# External Lighting Strategy

## Mount Pleasant
## Phoenix Place
## Block B, C & D – Phase 2
**11TH May 2021**

**Client:** Taylor Wimpey Central London
**Contractor:** McAleer and Rushe
**Architect:** Ryder Architect
**Consulting Engineer – Services:** Caldwell Consulting

## Executive Summary

This report has been created by Caldwell Consulting Engineers, so as to provide details of the proposed general external lighting strategy at Mount Pleasant Block B, C and D – Phase 2.

This report and accompanying documents shall provide all relevant evidence so as to assist with the discharge of the following Planning Conditions: -

### Condition 23 – Lighting Strategy

Prior to the commencement of development (excluding works of demolition, site clearance and the erection of temporary structures within the relevant Section), full details of a lighting strategy, to include information about potential ecological impacts, relating to the relevant Area, shall be submitted to, and approved in writing by the Local Planning Authority.

The approved lighting strategy relating to the relevant area shall thereafter be fully implemented prior to the first occupation of accommodation within that Area.

### Condition 24 – CCTV, Lighting and Security Lighting

Details of Secured by Design accreditation for all dwellings, and details of site-wide general security measures, proposed in accordance with the recommendations of the Crime Impact Assessment shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement of superstructure works to the relevant Section.

The details shall relate to:

**a.** Closed Circuit TV
**b.** General Lighting (as approved under condition 24)
**c.** Security Lighting
**d.** 24-hour security guard and alarm facilities
**e.** Security of all entrance doors
**f.** Any other security features adopted on site, including bin stores and cycle stores.

These details shall include the location and full specification of:

- all lamps/luminaires; positions, light levels/spill.
- camera data spec sheets (Also detailing view paths).

The information shall accord with or be reflected in the landscaping drawings and lighting strategy (ecological impact) to be discharged by condition.

The general security measures shall be carried out strictly in accordance with the details so approved shall be installed prior to first occupation of the development hereby approved and shall be maintained as such thereafter.

## Introduction

Caldwell Consulting have been commissioned to provide a report describing the external lighting strategy for Phase 2 at Mount Pleasant development (comprising Block B, C and D).

This will form part of the planning submission to discharge Planning Conditions C.23 External Lighting Strategy and C.24 CCTV security lighting.

## External Lighting Strategy

The external lighting strategy has been developed to minimise energy usage, minimise impact on its immediate local ecology and minimise light pollution to the surrounding area.

This strategy has been designed to provide a level of lighting and uniformity around the development for the public and private door entrances as well as to areas within the landscape areas.

The lighting has been designed to SBD guidelines and compliance to BS 5489-1:2020. The design has been completed so has to complement the development architecture, help deter anti-social behaviour and provide landscaping features such as routeways, trees and street furniture to the public areas along the external walkways and Podium/roof terraces.

Please refer to accompanying Layout drawings, schedules and performance calculations indicating positions, luminaire spec and lighting levels.

The key lighting components to the lighting design and strategy are:

- Bulkhead luminaires - To illuminate main entrance ways to the building.
- Bollard lighting – To illuminate walkways which would otherwise not be able to be illuminated.
- Uplighters - For feature lighting and for defining ground features.
- LED strips - For feature lighting to street furniture
- LED luminaires for recessed applications to illuminate ramps and stairs

Specific details of the light fittings proposed, can be found within the luminaire schedule provided.

The lighting strategy has been developed to the following parameters:

- The lighting has been designed in accordance with BS5489-1:2020 and BS EN 13201-2:2015.
- Consideration of obtrusive light noted within ILE guidance.
- All external lamps are proposed to be LED for maximum energy efficiency.
- Wall mounted bulkheads and bollards proposed have been selected with either hoods or diffusers which will help eliminate light pollution with good downward directional characteristics to ensure dark - sky application.

All lighting has been designed to ecological guidelines including:

- Use of “bat-friendly” lighting using low UV lamps or UV filters and luminaires.
- Low/controlled upward lighting ratio is used within areas adjacent to green/brown roofs.
- Compliance with BREEAM Pol 4 and Ene 03

- Column and wall fixed luminaires have either zero or minimal upward light to limit sky glow.
- Lighting design levels are in the order of a uniform 20 lux average across the pathways.
- All building entrances are designed with an average uniform lighting level of 100 lux to comply with SBD.

It should also be noted that due to the residential use and tenant's privacy needs, it is expected that a large portion of apartments will use window coverings/Curtains during hours of darkness within residential apartments, therefore reducing light spill externally from inside apartments.

This is therefore omitted from any calculations and isn't part of the external lighting strategy.

All external lighting (except for safety and security lighting) will be controlled by photocell and timeclock to switch off between 2300 and 0700.

All external fittings shall meet the lighting requirements as given in the table 1 below.

**Table 1 – Lighting Requirements external fittings shall meet**

| | **Light fittings measured in lamp lumens/circuit Watt, when:** | | **LED luminaires where the lamp is integral to the fitting measured in luminaire lumens/circuit Watt, when:** | |
|---|---|---|---|---|
| External lighting location | Colour rendering index (Ra) ≥ 60 | Colour rendering index (Ra) < 60 | Colour rendering index (Ra) ≥ 60 | Colour rendering index (Ra) < 60 |
| Building, access ways, pathways | 50 | 60 | 40 | 50 |
| Car parking associated roads, floodlighting | 70 | 80 | 55 | 60 |
| | Lamp wattage ≥ 25W | Lamp wattage < 25W | Lamp wattage ≥ 25W | Lamp wattage < 25W |
| Signs, uplighting | 60 | 50 | 50 | 50 |

The external lighting shall be designed in compliance with Table 2 and collaborated with recommendations reference within ILP Guidance for the reduction of obtrusive light.

**Table 2 – Obtrusive Light Limitations for Exterior Lighting Installations – General Observers**

| Environmental Zone | Sky Glow ULR [Max %] (1) | Light Intrusion (into Windows) $E_v$ [lux] (2) | | Luminaire Intensity I [candelas] (3) | | Building Luminance Pre-curfew (4) |
|---|---|---|---|---|---|---|
| | | Pre-curfew | Post-curfew | Pre-curfew | Post-curfew | Average, L [cd/m²] |
| E0 | 0 | 0 | 0 | 0 | 0 | 0 |
| E1 | 0 | 2 | 0 (1*) | 2,500 | 0 | 0 |
| E2 | 2.5 | 5 | 1 | 7,500 | 500 | 5 |
| E3 | 5.0 | 10 | 2 | 10,000 | 1,000 | 10 |
| E4 | 15 | 25 | 5 | 25,000 | 2,500 | 25 |

**Secured by Design (SBD)**

The lighting design and luminaire performance lighting levels have been calculated and computer analysed to ensure its compliance with BS 5489-1:2020. Please refer to the following drawings

- Ground Floor Externals,
- First Floor Podium,
- Level 06 Block D roof level – The lighting on this roof level will only be used for maintenance purposes only and will be controlled via a manual on/off switch located within the electrical riser.
- Level 08 Block C roof level.
- Level 10 Block B roof level.