

LEGGATTS CAMPUS
NORTH WATFORD

BAT SURVEY REPORT

Prepared by
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for

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BAT SURVEY REPORT

1.0 BACKGROUND

Development Background

- 1.1 It is proposed to re-develop Leggatts Campus of West Herts College, North Watford, for housing. It is understood that the planning application is to be submitted during the week commencing 24th September, with a view to the application being determined in December 2007 and site works (i.e. site clearance and building demolition works) commencing immediately thereafter.

Ecology Background

- 1.2 An extended Phase 1 habitat survey and informal desk study was carried out by ACD Landscape Architects in July 2007 in order to provide a preliminary assessment of any identified or potential ecological constraints associated with the re-development proposals. This survey identified that three of the relatively older on-site buildings (B1, B4 and B7) as well as one of the relatively more modern on-site buildings (B10) possess at least some (moderate) potential to support roosting bats.
- 1.3 In addition, during the site visit, mature oak tree (T3) and mature cherry (T4) were considered to possess features which afford both trees, at most, negligible bat roost potential. Specifically, rot holes where branches had been lost/removed were noted on both the oak and cherry whilst the cherry additionally possessed flaking bark. Another mature oak (T1) was also subsequently assessed to possess at least some (negligible) bat roost potential following the identification of significant internal decay by ACD's arboriculturist.
- 1.4 It is understood that all on-site buildings are to be demolished as part of the site re-development, though it is not known whether T1, T3 and/or T4 are to be felled.
- 1.5 Most bat populations have declined dramatically in recent years and as a consequence, all sixteen species of bat resident in the UK receive full protection under the Wildlife & Countryside Act 1981, Countryside and Rights of Way Act 2000 and Conservation (Natural Habitats etc) Regulations 1994. Taken together, this makes it an offence to intentionally or deliberately capture, kill or injure or disturb bats (whether in a roost or not), and intentionally or recklessly damage, destroy or obstruct access to their roosts.
- 1.6 Several species of bat are also Priority Species in the UK Biodiversity Plan and species of principal importance for the conservation of biodiversity in England, including common and soprano pipistrelles, i.e. the most common species of bat and thus most frequently encountered during development works.
- 1.7 Given the proposed development works and the legal protection afforded to bats, the extended Phase 1 habitat survey report therefore makes a recommendation that further bat survey work should be carried out for buildings B1, B4, B7 and B10 and ACD Landscape Architects was accordingly commissioned to carry out this work.

- 1.8 This report concerns only the bat survey work recommendations for buildings B1, B4, B7 and B10 since the specific trees which are to be felled are yet to be finalised and so further bat survey work for on-site potential bat roost trees has yet to be commissioned and undertaken.

Survey Objectives

- 1.9 The objectives of the bat survey work for buildings B1, B4, B7 and B10 were to:
- to determine the presence or likely absence of roosting bats from these buildings;
 - identify any legal and planning policy constraints relevant to nature conservation which may affect the development; and,
 - determine the need for further surveys and mitigation.

2.0 METHODOLOGY

- 2.1 The further bat survey work comprised an internal inspection and detector surveys of each of the four buildings as detailed below:

2.2 Internal Inspection

- 2.3 The inspections were undertaken by a Natural England licensed bat worker (licence number: 20071804) and an assistant. Where accessible and where health and safety considerations allowed, each roof space was surveyed for evidence of bats (e.g. droppings, scratch marks, staining and sightings) using a high-powered torch and endoscope (where required). Notes were made relating to the relevant characteristics of internal features providing potential access points and roosting opportunities for bats, including (but not exclusively):

- Suitable gaps between tiles and roof lining;
- Access points via eaves;
- Gaps between timbers;
- Gaps around mortise joints;
- Gaps around top of gable end walls;
- Gaps within roof walling;
- Gaps around tops of chimney breasts; and,
- Clean ridge beams.

- 2.4 A number of the roof spaces could not be directly entered on account of limited accessibility (see Appendix 2), including the majority of the loft space within building B7 and also several of the numerous loft spaces within B1. In these instances an inspection was made from the loft hatch itself with the aid of high powered torch and binoculars.

2.5 Detector Surveys

- 2.6 One dusk (emergence) and one dawn (re-entry) detector survey of buildings B4, B7 and B10 were undertaken, whilst two dusk and two dawn surveys of building B1 were conducted.

- 2.7 In accordance with current guidelines (Bat Conservation Trust, 2007; Mitchell-Jones, A.J, 2004) and best practice the evening surveys commenced

approximately half an hour before sunset and continued for the following two hours whilst the dawn surveys commenced two hours before sunrise and ended at sunrise.

- 2.8 Frequency division and time expansion bat detectors (Batbox Duet and Pettersson D240X) were used by each surveyor and calls were recorded on to a minidisk and later analysed using computer software (Batscan 9 and BatSound 3.31) to species level (where possible): bat passes which were either too brief and/or faint to record and/or analyse were recorded as unidentified bats, i.e. Vesper species.
- 2.9 The bat detector survey work was undertaken between 13th August and 30th August 2007, given the project deadline for completion of this project survey work and reporting by the 24th September 2007. Exact dates and weather conditions of each detector survey are provided in Appendix 3.
- 2.10 The bat survey work was carried out during the optimal survey window, i.e. during the month of August when maternity roosts or at least some individuals from any maternity roosts may still be present. Further, every effort was made to schedule the detector survey work during suitable weather conditions, i.e. mild, dry and non-windy conditions. In exception, however, gusty wind conditions were encountered during the dusk/dawn survey of B50, during which surveys minimal bat activity was detected. Numerous moths and night feeding invertebrates, however, were noted to be on the wing, and it is not clear whether the weather conditions were a factor in the lack of bat activity. Given that the internal inspection of this building has revealed the presence of a bat roost, however, it is considered that, taken together, the detector surveys and internal inspection provide valid survey data for building B10.

Results

2.11 Internal Inspection

- 2.12 During the internal inspections, evidence of bats was recorded within one (building B10) of the four surveyed buildings. Specifically, a total of approximately 200-300 pipistrelle droppings were found at the south-eastern end of the loft directly beneath the ridge beam.
- 2.13 Although no evidence of roosting bats was identified within the surveyed roof/loft spaces of buildings B1, B4 and B7, possible bat access points and roosting features were noted in at least some of the roof/loft spaces. For example, light at eave level was noted in several of the loft spaces (e.g. east side of B1 and B7) whilst the under-felt beneath the roof tiles on the northern roof of building B1 was noted to be torn in several places affording access from the exterior of the building into the interior and vice versa.
- 2.14 Photographs of selected roof/loft spaces are given in Appendix 1 and a description of the roof/loft spaces of each of the four buildings is included within Appendix 2.

2.15 Detector Surveys

- 2.16 No emergence or re-entry of roosting bats from or into any of the 4 surveyed buildings was detected during the detector survey works. That said, bat activity

was recorded in the vicinity of buildings B1, B4 and B7 close to (i.e. both shortly after and also before) dusk and dawn (i.e. shortly before). Specifically, a single pipistrelle bat was recorded at 20:24 (i.e. 23 minutes after sunset) on 27th August to fly from the western side of building B1 westwards towards the neighbouring gardens. In addition, during the following dawn survey a soprano pipistrelle was observed to forage along the northern side of B1 roof at 05:43 (i.e. 20 minutes before sunrise) on 28th August and another unobserved soprano pipistrelle was detected at the south-west corner of this building at 05:45 (i.e. 18 minutes before dawn) on 28th August.

2.17 Similarly activity close to dusk was noted for buildings B4 and B7. For building B4, a common pipistrelle was first observed at 20:38 (i.e. 12 minutes after sunset) on 13th August immediately west of building B4 foraging at tree height above the courtyard area. For building B7, a single common pipistrelle was observed at 20:14 (i.e. 10 minutes *before* sunset) on 16th August to fly (forage) along the tree-line on the site's western boundary and immediately west of B7.

2.18 The timings of the pipistrelle bat observations made close to dusk and dawn suggest that these individuals are likely to roost within the surrounding area of the site, potentially within the surveyed buildings or possibly neighbouring residential properties and/or within trees of the neighbouring woodland. This interpretation is based upon Kapteyn's (1993) principle that the earlier a bat is seen at sunset, then the closer it is likely to be to its roost. It can therefore be assumed that bats seen shortly after dusk have recently emerged from their roosts nearby (where 'early' is defined as within 20 minutes after sunset for pipistrelle species).

2.19 Despite these notable observations close to both dusk and dawn, no conclusive evidence of roosting bats within buildings B1, B4 and B7 has been identified during the survey work.

2.20 As for building B10, despite pipistrelle droppings having been found within building B10 during the internal inspection, no bats were observed or detected to either exit or re-enter building B10 and no bat activity (e.g. swarming at dawn etc) to indicate the presence of roosting bats was noted during the detector surveys. It is possible that the lack of evidence for roosting bats during the detector surveys of B10 could be explained by the fact that the identified roosting colony had already disbanded or that any roosting bats present chose not to exit the roost on the specific dusk/dawn during which the detector surveys were undertaken.

2.21 Other incidental records of bat activity were made during the detector surveys. This activity was dominated by low numbers of soprano and common pipistrelles, though noctule bats were also occasionally detected. Activity principally included pipistrelle foraging and feeding behaviour associated with the line of trees along the western boundary of the site, the neighbouring gardens and also the woodland edge adjacent to the sports centre car park.

2.22 Detailed survey results are given in Appendix 5.

Discussion

2.23 The findings of the bat survey work allow an evaluation to be made as to the status, seasonal usage and, accordingly, conservation significance of the bat roost