DATE: **30 August 2022**

DESIGNER: **Alex Naper**

PROJECT No: **SES 03521 Rev C**

PROJECT NAME: **Kilcock West SHD 2- Teresa Monaghan**

Residential area designed in accordance with EN13201-2:2015 Category P4.

Link road through site designed in accordance with EN13201-2:2015 Category P3.

Northern & Western Junctions meets requirements of EN13201-2:2015 Category C4 with existing HID luminaires (estimated as 150 Watt SON-T and installed with factory lamp setting)

Rev B: P64 relocated.
Rev C: Revised site layout.

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

DATE: 30 August 2022 **DESIGNER:** **Alex Naper**

PROJECT No: SES 03521 Rev C PROJECT NAME: Kilcock West SHD 2- Teresa Monaghan

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	Residential Area (1)	687353.57	740196.98	160.00	253.15	1.50	1.50
2	Residential Area (2)	687163.64	739956.02	311.12	304.42	1.50	1.50
3	Link Road (3)	687197.09	740144.53	368.98	211.31	1.50	1.50
4	Northern Junction (4)	687432.09	740337.58	265.42	104.71	1.50	1.50
5	Grid 5	687314.67	740321.63	66.00	87.00	1.50	1.50
6	Grid 6	687248.09	740187.44	69.00	109.42	1.50	1.50

Luminaires

Luminaire A Data

Supplier	C U Phosco
Type	E950-28-P4A-727-C600-16W
Lamp(s)	727N
Lamp Flux (klm)	2.19
File Name	E950-28-P4A-727-C0600-16W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	66

Luminaire B Data

Supplier	C U Phosco
Type	E950-28-P4A-727-C350-10W
Lamp(s)	727N
Lamp Flux (klm)	1.33
File Name	E950-28-P4A-727-C0350-10W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	11



Luminaire C Data

Supplier	C U Phosco
Type	P863-128-R2E-730-W3-325-43W
Lamp(s)	730SS
Lamp Flux (klm)	6.03
File Name	P863-128-R2E-730-W3-325-43W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	463.7, 84.3, 0.0
No. in Project	14

Luminaire D Data

Supplier	
Type	2695 SNN-1C#
Lamp(s)	1 ST 150 17500 2000 E40
LampFlux(klm)/Colour	17.50 1950 / 23
File Name	Arc 2695 SNN 1C# 1 ST 150 17500 1950 E 40.ldt
Maintenance Factor	0.75
Imax70,80,90(cd/klm)	344.0, 99.0, 3.0
No. in Project	4



Luminaire E Data

Supplier	C U Phosco
Type	P863-32-F2B-NW-F0500-51W
Lamp(s)	740P NW
Lamp Flux (klm)	6.09
File Name	P863-32-F2B-NW-F0500-51W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	797.8, 97.0, 0.0
No. in Project	1

Luminaire F Data

Supplier	C U Phosco
Type	E950-28-P4A-727-C300-9W
Lamp(s)	727N
Lamp Flux (klm)	1.15
File Name	E950-28-P4A-727-C0300-9W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	25

Luminaires

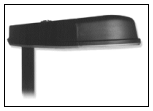


Luminaire G Data

Supplier	C U Phosco
Type	E950-28-P4A-727-C400-11W
Lamp(s)	727N
Lamp Flux (klm)	1.51
File Name	E950-28-P4A-727-C0400-11W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	3

Luminaire H Data

Supplier	C U Phosco
Type	P863-128-F2B-730-W3-300-40W
Lamp(s)	730SS
Lamp Flux (klm)	5.39
File Name	P863-128-F2B-730-W3-300-40W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	461.8, 61.8, 0.8
No. in Project	1



Luminaire I Data

Supplier	_Historic Lanterns
Type	ZX3_FG_1289_120_-43x_881421*
Lamp(s)	150W-SONT+
Lamp Flux (klm)	18.00
File Name	ZX3_Flat Glass_1289_SON-T+_150_120#-43x_881421TX.ldt
Maintenance Factor	0.75
Imax70,80,90(cd/klm)	414.0, 42.0, 0.0
No. in Project	3

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	687408.39	740183.08	6.00	148.00	5.00	0.00	0.40			
2	A	687425.96	740212.21	6.00	148.00	5.00	0.00	0.40			
3	F	687468.78	740264.60	5.00	244.00	0.00	0.00	0.40			
4	A	687439.61	740228.62	6.00	69.00	5.00	0.00	0.40			
5	A	687461.07	740212.37	6.00	53.00	5.00	0.00	0.40			
6	A	687467.23	740236.51	6.00	323.00	5.00	0.00	0.40			
7	A	687490.95	740259.70	6.00	151.00	5.00	0.00	0.40			
8	A	687491.10	740287.95	6.00	335.00	5.00	0.00	0.40			
9	A	687515.75	740307.13	6.00	162.00	5.00	0.00	0.40			
10	A	687506.56	740326.09	6.00	328.00	5.00	0.00	0.40			
11	A	687532.75	740347.21	6.00	167.00	5.00	0.00	0.40			
12	A	687508.35	740280.51	6.00	244.00	5.00	0.00	0.40			
13	A	687538.04	740330.30	6.00	66.00	5.00	0.00	0.40			
14	A	687567.40	740328.01	6.00	244.00	5.00	0.00	0.40			
15	A	687552.77	740254.91	6.00	147.00	5.00	0.00	0.40			
16	A	687532.36	740260.10	6.00	62.00	5.00	0.00	0.40			
17	A	687451.73	740136.49	6.00	59.00	5.00	0.00	0.40			
18	A	687469.84	740156.02	6.00	147.00	5.00	0.00	0.40			
19	A	687484.49	740182.47	6.00	166.00	5.00	0.00	0.40			
20	A	687510.67	740194.50	6.00	239.00	5.00	0.00	0.40			
21	A	687480.07	740200.49	6.00	67.00	5.00	0.00	0.40			
22	A	687470.03	740028.74	6.00	238.00	5.00	0.00	0.40			
23	A	687477.79	739993.69	6.00	142.00	5.00	0.00	0.40			
24	A	687505.09	740023.20	6.00	138.00	5.00	0.00	0.40			
25	A	687502.07	740045.33	6.00	321.00	5.00	0.00	0.40			
26	C	687462.94	740009.70	8.00	168.00	5.00	0.00	0.45			
27	A	687525.62	740045.35	6.00	135.00	5.00	0.00	0.40			
28	A	687527.10	740068.61	6.00	318.00	5.00	0.00	0.40			
29	A	687550.72	740059.30	6.00	66.00	5.00	0.00	0.40			
30	A	687563.86	740067.72	6.00	243.00	5.00	0.00	0.40			
31	A	687522.74	740094.37	6.00	241.00	5.00	0.00	0.40			
32	A	687504.95	740083.68	6.00	52.00	5.00	0.00	0.40			
33	A	687481.85	740101.73	6.00	35.00	5.00	0.00	0.40			
34	A	687407.87	740115.66	6.00	147.00	5.00	0.00	0.40			
35	A	687404.22	740137.14	6.00	317.00	5.00	0.00	0.40			
36	A	687389.90	740115.29	6.00	317.00	5.00	0.00	0.40			

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Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
37	F	687415.38	740109.27	5.00	226.00	0.00	0.00	0.40			
38	A	687400.58	740093.98	6.00	8.00	5.00	0.00	0.40			
39	A	687362.87	740092.61	6.00	109.00	5.00	0.00	0.40			
40	A	687334.68	740083.40	6.00	105.00	5.00	0.00	0.40			
41	A	687333.60	740113.55	6.00	352.00	5.00	0.00	0.40			
42	A	687336.60	740143.41	6.00	333.00	5.00	0.00	0.40			
43	F	687385.70	740094.78	5.00	111.00	5.00	0.00	0.40			
44	A	687361.90	740157.99	6.00	145.00	5.00	0.00	0.40			
45	A	687425.13	740082.82	6.00	196.00	5.00	0.00	0.40			
46	A	687410.00	740065.73	6.00	17.50	5.00	0.00	0.40			
47	A	687432.82	740060.59	6.00	193.00	5.00	0.00	0.40			
48	A	687444.14	740059.10	6.00	257.00	5.00	0.00	0.40			
49	A	687436.93	740039.82	6.00	79.00	5.00	0.00	0.40			
50	A	687401.41	740031.50	6.00	104.00	5.00	0.00	0.40			
51	F	687413.48	739991.91	5.00	196.00	0.00	0.00	0.40			
52	A	687404.39	739964.14	6.00	110.00	5.00	0.00	0.40			
53	A	687423.89	739987.70	6.00	286.00	5.00	0.00	0.40			
54	F	687380.34	740016.21	5.00	18.00	0.00	0.00	0.40			
55	F	687404.72	740019.10	5.00	194.00	0.00	0.00	0.40			
56	A	687408.59	740052.04	6.00	285.00	5.00	0.00	0.40			
57	A	687381.21	740037.68	6.00	290.00	5.00	0.00	0.40			
58	A	687348.79	740017.53	6.00	104.00	5.00	0.00	0.40			
59	A	687321.50	740032.95	6.00	208.00	5.00	0.00	0.40			
60	A	687317.67	740007.88	6.00	110.00	5.00	0.00	0.40			
61	A	687293.41	739986.67	6.00	146.00	5.00	0.00	0.40			
62	A	687284.25	739960.64	6.00	197.00	5.00	0.00	0.40			
63	A	687284.62	739934.31	6.00	20.00	5.00	0.00	0.40			
64	A	687306.99	739935.17	6.00	107.00	5.00	0.00	0.40			
65	A	687338.13	739943.94	6.00	107.00	5.00	0.00	0.40			
66	A	687371.22	739953.50	6.00	109.00	5.00	0.00	0.40			
67	A	687441.91	739979.76	6.00	114.00	5.00	0.00	0.40			
68	A	687300.56	739912.43	6.00	197.00	5.00	0.00	0.40			
69	B	687276.85	739897.87	5.00	48.00	0.00	0.00	0.40			
70	B	687258.14	739921.13	5.00	6.00	0.00	0.00	0.40			
71	B	687258.62	739950.59	5.00	350.00	0.00	0.00	0.40			
72	B	687295.26	740016.53	5.00	324.00	0.00	0.00	0.40			

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Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
73	B	687307.87	740045.77	5.00	337.00	0.00	0.00	0.40			
74	B	687327.12	740071.29	5.00	177.00	0.00	0.00	0.40			
75	B	687323.18	740105.05	5.00	351.00	0.00	0.00	0.40			
76	B	687324.13	740133.20	5.00	357.00	0.00	0.00	0.40			
77	B	687345.28	740170.24	5.00	318.00	0.00	0.00	0.40			
78	C	687432.98	740123.56	8.00	49.00	5.00	0.00	0.45			
79	F	687350.40	740110.22	6.00	176.00	0.00	0.00	0.40			
80	F	687348.45	740131.60	6.00	173.00	0.00	0.00	0.40			
81	C	687305.58	740247.13	8.00	272.00	5.00	0.00	0.45			
82	C	687328.49	740225.20	8.00	49.00	5.00	0.00	0.45			
83	C	687355.42	740215.53	8.00	220.00	5.00	0.00	0.45			
84	C	687348.27	740190.68	8.00	45.00	5.00	0.00	0.45			
85	C	687423.24	740153.96	8.00	233.00	5.00	0.00	0.45			
86	C	687471.71	740109.51	8.00	207.00	5.00	0.00	0.45			
87	C	687457.28	740088.69	8.00	15.00	5.00	0.00	0.45			
88	C	687477.59	740056.25	8.00	174.00	5.00	0.00	0.45			
89	C	687450.56	740040.10	8.00	346.00	5.00	0.00	0.45			
90	H	687473.35	739966.39	8.00	196.00	5.00	0.00	0.45			
91	C	687385.84	740178.87	8.00	229.00	5.00	0.00	0.45			
92	D	687551.23	740361.54	10.00	257.00	0.00	0.00	2.00			
93	D	687509.57	740371.66	10.00	254.00	0.00	0.00	2.00			
94	E	687472.11	739932.31	8.00	32.00	5.00	0.00	0.50			
95	F	687301.56	740223.18	5.00	317.00	0.00	0.00	0.40			
96	B	687302.44	740260.92	5.00	233.00	0.00	0.00	0.40			
97	F	687389.51	739988.19	5.00	16.00	0.00	0.00	0.40			
98	F	687486.49	740032.14	5.00	288.00	0.00	0.00	0.40			
99	F	687369.92	740108.30	5.00	289.00	0.00	0.00	0.40			
100	D	687589.59	740352.45	10.00	257.00	0.00	0.00	2.00			
101	D	687631.47	740341.16	10.00	257.00	0.00	0.00	2.00			
102	G	687346.88	740370.11	5.00	258.00	0.00	0.00	0.40			
103	G	687358.70	740352.88	5.00	167.00	0.00	0.00	0.40			
104	G	687366.24	740382.89	5.00	171.00	0.00	0.00	0.40			
105	F	687444.12	740259.08	5.00	297.00	0.00	0.00	0.40			
106	F	687459.88	740245.45	5.00	215.00	0.00	0.00	0.40			
107	F	687418.10	740250.29	5.00	278.00	0.00	0.00	0.40			
108	F	687402.91	740226.24	5.00	349.00	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	F	687394.45	740197.26	5.00	128.00	0.00	0.00	0.40			
110	F	687446.31	740240.85	5.00	238.00	0.00	0.00	0.40			
111	A	687412.42	739948.06	6.00	16.00	5.00	0.00	0.40			
112	A	687427.61	739951.83	6.00	211.00	5.00	0.00	0.40			
113	A	687380.39	739971.83	6.00	287.00	5.00	0.00	0.40			
114	B	687276.33	739984.67	5.00	336.00	0.00	0.00	0.40			
115	A	687322.16	740156.24	6.00	34.00	5.00	0.00	0.40			
116	A	687315.67	740176.58	6.00	30.00	5.00	0.00	0.40			
117	F	687271.65	739945.75	5.00	16.00	0.00	0.00	0.40			
118	F	687283.29	739913.90	5.00	16.00	0.00	0.00	0.40			
119	F	687370.31	740018.51	5.00	112.00	0.00	0.00	0.40			
120	F	687490.62	740057.90	5.00	215.00	0.00	0.00	0.40			
121	F	687311.79	740021.07	5.00	199.00	0.00	0.00	0.40			
122	C	687386.52	740154.23	8.00	60.00	0.00	0.00	0.40			
123	C	687443.63	739989.48	8.00	7.00	5.00	0.00	0.40			
124	F	687430.76	740090.09	5.00	299.00	0.00	0.00	0.40			
125	F	687431.59	740079.18	5.00	200.00	0.00	0.00	0.40			
126	I	687280.51	740239.75	10.00	7.00	5.00	0.00	2.00			
127	I	687283.86	740312.43	10.00	355.00	5.00	0.00	2.00			
128	I	687299.09	740205.51	10.00	191.00	5.00	0.00	2.00			

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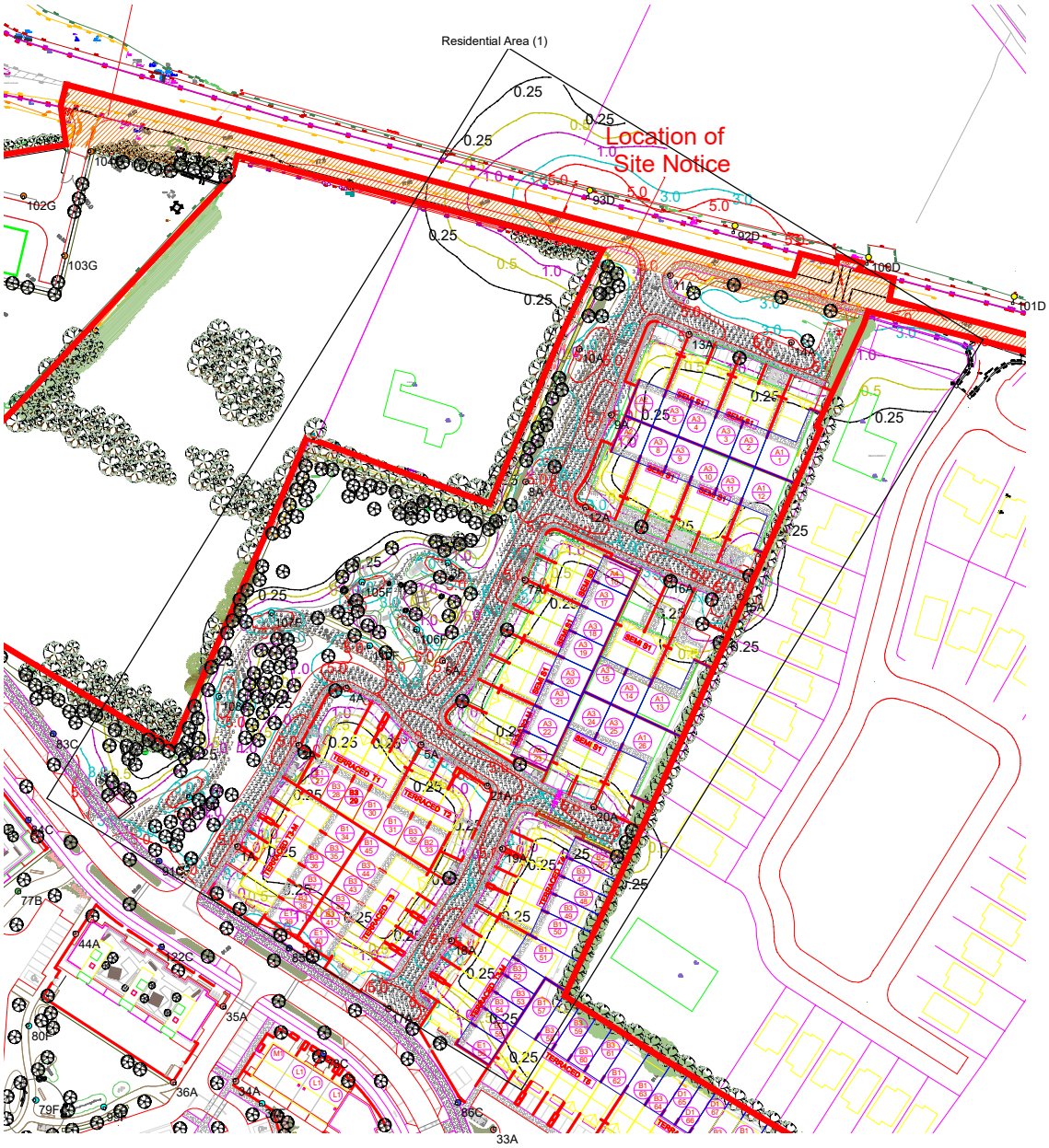
Horizontal Illuminance (lux)

Residential Area (1)



Results

Eav	5.10
Emin	1.04
Emax	16.82
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Residential Area (2)



Results

Eav	5.38
Emin	1.06
Emax	18.48
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Link Road (3)

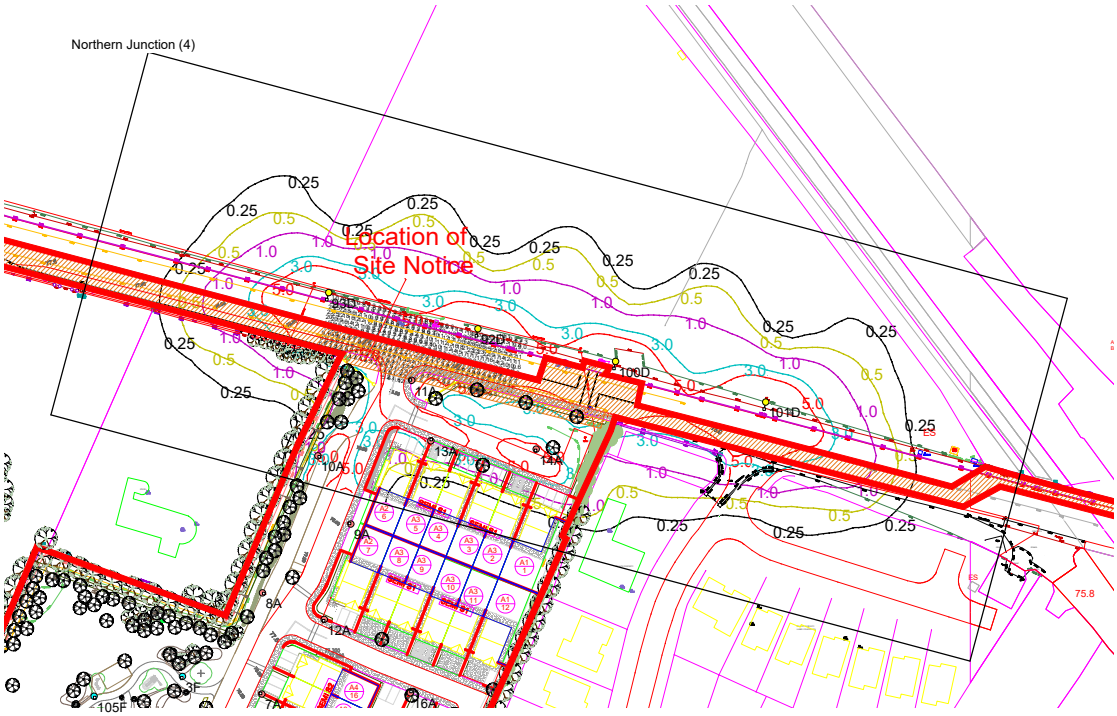


Results

Eav	7.93
Emin	1.56
Emax	26.93
Emin/Emax	0.06
Emin/Eav	0.20

Horizontal Illuminance (lux)

Northern Junction (4)

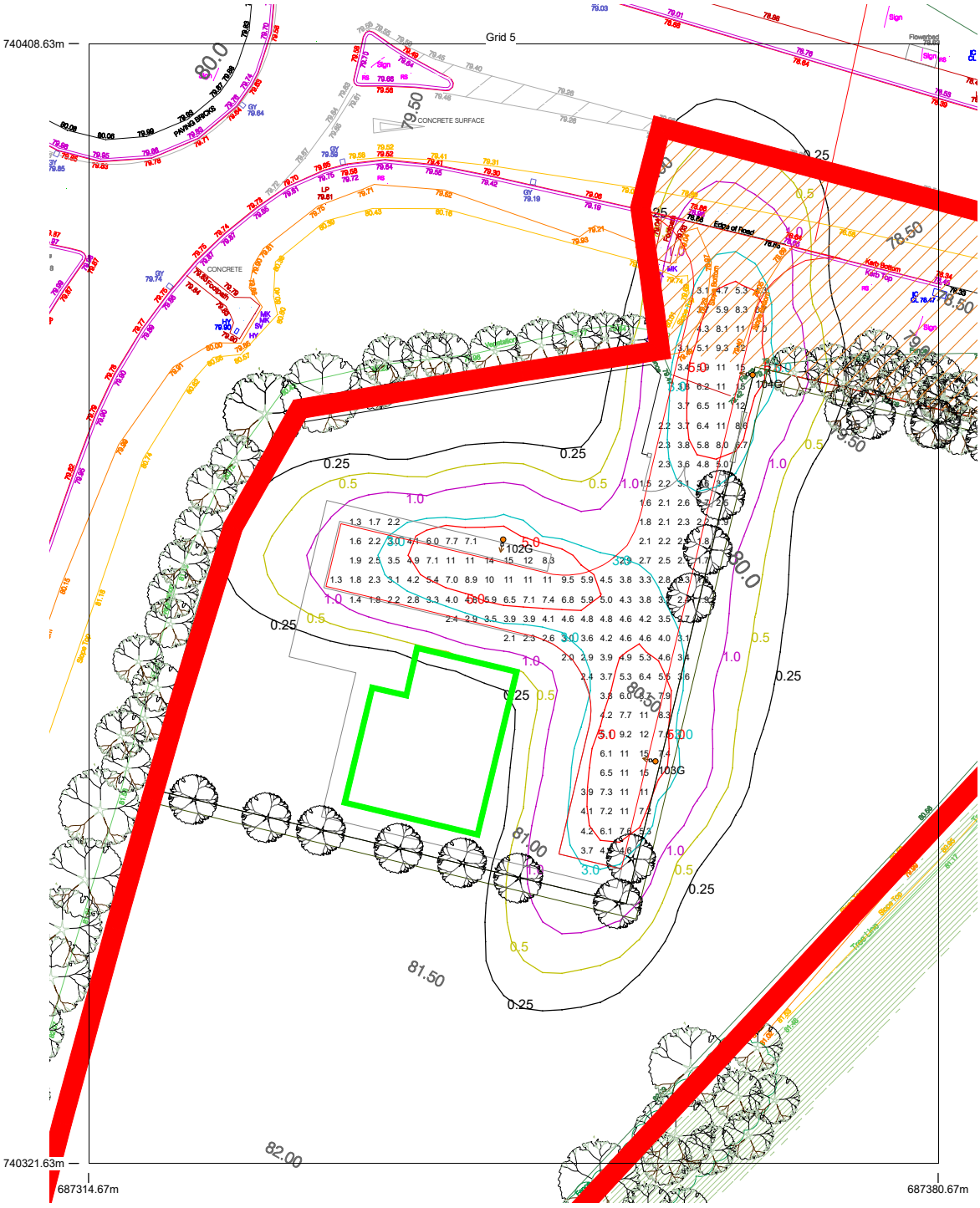


Results

Eav	10.30
Emin	4.14
Emax	26.41
Emin/Emax	0.16
Emin/Eav	0.40

Horizontal Illuminance (lux)

Grid 5

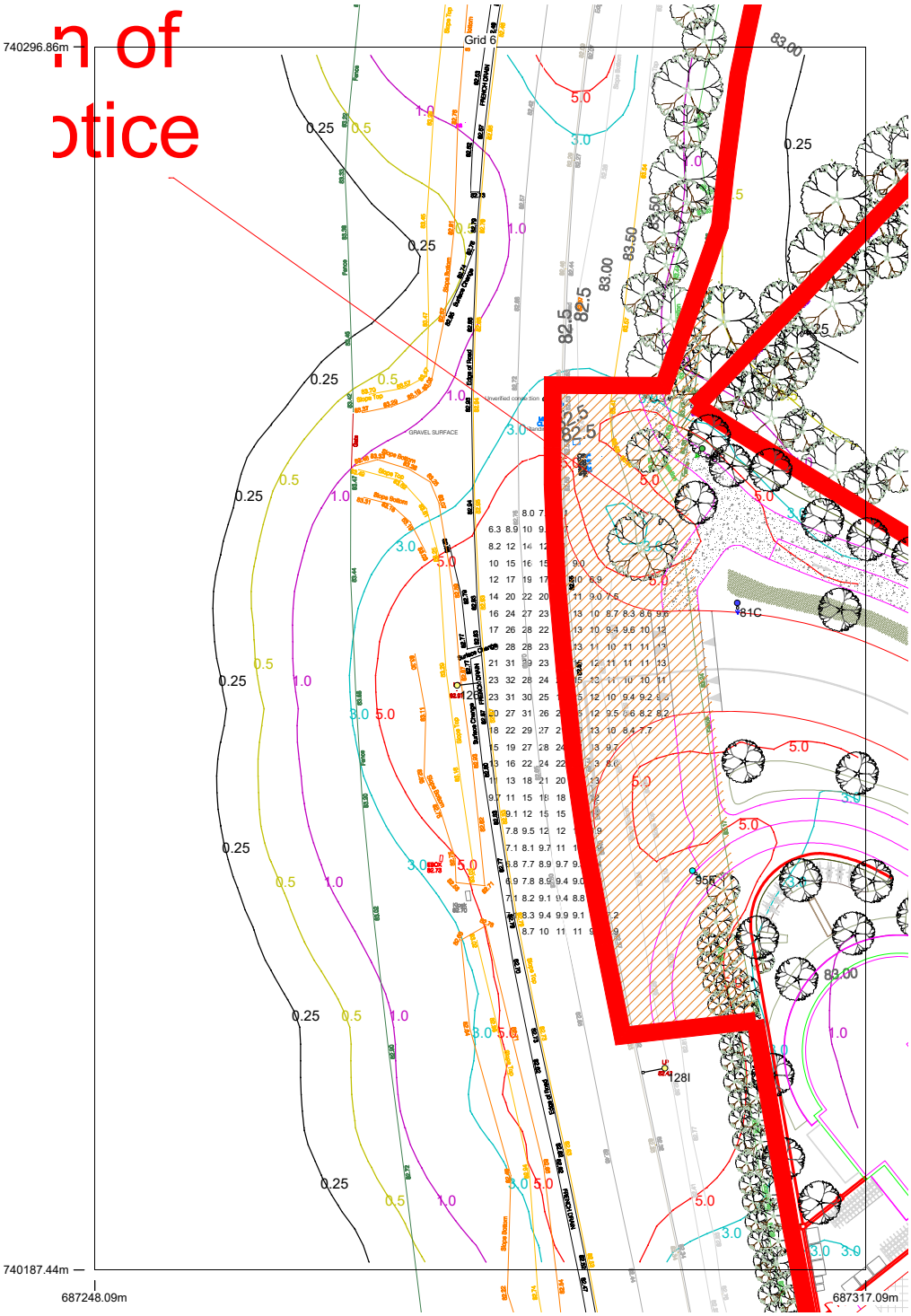


Results

Eav	5.38
Emin	1.30
Emax	15.13
Emin/Emax	0.09
Emin/Eav	0.24

Horizontal Illuminance (lux)

Grid 6



Results

Eav	14.22
Emin	6.30
Emax	31.69
Emin/Emax	0.20
Emin/Eav	0.44