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**PUBLIC LIGHTING REPORT  
FOR  
PORTMARNOCK SOUTH – PHASE 1D**

## 1. PROPOSED DEVELOPMENT

The proposed development (Phase 1D), generally comprises: -

- 172no. residential units consisting of 22no. duplexes and 150no. houses ranging in heights between 1.5 and 3 storeys.
- Provision of public open space including Skylark Park and extension to Railway Linear Park and Townland Boundary Linear Park.
- Vehicular access to serve the development is proposed off the existing / under construction access points on roads serving the St. Marnock's Bay development.
- A new vehicular road is proposed to serve the proposed development which will connect with Moyne Road. The permanent road includes the provision of a new junction with Moyne Road and SuDS features to control surface water run-off.
- Upgrade of existing temporary foul water pumping station and storage tank to increase capacity.
- All associated and ancillary site development, infrastructural, landscaping and boundary treatment works.

## 2. EXECUTIVE SUMMARY

This report was prepared in accordance with Fingal County Council requirements to ensure the development will be provided with adequate lighting to the standards of FCC Public Lighting department.

### Phase 1D Development

The design is based on use of 64 x Tech Series 27w LED 3000K (56 x Single Head Street Optic A10, 8 x Single Head Forward Throw Optic and A14) mounted on 64 x 6m columns.

The average light level is 6.35 lux with a minimum of 1.07 lux (0.17 uniformity). This complies with Class P4 of IS EN 13201-2:2015 / BS 5489-1:2020 for residential roads (5.0 lux average, 1.0 lux minimum).

### Link Road

The design is based on use of 31 x Tech Series 69w LED Street Optic A10 mounted on 8m columns with no tilt.

Light levels as follows:

Road – Section 1 : 15 lux average, 0.40 uniformity.

Road – Section 2 : 16 lux average, 0.40 uniformity.

These light levels comply with class C3 of IS EN 13201-2:2015 / BS 5489-1:2020 for roads (15 lux average, 0.40 uniformity)

The lighting design complies with the above requirements and detailed output is on the following pages:

**DATE:** 24 November 2021  
**DESIGNER:** Martin Obst  
**PROJECT No:** J629 1D  
**PROJECT NAME:** Portmarnock South Phase 1D

**LIGHTING  
REALITY**

Portmarnock South Phase 1D

IS EN 13201-2:2015 / BS 5489-1:2020  
Class P4

## Outdoor Lighting Report

## 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	Road	82.34	3.28	371.73	374.70	1.50	1.50
2	Isolines	-33.17	-71.81	604.35	555.45	2.42	2.22

### Luminaires

#### Luminaire A Data

Supplier	
Type	Veelje Tech Series 27w LED Street Optic A10
Lamp(s)	12 LED 3000K
Lamp Flux (klm)	3.19
File Name	5TCA11GLA-A10.ies
Maintenance Factor	0.72
Imax70,80,90(cd/klm)	746.4, 117.9, 0.0
No. in Project	56

#### Luminaire B Data

Supplier	
Type	Veelje Tech Series 27w LED Forward Throw Optic A14
Lamp(s)	12 LED 3000K
Lamp Flux (klm)	3.19
File Name	5TCA11GLA-A14-3K.ies
Maintenance Factor	0.72
Imax70,80,90(cd/klm)	515.0, 204.0, 0.0
No. in Project	8

### Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	427.89	358.45	6.00	44.00	0.00	0.00	0.50			
2	B	440.34	333.93	6.00	46.00	0.00	0.00	0.50			
3	A	417.99	355.38	6.00	156.00	0.00	0.00	0.50			
4	A	406.11	316.50	6.00	158.00	0.00	0.00	0.50			
5	A	402.89	283.30	6.00	169.00	0.00	0.00	0.50			
6	A	399.89	253.96	6.00	175.00	0.00	0.00	0.50			
7	A	393.03	231.43	6.00	152.00	0.00	0.00	0.50			
8	A	398.50	182.92	6.00	71.00	5.00	0.00	0.50			
9	A	382.54	201.94	6.00	173.00	0.00	0.00	0.50			
10	A	370.38	163.51	6.00	352.00	0.00	0.00	0.50			
11	A	430.01	173.44	6.00	72.00	5.00	0.00	0.50			
12	A	444.83	164.09	6.00	329.00	0.00	0.00	0.50			
13	A	366.57	124.12	6.00	344.00	0.00	0.00	0.50			
14	A	361.41	92.40	6.00	347.00	0.00	0.00	0.50			
15	A	357.67	60.19	6.00	358.00	0.00	0.00	0.50			
16	A	359.90	191.68	6.00	113.00	0.00	0.00	0.50			
17	A	344.59	164.02	6.00	0.00	0.00	0.00	0.50			
18	A	339.94	131.05	6.00	350.00	0.00	0.00	0.50			
19	A	331.52	96.35	6.00	347.00	0.00	0.00	0.50			

**Layout Continued**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
20	A	327.59	56.87	6.00	2.00	0.00	0.00	0.50			
21	A	324.74	30.23	6.00	342.00	0.00	0.00	0.50			
22	A	299.64	24.52	6.00	279.00	0.00	0.00	0.50			
23	A	276.31	26.20	6.00	269.00	0.00	0.00	0.50			
24	A	247.64	29.80	6.00	267.00	0.00	0.00	0.50			
25	A	211.85	31.37	6.00	266.00	0.00	0.00	0.50			
26	A	176.11	34.92	6.00	274.00	0.00	0.00	0.50			
27	A	150.80	35.24	6.00	268.00	0.00	0.00	0.50			
28	A	124.09	39.17	6.00	236.00	0.00	0.00	0.50			
29	A	118.54	64.10	6.00	190.00	0.00	0.00	0.50			
30	A	112.50	127.90	6.00	152.00	0.00	0.00	0.50			
31	A	129.37	130.74	6.00	99.00	0.00	0.00	0.50			
32	A	153.83	122.86	6.00	63.00	0.00	0.00	0.50			
33	A	175.92	100.63	6.00	9.00	0.00	0.00	0.50			
34	A	200.14	105.62	6.00	68.00	0.00	0.00	0.50			
35	A	229.86	92.48	6.00	72.00	5.00	0.00	0.50			
36	A	267.00	86.91	6.00	30.00	5.00	0.00	0.50			
37	B	271.90	65.40	6.00	167.00	0.00	0.00	0.50			
38	A	280.92	117.55	6.00	177.00	0.00	0.00	0.50			
39	A	288.65	155.18	6.00	166.00	0.00	0.00	0.50			
40	B	300.29	170.27	6.00	136.00	0.00	0.00	0.50			
41	A	319.71	197.47	6.00	75.00	0.00	0.00	0.50			
42	A	296.08	214.14	6.00	73.00	0.00	0.00	0.50			
43	A	338.99	192.18	6.00	74.00	0.00	0.00	0.50			
44	A	181.99	134.26	6.00	342.00	0.00	0.00	0.50			
45	A	209.66	145.84	6.00	256.00	5.00	0.00	0.50			
46	B	237.27	138.95	6.00	254.00	0.00	0.00	0.50			
47	A	247.58	140.14	6.00	348.00	0.00	0.00	0.50			
48	A	254.70	171.31	6.00	342.00	0.00	0.00	0.50			
49	A	191.91	178.58	6.00	159.00	0.00	0.00	0.50			
50	B	189.95	155.21	6.00	161.00	0.00	0.00	0.50			
51	A	162.40	151.84	6.00	57.00	0.00	0.00	0.50			
52	A	124.67	168.77	6.00	57.00	0.00	0.00	0.50			
53	A	99.86	176.48	6.00	65.00	0.00	0.00	0.50			
54	A	88.28	205.52	6.00	9.00	0.00	0.00	0.50			
55	A	107.99	246.10	6.00	96.00 3	0.00	0.00	0.50			

**Layout Continued**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
56	A	83.45	241.55	6.00	348.00	0.00	0.00	0.50			
57	A	181.05	68.29	6.00	9.00	0.00	0.00	0.50			
58	A	270.98	38.05	6.00	183.00	0.00	0.00	0.50			
59	A	184.28	44.46	6.00	16.00	0.00	0.00	0.50			
60	B	298.23	192.10	6.00	315.00	0.00	0.00	1.00			
61	A	276.81	93.07	6.00	164.00	0.00	0.00	1.00			
62	B	247.12	85.57	6.00	72.00	0.00	0.00	0.30			
63	A	113.10	99.20	6.00	187.00	0.00	0.00	0.30			
64	B	364.94	63.23	6.00	288.00	0.00	0.00	0.50			

# Horizontal Illuminance (lux)



## Horizontal Illuminance (lux)

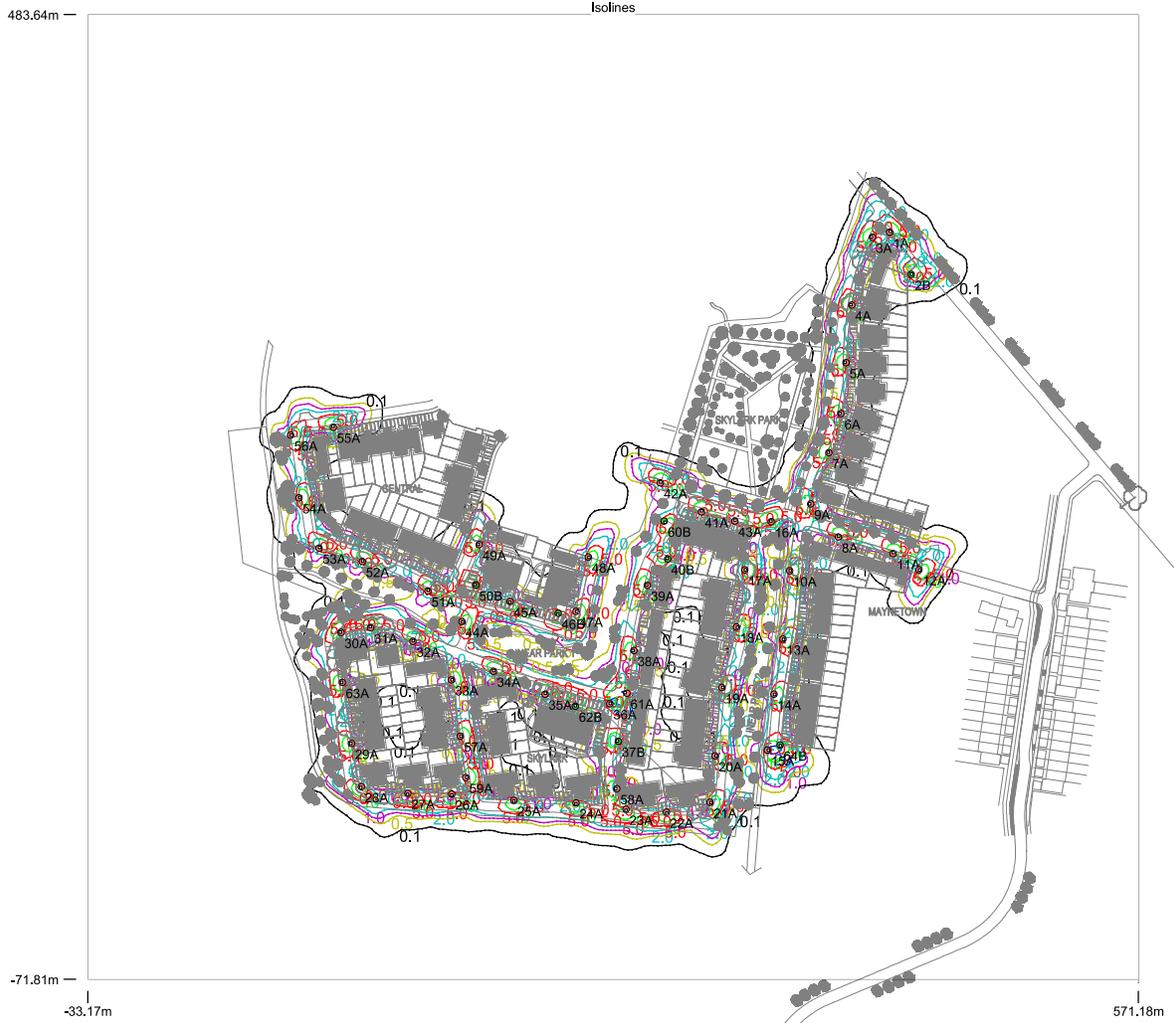


### Results

Eav	6.35
Emin	1.07
Emax	25.01
Emin/Emax	0.04
Emin/Eav	0.17

# Horizontal Illuminance (lux)

Isolines



**DATE:** 16 November 2021  
**DESIGNER:** Martin Obst  
**PROJECT No:** J629 rev B  
**PROJECT NAME:** Portmarnock Link Road

**LIGHTING  
REALITY**

Portmarnock Phase 1D - Link Road

IS EN 13201-2:2015 / BS 5489-1:2020  
Road Sections 1 & 2 - Class C3

## Outdoor Lighting Report

## 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	Road - Section 1	-27.73	-10.10	314.50	342.94	1.50	1.50
2	Road - Section 2	-22.73	332.84	359.69	374.73	1.50	1.50
3	Isolines	-99.11	-98.94	505.28	902.16	2.02	3.61

### Luminaires

#### Luminaire A Data

Supplier	
Type	Veelite Tech Series 69w LED Street Optic A10
Lamp(s)	32 LED 4000K 700mA
Lamp Flux (klm)	9.20
File Name	5TCA13GLA-A10.ies
Maintenance Factor	0.76
Lum. Int. Class	G2
No. in Project	31

### Layout

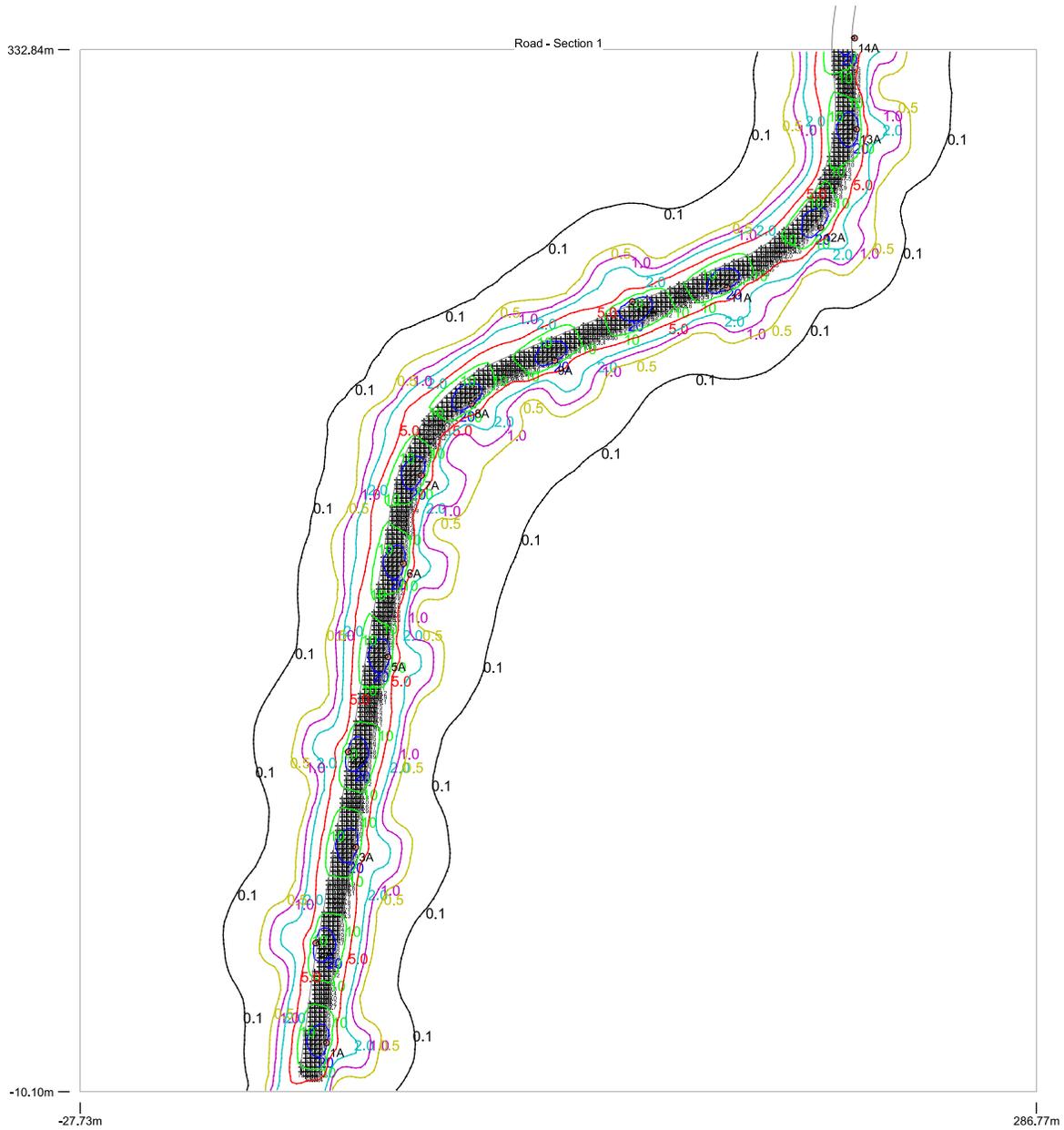
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	53.25	6.15	8.00	169.00	0.00	0.00	0.50			
2	A	49.72	38.94	8.00	348.00	0.00	0.00	0.50			
3	A	62.88	70.45	8.00	169.00	0.00	0.00	0.50			
4	A	60.41	101.86	8.00	345.00	0.00	0.00	0.50			
5	A	73.48	133.08	8.00	173.00	0.00	0.00	0.50			
6	A	78.57	163.78	8.00	169.00	0.00	0.00	0.50			
7	A	84.47	192.76	8.00	158.00	0.00	0.00	0.50			
8	A	100.97	216.39	8.00	128.00	0.00	0.00	0.50			
9	A	128.29	230.61	8.00	120.00	0.00	0.00	0.50			
10	A	153.78	249.95	8.00	294.00	0.00	0.00	0.50			
11	A	184.94	254.49	8.00	117.00	0.00	0.00	0.50			
12	A	215.79	274.33	8.00	142.00	0.00	0.00	0.50			
13	A	227.63	306.62	8.00	179.00	0.00	0.00	0.50			
14	A	226.89	336.63	8.00	171.00	0.00	0.00	0.50			
15	A	229.61	368.75	8.00	176.00	0.00	0.00	0.50			
16	A	233.92	400.30	8.00	173.50	0.00	0.00	0.50			
17	A	239.51	431.65	8.00	168.00	0.00	0.00	0.50			
18	A	244.99	463.67	8.00	171.00	0.00	0.00	0.50			

**Layout Continued**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
19	A	249.44	495.33	8.00	174.00	0.00	0.00	0.50			
20	A	253.13	516.60	8.00	143.00	0.00	0.00	0.50			
21	A	272.05	537.30	8.00	218.00	0.00	0.00	0.50			
22	A	290.00	516.78	8.00	227.00	0.00	0.00	0.50			
23	A	250.96	562.58	8.00	226.00	0.00	0.00	0.50			
24	A	230.76	586.29	8.00	227.00	0.00	0.00	0.50			
25	A	210.38	610.69	8.00	227.00	0.00	0.00	0.50			
26	A	190.49	633.62	8.00	227.00	0.00	0.00	0.50			
27	A	170.64	657.12	8.00	227.00	0.00	0.00	0.50			
28	A	150.82	680.65	8.00	227.00	0.00	0.00	0.50			
29	A	130.55	704.03	8.00	227.00	0.00	0.00	0.50			
30	A	216.80	459.72	8.00	76.00	0.00	0.00	0.50			
31	A	185.50	468.67	8.00	69.00	0.00	0.00	0.50			

## Horizontal Illuminance (lux)

Road - Section 1

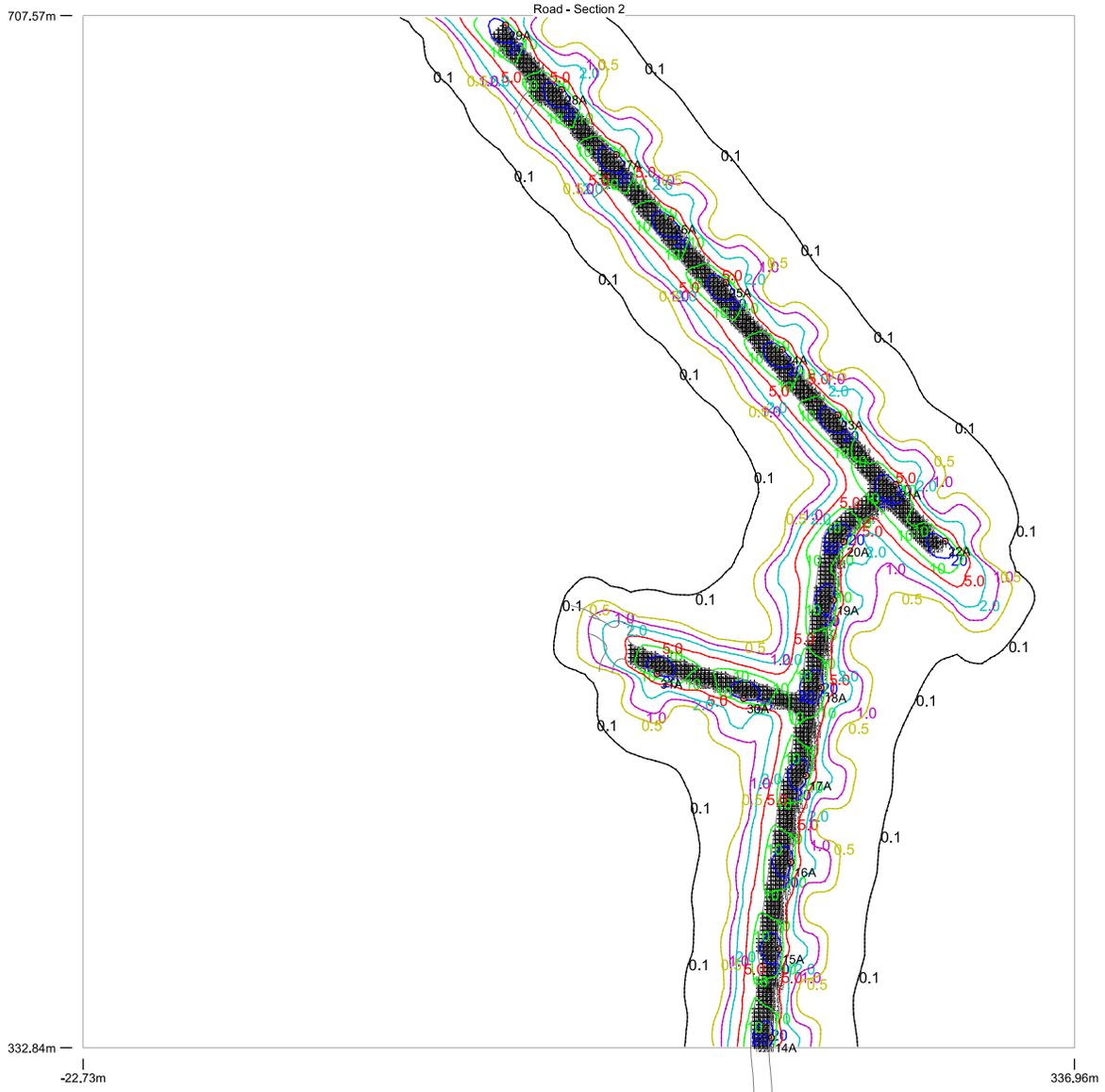


### Results

Eav	15.43
Emin	6.15
Emax	32.65
Emin/Emax	0.19
Emin/Eav	0.40

## Horizontal Illuminance (lux)

Road - Section 2



### Results

Eav	16.08
Emin	6.36
Emax	34.06
Emin/Emax	0.19
Emin/Eav	0.40

# Horizontal Illuminance (lux)

Isolines



