Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	UWLR
▯	6	T1	Single	OE-QLS410	0.900	395	7.5	N.A.
⊕	95	A	Single		0.900	1050	10	N.A.
⊕	204	B	Single		0.900	2200	25	N.A.
▭	57	C	Single	OE-WSNCF-4FT-CCT	0.900	4800	4	N.A.
●	8	EX1-SC	Single	37,4W LED 3000K (2 Modules) 100mA EcoRays S with S07 Optic column mounted at 6m.	0.900	5110	37.4	0.00
●	5	EX2	Single	11,9W LED 3000K (1 Module) 60mA EcoRays TP with STE-M Optic column mounted at 4m. (4.5m including luminaire)	0.900	1510	11.9	0.00
●	47	EX2-SC	Single	11,9W LED 3000K (1 Module) 60mA EcoRays TP with STE-M Optic column mounted at 4m. (4.5m including luminaire)	0.900	1510	11.9	0.00
●	156	EX3	Single	20W MIKO·3000K·ON-OFF·1000mm·radial optic·DarkSky Approved	0.900	1700	20	0.00
●	11	EX4	Single	52,3W LED 3000K (2 Modules) 140mA EcoRays S with S07 Optic column mounted at 6m.	0.900	7000	52.3	0.00
●	20	EX5	Single	23W LED 3000K (2 Modules) 60mA EcoRays TP with S Optic column mounted at 4m.	0.900	2970	23	0.00
●	60	EX6	Single	11,9W LED 3000K (1 Module) 60mA EcoRays TP with SV Optic column mounted at 4m.	0.900	1510	11.9	0.00
▨	16	Existing Lanterns	Single	Existing Street Lanterns	0.900	5860	40	0.00

Calculation Summary

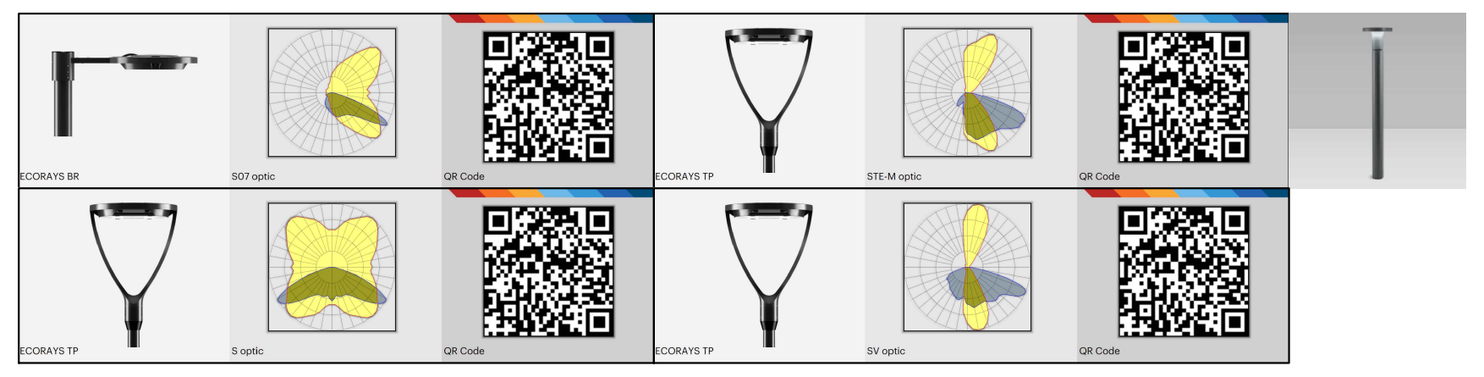
Project: Project_1

Label	CalcType	Units	Avg	Max	Min	Uniformity (Min/Avg)	Diversity (Min/Max)	Designed to:
Bike Store 112	Illuminance	Lux	222.60	270	193	0.87	0.71	
Bike Store 160	Illuminance	Lux	211.04	300	143	0.68	0.48	
Bike Store 20	Illuminance	Lux	195.00	244	144	0.74	0.59	
Bike Store 52	Illuminance	Lux	169.21	210	115	0.68	0.55	
Bike Store 53	Illuminance	Lux	208.83	223	191	0.91	0.86	
Bike Store 92	Illuminance	Lux	209.90	306	151	0.72	0.49	
Bin Store 80	Illuminance	Lux	229.75	264	187	0.81	0.71	
Bin Store 88	Illuminance	Lux	139.93	218	65	0.46	0.30	
Block Under canopy 2	Illuminance	Lux	143.67	164	132	0.92	0.80	
Block 1 Under canopy	Illuminance	Lux	183.50	188	179	0.98	0.95	
Block 10 Entrance	Illuminance	Lux	58.54	137	21	0.36	0.15	
Block 10 Under canopy	Illuminance	Lux	154.95	212	109	0.70	0.51	
Block 11 Under canopy	Illuminance	Lux	130.33	149	118	0.91	0.79	
Block 13 Under canopy	Illuminance	Lux	133.33	153	95	0.71	0.62	
Block 15 Under canopy	Illuminance	Lux	113.29	124	89	0.79	0.72	
Block 16 Under canopy	Illuminance	Lux	144.00	170	129	0.90	0.76	
Block 17 Under canopy	Illuminance	Lux	161.50	162	161	1.00	0.99	
Block 18 Under canopy	Illuminance	Lux	98.25	111	77	0.78	0.69	
Block 18 Under canopy 2	Illuminance	Lux	138.67	158	127	0.92	0.80	
Block 19 Under canopy	Illuminance	Lux	73.00	81	67	0.92	0.83	
Block 19 Under canopy 2	Illuminance	Lux	128.67	138	124	0.96	0.90	
Block 2 Under canopy	Illuminance	Lux	183.50	185	182	0.99	0.98	
Block 20 Under canopy	Illuminance	Lux	149.43	166	120	0.80	0.72	
Block 20-21 Link	Illuminance	Lux	103.90	126	78	0.75	0.62	
Block 21 Under canopy 1	Illuminance	Lux	138.08	160	109	0.79	0.68	
Block 21 Under canopy 2	Illuminance	Lux	132.67	142	124	0.93	0.87	
Block 21 Under canopy 3	Illuminance	Lux	130.33	137	122	0.94	0.89	
Block 22 Under canopy	Illuminance	Lux	139.50	147	132	0.95	0.90	
Block 23 Under canopy	Illuminance	Lux	180.50	183	178	0.99	0.97	
Block 24 Under canopy	Illuminance	Lux	181.00	185	177	0.98	0.96	
Block 25 Under canopy	Illuminance	Lux	176.50	181	172	0.97	0.95	
Block 26 Under canopy	Illuminance	Lux	117.58	146	82	0.70	0.56	
Block 27 Under canopy	Illuminance	Lux	183.50	187	180	0.98	0.96	
Block 28 Under canopy	Illuminance	Lux	169.50	175	164	0.97	0.94	
Block 29 Under canopy	Illuminance	Lux	186.50	187	186	1.00	0.99	
Block 3 Under canopy	Illuminance	Lux	151.67	205	117	0.77	0.57	
Block 3 Under canopy 2	Illuminance	Lux	153.67	208	122	0.79	0.59	
Block 4 Under canopy	Illuminance	Lux	132.25	149	104	0.79	0.70	
Block 5 Under canopy	Illuminance	Lux	145.00	161	122	0.84	0.76	
Block 5 Under canopy 2	Illuminance	Lux	144.00	160	133	0.92	0.83	
Block 6 Under canopy	Illuminance	Lux	109.50	116	99	0.90	0.85	
Block 7 Under canopy	Illuminance	Lux	152.17	170	129	0.85	0.76	
Block 8 Canopy	Illuminance	Lux	136.22	163	106	0.78	0.65	
Block 9 Under canopy	Illuminance	Lux	145.08	177	106	0.73	0.60	
Block 9 Under canopy 2	Illuminance	Lux	132.00	145	123	0.93	0.85	
Building 1 Terraces	Illuminance	Lux	8.50	22	1	0.12	0.05	
Building 17 Terraces	Illuminance	Lux	7.50	15	1	0.13	0.07	
Building 24 Terraces	Illuminance	Lux	6.00	12	2	0.33	0.17	
Courtyards	Illuminance	Lux	20.23	135	5	0.25	0.04	BSEN12464-2 2024 Pathways 10lux 0.20Uo
Cycle Store 68	Illuminance	Lux	195.28	229	145	0.74	0.63	
Cycle Store 80	Illuminance	Lux	221.78	280	153	0.69	0.55	
Main Vehicle Route	Illuminance	Lux	27.65	78.3	9.1	0.33	0.12	BSEN13201-2:2015 Table 3 - P1 15lux Ave 3Lux Min.
Pathways	Illuminance	Lux	19.50	96.5	5.0	0.26	0.05	BSEN12464-2 2024 Pathways 10lux 0.20Uo
Steps 1	Illuminance	Lux	32.04	41	25	0.78	0.61	BS5489-1:2020 Table 3 - Stairways 20lux Ave 10Lux Min.
Steps 2	Illuminance	Lux	21.25	25	17	0.80	0.68	BS5489-1:2020 Table 3 - Stairways 20lux Ave 10Lux Min.
Steps 3	Illuminance	Lux	77.75	110	53	0.68	0.48	BS5489-1:2020 Table 3 - Stairways 20lux Ave 10Lux Min.
Steps 4	Illuminance	Lux	127.50	138	117	0.92	0.85	BS5489-1:2020 Table 3 - Stairways 20lux Ave 10Lux Min.
Vehicle Routes	Illuminance	Lux	13.32	75.7	3.3	0.25	0.04	BSEN13201-2:2015 Table 3 - P2 10lux Ave 2Lux Min.

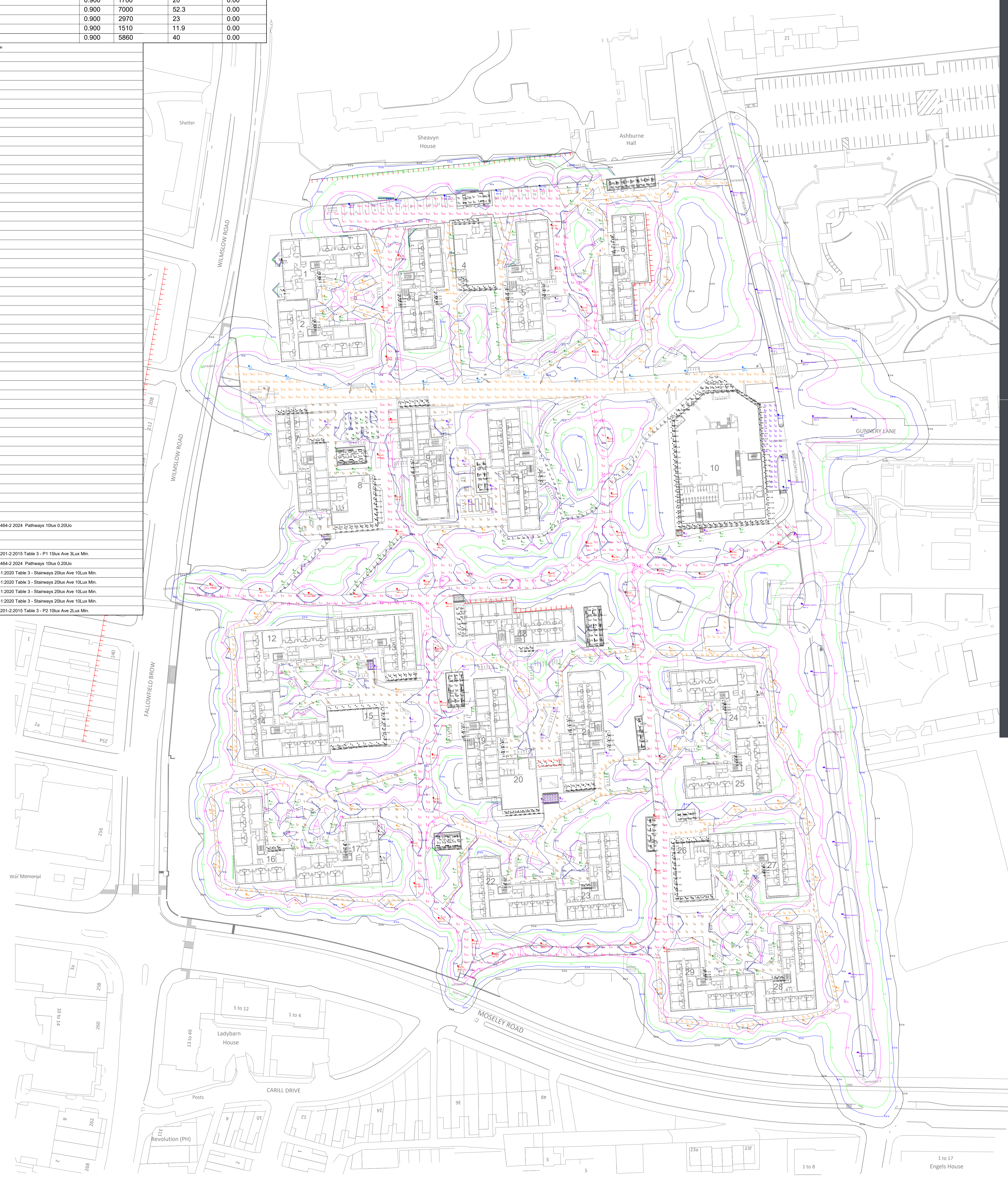
Calculation Summary

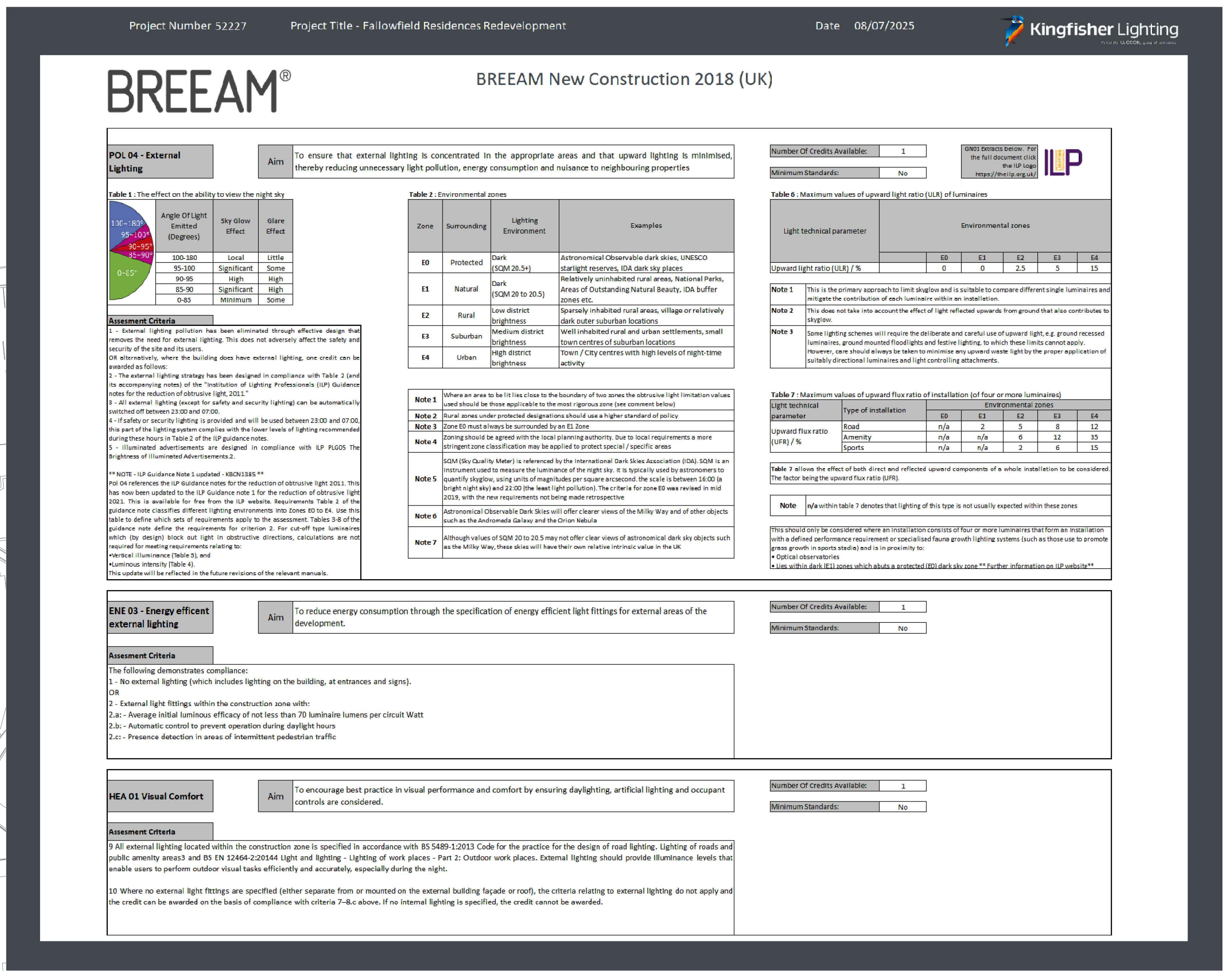
Project: Obtrusive Light

Label	CalcType	Units	Avg	Max	Min	Uniformity (Min/Avg)	Diversity (Min/Max)
Example Obtrusive light onsite next to pathways_1_Cd_Seg1	Obtrusive - Cd	N.A.	37.70	365	1	0.03	0.00
Example Obtrusive light onsite next to pathways_1_Cd_Seg2	Obtrusive - Cd	N.A.	20.40	104	2	0.10	0.02
Example Obtrusive light onsite next to pathways_1_Cd_Seg3	Obtrusive - Cd	N.A.	9.30	51	1	0.11	0.02
Example Obtrusive light onsite next to pathways_1_Ill_Seg1	Obtrusive - Ill	Lux	0.22	2	0	0.00	0.00
Example Obtrusive light onsite next to pathways_1_Ill_Seg2	Obtrusive - Ill	Lux	0.00	0	0	N.A.	N.A.
Example Obtrusive light onsite next to pathways_1_Ill_Seg3	Obtrusive - Ill	Lux	0.00	0	0	N.A.	N.A.
Example Obtrusive light onsite next to pathways_Cd_Seg1	Obtrusive - Cd	N.A.	18.60	399	2	0.11	0.01
Example Obtrusive light onsite next to pathways_Cd_Seg2	Obtrusive - Cd	N.A.	63.50	384	2	0.03	0.01
Example Obtrusive light onsite next to pathways_Cd_Seg3	Obtrusive - Cd	N.A.	21.85	121	2	0.09	0.02
Example Obtrusive light onsite next to pathways_Ill_Seg1	Obtrusive - Ill	Lux	0.07	2	0	0.00	0.00
Example Obtrusive light onsite next to pathways_Ill_Seg2	Obtrusive - Ill	Lux	0.25	2	0	0.00	0.00
Example Obtrusive light onsite next to pathways_Ill_Seg3	Obtrusive - Ill	Lux	0.10	1	0	0.00	0.00
Fallowfield Brow Obtrusive light_Cd_Seg1	Obtrusive - Cd	N.A.	14.81	130	1	0.07	0.01
Fallowfield Brow Obtrusive light_Ill_Seg1	Obtrusive - Ill	Lux	0.00	0	0	N.A.	N.A.
Sheavyn House Obtrusive Light_Cd_Seg1	Obtrusive - Cd	N.A.	128.17	292	9	0.07	0.03
Sheavyn House Obtrusive Light_Ill_Seg1	Obtrusive - Ill	Lux	0.81	2	0	0.00	0.00



Dimensions are not to be scaled from this drawing





Project Number 52227 Project Title - Fallowfield Residences Redevelopment Date 08/07/2025 Kingfisher Lighting

BREEAM®

BREEAM New Construction 2018 (UK)

POL 04 - External Lighting

Aim: To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, thereby reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties

Number Of Credits Available:	1
Minimum Standards:	No

GN01 Extracts below. For the full document click the ILP Logo https://theilp.org.uk/

Table 1 : The effect on the ability to view the night sky

Angle Of Light Emitted (Degrees)	Sky Glow Effect	Glare Effect
100-180	Local	Little
95-100	Significant	Some
90-95	High	High
85-90	Significant	High
0-85	Minimum	Some

Assesment Criteria

1 - External lighting pollution has been eliminated through effective design that removes the need for external lighting. This does not adversely affect the safety and security of the site and its users.
OR alternatively, where the building does have external lighting, one credit can be awarded as follows:
2 - The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the "Institution of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011."
3 - All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00.
4 - If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP guidance notes.
5 - Illuminated advertisements are designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements 2.

** NOTE - ILP Guidance Note 1 updated - KBCN1385 **
Pol 04 references the ILP Guidance notes for the reduction of obtrusive light 2011. This has now been updated to the ILP Guidance note 1 for the reduction of obtrusive light 2021. This is available for free from the ILP website. Requirements Table 2 of the guidance note classifies different lighting environments into Zones E0 to E4. Use this table to define which sets of requirements apply to the assessment. Tables 3-8 of the guidance note define the requirements for criterion 2. For cut-off type luminaires which (by design) block out light in obstructive directions, calculations are not required for meeting requirements relating to:
•Vertical illuminance (Table 3), and
•Luminous intensity (Table 4).
This update will be reflected in the future revisions of the relevant manuals.

Table 2 : 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	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

Note 1	Where an area to be lit lies close to the boundary of two zones the obtrusive light limitation values used should be those applicable to the most rigorous zone (see comment below)
Note 2	Rural zones under protected designations should use a higher standard of policy
Note 3	Zone E0 must always be surrounded by an E1 Zone
Note 4	Zoning should be agreed with the local planning authority. Due to local requirements a more stringent zone classification may be applied to protect special / specific areas
Note 5	SQM (Sky Quality Meter) is referenced by the International Dark Skies Association (IDA). SQM is an instrument used to measure the luminance of the night sky. It is typically used by astronomers to quantify skyglow, using units of magnitudes per square arcsecond. the scale is between 16:00 (a bright night sky) and 22:00 (the least light pollution). The criteria for zone E0 was revised in mid 2019, with the new requirements not being made retrospective
Note 6	Astronomical Observable Dark Skies will offer clearer views of the Milky Way and of other objects such as the Andromeda Galaxy and the Orion Nebula
Note 7	Although values of SQM 20 to 20.5 may not offer clear views of astronomical dark sky objects such as the Milky Way, these skies will have their own relative intrinsic value in the UK

Table 6 : Maximum values of upward light ratio (ULR) of luminaires

Light technical parameter	Environmental zones				
	E0	E1	E2	E3	E4
Upward light ratio (ULR) / %	0	0	2.5	5	15

Note 1	This is the primary approach to limit skyglow and is suitable to compare different single luminaires and mitigate the contribution of each luminaire within an installation.
Note 2	This does not take into account the effect of light reflected upwards from ground that also contributes to skyglow.
Note 3	Some lighting schemes will require the deliberate and careful use of upward light, e.g. ground recessed luminaires, ground mounted floodlights and festive lighting, to which these limits cannot apply. However, care should always be taken to minimise any upward waste light by the proper application of suitably directional luminaires and light controlling attachments.

Table 7 : Maximum values of upward flux ratio of installation (of four or more luminaires)

Light technical parameter	Type of installation	Environmental zones				
		E0	E1	E2	E3	E4
Upward flux ratio (UFR) / %	Road	n/a	2	5	8	12
	Amenity	n/a	n/a	6	12	35
	Sports	n/a	n/a	2	6	15

Table 7 allows the effect of both direct and reflected upward components of a whole installation to be considered. The factor being the upward flux ratio (UFR).

Note: n/a within table 7 denotes that lighting of this type is not usually expected within these zones

This should only be considered where an installation consists of four or more luminaires that form an installation with a defined performance requirement or specialised fauna growth lighting systems (such as those use to promote grass growth in sports stadia) and is in proximity to:
• Optical observatories
• Lies within dark (E1) zones which abuts a protected (E0) dark sky zone ** Further information on ILP website**

ENE 03 - Energy efficent external lighting

Aim: To reduce energy consumption through the specification of energy efficient light fittings for external areas of the development.

Number Of Credits Available:	1
Minimum Standards:	No

Assesment Criteria

The following demonstrates compliance:
1 - No external lighting (which includes lighting on the building, at entrances and signs).
OR
2 - External light fittings within the construction zone with:
2.a: - Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt
2.b: - Automatic control to prevent operation during daylight hours
2.c: - Presence detection in areas of intermittent pedestrian traffic

HEA 01 Visual Comfort

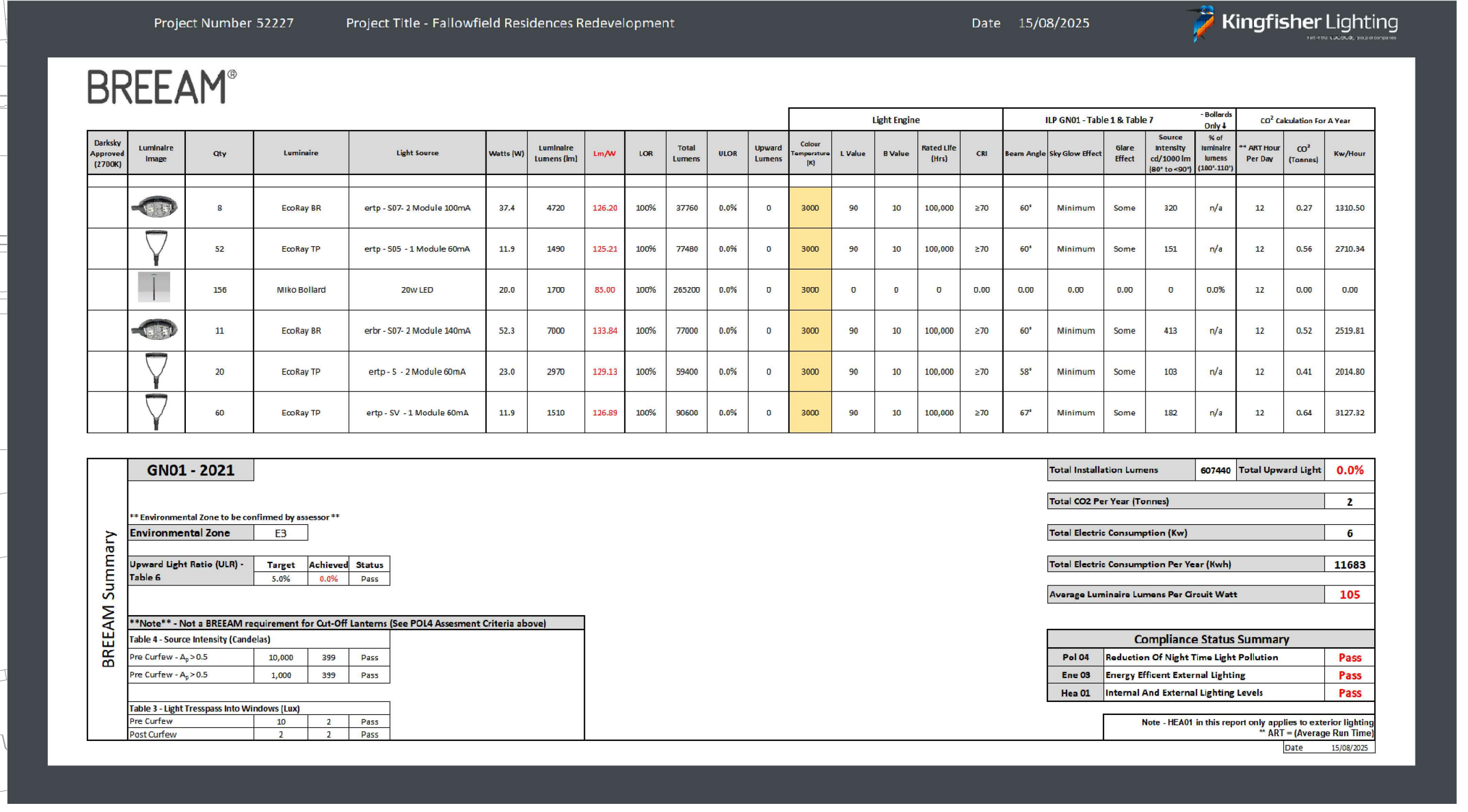
Aim: To encourage best practice in visual performance and comfort by ensuring daylighting, artificial lighting and occupant controls are considered.

Number Of Credits Available:	1
Minimum Standards:	No

Assesment Criteria

9 All external lighting located within the construction zone is specified in accordance with BS 5489-1:2013 Code for the practice for the design of road lighting. Lighting of roads and public amenity areas3 and BS EN 12464-2:20144 Light and lighting - Lighting of work places - Part 2: Outdoor work places. External lighting should provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night.

10 Where no external light fittings are specified (either separate from or mounted on the external building façade or roof), the criteria relating to external lighting do not apply and the credit can be awarded on the basis of compliance with criteria 7–8.c above. If no internal lighting is specified, the credit cannot be awarded.



Project Number 52227 Project Title - Fallowfield Residences Redevelopment Date 15/08/2025 Kingfisher Lighting

BREEAM®

												Light Engine					ILP GN01 - Table 1 & Table 7				- Bollards Only ↓	CO^2 Calculation For A Year		
Darksky Approved (2700K)	Luminaire Image	Qty	Luminaire	Light Source	Watts (W)	Luminaire Lumens (lm)	Lm/W	LOR	Total Lumens	ULOR	Upward Lumens	Colour Temperature (K)	L Value	B Value	Rated Life (Hrs)	CRI	Beam Angle	Sky Glow Effect	Glare Effect	Source Intensity cd/1000 lm (80° to <90°)	% of luminaire lumens (100°-110°)	** ART Hour Per Day	CO^2 (Tonnes)	Kw/Hour
		8	EcoRay BR	ertp - S07- 2 Module 100mA	37.4	4720	126.20	100%	37760	0.0%	0	3000	90	10	100,000	≥70	60°	Minimum	Some	320	n/a	12	0.27	1310.50
		52	EcoRay TP	ertp - S05 - 1 Module 60mA	11.9	1490	125.21	100%	77480	0.0%	0	3000	90	10	100,000	≥70	60°	Minimum	Some	151	n/a	12	0.56	2710.34
		156	Miko Bollard	20w LED	20.0	1700	85.00	100%	265200	0.0%	0	3000	0	0	0	0.00	0.00	0.00	0.00	0	0.0%	12	0.00	0.00
		11	EcoRay BR	erbr - S07- 2 Module 140mA	52.3	7000	133.84	100%	77000	0.0%	0	3000	90	10	100,000	≥70	60°	Minimum	Some	413	n/a	12	0.52	2519.81
		20	EcoRay TP	ertp - S - 2 Module 60mA	23.0	2970	129.13	100%	59400	0.0%	0	3000	90	10	100,000	≥70	58°	Minimum	Some	103	n/a	12	0.41	2014.80
		60	EcoRay TP	ertp - SV - 1 Module 60mA	11.9	1510	126.89	100%	90600	0.0%	0	3000	90	10	100,000	≥70	67°	Minimum	Some	182	n/a	12	0.64	3127.32

BREEAM Summary

GN01 - 2021

** Environmental Zone to be confirmed by assessor **

Environmental Zone	E3

Upward Light Ratio (ULR) - Table 6	Target	Achieved	Status
	5.0%	0.0%	Pass

Note - Not a BREEAM requirement for Cut-Off Lanterns (See POL4 Assesment Criteria above)

Table 4 - Source Intensity (Candelas)			
Pre Curfew - A_p > 0.5	10,000	399	Pass
Pre Curfew - A_p > 0.5	1,000	399	Pass

Table 3 - Light Tresspass Into Windows (Lux)			
Pre Curfew	10	2	Pass
Post Curfew	2	2	Pass

Total Installation Lumens	607440	Total Upward Light	0.0%
Total CO2 Per Year (Tonnes)			2
Total Electric Consumption (Kw)			6
Total Electric Consumption Per Year (Kwh)			11683
Avarage Luminaire Lumens Per Circuit Watt			105

Compliance Status Summary

Pol 04	Reduction Of Night Time Light Pollution	Pass
Ene 03	Energy Efficent External Lighting	Pass
Hea 01	Internal And External Lighting Levels	Pass

Note - HEA01 in this report only applies to exterior lighting
** ART = (Average Run Time)
Date 15/08/2025

N

Fallowfield Residences Development

Scale	Project Number
1:800 at A0	D52227R
Date	**Drawing No.**
18 August 2025	D52227/RD/Q

Designed By :

For this lighting design a 0.9mf has been used. If it differs from the maintenance plan for this project then you must advise us accordingly

Kingfisher Lighting

Part of the LUCECO plc group of companies

Rev.	Description	Initials

A lighting applications design service is provided by us in good faith and without charge, relating to Kingfisher products only. As such, whilst every endeavor is made for accuracy from information provided by yourselves, the final responsibility for the suitability of the design lies with the client. The company cannot, therefore, accept any liability or consequential loss incurred. *If the drawing supplied to Kingfisher is a PDF then an AutoCAD drawing is to be provided prior to order. When converting a PDF, the scale is not precise.*

Commercial
Sync Energy offers the ultimate solution for commercial EV charging

For more information on EV charging for your installation please visit www.sync.energy or click the image