

DATE: 4 November 2024
DESIGNER: YA
PROJECT No: Northern Arc Avenue
PROJECT NAME: P0103-150-CA01-02

**LIGHTING
REALITY**

P0103-150-CA01 - ILLUMINANCE CALCULATION

LIGHTING CLASS

ROADWAYS LIT TO M4

Outdoor Lighting Report

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 M4	529691.82	120650.07	227.76	65.13	1.50	1.48
2	Grid 2 M4	529906.20	120687.13	176.62	88.61	1.50	1.48
3	Grid 3 M4	530603.69	120758.98	110.83	34.38	1.50	1.49
4	Grid 4 M4	530467.32	120763.25	61.69	116.79	1.47	1.50
5	Grid 5 M4	530062.25	120753.75	314.02	82.20	1.50	1.49
6	Grid 6 C4	530482.11	120788.11	34.40	113.02	1.50	1.49
7	Grid 7 C4	530355.53	120850.11	69.93	28.20	1.49	1.48
8	Grid 8 C4/M4	530708.19	120789.67	83.42	71.32	1.49	1.49
9	Grid 9 P3	530359.93	120875.60	19.44	63.17	1.50	1.47
10	Grid 10 P3	530523.68	120691.60	38.36	66.83	1.48	1.49
11	Grid 11 P3	530346.90	120929.84	22.45	140.19	1.50	1.49
12	Grid 12 P3	530405.97	120878.35	21.21	66.42	1.41	1.48
13	Grid 13 M4	529652.79	120664.07	41.69	32.48	1.49	1.48
14	Grid 14	529783.01	120690.61	32.08	22.45	1.46	1.50
15	Grid 15	530009.61	120741.34	34.86	22.45	1.45	1.50
16	Grid 16	530069.41	120783.44	58.23	22.45	1.49	1.50
17	Grid 17	530230.46	120792.61	28.96	23.78	1.45	1.49

Luminaires

Luminaire A Data



Supplier	Urbis Schreder
Type	AXIA 3.1 5295 Integrated lenses 16 OSLO N SQUARE GIANT@870mA
Lamp(s)	16 OSLO N SQUARE GIANT@870mA NW 740 230V
LampFlux(klm)/Colour	5.72 NW 4000K/70
File Name	AXIA 3.1 5295 16 OSLO N SQUARE GIANT 870mA NW 740 44W 435822 Integrated le...
Maintenance Factor	0.94
Imax70,80,90(cd/klm)	711.2, 23.8, 0.0
No. in Project	56

Luminaire B Data



Supplier	Urbis Schreder
Type	AXIA 3.1 5384 Integrated lenses 16 OSLO N SQUARE GIANT@870mA
Lamp(s)	16 OSLO N SQUARE GIANT@870mA NW 740 230V 00-53-397
LampFlux(klm)/Colour	5.50 NW 4000K/70
File Name	AXIA 3.1 5384 16 OSLO N SQUARE GIANT 870mA NW 740 44W 487502 Integrated le...
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	1031.6, 225.6, 0.0
No. in Project	11

Luminaire C Data



Supplier	Urbis Schreder
Type	AXIA 3.2 5293 Integrated lenses 24 OSLO N SQUARE GIANT@900mA
Lamp(s)	24 OSLO N SQUARE GIANT@900mA NW 740 230V
LampFlux(klm)/Colour	8.65 NW 4000K/70
File Name	AXIA 3.2 5293 24 OSLO N SQUARE GIANT 900mA NW 740 68.5W 444502 Integrated ...
Maintenance Factor	0.94
Imax70,80,90(cd/klm)	625.2, 21.3, 0.0
No. in Project	16

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
1	A	529716.49	120698.96	8.00	280.00	0.00	0.00	0.40	100%			
2	A	529719.58	120682.78	8.00	100.00	0.00	0.00	0.40	100%			
3	A	529749.98	120704.19	8.00	276.00	0.00	0.00	0.40	100%			
4	A	529752.24	120688.08	8.00	103.00	0.00	0.00	0.40	100%			
5	A	529783.57	120709.67	8.00	280.00	0.00	0.00	0.40	100%			
6	A	529785.75	120693.12	8.00	95.00	0.00	0.00	0.40	100%			
7	A	529809.51	120713.56	8.00	277.00	0.00	0.00	0.40	100%			
8	A	529812.88	120696.96	8.00	100.00	0.00	0.00	0.40	100%			
9	A	529843.03	120702.25	8.00	104.00	0.00	0.00	0.40	100%			
10	A	529840.53	120718.36	8.00	276.00	0.00	0.00	0.40	100%			
11	A	529872.43	120723.44	8.00	279.00	0.00	0.00	0.40	100%			
12	A	529875.27	120707.41	8.00	101.00	0.00	0.00	0.40	100%			
13	A	529905.04	120728.63	8.00	280.00	0.00	0.00	0.40	100%			
14	A	529907.48	120712.30	8.00	98.00	0.00	0.00	0.40	100%			
15	A	529688.19	120694.56	8.00	280.00	0.00	0.00	0.40	100%			
16	A	529692.08	120677.90	8.00	100.00	0.00	0.00	0.40	100%			
17	A	529652.58	120688.94	8.00	282.00	0.00	0.00	0.40	100%			
18	A	529655.45	120669.73	8.00	98.00	0.00	0.00	0.40	100%			
19	A	529941.79	120719.49	8.00	107.00	0.00	0.00	0.40	100%			
20	A	529937.81	120735.46	8.00	287.00	0.00	0.00	0.40	100%			
21	A	529975.89	120730.23	8.00	110.00	0.00	0.00	0.40	100%			
22	A	529970.13	120745.47	8.00	294.00	0.00	0.00	0.40	100%			
23	A	530002.11	120759.14	8.00	301.00	0.00	0.00	0.40	100%			
24	A	530009.09	120743.90	8.00	117.00	0.00	0.00	0.40	100%			
25	A	530028.27	120773.39	8.00	297.00	0.00	0.00	0.40	100%			
26	A	530037.54	120759.27	8.00	133.00	0.00	0.00	0.40	100%			
27	A	530055.93	120791.43	8.00	301.00	0.00	0.00	0.40	100%			
28	A	530065.29	120778.08	8.00	129.00	0.00	0.00	0.40	100%			
29	A	530099.15	120812.07	8.00	290.00	0.00	0.00	0.40	100%			
30	A	530104.21	120799.47	8.00	110.00	0.00	0.00	0.40	100%			
31	A	530129.69	120818.58	8.00	275.00	0.00	0.00	0.40	100%			
32	A	530131.11	120804.25	8.00	95.00	0.00	0.00	0.40	100%			
33	A	530167.65	120817.59	8.00	263.00	0.00	0.00	0.40	100%			
35	A	530203.36	120811.10	8.00	266.00	0.00	0.00	0.40	100%			
36	A	530201.93	120794.32	8.00	93.00	0.00	0.00	0.40	100%			
37	A	530229.67	120811.21	8.00	277.00	0.00	0.00	0.40	100%			

Layout Continued

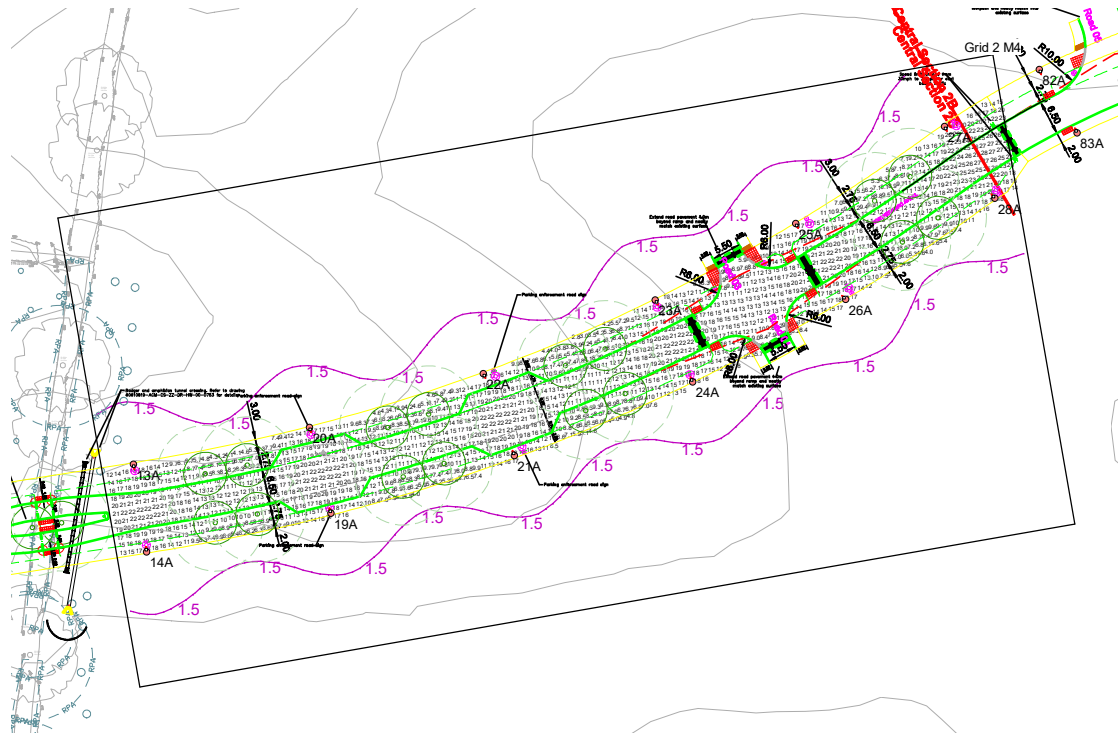
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
38	A	530230.30	120794.84	8.00	99.00	0.00	0.00	0.40	100%			
39	A	530254.24	120815.69	8.00	284.00	0.00	0.00	0.40	100%			
40	A	530258.38	120799.65	8.00	111.00	0.00	0.00	0.40	100%			
41	A	530300.38	120837.34	8.00	299.00	0.00	0.00	0.40	100%			
43	A	530331.43	120859.82	8.00	297.00	0.00	0.00	0.40	100%			
44	A	530340.69	120844.48	8.00	119.00	0.00	0.00	0.40	100%			
45	C	530354.59	120874.14	8.00	295.00	0.00	0.00	0.40	100%			
49	A	530430.58	120849.70	8.00	35.00	0.00	0.00	0.40	100%			
49	C	530528.62	120781.40	8.00	276.00	0.00	0.00	0.40	100%			
53	C	530751.44	120828.63	8.00	76.00	0.00	0.00	0.40	100%			
54	C	530715.99	120858.01	8.00	274.00	0.00	0.00	0.40	100%			
55	C	530680.41	120842.45	8.00	305.00	0.00	0.00	0.40	100%			
56	C	530690.58	120825.43	8.00	122.00	0.00	0.00	0.40	100%			
59	A	530649.44	120817.82	8.00	308.00	0.00	0.00	0.40	100%			
60	A	530661.05	120802.62	8.00	128.00	0.00	0.00	0.40	100%			
61	A	530625.98	120799.34	8.00	302.00	0.00	0.00	0.40	100%			
62	A	530637.58	120783.63	8.00	125.00	0.00	0.00	0.40	100%			
63	C	530597.76	120772.44	8.00	98.00	0.00	0.00	0.40	100%			
65	C	530553.54	120765.10	8.00	98.00	0.00	0.00	0.40	80%			
70	B	530529.14	120752.56	6.00	3.00	0.00	0.00	0.40	100%			
75	A	530476.40	120795.56	8.00	34.00	0.00	0.00	0.40	100%			
77	C	530486.50	120777.95	8.00	40.00	0.00	0.00	0.40	100%			
78	C	530567.68	120786.70	8.00	276.00	0.00	0.00	0.40	80%			
76	A	530166.72	120800.49	8.00	87.00	0.00	0.00	0.40	100%			
77	A	530309.38	120824.14	8.00	132.00	0.00	0.00	0.40	100%			
78	C	530396.61	120879.75	8.00	270.00	0.00	0.00	0.40	100%			
77	C	530749.91	120856.49	8.00	262.00	0.00	0.00	0.40	100%			
78	C	530720.90	120834.48	8.00	91.00	0.00	0.00	0.40	100%			
79	B	530361.20	120889.12	6.00	16.00	0.00	0.00	0.40	100%			
81	B	530345.05	120941.43	6.00	34.00	0.00	0.00	0.40	100%			
82	B	530355.08	120914.73	6.00	16.00	0.00	0.00	0.40	100%			
82	B	530533.28	120724.24	6.00	359.00	0.00	0.00	0.40	100%			
81	C	530506.13	120759.97	8.00	70.00	0.00	0.00	0.40	100%			
78	B	530324.67	120972.63	6.00	31.00	0.00	0.00	0.40	100%			
79	B	530393.61	120892.58	6.00	41.00	0.00	0.00	0.40	100%			
80	A	530446.21	120831.91	8.00	36.00	0.00	0.00	0.40	100%			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out- reach	Dimmed to	Target X	Target Y	Target Z
81	A	530460.76	120815.37	8.00	38.00	0.00	0.00	0.40	100%			
82	B	530303.95	121002.80	6.00	40.00	0.00	0.00	0.40	100%			
83	B	530284.59	121034.88	6.00	27.00	0.00	0.00	0.40	100%			
76	B	530528.44	120711.45	6.00	304.00	0.00	0.00	0.40	100%			
85	B	530371.17	120918.32	6.00	31.00	0.00	0.00	0.40	100%			
82	A	530073.60	120802.03	8.00	291.00	0.00	0.00	0.40	100%			
83	A	530080.63	120790.26	8.00	116.00	0.00	0.00	0.40	100%			
84	A	530273.20	120822.11	8.00	288.00	0.00	0.00	0.40	100%			
85	A	530280.10	120807.15	8.00	122.00	0.00	0.00	0.40	100%			
86	C	530374.47	120860.66	8.00	110.00	0.00	0.00	0.40	100%			
87	C	530420.92	120873.28	8.00	251.00	0.00	0.00	0.40	100%			

Horizontal Illuminance (lux)

Grid 2 M4



Results

Eav	14.09
Emin	2.77
Emax	27.51
Emin/Emax	0.10
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 3 M4

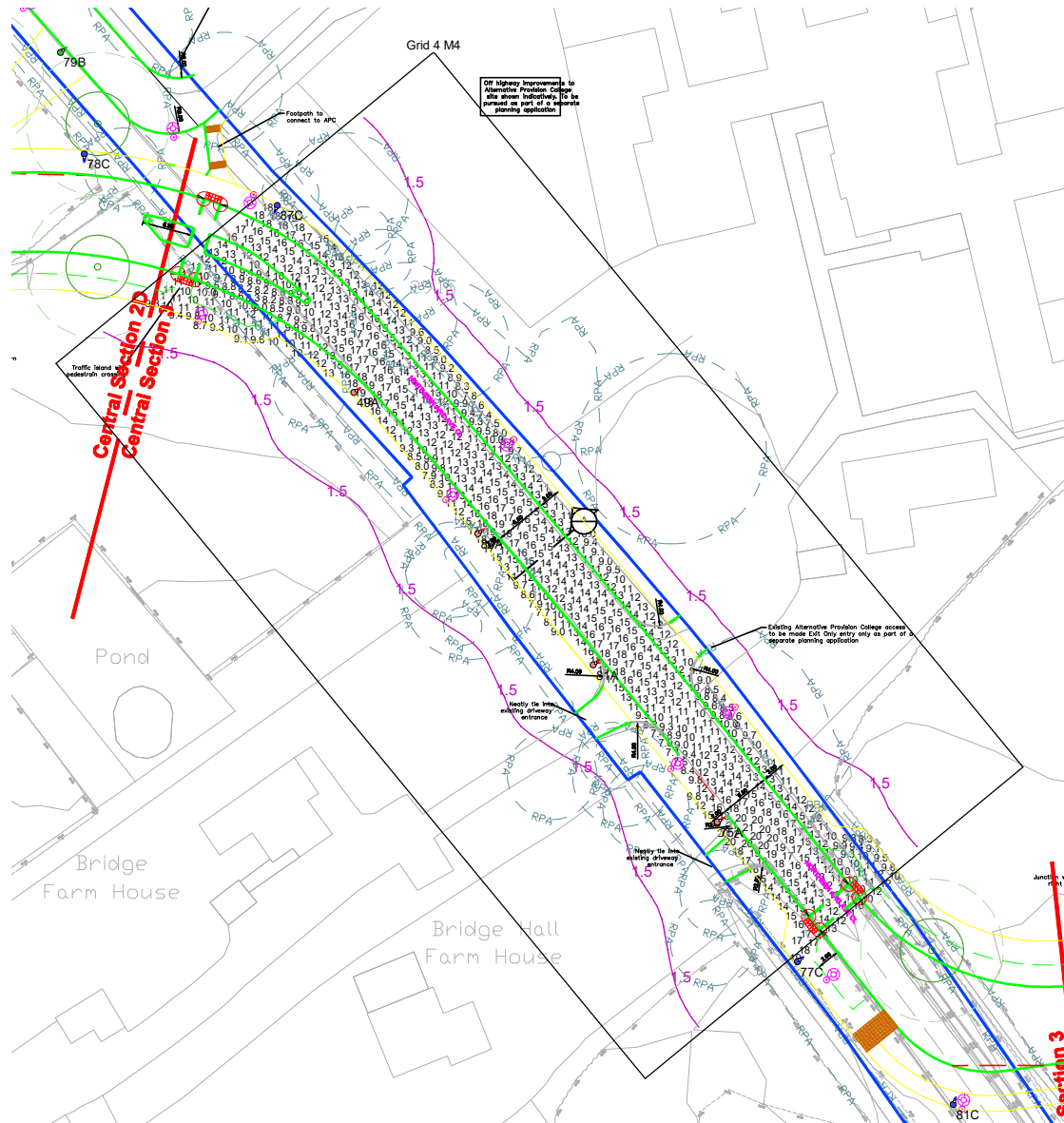


Results

Eav	11.37
Emin	2.47
E _{max}	23.28
Emin/E _{max}	0.11
Emin/Eav	0.22

Horizontal Illuminance (lux)

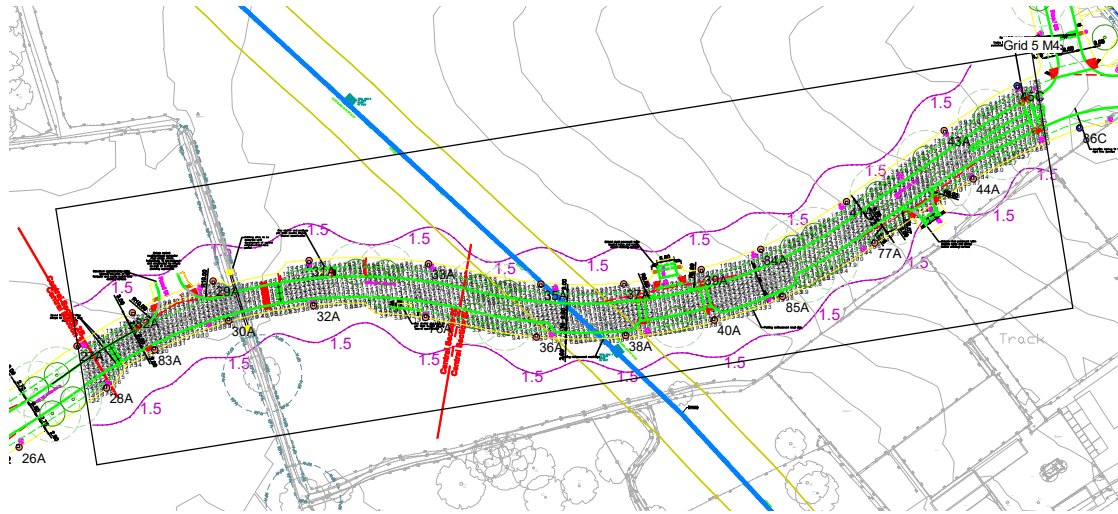
Grid 4 M4



Results

Eav	12.96
Emin	7.03
Emax	20.84
Emin/Emax	0.34
Emin/Eav	0.54

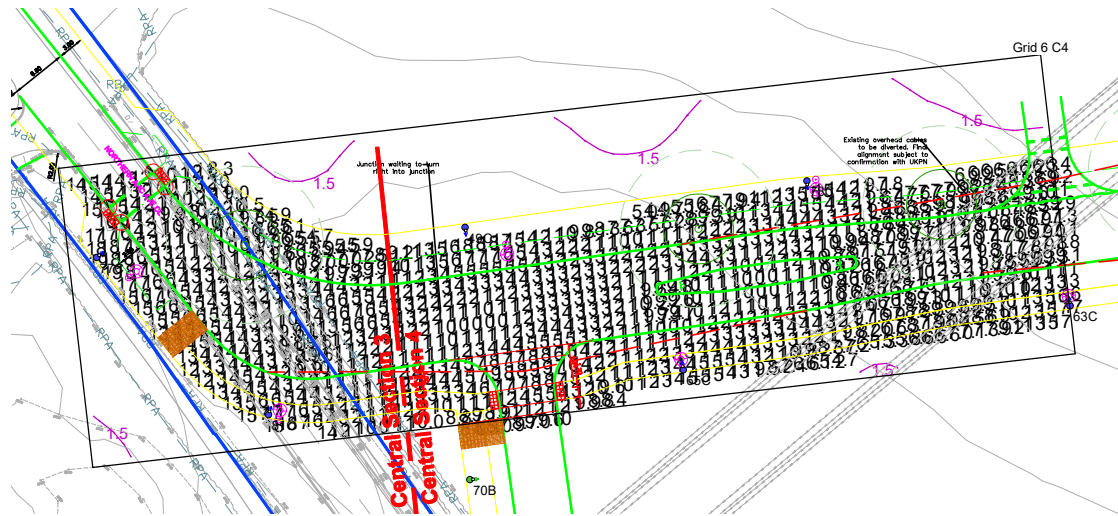
Grid 5 M4



Eav	15.78
Emin	3.36
Emax	29.75
Emin/Emax	0.11
Emin/Eav	0.21

Horizontal Illuminance (lux)

Grid 6 C4

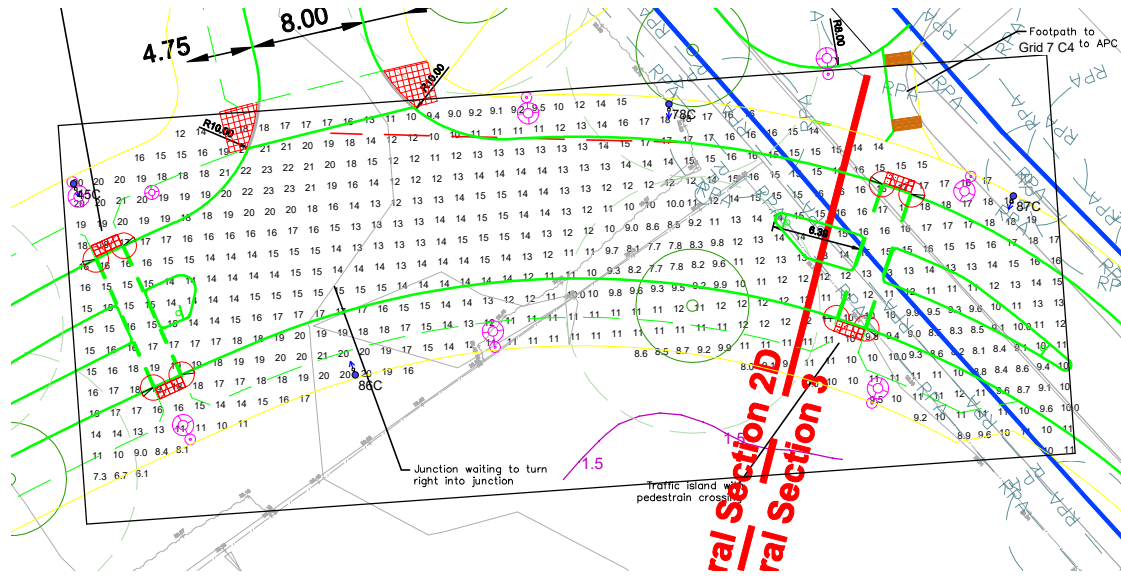


Results

Eav	11.60
Emin	4.65
Emax	19.20
Emin/Emax	0.24
Emin/Eav	0.40

Horizontal Illuminance (lux)

Grid 7 C4

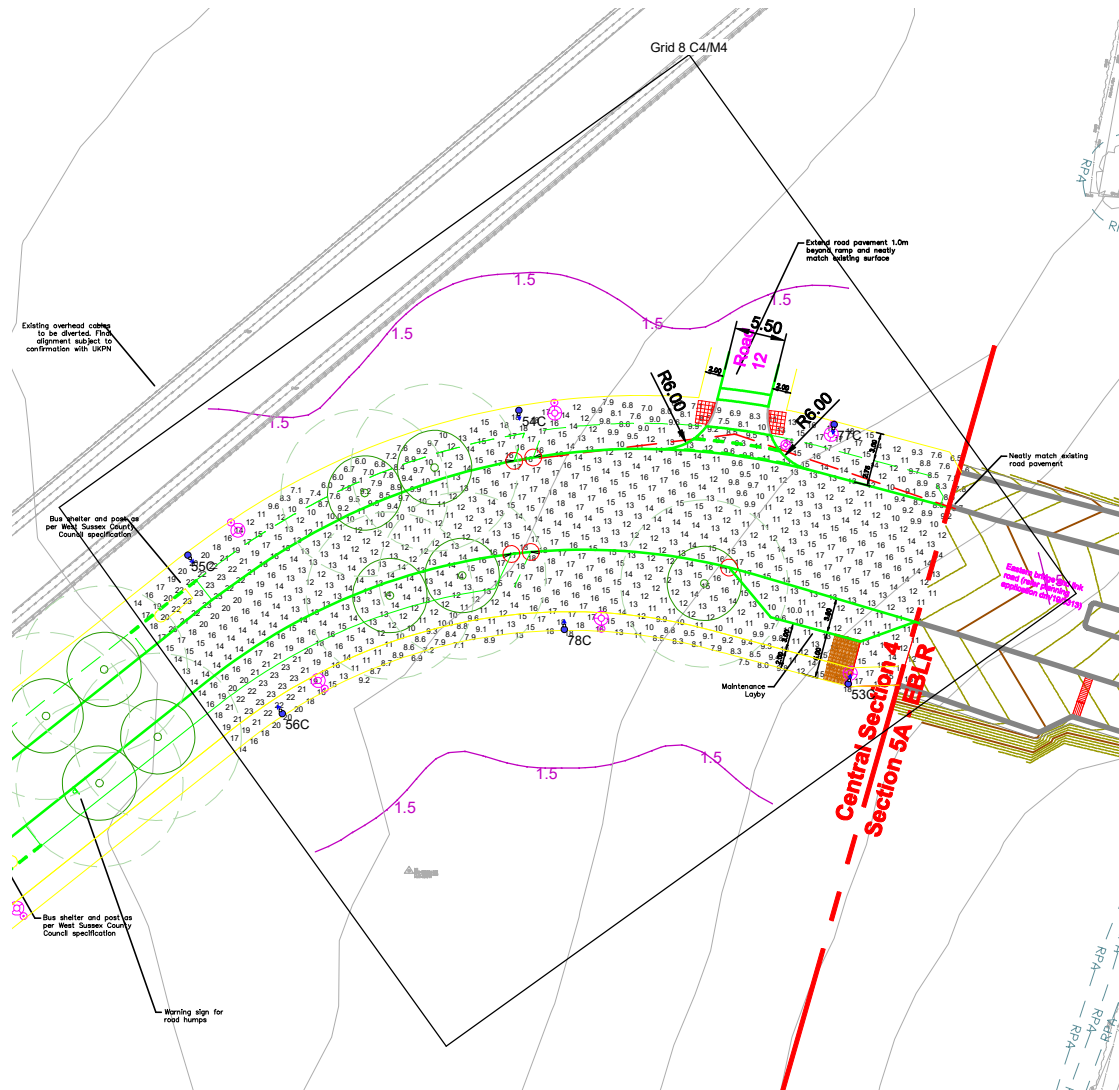


Results

Eav	13.90
Emin	6.08
Emax	22.95
Emin/Emax	0.27
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 8 C4/M4

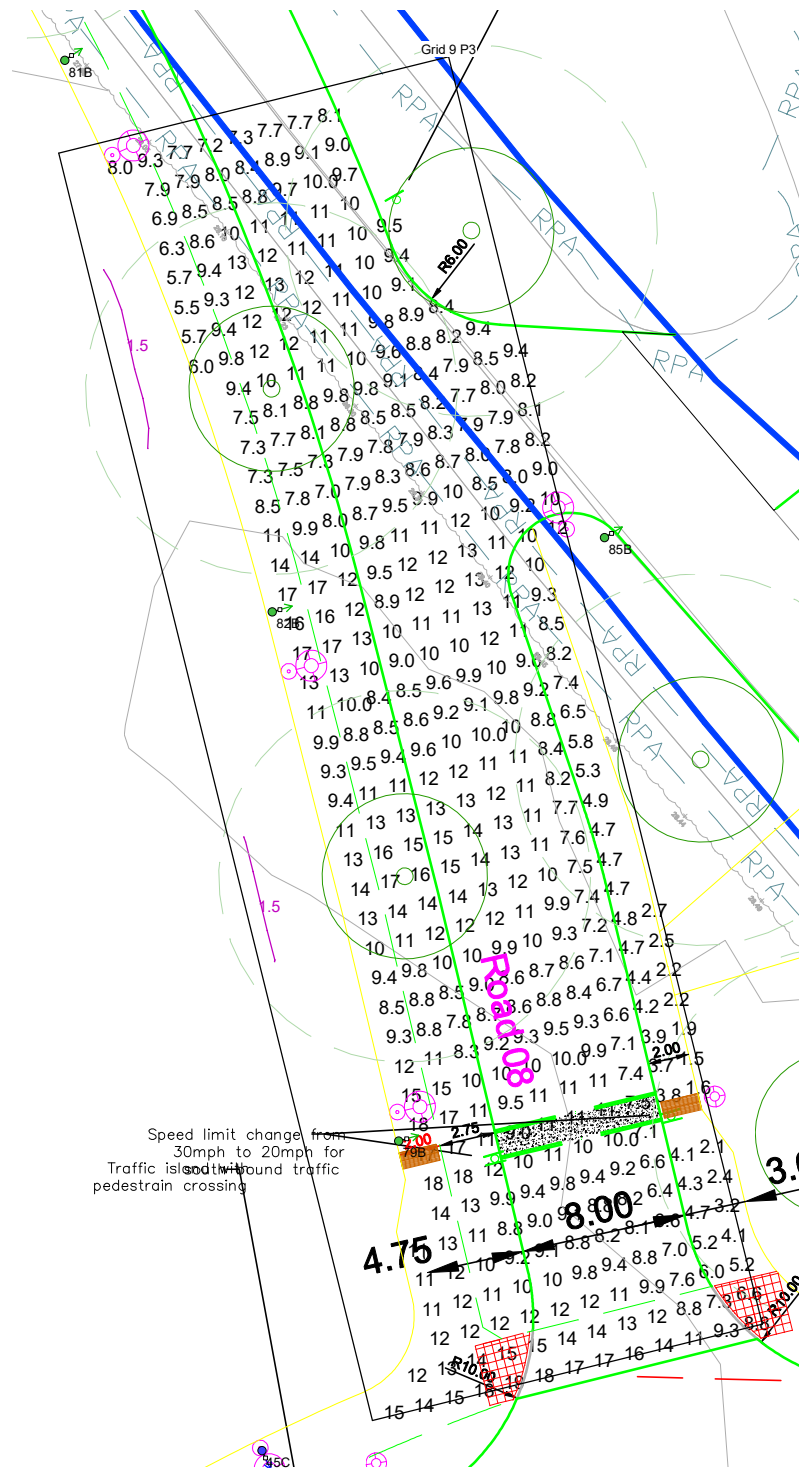


Results

Eav	13.65
Emin	5.96
Emax	23.40
Emin/Emax	0.25
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 9 P3

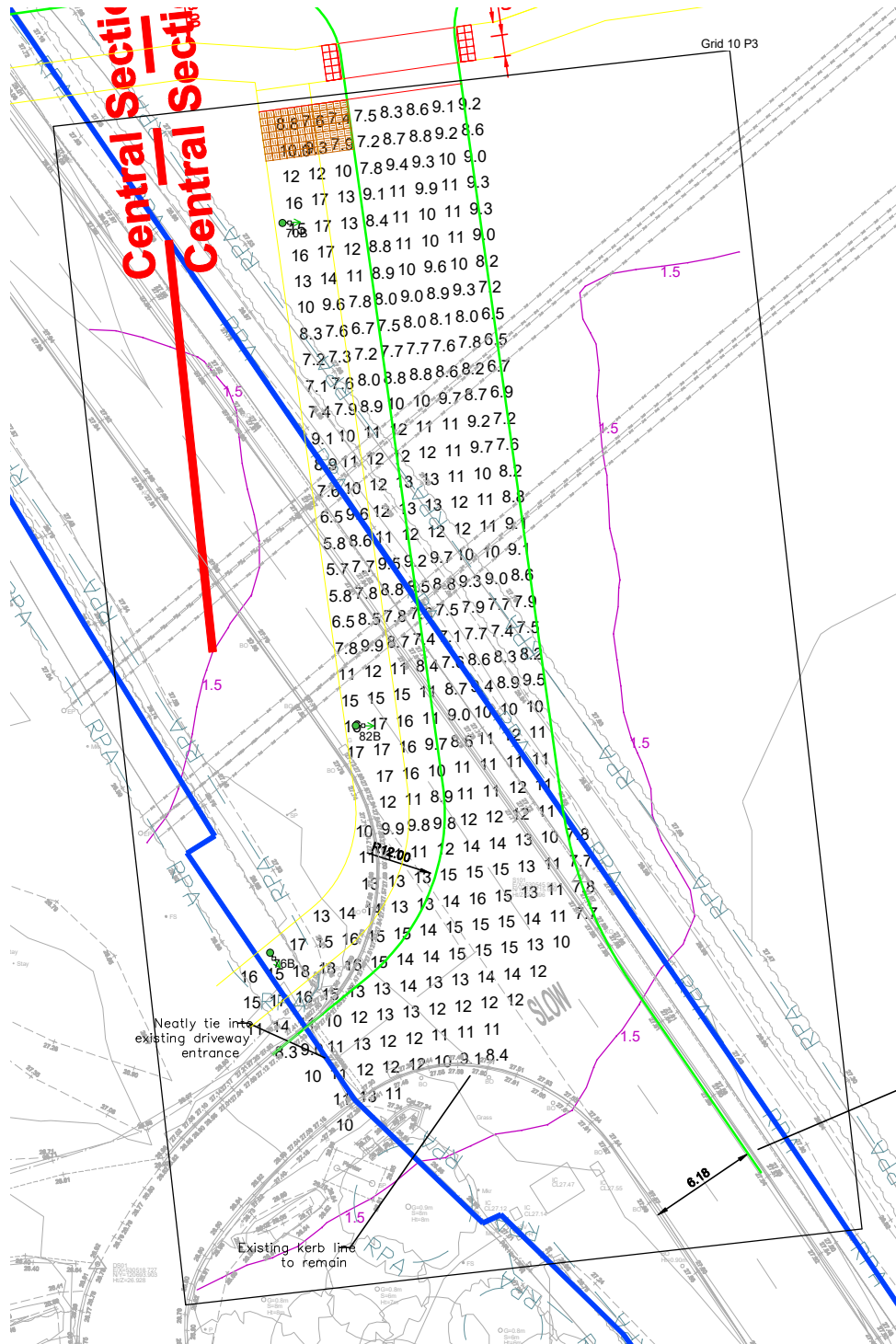


Results

Eav	9.91
Emin	1.53
Emax	19.16
Emin/Emax	0.08
Emin/Eav	0.15

Horizontal Illuminance (lux)

Grid 10 P3



Results

Eav	10.84
Emin	5.67
Emax	18.50
Emin/Emax	0.31
Emin/Eav	0.52

Horizontal Illuminance (lux)

Grid 11 P3

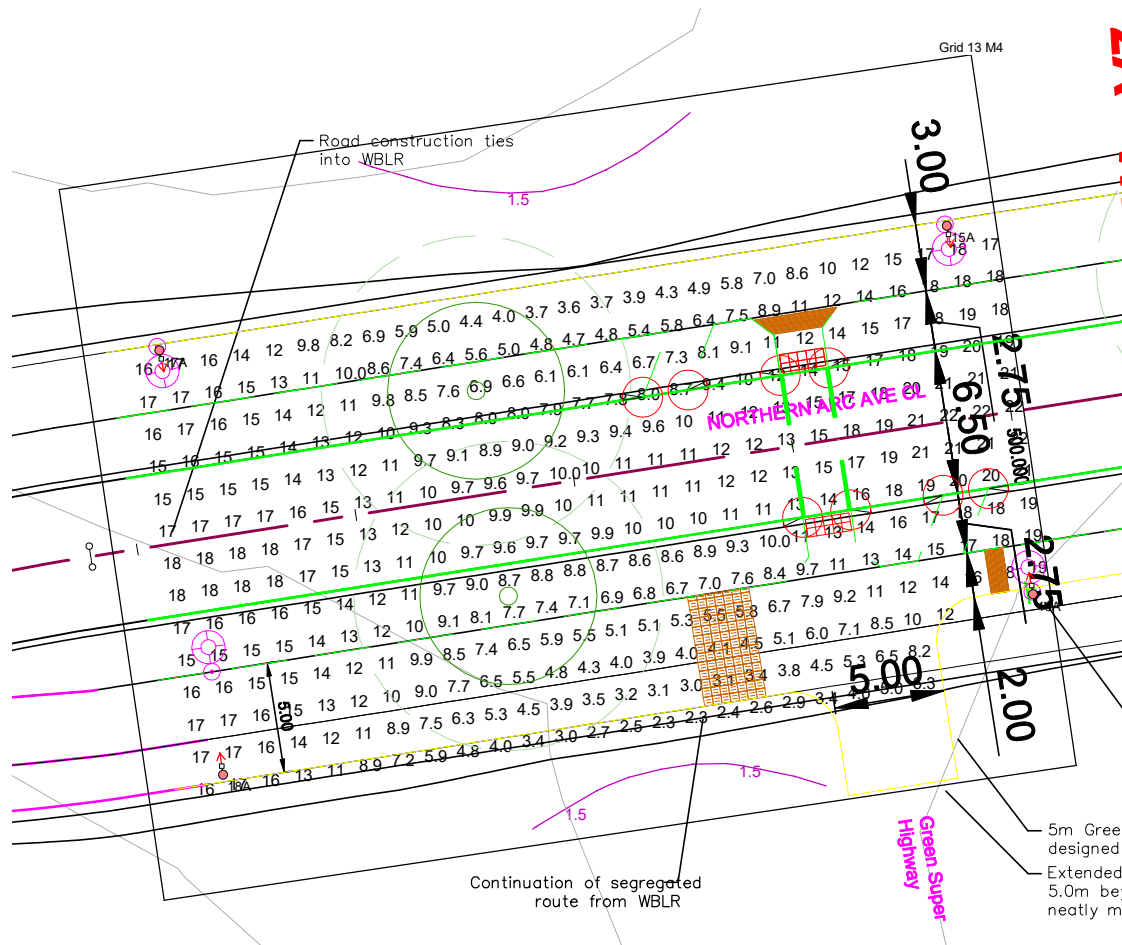


Results

Eav	13.90
Emin	6.08
Emax	22.95
Emin/Emax	0.27
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 13 M4

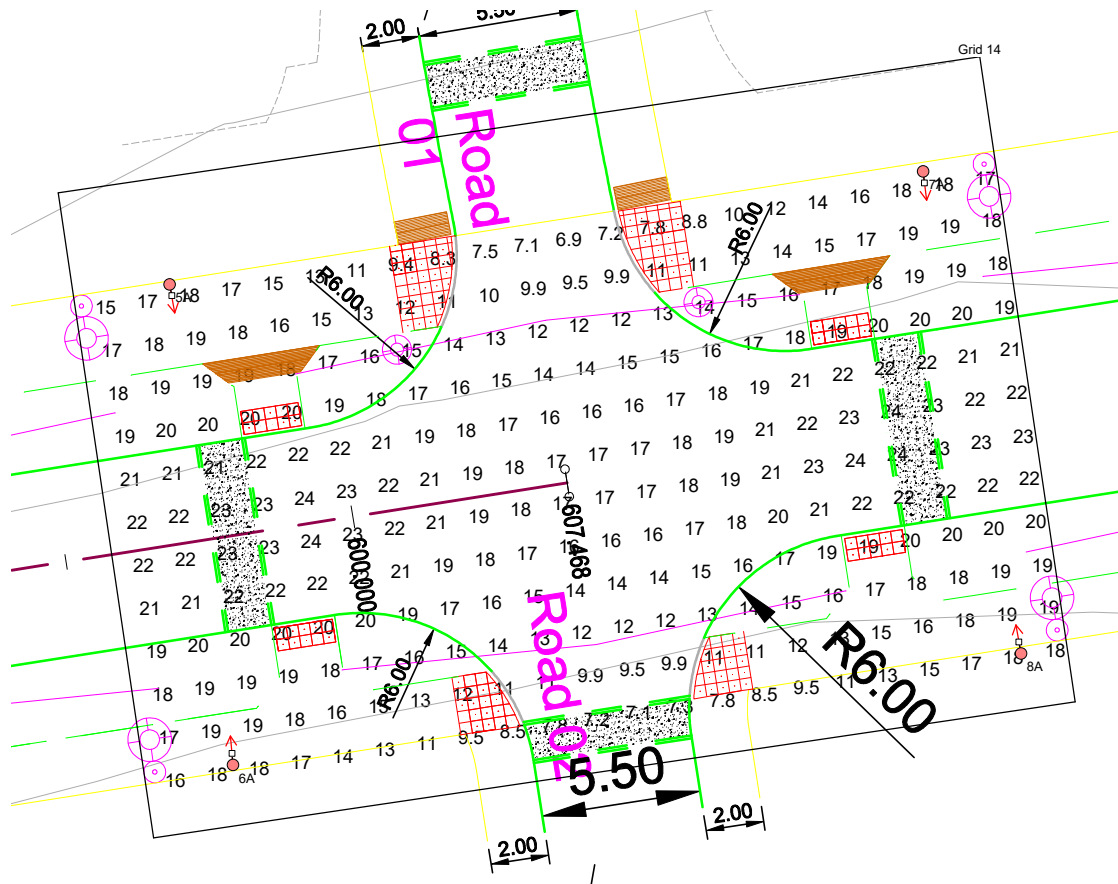


Results

Eav	13.90
Emin	6.08
Emax	22.95
Emin/Emax	0.27
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 14

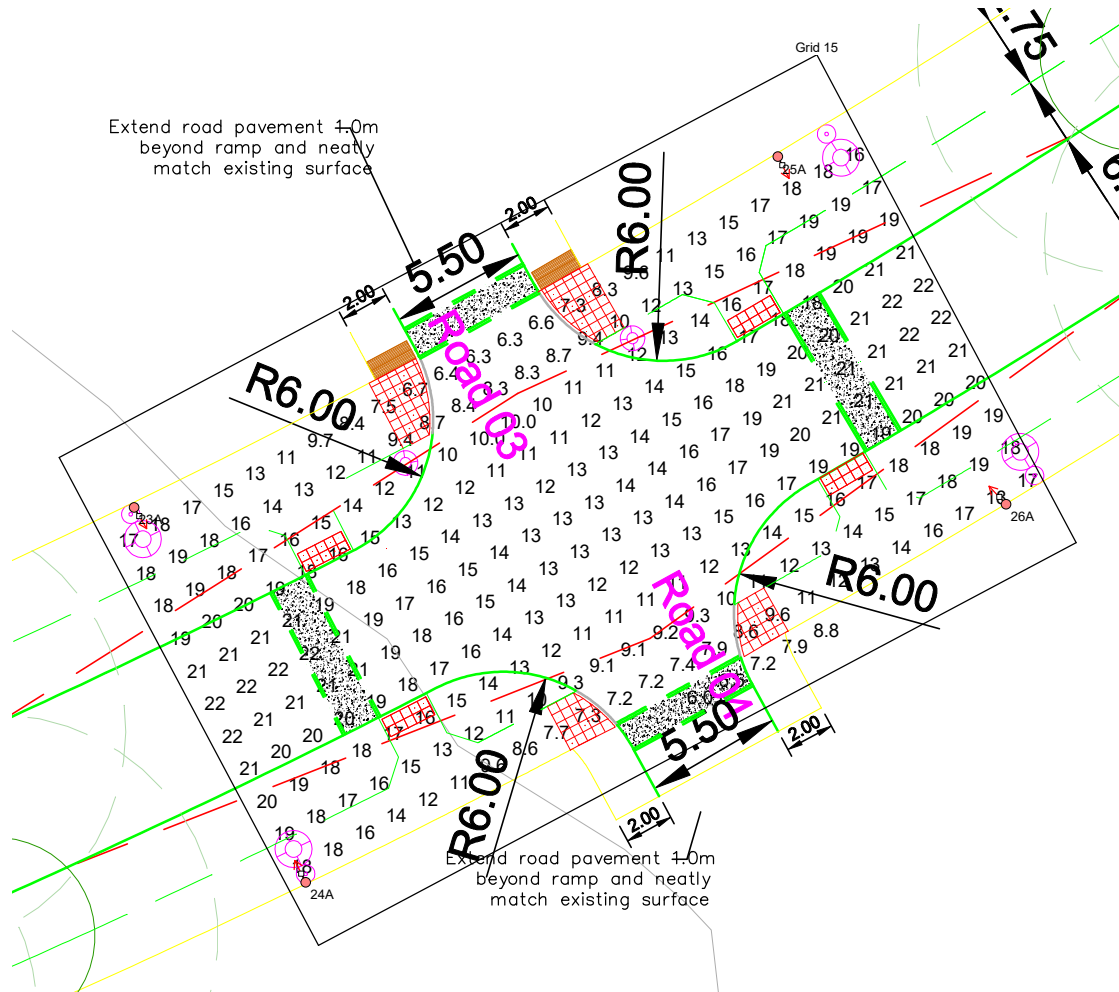


Results

Eav	13.90
Emin	6.08
Emax	22.95
Emin/Emax	0.27
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 15

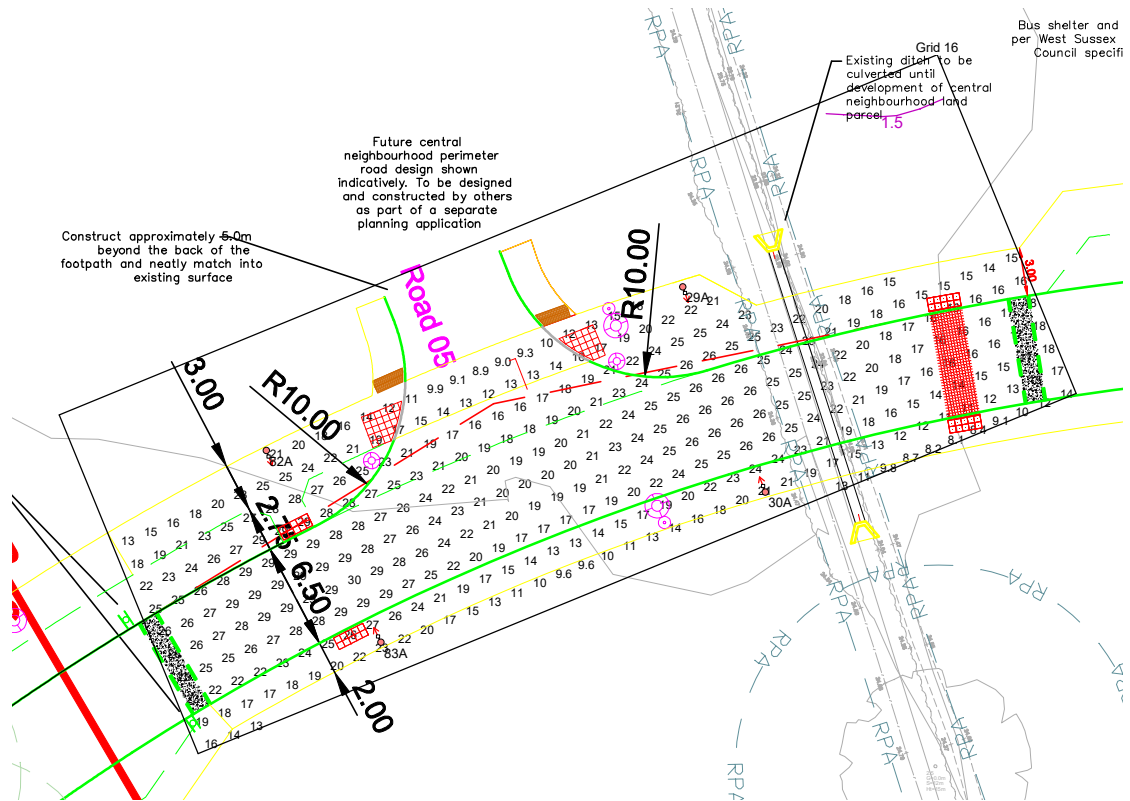


Results

Eav	13.90
Emin	6.08
Emax	22.95
Emin/Emax	0.27
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 16

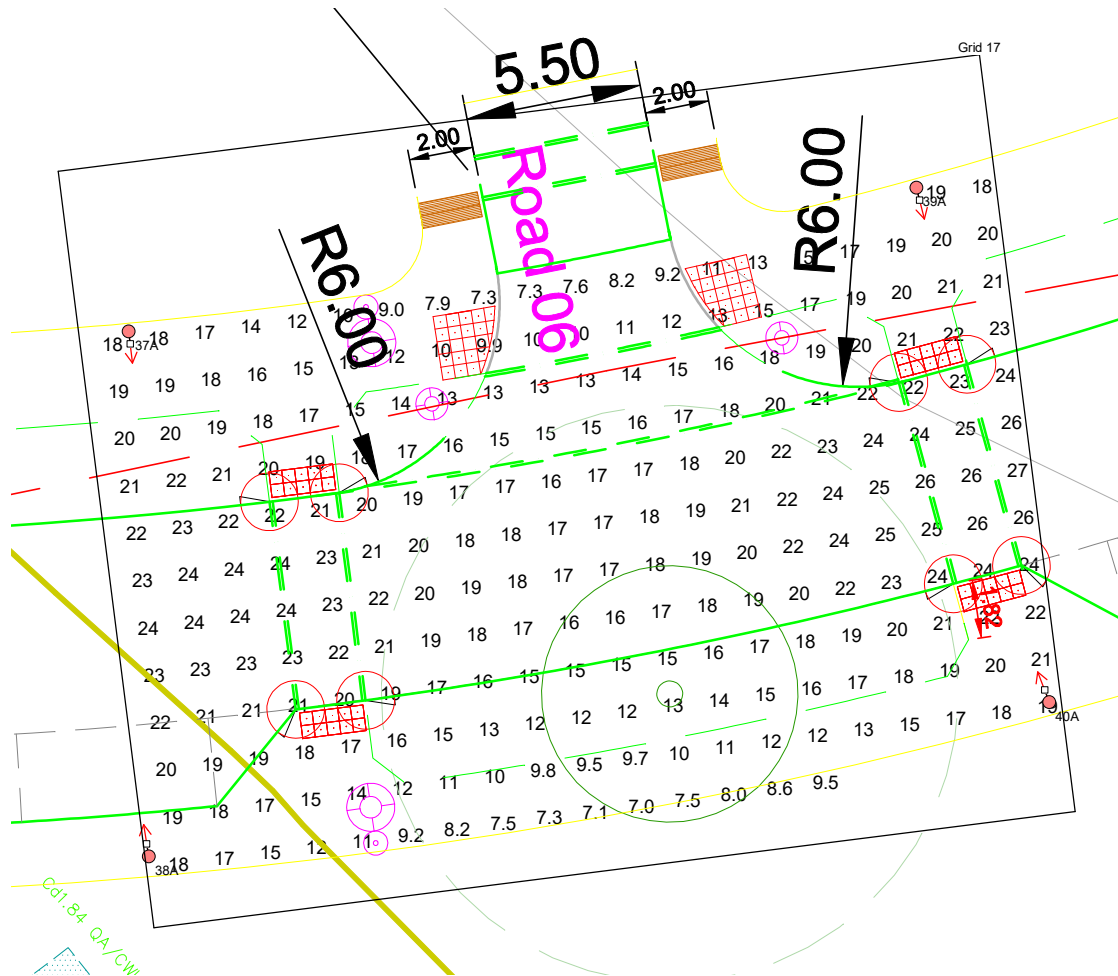


Results

Eav	13.90
Emin	6.08
Emax	22.95
Emin/Emax	0.27
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 17



Results

Eav	13.90
Emin	6.08
Emax	22.95
Emin/Emax	0.27
Emin/Eav	0.44