

DATE: May 2023
DESIGNER: M Crane
PROJECT No: BC-21-511
PROJECT NAME: Five Points Roundabout



Document: BC-21-511-3.1-002
Proposed Lighting Area Calculation

Proposed Lighting Report

PREPARED BY: Michael Crane
Lighting and Technology Design | Ringway Jacobs Ltd

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 - Roundabout (C3)...	502034.93	182804.14	114.97	92.23	1.49	1.49
2	Grid 2 - Uxbridge Rd (M4)...	501873.10	182776.15	183.81	40.08	1.49	1.48
3	Grid 3 - Pinewood Rd (M5)...	502056.05	182884.62	27.81	59.04	1.46	1.48
4	Grid 4 - Church Rd (M4)...	502099.15	182894.11	31.71	90.42	1.44	1.48
5	Grid 5 - Slough Rd (M4)...	502142.03	182848.89	140.86	30.12	1.50	1.43
6	Grid 6 - Wood La (M4)	502073.73	182687.19	36.50	125.99	1.46	1.50

Luminaires

Luminaire F Data

Supplier	
Type	HWD6-#3K052 350-M1-CLO Gen 5
Lamp(s)	LED 3000K
LampFlux(klm)/Colour	6.55 3000/72
File Name	Type F HWD6-#3K052 350-M1-CLO (53W). .ldt
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	592.4, 139.0, 0.3
No. in Project	9

Luminaire H Data

Supplier	
Type	HWD6-#3K068 350-M1-CLO Gen 5
Lamp(s)	LED 3000K
LampFlux(klm)/Colour	8.87 3000/72
File Name	Type H HWD6-#3K068 350-M1-CLO (67W). .ldt
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	581.2, 235.4, 0.5
No. in Project	6

Luminaire I Data

Supplier	
Type	HWD6-#3K100 350-M1-CLO Gen 5
Lamp(s)	LED 3000K
LampFlux(klm)/Colour	13.06 3000/72
File Name	Type I HWD6-#3K100 350-M1-CLO (99W).ldt
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	587.0, 204.3, 0.3
No. in Project	3

Luminaire K Data

Supplier	
Type	Kirium 3 4K 700mA
Lamp(s)	45 x 2w LUXEON Tx LED 4k Cct SPR 1.5
Lamp Flux (klm)	11.35
File Name	K3 NW RD 700mA.ies
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	664.3, 26.5, 9.9
No. in Project	9



Luminaire M Data

Supplier	ASD Lighting
Type	HWD6-#3K084 350-M2-CLO Gen 5
Lamp(s)	LED 3000K
LampFlux(klm)/Colour	10.04 3000/72
File Name	HWD6-#3K084 350-M2-CLO (83W).ldt
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	846.2, 311.6, 0.5
No. in Project	12

Luminaire T Data

Supplier	
Type	Teceo 1_FG_5103_322761
Lamp(s)	48LED_NEUT_WH
Lamp Flux (klm)	11.79
File Name	Teceo 1_Flat Glass_5103_48_LED_NeutW h_700mA_LF#01_322761.ltd
Maintenance Factor	0.80
Imax70,80,90(cd/klm)	474.6, 129.6, 0.0
No. in Project	3

Layout

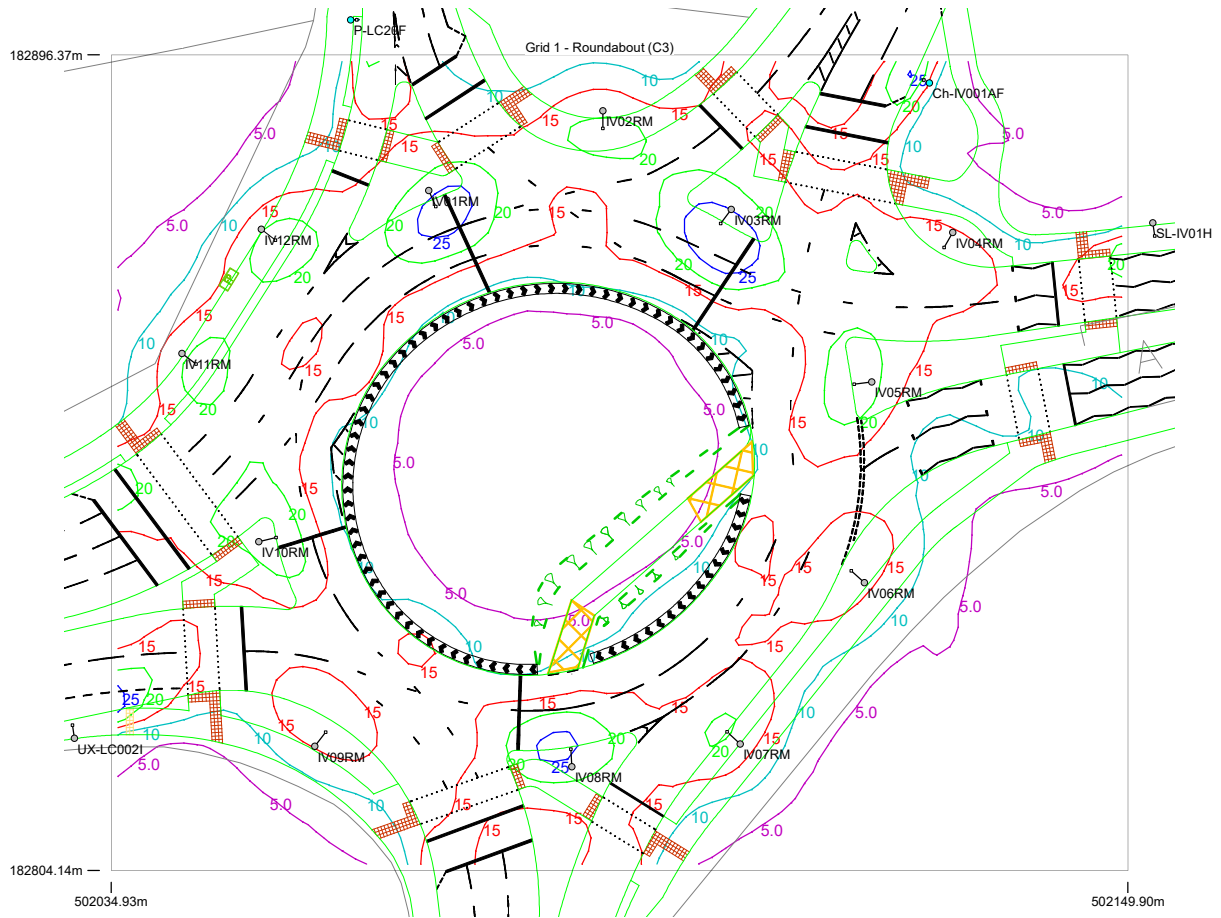
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
P-LC21	F	502059.08	182929.99	10.00	5.00	0.00	0.00	0.70			
IV12R	M	502051.90	182876.63	10.00	323.00	0.00	0.00	2.00			
IV01R	M	502070.82	182881.03	10.00	294.00	0.00	0.00	2.00			
Ch-IV001A	F	502127.41	182893.18	10.00	152.00	0.00	0.00	0.70			
IV03R	M	502105.04	182878.91	10.00	233.00	0.00	0.00	2.00			
IV05R	M	502120.91	182859.39	10.00	187.00	0.00	0.00	2.00			
IV07R	M	502106.03	182818.47	10.00	137.00	0.00	0.00	2.00			
IV08R	M	502087.01	182815.88	10.00	93.00	0.00	0.00	2.00			
Wd-IV11	F	502076.07	182751.96	10.00	3.00	0.00	0.00	1.50			
Wd-IV12	H	502069.43	182796.38	10.00	7.00	0.00	0.00	1.50			
IV09R	M	502057.96	182818.19	10.00	53.00	0.00	0.00	2.00			
IV10R	M	502051.62	182841.33	10.00	13.00	0.00	0.00	2.00			
IV11R	M	502042.92	182862.62	10.00	323.00	0.00	0.00	2.00			
IV02R	M	502090.53	182890.04	10.00	270.00	0.00	0.00	2.00			
UX-LC001	I	502025.68	182848.90	10.00	289.00	0.00	0.00	1.50			
UX-LC002	I	502030.77	182819.12	10.00	99.00	0.00	0.00	1.50			
UX-EX003	K	501985.76	182837.16	10.00	284.00	0.00	0.00	2.00			
UX-LC004	I	501991.93	182811.33	10.00	102.00	0.00	0.00	1.50			
UX-EX005	K	501952.40	182829.04	10.00	283.00	0.00	0.00	2.00			
UX-EX006	K	501959.30	182805.33	10.00	102.00	0.00	0.00	2.00			
UX-EX007	K	501913.82	182819.23	10.00	286.00	0.00	0.00	2.00			
UX-EX008	K	501919.17	182795.17	10.00	104.00	0.00	0.00	2.00			
UX-EX009	K	501872.67	182810.46	10.00	283.00	0.00	0.00	2.00			
UX-EX010	K	501876.45	182785.07	10.00	101.00	0.00	0.00	2.00			
UX-EX011	K	501830.99	182796.32	10.00	282.00	0.00	0.00	2.00			
UX-EX012	K	501836.79	182775.57	10.00	103.00	0.00	0.00	2.00			
Ch-IV002A	F	502141.04	182921.96	10.00	143.00	0.00	0.00	0.70			
Ch-IV002	F	502154.49	182944.71	10.00	140.00	0.00	0.00	0.70			
Ch-IV003	F	502170.87	182968.60	10.00	140.00	0.00	0.00	0.70			
IV06R	M	502120.08	182836.70	10.00	138.00	0.00	0.00	2.00			
SL-IV01A	H	502164.51	182856.54	10.00	106.00	0.00	0.00	1.50			
SL-IV03	H	502212.50	182869.44	10.00	104.00	0.00	0.00	1.50			
SL-IV04	T	502249.33	182878.71	8.00	106.00	0.00	0.00	2.00			
SL-IV05	T	502281.57	182887.24	8.00	106.00	0.00	0.00	2.00			
SL-IV06	T	502317.23	182896.13	8.00	106.00	0.00	0.00	2.00			
SL-IV01	H	502152.70	182877.35	10.00	278.00	0.00	0.00	1.50			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
IV04R	M	502130.08	182876.30	10.00	240.00	0.00	0.00	2.00			
SL-IV02	H	502185.20	182879.14	10.00	278.00	0.00	0.00	1.50			
Ch-IV001	F	502107.44	182902.35	10.00	323.00	0.00	0.00	0.70			
P-LC20	F	502061.99	182900.32	10.00	1.00	0.00	0.00	0.70			
Wd-IV13	H	502093.49	182795.77	10.00	163.00	0.00	0.00	1.50			
Wd-IV10	F	502079.24	182725.05	10.00	5.00	0.00	0.00	1.50			

Horizontal Illuminance (lux)

Grid 1 - Roundabout (C3)

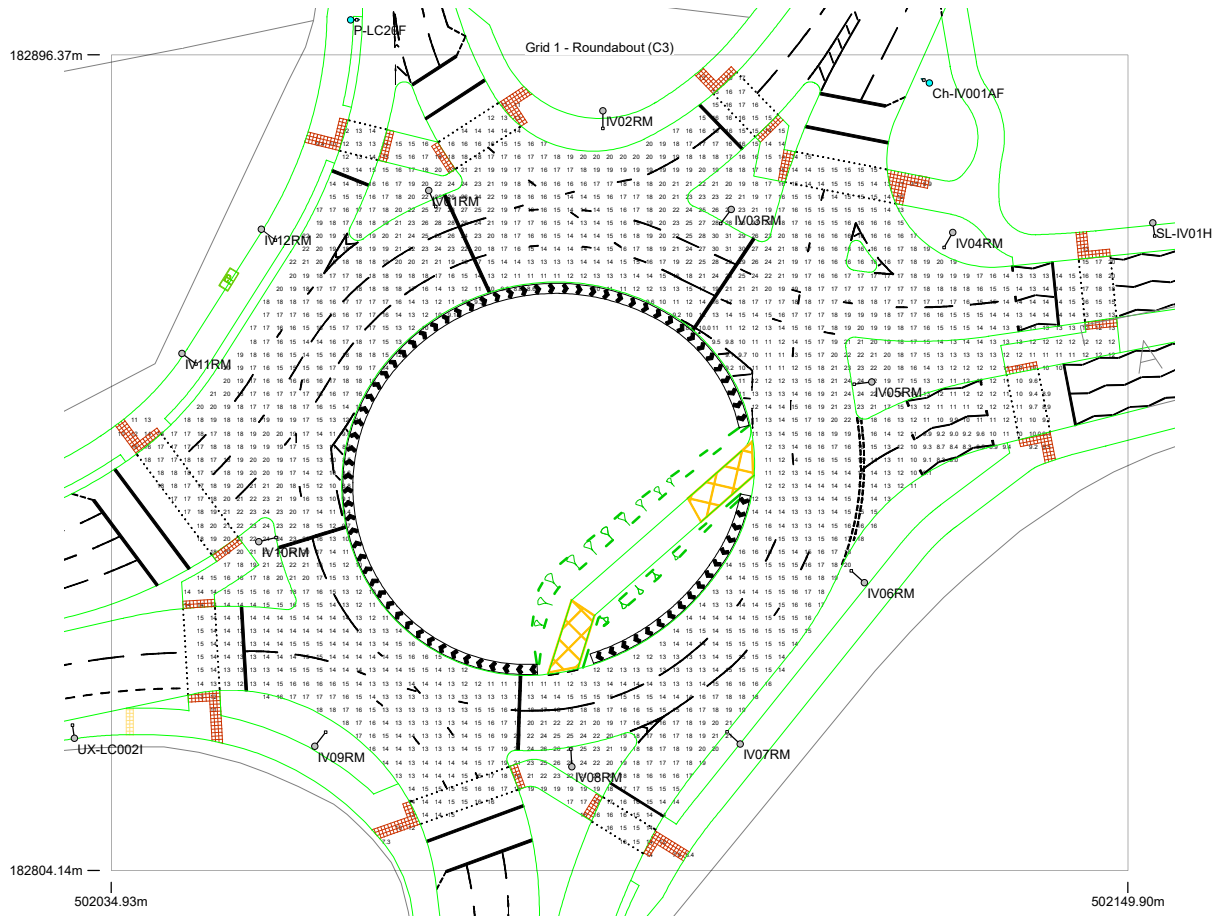


Results

Eav	16.02
Emin	6.38
Emax	31.49
Emin/Emax	0.20
Emin/Eav	0.40

Horizontal Illuminance (lux)

Grid 1 - Roundabout (C3)



Results

Eav	16.02
Emin	6.38
Emax	31.49
Emin/Emax	0.20
Emin/Eav	0.40

Horizontal Illuminance (lux)

Grid 2 - Uxbridge Rd (M4)



Results

Eav	16.93
Emin	8.38
Emax	43.34
Emin/Emax	0.19
Emin/Eav	0.49

Horizontal Illuminance (lux)

Grid 2 - Uxbridge Rd (M4)



Results

Eav	16.93
Emin	8.38
Emax	43.34
Emin/Emax	0.19
Emin/Eav	0.49

Horizontal Illuminance (lux)

Grid 3 - Pinewood Rd (M5)

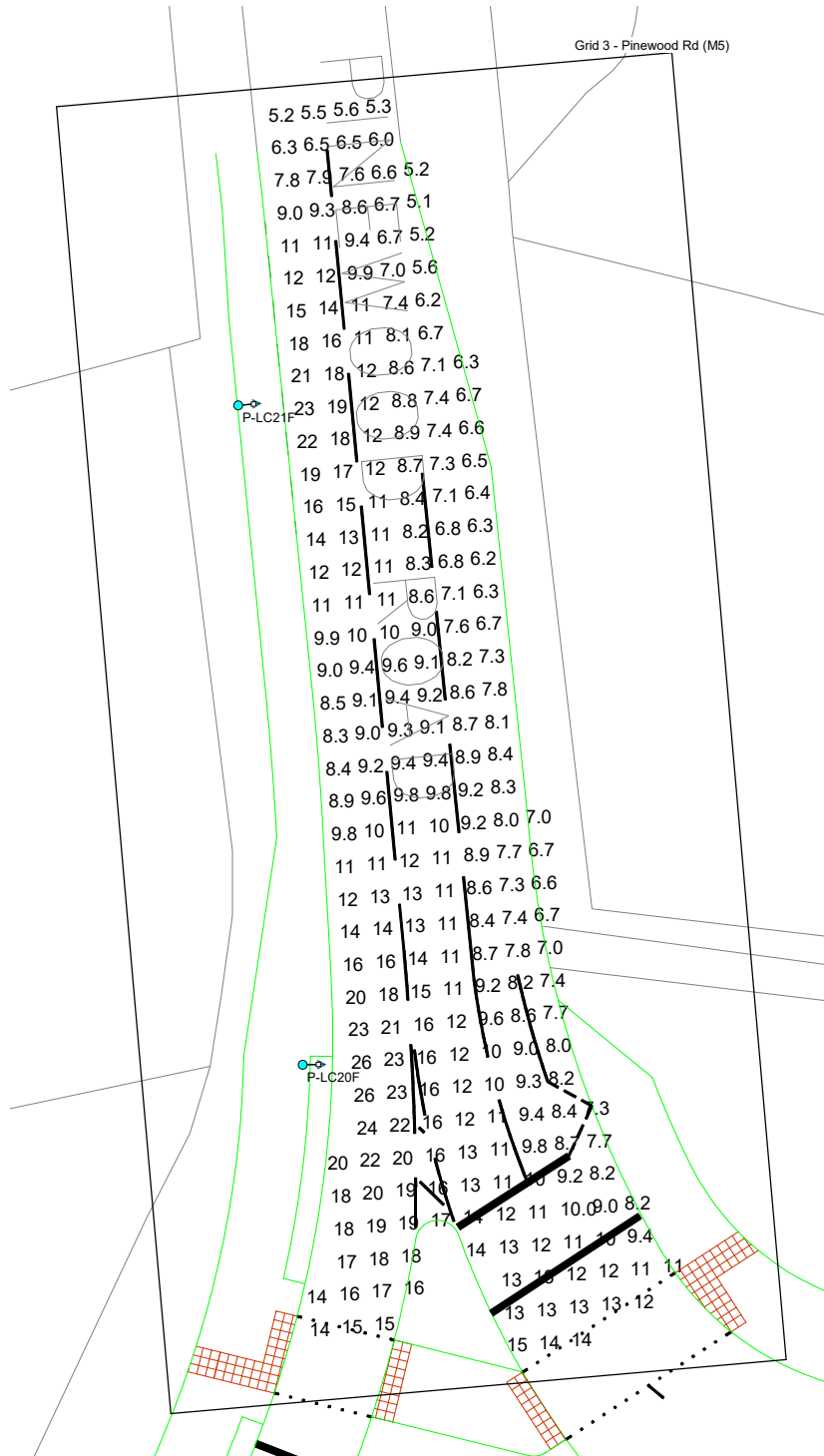


Results

Eav	11.29
Emin	5.14
Emax	25.98
Emin/Emax	0.20
Emin/Eav	0.46

Horizontal Illuminance (lux)

Grid 3 - Pinewood Rd (M5)

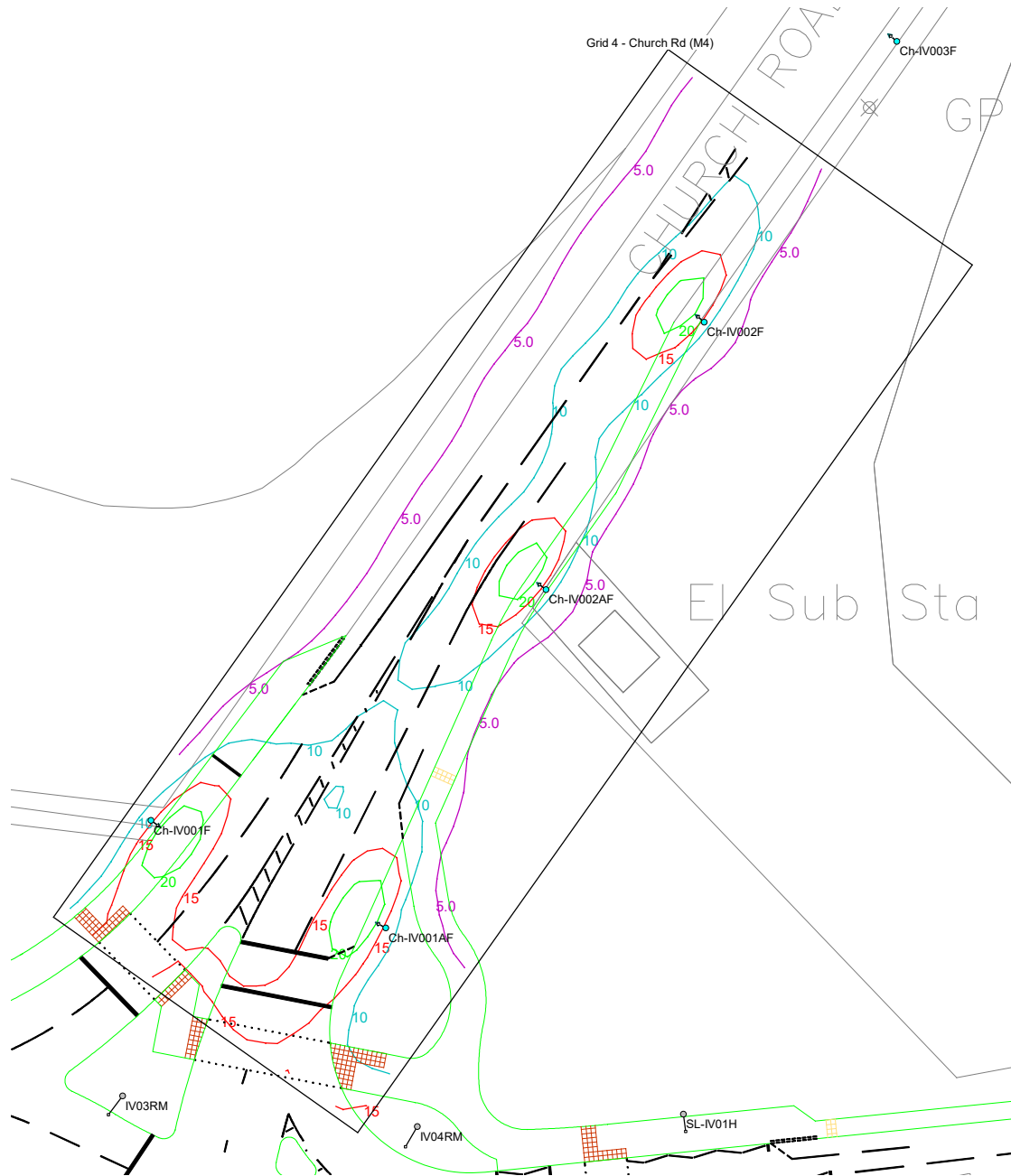


Results

Eav	11.29
Emin	5.14
E _{max}	25.98
E _{min} /E _{max}	0.20
E _{min} /E _{av}	0.46

Horizontal Illuminance (lux)

Grid 4 - Church Rd (M4)

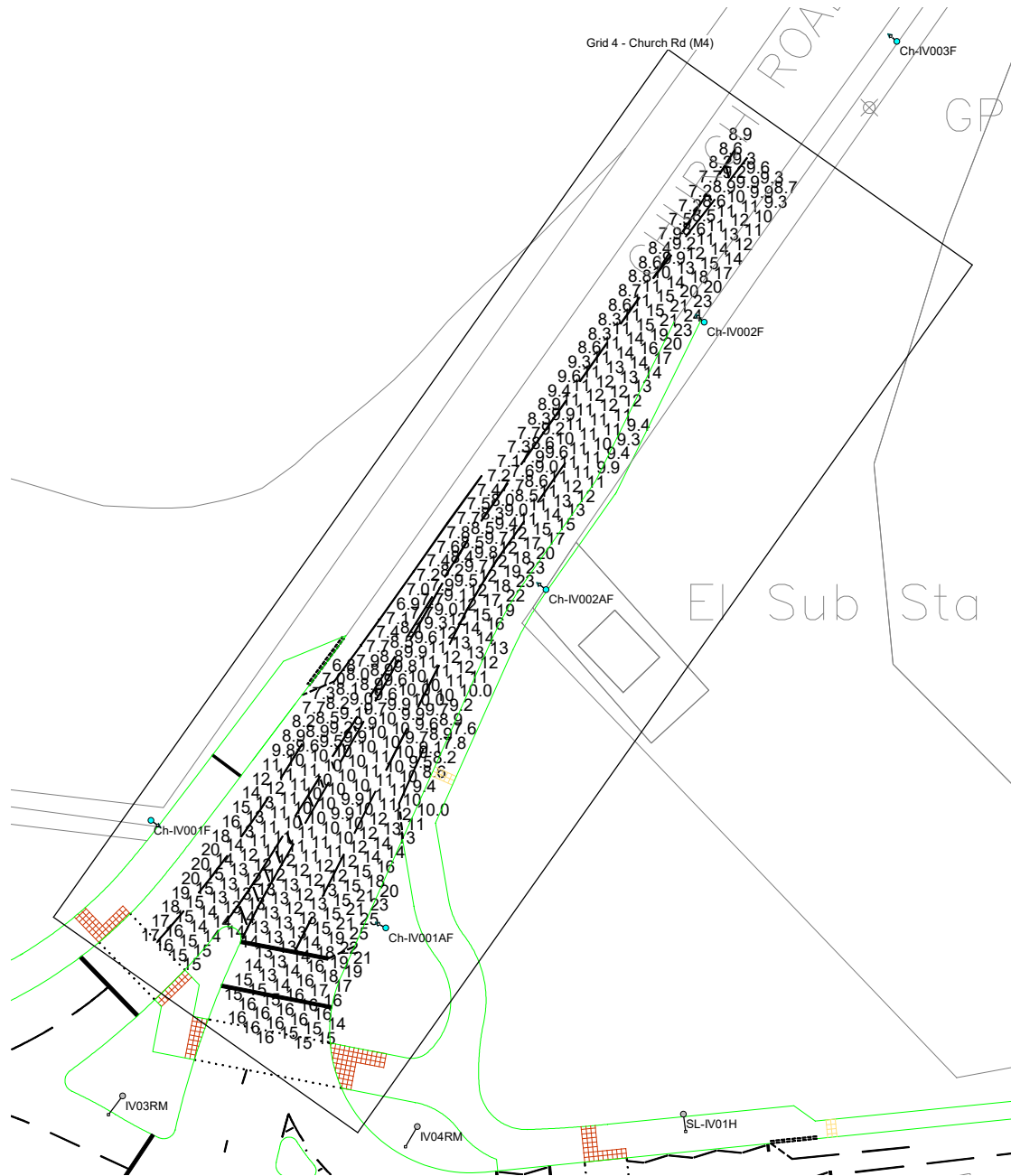


Results

Eav	12.14
Emin	6.81
Emax	24.98
Emin/Emax	0.27
Emin/Eav	0.56

Horizontal Illuminance (lux)

Grid 4 - Church Rd (M4)

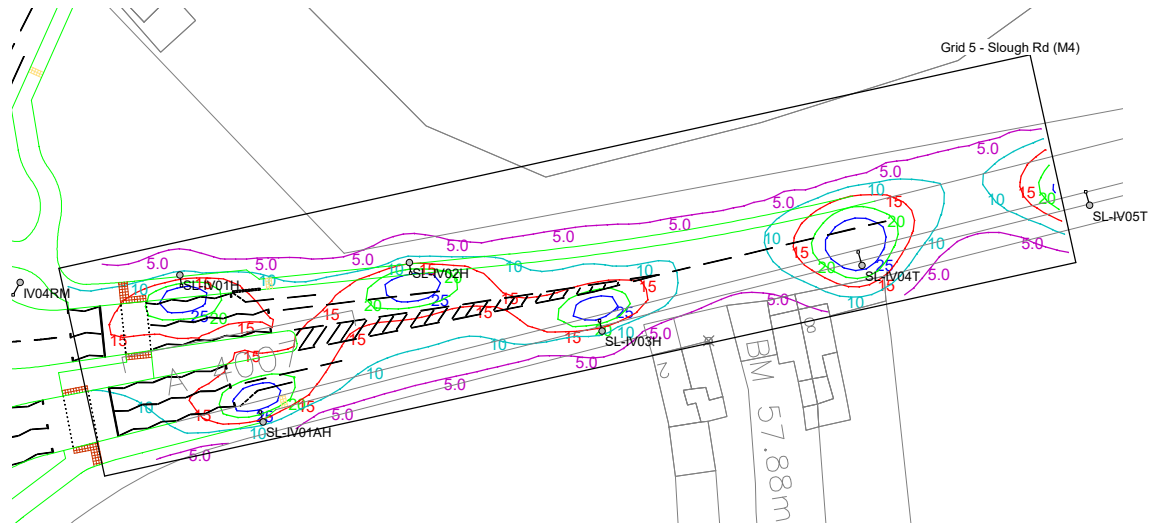


Results

Eav	12.14
Emin	6.81
Emax	24.98
Emin/Emax	0.27
Emin/Eav	0.56

Horizontal Illuminance (lux)

Grid 5 - Slough Rd (M4)

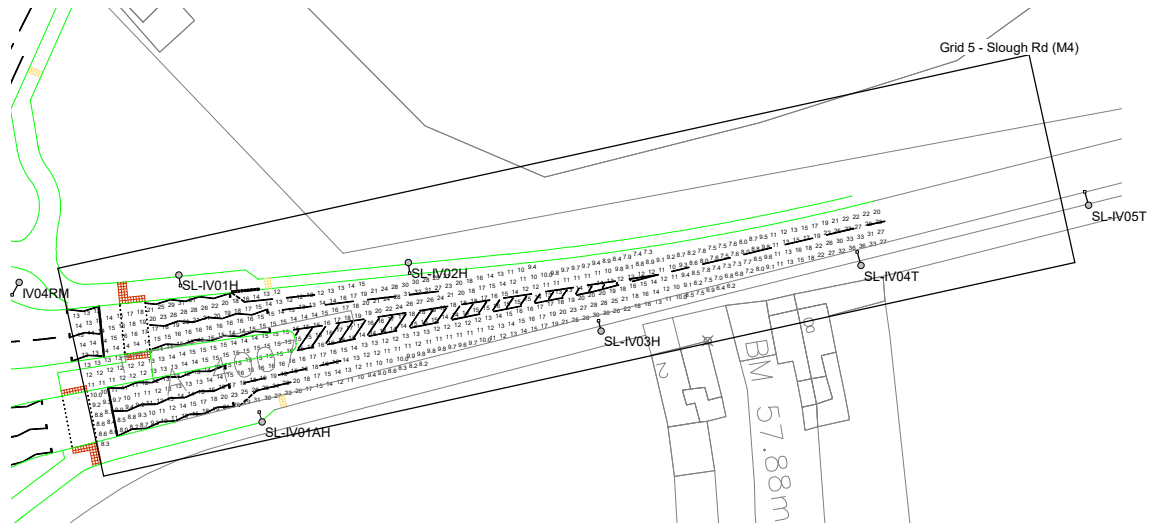


Results

Eav	15.25
Emin	6.25
Emax	35.98
Emin/Emax	0.17
Emin/Eav	0.41

Horizontal Illuminance (lux)

Grid 5 - Slough Rd (M4)

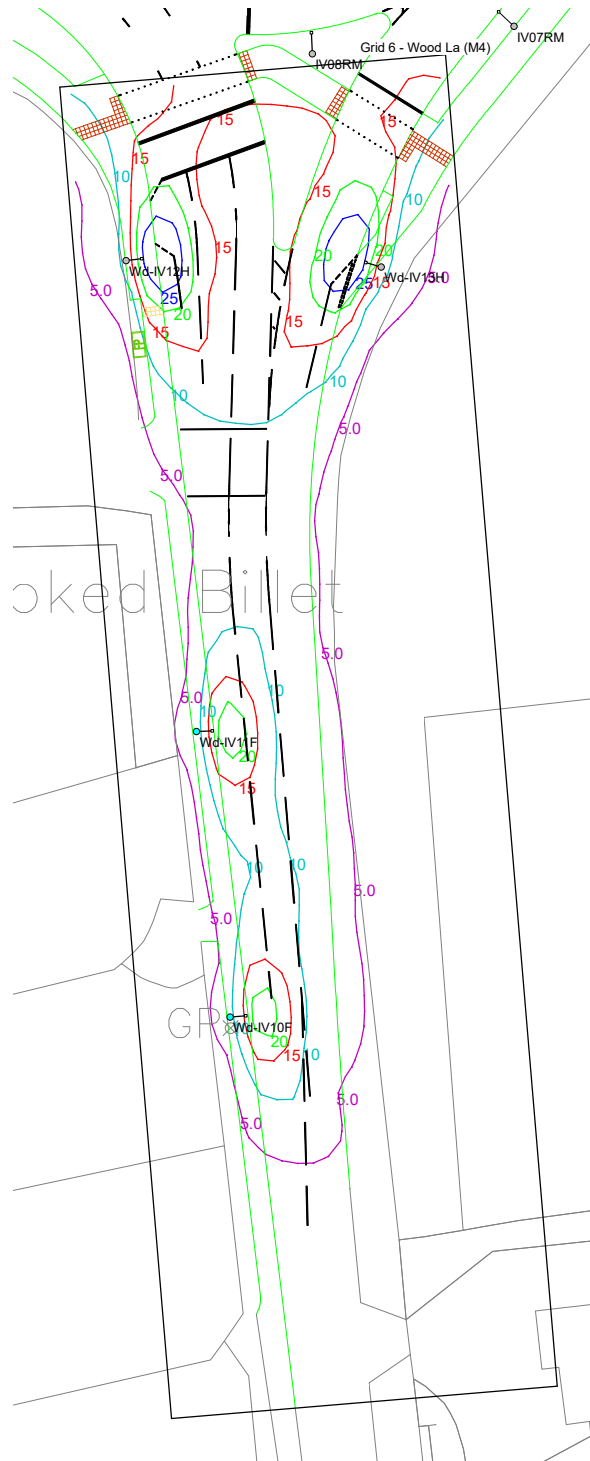


Results

Eav	15.25
Emin	6.25
Emax	35.98
Emin/Emax	0.17
Emin/Eav	0.41

Horizontal Illuminance (lux)

Grid 6 - Wood La (M4)



Results

Eav	12.41
Emin	4.91
Emax	32.03
Emin/Emax	0.15
Emin/Eav	0.40

Horizontal Illuminance (lux)

Grid 6 - Wood La (M4)



Results

Eav	12.41
Emin	4.91
E _{max}	32.03
E _{min} /E _{max}	0.15
E _{min} /E _{av}	0.40