

DATE: 29 April 2022
DESIGNER: G.Slattery
PROJECT No: 21151
PROJECT NAME: Carrigaline Town Centre SHD



Doc Ref: 21151-DD-001-REVC-PUBLIC LIGHTING DESIGN REPORT

Grid 1 - Access Road - Lighting Class - C2
Minimum Average Lux = 20
Minimum Uniformity Ratio = 0.40
Grid 2 - Concourse - Lighting Class - P3
Minimum Average Lux = 7.5
Minimum Lux = 1.5
Grid 3 - Landscape Pathway - Lighting Class - P4
Grid 4 - Riverside Pathway - Lighting Class - P4
Minimum Average Lux = 5
Minimum Lux = 1

Public Lighting Design Report

PREPARED BY: Horizon Engineering Consultants Ltd.
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Little Island,
Cork.

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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	Street Area - Class C2	572549.93	562216.35	227.62	278.05	1.50	1.49
2	Concourse - Class P3	572553.51	562220.24	213.92	135.02	1.50	1.48
3	Landscape Pathway - Class ...	572560.98	562356.15	184.91	132.80	1.49	1.49
4	Riverside Amenity Pathway ...	572745.48	562347.49	200.31	140.57	1.49	1.50

Luminaires

Luminaire A Data



Supplier	Philips
Type	BGP704 DW50
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	20.00
File Name	Luma Gen2 Medium_BGP704_DW50_200 00_80LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	595.5, 51.0, 0.0
Lamp S/P Ratio	1.30
No. in Project	3

Luminaire B Data



Supplier	Philips
Type	BGP531 T35 S GRN130/- NO
Lamp(s)	GRN130/830/-
LampFlux(klm)/Colour	13.00 -/
File Name	BGP531 T35 1xGRN130_830 S.ltd
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	319.8, 36.6, 0.0
Lamp S/P Ratio	1.30
No. in Project	12

Luminaire C Data



Supplier	Philips
Type	BGP530 T35 S GRN40/- NO
Lamp(s)	GRN40/830/-
LampFlux(klm)/Colour	4.00 -/
File Name	BGP530 T35 1xGRN40_830 S.ltd
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	327.0, 37.4, 0.0
Lamp S/P Ratio	1.30
No. in Project	8

Luminaire D Data

Supplier	
Type	EPW19913 (11W)
Lamp(s)	11W LED
Lamp Flux (klm)	0.19
File Name	EPW19913_11W_.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	665.8, 350.5, 38.9
Lamp S/P Ratio	0.00
No. in Project	54

Luminaires

Luminaire E Data

Supplier	
Type	Westminster 10W - 3K - 180°
Lamp(s)	WBHD10-AW-00GH-950
LampFlux(klm)/Colour	0.50 3000K/Ra80
File Name	Westminster 10W - 3K - 180°.ldt
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	232.8, 151.2, 0.0
Lamp S/P Ratio	0.00
No. in Project	28

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	572574.95	562364.30	8.00	90.00	0.00	0.00	1.00			
2	A	572597.06	562362.95	8.00	87.00	0.00	0.00	1.00			
3	A	572620.72	562361.70	8.00	88.00	0.00	0.00	1.00			
5	B	572639.45	562373.69	6.00	272.00	0.00	0.00	1.00			
6	B	572650.22	562359.28	6.00	83.00	0.00	0.00	1.00			
7	B	572680.75	562358.60	6.00	88.00	0.00	0.00	1.00			
14	B	572704.35	562358.68	6.00	86.00	0.00	0.00	1.00			
15	B	572725.98	562358.83	6.00	90.00	0.00	0.00	1.00			
16	B	572744.26	562362.26	6.00	180.00	0.00	0.00	1.00			
12	B	572702.99	562374.40	6.00	257.00	0.00	0.00	1.00			
11	B	572689.90	562379.96	6.00	242.00	0.00	0.00	1.00			
8	B	572665.04	562371.95	6.00	310.00	0.00	0.00	1.00			
10	B	572677.48	562387.52	6.00	319.00	0.00	0.00	1.00			
13	C	572680.94	562369.75	5.00	0.00	0.00	0.00	0.00			
4	B	572639.66	562357.03	6.00	181.00	0.00	0.00	1.00			
19	C	572645.59	562340.36	5.00	0.00	0.00	0.00	0.00			
20	C	572655.88	562328.42	6.00	273.00	0.00	0.00	0.00			
21	C	572655.91	562315.00	5.00	90.00	0.00	0.00	0.00			
23	C	572663.51	562302.87	5.00	179.00	0.00	0.00	0.00			
22	C	572645.26	562302.95	5.00	0.00	0.00	0.00	0.00			
9	B	572651.31	562392.48	6.00	5.00	0.00	0.00	1.00			
18	C	572663.43	562340.20	5.00	188.00	0.00	0.00	0.00			
42	D	572564.16	562293.05	1.20	270.00	0.00	0.00	0.00			
40	D	572575.24	562293.05	1.20	270.00	0.00	0.00	0.00			
41	D	572569.70	562288.79	1.20	89.00	0.00	0.00	0.00			
43	D	572558.41	562288.79	1.20	85.00	0.00	0.00	0.00			
39	D	572580.51	562288.79	1.20	90.00	0.00	0.00	0.00			
38	D	572586.42	562293.05	1.20	270.00	0.00	0.00	0.00			
36	D	572597.08	562293.05	1.20	270.00	0.00	0.00	0.00			
34	D	572607.99	562293.10	1.20	270.00	0.00	0.00	0.00			
32	D	572618.86	562293.15	1.20	270.00	0.00	0.00	0.00			
30	D	572629.48	562293.16	1.20	270.00	0.00	0.00	0.00			
28	D	572637.75	562292.94	1.20	270.00	0.00	0.00	0.00			
37	D	572591.52	562288.72	1.20	91.00	0.00	0.00	0.00			
35	D	572602.38	562288.83	1.20	92.00	0.00	0.00	0.00			
33	D	572613.40	562288.78	1.20	96.00	0.00	0.00	0.00			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
31	D	572624.42	562288.89	1.20	85.00	0.00	0.00	0.00			
29	D	572633.48	562288.84	1.20	86.00	0.00	0.00	0.00			
27	D	572642.44	562288.97	1.20	92.00	0.00	0.00	0.00			
26	D	572650.30	562289.02	1.20	90.00	0.00	0.00	0.00			
25	D	572658.54	562289.15	1.20	90.00	0.00	0.00	0.00			
24	D	572667.42	562289.15	1.20	85.00	0.00	0.00	0.00			
17	C	572669.72	562348.52	5.00	180.00	0.00	0.00	0.00			
49	D	572740.83	562386.99	1.20	146.00	0.00	0.00	0.00			
50	D	572732.45	562381.65	1.20	324.00	0.00	0.00	0.00			
51	D	572728.93	562373.59	1.20	131.00	0.00	0.00	0.00			
52	D	572718.63	562373.70	1.20	273.00	0.00	0.00	0.00			
53	D	572709.01	562370.70	1.20	86.00	0.00	0.00	0.00			
48	D	572743.46	562395.64	1.20	320.00	0.00	0.00	0.00			
59	D	572652.27	562433.92	1.20	56.00	0.00	0.00	0.00			
55	D	572670.30	562402.55	1.20	9.00	0.00	0.00	0.00			
54	D	572676.52	562395.03	1.20	208.00	0.00	0.00	0.00			
56	D	572673.05	562413.54	1.20	183.00	0.00	0.00	0.00			
57	D	572665.19	562420.63	1.20	32.00	0.00	0.00	0.00			
58	D	572661.41	562429.73	1.20	218.00	0.00	0.00	0.00			
60	D	572645.36	562440.34	1.20	253.00	0.00	0.00	0.00			
61	D	572635.20	562439.10	1.20	90.00	0.00	0.00	0.00			
62	D	572626.72	562439.56	1.20	310.00	0.00	0.00	0.00			
63	D	572623.04	562431.09	1.20	150.00	0.00	0.00	0.00			
64	D	572615.62	562424.86	1.20	325.00	0.00	0.00	0.00			
65	D	572618.37	562415.85	1.20	186.00	0.00	0.00	0.00			
66	D	572617.53	562405.81	1.20	17.00	0.00	0.00	0.00			
67	D	572623.95	562398.22	1.20	207.00	0.00	0.00	0.00			
68	D	572626.87	562388.96	1.20	43.00	0.00	0.00	0.00			
69	D	572633.76	562386.21	1.20	229.00	0.00	0.00	0.00			
70	D	572637.32	562379.86	1.20	52.00	0.00	0.00	0.00			
71	D	572645.69	562379.03	1.20	247.00	0.00	0.00	0.00			
72	D	572653.34	562374.88	1.20	91.00	0.00	0.00	0.00			
73	D	572609.34	562416.95	1.20	113.00	0.00	0.00	0.00			
74	D	572601.15	562419.04	1.20	267.00	0.00	0.00	0.00			
75	D	572592.23	562416.99	1.20	81.00	0.00	0.00	0.00			
76	D	572584.63	562421.99	1.20	254.00	0.00	0.00	0.00			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
77	D	572575.76	562420.86	1.20	83.00	0.00	0.00	0.00			
47	D	572587.40	562285.06	1.20	90.00	0.00	0.00	0.00			
46	D	572594.82	562284.98	1.20	86.00	0.00	0.00	0.00			
44	D	572606.98	562285.16	1.20	91.00	0.00	0.00	0.00			
45	D	572601.34	562284.98	1.20	96.00	0.00	0.00	0.00			
78	E	572751.67	562400.09	0.95	135.00	0.00	0.00	0.00			
79	E	572754.88	562407.21	0.95	311.00	0.00	0.00	0.00			
80	E	572763.20	562407.73	0.95	101.00	0.00	0.00	0.00			
81	E	572770.62	562410.44	0.95	258.00	0.00	0.00	0.00			
82	E	572776.94	562405.24	0.95	77.00	0.00	0.00	0.00			
83	E	572785.30	562405.86	0.95	249.00	0.00	0.00	0.00			
84	E	572791.56	562400.40	0.95	73.00	0.00	0.00	0.00			
85	E	572799.26	562400.91	0.95	250.00	0.00	0.00	0.00			
86	E	572805.13	562395.53	0.95	69.00	0.00	0.00	0.00			
87	E	572813.10	562396.69	0.95	254.00	0.00	0.00	0.00			
88	E	572820.23	562392.95	0.95	89.00	0.00	0.00	0.00			
89	E	572827.19	562396.48	0.95	271.00	0.00	0.00	0.00			
90	E	572834.61	562393.23	0.95	91.00	0.00	0.00	0.00			
91	E	572841.51	562396.60	0.95	270.00	0.00	0.00	0.00			
92	E	572848.93	562393.43	0.95	90.00	0.00	0.00	0.00			
93	E	572855.61	562396.69	0.95	270.00	0.00	0.00	0.00			
94	E	572862.57	562393.56	0.95	91.00	0.00	0.00	0.00			
95	E	572870.04	562396.82	0.95	266.00	0.00	0.00	0.00			
96	E	572876.87	562393.52	0.95	74.00	0.00	0.00	0.00			
97	E	572884.04	562390.43	0.95	200.00	0.00	0.00	0.00			
98	E	572880.06	562383.31	0.95	358.00	0.00	0.00	0.00			
99	E	572883.92	562376.45	0.95	205.00	0.00	0.00	0.00			
100	E	572885.23	562368.54	0.95	41.00	0.00	0.00	0.00			
101	E	572893.46	562367.90	0.95	257.00	0.00	0.00	0.00			
102	E	572899.53	562362.80	0.95	67.00	0.00	0.00	0.00			
103	E	572907.98	562363.83	0.95	250.00	0.00	0.00	0.00			
104	E	572914.43	562358.81	0.95	79.00	0.00	0.00	0.00			
105	E	572922.77	562360.16	0.95	263.00	0.00	0.00	0.00			

Horizontal Illuminance (lux)

Street Area - Class C2

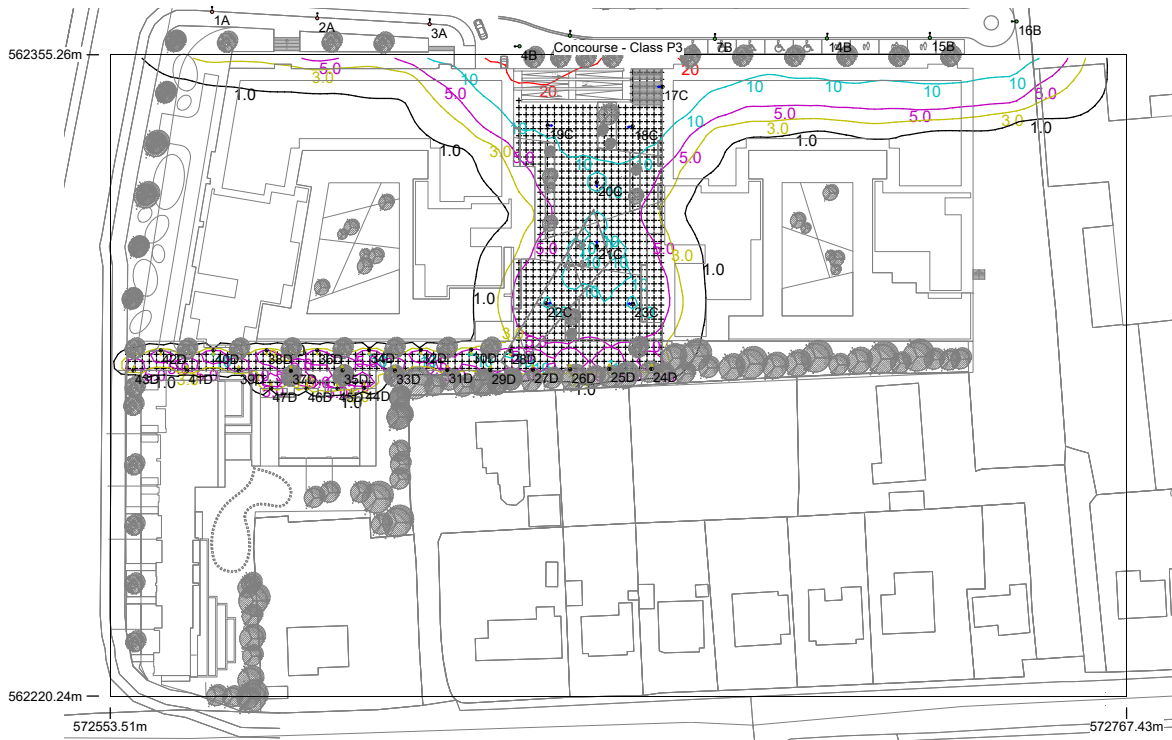


Results

Eav	27.02
Emin	10.69
E _{max}	39.39
E _{min} /E _{max}	0.27
E _{min} /E _{av}	0.40

Horizontal Illuminance (lux)

Concourse - Class P3

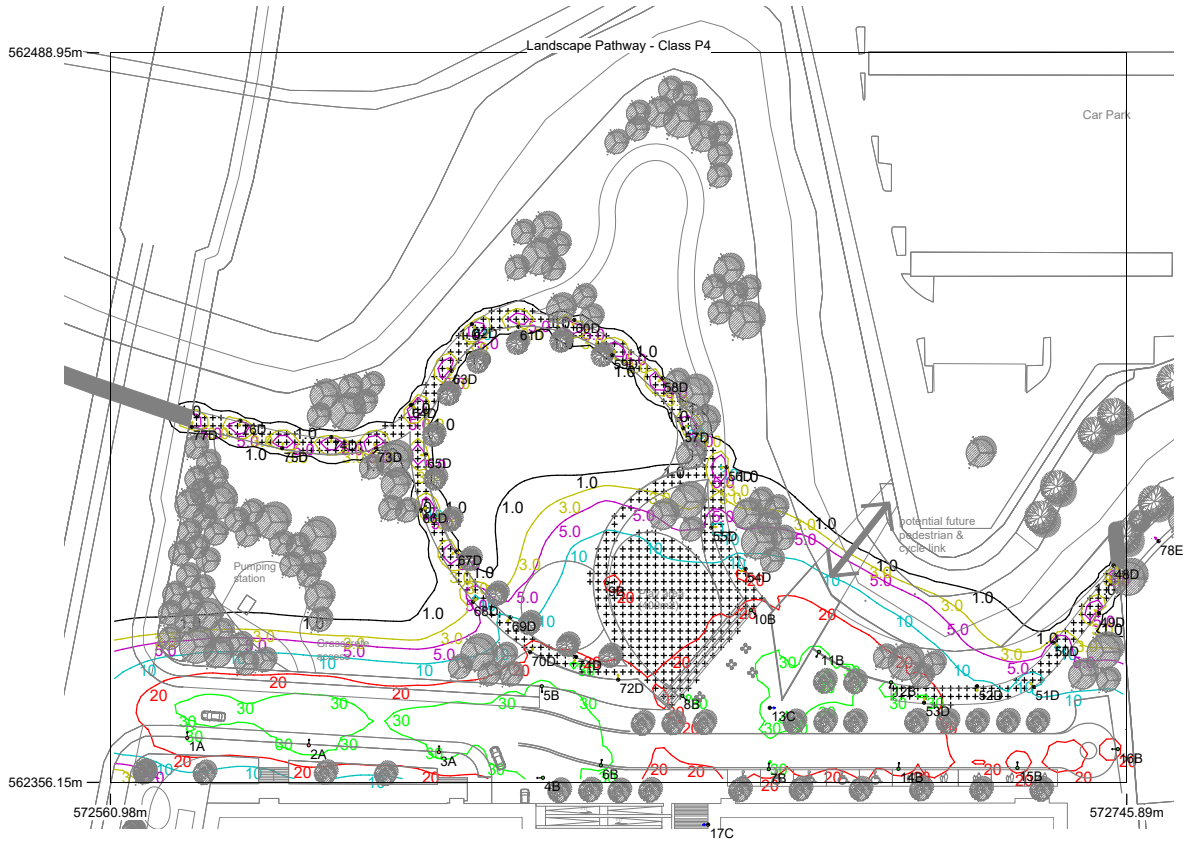


Results

Eav	8.16
Emin	2.28
Emax	19.40
Emin/Emax	0.12
Emin/Eav	0.28

Horizontal Illuminance (lux)

Landscape Pathway - Class P4



Results

Eav	11.45
Emin	1.13
Emax	32.99
Emin/Emax	0.03
Emin/Eav	0.10

Horizontal Illuminance (lux)

Riverside Amenity Pathway - Class P4



Results

Eav	8.98
Emin	1.11
Emax	62.97
Emin/Emax	0.02
Emin/Eav	0.12