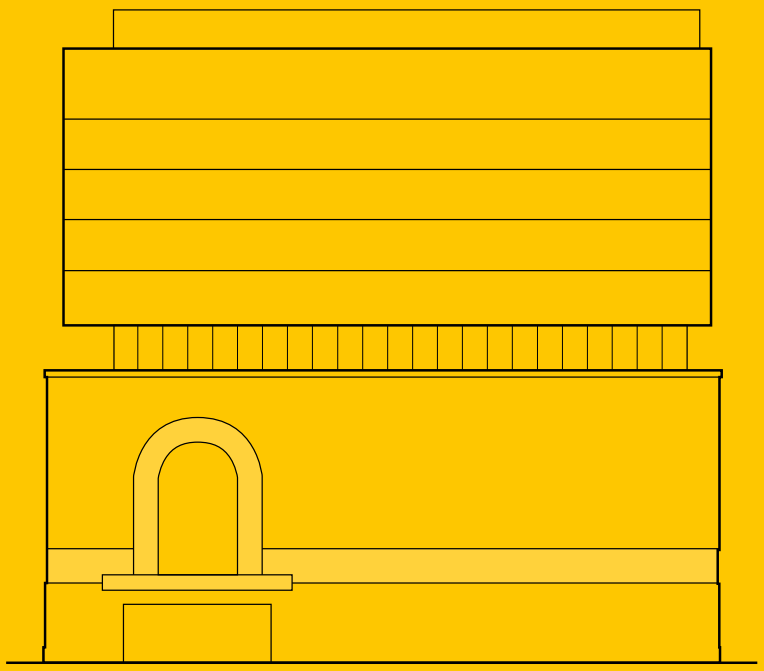

SAVILLE THEATRE

135 SHAFTESBURY AVENUE

URBAN GREENING FACTOR REPORT

RPS

FORMER SAVILLE THEATRE, SHAFTSBURY AVENUE, LONDON

Urban Greening Factor Report

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Saville Theatre, Covent Garden
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January 2025

rpsgroup.com

Quality Management

Version	Status	Authored by	Reviewed by	Approved by	Review date
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Hannah Knight 31 January 2025

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EXECUTIVE SUMMARY

- RPS were commissioned to prepare an Urban Greening Factor (UGF) Report for the proposed development at the former Saville Theatre, which seeks to re-introduce a live performance venue to this Site and introduce a new hotel use on upper floors. The Proposed Development includes a 6-storey extension, plus plant, on top of the existing Building.
- The application boundary is 1,265m^2 in size and comprises of solely hardstanding, following a Preliminary Ecological Appraisal in January 2024 (RPS, 2024).
- Existing urban greening / green infrastructure or landscape elements are non-existent. The proposals include the creation of several small areas of formal ornamental planting, green wall and green roof areas.
- Based on the targeted Urban Greening Factor for London, as outlined by Policy G5: Urban Greening in the London Plan, the proposals should seek to attain a minimum overall target score of 0.3 for a predominantly commercial development.

Contents

1 PLANNING POLICY CONTEXT

General

1.1 This section summarises the current and emerging National and Local planning policies and guidance pertinent to this Urban Greening Report. The following policy documents have been reviewed as part of the report.

National Planning Policy

National Planning Policy Framework (NPPF) (2023)

1.2 Although the current NPPF (Ref.1) does not specifically refer to Urban Greening; Section 14: Meeting the Challenge of Climate Change, Flooding and Coastal Change, emphasises the importance of Green Infrastructure (including landscape) when tackling the issues of climate change including overheating due to rises in temperature.

1.3 Paragraph 153 states that:

"Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures". (NPPF 2023)

1.4 Paragraph 154 states that "New development should be planned for in ways that:

a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure…". (NPPF 2023).

Regional Planning Policy

London Plan July 2021

1.5 Policy G5: Urban Greening, of the London Plan (Ref. 3), has been brought forward as a result of extensive research into urban greening and the Green Space Factor (GSF) planning policy tool that originated in Berlin and has been adopted and adapted in a number of other cities in Europe and North America to encourage urban greening. Policy G5(A) states that:

"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". Paragraph 8.5.1 further states that "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".

1.6 Paragraph 8.5.2 indicates the measures that could be considered as contributing to urban greening and the benefits that would result, stating that:

"Urban greening covers a wide range of options including, but not limited to, street trees, green roofs, green walls, and rain gardens. It can help to meet other policy requirements and provide a range of benefits including amenity space, enhanced biodiversity, addressing the urban heat island effect, sustainable drainage and amenity".

1.7 At paragraph 8.5.4 of the London Plan, details are given as to the methodology to be used for the calculation of the UGF for a given development and the various land cover types (including scores) which contribute to this. This methodology has been directly transposed from the GLA Urban

Greening Factor for London (2017) and is the methodology which has been adopted for this report (refer to Section 2 below).

Supplementary Guidance

Greater London Authority Urban Greening Factor for London (2017)

1.8 Prepared by The Ecology Consultancy, in collaboration with The Green Infrastructure Consultancy and Temple. The GLA Urban Greening Factor for London (Ref. 4) report proposes a Green Space Factor (GSF) framework for London, called the Urban Greening Factor (UGF). The report has recommended that the framework was endorsed by the current Mayor of London for inclusion within the emerging New London Plan, as set out in Policy G5: Urban Greening in the London Plan (summarised above).

1.9 Section 2 and 5 of this report have been used as the baseline methodology for the completion of the Urban Greening Report. As such, further detail is summarised in Section 3 of this Urban Greening Report below.

2 METHODOLOGY

2.1 The methodology for this Urban Greening Report is commensurate with current guidance and policy, including Section 2: How it Works and Section 5: Recommendations – An Urban Greening Factor for London, as detailed within the Greater London Authority Urban Greening Factor (The Ecology Consultancy, July 2017) (Ref. 4). With reference to the Policy G5: Urban Greening, as detailed within the London Plan July 2021 (Ref. 3) as appropriate.

General

2.2 "Green Space Factor schemes are applied in a number of cities around the world. All schemes allocate a factor to various types of surface cover included in planning proposals. The factors are a simplified measure of the various benefits (ecosystem services) 2 provided by soils, vegetation and water and are usually assigned on the basis of potential for rainwater infiltration. This is because the water-holding capacity of surface cover and associated soil is a good proxy for their 'naturalness' and their ability to provide the range of benefits associated with more natural systems including benefits in relation to health, climate change adaptation, air quality improvement and biodiversity conservation. Factors between 0 and 1 (in increments of 0.1) are allocated to each surface cover type, with impermeable surfaces such as concrete and asphalt assigned a factor of 0 and the most natural surface cover such as open water or trees on deeper soils, given a factor of 1.

In calculating an overall GSF for any given proposed development it is necessary to measure the overall area of the redevelopment or regeneration site and then to determine, map and measure the area of various surface cover types proposed as part of the new development (Figure 1 below). Typical surface covers defined by cities operating GSF schemes, include sealed surfaces, permeable paving, amenity grassland, trees and shrubs, extensive green roofs, roof gardens and green walls etc. A factor (a weighting for the naturalness and functionality) is then assigned to each surface cover type. To calculate the overall GSF score the factor for each surface cover within a site is multiplied by its area. This generates a series of figures which are then added together. This new total is then divided by the site overall site area to give a GSF score (as set out in Figure 2 below). This score can then be compared with a target set by the planning authority" (Page 6, Greater London Authority Urban Greening Factor, The Ecology Consultancy, July 2017).

2.3 Section 5: Recommendation, - An Urban Greening Factor for London sets out the specific methodology for determining the scores assigned to urban greening elements within a given development, stating that *"The proposed city-wide methodology for determining a GSF score is presented in Table 1 below. It assigns a factor to a range of surface cover types that are likely to be included within development proposals in London. It briefly describes the surface cover type and provides references that provide additional technical description of the surface cover type. The table covers most eventualities, however, if a surface cover type is encountered which is not listed, it is suggested that it is assigned the same factor as the category in the table that is most functionally similar. Factors are similar to those used in other cities, with 0 assigned to sealed, hard surfaces and 1 assigned to the most natural and or permeable features*.

All developments (in areas targeted in strategic plans) should deliver additional urban greening, however targets may need to be differentiated depending on the development type and location. An overall minimum target score of 0.4 will be suitable for most proposed developments on previously developed land in London. However, each local planning authority may consider adjusting this figure, based on local needs and particular development typologies. In particular, developments that are predominantly residential may justify the application of a higher target score of 0.5, particularly if the development is resulting in additional pressure on already limited green space". (Page 13, Greater London Authority Urban Greening Factor, The Ecology Consultancy, July 2017).

Table 1: Proposed surface cover type descriptions and factors

Surface Cover Area	Factor
Semi-natural vegetation (e.g., woodland, species-rich grassland) created on site	1
Wetland or open water (semi-natural) created on site	1
Intensive green roof or vegetation over structure. Vegetated sections only. Substrate minimum settled depth of 150mm	0.8
Standard trees planted in natural soils or within a minimum of 25 cubic metres of soil volume per tree.	0.8
Extensive green roof with substrate of minimum settled depth of 80mm	0.7
Flower-rich perennial planting	0.7
Rain gardens and other vegetated sustainable drainage elements.	0.7
Hedges (line of mature shrubs, more than one or two shrubs wide)	0.6
Standard trees planted in individual pits, with less than 25 cubic meters of soil volume	0.6
Green wall, modular system or climbers rooted in soil	0.6
Groundcover planting	0.5
Amenity grassland (species poor and regularly mown)	0.4
Extensive green roof of sedum mat without substrate (or similar)	0.3
Water features (chlorinated)	0.2
Permeable paving	0.1
Sealed surface (e.g., concrete, asphalt)	0

2.4 It is noted that the criteria set out in Table 1 above has been directly transposed and included within Policy G5: Urban Greening, as set out in the London Plan (2021), and so can be interpreted as the most up to date policy.

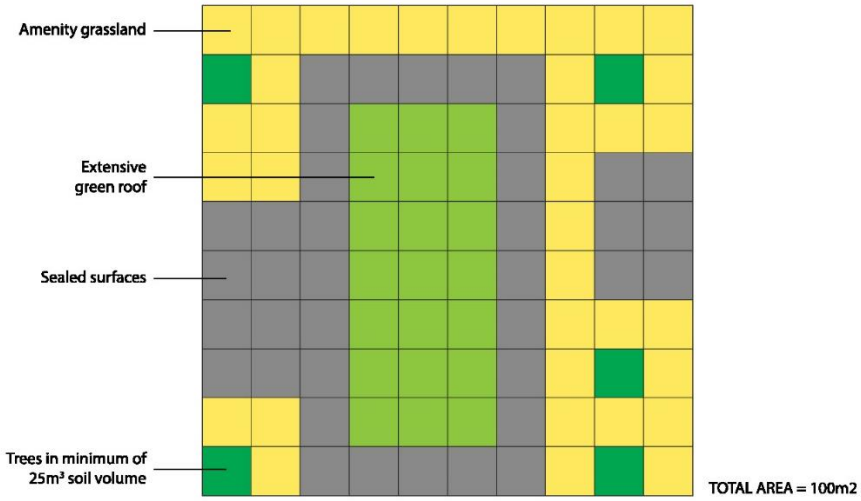
2.5 Furthermore, the overall minimum UGF target score, as stated in section 1 , within Policy G5: Urban Greening, sets the current policy and Urban Greening Factor (UGF) target score, stating that *"Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening 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 developments that are predominately residential, and a target score of 0.3 for predominately commercial development"* (London Plan, 2021). This is also consistent with the recommendations set out in the GLA Urban Greening Factor for London (The Ecology Consultancy, 2017).

3 PROPOSED DEVELOPMENT

3.1 Current landscape proposals include the creation of several ornamental planters on the various roof terraces, green walls (where appropriate) and a green roof on the plant. Landscaping proposals are provided in Appendix A.

Figure 1: Diagram of simplified theoretical development site to demonstrate how the GSF works (modified from a diagram in Southampton City Council's GSF Guidance notes)[3].

1. Measure site area, measure various surface cover types



2. Table showing areas of each cover type and factor assigned to each:

		Factor	Area (m^2)
	Extensive green roof	0.7	21
	Sealed surfaces	0.0	38
	Amenity grassland	0.4	36
	Trees in minimum of 25m^3 soil volume	0.8	5
			100

3. Calculation of the overall score for the site

$$\frac{(0.7 \times 21) + (0 \times 38) + (0.4 \times 36) + (0.8 \times 5)}{100}$$

Score = 0.33

[3] https://www.southampton.gov.uk/policies/Green-Space-Factor-guidance-notes-2015.pdf

3.2 In line with the methodology set out in section 2 of this report and Figure 2 below, the Overall Urban Greening Factor (UGF) score for the current proposals is **0.366.** This is based on the calculation within Table 2 below. As such, the current proposals **do satisfy** the target UGF of 0.3 for a scheme of this nature.

Figure 2: Formula for calculating the overall GSF score

$$\frac{\text{(Factor A x Area) + (Factor B x Area) + (Factor C x Area) + (Factor D x Area) etc.}}{\text{Total Site Area}}$$

Table 2: Urban Greening Factor (UGF) Calculation

Area	Surface Cover Type	Total Area (sqm)	Factor	Urban Greening Factor (UGF) (Total Area x Factor)
1	Flower rich perennial planting	33	0.7	23.1
2	Green wall (modular)	208	0.6	124.8
3	Permeable paving	480	0.1	48
4	Extensive green Roof	290	0.7	203
	Total Site Area (inc. sealed surfaces) (sqm)	1,265m²		
	Total UGF contribution			398.9
	Overall UGF (Total UGF divided by Total Scheme Area)			**0.315**

4 CONCLUSIONS AND RECOMMENDATIONS

4.1 In line with emerging planning policy and best practice guidelines, as set out in Policy G5: Urban Greening (London Plan, July 2021) (Ref. 3) and the Greater London Authority Urban Greening Factor (The Ecology Consultancy, July 2017) (Ref. 4), the current proposed development does satisfy the current target Urban Greening Factor (UGF) score of 0.3, based on Table 1.

REFERENCES

National Planning Policy Framework (NPPF) (2021);

Adopted Greater London Authority (GLA) London Plan (2016);

London Plan (July 2021); and

Greater London Authority Urban Greening Factor for London (2017).

Appendix A – Landscaping Proposals

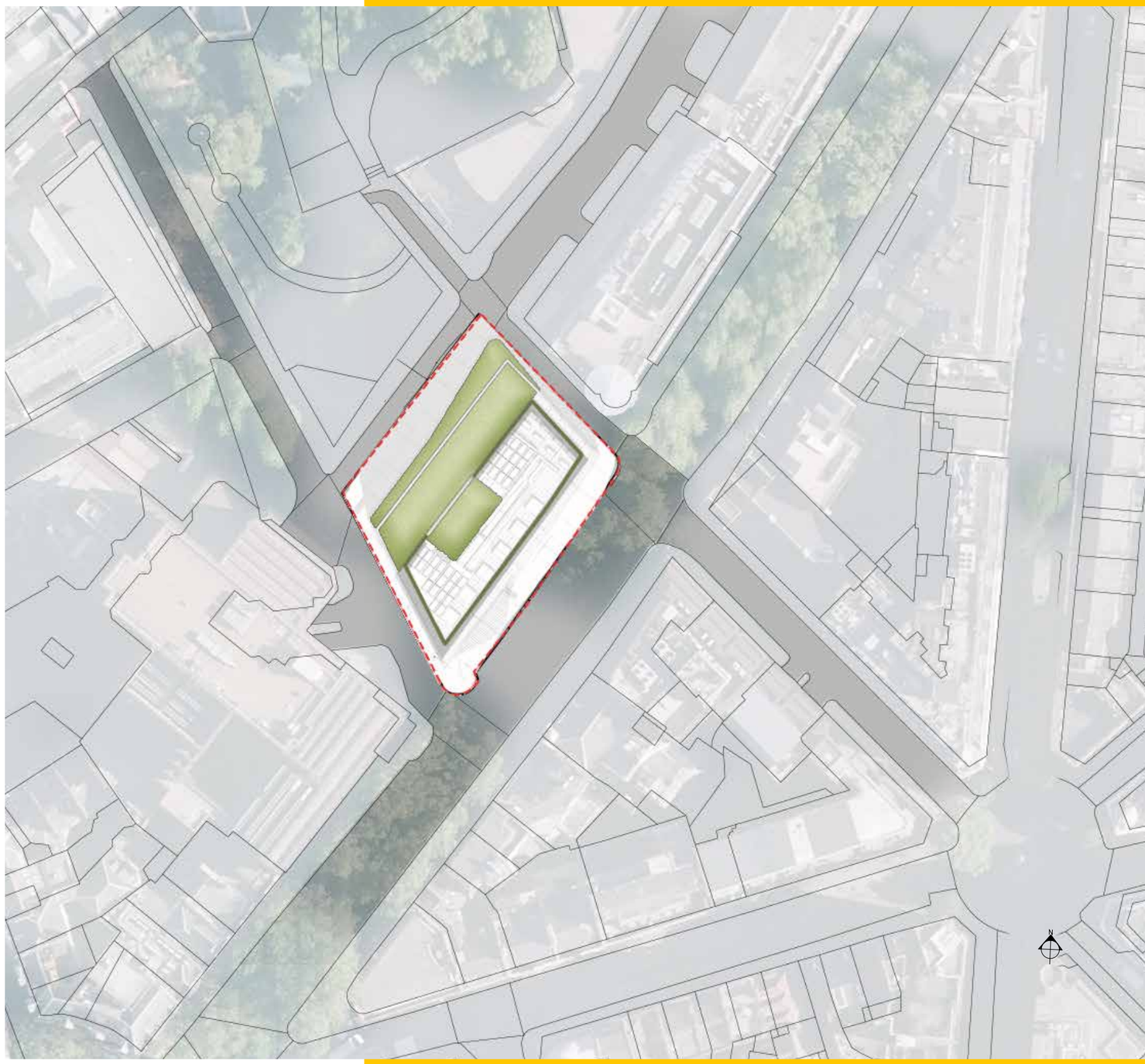
Landscape Vision

The landscape proposals for the redevelopment of the Saville Theatre provides an opportunity to create a superb setting for future hotel and theatre visitors alike.

In parallel with the visitor experience, the opportunity exists to provide significant habitat and biodiversity enhancements through a series of landscape elements set within the developent.

Urban greening is proposed to be provided with the inclusion of green walls, green roof systems and raised planters. A mix of seasonal planting will provide botanical interest through flowering, scented and textural species; offering a varied and rich experience to visitors and wildlife.

A series of raised planters will be onview from within the central front-of-house floor of the hotel, whilst some rooms will look out onto green roof space.



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Illustrative Planting Proposals

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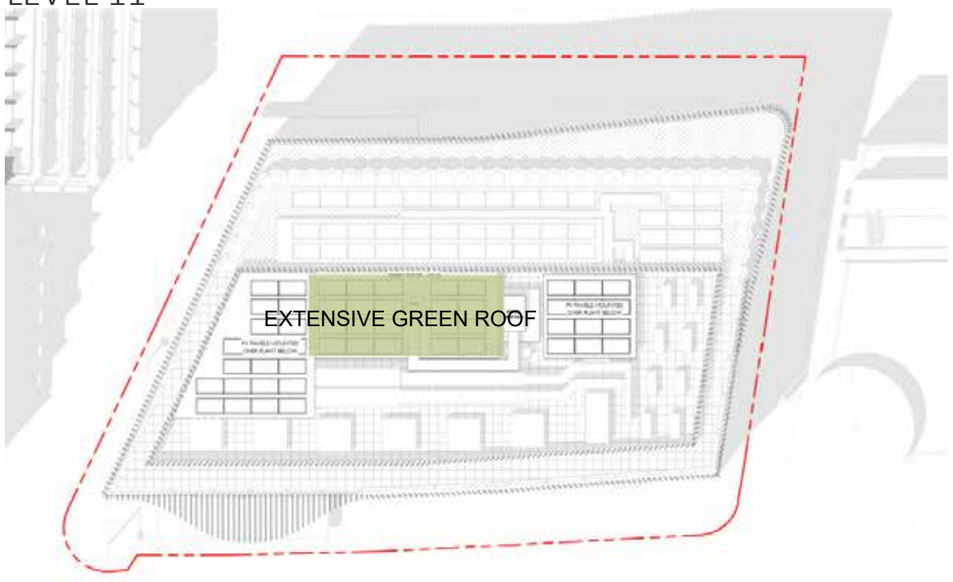

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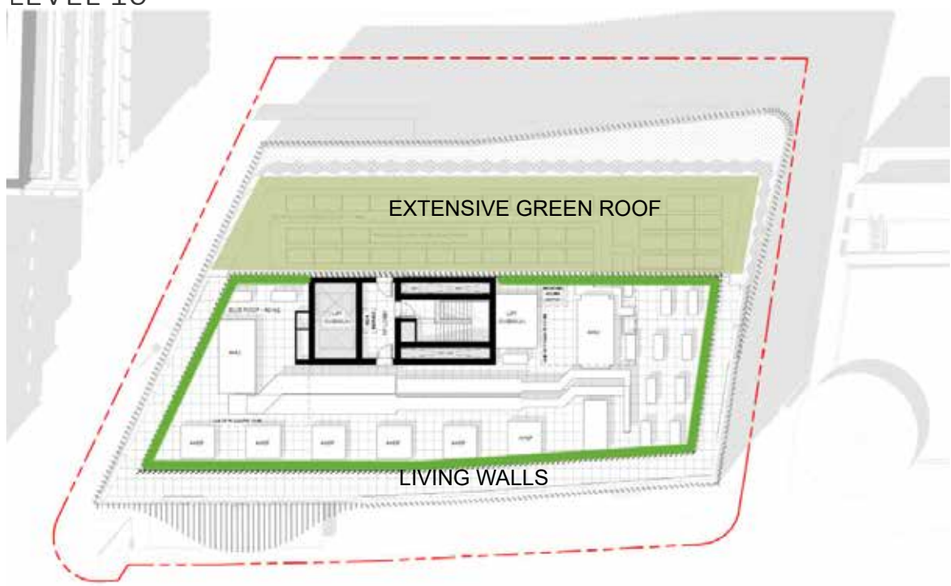

LEVEL 9

LEVEL 5

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Precedent Images







Blue Roof Proposals

Blue roof attenuation technology is proposed to store rainfall under permeable paving on the roof to allow a controlled means of discharge.

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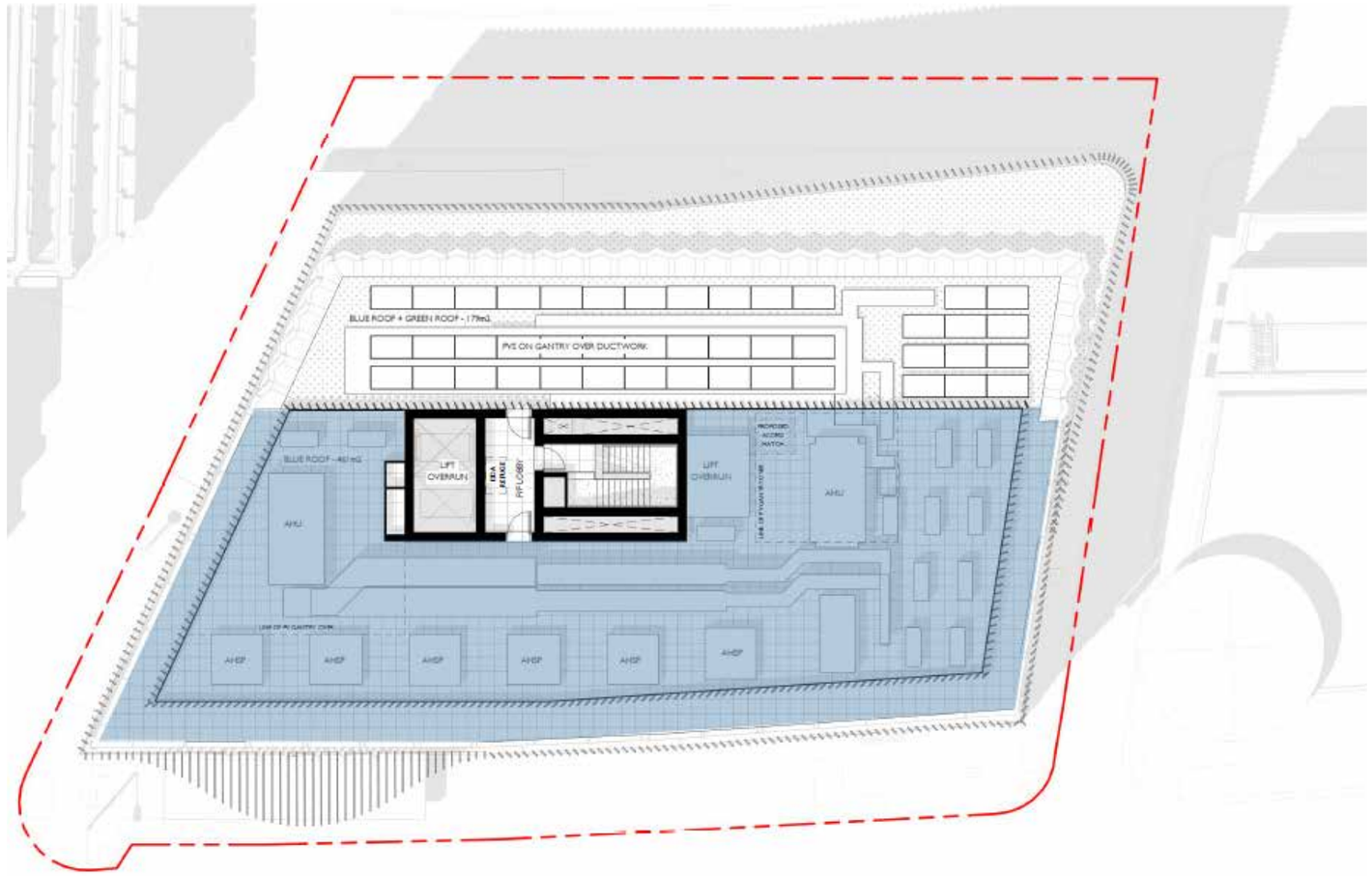
LEVEL 11



MAKING COMPLEX EASY

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