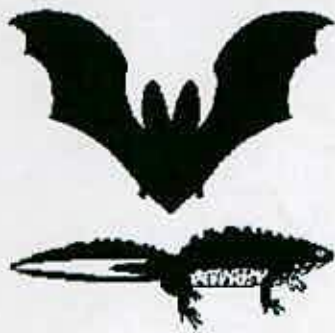


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**Bat Survey  
Butterlees Farm  
Pagham Road  
Lagness  
Chichester**



**Stephanie Murphy  
August 2010**

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## Summary

- AEWCLtd. was commissioned by Richard Pierce to undertake a survey for Bats at Butterlees Farm, Pagham Road, Lagness, Chichester, West Sussex PO20 1LL, to inform the proposed development of the site.
- This Bat survey and report has been carried out and prepared by Stephanie Murphy, a Natural England Licensed bat worker.
- This report provides results of a day visit to survey and assess the site during daylight for any bats or evidence that bats may be present and two evening emergence surveys, to identify any bats which may emerge from roosting locations in the buildings, which are proposed for renovations, to feed at dusk.
- An inspection of the farm buildings found a low number (less than 10) of scattered bat droppings present within the main barn, denoted as building 1. These droppings were a mixture of old and fresh. Numerous potential bat access points are present externally on the building.
- No bats were identified on either survey night emerging from a roost location in any of the buildings, either on cameras, or by the surveyors. Bats were identified present on the site but activity levels were very low with no more than odd individual bats present.
- It is highly unlikely that a maternity roost is located on or within close proximity to the site, otherwise a much higher number of bats would have been observed and recorded present around the site during the evening surveys. Not only were the number of bats observed present very low but, also, during the second survey, bats were not present until late in the survey. The level of bat activity was much lower than expected, despite the site being surrounded by suitable habitat (such as riparian habitats and hedgerows). The site, however, is very flat and situated in an exposed and windy location, which may make it less suitable for many bats.
- No maternity roosts or important roosting areas for bats have been identified present in any of the buildings on the site, and none of the buildings are considered likely to be important roosting habitat for bats at any time of the year, therefore the buildings can be demolished at any time and a Natural England bat licence will not be required.
- As there is a very low chance that individual roosting bats may be present at any time as a precaution potential roosting areas should be stripped by hand under supervision of a licensed bat worker, particularly the ridge board and tiles within the main barn, building 1.
- Recommendations for improving the sites suitability for roosting bats, as requested by the client, is detailed in Section 7.

This report has been prepared by AEWCLimited, with all reasonable skill, care and diligence within the terms of the Contract with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

## 1 Introduction

- 1.1 AEWCLtd. was commissioned by Richard Pierce to undertake a survey for Bats at Butterlees Farm, Pagham Road, Lagness, Chichester, West Sussex PO20 1LL, to inform the proposed development of the site.
- 1.2 This Bat survey and report has been carried out and prepared by Stephanie Murphy BSc (Hons) MIEEM, a Natural England Licensed bat worker (licence number 20101791).
- 1.3 The objective of the survey was to gather information as to which bat species are, or might be, present using the site at any time of the year and how they might be affected by any proposed development to the site.
- 1.4 This report provides results of a day visit to survey and assess the site during daylight hours for any bats or evidence that bats may be present and two evening emergence survey to identify any bats which may emerge from roosting locations in the buildings, which are proposed for renovation, to feed at dusk.

## 2 Background

- 2.1 The site consists of a traditional farm in a rural area. The proposed application site consists of a four separate buildings situated around a central courtyard.
- 2.2 The site is located in a rural area, predominately surrounded by agricultural fields and wet ditches. The site is located to the north - east of the village of Lagness, approximately 2km from the outskirts of Bognor Regis at OS Grid Reference SU 490027 101329.
- 2.3 Building 1, shown in Photograph 2.1, is a large barn timber framed, with a brick, stone and flint construction. The pitched roof is comprised of slate tiles with close wooden boarded insulation. The barn doors to the located at the north-east and south-west aspects of the building are comprised of corrugated metal. The building is currently used for the storage of building and farm machinery.

**Photograph 2.1:** Building 1 and 2, Butterlees Farm, Pagham Road, Lagness, West Sussex.



- 2.4 Building 2, also shown in Photograph 2.1, is single storey lean to, of brick, stone and flint construction, situated to the north-west of the main barn building. The building has wooden double doors comprising the north-east of the building, and a slate roof overlaid on the timber roof batons.
- 2.5 Building 3, shown in Photograph 2.3, historically was used as a cow shed but is now used for timber storage. The single storey building is of brick, stone and flint construction, with half of the roof comprised of slate tiles overlaid against the timber roof batons and the other half of the roof is comprised of asbestos sheeting. Lead flashing is present across the roof ridge. A small lean to, with wooden doors and flat plastic corrugated roofing is situated between the building and the main residential property (which is not within the proposed application).

**Photograph 2.3:** Building 3, Butterlees Farm, Pagham Road, Lagness, West Sussex.



- 2.6 Building 4, previously used as a chicken shed, is now an unused building. The single storey building is of brick, stone and flint construction, with a pitched corrugated tin roof. The interior roof of the building, shown in Photograph 2.4, has been boarded throughout, creating a false flat ceiling.

**Photograph 2.4:** Interior of Building 4, Butterlees Farm, Pagham Road, Lagness, West Sussex.



- 2.7 There are also two temporary buildings which have been constructed by the property owners as temporary accommodation and storage. These buildings are shown in Photograph 2.5 and 2.6 and not within the current application. However, it is likely that these buildings will be removed at a later stage.

**Photograph 2.5:** Temporary storage unit, Butterlees Farm, Pagham Road, Lagness, West Sussex.



**Photograph 2.6:** Temporary accommodation, Butterlees Farm, Pagham Road, Lagness, West Sussex.



### 3 Method

#### **Daytime Assessment**

- 3.1 The site was surveyed during daylight hours on the 13<sup>th</sup> and 16<sup>th</sup> August 2010. All areas in and around the buildings were surveyed. The buildings were assessed for bat roosting potential and the surrounding area was assessed for the suitability of bats.
- 3.2 A detailed survey was carried out, looking for any evidence indicating the presence of bats using the buildings, such as rub marks, staining or droppings inside or outside the buildings.
- 3.3 Dropping surveying was concentrated at suitable locations externally on the buildings where bats may access roosting locations and droppings may be deposited by bats constantly using a roosting access point, in particular any wooden boarding and around the eaves and gable ends.
- 3.4 Surveying for droppings inside the building concentrated on underneath any potential roosting areas inside the building where droppings can accumulate, particularly underneath the roof apex and timber joists. Where possible, all clean, undisturbed surfaces were examined for bats or evidence of bats.
- 3.5 A ladder was used to access the interior of the roof space in building 4, as the roof space was obscured to the false ceiling. Other equipment used included binoculars, high-powered torch (CB2) and an endoscope where applicable.

#### **Emergence Survey**

- 3.6 The evening emergence surveys were carried out by two bat surveyors on the 13<sup>th</sup> and 16<sup>th</sup> August 2010, a time of year when active bats are most likely to be found and maternity roost should be present. Weather conditions were good for all bat surveys with it warm, mild and absent of rain and any bats present are very likely to be active. The emergence surveys began approximately 10 minutes before sunset and finished after 1 and a half hours after sunset on each survey.
- 3.7 A Peterson D240x was used for taking time-expanded recordings of any bats when they may emerge from the building. These recordings were analysed on Bat-Sound software that facilitates bat species identification.
- 3.8 Sony night vision video cameras were used to film areas of the building with the assistance of two external infra red lamps to accurately identify if bats emerge from that selected area of the building or are present inside the building.

## 4 Results

### Daytime Assessment

- 4.1 The local area is considered good for bats with a number of habitats, such as hedgerows as wet ditches, in the immediate area, offering a variety of foraging habitats for a number of different species. The buildings are traditional, with timber beams and lots of potential bat access areas present and have potential to be used by roosting bats.

#### Building 1

- 4.2 An exterior inspection of the building noted numerous bat access areas, including gaps under the eaves, ventilation gaps in the brickwork, gaps under the ridge tiles and gaps above both double barn doors. All potential access points were examined but no evidence of bats was found to indicate a large roost site or maternity roost or main emergence point externally.
- 4.3 The interior of the barn and timber frame structure was examined using a high powered Cluson torch to look for any bats roosting in crevices. No bats were recorded roosting but a few scattered bat droppings (approximately 10) were found on work surfaces and on some machinery, as shown in Photograph 4.1. The droppings were a mixture of old and fresh, and likely to be Common Pipistrelle (*Pipistrellus pipistrellus*) droppings.

**Photograph 4.1:** Scattered small bat droppings, Building 1, Butterlees Farm, Pagham Road, Lagness, West Sussex.



Building 2

- 4.4 An exterior inspection of the lean to building noted numerous bat access areas, including gaps under the eaves, gaps under the ridge tiles and gaps under the slate tiles. All potential access points were examined but no evidence of bats was found to indicate a large roost site or maternity roost or main emergence point externally.
- 4.5 The interior of the lean to and timber frame structure was examined using a high powered Cluson torch to look for any bats roosting in crevices. No bats were recorded roosting and no bat droppings were found internally.

Building 3

- 4.6 An exterior inspection of the building noted numerous bat access areas, including gaps under the eaves, gaps in lead flashing adjacent to brick chimney breast and gaps around the doors. All potential access points were examined but no evidence of bats was found to indicate a large roost site or maternity roost or main emergence point externally.
- 4.7 The interior of the old cow shed was examined using a high powered Cluson torch to look for any bats roosting in crevices. No bats were recorded roosting or any evidence of bats, such as droppings, was found present. The building is used as a timber storage area, and any bats droppings, if present, would have been evident on the stacked timber. The timbers in the roof space were heavily cobwebbed, which implies a lack of bat activity.
- 4.8 The lean two area between Building 2 and the residential property was examined. No bat roosting potential was noted but an active Swallow (*Hirundo rustica*) nest was noted built against the brick wall of the residential property, shown in Photograph 4.2.

**Photograph 4.2:** Active Swallow nest, located in the 'lean to' at the south-west of Building 2, Butterlees Farm, Pagham Road, Lagness, West Sussex.



Building 4

- 4.9 An exterior inspection of the building noted a few bat access areas under the eaves and around the door. All potential access points were examined but no evidence of bats was found to indicate a large roost site or maternity roost or main emergence point externally.
- 4.10 The interior of the old chicken shed was examined using a high powered Cluson torch to look for any bats roosting in crevices. A false ceiling prevented a visual inspection of the roof space, but the loft area was accessed via a ladder and hatch. The roof is comprised of corrugated tin and limited bat roosting areas are present. No bats were recorded roosting or any evidence of bats, such as droppings, was found present. The roof area was heavily cobwebbed, which implies a lack of bat activity.
- 4.11 The temporary buildings used for storage and accommodation, shown in Photograph 2.5 and 2.6, were considered unlikely to support roosting bats.

**Emergence Surveys**

- 4.12 The emergence surveys predominately concentrated on Building 1 and Building 3 as these buildings were considered to be the most likely to support roosting bats.
- 4.13 13<sup>th</sup> August 2010 - Weather conditions were good (Moderate breeze, cool, 15°C and approximately 50% cloud cover at 20:15) and any bats present are likely to be active. Two night vision cameras were used, the first was filming the inside Building 1 and the second was filming the north-east aspect of Building 1. One surveyor was present at the south-west aspect of the courtyard to monitor for any bats that flew from the three farm buildings and a second surveyor was south-east aspect of Building 1 and Building 2. The survey commenced at 20:25.
- 4.14 At 21:13 a Common Pipistrelle (*Pipistrellus pipistrellus*) was recorded by surveyor 2. This bat was observed in the distance flying in and around some small trees approximately 20 metres from the site boundary, to the east.
- 4.15 At 21:21 a Common Pipistrelle (*Pipistrellus pipistrellus*) was recorded again by surveyor 2. This bat was observed in the distance flying in and around some small trees approximately 20 metres from the site boundary, to the east. This may have been the same individual recorded earlier foraging at the same locality.
- 4.16 At 21:25 a Common Pipistrelle (*Pipistrellus pipistrellus*) bat flew over the site in an east to west direction.
- 4.17 At 21:30 a Common Pipistrelle (*Pipistrellus pipistrellus*) bat was observed by surveyor 1 flying around the Willow tree, outside the site boundary entrance.
- 4.18 No further observations of bats were recorded at the site during the emergence survey and the survey terminated at 21:40.

- 4.19 16<sup>th</sup> June – Weather conditions were good (breezy, cool, 15 °C and approximately 90% cloud cover at 20:15) and any bats present are likely to be active. Two night vision cameras were used, the first was filming the north-west side Building 1 and Building 3 and the second was filming the north-east aspect of Building 1. One surveyor was present at the south-west aspect of the courtyard to monitor for any bats that flew from the three farm buildings and a second surveyor was south-east aspect of Building 1 and Building 2. The survey commenced at 20:25.
- 4.20 At 21:14 a Common Pipistrelle was heard and not seen, this was a distant recording.
- 4.21 At 21:18 a Common Pipistrelle was heard and not seen, this was also a distant recording.
- 4.22 No further observations of bats were recorded at the site during the emergence survey and the survey terminated at 21:40.

## 5 Constraints

- 5.1 Bats are difficult to locate in large structures, with so many potential roosting areas, finding the exact roosting site can be difficult, especially male/single bat roosting sites.
- 5.2 Bats can have seasonal use of buildings and being so mobile may arrive and start using a site after it has been surveyed, or roost somewhere else during the period it was surveyed. For this reason bats may potentially be present but remain undetected, particularly during day time assessment surveys.

## 6 Conclusions

- 6.1 No fresh droppings or recent evidence of bats were identified examining around the exterior of the buildings and only low numbers of fresh droppings were identified inside Building 1. The small amount of droppings recorded present at Building 1, Butterlees Farm, is not typical of a main roost site. The numerous potential access areas in the barn, in conjunction with the low number of droppings, are more typical of a bat in flight or a night roost.
- 6.2 No bats were identified on either survey night emerging from a roost location in any of the buildings, either on cameras, or by the surveyors. Bats were identified present on the site but activity levels were very low with no more than odd individual bats present.
- 6.3 It is highly unlikely that a maternity roost is located on or within close proximity to the site, otherwise a much higher number of bats would have been observed and recorded present around the site during the evening surveys. Not only were the number of bats observed present very low but, also, during the second survey, bats were not present until late in the survey. The level of bat activity was much lower than expected, despite the site being surrounded by suitable habitat (such as

riparian habitats and hedgerows). The site, however, is very flat and situated in an exposed and windy location, which may make it less suitable for many bats.

- 6.4 No maternity roosts or important roosting areas for bats have been identified present in any of the buildings on the site, and none of the buildings are considered likely to be important roosting habitat for bats at any time of the year, therefore the buildings can be converted at any time and a Natural England bat licence will not be required.
- 6.5 Recommendations to ensure that the building works are carried out in an ecologically sensitive manner and recommendations for habitat enhancements are detailed in Section 7.

## 7 Recommendations

- 6.6 Bats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation contravening (Natural Habitats &c.) Regulations 1994, (which make it illegal to intentionally kill, injure or otherwise disturb bats, or to damage, destroy or obstruct access to a bat roost, whether bats are present or not). As there is a very low chance that individual roosting bats may be present at any time as a precaution potential roosting areas should be stripped by hand under supervision of a licensed bat worker, particularly the ridge board and slate tiles within the main barn, building 1.
- 6.7 Birds - There was evidence of nesting birds using the buildings on site. If any work involving clearance of vegetation or demolition of buildings were scheduled to take place between the beginning of March and the end of August, a survey to check for nesting birds would be required. This applies to trees and ground vegetation. No vegetation can be cleared whilst a nest is occupied.
- 6.8 There is a wide range of commercially available bird nest-boxes and bat boxes which can be fitted to the outside of a building, or used like a brick in the construction phase of a development. These can provide nest-sites or shelters for species ranging from birds to bats. It is important to make sure that the correct 'boxes' are used with respect to what birds, bats or bugs are prevalent in the area, and it is also important to make sure that they are sited correctly.
- 6.9 Due to the confirmed presence of Common Pipistrelle bats in the local area, it is recommended that a product such as The EcoSurv bat box, may suitable habitat enhancement for the proposed conversion and/or buildings at Butterlees Farm. The facing of the box can be manufactured to suit any brick, stonework, timber or render for an unobtrusive finish. Alternatively, a more economical option would be a slimline wooden bat box, or the Schwegler 1FR Bat Tube. There are a number of online companies providing these products but AEWC Ltd. is happy to provide additional information if required. Ideally, the bat boxes should be situated at the south / south-west aspect of the buildings.
- 6.10 Due to the presence of breeding Swallows on site, additional nesting sites could be provided by the provision of nesting boxes, such as the Schwegler No 10 Swallow Nest.