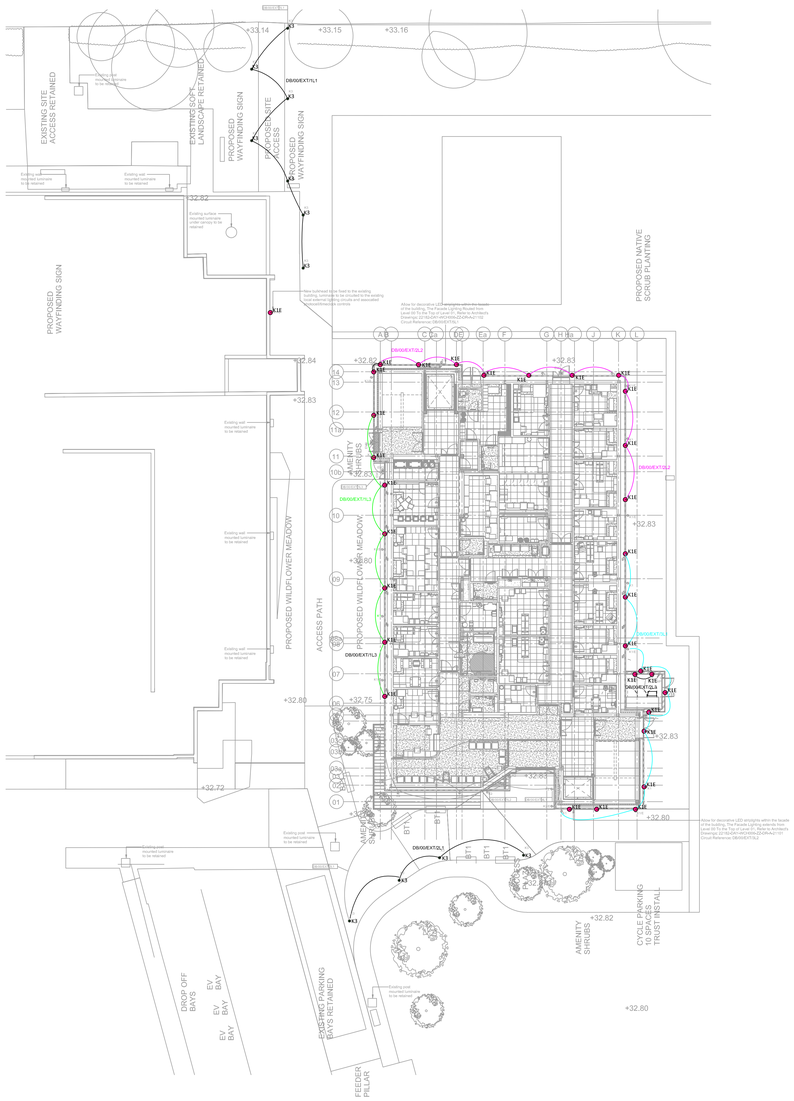


SYMBOL	REF	QTY	PART CODE	PRODUCT	WATTAGE
	K1E	32	K6H4154KSLEP	KOLO IP65	13 W
	K3	11	BLY214KSRB	KOLO BOLLARD	4 W

DO NOT SCALE FROM THIS DRAWING.

ALL DIMENSIONS TO BE CHECKED ON SITE.

FOR REFERENCED VIEWS REFER TO SERIES OF DRAWINGS

BREEAM and Light Pollution Compliance Summary

Project Reference	34511
Project Name	WITHINGTON CDC - COMMUNITY DIAGNOSTIC CENTRE
Date	11.09.2025
Report By	B. STANTON
WLL Drawing Numbers	34511_DWG_EX_00004_00
Comments	Assumed E3 environmental zone operating pre-curfew

BREEAM Pol 4 - Reduction of Night Time Light Pollution Non-Domestic Buildings

One BREEAM credit is available where the lighting design is in compliance with the criteria below

Demonstrate compliance with ILP Guidance Notes for the Reduction of Obtrusive Light (2021)
Select Environmental Zone from table below:

Table 1 - Environmental Zones

Zone	Surrounding	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 Observers

Environmental Zone	Sky Glow ULR (Max %)	Light Intrusion (into windows) Ev (lux)		Luminaire Intensity I (candelas)		Building Luminance Pre-curfew Average, L (cd/m²)
		Pre-curfew	Post-curfew	Pre-curfew	Post-curfew	
E0	0	0	0	0	0	0
E1	0	2	0	2500	0	0
E2	2.5	5	1	7500	500	5
E3	5.0	10	2	10000	1000	10
E4	15	25	5	25000	2500	25

General notes relating to the ILP Guidance
1 - Values for Light Trespass into windows can only be demonstrated with full detailed drawings showing adjacent properties. Please see Lighting Calculation for further details

2 - No building is lit directly as a night time feature so Building Luminance requirements are not exceeded

3 - This applies to each luminaire in the potentially obtrusive direction, outside of the area being lit. The figures given are for general guidance only and for some applications with limited mounting heights, may be difficult to achieve.

4 - External lighting (except for safety and security) should be automatically switched off between 11pm and 7am (Post curfew) to gain the BREEAM credit

5 - Safety and security lighting between 11pm and 7am should meet the 'Post curfew' targets in Table 2

6 - Night-time switching control is recommended to achieve compliance post curfew

7 - Lumen outputs reduced by 50% where 'Dual Power' feature is used

Upward Light (ULR)	
Target	5.0%
Project	46.8%
PASS/FAIL	FAIL

Source Intensity (kcd)		
	Pre Curfew	Post Curfew
Target	10.0	1.0
Project	0.6	
PASS/FAIL	PASS	

E3 — Project Environmental Zone

Input project equipment details into white boxes below

Reference	Part Number	Product Type	Time of Operation	Lamps	Lumen	Qty	Light Outpt Ratio % (LOR)	Upward Light Ratio % (ULR)	Total Upward Lumens	Total Available Lumens	Max. source Intensity cd/1000 lm	Max. source Intensity kcd Pre Curfew	Max. source Intensity kcd Post Curfew	Circuit Watts	Total Watts
K1	K6H4154KS WALL MTD	KOLO IP65 - WALL	Pre Curfew	LED	1755	32	100.00%	50.00%	28080.0	56160.0	330	0.579		13.7	438.4
K3	BLY214KSRB	KOLO BOLLARD	Pre Curfew	LED	404	11	100.00%	6.60%	293.3	4444.0	240	0.097		4.0	44.0
									28373	60604					482.4

BREEAM Ene 03 External Lighting, BREEAM New Construction (Non-Domestic Buildings)

Total LL/CW: 125.6

Select BREEAM version in box below:

2018 ← If 2014 or 2018, status is shown to the right. If 2011, use separate table

BREEAM 2018	
Luminaire lumens per circuit watt LL/CW	
Target	70.0
Project	125.6
PASS/FAIL	PASS

One BREEAM credit is available where luminaires meet the criteria below and are controlled through time or daylight to prevent operation during daytime hours.
Minimum target indicates the minimum average for external luminaires in all areas and with any colour rendition

Whitecroft Lighting Ltd

Suitability Code (as defined in BS1192)

Work in Progress (WIP)

S0 - Work In Progress

Shared (Non- Contractual)

S1 - Suitable for Co-ordination
S3 - Suitable for Review & comment
S5 - Not Used
S7 - Suitable for AIM Authorisation

S2 - Suitable for Information
S4 - Suitable for Stage Approval
S6 - Suitable for PIM Authorisation

WIP to Published (Non-Contractual)

D1 - Suitable for Costing
D3 - Suitable for Contractor Design

D2 - Suitable for Tender
D4 - Suitable for manufacture/procurement

Published Documentation (Contractual)

A1, A2, A3, Etc - Approved and accepted as stage complete
01,02,03, Etc, - Partially signed off with minor comments from the Client

Published for AIM Acceptance

CR - As Construction Record Documentation

Rev	Drn	Chkd	Date	Description
C01	AB	RD	08.10.25	ISSUED FOR CONSTRUCTION
P01	AB	RD	07.10.25	ISSUED FOR APPROVAL

bam
BAM Services Engineering
BAM Construct UK Ltd
Services Engineering
Lighting Design
Interior Design
3D Visualisation
Public Realm Design
Structural Engineering
Environmental Services
Building Information Modelling
Metro, 2nd Floor
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Salford, M3 3WA
0161 8779374
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NHS
Manchester University
NHS Foundation Trust

project: WITHINGTON CDC
title: EXTERNAL LIGHTING LAYOUT
purpose of issue: CONSTRUCTION
date: 07/10/25 | scale: 1:200 | BAM job no.: HNW.0350 | orig. status: A1
drawn: AB | checked: RD | classification: PM_40_40_01
project code | originator | volume | level | type | role | number | rev.
org / doc ref.: 22182-BAM-WCH006-XX-DR-E-70072 | C01