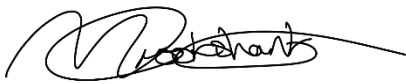
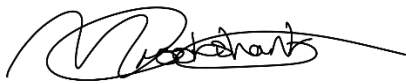




QA**Haringey Civic Centre –Bat Survey Report**

Issue/Revision:	Draft	Final
	September 2021	October 2021
Comments:		
Prepared by:	Molly Crookshank	Molly Crookshank
Signature:		
Authorised by:	Jess Cole	Jess Cole
Signature:		
File Reference:	551475mc01oct21DV01_BATS.docx	551475mc01oct21FV01_BATS.docx

CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	3
	AIMS OF SURVEY	3
	SITE DESCRIPTION	3
	Desk Study	4
	Site Visit	4
3.0	METHODOLOGY	6
	EMERGENCE SURVEY	6
	Surveyors	6
	Limitations and commentary on methodology	7
4.0	RESULTS	8
	EMERGENCE SURVEY	8
5.0	RECOMMENDATIONS	9
	Lighting	9
	Biodiverse Roof	9
	Bat Boxes	10
	Wildlife Friendly Landscaping	11
6.0	SUMMARY	12

FIGURE 1: BAT SURVEY MAP

APPENDIX 1: LEGISLATION AND POLICY

REFERENCES

1.0 EXECUTIVE SUMMARY

- 1.1 Greengage Environmental Ltd was commissioned by Hawkins/Brown Architects to undertake a bat survey of a site known as Haringey Civic Centre, within the administrative boundary of the London Borough of Haringey.
- 1.2 This document is a report of this survey and has been produced to support a planning submission for the site which seeks the refurbishment of the existing building on site as well as to build a new residential area.
- 1.3 An initial ecological walkover of the site was undertaken on 10th August 2020 which entailed a detailed systematic daytime external inspection of the buildings on site to identify any potential to support roosting bats. The inspection confirmed that the main building on site (Building 1) had low potential to support roosting bats. A second building, an outhouse to the east of the site (Building 2) was also found to have low roosting potential. See the BREEAM Ecology report for further details (Doc Ref: 551475jc18Aug20FV01_BREEAM_Eco).
- 1.4 An emergence/re-entry survey was therefore recommended in accordance with best practice guidance from the Bat Conservation Trust (BCT)¹ to confirm the presence/likely absence of roosting bats in building 1. A further survey of building 2 was not considered necessary as this building will be retained and left undisturbed by the development proposals.
- 1.5 The emergence survey undertaken on the 29th July 2021, and recorded no bats exiting the building. Therefore, roosting bats can be determined as likely absent from the building.
- 1.6 Furthermore, low levels of commuting were observed on site during the survey from three species, common pipistrelle (*Pipistrellus pipistrellus*), noctule (*Nyctalus noctule*) and Leislers (*Nyctalus leisleri*).
- 1.7 With roosting bats confirmed as likely absent, the development is predicted to have a negligible impact upon roosting bats, assuming a bat-sensitive lighting regime is implemented post-development, following guidance from The Institute of Lighting Professionals (ILP) and BCT². See section 5 of this report for further details.
- 1.8 Suitable best practice recommendations and enhancement measures for bats have also been made within this report, including:
 - Bat sensitive lighting to be incorporated into the scheme to minimise any potential impacts of increased lighting levels on bats;
 - Biodiverse roof with roof enhancements should also be used on new builds where possible, these should include rope coils, sandy piles, log piles and ephemeral wetlands;

-
- Bat boxes targeting crevice dwelling species should be erected onto the existing trees on site; and
 - Wildlife-friendly landscaping in the form of shrub, herbaceous and tree planting. This includes the inclusion of pollinator friendly flora species and utilisation of night scented species which bring foraging value to bats. The extension of amenity grassland with a diverse mix of low growing flowering species and the creation of a wildflower meadow will also be proposed.
- 1.9 Should these enhancement recommendations be followed, the development stands to result in minor benefits for bats within the developments zone of influence only.

2.0 INTRODUCTION

- 2.1 Greengage was commissioned by Hawkins/Brown Architects to undertake a bat survey of a site known as Haringey Civic Centre, within the administrative boundary of the London Borough of Haringey
- 2.2 This document is a report of this survey and has been produced to support a planning submission for the site which seeks the refurbishment of the existing building on site as well as to build a new residential area.

AIMS OF SURVEY

- 2.3 The purpose of the survey was to further determine if there are any features or habitats on site that could potentially support bats, and, to determine whether any bats are roosting in the building on site. The surveys aimed to:
- Determine the presence/absence of bat species;
 - Determine the intensity of bat activity both spatially and temporally to help estimate bat populations; and
 - Determine the type of activity, most usually
 - Roosting;
 - foraging (by feeding buzzes); and
 - commuting (by high directional pass rates).
- 2.4 By using a collation of existing data for the area to support the survey, it is possible to determine the presence/likely-absence of bats across the site and in the wider area. This information can then be used to determine the form and extent of any mitigation, compensation or enhancement that may be appropriate.

SITE DESCRIPTION

- 2.5 The assessment site covers an area of approximately 1 hectare (ha) and is centred on National Grid Reference TQ 30820 90721.
- 2.6 The habitats on site consisted of buildings, hardstanding, amenity grassland, tall ruderal vegetation, introduced shrub and scattered trees, all of which are common and widespread in the surrounding area.
- 2.7 The site is situated within an urban setting, with Alexandra Palace located appropriately 600m to the south west. The immediate surroundings to the north and south consist of a mix of residential and commercial buildings. Greenspace is more prominent to the east and west with the school grounds of Trinity Primary Academy to the immediate west and Crescent Gardens to the east.

- 2.8 Residential development is dominant in the surroundings to the north, south, east and west. The most significant area of greenspace, Alexandra Park, lies approximately 700m to the south west, and is ecologically connected to site via smaller pockets of greenspace such as parks, private gardens and tree lined streets.

Desk Study

- 2.9 Biological records were analysed to determine the records of bat species in the local area. Records were obtained from Greenspace Information for Greater London (GiGL) in August 2020. Records of ten species were returned from the search including:
- Common pipistrelle (*Pipistrellus pipistrellus*);
 - Noctule (*Nyctalus noctula*);
 - Natterer's (*Myotis nattereri*);
 - Nathusius' pipistrelle (*Pipistrellus nathusii*);
 - Daubenton's (*Myotis daubentonii*);
 - Whiskered/ Brandt's (*Myotis mystacinus/brandtii*);
 - Serotine (*Eptesicus serotinus*);
 - Leislers (*Nyctalus leisleri*);
 - brown long-eared (*Plecotus auratus*); and
 - Soprano pipistrelle (*Pipistrellus pygmaeus*).

- 2.10 An assessment of the local area using aerial photography and available maps and biological data was also undertaken.

Site Visit

- 2.11 During the initial ecological site visit, undertaken on the 10th August 2020, a visual assessment of the buildings and trees to identify their suitability to support roosting bats was undertaken.
- 2.12 The potential access points, roost locations, foraging areas and commuting routes were identified during this inspection.
- 2.13 During the inspection the main building on site (Building 1) was found to be in generally good condition although there were signs of wear particularly around the brickwork. The features of interest on the buildings include gaps under the fascia boards, missing mortar, damaged brickwork and lifted lead flashing.
- 2.14 These features were deemed suitable to support low numbers of common crevice dwelling species such as common pipistrelle.

- 2.15 The site's urban location, isolation from suitable foraging habitat and exposure to regular noise and light disturbance, reduced the suitability of these roosting features.
- 2.16 Therefore, overall Building 1 was given **Low** bat roosting potential.

Figure 2.1 Example of roosting features on building 1.



- 2.17 A second outhouse building (Building 2) was also assessed for its potential to support roosting bats. This building was also found to have some damaged brickwork which, for the reasons given in paragraphs 2.14-2.16 above, was also given **Low** roosting potential.
- 2.18 In accordance with the BCT Good Practice Guidelines¹ and the Bat Workers Manual (2004)³, for the reasons listed above, and given the legal protection afforded to bats (see Appendix 1), the requirement for a further emergence/re-entry survey. This survey is required in order to establish the relative importance of the site for local bat populations, and to identify the presence/ likely absence of roosting bats.
- 2.19 As works are proposed to impact Building 1 only, this further survey is not considered necessary for building 2.
- 2.20 Methodology of this survey is described in the below section.
- 2.21 Two trees were also found to provide low bat roosting potential, however, in accordance with BCT guidance¹ further survey on low potential trees is not required, and instead soft felling of these trees is required if they are to be removed. See the BREEAM Ecology report for further details (Doc Ref: 551475jc18Aug20FV01_BREEAM_Eco).

3.0 METHODOLOGY

EMERGENCE SURVEY

- 3.1 The scoping survey identified six locations across the site that would enable the potential roosting features on Building 1 to be observed sufficiently. These locations are indicated in Figure 1.
- 3.2 The survey took place on 29th July 2021 in suitable weather conditions in accordance with good practice guidance¹. Survey conditions were overcast, with a slight breeze, the temperature throughout the survey was 15°C.
- 3.3 The emergence survey commenced 15 minutes before sunset (20:54) and ran for 1.5 hours thereafter, with the survey starting at 20:39 and ending at 22:24.

Table 3.1 Surveyor locations for the dusk survey, 29th of July 2021.

Surveyor 1	Surveyor 2	Surveyor 3	Surveyor 4	Surveyor 5	Surveyor 6
MC – Located west of the building	JM – Located south-west of the building	HC – located south-east of the building off High Rd (A105)	GT - Located north-west of the building	JA – Located east of the site off High Rd (A105)	EC - Located north-east of the building located off High Rd (A105)

- 3.4 The surveyors were equipped with Echo Meter Touch bat detectors to detect, visualise, and record the calls of any bats present in the area.

Surveyors

- 3.5 Molly Crookshank, who led the survey and wrote this report, has a Bachelor's degree in Animal Biology (BSc Hons), a Master's degree in Wildlife Biology and Conservation (MSc) and is a Qualifying member of CIEEM.
- 3.6 Jess Cole, who reviewed this report, has a BSc degree in Ecology (Hons) and is a Graduate member of CIEEM. Jess holds a Natural England Great Crested Newt Licence (2016-24975-CLS-CLS) and has over five years' experience in ecological survey and assessment.
- 3.7 Additional support was provided by the following field surveyors:
 - Jordan McNulty, who assisted with the site survey, has an undergraduate degree in Marine Biology (BSc with First Class Honours), and a Masters by Research in Ecology, Evolution & Behaviour and has experience in ecology survey and assessments.
 - Hazel Cuenca, who assisted with the site survey, has a Bachelor's degree in Physical Geography (BSc Hons), a Master's Degree in Environmental Conservation (MSc) and has experience in ecology survey and assessments.

- Jessica Aberbach, who assisted with the site survey, is a Geography graduate (BA, Hons). She has over five years experience working within the environmental sector.
- Emma Carter, who undertook the survey has an undergraduate degree in Zoology (BSc Hons).
- Gareth Thomas, who undertook the survey has a PhD in Chemical Ecology and has experience in ecology survey and assessments.

3.8 This report was written by Molly Crookshank and reviewed and verified by Jess Cole who confirm in writing (see the QA sheet at the front of this report) that the report is in line with the following:

- Represents sound industry practice;
- Reports and recommends correctly, truthfully and objectively;
- Is appropriate given the local site conditions and scope of works proposed; and
- Avoids invalid, biased and exaggerated statements.

Limitations and commentary on methodology

3.9 The emergence survey was undertaken at the suitable time of year in suitable weather conditions in accordance with guidance from the BCT¹, therefore, Greengage considered there to be no constraints which impact the results of the survey and the conclusions drawn in this report.

4.0 RESULTS

EMERGENCE SURVEY

- 4.1 No bat roosting activity was observed during the survey. Roosting bats can, therefore, be assumed likely absent from the building.
- 4.2 Bat commuting was recorded at low levels across the site from common pipistrelle, noctule and Leislars.
- 4.3 Three passes of Leislars were recorded at 20:45, 21:21 and 21:56 from surveyors MC, GT, EC, . All of these passes were heard but not seen by the surveyors apart from the pass at 21:21, which was seen by EC travelling north-east of the site commuting over the building.
- 4.4 A single pass from a noctule was heard but not seen by EC at 21:28.
- 4.5 Three passes of common pipistrelle were recorded at 21:32, 21:58 and 22:12. The first pass at 21:32 was detected by the surveyor north-east of the site but was not seen by EC.
- 4.6 It should be noted that High Road (A105) had high levels of traffic and lighting levels during the survey. High levels of lighting is not favourable to bats which are generally considered to be light sensitive species, which therefore decreases the suitability of the site to support foraging and commuting.

5.0 RECOMMENDATIONS

- 5.1 The survey results confirmed the likely-absence of roosting bats within the building on site. There is therefore no requirement for mitigation with regards to roosting bats.
- 5.2 Low levels of commuting were observed over the survey by three species, common pipistrelle, noctule and Leislers.
- 5.3 Suitable best practice recommendations are detailed below.

LIGHTING

- 5.4 Artificial lighting can cause disturbance to bat species' roosting, foraging and commuting activity. Bat-sensitive lighting should therefore be incorporated into the scheme to minimise any potential impacts of increased lighting levels on bats.
- 5.5 Lighting should follow guidance provided by the ILP and BCT² and include the following principles:
 - The new scheme should not exceed the current lighting levels;
 - Use of low-UV warm-white LED bulbs with directional, downward facing and shielded lights which point away from green features such as tree lines or areas of planting;
 - External lights should be subject to curfew controls where possible, with lights on movement sensors to reduce light pollution when not needed;
 - Open green space should remain unlit, particularly between April and October, inclusive when bats are active; and
 - Measures should be taken in internal light placement to reduce risk of light spill from windows, as per guidelines.
- 5.6 Lighting at site should be modelled to confirm predicted intensity and spill.

ENHANCEMENTS

Biodiverse Roof

- 5.7 Green roofs should be implemented due to their valuable contribution towards habitat provision for local wildlife, green connectivity across the landscape
- 5.8 Green roofs should take the form of substrate-based biodiverse roofs. Which utilise multiple substrate types including:
 - Typical biodiverse substrate designed for extensive living roofs, composed of recycled crushed brick, expanded clay shale and recycled organic content (for example Bauder's Biodiverse Substrate⁴);

- Caledonia cobbles of roughly 40-120mm size mixed with the biodiverse roof substrate; and
 - Water collection trays for ephemeral wetland planting. These should be lined with a suitable aquatic compost and cobbles.
- 5.9 Seed mixes and species composition should vary across the roof depending upon substrate types. However, suitable seed mixes can be procured from a variety of retailers that are tailored for exposed, low-nutrient conditions on roof tops. Bauder's Flora 3 Seed Mix⁵ contains 49 species including 35 wildflowers on the RHS Perfect for Pollinators list⁶.
- 5.10 Roof enhancements should also be used on the green roof where possible, these should include rope coils, sandy piles and log piles which all enhance the habitat for invertebrate species, thus improving foraging habitat for bats.
- 5.11 Further detail on this design of the green roof should be specified at a later design stage.

Figure 5.1 Left: Sandy piles covered in stones on biodiverse roof Right: Ephemeral wetlands on a biodiverse roof.



Bat Boxes

- 5.12 Given the scale of the proposed development, at least five bat boxes should be provided on the retained mature trees on site.
- 5.13 The boxes should be positioned 2-5 metres from ground level, facing south west or south east and away from direct lighting.
- 5.14 It is recommended that the crevice bat boxes⁷, or similar are used as these are most suited to common bat species and summer roosting.

Figure 5.1 Example of crevice bat boxes⁷



Wildlife Friendly Landscaping

- 5.15 It is recommended that areas of soft landscaping including shrub, herbaceous and tree planting. Species should be native or have value to pollinators (e.g. those listed by the Royal Horticultural Society (RHS) Plants for Pollinators list^{Error! Bookmark not defined.}).
- 5.16 In order to increase the attractiveness of the site for bats further, night scented species in particular should be favoured, e.g. honeysuckle (*Lonicera periclymenum*), jasmine (*Jasminum officinale*) and evening primrose (*Oenothera biennis*).
- 5.17 The planting of native tree species within the landscaping should include alder (*Alnus sp.*), birch (*Betula sp.*), elder (*Sambucus nigra*) and cherry (*Prunus sp.*).
- 5.18 The proposed extension to the amenity grassland should be sown with a diverse mix of low growing flowering species. Species list can be found in the existing BREEAM report (Doc Ref: 551475jc18Aug20FV01_BREEAM_Eco). The proposed wildflower meadow created on site will be sown with an appropriate wildlife seed mix such as Emorsgate's EM3F-specieal general purpose wildflower mix⁸.
- 5.19 This will encourage a richer invertebrate community and provide foraging resources for bats.

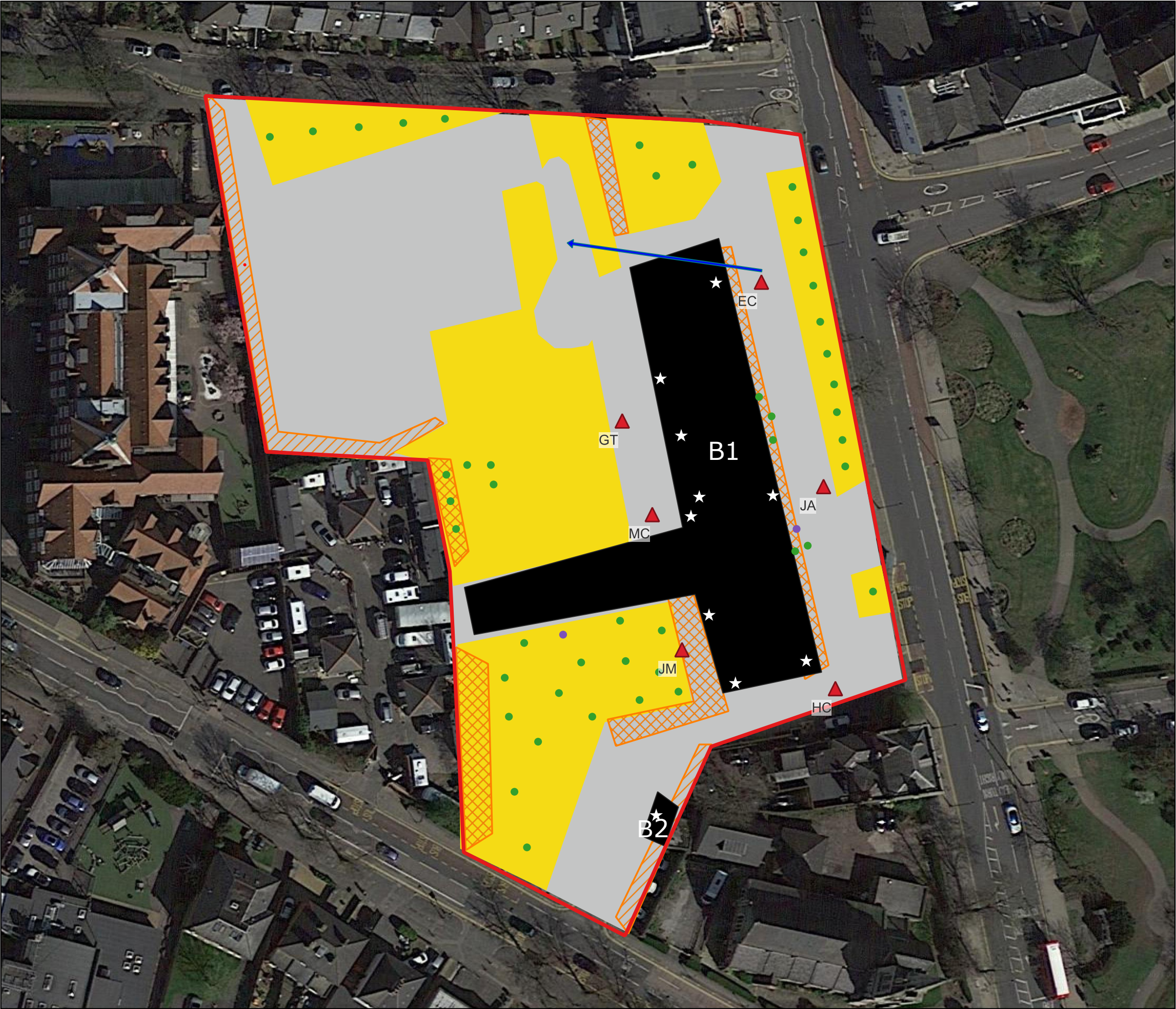
6.0 SUMMARY

- 6.1 Greengage was commissioned by Hawkins/Brown Architects to undertake a bat survey of a site known as Haringey Civic Centre, within the administrative boundary of the London Borough of Haringey.
- 6.2 An external inspection, undertaken by Greengage in August 2020, identified low value for roosting bats on site within Building 1.
- 6.3 No roosting activity was observed during the emergence survey and formal mitigation is, therefore, not required to avoid or minimise impacts upon roosting bats.
- 6.4 Low levels of commuting were observed over the survey by three species, common pipistrelle, noctule and Leislars.
- 6.5 Best practice recommendations for roosting, commuting and foraging bats include the provision of bat sensitive lighting, biodiverse roof, bat boxes and enhanced wildlife friendly landscaping. These recommendations have been details in section 5 of this report.

BAT SURVEY MAP

Haringey Civic Centre

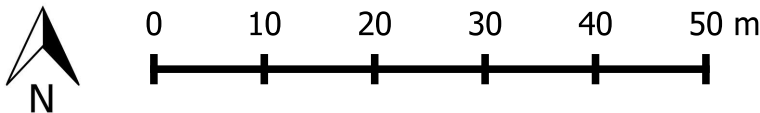
- Red Line Boundary
- ☆ Feature with Low Bat Roosting Potential
- Tree with Low Bat Roosting Potential
- ▲ Surveyor locations
- Leislers route
- Scattered Trees
- Buildings
- ▨ Introduced Shrub
- Amenity Grassland
- ▨ Tall Ruderal Vegetation
- Hardstanding



Greengage Environmental Ltd
9 Holyrood Street, London SE1 2EL
www.greengage-env.com

Fig 1.0 Site Plan and Habitat Map

Project Number 551475
October 2021
1 to 1100 at A3



APPENDIX 1: LEGISLATION AND POLICY

All UK bats and their roosts are protected by law. Since the first legislation was introduced in 1981, which gave strong legal protection to all bat species and their roosts in England, Scotland and Wales, additional legislation and amendments have been implemented throughout the UK.

Six of the 18 British species of bat have Biodiversity Action Plans (BAPs) assigned to them, which highlights the importance of specific habitats to species, details of the threats they face and proposes measures to aid in the reduction of population declines.

The Wildlife & Countryside Act 1981 (WCA)⁹ was the first legislation to provide protection for all bats and their roosts in England, Scotland and Wales (earlier legislation gave protection to horseshoe bats only.)

All eighteen British bat species are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 and under Annexe IV of the Habitats Directive¹⁰, 1992 as a European protected species. They are therefore fully protected under Section 9 of the 1981 Act and under Regulation 43 of the Conservation of Habitats and Species Regulations 2017¹¹, which transposes the Habitats Directive into UK law. Consequently, it is an offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat; and
- Intentionally or recklessly obstruct access to a bat roost.

This legislation applies to all bat life stages.

The implications of the above in relation to the proposals are that where it is necessary during construction to remove trees, buildings or structures in which bats roost, it must first be determined that work is compulsory and if so, appropriate licenses must be obtained from Natural England. Additionally, although habitats that are important for bats are not legally protected, care should be taken when dealing with the modification or development of an area if aspects of it are deemed important to bats such as flight corridors and foraging areas.

REFERENCES

-
- ¹ Bat Conservation Trust, (2015); Bat Surveys – Good Practice Guidelines. Bat Conservation
 - ² Institution of Lighting Professionals and Bat Conservation Trust (2018), Bats and Artificial Lighting in the UK; Bats and the Built Environment Series.
 - ³ Mitchell-Jones, A.J. & McLeish, A.P. (2004) Bat Works Manual, 3rd Edition
 - ⁴ Bauder's Biodiverse Substrate Available from <https://www.bauder.co.uk/technical-centre/products/green-roof-landscaping/biodiverse-substrate>
 - ⁵ Bauder's Flora 3 Seed Mix available from <https://www.bauder.co.uk/solar-pv/bauder-biosolar/flora-3-seed-mix>
 - ⁶ Royal Horticultural Society (2016); Perfect for Pollinators: Wildflowers. RHS, London
 - ⁷ Example of Crevice bat box. Available from <https://www.nestbox.co.uk/products/crevice-bat-box>
 - ⁸ Emorsgate EM3F wildflower mix <https://wildseed.co.uk/mixtures/view/25>
 - ⁹ HM Government, (1981); Part I and Part II of Wildlife and Countryside Act (as amended). HMSO
 - ¹⁰ CEC (Council of the European Communities), (1992); Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
 - ¹¹ HM Government, (2017); The Conservation of Habitats and Species Regulations 2017. Statutory Instrument 2010 no. 490 Wildlife Countryside. OPSI