

Environmental Statement

Information for:

External Lighting Report



Presented to:

Hinckley Investment LLP
Hammonds Way, Hinckley

28-Oct-25



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1. Introduction

1.1. Introduction

This Environmental Report details the proposed methodology and design standards considered in respect of the external lighting installation. It will also describe and demonstrate the methods used to mitigate the effect of the external lighting on the surrounding areas.

In addition to the above, the assessment details the mitigating measures taken to prevent and minimise the potential impact of the external lighting scheme on the local environment. Particular attention has been paid to the existing nearby vegetation, Sketchley Brook, and lighting spill to nearby developments.

All lighting will be designed to meet the specific minimum environmental design criteria from BS5489-1, BS EN 12464.

This statement has been produced to describe the proposed external lighting strategy for the project known as Hammonds Way, Hinckley.

This report shall be read in conjunction with the external lighting drawing 2318-ESC-00-ZZ-DR-E-2100 Rev P1.

The site has been classified as E3 (suburban) for the environmental zone and obtrusive light limitation for exterior lighting installation for the purposes of this statement.

The site will comprise a single industrial building with a GIA of 95,000 square feet, and ancillary areas, as per the extract overleaf.

As topography, vegetation and fencing is extremely difficult to incorporate into the design calculation, it should be noted that the lighting levels and spill contours indicated are at floor level and based on a completely flat site with no features. As such, the design represents the worst-case scenario. A 1 lux spill line (blue) has also been highlighted around the entire site to show at which point the light spill drops below 1 lux.



2. Lighting Performance Objectives

2.1. Overview

The section summarises the key documents, design criteria and technical input considered during the design and production of this external lighting design and associated statement. A specific emphasis has been applied for the functional purpose of the development/integration of lighting to comply with specific standards and to limit the effects of obtrusive light on the ecology of the surrounding area.

2.2. Design Standards

The proposed lighting installation has been designed to meet specific minimum environmental design criteria in accordance with the current versions of the following documents and British Standards:

- Lighting Guide LG6: The Outdoor Environment
- BS5489-1: Code of Practice for the Design of Road Lighting. Lighting of Roads and Public Amenity Areas
- BS EN 12464-1: Light and Lighting of Workplaces
- ILP Guidance Note 01/21 for the Reduction of Obtrusive Light 2021.
- Local Council planning policies.

2.3. Site Specific Performance Objectives

The external lighting design and statement of this scheme shall comply with the following performance objectives.

- Provide high quality and efficient lighting, which creates a safe environment for building occupants while limiting obtrusive light, and the effects of artificial lighting on the surrounding area and ecology.
- Fittings have been selected which include high quality drivers and lamp technology to provide high lighting efficacy with sufficient spread of light to reduce the number of luminaires required through an accurate lighting design.
- Luminaires provided shall only utilise LED lamp technology and a timeclock / photocell control philosophy to limit lighting illumination to the hours the building is operational.
- Particular attention has been paid towards sensitive areas of the site close to site boundaries and possible ecology to minimise the environmental impact of the development.
- Consideration has been applied to minimise sky glow, lighting spill and the luminous intensity of all luminaires.
- Specific mitigation of lighting spill has been applied via factory fitted shield optics in specific areas on this development.

2.4. Design Criteria – Lighting Levels

The external lighting design for this development has been designed in accordance with BS5489-1, BS EN 12464-2 and CIBSE LG6. The below table highlights details of the proposed illumination levels:

Table 2.2 Excerpt from BS EN 12464-2:2014 (reproduced by permission of BSI)

Ref. no.	Type of area, task or activity	$\bar{E}_m$ (lux)	U_o (–)	R_{GL} (–)	R_a (–)	Remarks
5.1.1	Walkways exclusively for pedestrians	5	0.25	50	20	
5.1.2	Traffic areas for slowly moving vehicles (max. 10 km/h), e.g. bicycles, trucks and excavators	10	0.40	50	20	
5.1.3	Regular vehicle traffic (max. 40 km/h)	20	0.40	45	20	At shipyards and in docks, R_{GL} may be 50
5.1.4	Pedestrian passage, vehicle turning, loading and unloading points	50	0.40	50	20	

**Table replicated from CIBSE LG6: The Exterior Environment and information detailed within BS EN 12464-2.*

The minimum lighting requirements have been designed where possible to ensure no areas are over lit or higher than required uniformity more than the guidance.

2.5. Design Criteria – Obtrusive Light

The guidance levels contained within the ILP Guidance Notes for the Reduction of Obtrusive Light GN01:2021 have been utilised. This splits the surroundings into five environmental zones which are recommended to Local Planning Authorities to specify an approach and applicable zone to a particular location.

For the purposes of this development, the site has been classified an E3 (environmental zone) for obtrusive light limitation for exterior lighting installations.

Environmental Zones

Zone	Surrounding	Lighting environment	Examples
E0	Protected	Dark (SQM 20.5+)	Astronomical Observable dark skies, UNESCO starlight reserves, IDA dark sky places
E1	Natural	Dark (SQM 20 to 20.5)	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, IDA buffer zones etc.
E2	Rural	Low district brightness (SQM ~15 to 20)	Sparsely inhabited rural areas, village or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well inhabited rural and urban settlements, small town centres of suburban locations
E4	Urban	High district brightness	Town / City centres with high levels of night-time activity

Obtrusive Light Limitations

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

ULR = **Upward Light Ratio of the Installation** is the maximum permitted percentage of luminaire flux that goes directly into the sky.

E_v = **Vertical Illuminance in Lux** - measured flat on the glazing at the centre of the window.

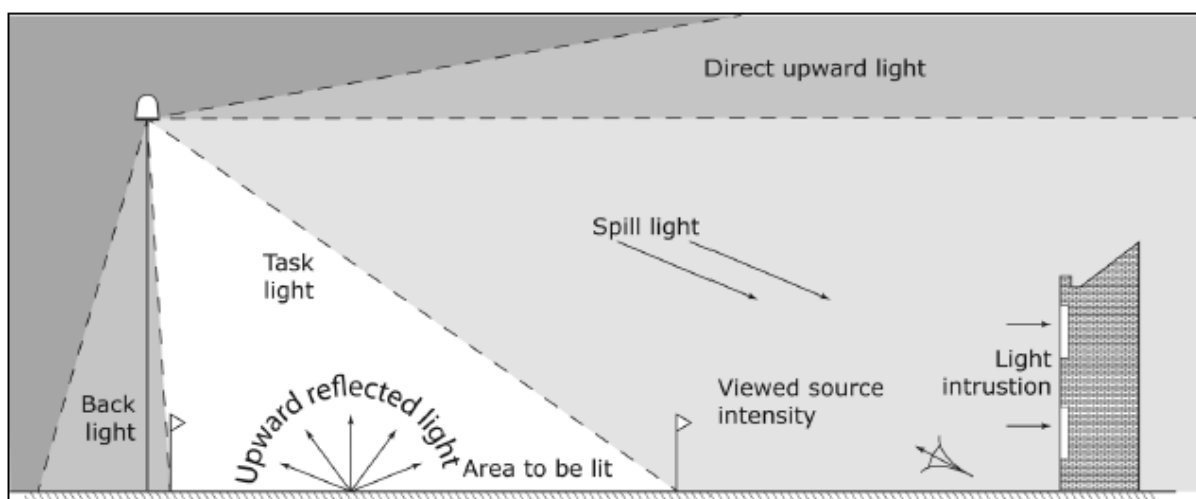
I = **Light Intensity in Candelas (cd)**

L = **Luminance in Candelas per Square Metre (cd/m²)**

Curfew = **the time after which stricter requirements (for the control of obtrusive light) will apply**; often a condition of use of lighting applied by the local planning authority. If not otherwise stated - 23.00hrs is suggested.

***** = **Permitted only from** Public road lighting installations

Classification Of Obtrusive Light Diagram



2.6. Design Criteria – Obtrusive Light Overview

The Proposed Development has been designed in accordance with ILP Guidance Notes for the Reduction of Obtrusive Light GN01:2021 and categorised under Environmental Zone E3: Medium district brightness areas.

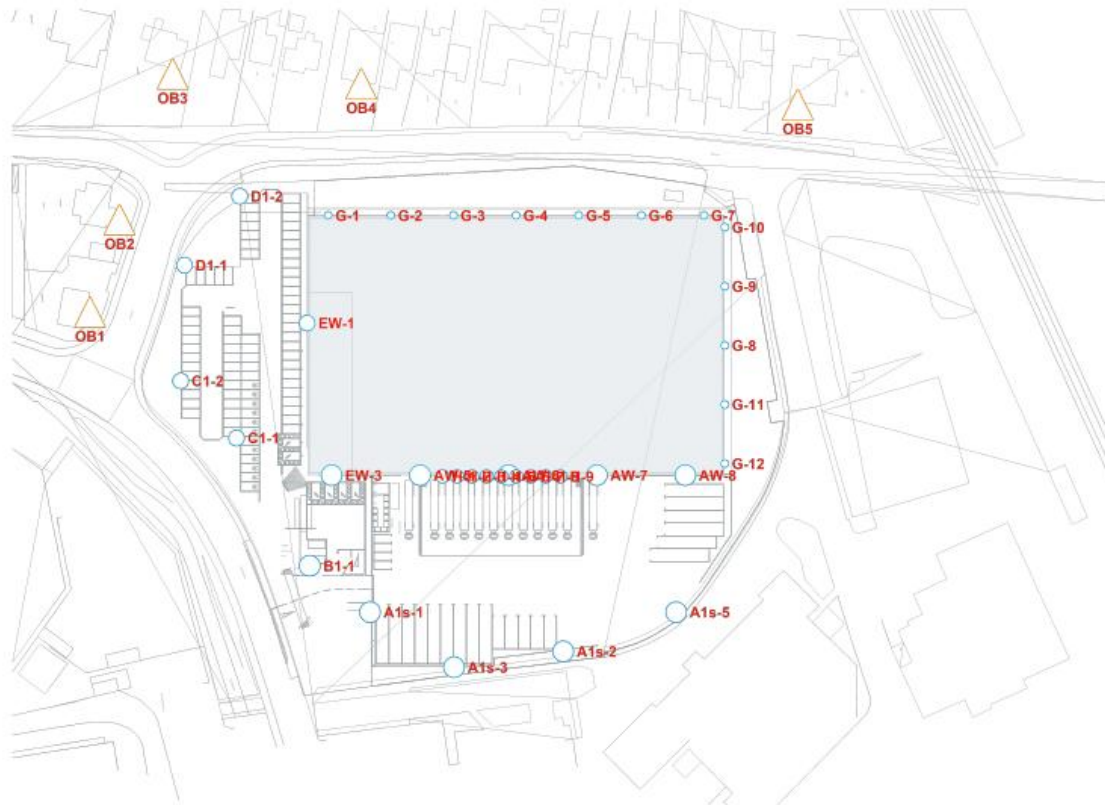
A design has been detailed on ESC's external lighting drawing 2318-ESC-00-ZZ-DR-E-2100 Rev P1 issued in conjunction with this report.

At the time of the design, numerous sensitive residential receptors have been identified as requiring consideration / calculation regarding source intensity and / or light intrusion. Please see below: -

Luminous Intensity

To	Distance (m)	Achieved Full Power (cd)	Luminaire Group	Pre-Curfew					Post-Curfew			
				Limit (cd)	Result	Dim	Achieved (cd)	Result	Limit (cd)	Dim	Achieved (cd)	Result
From OB1												
A1s-1	111.5	13	0.03 $A_p \leq 0.13$	836	✓ PASS	100%	13	✓ PASS	279	100%	13	✓ PASS
A1s-3	138.1	306	0.03 $A_p \leq 0.13$	1,035	✓ PASS	100%	306	✓ PASS	345	100%	306	✓ PASS
B1-1	91.2	219	0.03 $A_p \leq 0.13$	684	✓ PASS	100%	219	✓ PASS	228	100%	219	✓ PASS
C1-1	52.6	5	0.03 $A_p \leq 0.13$	395	✓ PASS	100%	5	✓ PASS	132	100%	5	✓ PASS
C1-2	31.2	9	0.03 $A_p \leq 0.13$	234	✓ PASS	100%	9	✓ PASS	78	100%	9	✓ PASS
D1-1	29.0	0	0.03 $A_p \leq 0.13$	217	✓ PASS	100%	0	✓ PASS	72	100%	0	✓ PASS
D1-2	51.5	0	0.03 $A_p \leq 0.13$	386	✓ PASS	100%	0	✓ PASS	129	100%	0	✓ PASS
EW-1	59.2	96	0.03 $A_p \leq 0.13$	444	✓ PASS	100%	96	✓ PASS	148	100%	96	✓ PASS
From OB2												
A1s-1	126.3	11	0.03 $A_p \leq 0.13$	948	✓ PASS	100%	11	✓ PASS	316	100%	11	✓ PASS
B1-1	107.2	21	0.03 $A_p \leq 0.13$	804	✓ PASS	100%	21	✓ PASS	268	100%	21	✓ PASS
C1-1	67.3	7	0.03 $A_p \leq 0.13$	505	✓ PASS	100%	7	✓ PASS	168	100%	7	✓ PASS
C1-2	46.9	11	0.03 $A_p \leq 0.13$	352	✓ PASS	100%	11	✓ PASS	117	100%	11	✓ PASS
D1-1	22.0	0	0.03 $A_p \leq 0.13$	165	✓ PASS	100%	0	✓ PASS	55	100%	0	✓ PASS
D1-2	33.6	0	0.03 $A_p \leq 0.13$	252	✓ PASS	100%	0	✓ PASS	84	100%	0	✓ PASS
EW-1	58.3	244	0.03 $A_p \leq 0.13$	437	✓ PASS	100%	244	✓ PASS	146	30%	73	✓ PASS
G-1	56.7	8	0.01 $A_p \leq 0.03$	215	✓ PASS	100%	8	✓ PASS	74	100%	8	✓ PASS
From OB3												
B1-1	138.4	48	0.03 $A_p \leq 0.13$	1,038	✓ PASS	100%	48	✓ PASS	346	100%	48	✓ PASS
C1-1	100.2	9	0.01 $A_p \leq 0.03$	381	✓ PASS	100%	9	✓ PASS	130	100%	9	✓ PASS
C1-2	83.3	8	0.03 $A_p \leq 0.13$	624	✓ PASS	100%	8	✓ PASS	208	100%	8	✓ PASS
D1-1	52.1	-0	0.03 $A_p \leq 0.13$	390	✓ PASS	100%	-0	✓ PASS	130	100%	-0	✓ PASS
D1-2	38.0	0	0.03 $A_p \leq 0.13$	285	✓ PASS	100%	0	✓ PASS	95	100%	0	✓ PASS
EW-1	76.8	563	0.03 $A_p \leq 0.13$	576	✓ PASS	100%	563	✓ PASS	192	30%	169	✓ PASS
G-1	57.0	2	0.01 $A_p \leq 0.03$	217	✓ PASS	100%	2	✓ PASS	74	100%	2	✓ PASS
G-2	70.5	2	0.002 $A_p \leq 0.01$	134	✓ PASS	100%	2	✓ PASS	44	100%	2	✓ PASS
G-3	85.3	2	0.002 $A_p \leq 0.01$	162	✓ PASS	100%	2	✓ PASS	54	100%	2	✓ PASS
G-4	100.8	2	0.002 $A_p \leq 0.01$	191	✓ PASS	100%	2	✓ PASS	63	100%	2	✓ PASS
G-5	116.7	2	0.002 $A_p \leq 0.01$	222	✓ PASS	100%	2	✓ PASS	74	100%	2	✓ PASS
G-6	132.9	2	0.002 $A_p \leq 0.01$	252	✓ PASS	100%	2	✓ PASS	84	100%	2	✓ PASS
G-7	149.2	2	0.002 $A_p \leq 0.01$	284	✓ PASS	100%	2	✓ PASS	94	100%	2	✓ PASS
From OB4												
C1-2	94.3	20	0.03 $A_p \leq 0.13$	707	✓ PASS	100%	20	✓ PASS	236	100%	20	✓ PASS
D1-1	68.8	59	0.03 $A_p \leq 0.13$	516	✓ PASS	100%	59	✓ PASS	172	100%	59	✓ PASS
D1-2	45.1	90	0.03 $A_p \leq 0.13$	338	✓ PASS	100%	90	✓ PASS	113	100%	90	✓ PASS
G-1	36.7	2	0.01 $A_p \leq 0.03$	140	✓ PASS	100%	2	✓ PASS	48	100%	2	✓ PASS
G-2	36.5	2	0.01 $A_p \leq 0.03$	139	✓ PASS	100%	2	✓ PASS	47	100%	2	✓ PASS
G-3	43.6	2	0.01 $A_p \leq 0.03$	165	✓ PASS	100%	2	✓ PASS	57	100%	2	✓ PASS
G-4	55.1	3	0.01 $A_p \leq 0.03$	209	✓ PASS	100%	3	✓ PASS	72	100%	3	✓ PASS
G-5	69.0	2	0.002 $A_p \leq 0.01$	131	✓ PASS	100%	2	✓ PASS	43	100%	2	✓ PASS
G-6	84.0	2	0.002 $A_p \leq 0.01$	160	✓ PASS	100%	2	✓ PASS	53	100%	2	✓ PASS
G-7	99.6	2	0.002 $A_p \leq 0.01$	189	✓ PASS	100%	2	✓ PASS	63	100%	2	✓ PASS
From OB5												
D1-2	153.5	1	0.01 $A_p \leq 0.03$	583	✓ PASS	100%	1	✓ PASS	200	100%	1	✓ PASS
G-1	130.9	3	0.002 $A_p \leq 0.01$	249	✓ PASS	100%	3	✓ PASS	82	100%	3	✓ PASS
G-2	114.4	3	0.002 $A_p \leq 0.01$	217	✓ PASS	100%	3	✓ PASS	72	100%	3	✓ PASS
G-3	98.1	2	0.002 $A_p \leq 0.01$	186	✓ PASS	100%	2	✓ PASS	62	100%	2	✓ PASS
G-4	82.1	2	0.002 $A_p \leq 0.01$	156	✓ PASS	100%	2	✓ PASS	52	100%	2	✓ PASS
G-5	66.6	2	0.002 $A_p \leq 0.01$	126	✓ PASS	100%	2	✓ PASS	42	100%	2	✓ PASS
G-6	51.9	3	0.01 $A_p \leq 0.03$	197	✓ PASS	100%	3	✓ PASS	68	100%	3	✓ PASS
G-7	39.3	3	0.01 $A_p \leq 0.03$	149	✓ PASS	100%	3	✓ PASS	51	100%	3	✓ PASS
G-8	68.1	4	0.002 $A_p \leq 0.01$	129	✓ PASS	100%	4	✓ PASS	43	100%	4	✓ PASS
G-9	53.0	3	0.01 $A_p \leq 0.03$	201	✓ PASS	100%	3	✓ PASS	69	100%	3	✓ PASS
G-10	38.6	3	0.01 $A_p \leq 0.03$	147	✓ PASS	100%	3	✓ PASS	50	100%	3	✓ PASS
G-11	83.6	5	0.002 $A_p \leq 0.01$	159	✓ PASS	100%	5	✓ PASS	53	100%	5	✓ PASS
G-12	99.2	5	0.002 $A_p \leq 0.01$	188	✓ PASS	100%	5	✓ PASS	62	100%	5	✓ PASS

Project Drawing



Vertical Light

Description	Achieved (Lux)	Pre-Curfew		Post-Curfew	
		Limit (Lux)	Result	Limit (Lux)	Result
Vertical - Nutts Way	0	10	✓ PASS	2	✓ PASS
Vertical - Nutts Way	0	10	✓ PASS	2	✓ PASS

Sky Glow

ULOR Max Limit	Total Achieved ULOR	Result
5.0%	0.0%	✓ PASS

Label	Tilt (°)	Fitting Quantity	Power (W)	Lumens (lm)	LLM/TcW	ULOR
A1s	0	4	268	33,231	124	0%
AW	0	4	268	39,626	148	0%
B1	0	1	145	21,795	150	0%
C1	0	2	106	10,577	100	0%
D1	0	2	116	10,672	92	0%
EW	0	2	75	10,823	144	0%
G	0	12	6	897	138	0%

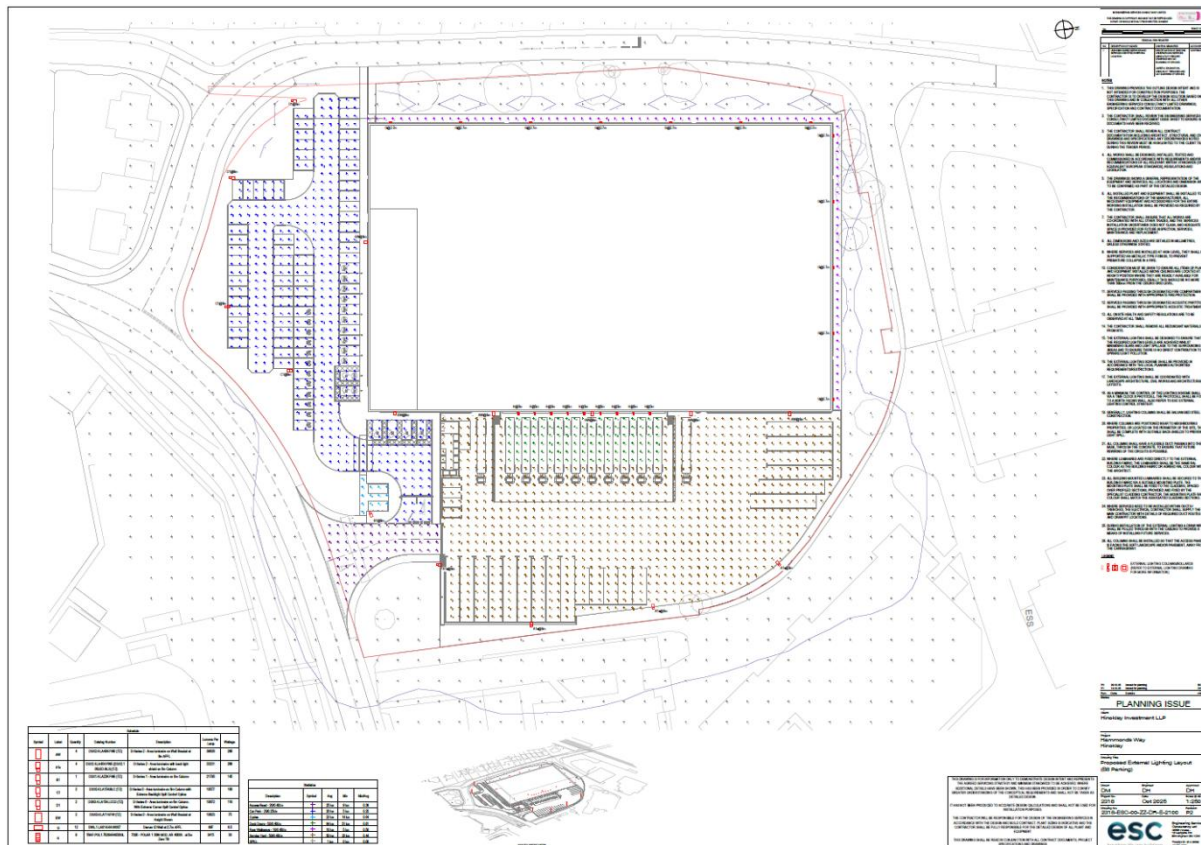
As can be seen from the GN01/21 calculations above, all values are compliant. To achieve compliance, the only mitigation measures required are that EW-1 would require dimming to 30% to pass the post-curfew levels (if lighting remains operational at night).

It is already assumed that the lighting will be switched off via a timeclock at night for BREEAM purposes, and as such the dimming will not be incorporated unless the lighting will remain illuminated at night.

3. External Lighting Scheme

3.1. Overview

The external lighting drawing number 2318-ESC-00-ZZ-DR-E-2100 Rev P1 as shown below, represents the external lighting installation. (This report should be read in conjunction with the full-size version of this drawing for clarity).



2318-ESC-00-ZZ-DR-E-2100 Revision P2

The above represents the typical information that would be required for planning and demonstrates the lighting lux levels within the site boundary and the overspill lux levels in the surrounding areas. A 1 lux spill line around the development in blue demonstrates the point at which the surrounding lighting level drops below 1 lux.

The external lighting scheme adopts a policy of limiting and controlling external upward light pollution to a minimum and to use the minimum energy necessary to provide a safe and secure premises. Therefore, the lighting will not make a direct contribution to "upward light pollution".

The lighting has been designed in accordance with the technical lighting guides published by CIBSE (Chartered Institution of Building Services Engineers) and the Guidance Notes for the reduction of obtrusive light published by ILP (Institution of Lighting Professionals).

The lighting is designed utilising LED low energy lighting sources, using a combination of building mounted luminaires and lighting columns to provide a minimum maintained illuminance.

The control of the lighting solution is via a timeclock and photocell control. This will enable the lighting to be controlled during the operating hours of the premises. Further, this will adjust in line with summer and winter seasons, thereby preventing the unnecessary operation of the lighting installation. The

lighting will also be turned off via the timeclock between the hours of 11pm and 7am, subject to the operating hours of the industrial unit.

The lighting is designed taking great care to ensure that the required lighting levels are achieved, incorporating optic control to limit the light pollution to the surrounding areas whilst ensuring adequate lighting is provided for public and staff safety.

Specific migration of lighting spill has been applied via tilt brackets, backlight optics and/or corner spill control optics in specific areas on this development.

NOTE - As topography, vegetation and fencing is extremely difficult to incorporate into the design calculation, it should be noted that the lighting levels and spill contours indicated are at floor level and based on a completely flat site with no features. As such, the design represents the worst-case scenario.

3.2. Car Park, Walkways, and Service Yards

The external lighting to the development shall consist of LED lamps wall mounted and mounted on columns centred at the maximum possible distances to maintain the lighting levels and uniformity requirements. Column heights have been considered to provide the highest luminaire efficacy while minimising offsite spill while applying optical shields (BLC/BLS/LCCO) and / or tilt brackets as required as an additional supporting measure.

Schedule						
Symbol	Label	Quantity	Catalog Number	Description	Lumens Per Lamp	Wattage
	AW	4	DSX2.4.LA404.FWE (TZ)	D-Series 2 - Area luminaire on Wall Bracket at 8m AFFL	39626	268
	A1s	4	DSX2.4.LA404.FWE.(DSX2.100LED.BLS) (TZ)	D-Series 2 - Area luminaire with back light shield on 8m Column	33231	268
	B1	1	DSX1.4.LA224.FWE (TZ)	D-Series 1 - Area luminaire on 8m Column	21795	145
	C1	2	DSX0.4.LA154.BLC (TZ)	D-Series 0 - Area luminaire on 6m Column with Extreme Backlight Spill Control Optics	10577	106
	D1	2	DSX0.4.LA154.LCCO (TZ)	D-Series 0 - Area luminaire on 6m Column. With Extreme Corner Spill Control Optics	10672	116
	EW	2	DSX0.4.LA114.FW (TZ)	D-Series 0 - Area luminaire on Wall Bracket at Height Shown	10823	75
	G	12	DWL.1.LA014.HN.W007	Denver iD Wall at 2.7m AFFL	897	6.5
	H	9	TBHF.POL1.7026AR4030GL	7026 - POLAR 1 30W MOD. AR 4000K. at 5m Zero Tilt	3415	30

Refs	Light Type	Source	Manufacturer / Model	Image
AW A1s	LED		Holophane – D-Series 2 Luminaire	
C1 D1 EW	LED		Holophane – D-Series 0 Luminaire	
B1	LED		Holophane – D-Series 1 Luminaire	
G	LED		Holophane – Denver iD Wall Luminaire	
H	LED		Holophane – Polar 1	

3.3. Evaluation

The proposed external lighting scheme has been evaluated against the requirements of all local planning policy considerations; British Standards & design guidance documents as detailed within this report.

The designed results are highlighted below:

Statistics				
Description	Symbol	Avg	Min	Min/Avg
Access Road - 20/0.40Uo	+	25 lux	9 lux	0.36
Car Park - 20/0.25Uo	+	20 lux	5 lux	0.25
Cycles	+	22 lux	14 lux	0.64
Dock Doors - 50/0.40Uo	+	84 lux	51 lux	0.61
Rear Walkways - 10/0.40Uo	+	10 lux	5 lux	0.50
Service Yard - 50/0.40Uo	+	50 lux	22 lux	0.44
SPILL	+	1 lux	0 lux	0.00

Maintained lux level compliance with BS5489-1 & BS EN 12464 has been provided throughout the external lighting design. Additional measures have been applied via control optics on selected luminaires which has reduced the overall lux spill.

The control of the lighting solution is also via a timeclock and photocell control. This will enable the lighting to be controlled during the operating hours of the premises. Further, this will adjust in line with summer and winter seasons, thereby preventing the unnecessary operation of the lighting installation.

4. Conclusion

The proposed external lighting scheme supports local planning policy, British Standards and design guidance documents as detailed within this report.

Lighting proposals have been specifically designed to meet all relevant performance standards, ILP guidelines towards obtrusive light and associated British and European regulations towards external lighting.

The following specific requirements have been carried out as part of this design strategy:

- Ensuring all designed lighting across this development is lit adequately to correct guidelines and British/European regulations.
- All luminaires selected and applied into the design with performance factors, ecology and the nearby surroundings considered as part of the design.
- Minimise obtrusive light to existing adjacent areas including neighbouring properties where applicable and areas highlighted.
- Lighting controls considered to ensure occupants of the site are safe but also controlled to ensure lighting is not within hours of non-building operation.

Engineering Services Consultancy Ltd
28 October 2025