

DATE: 23 February 2022

DESIGNER: Patrick Redmond

PROJECT No: 21092

PROJECT NAME: Proposed Res Dev at Edmonstown ~ North Site REV D



Lighting on junction designed to comply with I.S. EN 13201-2:2015 C3, new road & Whitechurch Road with P2, spine road with P3, residential areas with P4. 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 degree ambient. Photometry measured at minimum 15 degree ambient.

Luminaire A = 52W. Luminaire B = 47W. Luminaire C = 42W.
Luminaire D = 20W. Luminaire E = 24W. Luminaire F = 11W.
Luminaire G = 5W. Luminaire H = 16W. Luminaire I = 13W.
Luminaire J = 10W. Luminaire K = 23W. Luminaire L = 4W.
Luminaire M = 543W. Connected load, averaged for CLO.

Light Level ~ Dimmed By 25%

PREPARED BY: Patrick Redmond MILP, MSL, 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 North	63.68	799.80	193.23	126.13	1.50	1.48
2	Phase 2 North	2.46	842.67	95.43	126.76	1.49	1.49
3	Whitechurch Road 1	271.16	713.13	46.05	117.98	1.49	1.49
4	Whitechurch Road 2	273.06	649.22	38.55	73.27	1.48	1.50

Luminaires

Luminaire F Data



Supplier	Philips
Type	BGP291 DW52
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	2.40
File Name	LumiStreet Gen2 Micro_BGP291_DW52_240_0_10LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	639.6, 45.2, 0.0
No. in Project	3

Luminaire G Data



Supplier	Philips
Type	BGP291 DRXN1
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	1.00
File Name	LumiStreet Gen2 Micro_BGP291_DRXN1_1000_6LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	1155.3, 26.3, 0.0
No. in Project	12

Luminaire I Data



Supplier	Philips
Type	BGP291 DM10
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	3.00
File Name	LumiStreet Gen2 Micro_BGP291_DM10_3000_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	9

Luminaire J Data



Supplier	Philips
Type	BGP291 DM33
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	2.20
File Name	LumiStreet Gen2 Micro_BGP291_DM33_2200_10LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	292.4, 11.4, 0.0
No. in Project	7

Luminaire K Data



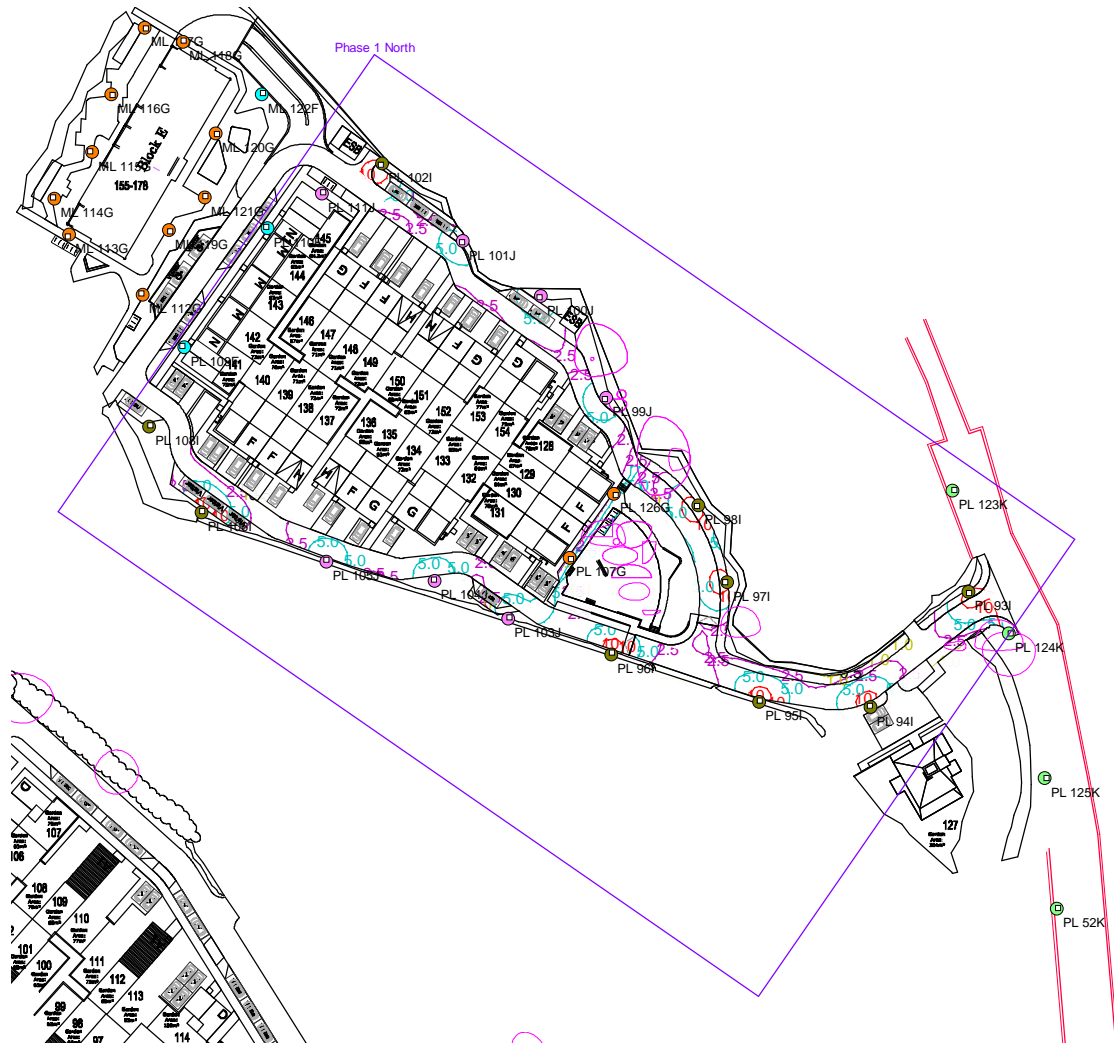
Supplier	Philips
Type	BGP291 DM12
Lamp(s)	LED-HB 5.2S 740
Lamp Flux (klm)	5.20
File Name	LumiStreet Gen2 Micro_BGP291_DM12_5200_20LED_5.2S_CLO_L90_740.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	742.0, 45.4, 0.0
No. in Project	5

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
PL 93	I	270.20	781.61	6.00	299.00	0.00	0.00	0.40	75%			
PL 94	I	248.03	755.46	6.00	120.00	0.00	0.00	0.40	75%			
PL 95	I	222.71	756.57	6.00	74.00	0.00	0.00	0.40	75%			
PL 96	I	189.16	767.45	6.00	73.00	0.00	0.00	0.40	75%			
PL 97	I	215.50	783.82	6.00	183.00	0.00	0.00	0.40	75%			
PL 98	I	208.97	801.26	6.00	207.00	0.00	0.00	0.40	75%			
PL 99	J	188.03	825.57	6.00	213.00	0.00	0.00	0.40	75%			
PL 100	J	173.16	848.78	6.00	232.00	0.00	0.00	0.40	75%			
PL 101	J	155.52	861.25	6.00	239.00	0.00	0.00	0.40	75%			
PL 102	I	137.11	878.79	6.00	238.00	0.00	0.00	0.40	75%			
PL 103	J	165.84	775.52	6.00	49.00	0.00	0.00	0.40	75%			
PL 104	J	149.07	784.06	6.00	102.00	0.00	0.00	0.40	75%			
PL 105	J	124.47	788.48	6.00	71.00	0.00	0.00	0.40	75%			
PL 106	I	96.18	799.58	6.00	54.00	0.00	0.00	0.40	75%			
PL 107	G	179.67	789.30	6.00	325.00	0.00	0.00	0.40	75%			
PL 108	I	84.33	819.09	6.00	55.00	0.00	0.00	0.40	75%			
PL 109	F	92.23	837.16	6.00	141.00	5.00	0.00	0.40	75%			
PL 110	F	111.23	864.19	6.00	148.00	5.00	0.00	0.40	75%			
PL 111	J	123.55	871.93	6.00	55.00	0.00	0.00	0.40	75%			
ML 112	G	82.92	849.07	6.00	144.00	0.00	0.00	0.40	75%			
ML 113	G	66.10	862.64	6.00	237.00	0.00	0.00	0.40	75%			
ML 114	G	62.87	870.85	6.00	151.00	0.00	0.00	0.40	75%			
ML 115	G	71.37	881.39	6.00	164.00	0.00	0.00	0.40	75%			
ML 116	G	75.68	894.46	6.00	340.00	0.00	0.00	0.40	75%			
ML 117	G	83.29	909.67	6.00	322.00	0.00	0.00	0.40	75%			
ML 118	G	91.95	906.41	6.00	61.00	0.00	0.00	0.40	75%			
ML 119	G	88.79	863.68	6.00	328.00	0.00	0.00	0.40	75%			
ML 120	G	99.39	885.70	6.00	332.00	0.00	0.00	0.40	75%			
ML 121	G	96.92	871.14	6.00	55.00	0.00	0.00	0.40	75%			
ML 122	F	109.91	894.48	6.00	44.00	5.00	0.00	0.40	75%			
PL 123	K	266.63	804.65	6.00	19.00	5.00	0.00	0.40	75%			
PL 124	K	279.41	772.11	6.00	19.00	5.00	0.00	0.40	75%			
PL 125	K	287.56	739.32	6.00	14.00	5.00	0.00	0.40	75%			
PL 52	K	290.21	709.75	6.00	7.00	5.00	0.00	0.40	75%			
PL 54	K	293.15	677.50	6.00	8.00	5.00	0.00	0.40	75%			
PL 126	G	189.82	803.81	6.00	333.00	0.00	0.00	0.40	75%			

Horizontal Illuminance (lux)

Phase 1 North

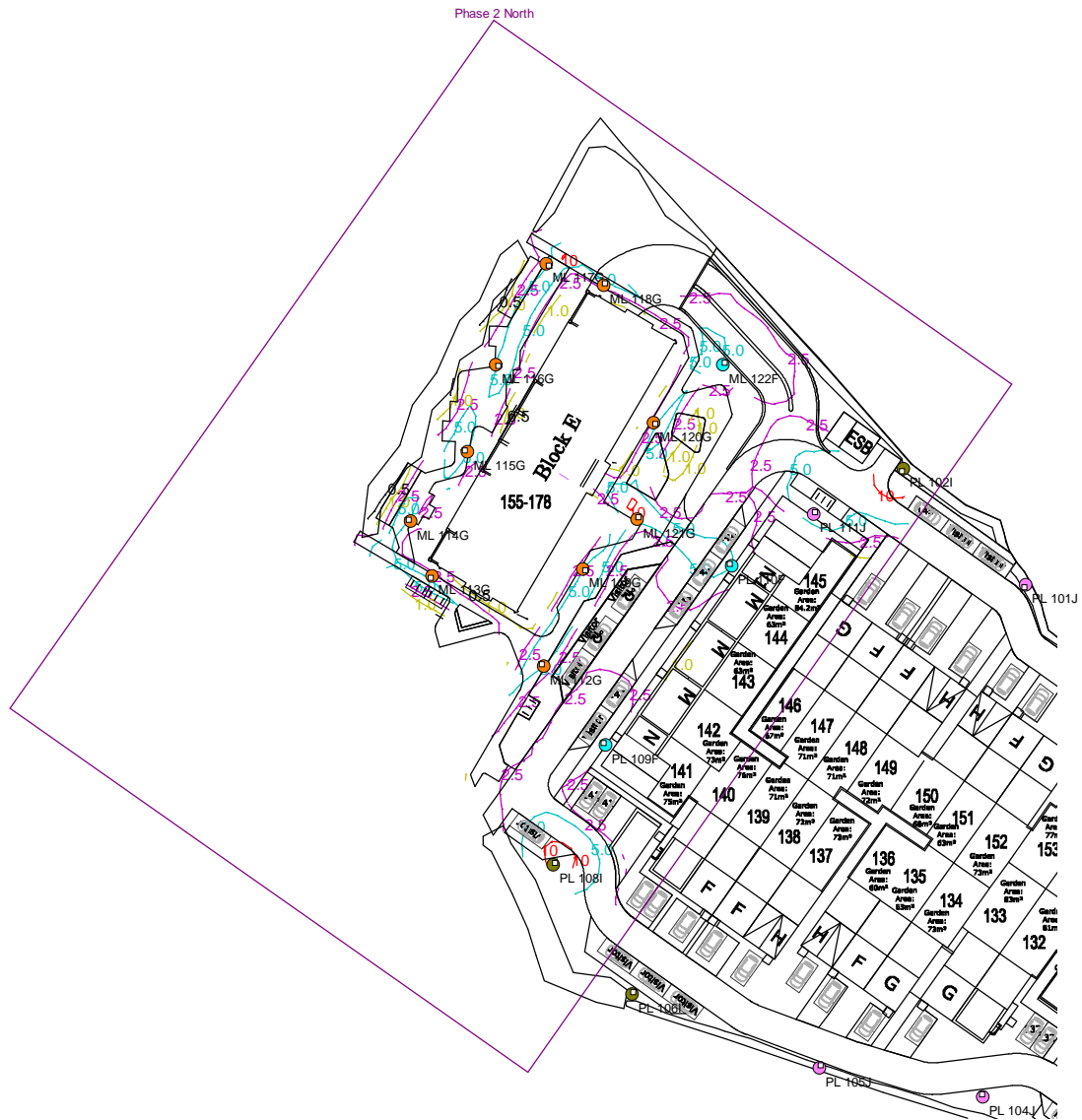


Results

Eav	4.53
Emin	1.03
Emax	12.99
Emin/Emax	0.08
Emin/Eav	0.23

Horizontal Illuminance (lux)

Phase 2 North

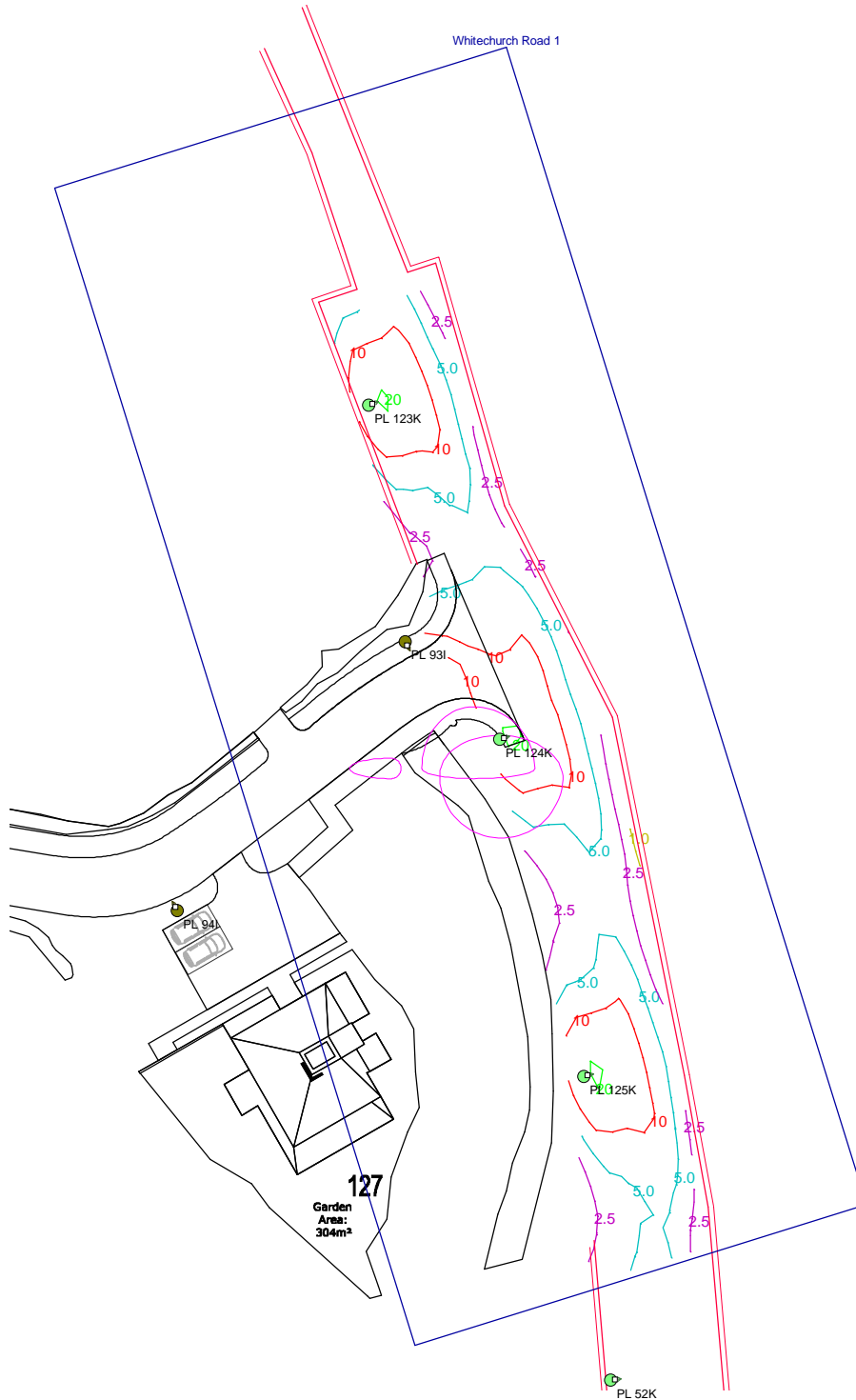


Results

Eav	3.86
Emin	0.74
E _{max}	12.12
E _{min} /E _{max}	0.06
E _{min} /E _{av}	0.19

Horizontal Illuminance (lux)

Whitechurch Road 1

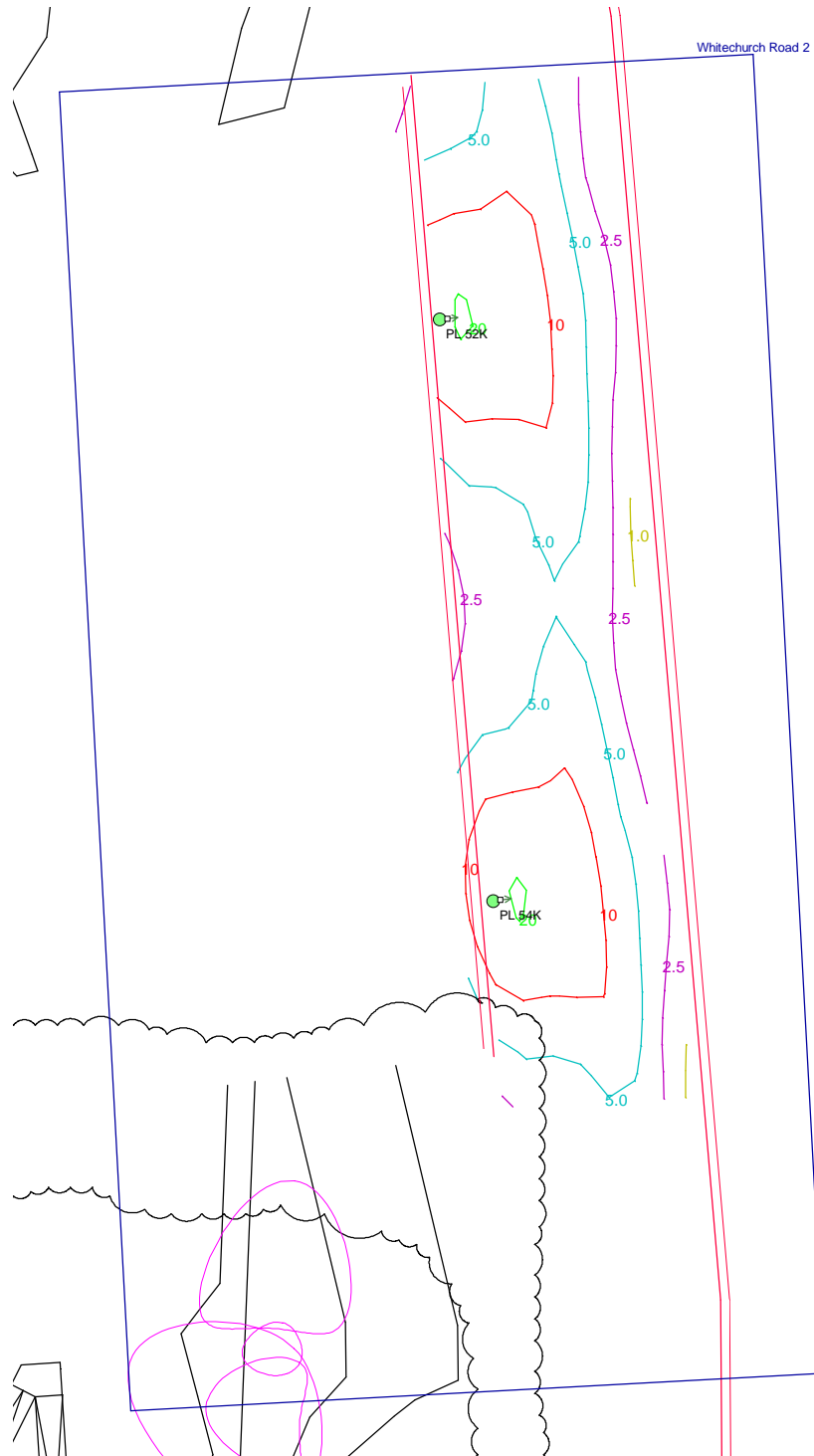


Results

Eav	8.05
Emin	2.11
Emax	21.04
Emin/Emax	0.10
Emin/Eav	0.26

Horizontal Illuminance (lux)

Whitechurch Road 2



Results

Eav	7.90
Emin	2.23
E _{max}	20.84
E _{min} /E _{max}	0.11
E _{min} /E _{av}	0.28