

Appendix E

Urban Greening Factor

This guidance is intended to support Policy ENV3 which sets out how new developments should incorporate urban greening measures using the principle of an Urban Greening Factor (UGF) to calculate the requirements of a specific scheme. Urban greening covers a wide range of options including, but not limited to, street trees, green roofs, green walls, and rain gardens. A number of cities have successfully adopted a 'green space factor' to encourage more and better urban greening. The adopted London Plan 2021 operates a generic UGF model to assist developers in determining the appropriate provision of urban greening for new developments and is the inspiration for the policy.

The UGF for a proposed development is calculated in the following way:

$$\frac{(\text{Factor A} \times \text{Area in sq.m.}) + (\text{Factor B} \times \text{Area}) + (\text{Factor C} \times \text{Area}) + \text{etc}}{\text{Total Site Area.}}$$

whereby each urban greening element of the proposal is multiplied by the area (in sq.m.) of the proposal to which it applies, then all are added up and divided by the gross site area. The table below sets out the UGF for each urban greening measure.

Example 1

An office development with a 600 sq.m. footprint on a site of 1,000 sq.m. including a green roof, 250 sq.m. car parking, 100 sq.m. open water and 50 sq.m. of amenity grassland would score the following:

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

In this example, the proposed office development exceeds the target score of 0.3 required by the policy for a commercial development.

Example 2

A housing development with a total footprint of 5,000 sq.m. on a site of 7,500 sq.m., which includes 4,000 sq.m. of green roofs (non GRO), 1,000 sq.m. of amenity grassland; 750 sq.m. of permeable paving; and 750 sq.m. of sealed surface highways and parking would score the following:

$$(4000 \times 0.3) + (1000 \times 0.7) + (750 \times 0.1) + (750 \times 0.0) / 7500 = 0.26$$

In this example, the proposed scheme fails to meet the target score of 0.4 required by the policy for a housing development. The applicant should either modify the mix of measures or accept that in the planning balance the proposal will be contrary to Policy ENV3. If the applicant instead delivered a green roof to GRO Code then that higher factor (0.7 versus 0.3) would lead to a score of 0.48, which would be policy compliant.

SURFACE COVER TYPE	FACTOR
Semi-natural vegetation (e.g. trees, woodland, species-rich grassland) maintained or established on site.	1
Wetland or open water (semi-natural; not chlorinated) maintained or established on site.	1
Intensive green roof or vegetation over structure. Substrate minimum settled depth of 150mm – see HERE for descriptions.	0.8
Standard trees planted 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 HERE 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 HERE for guidance.	0.7
Rain gardens and other vegetated sustainable drainage elements – See CIRIA for case studies.	0.7
Hedges (line of mature shrubs one or two shrubs wide) – see HERE 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 overview.	0.1
Sealed surfaces (e.g. concrete, asphalt, waterproofing, stone).	0