



External Lighting Strategy

**Mount Pleasant
Phoenix Place
Block A – Phase 1
25 September 2020**

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Block A – Phase 1
External Lighting Strategy**

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CONTENTS

Executive Summary	5
1 Introduction	6
2 External Strategy Lighting	6
3 Secured by Design (SBD) Submission	8
4 Environmental Compliance	8
5 Submission Documentation	9
• Appendix A – Drawings	
• Appendix B – Schedule of Fittings	
• Appendix C –Lighting Report and Calculations	
• Appendix D – BREEAM Compliance	

Executive Summary

This report has been produced by SVM Consulting Engineers to provide details of general external lighting strategy at Mount Pleasant Block A – Phase 1. This report provides relevant evidence to aid in 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.*

The details shall include the location and full specification of: all lamps/luminaires; support structures; light levels/spill; cameras (detailing view paths); lamps and support structures. The details shall accord with or be reflected in the equivalent details included within landscaping details 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.

Please note this report should be considered in conjunction with the previously submitted documentation to discharge Condition 13 - Landscaping.

1 Introduction

SVM Consulting Engineers were asked to provide a report describing the external lighting strategy for Phase 1 of the Mount Pleasant development (which comprises of Block A). This will form part of the planning submission to discharge Planning Conditions C.23 External Lighting Strategy and C.24 CCTV security lighting.

2 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 supplement the existing street lighting and provide a level of lighting and uniformity around the development for the public and private door entrances as well as to areas within the landscaped areas of Square P, the Walk and the large communal courtyard.

The lighting has been designed to SBD guidelines and compliance to BS 5489:2013. The design complements the developments architecture and gives a level of “sparkle and intrigue” to the environs using feature lighting to highlight landscaping features such as routeways, trees and street furniture to the public areas along Mount Pleasant, within Square P and the communal courtyard.

Please refer to Appendix A - Layout drawings provided by the landscape architects BMA and SVM for ground level lighting layouts of the scheme

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

- Column lighting – To provide uniformity and levels of light to aid facial identification where required.
- Bulkhead fittings -to illuminate entrance ways to the building
- 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
- Wall mounted balcony/terrace lights – Provide discrete background lighting to private balconies and terraces (Please note these fittings at Level 1 and above have not been considered as part of the SBD Lighting analysis)
- Specific details of the light fittings can be found in Appendix B

The lighting strategy has been developed to the following parameters:

- The lighting has been designed in accordance with BS5489 Part 1 2013 and BS EN 13201- 2:2003.
- Peak external lighting levels at the nearest residential windows. will not exceed those recommend within ILE guidance,
- All external lamps are proposed to be LED for maximum energy efficiency.
- LED light source is to be used throughout giving zero/negligible UV.

- Luminaires selected have hoods or diffusers to eliminate light pollution and have good downward directional characteristics to ensure dark - sky application
- All lighting has been designed to accepted ecological guidelines including:
 - Use of “bat-friendly” lighting using low UV lamps or UV filters and luminaires
 - Low upwards lighting ratio is used within areas adjacent to green/brown roofs.
 - Compliance with BREEAM Pol 4 and Ene 03 (see Appendix D)
- Column and wall fixed luminaires have zero upward light to limit sky glow.
- Colour rendering of fittings will be 4000K throughout apart from external bench lighting which will be 3000K.
- Lighting design levels are in the order of a uniform 20 lux average across the paths 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 privacy needs, it is likely that a large portion of apartments will use window coverings during hours of darkness in residential apartments 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
- The external lighting shall be designed in compliance with Table 2 (see below) and its accompanying notes of the ILP Guidance notes for the reduction of obtrusive light, 2011

Table 1 – Lighting Requirements external fittings shall meet

External lighting location	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:	
	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

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/m ²]
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

3 Secured By Design (SBD) Submission

The lighting scheme has been developed and lighting level calculated and computer analysed to ensure it compliance with BS 5489:2013. A copy of the report is contained in Appendix C. This has been submitted to the Metropolitan Continuous Policing Improvement Command division based in Ruislip who have reviewed the submission and confirmed its compliance to the SBD guidelines and to BS 5489:2013.

4 Environmental Compliance

The lighting has also been assessed for Reduction of night time light pollution and within Appendix D the Breeam and Light Pollution compliance summary is attached

The Ecological Appraisal prepared by Waterman 2016 assessed the pre - development Phoenix Place site consisted of habitats, notwithstanding the existing trees to be of negligible ecological value. In accordance with local planning policy (LB Camden Core Strategy: Policy CS15), the Phoenix Place Development has incorporated green and brown roofs with bird and bat boxes at roof levels. Details of these have been submitted and approved by LB Camden under Planning Condition 21 and 22. Consequently the scheme has been designed utilising “bat friendly” low UV lamps and luminaires with colour renderings between 3000-4000k. where apart from the ground fitted uplighters all light fittings are hood to ensure minimal upward light pollution.

5 Submission documentation

The following appendices contain the following documentation:

Appendix A

- BMA Landscape architects external lighting layout - These give the general arrangement of external lighting in the landscaped areas of the Courtyard, Square P and along Mount Pleasant
 - MP1-BMA-ALL-SL-GA-A35-990150 - External Lighting Layout
- SVM Electrical Consultants drawings - These show the private external and security lighting fixed at ground level to the building at entrances and to private balconies and terraces.
 - MP1-SVM-EXT-UG-GA-A72-963300 L - Upper Ground Floor External Lighting Layout - Sht 1 of 6
 - MP1-SVM-EXT-UG-GA-A72-963301 L - Upper Ground Floor External Lighting Layout - Sht 2 of 6
 - MP1-SVM-EXT-UG-GA-A72-963302 M - Upper Ground Floor External Lighting Layout - Sht 3 of 6
 - MP1-SVM-EXT-UG-GA-A72-963303 N - Upper Ground Floor External Lighting Layout - Sht 4 of 6
 - MP1-SVM-EXT-UG-GA-A72-963304 L - Upper Ground Floor External Lighting Layout - Sht 5 of 6
 - MP1-SVM-EXT-UG-GA-A72-963305 A - Upper Ground Floor External Lighting Layout - Sht 6 of 6

Appendix B

- Schedule of proposed light fittings

Appendix C

- C4C13112_CALCS_EXT_SBD_R8.3 - Whitecroft Lighting Report - This report itemises all the light fittings used and includes a lighting analysis of the various areas confirming the lighting levels to ground level areas comply with BS 5489:2013 as demanded by the SBD 2016 "Silver Standard"

Appendix D

Breeam - Reduction of night time light pollution compliance confirmation