BAT SURVEY

OUTBUILDINGS AT BARLEY MOW COTTAGE CADEBY

A Report to Mr and Mrs Evans

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CADEBY

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01 OF 02

01 MR AND MRS EVANS
02 MIDDLEMARCH ENVIRONMENTAL LTD

This study was compiled by
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The contents of this report are the responsibility of Middlemarch Environmental Ltd.
It should be note, that whilst every effort is made to meet the client's brief,
no site investigation can ensure complete assessment
or prediction of the natural environment

Contract Number C110523

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1. INTRODUCTION

1.1 PROJECT INTRODUCTION

Middlemarch Environmental Ltd was commissioned on 25th August 2011 by Mr and Mrs Evans to undertake a bat survey of two outbuildings located at Barley Mow Cottage in Cadeby, Leicestershire. Middlemarch Environmental Ltd understands that the two outbuildings within the survey area are to be renovated and restored to provide additional useable living space.

This report details the findings of an initial bat survey only.

1.2 SITE DESCRIPTION

The outbuildings are located within the grounds of Barley Mow Cottage off Main Street in Cadeby, centered at National Grid Reference SK 424 025.

The site covers approximately 0.1 hectares and comprised a single house with two outbuildings and garden habitats including amenity grassland, trees and woody shrubs and hardstanding paths. The survey focused on the two outbuildings which currently form part of a active planning application.

The survey area is surrounded by residential buildings with their associated habitats, and backs onto agricultural land.

1.3 LEGISLATION

Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2010 (Habitats Regulations 2010). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2010, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of

animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2010 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* (rather than deliberately) kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, *or obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CRoW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The Natural Environment and Rural Communities (NERC) Act 2006 places a duty on public bodies to have regard for the conservation of biodiversity and maintains lists of species and habitats which are of principal importance for the purposes of conserving biodiversity in England and Wales. These lists supersede Section 74 of the CRoW Act 2000.

The United Kingdom Biodiversity Action Plan (UK BAP) first published in 1994 and updated in 2007, is a government initiative designed to implement the requirements of the Convention of Biological Diversity to conserve and enhance species and habitats. The UK BAP contains a list of priority habitats and species of conservation concern in the UK, and outlines biodiversity initiatives designed to enhance their conservation status. The priority habitats and species in England correlate with those listed on Section 41 of the NERC Act.

The following bat species are listed on the UK BAP and Section 41 of the NERC Act 2006: Barbastelle Bat *Barbastella barbastellus*, Bechstein's Bat *Myotis bechsteini*, Noctule Bat *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum*, and Lesser Horseshoe Bat

Rhinolophus hipposideros. Lesser Horseshoe Bat *Rhinolophus hipposideros*. All bat species are listed on the Leicestershire and Rutland BAP.

The reader is referred to the original legislation for the definitive interpretation.

2. APPROACH

In line with the specifications detailed by English Nature (2004) and Bat Conservation Trust (2007), a daytime survey of the site was conducted. A visual assessment was undertaken of the site internally and externally for any evidence of bat usage. All likely roosting areas were visually assessed. Any accessible holes/cracks and crevices, which could have allowed bat access into potential roosting areas were inspected.

The survey was undertaken with visual assessments and equipment including an endoscope, 1 million candle power torch, 3.5 m ladders, binoculars and a camera.

3. RESULTS

The initial survey was conducted on 30th August 2011 by John Polley (Senior Ecological Consultant, Licensed Bat Worker). Weather conditions were recorded during the initial survey and are presented in Table 3.1.

Parameter	Conditions
Temperature ºC	18
Cloud Cover %	20
Wind Force Beaufort	BF 1
Precipitation	No rain

Table 3.1 Weather Conditions During the Initial Bat Survey.

3.1 OUTBUILDING 1

External Assessment

The building was a single storey outbuilding with a pitched roof running from north east to south west (Plate 3.1). The roof was constructed of clay tiles and ridge tiles. In general these were in good condition with few gaps recorded which could allow a bat potential access into the building. Where mortar had weathered, or tiles had slipped, gaps were recorded (Plate 3.2). These areas were fully inspected and identified as being covered in cobwebs indicating no recent usage by bats. No evidence of droppings or staining was recorded.



Plate 3.1: Outbuilding 1.



Plate 3.2: Example of gap beneath ridge tile.

The gable end brickwork had been rendered. Sections had weathered resulting in the render lifting from the brickwork (Plate 3.3). The areas were fully inspected and no evidence of bats recorded including droppings or staining.



Plate 3.3: Weathered render.

The brickwork on the gable ends formed a parapet over the roof. Where the tiles adjoined the brick lead flashing was present. This had lifted in places allowing potential access for bats (Plate 3.4). All areas were inspected and no evidence of bats recorded including droppings or staining.



Plate 3.4: Lifted lead.

Where the brickwork adjoined the eaves the area was tight fitting with no gaps recorded.

Two single glazed windows in wooden frames were present. These were tight fitting to the brickwork with no gaps recorded. No bat droppings were recorded on the window sills or glass panes.

The outbuilding had six open doorways which could allow flight access for bats into the building. The doorways had wooden lintels with gaps recorded that were suitable to support a roosting bat (Plate 3.5). All areas were inspected with no evidence of bats recorded including droppings or staining. The areas additionally had cobwebs within, indicating no recent usage.



Plate 3.5: Gap within doorway lintel.

A single brick chimney was located within the centre of the roof. This had lead flashing sealing the brickwork to the tiles (Plate 3.6). Gaps were present but deemed too small to provide potential access points for bats to enter the building.



Plate 3.6: Lead flashing around chimney.

No evidence of bats (i.e. scratch marks, urine staining or droppings) was recorded during the external assessment of the outbuilding.

Internal Assessment

The building was divided into six separate rooms each with an open roof structure. The roof was supported using wooden purlins and cross beams with a wooden ridge beam (Plate 3.7). Where these features adjoined the internal walls gaps were present. All were inspected with no evidence of bat usage recorded including droppings, staining or scratch marks.



Plate 3.7: Roof structure of Outbuilding 1.

In places the wooden beams had split providing potential crevices for bats to utilise to roost within. These were fully inspected with no evidence of bats recorded including droppings, staining or scratch marks.

The ridge beam and ridge tunnel (void between the ridge tile and ridge beam) were surveyed using an endoscope. The areas had cobwebs and debris within indicating no recent usage by bats (Plate 3.8). This void is a suitable roost location for species such as brown long-eared bat *Plecotus auritus*.



Plate 3.8: Wooden ridge beam.

No evidence of bats including droppings, staining, scratch marks or feeding remains were recorded on or beneath the wooden beams.

Gaps were present where the internal brick walls adjoined the external walls (Plate 3.9). These areas were fully inspected with no evidence of bats recorded including droppings or staining.



Plate 3.9: Gap within internal brickwork.

Felt sarking lined sections of the roof. The void between the sarking and tiles could not be inspected and would be a suitable roost location for species such as common pipistrelle *Pipistrellus pipistrellus*.

Within two of the rooms were disused coal stores (Plate 3.10). These could potentially support a range of roosting bat species. All areas were inspected with no evidence of roosting bats recorded including droppings, staining or feeding remains.



Plate 3.10: Coal store.

No evidence of bats (i.e. scratch marks, urine staining or droppings) was recorded during the internal assessment of the outbuilding.

3.2 OUTBUILDING 2

External Assessment

The building was a single storey garage with a pitched roof running from north east to south west (Plate 3.11). The roof was constructed of clay tiles and ridge tiles. In general these were in good condition with few gaps recorded which could allow a bat potential access into the building. Where tiles had lifted gaps were recorded (Plate 3.12). These areas were fully inspected and identified as being covered in cobwebs indicating no recent usage by bats. No evidence of droppings or staining was recorded.



Plate 3.11: Outbuilding 2.



Plate 3.12: Lifted tile.

The brickwork was predominantly rendered and in good condition with no cracks or crevices recorded which could provide access for bats into the building. Within the north eastern gable

end wooden beams were sealed within the brickwork. These had split however did not provide a feature which could support a roosting bat (Plate 3.13).



Plate 3.13: Split in wooden beam.

Where the brickwork adjoined the eaves wooden barge board was present. To allow ventilation into the building a 15 mm gap was present between this board and the brickwork (Plate 3.14). The area was fully inspected and no evidence of bat usage was recorded including droppings or staining.



Plate 3.14: Gap behind barge board.

The tiled roof was mortared to the brickwork on the gable ends. In general this was in a good state of repair. One area on the south western elevation had become damaged (Plate 3.15).

This was fully inspected with no evidence of bat usage recorded including droppings or staining.



Plate 3.15: Damaged section of mortar.

Two single glazed windows in wooden frames were present. These were tight fitting to the brickwork with no gaps recorded. No bat droppings were recorded on the window sills or panes of glass.

Two wooden garage doors sealed tightly closed within no potential access points recorded which bats could utilise.

No evidence of bats (i.e. scratch marks, urine staining or droppings) was recorded during the external assessment of the outbuilding.

Internal Assessment

The building had an open roof space which utilised a wooden collar beam roof structure (Plate 3.16). Where the beams adjoined the internal walls no gaps were recorded.
The internal brickwork was in good condition with no cracks or crevices recorded.



Plate 3.16: Roof structure of Outbuilding 2.

A wooden ridge beam ran the extent of the roof space. The ridge beam was fully inspected and provided no internal access to the ridge tunnel. The beam had cobwebs present indicating no recent usage by bats. As no external access points were located around the ridge tiles it is not considered possible for a bat to roost within the ridge tunnel.

No evidence of bats including droppings, staining, scratch marks or feeding remains were recorded on or beneath the wooden beams.

uPVC sarking lined the roof. The void between the sarking and tiles could not be inspected and would be a suitable roost location for species such as common pipistrelle *Pipistrellus pipistrellus*.

No evidence of bats (i.e. scratch marks, urine staining or droppings) was recorded during the internal assessment of the outbuilding.

3.3 SURROUNDING AREAS

The immediate surrounding area consisted of residential houses with associated gardens and grounds. The site additionally backed onto agricultural land. The habitats on site provide suitable foraging locations for bats.

Habitats present within 1 km suitable for bats to use for foraging and roosting primarily include:

- Agricultural land including hedgerows, trees and open pasture;
- Woodland;
- Residential houses and associated habitats; and,
- Open water.

4. DISCUSSION AND CONCLUSIONS

4.1 OUTBUILDING 1

The external assessment of the building identified the following potential bat access points:

- Gaps beneath roof and ridge tiles;
- Gaps above door lintels;
- Open doorways;
- Cracks in rendering; and,
- Lifted lead.

All areas were fully inspected with no evidence of bat usage recorded including droppings or staining.

The internal assessment identified the following potential roost locations:

- Within the void between the sarking and tiles;
- Within door lintels;
- Within coal stores;
- Along wooden beams;
- Within ridge tunnel; and,
- Cracks and gaps within brickwork.

No evidence of bats (i.e. droppings, feeding remains, scratch marks or staining) was recorded within the areas of the building which could be inspected.

As all potential bat access points within the building could be fully surveyed, with no evidence of bat usage recorded, it can be concluded that no bats are currently roosting within the features identified as being present.

4.2 OUTBUILDING 2

The external assessment of the building identified the following potential bat access points:

- Gaps beneath roof tiles;
- Weathered mortar; and,
- Gap around barge board.

All areas were fully inspected with no evidence of bat usage recorded including droppings or staining.

The internal assessment identified the following potential roost locations:

- Within the void between the sarking and tiles; and,
- Along wooden beams.

No evidence of bats (i.e. droppings, feeding remains, scratch marks or staining) was recorded within the areas of the building which could be inspected.

As all potential bat access points within the building could be fully surveyed, with no evidence of bat usage recorded, it can be concluded that no bats are currently roosting within the features identified as being present.

4.3 SURROUNDING AREA

The habitats within the site provided suitable foraging areas for bats.

Habitats within 1 km of the survey area provide suitable foraging, commuting and roosting areas for bats.

5. RECOMMENDATIONS

No bat roosts are present within the surveyed buildings.

Due to the buildings containing potential roosting features it is possible that bats may colonise the structures at a later date. It is therefore recommended that works to the buildings proceed prior to the next active period (as soon as possible). If the buildings are not demolished by September 2012 a further check will be required to identify whether bats have colonised the potential roosting features in the interim.

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MIDDLEMARCH ENVIRONMENTAL

QUALITY ASSURANCE

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