Protected Species Survey at 27,Caulder Ave, Billington, Nr Whalley
11th June 2015
Undertaken by Joyce Gillies

1 Species Background Information

Bats are the only flying mammal. They have existed in their present form for over fifty million years. Bats and their roosts have full protection under the Wildlife and Countryside Act of 1981, due to their significant decline in recent years.
Bats will live in buildings and trees at different times of year. They will feed over gardens and in woodland with mature trees due to the high density and range of insects and for the shelter provided from the elements. Bats like to fly along linear features such as hedges, fences, ditches, streams and riverbanks.

By using sound to find their way through their echolocation system, bats find prominent features easier to locate. When such features which are linear, e.g. hedges, bats follow them as we would use a footpath, for going to and from a feeding site, or for ease of navigation whilst feeding along such a feature.

Research has shown that bats prefer habitats containing water - this is probably due to the higher density of insects flying, feeding and hatching over ponds, rivers and canals. Bats will travel considerable distances to feed over still pools along a river system where they may be found in large numbers.

Tree lined field edges offer a choice habitat by providing added protection from the wind. Strong wind is a source of danger for the flying mammal whose wing area acts like a kite. Many casualties are picked up after summer gales when lactating female bats are under pressure to feed in conditions when single male bats choose to remain torpid.

If bats are able to roost close to good feeding habitat then their chances of survival and reproduction are increased. Reproduction does not markedly increase bat numbers due to the fact that only one baby is born each year. Although bats have been recorded at 16 and 30 years old, the average is probably 3-5 years with many juveniles not surviving their first winter.

Bats hibernate during the cold winter months when insect food is not available. They choose cool places with high humidity in which to hibernate, seeking out somewhere cooler if the site becomes too mild. In a dry atmosphere dehydration occurs due to the large area of skin surface in the wings and tail membrane of the bat.

During hibernation in Britain bats are usually found singly or in twos or threes. Apart from caves, cellars and mines, places frequently chosen are gaps between the stonework of bridges, walls, buildings etc. Many bats are more secure with a little dorsal pressure and choose to squeeze into small gaps, drawing themselves deeper in with their feet, thus making them difficult to find. They shun any disturbance by torchlight.

Hibernating bats have been found in a wide variety of places, for example, in gaps in stonework of buildings, under lead flashing, behind metal down spouts, but more natural sites often chosen include behind the bark or in holes in trees.

Bats cannot fly away from danger as birds do. The ability of bats to go torpid, to save energy, means that their temperature, heart and respiratory rate is drastically reduced. To be able to fly they must increase the rate of these systems (temperature from - 3/4°C to 40°C, heart rate from 2-4 in hibernation to around 400 per minute) before safe flight is possible. This takes in the region of 20 minutes.

Clearly, during building work any bats present would be in danger. If forced to fly in daylight the risk from predators is increased until an alternative roost can be found.

2 Bat Feeding and Roosting Behaviours

2.1 Feeding

Bats fly out of their roosts at dusk to search for insects on which to feed.
They find insects by using echolocation and might consume several thousand small flies each night.

Each bat has its own regular flight paths and feeding area.

Good feeding areas are sheltered from the prevailing wind.

Bats choose not to emerge to feed on wet and windy nights.

2.2 Roosts

Hybernaculum: Used in winter because of specific conditions provided, e.g. low temperature and high humidity.

Maternity Roosts: Large collections of females and young.

Non-Maternity Roosts. : Males, spring roosts, autumn breeding/ mating roosts.

Night Roosts: For rests between feeding or for hanging to eat large prey.

3 Possible Species in the area of survey.

Species found in the locality are Pipistrelle (possibly both types). Brown Long Eared and probably Whiskered/ Brants. Also possible are Daubenton and even the more rare Natterers. This is due to the old pasture land, mature trees and many hedgerows, which have been there for many years.

4 The General Area and Bat Roosts.

The area of the survey is good bat habitat.

It is known that bats feed, commute and roost in this area.

Roost sizes could be from one to possibly several hundred.

Roosts are used for many reasons during the year, a generalised scenario would be:

Spring (April/May/June.): Males still hibernating, singly or several together. Females begin gathering in small roosts. Pregnancy begins.

Summer (June/July): Small all female roosts join together, single young are born to females in large maternity roosts. Males live separately in small numbers or singly.

Early Autumn (August): Young begin to fly, learn to feed on insects.

Late autumn (Sept/ Oct): Mating takes place. Males set up breeding roosts, often in holes in trees, to attract several females.

Winter (Oct/ April): Hibernation during cold weather though bats are seen flying on sunny days to drink or change roosts. After mating the female bats store the valid sperm within their body, only becoming pregnant when conditions are favourable in the spring.

British bats are small; most will fit into a matchbox when their wings are closed. The largest, the **Noctule**, mainly a tree dweller, fits comfortably into a human hand.

Bats are generally dark brown, furred on the body, secretive in habit but capable of uttering shrill squeaks when disturbed.

5. The Survey is carried out on the instructions of Micheal Kay, Owner.

5.1. The Instructions

To inspect the inside and outside for evidence of bats and assess its suitability for the possibility of housing a bat roost in connection with the proposed changes.

5.2. Accuracy of Report

This report has been compiled based on the methodology and professional experience of the surveyor. Whilst the report reflects the situation found as accurately as possible, bats are wild and can move freely from site to site. Their presence or absence detailed in this report does not entirely preclude the possibility of a different past, current or future use of the site surveyed.

I would ask all clients acting upon the contents of this report to show diligence when undertaking work on their site and or in their interactions with bat species. If bats are found during a work program and continuing the work program could result in their disturbance, injury or death either directly or indirectly an offence may be committed.

Bats may only be disturbed, injured or killed under license. This report does not convey the authority to undertake work, which may disturb, injure or kill any bat species.

If in doubt, stop work and seek professional help.

Contact Natural England, Bat Conservation Trust (0845 1300 228) or Joyce Gillies (07801 386976)

Wear gloves if it is necessary to handle bats.

5.3. Background

A planning application has been presented.

A Bats Survey has been requested following guidance under Regulation 39 of the Conservation (Natural Habitats etc) Regulation 1994, the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and Planning Policy Statement 9 (PPS9) Biodiversity and Geological Conservation.

5.4. Proposed work on site

To extend the existing two storey, semi-detached house with a two storey addition. This will be one room wide and the pitched roof will be slightly lower than the existing house and therefore will not disturb the loft or roof of the existing house.

5.5. Survey Area and Site assessment

After driving around the local area and walking around the site, together with discussions with other bat workers, in the experience of the surveyor, bat species which may occur in the wider area around the building could be;

Common Pipistrel (pipistrellus pipistrellus)
Soprano Pipistrel (pipistrellus pygmaeus)
Whiskered (Myotis mystacinus)
Daubenton (Myotis Daubentonii)
Brants (Myotis brandtii)
Brown Longeared (Plectus auritus)
Natterers (Myotis nattereri)
Noctule (Nyctalus Nactula)

5.6. Objectives of the survey

To ensure that the proposed development does not affect any bat species which is listed under the Conservation (Natural Habitats etc) Regulations 1994 which implements the EC Directive 92/ 43/ EEC in the United Kingdom the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way act 2000 as it is an offence, with certain exemptions, to;

1) Deliberately capture or kill any wild animal of a European protected species;
2) Deliberately disturb such animals;
3) In respect of bat species, damage or destroy a breeding site or resting place of such a wild animal;

The survey will (where possible) identify the past or current use by bat species Assess the likely impact of the proposed development on the species.

Provide a basis upon which to propose mitigation (if required) for bat species affected by the development.

5.7. Survey Area = 27, Caulder Ave, Billington.

Grid Ref SD724357

5.8. Habitat Description

The property is in an estate of similar, semi and terraced houses, built on a slight slope and would ,at one time have been owned by the 'council'.
No.27 is attached to one other house to the left, behind which runs a garden with trees which goes down to a brook.
The main water bodies are the two reservoirs 3k of the south of Billington and are there fore of little significance.
The River Calder flows 0.5k to the north.

6) The survey of the Building.

The existing , two storey house is rendered from the ground to the gutter and all the gable end wall. It has a pitched, tile/slate roof to which the render joins with no barge board below, on the gable end.

Figure 1 – Front View

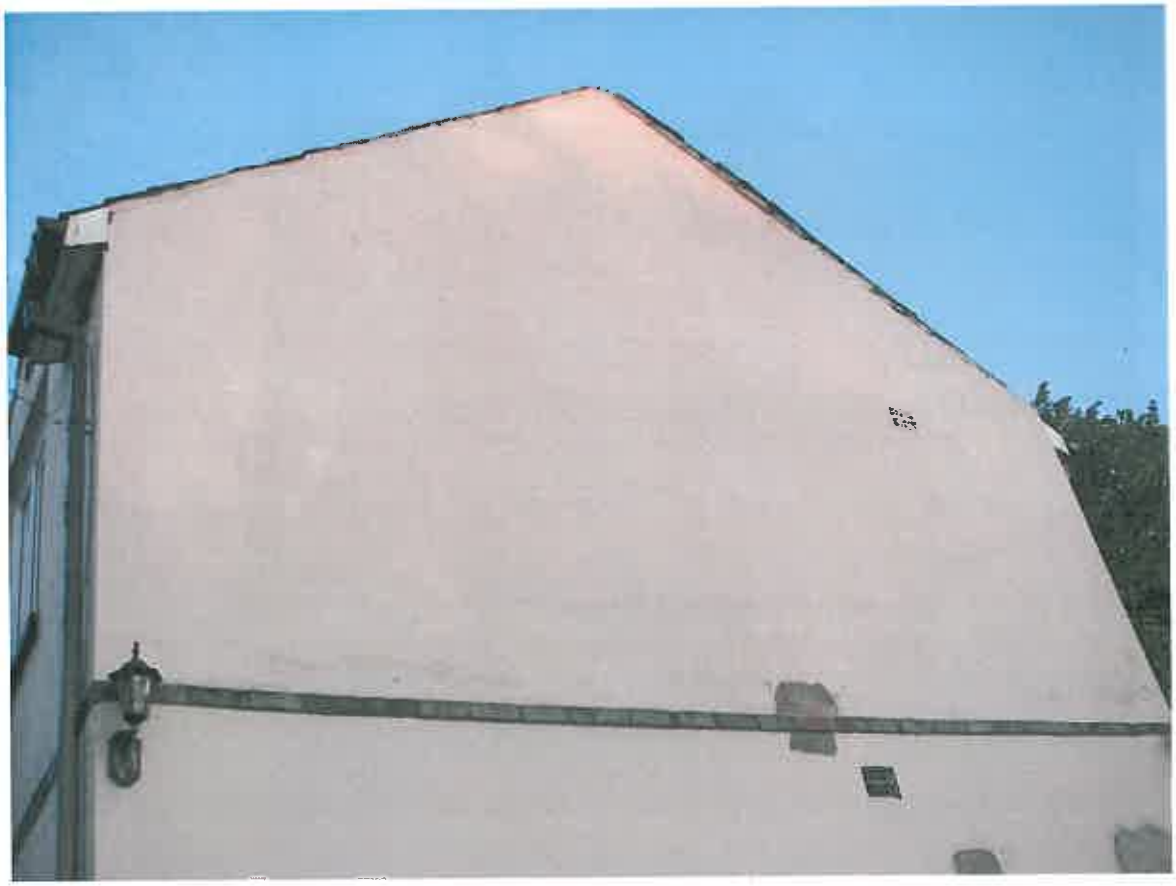

Figure 2– Side View Gable End.

Figure 3 : Rear View

Figure 4: Interior Gable End

My daylight/emergence visit took place on Thursday 11th June, 2015, from 9pm onwards, when the outside temp was 15c,and falling. The blue sky had some clouds and a cool, gentle breeze of aprox 10 kph blew from the NNW.

6.1. Method

The outside roofline, gutters, gaps in the structure were inspected using binoculars, from the front, side and back.(fig 1,2+3)

Inside, the loft was well under felted through out.
The brick work on the internal gable end wall was clean, apart from many, heavy spiders webs.(fig 4)

The powerful torch and binoculars were used as necessary.

Personnel
Mrs. Joyce Gillies, a licensed bat worker with 25 years experience and one other.

7. Results

7.1 Presence or Absence

Internally
No evidence of bat use was found on the brick wall or the objects stored in the loft. (fig 4)

This would have been droppings on the insulation or bricks or on the hanging spider's webs, snipped- off moth wings or odour of bats.

Clean, complete, roofing felt lined the tile/slate roof.

Externally

No signs of bats were seen emerging from anywhere on the house, at the front (fig 1), back (fig 3) or the gable wall (fig 2).

The first bat-pass was head on the detector at 10.05pm followed by others calls which were eventually tracked to a 45' pipistrelle feeding low under the trees of the garden next door where the stream flowed out into the cleared garden of No27.
This bat was observed feeding in the shelter of the new fence at the rear of No27, one other bat was seen and heard as the evening cooled.
The gable end wall was catching the prevailing wind and therefore would not be first choice as a maternity roost.

Mitigation

None necessary.

8) Conclusion

There is a low of risk of bats using this property and therefore I find no reason to prevent planning approval due to bats.

When work starts;
If a bat is found, that piece of work must stop, the bat must be cared for and advice must be sought (if the bat is unharmed and the wood or materials can be replaced temporarily, that will be sufficient. If the bat is injured, it must be contained in a box and help obtained).

REMEMBER; WEAR GLOVES IF IT IS NECESSARY TO HANDLE BATS.
PHONE; B.C.T. 0845 1300 228, OR JOYCE GILLIES 07801 38 69 76.

A COPY OF THIS REPORT MUST BE KEPT ON SITE FOR REFERANCE AT ALL TIMES.

TO HELP BATS IN THE FUTURE;

Any small gaps that can be left in the mortar work along the roofline, under the eaves and at the ends of the ridge tiles of the property would offer the odd bat a safe roosting opportunity.

Joyce Gillies, licensed Batworker (CLSO 2189)

14th June 2015.