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Urban Greening Factor

- infrastructure or ornament?

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London Plan

New green infrastructure policies:

- protect public green space, natural habitats and trees
- promote river restoration and sustainable drainage
- accelerate urban greening through an 'urban greening factor' and increasing canopy cover
- addressing environmental and social challenges through green infrastructure



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An iteration of policy that has shifted from an encouragement to install green roofs to promote biodiversity and resilience to climate change to a more comprehensive approach that requires green infrastructure to be integrated into new development to deliver a range of environmental and social objectives.



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...



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

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.



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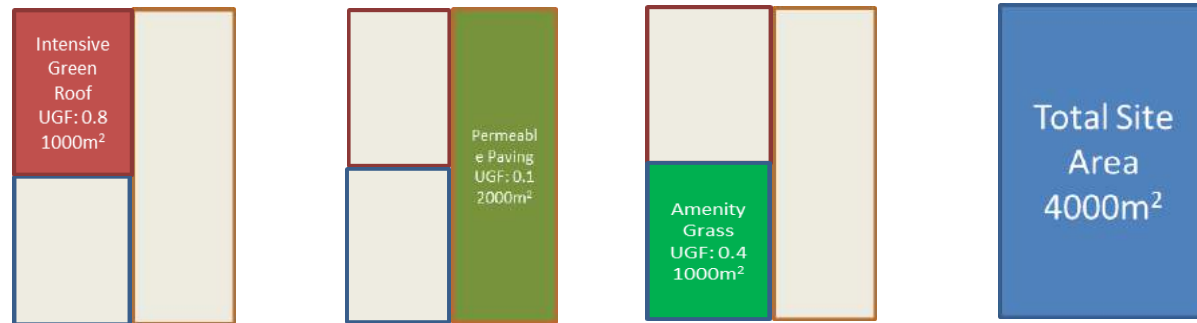
Surface Cover Type	Factor
Semi-natural vegetation (e.g. woodland, flower-rich grassland) created on site.	1
Wetland or open water (semi-natural; not chlorinated) created on site.	1
Intensive green roof or vegetation over structure. Vegetated sections only. Substrate minimum settled depth of 150mm – see livingroofs.org for descriptions.	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.	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.	0.7
Flower-rich perennial planting – see Centre for Designed Ecology for case-studies.	0.7
Rain gardens and other vegetated sustainable drainage elements – See CIRIA for case-studiesE.	0.7
Hedges (line of mature shrubs one or two shrubs wide) – see RHS for guidance.	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.	0.6
Groundcover planting – see RHS Groundcover Plants for overview.	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.	0.3
Water features (chlorinated) or unplanted detention basins.	0.2
Permeable paving - see CIRIA for overviewJ.	0.1
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone).	0

Purpose of the Urban Greening Factor

A tool that evaluates and quantifies the amount and quality of urban greening that a scheme provides to inform decisions about appropriate levels of greening in new developments

How is it calculated?

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



$$(0.8 \times 1000) + (0.1 \times 2000) + (0.4 \times 1000) \div 4000 = \underline{\underline{0.35}}$$

When does it apply?

- All major developments
- Across all of London
- Should be applied in combination with other policies e.g. the protection of Open Space, Biodiversity and Trees

Importantly the application of the UGF can deliver against other policy objectives including: increasing canopy cover; implementing SuDS and biodiversity net gain.

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Landscape Layout

1. Arrival plaza with strip of feature paving highlighting the principal pedestrian routes.
2. Pocket park next to main entrance, comprising areas of lawn, shrub planting, benches, circular path, hedge planting and trees to the site boundary, and a feature tree in the centre.
3. Pergola arches positioned through the central parking strips, with climber plants trained along them.
4. 5 no. DDA parking spaces close to the main entrance.
5. Taxi drop-off area by arrival plaza with 2 no. parking bays.
6. Standard parking spaces - 77no. in total - reinforced grass surface proposed for all spaces except for those under building undercroft which will be asphalt.
7. Areas of planting scattered throughout the car park in raised planters. Due to restrictions on construction depth, areas above the tunnel will be planted with shrubs including a couple of bigger feature specimens. Other areas will have small trees to maximise the green car park concept. The overall height of the planter and planting (except for specimens and trees) are to be maintained at a maximum of 1.2m to provide visual clearance for cars and pedestrians.
8. Feature plaque to indicate the location of the (underground) old dock wall.
9. Service area.
10. Green hedge buffer to perimeter made up of anti-pollution trees and native species.
11. Car park entrance from Sorrel Lane.
12. Car park exit onto Oregano Drive.
13. Areas of shared surface provide clear routes from the car park into the arrival plaza and pocket park, whilst also providing surface water filtration.
14. Sheffield cycle stands sufficient for 24 bicycles.
15. Timber screening to exterior of refuse enclosure, with climbers trained to run up the facades.
16. Wind mitigation screen, approx. 1.8m high with ivy climbers.

NOTE: Please refer to drawing L-1935-PRP-002 & L-1935-PRP-009 for details of planting and hard landscape materials.

colour



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- Hardworks**
- Vehicular asphalt
 - Permeable block paving to car parking bays
 - Grasscrete to car parking bays next to the corner park
 - Feature concrete paving to arrival plaza
 - Concrete block paving to pedestrian
 - Self binding gravel to footpath in the park
- Softworks**
- Proposed tree
 - Proposed specimen shrub
 - Woodland planting to green buffer with Emorgate Seed EH1 Hedge Mix beneath
 - Hedge planting mixed with large specimen shrubs
 - Flower-rich perennial shrub planting
 - Groundcover planting
 - Amenity grass area to be Germinal A2 or similar
 - Wildflower meadow to corner park to be Emorgate Seed EM2 or similar



Landscape Layout

- Arrival plaza with feature paving.
- Pocket park next to main entrance, comprising areas of lawn, shrub planting, benches, circular path (with a 1.5m footpath link accessible by wheelchair), hedge planting and trees to the site boundary, and a feature tree in the centre.
- Pedestrian route linking the taxi drop-off area, main arrival plaza and the corner park.
- 5 no. DDA parking spaces close to the main entrance in block paving.
- Standard parking spaces - 20no. - reinforced grass surface proposed for all spaces except for those under building undercroft which will be concrete block paving.
- Larger vehicle parking spaces - 10no. - reinforced grass surface.
- Areas of planting scattered throughout the car park in raised planters. Due to restrictions on construction depth, areas above the tunnel will be planted with shrubs including a couple of bigger feature specimens. The overall height of the planter and planting (except for specimens and trees) are to be maintained at a maximum of 1.2m to provide visual clearance for cars and pedestrians.
- Feature plaque to indicate the location of the (underground) old dock wall.
- Service area.
- Green planting buffer at corner park made up of anti-pollution trees/shrubs and hedge mix beneath. Due to restrictions on construction depth, areas above the tunnel will be planted with large shrubs.
- Car park entrance from Sorrel Lane.
- Car park exit onto Oregano Drive.
- Taxi drop-off area, 8.5m long.
- Sheffield cycle stands sufficient for 24 bicycles.
- Timber screening to exterior of refuse enclosure, with climbers trained to run up the facades.
- Wind mitigation screen, approx. 1.8m high with ivy climbers.
- Corner park with native trees along the boundary and shrub planting to both sides of the footpath. 2m wide path links the existing crossing and the public footpath.

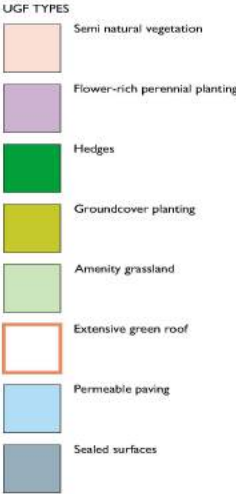
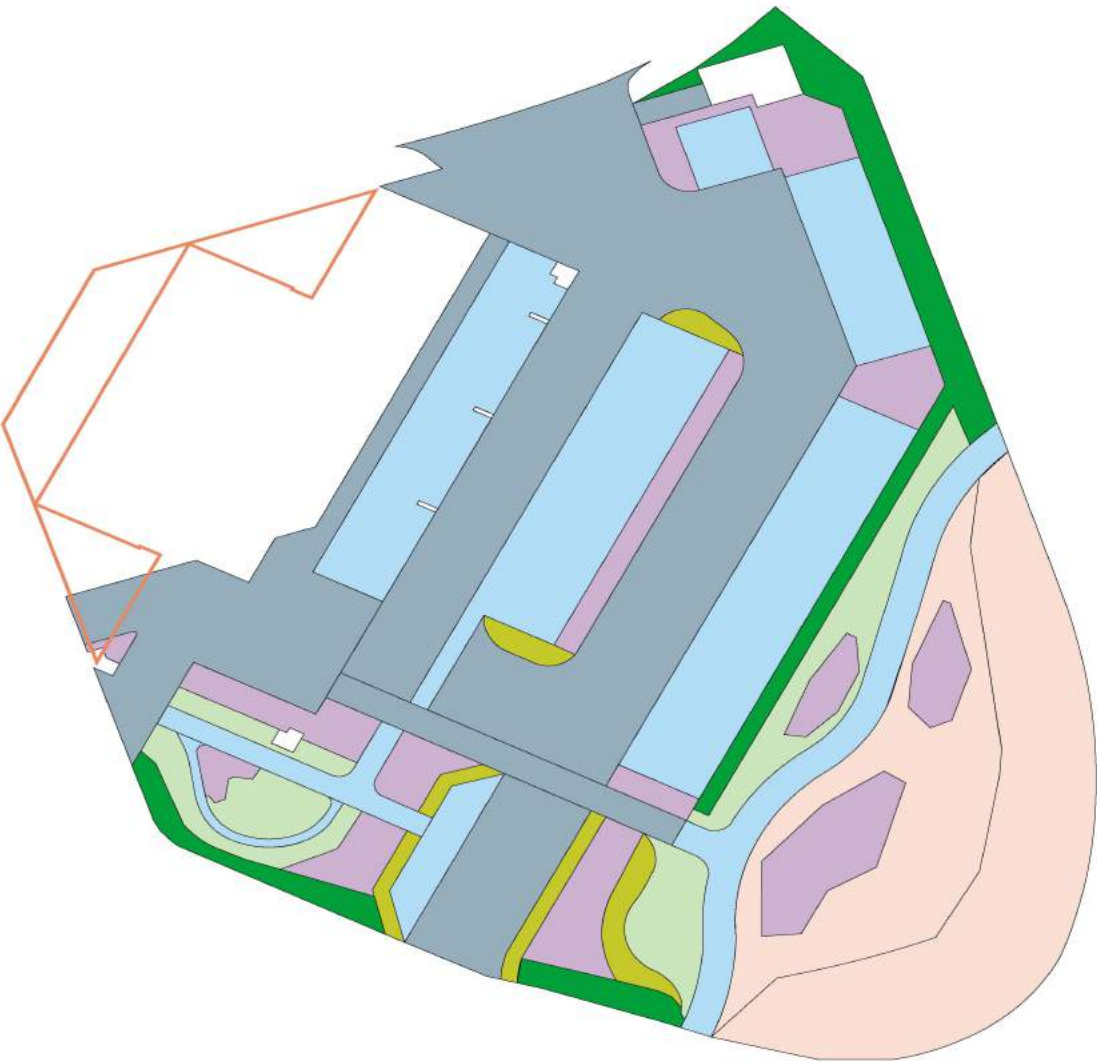
NOTE: Please refer to drawing L-1935-PRP-002 & L-1935-PRP-009 for details of planting and hard landscape materials.

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L-1935-PRP-001 Landscape Layout Plan Rev 18
Scale 1 : 200 @ A2

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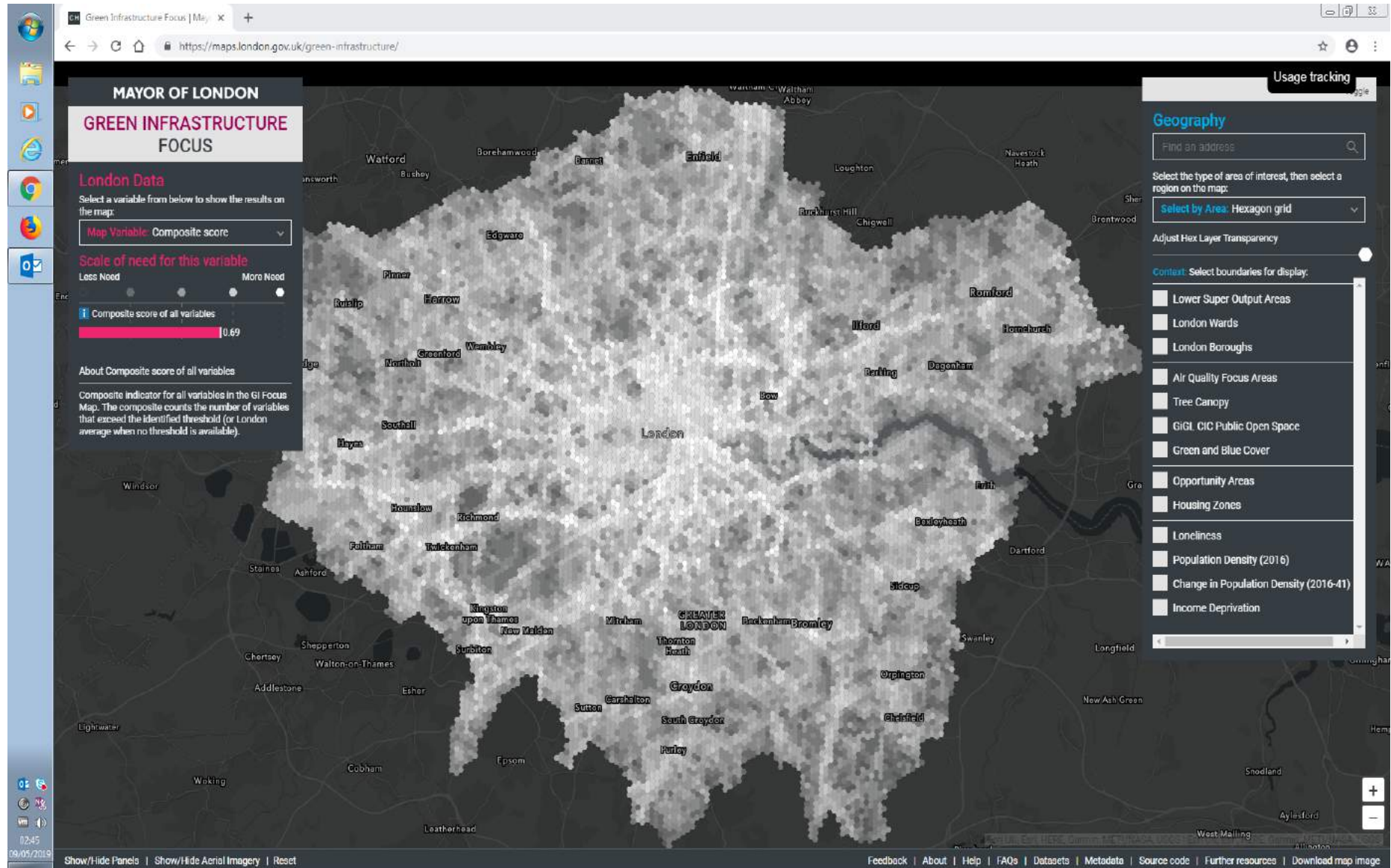
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London UGF		
Proposed Surface Cover Type	Factor	Area (m2)
1 Semi-natural vegetation (e.g. woodland, flower-rich grassland) created on site.	1	508.54
2 Flower-rich perennial planting – see Centre for Designed Ecology for case-studies8	0.7	320.14
3 Hedges (line of mature shrubs one or two shrubs wide) – see RHS for guidance10 .	0.6	166.87
4 Groundcover planting – see RHS Groundcover Plants for overview12	0.5	62.56
5 Amenity grassland (species-poor regularly mown lawn).	0.4	195.4
6 Extensive green roof with substrate of minimum settled depth of 80mm (or 60mm beneath vegetation blanket) – meets the requirements of GRO Code (2014).	0.7	147.9
7 Permeable paving - see CIRIA for overview14 .	0.1	712.76
8 Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone).	0	989.17
UGF		TOTAL AREA (m2)
		0.36 3103.34



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Conclusions

- UGF is a policy and tool to facilitate discussions about the quality and quantity of urban greening and resulting in more 'green' developments.
- It is particularly useful when reviewing applications that appear relatively green on the plans submitted.
- Applicants are beginning to submit their own calculation of the UGF, demonstrating that policy is starting to inform design development.
- Policy, practice and products are better aligned than ever. Together we can create greener cities that can address the challenges we face locally and globally.

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THANK YOU

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