

Urban Greening Factor

Boyton Road



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Introduction and Methodology

Eight Versa has been commissioned by Walker Construction Consultants to conduct an Urban Greening Factor (UGF) calculation and report for the proposed site land adjacent Wat Tyler House - Boyton Road, Hornsey, London Borough of Haringey, N8 7AU, hereinafter referred to as the site (National Grid Reference TQ 3031 8960).

This report outlines the contribution of greening at the development, in line with Policy G5 of The New London Plan (2021). It includes the overall UGF value of the site in comparison to the Greater London Authority (GLA) target score of 0.4 for predominantly residential developments.

Site Description

The red line site boundary currently comprises hardstanding and modified grassland, both of negligible ecological importance. The adjoining enhancement areas currently comprises hardstanding, modified grassland, tall ruderal/ephemeral vegetation, and introduced shrubs of negligible ecological importance and broad-leaved urban trees of local ecological importance. All habitats are associated with the adjacent Wat Tyler House and Gillett House. The site is bounded by residential flats to the north, Boyton Road and residential buildings to the west, residential flats to the east and residential buildings with private gardens to the south. The red line site boundary is approx. 0.06ha and the enhancement area approx. 0.22ha.

Building Proposals

Current proposals consist of redevelopment of the car park adjacent Wat Tyler House to provide 15 new Council rent homes in a part-4, 5 and 7-storey building. Provision of associated amenity space, cycle and refuse/recycling stores, a wheelchair parking space on Boyton Road and enhancement of existing communal areas and play space to the rear on the Campsbourne Estate. Current proposals within the enhancement area include the retention and creation of new habitats. Landscape proposals are detailed within **Appendix A**.

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The increasing population in London combined with an increased density of development in many areas of the city is likely to increase pressure on London's greenspace and natural environment. The New London Plan presents an opportunity to consider new policies to address these pressures and ensure measures are in place for new development which will result in an increase in green cover across the city.

Policy G5 of The New London Plan sets out the following requirements:

- 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 Appendix C of this report, 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 (excluding B2 and B8 uses).
- C. Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in Appendix C.

Further information on the above policy can be found in Appendix B of this report.

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The architects for the site, Remapp Landscape Architects, were contacted in order to obtain the area in square metres of each surface area type proposed for the completed site.

Factors between 0 and 1 for each surface type were assigned using Table 8.2 in The New London Plan. This table can be found in Appendix C. Using this table, the lowest score of zero is given to impermeable surfaces such as asphalt and concrete and the highest score of 1 is given to natural vegetation on deep soils.

The factor for each surface cover is multiplied by the area of the site in square metres which is made up of this surface cover. The resulting figures for each facture are added together and then divided by the overall site area. This gives an overall UGF score for the site of between 0 and 1. Please see a summary of the calculation below.

$$\text{UGF} = \frac{(\text{Factor A} \times \text{Area}) + (\text{Factor B} \times \text{Area}) + (\text{Factor C} \times \text{Area}) + (\text{Factor D} \times \text{Area}) \text{ etc}}{(\text{Total Site Area})}$$

Limitations

It should be noted that the UGF calculated in this report relies on the correct and up to date areas of each surface cover being provided by the design team. Should there be changes to the design of the site which may affect surface area cover ratios, the calculation should be updated.

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Urban Greening Factor Habitats

The UGF calculations are detailed in Appendix D. The proposals were found to result in a UGF score of 1.63, therefore the target score of 0.4 for predominantly residential development has been achieved. The following habitats will be created onsite post-development, providing benefits to biodiversity in the local area and all contribute to the UGF score.

Building

The new building within the red line site boundary falls under sealed surface with a factor weighting of 0.

Ephemeral/ruderal

Scattered areas of tall ruderal vegetation are present within the north of the enhancement area. The area is dominated by common nettle *Urtica dioica* which falls under groundcover planting under the UGF classification.

Introduced Shrub

Introduced shrubs are being retained and planted, including reinstating and replacement planting where gaps are present within the enhancement area. These will be planted with native and non-native shrubs, including species with a known wildlife benefit. This habitat is classified as groundcover planting under the UGF classification.

Green Roof

An extensive green roof is proposed on the building within the red-line boundary. The extensive green roof will be designed to be a low maintenance and lightweight system with a thin layer of substrate (the growing medium) to keep depth and weight to a minimum.

Hedgerow

A mixed species hedgerow will be created along the front of Wat Tyler House within the enhancement area. It will include mainly native species with a number of wildlife friendly non-native species. The hedgerow will be maintained at a height of 700mm. The hedgerow will be a line of mature shrubs or two shrubs wide in line with the UGF classification.

Modified Grassland

Modified grassland areas are being retained and created within the enhancement area. These grasslands have a short, regularly managed sward and fall under amenity grassland (species-poor, regularly mown lawn) under the UGF classification.

Permeable Paving

Permeable paving is being installed within the red line boundary. This is to aid with natural filtration and flood risk alleviation. Advantages of permeable paving include natural filtration and flood risk

alleviation. The installation of permeable paving will follow CIRIA guidance (Reference J, Appendix B). This habitat is classified as permeable paving under the UGF classification.

Trees

Scattered trees are located throughout the enhancement area. The majority of trees are being retained and 18 new trees are being planted onsite. The UGF category for which the existing and planted trees fall under is standard trees planted in natural soils, or connected tree puts with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.

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Conclusion

The UGF for the site was 1.73, which meets the target score of 0.4 for predominantly residential developments in The New London Plan.

The green infrastructure potential at the site has been maximised by the retention, enhancement and creation of introduced shrub, hedgerows, green roof, scattered trees, and ruderal/ephemeral vegetation. Permeable paving will also be installed instead of hardstanding across some sections of the site, which will aid in natural filtration.

It is concluded that the proposed development at the site meets the UGF target score of 0.4 and the habitats being installed onsite will largely improve the biodiversity and greening of the area, in line with The New London Plan.

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Validation

Report produced by Sara Curtis

Ecologist's Qualifications:	BSc - Environmental Science MSc - Environmental Consultancy (Biodiversity and Conservation)
Evidence of practicing Ecologist	Eight Versa, Principal Ecologist and Sustainability Consultant, conducting habitat and protected species surveys (2022 to present date); Senior Ecologist, Tyler Grange (2018 - 2021), Consultant Ecologist (2015 - 2018)
Professional Code of Conduct	I am a full member of the Chartered Institute of Ecology and Environmental Management.

Report verified by Miguel Robles Florez

Ecologist's Qualifications:	NPTC/City & Guilds Level 2 Certificate of Competence in Tree Climbing & Aerial Rescue (0039-22) MEnvSci - Biodiversity and Conservation
Evidence of practicing Ecologist	Eight Versa, Assistant Ecologist, conducting habitat and protected species surveys (June 2021); CONANP, Research Assistant. Whale shark conservation and management project (Jun - August 2019).
Professional Code of Conduct	I am a member of the Chartered Institute of Ecology and Environmental Management.

Validation

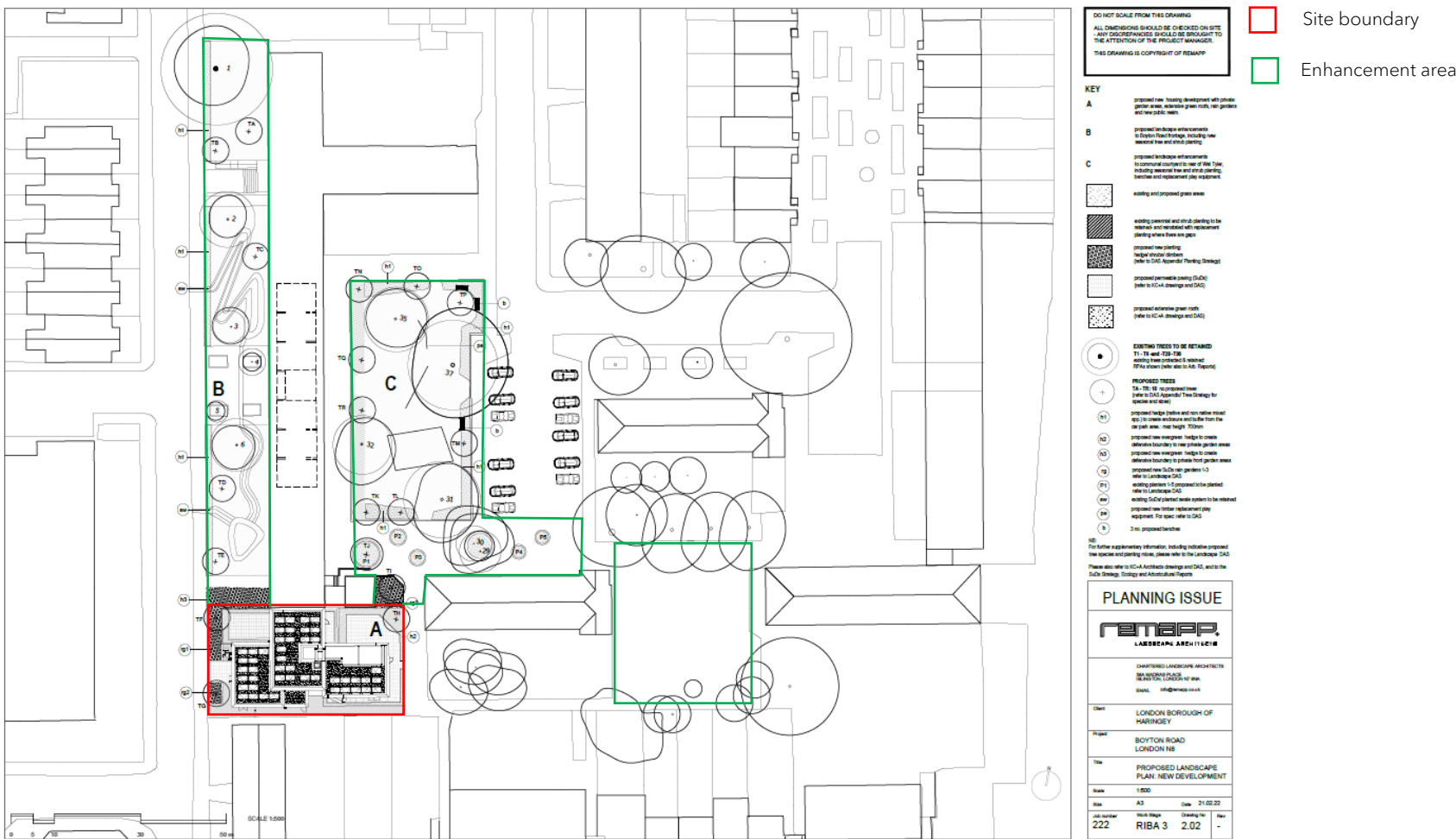
I confirm the information provided in this document is truthful and accurate at the time of completion.

Suitably Qualified Ecologist	Stacey Cougill
Signature of Ecologist	SC
Date	20/10/2022

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Appendix A - Landscape Plan



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Appendix B - Local Policy

The New London Plan (2021)

The below extract is taken from Policy G5 (Urban Greening) of The New London Plan.

Policy G5 Summary

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

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 predominately residential developments, and a target score of 0.3 for predominately commercial development.

Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in Table 8.2.

8.5.1

The inclusion of urban greening measures in new development will result in an increase in green cover and should be integral to planning the layout and design of new buildings and developments. This should be considered from the beginning of the design process.

8.5.2

Urban greening covers a wide range of options including, but not limited to, street trees, green roofs, and green walls. It can provide a range of benefits including amenity space, enhanced biodiversity, addressing the urban heat island effect, sustainable drainage and amenity – the latter being especially important in the most densely developed parts of the city where traditional green space is limited. The management and ongoing maintenance of green infrastructure should be considered and secured through the planning system where appropriate

8.5.3

A number of cities have successfully adopted a 'green space factor' to encourage more and better urban greening. The Mayor has developed a generic Urban Greening Factor model to assist boroughs and developers in determining the appropriate provision of urban greening for new developments. This is based on a review of green space factors in other cities (https://www.london.gov.uk/sites/default/files/urban_greening_factor_for_london_final_report.pdf). The factors outlined in Table 8.2 are a simplified measure of various benefits provided by soils, vegetation and water based on their potential for rainwater infiltration as a proxy to provide a range of benefits such as improved health, climate change adaption and biodiversity conservation

8.5.4

The UGF is currently only applied to major applications, but may eventually be applied to applications below this threshold as boroughs develop their own models. London is a diverse city so it is appropriate that each borough develops its own approach in response to its local circumstances. However, the challenges of climate change, poor air quality and deficiencies in green space need to be tackled now, so while each borough develops its own bespoke approach the Mayor has recommended the standards set out above. Further guidance will be developed to support implementation of the Urban Greening Factor.

8.5.5

Residential development places greater demands on existing green infrastructure and, as such, a higher standard is justified. Commercial development includes a range of uses and a variety of development typologies where the approach to urban greening will vary. Whilst the target score of 0.3 does not apply to B2 and B8 uses, these uses will still be expected to set out what measures they have taken to achieve urban greening on-site and quantify what their UGF score is.

8.5.6

The Urban Greening Factor for a proposed development is calculated in the following way:

(Factor A x Area) + (Factor B x Area) + (Factor C x Area) etc. divided by Total Site Area

So, for example, an office development with a 600 sqm footprint on a site of 1,000 sqm including a green roof, 250 sqm car parking, 100 sqm open water and 50 sqm of amenity grassland would score the following:

$$(0.7 \times 600) + (0.0 \times 250) + (1 \times 100) + (0.4 \times 50) / 1000 = 0.54$$

8.5.7

So, in this example, the proposed office development exceeds the interim target score of 0.3 for predominately commercial development under Part B of Policy G5 Urban greening.

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Appendix C - UGF Factors

The below table is found in Table 8.2 in The New London Plan.

Surface Cover Type	Factor
Semi-natural vegetation (e.g., woodland, flower-rich grassland) created on site.	1
Wetland or open water (semi-natural; not chlorinated) created on site.	1
Intensive green roof or vegetation over structure. Vegetated sections only. Substrate minimum settled depth of 150mm – see livingroofs.org for descriptions ^A .	0.8
Standard trees planted in natural soils or in connected tree pits with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree – see Trees in Hard Landscapes for overview ^B .	0.8
Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code 2014 ^C .	0.7
Flower-rich perennial planting – see Centre for Designed Ecology for case-studies ^D .	0.7
Hedges (line of mature shrubs one or two shrubs wide) – see RHS for guidance ^E .	0.6
Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6
Green wall – modular system or climbers rooted in soil – see NBS Guide to Façade Greening for overview ^G .	0.6
Groundcover planting – see RHS Groundcover Plants for overview ^H .	0.5
Amenity grassland (species-poor, regularly mown lawn).	0.4
Extensive green roof of sedum mat or other lightweight systems that do not meet GRO Code 2014 ^I .	0.3
Water features (chlorinated) or unplanted detention basins.	0.2
Permeable paving - see CIRIA for overview ^J .	0.1
Sealed surfaces (e.g., concrete, asphalt, waterproofing, stone).	0

Foot note references:

- A. <https://livingroofs.org/intensive-green-roofs/>
- B. <http://www.tdag.org.uk/trees-in-hard-landscapes.html>
- C. <https://livingroofs.org/wp-content/uploads/2016/03/grocode2014.pdf>
- D. <https://cfde.co.uk/front-page/about/case-studies/>
- E. <http://www.susdrain.org/case-studies/>
- F. <https://www.rhs.org.uk/advice/profile?pid=351>
- G. <https://www.thenbs.com/knowledge/the-nbs-guide-to-facade-greening-part-two>
- H. <https://www.rhs.org.uk/advice/profile?PID=818>
- I. <https://livingroofs.org/wp-content/uploads/2016/03/grocode2014.pdf>
- J. <http://www.susdrain.org>

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Appendix D - UGF Calculations

Habitat	Classification according to Policy G5 of the Intend to Publish London Plan (Appendix B)	Factor weighting (F)	Area, m2 (A)	Score (Fx A= S)
Building	Sealed surfaces (e.g., concrete, asphalt, waterproofing, stone).	0	216	0
Introduced shrub	Groundcover planting.	0.5	20	10
Green roof	Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket).	0.7	160	112
Permeable paving	Permeable paving.	0.1	174	17.4
Hardstanding	Sealed surfaces (e.g., concrete, asphalt, waterproofing, stone).	0	560	0
Modified grassland	Amenity grassland (species-poor, regularly mown lawn).	0.4	1160	464
Introduced shrub	Groundcover planting.	0.5	230	115
Trees	Standard trees planted in natural soils or in connected tree pits with a minimum soil volume equivalent to at least two thirds of the projected canopy area of the mature tree.	0.8	122	97.6
Ephemeral/ruderal	Groundcover planting.	0.5	75	37.5
New hedgerow	Hedges (line of mature shrubs one or two shrubs wide).	0.6	78	46.8
Introduced shrubs - playground	Groundcover planting.	0.5	20	10
Permeable Paving - playground	Permeable paving.	0.1	460	46
Trees - playground	Standard trees planted in pits with soil volumes less than two thirds of the projected canopy area of the mature tree.	0.6	15	9
Sum Total			3462	1085.7
Total Site Area			625	
UGF Score				1.73