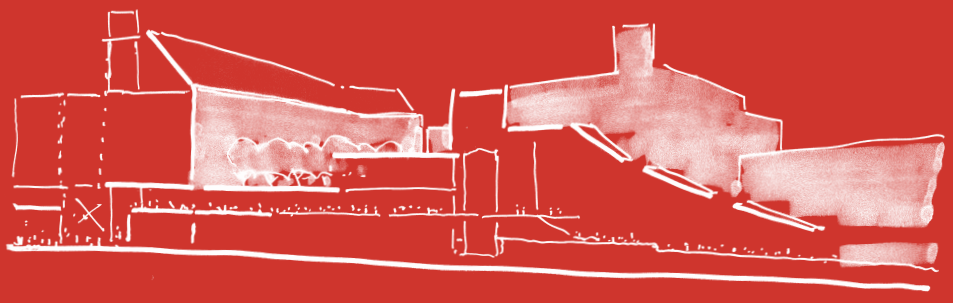
The British Library Extension
January 2022

Urban Greening Factor Assessment



British Library Extension

Urban Greening Factor Report

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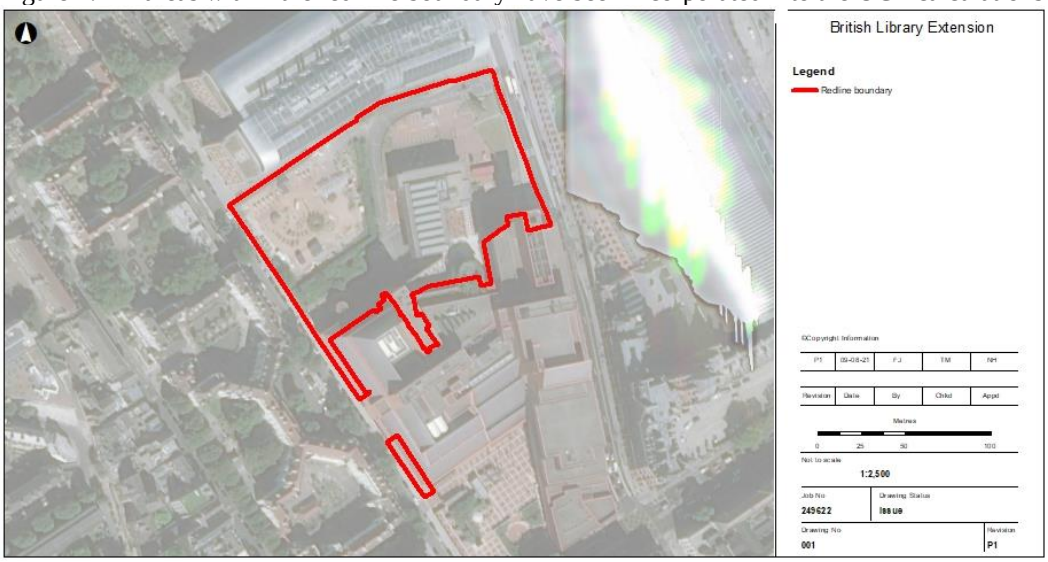
1 Introduction

The London Plan contains a metric to measure green space improvements within new developments within Policy G5; the Urban Greening Factor (UGF)[1]. Major developments must calculate a score which is a combination of a defined score for green space type and extent within the pre and post construction development area; the final score providing a measurement of total green space gains, or losses. A score of 0.3 should be achieved for predominantly commercial developments, and 0.4 for predominantly residential developments.

The pre-development UGF has been calculated for the site (shown in Figure 1). Taking into consideration the existing urban allotment[2], amenity grassland, introduced shrub and scattered trees recorded on site in the Preliminary Ecological Appraisal (PEA)[3] (areas), there is a pre-development score of 0.24 for the site.

Figure 1: All areas within the red line boundary have been incorporated into the UGF calculations



[1] Greater London Authority (GLA) (2021), *The London Plan 2021* Available from: https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/london-plan-2021
[2] This urban allotment has been assumed to be 25% 'sealed surfaces' and 75% 'flower-rich perennial planting' following review of the Preliminary Ecological Appraisal and based upon the precautionary principle.
[3] Ove Arup and Partners (2020), *British Library Extension, Preliminary Ecological Assessment and Site Evaluation*.

2 Results

Using the latest landscape designs, as assessed in the Biodiversity Net-Gain Assessment[4] and BREEAM 2018 Ecology Report[5], the Proposed Development will score up to 0.25.

At ground level, this score has been maximised by incorporating:

- Areas of woodland and shaded planting, as well as a number of ground level planters. Planting will include species of known benefit to biodiversity, and will be designed to be multifunctional, delivering ecological and social benefits in line with the London Plan. Therefore, where woodland will be created the UGF habitat type has been selected as 'Semi-natural vegetation' surface cover type, and where ground level planters will be created the UGF habitat type has been selected as "Flower-Rich Perennial Planting" surface cover type with a UGF co-efficient of 1.0 and 0.7 respectively; and

- Rain garden planting, which will attenuate water and slow its progress to drainage in line with the London Plan Policy SI 13 on sustainable drainage[1]. Therefore, these areas have been assigned as "Rain gardens and other vegetated sustainable drainage elements" surface cover type to reflect this, with a UGF co-efficient of 0.7.

In addition to landscape elements at ground level, the score has been maximised by incorporating areas of indicative external landscaping into the new buildings at roof level:

- Species rich grassland on Level 1 with a settled substrate depth of 150-300mm which meets the requirements of the GRO Code 2014[6]. As such, it has been assigned as 'Intensive Green Roof', with a UGF co-efficient of 0.8;

- Terraces on Level 2 that, where accessible, will incorporate planters with a 600-1100mm settled substrate depth, and ornamental planting with specimen shrubs. Where inaccessible, terraces will incorporate species rich grassland with a 150-300mm settled substrate depth and will comprise entirely of native species. In addition, these areas will meet the requirements of GRO Code 2014[6]; therefore, they have been assigned as 'Intensive Green Roof', with a UGF co-efficient of 0.8;

- Wetland blue roof on Level 10 which will contain a number of wetland areas with fluctuating water levels. A settled substrate depth of 300 - 600mm will allow native riparian plant species to establish and key areas

[4] Ove Arup and Partners (2021), *British Library Extension, Biodiversity Net-Gain Assessment*
[5] Ove Arup and Partners (2021), *British Library Extension, BREEAM 2018 Ecology Report*
[6] Green Roof Organisation (GRO) (2014), *The GRO Green Roof Code* Available from: https://livingroofs.org/wp-content/uploads/2016/03/grocode2014.pdf

of standing water to be maintained throughout the year in order to provide habitat for biodiversity. Therefore, this area has been assigned 'Wetland or open water (semi-natural; not chlorinated)' surface cover type to reflect this, with a UGF co-efficient of 1.0;

- Species rich grassland and woodland edge planting on Level 11. These areas will have a settled substrate depth of 150-300mm and 150-450mm respectively and meet the requirements of the GRO Code 2014[6]. As such, they have been assigned as 'Intensive Green Roof' to reflect this, with a UGF co-efficient of 0.8; and

- A green roof where Building Maintenance Unit (BMU) tracks limit the designs on Level 11. Currently this area will incorporate a settled substrate depth of 150mm; however, as the area will be accessed for external building maintenance and designed as a lightweight system, it has been assigned a UGF co-efficient of 0.3.

The exact design and quantum of these green spaces will be subject to adjustment during detailed design, but they will be maximised to ensure the building's users benefit from access to biodiversity-rich green spaces, and to ensure that landscaped areas remain flexible in their use.

3 Conclusion

Whilst the score of up to 0.25 is below the target of 0.3 for predominantly commercial developments contained within the London Plan, there is limited scope to improve the ecological functionality of green space enhancements as reported in the Biodiversity Net-Gain Assessment[4]. Therefore, despite not achieving a policy compliant UGF score of 0.3, the plans provide benefits for biodiversity in the local area, as well as opportunities for increasing interactions between residents/tenants and nature.

In addition, the scores achieved are in line with other similar central London urban developments, reflecting the challenge of achieving the London-wide target of 0.3. The London Plan recommends that each Borough should develop their own UGF, so as to be tailored to local circumstances; however, London Borough of Camden has not yet published their recommended scoring, which may take into account local constraints.

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