9 Holyrood St
London SE1 2EL
T: 0203 544 4000
E: info@greengage-env.com

James Kon
Asserson
By Email Only

16th April 2021
Our ref: 550888mt16Apr21P02

Dear James

Jack Straw Castle – Response to Ecology Comments

Greengage Environmental Ltd have been asked to respond to comments raised in objection letters in relation to the proposed development at Jack Straws Castle for which we undertook ecological assessment and produced associated reports for planning in 2017 and 2020. A further preliminary ecological appraisal was prepared in 2020 but we understand not submitted to the Council, who assessed and were satisfied with the 2017 report. Nonetheless, it is accepted that the 2017 report could now be considered out of date and therefore we have used the 2020 version (a copy of which is appended) for our review. For clarity, within this response we will reference the most recent reports produced for the scheme in 2020:

- Preliminary Ecological Appraisal (PEA), dated April 2020 (an update of the 2017 survey and report), file ref 550888mtApr20FV01_PEA
- Bat Survey, dated June 2020 (an update of the 2017 survey and report), file ref 550888mtJun20FV01_Bats
- Biodiversity Net Gain (BNG) statement, dated March 2020, file ref 550888mtMar20FV01_BNG (which was assessed as part of the planning application)

We have reviewed comments presented in two documents:

- Appeal Statement produced by Metropolis on behalf of the City of London Corporation, dated 22/3/21
- Letter from the Heath and Hampstead Society, dated 25/3/21

For the City of London Corporation's appeal statement reference is made to a statement from the Corporation's senior ecologist. The points raised in this statement are addressed below:

"An assessment of the existing ecological value of the site was made utilising data collected during a Preliminary Ecological Appraisal (PEA) of the site on 20th March 2020". Comment: this is potentially misleading: the assessment was made on this date and not the PEA which was undertaken in March 2017.

An updated PEA was undertaken in 2020 and is appended to this letter. This PEA concludes that the site is generally of low ecological value.

The assessment itself does not consider the potential for biodiversity loss (or gain) off-site caused by the development, which is likely to have a negative ecological impact beyond the site boundaries.

It is unclear what offsite habitat loss this is in reference to. It was understood that the only vegetation loss was the ivy coverage over the wall, which is rooted in the adjacent SINC; this is factored into the

Greengage Environmental Ltd Registration No. 08155937 Registered Address: Camburgh House, 27 New Dover Road, Canterbury, Kent, CT1 3DN

BNG statement. Having again consulted with the design team it is still understood that no vegetation is to be lost within the footprint of the SINC itself other than some potential pruning to enable construction, as per conclusions drawn in the PEA. The PEA does consider off site ecological impacts and provides recommendations for these to be addressed. It is recommended that these measures are integrated within a Construction Environmental Management Plan (CEMP) which could be secured via planning condition. Pruning a small section of vegetation, albeit in a SINC, is not considered likely to result in significant impacts upon a SINC.

The DEFRA measurement tool used for the BNG is limited to 2 decimal places and is measured in hectares. Given the size of some of the areas, they are as small as 4 decimal places. Clarification is therefore required as to how the calculations were made.

This is acknowledged in the BNG statement at 1.16. It states that this is an inherent limitation of using BNG as a tool for measuring change on such a small site. Square metres were therefore used as the unit in this instance; it is acknowledged that this wouldn't be comparable with other sites but nonetheless acts as a reasonable proxy measure of change.

Table 1.1: Baseline Biodiversity Units show a total value of 26.4 biodiversity units which is clear from the table. Table 1.2: Post-development Biodiversity Units shows a total value of 78.32 yet the scores add up to 2.41. This calculation highlights a net biodiversity gain of 296.66%, which would not be the case with a score of 2.41. Therefore, clarification of this calculation is required.

This was a typo in the table. This table should read:

Post-development				
Habitat description	**Area (sqm)**	**Distinctiveness**	**Condition**	**Score**
Biodiverse roof	6	Medium	Good	44.41
Introduced shrub	14.5	Low	Poor	30.77
Façade bound green wall	2.2	Low	Poor	3.13
Developed land, sealed surface	326.3	Very Low	N/A	0
Total:				**78.32**

The next set of comments reference the 2017 report which was subject to an addendum in March 2018 (550888mt22Mar18P01) and was fully updated in 2020. Many of the below are accordingly already addressed within the up-to-date documentation.

Para 5.2: "The closest section of Heath can be found 10m to the north of the site across Heath Brow. This area is defined by woodland and open grassland glades with patches of scrub and ruderal vegetation". Comment: this is an incorrect statement. The closest section of Hampstead Heath abuts the boundary of the development site.

See updated report which acknowledges this.

Bats Paras 5.19 + 5.20: Comment: Due to the high value of foraging and commuting bats in the adjacent Heath it is possible that bats forage along and over the band of shrubs and trees bordering the west of the site and that the car park area forms part of that foraging habitat particularly due to

the presence of the ivy habitat which can be an important nectar source for many moth and invertebrate species. This foraging could be impacted by the presence of the Development through obstruction of current flight routes. This would particularly be the case if bats were present in the existing Jack Straws Castle roof and were returning to roost.

Significant obstruction of flight routes seems highly improbable in this location. There are abundant far more favourable routes throughout the surrounding landscape. Bats were considered likely-absent from the Jack Straw Castle building and low levels of bat activity observed during the survey visits.

Para 5.21: "No further surveys are recommended, but design approach should be sensitive towards bats; most importantly, proposals should not result in increased light spill across the section of the Heath opposite". Comment: This contrasts with the results and recommendations section where additional surveys are recommended to confirm the likely presence or absence of roosting bats.

To date we understand that this has not yet been carried out. As the proposed development does abut Hampstead Heath, it is unclear how a conclusion could rationally be reached that there would be no increased light spill to either the land opposite or the land to the west, especially as pruning and felling of some vegetation is recommended in the 2016 Tree Survey.

See updated PEA. The reference to no further surveys is in relation to foraging bats, whereas the recommendations later in the report refer to roosting bats. Recommendations for light spill control are provided within the PEA.

5.22: there was low to moderate value for roosting bats in the pitched and tiled roofs of Jack Straws Castle. 5.23: Proposals therefore do not stand to directly impact any potential roost. Comment: A roost in the pitched and tiled roofs of Jack Straws Castle could be directly impacted by the presence of a development with commuting to and from the roost impacted and potentially impeded. As the bat surveys were carried out during the day neither foraging over or commuting to a roost could be assessed.

Direct disturbance in licence terms would be disturbance to the physical roost itself, whereas indirect disturbance would include considerations such as flight lines. The report acknowledges that indirect disturbance could occur, and further surveys were accordingly undertaken in 2017 and 2020.

5.25: Nesting value was constrained to the ivy coverage along the western boundary wall. The line of trees beyond this wall in the next door car park may also provide value for bird nesting, however these habitats are outside of the likely zone of influence of proposals. Comment: The development would be adjoined to these habitats and an increase in light, noise or other disturbance could influence a bird's ability to nest even with no change to the habitat itself. A 2020 Breeding Bird Survey on Hampstead Heath revealed 10 breeding bird species within 100m of the site. Although the survey did not cover the area to the west of the boundary wall, this area provides suitable habitat for many of these species.

It is considered highly unlikely that the development would result in impacts upon notable species nesting in surrounding habitats; these are habitats which are already next to development and a car park, so bird species which choose to nest here will inevitably already be those which are less sensitive to human proximity. The proposals integrate proposed nesting habitats for priority species such as house sparrow which clearly tolerate human disturbance.

6.2: Baseline summary: Designated sites: Proposals do not stand to result in direct impacts upon the Heath. Comment: As well as the required pruning and removal of dead trees, which would have a negative impact on biodiversity in the area, the development is likely to result in an impact on the adjoining Heath land both during the construction and after its development. An increase in noise and

light has already been highlighted as having a potential impact on bats as well as nesting birds. Future impacts of the development on Hampstead Heath are covered further below.

See updated PEA. Impacts upon the SINC are considered, and recommendations provided, to be outlined within a CEMP, as standard for developments in proximity to potentially sensitive habitats.

6.6: Proposals should not result in increased light spill across the section of the Heath opposite.

Comment: As with 5.21 above, the PEA does not take account of the correct boundary of the Heath and does not take account of the inevitable increase in light spill to the Heath area to the west.

See updated PEA which does provide recommendations for management of light spill as per best practice.

As well as the impacts highlighted above the development has the potential to cause biodiversity loss on Hampstead Heath as well as to adversely affect future enhancement schemes on the Heath.

It is unclear through what mechanism these suggested impacts are predicted to occur. We believe the limited scale and nature of the scheme is highly unlikely to result in significant impacts upon the Heath, assuming construction impacts are addressed through a CEMP and landscape design, and operational lighting impacts addressed through BCT/ILP guidance compliant lighting design.

The proximity of the site to the SINC area has the potential to cause the future loss of habitat through the likely ongoing maintenance and access required to the development. Future access and maintenance to the western facing section of the development will require access through Heath land. It is difficult to see how any future maintenance or access would not result in a loss of vegetation to the strip of land alongside the development, further reducing its habitat potential. This is estimated to be a future minimal loss of 25m2 of vegetation (Figure 2).

It is unclear what ongoing access this is reference to. Future impacts upon this land have not been predicted based on information made available to Greengage from the design team.

Any future planting or biodiversity schemes along this fringe would be affected as they would have to consider the proximity of the building. Future tree size and spread would be restricted and any planting along the current boundary may be affected by access and maintenance requirements to the development and thus reducing the effectiveness of such schemes.

We do not agree with this statement. There are numerous options for habitat management interventions which could be chosen for land near buildings.

5.4: A bat survey had been undertaken for the previous application to an acceptable standard and mitigation and enhancements are proposed, although roosting bats are likely to be absent on the Jack Straws building and the carpark itself has limited value for bats: Comment: The bat survey actually states that there is a low to moderate roosting bat potential in the existing Jack Straws Castle roof. A moderate potential states that the on-site habitats are of moderate quality, providing most or all of the key requirements for a species (PEA para 4.5). Even the low potential category states 'However, presence cannot be discounted due to the national distribution of the species or the nature of on-site and surrounding habitats(PEA para 4.5). It cannot therefore be considered that bats are likely to be absent.

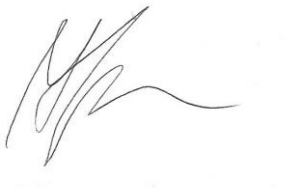
Please see the up-to-date PEA. Updated surveys which follow BCT have been undertaken which confirm likely-absence of bats.

The Letter from the Heath and Hampstead Society also suggests that they have not been given the most recent documentation for the site. The assertion that a 'bat survey was carried out in daylight hours' is incorrect. A PEA contains a protected species scoping survey during which potential value for bats is assessed; this is a standard approach. Recommendations for further phase 2 surveys are then typically provided, as was the case. These further surveys were undertaken in 2017 and 2020 during which no bats were observed roosting in Jack Straws Castle. The comment relating to BNG is addressed as above.

The updated 2020 accounts for the site's proximity to the SINC and provides best practice recommendations on how the SINC should be adequately protected. This includes recommendations relating to light spill, with lighting design (including internal) recommended to follow measures outlined within the BCT/ILP best practice guidance.

We hope the above suitably addresses all comments raised within the objections. Should you have any further queries do not hesitate to get in touch.

Yours sincerely



Morgan Taylor

Director

For and on behalf of Greengage Environmental Ltd

Appendices

Appendix 1 Preliminary Ecological Appraisal 550888mtApr20FV01_PEA

Appendix 2 Bat Survey 550888mtJun20FV01_Bats

Appendix 3 Biodiversity Net Gain (BNG) statement 550888mtMar20FV01_BNG

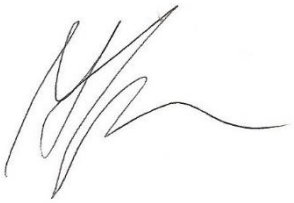
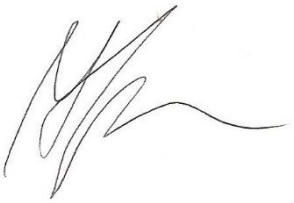
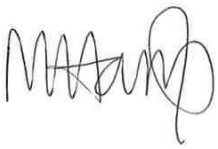
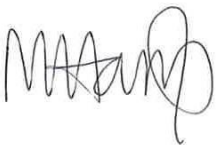
Appendix 1

Greengage

Jack Straw' s Castle, Montagu Evans
Preliminary Ecological Appraisal, April 2020

QA

Jack Straw's Castle – Preliminary Ecological Appraisal

Issue/Revision:	Draft	Final
Date:	April 2020	April 2020
Comments:		
Prepared by:	Morgan Taylor	Morgan Taylor
Signature:		
Authorised by:	Mike Harris	Mike Harris
Signature:		
File Reference:	550888mtMar20DV01_PEA	550888mtApr20FV01_PEA

CONTENTS

1.0 EXECUTIVE SUMMARY

1.1 Greengage Environmental Ltd was commissioned to undertake a Preliminary Ecological Appraisal (PEA) by Montagu Evans of a site known as Jack Straw's Castle, Hampstead.

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 construction of a new residential block adjoining the existing Jack Straw's Castle building.

1.3 This survey aimed to establish the ecological value of this site and the presence/likely-absence of notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.

1.4 The assessment site comprises a small car park area adjacent to the former Jack Straw's Castle public house on Hampstead Heath.

1.5 A survey was first undertaken in 2017; given the age of the survey data an updated survey was accordingly recommended. This report presents the results of this updated assessment, undertaken in March 2020.

1.6 Details received from a desk top study and the updated site walkover have confirmed the site:

- Is immediately adjacent to Hampstead Heath Site of Metropolitan Importance for Nature Conservation (SINC);
- Has low value for nesting birds; and
- Has low to moderate value for roosting bats in the adjacent building and tree.

1.7 A bat survey undertaken in 2018 confirmed the likely-absence of roosting bats, however these data are now considered out of date. Proposals should therefore take account of the potential value for bats in the adjacent building, tree and surrounding area. An updated assessment for bats is accordingly recommended to be undertaken prior to works taking place, with actions that may result in significant disturbance to bats in the surrounding area, such as extensive piling works or lighting, be subject to controls.

1.8 Vegetation clearance should be avoided during the breeding bird season, taken to run March to September. Any clearance during this period should only proceed following a nesting bird check by a suitably qualified ecologist.

1.9 Given the loss of the small area of ivy, which falls within the boundary of Hampstead Heath SINC, proposals should include compensatory vertical greening and bird nesting opportunities.

1.10 Best practice environmental practice should also be followed to minimise any indirect impact upon the Heath. This should include measures to address disturbance throughout

construction as well as operation, such as the control of light spill. Such actions could be secured through production of a Construction Environmental Management Plan (CEMP).

1.11 Proposals should also seek to achieve net gains for biodiversity through the integration of the following enhancement actions:

- Wildlife friendly landscaping;
- Living roofs on the cycle store and bin shelter;
- Bird and bat boxes integrated into the fabric of the building.

1.12 Assuming the measures summarised above are implemented effectively, then no adverse impacts on biodiversity within or adjoining the site are predicted, and proposals have the potential to provide a net gain for biodiversity.

1.13 All of the above key actions could be included and detailed within an Ecological Management Plan (EMP) and CEMP for the site which could be secured through planning condition. Should these recommendations be adhered to, the proposals stand to be compliant with legislation and current and emerging planning policy.

2.0 INTRODUCTION

2.1 Greengage was commissioned to undertake a Preliminary Ecological Appraisal by Montagu Evans of a site known as Jack Straw's Castle, Hampstead.

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 construction of a new residential block adjoining the existing Jack Straw's Castle building.

2.3 This survey aimed to establish the ecological value of this site and the presence/likely-absence of notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.

SITE DESCRIPTION

2.4 The site comprises a small car park area adjacent to the former Jack Straw's Castle public house building located on North End Way in Hampstead, London Borough of Camden.

2.5 The entire assessment site consists of hardstanding with some ivy coverage along the western boundary wall. Land to the immediate west of this wall, within which the ivy and several trees are growing, falls within Hampstead Heath Site of Metropolitan Importance for Nature Conservation (SINC).

2.6 The site is bound to the east by North End Way, the north by Heath Brow, beyond which extends the Heath, and the south by the former Jack Straw's Castle public house building.

2.7 The site is surrounded by an abundance of diverse green space, with woodland and grassland associated with the Heath extending to the north, east and west. The residential area of Hampstead Village can be found to the south.

3.0 METHODOLOGY

3.1 The PEA (which included an Extended Ecological Phase 1 Survey) was undertaken in accordance with guidance in the Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase 1 Habitat Survey[1] and the Chartered Institute of Ecological and Environmental Management (CIEEM) (2017) Guidelines for Preliminary Ecological Appraisal[2], in accordance with BS42020:2013: Biodiversity[3]. The overall assessment consisted of:

- A desktop assessment and review of available biological records; and
- A site walkover, protected species scoping assessment and phase 1 habitat survey.

3.2 The site-specific consultation provided the ecological context for the site survey carried out on the 20th March 2020.

3.3 The survey boundary and existing site is shown at Figure 4.1.

3.4 Greengage undertook the site walkover during cool but sunny weather conditions. Features within the site boundary and accessible features immediately bordering it were evaluated and the extent and distribution of habitats and plant communities were recorded and supplemented with target notes on areas or species requiring further commentary. Fauna using the area were recorded and areas of habitat suitable for statutorily protected species were identified where present, with an active search carried out for evidence of such use.

DESK TOP REVIEW

3.5 A review of readily available ecological information and other relevant environmental databases (included Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) website[4]) was undertaken for the site and its vicinity. In addition, local authority websites and a biological records search from Greenspace Information for Greater London (GiGL) were reviewed to identify the location and citations of local non-statutory designated sites and presence of records for notable and protected species. This provided the overall ecological context for the site, to better inform the Phase 1 Survey.

ON SITE SURVEYS

Flora

3.6 The extent and distribution of different habitats on site were identified and mapped according to the standard Phase 1 Survey methodologies, supplemented with target notes describing the dominant botanical species and any features of interest. Any present protected plant species and invasive/non-natives were also noted. A habitat map has been produced to illustrate the results, as shown at Figure 4.1.

Fauna

3.7 The Phase 1 Survey specifically included assessments to identify the potential value for notable, rare and protected species at site. This involved identifying potential habitats in terms of refugia, breeding sites and foraging areas in the context of species known to be present locally and regionally.

3.8 The likelihood of occurrence is ranked as follows:

- Negligible - While presence cannot be absolutely discounted, the site includes very limited or poor-quality habitat for a particular species. The site may also be outside the known national range for a species;
- Low - On-site habitat is poor to moderate quality for a given species, with few or no information about their presence from desk top study. However, presence cannot be discounted due to the national distribution of the species or the nature of on-site and surrounding habitats;
- Moderate - The on-site habitats are of moderate quality, providing most or all of the key requirements for a species. Several factors may limit the likelihood of occurrence, habitat severance, habitat disturbance and small habitat area;
- High - On-site habitat of high quality for given species. Site is within a regional or national stronghold for that particular species with good quality surroundings and good connectivity; and
- Present - Presence confirmed for the survey itself or recent, confirmed records from information gathered through desk top study.

3.9 Given the site's urban location it was possible to rule out the presence of many protected/notable species. Several species are however known to be present in such habitats. The PEA therefore included a focus on the following species/species groups:

Badger (Meles meles)

3.10 The potential for badger to inhabit or forage within the study area was assessed. Evidence of badger activity includes the identification of setts (a system of underground tunnels and nesting chambers), grubbed up grassland (caused by the animals digging for earthworms, slugs, beetles etc.), badger hairs, paths, latrines and paw prints.

Bat Species (Chiroptera)

3.11 The site visit was undertaken in daylight and the evaluation of bat potential comprised an assessment of natural features on site that aimed to identify characteristics suitable for bat roosts, foraging and commuting. In accordance with Bat Conservation Trust's *Good Practice Guidelines*[5] and methods given in English Nature's (now Natural England) *Bat Mitigation Guidelines*[6] consideration was given to:

- The availability of access to roosts for bats;
- The presence and suitability of crevices and other places as roosts; and
- Signs of bat activity or presence.

3.12 Definite signs of bat activity were taken to be:

- The bats themselves;
- Droppings;
- Grease marks;
- Scratch marks; and
- Urine spatter.

3.13 Signs of possible bat presence were taken to be:

- Stains; and
- Moth and butterfly wings.

3.14 Features with potential as roost sites include mature trees with holes, crevices or splits (the most utilised trees being oak, ash, beech, willow and Scots pine), caves, bridges, tunnels and buildings with cracks or gaps serving as possible access points to voids or crevices.

3.15 Additionally, linear natural features such as tree lines, hedgerows and river corridors are often considered valuable for commuting and semi-natural habitats such as woodland, meadows and waterbodies can provide important foraging resources. Consideration was given to the presence of these features both immediately within and adjacent to the assessment area.

Birds

3.16 During the walkover survey, the potential for breeding, wintering and migratory birds was assessed. In particular, this includes areas of trees, scrub, heathland and wetlands that could support nests for common or notable species.

Invertebrates

3.17 As part of the walkover survey the quality of invertebrate habitat and the potential for notable terrestrial and aquatic invertebrate species was considered. There is a wide variety of habitats suitable for invertebrates including wetland areas, heathland, areas of bare sandy soil, ephemeral brownfield vegetation and meadows.

Biodiversity Action Plan priority species/ Species of Principal Importance

3.18 Where consultation and desk-study indicates the presence of BAP priority species (Species of Principal Importance) not protected by statute, effort was made to establish the potential for the site to support these species.

SURVEYORS

3.19 Morgan Taylor, who undertook the survey and wrote this report, has a bachelors and master's degree in marine biology (MSci Hons), a Natural England CL17 Bat Survey Level 2 Class Licence (2015-7369-CLS-CLS) and CL10 Dormouse Survey Licence (2017-30817-CLS-CLS). Morgan is a Chartered Environmentalist, Full member of CIEEM and has over 8 years' experience in ecological surveying having undertaken assessments of numerous development sites of this type. He leads the Ecology team at Greengage.

3.20 Mike Harris, who reviewed this report, has a Bachelor's degree in Environmental Biology (BSc Hons), a Natural England Great Crested Newt Licence (2015-17819-CLS-CLS) and Dormouse Licence (2016-21291-CLS-CLS), is a Chartered Environmentalist (CEnv) and is a Full member of CIEEM. Mike has over 17 years' experience in ecological surveying and has undertaken and managed numerous ecological surveys and assessments.

3.21 This report was written by Morgan Taylor and reviewed and verified by Mike Harris who confirms 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.

CONSTRAINTS

3.22 The PEA was undertaken during an optimal time of year during ideal conditions by a suitably qualified ecologist. It was possible to access all areas of the site itself although given covid 19 social distancing restrictions it was not possible to undertake an internal inspection of the attic space of the adjoining Jack Straw's castle building.

3.23 Assuming the recommendation for further survey work relating to bats is undertaken this is not however predicted to result in any significant constraint over the conclusions drawn in this report.

4.0 RESULTS

DESK TOP REVIEW

Designations

4.1 Consultations with the local biological record centres (GiGL) and the MAGIC dataset have confirmed that there are no statutory designations of national or international importance within the boundary of the site.

4.2 There was one statutory designated site within a 1km radius, Hampstead Heath Woods Site of Special Scientific Importance (SSSI).

4.3 Records from GiGL did however identify 4 non-statutory Sites of Importance for Nature Conservation (SINCs) within 1km of the site boundary, including one immediately adjacent to the site. SINCs are recognised by LPAs as important wildlife sites.

4.4 Table 4.1 below gives the locations and descriptions of a selection of the nearest/most relevant local designations.

Table 4.1 Designated Sites within Search Radius

Site Name	Approximate Location	Description
Statutory		
Hampstead Heath Woods SSSI	0.7km north east	Fragment of ancient woodland highly valued for the abundance of mature and over-mature trees and associated invertebrate community, alongside an adjacent small valley containing an acidic flush with developing bog-moss communities.
Non-Statutory		
Hampstead Heath (SINC – Metropolitan)	Immediately adjacent to the west	An extensive parkland highly valued for its mix of woodland, open grassland and bog habitats. Supports a wide range of rare, notable and protected species.
Branch Hill Borough Grade I SINC	0.5km south south-west	Several blocks of woodland and grassland, incorporating the private grounds of three large houses (Combe Lodge, Oak Hill House and Heysham) and Branch Hill Allotments.
Hampstead Parish Churchyard Borough Grade I SINC	0.7km south	A churchyard with slightly acidic meadow areas and a number of mature trees.
Turner's Wood Borough Grade II SINC	0.9km north	A small fragment of ancient woodland managed for bird conservation.

Biodiversity Action Plans

4.5 UK Biodiversity Action Plans (BAPs) have been developed which set priorities for nationally important habitats and species. To support the BAPs, Species/Habitat Statements (otherwise known as Species/Habitat Action Plans) were produced that provide an overview of the status of the species and set out the broad policies that can be developed to conserve them. A list of priority species of conservation importance was also developed.

4.6 The UK BAP was succeeded in 2012 by the *UK-Post 2012 Biodiversity Framework* which informed the creation of the *Biodiversity 2020* strategy; England's contribution towards the UK's commitments under the *United Nations Convention of Biological Diversity*.

4.7 Despite this, the UK BAP priority species lists and conservation objectives still remain valid through integration with local BAPs (which remain valid), and in the form of the Habitats and Species of Principle Importance list (as required under section 41 of the Natural Environment and Rural Communities (NERC) Act).

4.8 No UK BAP priority habitats were present at site.

4.9 Local Biodiversity Action Plans (LBAPs) ensure that national action plans (the UK BAP/Biodiversity 2020) are translated into effective action at the local level and establish targets and actions for locally characteristic species and habitats.

London BAP

4.10 The London BAP[7] lists 26 priority habitats and species to protect and enhance, which are of importance to London's nature conservation. Notable features of the London BAP that are of relevance to this report (due to the presence of these habitats or species in the surrounding area, associated with the Heath) are:

- Heathland Habitat Action Plan (HAP);
- Acid Grassland HAP;
- Woodland HAP;
- Parks & urban green spaces HAP;
- The onus placed on the importance of built structures for wildlife;
- Bat Species Action Plan (SAP); and.
- House Sparrow SAP.

Camden BAP

4.11 Features within the Camden BAP of importance to this report include:

- The Built Environment Action Plan; and

- Camden Biodiversity Advice Note on Landscaping Schemes and Species Features.

Species Record

4.12 The information provided in the biological data search from GiGL identified records of a number of protected and BAP priority species within 1km search radius of the site. Among others, these include the following species of relevance to the site:

- Common frog (*Rana temporaria*) and common toad (*Bufo bufo*);
- Bat species including Daubenton's (*Myotis doubentonii*), whiskered/Brandt's (Myotis mystacinus/brandtii), Natterer's (Myotis nattereri), common noctule (*Nyctalus noctula*), Leisler's (*Nyctalus leisleri),* common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), serotine (*Eptesicus serotinus*) and brown long eared (*Plecotus auritus*)*;*
- West European hedgehog (*Erinaceus europaeus*);
- Notable invertebrate species including a range of saproxylic beetles such as stag beetle (*Lucanus cervus*) and lepidoptera such as the small heath (*Coenonympha pamphilus*);
- Notable/rare birds species including house sparrow (*Passer domesticus*), black redstart (*Phoenicurus ochruros*), swift (*Apus apus)*, house martin (*Delichon urbicum*), spotted flycatcher (*Muscicapa striata*) and grey wagtail (*Motacilla cinereal*).

4.13 The species listed above are primarily those known to be in the area that may be impacted by any proposals at the site, or that stand to benefit as a consequence of potential ecological enhancements at the site and inform site-specific mitigation and enhancement recommendations described in the following chapter.

Detailed Description of Site: Habitats

4.14 The habitats presented across the assessment site consist of the following Joint Nature Conservation Committee (JNCC) Phase 1 Habitat categories, as mapped at Figure 4.1:

Building (J3.6) and Hardstanding (J3.6.1)

4.15 The site itself is comprised entirely of hardstanding with a stretch of brick wall and overhanging ivy (*Hedera helix*) coverage.

4.16 There is a single tree opposite the site in a traffic island off North End Way. Deciduous semi-natural woodland, improved grassland, scattered scrub and tall ruderal vegetation extend to the north associated with the Heath. The site is bound along its southern boundary by a building.

4.17 No protected or rare habitats were therefore present at site, although deciduous woodland is a London and UK BAP priority habitat alongside several other habitats found across the adjacent Heath such as acid grassland, heathland, open landscapes with ancient trees and the built form.

Figure 4.1 Ownership boundary (solid red) and application site (dashed red line) showing areas of building and hardstanding as well as the location of the ivy coverage (solid green line) and single street tree opposite (green circle).

Target Notes

Target Note 1

4.18 This note describes the site itself; a 20m by 15m area of car park overlooked by the former Jack Straw's Castle public house building to the south.

Figure 4.2 Looking west over the assessment site overlooked by the adjacent building

Target Note 2

4.19 This note describes the ivy-covered wall and band of trees/scrub to the west of the site. The scrubby tree line is located off site along the boundary of the adjacent car park that serves the West Heath. Species present include sycamore (*Acer pseduoplatanus*), elm (*Ulmus* sp.) and cherry (*Prunus avium*).

Figure 4.3 The ivy clad wall (left) and tree/scrub line of the next door car park (right)

Target Note 3

4.20 This note describes the section of Heath opposite the site., this part of the Heath, the West Heath, is defined by patches of open grassland amongst deciduous woodland, scrub and heathland.

Figure 4.4 The section of Heath opposite the site

Target Note 4

4.21 This note describes the single street tree in the traffic island on the corner of North End Wat. A semi-mature oak, the tree has some features that would be considered of potential value for wildlife, including a woodpecker hole.

Figure 4.5 The tree located opposite the site entrance

Bats

Foraging

4.22 The site itself is likely to be of negligible value for foraging bats, containing no suitable habitats of value for invertebrate prey.

4.23 Surrounding habitats, including the adjacent areas of Heath are likely to be of high value for foraging and commuting bats supporting a diverse assemblage of invertebrate prey species.

Roosting

4.24 There is negligible value for roosting bats within the site itself given the absence of any suitable structures, however, there was low value for roosting bats in the pitched and tiled roofs of Jack Straw's Castle, which overlooks the site and the proposed development.

4.25 Moderate value due to the presence of a woodpecker hole and some storm damage was also noted in the oak tree to the immediate south of the site, on the traffic island opposite the entrance at the corner of North End Way and Heath Brow.

Birds

4.26 Nesting value was constrained to the ivy coverage along the western boundary wall. The line of trees beyond this wall in the adjacent car park may also provide value for nesting by common passerine species.

Invertebrates

4.27 Habitats on site were of limited value for invertebrates. The ivy likely provides a late summer resource for pollinators however.

Other Protected Species

4.28 Value for other notable, rare or protected species was deemed negligible given the location of the site and nature of the existing habitats.

5.0 EVALUATION AND DISCUSSION

BASELINE SUMMARY

5.1 The assessment site and its surroundings have potential to support the following ecological receptors of note, which could therefore be impacted upon by any future prospective development proposals, as indicated in Table 5.1 below. Given the small scale of the proposed works a full ecological impact assessment was not considered necessary, however commentary of predicted impacts and associated recommendations is outlined below.

5.2 Comment on further recommendations for each receptor is provided; further detail and discussion can be found at paragraph 5.2 onward:

Table 5.1 Baseline Summary

Receptor	Presence/ Potential Presence	Potential Impact	Recommendations and Residual Impact
Designated Sites: Statutory	0.75km away	Impacts associated with the development are considered unlikely due to distance and other barriers.	No action required with no impact predicted.
Designated Sites: Non-Statutory	Hampstead Heath SINC immediately adjacent	Without mitigation, demolition and construction works could stand to result in minor local impacts upon this small section of the Heath, through increased noise, vibration, dust deposition or pollutant spillage. Construction works may also require scaffolding to be erected within the adjacent tree line which falls within the SINC. In the absence of mitigation this could result in the loss of a small area of ivy and the tree line. Furthermore, in its operation the scheme may result in increased light spill across the surrounding section of Heath.	A detailed Construction Environmental Management Plan is recommended to address potential impacts upon the Heath during construction and operation of the site. This should include consideration of lighting impact. Any construction works should follow guidance provided in the tree survey report relating to protection of trees in line with BS5837. Any area of lost ivy overhanging the boundary wall (which is rooted within the SINC), should be compensated for through the provision of a trellis system allowing ivy to grow up the elevation of the new development. Assuming this is suitably implemented, no residual impacts are predicted.

Receptor	Presence/ Potential Presence	Potential Impact	Recommendations and Residual Impact
Foraging bats	Negligible	The site itself has limited value to support foraging and commuting bats. Without due consideration, proposals may however stand to result in increased light spill into surrounding habitats which would stand to result in minor impacts upon foraging and commuting bats at a local scale.	No further surveys are recommended, however due to the close proximity of Heath, it is recommended that a sensitive lighting strategy following best practice industry guidance produced by the Bat Conservation Trust and Institute of Lighting Professionals[8] be implemented. Furthermore, it is recommended that the proposals help to enhance the existing environment for commuting and foraging bats through the provision of wildlife friendly landscaping. Assuming these measures are implemented the proposals stand to result in overall gains for bats at a local scale.
Roosting bats	Negligible within site, but low to moderate in adjacent building and tree	Should bats be confirmed as present in the building and/or adjacent tree, without suitable mitigation proposals may stand to disturb roosting bats.	An updated bat emergence/re-entry survey is recommended for the adjacent building and tree to assess the presence/likely-absence of bats and inform the need for mitigation or compensation relating to roosting. Roosting opportunities should also be provided as part of the new scheme to deliver enhancements for roosting bats, providing further opportunity beyond those currently afforded. Sensitive lighting as described above should also be integrated within the scheme. Assuming the measures identified as being required following the further bat survey are followed, alongside the additional provision of bat roosting opportunities in the new building, then the proposals may stand to benefit roosting bats.
Birds	Low	Proposals may stand to directly impact birds through clearance of the ivy during nesting season.	Nesting opportunities are present within the ivy coverage on the boundary wall and surroundings trees at site.

Receptor	Presence/ Potential Presence	Potential Impact	Recommendations and Residual Impact
			Recommendations are therefore provided below regarding any site clearance works and the provision of compensatory and enhanced nesting opportunities, which would result in overall gains for birds at site.

DISCUSSION AND RECOMMENDATIONS

5.3 Discussion is provided below on the key ecological receptors that stand to be impacted/benefit from proposed works; high level commentary on appropriate mitigation, compensation and enhancement actions is also provided.

5.4 An Ecological Management Plan (EMP) should be produced and implemented for the site providing greater detail on the below, which could be secured through planning condition in accordance with BS 42020: 2013 Biodiversity.

Mitigation

Hampstead Heath SINC

Construction Impact

5.5 Proposals should be considerate of the site's proximity to the Heath. A Construction Environmental Management Plan (CEMP) should accordingly be produced following industry best practice to ensure that construction activity avoids causing indirect impacts to the notable habitats surrounding the site.

5.6 Suitable tree protection should be put in place for the oak tree near to the site entrance on the small traffic island as well as the line of trees on the west side of the boundary wall.

Compensatory Ivy and Nesting Bird Mitigation

5.7 It is understood that a 1.2m access corridor will be required to enable construction. We understand this corridor, which would run through the edge of the SINC adjacent to the site, would be in the form of raised scaffolding. This which would enable retention of the wall, all trees, and the ivy coverage on the SINC side of the wall; the cherry trees would be retained and severing of the ivy will not be required under this approach. There would be temporary minor disturbance to the area, but no long term clearance of vegetation. This approach could be secured by condition under a Precautionary Method Statement, with works to be overseen in their initial stages by an Arboricultural and Ecological Clerk of Works (ACoW and ECoW). Erection of the scaffolding should take place outside of the

nesting bird season, or, if undertaken between March and September, only following confirmation of the absence of nesting birds by an experienced ecologist.

5.8 The proposals would result in the loss of approximately 12m^2 of ivy coverage on the site side of the wall however, which would be carefully pruned outside of the nesting season (unless absence of nesting birds is confirmed by an ecologist prior to works commencing).

5.9 An ivy trellis/wire system should be erected on the west facing façade of the building that adjoins the boundary wall, facing onto the SINC. The existing ivy growing on the wall should be encouraged to grow up this trellis to provide compensatory ivy growth for the area lost to development.

5.10 It is believed this approach would help mitigate any long term minor impacts upon the SINC and would compensate for the loss of the ivy coverage on the site side of the wall.

5.11 The details could be secured by condition with compliance enforced through the provision of an ECoW watching brief at key stages during works.

Operational Impact

5.12 Operational impacts upon habitats and the SINC are likely to be limited to the potential for increased light disturbance. This impact is discussed and addressed below relating to potential impacts upon bats.

Bats

5.13 Updated bat emergence/re-entry surveys are recommended to assess the current presence/likely-absence of bats in the adjacent Jack Straw's Castle building and oak tree.

5.14 Further actions which may be appropriate to address roosting bats should be informed by these surveys, although it is envisaged that no material change to approach would be required, as any impact would be indirect, addressable through sensitive working practices.

5.15 To address operational impact upon bats, proposals should not result in increased light spill across the section of Heath opposite the site. Any lighting elements should be designed in accordance with industry best practice as described in the Bat Conservation Trust and Institute of Lighting Professional's Guidance[9].

5.16 Light spill modelling should be undertaken to evidence how proposals would not result in predicted spill.

Enhancements

5.17 There is scope to provide further ecological enhancements to improve the biodiversity value of the site, ensuring net gains in line with current and emerging planning policy.

5.18 Ecological enhancements proposed as part of the development include:

- Provision of additional bird and bat boxes within the built form of the new buildings targeting crevice dwelling bat species, swift and house sparrow;
- Provision of wildlife friendly landscaping in all available areas of the site. This should incorporate species of known value to local BAP priority pollinators and include species on the Royal Horticultural Society's Perfect for Pollinator[10] lists; and
- Installation of extensive biodiverse roofs on the small flat roofs of the cycle store and bin shelter.

Biodiversity Net Gain

5.19 A separate Biodiversity Net Gain Assessment will be produced to accompany this report once landscaping plans have been finalised.

5.20 Proposals should however seek to deliver measurable gains using Defra's Biodiversity Metric 2.0.

6.0 SUMMARY & CONCLUSION

6.1 Greengage was commissioned by Montagu Evans to undertake a PEA of a site known as Jack Straw's Castle, Hampstead in order to establish the ecological value of this site and its potential to support notable and/or legally protected species.

6.2 The PEA identified the site to be of generally low ecological value, although several notably ecological receptors in the site's surroundings were noted. This includes the presence of the adjacent Hampstead Heath SINC, value for roosting bats in the adjacent building and oak tree, and value for nesting birds in the overhanging ivy on the boundary wall.

6.3 Updated bat surveys to assess the current presence/likely-absence of bats has therefore been recommended.

6.4 Further general mitigation, compensation and enhancement actions are also described seeking to enable legislative and policy compliance (see context at Appendix 1), aiming to achieve net gains in biodiversity for the site.

6.5 Key actions could be further described within an EMP and CEMP for the site which could be secured through planning condition.

APPENDIX 1 RELEVANT LEGISLATION AND POLICY

LEGISLATION

Current key legislation relating to ecology includes the Wildlife and Countryside Act 1981 (as amended)[11]; The Conservation of Habitats and Species Regulations 2017 ('Habitats & Species Regulations')[12], The Countryside and Rights of Way Act 2000 (CRoW Act)[13], and The Natural Environment and Rural Communities Act, 2006[14].

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Conservation of Habitats & Species Regulations replace The Conservation (Natural Habitats, etc.) Regulations 1994 (as amended)[15], and transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ('EU Habitats Directive')[16], and Council Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive')[17] into UK law (in conjunction with the Wildlife and Countryside Act).

Regulation 43 and 47 respectively of the Conservation of Habitats & Species Regulations makes it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2 (European protected species of animals), or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5 (European protected species of plant). Development that would contravene the protection afforded to European protected species requires a derogation (in the form of a licence) from the provisions of the Habitats Directive.

Regulation 63 (1) states: 'A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which —

> (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and
>
> (b) is not directly connected with or necessary to the management of that site;

must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.'

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats[18] (the 'Bern Convention') and the Birds Directive and EU Habitats Directive are implemented in Great Britain.

The Countryside and Rights of Way Act 2000

The Wildlife and Countryside Act has been updated by the CRoW Act. The CRoW Act amends the law relating to nature conservation and protection of wildlife. In relation to threatened species it strengthens the legal protection and adds the word 'reckless' to the offences of damaging, disturbing, or obstructing access to any structure or place a protected species uses for shelter or protection, and disturbing any protected species whilst it is occupying a structure or place it uses for shelter or protection.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities Act 2006 states that every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Biodiversity Action Plans provide a framework for prioritising conservation actions for biodiversity.

Section 41 of the Natural Environment and Rural Communities Act requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. The list, a result of the most comprehensive analysis ever undertaken in the UK, currently contains 1,149 species, including for example, hedgehog (*Erinaceus europaeus*), and 65 habitats that were listed as priorities for conservation action under the now defunct UK Biodiversity Action Plan[19] (UK BAP). Despite the devolution of the UK BAP and succession of the UK Post-2010 Biodiversity Framework[20] (and Biodiversity 2020 strategy[21] in England), as a response to the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020[22] and EU Biodiversity Strategy (EUBS)[23], this list (now referred to as the list of Species and Habitats of Principal Importance in England) will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 41 of the Natural Environment and Rural Communities Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

Biodiversity Action Plans

Non-statutory Biodiversity Action Plans (BAPs) have been prepared on a local and regional scale throughout the UK over the past 15 years. Such plans provide a mechanism for implementing the government's broad strategy for conserving and enhancing the most endangered ('priority') habitats and species in the UK for the next 20 years. As described above the UK BAP was succeeded in England by Biodiversity 2020 although the list of priority habitats and species remains valid as the list of *Species of Principal Importance for Nature Conservation*.

Regional and local BAPs are still valid however and continue to be updated and produced.

Detail on the relevant BAPs for this site are provided in the main text of this report.

Legislation Relating to Nesting Birds

Nesting birds, with certain exceptions, are protected from intentional killing, destruction of nests and destruction/taking of eggs under the Wildlife and Countryside Act 1981 (as amended) and the CRoW Act. Any clearance of dense vegetation should therefore be undertaken outside of the nesting bird season, taken to run conservatively from March to August (inclusive), unless an ecologist confirms the absence of active nests prior to clearance.

Legislation Relating to Bats

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.

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.

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.)

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 43 of the Conservation of Habitats and Species Regulations 2017, 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.

PLANNING POLICY

National

National Planning Policy Framework

The National Planning Policy Framework (NPPF) 2019[24] sets out the Government's planning policies for England, including how plans and decisions are expected to apply a presumption in favour of sustainable development. Chapter 15 of the NPPF focuses on conservation and enhancement of the natural environment, stating plans should 'identify and pursue opportunities for securing measurable net gains for biodiversity'.

It goes on to state: 'if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused'. Alongside this, it acknowledges that planning should be refused where irreplaceable habitats such as ancient woodland are lost.

Regional

The London Plan: Spatial Development Strategy for Greater London[25]

The London Plan is comprised of separate chapters relating to a number of areas, including London's Places, People, Economy and Transport. The following policies have been identified within the London Plan, which relate specifically to ecology and this development.

Policy 2.18 Green Infrastructure

Policy 2.18 aims to protect, promote, expand and manage the extent and quality of, and access to, London's network of open and green spaces.

Policy 5.10 Urban Greening

This policy encourages the 'greening of London's buildings and spaces and specifically those in central London by including a target for increasing the area of green space (including green roofs etc) within the Central Activities Zone'.

Policy 5.11 Green Roofs and Development Site Environs

Policy 5.11 specifically supports the inclusion of planting within developments and encourages boroughs to support the inclusion of green roofs.

Policy 5.13 Sustainable Drainage

Policy 5.13 promotes the inclusion of sustainable urban drainage systems in developments and sets out a drainage hierarchy that developers should follow when designing their schemes.

Policy 7.19 Biodiversity and Access to Nature

'The Mayor will work with all the relevant partners to ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity in support of the Mayors Biodiversity Strategy.'

The Draft New London Plan (emerging)

Policy G1 Green infrastructure

A. London's network of green and open spaces, and green features in the built environment such as green roofs and street trees, should be protected, planned, designed and managed as integrated features of green infrastructure.

B. Boroughs should prepare green infrastructure strategies that integrate objectives relating to open space provision, biodiversity conservation, flood management, health and wellbeing, sport and recreation.

C. Development Plans and Opportunity Area Planning Frameworks should:

    1. identify key green infrastructure assets, their function and their potential function

    2. identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.

Policy G2 London's Green Belt

A. The Green Belt should be protected from inappropriate development:

    1. development proposals that would harm the Green Belt should be refused

    2. the enhancement of the Green Belt to provide appropriate multi-functional uses for Londoners should be supported.

Policy G5 Urban greening

A. Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.

B. Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development.

Policy G6 Biodiversity and access to nature

C. Where harm to a SINC (other than a European (International) designated site) is unavoidable, the following approach should be applied to minimise development impacts:

    1. avoid adverse impact to the special biodiversity interest of the site
    2. minimise the spatial impact and mitigate it by improving the quality or management of the rest of the site
    3. seek appropriate off-site compensation only in exceptional cases where the benefits of the development proposal clearly outweigh the biodiversity impacts.

D. Biodiversity enhancement should be considered from the start of the development process.

E. Proposals which create new or improved habitats that result in positive gains for biodiversity should be considered positively, as should measures to reduce deficiencies in access to wildlife sites.

Policy G7 Trees and woodlands

C. Development proposals should ensure that, wherever possible, existing trees of quality are retained [Category A and B]. If it is imperative that trees have to be removed, there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.

Supplementary Planning Guidance (SPG): Sustainable Design and Construction 2014

As part of the London Plan 2011 implementation framework, the SPG, relating to sustainable design and construction, was adopted in April 2014 and includes the following sections detailing Mayoral priorities in relation to biodiversity of relevance to The Site.

Nature conservation and biodiversity

The Mayor's priorities include ensuring 'developers make a contribution to biodiversity on their development Site'.

Overheating

Where priorities include the inclusions of 'measures, in the design of schemes, in line with the cooling hierarchy set out in London Plan policy 5.9 to prevent overheating over the scheme's lifetime'

Urban greening

A Priority is for developers to 'integrate green infrastructure into development schemes, including by creating links with wider green infrastructure network'.

Use less energy

'The design of developments should prioritise passive measures' which can include 'green roofs, green walls and other green infrastructure which can keep buildings warm or cool and improve biodiversity and contribute to sustainable urban drainage'.

London Environment Strategy 2018[26]

The Mayor's Environment Strategy was published in May 2018. This document sets out the strategic vision for the environment throughout London. Although not primarily a planning guidance document, it does set strategic objectives, policies and proposals that are of relevance to the delivery of new development in a planning context, including:

Objective 5.1 Make more than half of London green by 2050

Policy 5.1.1 Protect, enhance and increase green areas in the city, to provide green infrastructure services and benefits that London needs now.

This policy states:

"New development proposals should avoid reducing the overall amount of green cover and, where possible, seek to enhance the wider green infrastructure network to increase the benefits this provides. […] New developments should aim to avoid fragmentation of existing green space, reduce storm water run-off rates by using sustainable drainage, and include new tree planting, wildlife-friendly landscaping, or features such as green roofs to mitigate any unavoidable loss".

This supports the 'environmental net gain' approach promoted by government in the 25 Year Environment Plan.

Proposal 5.1.1.d The London Plan includes policies to green streets and buildings, including increasing the extent of green roofs, green walls and sustainable drainage.

Objective 5.2 conserving and enhancement wildlife and natural habitats

Policy 5.2.1 Protect a core network of nature conservation sites and ensure a net gain in biodiversity

This policy requires new development to include new wildlife habitat, nesting and roosting sites, and ecologically appropriate landscaping will provide more resources for wildlife and help to strengthen ecological corridors. It states:

"*Opportunities should be sought to create or restore priority habitats (previously known as UK Biodiversity Action Plan habitats) that have been identified as conservation priorities in London [and] all land managers and landowners should take BAP priority species into account*".

Local

Camden Local Plan (2017)

The Local Plan was adopted by Council on 3 July 2017 and has replaced the Core Strategy and Camden Development Policies documents as the basis for planning decisions and future development in the borough.

Policy A3 Biodiversity

The Council will protect and enhance sites of nature conservation and biodiversity. We will:

a. designate and protect nature conservation sites and safeguard protected and priority habitats and species;

b. grant permission for development unless it would directly or indirectly result in the loss or harm to a designated nature conservation site or adversely affect the status or population of priority habitats and species;

c. seek the protection of other features with nature conservation value, including gardens, wherever possible;

d. assess developments against their ability to realise benefits for biodiversity through the layout, design and materials used in the built structure and landscaping elements of a proposed development, proportionate to the scale of development proposed;

e. secure improvements to green corridors, particularly where a development scheme is adjacent to an existing corridor;

f. seek to improve opportunities to experience nature, in particular where such opportunities are lacking;

g. require the demolition and construction phase of development, including the movement of works vehicles, to be planned to avoid disturbance to habitats and species and ecologically sensitive areas, and the spread of invasive species;

h. secure management plans, where appropriate, to ensure that nature conservation objectives are met; and i. work with The Royal Parks, The City of London Corporation, the London Wildlife Trust, friends of park groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden.

Trees and vegetation

The Council will protect, and seek to secure additional, trees and vegetation. We will:

j. resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation;

k. require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 'Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout;

l. expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;

m. expect developments to incorporate additional trees and vegetation wherever possible.

Policy CC2 Adapting to climate change

The Council will require development to be resilient to climate change. All development should adopt appropriate climate change adaptation measures such as:

a. the protection of existing green spaces and promoting new appropriate green infrastructure;

b. not increasing, and wherever possible reducing, surface water runoff through increasing permeable surfaces and use of Sustainable Drainage Systems;

c. incorporating bio-diverse roofs, combination green and blue roofs and green walls where appropriate; and

d. measures to reduce the impact of urban and dwelling overheating, including application of the cooling hierarchy.

Any development involving 5 or more residential units or 500 sqm or more of any additional floorspace is required to demonstrate the above in a Sustainability Statement.

REFERENCES

[1] Joint Nature Conservation Committee (2010); Handbook for Phase 1 Habitat Survey: A Technique for Environmental Audit. JNCC, Peterborough.

[2] CIEEM (2017); Guidelines for Preliminary Ecological Appraisal, 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.

[3] BSI (2013); British Standard 42020:2013: Biodiversity — Code of practice for planning and development, BSI Standards Publication

[4] MAGIC (2019); Interactive Map. (Partnership project involving six government organisations: Defra (Department for Environment, Food and Rural Affairs); English Heritage; Natural England; Environment Agency; Forestry Commission; Department for Communities and Local Government). Available at: www.magic.gov.uk.

[5] Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London

[6] English Nature, (2004); Bat Mitigation Guidelines. English Nature.

7 London Biodiversity Partnership (2010), London Biodiversity Action Plan http://www.lbp.org.uk/londonhabspp.html#redstart

[8] Bat Conservation Trust (BCT) and Institute of Lighting Professionals (ILP) Guidance Note (2018) Bats and artificial lighting in the UK. Bats and the built environment series

[9] The Bat Conservation Trust (BCT) and Institute of Lighting Professionals (ILP), Bats and artificial lighting in the UK. Bats and the Built Environment Series, Guidance Note 08/18

[10] Royal Horticultural Society (2017); Perfect for Pollinators: Garden Plants and Wildflowers. RHS, London

[11] HM Government, (1981); Part I and Part II of Wildlife and Countryside Act (as amended). HMSO

[12] HM Government, (2017); The Conservation of Habitats and Species Regulations 2017. Statutory Instrument 2017 no. 490 Wildlife Countryside. OPSI

[13] HM Government, (2000); The Countryside and Rights of Way Act. HMSO

[14] HM Government, (2006); Natural Environment and Rural Communities Act 2006. HMSO

[15] HM Government, (1994); The Conservation (Natural Habitats, &c.) Regulations. HMSO

[16] 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

[17] The European Parliament And Of The Council, (30 November 2009); Directive 2009/147/EC On The Conservation Of Wild Birds (Codified Version)

[18] CEC (Council of the European Communities), (1979); Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 19.IX.1979). EC

[19] UK Biodiversity Action Plan (2007). UKBAP Priority Species and Habitats. http://www.ukbap.org.uk/newprioritylist.aspx

[20] JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). UK Post-2010

Biodiversity Framework. July 2012. Available from: http://jncc.defra.gov.uk/page-6189

[21] Defra (2011). Biodiversity 2020: A strategy for England's wildlife and ecosystem services

[22] Convention on Biological Diversity (CBD) (2010). Decision X/2 Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets. Available at https://www.cbd.int/decision/cop/?id=12268

[23] European Commission (2012). Our life insurance, our natural capital: an EU biodiversity strategy to 2020 European Parliament resolution of 20 April 2012 on our life insurance, our natural capital: an EU biodiversity strategy to 2020 (2011/2307(INI))

[24] GOV.UK. (2019). *National Planning Policy Framework*. [online] Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2 [Accessed 13 June 2019].

[25] Greater London Authority (2016). *The London Plan: The Spatial Development Strategy for London Consolidated with Alterations Since 2011*. London: Greater London Authority.

[26] Greater London Authority (2018). *London Environment Strategy 2018*. London: Greater London Authority.

Appendix 2

Greengage

Jack Straw' s Castle, Montagu Evans
Bat Survey Report, May 2020

QA

Jack Straw's Castle – Bat Survey Report

Issue/Revision:	Draft	Final
	May 2020	June 2020
Comments:		
Prepared by:	Morgan Taylor	Morgan Taylor
Signature:		
Authorised by:	James Bumphrey	James Bumphrey
Signature:		
File Reference:	550888mtMay20DV01_Bats	550888mtJun20FV01_Bats

CONTENTS

1.0 EXECUTIVE SUMMARY

1.1 Greengage Environmental Ltd was commissioned by Montagu Evans to undertake a bat emergence survey of a site known as Jack Straw's Castle in Hampstead, London Borough of Camden (LB Camden), to determine the presence or likely absence of roosting bats and to observe any bat foraging or commuting activity associated with the site.

1.2 Proposals seek to construct a new residential block adjoining the existing Jack Straw's Castle building.

1.3 Value for bats was noted in Jack Straw's Castle itself and in a single tree during a Preliminary Ecological Appraisal (PEA)[1]. Further survey work was accordingly considered necessary to determine the presence/likely-absence of bats in this location prior to construction works commencing.

1.4 This survey therefore aimed to confirm the presence/likely-absence of roosting bats within the features of potential value identified during the PEA.

1.5 Very low levels commuting/foraging of common pipistrelle were recorded at the site during the two dusk emergence surveys.

1.6 No roosting activity was observed. As such, there are no formal mitigation measures required to address potential impacts upon roosting bats.

1.7 However, given the low levels of commuting and foraging activity observed, in accordance with planning policy and good practice, a number of recommendations have been made, including:

- Bat-sensitive lighting incorporated into the scheme to minimise any potential impacts of increased lighting levels on foraging and commuting bats observed as present;
- Provision of wildlife-friendly landscaping to enhance the site as a foraging and commuting resource; and
- Inclusion of bat boxes, bricks or 'habibats' within the new building to provide bat roosting opportunities at the site.

1.8 With roosting bats confirmed as likely absent, the development is predicted to have a negligible impact upon roosting bats. Any potential impacts upon foraging and commuting bats can be fully mitigated through implementation of the above recommendations.

1.9 Enhancement measures for bats have been recommended to increase the biodiversity value of the site.

2.0 INTRODUCTION

2.1 Greengage was commissioned to undertake a bat emergence survey by Montagu Evans of a site know as Jack Straw's Castle, LB Camden, to assess the relative importance of the site for roosting bats and to confirm the presence/ likely-absence in the adjacent building and tree subject to potential indirect disturbance by the proposed development on site.

2.2 This report has been produced to support a planning submission which seeks to deliver a new residential block adjoining the existing Jack Straw's Castle building.

AIMS OF SURVEY

2.3 The purpose of the survey was to 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 buildings at the site. Specifically, the survey' aimed to:

- Determine the presence/absence of bat species;
- Determine the intensity of bat activity both spatially and temporally to help estimate bat populations;
- Determine the type of activity, most usually
    - Roosting;
    - foraging (by feeding buzzes); or
    - commuting (by high directional pass rates); and

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 site comprises a small car park area adjacent to the former Jack Straw's Castle public house building located on North End Way in Hampstead, London Borough of Camden.

2.6 The entire assessment site consists of hardstanding with some ivy coverage along the western boundary wall. Land to the immediate west of this wall, within which the ivy and several trees are growing, falls within Hampstead Heath Site of Metropolitan Importance for Nature Conservation (SINC).

2.7 The site is bound to the east by North End Way, the north by Heath Brow, beyond which extends the Heath, and the south by the former Jack Straw's Castle public house building.

2.8 The site is surrounded by an abundance of diverse green space, with woodland and grassland associated with the Heath extending to the north, east and west. The residential area of Hampstead Village can be found to the south.

PREVIOUS SURVEY RESULTS

2.9 Ecological surveys, including a bat emergence survey, were carried out at site in 2017 for a previous planning submission. These surveys confirmed the likely-absence of bats, however given their age, updated surveys were considered necessary.

2.10 An updated Preliminary Ecological Appraisal (PEA) of the site was carried out by Greengage in April 2020 (doc ref: 550888mtApr20FV01_PEA).

2.11 This found habitats directly present on site, and connections to suitable habitats in the wider locality to provide moderate bat foraging potential. The only foraging habitat directly on site is confined to the boundary vegetation however.

2.12 A search on MAGIC found two recent European Protected Species Licence granted for pipistrelle bats within a 2km radius of the site.

2.13 A data search with Greenspace Information for Greater London found records for bat species including Daubenton's (*Myotis doubentonii*), whiskered/Brandt's (*Myotis mystacinus/brandtii*), Natterer's (*Myotis nattereri*), common noctule (*Nyctalus noctula*), Leisler's (*Nyctalus leisleri*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), serotine (*Eptesicus serotinus*) and brown long eared (*Plecotus auritus*).

Figure 2.1 The lime (*Tilia cordata*) tree on the traffic island and pitched roof of Jack Straw's Castle

2.14 No direct field signs were observed externally during the PEA, with no droppings, stains, scratch marks or other evidence that may suggest presence of bats. Features that may provide roosting opportunities for bats were however observed in the form of gaps beneath tiles. Features within the single lime tree on the traffic island opposite the site entrance were also classified as being of low to moderate value.

2.15 In accordance with BCT guidelines, a single visit is therefore required to assess the presence/likely-absence of bats in the building, with two visits required for the tree.

3.0 METHODOLOGY

3.1 The first emergence survey was undertaken on the evening of 19th May 2020 (sunset 20:53). The temperature at sunset was 20°C, with clear skies and a light breeze from the north east. The second survey was undertaken on the evening of 3rd June 2020. The temperature at sunset was 14°C, with overcast skies and a light breeze from north east.

3.2 The emergence surveys commenced 15 minutes before sunset and continued for one hour and 30 minutes after sunset.

3.3 A single surveyor was present during the surveys.

3.4 The surveyor was equipped with BatBox Duet Heterodyne detectors and an Echo Meter Touch bat detector to detect, visualise and record the calls of any bats present in the area.

Surveyors

3.5 James Bumphrey, who undertook the survey and reviewed this report, has a Bachelors degree in Environmental Sciences and a Masters degree in Environmental Consultancy. James has over 7 years experience in ecological surveying.

3.6 Morgan Taylor, who coordinated surveys and reviewed this report, has a bachelors and master's degree in marine biology (MSci Hons) and a Natural England CL17 Bat Survey Level 2 Class Licence (2015-7369-CLS-CLS). Morgan is a Chartered Environmentalist, Full member of CIEEM and has over 9 years' experience in ecological surveying having undertaken assessments of numerous development sites of this type. He leads the Ecology team at Greengage.

3.7 This report was reviewed and verified by James Bumphrey who confirms 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

3.8 The survey was undertaken at a suitable time of year and weather conditions.

3.9 Given the height of the building some areas of the roof could not be directly observed from ground-level, however, all aspects of the building could be sufficiently covered by the single surveyor and there was no ambiguous activity that could suggest roosting behaviour; it is therefore not considered a significant limitation.

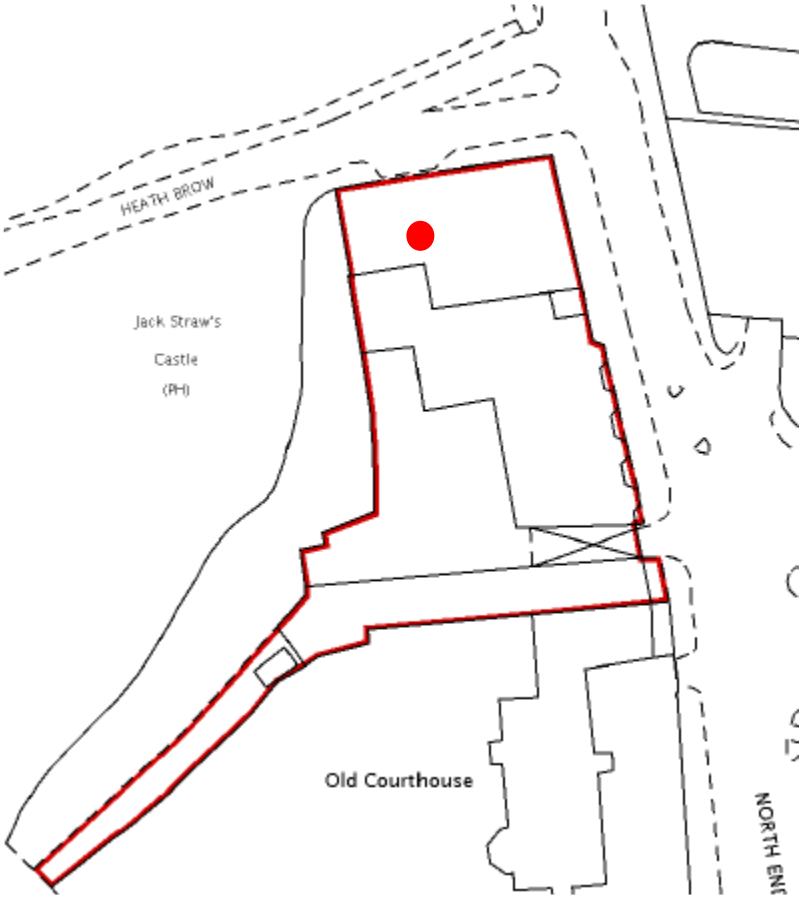
3.10 An internal survey of the attic space within Jack Straw's Castle was not possible given covid-19 restrictions. As the features were seemingly limited to those associated with external features this is not considered to have resulted in any significant constraint over the conclusions made in this report.

4.0 BAT SURVEY RESULTS

4.1 There was no evidence of roosting observed during the emergence surveys. Roosting bats can therefore be confirmed as likely absent from the building and tree.

4.2 Very low levels of commuting activity were observed during the surveys by common pipistrelle and soprano pipistrelle, with 4 passes recorded during each survey. A single instance of foraging was heard at 22:15 on the first survey by a soprano pipistrelle, although this behaviour was not observed. A single pass by a noctule was heard during the first survey. No bats were observed during the survey with all activity at a distance in the high value habitat to the north.

Figure 4.1 Site Plan: red circle - survey location



5.0 RECOMMENDATIONS & MITIGATION

5.1 The survey results confirmed the likely-absence of roosting bats within the building at the site. There is therefore no requirement for mitigation with regards to roosting bats.

5.2 Very low levels of commuting activity were observed by common and soprano pipistrelle, and a single noctule pass.

5.3 The site itself is considered to be of limited value for bats, however the surrounding Heath is known to be an important foraging resource and proposals should accordingly consider the protection of bat foraging and commuting resources.

5.4 Whilst foraging and commuting resources for bats are not formally protected by law, their protection is a material consideration within the planning process. Suitable best practice and mitigation recommendations are therefore outlined below and have been integrated within plans for the site:

- Artificial lighting can cause disturbance to bat species' roosting, foraging and commuting activity[2]. The proposed development may have lighting elements associated with the new buildings. Any lighting associated with the proposals should be designed following appropriate guidance described in the *Institute of Lighting Engineers and Bat Conservation Trust joint guidance document for the reduction of obtrusive light*[3]. This should include directional lighting, appropriate luminescence and protection from light spill and should ensure that all lighting is designed, operated and maintained under best practice conditions. No uncontrolled lighting should occur and light spill should be minimised; this would enable the continued use of the site as a roosting and foraging resource. No light sources such as security lights should be positioned near artificial roost entrances and neither should any light sources be directed towards any roost entrances i.e. no up-lighting of the building. Additionally, no light should fall on any areas of vegetation in the garden, as this would impair the value of the trees as foraging resources.
- Wildlife friendly landscaping should be provided in the form of small areas of raised bed planters/small living roofs on the flat bin stores containing pollinator friendly species.
- Bat boxes should be installed, integrated within the built form of the new development at site. Most species of bats will use bat boxes at various times of year but in particular they are favoured by pipistrelles, Leisler's, noctules and *Myotis* species. Several of these species are known to be present in the wider landscape. 'Habibat' bat boxes will be positioned in sunny locations on the western building façade. 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;

5.5 Further to the above recommendations 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 is predicted to be negligible, with potential net gains achieved through the provision of enhanced foraging and roosting opportunities within the site footprint itself.

6.0 CONCLUSIONS

6.1 Greengage was commissioned to undertake a bat emergence survey by Montagu Evans on a site known as Jack Straw's Caste in LB Camden, to determine the presence or likely absence of roosting bats

6.2 Low value for roosting bats was identified in Jack Straw's Castle, with low to moderate value in the tree opposite the car park at the site. A single visit was therefore completed for the building with two visits for the tree.

6.3 No roosting activity was observed and formal mitigation is therefore not required to address impacts upon roosting bats.

6.4 Very low levels of bat commuting activity by common and soprano pipistrelle were observed during the emergence surveys.

6.5 Actions have been described relating to the implementation of a bat sensitive lighting scheme and provision of enhanced foraging resources and roosting sites in the new build development.

6.6 Assuming recommendations are followed, the impact of the proposed development upon local bat populations is predicted to be negligible and may stand to achieve minor net gains for biodiversity at a site level.

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)[4] 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 Directive[5], 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 of Habitats and Species Regulations 2010[6], 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. Guidance on nature conservation within planning is issued by the Government within the National Planning Policy Framework. This Framework document acts as guidance for local planning authorities on the content of their Local Plans, but is also a material consideration in determining planning applications. As a result of the NPPF any species or habitats of principal importance found on the application site, in addition to statutorily protected species, are of material consideration

REFERENCES

1 Greengage Environmental (2020) Preliminary Ecological Appraisal, Jack Straw's Castle, 550888mtApr20FV01

[2] E.L. Stone, S. Harris, G. Jones (2015) Impacts of artificial lighting on bats: a review of challenges and solutions, *Mamm. Biol*., **80** 213–219

[3] Bat Conservation Trust (BCT) & Institute of Lighting Professionals (ILP) (2018) Bats and Artificial Lighting in the UK, Bats and the Built Environment Series https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/

4 HM Government, (1981); Part I and Part II of Wildlife and Countryside Act (as amended). HMSO

5 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

6 HM Government, (2010); The Conservation of Habitats and Species Regulations 2010. Statutory Instrument 2010 no. 490 Wildlife Countryside. OPSI

Appendix 3

JACK STRAW'S CASTLE – BIODIVERSITY NET GAIN ASSESSMENT

Introduction

1.1 Greengage were appointed Montagu Evans to undertake a Biodiversity Net Gain (BNG) Assessment for the proposed development at Jack Straw's Castle, in the London Borough of Camden, in order to monitor compliance against emerging regional and national policy.

1.2 Proposals seek the construction of a new residential block adjoining the existing Jack Straw's Castle building.

1.3 The National Planning Policy Framework (NPPF)[1] states that '*plans should… identify and pursue opportunities for securing measurable net gains for biodiversity*'.

1.4 This assessment, therefore, seeks to determine the change in ecological value of the site in light of the development proposals and make recommendations to minimise net loss/improve net gain.

Site Description

1.5 The site comprises a small car park area adjacent to the former Jack Straw's Castle public house building located on North End Way in Hampstead, London Borough of Camden.

1.6 The entire assessment site consists of hardstanding with some ivy coverage along the western boundary wall. Land to the immediate west of this wall, within which the ivy and several trees are growing, falls within Hampstead Heath Site of Metropolitan Importance for Nature Conservation (SINC).

1.7 The site is bound to the east by North End Way, the north by Heath Brow, beyond which extends the Heath, and the south by the former Jack Straw's Castle public house building.

1.8 The site is surrounded by an abundance of diverse green space, with woodland and grassland associated with the Heath extending to the north, east and west. The residential area of Hampstead Village can be found to the south.

Methodology

1.9 An assessment of the existing ecological value of the site was made utilising data collected during a Preliminary Ecological Appraisal (PEA) of the site on 20th March 2020. In order to quantify the ecological value of the site, the DEFRA Metric 2.0 was used, in line with best practice guidance from DEFRA[2,3] and joint guidance from CIEEM, IEMA and CIRIA[4].

1.10 Proposed site layout drawings were utilised to estimate predicted post-construction habitat lengths and areas. The following drawings were assessed:

Greengage Environmental Ltd Registration No. 08155937 Registered Address: Camburgh House, 27 New Dover Road, Canterbury, Kent, CT1 3DN

- Greengage Phase 1 Habitat Map; and
- 06-681-200-01.pdf

1.11 Targets for habitat condition have been set to maximise the biodiversity value of habitat created on site. The required criteria for meeting the targeted post-construction habitat conditions are given in the Discussion section.

1.12 The change in biodiversity units as a consequence of the development is calculated by subtracting pre-development ecological value from post-development ecological value. This change is then calculated as a percentage of original value.

Limitations

1.13 Using "biodiversity units" as a proxy for the ecological value of a site does not encompass features of ecological value besides habitat extent. Protected species potential, the presence/absence of designated sites and the location/importance of the site within wider ecological networks are not captured by the biodiversity net gain assessment. As such, this report should be read in conjunction with The PEA, 550888mtApr20FV01_PEA. Specifically, measures to protect habitats surrounding the site associated with Hampstead Heath should be followed.

1.14 This calculator also does not pick up not habitat related ecological design interventions, which in this instance should include:

- Integrated swift, house sparrow and bat boxes within the built form of the new building at site.

1.15 The BNG assessment at this stage is predictive in nature. To ensure delivery of BNG, requirements outlined within this report must be adhered to, and a programme of monitoring and maintenance must be implemented.

1.16 Given the size of the proposed development site, square metres have been used as the unit of area for this assessment as opposed to hectares given the inherent constraint of calculations in the Defra metric being limited to 2 decimal points. This means the unit measures are not comparable with other sites using the metric, but are simply representative of the change being delivered at site.

Results

1.17 The baseline biodiversity value of the site is calculated to be **26.4** biodiversity units. A breakdown of this calculation is provided in Table 4.1 below:

Table 1.1 Baseline Biodiversity Units

Pre-development				
Habitat description	**Area (sqm)**	**Distinctiveness**	**Condition**	**Score**
Building/Hardstanding	337	Very low	N/A	0
Ivy	12	Low	Poor	26.4
Total:				**26.4**

1.18 Based on masterplan drawings, the proposed development is predicted to provide **78.32** biodiversity units.

Table 1.2 Post-development Biodiversity Units

Post-development				
Habitat description	**Area (sqm)**	**Distinctiveness**	**Condition**	**Score**
Biodiverse roof	6	Medium	Good	2.10
Introduced shrub	14.5	Low	Poor	0.22
Façade bound green wall	2.2	Low	Poor	0.09
Developed land, sealed surface	326.3	Very Low	N/A	0
Total:				**78.32**

1.19 Additionally, retention of the ivy habitat in Table 1.1 through the provision of the compensatory trellis system means the total post-development biodiversity unit score is predicted to be **104.72**.

Discussion and recommendations

1.20 Under these proposals, and in the absence of additional enhancement measures and habitat creation, the development stands to result in a **net gain of 78.32** biodiversity units associated with area-based habitats from pre-development levels. This corresponds to a total **net increase of 296.66%** in ecological value.

1.21 The proposals are therefore in compliance with local and national planning policy (see Appendix 2). Proposals also exceed expectations of the emerging BNG Mandate which seeks a 10% uplift in biodiversity units on new development projects.

1.22 Details on habitat enhancement and management to ensure delivery of BNG should be outlined in an Ecological Management Plan (EMP) and detailed landscaping plans, which could be secured through planning condition.

1.23 The EMP should provide description of how habitats are to be created and managed for a period of at least 30 years.

1.24 Assumptions of habitat creation conditions have been made. The following criteria are required to be met for the post-construction habitats to achieve the biodiversity units detailed in this calculation:

Table 1.3 Target conditions for post-construction habitats – Condition assessment criteria for Urban Habitats (Valid for biodiverse roof, introduced shrub, ground level planting and façade bound green wall)

Condition	Assessment Criteria	Score
Good	• Vegetation provides multiple opportunities for a high number of species to live and breed (complete their life cycles). • Bare open ground is common throughout the area. • Plant species are flowering extensively and so providing ready nectar sources for insects. • Insects and butterflies are common and using the site extensively. • None of the indicators of poor condition are present. • The invasive none-native species are low or absent from the site, or in the process of being eradicated if beneficial to wildlife to do so.	3
Moderate	• Cover of undesirable and invasive species at 10-20%. • OR Some of the condition criteria are being failed. • The areas of bare ground with little species colonisation are large, with a high potential for improvement with better wildlife management.	2
Poor	• Most of the condition criteria are being failed. • Cover of undesirable species high above 20%	1

[1] Ministry of Housing, Communities & Local Government (2019); National Planning Policy Framework – Publications. URL: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/779764/NPPF_Feb_2019_web.pdf, Last accessed: 20/03/2019

[2] Ian Crosher, Susannah Gold, Max Heaver D, Matt Heydon, Lauren Moore, Stephen Panks, Sarah Scott, Dave Stone & Nick White (2019); The Biodiversity Metric 2.0: auditing and accounting for biodiversity value. User guide (Beta Version, July 2019). Natural England

[3] Ian Crosher, Susannah Gold, Max Heaver D, Matt Heydon, Lauren Moore, Stephen Panks, Sarah Scott, Dave Stone & Nick White (2019); The Biodiversity Metric 2.0: auditing and accounting for biodiversity value. Technical Supplement (Beta Version, July 2019). Natural England

[4] Julia Baker, Rachel Hoskin & Tom Butterworth (2019); Biodiversity Net Gain. Good practice principles for development: A practical guide. CIRIA, London