



Photo 7 - Hole in soffit



Photo 8 - Hole in soffit

## Survey Findings

### Building Inspection

- 3.14 In general the buildings within the College Grounds were well maintained flat-roofed brick or metal clad structures that lacked any obvious external features that would be attractive to roosting bats and can be considered to be of negligible value to roosting bats.
- 3.15 A small number of external features were present that could theoretically support crevice roosting bats, but none possessed any obvious evidence that they were used by bats, and their value to bats is theoretical only. The location and description of these features is shown by **Figure 3.3**, and **Figure 3.4**. Buildings with external features of theoretical value to roosting bats can be considered to be of low value to roosting bats.
- 3.16 No trees with obvious features of value to roosting bats were present within the red line area.
- 3.17 The North Stand of the Harlequins stadium possessed no features of value to roosting bats and is also considered to be of negligible value in this respect.

### Bat Activity

#### July 2014

- 3.18 The first bat (a soprano pipistrelle *Pipistrellus pygmaeus*) during the July transect survey was recorded by the static detector located along the tree line along the northern boundary of the playing fields to the north of the College buildings at 21.21 (17 minutes after sunset). The next recorded bat was a soprano pipistrelle at 21.31 by a detector located within the College building area. The static detectors located in the College grounds recorded mainly the calls of soprano pipistrelle bats with an average of 20 separate call files recorded (range 0 to 40). The most calls were recorded by the detector located within the roadside tree and shrub belt along the eastern boundary of the College.
- 3.19 In addition to soprano pipistrelle, four of the College detectors recorded the calls of a common pipistrelle *Pipistrellus pipistrellus* at 21.33, 21.47, 22.11 and 22.12.
- 3.20 A single set of serotine bat calls was also recorded by the detector located in the south west corner of the College grounds at 22.19.
- 3.21 The overall breakdown of calls recorded by the College detectors was as follows: soprano pipistrelle (91% of all calls), common pipistrelle (8%) and serotine (1%).
- 3.22 The static detectors located outside the College grounds recorded only soprano pipistrelle calls with an average number of call sets per detector being 4 (range 0-13).
- 3.23 The surveyors walking the transects recorded mainly individual soprano and occasional common pipistrelle bats as commuting and foraging individual bats as summarised by **Figure 3.5**.





## August 2014

- 3.24 The first bat (a common pipistrelle) during the August survey was recorded by the static detector located along the southern boundary of the College buildings next to the back gardens of the adjoining residential properties at 20.54 (14 minutes after sunset). The next recorded bat was a soprano pipistrelle at 20.59 by the detector located along the northern boundary of the site along the playing field tree line. The static detectors located in the College grounds recorded mainly common pipistrelle bat calls with an average of nine call sets per detector (range 0-41).
- 3.25 In addition to common pipistrelle, the College detectors recorded the calls of soprano pipistrelle (average 4 sets of calls per detector, range 0-10), and the occasional faint overhead commuting calls of a *Nyctalus* bat.
- 3.26 The overall breakdown of calls recorded by the College detectors was as follows: common pipistrelle (68% of all calls), soprano pipistrelle (26%) and *Nyctalus* (6%).
- 3.27 The static detectors located outside the College grounds recorded only soprano pipistrelle and *Nyctalus* calls with an average number of soprano calls per detector being 4 (range 0-10), and *Nyctalus* being 0.5 (range 0-5).
- 3.28 The surveyors walking the transects recorded mainly individual soprano and occasional common pipistrelle bats as commuting and foraging individual bats as summarised on **Figure 3.5**.

## Bat Roost Emergence Survey

- 3.29 No bats were seen or filmed to emerge from any building during the roost emergence survey completed on 30 September 2014.
- 3.30 With the exception of the southern boundary of the College, no bat calls were recorded by any of the detectors within the College during the emergence survey or were heard by the surveyors within the College.
- 3.31 At 19.19 (37 minutes after sunset), a single commuting common pipistrelle bat was seen and recorded flying from east to west along the line of small trees and shrubs that delineate the southern boundary of the College alongside the back gardens of a line of neighbouring semi-detached residential housing. The timing, height and direction of flight suggested that the bat had emerged from an off-site roost – see **Figure 3.5**.
- 3.32 At 19.28, a single commuting soprano pipistrelle bat flew along the southern boundary of the site in the same direction as the common pipistrelle recorded nine minutes earlier.
- 3.33 At 19.32 a high flying (commuting) *Nyctalus* bat was heard above the College but the bat was not seen.

## Conclusions and Recommendations

### Bat Roosts

- 3.34 The static bat detectors recorded early call times of soprano pipistrelle in July (17 minutes after sunset) and common pipistrelle in August (14 minutes after sunset).



- 3.35 The July record was from the tree line that bounds the northern edge of the northern College playing fields and is considered most likely to represent a bat that had been roosting in a residential property somewhere close to the College playing fields to the east.
- 3.36 The August record of a common pipistrelle at 14 minutes after sun-set was recorded by a detector located within the College grounds next to the southern boundary of the site suggesting the presence of a roost close to or within the site.
- 3.37 The September bat roost emergence survey recorded no bats emerging from buildings within the College and recorded negligible bat activity levels suggesting strongly that the College does not support roosting bats, and that the early August recording of a common pipistrelle was more likely to have been a bat roosting in an off-site residential house rather than within a College building.

### Valuation

- 3.38 The site can be valued for commuting and foraging bats using an approach described by Wray, S. *et al* (2010)<sup>4</sup>.
- 3.39 Based on the survey findings, the land within the red line site boundary can be assessed of being of “District, local or parish” value for foraging and commuting bats, with lines of trees, shrubs, waterways, scrub and gardens being the most important features. The College itself is a relatively inhospitable location for bats with large areas of land being dominated by buildings and hard standing that are relatively well illuminated after dark, and lacking insects on which bats could feed. The exception to this appears to be the peripheral undeveloped habitat areas close to the southern boundary of the College which are unilluminated and support a number of trees and a small sheltered grassland area in close proximity to neighbouring gardens.

### Recommendations

- 3.40 Consideration should be given to the incorporation of enclosed bat boxes into the external brickwork of new buildings as a biodiversity enhancement – see [www.habibat.co.uk](http://www.habibat.co.uk)



- 3.41 Consideration should also be given to maintaining peripheral habitat areas unilluminated and to develop a soft landscape strategy that promotes insect diversity particularly around the periphery of the site for the benefit of bats and other wildlife.

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<sup>4</sup> Wray, S *et al* (December 2010) *Valuing Bats in Ecological Impact Assessment*. In Practice



## 4 Other Species

### Background

- 4.1 As part of the current survey, a watching brief was maintained for European hedgehog *Erinaceus europaeus* during the bat transect survey work, and to assess the habitat present for their likely importance to invertebrate species of conservation concern.

### Hedgehog

- 4.2 No hedgehogs were seen at any point during the two after dark bat transect surveys completed in July and August 2014.

### Invertebrates

- 4.3 The semi-natural habitats present on site were dominated by short turf amenity grassland of negligible value to invertebrate species of conservation concern. In general, there were no habitats present within the red line area that were considered to be of particular importance for invertebrate conservation.
- 4.4 The exception to this was the presence of a dead tree stump with evidence of beetle boring located next to a public footpath alongside the River Crane to the south of the site at grid reference TQ 15510, 73520 – see **Figure 4.1**.
- 4.5 The stump has the potential to support the legally protected stag beetle *Lucanus cervus*.







Richmond College  
Figure 4.1

