

DATE: 29 October 2021
DESIGNER: Graham Sheehan
PROJECT No: SES 11518-2 Rev C Residential area
PROJECT NAME: Kilnahue Residential Dev Gannon Homes-Waterman Moylan



Designed in accordance with ISEN13201-2:2015 Class P4 for residential Rd's and P3 for spine Rd's.

Rev A: Latest site layout used. Creche area added as well.
Rev B: Latest site layout used.
Rev C: Latest site layout used.

Outdoor Lighting Report

PREPARED BY: Sabre Electrical Services Ltd.
Unit 11 Bellevue Ind. Est.
Finglas
Dublin 11.
Email: graham@sabrelighting.ie
Ph: 01 8110875

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	713460.68	659024.66	181.00	57.00	1.50	1.50
2	Grid 2	713665.13	659128.00	375.00	376.00	1.50	1.50
3	Grid 3	713509.00	658991.00	214.00	202.00	1.50	1.50

Luminaires

Luminaire A Data



Supplier	C U Phosco
Type	P852-12-P4-NW-CB0400-17W
Lamp(s)	740C NW
Lamp Flux (klm)	2.06
File Name	P852-12-P4-NW-CB0400-17W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	760.6, 161.3, 0.8
No. in Project	21

Luminaire B Data



Supplier	C U Phosco
Type	P852-12-R3B-NW-CB0200-9W
Lamp(s)	740C NW
Lamp Flux (klm)	1.11
File Name	P852-12-R3B-NW-CB0200-9W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	896.4, 62.1, 1.9
No. in Project	26

Luminaire C Data



Supplier	C U Phosco
Type	P862-256-F2B-740-W5-0225-58W
Lamp(s)	740SS
Lamp Flux (klm)	8.51
File Name	P862-256-F2B-740-W5-0225-58W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	458.8, 61.5, 0.7
No. in Project	6

Luminaire D Data



Supplier	C U Phosco
Type	P852-12-F2-NW-CB0600-23W
Lamp(s)	740C NW
Lamp Flux (klm)	2.88
File Name	P852-12-F2-NW-CB0600-23W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	761.9, 260.5, 34.9
No. in Project	119

Luminaire E Data



Supplier	C U Phosco
Type	P862-256-F2B-740-W5-0250-64W
Lamp(s)	740SS
Lamp Flux (klm)	9.45
File Name	P862-256-F2B-740-W5-0250-64W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	458.8, 61.5, 0.7
No. in Project	2

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	E	713454.47	659046.23	10.00	17.00	0.00	0.00	0.40			
2	E	713623.62	659535.90	8.00	161.00	0.00	0.00	0.40			
3	C	713459.50	659069.54	8.00	197.00	5.00	0.00	0.40			
4	C	713463.99	659090.27	8.00	142.00	5.00	0.00	0.40			
5	C	713488.94	659105.92	8.00	130.00	5.00	0.00	0.40			
6	C	713515.02	659121.30	8.00	123.00	5.00	0.00	0.40			
7	C	713542.51	659137.01	8.00	132.00	5.00	0.00	0.40			
8	C	713564.38	659155.94	8.00	134.00	5.00	0.00	0.40			
9	D	713581.87	659181.10	6.00	139.00	0.00	0.00	0.40			
10	D	713611.35	659211.69	6.00	152.00	0.00	0.00	0.40			
11	D	713625.52	659238.11	6.00	148.00	0.00	0.00	0.40			
12	D	713639.70	659264.23	6.00	153.00	0.00	0.00	0.40			
13	D	713655.32	659292.94	6.00	154.00	0.00	0.00	0.40			
14	D	713668.66	659316.85	6.00	155.00	0.00	0.00	0.40			
15	D	713681.02	659343.26	6.00	154.00	0.00	0.00	0.40			
16	D	713689.99	659364.87	6.00	163.00	0.00	0.00	0.40			
17	D	713699.24	659405.91	6.00	167.00	0.00	0.00	0.40			
18	D	713709.42	659434.42	6.00	159.00	0.00	0.00	0.40			
19	D	713711.78	659458.99	6.00	193.00	0.00	0.00	0.40			
20	D	713709.57	659378.48	6.00	160.00	0.00	0.00	0.40			
21	D	713660.72	659281.50	6.00	244.00	0.00	0.00	0.40			
22	D	713658.88	659390.85	6.00	62.00	0.00	0.00	0.40			
23	D	713666.49	659411.78	6.00	234.00	0.00	0.00	0.40			
24	D	713653.68	659263.66	6.00	64.00	0.00	0.00	0.40			
25	D	713713.48	659390.51	6.00	160.00	0.00	0.00	0.40			
26	D	713719.52	659407.13	6.00	160.00	0.00	0.00	0.40			
27	B	713548.51	659174.38	5.00	236.00	0.00	0.00	0.40			
28	D	713598.34	659191.01	6.00	151.00	0.00	0.00	0.40			
29	D	713700.85	659479.55	6.00	252.00	0.00	0.00	0.40			
30	D	713673.47	659488.90	6.00	253.00	0.00	0.00	0.40			
31	D	713645.90	659498.20	6.00	252.00	0.00	0.00	0.40			
32	D	713619.36	659507.48	6.00	252.00	0.00	0.00	0.40			
33	D	713563.66	659191.37	6.00	330.00	0.00	0.00	0.40			
34	D	713576.27	659208.52	6.00	326.00	0.00	0.00	0.40			
35	B	713623.66	659225.16	5.00	246.00	0.00	0.00	0.40			
36	B	713595.26	659257.14	5.00	67.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
37	B	713573.50	659224.12	5.00	225.00	0.00	0.00	0.40			
38	D	713593.50	659230.00	6.00	326.00	0.00	0.00	0.40			
39	D	713606.25	659255.70	6.00	325.00	0.00	0.00	0.40			
40	D	713616.65	659275.27	6.00	329.00	0.00	0.00	0.40			
41	D	713627.61	659296.30	6.00	328.00	0.00	0.00	0.40			
42	D	713644.78	659326.32	6.00	331.00	0.00	0.00	0.40			
43	D	713615.79	659319.91	6.00	333.00	0.00	0.00	0.40			
44	D	713655.97	659348.84	6.00	335.00	0.00	0.00	0.40			
45	D	713665.08	659371.15	6.00	339.00	0.00	0.00	0.40			
46	D	713679.77	659407.98	6.00	336.00	0.00	0.00	0.40			
47	D	713690.76	659384.07	6.00	162.00	0.00	0.00	0.40			
48	D	713689.60	659434.79	6.00	332.00	0.00	0.00	0.40			
49	D	713695.99	659452.13	6.00	339.00	0.00	0.00	0.40			
50	D	713676.51	659463.65	6.00	71.00	0.00	0.00	0.40			
51	D	713650.91	659473.07	6.00	73.00	0.00	0.00	0.40			
52	D	713626.54	659482.03	6.00	72.00	0.00	0.00	0.40			
53	D	713611.75	659478.90	6.00	160.00	0.00	0.00	0.40			
54	B	713641.92	659214.48	5.00	232.00	0.00	0.00	0.40			
55	D	713632.36	659189.19	6.00	333.00	0.00	0.00	0.40			
56	D	713651.02	659174.87	6.00	151.00	0.00	0.00	0.40			
57	D	713665.65	659200.48	6.00	151.00	0.00	0.00	0.40			
58	D	713650.42	659222.74	6.00	330.00	0.00	0.00	0.40			
59	D	713682.01	659228.95	6.00	151.00	0.00	0.00	0.40			
60	D	713665.56	659251.36	6.00	326.00	0.00	0.00	0.40			
61	D	713696.37	659252.29	6.00	151.00	0.00	0.00	0.40			
62	D	713680.59	659279.23	6.00	322.00	0.00	0.00	0.40			
63	D	713704.15	659277.43	6.00	151.00	0.00	0.00	0.40			
64	D	713706.25	659302.94	6.00	151.00	0.00	0.00	0.40			
65	B	713686.90	659326.46	5.00	238.00	0.00	0.00	0.40			
66	B	713662.68	659507.53	5.00	336.00	0.00	0.00	0.40			
67	D	713622.60	659336.01	6.00	335.00	0.00	0.00	0.40			
68	D	713577.00	659256.62	6.00	326.00	0.00	0.00	0.40			
69	D	713567.89	659241.42	6.00	324.00	0.00	0.00	0.40			
70	D	713602.24	659523.31	6.00	342.00	0.00	0.00	0.40			
71	D	713595.23	659504.09	6.00	338.00	0.00	0.00	0.40			
72	D	713587.52	659481.86	6.00	332.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
73	D	713601.04	659449.43	6.00	151.00	0.00	0.00	0.40			
74	D	713578.41	659456.53	6.00	335.00	0.00	0.00	0.40			
75	D	713609.35	659422.19	6.00	151.00	0.00	0.00	0.40			
76	D	713588.22	659416.79	6.00	151.00	0.00	0.00	0.40			
77	D	713566.00	659425.60	6.00	343.00	0.00	0.00	0.40			
78	D	713576.56	659388.13	6.00	151.00	0.00	0.00	0.40			
79	D	713554.29	659396.67	6.00	329.00	0.00	0.00	0.40			
80	D	713541.89	659371.63	6.00	332.00	0.00	0.00	0.40			
81	D	713585.00	659353.45	6.00	151.00	0.00	0.00	0.40			
82	D	713579.47	659339.47	6.00	151.00	0.00	0.00	0.40			
83	D	713562.21	659361.81	6.00	151.00	0.00	0.00	0.40			
84	D	713551.51	659341.09	6.00	151.00	0.00	0.00	0.40			
85	D	713527.19	659344.77	6.00	322.00	0.00	0.00	0.40			
86	D	713536.55	659312.93	6.00	151.00	0.00	0.00	0.40			
87	D	713513.32	659319.86	6.00	323.00	0.00	0.00	0.40			
88	D	713538.57	659278.37	6.00	151.00	0.00	0.00	0.40			
89	D	713530.71	659265.90	6.00	151.00	0.00	0.00	0.40			
90	D	713498.53	659294.66	6.00	328.00	0.00	0.00	0.40			
91	D	713501.96	659256.86	6.00	146.00	0.00	0.00	0.40			
92	D	713481.84	659270.62	6.00	327.00	0.00	0.00	0.40			
93	D	713486.37	659235.27	6.00	144.00	0.00	0.00	0.40			
94	D	713465.54	659246.96	6.00	325.00	0.00	0.00	0.40			
95	D	713453.28	659229.81	6.00	309.00	0.00	0.00	0.40			
96	D	713471.52	659207.52	6.00	217.00	0.00	0.00	0.40			
97	A	713589.88	659532.66	6.00	340.00	0.00	0.00	0.40			
98	A	713567.22	659474.72	6.00	340.00	0.00	0.00	0.40			
99	A	713563.58	659458.19	6.00	340.00	0.00	0.00	0.40			
100	A	713538.15	659400.79	6.00	340.00	0.00	0.00	0.40			
101	A	713529.40	659379.75	6.00	340.00	0.00	0.00	0.40			
102	A	713497.45	659325.77	6.00	340.00	0.00	0.00	0.40			
103	A	713487.99	659305.36	6.00	340.00	0.00	0.00	0.40			
104	A	713450.41	659254.15	6.00	324.00	0.00	0.00	0.40			
105	B	713556.28	659281.84	5.00	237.00	0.00	0.00	0.40			
106	B	713578.09	659270.20	5.00	239.00	0.00	0.00	0.40			
107	B	713535.17	659248.32	5.00	55.00	0.00	0.00	0.40			
108	B	713555.39	659233.60	5.00	64.00	0.00	0.00	0.40			

Layout Continued

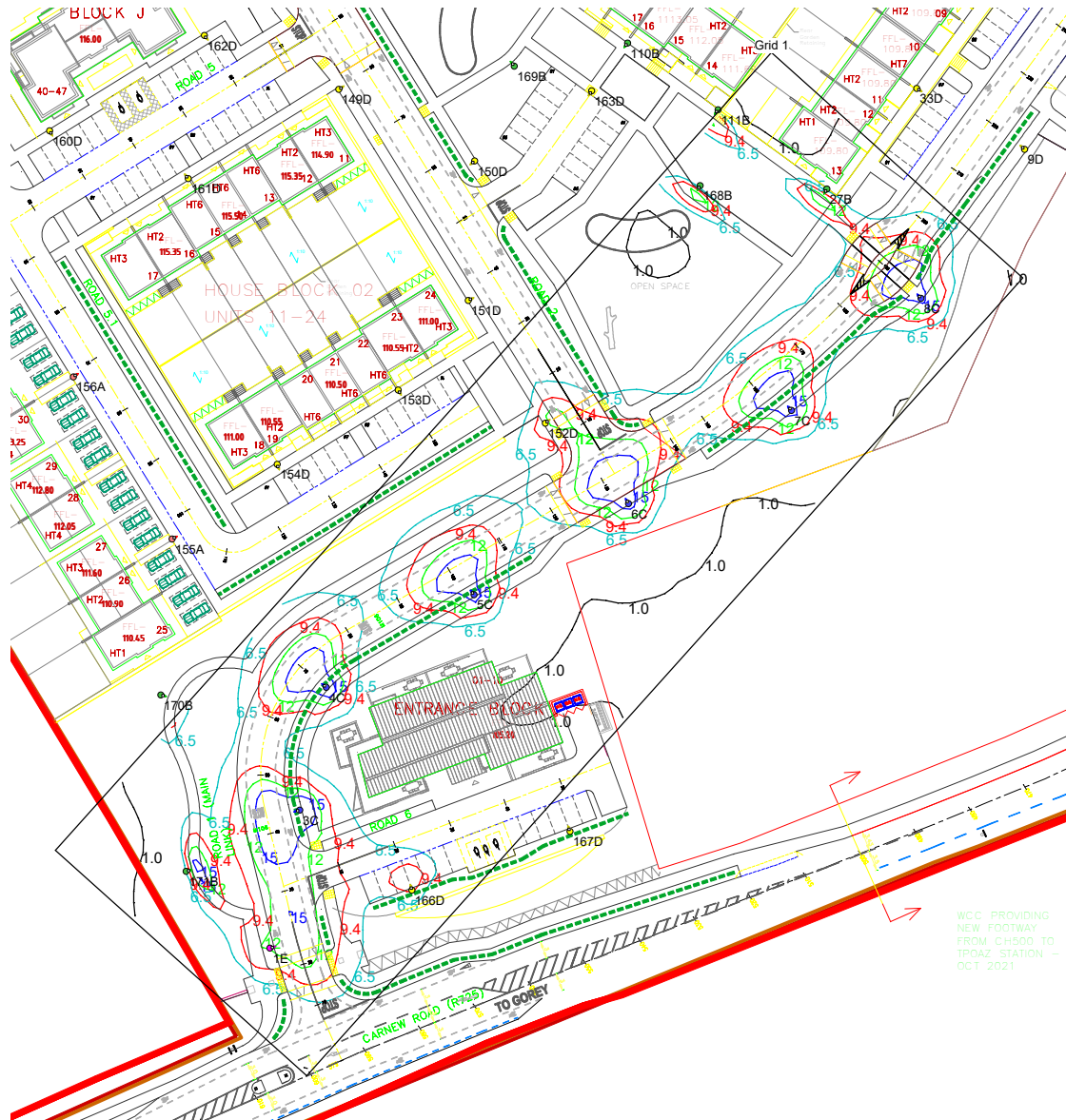
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
109	B	713494.56	659213.73	5.00	236.00	0.00	0.00	0.40			
110	B	713514.84	659199.06	5.00	232.00	0.00	0.00	0.40			
111	B	713530.13	659187.77	5.00	232.00	0.00	0.00	0.40			
112	B	713598.78	659359.01	5.00	250.00	0.00	0.00	0.40			
113	B	713622.21	659349.50	5.00	236.00	0.00	0.00	0.40			
114	D	713652.90	659405.47	6.00	151.00	0.00	0.00	0.40			
115	D	713620.89	659417.98	6.00	337.00	0.00	0.00	0.40			
116	D	713450.92	659210.37	6.00	48.00	0.00	0.00	0.40			
117	D	713438.34	659239.33	6.00	234.00	0.00	0.00	0.40			
118	D	713413.71	659238.17	6.00	52.00	0.00	0.00	0.40			
119	D	713407.80	659261.27	6.00	229.00	0.00	0.00	0.40			
120	D	713383.74	659268.28	6.00	17.00	0.00	0.00	0.40			
121	D	713404.39	659282.84	6.00	124.00	0.00	0.00	0.40			
122	D	713402.31	659306.94	6.00	310.00	0.00	0.00	0.40			
123	D	713429.87	659309.58	6.00	137.00	0.00	0.00	0.40			
124	D	713418.07	659327.23	6.00	313.00	0.00	0.00	0.40			
125	D	713448.54	659324.78	6.00	133.00	0.00	0.00	0.40			
126	D	713434.08	659340.67	6.00	311.00	0.00	0.00	0.40			
127	B	713377.38	659295.08	5.00	309.00	0.00	0.00	0.40			
128	B	713393.55	659308.05	5.00	309.00	0.00	0.00	0.40			
129	B	713457.71	659361.02	5.00	309.00	0.00	0.00	0.40			
130	D	713484.02	659357.54	6.00	158.00	0.00	0.00	0.40			
131	D	713458.23	659352.87	6.00	309.00	0.00	0.00	0.40			
132	D	713471.37	659377.33	6.00	19.00	0.00	0.00	0.40			
133	D	713471.57	659402.08	6.00	220.00	0.00	0.00	0.40			
134	A	713454.31	659407.36	6.00	314.00	0.00	0.00	0.40			
135	A	713434.33	659372.31	6.00	129.00	5.00	0.00	0.40			
136	A	713402.69	659345.83	6.00	129.00	5.00	0.00	0.40			
137	A	713370.61	659319.63	6.00	129.00	5.00	0.00	0.40			
138	A	713350.50	659318.46	6.00	341.00	5.00	0.00	0.40			
139	D	713465.16	659425.73	6.00	318.00	0.00	0.00	0.40			
140	D	713495.41	659440.64	6.00	154.00	0.00	0.00	0.40			
141	D	713490.31	659465.15	6.00	335.00	0.00	0.00	0.40			
142	D	713506.00	659488.24	6.00	336.00	0.00	0.00	0.40			
143	D	713528.67	659507.13	6.00	150.00	0.00	0.00	0.40			
144	D	713526.02	659541.29	6.00	333.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
145	D	713552.55	659558.40	6.00	155.00	0.00	0.00	0.40			
146	A	713531.54	659480.10	6.00	246.00	0.00	0.00	0.40			
147	D	713542.91	659489.03	6.00	336.00	0.00	0.00	0.40			
148	D	713530.97	659456.91	6.00	336.00	0.00	0.00	0.40			
149	D	713466.10	659191.23	6.00	33.00	0.00	0.00	0.40			
150	D	713489.05	659179.15	6.00	219.00	0.00	0.00	0.40			
151	D	713487.97	659155.59	6.00	27.00	0.00	0.00	0.40			
152	D	713500.96	659134.84	6.00	39.00	0.00	0.00	0.40			
153	D	713476.14	659140.47	6.00	301.00	0.00	0.00	0.40			
154	D	713455.68	659127.93	6.00	291.00	0.00	0.00	0.40			
155	A	713437.94	659115.30	6.00	29.00	5.00	0.00	0.40			
156	A	713421.28	659142.69	6.00	33.00	5.00	0.00	0.40			
157	A	713408.07	659164.18	6.00	31.00	5.00	0.00	0.40			
158	A	713391.23	659191.56	6.00	39.00	5.00	0.00	0.40			
159	B	713405.22	659206.10	5.00	310.00	0.00	0.00	0.40			
160	D	713417.25	659184.21	6.00	301.00	0.00	0.00	0.40			
161	D	713440.67	659176.17	6.00	129.00	0.00	0.00	0.40			
162	D	713443.38	659200.33	6.00	309.00	0.00	0.00	0.40			
163	D	713508.76	659190.97	6.00	238.00	0.00	0.00	0.40			
164	B	713580.15	659327.83	5.00	63.00	0.00	0.00	0.40			
165	B	713602.61	659315.98	5.00	61.00	0.00	0.00	0.40			
166	D	713478.42	659056.00	6.00	104.00	0.00	0.00	0.40			
167	D	713505.14	659065.93	6.00	111.00	0.00	0.00	0.40			
168	B	713527.11	659174.97	5.00	236.00	0.00	0.00	0.40			
169	B	713495.69	659195.16	5.00	129.00	0.00	0.00	0.40			
170	B	713436.04	659088.97	5.00	344.00	0.00	0.00	0.40			
171	B	713440.34	659059.17	5.00	18.00	0.00	0.00	0.40			
172	A	713409.11	659367.26	6.00	307.00	5.00	0.00	0.40			
173	A	713380.44	659343.74	6.00	304.00	5.00	0.00	0.40			
174	A	713439.29	659392.89	6.00	305.00	5.00	0.00	0.40			

Horizontal Illuminance (lux)

Grid 1



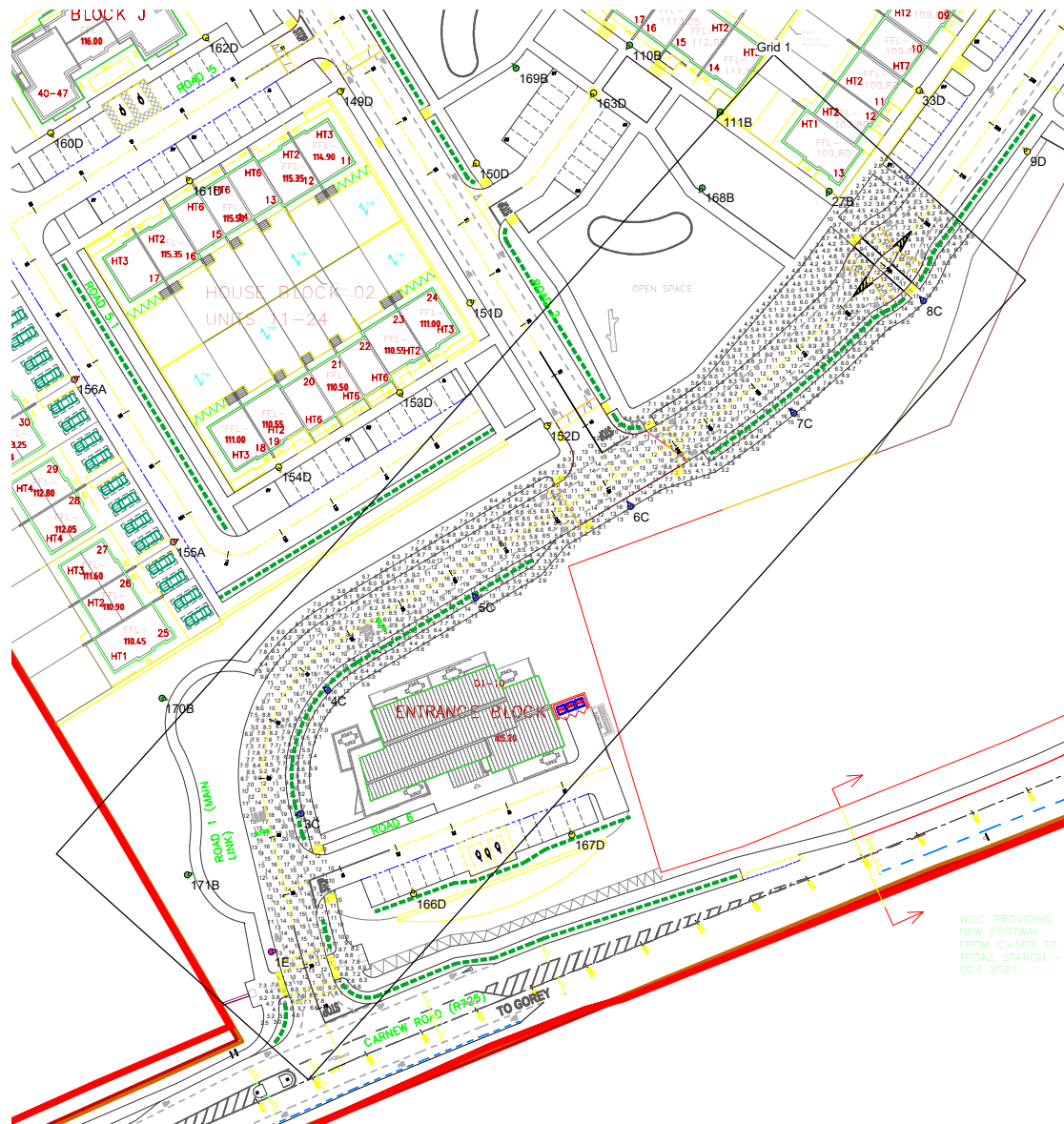
WCC PROVIDING
NEW FOOTWAY
FROM CHSD TO
TPOAZ STATION -
OCT 2021

Results

Eav	9.61
Emin	2.11
Emax	19.71
Emin/Emax	0.11
Emin/Eav	0.22

Horizontal Illuminance (lux)

Grid 1



Results

Eav	9.61
Emin	2.11
Emax	19.71
Emin/Emax	0.11
Emin/Eav	0.22

Horizontal Illuminance (lux)

Grid 2



Results

Eav	5.36
Emin	1.13
Emax	21.73
Emin/Emax	0.05
Emin/Eav	0.21

Horizontal Illuminance (lux)

Grid 2

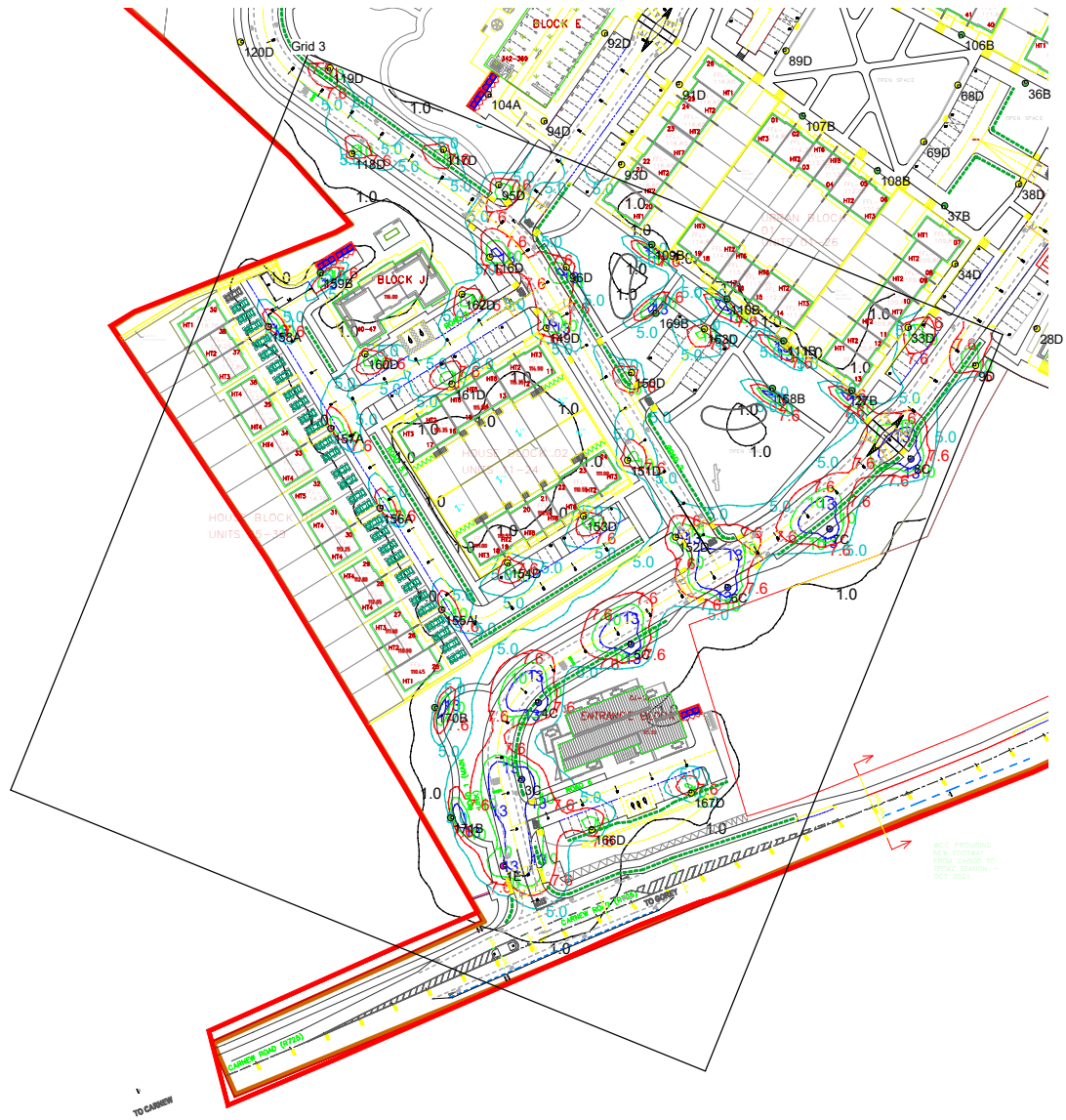


Results

Eav	5.36
Emin	1.13
Emax	21.73
Emin/Emax	0.05
Emin/Eav	0.21

Horizontal Illuminance (lux)

Grid 3

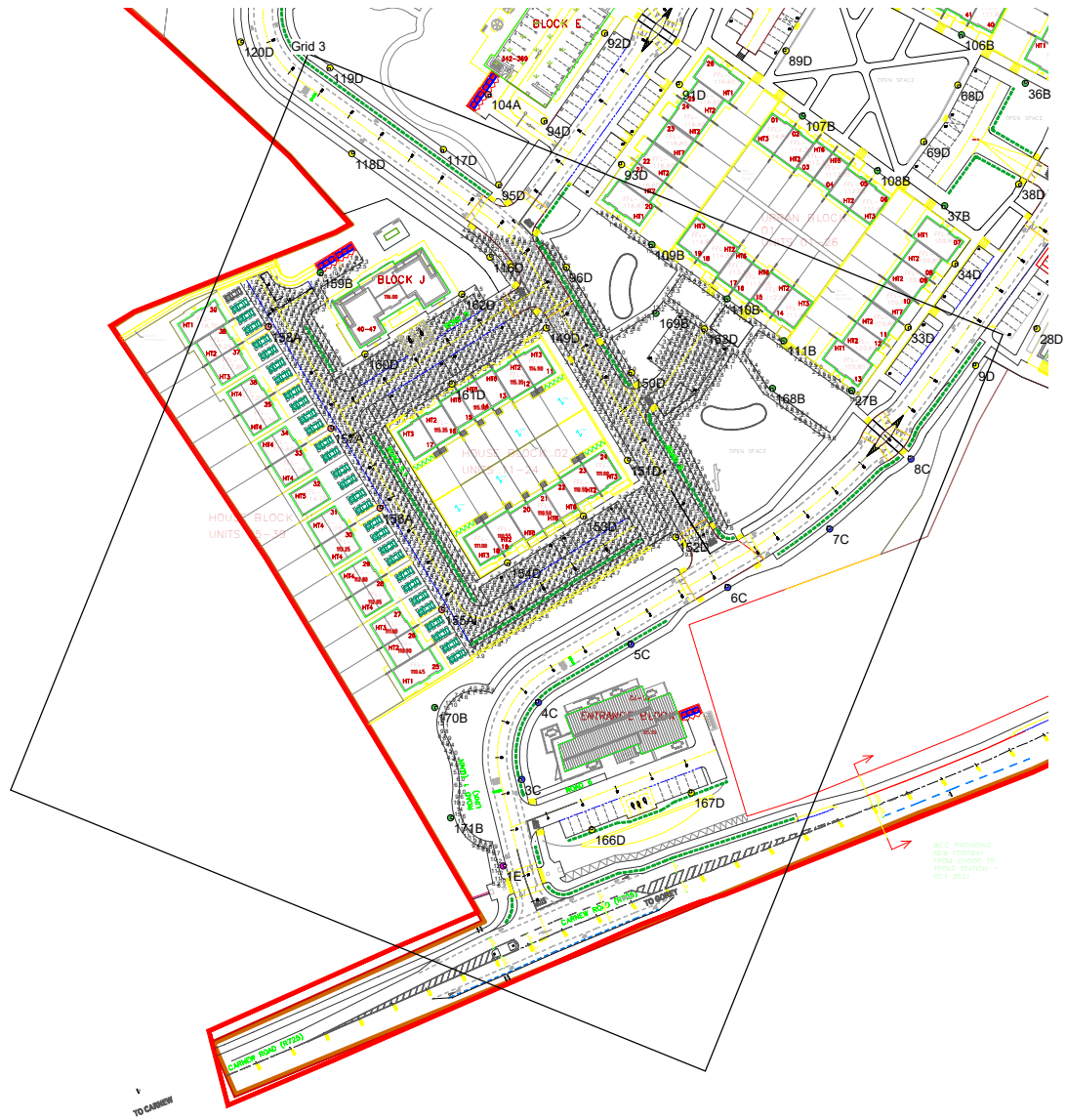


Results

Eav	5.40
Emin	1.07
Emax	16.85
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 3



Results

Eav	5.40
Emin	1.07
E _{max}	16.85
E _{min} /E _{max}	0.06
E _{min} /E _{av}	0.20