

DATE: 29 March 2022

DESIGNER: Alex Naper

PROJECT No: SES 09021 Rev D

PROJECT NAME: Great Connell SHD Newbridge - Residential Area - Aston Limited



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

Subsidiary Road designed in accordance with EN13201-2:2015 Category P3.

Rev A: New site layout.

Rev B: Updated as per comments.

Rev C: Updated as per comments.

Rev D: Client name updated.

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
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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	681600.49	714424.79	279.91	373.23	1.50	1.50
2	Grid 2	681399.81	714370.34	202.01	277.00	1.50	1.50
3	Grid 3	681550.12	714451.65	69.00	311.00	1.50	1.50
4	Grid 4	681204.40	714579.40	216.00	105.00	1.50	1.50
5	Grid 5	681208.16	714496.65	280.05	268.00	1.50	1.50
6	Grid 6	681404.21	714741.57	265.00	99.00	1.50	1.50

Luminaires

Luminaire A 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	11

Luminaire B 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	128



Luminaire C 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	79

Luminaire D Data

Supplier	C U Phosco
Type	P863-128-R2E-730-W3-325-43W
Lamp(s)	730SS
Lamp Flux (klm)	6.03
File Name	P863-128-R2E-730-W3-325-43W.ies
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	463.7, 84.3, 0.0
No. in Project	9

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	681479.74	714683.68	6.00	298.00	0.00	0.00	0.40			
2	A	681494.11	714668.06	6.00	117.00	0.00	0.00	0.40			
3	A	681500.28	714694.46	6.00	298.00	0.00	0.00	0.40			
4	A	681511.60	714677.33	6.00	121.00	0.00	0.00	0.40			
5	A	681534.80	714689.74	6.00	119.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
6	A	681517.67	714703.53	6.00	298.00	0.00	0.00	0.40			
7	B	681520.82	714721.84	6.00	34.00	0.00	0.00	0.40			
8	B	681546.87	714706.65	6.00	208.00	0.00	0.00	0.40			
9	B	681525.48	714744.27	6.00	204.00	0.00	0.00	0.40			
10	C	681544.45	714727.28	5.00	114.00	0.00	0.00	0.40			
11	C	681566.29	714738.84	5.00	117.00	0.00	0.00	0.40			
12	C	681591.76	714750.09	5.00	213.00	0.00	0.00	0.40			
13	B	681511.41	714764.55	6.00	303.00	0.00	0.00	0.40			
14	B	681506.15	714744.74	6.00	110.00	0.00	0.00	0.40			
15	B	681482.62	714729.26	6.00	115.00	0.00	0.00	0.40			
16	B	681461.83	714744.52	6.00	204.00	0.00	0.00	0.40			
17	B	681455.19	714717.38	6.00	112.00	0.00	0.00	0.40			
18	C	681486.57	714760.22	5.00	27.00	0.00	0.00	0.40			
19	C	681469.16	714762.32	5.00	115.00	0.00	0.00	0.40			
20	C	681498.88	714778.39	5.00	119.00	0.00	0.00	0.40			
21	C	681521.29	714790.37	5.00	115.00	0.00	0.00	0.40			
22	C	681543.91	714802.31	5.00	115.00	0.00	0.00	0.40			
23	C	681542.81	714791.28	5.00	23.00	0.00	0.00	0.40			
24	C	681564.06	714812.89	5.00	115.00	0.00	0.00	0.40			
25	C	681586.95	714825.38	5.00	115.00	0.00	0.00	0.40			
26	C	681609.50	714837.44	5.00	119.00	0.00	0.00	0.40			
27	C	681631.44	714848.82	5.00	115.00	0.00	0.00	0.40			
28	C	681642.69	714837.56	5.00	31.00	0.00	0.00	0.40			
29	C	681654.67	714815.35	5.00	31.00	0.00	0.00	0.40			
30	C	681665.99	714792.18	5.00	31.00	0.00	0.00	0.40			
31	C	681679.40	714770.10	5.00	32.00	0.00	0.00	0.40			
32	B	681535.12	714760.56	6.00	114.00	0.00	0.00	0.40			
33	B	681546.07	714784.13	6.00	292.00	0.00	0.00	0.40			
34	B	681571.58	714779.99	6.00	122.00	0.00	0.00	0.40			
35	B	681581.71	714802.16	6.00	291.00	0.00	0.00	0.40			
36	C	681579.95	714772.08	5.00	209.00	0.00	0.00	0.40			
37	B	681616.77	714793.50	6.00	140.00	0.00	0.00	0.40			
38	B	681601.48	714815.32	6.00	25.00	0.00	0.00	0.40			
39	C	681712.17	714738.35	5.00	32.00	0.00	0.00	0.40			
40	B	681610.60	714768.27	6.00	34.00	0.00	0.00	0.40			
41	B	681622.12	714816.24	6.00	208.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
42	B	681630.68	714750.23	6.00	34.00	0.00	0.00	0.40			
43	B	681656.99	714769.42	6.00	298.00	0.00	0.00	0.40			
44	C	681669.87	714746.31	5.00	206.00	0.00	0.00	0.40			
45	C	681685.94	714726.28	5.00	208.00	0.00	0.00	0.40			
46	C	681690.89	714738.59	5.00	117.00	0.00	0.00	0.40			
47	B	681675.72	714682.66	6.00	117.00	0.00	0.00	0.40			
48	B	681689.61	714707.14	6.00	293.00	0.00	0.00	0.40			
49	C	681727.61	714689.64	5.00	2.00	0.00	0.00	0.40			
50	C	681713.53	714718.11	5.00	24.00	0.00	0.00	0.40			
51	C	681687.77	714755.78	5.00	24.00	0.00	0.00	0.40			
52	B	681559.22	714712.56	6.00	300.00	0.00	0.00	0.40			
53	B	681574.02	714703.46	6.00	125.00	0.00	0.00	0.40			
54	B	681549.96	714687.88	6.00	207.00	0.00	0.00	0.40			
55	B	681595.69	714731.72	6.00	295.00	0.00	0.00	0.40			
56	B	681607.84	714721.43	6.00	123.00	0.00	0.00	0.40			
57	B	681635.42	714736.04	6.00	117.00	0.00	0.00	0.40			
58	C	681613.15	714754.27	5.00	24.00	0.00	0.00	0.40			
59	B	681594.84	714792.52	6.00	115.00	0.00	0.00	0.40			
60	B	681644.63	714721.37	6.00	32.00	0.00	0.00	0.40			
61	B	681526.39	714868.59	6.00	120.00	0.00	0.00	0.40			
62	B	681711.98	714701.88	6.00	127.00	0.00	0.00	0.40			
63	B	681660.81	714691.52	6.00	35.00	0.00	0.00	0.40			
64	B	681645.59	714666.59	6.00	114.00	0.00	0.00	0.40			
65	B	681614.76	714660.67	6.00	292.00	0.00	0.00	0.40			
66	B	681629.69	714638.21	6.00	214.00	0.00	0.00	0.40			
67	B	681643.64	714612.17	6.00	209.00	0.00	0.00	0.40			
68	B	681658.77	714608.93	6.00	297.00	0.00	0.00	0.40			
69	B	681689.18	714625.05	6.00	297.00	0.00	0.00	0.40			
70	B	681716.08	714635.53	6.00	268.00	0.00	0.00	0.40			
71	B	681640.58	714588.56	6.00	124.00	0.00	0.00	0.40			
72	B	681666.04	714582.63	6.00	207.00	0.00	0.00	0.40			
73	B	681681.12	714553.25	6.00	200.00	0.00	0.00	0.40			
74	A	681561.64	714557.26	6.00	298.00	0.00	0.00	0.40			
75	B	681701.75	714539.02	6.00	287.00	0.00	0.00	0.40			
76	B	681723.76	714535.10	6.00	158.00	0.00	0.00	0.40			
77	B	681672.69	714530.54	6.00	286.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
78	B	681637.67	714520.31	6.00	286.00	0.00	0.00	0.40			
79	B	681601.92	714509.39	6.00	286.00	0.00	0.00	0.40			
80	B	681570.22	714500.01	6.00	286.00	0.00	0.00	0.40			
81	B	681613.93	714585.31	6.00	301.00	0.00	0.00	0.40			
82	B	681584.21	714568.96	6.00	293.00	0.00	0.00	0.40			
83	A	681549.85	714544.54	6.00	39.00	0.00	0.00	0.40			
84	B	681576.97	714629.80	6.00	118.00	0.00	0.00	0.40			
85	B	681591.61	714648.40	6.00	284.00	0.00	0.00	0.40			
86	B	681547.20	714613.72	6.00	116.00	0.00	0.00	0.40			
87	B	681515.04	714608.68	6.00	277.00	0.00	0.00	0.40			
88	B	681561.95	714645.25	6.00	27.00	0.00	0.00	0.40			
89	B	681549.91	714667.33	6.00	22.00	0.00	0.00	0.40			
90	C	681575.29	714537.39	5.00	199.00	0.00	0.00	0.40			
91	B	681480.21	714578.05	6.00	111.00	0.00	0.00	0.40			
92	B	681447.93	714560.79	6.00	117.00	0.00	0.00	0.40			
93	B	681420.10	714535.70	6.00	134.00	0.00	0.00	0.40			
94	B	681436.99	714542.76	6.00	219.00	0.00	0.00	0.40			
95	B	681412.35	714553.56	6.00	54.00	0.00	0.00	0.40			
96	B	681387.85	714516.02	6.00	315.00	0.00	0.00	0.40			
97	B	681377.52	714496.59	6.00	45.00	0.00	0.00	0.40			
98	B	681356.41	714525.50	6.00	233.00	0.00	0.00	0.40			
99	B	681333.14	714545.31	6.00	239.00	0.00	0.00	0.40			
100	C	681327.90	714564.06	5.00	156.00	0.00	0.00	0.40			
101	B	681399.06	714484.81	6.00	222.00	0.00	0.00	0.40			
102	B	681418.50	714457.09	6.00	217.00	0.00	0.00	0.40			
103	B	681442.94	714450.25	6.00	295.00	0.00	0.00	0.40			
104	B	681473.03	714465.83	6.00	289.00	0.00	0.00	0.40			
105	B	681489.09	714465.13	6.00	211.00	0.00	0.00	0.40			
106	B	681473.50	714494.19	6.00	215.00	0.00	0.00	0.40			
107	B	681456.00	714519.81	6.00	223.00	0.00	0.00	0.40			
108	B	681367.44	714586.26	6.00	56.00	0.00	0.00	0.40			
109	B	681389.48	714571.84	6.00	56.00	0.00	0.00	0.40			
110	B	681347.68	714603.50	6.00	326.00	0.00	0.00	0.40			
111	B	681448.50	714681.00	6.00	138.00	0.00	0.00	0.40			
112	C	681438.98	714691.47	5.00	328.00	0.00	0.00	0.40			
113	C	681425.83	714670.44	5.00	320.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
114	B	681421.37	714630.49	6.00	63.00	0.00	0.00	0.40			
115	C	681406.89	714657.56	5.00	241.00	0.00	0.00	0.40			
116	B	681399.55	714644.16	6.00	60.00	0.00	0.00	0.40			
117	B	681449.93	714608.40	6.00	59.00	0.00	0.00	0.40			
118	B	681468.18	714604.09	6.00	199.00	0.00	0.00	0.40			
119	C	681403.05	714676.73	5.00	151.00	0.00	0.00	0.40			
120	C	681416.16	714697.60	5.00	152.00	0.00	0.00	0.40			
121	B	681432.70	714655.13	6.00	138.00	0.00	0.00	0.40			
122	D	681441.84	714720.36	8.00	242.00	0.00	0.00	0.40			
123	D	681467.89	714692.97	8.00	211.00	0.00	0.00	0.40			
124	D	681465.99	714662.39	8.00	30.00	0.00	0.00	0.40			
125	D	681481.95	714633.56	8.00	29.00	0.00	0.00	0.40			
126	D	681491.73	714606.32	8.00	349.00	0.00	0.00	0.40			
127	D	681503.19	714578.96	8.00	204.00	0.00	0.00	0.40			
128	D	681507.53	714546.49	8.00	38.00	0.00	0.00	0.40			
129	D	681527.42	714515.13	8.00	31.00	0.00	0.00	0.40			
130	D	681545.07	714480.28	8.00	18.00	0.00	0.00	0.40			
131	B	681361.23	714671.23	6.00	57.00	0.00	0.00	0.40			
132	B	681336.48	714687.75	6.00	54.00	0.00	0.00	0.40			
133	B	681310.25	714705.51	6.00	54.00	0.00	0.00	0.40			
134	B	681288.91	714723.58	6.00	45.00	0.00	0.00	0.40			
135	B	681307.80	714723.12	6.00	315.00	0.00	0.00	0.40			
136	B	681277.69	714657.36	6.00	240.00	0.00	0.00	0.40			
137	B	681285.30	714700.87	6.00	309.00	0.00	0.00	0.40			
138	B	681256.67	714679.36	6.00	302.00	0.00	0.00	0.40			
139	B	681229.88	714650.40	6.00	23.00	0.00	0.00	0.40			
140	B	681251.07	714633.01	6.00	79.00	0.00	0.00	0.40			
141	B	681275.47	714636.85	6.00	137.00	0.00	0.00	0.40			
142	C	681289.30	714670.94	5.00	153.00	0.00	0.00	0.40			
143	B	681300.17	714643.33	6.00	240.00	0.00	0.00	0.40			
144	B	681320.50	714618.90	6.00	56.00	0.00	0.00	0.40			
145	C	681334.62	714642.02	5.00	317.00	0.00	0.00	0.40			
146	B	681317.24	714607.72	6.00	319.00	0.00	0.00	0.40			
147	B	681298.35	714581.63	6.00	306.00	0.00	0.00	0.40			
148	B	681272.65	714575.62	6.00	274.00	0.00	0.00	0.40			
149	B	681245.52	714580.82	6.00	261.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
150	B	681214.14	714586.83	6.00	258.00	0.00	0.00	0.40			
151	B	681188.31	714597.78	6.00	215.00	0.00	0.00	0.40			
152	B	681181.04	714624.38	6.00	184.00	0.00	0.00	0.40			
153	B	681171.16	714655.37	6.00	0.00	0.00	0.00	0.40			
154	B	681193.17	714661.34	6.00	273.00	0.00	0.00	0.40			
155	B	681229.46	714664.08	6.00	283.00	0.00	0.00	0.40			
156	B	681178.20	714681.02	6.00	182.00	0.00	0.00	0.40			
157	B	681187.34	714704.81	6.00	117.00	0.00	0.00	0.40			
158	B	681219.97	714723.65	6.00	121.00	0.00	0.00	0.40			
159	B	681243.99	714740.52	6.00	132.00	0.00	0.00	0.40			
160	B	681267.28	714744.04	6.00	42.00	0.00	0.00	0.40			
161	B	681255.13	714762.72	6.00	319.00	0.00	0.00	0.40			
162	B	681278.14	714775.95	6.00	142.00	0.00	0.00	0.40			
163	B	681301.50	714803.50	6.00	138.00	0.00	0.00	0.40			
164	C	681367.00	714684.36	5.00	318.00	0.00	0.00	0.40			
165	C	681381.25	714703.11	5.00	322.00	0.00	0.00	0.40			
166	C	681394.13	714722.72	5.00	324.00	0.00	0.00	0.40			
167	B	681384.75	714744.76	6.00	239.00	0.00	0.00	0.40			
168	B	681350.91	714773.61	6.00	313.00	0.00	0.00	0.40			
169	B	681363.18	714760.61	6.00	270.00	0.00	0.00	0.40			
170	C	681342.67	714791.13	5.00	47.00	0.00	0.00	0.40			
171	C	681321.42	714803.46	5.00	56.00	0.00	0.00	0.40			
172	B	681296.21	714813.29	6.00	272.00	0.00	0.00	0.40			
173	B	681338.11	714744.80	6.00	142.00	0.00	0.00	0.40			
174	C	681346.44	714659.34	5.00	323.00	0.00	0.00	0.40			
175	C	681301.88	714689.26	5.00	143.00	0.00	0.00	0.40			
176	B	681529.28	714831.78	6.00	26.00	0.00	0.00	0.40			
177	B	681546.68	714840.52	6.00	204.00	0.00	0.00	0.40			
178	B	681518.37	714882.30	6.00	297.00	0.00	0.00	0.40			
179	A	681518.08	714852.67	6.00	40.00	0.00	0.00	0.40			
180	B	681559.42	714876.07	6.00	117.00	0.00	0.00	0.40			
181	A	681541.27	714897.84	6.00	300.00	0.00	0.00	0.40			
182	A	681562.58	714901.43	6.00	211.00	0.00	0.00	0.40			
183	B	681526.63	714868.23	6.00	301.00	0.00	0.00	0.40			
184	B	681506.50	714842.36	6.00	115.00	0.00	0.00	0.40			
185	B	681473.75	714824.57	6.00	117.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
186	B	681441.47	714807.37	6.00	116.00	0.00	0.00	0.40			
187	B	681418.87	714797.35	6.00	31.00	0.00	0.00	0.40			
188	B	681418.34	714819.05	6.00	298.00	0.00	0.00	0.40			
189	B	681430.86	714774.78	6.00	26.00	0.00	0.00	0.40			
190	C	681426.22	714759.24	5.00	295.00	0.00	0.00	0.40			
191	C	681409.76	714767.01	5.00	207.00	0.00	0.00	0.40			
192	C	681397.90	714789.03	5.00	203.00	0.00	0.00	0.40			
193	C	681446.63	714776.43	5.00	142.00	0.00	0.00	0.40			
194	C	681452.84	714790.02	5.00	292.00	0.00	0.00	0.40			
195	C	681498.66	714814.60	5.00	294.00	0.00	0.00	0.40			
196	C	681475.93	714812.79	5.00	28.00	0.00	0.00	0.40			
197	C	681520.51	714826.19	5.00	293.00	0.00	0.00	0.40			
198	C	681474.39	714801.74	5.00	290.00	0.00	0.00	0.40			
199	C	681556.30	714844.61	5.00	299.00	0.00	0.00	0.40			
200	C	681598.68	714871.95	5.00	299.00	0.00	0.00	0.40			
201	C	681615.05	714882.42	5.00	299.00	0.00	0.00	0.40			
202	C	681605.86	714867.55	5.00	27.00	0.00	0.00	0.40			
203	C	681604.57	714906.34	5.00	28.00	0.00	0.00	0.40			
204	C	681577.07	714858.09	5.00	299.00	0.00	0.00	0.40			
205	C	681615.96	714888.68	5.00	39.00	0.00	0.00	0.40			
206	C	681578.44	714733.44	5.00	29.00	0.00	0.00	0.40			
207	C	681564.79	714758.74	5.00	213.00	0.00	0.00	0.40			
208	B	681657.50	714754.63	6.00	112.00	0.00	0.00	0.40			
209	C	681583.47	714510.46	5.00	196.00	0.00	0.00	0.40			
210	C	681539.08	714562.74	5.00	211.00	0.00	0.00	0.40			
211	C	681525.88	714584.26	5.00	204.00	0.00	0.00	0.40			
212	C	681724.87	714713.73	5.00	23.00	0.00	0.00	0.40			
213	C	681722.48	714666.13	5.00	354.00	0.00	0.00	0.40			
214	C	681723.18	714641.64	5.00	14.00	0.00	0.00	0.40			
215	C	681726.50	714619.89	5.00	357.00	0.00	0.00	0.40			
216	C	681725.07	714596.51	5.00	357.00	0.00	0.00	0.40			
217	C	681724.40	714573.84	5.00	3.00	0.00	0.00	0.40			
218	C	681727.87	714547.09	5.00	15.00	0.00	0.00	0.40			
219	C	681714.80	714682.92	5.00	29.00	0.00	0.00	0.40			
220	C	681705.16	714734.99	5.00	35.00	0.00	0.00	0.40			
221	C	681698.57	714761.38	5.00	32.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out- reach	Target X	Target Y	Target Z
222	C	681681.36	714785.35	5.00	32.00	0.00	0.00	0.40			
223	C	681337.46	714582.89	5.00	156.00	0.00	0.00	0.40			
224	C	681368.22	714629.03	5.00	148.00	0.00	0.00	0.40			
225	C	681384.65	714652.31	5.00	146.00	0.00	0.00	0.40			
226	C	681509.84	714472.33	5.00	291.00	0.00	0.00	0.40			
227	C	681537.06	714484.38	5.00	291.00	0.00	0.00	0.40			

Horizontal Illuminance (lux)

Grid 1



Results

Eav	5.68
Emin	1.11
Emax	17.71
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 2

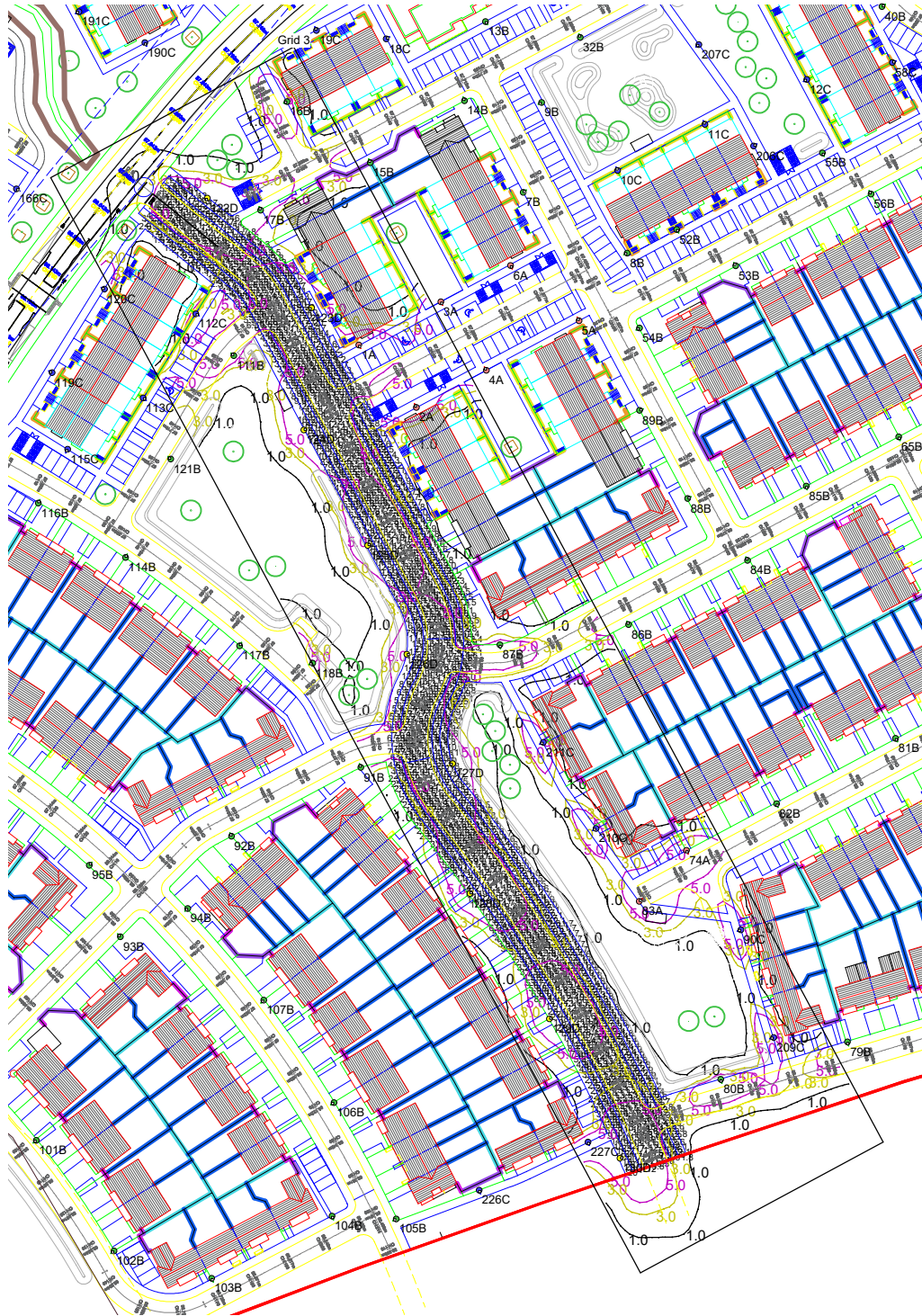


Results

Eav	5.34
Emin	1.05
E _{max}	19.24
Emin/E _{max}	0.05
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 3



Results

Eav	7.57
Emin	1.49
Emax	24.32
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 5



Results

Eav	5.65
Emin	1.12
Emax	18.28
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 6



Results

Eav	5.60
Emin	1.11
Emax	19.35
Emin/Emax	0.06
Emin/Eav	0.20