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:

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- 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