BACTON LOW RISE REDEVELOPMENT

Camden

Greengage

BAT SURVEY REPORT

JANUARY 2013

Greengage

Bacton Low Rise EC Harris
Bat Survey

QA

Bacton Low Rise, Bat Survey Report

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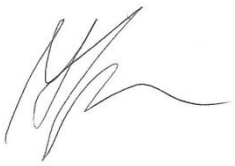
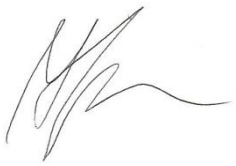
Prepared by:	Morgan Taylor	Morgan Taylor
Signature:		
Authorised by:	Mitch Cooke	Mitch Cooke
Signature:		
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1.0 INTRODUCTION

1.1 Greengage Environmental LLP were commissioned to undertake a Bat Survey on the site of the Bacton Low Rise housing estate, in the London Borough of Camden.

1.2 An Ecological Extended Phase 1 Habitat survey carried out in July 2012 in which we identified the habitats types on site, as well as the overall existing biodiversity.

1.3 Whilst there were no opportunities for bats to be roosting on site, some potential was identified for bats to be using adjacent habitats for commuting or foraging. So as to provide details on how areas adjacent to the site may be being used and how to avoid any impact from the proposed development surveys were recommended for to record bat activity in the area. This information was then used to provide the context for the ecological enhancements being incorporated within the scheme.

1.4 It has been assumed that all areas of the application site and associated habitats will be affected by any future plans (directly or indirectly), and as such this report, identifies potential ecological constraints relating to the entire site with respect to these species.

1.5 The recommendations and opinions expressed in this report are based on the combination of information stated, site observations and feedback from the consultation exercise.

AIMS OF SURVEY

1.6 The purpose of the survey was to determine if there are any features or habitats on site that could potentially support bats. The aims of the survey are to:

- Determine the presence/absence of species;
- Determine the intensity of bat activity both spatially and temporally to help estimate bat populations;
- Determine the type of activity, most usually
    - foraging (by feeding buzzes);
    - commuting (by high directional pass rates);
    - mating (by mating social calls);
- Find roosts by tracking back bat flight paths or observing dawn flight activity at roosts; and/or
- Find emergence of bats from built structures or trees.

1.7 By using a collation of existing data for the area to support the survey, it is possible to determine the presence/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 that

would be required if bats were found to be present. It would also be used to inform the biodiversity benefits associated with the ecological enhancements being integrated into the built form and landscaping.

SITE DESCRIPTION

1.8 The assessment site covers an area of approximately 1.46 hectares (ha) and is approximately centred on National Grid Reference TQ280852, OS Co-ordinates 528084, 185243.

1.9 The site can be split into two areas; referred to in this instance as northern and southern area. The northern area (0.53 ha) contains a number of disused commercial buildings and an associated works yard. The remaining buildings in this area are associated with the District Housing Office and the estate Tenants Association. The southern area (0.93 ha) solely consists of the residential buildings of the low rise housing estate and associated landscaping, parking and hardstanding. There are very few green areas directly on site, with the majority of space consisting of buildings or hardstanding.

1.10 The Thameslink railway line runs east to west directly bordering the north of the site with areas of residential housing extending beyond this. The railway line runs under Lismore Circus; a small area of amenity grassland and scattered mature London Plane and Ash trees to the north of the estate. Between the low rise estate and Lismore Circus sits Bacton Tower with the low rise estate extending to the south west of the site. A small open amenity grassland area with a number of tennis courts can be found to the south east with further areas of residential flats and housing, with associated gardens, extending further south, south east and east. The Kentish Town Church also sits to the east and is surrounded with associated scattered trees and grassland. The open and naturalised areas of Parliament Hill and Hampstead Heath, with a number of bathing and swimming ponds, are found further north (approximately 0.8km).

1.11 It is the area surrounding Lismore Circus that was identified as having potential for bats to be using this for commuting or as a foraging resource. As such, the survey effort will concentrate here.

EXISTING RECORDS

1.12 Site specific information has been sourced through direct consultation with Greenspace Information for Greater London (GiGL), the environmental records centre for Greater London in relation to London's wildlife, parks, nature reserves, gardens and other open spaces.

1.13 The response to this consultation has been received and is referenced within the report. GIGL restricts the inclusion of the full consultation report but data has been

referenced and incorporated here as appropriate to inform the findings and assessment of the site.

1.14 Consultation with the London Bat Group (LBG) was also undertaken and records provided from them on recorded activity within 2km of the site boundary. These are contained within the Appendices.

1.15 Data from both GIGL and from the LBG show that recordings of bat activity have been collected since 1985 and provide a comprehensive picture of the bats within the area.

1.16 Whilst no bats have been recorded within the site itself there are key areas within 2km where bats have been recorded and where known roosts are present. These include Hampstead, Highgate and Regents Park, with other activity associated with areas close to these may sites where corridors or green linkages exist. The closest of these records to the site is 692m NE and is generally associated with Highgate Ponds area where extensive data has been collected by the LBG.

PROPOSED DEVELOPMENT

1.17 It is understood that the plans include the demolition of many of the existing buildings allowing a large scale regeneration of the estate.

POLICY AND LEGISLATIVE CONTEXT

National Policy

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

1.19 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.

1.20 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.

Wildlife & Countryside Act (1981)

1.21 The Wildlife & Countryside Act 1981 (WCA) 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.)

1.22 All eighteen British bat species are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 and under Annexe IV of the Habitats Directive, 1992 as a European protected species. They are therefore fully protected under Section 9 of the 1981 Act and under Regulation 39 of the Conservation (Natural Habitats etc) Regulations, 1994, 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.

1.23 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 DEFRA.

2.0 METHODOLOGY

PRELIMINARY ASSESSMENT

2.1 The initial Phase 1 ecological assessment carried out in July 2012 noted a number of features of potential value to bats that included;

- Potential bat foraging habitat associated with the vegetation on site and on adjacent pathways, railway lines and roads (mostly surrounding Lismore Circus, to the north of the Southern area and west of the Northern area); and
- Suitable commuting corridors from several areas known to support bat populations, including Hampstead Heath and Regents Park.

2.2 For these reasons, and given the legal protection afforded to bats, it was recommended that emergence and activity surveys should be completed to confirm whether or not bats are using the application site. This was also going to be used to inform the opportunities to enhance the biodiversity value on site for bats.

2.3 Visual assessments of the trees and buildings on site and an assessment of the suitability of the habitats present for bats were carried out during the initial Phase 1 Survey site walkover, informing the bat emergence and activity survey. The area was surveyed for bats signs, including the presence of droppings, urine staining, grease marks and signs of food remnants such as moth and butterfly wings.

2.4 The potential access points, roost locations, foraging areas and commuting routes were identified. This information was used to inform the placement of surveyors during the emergence and activity surveys and help further assess the possible implications for bats on site with the proposed redevelopment.

EMERGENCE AND ACTIVITY SURVEY

2.5 Dusk surveys were undertaken on the 8th and 14th August 2012 (sunset 20:36 and 20:24 respectively) with an additional dawn survey on 15th August 2012 (sunrise 05:46). The emergence and activity surveys were undertaken during clear and warm conditions with an average temperature of 18 °C. The dusk surveys commenced approximately 1 hour before sunset and were completed 1 hour after sunset. Surveyors were positioned near the entrance of Lismore Circus to the north of the southern area and west of the northern area. The surveyors were equipped with a BatBox Duet Heterodyne detector to detect the sonar calls of any bats present in the area, which were recorded onto a Zoom Handy Recorder H2 device and subsequently analysed with Bat Sound software on a computer at the office to help with verification of species.

2.6 The dawn survey commenced approximately 1 hour before sunrise until 1 hour after sunrise; again 2 surveyors were present with the same methodology and equipment as the dusk surveys.

3.0 BAT SURVEY RESULTS

ASSESSMENT OF THE SITE

3.1 The habitats directly present on site provide low bat foraging potential, with limited areas of vegetation present to encourage prey species. However, areas directly adjacent to the site, namely Lismore Circus and the bordering railway line to the north do however provide potential for bats to use these either to commute to areas to forage as well as providing some foraging value. Dense areas of scrub bordering linear corridors that link the site to areas such as Hampstead Heath and Primrose Hill exist along the railway line itself and along bordering pathways that link to the Lismore Circus and then the development site in turn.

3.2 The buildings on site show no direct signs of bats, with no droppings, stains, scratch marks or other evidence that may suggest they are present. The roofs were in good condition and there was no sign of immediate access points that are in use, or of any bat activity within the roof spaces following internal inspections.

EMERGENCE AND ACTIVITY SURVEY

3.3 A total of 3 surveys were undertaken over a period of 7 days, this included 2 dusk surveys and 1 dawn survey. All surveys were in accordance with *Bat Conservation Trust, Bat Surveys Good Practice Guidelines*.[1] The weather was mild and dry on all survey occasions. The initial ecological assessment, a desktop review of the site, and an in situ assessment pre-commencement of the survey informed positions for the surveyors and the survey emergence and activity surveys focused attention in Lismore Circus and along the railway line that borders the site to the north.

3.4 Bat activity was observed and recorded across the site using the appropriate equipment. During both dusk survey no bats were observed anywhere on site.

3.5 During the dawn survey 1 pipistrelle (55kHz) was recorded foraging across Lismore Circus, having reached the site from the south; presumably along the railway line.

3.6 No direct emergence activity was observed.

3.7 No swarming was identified from the dawn survey around any trees or buildings which is another indication that bats were most likely only commuting or foraging and not roosting on-site.

TIMING & CONDITIONS

3.8 The survey visits were conducted in August 2012. This was an optimal time for a site walkover survey and an optimal period for the emergence and activity survey according to *Bat Conservation Trust, Bat Surveys Good Practice Guidelines*[1].

3.9 Weather during the survey visits were conducive for surveying for bats, being dry and mild with temperatures averaging 18°C.

4.0 RECOMMENDATIONS & MITIGATION

4.1 The survey results identified there were no roosting bats within trees or buildings in the site boundary or immediately adjacent, along with limited numbers of foraging bats in the area. Despite the low levels of foraging activity, a bat was observed using the area, highlighting the potential for others to also use the site albeit in very low numbers. Therefore suitable best practice and mitigation recommendations are outlined below:

- The construction of the proposed development will take place predominately during daylight hours. As such noise and general disturbance through construction activity will be limited.
- The proposed development will have lighting elements associated with the housing and back gardens, where possible these will be designed following appropriate guidance. This will include direction lighting, appropriate luminescence and protection from light spill and will ensure that all lighting is designed, operated and maintained under best practice conditions. No uncontrolled lighting will occur and light spill will be minimised.

4.2 Overall, it is considered that the proposed development is not likely to have any adverse impact on bats using the site itself.

4.3 Further to the proposed mitigation it is considered unlikely that there will be a significant adverse impact on bats in the local surrounding area, and the overall impact from the proposed development will be negligible.

4.4 However, whilst the application site has been identified as having low potential for foraging and roosting bats, and the impact will be negligible, the following enhancements measures for bats are recommended to increase the biodiversity value of the proposed development:

- Most species of bats will use bat boxes at various time of year but in particular they are favoured by pipistrelles, Leisler's, noctules and Myotis species. A pipistrelle was identified during the survey. With a pipistrelle being recorded from the survey and more individuals being known to be in the wider area we propose that bat boxes or bricks be incorporated on external features of the building; the use of these bat boxes will increase roosting opportunities for bats in the area. Bat boxes or bricks should be positioned in sunny locations mainly to the south or west façade of the building or tress. However, a variety of different locations would provide a range of climatic conditions and attract several different species. The optimal height for a bat box is 3 to 6 metres with an entrance free from obstruction and obstacles. The behaviour of bats varies from species to species but generally they will use a number of different roosts so it is best to erect

several boxes in different locations across the site and include a range of aspects. Linking these bricks/boxes linearly to Lismore Circus or the train line will increase the likelihood of enhanced bat activity on site.

- In addition, appropriate lighting should be included. A lighting strategy can be formally agreed before construction but the design will be based upon guidance within the Institution of Lighting Engineers guidance notes for the reduction of obtrusive light and should include the following:
    - Directional street lighting: This can refer to light being controlled to provide some dark periods or direction control avoiding light spillage and unnecessary light pollution. It should be noted Lismore Circus already contains directional lighting, that should be maintained;
    - No high level security lighting; and
    - Low level bollard lighting.
- The reinstatement of landscaped areas with suitable native planting will encourage a range of invertebrate species to become established on site. All species of bat feed upon invertebrates, so an increase in invertebrate diversity and populations will encourage bats to forage and feed across the site.
- Living roofs have been incorporated within the scheme and include a mix of grasses and wildflowers to provide value to biodiversity as a whole. The use of native species that have some local provenance will attract a wide range of invertebrates into the estate and provide stepping stones to the wider landscape. This in turn will provide an increase in the flying insects likely to provide an increase in foraging value to bats.

LIVING ROOF

4.5 The development design incorporates approximately 30% of the roof surface as a living roof. There is a detailed species mix contained within the landscaping strategy that includes a 30% component of grasses (*Poa annua, Agrostis capillaris* and *Festuca ovina*) and 70% wildflowers. This includes the following species;

- *Achillea millefolium* Yarrow
- *Anthyllis vulneraria* Kidney Vetch
- *Centaurea scabiosa* Greater Knapweed
- *Daucus carota* Wild Carrot
- *Gallium verum* Lady's bedstraw
- *Leontodon hispidus* Rough Hawkbit
- *Lotus corniculatus* Bird's-foot Trefoil

- *Thymus vulgaris* Thyme
- *Silene dioica* Red Campion
- *Geranium pratense* Meadow crane's-bill
- *Origanum majorana* Marjoram
- *Leucanthemum vulgare* Ox-eye daisy
- *Tanacetum parthenium* Feverfew
- *Linaria* vulgaris Toadflax
- *Clinopodium vulgare* Wild basil
- *Silene latifolia* White campion
- *Trifolium pratense* Red Clover
- *Scabiosa columbaria* Small scabious

4.6 Currently, within the site footprint there is a lack of diverse floral habitats. The inclusion of areas of living roof will minimise surface water run-off and improve biodiversity across the site. In particular the wildflower mix contains species that will increase invertebrate presence across the development site. These will in turn provide foraging for bats (as well as a range of birds).

LANDSCAPING

4.7 Full landscaping proposals are contained within the landscaping strategy included as part of the overall planning application and are not replicated here. However, this has sought to balance the use of these spaces to incorporate green linkages to the wider areas, and in particular corridors and connections to more natural spaces such as Hampstead Heath and Kentish Town City Farm, Gospel Oak Railsides and Mortimer Terrace Nature Reserve.

4.8 The areas of grass and tree cover will provide stepping stones to connecting vegetation and enable bats to connect to the wider landscape.

5.0 CONCLUSIONS

5.1 A single pipistrelle bat was recorded foraging over Lismore Circus. No roosts were identified within the buildings or trees on site, or within the immediate vicinity. We conclude that the area is utilised as a commuting path and could also provide foraging habitat due to the presence of invertebrate prey in the limited areas of scrub habitat.

5.2 A low level of impact on bats is expected from the proposed development, mainly associated with any increased light levels that may occur as a consequence of the proposed development. As such the use of directional lighting on the houses and the retention of a vegetated buffer zone should result in no adverse impact on bats.

5.3 The mitigation and recommendations contained within this report will increase the biodiversity value associated with the site and provide a net gain in value for foragin bats.

APPENDIX 1.0 – CONSULTATION WITH LONDON BAT GROUP

London Bat Group

Affiliated to The Bat Conservation Trust

Bat records as requested by Morgan Taylor –

Records within 2km TQ 280852

Greengage Environmental LLP

By e-mail only **31st July 2012**

Your Ref: Bacton Low Rises

Bat Roosts

21/0/2010	[illegible]	2	[illegible]
0/0/2010	[illegible]	2	[illegible]
1/0/200[illegible]	[illegible]	2	[illegible]
22/0/200[illegible]	[illegible]	2	[illegible]
0/10/200[illegible]	[illegible]	2	[illegible]
0/0/200[illegible]	[illegible]	2	[illegible]
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Hibernation Sites

12/11/200[illegible]	[illegible]	2	[illegible]
10/12/200[illegible]	[illegible]	2	[illegible]
20/02/200[illegible]	[illegible]	2	[illegible]

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Bat Casualties

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