

DATE: 11 March 2022
DESIGNER: Alex Naper
PROJECT No: SES 12920 Rev F
PROJECT NAME: Holybank, Swords - Cairn Homes



Residential area designed in accordance with EN13201-:2015 Category P4.

Ramp sections designed in accordance with ISEN17210-2021 with recommend illuminance levels as per BS8300-1:2018 Table 5 Stairways and ramps (open) in the external environment.

Junction onto Glen Ellan road meets recommendations of EN13201-2:2015 Category C3.

Transition zone between residential area and Glen Ellan road designed in accordance with EN13201-2:2015 Category P3.

Rev A: Updated site layout.

Rev B: LED colour temperature changed to 2700K.

Rev C: Columns relocated to avoid landscaping clash.

Rev D: P44 relocated to requested location & additional column added.

Rev F: P94 Relocated

Rev E : Updated site layout.

Outdoor Lighting Report

PREPARED BY: Sabre Electrical Services Ltd.
Unit 11,
Bellview Industrial Estate,
Tolka Valley Road,
Dublin 11
Phone Number: 01 8110875
Contact: Graham Sheehan
eMail: graham@sabrelighting.ie

Layout Report

General Data

Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	717514.74	748132.25	375.39	294.85	1.50	1.50
2	Grid 2	717602.74	747934.86	317.98	197.39	1.50	1.50
3	Junction Grid	717758.54	747938.47	45.00	33.00	1.50	1.50
4	Transition Grid	717777.56	747959.88	9.00	12.00	1.50	1.50
5	Grid 5	717782.58	748160.48	36.00	54.00	1.50	1.50

Luminaires

Luminaire A Data



Supplier	Urbis Schreder
Type	AXIA 2.1 5167 Integrated lenses - 16 OSLO N SQUARE GIANT@400m
Lamp(s)	16 OSLO SQUARE GIANT@400mA WW 727 230V 00-36-648
LampFlux(klm)/Colour	2.60 WW 2700K/70
File Name	AXIA 2.1 5167 16 OSLO SQUARE GIANT 400mA WW 727 20.6W 434362 Integrated ...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1162.3, 202.9, 3.0
No. in Project	27

Luminaire B Data



Supplier	Urbis Schreder
Type	AXIA 2.1 5166 Integrated lenses - 8 OSLO N SQUARE GIANT@400mA
Lamp(s)	8 OSLO SQUARE GIANT@400mA WW 727 230V 00-36-648
LampFlux(klm)/Colour	1.34 WW 2700K/70
File Name	AXIA 2.1 5166 8 OSLO SQUARE GIANT 400mA WW 727 11.6W 464222 Integrated I...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1083.7, 150.6, 1.2
No. in Project	9

Luminaire C Data



Supplier	Urbis Schreder
Type	AXIA 2.1 5166 Integrated lenses - 16 OSLO N SQUARE GIANT@400m
Lamp(s)	16 OSLO SQUARE GIANT@400mA WW 727 230V 00-36-648
LampFlux(klm)/Colour	2.69 WW 2700K/70
File Name	AXIA 2.1 5166 16 OSLO SQUARE GIANT 400mA WW 727 20.6W 464222 Integrated ...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1083.7, 150.6, 1.2
No. in Project	28

Luminaire D Data



Supplier	Urbis Schreder
Type	AXIA 2.1 5165 Integrated lenses Front-Rear louvres 8 OSLO N S
Lamp(s)	8 OSLO SQUARE GIANT@400mA WW 727 230V 00-36-648
LampFlux(klm)/Colour	0.80 WW 2700K/70
File Name	AXIA 2.1 5165 8 OSLO SQUARE GIANT 400mA WW 727 11.6W 434272 Integrated I...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1551.2, 151.5, 3.2
No. in Project	15

Luminaire E Data



Supplier	Urbis Schreder
Type	AXIA 2.1 5165 Integrated lenses Rear louvers 8 OSLO N SQUARE
Lamp(s)	8 OSLO SQUARE GIANT@400mA WW 727 230V 00-36-648
LampFlux(klm)/Colour	1.09 WW 2700K/70
File Name	AXIA 2.1 5165 8 OSLO SQUARE GIANT 400mA WW 727 11.6W 434262 Integrated I...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1690.7, 164.7, 3.2
No. in Project	42

Luminaire F Data



Supplier	Thom
Type	CIVITEQ L - 60 x Neutral White 4000K LED CR170 500mA - NR Opt
Lamp(s)	LED_4000K
LampFlux(klm)/Colour	14.08 4000/70
File Name	CQL60L50NR740G36_DC.LDT
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	602.6, 98.0, 0.0
No. in Project	6

Luminaires



Luminaire G Data

Supplier	Urbis Schreder
Type	AXIA 2.1 5165 Integrated lenses Rear louvers 24 OSLON SQUARE
Lamp(s)	24 OSLON SQUARE GIANT@500mA WW 727 230V 00-36-646
LampFlux(klm)/Colour	3.98 WW 2700K/70
File Name	AXIA 2.1 5165 24 OSLON SQUARE GIANT 500mA WW 727 37.2W 434262 Integrated ...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1690.7, 164.7, 3.2
No. in Project	5



Luminaire H Data

Supplier	Urbis Schreder
Type	AXIA 2.1 5165 Integrated lenses - 8 OSLON SQUARE GIANT@400mA
Lamp(s)	8 OSLON SQUARE GIANT@400mA WW 727 230V 00-36-648
LampFlux(klm)/Colour	1.33 WW 2700K/70
File Name	AXIA 2.1 5165 8 OSLON SQUARE GIANT 400mA WW 727 11.6W 464212 Integrated I...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1587.4, 164.9, 1.3
No. in Project	3



Luminaire I Data

Supplier	Urbis Schreder
Type	AXIA 2.1 5167 Integrated lenses Rear louvers 16 OSLON SQUARE
Lamp(s)	16 OSLON SQUARE GIANT@400mA WW 727 230V 00-36-648
LampFlux(klm)/Colour	1.86 WW 2700K/70
File Name	AXIA 2.1 5167 16 OSLON SQUARE GIANT 400mA WW 727 20.6W 434342 Integrated ...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1431.3, 207.0, 3.1
No. in Project	6

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	C	717778.14	747968.66	6.00	354.00	5.00	0.00	0.40			
2	C	717780.27	748009.70	6.00	355.00	5.00	0.00	0.40			
3	C	717774.26	748040.68	6.00	7.00	5.00	0.00	0.40			
4	E	717763.75	747979.20	5.00	266.00	0.00	0.00	0.40			
5	E	717729.73	747982.18	5.00	268.00	0.00	0.00	0.40			
6	E	717693.66	747985.78	5.00	261.00	0.00	0.00	0.40			
7	I	717763.46	748065.12	6.00	285.00	5.00	0.00	0.40			
8	A	717770.82	748045.80	6.00	106.00	5.00	0.00	0.40			
9	A	717737.80	748038.92	6.00	104.00	5.00	0.00	0.40			
10	I	717728.06	748056.46	6.00	280.00	5.00	0.00	0.40			
11	A	717711.95	748032.74	6.00	111.00	5.00	0.00	0.40			
12	I	717693.21	748047.87	6.00	284.00	5.00	0.00	0.40			
13	A	717671.23	748032.81	6.00	13.00	5.00	0.00	0.40			
14	C	717765.70	748081.02	6.00	16.00	5.00	0.00	0.40			
15	B	717744.05	748019.30	5.00	20.00	0.00	0.00	0.40			
16	B	717704.51	748017.79	5.00	13.00	0.00	0.00	0.40			
17	B	717730.15	748009.57	5.00	88.00	0.00	0.00	0.40			
18	B	717751.08	748001.42	5.00	168.00	0.00	0.00	0.40			
20	D	717807.61	748031.06	5.00	197.00	0.00	0.00	0.40			
21	D	717802.84	748052.64	5.00	199.00	0.00	0.00	0.40			
22	I	717795.93	748068.30	6.00	283.00	5.00	0.00	0.40			
23	A	717814.64	748058.17	6.00	99.00	5.00	0.00	0.40			
24	A	717828.59	748082.59	6.00	284.00	5.00	0.00	0.40			
25	A	717850.32	748066.65	6.00	105.00	5.00	0.00	0.40			
26	C	717866.34	748085.52	6.00	281.00	5.00	0.00	0.40			
27	B	717854.67	748026.26	5.00	196.00	0.00	0.00	0.40			
28	B	717842.04	748034.59	5.00	290.00	0.00	0.00	0.40			
29	B	717834.98	748023.04	5.00	12.00	0.00	0.00	0.40			
30	E	717870.76	747971.19	5.00	270.00	0.00	0.00	0.40			
31	E	717847.26	747971.09	5.00	266.00	0.00	0.00	0.40			
32	B	717846.66	748015.95	5.00	285.00	0.00	0.00	0.40			
33	E	717821.50	747973.81	5.00	262.00	0.00	0.00	0.40			
34	D	717871.47	748022.30	5.00	275.00	0.00	0.00	0.40			
35	A	717809.86	748086.41	6.00	196.00	5.00	0.00	0.40			
36	A	717801.56	748120.38	6.00	202.00	5.00	0.00	0.40			
37	A	717796.15	748141.50	6.00	196.00	5.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
38	C	717766.19	748116.07	6.00	198.00	5.00	0.00	0.40			
39	C	717741.59	748107.13	6.00	101.00	5.00	0.00	0.40			
40	C	717715.60	748100.80	6.00	107.00	5.00	0.00	0.40			
41	C	717683.88	748092.87	6.00	108.00	5.00	0.00	0.40			
42	C	717649.78	748088.67	6.00	7.00	5.00	0.00	0.40			
43	D	717790.94	748095.92	5.00	283.00	0.00	0.00	0.40			
44	D	717779.86	748075.23	5.00	5.00	0.00	0.00	0.40			
45	D	717809.35	747979.05	5.00	205.00	0.00	0.00	0.40			
46	E	717791.69	747986.13	5.00	327.00	0.00	0.00	0.40			
47	F	717685.54	747965.76	10.00	269.00	0.00	0.00	0.50			
48	G	717798.21	748172.57	5.00	252.00	0.00	0.00	0.50			
49	D	717811.36	748004.61	5.00	167.00	0.00	0.00	0.40			
50	G	717798.26	748197.71	6.00	155.00	5.00	0.00	0.40			
51	E	717876.57	748070.17	5.00	194.00	0.00	0.00	0.40			
52	E	717884.66	748036.30	5.00	186.00	0.00	0.00	0.40			
53	E	717886.03	748007.84	5.00	180.00	0.00	0.00	0.40			
54	E	717888.10	747977.51	5.00	182.00	0.00	0.00	0.40			
55	E	717879.78	747958.66	5.00	150.00	0.00	0.00	0.40			
56	C	717749.42	748137.35	6.00	21.00	5.00	0.00	0.40			
57	C	717596.22	748221.91	6.00	298.00	5.00	0.00	0.40			
58	C	717635.03	748225.68	6.00	103.00	5.00	0.00	0.40			
59	C	717675.69	748232.60	6.00	99.00	5.00	0.00	0.40			
60	A	717713.90	748233.42	6.00	86.00	5.00	0.00	0.40			
61	A	717698.92	748249.91	6.00	268.00	5.00	0.00	0.40			
62	A	717740.69	748245.04	6.00	261.00	5.00	0.00	0.40			
63	C	717747.21	748222.28	6.00	342.00	5.00	0.00	0.40			
64	C	717745.95	748177.11	6.00	180.00	5.00	0.00	0.40			
65	C	717697.73	748166.64	6.00	103.00	5.00	0.00	0.40			
66	C	717657.70	748156.77	6.00	104.00	5.00	0.00	0.40			
67	C	717630.99	748148.49	6.00	178.00	5.00	0.00	0.40			
68	E	717685.38	748191.47	5.00	8.00	0.00	0.00	0.40			
69	E	717684.27	748216.32	5.00	0.00	0.00	0.00	0.40			
70	C	717724.39	748181.35	6.00	283.00	5.00	0.00	0.40			
71	A	717802.04	748208.30	6.00	164.00	5.00	0.00	0.40			
72	G	717793.69	748181.49	6.00	159.00	5.00	0.00	0.40			
73	I	717777.51	748164.81	6.00	5.00	5.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
74	G	717794.43	748160.69	5.00	105.00	0.00	0.00	0.40			
75	I	717769.41	748239.44	6.00	258.00	5.00	0.00	0.40			
76	A	717811.14	748228.43	6.00	255.00	5.00	0.00	0.40			
77	A	717811.86	748237.00	6.00	158.00	5.00	0.00	0.40			
78	D	717757.93	748215.11	5.00	329.00	0.00	0.00	0.40			
79	D	717757.58	748163.45	5.00	357.00	0.00	0.00	0.40			
80	D	717761.79	748136.74	5.00	19.00	0.00	0.00	0.40			
81	E	717819.64	748185.92	5.00	159.00	0.00	0.00	0.40			
82	A	717822.03	748202.82	6.00	70.00	5.00	0.00	0.40			
83	A	717845.07	748217.82	6.00	250.00	5.00	0.00	0.40			
84	A	717854.22	748194.09	6.00	65.00	5.00	0.00	0.40			
85	A	717876.73	748208.26	6.00	252.00	5.00	0.00	0.40			
86	A	717821.19	748270.42	6.00	158.00	5.00	0.00	0.40			
87	C	717671.92	748257.14	6.00	21.00	5.00	0.00	0.40			
88	C	717651.90	748273.40	6.00	304.00	5.00	0.00	0.40			
89	C	717621.92	748256.11	6.00	302.00	5.00	0.00	0.40			
90	C	717594.78	748240.66	6.00	297.00	5.00	0.00	0.40			
91	C	717678.48	748273.18	6.00	210.00	5.00	0.00	0.40			
92	C	717650.03	748292.90	6.00	25.00	5.00	0.00	0.40			
93	C	717656.17	748311.84	6.00	211.00	5.00	0.00	0.40			
94	E	717679.10	748296.12	5.00	121.00	0.00	0.00	0.40			
95	C	717634.70	748319.40	6.00	25.00	5.00	0.00	0.40			
96	A	717643.08	748354.79	6.00	302.00	5.00	0.00	0.40			
97	A	717644.50	748333.52	6.00	117.00	5.00	0.00	0.40			
98	A	717613.11	748337.43	6.00	295.00	5.00	0.00	0.40			
99	A	717602.98	748314.68	6.00	128.00	5.00	0.00	0.40			
100	A	717566.03	748310.81	6.00	301.00	5.00	0.00	0.40			
101	A	717553.25	748285.84	6.00	118.00	5.00	0.00	0.40			
102	E	717754.24	748263.41	5.00	171.00	0.00	0.00	0.40			
103	G	717807.99	748163.53	6.00	108.00	5.00	0.00	0.40			
104	D	717772.45	748102.78	5.00	16.00	0.00	0.00	0.40			
105	H	717745.07	748280.64	5.00	266.00	0.00	0.00	0.40			
106	E	717716.95	748283.47	5.00	265.00	0.00	0.00	0.40			
107	E	717715.54	748268.59	5.00	173.00	0.00	0.00	0.40			
108	D	717814.70	748146.23	5.00	16.00	0.00	0.00	0.40			
109	E	717815.09	748120.99	6.00	105.00	5.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
110	D	717781.45	748217.01	5.00	72.00	0.00	0.00	0.40			
111	D	717754.56	748191.19	5.00	0.00	0.00	0.00	0.40			
112	E	717605.65	748365.63	5.00	207.00	0.00	0.00	0.40			
113	E	717583.27	748355.72	5.00	302.00	0.00	0.00	0.40			
114	H	717557.41	748347.09	5.00	73.00	0.00	0.00	0.40			
115	E	717567.03	748326.56	5.00	202.00	0.00	0.00	0.40			
116	E	717530.99	748352.30	5.00	115.00	0.00	0.00	0.40			
117	E	717541.89	748358.37	5.00	257.00	0.00	0.00	0.40			
118	E	717533.73	748325.08	5.00	205.00	0.00	0.00	0.40			
119	E	717517.18	748356.81	5.00	19.00	0.00	0.00	0.40			
120	E	717561.91	748270.55	5.00	214.00	0.00	0.00	0.40			
121	E	717575.89	748243.72	5.00	202.00	0.00	0.00	0.40			
122	E	717599.83	748192.41	5.00	210.00	0.00	0.00	0.40			
123	E	717615.91	748158.67	5.00	198.00	0.00	0.00	0.40			
124	E	717630.94	748128.01	5.00	205.00	0.00	0.00	0.40			
125	E	717643.39	748102.30	5.00	207.00	0.00	0.00	0.40			
126	E	717661.29	748060.55	5.00	205.00	0.00	0.00	0.40			
127	E	717680.52	748002.72	5.00	200.00	0.00	0.00	0.40			
128	F	717719.88	747961.76	10.00	269.00	0.00	0.00	0.50			
129	F	717759.84	747958.07	10.00	266.00	0.00	0.00	0.50			
130	F	717799.60	747954.28	10.00	265.00	0.00	0.00	0.50			
131	F	717833.65	747950.91	10.00	267.00	0.00	0.00	0.50			
132	F	717862.43	747937.83	10.00	88.00	0.00	0.00	0.50			
133	B	717723.94	748023.31	5.00	104.00	0.00	0.00	0.40			
134	E	717841.71	748264.60	5.00	346.00	0.00	0.00	0.40			
135	E	717851.00	748257.84	5.00	256.00	0.00	0.00	0.40			
136	E	717833.80	748237.92	5.00	338.00	0.00	0.00	0.40			
137	E	717886.68	748222.55	5.00	157.00	0.00	0.00	0.40			
138	E	717884.93	748239.50	5.00	166.00	0.00	0.00	0.40			
139	E	717546.70	748300.27	5.00	219.00	0.00	0.00	0.40			
140	D	717604.76	748381.44	5.00	124.00	0.00	0.00	0.40			
141	H	717745.07	748281.03	5.00	85.00	0.00	0.00	0.40			
142	E	717874.13	748251.07	5.00	256.00	0.00	0.00	0.40			

Horizontal Illuminance (lux)

Grid 1



Results

Eav	5.38
Emin	1.07
Emax	40.76
Emin/Emax	0.03
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 2

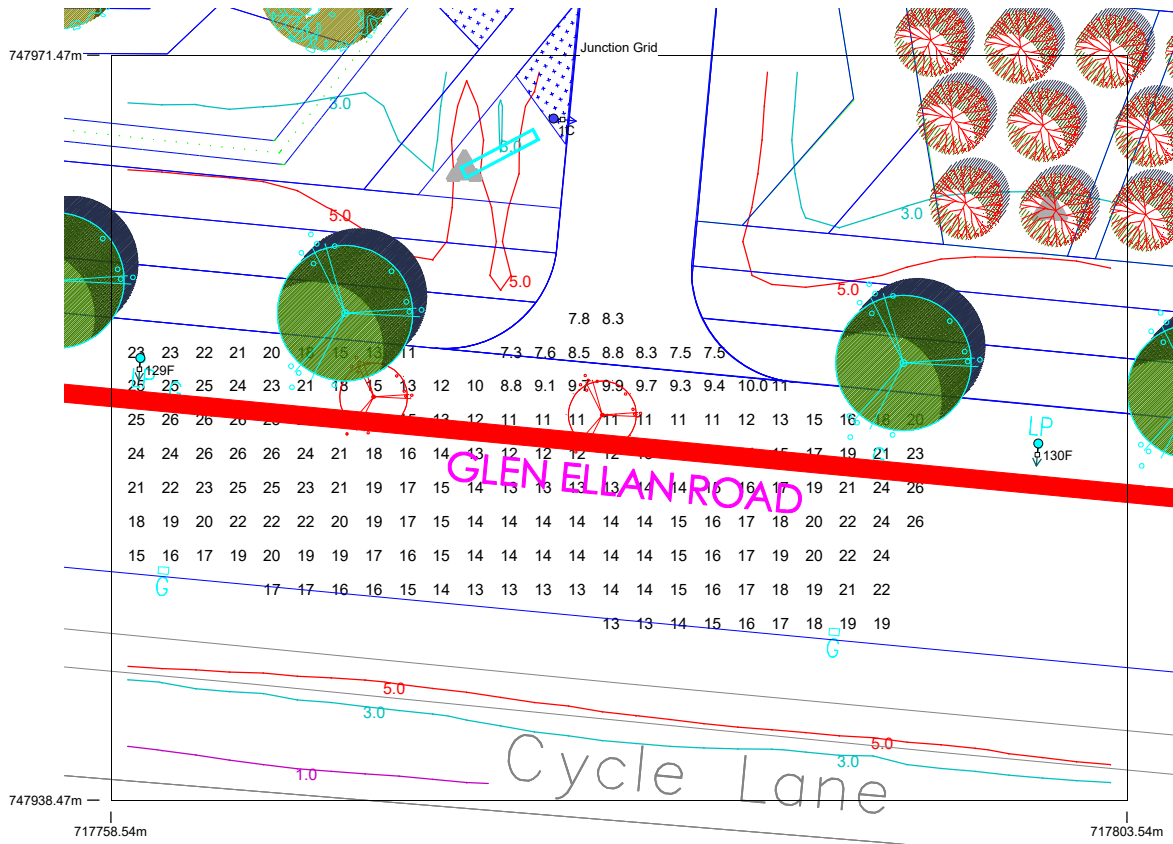


Results

Eav	5.34
Emin	1.06
Emax	24.10
Emin/Emax	0.04
Emin/Eav	0.20

Horizontal Illuminance (lux)

Junction Grid

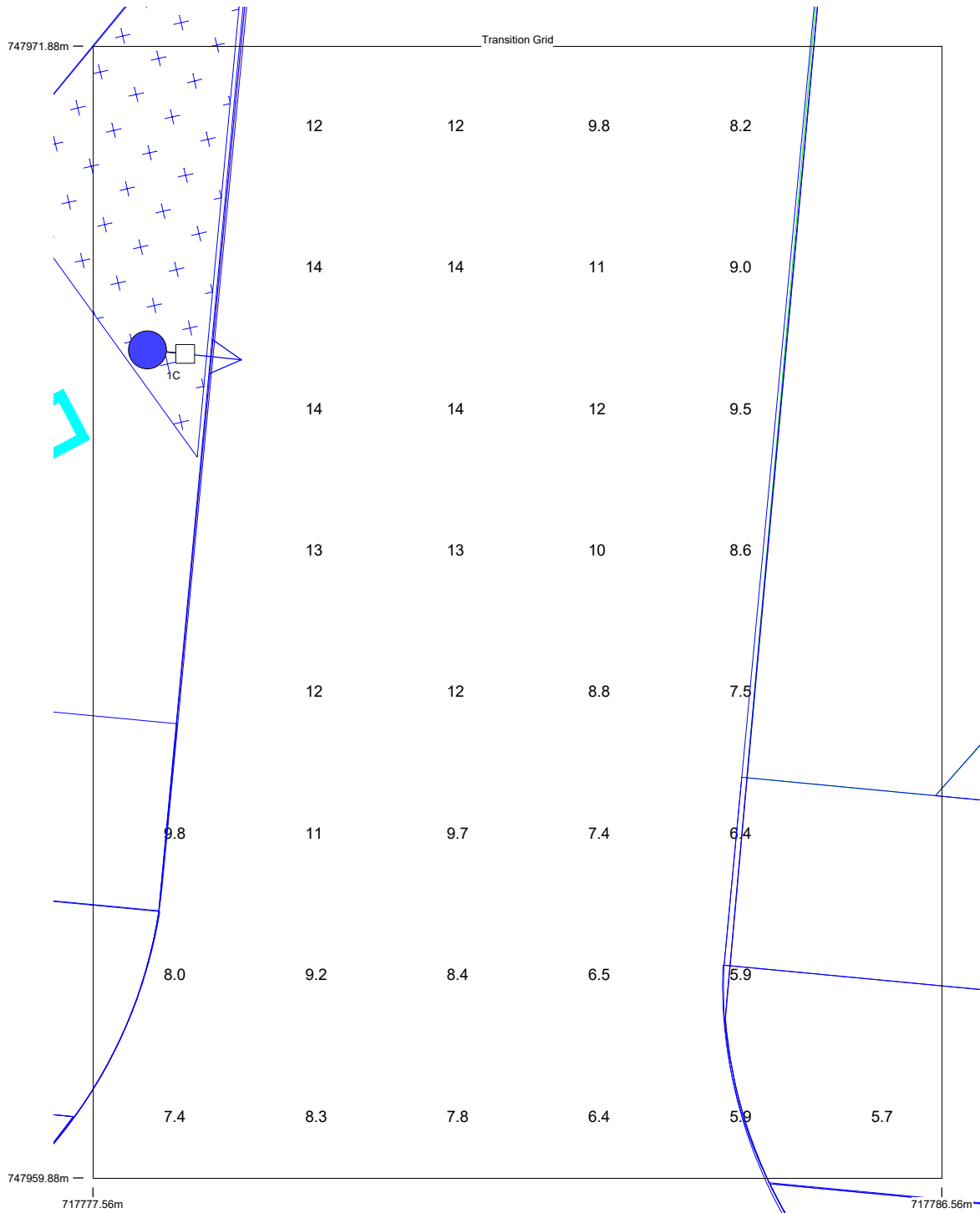


Results

Eav	16.63
Emin	7.26
Emax	26.42
Emin/Emax	0.27
Emin/Eav	0.44

Horizontal Illuminance (lux)

Transition Grid

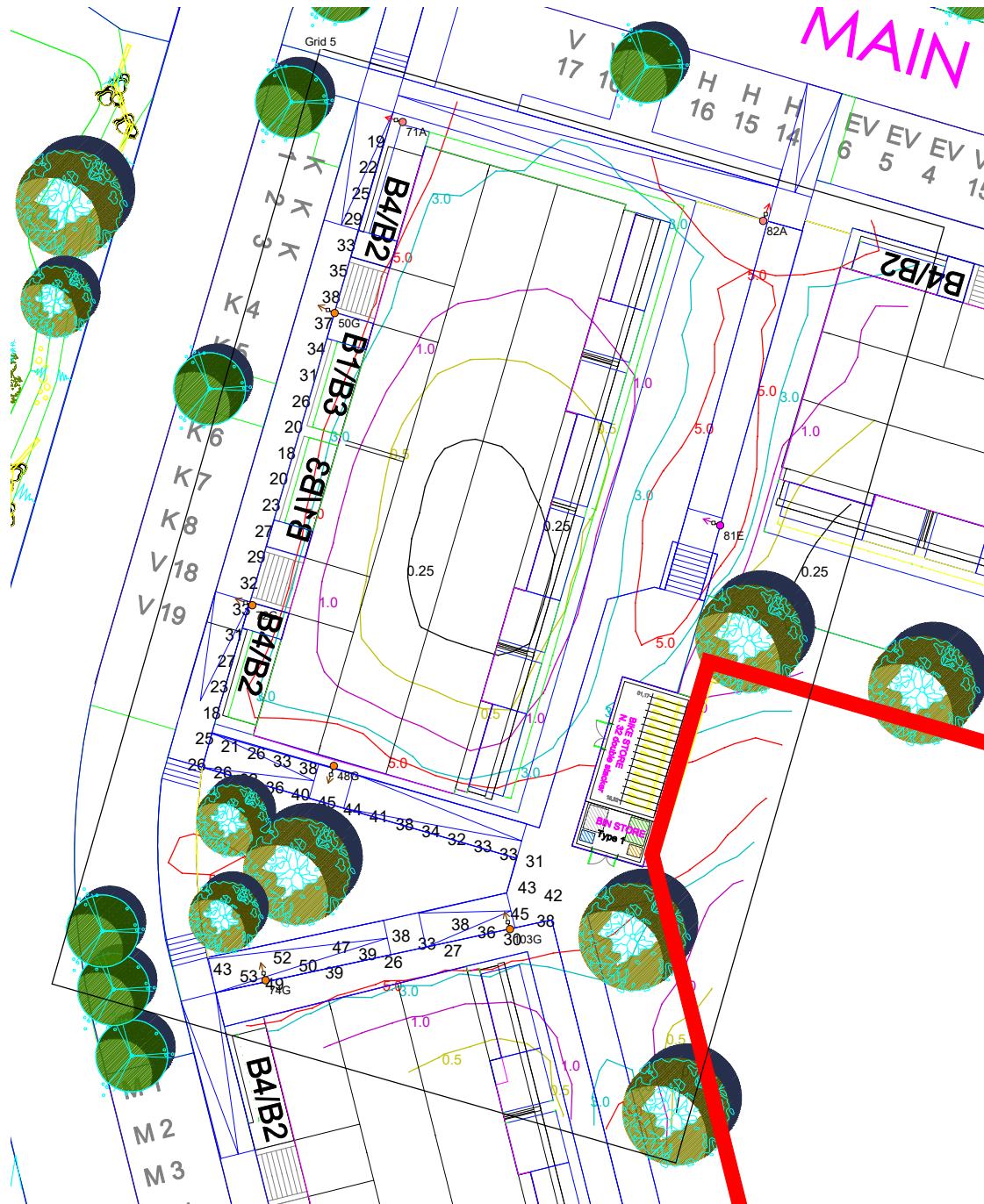


Results

Eav	9.67
Emin	5.75
Emax	14.33
Emin/Emax	0.40
Emin/Eav	0.59

Horizontal Illuminance (lux)

Grid 5



Results

Eav	33.24
Emin	18.21
Emax	52.56
Emin/Emax	0.35
Emin/Eav	0.55