JARROW CEMETERY:

BAT SURVEY

June 2000

Jane Young BSc PhD MIEEM

Report No. OV 83c.Bat Survey

YOUNG NATURE Ecological Consultancy
Liddisdale, Millfield Road, Riding Mill, Northumberland NE44 6DL
Tel/Fax (01434) 682220
Email youngnature@btinternet.com
www.ecologist.co.uk

CONTENTS

JARROW CEMETERY:
BAT SURVEY

INTRODUCTION

A bat survey has been carried out at Jarrow Cemetery. The survey was commissioned by Ove Arup and the work was carried out on 6th June 2000 by Jane Young, Principal Ecologist for YOUNG NATURE Ecological Consultancy with an assistant.

The survey undertaken was to determine whether bats used the area during the summer months.

METHODOLOGY

The Cemeteries Department for South Tyneside was notified of the survey.

A daytime visit was made using a base plan provided by Ove Arup in order to assess the potential areas where bats are most likely to be found. Particular note was made of buildings and older trees which may be used as roost sites, and of areas which may provide plenty of insect food.

The evening June 6th 2000 was chosen for a single visit when the weather was mild, although at the time there was a slight to moderate breeze. The weather during the day had been showery but in the evening there was a clear sky and the temperature was 13^0C. The evening visit lasted from 9.40 pm until 11.15 pm.

Using visual observation and a bat detector the location and probable species of each bat seen was recorded. Any important flight routes were noted and possible roost sites also watched for emerging bats.

A short report was then prepared including a brief description of the site, survey observations with a map, an asessment of the site as bat habitat and the status and protection of bats in a local, regional and national context.

SITE DESCRIPTION

The survey area is a long established cemetery in the urban conurbation, Jarrow, South Tyneside, at NZ 332 644. It is still currently in use. Covering an area of approximately 10 hectares it is bounded by a strip of meadow grassland and the A 19 road to the east, Cemetery Road and housing to the south and west, and landscaped open space and the valley of the River Don to the north. The whole site is bounded by a high wall and there are street lights alongside the boundary wall to the south.

The cemetery itself is laid out in a grid pattern with approximately thirty open spaces of mown grass and graves. Each of these open spaces is surrounded by paths and mature trees. Most of the trees are not more than about one hundred years old but several species are represented including sycamore (*Acer pseudoplatanus*), ash (*Fraxinus excelsior*), wych elm (*Ulmus glabra*), willows (*Salix spp*), Swedish

whitebeam (*Sorbus intermedia*), hawthorn (*Crataegous monogyna*), laburnum (*Laburnum anagyroides*) with an occasional holly (*Ilex aquifolium*) and cherry laurel (*Prunus laurocerasus*) and a yew (*Taxus baccata*) which is probably older than most of the other trees. A very few of the trees had ivy clad trunks.

There is a house at the entrance with a privet hedge with elder (*Sambucus nigra*) and sycamore (*Acer pseudoplatanus*).

A small chapel/mortuary is located in the southern part of the site.

SURVEY RESULTS

The daytime scoping survey revealed no old trees so it was decided to watch the chapel and house for emerging bats and to walk slowly around the site using a bat detector.

No bats were seen to emerge from either the chapel or the house but bat activity was picked up on four occasions. All records were made across the centre of the site (see map Appendix 1). On each occasion only one bat was detected and it is possible that it was the same bat. It was seen on only one occasion, the most southerly site. Here it may have been flying higher making it easier to see. There was a street light nearby and the bat may have been feeding on insects attracted to the light. At the other sites it was flying past the detector but could not be seen among the trees. Each detection was made at 45 kHz and from the brief glimpse of a single bat and its pattern of flight, it may have been a pipistrelle bat.

ASSESSMENT OF RESULTS

All British bats feed solely on insects. Although this had been a single visit, the weather conditions were suitable for insects and bats would have expected to emerge from a roost. This did not happen.

The trees do not provide ideal roosting habitat and the buildings are not being used. If the bat(s) detected was a pipistrelle it may have been roosting in a nearby modern house. This type of habitat is frequently used by pipistelles. However bats may fly up to 1.5 kilometres from their roost and use a regular flight path before dispersing as individuals to feed. It has been shown that a Daubenton's bat may even fly 10 kilometres from a roost site to a favourable feeding territory (Richardson 1985). The occurrence of isolated individuals, or a few together, suggests that this site was only being used as feeding territory at the time of survey.

As feeding territory the large number of mature trees would be expected to provide many different types of insects as food throughout the summer. The arrangement of the trees around open spaces also provides more shelter for insects to be found.

In this situation however the nearness of the River Don may attract more bats to feed along the length of the river than in the cemetery. The river has a very large number of tree species, with several willows. Willows have been shown to host more insect species than any other tree in Britain (Kennedy and Southwood 1984). In addition, an

aquatic habitat is where many insects live as larvae before emerging out of the water as adult insects.

STATUS AND PROTECTION OF BATS

All bats are listed in the Mammal Red Data book (Morris 1993). They are also listed on the shortlist of the UK Steering Group for Biodiversity (1995) and a national species plan has been prepared. A local species action plan will be produced in the second tranche of the Durham Biodiversity Action Plan which cover South Tyneside.

All bats are protected under Schedule 5 of the Wildlife and Countryside Act (1981) which gives protection to both bats and their roosts.

SUMMARY

- A single bat was detected on four separate occasions. This may have been a pipistrelle and it may have been the same bat. All records were made within a small area.

- No roost sites were identified and the bats found were using the site only as feeding territory.

- Although the pattern of tree planting within the cemetery provides sheltered areas for feeding, the nearness of the River Don may provide bats with more ideal feeding ground.

REFERENCES

ACTION FOR WILDLIFE: THE DURHAM BIODIVERSITY ACTION PLAN 1999. Tranche 1. Durham Biodiversity Action Plan Partnership

BIODIVERSITY: THE UK STEERING GROUP REPORT 1995. Vol.2 *Action Plans.* London HMSO

KENNEDY C.E.J. AND SOUTHWOOD T.R.E. 1984. The Number of Species of Insects associated with British Trees: a re-analysis. *Journal of Animal Ecology* 53 455-478

KERSLAKE, L (Ed) 1998. *Red Data Book for Northumberland.* Transactions of the Natural History of Northumbria Vol 58 Part 2

MORRIS, P. 1993. *The Red Data Book for British Mammals.* The Mammal Society

RICHARDSON P. 1985. *Bats.* Whittet Books

WILDLIFE AND COUNTRYSIDE ACT 1981 (as amended 1997). HMSO