DATE: **25 August 2022**

DESIGNER: **Patrick Redmond**

PROJECT No: **22085**

PROJECT NAME: **Gordon Park Revision**

Lighting designed to comply with I.S. EN 13201-2:2015 P4 within the development, and to comply with I.S. EN 13201-2:2015 P2 on the Old Naas Road to blend with existing levels, with a neutral (4,000K) source. All prior to dimming by 25%. Energy consumption assessed in accordance with I.S. EN 13201-5:2015.

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

Luminaire A = 13W. Luminaire B = 9W. Luminaire C = 5W. Luminaire D = 4W. Luminaire E = 8W. Luminaire F = 15W. Luminaire G = 31W.
Connected load, averaged for CLO.

Lighting Level ~ Dimmed By 25%

PREPARED BY: Patrick Redmond MILP, MSLL, IEng, Tech IEI
Redmond Analytical Management Services Ltd.
M~ 086 2356356
O~ 053 9231112
patrick@redmondams.ie
8 Peare Campus, Moyne Park, Old Dublin Road,
Enniscorthy, Co. Wexford. Y21 TD68
www.redmondams.ie
Document control: TD 01 Version: 1.0

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	Phase 1	705379.58	728724.91	165.85	147.83	1.49	1.49
2	Phase 2	705399.26	728787.09	146.49	164.98	1.32	1.50
3	Frontage 1	705363.75	728793.28	34.67	79.45	1.28	1.50
4	Frontage 2	705382.07	728872.77	31.61	81.99	1.44	1.49
5	Crossing assessment	705391.55	728912.23	13.81	2.11	0.99	0.53
6	Crossing vertical assessme...	705391.77	728913.22	13.75	2.00	0.60	0.50

Luminaires

Luminaire A Data

Supplier	Philips
Type	BGP291 DW52
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	3.00
File Name	LumiStreet Gen2 Micro_BGP291_DW52_3000_20LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	639.6, 45.2, 0.0
No. in Project	10

Luminaire B Data

Supplier	Philips
Type	BGP291 DM12
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	2.00
File Name	LumiStreet Gen2 Micro_BGP291_DM12_2000_10LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	742.0, 45.4, 0.0
No. in Project	4

Luminaire C Data

Supplier	Philips
Type	BGP291 DN09
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	1.00
File Name	LumiStreet Gen2 Micro_BGP291_DN09_1000_6LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	986.5, 116.6, 0.0
No. in Project	3

Luminaire D Data

Supplier	Philips
Type	BGP291 DRN1
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	0.80
File Name	LumiStreet Gen2 Micro_BGP291_DRN1_800_6LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	431.4, 23.6, 0.0
No. in Project	3

Luminaire E Data

Supplier	Philips
Type	BGP291 DM10
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	1.60
File Name	LumiStreet Gen2 Micro_BGP291_DM10_1600_6LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	534.0, 55.4, 0.0
No. in Project	1

Luminaire F Data

Supplier	Philips
Type	BGP291 DM10
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	3.40
File Name	LumiStreet Gen2 Micro_BGP291_DM10_3400_20LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	534.0, 55.4, 0.0
No. in Project	1

Luminaires

Luminaire G Data

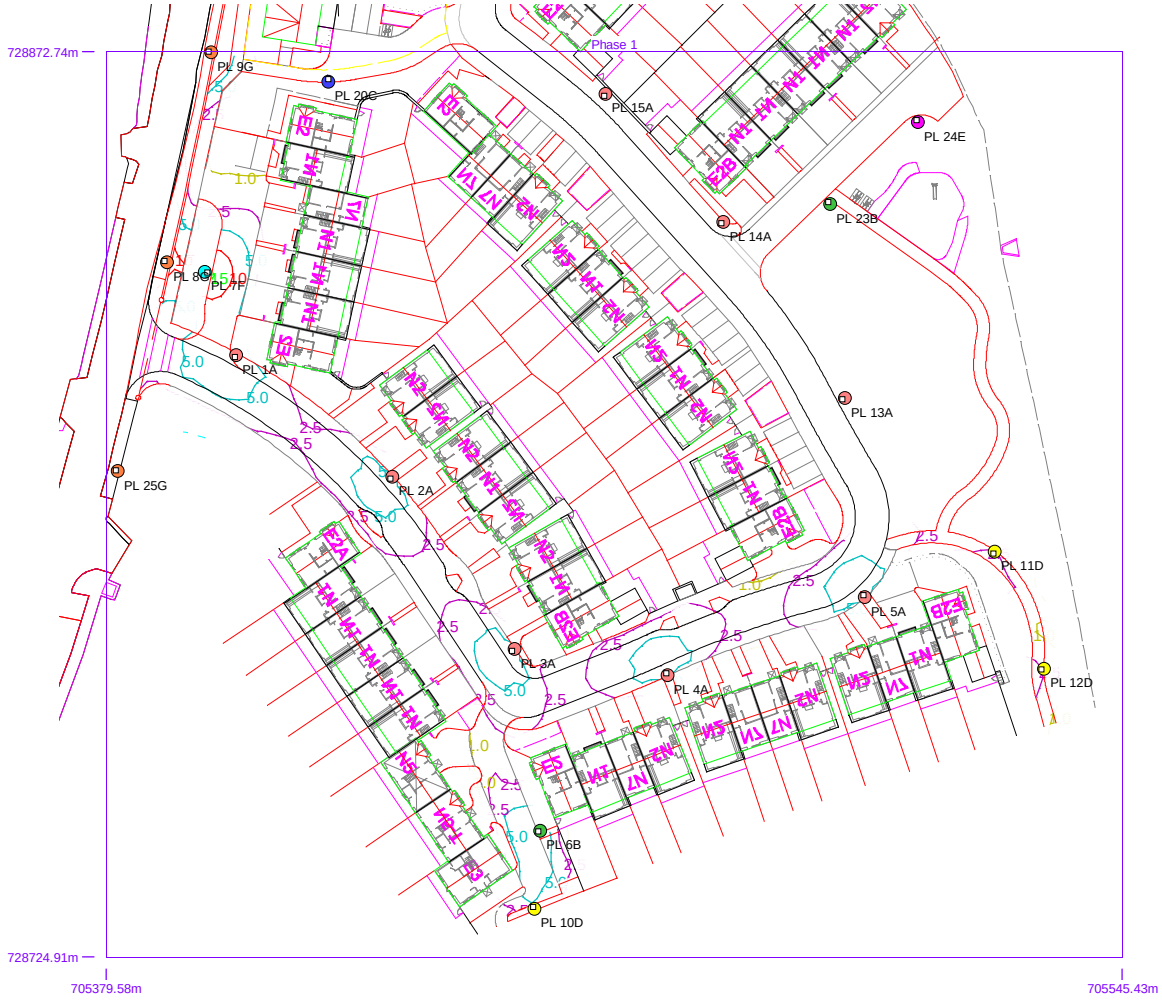
Supplier	Philips
Type	BGP292 DM31
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	7.50
File Name	LumiStreet Gen2 Mini_BGP292_DM31_7500_40LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	245.2, 15.7, 0.0
No. in Project	5

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 1	A	705400.80	728823.25	6.00	243.00	0.00	0.00	0.40	75%			
PL 2	A	705426.27	728803.36	6.00	220.00	0.00	0.00	0.40	75%			
PL 3	A	705446.16	728775.25	6.00	214.00	0.00	0.00	0.40	75%			
PL 4	A	705471.13	728770.96	6.00	116.00	0.00	0.00	0.40	75%			
PL 5	A	705503.34	728783.77	6.00	129.00	0.00	0.00	0.40	75%			
PL 6	B	705450.42	728745.68	6.00	199.00	0.00	0.00	0.40	75%			
PL 7	F	705395.64	728836.79	6.00	348.00	0.00	0.00	0.40	75%			
PL 8	G	705389.50	728838.43	8.00	164.00	0.00	0.00	0.40	75%			
PL 9	G	705396.72	728872.61	8.00	169.00	0.00	0.00	0.40	75%			
PL 10	D	705449.46	728732.85	6.00	116.00	0.00	0.00	0.40	75%			
PL 11	D	705524.55	728791.21	6.00	237.00	0.00	0.00	0.40	75%			
PL 12	D	705532.57	728772.09	6.00	199.00	0.00	0.00	0.40	75%			
PL 13	A	705500.08	728816.25	6.00	206.00	0.00	0.00	0.40	75%			
PL 14	A	705480.22	728844.97	6.00	217.00	0.00	0.00	0.40	75%			
PL 15	A	705461.09	728865.83	6.00	221.00	0.00	0.00	0.40	75%			
PL 16	A	705435.83	728883.55	6.00	351.00	0.00	0.00	0.40	75%			
PL 17	B	705441.12	728911.28	6.00	349.00	0.00	0.00	0.40	75%			
PL 18	B	705458.13	728898.95	6.00	134.00	0.00	0.00	0.40	75%			
PL 19	A	705455.58	728911.81	6.00	70.00	0.00	0.00	0.40	75%			
PL 20	C	705415.87	728867.86	6.00	98.00	0.00	0.00	0.40	75%			
PL 21	G	705403.21	728906.99	8.00	174.00	0.00	0.00	0.40	75%			
PL 22	G	705408.05	728941.72	8.00	174.00	0.00	0.00	0.40	75%			
PL 23	B	705497.72	728847.89	6.00	136.00	0.00	0.00	0.40	75%			
PL 24	E	705512.04	728861.23	6.00	133.00	0.00	0.00	0.40	75%			
PL 25	G	705381.50	728804.37	8.00	167.00	0.00	0.00	0.40	75%			
PL 26	C	705406.88	728923.05	6.00	351.00	0.00	0.00	0.40	75%			
PL 29	C	705402.19	728887.32	6.00	351.00	0.00	0.00	0.40	75%			

Horizontal Illuminance (lux)

Phase 1

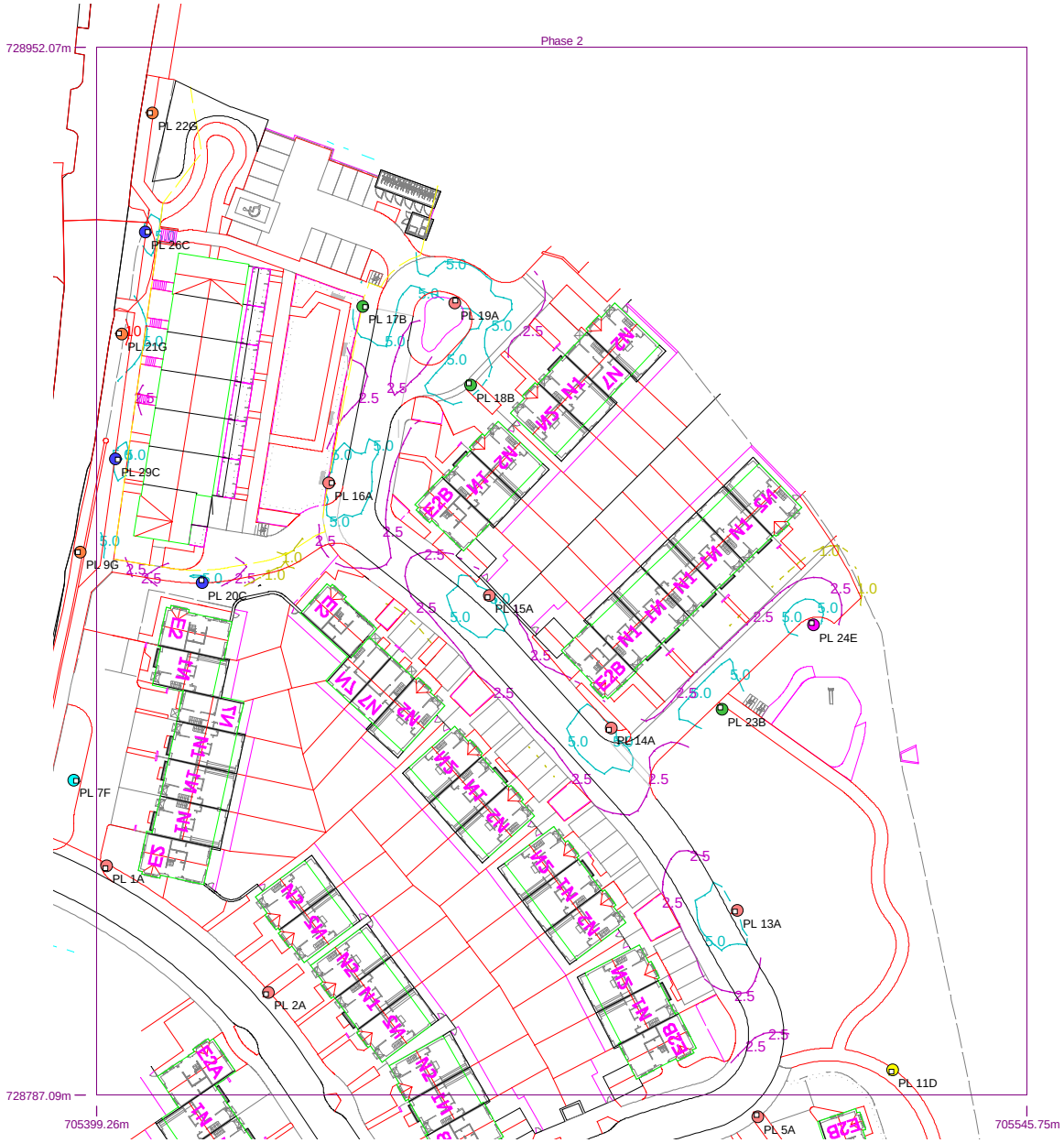


Results

Eav	3.81
Emin	0.95
Emax	15.33
Emin/Emax	0.06
Emin/Eav	0.25

Horizontal Illuminance (lux)

Phase 2

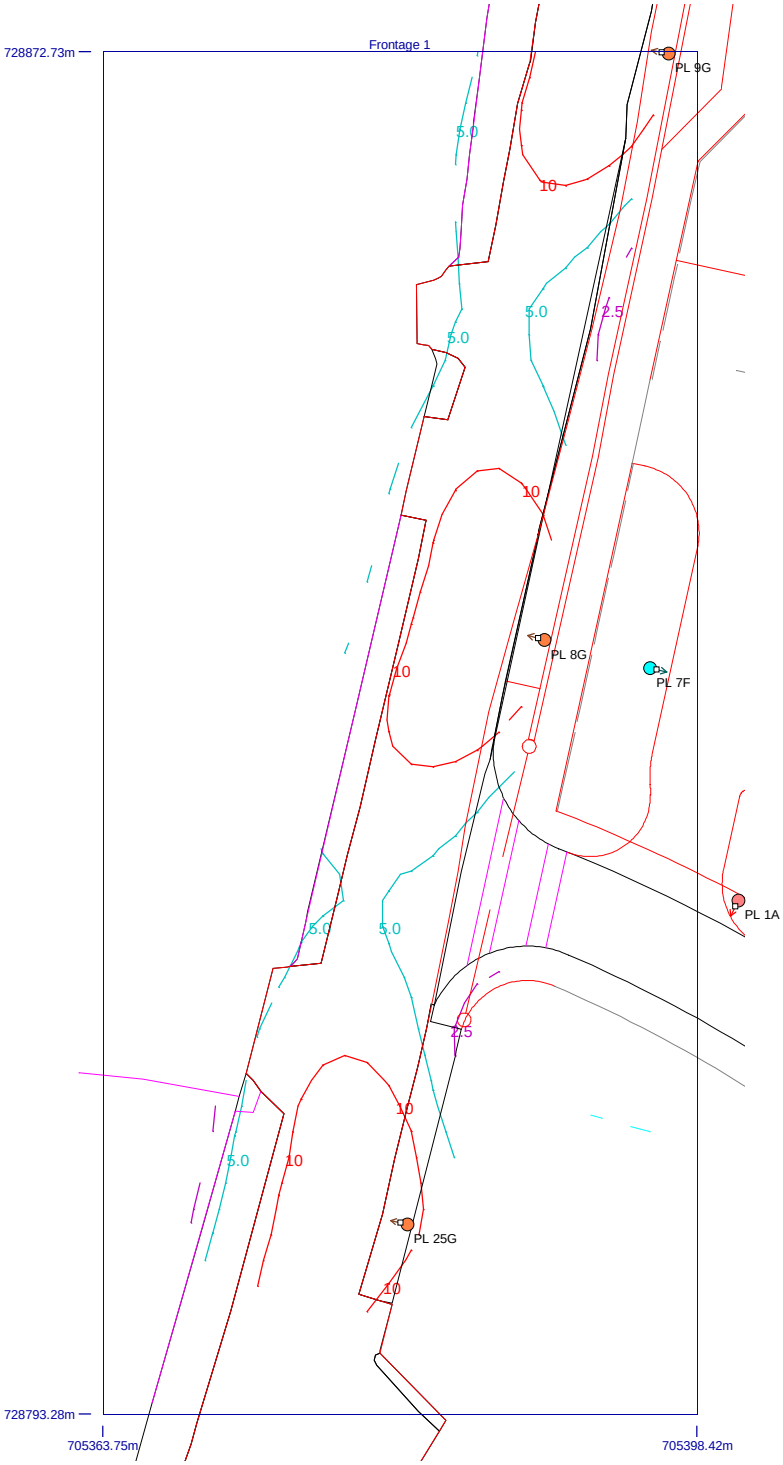


Results

Eav	3.92
Emin	0.96
Emax	8.50
Emin/Emax	0.11
Emin/Eav	0.24

Horizontal Illuminance (lux)

Frontage 1



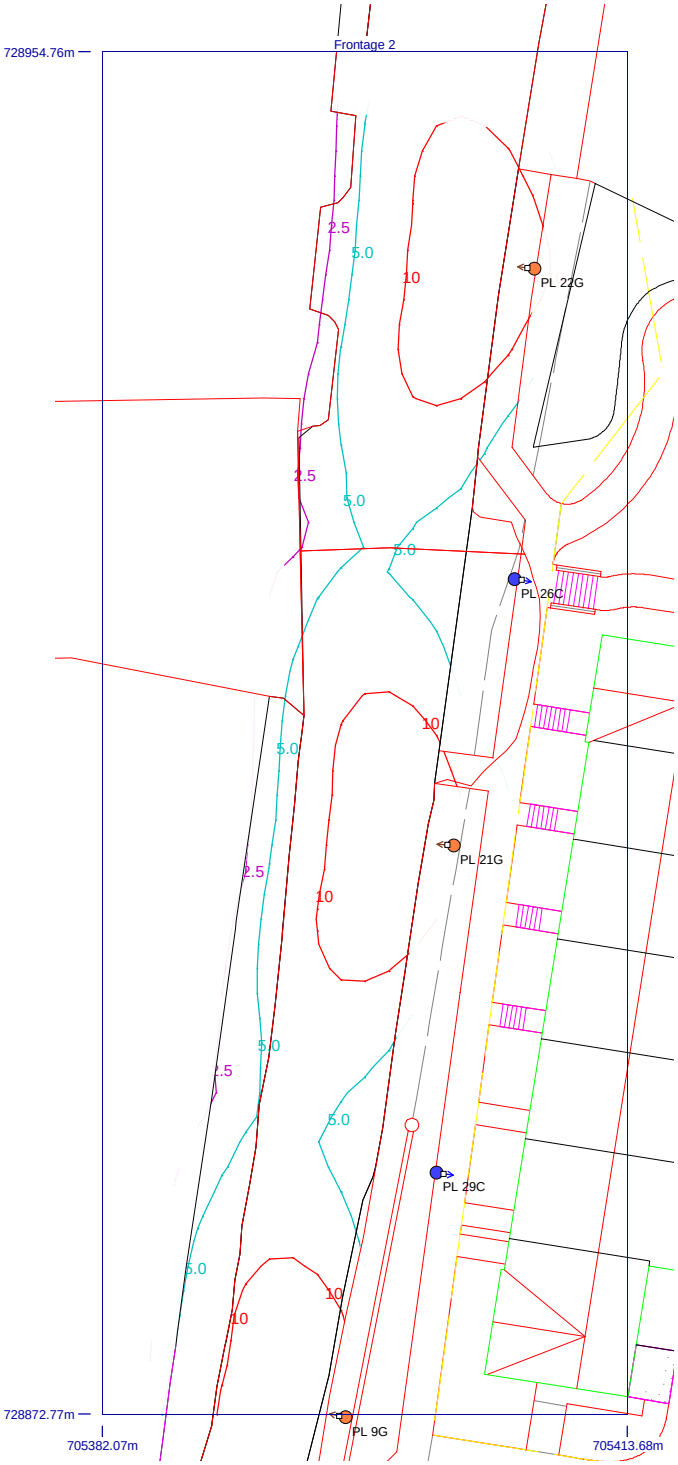
Results

Eav	8.40
Emin	2.46
Emax	14.52
Emin/Emax	0.17
Emin/Eav	0.29

851433181

Horizontal Illuminance (lux)

Frontage 2



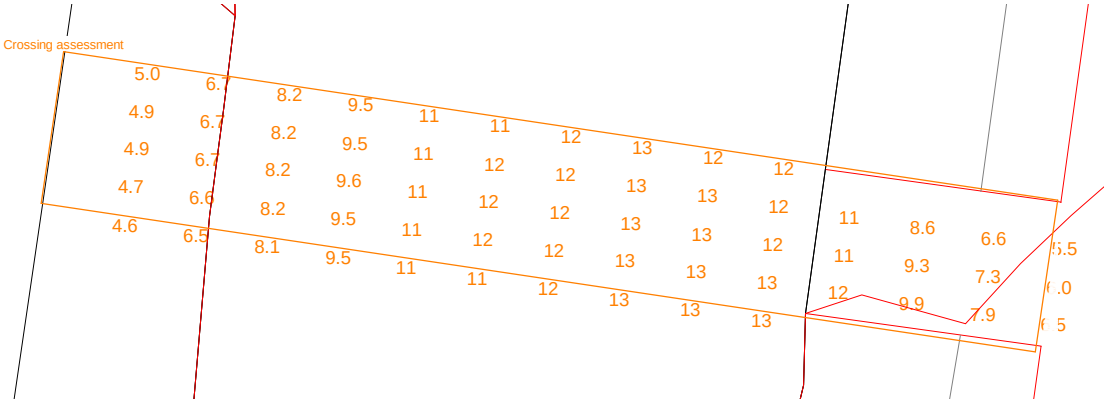
Results

Eav	7.91
Emin	1.72
Emax	14.28
Emin/Emax	0.12
Emin/Eav	0.22

851433181

Horizontal Illuminance (lux)

Crossing assessment



Results

Eav	9.87
Emin	4.64
Emax	13.31
Emin/Emax	0.35
Emin/Eav	0.47

Illuminance (lux)

Crossing vertical assessment

1.2	1.5	1.8	2.2	3.1	4.7	6.5	8.4	10.0	11	13	14	15	16	16	16	16	15	14	11	8.5	6.4	5.1	4.0
1.2	1.5	1.9	2.7	3.8	5.3	6.7	7.9	9.0	9.9	11	12	12	13	13	13	13	12	11	9.5	7.4	5.7	4.7	3.8
1.3	1.7	2.3	3.2	4.4	5.4	6.3	7.1	7.9	8.6	9.2	9.7	10	11	11	11	10	9.9	9.2	8.0	6.5	5.1	4.3	3.5
1.5	2.0	2.8	3.6	4.4	5.1	5.8	6.4	6.9	7.4	7.8	8.1	8.5	8.8	8.9	8.8	8.6	8.2	7.7	6.8	5.6	4.6	4.0	3.4
1.8	2.4	3.1	3.7	4.2	4.7	5.2	5.6	6.0	6.3	6.6	6.9	7.1	7.3	7.4	7.3	7.1	6.8	6.5	5.8	4.9	4.2	3.7	3.3

Results

Eav	7.09
Emin	1.21
Emax	16.48
Emin/Emax	0.07
Emin/Eav	0.17

851433181