

**Ditton Rail Freight Terminal, Bat Report,  
to Discharge Planning Condition 14**

Submitted to:

**Halton Borough Council**

Submitted by:

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## **1.0 INTRODUCTION**

- 1.1 This report provide the results of a bat survey designed to discharge Planning Condition number 14 for a Planning Application for the Land off Halebank Road, Halebank, Widnes, Cheshire (SJ 480 846). The relevant Planning Condition is provided below:

Condition 14 – Detailed Survey to Check for Day Time Bat Roosts and Night Time Bat Activity.

- 1.2 It is proposed to develop the land for railway sidings and industrial use.

### **Site description**

- 1.3 The land is agricultural arable farmland with open fields bordered by discontinuous unmanaged hedgerows consisting mainly of hawthorn. The fields have been sown with cereal crops in part but these have been left to grow 'wild' and full of thistle, nettles and 'wild grasses'.
- 1.4 The site has an active railway line as its north boundary and residential properties on its east border. To the south are scattered houses with large plots or farms. The western side has stock pasture for horses.
- 1.5 There is an active fishing pond just off the southeast corner and one or two dry and choked ponds in the overgrown fields.
- 1.6 The northeast part of the site close to the housing estate there is amenity grassland and some recreational playing fields with small clumps of immature trees. The railway line has a line of dense popular and hawthorn in the northeast corner of the site.
- 1.7 The only other mature trees of any size are around the house at Linner Farm just off site in the southwest corner. The only buildings are derelict farm outbuildings on the southern boundary (See Appendix 1, Photographs 1 + 2).

### **Aims of the survey**

- 1.11 To assess the site for likely bat roosting, commuting and foraging.
- 1.12 To recommend any further actions necessary as a result of the survey findings.

### **Surveyor details**

- 1.13 The survey was conducted by Mike Freeman. He is a professional wildlife consultant specialising in bats, badgers and birds. He has been a licensed bat worker since 1984 and a licensed bat worker trainer since 1989. He has been chairman of the Cheshire Bat Group since its formation in 1986 and is a voluntary Bat Warden for English Nature. He is an Associate member of the Institute of Ecology and Environmental Management (AIEEM).

## 2.0 LEGAL PROTECTION FOR BATS

2.1 All British species of bat are protected under Schedule 5 of the Wildlife and Countryside Act, 1981(as amended). They are also included in Schedule 2 the Conservation (Natural Habitats & c.) Regulations 1994, which are the domestic implementation of the EC Habitats Directive. This legislation makes it illegal to:

- Intentionally kill, injure or capture (take) bats;
- Intentionally or recklessly disturb bats;
- Intentionally or recklessly damage, destroy or obstruct access to bat roosts.

In this sense a bat roost has been interpreted to mean any structure or place which is used for shelter or protection whether or not bats are present at the time.

### Licensing Procedures

2.2 In the case of development works, exemption from the protection afforded for bats under section 39 of the Conservation (Natural Habitats, & c) Regulations 1994 can be granted by means of a licence from the Department of the Environmental Food and Rural Affairs (DEFRA). Three tests must be satisfied before DEFRA can issue a licence under Section 44 (2) (e) to permit otherwise prohibited acts:

- (i) Section 44 (2) (e) states that licences may be granted by DEFRA “to preserve public health or public safety or other imperative reasons of overriding public interest including those of the social or economic nature and beneficial consequences of primary importance for the environment”.
- (ii) Section 44 (3) (e) states that a licence may not be granted unless DEFRA is satisfied “that there is no satisfactory alternative”.
- (iii) Under Section 44 (3) (b) a licence cannot be issued unless DEFRA is satisfied that the action proposed “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

DEFRA consults English Nature for advice on the third Test relating to maintenance of favourable conservation status.

## 3.0 BATS IN TREES AND LINEAR LANDSCAPES

3.1 Some bat species rely exclusively on trees for roost sites; others use them for only a part of the year. The availability of tree holes may limit the number of these species.

3.3 All UK bat species feed on insects associated with trees. The importance of trees to bats varies with species, season and foraging behaviour. Trees and hedgerows, especially native ones, play host to many species of insect, which are food for bats.

3.6 Bats rest; give birth, raise young, form groups and hibernate in natural holes, crevices and sheltered places. Such conditions occur particularly in mature

trees. Identification of tree roosts is an area with a poor record of success. Typical sites may be old woodpecker holes, cavities and cracks in trees, crevices behind peeling-off bark, woodpiles and behind ivy. Bats favour native trees such as oak, beech, ash and Scots pine. Even in winter, deep cavities can provide protection against bad weather and fluctuations in temperature. Over a period of time bats will use a number of trees to optimise roosting conditions. External disturbances, an internal build up of parasites or distance from feeding area can influence the choice of tree.

- 3.10 Bats also use trees, lines of trees and hedges to navigate at night. Loss or damage to such features affects the ability of bats to commute safely and economically between roosts and feeding sites. A gap in a hedge as little as 10 metres may force some bats to seek an alternative route or to change roosts.
- 3.11 Even if not directly affected by development work, bat roosts may be abandoned if the connectivity of the landscape around it is lost by hedge or tree removal or breaking up of other linear features.
- 3.12 Evidence of bats in trees can be identified in a number of ways, including:
- Obvious holes, cavities and splits
  - Dark staining caused by urine on the tree below a hole
  - Staining around a hole caused by the natural oils in bats' fur
  - A maze of tiny scratch marks around the hole made by bats' claws
  - Droppings below a hole – they look similar to those for rodents, but crumble to a powder of insect fragments
  - On close inspection a hole may contain droppings or smell of bats
  - Noise (squeaking or chittering) coming from a hole-especially on a hot day or at dusk

**However, it should be noted that bats often produce little or no evidence of their occupation.**

#### **4.0 METHODOLOGY FOR BAT SURVEYS**

- 4.1 The site was walked during daylight hours looking for potential bat roosting sites. Trees were viewed from the ground using binoculars as an aid looking for possible roosting field signs and features as described in Section 3.0 above. The hedgerows and field edges were walked and assessed as potential foraging and commuting landscapes. The farm outbuildings were viewed from the outside. Permission to enter farm buildings had not been given at the time of the survey.
- 4.2 A night visit was also made to the site and the hedgerows and tree lines walked using a portable tuneable heterodyne bat detector as an aid to locating and identifying flying bats. The bat detector was tuned to 45Khz in order to pick up most bat species but once a bat had been located the detector was re-tuned in order to try and identify the species.

## **5.0 TIMING OF THE SURVEY**

- 5.1 The daytime survey was conducted on the 19<sup>th</sup> June 2006. The weather on this visit was cloudy and dull with light showers and a temperature of around 14°C.
- 5.2 The night survey was undertaken on the 23<sup>rd</sup> June 2006. The weather was fine and dry with temperatures ranging from 16°C (at 22.00hrs) to 14°C (at 24.00hrs).

## **6.0 LIMITATIONS OF THE SURVEY**

- 6.1 Trees were only viewed from the ground with binoculars. This will only give a limited view of tree particularly at this time of year when the trees are in full leaf. Some areas had particularly dense foliage.
- 6.2 None of the buildings of the southern site border were searched closely either internally or externally. At the time of the survey they were considered off site and permission had not been granted to enter them or the farmyard.
- 6.3 The evening survey only provided a snapshot of bat activity in the post emergence period (21.30hrs - 24.00hrs) on one evening in those weather conditions. Multiple visits at different times would give a more accurate picture.

## **7.0 RESULTS**

### **Daytime Survey**

- 7.1 The daytime survey found no trees that were considered to have high bat roosting potential. The poplars alongside the railway are tall but very dense and seem to lack the necessary cracks, crevices, cavities, ivy cover etc required for roosting. The small clumps of immature woodland close by, in the amenity area, were considered too immature to have suitable sites.
- 7.2 The hedgerows, whilst often discontinuous, did appear to be useful linear landscapes that local bats would use to both forage and commute. This was thought to be also true of the lines of poplars and clumps of immature trees.
- 7.3 The limited views of the outbuilding of the southern border gave the impression that these structures were of very limited value for roosting bats. One brick built barn at Linnors Farm looked to have more potential, as did the farmhouse itself, which is off-site (See Appendix 1, Photograph 3).

### **Night Survey**

- 7.4 Whilst weather conditions were good for the evening/night survey (dry, mild, calm 16°C-14°C) very little bat activity was encountered. Only pipistrelles (*Pipistrellus* sp) and noctules (*Nyctalus noctula*) were occasionally encountered. The pipistrelles were found along the hedgerows occasionally feeding but mainly commuting. Noctule passes (perhaps the same bat) were obtained over the open field at the west of the site. Notably, no bats were

encountered in the double hedged 'lane' that runs northeast from Linner Farm. This area was thought, during the daytime survey, to offer good sheltered foraging for bats. The locations of bats encountered are shown on the attached map.

## **8.0 CONCLUSIONS**

- 8.1 The site is generally considered to have low potential for roosting bats particularly tree roosting ones.
- 8.2 The farm outbuildings again appear, in the main, to have low potential for bat roosting but these were only assessed from a distance and further surveying of these structures is advised if they are to be affected.
- 8.3 The larger trees around the farmhouse are also considered to have more potential to provide niches for bat roosts but could not be closely viewed even with binoculars.
- 8.4 Bats were only occasionally and briefly encountered on the evening survey and there was less activity than expected after the daytime survey.

## **9.0 IMPLICATIONS AND RECOMMENDATIONS**

- 9.1 No evidence was found to indicate that bats roost on site. However, the Limitations of the Survey must be taken into account here (see Section 6).
- 9.2 It is strongly recommended that daytime and, if thought necessary, evening surveys should be undertaken on any of the buildings that are now part of the site due to boundary changes.
- 9.3 If bats are found to roost in these buildings a DEFRA licence may be required before developments can take place.
- 9.4 With regard to hedgerows and trees, significantly more hedgerows and trees will be planted as part of the proposed landscaping scheme than are currently present on and around the site. the surveyor has no knowledge about which will be lost or retained.
- 9.6 As single or small number of bats can easily get tucked into relatively insignificant cracks and crevices care should be taken when felling any of the trees on site, particularly those singled out as having some, even small, potential.
- 9.7 The loss of potential tree roosts needs to be minimalised. In any mature trees are unavoidably lost due to the development, and are targeted for felling, they should be re-surveyed a maximum of one month before felling. Inspection should be by a bat specialist preferably by rope access into the tree or by directing such activities from the ground.

- 9.8 If any trees to be felled are found to contain bats or evidence that they have done so then a licence must be obtained from DEFRA before the tree can be felled.
- 9.9 When felling trees with potential but no actual roosting cavities in the limbs these should be cut from the tree and carefully lowered to the ground and inspected by a bat specialist. In instances where potential cavities are in the main trunk it may need to be sectioned or in some instances it may be better to fell the tree in one and let the branches cushion the impact. If a mechanical digger is available this may be used to hold the tree as it is cut and lowered it to the ground. Any potential cavities, once brought to the ground, should be left for a 24-hour period before limbing, logging or removing ivy. If possible, a licensed bat specialist should be on hand to deal with any accidentally discovered bats and help direct the tree works.
- 9.12 Ideally work on likely bat trees should be carried out in the spring (late March, April, May) or the autumn (September, October, November). This avoids periods when bats are particularly vulnerable – during hibernation and when non-flying young are present.
- 9.13 To make up for the loss of tree lines new ones should be established and linked to hedgerows and other habitats. A dense shrub layer below the tree canopy will increase the shelter for both bats and their insect prey.
- 9.14 Bat boxes of many different designs can be erected on trees and buildings to provide roosting opportunities. Boxes are most commonly made of untreated softwoods, but increasingly boxes made of “woodcrete” (a mixture of wood shavings and cement) are proving to be successful at attracting bats, having the advantages of better thermal insulation and resistance to rot and damage by woodpeckers and squirrels.
- 9.15 Correct siting of bats boxes is important to increase the chances of occupancy. Boxes should be at least 4m from the ground and species such as the Noctule *Nyctalus noctula* are more likely to be attracted when placed at 5m or 6m. As a general rule boxes should be sited with the front facing SW to SE, which will ensure that the box warms up during the day. Boxes facing other aspects may well be used and a common practise is to site three boxes on a single tree, all with different aspects, giving bats a choice of roost sites with different environmental conditions.