



#### DESIGN CRITERIA:

THIS DRAWING INDICATES THE DESIGN INTENT AND THE INDICATIVE ILLUMINANCES FROM THE PROPOSED LUMINAIRES, DEMONSTRATING THAT COMPLIANCE WITH BS 5489 AND BSEN 13201 CAN BE ACHIEVED.

WHEN FINAL LUMINAIRE SELECTIONS, MOUNTING HEIGHTS AND BEAM DIRECTIONS ARE SET, THE LUMINAIRES SHALL THEN BE COMMISSIONED TO MEET THE CRITERIA DEFINED IN THE TABLES BELOW.

Table 1 – Environmental Zones			
Zone	Surrounding Environment	Lighting Environment	Examples
E0	Protected	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Natural	Intrinsically dark	National Parks, Areas of Outstanding Natural Beauty etc
E2	Rural	Low district brightness	Village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Small town centres or suburban locations
E4	Urban	High district brightness	Town/city centres with high levels of night-time activity

Table 2 – Obtrusive Light Limitations for Exterior Lighting Installations – General					
Environment at Zone	Sky Glow U <sub>GL</sub> [m <sup>-2</sup> sr <sup>-1</sup> ]	Light Intrusion (into Windows) E <sub>in</sub> [lux]	Luminaire Intensity I [candelas]		Building Luminescence Pre-curfew Average, L [cd/m <sup>2</sup> ]
			Pre-curfew	Post-curfew	
E0	0	0	0	0	0
E1	0	2	0 (1*)	2,500	0
E2	2.5	5	1	2,500	5
E3	5.0	10	3	10,000	10
E4	15	25	5	25,000	25

Table A.7 Variation of maintained lighting level with S/P ratio of light source					
Lighting class	Benchmark (e.g. R <sub>a</sub> < 60 or when S/P ratio of light source is not known or specified)	S/P ratio = 1.2 and R <sub>a</sub> < 60 (e.g. some types of warm white lamp such as metal halide)		S/P ratio = 2 and R <sub>a</sub> < 60 (e.g. some types of cool white compact fluorescent or LED)	
		E <sub>min</sub>	E <sub>max</sub>	E <sub>min</sub>	E <sub>max</sub>
P1 or S1	15.0	3.0	13.4	2.7	12.3
P2 or S2	10.0	2.0	8.6	1.7	7.7
P3 or S3	7.5	1.5	6.3	1.3	5.5
P4 or S4	5.0	1.0	4.0	0.8	3.4
P5 or S5	3.0	0.6	2.2	0.4	1.8
P6 or S6	2.0	0.4	1.4	0.4	1.1

#### LEGEND:

- X-A1 FLOODLIGHT SURFACE WASHER
- X-A2 COMPACT DOWNLIGHT
- X-A3 COMPACT DOWNLIGHT
- X-B1 BOLLARD
- X-C1 RECESSED LUMINAIRE
- X-D1 WALL MOUNTED UP/DOWN LIGHT
- X-D2 COMPACT DOWNLIGHT
- X-F1 FLEXIBLE LED STRIP
- X-G1 IN GROUND LIGHT
- X-H1 LED ROD
- X-J1 WALL LIGHT
- X-K1 WALL LIGHT

FOR DETAILS OF LUMINAIRES, REFER TO LUMINAIRE DATA SHEETS.

#### LUX LEVEL CONTOUR LINES:

- 3 LUX
- 5 LUX
- 7.5 LUX
- 10 LUX
- 15 LUX
- 20 LUX
- 30 LUX
- 50 LUX
- 75 LUX
- 100 LUX
- 150 LUX
- 300 LUX

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FOR REVIEW & COMMENT/APPROVAL

Drawing Title:

EXTERNAL LIGHTING LUX PLOT

**MDL**

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