

DATE: 21/08/2022
DESIGNER: James Duffin IEng MILP BA (Hons)
PROJECT No: SSE296001-AC-003-G
PROJECT NAME: Horton Heath, Segment 3

ENERVEO

Horton Heath Segment 3
Northern section to Allington Lane Roundabout

Lighting Class - P2, P4, C4
Lantern - Urbis Schreder Axia 3.1 Urbis Schreder Axia 3.2
Colour Temperature - 3000K
Maintenance Factor - 0.85

Grids 9, 10 show ecology restricted areas of lighting
See "Technical Note OHH Street Lighting and Ecology July22
(002).pdf" for details

Outdoor Lighting Report

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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 - Distributor Road ...	448404.41	117290.32	48.00	255.00	1.60	1.50
2	Grid 2 - Footpath - P4	448405.94	117299.61	30.00	141.00	1.50	1.50
3	Grid 3 - Footpath - P3	448387.25	117319.21	25.50	72.00	1.50	1.50
4	Grid 4 - Footpath - P4	448405.49	117404.01	15.00	93.00	1.50	1.50
5	Grid 5 - Footpath - P4	448401.42	117501.24	15.00	54.00	1.50	1.50
6	Grid 6 - Footpath - P4	448417.93	117459.28	17.69	84.05	1.47	1.47
7	Grid 7 - Distributor Road ...	448416.89	117537.10	60.00	131.00	1.50	1.49
8	Grid 8 - Footpath - P4	448439.97	117528.86	79.50	159.00	1.50	1.50
9	Grid 9 - Quobleigh Brook B...	448446.12	117668.00	24.00	51.00	1.50	1.50
10	Grid 10 - Quobleigh Brook ...	448480.84	117689.27	12.00	39.00	1.50	1.50
11	Grid 11 - Distributor Road...	448447.00	117705.32	30.00	66.00	1.50	1.50

Luminaires

Luminaire A Data



Supplier	Urbis Schreder
Type	AXIA 3.2 5279 Integrated lenses 24 OSLO N SQUARE GIANT@1000m
Lamp(s)	24 OSLO N SQUARE GIANT@1000mA W W 730 230V
LampFlux(klm)/Colour	8.49 WW 3000K/70
File Name	AXIA 3.2 5279 24 OSLO N SQUARE GIANT T 1000mA WW 730 76W 430122 Integrated...
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	758.9, 149.6, 0.0
No. in Project	1

Luminaire B Data



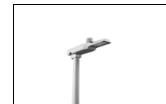
Supplier	Urbis Schreder
Type	AXIA 3.2 5295 Integrated lenses 32 OSLO N SQUARE GIANT@800mA
Lamp(s)	32 OSLO N SQUARE GIANT@800mA WW 730 230V
LampFlux(klm)/Colour	9.85 WW 3000K/70
File Name	AXIA 3.2 5295 32 OSLO N SQUARE GIANT T 800mA WW 730 78W 441022 Integrated...
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	753.3, 15.9, 0.0
No. in Project	1

Luminaire C Data



Supplier	Urbis Schreder
Type	AXIA 3.2 5295 Integrated lenses Rear louvers 32 OSLO N SQUARE
Lamp(s)	32 OSLO N SQUARE GIANT@800mA WW 730 230V 00-49-490
LampFlux(klm)/Colour	7.96 WW 3000K/70
File Name	AXIA 3.2 5295 32 OSLO N SQUARE GIANT T 800mA WW 730 78W 479062 Integrated...
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	723.7, 21.7, 0.0
No. in Project	3

Luminaire D Data



Supplier	Urbis Schreder
Type	AXIA 3.2 5267 Integrated lenses - 32 OSLO N SQUARE GIANT@800m
Lamp(s)	32 OSLO N SQUARE GIANT@800mA WW 730 230V 00-49-490
LampFlux(klm)/Colour	9.61 WW 3000K/70
File Name	AXIA 3.2 5267 32 OSLO N SQUARE GIANT T 800mA WW 730 78W 430092 Integrated...
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	1001.2, 151.3, 0.0
No. in Project	4

Luminaires**Luminaire E Data**

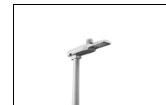
Supplier	Urbis Schreder
Type	AXIA 3.2 5279 Integrated lenses Rear louvers 32 OSLO SQUARE
Lamp(s)	32 OSLO SQUARE GIANT@600mA WW 730 230V 00-49-490
LampFlux(klm)/Colour	6.10 WW 3000K/70
File Name	AXIA 3.2 5279 32 OSLO SQUARE GIANT T 600mA WW 730 59W 478812 Integrated...
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	878.0, 147.2, 0.0
No. in Project	3

Luminaire F Data

Supplier	Urbis Schreder
Type	AXIA 3.2 5279 Integrated lenses 24 OSLO SQUARE GIANT@700mA
Lamp(s)	24 OSLO SQUARE GIANT@700mA WW 730 230V
LampFlux(klm)/Colour	6.53 WW 3000K/70
File Name	AXIA 3.2 5279 24 OSLO SQUARE GIANT T 700mA WW 730 52.5W 430122 Integrated...
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	758.9, 149.6, 0.0
No. in Project	3

Luminaire G Data

Supplier	Urbis Schreder
Type	AXIA 3.1 5266 Integrated lenses Rear louvers 8 OSLO SQUARE G
Lamp(s)	8 OSLO SQUARE GIANT@700mA WW 730 230V 01-37-041
LampFlux(klm)/Colour	1.74 WW 3000K/70
File Name	AXIA 3.1 5266 8 OSLO SQUARE GIANT 700mA WW 730 19.4W 457662 Integrated...
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	1216.3, 169.4, 0.0
No. in Project	45

Luminaire H Data

Supplier	Urbis Schreder
Type	AXIA 3.2 5294 Integrated lenses - 32 OSLO SQUARE GIANT@500mA
Lamp(s)	32 OSLO SQUARE GIANT@500mA WW 730 230V 00-49-490
LampFlux(klm)/Colour	6.66 WW 3000K/70
File Name	AXIA 3.2 5294 32 OSLO SQUARE GIANT T 500mA WW 730 48.5W 441012 Integrated...
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	613.3, 21.0, 0.0
No. in Project	41

Luminaire X Data

Supplier	Philips
Type	BGP621 DW50
Lamp(s)	LED-HB 5.1S
Lamp Flux (klm)	9.50
File Name	Luma Mini_BGP621_DW50_9500_40LED_5.1S_CLO_L90_NW.ies
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	616.7, 39.5, 0.0
No. in Project	2

Luminaire Y Data

Supplier	Philips
Type	BGP621 DM10 BL1
Lamp(s)	LED-HB 5.1S
Lamp Flux (klm)	7.00
File Name	Luma Mini_BGP621_DM10 BL1_7000_40LED_5.1S_CLO_L90_NW.ies
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	529.5, 53.6, 0.0
No. in Project	1

Luminaire Z Data

Supplier	Philips
Type	BGP703 DX10
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	9.50
File Name	Luma Gen2 Mini_BGP703_DX10_9500_40LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.85
Imax70,80,90(cd/klm)	522.9, 97.5, 0.0
No. in Project	1

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
264130_1	Z	448829.64	116091.74	8.00	25.00	0.00	0.00	0.40			
2	D	448824.48	116134.57	8.00	354.00	0.00	0.00	0.40			
3	D	448838.83	116162.93	8.00	179.00	0.00	0.00	0.40			
5	D	448836.29	116197.32	8.00	178.00	0.00	0.00	0.40			
8	C	448839.32	116232.05	8.00	169.00	0.00	0.00	0.40			
10	C	448847.56	116261.65	8.00	164.00	0.00	0.00	0.40			
12	C	448836.56	116288.36	8.00	13.00	0.00	0.00	0.40			
1_SR1	D	448855.80	116295.81	8.00	279.00	0.00	0.00	0.40			
14	B	448829.79	116309.23	8.00	14.00	0.00	0.00	0.40			
16	E	448830.17	116344.84	8.00	202.00	0.00	0.00	0.40			
18	E	448814.96	116377.29	8.00	207.00	0.00	0.00	0.40			
20	F	448793.09	116401.08	8.00	14.00	0.00	0.00	0.40			
22	F	448786.85	116429.81	8.00	16.00	0.00	0.00	0.40			
24	E	448785.60	116458.81	8.00	207.00	0.00	0.00	0.40			
27	F	448769.19	116492.15	8.00	355.00	0.00	0.00	0.40			
29	A	448780.51	116523.33	8.00	179.00	0.00	0.00	0.40			
26	G	448785.39	116476.93	6.00	194.00	0.00	0.00	0.40			
21	G	448805.24	116423.37	6.00	201.00	0.00	0.00	0.40			
1_SR2	G	448805.24	116410.66	6.00	293.00	0.00	0.00	0.40			
13	G	448848.62	116317.82	6.00	204.00	0.00	0.00	0.40			
19	G	448816.53	116388.88	6.00	199.00	0.00	0.00	0.40			
15	G	448818.20	116326.76	6.00	53.00	0.00	0.00	0.40			
17	G	448805.76	116354.23	6.00	17.00	0.00	0.00	0.40			
25	G	448764.95	116464.50	6.00	6.00	0.00	0.00	0.40			
28	G	448764.33	116498.93	6.00	352.00	0.00	0.00	0.40			
4	G	448843.57	116187.50	6.00	169.00	0.00	0.00	0.40			
7	G	448848.70	116229.54	6.00	178.00	0.00	0.00	0.40			
11	G	448825.24	116268.39	6.00	339.00	0.00	0.00	0.40			
9	G	448817.89	116236.22	6.00	3.00	0.00	0.00	0.40			
6	G	448819.01	116205.04	6.00	4.00	0.00	0.00	0.40			
30	H	448779.15	116555.98	8.00	192.00	0.00	0.00	0.40			
31	H	448765.00	116587.16	8.00	215.00	0.00	0.00	0.40			
32	H	448739.04	116612.85	8.00	225.00	0.00	0.00	0.40			
33	H	448719.71	116629.84	8.00	223.00	0.00	0.00	0.40			
34	H	448699.71	116654.74	8.00	215.00	0.00	0.00	0.40			
35	H	448682.81	116683.11	8.00	207.00	0.00	0.00	0.40			

Layout Continued

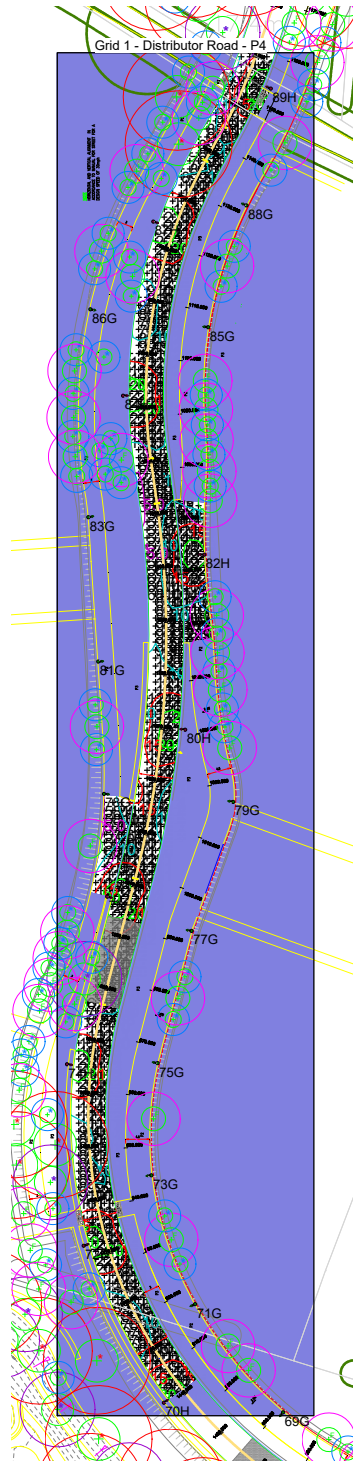
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
36	H	448666.05	116711.50	8.00	211.00	0.00	0.00	0.40			
37	H	448650.72	116740.63	8.00	195.00	0.00	0.00	0.40			
38	H	448644.85	116773.16	8.00	185.00	0.00	0.00	0.40			
39	H	448637.83	116805.31	8.00	197.00	0.00	0.00	0.40			
40	H	448626.87	116836.38	8.00	197.00	0.00	0.00	0.40			
41	H	448602.77	116859.36	8.00	40.00	0.00	0.00	0.40			
100	H	448444.76	117750.38	8.00	218.00	0.00	0.00	0.40			
66_264127	Y	448432.30	117765.59	8.00	215.00	0.00	0.00	0.40			
67_264127	X	448397.51	117763.47	8.00	114.00	0.00	0.00	0.40			
68	X	448420.85	117783.40	8.00	204.00	0.00	0.00	0.40			
23	G	448778.59	116437.93	6.00	30.00	0.00	0.00	0.40			
42	H	448589.05	116891.00	8.00	223.00	0.00	0.00	0.40			
43	H	448556.58	116898.37	8.00	59.00	0.00	0.00	0.40			
45	H	448534.01	116915.75	8.00	41.00	0.00	0.00	0.40			
47	H	448521.90	116993.64	8.00	197.00	0.00	0.00	0.40			
48	H	448510.26	117013.21	8.00	215.00	0.00	0.00	0.40			
44	G	448563.73	116911.20	6.00	244.00	0.00	0.00	0.40			
46	G	448544.20	116923.60	6.00	220.00	0.00	0.00	0.40			
49	G	448516.36	117019.74	6.00	200.00	0.00	0.00	0.40			
50	H	448485.12	117035.29	8.00	32.00	0.00	0.00	0.40			
52	H	448472.13	117065.63	8.00	15.00	0.00	0.00	0.40			
54	H	448469.35	117098.00	8.00	356.00	0.00	0.00	0.40			
56	H	448474.41	117131.99	8.00	190.00	0.00	0.00	0.40			
58	H	448462.36	117157.47	8.00	352.00	0.00	0.00	0.40			
60	H	448467.78	117180.72	8.00	339.00	0.00	0.00	0.40			
62	H	448483.62	117192.26	8.00	158.00	0.00	0.00	0.40			
66	H	448477.54	117256.11	8.00	206.00	0.00	0.00	0.40			
68	H	448449.79	117270.72	8.00	61.00	0.00	0.00	0.40			
70	H	448424.36	117292.75	8.00	36.00	0.00	0.00	0.40			
72	H	448409.35	117322.11	8.00	19.00	0.00	0.00	0.40			
74	H	448406.25	117356.08	8.00	352.00	0.00	0.00	0.40			
51	G	448504.47	117046.20	8.00	203.00	0.00	0.00	0.40			
53	G	448494.96	117071.47	6.00	195.00	0.00	0.00	0.40			
55	G	448492.53	117094.99	6.00	182.00	0.00	0.00	0.40			
57	G	448489.45	117126.83	6.00	188.00	0.00	0.00	0.40			
59	G	448484.07	117154.34	6.00	194.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
61	G	448483.94	117171.48	6.00	170.00	0.00	0.00	0.40			
63	G	448489.25	117188.26	6.00	154.00	0.00	0.00	0.40			
64	G	448496.26	117199.82	6.00	150.00	0.00	0.00	0.40			
65	G	448493.02	117248.52	6.00	212.00	0.00	0.00	0.40			
67	G	448470.54	117274.07	6.00	227.00	0.00	0.00	0.40			
69	G	448446.65	117290.95	6.00	230.00	0.00	0.00	0.40			
71	G	448430.19	117311.18	6.00	204.00	0.00	0.00	0.40			
76	H	448413.75	117387.44	8.00	346.00	0.00	0.00	0.40			
80	H	448428.33	117418.65	8.00	172.00	0.00	0.00	0.40			
82	H	448431.90	117451.42	8.00	179.00	0.00	0.00	0.40			
84	H	448416.71	117481.16	8.00	1.00	0.00	0.00	0.40			
87	H	448422.38	117513.72	8.00	343.00	0.00	0.00	0.40			
89	H	448444.35	117538.60	8.00	155.00	0.00	0.00	0.40			
90	H	448455.48	117570.87	8.00	162.00	0.00	0.00	0.40			
92	H	448462.65	117604.16	8.00	178.00	0.00	0.00	0.40			
94	H	448450.61	117629.75	8.00	7.00	0.00	0.00	0.40			
96	H	448449.03	117647.77	8.00	352.00	0.00	0.00	0.40			
99	H	448455.97	117733.47	8.00	209.00	0.00	0.00	0.40			
78	G	448413.15	117406.64	8.00	356.00	0.00	0.00	0.40			
81	G	448412.08	117431.41	8.00	4.00	0.00	0.00	0.40			
73	G	448422.03	117335.30	6.00	187.00	0.00	0.00	0.40			
75	G	448423.19	117356.29	6.00	170.00	0.00	0.00	0.40			
77	G	448429.52	117381.02	6.00	170.00	0.00	0.00	0.40			
79	G	448437.31	117405.16	6.00	170.00	0.00	0.00	0.40			
83	G	448410.21	117458.42	6.00	10.00	0.00	0.00	0.40			
86	G	448410.62	117497.31	6.00	349.00	0.00	0.00	0.40			
88	G	448439.81	117516.74	6.00	157.00	0.00	0.00	0.40			
85	G	448432.66	117493.98	6.00	174.00	0.00	0.00	0.40			
98	G	448478.89	117678.61	6.00	136.00	0.00	0.00	0.40			
97	G	448469.56	117670.04	6.00	142.00	0.00	0.00	0.40			
95	G	448463.68	117655.48	6.00	172.00	0.00	0.00	0.40			
93	G	448466.12	117628.40	6.00	194.00	0.00	0.00	0.40			
91	G	448471.16	117599.02	6.00	163.00	0.00	0.00	0.40			

Horizontal Illuminance (lux)

Grid 1 - Distributor Road - P4

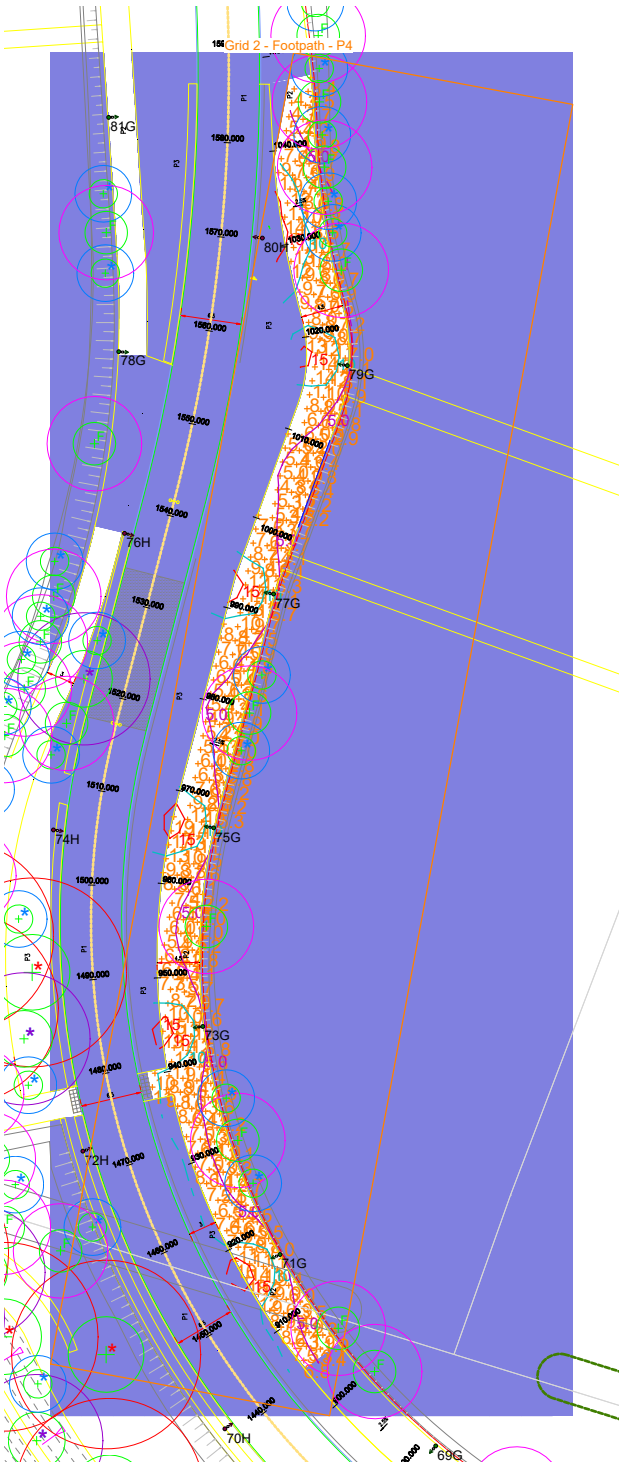


Results

Eav	12.89
Emin	3.78
Emax	24.02
Emin/Emax	0.16
Emin/Eav	0.29

Horizontal Illuminance (lux)

Grid 2 - Footpath - P4

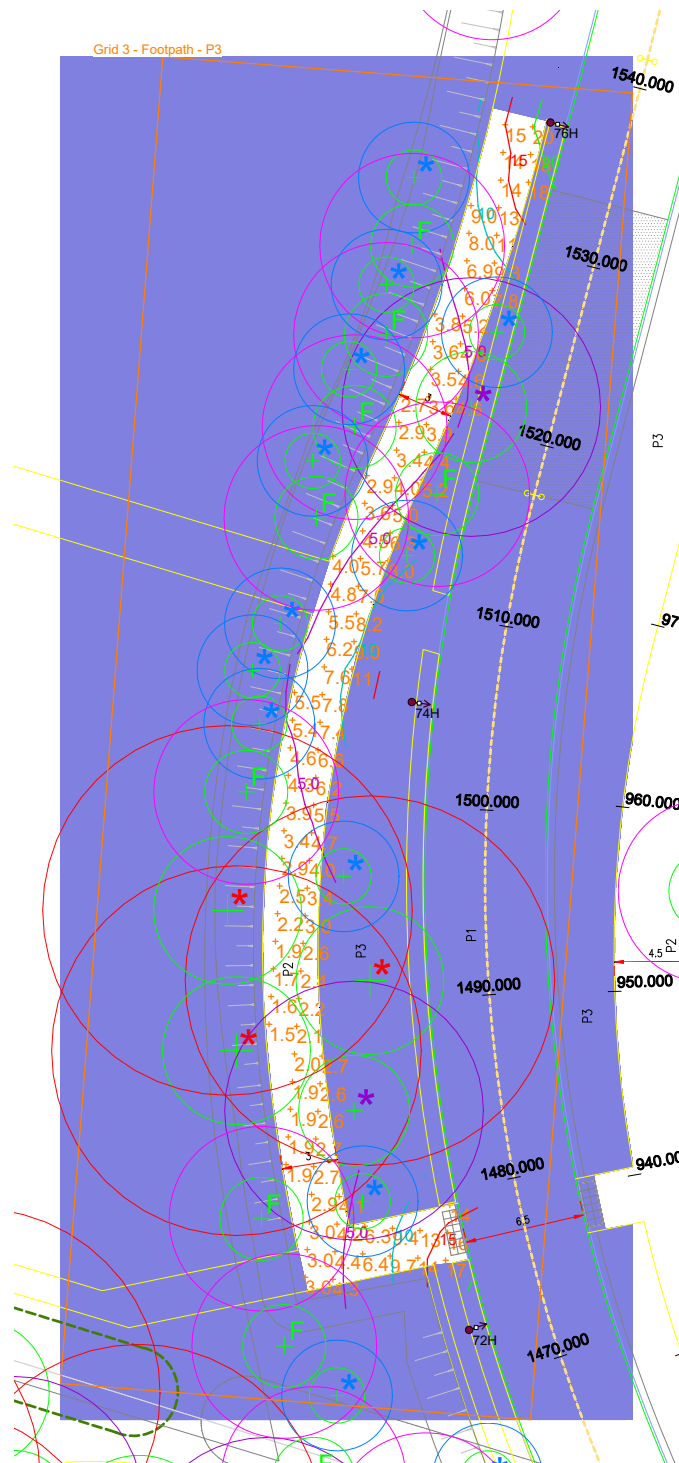


Results

Eav	7.34
Emin	1.92
Emax	19.39
Emin/Emax	0.10
Emin/Eav	0.26

Horizontal Illuminance (lux)

Grid 3 - Footpath - P3

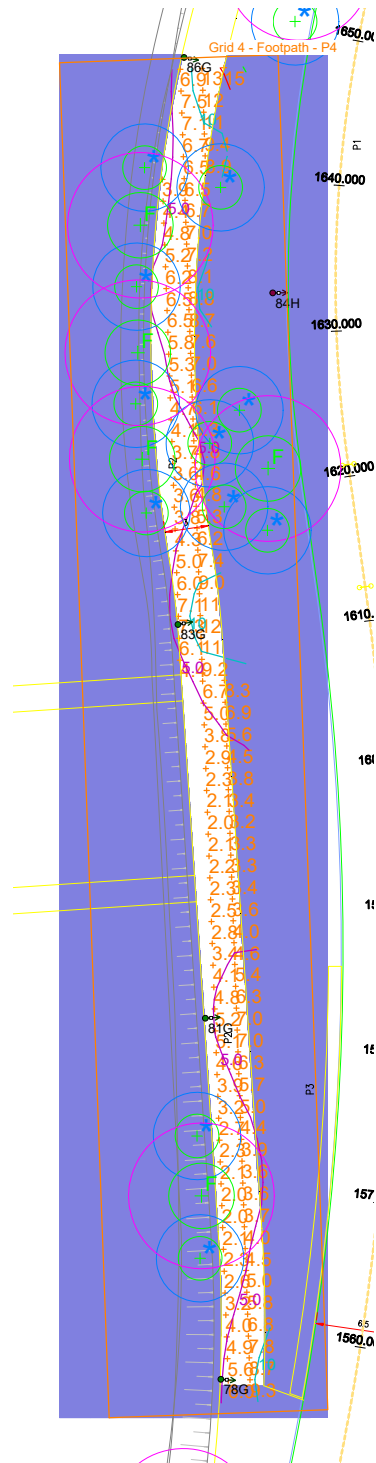


Results

Eav	5.97
Emin	1.49
E _{max}	19.87
Emin/E _{max}	0.08
Emin/Eav	0.25

Horizontal Illuminance (lux)

Grid 4 - Footpath - P4

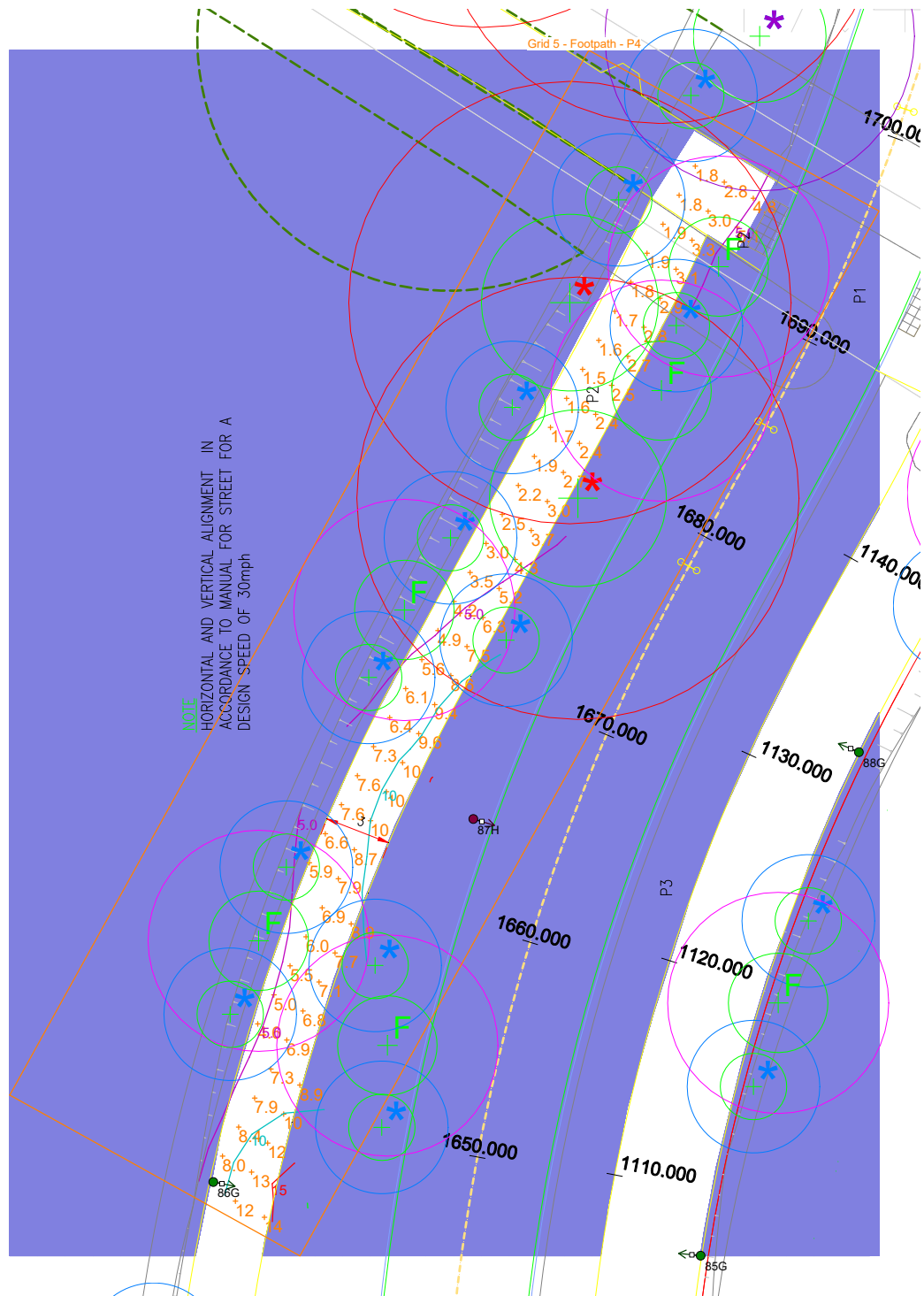


Results

Eav	5.51
Emin	1.98
Emax	15.39
Emin/Emax	0.13
Emin/Eav	0.36

Horizontal Illuminance (lux)

Grid 5 - Footpath - P4

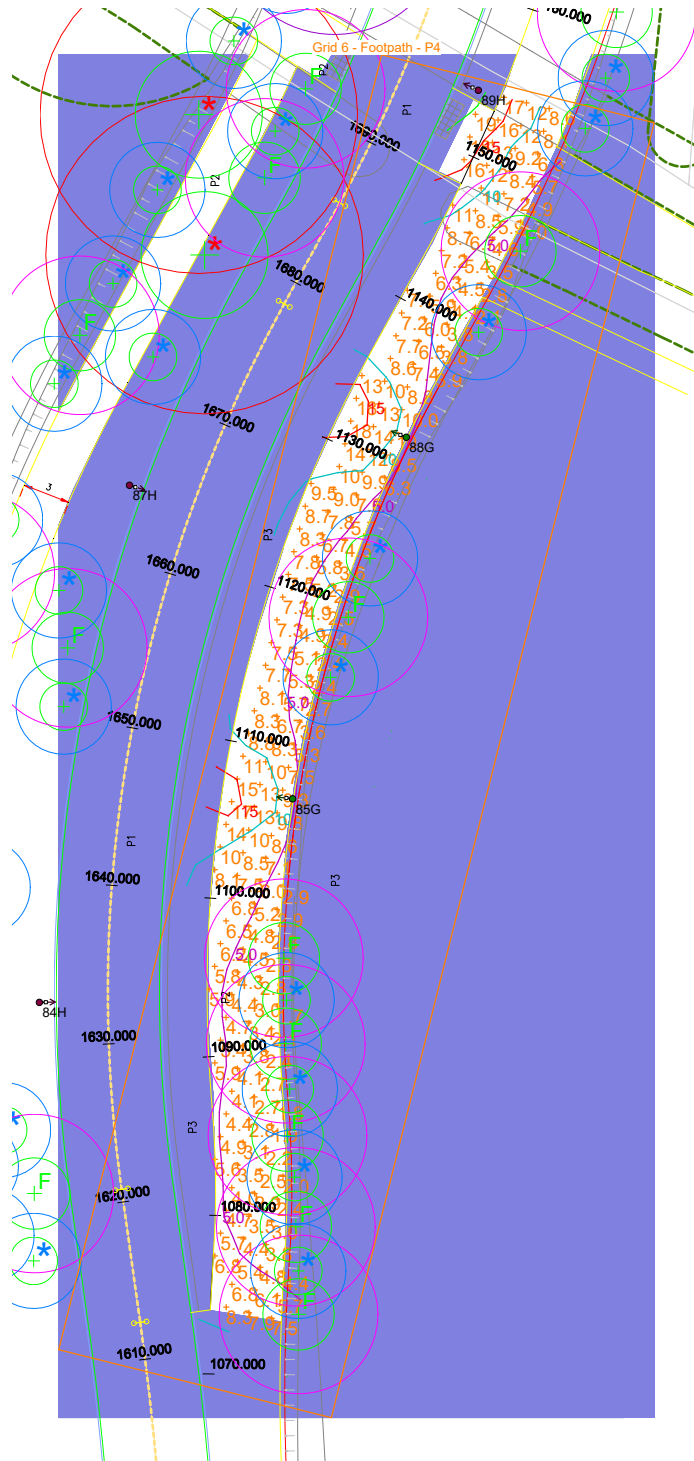


Results

Eav	5.63
Emin	1.51
Emax	14.11
Emin/Emax	0.11
Emin/Eav	0.27

Horizontal Illuminance (lux)

Grid 6 - Footpath - P4

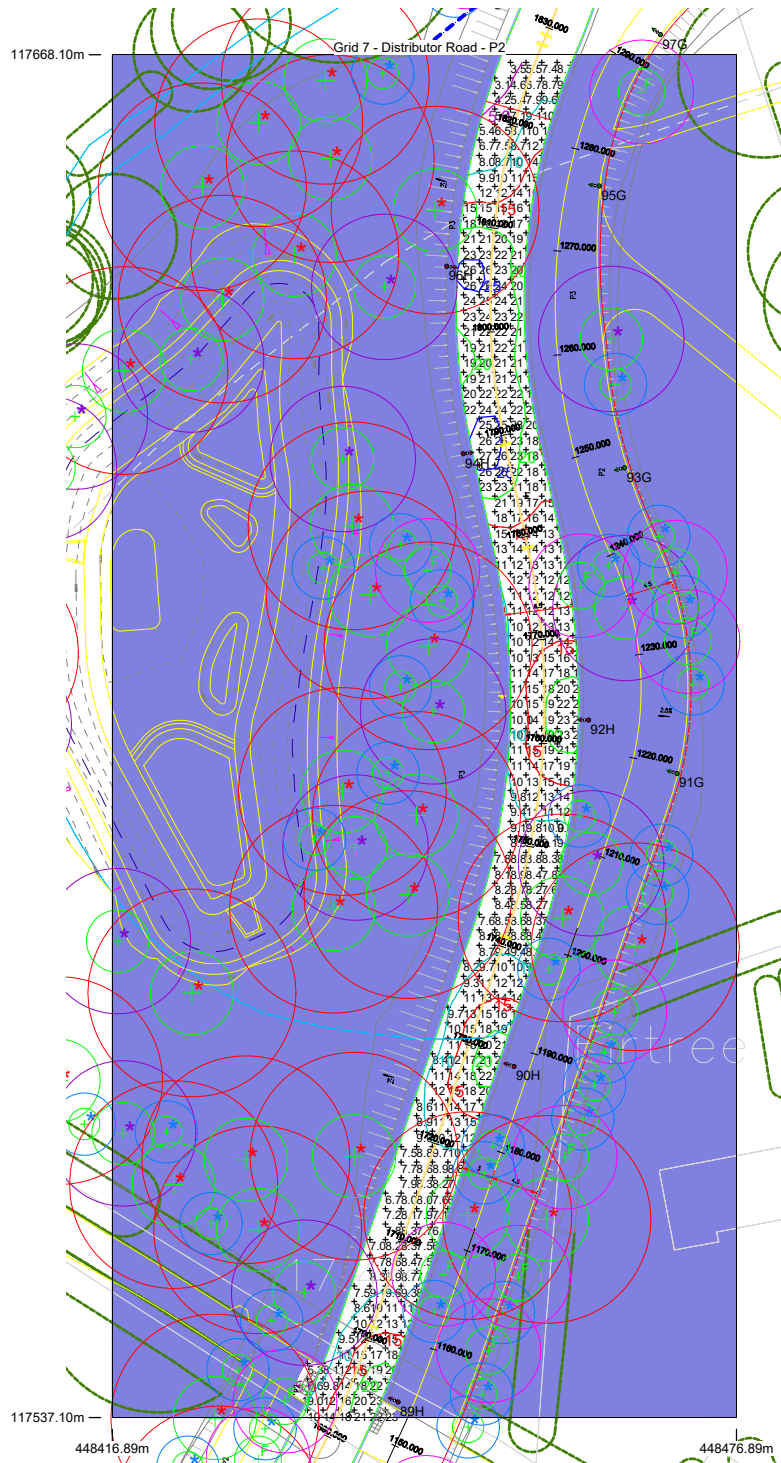


Results

Eav	6.92
Emin	1.75
Emax	19.49
Emin/Emax	0.09
Emin/Eav	0.25

Horizontal Illuminance (lux)

Grid 7 - Distributor Road - P2



Results

Eav	13.98
Emin	3.09
Emax	27.12
Emin/Emax	0.11
Emin/Eav	0.22

Horizontal Illuminance (lux)

Grid 8 - Footpath - P4

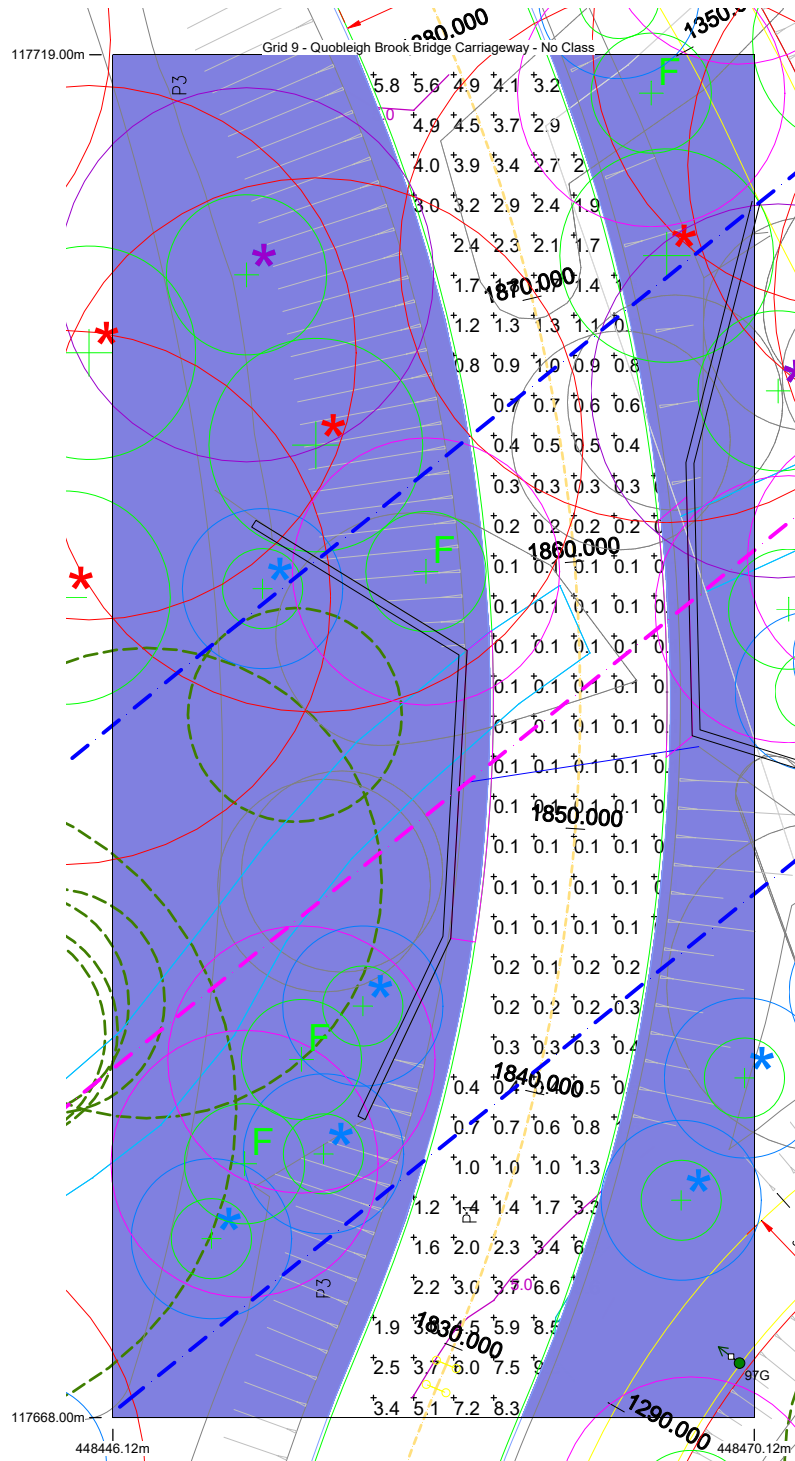


Results

Eav	7.39
Emin	1.27
Emax	20.28
Emin/Emax	0.06
Emin/Eav	0.17

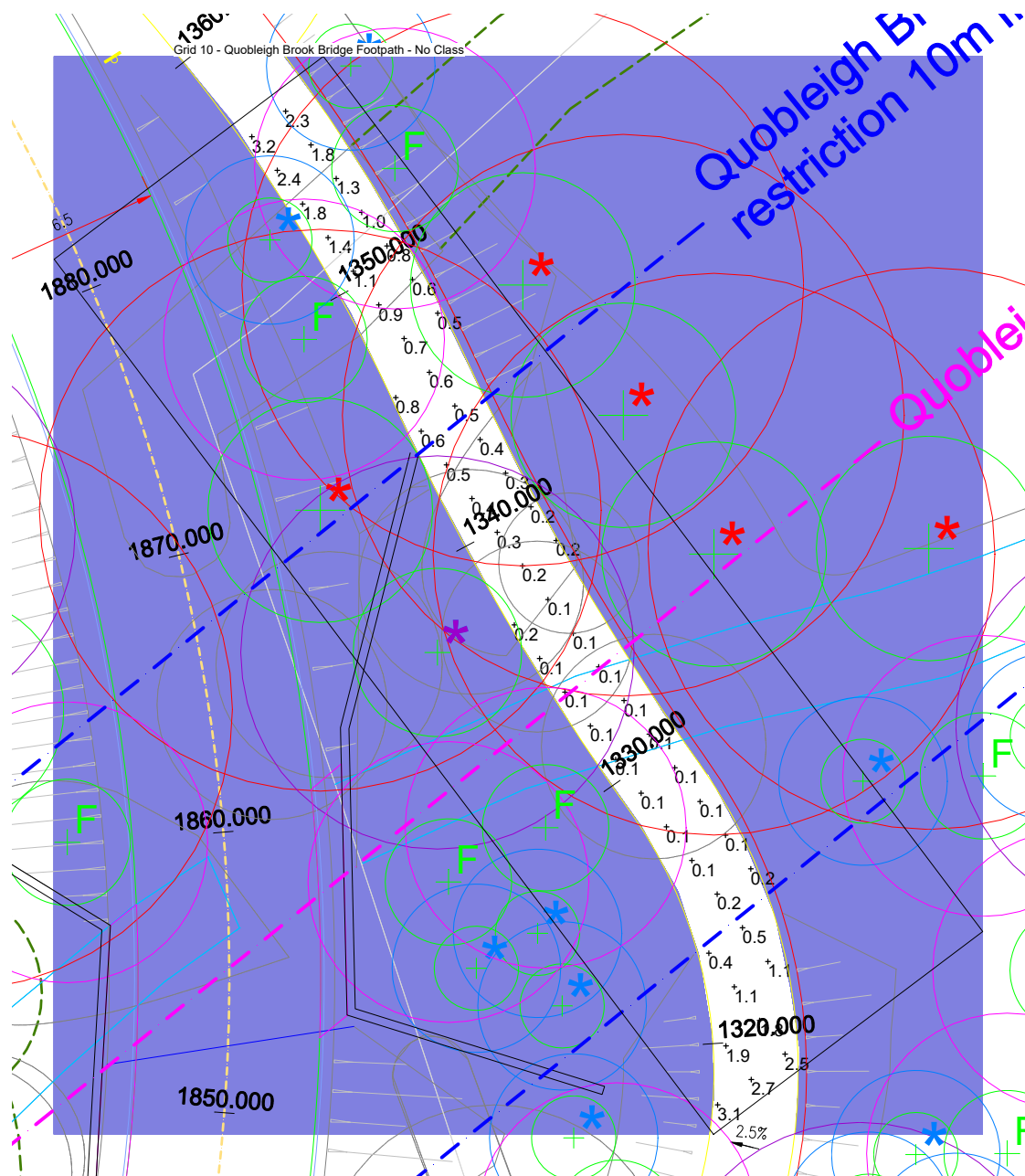
Horizontal Illuminance (lux)

Grid 9 - Quobleigh Brook Bridge Carriageway - No Class



Horizontal Illuminance (lux)

Grid 10 - Quobleigh Brook Bridge Footpath - No Class



Results

Eav	0.78
Emin	0.05
E _{max}	3.16
Emin/E _{max}	0.02
Emin/Eav	0.07

Horizontal Illuminance (lux)

Grid 11 - Distributor Road - P2



Results

Eav	14.70
Emin	2.90
Emax	26.28
Emin/Emax	0.11
Emin/Eav	0.20