

13 Fitzroy Street
London W1T 4BQ
www.arup.com

-
-

Project title Microsoft Dublin 14/15

Job number

279225

cc

File reference

Prepared by S Mahalingam

Date

25 January 2022

Subject Electrical Planning Pack - Lighting

This pack of information contains design information on Electrical systems, particularly on the external lighting strategy for the Microsoft Dublin 14/15 project.

The external lighting design generally comprises façade-mounted and pole-mounted luminaires and has been developed to form a site lighting strategy that provides required illumination and uniformity levels to meet relevant lighting standards and the Basis of Design document. The lighting strategy considers several key design factors in order to provide a safe, comfortable and suitable level of ambient lighting for the purpose of security and movement, which includes, but not limited to the following:

- Light distribution and brightness through selection of colour temperature, light output and minimisation of pollution through controlled uplight and backlight
- Conservation of energy using LED lamps, which is in compliance with SI requirements of IS EN 1320 1 – 2 and in accordance with E4 Objective I of the South Dublin County Council Development Plan.
- Suitable Colour Rendering Index (CRI) in accordance with EN 12464, CIE 067 and CIE 13.3 in the selection of the luminaire lamps
- Other factors considered in the selection of the lamps include Suitable Colour Consistency, Colour Shift over Life, Colour Spatial Uniformity, Lumen Maintenance, Luminaire Efficacy, Power Factor, Operating Temperature Range and Energy Consumed in Off State
- Lighting control to minimise use of lighting when not required
- Safety and security through lighting levels and colour temperatures that aid resilience designs

The external lighting design encourages improved night-time visibility but respects the consequences of the development on wildlife and people.

The lighting design have been carried out in a holistic manner considering the factors noted above as well as those defined in the South Dublin County Council Public Lighting Specification, particularly Section 5 ‘Lighting’, and the Basis of Design (Microsoft Ballard) documents, on which the lighting design requirements is referenced upon.

File Note

279225

25 January 2022

Environmental factors that were also considered in the design included the use of mercury-free and lead-free luminaires, and otherwise Restriction of Hazardous Substance (RoHS) Directive compliant to the requirements of the European Union Directive 2002/95/EC.

Compliance with the following standards is also achieved through the designs and luminaire selection:

- IEC 62717 – LED Modules for General Lighting
- IEC 62031 – LED Modules for General Lighting – Safety Specifications
- IEC 62504 – General Lighting – LED Products and Related Equipment
- IS 10101
- IEC 60529 – IP Ratings
- EN 13201
- EN 60598 1&2
- EN 12464-2
- Technical Guidance Document Part L 2017 Building Regulations
- IES Lighting Handbook

Included in this pack of information are the site lighting layout, luminaire schedule for the external lighting, external site lighting datasheets and the excerpt from the Basis of Design (Microsoft Ballard) document.

DOCUMENT CHECKING (not mandatory for File Note)

	Prepared by	Checked by	Approved by
Name	S Mahalingam		
Signature			