# LIGHTING STRATEGY

## 9.8 PUBLIC REALM: LIGHTING STANDARD COMMENTARY

The public realm lighting has been designed by Studio Fractal in accordance with the landscape designed by Gillespies. The lighting within the public realm will have a significant impact upon the perception of the overall development, both in terms of the physical appearance and fixing locations of the equipment used to achieve the scheme, as well as the overall character and experience of the space.

Reviewing the proposed lighting design for the public realm has raised some concerns about the intensity and uniformity of the light, as well as the impact of the proposed luminaire fixing locations on the external image of the buildings, both by day and by night.

Lighting Standards

The lighting scheme proposes an illumination level of 25 lux (maintained average) with a uniformity of 40% for the main open area of the new square, rising to 34 lux (maintatined average) beneath the link bridge. These light levels are comparable to the lighting standards required for vehicular and pedestrian conflict zones (CE1/CE2). The high level of illumination and uniformity negate the opportunity to create an inviting space with an after-dark character that encourages people to enjoy the space, rather than just walk straight through it.

In reviewing the British Standards BS54891:2003 (Code of practice for the design of road lighting and public amenity areas) and EN 13201-2:2003 (Road lighting performance requirements), it is felt that a much lower lighting standard could safely be applied to the public realm. It is proposed that an average illuminance of approximately 15 lux with a maximum uniformity of 30% could be applied to the perimeter of the public realm spaces, but that the light level and uniformity to decrease further in the centre of the square. This would result in the provision of well illuminated routes around the perimeter of the space that feel safe, as well as giving definition to the space. A lower light level in the centre of the square will enable decoratively illuminated elements such as the trees, to stand out to much greater effect. The contrast in intensity across the public realm will provide visual interest and better intuitive way-finding.

Lighting Equipment

The public realm lighting scheme proposes the use of column and building-mounted luminaires. There are some concerns over the positions of the building mounted luminaires and their potential detrimental impact on the image of the buildings. Given the above commentary about the need to reconsider the lighting standards, it is proposed that the lighting equipment and mounting positions should also be reconsidered. If a lower light level is to be applied, then smaller, lower power luminaires, fixed at a lower height, are likely to be more suitable.

Given the visual impact of building mounted luminaires, it is proposed that any amendments to the public realm lighting proposal should be considered alongside the lighting proposals for the buildings themselves, to avoid any conflict of interests.

### A.10 Lighting situations — set E2

**Table A.19 — Recommended lighting classes**

| Crime risk | Facial recognition | Traffic flow pedestrians | | | | | |
|---|---|---|---|---|---|---|---|
| | | Normal | | | High | | |
| | | ← | o | → | ← | o | → |
| Normal | Unnecessary | S5 | S4 | S3 [a] | S4 | S3 | S2 [a] |
| | Necessary | S3 | S2 | S1 [b] | S3 | S2 | S1 [b] |
| Higher than normal | | S2 | S1 | CE2 [b] | S2 | S1 | CE2 [b] |

[a] Alternative A classes of comparable lighting level to recommended S classes can be found in Table 4.

[b] Additional ES and EV classes to recommended S and CE classes can be found in Table 5.

**Table A.20 — Recommended selection from range**

| Ambient luminance | | |
|---|---|---|
| Low | Medium | High |
| ← | o | → |

**Table 3 — S-series of lighting classes**

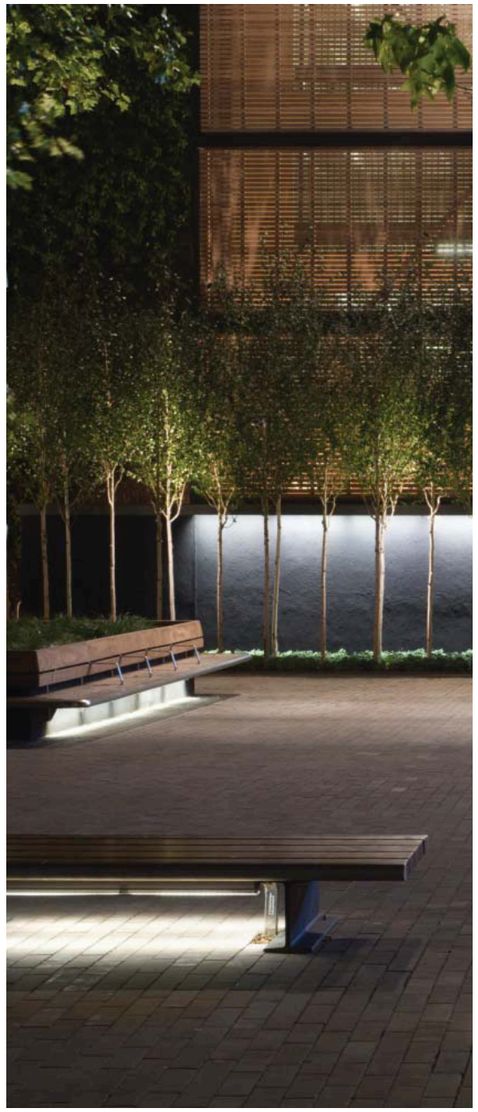
| Class | Horizontal illuminance | |
|---|---|---|
| | $\overline{E}$ in lx [a] [minimum maintained] | $E_{min}$ in lx [maintained] |
| S1 | 15 | 5 |
| S2 | 10 | 3 |
| S3 | 7,5 | 1,5 |
| S4 | 5 | 1 |
| S5 | 3 | 0,6 |
| S6 | 2 | 0,6 |
| S7 | performance not determined | performance not determined |

[a] To provide for uniformity, the actual value of the maintained average illuminance may not exceed 1,5 times the minimum $\overline{E}$ value indicated for the class.

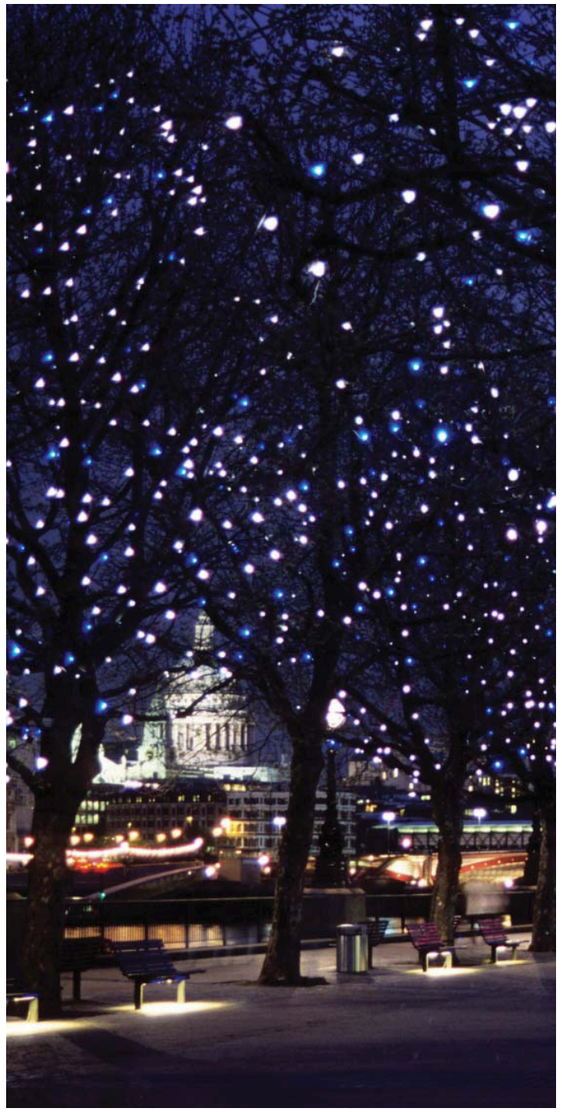
**Table 2 — CE-series of lighting classes**

| Class | Horizontal illuminance | |
|---|---|---|
| | $\overline{E}$ in lx [minimum maintained] | $U_o$ [minimum] |
| CE0 | 50 | 0,4 |
| CE1 | 30 | 0,4 |
| CE2 | 20 | 0,4 |
| CE3 | 15 | 0,4 |
| CE4 | 10 | 0,4 |
| CE5 | 7,5 | 0,4 |

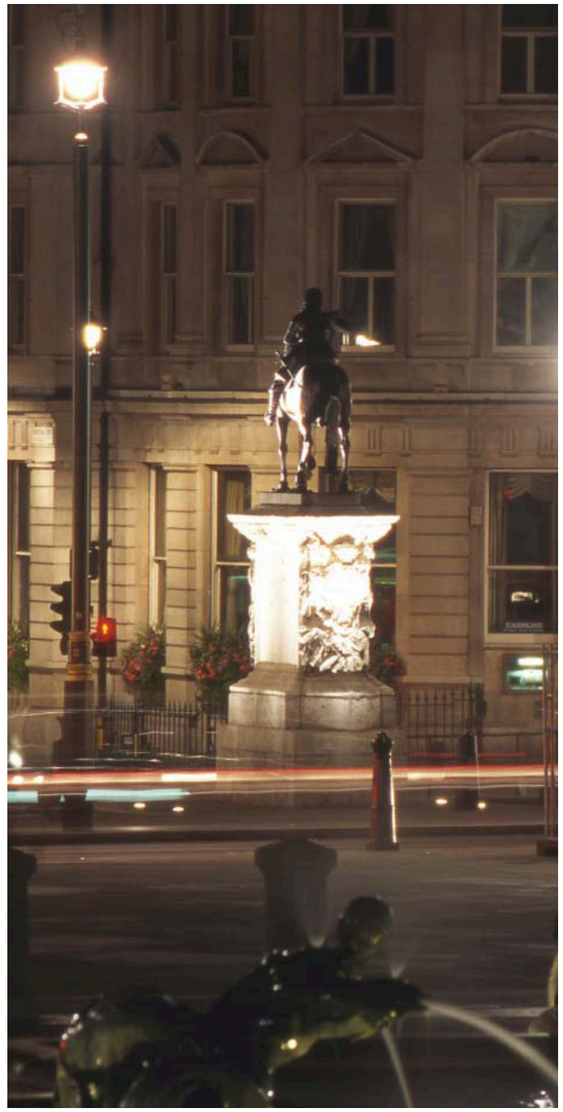
## PUBLIC REALM: PRECEDENT



Wharf Green, Swindon - 13 lux ave., 0.25 uniformity



Queen's Walk, Southbank - 1-5 lux ave.



Trafalgar Square- 5-10 lux ave.

There are a number of urban public realm environments that provide a precedent for using a lower intensity of light, that feel both safe and visually appealing.

Queen's Walk, Southbank
1-5 lux average

The Southbank has a high footfall, yet an extremely low average illuminance level. A greater light intensity is provided by lighting columns along the route immediately beside the water's edge, but most people choose to walk along the tree avenue, in the lower level of light. The space feels safe and well illuminated due to the lighting within the trees and concealed beneath the benches.

Trafalgar Square
5-10 lux average, with a light level of less than 1 lux in the centre of the square.

Trafalgar Square has a high pedestrian footfall and has a large number of tourists who may not be familiar with the space. Compared with the numerical recommendations of Lighting Standards, the light levels are very low, yet the space feels safe and well illuminated. This is largely due to the illumination of vertical surfaces providing spatial awareness.

Wharf Green, Swindon
13 lux average, 0.25 uniformity

Wharf Green is located in a fairly rough area of Swindon, which would traditionally be treated with high levels of light in an attempt to make the space feel safe. Whilst the light levels are higher than the two precedents above, it is the visual contrast from the illuminated landscape elements that make the space feel safe, not the average illuminance across the ground surface. The landscape lighting brings visual contrast, colour and texture to the environment.

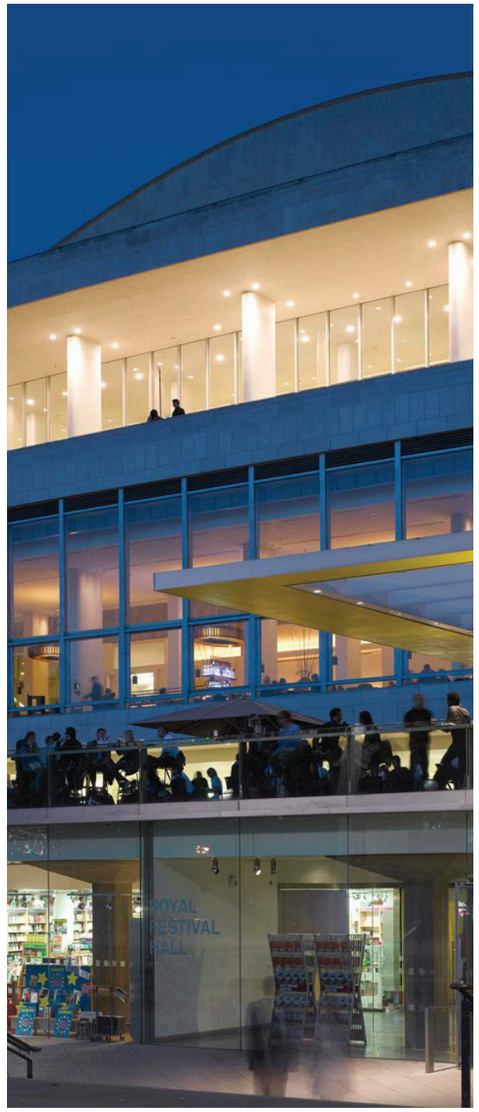
## PUBLIC REALM: CHARACTER OF THE NEW PIAZZA

The character of the public realm after-dark is largely determined by the application of light. Variation in light intensity intrinsically guides people through a space and provides visual clues as to the nature of that particular environment. Illuminating vertical surfaces and elements within the landscape help provide spatial awareness which in turn improves a feeling of safety, without the need for a uniform blanket of light across the entire space.

Extreme levels of contrast in the after-dark environment, such as glowing light sources or glare sources, can make an environment seem darker than it is and subsequently feel less safe. To encourage the use of a public realm are after dark, lighting should provide sufficient light onto people's faces to promote a perception of safety

Devonshire Square, London

New Street Square, London




Royal Festival Hall, London

## PUBLIC REALM: CHARACTER OF THE TOWER

Trellick Tower

Seagram Building

Barbican

The character of tower architecture after-dark is largely determined by the lighting of the internal spaces that is visible through the glazing. For office buildings, it may be possible to have some level of continuity in the internal lighting, to produce some consistency in the building appearance. This is the case for Mies van de Rohe's Seagram buiding, where the lighting designer Richard Kelly designed a consistent lighting detail at the glazing perimeter of every floor. This type of approach would not be possible in a residential building.

The typical character of a residential tower after-dark, is one of a dark silhouette, with a random tapestry of internal illumination according to which apartments are inhabited at the time. The reason that so few residential towers are externally illuminated is to protect the views out from the apartments. There is no way to create continuity across the internal residences, but consistency can be provided by the illumination of public areas such as stair cores, and elements of the façade that do not impact upon the views out from the apartments, but that help to inform the image of the building when viewed from the street.

## 9.9 CENTRE POINT

Earnshaw Street

Centrepoint House is viewed against a backdrop of the Tower when the development is viewed from Earnshaw Street, juxtaposing the building elements in a sequence of incrementally increasing scale. The lighting approach must respond to this architectural composition.

Retail + Leisure
The large expanse of glazed retail frontage at ground level will dominate the image of the ground floor. Retail guidelines will ensure that the interior lighting, particularly in the window displays, will have some visual continuity between adjoining units, in terms of maximum light intensity, hours of operation and the use or restriction of illuminated signage.

Screen
The horizontal screen on the first floor of Centre Point House provides the opportunity to produce a highly textured illuminated façade, accentuating the form of the architecture and inverting the daylit image of the screen by illuminating those surfaces that are usually viewed in shadow. Given that there are retail units behind the screen, any external architectural lighting should have no detrimental impact on the interior space.

Stairs
The stairways of the both Centre Point House and the Tower run up the edges of each of the buildings, providing the opportunity through the use of light to visually 'book-end' the buildings. As the stairways are public areas within the otherwise residential buildings, the illumination of the stairways enable there to be a consistent vertical lighting treatment on both buildings. The lighting control of these stairways will inform the external image of the building.

Occupancy
The residential nature of the buildings means that there will be a constantly changing tapestry of inhabitation, visible through the windows of the apartments. The light intensity and colour temperature will differ in every window. It is therefore proposed that there are careful applications of architectural lighting that visually tie-together the otherwise disparate lit image of the buildings.

Balconies
The balconies of the residential apartments in Centre Point House and the Tower are private spaces that will be illuminated as determined by the inhabitant. Whilst external lighting for the benefit of the inhabitant's use on the balcony may be designed into the apartment fit-out, providing the opportunity for some consistency in the lit appearance of the balconies, the use of this lighting cannot be enforced in private dwellings. It is therefore proposed that any architectural lighting applied to the building façade for the benefit of the image of the building after-dark, should not impinge upon the views out from the apartments.

Signage
The iconic signage at the top of the Centre Point Tower acts as a way-finding tool in the surrounding environment, as well as announcing the development. The means by which the signage is illuminated must minimise the impact of the illumination on the apartment that sits behind the lettering.

Public Realm
A glimpse of the public realm is revealed at the corner of Centre Point House. The lighting within this entrance to the public realm must be inviting, providing a flavour of the character of the public square.

Earnshaw Street

New Public Square

New Public Square

The view when stood within the public square reveals the full breadth of the architectural forms and the composition of the lighting approach.

Entrance
The building entrances must stand out from the general public areas after-dark, so that people are able to naturally navigate through the space without being entirely reliant upon signage. This may be achieved by the illumination of the pilotis that flank the building entrance.

Retail + Leisure
The perimeter of the public square will largely be determined by the appearance of the retail units behind their glazed façade. The window displays may produce considerable spill lighting into the square, so it is imperative that some degree of lighting control is incorporated into the tenant guidelines.

Link
The Link Building is the architectural connection between the Centre Point House and Tower and the lighting provides the opportunity to visually connect the buildings after dark, into a composite whole. The undersides of the soffits are highly visible through the glazed facades. The illumination of these soffits would reveal their form, as well as visually lifting those areas that traditionally may have been perceived as being gloomy or feel dangerous. The illumination of the Link soffits within the glazing enclosed retail units will need to be carefully considered so as not to conflict with the tenant interior design.

Screen
The lighting approach for the Centre Point House screen will be the same on both sides of the building. This illuminated façade will enhance the sense of enclosure within the square.

Stairs
A consistent interior lighting approach applied within the stair core provides an illuminated vertical edge that flanks both sides of the tower. The plant rooms mirror the stair core location on both ends of the building and also provide the opportunity to produce a consistent lighting approach on all four vertical edges of the building.

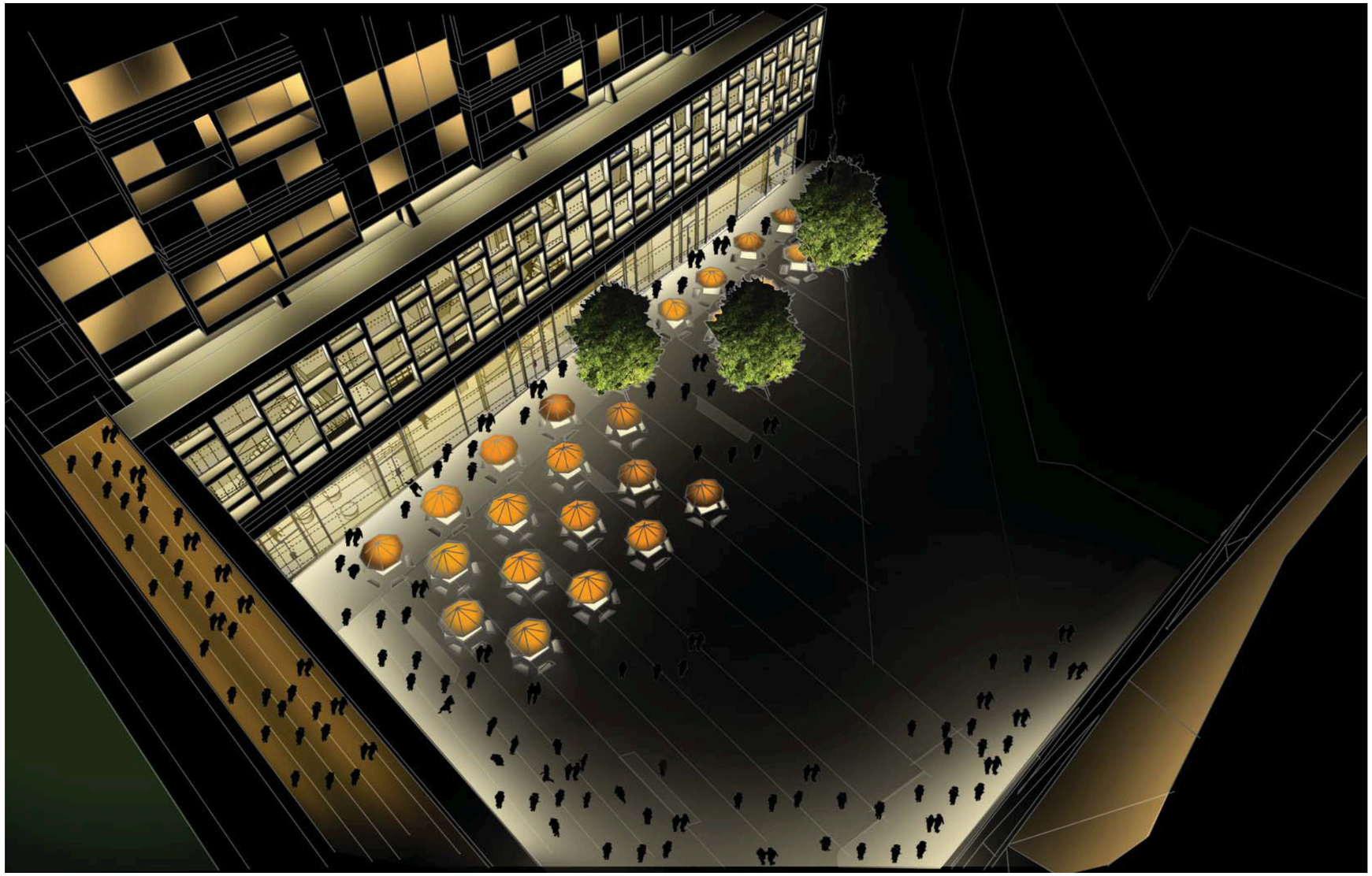
Occupancy
The residential nature of the buildings means that there will be a constantly changing tapestry of inhabitation, visible through the windows of the apartments. The light intensity and colour temperature will differ in every window. It is therefore proposed that there are careful applications of architectural lighting that visually tie-together the otherwise disparate lit image of the buildings.

Balconies
The balconies of the residential apartments in Centre Point House and the Tower are private spaces that will be illuminated as determined by the inhabitant. They are highly visible from the square and will therefore significantly impact upon the image of the buildings. Any architectural lighting applied to the building façade to provide some continuity to the lit image of the buildings after-dark, should not impinge upon the views out from the apartments.

Public Realm
The public realm lighting should create an inviting environment, with intensity contrast that provides visual interest, ensures that light is applied only where it is needed to create a space that feels safe and vibrant after-dark.

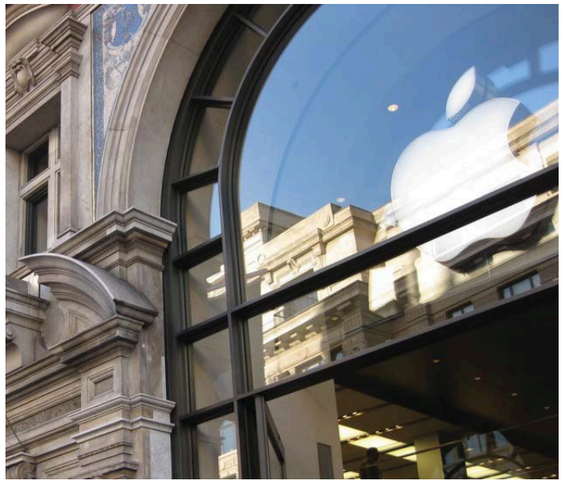
New Public Square viewed from above

It should be remembered that the Public Square is not only experienced at ground level, but is also viewed from the numerous residential apartments above. The view from above reveals the full composition of the square. The public realm lighting scheme must be designed bearing this in mind.



New Public Square from Centre Point Tower

## 9.10 RETAIL SIGNAGE GUIDELINES



Lit signage: street view

LED rods: street view

Given the expanse of retail frontages that ground the Centre Point development, it is proposed that some guidelines are written into the retail tenant agreements to ensure that the signage of each individual retail unit does not become too visually dominant. Ensuring that all retail signage is set behind the façade glazing is one way to provide some consistency in the appearance of the signage between different units. It is suggested that all signage design proposals be reviewed prior to their installation to ensure that any integrated lighting does not conflict with the overall character of the development.

It is suggested that the signage guidelines ensure that some level of transparency is retained through every retail façade. This is particularly relevant for the retail units beneath the Link building where the fully glazed facades have been designed to maintain the original architectural form. If large video screens or other illuminated surfaces are to be installed, it is suggested that these must use an open-weave or clear infrastructure that still facilitates views through/between the screen elements.

Lit signage: internal view

LED rods: internal view