



**17 Pownall Avenue, Bramhall**

**Bat Assessment**

August 2022

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**Control sheet**

**Project No & Title:** 295. 17 Pownall Avenue, Bramhall. Bat Assessment

**Client:** Mr and Mrs Porter

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## 1. Introduction

- 1.1 Rhodes Ecology Ltd were commissioned by Mr and Mrs Porter to undertake a bat assessment of their property at 17 Pownall Avenue, Bramhall. This assessment was undertaken in support of a planning application for the demolition of the existing property and its replacement with a new residential building.
- 1.2 The assessment was undertaken by Kerry Rhodes BSc (Hons) MCIEEM, an ecologist with over twenty years experience of ecological assessment and the holder of a Natural England Class Licence for bats (Level 2) since 2007 (Licence Number 2020-49756-CLS-CLS). As a full member of the Chartered Institute of Ecology and Environmental Management, Kerry Rhodes undertakes all work under their professional code of conduct specified by CIEEM and in accordance with published guidance. Such guidance in relation to bat surveys includes Bat Surveys – Good Practice Guidelines, Bat Conservation Trust, 3<sup>rd</sup> Edition (2016).
- 1.3 The site is situated at the eastern outskirts of Bramhall at NGR SJ 90069 85039.
- 1.4 The objectives of the assessment include the following:
- To investigate the suitability of the building to support roosting bats;
  - To investigate the presence of roosting bats within the building;
  - To identify and assess any impacts that could result from the proposals on bat roosting habitat;
  - To suggest mitigation measures to reduce the potential impacts of the proposed development on bats.

## 2. Background Information

### *Bat Ecology*

- 2.1 A total of eighteen bat species are known to have resident breeding populations in Britain. Bats have been confirmed to roost in a variety of structures including caves, mines, trees, buildings and other built structures. Woodland, pasture, standing water and slow flowing rivers or canals all provide suitable habitat for foraging bats as these habitats can support an abundance of insect life. Generally the main period of foraging activity for most species of bat is during the first two to three hours after sunset and similarly a period of time three hours prior to dawn, when insect activity is at its most intense.
- 2.2 Bat activity over the course of a year reflects the seasonal climate and the availability of food and tends to adhere to the following yearly pattern (English Nature [now Natural England], 2004).
- **January - March** – Hibernation period; insect prey is scarce and bats will hibernate alone or in small groups, there may be limited activity in periods of mild weather.
  - **April - May** - insects become more plentiful as the temperature becomes warmer and bats become active. They may become torpid (cool and inactive) in cooler weather. Females will start to form groups and will roost in several sites.
  - **June - July** - females gather in maternity roosts and give birth to young, which are suckled for several weeks (young are independent by July-August). Males roost alone nearby.
  - **August - September** – mothers leave the roost before the young. Swarming activity occurs as bats mate and build up fat for the winter.
  - **October - December** – Bats search for potential hibernation sites. They become torpid for longer periods and then commence hibernation, subject to temperature reduction and periods of frost.
- 2.3 Bats seldom stay in the same roost throughout the year. They have different roost requirements at different times of the year. For instance, in summer the females require warm roosts when they are producing young and in winter they require cool roosts in order to conserve their energy. Summer roosts may be occupied between April and October, with peak activity from May to September. The remaining part of the year is a hibernation period. These timings can differ slightly depending on the bat species.
- 2.4 There are several different types of roost sites used by bats throughout the year; these are described below (BCT, 2007).
- **Spring gathering roost** used by breeding females before moving to a maternity roost;
  - **Maternity or nursery roost** where females give birth and raise their offspring;
  - **Daytime summer roost** used by breeding and/or non-breeding males;
  - **Mating roost** (spring or autumn) occupied by males seeking to attract females for breeding;
  - **Night roosts** used by bats for short periods between phases of foraging activity, but rarely or not used during the day;
  - **Feeding roost or perch** where bats temporarily hang up to devour an item of prey once it has been caught;

- **Transitional roost** used for short periods in the spring and autumn;
- **Hibernation sites** – where bats remain during the winter months.

2.5 The biggest threats to bats include direct loss of roost structures (such as woodland removal and building conversions), degradation of suitable foraging habitat as a result of modern forestry and farming practices, use of toxic agrochemicals and remedial timber treatment chemicals and disturbance to bat roosts themselves.

2.6 Bats have been in decline both nationally and internationally during the latter part of the 20<sup>th</sup> century. It is thought that their physical attributes, reproductive strategies and lifestyles render them particularly vulnerable to environmental change (Cowan, 2003). Bats require a variety of specific habitats in order to meet the basic needs of feeding, breeding and hibernating and are therefore extremely vulnerable to change such as the loss of flightlines through the removal of hedgerows as some species will not cross open areas. However, there is a lack of information on their population dynamics and the relative impact of the factors causing their decline nationally (Cowan, 2003).

#### *Legislation*

2.7 In Britain all bat species and their roosts are legally protected, by both domestic and international legislation. This means you may be committing a criminal offence if you:

- Deliberately take, injure or kill a wild bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats.
- Damage or destroy a place used by bats for breeding or resting (roosts) (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat of a species found in the wild in the EU (dead or alive) or any part of a bat.
- Intentionally or recklessly obstruct access to a bat roost.

2.10 In 2007, a new UK Priority List for species of the UK Biodiversity Action Plan (UK BAP) was created and new additions to this list for bats are noctule (*Nyctalus noctula*), brown long eared (*Plecotus auritus*) and soprano pipistrelle. Due to their recent inclusion on the UK Priority List, Species Action Plans for these species have not yet been prepared. Species Action Plans (SAPs) have been, or will be, prepared for the following seven species:

- Greater horseshoe (*Rhinolophus ferrumequinum*)
- Lesser horseshoe (*Rhinolophus hipposideros*).
- Bechstein (*Myotis bechsteini*)
- Barbastelle (*Barbastella barbastellus*).
- Soprano pipistrelle
- Brown long eared
- Noctule

### 3. Methodology

#### *Data Search*

- 3.1 A request for data relating to known bat roosts within 1km of the site was submitted to the Greater Manchester Ecology Unit.

#### *Habitat Assessment*

- 3.2 The external habitat assessment was conducted on the 26<sup>th</sup> July 2022 in favourable weather conditions (24°C, F1 wind, 30% cloud cover and dry).

- 3.3 The interior and exterior of the building was assessed for signs of bat use. This consisted of a methodical search of the walls, ceiling and roof using, if necessary, a torch, ladders, binoculars, an endoscope and a bat detector used to pick up the social calls which bats often emit when roosting during the day. Signs or indications that bats are likely to be present include:

- Droppings on or near potential roost sites.
- Scratch and grease marks, which are often left by bats entering and emerging from roosts.
- Obvious cracks and crevices that can be used by bats for shelter.
- The distinctive smell of bat urine which would indicate the presence of a roost.
- The presence of dense spider webs at a potential roost entrance can often indicate the absence of bats.

## 4. Results

### *Data Search*

- 4.1 The data search results are provided within Appendix A. The data revealed a total of fifteen records within a 1km radius of the site including five roosts and ten records of bats in flight or found dead of at least three species of bat - the common pipistrelle, Soprano pipistrelle, Natterer's and Myotis sp. bat. A number of the records were for unspecified species of bat therefore the species diversity is likely to be greater than suggested by the data search.
- 4.2 No records of a known bat roost within, or in close proximity to the property, were received therefore the proposals are unlikely to impact on a previously known bat roost.

### *Habitat Assessment*

- 4.2 The property is located on the eastern edge of Bramhall surrounded by residential housing. To the south of the property is Bramhall Golf Club which features small patches of broadleaf woodland interspersed with ponds in addition to surrounding residential housing and improved grassland bordered by hedgerows further to the east. All of the above habitat types will provide foraging, roosting and commuting habitat for a range of species of bat.
- 4.3 The house is a modern, double height detached property with a pitched roof which faces north-south (refer to Appendix B, Plate 1). The roof is in good condition with no raised or slipped tiles (Plate 2). Similarly, the ridge tiles, and the mortar between and beneath the ridge, are in good condition. The lead flashing surrounding the chimney lies flush to the chimney and the roof tiles beneath (Plate 3). The end tiles and the mortar beneath at each of the gables of the house are intact and no gaps have developed (Plate 4). The timber box soffits are intact with no potential access or egress points (Plate 5).
- 4.4 The walls are in a good state of repair with no cracks or mortar degradation which may have provided external crevice roosting habitat for bats. Similarly, the window and door frames and lintels are intact with no gaps having developed which may have provided suitable habitat. All walls, windows and window sills were assessed for evidence of bat activity and no droppings or urine spots were noted.
- 4.5 No evidence of bat activity in the form of droppings or staining was noted on the external walls of the house and no evidence of breeding birds was noted throughout the external assessment.
- 4.6 The internal inspection revealed that the roof void is currently not used for storage as the property is uninhabited (Plate 6). The underside of the roof is lined with 1F felt. The felt is intact and does not provide any access for bats from the exterior of the roof (Plate 7).
- 4.7 No potential access points into the interior of the roof void were noted at the eaves or the ridge as both areas are sealed internally. No evidence of bat activity in the form of droppings or staining was noted within the interior of the roof void.
- 4.8 Therefore, due to a lack of access into the loft space for bats and a lack of evidence of bat activity within the loft, it is concluded that the loft does not support roosting bats and has negligible potential to support roosting bats in the future.




4.9 No evidence of nesting or breeding birds was identified within the loft space.



## 5. Conclusion and Recommendations

- 5.1 This assessment concluded that there was no evidence of past or present use of the property by bats and that the building is considered to provide habitat with negligible potential to support bats.
- 5.2 Despite the low likelihood of the discovery of a bat roost within this property during the proposed works, Table 1 outlines a series of recommendations to further reduce the risk, in addition to advice should a bat be encountered during the works.

Table 1 Recommended Mitigation

Action	Method
<p><b>1. Protection of bat habitat</b></p>	<p>All development should be undertaken with an awareness of the legislation which protects bats and their places of shelter. All European bat species and their roosts are listed in Annex IV of the EC Directive 92/94/EEC 'The Conservation of Natural Habitats and of Wild Fauna and Flora' as being in need of "strict protection". This is implemented in Britain under the Conservation (Natural Habitats &amp;c.) Regulations (as amended by the Conservation (Natural Habitats &amp;c.) (Amendment) (England and Wales) Regulations 2010. In summary, in the UK, it is an offence to:</p> <ul style="list-style-type: none"> <li>• Deliberately capture, injure or kill a bat;</li> <li>• Deliberately disturb a bat in a way that would affect its ability to survive, breed or rear young, hibernate or migrate or significantly affect the local distribution or abundance of the species;</li> <li>• Damage or destroy a roost (this is an absolute offence);</li> <li>• Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.</li> </ul> <p>British bat species and their roosts are included under Schedule 5 of the Wildlife &amp; Countryside Act, 1981 (as amended). In summary, the relevant sections of this legislation make it an offence to:</p> <ul style="list-style-type: none"> <li>• Intentionally or recklessly disturb a bat at a roost;</li> <li>• Intentionally or recklessly obstruct access to a roost.</li> </ul>
<p><b>2. Timing of the works</b></p>	<p>It is not considered necessary to impose timing restrictions on the proposals due to the negligible likelihood of encountering bats.</p> <p>In the unlikely event that bats are found to be present, refer to 'Unexpected Discovery of Bats' below for further advice.</p>

Action	Method
<b>3. Careful removal of roofing materials</b>	All roofing materials shall be carefully removed by hand. In the unlikely event that bats or evidence of bats are/is found to be present, refer to 'Unexpected Discovery of Bats' below for further advice.
<b>4. Unexpected discovery of bats</b>	<p>In the event that a bat or bats are discovered during the course of the works, all work in the vicinity should stop and <b>the ecologist should be contacted for advice on how to proceed.</b></p> <p>Under no circumstances should a bat be handled by site personnel.</p> <p>All site personnel should be made aware that a bat in torpor may appear cold and lifeless.</p> <p>In the event of a chance discovery of a bat, the ecologist will remove it with gloved hands and either place it in the temporary bat box or take it into care in the event of an injury. The ecologist will then provide advice on how to proceed with the works.</p> <p>NB. In very cool weather or after cold nights, resting bats may be in a torpid state and therefore unable to move / or escape quickly. Contractors should be made aware that bats in torpor can often appear cold and lifeless.</p>
<b>5. Evidence of bats</b>	<p>The evidence of bats which is most likely to be discovered during the course of any building works is that of droppings. The droppings are small, approximately 5 – 10mm long (refer to Plate 1 below) and crumble into a fine powder when crushed unlike mouse droppings which cannot be crumbled.</p> <p>Plate 1 Bat droppings</p>  <p>If bats are discovered during the course of the works, it is likely that they will appear to be huddled behind or within a crevice rather than hanging from the rafters as many people believe. The most likely species to be identified at this property is the Pipistrelle spp. bat as pictured in Plate 2 below. They are tiny bats which are no bigger than an adult's thumb and may appear cold and lifeless if they are in torpor and may take up to half an hour to wake if disturbed.</p>

Action	Method
	<p>Plate 2 Pipistrelle bats</p> 
<p><b>6. Provision of additional bat roosting habitat</b></p>	<p>It is recommended that a total of two Ibstock Enclosed Bat Box C (available from NHBS) are attached to the apex of both the western and eastern gables of the property.</p>  <p>Ibstock Enclosed Bat Box C</p>
<p><b>7. Protection of breeding birds</b></p>	<p>All development should be undertaken with an awareness of the legislation which protects birds during the breeding season, which for most species is from March to August inclusive. All wild birds, their nests and eggs are protected by the Wildlife and Countryside Act, 1981 (as amended) against damage or disturbance.</p>
<p><b>8. Site contractors</b></p>	<p>All site contractors must be made aware of the potential risk of encountering bats and breeding birds and the procedure to be followed should bats or breeding birds be identified during the works.</p>

## Appendix A – Data Search

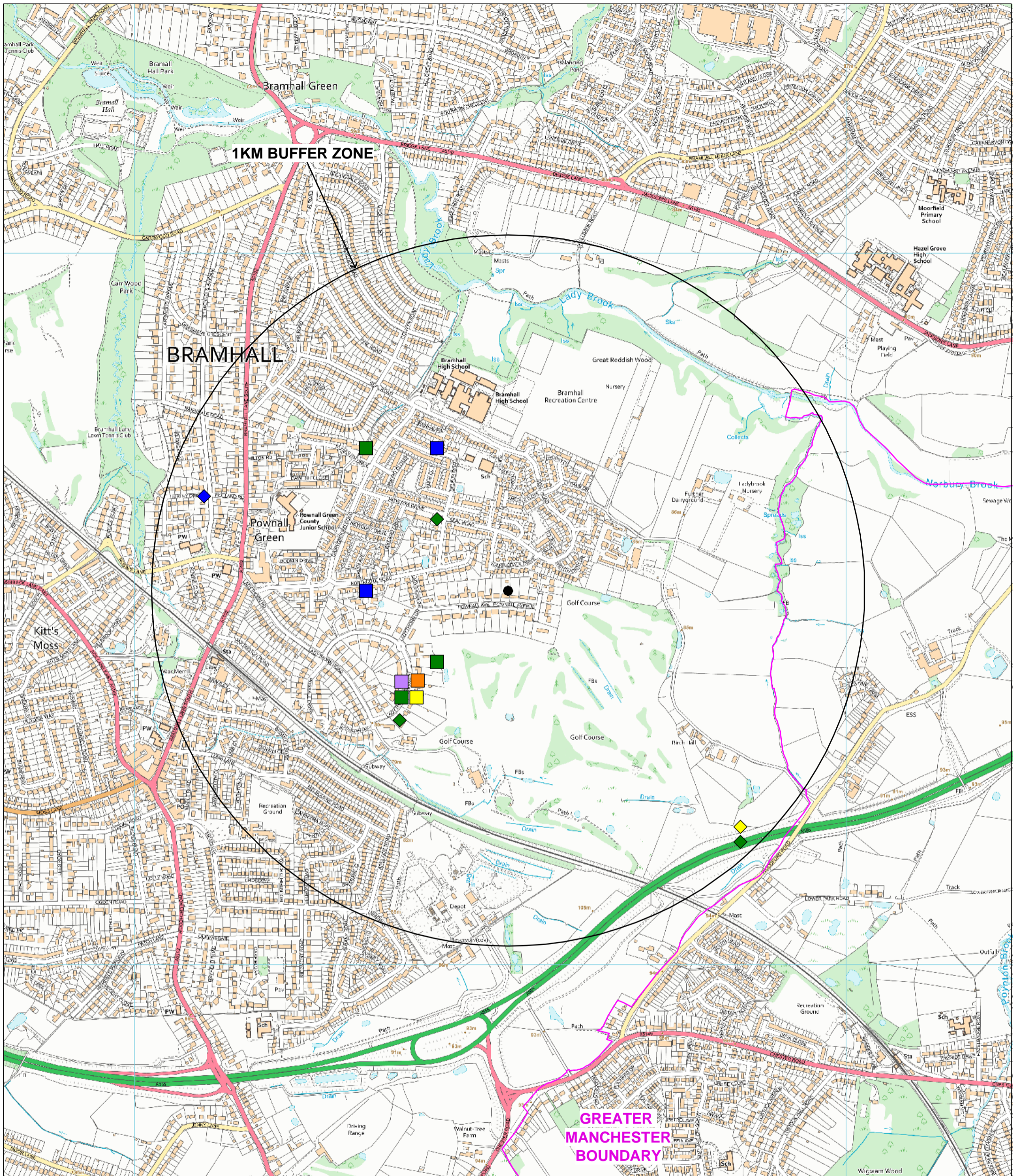
Species	Grid_Ref	Site	Date	Abundance	Comment
<b>BAT ROOSTS</b>					
Common Pipistrelle	SJ89748468	Ladythorn Crescent	16/06/2019	3 Emergent Bat Roost	emerging from under eaves. planning app DC073749
Common Pipistrelle	SJ898852		02/08/2001	Bat Roost	roost at Carmenna Drive
Common Pipistrelle	SJ9070484343	Hedgerow near Woodford Road	31/07/2014	2 Roosting Bat Roost	In Oak Tree
Pipistrelle sp	SJ89198531	St Michaels Avenue, Bramhall	10/01/2019	Bat Roost	single dropping found for planning app DC72726. Assessed as non-breeding roost
Soprano Pipistrelle	SJ9070484343	Hedgerow near Woodford Rd	31/07/2014	1 Bat Roost - tree	Oak Tree
<b>BAT OTHER SIGNS</b>					
Common Pipistrelle	SJ896854		26/07/1997	1 Male	found on Plymouth Drive - released
Common Pipistrelle	SJ897847	Bramhall	15/05/2014	1 Adult Commuting	
Common Pipistrelle	SJ897847	Bramhall	30/04/2014	2 Adult Commuting	
Common Pipistrelle	SJ898848	Bramhall, Cheshire	08/09/2011	1 Adult Commuting	
Myotis sp	SJ897847	Bramhall	15/05/2014	1 Adult Commuting	
Myotis sp	SJ897847	Bramhall	30/04/2014	1 Adult Commuting	
Natterer's Bat	SJ897847	Bramhall	15/05/2014	1 Adult Commuting	
Pipistrelle sp	SJ896850	Bramhall, Stockport	15/07/2002	1 Casualty - Dead	injured bat at Northcolt Road - died



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SJ 900 850



Species	Grid_Ref	Site	Date	Abundance	Comment
Pipistrelle sp	SJ898854	Bramhall, Stockport	18/08/2002	1 Casualty	grounded bat at Truro Close - released
Soprano Pipistrelle	SJ897847	Bramhall	30/04/2014	2 Adult Commuting	



**KEY**  
**BAT ROOSTS**

- ◆ COMMON PIPISTRELLE
- ◆ PIPISTRELLE SP
- ◆ SOPRANO PIPISTRELLE

**BATS OTHER SIGNS**

- COMMON PIPISTRELLE
- MYOTIS SP
- NATTERER'S BAT
- PIPISTRELLE SP
- SOPRANO PIPISTRELLE

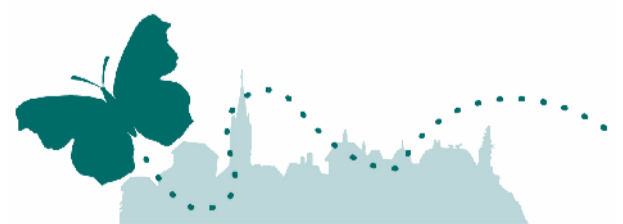
**GREATER MANCHESTER ECOLOGY UNIT**  
**ECOLOGICAL SEARCH - SJ 900 850**  
**POWNALL AVENUE - MAP 1**

SCALE 1:10,000

BAT DATA COURTESY OF SOUTH LANCS BAT GROUP

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## Appendix B – Photographs

Plate 1



Plate 2



Plate 3



Plate 4



Plate 5



Plate 6



Plate 7

