PADDINGTON GREEN
POLICE STATION

Lighting Strategy

FEBRUARY 2023

Berkeley
Designed for life

Paddington Green Police Station

Lighting Design Strategy

PGPS-SQP-VZ-ZZ-ZZ-RP-A-0200120

For Berkeley Homes (Central London) Ltd

February 2023

15044 Rev - P01

Document History

Rev	Date	Purpose of Issue	Author	Reviewer
P01	18/11/22	Issued for Panning	EJ	GD
P02	01/02/23	GLA Comments incorporated	EJ	GD

Contents

1.0 Lighting Impact

1.1 Policy Context

Policy D8
The London Plan 2021 states that the public realm should address the following;

3.8.10 The lighting of the public realm needs careful consideration to ensure it is appropriate to address safety and security issues, and make night-time activity areas and access routes welcoming and safe, while also minimising light pollution.

Policy D9
Tall Buildings of the London Plan 2021 states that "(C) Development proposals should address the following impacts:

1) Visual Impacts [...] h) buildings should be designed to minimise light pollution from internal and external lighting"

3.9.9 Any external lighting for tall buildings should be minimal, energy efficient and designed to minimise glare, light trespass, and sky glow, and should not negatively impact on protected views, designated heritage assets and their settings, or the amenity of nearby residents.

1.2 External Lighting Impacts

The lighting for the public realm of PGPS has been developed to provide a safe environment through sensitive lighting that illuminates the pedestrian areas to create safe and welcoming spaces whilst minimising excessive light pollution.

There is limited external lighting to the facades, with the exception of the lower 2 floors which contributes to the safe environment and legibility of entrances to the buildings.

Lighting to private balconies has been carefully considered and the proposals seek to provide shrouded light fittings that illuminate the balcony deck whilst minimising glare and light pollution.

1.3 Internal Lighting Impacts

Light pollution is defined as any light emitting from artificial sources into spaces where it is unwanted, such as spillage of light from office or commercial buildings onto residential accommodation, where this would cause nuisance to the occupants. The Institute of Lighting Professionals (ILP) Guidance Note 01/21: The Reduction of Obtrusive Light provides suggested lighting levels to ascertain the acceptability of light pollution, predominantly in relation to high powered external lighting.

Potential light pollution effects of a new development are typically assessed in relation to four specific criteria:

- Sky Glow is the brightening of the night sky over our towns, cities and countryside. It can be quantified by measuring the Upward Light Ratio (ULR), which is the maximum permitted percentage (%) of luminaire flux for the total installation that goes directly into the sky;
- Light Intrusion is the spilling of light beyond the boundary of a proposed development. It is assessed as vertical illuminance in lux (Ev) measured flat at the centre of the sensitive receptor;
- Luminaire Intensity is the uncomfortable brightness of a light source when viewed against a dark background. It is applied to each source visible from a sensitive receptor and is measured as source intensity (I) (kcd); and
- Building Luminance which can cause an increase in the brightness of a general area and is measured in cd per metre squared (L) as an average over the building facade caused only by external lighting.

GIA's review focuses only on light pollution from internal light sources, therefore sky glow is not relevant as there would be no upward light emitted from internal luminaires; likewise, luminaire intensity and building luminance only apply to external lighting. Therefore, the below review is applicable to light intrusion only.

The Site is located within an urban, city centre location and is therefore considered to be environmental zone E4, with a high district brightness. As such, the relevant ILP light intrusion criteria would be 25lux pre-curfew and 5luxpost-curfew (typically 11pm-6am).

Light intrusion from internal lighting occurs where large areas of glazed elevations are proposed in close proximity (generally within 20 metres) of neighbouring residential windows, for uses where high levels of internal illumination are required, such as offices. The facade design of the proposed development comprises a glazing ratio of circa 67% solid : 33% glazed, and glazing is set within deep window reveals, therefore the glazed areas are not be considered extensive enough to give rise to potential light intrusion effects and the deep window reveals obscure light sources from view. Additionally, whilst the internal lighting design has not yet been developed, due to the residential nature of the proposed development, the levels of illumination would be low and rooms would be fitted with blinds or curtains that would likely be deployed when the internal lighting is in use during post-curfew hours. Based on professional judgement, it is considered that the low levels of internal illumination do not have the potential to exceed the ILP guidelines for light intrusion, particularly given the existing high district brightness of the area.

Therefore, based on the elevations comprising modest glazed areas and the residential uses of the proposed development having low illumination requirements, light intrusion frominternal lighting is not considered to be relevant for further assessment and would not result in unacceptable visual impacts in terms of light pollution.

2.0 Lighting Strategy Exterior Landscape Paddington Green

2.1 Context

The lighting design for PGPS seeks to enhance the architectural intent and place-making set out within the wider West End Gate masterplan.

Continuing Paddington Green through into Newcastle Place to create a new green urban oasis at the heart of the West End Gate development. Distinct pedestrian, cycle and vehicular routes are delineated through the surface treatment, planting and lighting.

Accent lighting will be used within the linear public garden to generate interest and provide a focal point for navigation. This will be supplemented by the use of illuminated bollards to light paths and low level lighting to greenery & proposed water features.

Taxis, deliveries and drop-offs will be directed to the north of the Westmark. Light levels along this route will be developed to comply with road regulations, implementing street lighting with diffuse optic and low level lighting to greenery for pedestrian way-finding.

Activation to ground floor frontages via residential and retail uses will bring animation to the street frontage. This will be enhanced through amenity lighting to retail shop-fronts, and up -lighting to denote key building entrances.

Key

- Existing Bus
- Taxis / Deliveries / Drop-Off
- Cycle Route
- Pedestrian Route
- Residential Parking Route
- Emergency Vehicle Route

- Flexible Commercial
- Residential
- Community Access
- Plant
- Vehicle Access
- Cycle Access

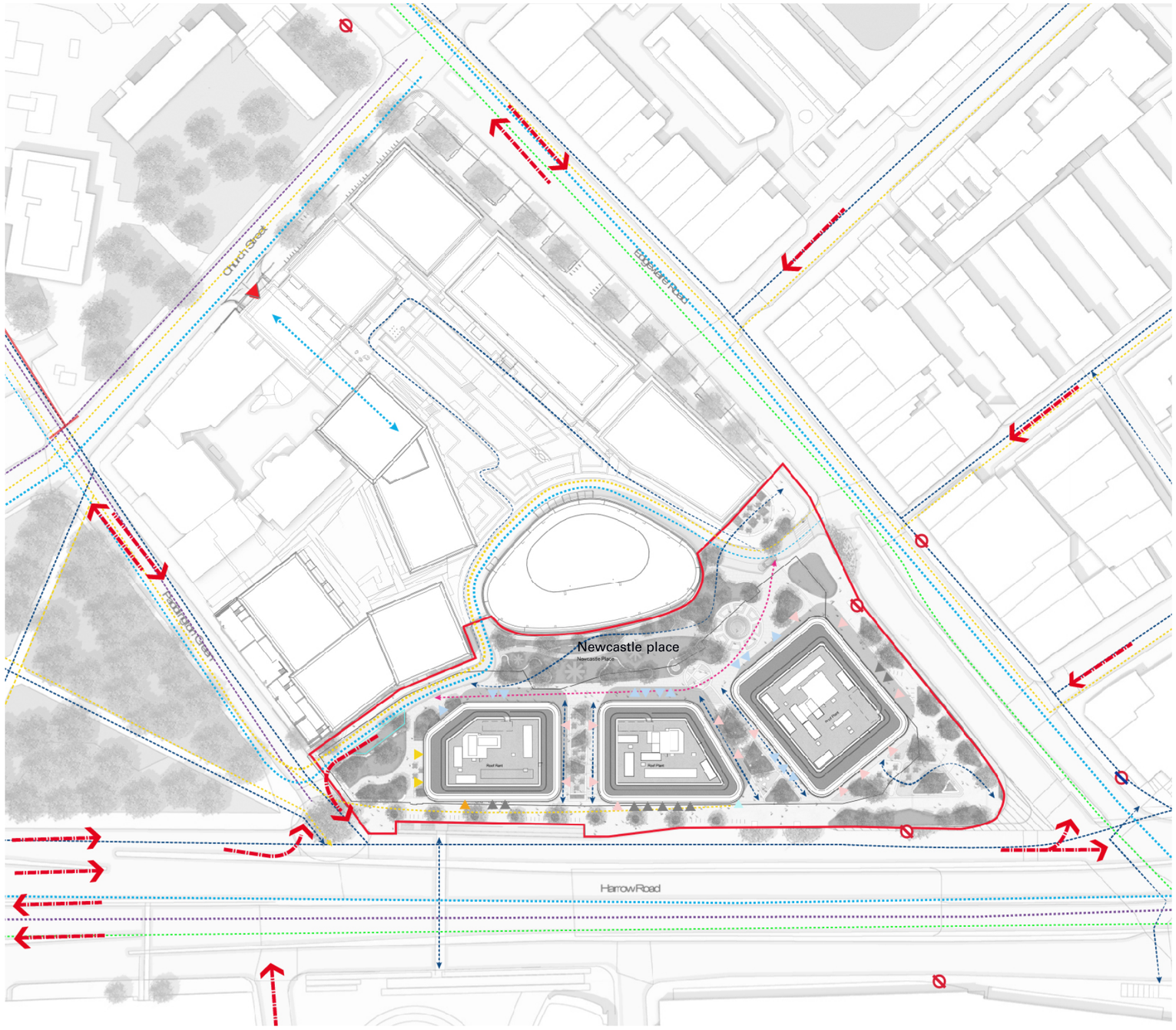


Figure 2.1 Access & Circulation

2.2 Hierarchy of Light Levels

Lighting Levels

High

Low

1 URBAN AREA

- High traffic - vehicles & pedestrians
- Light levels to comply with road regulation
- Street lighting with road optics
- Low level lighting to pavement for pedestrians
- Amenity lighting from retail shop-fronts

2 RESIDENTIAL AREA

- Medium traffic - vehicles & pedestrians
- Light levels to comply with road regulations
- Street lighting with diffuse optics
- Low level lighting to greenery for pedestrians
- Low glare lighting for residents

3 PUBLIC GARDEN

- Medium/Low traffic - pedestrians
- Accent lighting to generate interest
- Focal point for navigation
- Short poles or bollards to illuminate path
- Low level lighting to greenery & water feature

Figure 2.2 Areas hierarchy - light levels

2.3 Focal Points and Views

2.3.1 Established trees & avenue of hornbeams

Mature trees throughout the site will feature up-lighting co-ordinated with landscape architect proposals.

2.3.2 Arrival water feature /piazza with seating

Lighting to illuminate water sculpture. Detail to be coordinated with sculpture specification. Low level lighting to benches and benches specification to be coordinated with the landscape architect.

2.3.3 Harrow Road to Newcastle Place Pedestrian link

A linear avenue of planting signposts a through-route from Harrow road to Newcastle place. This planting and pathway will be illuminated by accent lighting within the granite setts in line with landscape architects proposals.

2.3.4 Focal Artwork

The junction of Edgware Road will be regenerated to expand the high quality landscaping on the corner of Edgware and Harrow Road. An illuminated Artwork will serve as a focal point to the plaza.

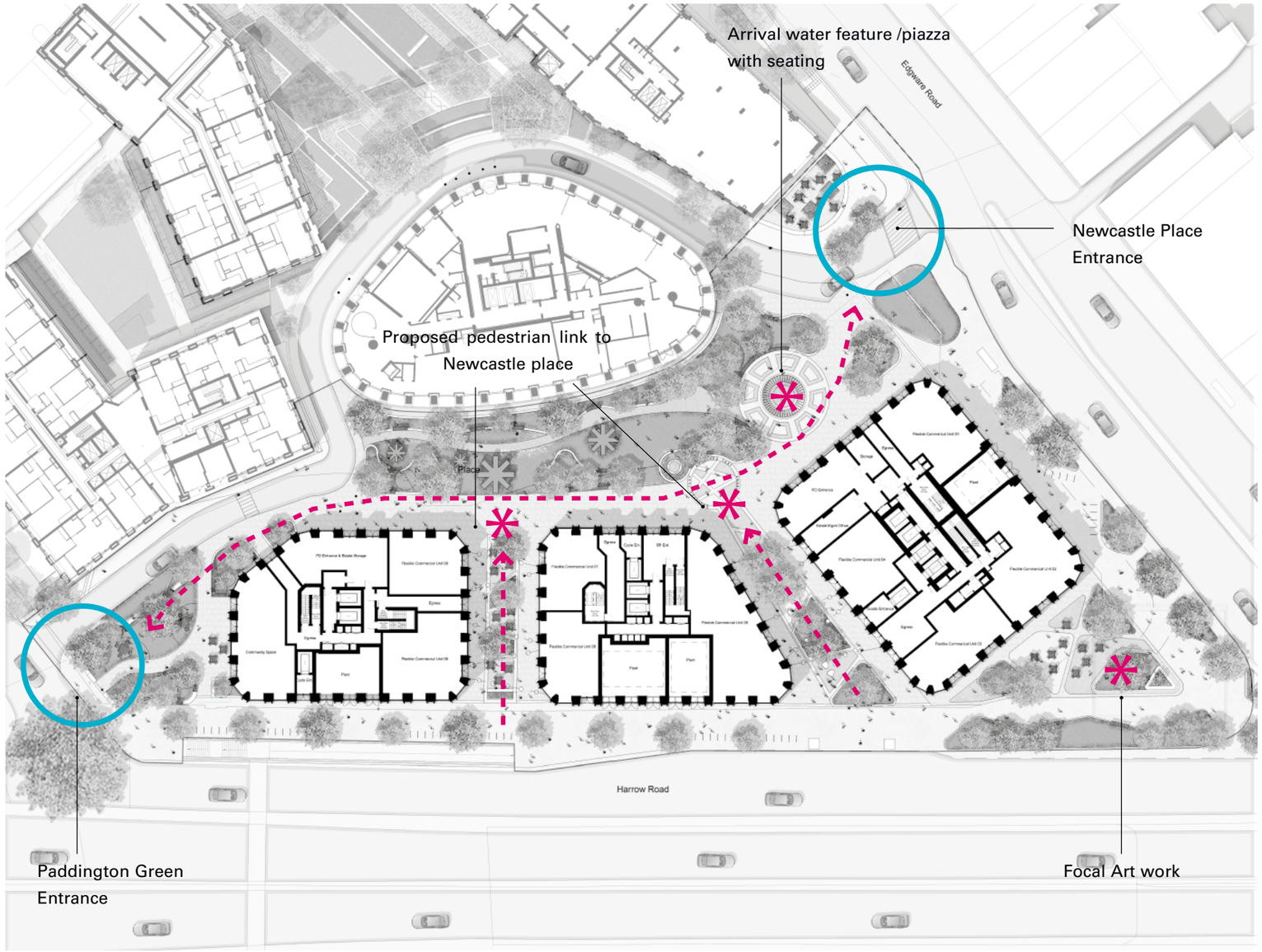


Figure 2.3 Focal Edges and Focal Points from Murdoch Wickham landscape proposals

Key

- Focal Point
- Focal Art work
- Green trail

2.4 Exterior Landscape Lighting

2.4.1 Mood board

- Focal point to road entrance for navigation [Fig 1.4]
- Street lighting to road & pavement [Fig 1.5]
- Low level lighting to trees & furniture [Fig 1.6]
- Accent lighting to bosque & planters [Fig 1.7 & Fig 1.8]
- Lighting to art/sculpture [Fig 1.9]
- Diffuse lighting to building entrances [Fig 1.10]
- Path lighting to guide perambulation [Fig 1.11]

Figure 2.4

Figure 2.5

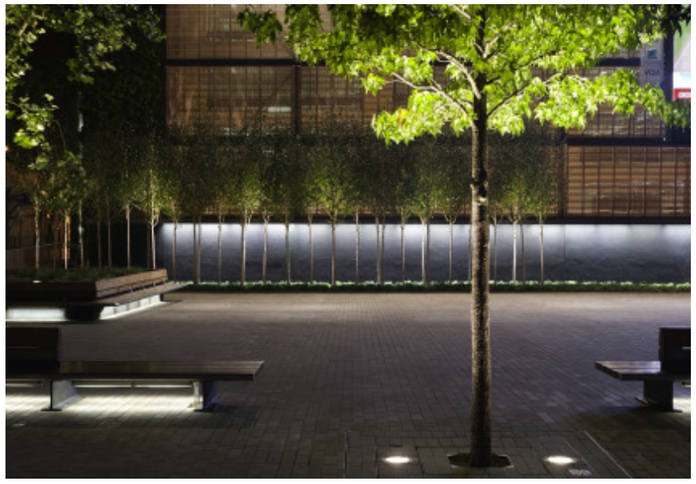


Figure 2.6

Figure 2.7

Figure 2.8

Figure 2.9

Figure 2.10

Figure 2.11

Figure 2.12 Roof garden lighting strategy

Key

- Feature landscape lighting
- Feature lighting to play area
- Low level strip lighting to seating
- Accent lighting
- Pathway lighting

3.0 Facade Lighting

3.1 Entrances & Ground Floor Activation

Down-lighting to be integrated within the soffit of recessed entrances.

Provision for floor luminaires behind the glazing line in reception areas to provide ambient lighting.

Feature up-light fittings to illuminate the GRC columns either side of key entrances. These will be positioned to avoid issues with glare from the internal spaces.

Feature light strips will be used within the planters to light the front face of the soft landscape adjacent to entrances.

3.2 Retail Lighting

Gallery lighting to flexible commercial frontages.

Up-lighting framing the GRC columns, with down-lighting to wash shop frontages.

Figure 3.2 Block K - Entrance from Harrow road / Edgeware Road Junction

Figure 3.1 Bright shop frontages

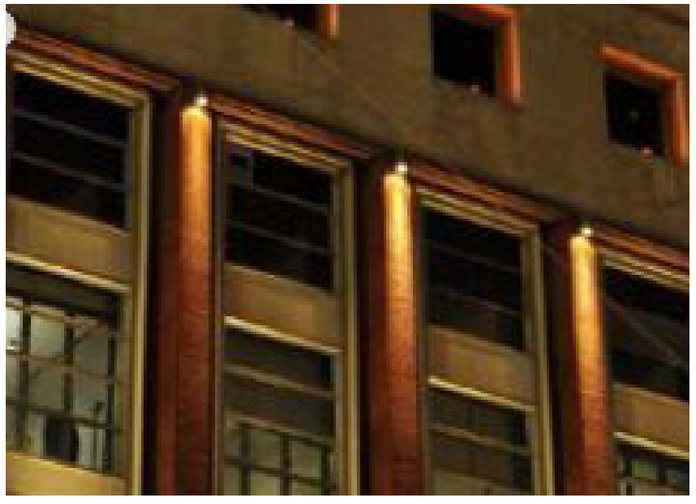


Figure 3.3 Window framing down-lighting

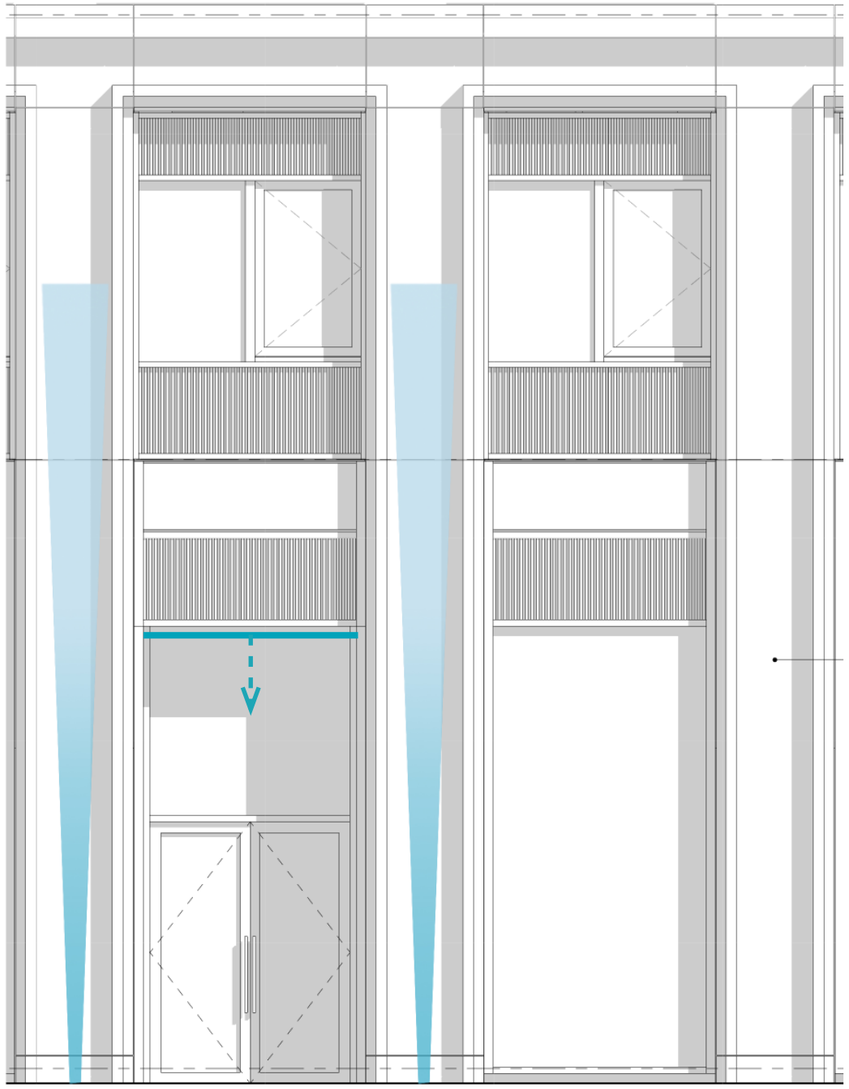
Figure 3.4 Floor recessed up-lighting

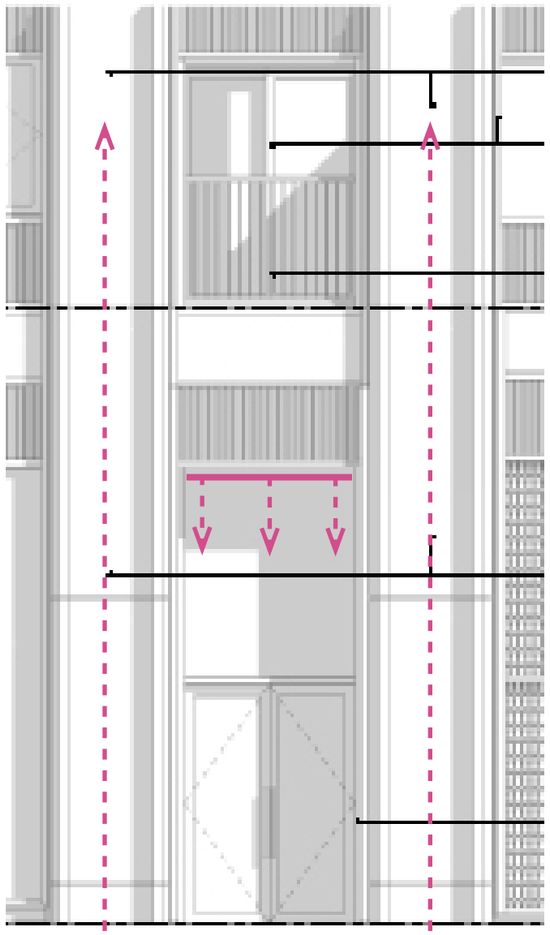
3.3 Street Level Facade Lighting Diagrams

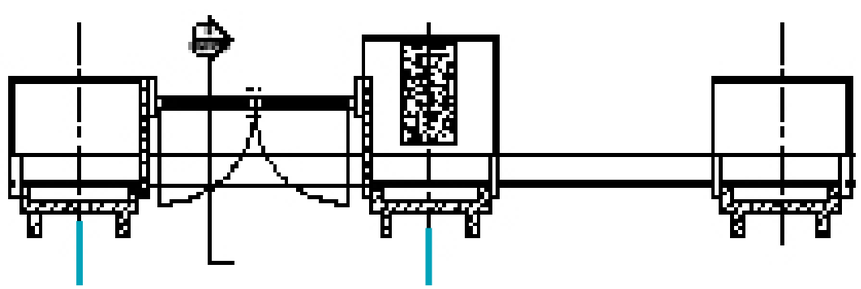
Key

Main entrance lighting

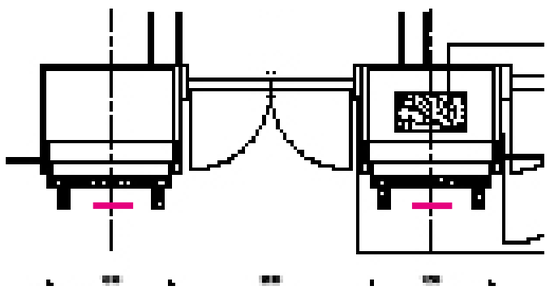
Comercial frontage lighting







Residential Entrance lighting strategy



Commercial Frontage lighting strategy

4.0 Inset Balconies

4.1 Lighting Approach

Surface mounted fittings on one side of balconies provide illuminate to each residents private amenity space without overspill of light to facade.

To be installed consistently across the facade. Proposed fitting <100mm diameter, circular shape to avoid potential injuries due to sharp edges. Downward shielded output for glare avoidance and visual comfort.

Figure 4.1 Balcony lighting mood board

Wall mounted luminaire
Manufacturer: iGuzzini
Product: Walky round recessed
Dimensions: D: 100mm W: 36mm

Figure 4.2

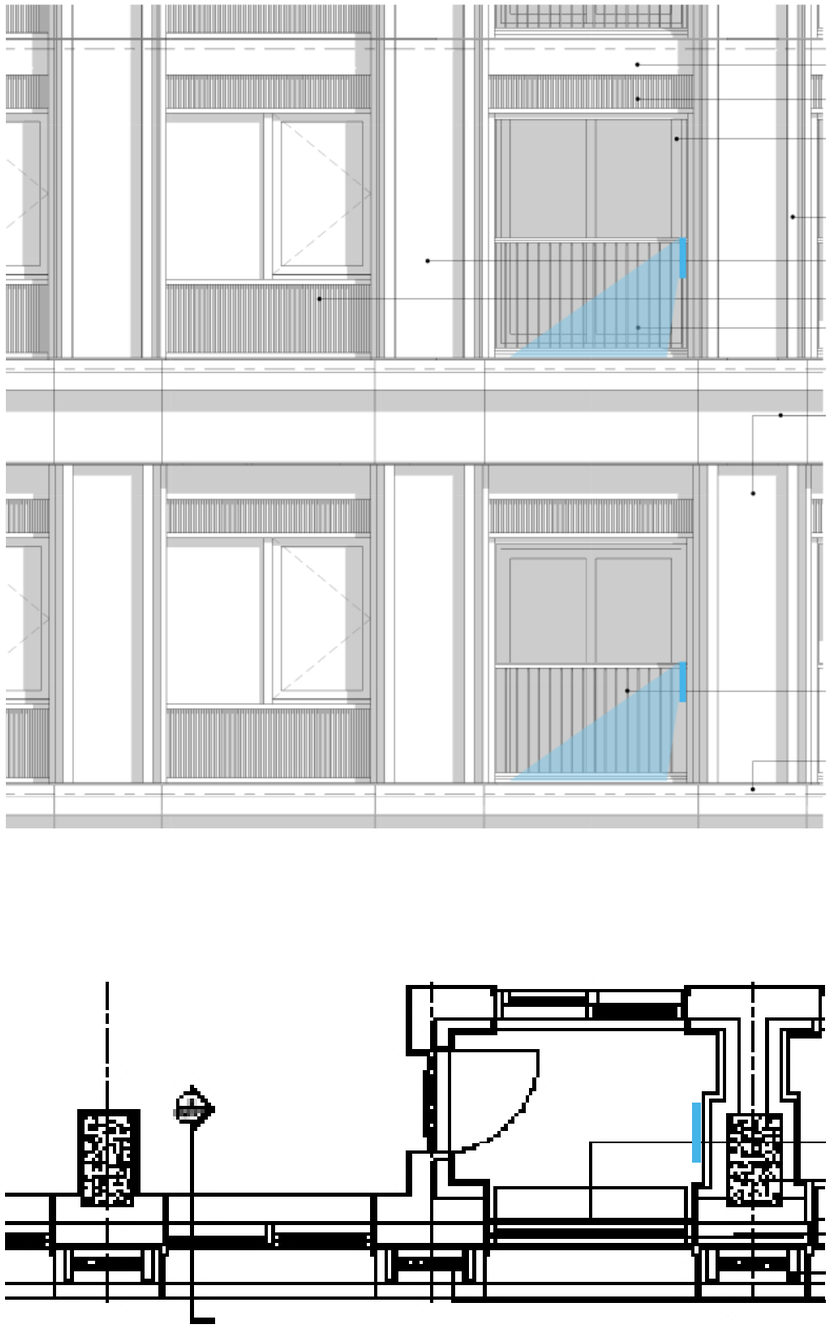


Figure 4.3 Diagram of Proposed balcony lighting

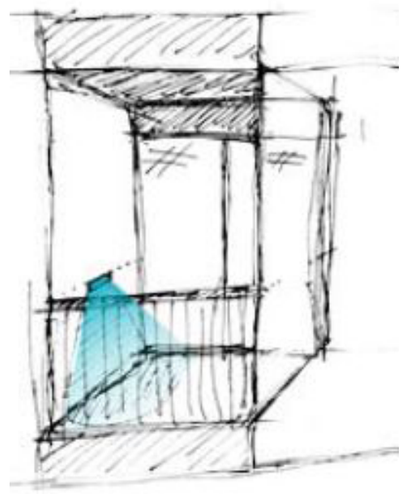


Figure 3.4 Balcony lighting concept sketch

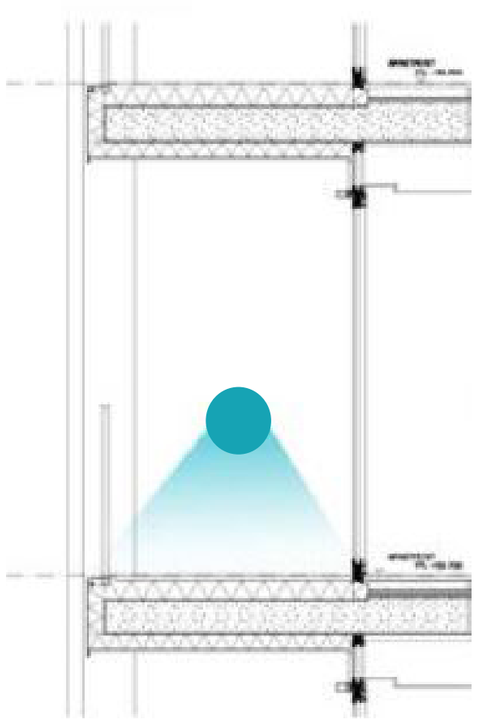


Figure 4.5 Balcony cross section illustrating wall mounted light fixture

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