Former Greggs Bakery Site Twickenham, Bat Surveys – File Note

This file note has been prepared by Richard Graves as a preliminary assessment of the 'bat potential' of the former Greggs bakery site and adjacent habitats. Further survey and analysis are to be completed.

Introduction

A preliminary ecological appraisal and preliminary bat roost assessment of the former Greggs Bakery site completed by Richard Graves Associates in November 2018 identified some of the buildings as of low potential for bat roosting and the River Crane, to the north of the site as a potentially important corridor for bat foraging and commuting.

To assess the actual utility of the sites and River Crane for bats three bat surveys were recommended, the first of which was completed in June 2019. The full set of results have not been fully analysed and two further surveys are scheduled for July and September, so this file note is a preliminary report on bat activity.

Methodology

The survey was completed from 15 minutes before sunset until 1 ½ hours after sunset on the evening of the 25th of June and from 1 ½ hours before sunrise on the morning of the 26th of June.

The following six experienced, licenced bat surveyors completed the survey:

- Richard Graves BSc (Hons) MSc PGDip CEcol CEnv FCIEEM
- Dr Suzy Cardy BSc (Hons) MSc CEcol MCIEEM
- Dr Liat Wicks BSc (Hons) MSc CEcol MCIEEM
- Dr Kevin Hume BSc (Hons) MCIEEM
- Dr Heather Fulford BSc (Hons) MCIEEM
- Anna McDermott BSc (Hons) MCIEEM

Four of the surveyors undertook fixed position (exit / re-entry) surveys within the boundary of the former bakery. One surveyor, Kevin Hume, undertook a fixed position survey located north of the river facing the site and surveyor Richard Graves undertook a short transect survey along the footpath north of the River Crane, including bridges across the river northeast of the site (Figure 1 below).

All surveyors used full spectrum bat detectors recording to digital media, including Elekon Batloggers and Echometer Touch Pro. In addition, two static detectors (an Anabat Express and a Songmeter 4) were deployed overnight and a thermal imaging camera was used to enhance the survey (locations of static detectors, Figure 1 below). Analysis of the static detector results and some of the fixed position surveyor results has been completed, the remaining results are subject to confirmation.

Results

Weather conditions during the dusk survey included light to moderate rain and overcast conditions throughout, with temperatures not dropping below 20°C. The dawn survey was completed in overcast conditions with light rain again. Temperatures again dropped to a minimum of 18°C during the dawn survey.

The following species were recorded (confirmed by analysis) during the survey: *Nyctalus noctula* noctule, *Pipistrellus pipistrellus* common pipistrelle and *Pipistrellus pygmaeus* soprano pipistrelle. The following species may also have been recorded (subject to confirmation): *Pipistrellus nathusii* Nathusius's pipistrelle and *Nyctalus leisleri* Leisler's.

The first bat recorded and observed (by Richard Graves) was a soprano pipistrelle foraging over the River Crane to the northeast of the site at approximately one minute before sunset. The last bat (about five minutes before sunset), a soprano pipistrelle was recorded at the same location as the first.

The earliest bats recorded from within the site were noctules with individual passes of common and soprano pipistrelles during the dusk and dawn surveys. Fixed point surveyor Kevin Hume recorded significantly more activity over and north of the river during the dusk and dawn surveys.

The transect completed by Richard Graves recorded occasional soprano pipistrelle activity along the watercourse and near constant activity during both dusk and dawn elements along the footpath north of the river through Craneford Way Recreation Ground. The largest number of bat passes recorded were for soprano pipistrelle with fewer noctule and common pipistrelle passes and possible fewer, but frequent Leisler passes and a possible individual Nathusius pass.

The static detectors recorded occasional passes of common and soprano and common pipistrelles and noctules. The thermal imaging camera did not record any bats.

None of the bat passes recorded from within the site were indicative of bats roosting within or near to the site. Soprano pipistrelle passes recorded during the transect survey indicate that this species is highly likely to be roosting close to the River Crane.

Incidental observations of other species during the bat survey included *Alcedo atthis* kingfisher and *Lucanus cervus* stag beetle, both flying over the recreation ground.

Figure 1 Survey Locations

During the survey the following observations were made regarding artificial lighting within the site and potentially impacting the River Crane and associated bat corridor:

- High glare security lights affixed to the northern facets of the building on permanently overnight impacting on the river
- Building interior nights left on overnight impacting on the river
- Extremely bright flood lighting of the bin store depot north of the site
- Lighting along the footpath

It is possible that some of the lighting currently affects the use of the corridor, including the River Crane adjacent to the site as more bat activity was recorded over darker sections to the northeast. The bright floodlighting of the depot may also attract insect prey and the noctules that forage on them. However, this can also disproportionately affect other species, drawing prey species away from darker areas.

The proposed new development will be set further back from the river than the existing facilities and a lighting scheme has been designed which will not impact the watercourse or the flight zone above it.

Conclusions

The survey recorded a significant amount of bat activity associated with the River Crane and footpath to the north of the site after sunset and before sunrise. In contrast activity within the site

was very limited and no exits or re-entries of bats were recorded. Current survey results do not indicate that the buildings of the site are being used as a roost.

The current lighting of the site appears to be detrimental to bat use of the adjacent River Crane. The proposed new lighting scheme will eliminate the impact of artificial lighting on the watercourse, removing a possible gap in a bat foraging corridor. In addition, new landscaping proposed as part of the development will provide an enhancement in the form of additional foraging habitat above the current situation of a site comprising entirely buildings and hardstanding.