

DATE: 12 April 2024

DESIGNER: Alex Naper

PROJECT No: SES 06624

PROJECT NAME: Mooretown Housing Development- Waterman Moylan



Residential area designed in accordance with EN13201-2:2015 Category P4.

Spine Road designed in accordance with EN13201-2:2015 Category P2.

MF derived from: 0.92 x 0.91 x 0.99 (LMF (Low pollution environment & 72 month cleaning cycle) x LLMF x LSF)
LLMF & LSF values @ 100,000 hours & 25 degrees C Ta.

Outdoor Lighting Report

PREPARED BY: Sabre Electrical Services Ltd.
Unit 11,
Bellview Industrial Estate,
Tolka Valley Road,
Dublin 11
D11 VN59
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	716448.80	747919.33	209.38	291.00	1.50	1.50
2	Grid 2	716606.08	747994.51	175.00	291.00	1.50	1.50
3	Grid 3	716764.62	748069.60	175.00	291.00	1.50	1.50
4	Grid 4	716676.46	747881.35	42.00	36.00	1.50	1.50
5	Grid 5	716353.94	747550.96	323.74	84.00	1.50	1.50
6	Grid 6	716698.05	747649.58	207.01	84.00	1.50	1.50
7	Grid 7	716759.45	747861.32	96.00	42.00	1.50	1.50

Luminaires

Luminaire A Data



Supplier	C U Phosco
Type	E950-28-P4A-730-C600-16W
Lamp(s)	730N
Lamp Flux (klm)	2.25
File Name	E950-28-P4A-730-C0600-16W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	2

Luminaire B Data



Supplier	C U Phosco
Type	E950-28-R3A-730-C300-9W
Lamp(s)	730N
Lamp Flux (klm)	1.21
File Name	E950-28-R3A-730-C0300-9W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	716.7, 30.6, 0.3
No. in Project	43

Luminaire C Data



Supplier	Philips
Type	BGP293 DW50
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	12.50
File Name	LumiStreet Gen2 Medium_BGP293_DW50_12500_80LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	609.4, 39.0, 0.0
No. in Project	24

Luminaire D Data



Supplier	C U Phosco
Type	E950-28-F2A-730-C600-16W
Lamp(s)	730N
Lamp Flux (klm)	2.28
File Name	E950-28-F2A-730-C0600-16W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	623.6, 113.9, 0.3
No. in Project	66

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	C	716372.69	747595.30	8.00	87.00	0.00	0.00	0.50			
2	C	716394.64	747615.05	8.00	262.00	0.00	0.00	0.50			
3	C	716428.61	747593.29	8.00	110.00	0.00	0.00	0.50			
4	C	716445.68	747627.72	8.00	299.00	0.00	0.00	0.50			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
5	C	716480.05	747623.18	8.00	124.00	0.00	0.00	0.50			
6	C	716490.95	747655.11	8.00	296.00	0.00	0.00	0.50			
7	C	716523.68	747649.26	8.00	124.00	0.00	0.00	0.50			
8	C	716539.00	747684.04	8.00	304.00	0.00	0.00	0.50			
9	C	716573.86	747670.09	8.00	95.00	0.00	0.00	0.50			
10	C	716595.53	747695.35	8.00	278.00	0.00	0.00	0.50			
11	C	716337.45	747616.79	8.00	267.00	0.00	0.00	0.50			
12	C	716629.03	747678.49	8.00	106.00	0.00	0.00	0.50			
13	C	716639.09	747714.40	8.00	327.00	0.00	0.00	0.50			
14	C	716669.20	747723.54	8.00	145.00	0.00	0.00	0.50			
15	C	716666.53	747763.69	8.00	328.00	0.00	0.00	0.50			
16	C	716698.44	747776.56	8.00	154.00	0.00	0.00	0.50			
17	C	716691.77	747809.91	8.00	329.00	0.00	0.00	0.50			
18	C	716725.59	747825.52	8.00	147.00	0.00	0.00	0.50			
19	C	716718.38	747858.07	8.00	336.00	0.00	0.00	0.50			
20	C	716740.91	747875.59	8.00	178.00	0.00	0.00	0.50			
21	C	716719.09	747900.70	8.00	354.00	0.00	0.00	0.50			
22	C	716740.75	747924.75	8.00	175.00	0.00	0.00	0.50			
23	C	716725.90	747943.86	8.00	332.00	0.00	0.00	0.50			
24	C	716751.17	747947.88	8.00	153.00	0.00	0.00	0.50			
25	B	716413.60	747620.77	5.00	271.00	0.00	0.00	0.50			
26	B	716385.59	747630.93	5.00	180.00	0.00	0.00	0.50			
27	B	716385.35	747658.93	5.00	180.00	0.00	0.00	0.50			
28	B	716389.63	747703.15	5.00	180.00	0.00	0.00	0.50			
29	D	716461.02	747647.76	6.00	30.00	0.00	0.00	0.40			
30	D	716472.50	747668.83	6.00	214.00	0.00	0.00	0.40			
31	D	716441.75	747660.79	6.00	91.00	0.00	0.00	0.40			
32	D	716438.14	747681.83	6.00	271.00	0.00	0.00	0.40			
33	D	716410.55	747681.29	6.00	276.00	0.00	0.00	0.40			
34	D	716418.80	747660.52	6.00	90.00	0.00	0.00	0.40			
35	D	716397.71	747660.07	6.00	91.00	0.00	0.00	0.40			
36	D	716381.79	747675.19	6.00	2.00	0.00	0.00	0.40			
37	D	716465.01	747684.94	6.00	174.00	0.00	0.00	0.40			
38	D	716447.42	747700.30	6.00	357.00	0.00	0.00	0.40			
39	D	716464.15	747722.09	6.00	178.00	0.00	0.00	0.40			
40	D	716446.59	747723.95	6.00	88.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
41	D	716477.16	747704.60	6.00	87.00	0.00	0.00	0.40			
42	D	716490.21	747722.32	6.00	266.00	0.00	0.00	0.40			
43	D	716507.14	747705.01	6.00	95.00	0.00	0.00	0.40			
44	D	716434.76	747741.44	6.00	272.00	0.00	0.00	0.40			
45	D	716519.04	747722.96	6.00	269.00	0.00	0.00	0.40			
46	D	716416.29	747723.12	6.00	85.00	0.00	0.00	0.40			
47	D	716407.32	747740.92	6.00	270.00	0.00	0.00	0.40			
48	D	716385.53	747731.09	6.00	352.00	0.00	0.00	0.40			
49	B	716434.87	747750.83	5.00	300.00	0.00	0.00	0.40			
50	D	716463.97	747743.82	6.00	180.00	0.00	0.00	0.40			
51	D	716460.96	747766.50	6.00	302.00	0.00	0.00	0.40			
52	D	716483.09	747755.57	6.00	119.00	0.00	0.00	0.40			
53	D	716484.52	747780.81	6.00	292.00	0.00	0.00	0.40			
54	D	716504.96	747779.98	6.00	213.00	0.00	0.00	0.40			
55	B	716489.96	747790.22	5.00	27.00	0.00	0.00	0.40			
56	D	716438.34	747763.05	6.00	23.00	0.00	0.00	0.40			
57	D	716439.29	747785.56	6.00	182.00	0.00	0.00	0.40			
58	D	716424.02	747799.47	6.00	353.00	0.00	0.00	0.40			
59	B	716447.98	747810.75	5.00	92.00	0.00	0.00	0.40			
60	B	716472.28	747810.93	5.00	90.00	0.00	0.00	0.40			
61	D	716413.86	747807.68	6.00	93.00	0.00	0.00	0.40			
62	D	716415.27	747825.24	5.00	269.00	0.00	0.00	0.40			
63	D	716390.24	747814.90	5.00	355.00	0.00	0.00	0.40			
64	D	716447.86	747820.98	5.00	123.00	0.00	0.00	0.40			
65	D	716437.98	747836.48	6.00	292.00	0.00	0.00	0.40			
66	B	716394.92	747759.62	5.00	180.00	0.00	0.00	0.40			
67	B	716394.51	747787.68	5.00	182.00	0.00	0.00	0.40			
68	B	716411.85	747787.89	5.00	93.00	0.00	0.00	0.40			
69	B	716398.95	747835.60	5.00	180.00	0.00	0.00	0.40			
70	B	716398.48	747863.49	5.00	180.00	0.00	0.00	0.40			
71	B	716411.70	747873.81	5.00	92.00	0.00	0.00	0.40			
72	B	716431.65	747871.45	5.00	33.00	0.00	0.00	0.40			
73	B	716446.44	747846.68	5.00	28.00	0.00	0.00	0.40			
74	B	716463.01	747826.12	5.00	208.00	0.00	0.00	0.40			
75	B	716479.96	747807.18	5.00	39.00	0.00	0.00	0.40			
76	B	716514.56	747756.93	5.00	28.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
77	B	716524.24	747733.93	5.00	2.00	0.00	0.00	0.40			
78	B	716524.88	747690.14	5.00	5.00	0.00	0.00	0.40			
79	B	716530.38	747712.63	5.00	177.00	0.00	0.00	0.40			
80	D	716641.35	747757.89	6.00	63.00	0.00	0.00	0.40			
81	D	716634.51	747778.88	6.00	245.00	0.00	0.00	0.40			
82	D	716612.87	747752.72	6.00	143.00	0.00	0.00	0.40			
83	D	716599.58	747770.72	6.00	321.00	0.00	0.00	0.40			
84	D	716583.67	747749.24	6.00	289.00	0.00	0.00	0.40			
85	D	716594.90	747731.45	6.00	122.00	0.00	0.00	0.40			
86	D	716593.08	747784.67	6.00	58.00	0.00	0.00	0.40			
87	D	716584.99	747806.17	6.00	250.00	0.00	0.00	0.40			
88	D	716560.49	747791.73	6.00	121.00	0.00	0.00	0.40			
89	D	716548.12	747808.67	6.00	291.00	0.00	0.00	0.40			
90	D	716527.83	747789.10	6.00	31.00	0.00	0.00	0.40			
91	D	716557.50	747817.84	6.00	358.00	0.00	0.00	0.40			
92	D	716578.73	747816.87	6.00	184.00	0.00	0.00	0.40			
93	D	716578.41	747836.06	6.00	183.00	0.00	0.00	0.40			
94	D	716557.12	747836.22	6.00	353.00	0.00	0.00	0.40			
95	D	716612.62	747794.55	6.00	321.00	0.00	0.00	0.40			
96	D	716635.70	747794.46	6.00	144.00	0.00	0.00	0.40			
97	D	716624.31	747815.69	6.00	321.00	0.00	0.00	0.40			
98	D	716648.22	747816.55	6.00	153.00	0.00	0.00	0.40			
99	D	716644.25	747835.42	6.00	242.00	0.00	0.00	0.40			
100	B	716571.29	747729.36	5.00	32.00	0.00	0.00	0.40			
101	B	716590.61	747712.25	5.00	213.00	0.00	0.00	0.40			
102	B	716560.72	747757.51	5.00	209.00	0.00	0.00	0.40			
103	B	716545.65	747775.64	5.00	35.00	0.00	0.00	0.40			
104	B	716517.71	747813.20	5.00	213.00	0.00	0.00	0.40			
105	B	716504.38	747834.81	5.00	213.00	0.00	0.00	0.40			
106	B	716511.58	747845.57	5.00	294.00	0.00	0.00	0.40			
107	B	716539.98	747850.53	5.00	276.00	0.00	0.00	0.40			
108	B	716562.83	747850.88	5.00	276.00	0.00	0.00	0.40			
109	B	716593.10	747845.96	5.00	87.00	0.00	0.00	0.40			
110	B	716618.86	747844.44	5.00	67.00	0.00	0.00	0.40			
111	B	716669.95	747812.18	5.00	64.00	0.00	0.00	0.40			
112	D	716755.72	747873.26	6.00	274.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
113	D	716789.64	747871.20	6.00	243.00	0.00	0.00	0.40			
114	D	716766.18	747856.22	6.00	94.00	0.00	0.00	0.40			
115	D	716790.15	747847.01	6.00	68.00	0.00	0.00	0.40			
116	D	716799.88	747884.51	6.00	332.00	0.00	0.00	0.40			
117	D	716814.67	747897.26	6.00	235.00	0.00	0.00	0.40			
118	B	716791.30	747905.40	5.00	59.00	0.00	0.00	0.40			
119	B	716772.31	747916.02	5.00	59.00	0.00	0.00	0.40			
120	B	716754.24	747919.38	5.00	94.00	0.00	0.00	0.40			
121	B	716792.75	747837.50	5.00	323.00	0.00	0.00	0.40			
122	B	716780.89	747816.39	5.00	328.00	0.00	0.00	0.40			
123	B	716765.97	747815.82	5.00	242.00	0.00	0.00	0.40			
124	B	716752.13	747830.36	5.00	177.00	0.00	0.00	0.40			
125	B	716751.75	747852.93	5.00	177.00	0.00	0.00	0.40			
126	D	716679.06	747976.44	6.00	329.00	0.00	0.00	0.40			
127	D	716700.68	747953.28	6.00	93.00	0.00	0.00	0.40			
128	D	716676.38	747960.06	6.00	1.00	0.00	0.00	0.40			
129	D	716730.11	747962.01	6.00	254.00	0.00	0.00	0.40			
130	D	716704.35	747975.08	6.00	245.00	0.00	0.00	0.40			
131	B	716789.86	747883.39	5.00	322.00	0.00	0.00	0.40			
132	D	716704.10	747897.78	6.00	3.00	0.00	0.00	0.40			
133	D	716687.39	747898.26	6.00	3.00	0.00	0.00	0.40			
134	A	716704.70	747920.91	6.00	274.00	0.00	0.00	0.40			
135	A	716677.54	747923.28	6.00	240.00	0.00	0.00	0.40			

Horizontal Illuminance (lux)

Grid 1

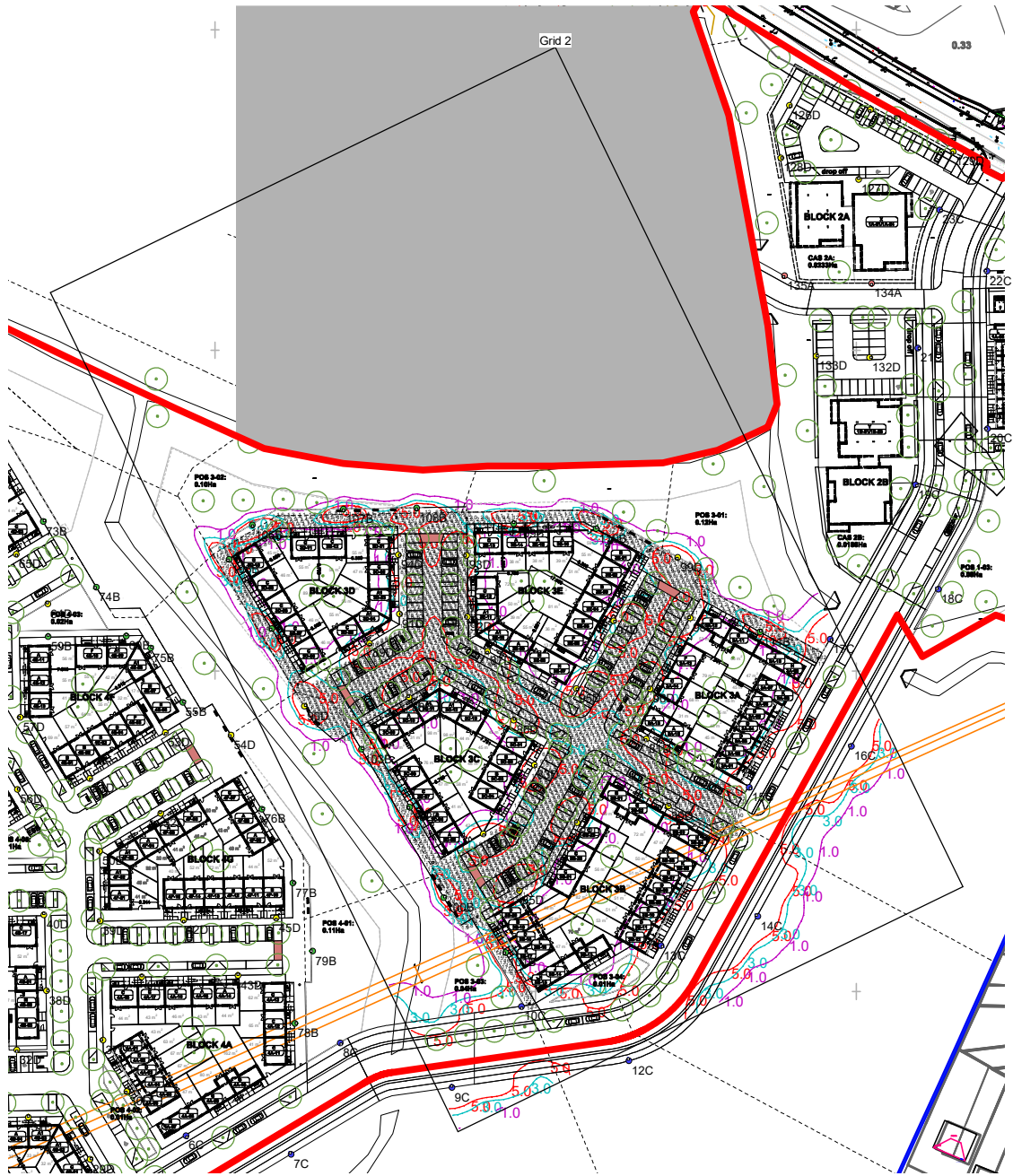


Results

Eav	5.53
Emin	1.08
Emax	19.08
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 2

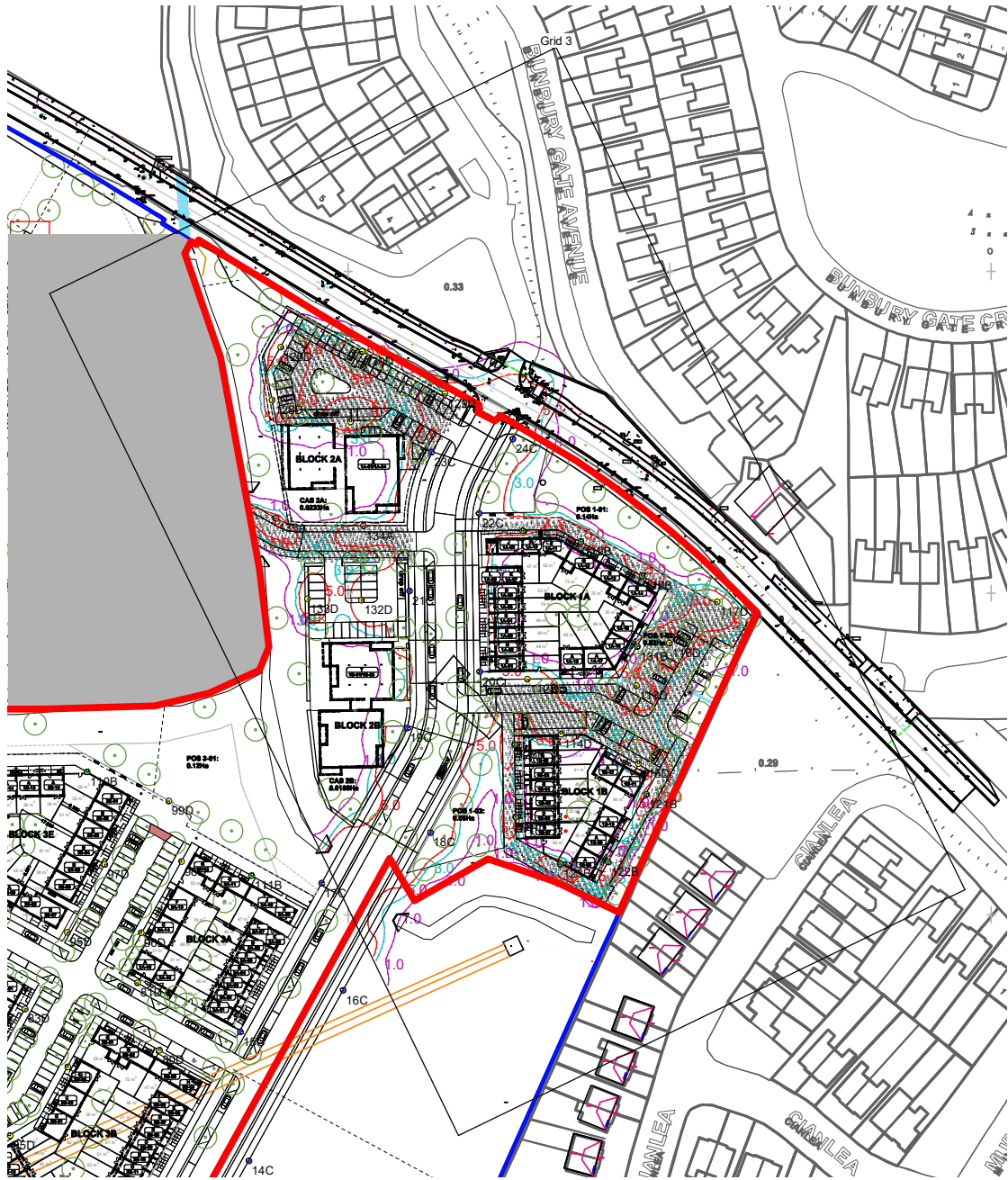


Results

Eav	5.37
Emin	1.05
Emax	18.83
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 3

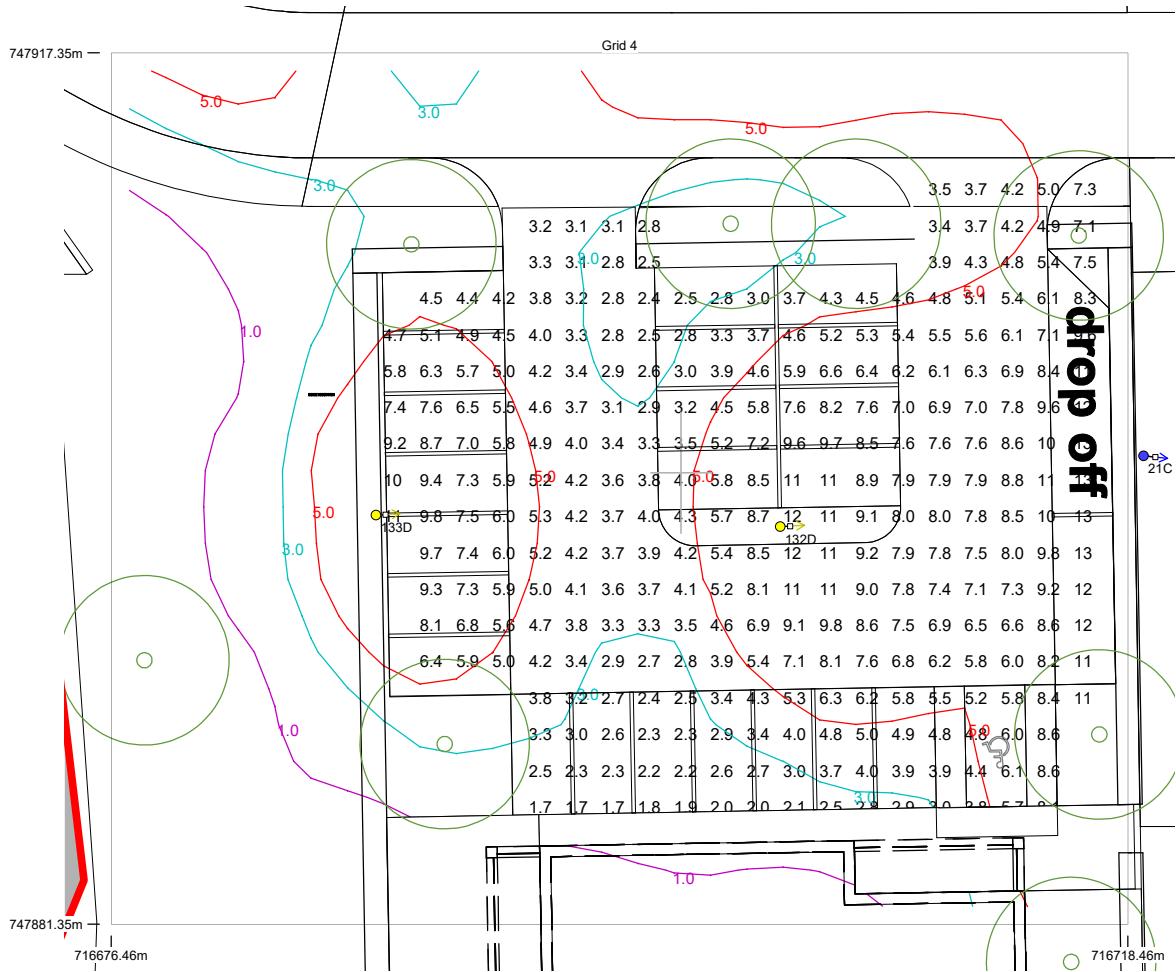


Results

Eav	5.91
Emin	1.17
Emax	17.65
Emin/Emax	0.07
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 4

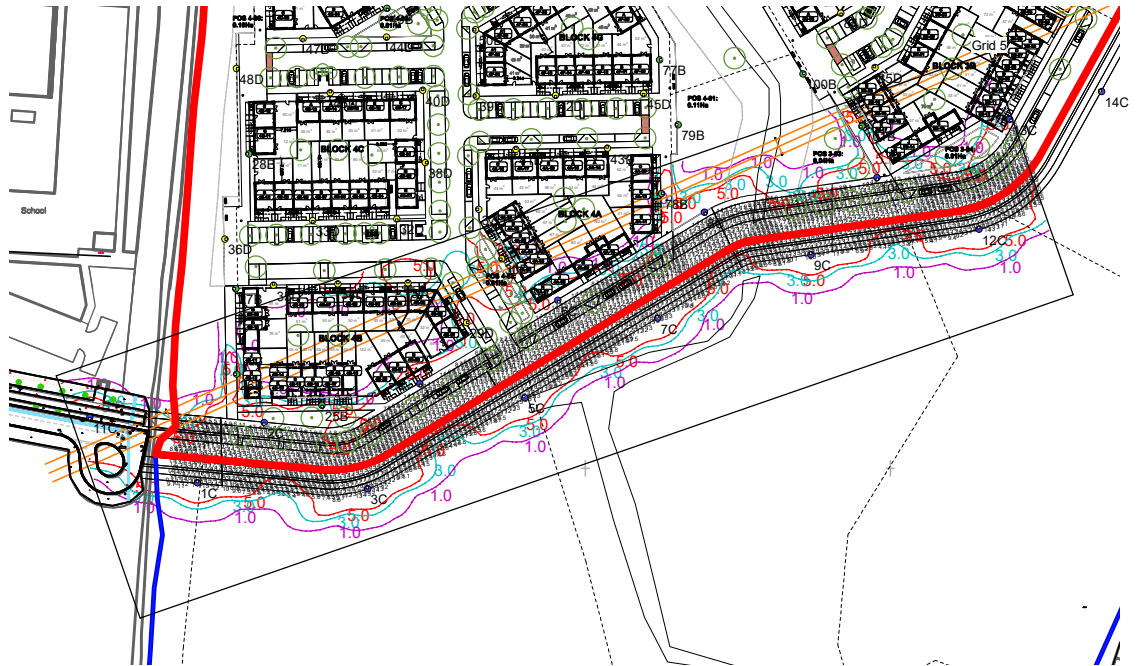


Results

Eav	5.79
Emin	1.66
Emax	13.37
Emin/Emax	0.12
Emin/Eav	0.29

Horizontal Illuminance (lux)

Grid 5

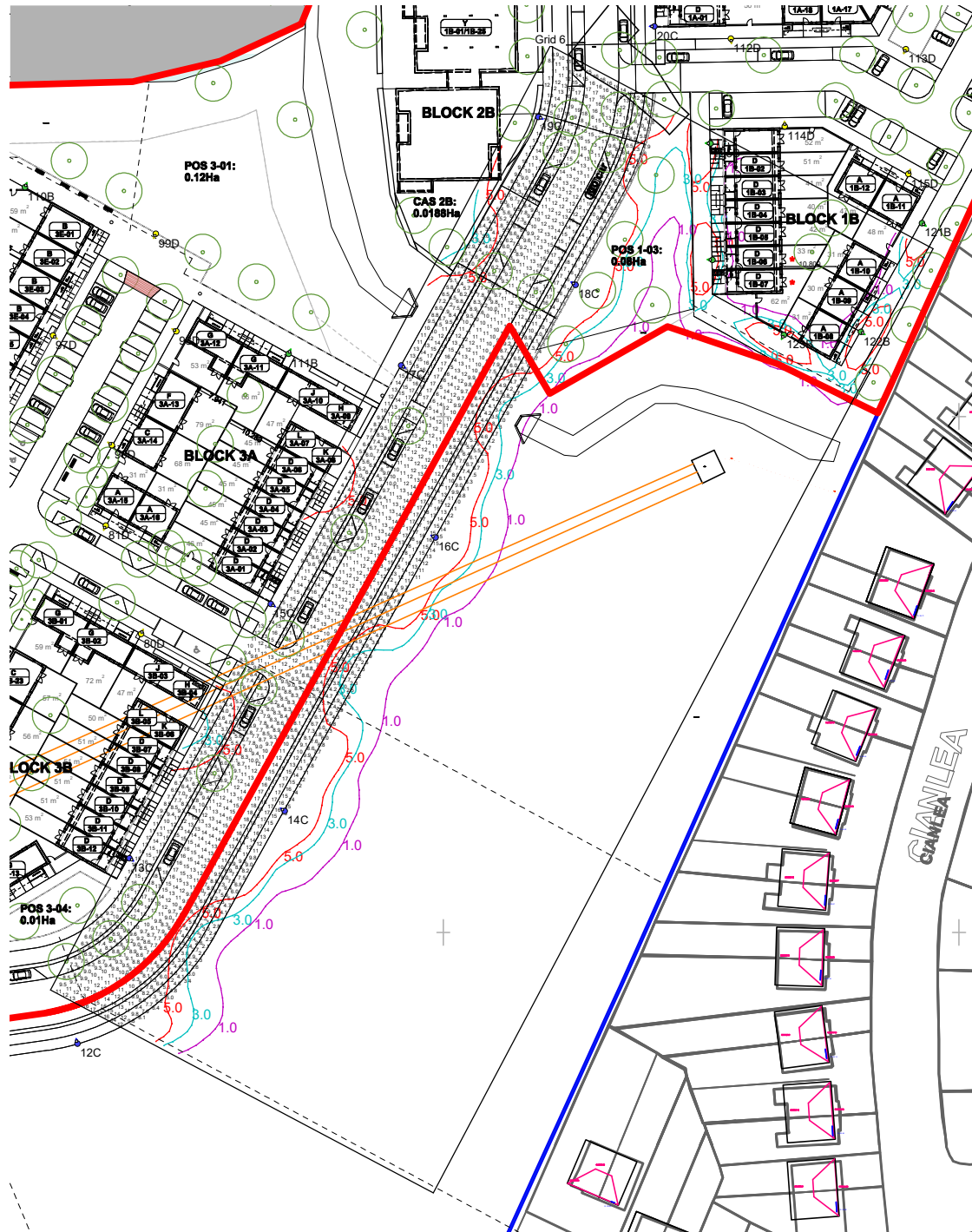


Results

Eav	10.33
Emin	2.35
Emax	18.40
Emin/Emax	0.13
Emin/Eav	0.23

Horizontal Illuminance (lux)

Grid 6

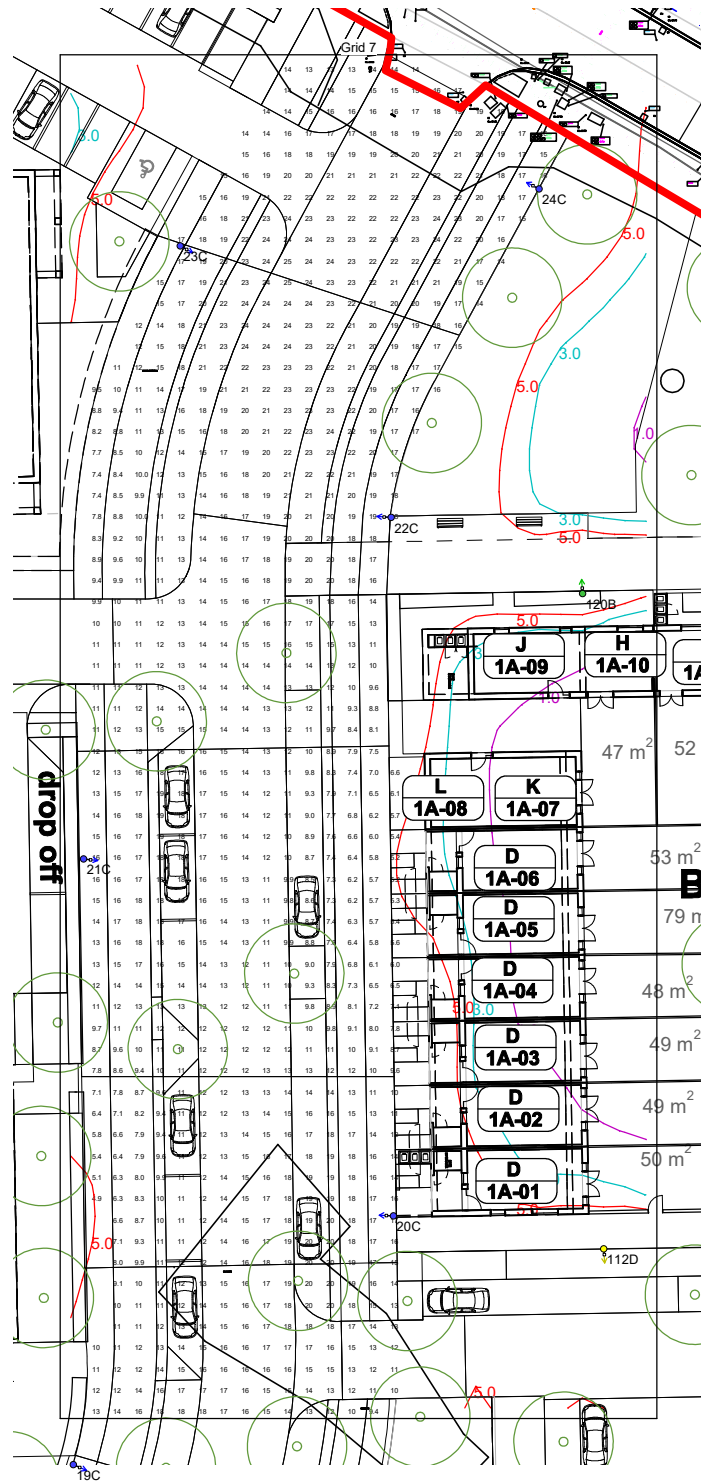


Results

Eav	10.45
Emin	2.08
Emax	18.82
Emin/Emax	0.11
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 7



Results

Eav	14.92
Emin	4.88
Emax	24.62
Emin/Emax	0.20
Emin/Eav	0.33