



APPENDIX 9-1

PUBLIC LIGHTING REPORT

Meath County Council - Viewing Purposes Only!

DATE: 16 August 2022
DESIGNER: Alex Naper
PROJECT No: SES 09922 Rev C
PROJECT NAME: MOOR – Maynooth Outer Orbital Road - Sky Castle Ltd



Distributor road section designed in accordance with EN13201-2:2015 Category P2 with longitudinal uniformity meeting requirements of EN13201-2:2015 Category M4.

Junction sections designed in accordance with EN13201-2:2015 Category C3.

Link road section designed in accordance with EN13201-2:2015 Category P3 with longitudinal uniformity meeting requirements of EN13201-2:2015 Category M5.

Rev B: Updated layout.
Rev C: Existing HID luminaires added

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
eMail: graham@sabrelighting.ie

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	693864.63	739395.68	54.00	68.83	1.50	1.50
2	Grid 2	693959.70	739297.35	46.43	43.42	1.50	1.50
3	Grid 3	693909.10	739363.32	172.43	109.41	1.50	1.50
4	Grid 4	694078.43	739267.61	52.41	43.42	1.50	1.50
5	Grid 5	694125.23	739254.25	195.00	54.00	1.50	1.50
6	Grid 6	694300.72	739246.43	52.41	43.42	1.50	1.50
7	Grid 7	694463.49	739145.49	52.41	43.42	1.50	1.50
8	Grid 8	694656.84	739000.69	120.00	99.00	1.50	1.50
9	Grid 9	694343.70	739623.78	118.04	98.84	1.48	1.50
10	Grid 10	694576.26	739100.39	175.00	374.26	1.50	1.50
11	Grid 11	694437.37	739569.37	219.63	99.00	2.75	1.50
12	Grid 12	694056.27	739503.77	144.00	295.00	1.50	1.50
13	Grid 13	693911.77	739445.58	108.00	146.74	1.50	1.50
14	Grid 14	694395.42	739629.43	69.00	184.00	1.50	1.50
15	Grid 15	694318.46	739267.24	69.00	321.76	1.50	1.50
16	Grid 16	694619.02	738523.02	114.00	138.00	1.50	1.50
17	Grid 17	694628.61	738660.04	114.00	362.00	1.50	1.50
18	Grid 18	694779.13	739002.56	274.00	189.00	1.50	1.50
19	Grid 19	694333.57	739208.13	365.00	85.44	1.50	1.50
20	Grid 20	693513.62	739293.26	151.01	375.94	1.50	1.50

Luminaires

Luminaire A Data



Supplier	C U Phosco
Type	P863-128-R2E-730-W3-425-55W
Lamp(s)	730SS
Lamp Flux (klm)	7.78
File Name	P863-128-R2E-730-W3-425-55W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	463.7, 84.3, 0.0
No. in Project	28

Luminaire B Data

Supplier	C U Phosco
Type	E950-28-P4A-730-C550-14W
Lamp(s)	730N
Lamp Flux (klm)	2.08
File Name	E950-28-P4A-730-C0550-14W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	2

Luminaire C Data



Supplier	C U Phosco
Type	P862-256-R2E-730-W3-425-107W
Lamp(s)	730SS
Lamp Flux (klm)	14.97
File Name	P862-256-R2E-730-W3-425-107W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	458.4, 47.0, 0.0
No. in Project	27

Luminaire D Data



Supplier	C U Phosco
Type	P862-256-R2E-730-W3-250-64W
Lamp(s)	730SS
Lamp Flux (klm)	8.84
File Name	P862-256-R2E-730-W3-250-64W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	458.4, 47.0, 0.0
No. in Project	4

Luminaires



Luminaire E Data

Supplier	C U Phosco
Type	P862-256-R2E-730-W3-300-76W
Lamp(s)	730SS
Lamp Flux (klm)	10.70
File Name	P862-256-R2E-730-W3-300-76W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	458.4, 47.0, 0.0
No. in Project	37



Luminaire F Data

Supplier	C U Phosco
Type	P863-128-R4-730-W3-300-40W
Lamp(s)	730SS
Lamp Flux (klm)	5.53
File Name	P863-128-R4-730-W3-300-40W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	386.2, 27.2, 0.4
No. in Project	10

Luminaire J Data

Supplier	
Type	2685 SNN-1C#
Lamp(s)	1 ST 150 17500 2000 E40
LampFlux(klm)/Colour	17.50 1950 / 23
File Name	Arc 2685 SNN 1C# 1 ST 150 17500 1950 E 40.Idt
Maintenance Factor	0.75
Imax70,80,90(cd/klm)	352.0, 100.0, 5.0
No. in Project	6

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	C	693893.29	739395.63	10.00	306.00	0.00	0.00	0.50			
2	C	693884.52	739362.91	10.00	136.00	0.00	0.00	0.50			
3	C	693933.49	739398.17	10.00	128.00	0.00	0.00	0.50			
4	A	693913.80	739367.43	8.00	47.00	0.00	0.00	0.50			
5	A	693958.11	739331.85	8.00	45.00	0.00	0.00	0.50			
6	A	693982.74	739327.61	8.00	248.00	0.00	0.00	0.50			
7	A	694008.53	739306.37	8.00	69.00	0.00	0.00	0.50			
8	A	693937.48	739346.51	8.00	53.00	0.00	0.00	0.50			
9	A	694040.33	739296.89	8.00	76.00	0.00	0.00	0.50			
10	A	694074.42	739291.17	8.00	78.00	0.00	0.00	0.50			
11	A	694108.62	739295.82	8.00	263.00	0.00	0.00	0.50			
12	A	694130.13	739283.09	8.00	82.00	0.00	0.00	0.50			
13	A	694163.81	739278.39	8.00	83.00	0.00	0.00	0.50			
14	B	693980.93	739311.36	6.00	151.00	0.00	0.00	0.40			
15	B	694112.38	739277.66	6.00	169.00	0.00	0.00	0.40			
16	A	694197.52	739273.55	8.00	85.00	0.00	0.00	0.50			
17	A	694231.04	739268.57	8.00	85.00	0.00	0.00	0.50			
18	A	694263.20	739263.98	8.00	85.00	0.00	0.00	0.50			
19	A	694296.89	739259.28	8.00	77.00	0.00	0.00	0.50			
20	A	694325.52	739253.15	8.00	73.00	0.00	0.00	0.50			
21	A	694350.78	739235.67	8.00	57.00	0.00	0.00	0.50			
22	F	694336.89	739268.29	8.00	317.00	0.00	0.00	0.50			
23	A	694379.13	739215.14	8.00	64.00	0.00	0.00	0.50			
24	A	694408.87	739198.81	8.00	60.00	0.00	0.00	0.50			
25	A	694438.79	739182.31	8.00	62.00	0.00	0.00	0.50			
26	A	694468.63	739165.98	8.00	61.00	0.00	0.00	0.50			
27	A	694498.75	739159.64	8.00	250.00	0.00	0.00	0.50			
28	A	694513.73	739141.44	8.00	55.00	0.00	0.00	0.50			
29	A	694482.37	739138.84	8.00	322.00	0.00	0.00	0.50			
30	D	694702.40	739062.93	10.00	304.00	0.00	0.00	0.50			
31	E	694686.20	739062.69	10.00	260.00	0.00	0.00	0.50			
32	D	694726.91	739065.21	10.00	227.00	0.00	0.00	0.50			
33	E	694703.44	739081.44	10.00	2.00	0.00	0.00	0.50			
34	E	694723.50	739097.46	10.00	191.00	0.00	0.00	0.50			
35	A	694663.96	739056.65	10.00	63.00	0.00	0.00	0.50			
36	D	694730.09	739046.72	10.00	102.00	0.00	0.00	0.50			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
37	D	694705.42	739037.94	10.00	23.00	0.00	0.00	0.50			
38	E	694707.20	739017.51	10.00	355.00	0.00	0.00	0.50			
39	E	694709.77	738982.63	10.00	2.00	0.00	0.00	0.50			
40	E	694753.36	739070.04	10.00	284.00	0.00	0.00	0.50			
41	E	694792.18	739081.88	10.00	291.00	0.00	0.00	0.50			
42	E	694830.26	739095.30	10.00	292.00	0.00	0.00	0.50			
43	E	694712.76	738943.79	10.00	2.00	0.00	0.00	0.50			
44	E	694708.66	738905.08	10.00	354.00	0.00	0.00	0.50			
45	E	694699.89	738866.95	10.00	348.00	0.00	0.00	0.50			
46	E	694692.32	738828.99	10.00	348.00	0.00	0.00	0.50			
47	E	694685.87	738789.77	10.00	349.00	0.00	0.00	0.50			
48	E	694681.26	738750.46	10.00	349.00	0.00	0.00	0.50			
49	E	694676.11	738711.51	10.00	349.00	0.00	0.00	0.50			
50	J	694686.56	738669.65	10.00	170.00	5.00	0.00	2.00			
51	J	694683.53	738647.14	10.00	170.00	5.00	0.00	2.00			
52	J	694681.45	738629.74	10.00	170.00	5.00	0.00	2.00			
53	J	694679.68	738609.10	10.00	170.00	5.00	0.00	2.00			
54	J	694674.47	738565.02	10.00	179.00	5.00	0.00	2.00			
55	E	694866.18	739112.99	10.00	304.00	0.00	0.00	0.50			
56	E	694900.50	739133.56	10.00	295.00	0.00	0.00	0.50			
57	E	694932.80	739154.34	10.00	303.00	0.00	0.00	0.50			
58	E	694924.94	739131.59	10.00	118.00	0.00	0.00	0.50			
59	A	694543.95	739124.55	8.00	55.00	0.00	0.00	0.50			
60	A	694574.07	739108.02	8.00	55.00	0.00	0.00	0.50			
61	A	694604.26	739091.24	8.00	55.00	0.00	0.00	0.50			
62	A	694634.40	739074.35	8.00	55.00	0.00	0.00	0.50			
63	E	694700.33	739131.26	10.00	2.00	0.00	0.00	0.50			
64	E	694714.20	739165.97	10.00	192.00	0.00	0.00	0.50			
65	E	694707.49	739198.13	10.00	189.00	0.00	0.00	0.50			
66	E	694700.32	739232.09	10.00	189.00	0.00	0.00	0.50			
67	E	694692.51	739267.89	10.00	189.00	0.00	0.00	0.50			
68	E	694668.67	739290.87	10.00	20.00	0.00	0.00	0.50			
69	E	694675.95	739328.25	10.00	194.00	0.00	0.00	0.50			
70	E	694662.56	739367.87	10.00	204.00	0.00	0.00	0.50			
71	E	694650.61	739399.35	10.00	211.00	0.00	0.00	0.50			
72	E	694637.49	739432.77	10.00	200.00	0.00	0.00	0.50			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
73	E	694444.07	739585.34	10.00	78.00	0.00	0.00	0.50			
74	C	694419.89	739630.01	10.00	357.00	0.00	0.00	0.50			
75	E	694455.92	739603.76	10.00	249.00	0.00	0.00	0.50			
76	C	694392.79	739610.16	10.00	274.00	0.00	0.00	0.50			
77	C	694409.11	739590.31	10.00	84.00	0.00	0.00	0.50			
78	C	694442.13	739661.78	10.00	171.00	0.00	0.00	0.50			
79	C	694433.45	739719.16	10.00	349.00	0.00	0.00	0.50			
81	E	694523.13	739574.51	10.00	243.00	0.00	0.00	0.50			
82	E	694554.52	739552.85	10.00	227.00	0.00	0.00	0.50			
83	E	694487.52	739592.02	10.00	243.00	0.00	0.00	0.50			
84	E	694582.12	739527.05	10.00	219.00	0.00	0.00	0.50			
85	E	694605.19	739497.98	10.00	214.00	0.00	0.00	0.50			
86	E	694623.32	739466.11	10.00	205.00	0.00	0.00	0.50			
87	C	693969.92	739420.83	10.00	122.00	0.00	0.00	0.50			
88	C	694007.60	739441.66	10.00	120.00	0.00	0.00	0.50			
89	C	694046.60	739460.24	10.00	117.00	0.00	0.00	0.50			
90	C	694085.95	739477.73	10.00	117.00	0.00	0.00	0.50			
91	C	694125.32	739495.25	10.00	115.00	0.00	0.00	0.50			
92	C	694164.72	739512.72	10.00	116.00	0.00	0.00	0.50			
93	C	694203.98	739530.23	10.00	118.00	0.00	0.00	0.50			
94	C	694243.41	739547.73	10.00	118.00	0.00	0.00	0.50			
95	C	694282.64	739565.09	10.00	111.00	0.00	0.00	0.50			
96	C	694321.57	739580.88	10.00	111.00	0.00	0.00	0.50			
97	C	694362.99	739590.09	10.00	88.00	0.00	0.00	0.50			
98	C	694439.58	739760.92	10.00	353.00	0.00	0.00	0.50			
99	C	694448.02	739803.25	10.00	349.00	0.00	0.00	0.50			
100	C	693760.38	739284.08	10.00	119.00	0.00	0.00	0.50			
101	C	693784.47	739320.17	10.00	309.00	0.00	0.00	0.50			
102	C	693725.22	739289.87	10.00	300.00	0.00	0.00	0.50			
103	F	693734.04	739298.83	8.00	38.00	0.00	0.00	0.50			
104	C	693847.09	739361.25	10.00	309.00	0.00	0.00	0.50			
105	C	693825.29	739321.26	10.00	128.00	0.00	0.00	0.50			
106	C	693690.52	739271.34	10.00	295.00	0.00	0.00	0.50			
111	F	694357.76	739301.16	8.00	338.00	0.00	0.00	0.50			
112	F	694368.26	739339.59	8.00	349.00	0.00	0.00	0.50			
113	F	694377.23	739377.91	8.00	338.00	0.00	0.00	0.50			

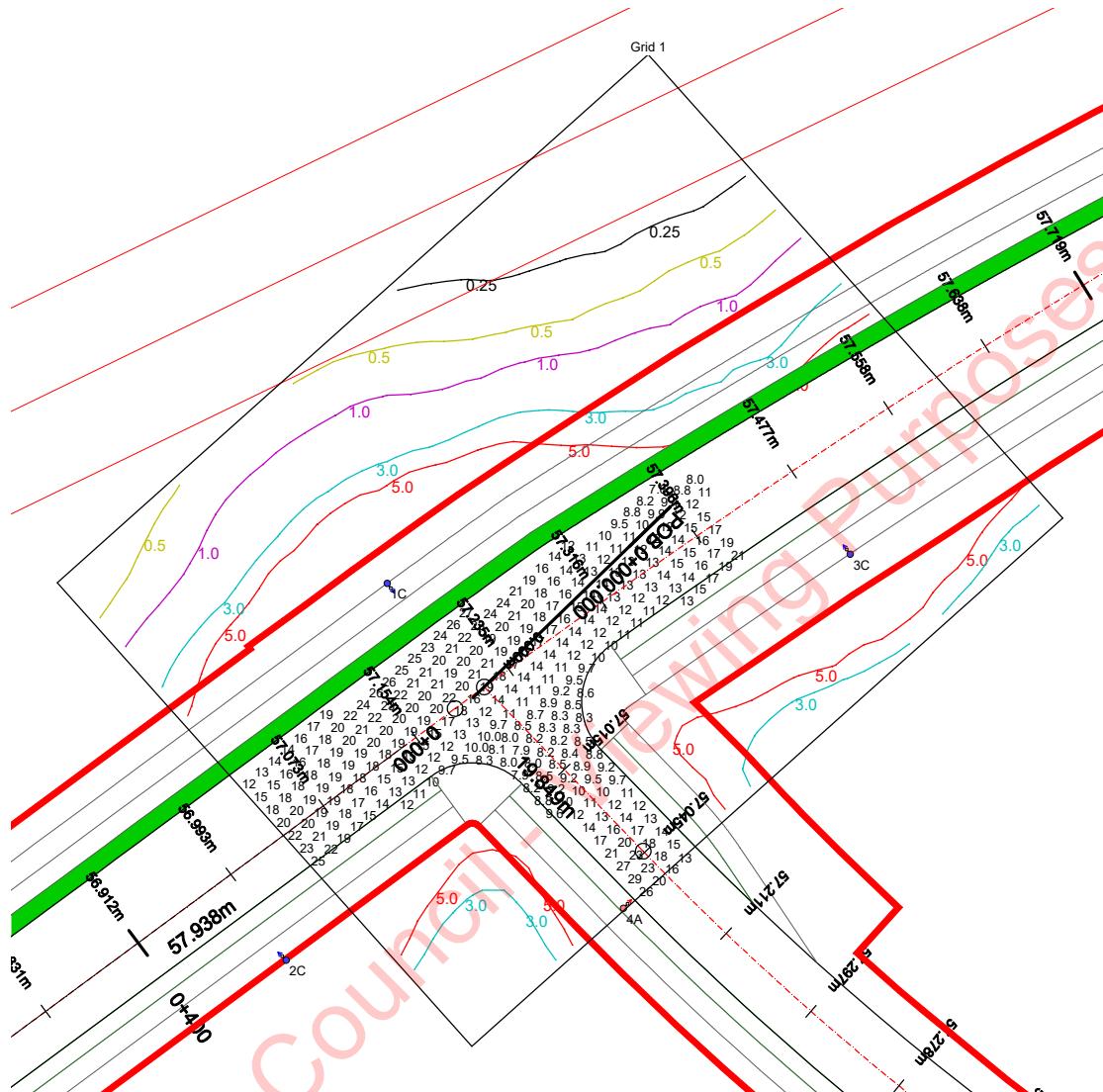
Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
114	F	694385.75	739416.30	8.00	340.00	0.00	0.00	0.50			
115	F	694393.60	739454.76	8.00	339.00	0.00	0.00	0.50			
116	F	694401.10	739493.28	8.00	345.00	0.00	0.00	0.50			
117	F	694408.06	739531.35	8.00	351.00	0.00	0.00	0.50			
118	F	694414.57	739569.78	8.00	351.00	0.00	0.00	0.50			
119	J	694670.51	738542.82	10.00	170.00	5.00	0.00	2.00			

Meath County Council - Viewing Purposes Only!

Horizontal Illuminance (lux)

Grid 1

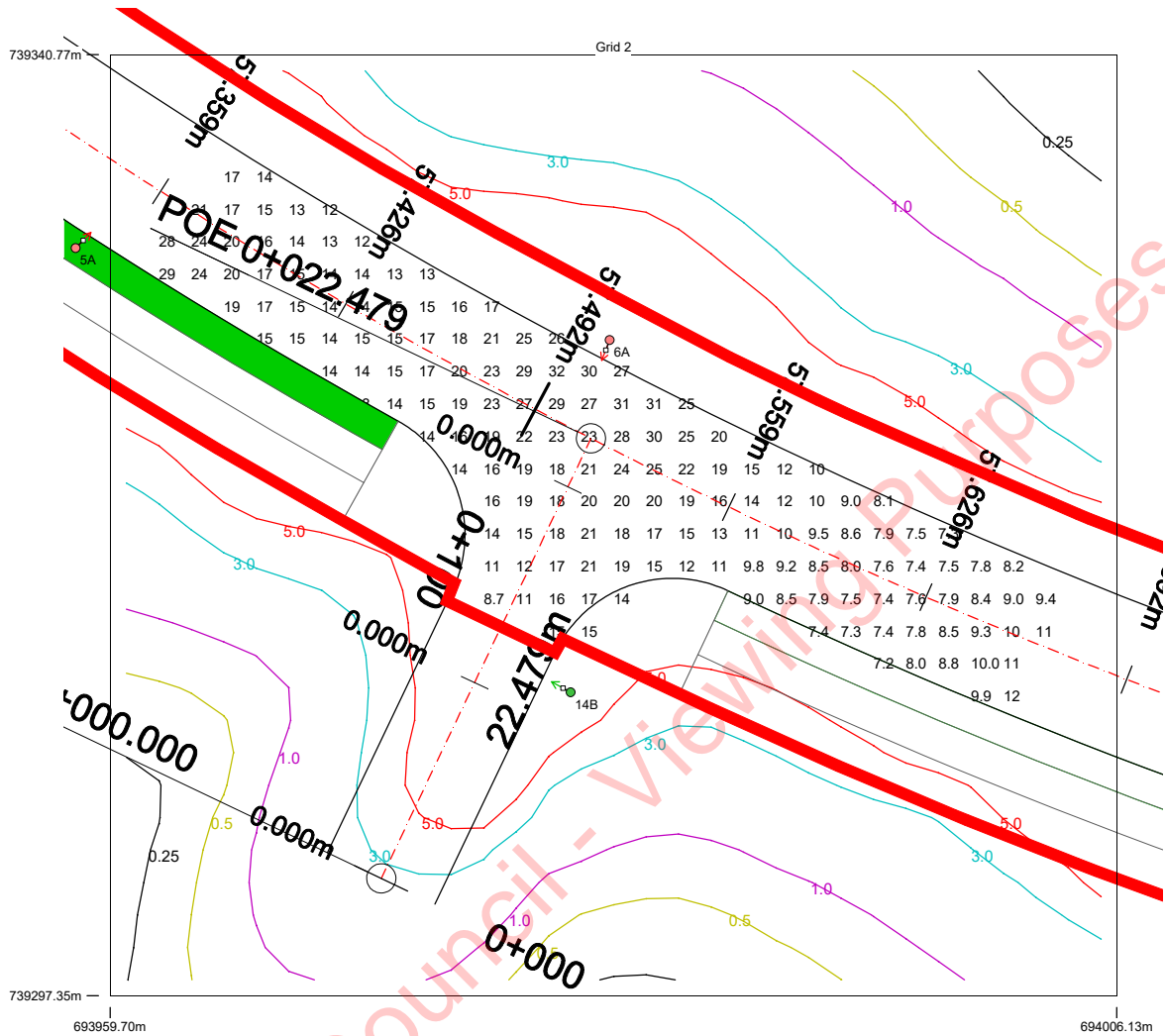


Results

Eav	15.24
Emin	7.63
Emax	28.68
Emin/Emax	0.27
Emin/Eav	0.50

Horizontal Illuminance (lux)

Grid 2

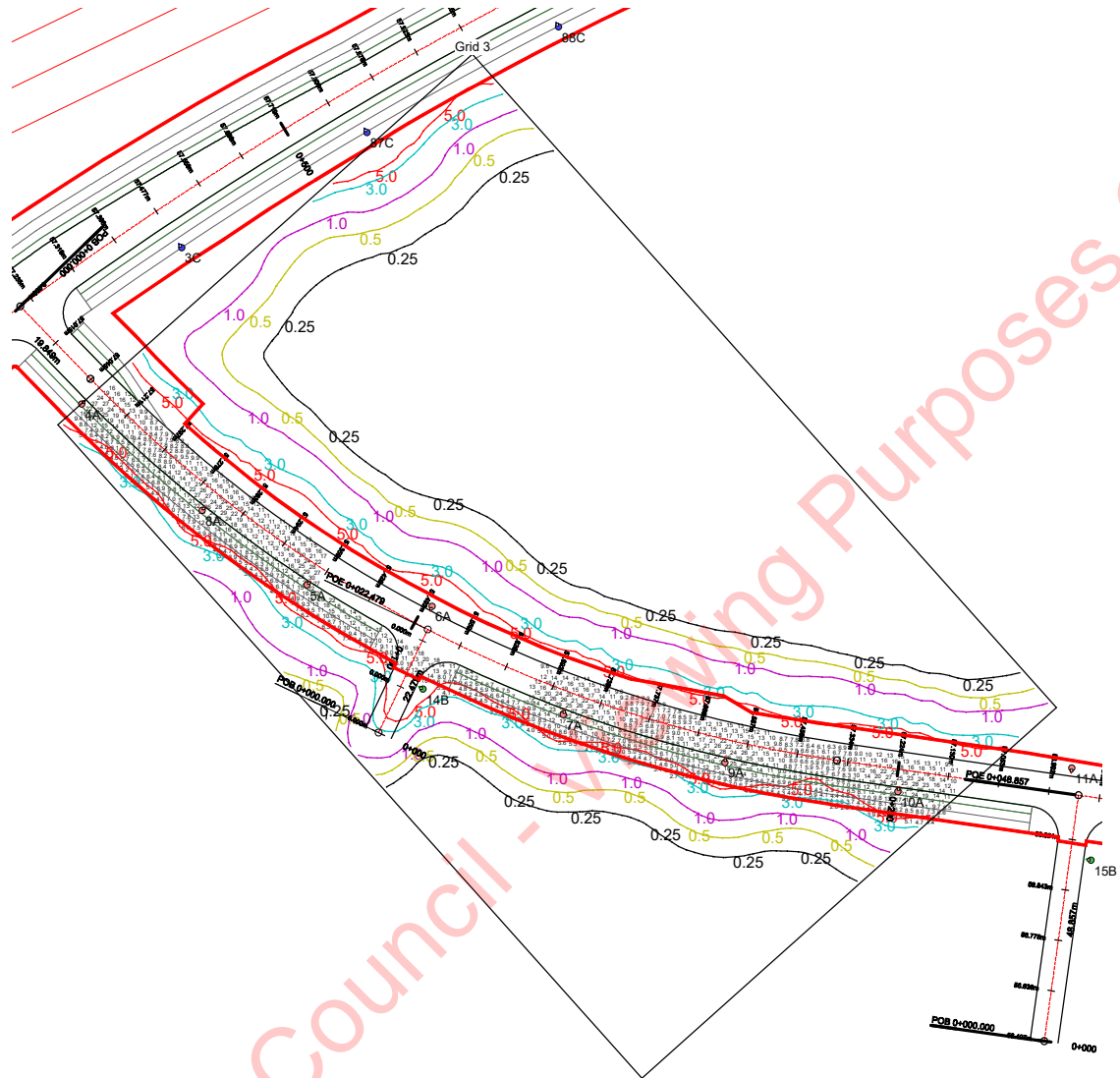


Results

Eav	15.62
Emin	7.25
Emax	32.15
Emin/Emax	0.23
Emin/Eav	0.46

Horizontal Illuminance (lux)

Grid 3

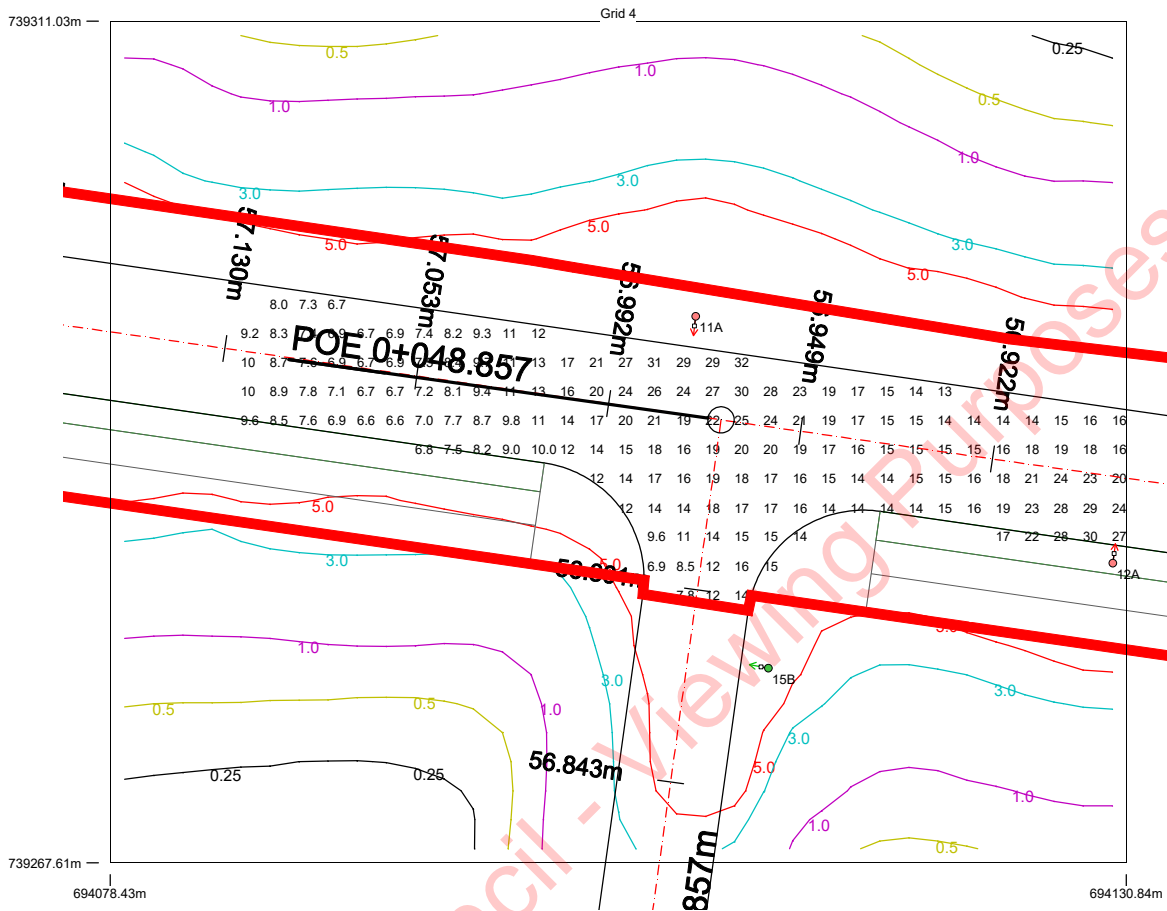


Results

Eav	11.59
Emin	2.58
Emax	29.50
Emin/Emax	0.09
Emin/Eav	0.22

Horizontal Illuminance (lux)

Grid 4

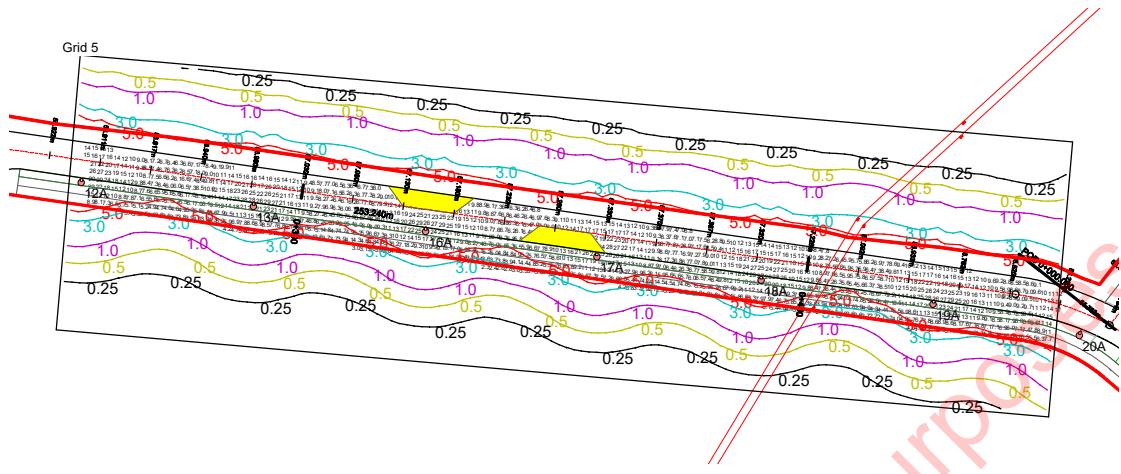


Results

Eav	15.06
Emin	6.56
Emax	31.93
Emin/Emax	0.21
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 5



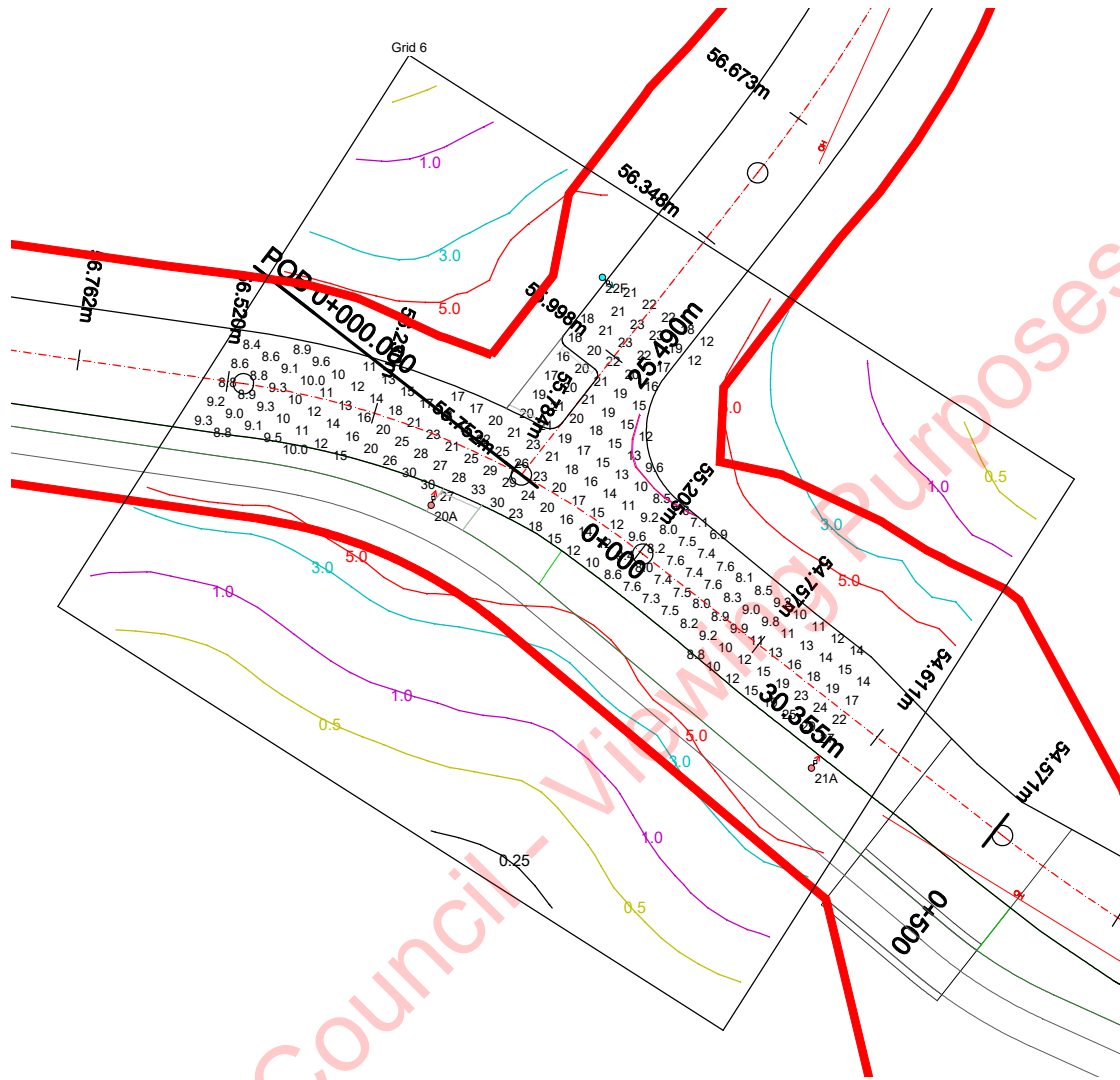
Results

Eav	10.71
Emin	2.25
Emax	29.30
Emin/Emax	0.08
Emin/Eav	0.21

Meath County Council - Viewing Purposes Only!

Horizontal Illuminance (lux)

Grid 6



Results

Eav	15.46
Emin	6.87
Emax	32.79
Emin/Emax	0.21
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 7

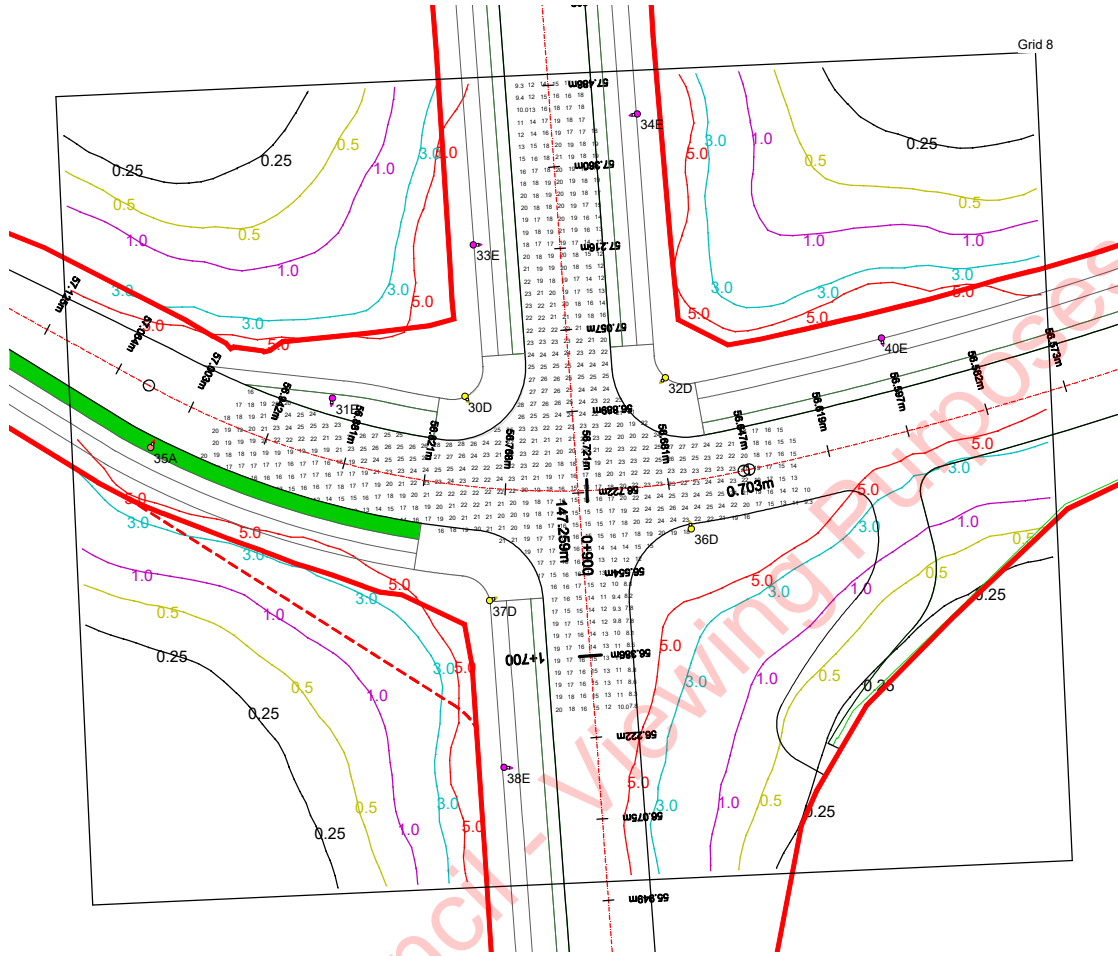


Results

Eav	16.18
Emin	7.79
Emax	31.75
Emin/Emax	0.25
Emin/Eav	0.48

Horizontal Illuminance (lux)

Grid 8

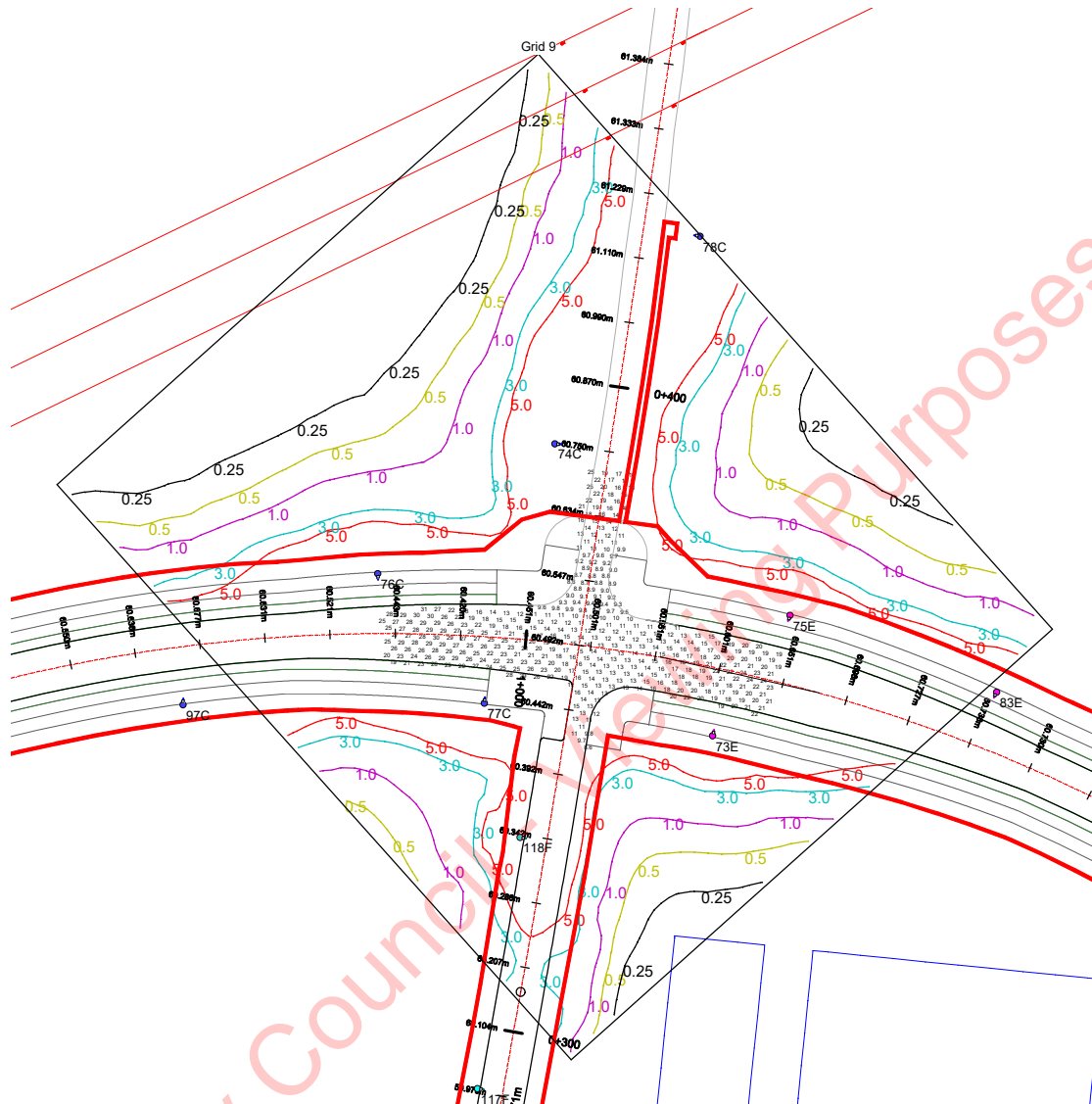


Results

Eav	18.98
Emin	7.75
Emax	28.42
Emin/Emax	0.27
Emin/Eav	0.41

Horizontal Illuminance (lux)

Grid 9

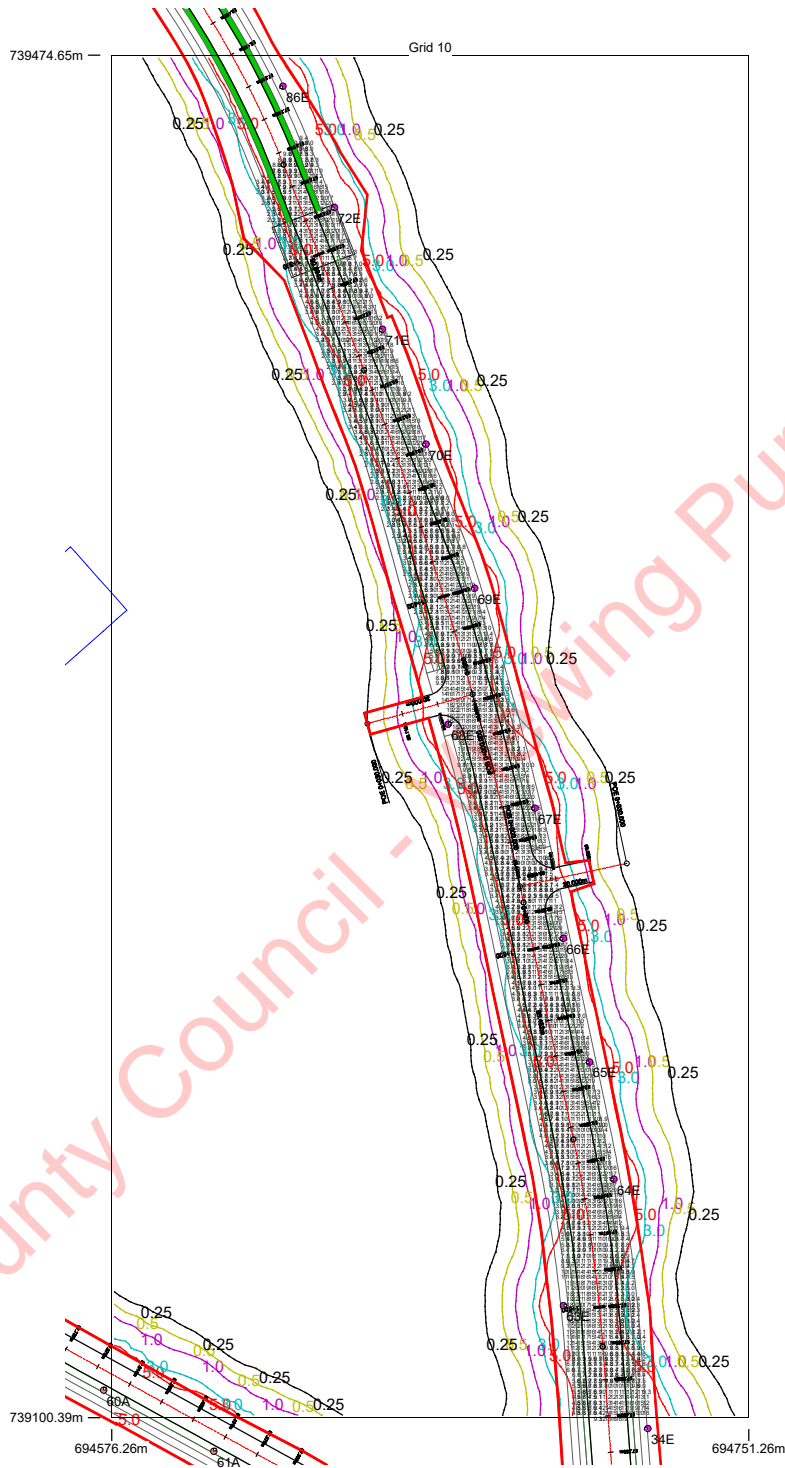


Results

Eav	17.49
Emin	8.56
E _{max}	30.79
E _{min} /E _{max}	0.28
E _{min} /E _{av}	0.49

Horizontal Illuminance (lux)

Grid 10

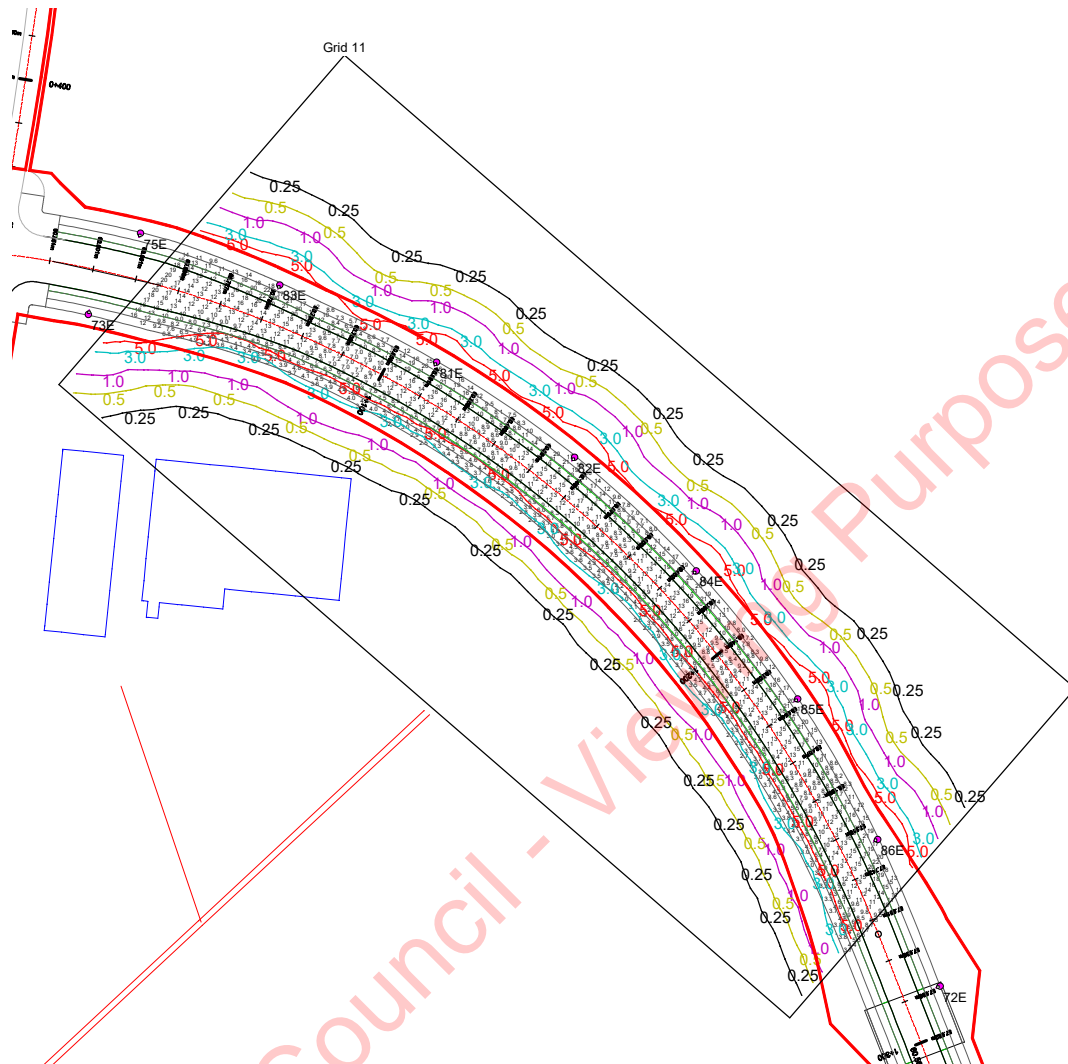


Results

Eav	10.61
Emin	2.09
Emax	22.39
Emin/Emax	0.09
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 11

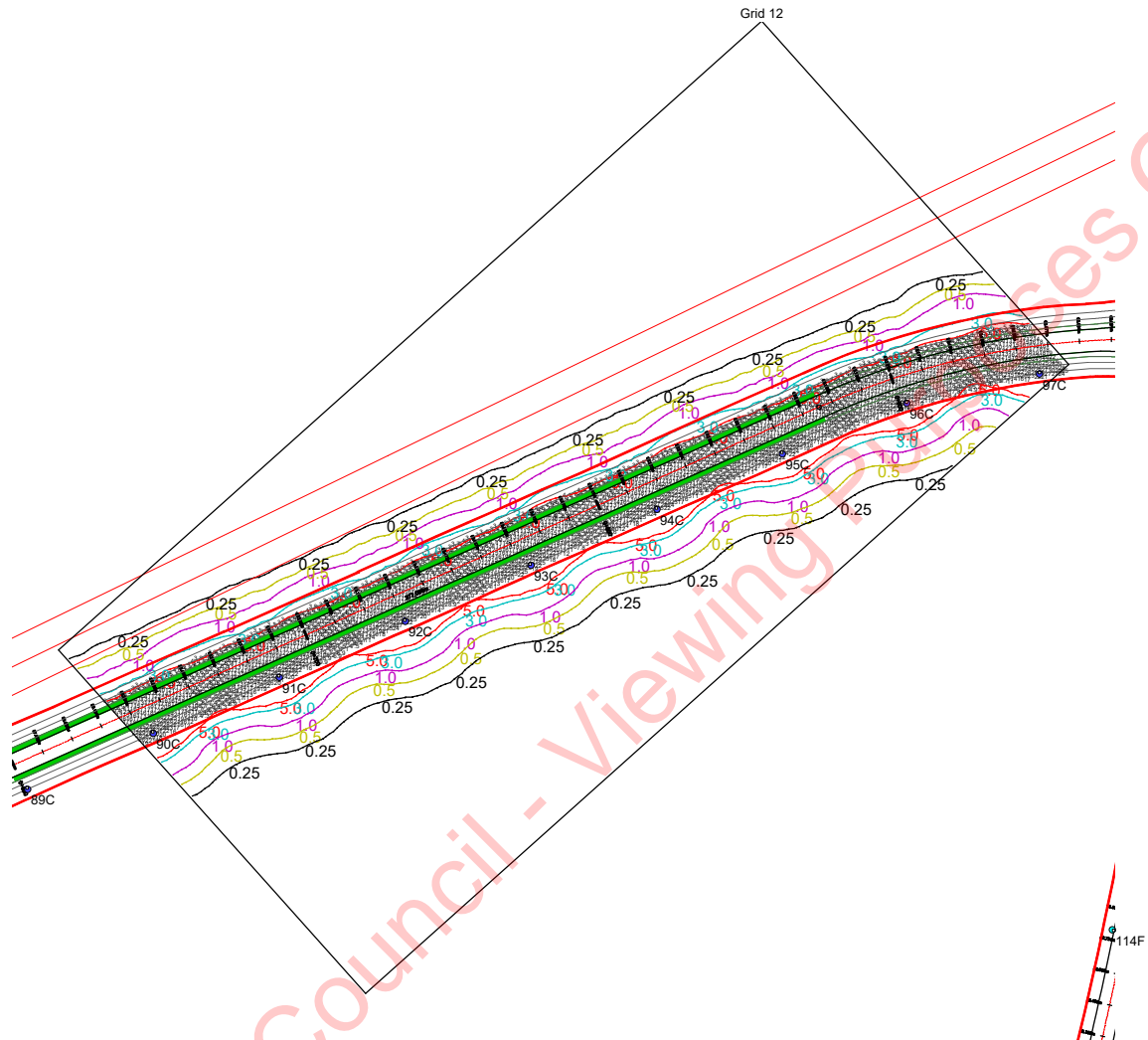


Results

Eav	10.42
Emin	2.51
Emax	21.66
Emin/Emax	0.12
Emin/Eav	0.24

Horizontal Illuminance (lux)

Grid 12

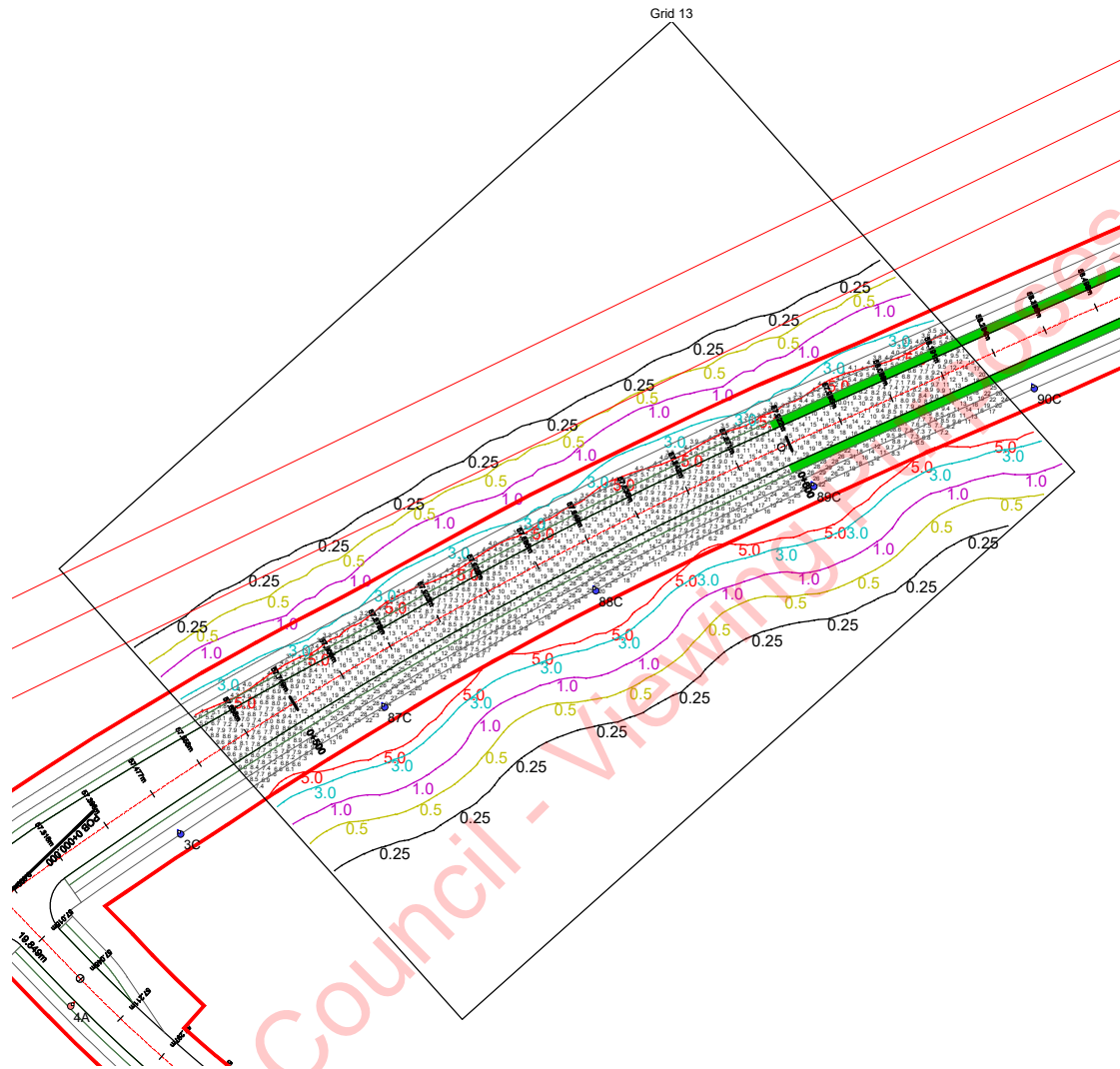


Results

Eav	12.33
Emin	3.00
Emax	30.25
Emin/Emax	0.10
Emin/Eav	0.24

Horizontal Illuminance (lux)

Grid 13

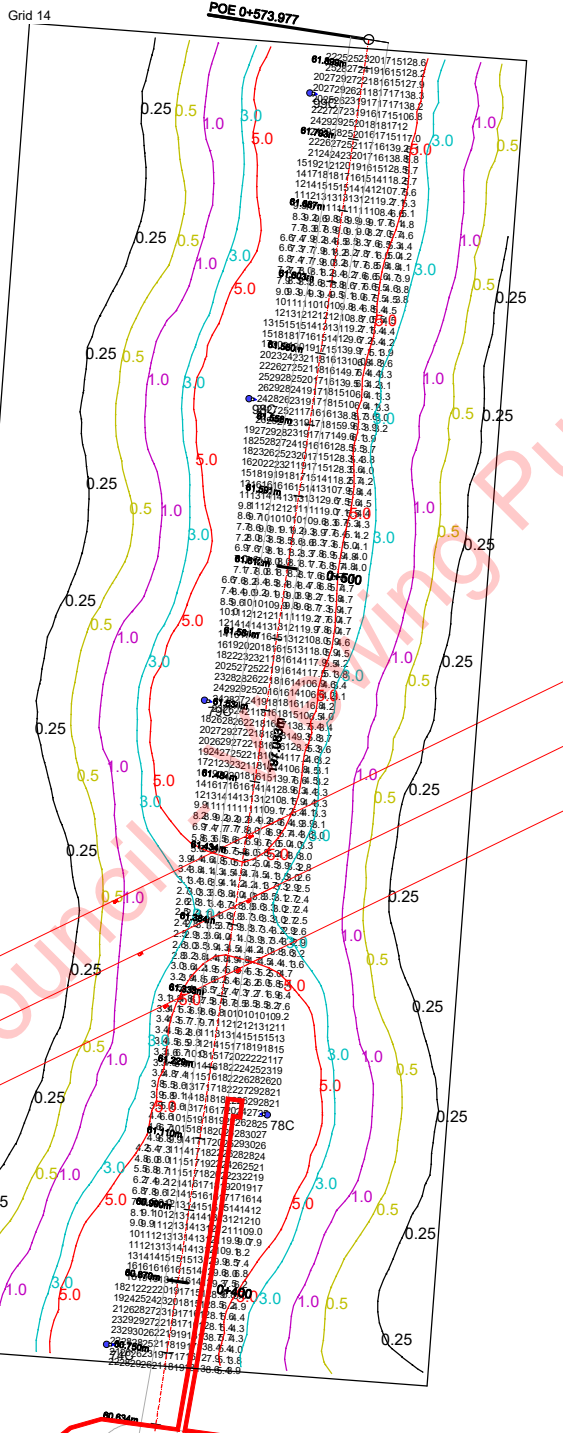


Results

Eav	11.68
Emin	2.97
Emax	29.38
Emin/Emax	0.10
Emin/Eav	0.25

Horizontal Illuminance (lux)

Grid 14



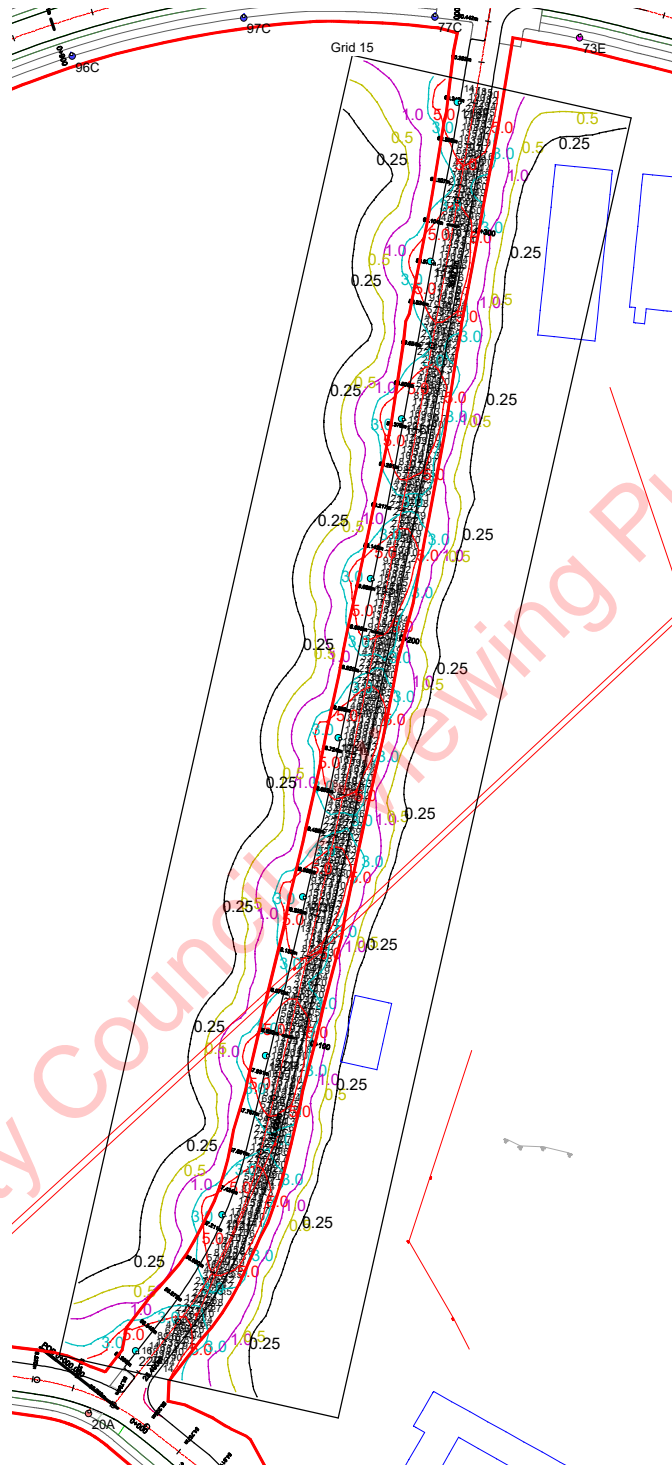
Results

Eav	12.30
Emin	2.41
Emax	29.89
Emin/Emax	0.08
Emin/Eav	0.20

Meath County Council Planning Purposes Only!

Horizontal Illuminance (lux)

Grid 15

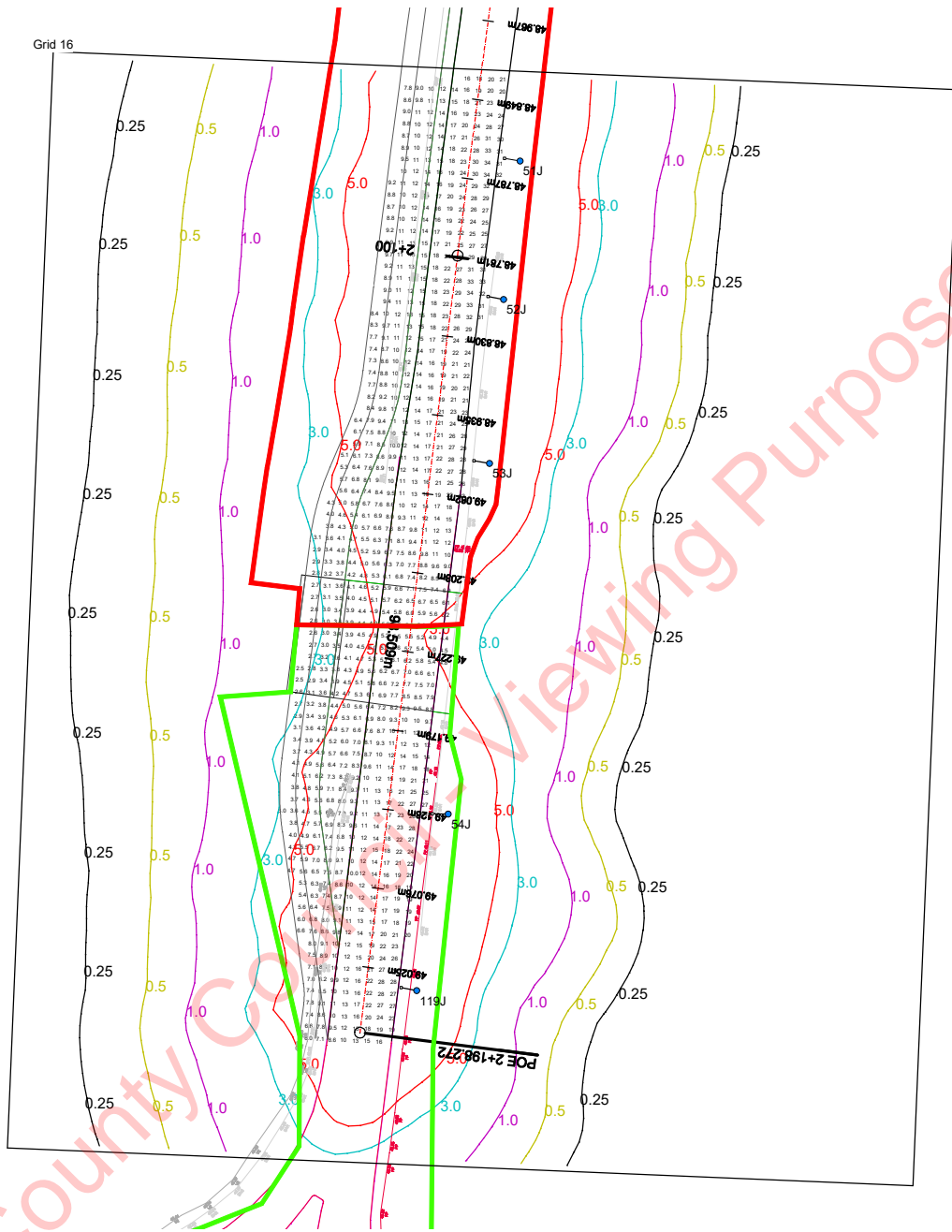


Results

Eav	9.01
Emin	1.87
Emax	22.13
Emin/Emax	0.08
Emin/Eav	0.21

Horizontal Illuminance (lux)

Grid 16

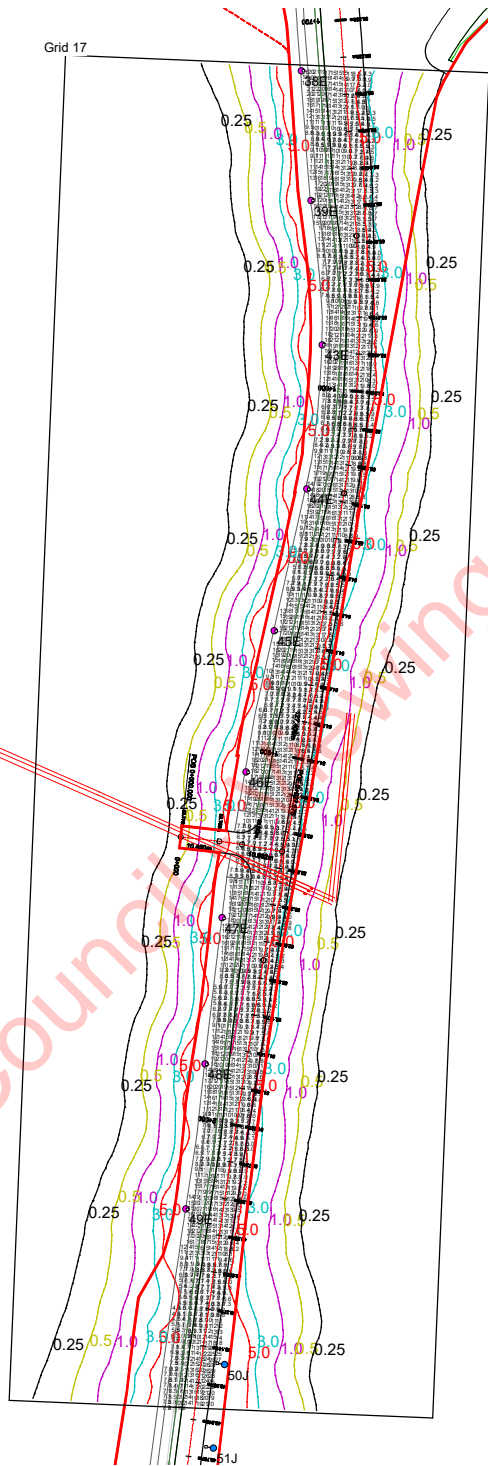


Results

Eav	12.41
Emin	2.45
Emax	34.24
Emin/Emax	0.07
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 17

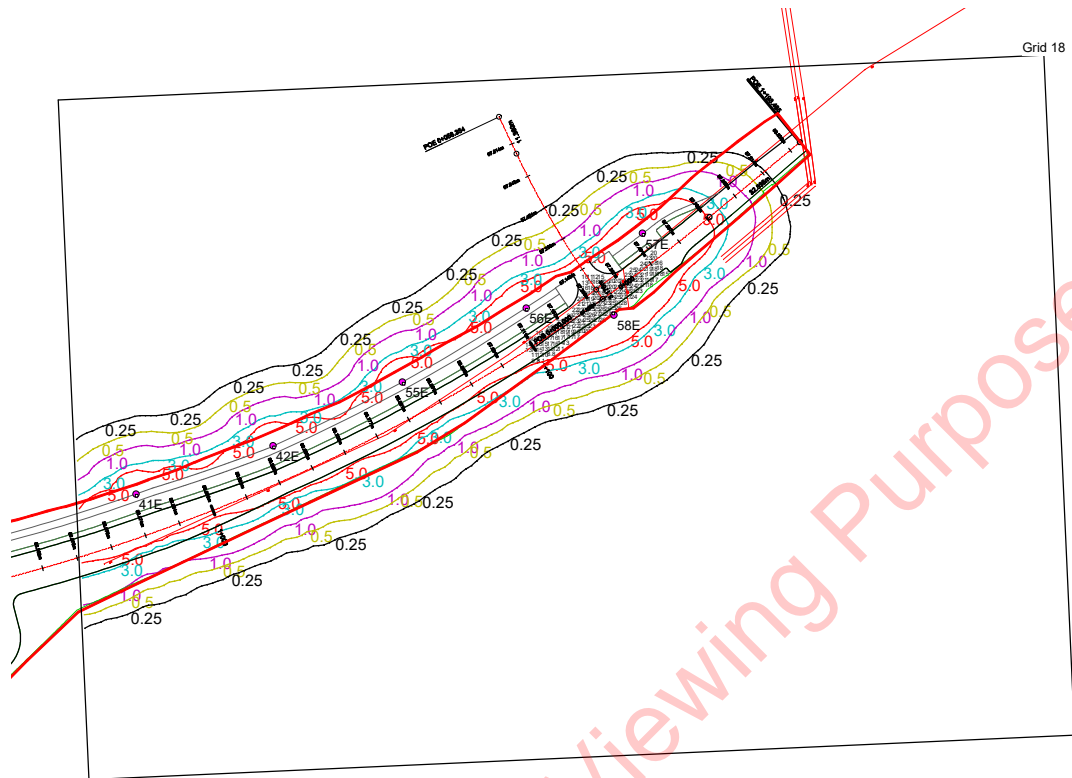


Results

Eav	10.69
Emin	2.65
Emax	28.54
Emin/Emax	0.09
Emin/Eav	0.25

Horizontal Illuminance (lux)

Grid 18

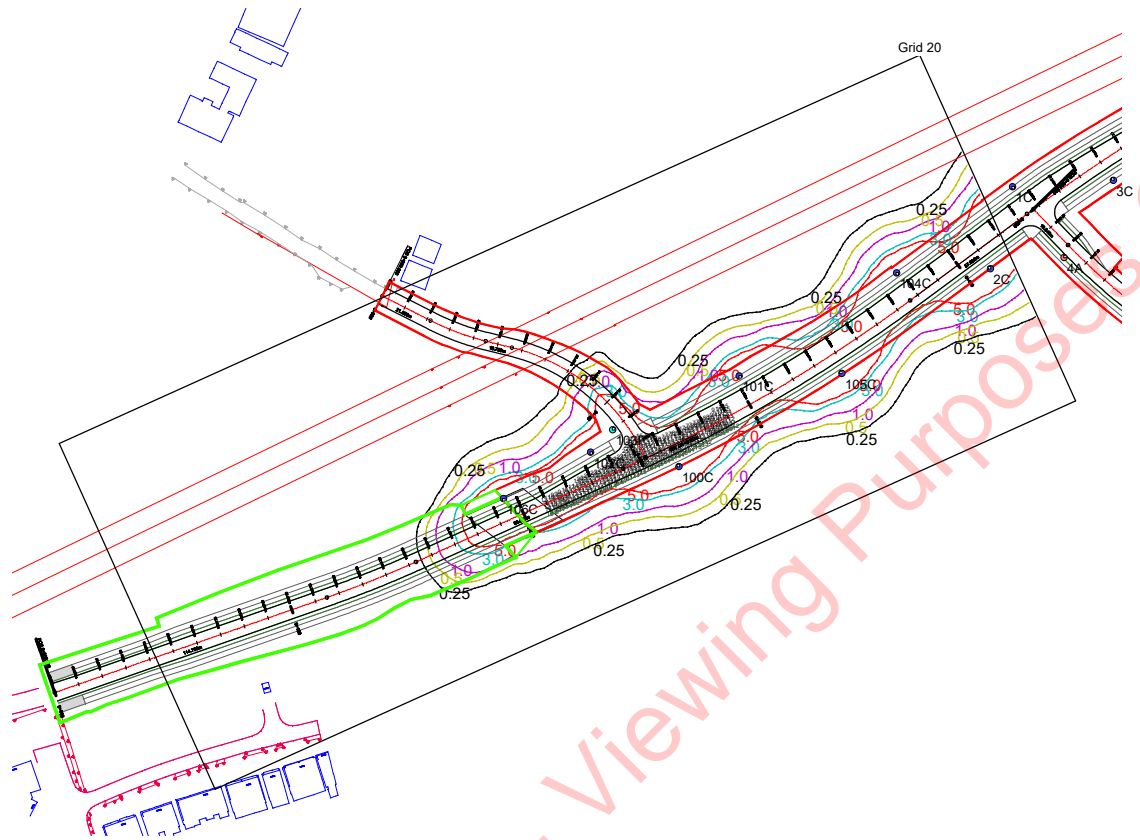


Results

Eav	19.83
Emin	8.05
E _{max}	27.57
E _{min} /E _{max}	0.29
E _{min} /E _{av}	0.41

Horizontal Illuminance (lux)

Grid 20



Results

Eav	15.07
Emin	6.86
Emax	27.68
Emin/Emax	0.25
Emin/Eav	0.46