

DATE: 12 October 2021

DESIGNER: Patrick Redmond

PROJECT No: 21058

PROJECT NAME: Proposed Residential Development at Boherboy REV D



Lighting on spine road designed to comply with I.S. EN 13201-2:2015 P3. Lighting in residential zones designed to comply with I.S. EN 13201-2:2015 P4. All prior to dimming by 25%. Energy consumption assessed in accordance with I.S. EN 13201-5:2015.

A product specific S/P ratio has been applied to the calculation to factor visual efficacy under low level white light, in line with guidance offered by PLG 03 (ILP '12).

LMF 0.92 x LDF 0.9 x LSF 1 = MF 0.83 at 100,000 hours at 25 degree ambient. Photometry measured at minimum 15 degree ambient.

Luminaire A = 17W. Luminaire B = 5W.
Luminaire C, E, & F = 10W. Luminaire D = 9W.
Luminaire G = 6W. Luminaire H = 11W.
Dimmed load, averaged for CLO.

Lighting Level ~ Dimmed By 25%

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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	Spine Road Phase 1	704759.22	726114.48	20.15	267.12	1.44	1.49
2	Durkan Phase 1	704618.29	726089.49	153.48	266.55	1.49	1.50
3	Kelland Phase 1	704772.85	726111.49	237.85	271.67	1.50	1.49
4	Spine Road Phase 2	704697.78	726377.75	33.17	166.46	1.44	1.50
5	Durkan Phase 2	704605.39	726353.51	113.33	158.93	1.49	1.50
6	Kelland Phase 2	704711.79	726358.36	223.48	250.37	1.50	1.50
7	Spine Road Phase 3	704702.60	726543.13	31.88	141.52	1.45	1.49
8	Durkan Phase 3	704620.67	726607.87	91.54	88.47	1.48	1.50
9	Spine Road Phase 3 A	704732.34	726665.88	104.65	41.61	1.50	1.49
10	Kelland Phase 3	704719.93	726597.73	116.63	102.76	1.50	1.49

Luminaires

Luminaire A Data

Supplier	ASD Lighting
Type	HWD-#4LED1260-S4 Osram Rev 1
Lamp(s)	LED
LampFlux(klm)/Colour	3.21 4000/72
File Name	HWD-#4LED1260-S4-CLO 15 deg (22w).ldt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	535.7, 67.7, 0.0
Lamp S/P Ratio	1.47
No. in Project	21

Luminaire B Data

Supplier	ASD Lighting
Type	HWD-#4LED440-S7 Osram Rev 1
Lamp(s)	LED
LampFlux(klm)/Colour	0.75 4000/72
File Name	HWD-#4LED0440-S7-CLO 15 deg (6w).ldt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	889.3, 32.7, 0.0
Lamp S/P Ratio	1.47
No. in Project	5

Luminaire C Data

Supplier	ASD Lighting
Type	HWD-#4LED1235-S4 Osram Rev 1
Lamp(s)	LED
LampFlux(klm)/Colour	1.97 4000/72
File Name	HWD-#4LED1235-S4-CLO 15 deg (13w).ldt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	541.4, 60.2, 0.0
Lamp S/P Ratio	1.47
No. in Project	21

Luminaire D Data

Supplier	ASD Lighting
Type	HWD-#4LED1230-S8 Osram Rev 1
Lamp(s)	LED
LampFlux(klm)/Colour	1.70 4000/72
File Name	HWD-#4LED1230-S8-CLO 15 deg (12w).ldt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	477.5, 62.1, 0.0
Lamp S/P Ratio	1.47
No. in Project	58

Luminaires

Luminaire E Data

Supplier	ASD Lighting
Type	HWD-#4LED1235-S0 Osram Rev 1
Lamp(s)	LED
LampFlux(klm)/Colour	1.96 4000/72
File Name	HWD-#4LED1235-S0-CLO 15 deg (13w).ldt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	415.6, 48.2, 0.2
Lamp S/P Ratio	1.47
No. in Project	3

Luminaire F Data

Supplier	ASD Lighting
Type	HWD-#4LED850-M1 Osram Rev 1
Lamp(s)	LED
LampFlux(klm)/Colour	1.69 4000/72
File Name	HWD-#4LED0850-M1-CLO 15 deg (13w).ldt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	636.1, 217.1, 0.2
Lamp S/P Ratio	1.47
No. in Project	52

Luminaire G Data

Supplier	ASD Lighting
Type	HWD-#4LED830-S7 Osram Rev 1
Lamp(s)	LED
LampFlux(klm)/Colour	1.17 4000/72
File Name	HWD-#4LED0830-S7-CLO 15 deg (8w).ldt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	964.3, 35.0, 0.0
Lamp S/P Ratio	1.47
No. in Project	106

Luminaire H Data

Supplier	ASD Lighting
Type	HWD-#4LED860-S4 Osram Rev 1
Lamp(s)	LED
LampFlux(klm)/Colour	2.15 4000/72
File Name	HWD-#4LED0860-S4-CLO 15 deg (15w).ldt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	545.6, 83.1, 0.2
Lamp S/P Ratio	1.47
No. in Project	9

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 1	A	704773.20	726129.95	6.00	189.00	5.00	0.00	0.40	75%			
PL 2	A	704766.67	726159.36	6.00	191.00	5.00	0.00	0.40	75%			
PL 3	A	704761.18	726188.84	6.00	189.00	5.00	0.00	0.40	75%			
PL 4	A	704754.40	726222.41	6.00	189.00	5.00	0.00	0.40	75%			
PL 5	A	704748.80	726254.82	6.00	191.00	5.00	0.00	0.40	75%			
PL 6	A	704733.48	726274.55	6.00	12.00	5.00	0.00	0.40	75%			
PL 7	A	704732.69	726291.82	6.00	12.00	5.00	0.00	0.40	75%			
PL 8	A	704724.88	726320.76	6.00	12.00	5.00	0.00	0.40	75%			
PL 9	A	704720.11	726347.77	6.00	11.00	5.00	0.00	0.40	75%			
PL 10	A	704727.71	726372.16	6.00	193.00	5.00	0.00	0.40	75%			
PL 11	B	704752.83	726159.24	6.00	280.00	0.00	0.00	0.30	75%			
PL 12	F	704731.16	726158.80	6.00	279.00	0.00	0.00	0.30	75%			
PL 13	B	704711.44	726152.04	6.00	280.00	0.00	0.00	0.30	75%			
PL 14	B	704754.51	726146.80	6.00	106.00	0.00	0.00	0.30	75%			
PL 15	B	704734.85	726142.92	6.00	102.00	0.00	0.00	0.30	75%			
PL 16	B	704708.10	726137.64	6.00	103.00	0.00	0.00	0.30	75%			
PL 17	C	704684.33	726136.27	6.00	100.00	5.00	0.00	0.30	75%			
PL 18	C	704654.77	726130.91	6.00	103.00	5.00	0.00	0.30	75%			
PL 19	C	704624.14	726132.47	6.00	78.00	5.00	0.00	0.30	75%			
PL 20	D	704611.74	726149.57	6.00	18.00	5.00	0.00	0.30	75%			
PL 21	D	704616.43	726172.01	6.00	185.00	5.00	0.00	0.30	75%			
PL 22	D	704614.98	726192.46	6.00	191.00	5.00	0.00	0.30	75%			
PL 23	D	704611.13	726213.34	6.00	180.00	5.00	0.00	0.30	75%			
PL 24	C	704605.78	726243.07	6.00	358.00	5.00	0.00	0.30	75%			
PL 25	D	704615.49	726271.50	6.00	171.00	5.00	0.00	0.30	75%			
PL 26	D	704619.11	726300.56	6.00	175.00	5.00	0.00	0.30	75%			
PL 27	D	704620.95	726329.14	6.00	175.00	5.00	0.00	0.30	75%			
PL 28	D	704616.61	726348.74	6.00	321.00	5.00	0.00	0.30	75%			
PL 29	E	704636.10	726358.89	6.00	277.00	5.00	0.00	0.30	75%			
PL 30	E	704655.94	726361.19	6.00	279.00	5.00	0.00	0.30	75%			
PL 31	E	704675.77	726363.47	6.00	279.00	5.00	0.00	0.30	75%			
PL 32	D	704621.86	726209.45	6.00	272.00	5.00	0.00	0.30	75%			
PL 33	F	704648.74	726218.66	6.00	279.00	5.00	0.00	0.30	75%			
PL 34	F	704646.91	726203.75	6.00	103.00	5.00	0.00	0.30	75%			
PL 35	F	704683.45	726209.70	6.00	103.00	5.00	0.00	0.30	75%			
PL 36	F	704681.53	726223.95	6.00	280.00	5.00	0.00	0.30	75%			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 37	D	704711.40	726207.74	6.00	102.00	5.00	0.00	0.30	75%			
PL 38	D	704734.36	726211.89	6.00	103.00	5.00	0.00	0.30	75%			
PL 39	F	704715.81	726238.09	6.00	192.00	5.00	0.00	0.30	75%			
PL 40	F	704703.59	726225.18	6.00	12.00	5.00	0.00	0.30	75%			
PL 41	F	704708.99	726279.19	6.00	194.00	5.00	0.00	0.30	75%			
PL 42	F	704699.02	726256.62	6.00	11.00	5.00	0.00	0.30	75%			
PL 43	F	704704.35	726308.63	6.00	189.00	5.00	0.00	0.30	75%			
PL 44	F	704689.50	726315.23	6.00	11.00	5.00	0.00	0.30	75%			
PL 45	F	704698.41	726343.46	6.00	191.00	5.00	0.00	0.30	75%			
PL 46	F	704685.32	726344.68	6.00	9.00	5.00	0.00	0.30	75%			
PL 47	D	704626.48	726283.78	6.00	262.00	5.00	0.00	0.30	75%			
PL 48	D	704653.15	726284.24	6.00	278.00	5.00	0.00	0.30	75%			
PL 49	D	704684.48	726288.32	6.00	282.00	5.00	0.00	0.30	75%			
PL 50	D	704730.27	726231.70	6.00	276.00	5.00	0.00	0.30	75%			
PL 51	C	704699.12	726373.71	6.00	290.00	5.00	0.00	0.30	75%			
PL 52	G	704637.35	726119.21	6.00	66.00	0.00	0.00	0.30	75%			
PL 53	G	704665.72	726109.58	6.00	81.00	0.00	0.00	0.30	75%			
PL 54	G	704691.08	726110.97	6.00	278.00	0.00	0.00	0.30	75%			
PL 55	G	704702.99	726164.06	6.00	190.00	0.00	0.00	0.30	75%			
PL 56	G	704698.65	726190.61	6.00	189.00	0.00	0.00	0.30	75%			
PL 57	G	704719.97	726289.72	6.00	277.00	0.00	0.00	0.30	75%			
PL 58	G	704714.06	726353.21	6.00	133.00	0.00	0.00	0.30	75%			
PL 59	G	704688.97	726124.11	6.00	189.00	0.00	0.00	0.30	75%			
PL 61	D	704778.82	726157.15	6.00	282.00	5.00	0.00	0.30	75%			
PL 62	F	704796.98	726167.34	6.00	283.00	5.00	0.00	0.30	75%			
PL 63	F	704802.12	726154.55	6.00	103.00	5.00	0.00	0.30	75%			
PL 64	D	704823.54	726158.74	6.00	101.00	5.00	0.00	0.30	75%			
PL 65	D	704856.37	726165.23	6.00	102.00	5.00	0.00	0.30	75%			
PL 66	D	704877.86	726168.24	6.00	84.00	5.00	0.00	0.30	75%			
PL 67	D	704892.51	726181.30	6.00	168.00	5.00	0.00	0.30	75%			
PL 68	D	704898.69	726204.43	6.00	178.00	5.00	0.00	0.30	75%			
PL 69	D	704894.67	726226.89	6.00	189.00	5.00	0.00	0.30	75%			
PL 70	C	704825.33	726223.25	6.00	103.00	5.00	0.00	0.30	75%			
PL 71	C	704854.12	726228.86	6.00	101.00	5.00	0.00	0.30	75%			
PL 72	C	704882.17	726232.67	6.00	99.00	5.00	0.00	0.30	75%			
PL 73	D	704911.29	726239.61	6.00	97.00	5.00	0.00	0.30	75%			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 74	D	704921.12	726256.22	6.00	174.00	5.00	0.00	0.30	75%			
PL 75	D	704921.30	726283.88	6.00	195.00	5.00	0.00	0.30	75%			
PL 76	D	704914.43	726311.73	6.00	189.00	5.00	0.00	0.30	75%			
PL 77	D	704915.32	726339.91	6.00	180.00	5.00	0.00	0.30	75%			
PL 78	D	704914.85	726368.38	6.00	178.00	5.00	0.00	0.30	75%			
PL 79	D	704912.74	726398.97	6.00	187.00	5.00	0.00	0.30	75%			
PL 80	F	704925.73	726373.91	6.00	96.00	5.00	0.00	0.30	75%			
PL 81	F	704955.56	726376.60	6.00	97.00	5.00	0.00	0.30	75%			
PL 82	F	704822.57	726183.50	6.00	192.00	5.00	0.00	0.30	75%			
PL 83	F	704805.35	726180.45	6.00	13.00	5.00	0.00	0.30	75%			
PL 84	F	704817.00	726211.92	6.00	190.00	5.00	0.00	0.30	75%			
PL 85	F	704800.06	726208.45	6.00	11.00	5.00	0.00	0.30	75%			
PL 86	F	704811.15	726241.37	6.00	192.00	5.00	0.00	0.30	75%			
PL 87	F	704794.18	726237.78	6.00	16.00	5.00	0.00	0.30	75%			
PL 88	F	704806.00	726270.60	6.00	191.00	5.00	0.00	0.30	75%			
PL 89	F	704788.33	726267.29	6.00	14.00	5.00	0.00	0.30	75%			
PL 90	F	704803.68	726291.94	6.00	184.00	5.00	0.00	0.30	75%			
PL 91	F	704789.80	726288.77	6.00	6.00	5.00	0.00	0.30	75%			
PL 92	F	704810.89	726314.63	6.00	174.00	5.00	0.00	0.30	75%			
PL 93	F	704797.23	726316.59	6.00	350.00	5.00	0.00	0.30	75%			
PL 94	F	704808.63	726358.71	6.00	191.00	5.00	0.00	0.30	75%			
PL 95	F	704795.03	726353.48	6.00	8.00	5.00	0.00	0.30	75%			
PL 96	D	704800.22	726390.31	6.00	190.00	5.00	0.00	0.30	75%			
PL 97	C	704820.11	726365.45	6.00	97.00	5.00	0.00	0.30	75%			
PL 98	C	704842.10	726367.65	6.00	98.00	5.00	0.00	0.30	75%			
PL 99	C	704876.35	726371.25	6.00	97.00	5.00	0.00	0.30	75%			
PL 100	D	704885.59	726392.57	6.00	278.00	5.00	0.00	0.30	75%			
PL 101	C	704754.77	726304.27	6.00	283.00	5.00	0.00	0.30	75%			
PL 102	C	704784.14	726304.81	6.00	262.00	5.00	0.00	0.30	75%			
PL 103	H	704815.71	726309.38	6.00	274.00	5.00	0.00	0.80	75%			
PL 104	H	704842.56	726312.29	6.00	277.00	5.00	0.00	0.80	75%			
PL 105	H	704864.78	726314.59	6.00	273.00	5.00	0.00	0.80	75%			
PL 106	H	704894.52	726317.66	6.00	276.00	5.00	0.00	0.80	75%			
PL 107	G	704779.22	726170.51	6.00	189.00	0.00	0.00	0.30	75%			
PL 108	G	704773.29	726199.82	6.00	189.00	0.00	0.00	0.30	75%			
PL 109	G	704767.80	726227.67	6.00	189.00	0.00	0.00	0.30	75%			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 110	G	704762.02	726257.14	6.00	191.00	0.00	0.00	0.30	75%			
PL 111	G	704756.13	726286.62	6.00	195.00	0.00	0.00	0.30	75%			
PL 112	D	704772.30	726274.13	6.00	278.00	0.00	0.00	0.30	75%			
PL 113	G	704775.16	726218.17	6.00	274.00	0.00	0.00	0.30	75%			
PL 114	G	704790.81	726216.89	6.00	94.00	0.00	0.00	0.30	75%			
PL 115	G	704896.99	726371.80	6.00	248.00	0.00	0.00	0.30	75%			
PL 116	G	704886.36	726148.74	6.00	356.00	0.00	0.00	0.30	75%			
PL 117	G	704896.01	726176.84	6.00	178.00	0.00	0.00	0.30	75%			
PL 118	G	704907.60	726204.91	6.00	153.00	0.00	0.00	0.30	75%			
PL 119	G	704922.03	726230.70	6.00	149.00	0.00	0.00	0.30	75%			
PL 120	G	704905.76	726236.59	6.00	275.00	0.00	0.00	0.30	75%			
PL 121	G	704933.80	726258.75	6.00	175.00	0.00	0.00	0.30	75%			
PL 122	G	704928.02	726287.96	6.00	205.00	0.00	0.00	0.30	75%			
PL 123	G	704915.05	726311.83	6.00	6.00	0.00	0.00	0.30	75%			
PL 124	G	704924.15	726340.38	6.00	170.00	0.00	0.00	0.30	75%			
PL 125	G	704923.72	726368.11	6.00	195.00	0.00	0.00	0.30	75%			
PL 126	G	704746.71	726354.16	6.00	276.00	0.00	0.00	0.30	75%			
PL 127	G	704775.02	726357.18	6.00	278.00	0.00	0.00	0.30	75%			
PL 128	F	704924.14	726385.87	6.00	276.00	5.00	0.00	0.30	75%			
PL 129	F	704954.68	726388.57	6.00	275.00	5.00	0.00	0.30	75%			
PL 130	A	704720.80	726406.46	6.00	193.00	5.00	0.00	0.40	75%			
PL 131	A	704707.68	726431.35	6.00	10.00	5.00	0.00	0.40	75%			
PL 132	A	704701.71	726465.75	6.00	2.00	5.00	0.00	0.40	75%			
PL 133	A	704704.33	726496.83	6.00	356.00	5.00	0.00	0.40	75%			
PL 134	A	704703.14	726521.79	6.00	1.00	5.00	0.00	0.40	75%			
PL 135	A	704705.99	726551.68	6.00	353.00	5.00	0.00	0.40	75%			
PL 136	D	704693.39	726439.62	6.00	283.00	5.00	0.00	0.30	75%			
PL 137	D	704665.59	726434.98	6.00	277.00	5.00	0.00	0.30	75%			
PL 138	D	704639.51	726432.30	6.00	270.00	5.00	0.00	0.30	75%			
PL 139	D	704622.36	726429.72	6.00	1.00	5.00	0.00	0.30	75%			
PL 140	D	704623.11	726453.86	6.00	1.00	5.00	0.00	0.30	75%			
PL 141	F	704635.83	726475.98	6.00	304.00	5.00	0.00	0.30	75%			
PL 142	F	704646.16	726462.64	6.00	127.00	5.00	0.00	0.30	75%			
PL 143	F	704659.94	726493.90	6.00	304.00	5.00	0.00	0.30	75%			
PL 144	F	704669.55	726479.96	6.00	128.00	5.00	0.00	0.30	75%			
PL 145	D	704692.57	726508.87	6.00	270.00	5.00	0.00	0.30	75%			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 146	D	704674.23	726504.65	6.00	306.00	5.00	0.00	0.30	75%			
LL 147	G	704680.81	726438.41	6.00	186.00	0.00	0.00	0.30	75%			
LL 148	G	704679.06	726477.54	6.00	182.00	0.00	0.00	0.30	75%			
LL 149	G	704679.27	726460.72	6.00	186.00	0.00	0.00	0.30	75%			
LL 150	D	704658.62	726457.38	6.00	97.00	5.00	0.00	0.30	75%			
PL 151	G	704637.75	726366.21	6.00	275.00	0.00	0.00	0.30	75%			
PL 152	G	704617.10	726363.17	6.00	8.00	0.00	0.00	0.30	75%			
PL 153	G	704622.20	726390.61	6.00	177.00	0.00	0.00	0.30	75%			
PL 154	G	704624.40	726409.13	6.00	172.00	0.00	0.00	0.30	75%			
PL 155	G	704673.14	726370.03	6.00	280.00	0.00	0.00	0.30	75%			
PL 156	D	704797.85	726413.65	6.00	188.00	5.00	0.00	0.30	75%			
PL 157	D	704795.99	726431.51	6.00	190.00	5.00	0.00	0.30	75%			
PL 158	D	704910.03	726425.88	6.00	185.00	5.00	0.00	0.30	75%			
PL 159	D	704905.49	726453.25	6.00	193.00	5.00	0.00	0.30	75%			
PL 160	D	704893.65	726486.68	6.00	204.00	5.00	0.00	0.30	75%			
PL 161	D	704881.29	726513.08	6.00	206.00	5.00	0.00	0.30	75%			
PL 162	D	704866.70	726535.60	6.00	214.00	5.00	0.00	0.30	75%			
PL 163	D	704850.44	726558.89	6.00	214.00	5.00	0.00	0.30	75%			
PL 164	D	704835.34	726580.26	6.00	216.00	5.00	0.00	0.30	75%			
PL 165	D	704818.41	726595.75	6.00	259.00	5.00	0.00	0.30	75%			
PL 166	C	704799.77	726587.82	6.00	306.00	5.00	0.00	0.30	75%			
PL 167	C	704775.33	726570.57	6.00	307.00	5.00	0.00	0.30	75%			
PL 168	F	704750.63	726553.35	6.00	306.00	5.00	0.00	0.30	75%			
PL 169	F	704725.83	726535.92	6.00	307.00	5.00	0.00	0.30	75%			
PL 170	F	704758.14	726542.35	6.00	127.00	5.00	0.00	0.30	75%			
PL 171	F	704732.85	726524.77	6.00	126.00	5.00	0.00	0.30	75%			
PL 172	D	704767.46	726542.76	6.00	207.00	5.00	0.00	0.30	75%			
PL 173	D	704773.78	726529.26	6.00	200.00	5.00	0.00	0.30	75%			
PL 174	D	704777.05	726515.21	6.00	186.00	5.00	0.00	0.30	75%			
PL 175	C	704734.82	726510.22	6.00	275.00	5.00	0.00	0.30	75%			
PL 176	C	704763.85	726513.23	6.00	276.00	5.00	0.00	0.30	75%			
PL 177	C	704794.39	726516.33	6.00	276.00	5.00	0.00	0.30	75%			
PL 178	C	704824.30	726519.38	6.00	277.00	5.00	0.00	0.30	75%			
PL 179	D	704848.84	726525.49	6.00	310.00	5.00	0.00	0.30	75%			
PL 180	H	704735.91	726426.36	6.00	96.00	5.00	0.00	0.80	75%			
PL 181	H	704765.73	726429.58	6.00	96.00	5.00	0.00	0.80	75%			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 182	H	704787.98	726431.84	6.00	96.00	5.00	0.00	0.80	75%			
PL 183	H	704817.75	726434.85	6.00	96.00	5.00	0.00	0.80	75%			
PL 184	H	704847.58	726437.93	6.00	96.00	5.00	0.00	0.80	75%			
PL 185	F	704856.27	726453.00	6.00	293.00	5.00	0.00	0.30	75%			
PL 186	F	704882.37	726465.33	6.00	294.00	5.00	0.00	0.30	75%			
PL 187	F	704875.75	726447.14	6.00	114.00	5.00	0.00	0.30	75%			
PL 188	G	704726.41	726501.64	6.00	184.00	0.00	0.00	0.30	75%			
PL 189	G	704727.69	726477.83	6.00	186.00	0.00	0.00	0.30	75%			
PL 190	G	704730.25	726452.56	6.00	190.00	0.00	0.00	0.30	75%			
PL 191	G	704787.57	726498.01	6.00	3.00	0.00	0.00	0.30	75%			
PL 192	G	704790.04	726473.57	6.00	10.00	0.00	0.00	0.30	75%			
PL 193	G	704792.20	726453.66	6.00	5.00	0.00	0.00	0.30	75%			
LL 194	D	704749.83	726422.67	6.00	98.00	5.00	0.00	0.30	75%			
PL 195	G	704733.20	726410.58	6.00	9.00	0.00	0.00	0.30	75%			
PL 196	G	704735.33	726391.15	6.00	9.00	0.00	0.00	0.30	75%			
LL 197	G	704759.45	726414.37	6.00	190.00	0.00	0.00	0.30	75%			
LL 199	G	704789.26	726399.52	6.00	9.00	0.00	0.00	0.30	75%			
PL 201	G	704771.57	726390.60	6.00	278.00	0.00	0.00	0.30	75%			
PL 202	G	704741.69	726385.70	6.00	285.00	0.00	0.00	0.30	75%			
PL 203	G	704920.57	726400.01	6.00	334.00	0.00	0.00	0.30	75%			
PL 204	G	704929.83	726428.71	6.00	193.00	0.00	0.00	0.30	75%			
PL 205	G	704919.03	726456.72	6.00	201.00	0.00	0.00	0.30	75%			
PL 206	G	704906.44	726484.00	6.00	205.00	0.00	0.00	0.30	75%			
PL 207	G	704892.63	726510.61	6.00	209.00	0.00	0.00	0.30	75%			
PL 208	G	704871.24	726546.56	6.00	214.00	0.00	0.00	0.30	75%			
PL 209	G	704878.96	726529.50	6.00	39.00	5.00	0.00	0.30	75%			
PL 210	G	704869.27	726558.08	6.00	123.00	0.00	0.00	0.30	75%			
PL 211	G	704857.51	726566.49	6.00	218.00	0.00	0.00	0.30	75%			
PL 212	G	704837.48	726588.77	6.00	223.00	0.00	0.00	0.30	75%			
PL 213	G	704813.81	726615.75	6.00	27.00	0.00	0.00	0.30	75%			
PL 214	G	704727.25	726552.62	6.00	358.00	0.00	0.00	0.30	75%			
PL 215	G	704730.09	726582.47	6.00	356.00	0.00	0.00	0.30	75%			
PL 216	G	704730.61	726600.44	6.00	82.00	0.00	0.00	0.30	75%			
PL 217	G	704749.00	726604.94	6.00	110.00	0.00	0.00	0.30	75%			
PL 218	D	704899.85	726469.44	6.00	199.00	5.00	0.00	0.30	75%			
PL 219	A	704709.34	726581.68	6.00	351.00	5.00	0.00	0.40	75%			

Layout Continued

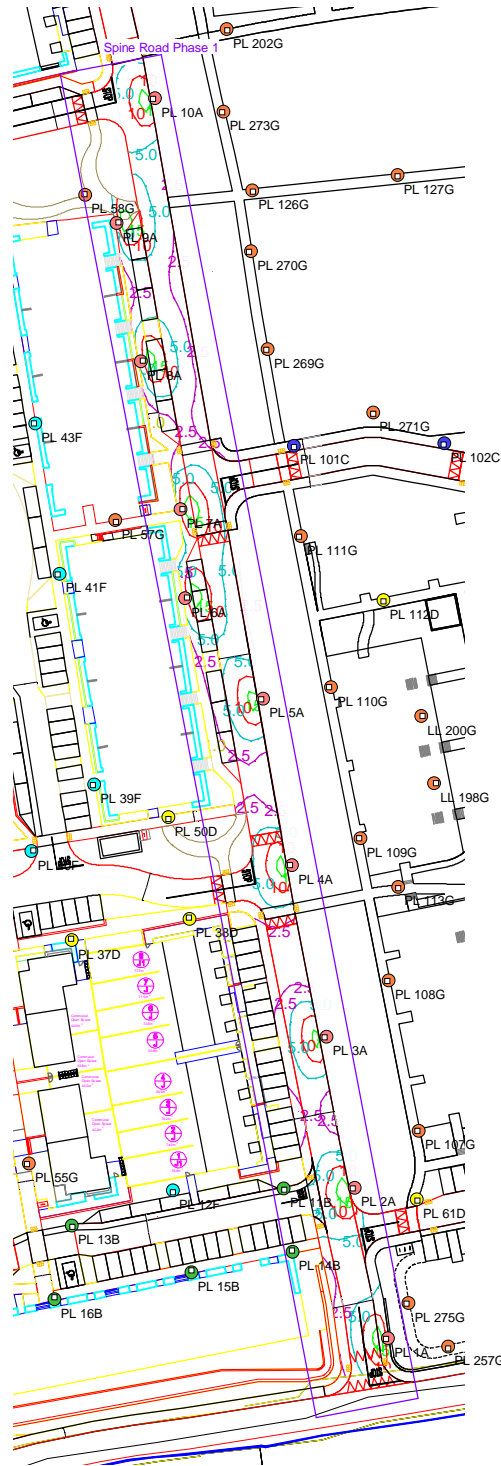
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 220	A	704712.95	726615.38	6.00	353.00	5.00	0.00	0.40	75%			
PL 221	F	704714.96	726643.44	6.00	353.00	5.00	0.00	0.40	75%			
PL 222	F	704717.52	726665.49	6.00	353.00	5.00	0.00	0.40	75%			
PL 223	A	704728.20	726681.30	6.00	265.00	5.00	0.00	0.40	75%			
PL 224	F	704728.40	726619.17	6.00	172.00	5.00	0.00	0.40	75%			
PL 225	F	704731.57	726648.64	6.00	170.00	5.00	0.00	0.40	75%			
PL 226	F	704774.69	726694.77	6.00	298.00	5.00	0.00	0.40	75%			
PL 227	F	704746.24	726685.23	6.00	294.00	5.00	0.00	0.40	75%			
PL 228	C	704698.62	726685.77	6.00	260.00	5.00	0.00	0.40	75%			
PL 229	F	704749.90	726673.24	6.00	103.00	5.00	0.00	0.40	75%			
PL 230	F	704777.12	726682.68	6.00	109.00	5.00	0.00	0.40	75%			
PL 231	A	704817.09	726723.51	6.00	174.00	5.00	0.00	0.40	75%			
PL 232	A	704802.97	726693.73	6.00	139.00	5.00	0.00	0.40	75%			
PL 233	D	704686.07	726674.41	6.00	170.00	5.00	0.00	0.40	75%			
PL 234	G	704661.37	726682.04	6.00	83.00	0.00	0.00	0.40	75%			
PL 235	G	704640.75	726681.49	6.00	105.00	0.00	0.00	0.40	75%			
PL 236	G	704635.00	726667.60	6.00	172.00	0.00	0.00	0.40	75%			
PL 237	G	704632.66	726644.79	6.00	172.00	0.00	0.00	0.40	75%			
PL 238	G	704630.23	726621.80	6.00	171.00	0.00	0.00	0.40	75%			
PL 239	G	704642.06	726616.64	6.00	265.00	0.00	0.00	0.40	75%			
PL 240	D	704667.33	726611.20	6.00	85.00	5.00	0.00	0.40	75%			
PL 241	C	704695.63	726603.89	6.00	87.00	5.00	0.00	0.40	75%			
PL 242	G	704819.03	726606.57	6.00	119.00	0.00	0.00	0.40	75%			
LL 243	G	704669.88	726621.40	6.00	173.00	0.00	0.00	0.40	75%			
LL 244	G	704680.92	726639.24	6.00	126.00	0.00	0.00	0.40	75%			
LL 245	G	704687.67	726657.37	6.00	173.00	0.00	0.00	0.40	75%			
PL 246	G	704774.31	726613.58	6.00	111.00	0.00	0.00	0.40	75%			
PL 247	G	704797.95	726621.60	6.00	110.00	0.00	0.00	0.40	75%			
PL 248	G	704812.39	726644.70	6.00	173.00	0.00	0.00	0.40	75%			
PL 249	G	704825.12	726658.43	6.00	83.00	0.00	0.00	0.40	75%			
PL 250	G	704812.45	726679.55	6.00	203.00	0.00	0.00	0.40	75%			
LL 251	G	704761.09	726624.14	6.00	358.00	0.00	0.00	0.40	75%			
LL 252	G	704782.60	726668.46	6.00	359.00	0.00	0.00	0.40	75%			
LL 253	G	704767.80	726650.22	6.00	356.00	0.00	0.00	0.40	75%			
LL 254	G	704782.22	726650.22	6.00	173.00	0.00	0.00	0.40	75%			
PL 255	G	704734.53	726627.82	6.00	354.00	0.00	0.00	0.40	75%			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 256	G	704737.60	726656.54	6.00	350.00	0.00	0.00	0.40	75%			
PL 257	G	704784.91	726128.31	6.00	282.00	0.00	0.00	0.30	75%			
PL 258	G	704804.61	726133.64	6.00	285.00	0.00	0.00	0.30	75%			
PL 259	G	704834.72	726138.42	6.00	98.00	0.00	0.00	0.30	75%			
PL 260	G	704856.92	726142.82	6.00	102.00	0.00	0.00	0.30	75%			
PL 261	G	704880.15	726139.88	6.00	86.00	0.00	0.00	0.30	75%			
PL 262	G	704748.34	726557.09	6.00	127.00	0.00	0.00	0.30	75%			
PL 263	G	704772.66	726574.42	6.00	128.00	0.00	0.00	0.30	75%			
PL 264	G	704797.18	726591.83	6.00	128.00	0.00	0.00	0.30	75%			
PL 264	G	704793.48	726171.42	6.00	119.00	0.00	0.00	0.30	75%			
LL 265	G	704792.04	726188.53	6.00	14.00	0.00	0.00	0.30	75%			
LL 266	G	704788.83	726205.24	6.00	14.00	0.00	0.00	0.30	75%			
LL 200	G	704779.68	726251.45	6.00	15.00	0.00	0.00	0.30	75%			
LL 198	G	704782.23	726238.32	6.00	13.00	0.00	0.00	0.30	75%			
PL 269	G	704749.66	726323.14	6.00	198.00	0.00	0.00	0.30	75%			
PL 270	G	704746.40	726342.21	6.00	190.00	0.00	0.00	0.30	75%			
PL 271	G	704770.27	726310.75	6.00	272.00	0.00	0.00	0.30	75%			
PL 272	G	704793.94	726336.62	6.00	186.00	0.00	0.00	0.30	75%			
PL 273	G	704741.10	726369.46	6.00	193.00	0.00	0.00	0.30	75%			
PL 60	G	704791.80	726376.49	6.00	185.00	0.00	0.00	0.30	75%			
LL 273	G	704820.81	726386.10	6.00	278.00	0.00	0.00	0.40	75%			
PL 274	G	704820.15	726672.25	6.00	194.00	0.00	0.00	0.40	75%			
PL 275	G	704777.15	726136.85	6.00	193.00	0.00	0.00	0.30	75%			

Horizontal Illuminance (lux)

Spine Road Phase 1

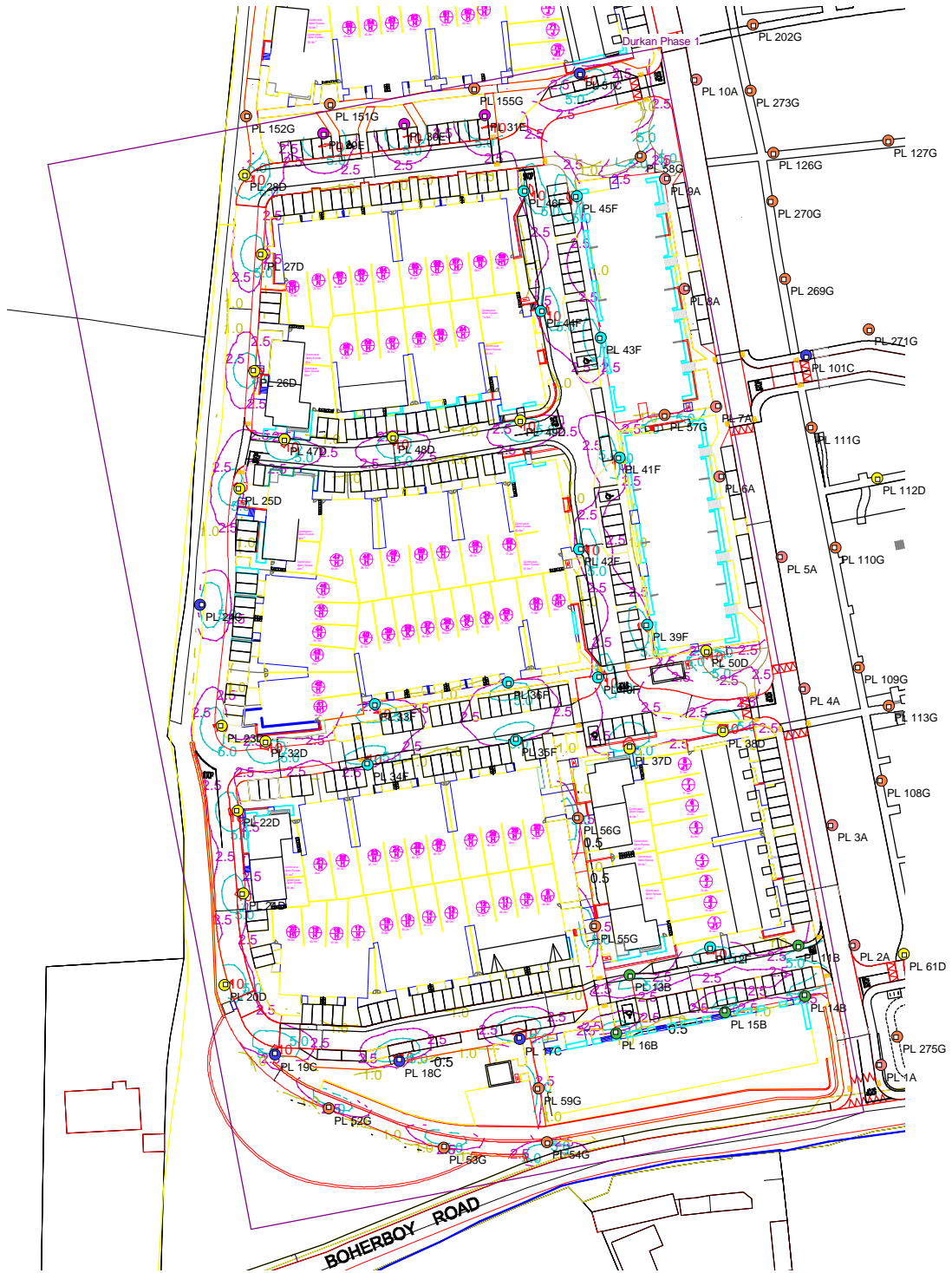


Results

Eav	5.66
Emin	1.28
Emax	17.71
Emin/Emax	0.07
Emin/Eav	0.23

Horizontal Illuminance (lux)

Durkan Phase 1

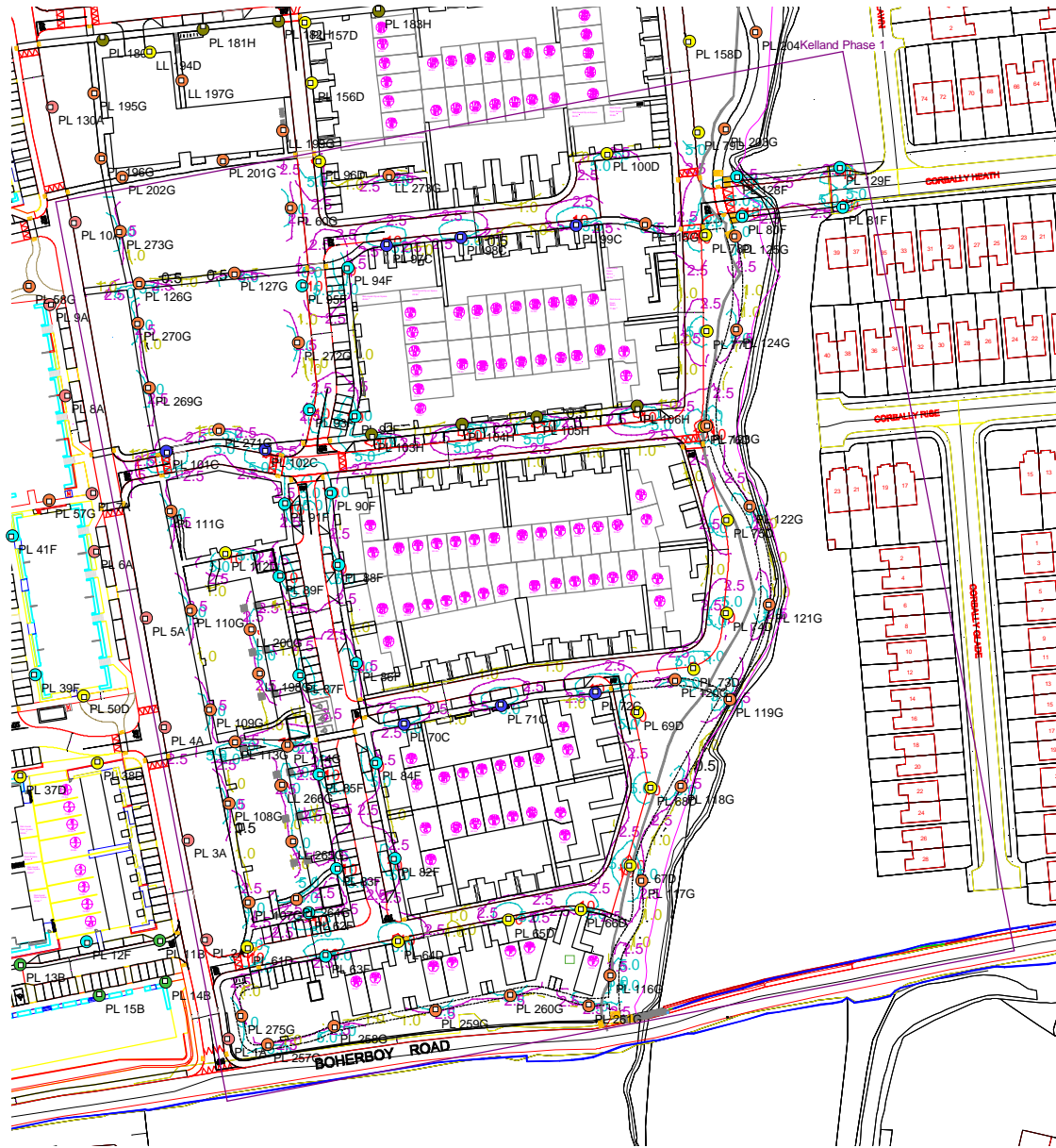


Results

Eav	3.45
Emin	0.77
Emax	11.44
Emin/Emax	0.07
Emin/Eav	0.22

Horizontal Illuminance (lux)

Kelland Phase 1

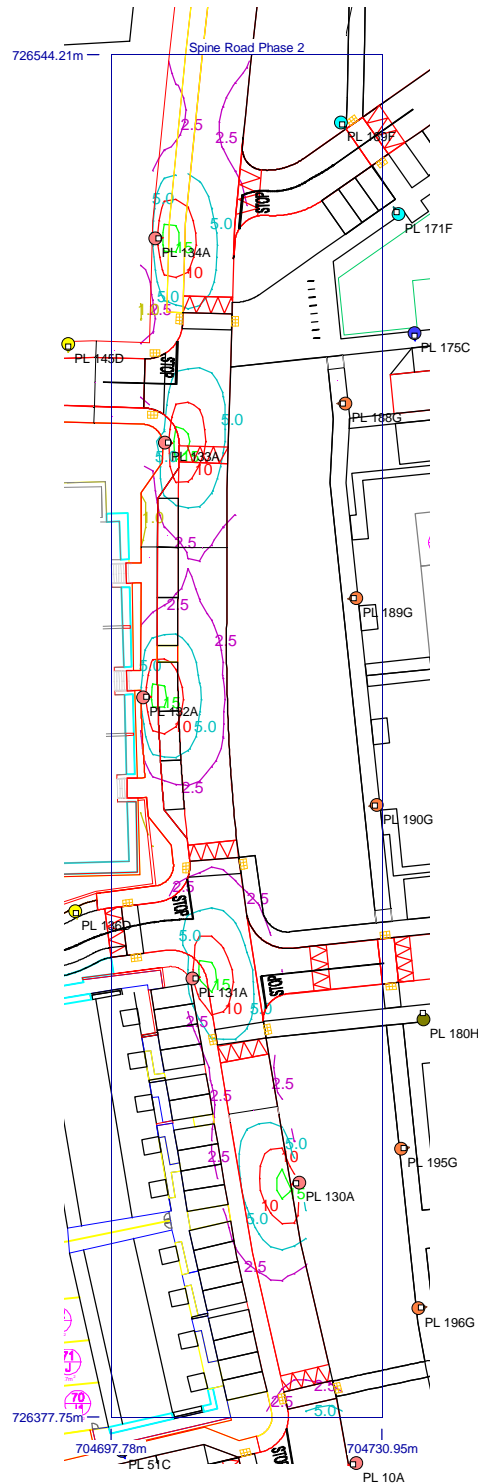


Results

Eav	3.71
Emin	0.82
Emax	12.94
Emin/Emax	0.06
Emin/Eav	0.22

Horizontal Illuminance (lux)

Spine Road Phase 2

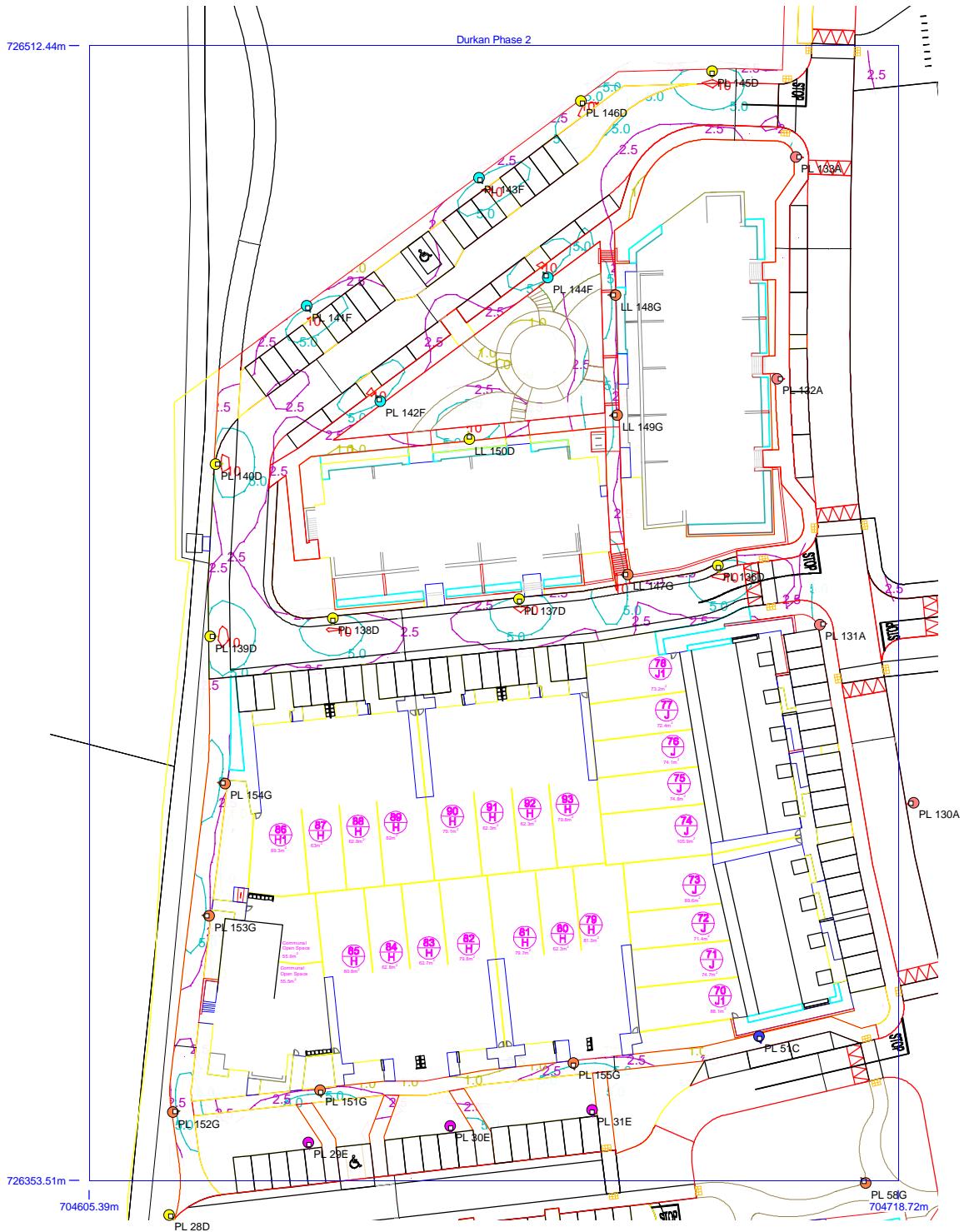


Results

Eav	4.82
Emin	1.23
E _{max}	17.21
E _{min} /E _{max}	0.07
E _{min} /E _{av}	0.26

Horizontal Illuminance (lux)

Durkan Phase 2

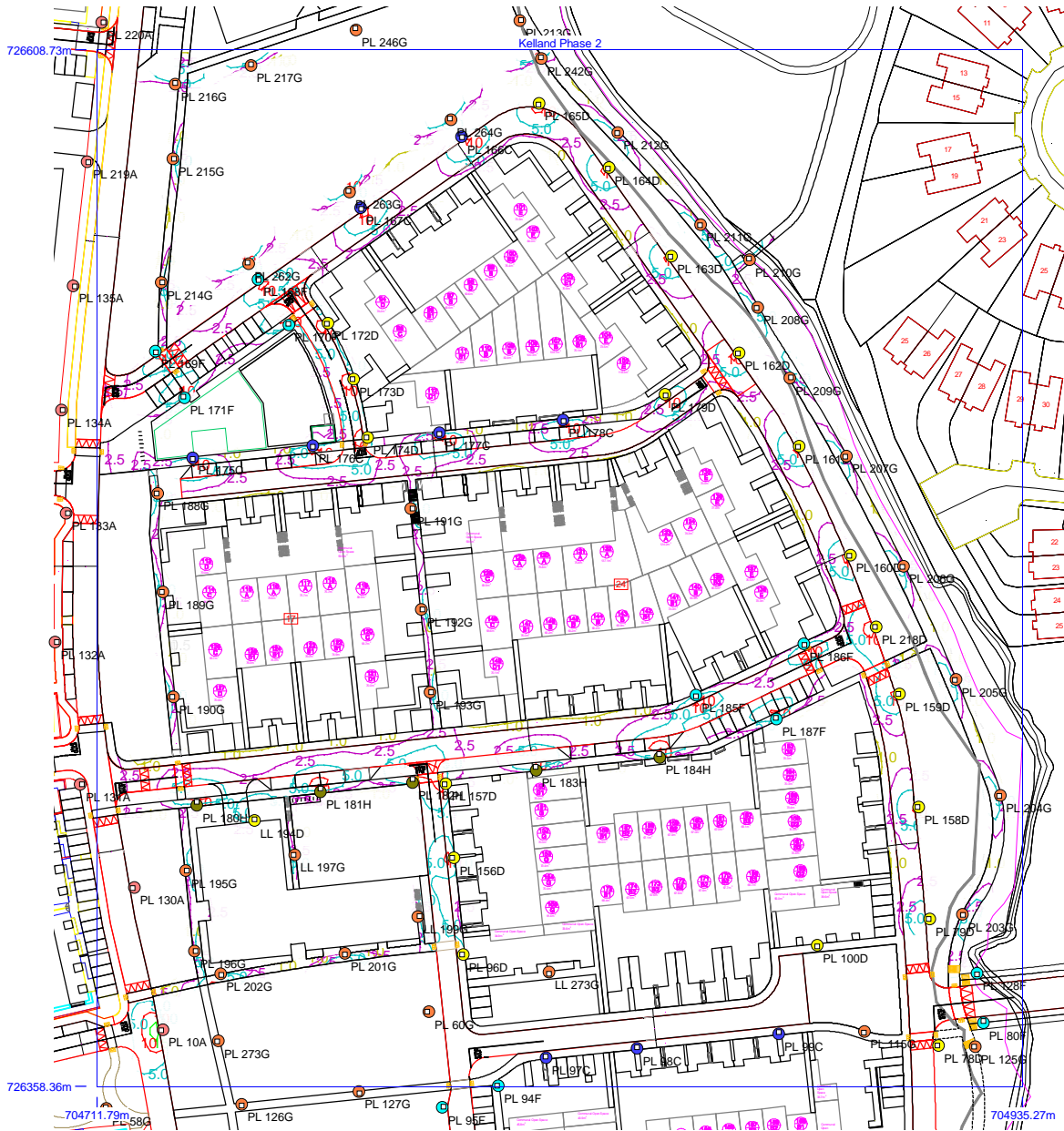


Results

Eav	3.84
Emin	0.81
Emax	11.04
Emin/Emax	0.07
Emin/Eav	0.21

Horizontal Illuminance (lux)

Kelland Phase 2

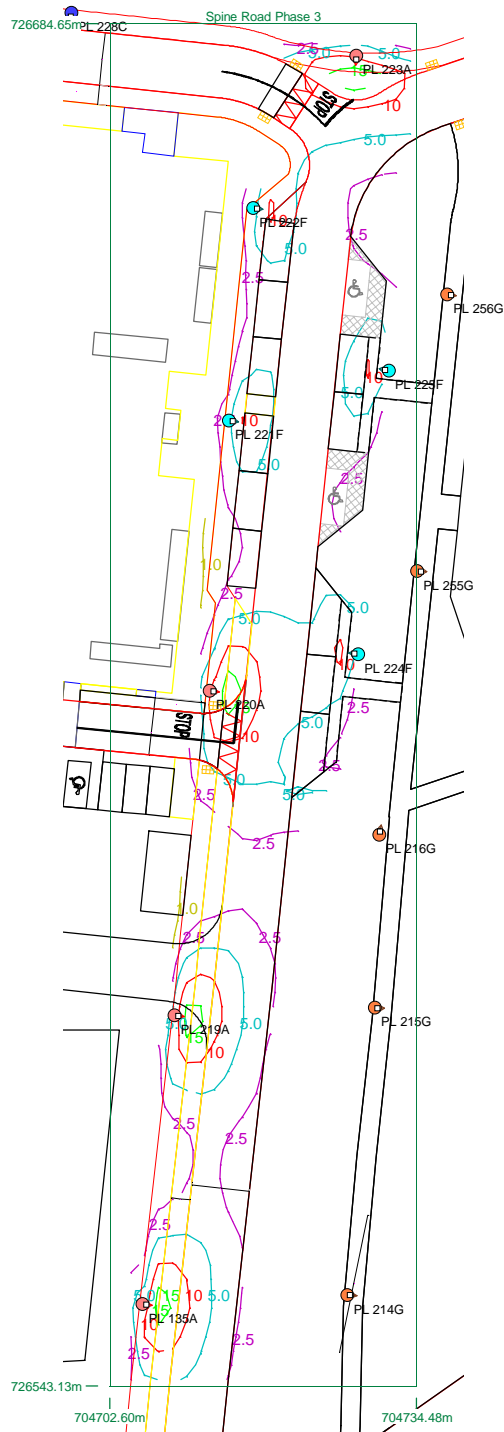


Results

Eav	3.84
Emin	0.83
Emax	17.14
Emin/Emax	0.05
Emin/Eav	0.21

Horizontal Illuminance (lux)

Spine Road Phase 3

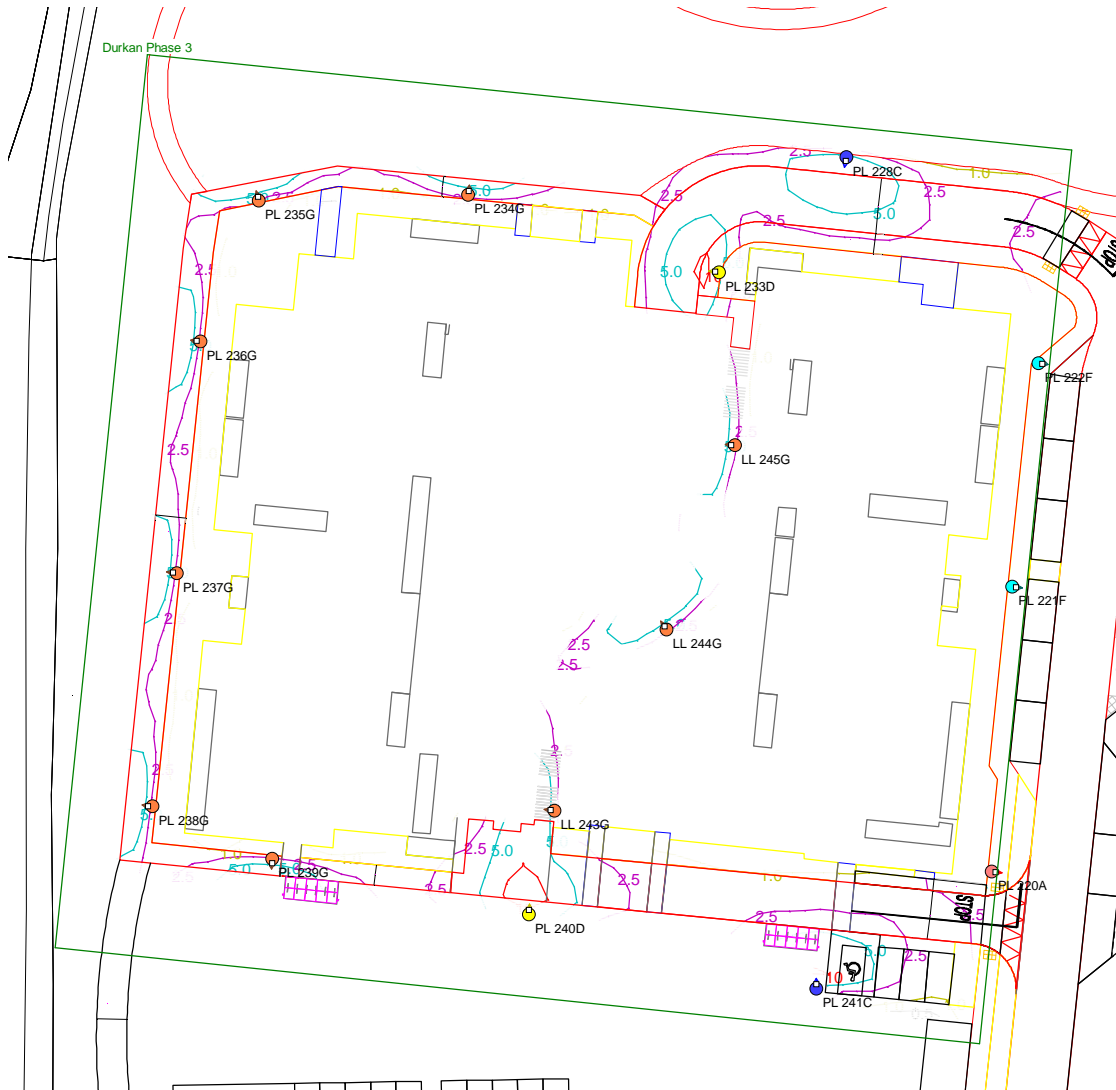


Results

Eav	4.90
Emin	1.31
E _{max}	16.92
E _{min} /E _{max}	0.08
E _{min} /E _{av}	0.27

Horizontal Illuminance (lux)

Durkan Phase 3

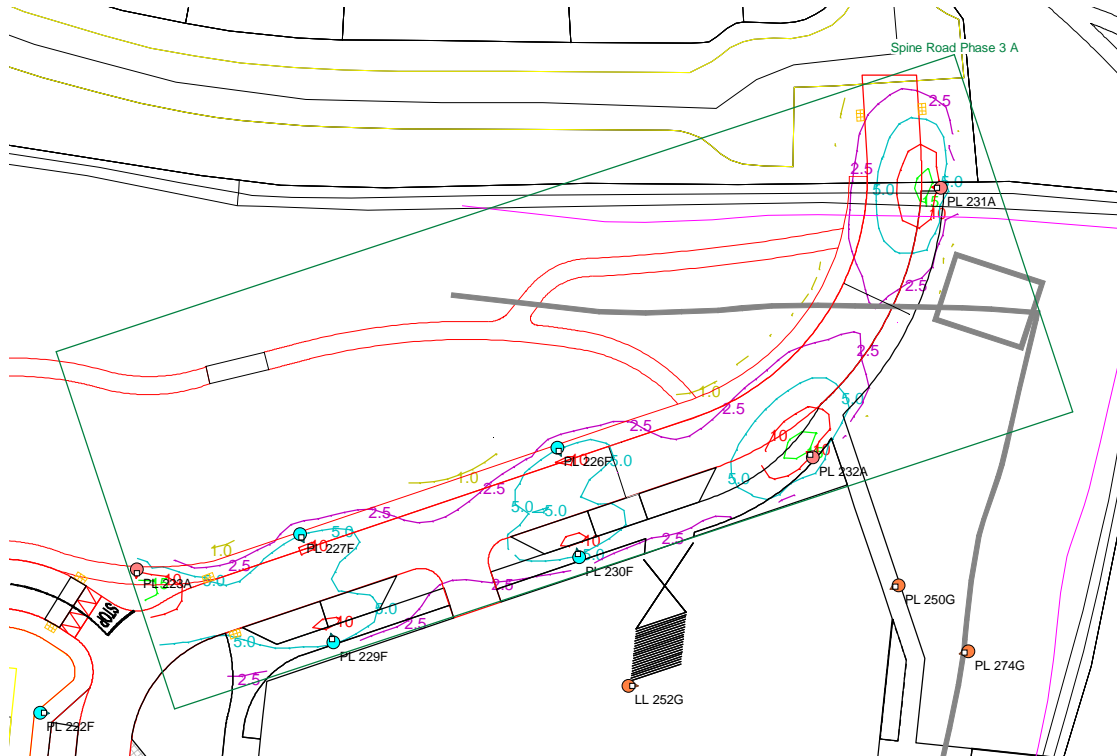


Results

Eav	3.57
Emin	0.92
E _{max}	12.46
E _{min} /E _{max}	0.07
E _{min} /E _{av}	0.26

Horizontal Illuminance (lux)

Spine Road Phase 3 A

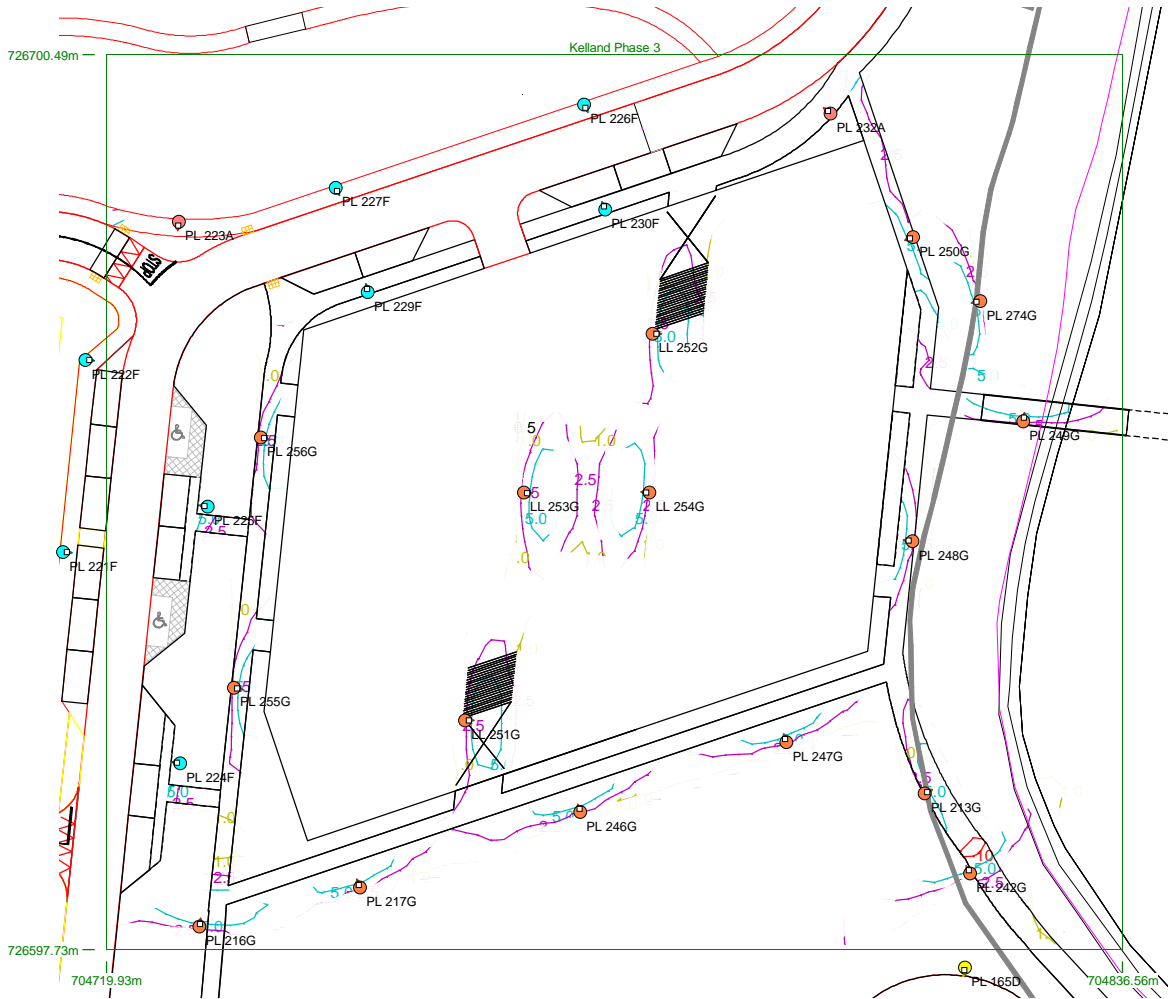


Results

Eav	4.78
Emin	1.10
E _{max}	16.93
E _{min} /E _{max}	0.06
E _{min} /E _{av}	0.23

Horizontal Illuminance (lux)

Kelland Phase 3



Results

Eav	3.62
Emin	0.75
Emax	11.39
Emin/Emax	0.07
Emin/Eav	0.21