INITIAL BAT SURVEY

SHEFFIELD ROAD, PENISTONE

A Report to The Co-Operative Group

Middlemarch Environmental Ltd.
Triumph House
Birmingham Road
Allesley
Coventry
CV5 9AZ

Tel: 01676 525880
Fax: 01676 521400

E-Mail: admin@middlemarch-environmental.com
Web Site: www.middlemarch-environmental.com

Report Number: RT-MME-113193-02

December 2012

INITIAL BAT SURVEY

SHEFFIELD ROAD, PENISTONE

CONTROLLED COPY

01 OF 02

01 THE CO-OPERATIVE GROUP
02 MIDDLEMARCH ENVIRONMENTAL LTD

This study was compiled by
Fiona Wallis BSc (Hons) and James Calow MPhil, CEnv, MIEEM, MIEMA, MIEnvSc

Contract Number C113193

December 2012

CONTENTS

1. INTRODUCTION

1.1 PROJECT INTRODUCTION

In November 2012, The Co-Operative Group commissioned Middlemarch Environmental Ltd to undertake an Initial Bat Survey of Trees and Stone Walls present at a proposed development site located off Sheffield Road, Penistone. Whilst the full scale and nature of the works is unknown, it is understood that many of the trees have been targeted for removal.

To fulfil the above brief to assess the potential for the existing structures and trees on site to support roosting bats, an initial bat survey was undertaken on 27th November 2012.

Middlemarch Environmental Ltd has also carried out an Extended Phase 1 Habitat Survey and an Arboricultural Survey for the Co-Operative Group at this site. The findings of these surveys are detailed in Middlemarch Environmental Ltd Reports RT-MME-113193-01 and RT-MME-113193-03, respectively.

1.2 SITE DESCRIPTION

The site is centred at National Grid Reference SE 252 032. The site is located in the eastern outskirts of Penistone off the B6462 in the Metropolitan Borough of Barnsley, South Yorkshire. The surrounding landscape comprised a mixture of built up areas with roads and residential dwellings, small scale industrial buildings and a railway line to the south west. The River Don is located approximately 100 m north of the site.

The site consisted mainly of poor semi-improved grassland with scattered trees, and scrub and a strip of plantation woodland along the northern boundary. Two walls were located on site; one stone retaining wall located parallel to the northern boundary and the second a brick wall located on the western boundary.

1.3 BAT 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 broadly 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 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*.

The Biodiversity Action Plan for Barnsley lists all bat species which are present within the area.

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

2. METHODOLOGY

2.1 DESK STUDY

A desk study was undertaken as part of the Extended Phase 1 Habitat Survey completed for the site (Middlemarch Environmental Ltd RT-MME-113193-01). Records of any bat species within 1 km are summarised within Section 3.1.

2.2 INITIAL BAT SURVEY

2.2.1 Initial Bat Survey of Structures

In line with the specifications detailed by English Nature (2004) and The Bat Conservation Trust (2007), a daytime survey of the site was conducted. A visual assessment of the site was undertaken to identify evidence of possible bat presence. Any accessible holes, cracks and crevices which could allow bat access into potential roosting areas were inspected using a torch and endoscope.

For reasons of health and safety, the survey was only undertaken in areas accessible from 3.5 m ladders.

2.2.2 Initial Bat Survey of Trees

In order to identify potential features suitable for roosting bats, the trees were surveyed using the Protocol for Visual Inspection of Trees provided by the Bat Conservation Trust (Hundt, 2012). Each tree was assessed visually, with any accessible holes/cracks and crevices which could provide potential roosting areas inspected closely where safe to do so. Equipment used during the survey included binoculars, an endoscope and a 3.5 m ladder, where required.

Following assessment, each tree was assigned to one of four categories, namely ‘1*’, ‘1’, ‘2’ and ‘3’. Table 2.1 highlights the key indicative features which were used to aid classification, as detailed in the Bat Conservation Trust guidelines, and examples of these features.

Category ‘1*’ and ‘1’ trees are those that are considered to have the greatest potential for use by roosting bats. Although limited, Category ‘2’ trees are also deemed to offer some potential for use by roosting bats, whilst Category ‘3’ trees have no potential. As such, only those trees on site which fall into Categories ‘1*’, ‘1’ or ‘2’ are discussed in detail within this report.

	Bat Conservation Trust Categories			
	1*	**1**	**2**	**3**
Description	Trees with multiple, highly suitable features capable of supporting bats.	Tree with definite potential, supporting fewer suitable features than Category 1* trees, or with potential for use by single bats.	Trees with no obvious potential for bats, although the tree is of a size and age where suitable features could be present, or where the tree supports features with limited potential to support bats.	Trees with no potential to support bats.
Example of features	Woodpecker holes. Cracks/crevices. Loose or flaking bark. Medium to dense ivy cover. Deadwood in canopy or stem. Snagged branches. Hollow stem or limb. Hole in branch or trunk. Buttresses / hollow core.	A single feature as listed for Category 1*, or few small cracks or crevices. Low to medium ivy cover. Deadwood in canopy or stem.	No obvious features but tree of suitable size and age that a detailed inspection of the tree at height may identify minor features. Low ivy cover.	No cracks, crevices, hollows, deadwood, etc. No flaking bark.

Table 2.1: Bat Conservation Trust (2012) Tree Assessment Categories (after Hundt, 2012)

3. RESULTS

3.1 DESK STUDY DATA

Middlemarch Environmental Ltd contacted the Local Biological Records Centre to provide desk study data within 1 km of the study site as part of the Extended Phase 1 Habitat Survey. The results of the desk study in relation to bats can be found in Table 3.1.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area
Brandt's bat *Myotis brandti*	1	1990	640 m north west
Noctule *Nyctalus noctula*	2	1991	640 m north west
Pipistrelle *Pipistrellus pipistrellus*	13	1997	500 m north west
Soprano pipistrelle *Pipistrellus pygmaeus*	1	2001	1 km west
Unidentified bat *Chiroptera* sp.	7	2008	500 m north west
Whiskered bat *Myotis mystacinus*	1	1987	640 m north west

Table 3.1: Records of Bat Species within 1 km of the Study Site provided by Sheffield Biological Records Centre

3.2 INITIAL BAT SURVEY

3.2.1 Weather Conditions and Personnel

The initial bat survey was undertaken on 27th November 2012 by Fiona Wallis (Ecological Consultant). Weather conditions during the time of the survey were recorded and are presented in Table 3.2.

Parameter	Result
Temperature (^{o}C)	8
Cloud Cover (%)	100
Wind Force	F2
Precipitation	Occasional Drizzle

Table 3.2 Weather Conditions during the Survey

3.2.2 Stone Wall Assessment

The site contained two walls; one stone wall which was located parallel to the northern boundary and one dilapidated brick wall located on the western boundary. The retaining stone wall on the northern boundary measured approximately 2 m in height and contained several areas of missing mortar and gaps (Plates 3.1 and 3.2). The gaps could be fully inspected with an endoscope and no evidence of bat activity (e.g. droppings, scratch marks, feeding remains or bats) was recorded in or around these features.

Plate 3.1: View of Stone Wall

Plate 3.2: Example of missing mortar

The brick wall located on the western boundary was mostly in good condition (Plate 3.3) with the exception of a short section at the southern end which was dilapidated with many areas of missing mortar (Plate 3.4). The gaps were inspected and found to be open to the elements making them largely unsuitable for roosting sites. No evidence of bat activity (e.g. droppings, scratch marks, staining, feeding remains or bats) was recorded.

Plate 3.3: View of brick wall in good condition

Plate 3.4: Dilapidated section of brick wall

3.2.3 Tree Assessment

The broadleaved plantation woodland block comprised a number of young to early mature trees including silver birch *Betula pendula*, willow *Salix* sp., alder *Alnus glutinosa* and sycamore *Acer pseudoplatanus*. The average height of the trees was approximately 15 m.

In addition to the plantation woodland, a number of broadleaved trees were present along the southern boundary of the site including birch *Betula* sp., willow *Salix* sp., and alder *Alnus glutinosa*. The trees were approximately 8 m in height and were young.

During the survey, the plantation broadleaf woodland and scattered broadleaf trees that have been targeted for removal were fully accessed and surveyed for features deemed suitable for bats.

All trees on site were considered to be Category 3 (trees with no potential to support bats). None of the trees had any potential features of value to roosting bats such as rot holes, cracks or split limbs. No evidence of bat activity (in the form of droppings, urine staining, grease marks, scratch marks or feeding remains) was recorded. None of the trees are therefore anticipated to contain a bat roost.

3.3 SURROUNDING HABITATS

The building is located on the outskirts of a residential area with dense scrub, broadleaved plantain woodland and semi-improved grassland. The proposed development site provides potential roosting and foraging areas for bats to utilise. Additional features present within 1 km of the study site suitable for use by roosting, foraging and commuting bats includes:

- Residential properties and their associated gardens;
- Arable fields with hedgerows;
- A railway line to the south-west;
- The River Don located approximately 100 m north;
- Two areas of ancient woodland: Shrogg Wood (located 610 m north east) and Spring Vale Wood (located 350 m east); and,
- The Scout Dike Grassland Inventory Site located approximately 850 m west (listed as containing neutral grassland).

4. DISCUSSION AND CONCLUSIONS

4.1 DESK STUDY

The desk study identified a range of bat species within 1 km of the study site.

4.2 WALL ASSESSMENT

The assessment of the stone wall identified the presence of features considered to have moderate roosting potential for bats. The features identified which bats could utilise include the areas of degraded mortar providing gaps between the stone work. No evidence of bats was found at the time of survey, but there is potential for these features to be colonised in the future.

The assessment of the brick wall identified a short section where the brick work and mortar were degraded. This was considered to have negligible potential for use by roosting bats.

4.3 TREE ASSESSMENT

The initial bat survey of trees at Sheffield Road, Penistone revealed plantation woodland and scattered trees with no features deemed suitable for roosting bats such as rot-holes, woodpecker holes, hollow trunks, split limbs and areas of delaminated bark. All of the trees were fully accessed and surveyed and no bats, or evidence of bat activity (including feeding remains, grease marks, urine staining, scratch marks and droppings), were found.

As such, it can be concluded that bats are not currently roosting within these trees. Nevertheless, it is considered that the trees on site would provide suitable foraging and commuting opportunities for any bats in the area. Thus, a number of recommendations are made in Section 5.

4.4 SURROUNDING LANDSCAPE

The site and surrounding landscape offer potential roosting, foraging and commuting features for bats including residential buildings, arable land with hedgerows, watercourses and railway lines.

5. RECOMMENDATIONS

R1 If the trees to be removed have not been felled and/or works to the wall not commenced by April 2014, an up-dated bat survey should be undertaken to ascertain whether or not their status, with regard to roosting bats, has changed in the interim.

R2 It is recommended that any external lighting on site is of a low lux-level, downward-facing and is directed away from any retained trees or scrub so that they retain their suitability as a commuting and foraging habitat for bats.

R2 It is recommended that the development of the land incorporates a habitat enhancement scheme to maximise the ecological value of the site. This will involve, for example, planting species such as honeysuckle *Lonicera* sp. and evening primrose *Oenothera biennis*, which will attract moths and other night-flying insects, which in turn will attract bats.

REFERENCES

Bat Conservation Trust (2012) *Good Practice Guidelines* Bat Conservation Trust

Bat Conservation Trust (2008) Advice Note 2a Bats and Trees. Bat Conservation Trust

English Nature (2004) *Bat Mitigation Guidelines*. English Nature, Peterborough.

Mitchell-Jones A.J. & McLeish (2004) *The Bat Workers' Manual*, Joint Nature Conservation Committee, Peterborough.

Wildlife & Countryside Act (1981) as amended

MIDDLEMARCH ENVIRONMENTAL LTD

QUALITY ASSURANCE

TITLE: INITIAL BAT SURVEY

SHEFFIELD ROAD, PENISTONE

SUBMITTED TO: THE CO-OPERATIVE GROUP

Report Number: RT-MME-113193-02

Revision Number: 00

Description: Final

Date: December 2012

Checked:

Dr Katy Read
Associate Director

Approved:

David Smith
Ecology and Landscape Director