The Hall School Charitable Trust

The Hall Senior School
Camden

Preliminary Ecological Appraisal review

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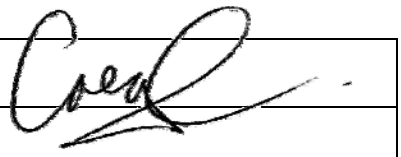
Primary Author	Dr Greg Carson	
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Executive summary

Location	The Hall Senior School, 23 Crossfield Road, London, NW3 4NU (OS GR: TQ 270845)
Previous surveys	*The Hall School. Update Preliminary Ecological Appraisal*. Ramboll. March 2019 *The Hall School, London Borough of Camden - Ecology Report*. Ramboll ENVIRON, 2016.
Survey	Review of 2019 Preliminary Ecological Appraisal, incorporating daytime roost assessment
Conclusions	No substantive ecological change to the application site since 2019 was evident. Evidence of very infrequent bat use was noted away from the building to be developed. This would not be a material constraint on the current proposal. Along with the creation of a green roof, site enhancement and 'designing-in' features to benefit invertebrates and bats, will result in biodiversity net gain.
Recommendations	A licenced bat ecologist is present during the removal of the coping to the Watham Hall roof. Features are 'designed-in' to the development which would benefit biodiversity.

1. Introduction

1.1. Ecology Network Ltd was commissioned by Lysander on 25th September 2022 to undertake a review in relation to The Hall Senior School, 23 Crossfield Road, London, NW3 4NU (OS Grid Ref: TQ 26955 84501; Fig 1).

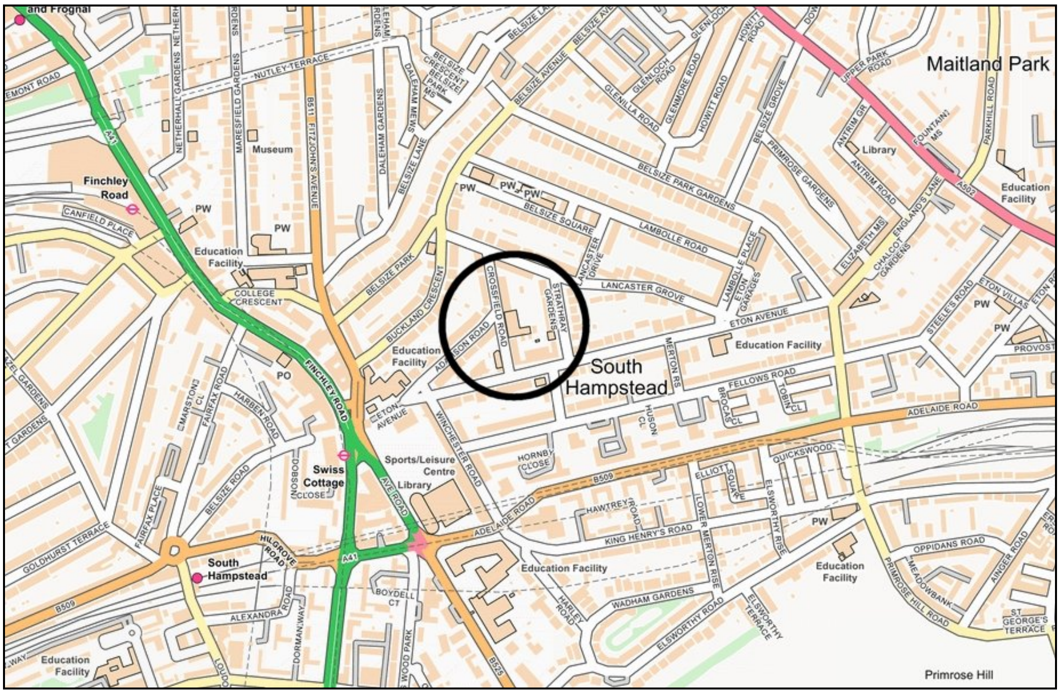

Fig 1 Location plan, The Hall Senior School

1.2. The site comprises an assemblage of buildings dating from 1889 and an area of astroturf (playground) set in a densely urban area. A number of planning consents for the expansion of school facilities have been previously obtained, but it is intended to submit a new application for a considerably scaled-down project, which in the main comprises adding a new floor to the current sports hall (the Wathen Hall). It is understood that the new floor will extend across the roof terrace and include the current location (and hence require the demolition) of the upper floor of the Science Laboratory.

1.3. In 2019 an updated[1] Preliminary Ecological Appraisal[2] (PEA) was undertaken and found that the site had potential to support nesting birds. The report made recommendations for mitigation and enhancement, and indicated that no further survey was required.

1.4. The report stated that "If any action or development has not taken place on this land within twelve months ... the findings of this survey

[1] An ecology report was produced in 2016
[2] *The Hall School. Update Preliminary Ecological Appraisal*. Ramboll. March 2019

should be reviewed by a suitably qualified ecologist and may need to be updated."

1.5. This review was commissioned, given that over 3 years has passed since the 2019 PEA

2. Nature of the PEA review

2.1. This review is not a PEA undertaken 'from scratch'. Rather it looks at the more critical aspects of the 2019 PEA, and reports on further desk and site observations which are material to both policy and legislative constraints. As such, this document needs to be read in conjunction with the 2019 PEA, which contains background information in relation to the site and the PEA methodology[3]. Within this report, the buildings are referred to as A, B, C & D as shown in Fig. 2.

Fig 2 The Hall Senior School site, showing the building layout. The small yellow squares mark the location of the hatches by which the roof voids were accessed.

[3] That reference is made to the 2019 PEA does not necessarily imply endorsement of all the observations or interpretations it cites.

2.2. This review centred on 3 key tasks:
- assess the site for any obvious major changes
- re-inspect the roof structure (under licence 2015-12402-CLS-CLS) & London plane, wrt to bats
- investigate biological records which may have arisen since 2019, and
- consider biodiversity enhancement in the light of net gain policies that are now in place.

3. Results

3.1. A site visit was undertaken on 6th October 2022. The weather was cool (15ºC [4]), clear, still and dry.

3.2. **No major changes** in the site layout, vegetation or principal infrastructure were evident relative to those illustrated within the 2019 PEA

3.3. Given the legal protection afforded to **bats and their roosts**, it was necessary to re-examine[5] the buildings, in case bats had taken occupation in the intervening years. Given the time of year, the inspection focussed upon the internal areas.

3.4. The pitched roof void of Building A was accessed by two hatches at the northern end, and is of sufficient height in which to stand. Despite the presence of water tanks within the northern end (see 2019 PEA, Section 3.5), it was still possible to crawl past the tanks to access the eastern gable end (a typical location for bats to occupy; Fig. 3), and access to the rest of the roof void was possible via a second hatch.

[4] Temperature was measures using a K-type thermocouple

[5] In essence, this amounted to a Preliminary Roost Assessment. A powerful ThruNite Mini TN30 torch (max 3660 lumens) was used.

Fig 3 View of roof void within northern part of Building A (looking west from the eastern gable). The water tank in the foreground is empty and showed no evidence of bats

3.5. The state of the roof void was far from conducive for seeking bat droppings or discarded insect wings: The floor of the void (where not obscured by water tanks) was characterised either by the presence of very old fibreglass insulation, had the original lath & plaster ceiling exposed or in places was boarded. In all areas, a substantial layer of dark detritus is present, making it difficult to discern bat evidence (Fig. 4). Nonetheless, although also covered in detritus, the timberwork and tops of the water tanks (or where no cover was present, the dry interior) offered a better opportunity to seek droppings etc. Despite an intensive search, no evidence of bats was found.

Fig 4 Floor of roof void within Building A. As with all the roof voids, characterised by a significant layer of detritus.

3.6. The basement of Building A was also inspected. Serving as a boiler room, the space is well isolated, with little opportunity for bat access. Numerous horizontal surfaces of plant, as well as a relatively clear floor, facilitated locating bat signs, but none were found.

3.7. The pitched roof void to **Building B** was accessed by a hatch at the northern end. The void is 1.1m high and 2.1m wide at the base, so access along its length was possible. Insulation was most absent from this roof void, with the lath & plaster ceiling exposed (Fig. 5), and subject to a similar covering of detritus as in Building A. The void is restricted to the upper part of the roof, with sarking-clad pitches extending down to the eaves. Large gaps persist down to the eaves (Fig. 6) or in places have been blocked off (Fig. 7).

Fig 5 Roof void within Building B (looking north from the southern gable). The lath & plaster ceiling and timberwork are covered in detritus.

Fig 6 Gap between the sarking-clad pitch and the hip of the roof extending down to the eaves

Fig 7 Gap between the sarking-clad pitch and the hip of the roof blocked off before reaching the eaves

3.8. Close inspection of the timberwork failed to reveal any signs of bats along the length of the void. However, within the dormer present towards the northern end, around 6 brown long eared *Plecotus auritus*[6]. droppings (Figs. 8 & 9), were noted on a loose plank on the ceiling rafters. Locating these resulted in an intensive search of the dormer, with attention paid to the surrounding timber, ceiling and timberwork immediately above (Fig. 10). No further evidence was noted.

[6] Originally thought to be that of common pipistrelle, was confirmed as brown long eared by DNA analysis

Fig 8 Bat droppings on a loose plank in the roof void of the dormer on the east elevation of Building B

Fig 9 Close up of the droppings shown in Fig. 8

Fig 10 Loose plank of timber within the eastern dormer of Building B. No staining or evidence of roosting was noted associated with the timbers above.

3.9. The 'pods' on the flat roof of **Building C** are of predominately zinc construction and are in good condition, offering little opportunity to accommodate bats. The base of the pods comprise lead flashing where they abut the flat roof. This is mostly intact, but in places is lifting (Fig. 11). However, the aspect of this feature makes it unlikely to be suitable for bats.

Fig 11 Lifting lead flashing (centre of photograph) to the base of the 'pods' on the flat roof of Building C.

3.10. The structure of the upper floor of the Science Laboratory offers negligible opportunity to accommodate bats. A line of lead flashing (Fig. 12) joins its roof to the wall of Building C. This was inspected using binoculars from the top of the external staircase. In the main, the flashing is intact, but gaps at the joins may offer limited opportunity for bat occupation.

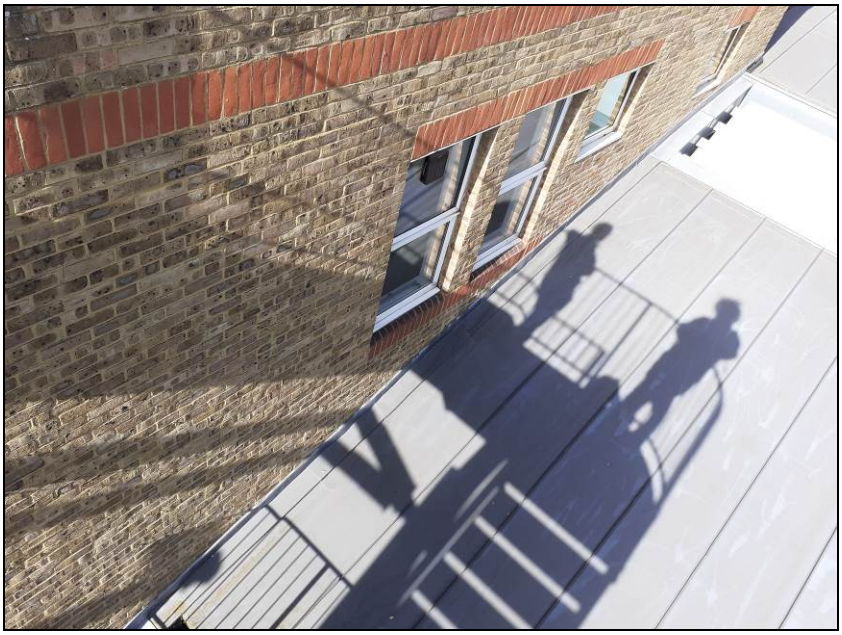

Fig 12 Lead flashing at the intersection of the Science Laboratory roof and Building C.

3.11. The felt roof to Wathen Hall (**Building D**) is intact and in sound condition (Fig. 13), offering negligible opportunity to accommodate bats. Beneath the metal coping at the top of the parapet (where the felt laps up), there is a significant gap. The gap is present beneath the coping on both sides of the parapet. Such a structure may be suitable to accommodate bats and/or provide access to within the (assumed) cavity wall of the building.

Fig 13 Roof of Wathan Hall. Felt in sound condition with no gaps. Coping to parapets has a gap along the length under the return, on both sides of the wall.

3.12. It is understood that to accommodate the new floor, the London plane will require cutting back, including the removal of at least one large limb. The tree was inspected from the roof of Wathen Hall using binoculars[7]. Several substantial pruning wounds were noted (Fig. 14), but none of them appeared to be associated with any gaps which could accommodate or provide entry points for bats. Likewise, although lifting bark is a ubiquitous feature of the tree, the spaces created appear to be too shallow and of insufficient penetration to accommodate even pipistrelles.

[7] Celestron 71331 Nature DX 10x32

Fig 14 London plane adjacent to Wathan Hall, showing two of the pruning wounds.

3.13. The 'introduced shrub' on the terrace identified in the 2019 PEA, are all in planters (Fig. 15), and consequently provide only a limited contribution to biodiversity within the site. The beds and young beech at the front of the main entrance (the west of the site), provide a more enhanced resource for invertebrates (and hence possibly bats).

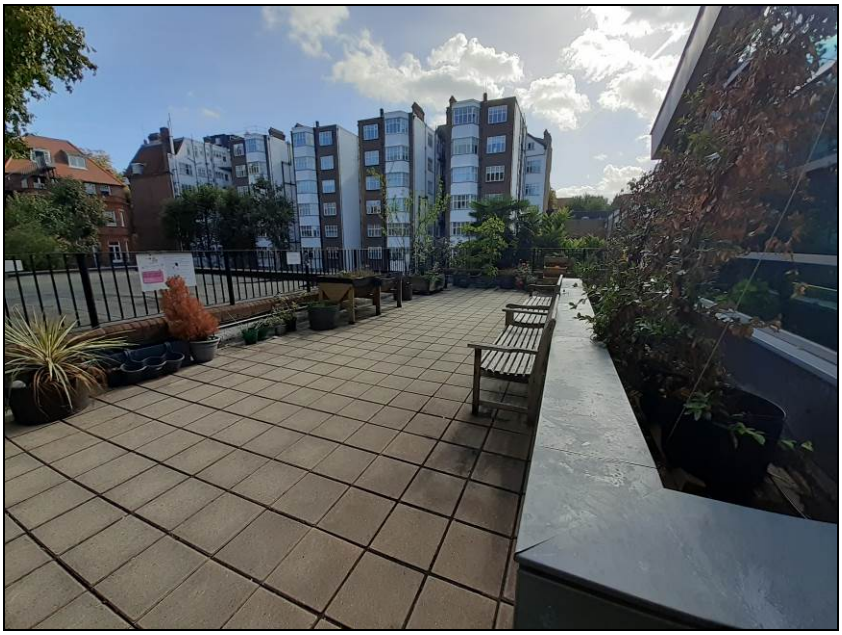

Fig 15 The 'introduced shrub' comprising the terrace planters

3.14. Greenspace Information for Greater London were consulted for biological records within a 1km radius of the school[8]. There were numerous new records for birds, but in nearly all cases, those birds had also been documented prior to 2019, and the more recent record was at a greater distance from the application site. New records included white fronted goose, (possibly[9]) tree pipit, yellowhammer, (possibly) reed bunting, Baltic gull, (possibly) red kite and Dartford warbler. In all cases, the occurrences were at a distance of virtually 1km from the site.

3.15. There were new records for bats, but again most of these had been recorded from within the area previously. Of note is a new record for Nathusius's pipistrelle *Pipistrellus nathusii*, albeit some 850m from the site.

3.16. There are new records for a number of invertebrates (silky gallows-spider *Phycosoma inornatum*, *Pediopsis tiliae* (a true bug), *Anthribus fasciatus*, *Polydrusus formosus* (beetles), *Lycaena phlaeas eleus*, *Thymelicus lineolacites* (butterflies), *Dorycera graminum*, *Andrena minutuloides*, *Lasius brunneus*, *Microdynerus exilis* (flies, ants bee's & wasps). All occur at a distance greater than 700m from the site.

3.17. Of interest is the first documented occurrence of badger within the search area[10].

3.18. The Multi Agency Geographic Information for the Countryside website[11] revealed one (expired, 2012) bat European Protected Species Licence within 1km of the school, which is assumed to be that cited within the 2019 PEA.

3.19. In relation to **planning policy**, Camden Council adopted a new biodiversity strategy, 'Creating space for nature in Camden' in January 2022. One of the objectives is to "achieve net gain in biodiversity through planning decisions that are supported by policy and guidance..."

[8] The same grid reference as cited in the 2019 PEA was used as the centre point (TQ 26932 84533). It was not possible for GIGL to provide a synthesis of new records since 2019, so these were manually 'extracted' from the full report.

[9] The GIGL report only lists the date of the most recent record and the date of the record of the occurrence closest to the site. It does not specify the dates of other records (other than in the confidential records section), so whether a record is new, may need to be interpreted from the number of total records (which is provided).

[10] As this is a confidential record, the distance from the site is not specified.

[11] Consulted 8/10/22

4. Discussion

4.1. An assumption is made that the 2019 PEA gave appropriate consideration to the relevance of the habitat and species records as provided by GIGL at the time. Notwithstanding this, it is evident that a number of new biological records have been made since the 2019 PEA. Although some of these may be related to animals of interest, they are all at some distance from the site (at least 700m), and therefore unlikely to be impacted by the proposal. Such records do, however, serve as a 'flag', so that such species are considered when planning mitigation, compensation or biodiversity gain.

4.2. The new record for Nathusius's pipistrelle is likely to have resulted from increased interest in, and survey effort of, this bat over the last few years, and is significant in this instance when considering mitigation (see Para 4.11 below).

4.3. Detailed inspection suggests the absence of bat activity in the majority of spaces within the school buildings. The exception to this is the dormer on the east side of Building B. The droppings found were of a condition that suggested they were deposited relatively recently (within the last couple of years). That there were so few with an absence of other signs, and confined to just the one area, suggests an opportunistic visit by a single bat.

4.4. This, coupled with the fact that that the droppings were located in a building separate to that of Wathan Hall, means it is extremely unlikely that the proposed work would have an impact upon any future use of this space by bats. It is of note that no evidence of bats was observed at the southern end of the building (ie the end closest to Wathen Hall), which is where it may have been most expected.

4.5. The presence of the droppings however, does demonstrate the presence of bats within the immediate vicinity (cf the 2019 PEA), and this needs to be considered in terms of risk (see below)

4.6. Overall, the sound condition of Wathen Hall and its low external height would not favour its function as a bat roost, particularly for brown long eared bats (Para 3.8) which favour a more open roost space. However, the gaps beneath the coping may provide access to the cavity walls of the building, and an elevated temperature (favoured by bats during the summer) may be created by the dark finish to the coping. Given that bats are likely to be within the vicinity to a greater or lesser extent (see above), it is recommended that a precautionary approach is taken,

and that a licenced bat worker is present to inspect the cavities when the coping is removed.

4.7. The same precautionary approach is recommended when the flashing joining the upper floor of the science laboratory to the wall of Building C is removed.

4.8. Aside from a sporadic and highly localised use of one building by bats (or a bat), the application site is of very limited ecological interest, with the London plane being the main feature, and some contribution to local biodiversity provided by the beech and associated vegetation at the main entrance.

4.9. It is understood that the additional floor to Withan Hall is to incorporate a green roof. Irrespective of the type of 'green roof' installed, such a feature will lead to a substantial increase in biodiversity within the application area, although a 'sedum' roof is unlikely to provide any additional benefit for bats[12]. The incorporation of a green roof, in conjunction with the recommendations below, will serve to support Camdens biodiversity net gain objective.

4.10. In order to ensure that the provision of the green roof demonstrates clear net gain, the loss of the planters on the terrace needs to be compensated. It is suggested that other areas within the application site are planted up and/or incorporate new planters, with native plants, with a view to encouraging insect activity.

4.11. It is noted that that the 2019 PEA recommends the provision of bat boxes. Opportunities may also be sought to make minor changes to the design and/or approach to construction of the new build, to enhance its capacity to accommodate bats, in particular pipistrelles, given the presence of Nathusius' pipistrelle within the search area (Para 4.2, above). For example, breathable roofing membranes should be avoided[13] with preference given to using a traditional roofing felt construction.

[12] H Pearce & C Walters (2012) *Do Green Roofs Provide Habitat for Bats in Urban Areas?* Acta Chiropterologica 14(2):469-478

[13] Recently, breathable membranes may be assessed as being suitable by undergoing a snagging propensity test. Currently, only one (TLX 'Bat Safe') may be suitable for use.

5. Conclusions

5.1. No substantive ecological change to the application site since 2019 was evident, and no new biological records from within the vicinity pointed to an adverse impact by the proposal on any other animals.

5.2. Evidence of very infrequent use of one of the buildings by bats or a single bat was noted. This would not be a material constraint on the current development proposal to add a new floor to Watham Hall.

5.3. Although it is unlikely that bats are using any other structure on site, a precautionary approach is recommended during the removal of the coping to Watham Hall, by having a licenced bat ecologist present.

5.4. Opportunities exists to enhance the site and 'design-in' features which would benefit invertebrates and bats. This, along with the creation of a green roof, would demonstrate that biodiversity net gain will result from the development.

6. Report conditions

6.1. This report is produced solely for the benefit of The Hall School Charitable Trust and no liability is accepted for any reliance placed upon it by any other party unless specifically agreed in writing otherwise.

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