commence during October, a time when bats have moved out of their summer roosts and returned to their winter hibernation sites.

5.5.2. Prior to the works to the roof, eaves and fascia's of the building commencing the ecologist will carry out a visual inspection of the interior and exterior of the building to look for bats or bat field signs.

5.5.3. The ecologist will supervise the removal of the roof tiles and fascias from the building, which will be carried out by hand by the contactor.

5.5.4. Before works commence a bat box will be erected on the existing house on the site to provide roosting opportunities. This will also provide a place to put a bat in the unlikely event that a bat is found during the works. This will be a Schwegler 1FF box.

5.5.5. In the unlikely event that any bats are encountered during the roof strip or fascia removal the ecologist will carefully move the bat to the bat box previously erected on the existing house on the site.

5.5.6. Once the roof strip and fascia removal are complete and the ecologist is satisfied that no bats are present in the building the contractor will be given clearance to continue with the works to the building.

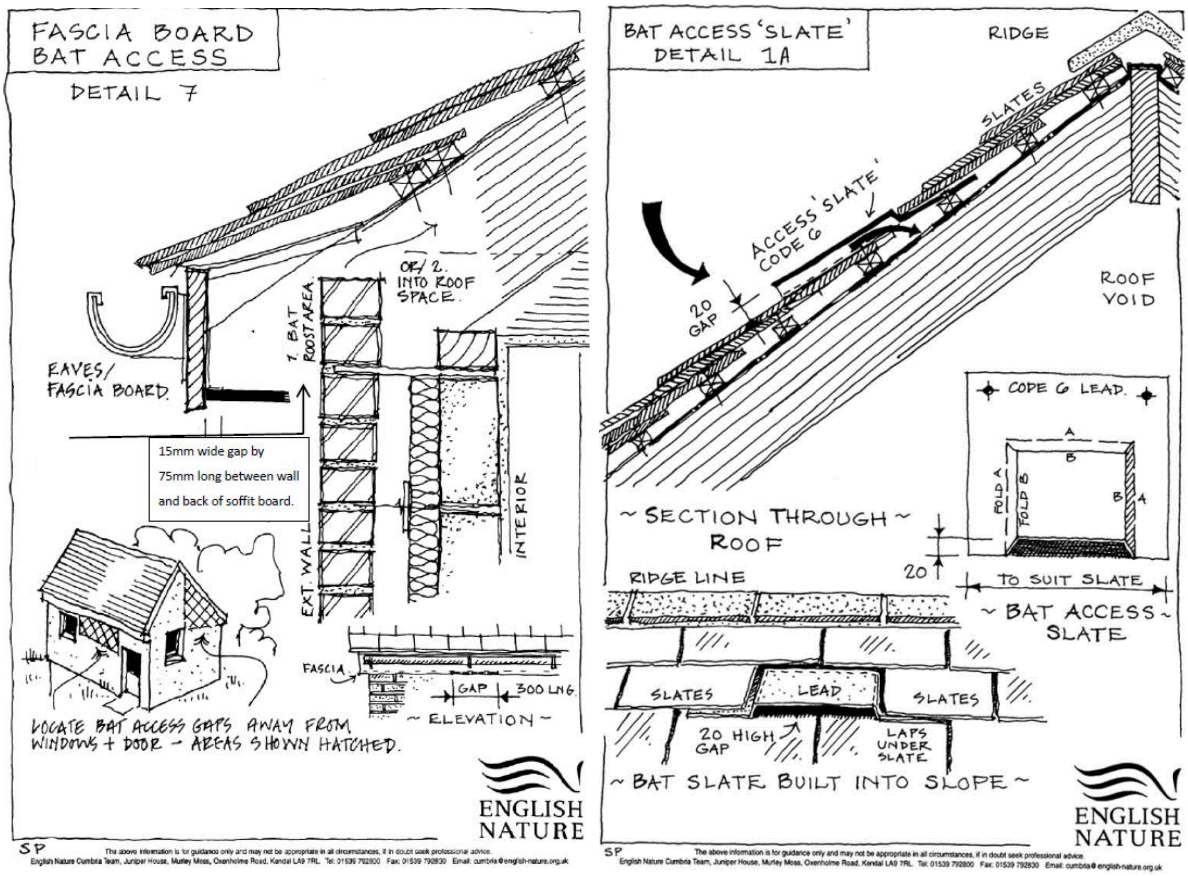
5.5.7. In the unlikely event that any bats are encountered during the works all work on the site will cease and the Registered Consultant will be contacted immediately for further advice.

5.6. Mitigation.

5.6.1. Before works commence a bat box will be erected on the existing house on the site to provide roosting opportunities. This will also provide a place to put a bat in the unlikely event that a bat is found during the works. This will be a Schwegler 1FF box, as shown below.

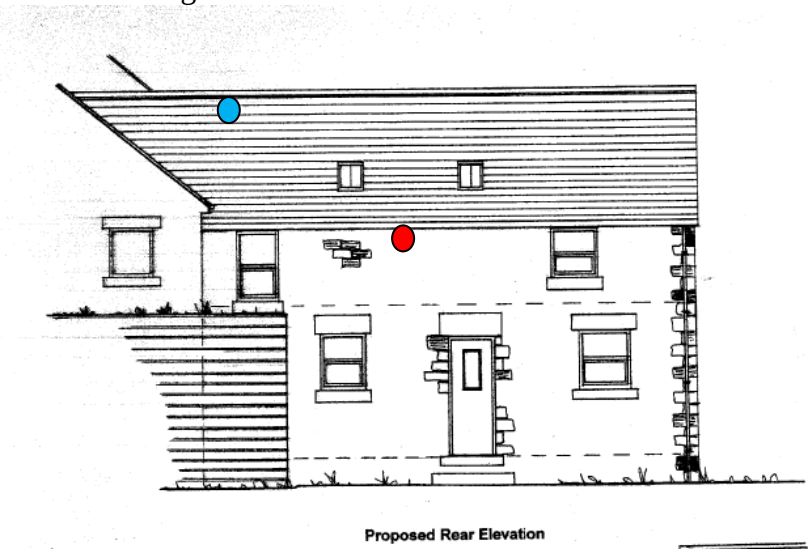


5.6.2. Further bat roosting potential will be installed in the barn during works and will be in place before April when bats become active and return to their summer roosts. These will be in the form of one bat slate on the western side of the roof and three gaps behind the fascia's, two on the western side and one on the eastern side of the building. Plans showing these mitigation measures are shown below.

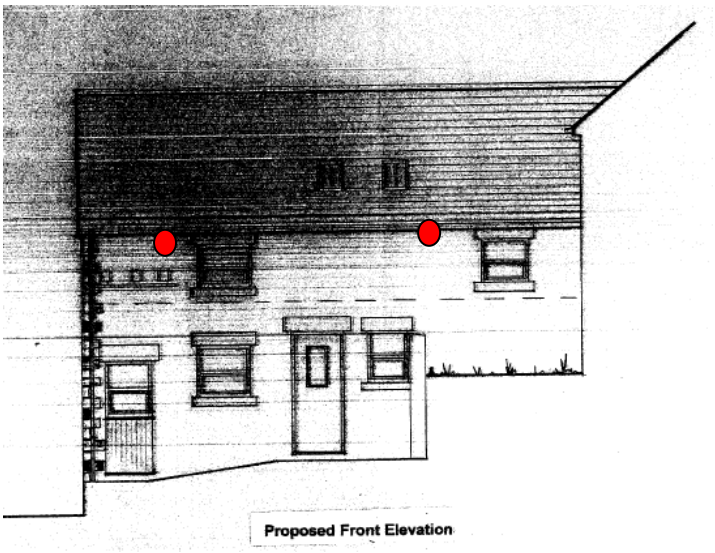


5.6.3. The bat slate will be installed in the eastern side of the roof towards the northern end of the barn in the approximate location the existing lifted slate is located.

5.6.4. The location of the bat slate (blue) and one gap under the eaves (red) on the eastern side of the building.



5.6.5. The location of two gaps under the eaves (red) on the western side of the building.



5.7. Timings.

Task.	**Date of Works.**
Erection of bat box on the existing house on the site.	September 2017.
Roof and fascia removal under supervision of the ecologist.	October 2017 to April 2018.
Installation of mitigation measures in the building.	October 2017 to April 2018.
Further works and convert the building.	October 2017 to June 2018.

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Checked by:	
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Appendix I. BAT INFORMATION.

Ecology

There are currently 18 species of bat residing in Britain, 17 of which of which are known to breed here. 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 habitat change and shortage of food, caused by pesticides, as insects are their sole diet.

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.

Surveys

During walkover surveys, bat roosts can be identified by looking for:

- Suitable holes, cracks and crevices within any building, tree or other structure.
- Bat droppings along walls, window cills, or on the ground.
- Prey remains, such as insect wings.

Further investigations can be made using endoscopes, by carrying out aerial inspections of trees or by conducting bat activity surveys during dusk and dawn over summer months.

Legislation

Bats are protected under Appendix II and III of the Bern Convention (1982), Schedule 5 and 6 of the Wildlife and Countryside Act (1981), Annex IV of the Habitats Directive (some species under Annex II), Annex II of the Conservation of Habitats and Species Regulations (2010) and EUROBATS agreement. Numerous species are

also listed under section 41 of the Natural Environment and Rural Communities Act (2006) making them species of principal importance.

All bats and their roosts are therefore protected in the UK. This makes it an offence to kill, injure or take any bat, to interfere with any place used for shelter or protection, or to intentionally disturb any animal occupying such a place.

The UK has designated maternity and hibernacula areas as Special Areas of Conservation (SAC's) under the Habitats Directive. Implementation of the UK Biodiversity Action Plan also includes action for a number bat species and the habitats which support them.

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