

**DATE:** 6 February 2024  
**DESIGNER:** Declan Doyle  
**PROJECT No:** KE/RE/CBC/01 rev 3  
**PROJECT NAME:** Clontrad Beg Coachford lighting



Lighting to IS EN 13201-2: 2015

Residential Lighting To Class P3, walkway To Class P4,  
Estate Entrance To Conflict Class C3, R619 to class P2

Dimming To U14 Regime, colour temp. 3000k

- A) Philips Lumistreet eco LED40 L95 DW, 4.00klm, 26w CLO
- B) Philips Nano Luma BGP701 DRXN1, 1.00klm, 6w CLO
- C) Philips Lumistreet eco LED40 L95 DW, 7.00klm, 39w CLO
- D) Philips Lumistreet micro BGP291 DW50 BL1, 4.00klm, 26w CLO  
C/W Nema 7 Pin Socket & photocell

6m Columns - Estate, 8m Columns - Main Road

## Outdoor Lighting Report

**NOTE: LUMINAIRES 8D & 10D TO HAVE REAR  
SCREENS/BAFFLES FITTED TO REDUCE LIGHT  
SPILL TO FRONT OF DWELLINGS**

**PREPARED BY:** Declan Doyle  
Lighting Design Manager

Kellihers Electrical  
M50 Business Park, Ballymount Road Upper, Dublin 12  
declan.doyle@rexel.ie  
Tel: +353 (0)1 4566717 Mob: +353 (0)86 8552936

[www.astrotek.ie](http://www.astrotek.ie) | [www.kellihers.com](http://www.kellihers.com) | [www.rexel.ie](http://www.rexel.ie)

## 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	Site	-0.88	-71.13	141.58	259.63	1.49	1.49
2	Walkway	69.17	65.57	4.34	56.75	1.45	1.49
3	Entrance	120.66	79.05	7.64	13.31	1.27	1.48
4	Walkway 2	58.39	36.22	28.58	16.92	1.43	1.41
5	R619-1	58.51	13.43	92.92	22.92	1.50	1.43
6	R619-2	11.37	-61.81	26.11	97.68	1.45	1.48

### Luminaires

#### Luminaire A Data

Supplier	
Type	LumiStreet gen2 Eco
Lamp(s)	LED40 L95@100kh /730 T25
Lamp Flux (klm)	4.00
File Name	BGS010 T25 FP LED40 L95@100kh-730 D W.ies
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	682.8, 25.9, 0.0
No. in Project	5

#### Luminaire B Data



Supplier	Philips
Type	BGP701 DRXN1
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	1.00
File Name	Luma Gen2 Nano_BGP701_DRXN1_1000_6LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	1103.8, 20.6, 0.0
No. in Project	6

#### Luminaire C Data

Supplier	
Type	LumiStreet gen2 Eco
Lamp(s)	LED70 L94@100kh /730 T25
Lamp Flux (klm)	7.00
File Name	BGS010 T25 FP LED70 L94@100kh-730 D M.ies
Maintenance Factor	0.84
Imax70,80,90(cd/klm)	823.6, 14.5, 0.0
No. in Project	8

#### Luminaire D Data

Supplier	
Type	BGP291 DW50 BL1
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	4.00
File Name	LumiStreet Gen2 Micro_BGP291_DW50 B L1_4000_20LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	595.4, 30.8, 0.0
No. in Project	6

### Layout

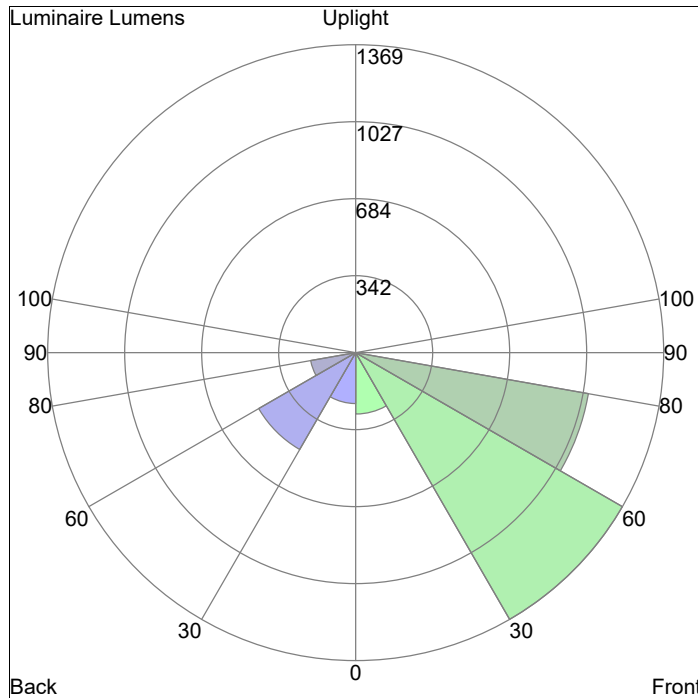
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	114.52	89.08	6.00	45.00	0.00	0.00	0.00			
2	D	75.02	82.89	6.00	309.00	0.00	0.00	0.00			
3	A	91.92	94.97	6.00	311.00	0.00	0.00	0.00			
4	A	101.12	120.15	6.00	222.00	0.00	0.00	0.00			
5	A	85.88	136.79	6.00	224.00	0.00	0.00	0.00			

**Layout Continued**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
6	D	51.85	149.75	6.00	310.00	0.00	0.00	0.00			
7	D	61.61	134.99	6.00	130.00	0.00	0.00	0.00			
8	D	34.44	137.27	6.00	41.00	0.00	0.00	0.00			
9	B	41.37	161.33	6.00	222.00	0.00	0.00	0.00			
10	D	28.38	129.39	6.00	310.00	0.00	0.00	0.00			
11	D	46.30	126.77	6.00	130.00	0.00	0.00	0.00			
12	B	48.67	92.80	6.00	220.00	0.00	0.00	0.00			
13	B	63.42	76.36	6.00	220.00	0.00	0.00	0.00			
14	B	30.62	109.99	6.00	43.00	0.00	0.00	0.00			
15	C	130.04	82.50	8.00	158.00	0.00	0.00	0.00			
16	B	61.08	55.28	6.00	135.00	0.00	0.00	0.00			
18	B	21.33	122.25	6.00	223.00	0.00	0.00	0.00			
19	C	112.81	56.45	8.00	140.00	0.00	0.00	0.00			
20	C	87.97	39.25	8.00	115.00	0.00	0.00	0.00			
21	C	59.66	23.09	8.00	125.00	0.00	0.00	0.00			
22	C	35.96	-1.45	8.00	354.00	0.00	0.00	0.00			
23	C	33.09	-37.69	8.00	346.00	0.00	0.00	0.00			
24	C	25.41	-62.96	8.00	335.00	0.00	0.00	0.00			
25	C	44.20	39.90	8.00	35.00	0.00	0.00	0.00			
25	A	44.01	149.12	6.00	222.00	0.00	0.00	0.00			

## Luminaire Classification System (LCS) Graphs

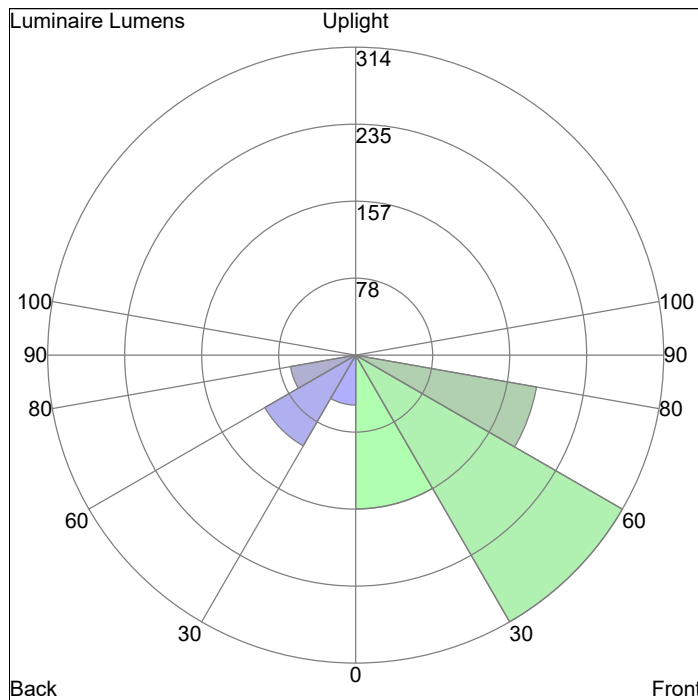
### Luminaire A LumiStreet gen2 Eco



LCS	Lumens	%Lamp	%Lum
FL	273.2	6.8	7.5
FM	1368.8	34.2	37.6
FH	1050.6	26.3	28.9
FVH	12.6	0.3	0.3
BL	226.5	5.7	6.2
BM	497.1	12.4	13.7
BH	202.6	5.1	5.6
BVH	8.5	0.2	0.2
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
<b>Total</b>	<b>3640.1</b>	<b>91.0</b>	<b>100.0</b>

BUG rating=B1-U0-G1

### Luminaire B BGP701 DRXN1

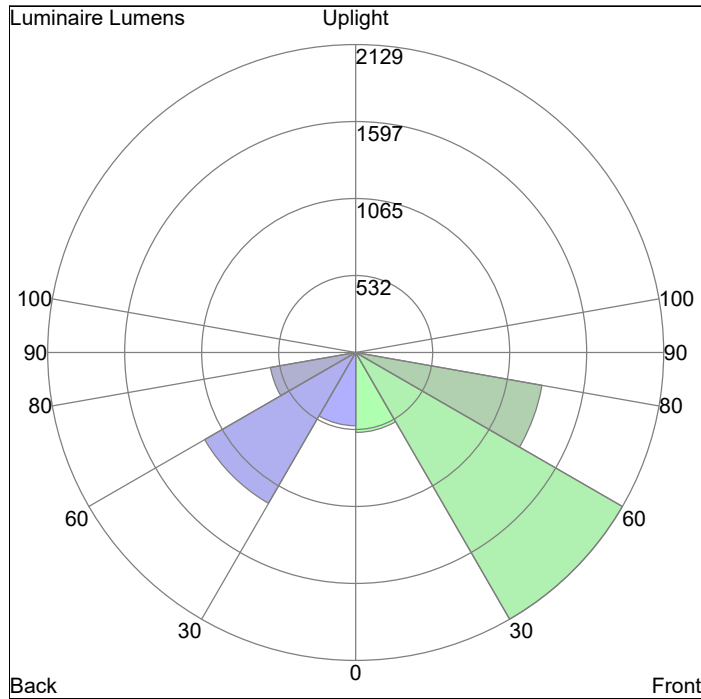


LCS	Lumens	%Lamp	%Lum
FL	156.6	15.7	17.7
FM	313.8	31.4	35.4
FH	187.1	18.7	21.1
FVH	1.7	0.2	0.2
BL	51.0	5.1	5.8
BM	106.8	10.7	12.1
BH	67.4	6.7	7.6
BVH	1.0	0.1	0.1
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
<b>Total</b>	<b>885.3</b>	<b>88.5</b>	<b>100.0</b>

BUG rating=B0-U0-G0

**Luminaire Classification System (LCS) Graphs Continued**

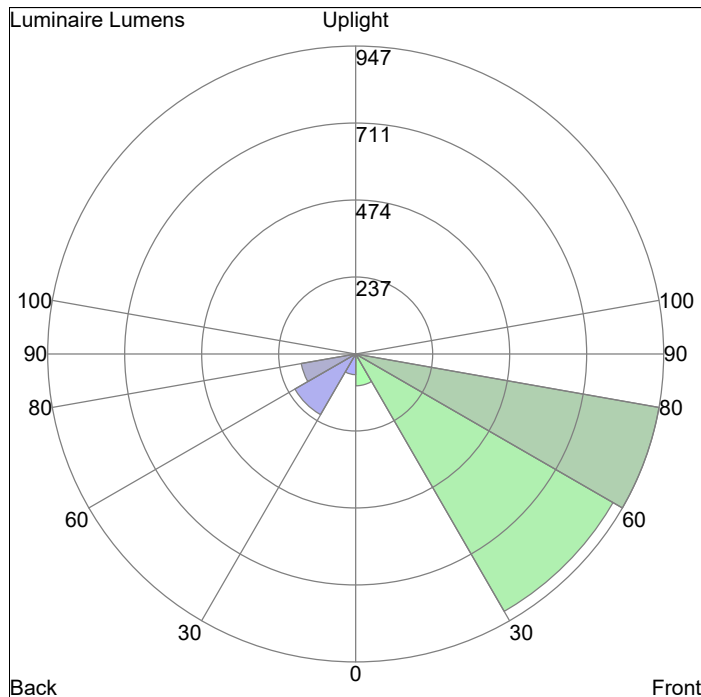
**Luminaire C LumiStreet gen2 Eco**



LCS	Lumens	%Lamp	%Lum
FL	553.2	7.9	8.7
FM	2129.4	30.4	33.6
FH	1308.5	18.7	20.7
FVH	17.0	0.2	0.3
BL	507.1	7.2	8.0
BM	1204.7	17.2	19.0
BH	597.5	8.5	9.4
BVH	11.2	0.2	0.2
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	6328.8	90.4	100.0

BUG rating=B3-U0-G2

**Luminaire D BGP291 DW50 BL1**

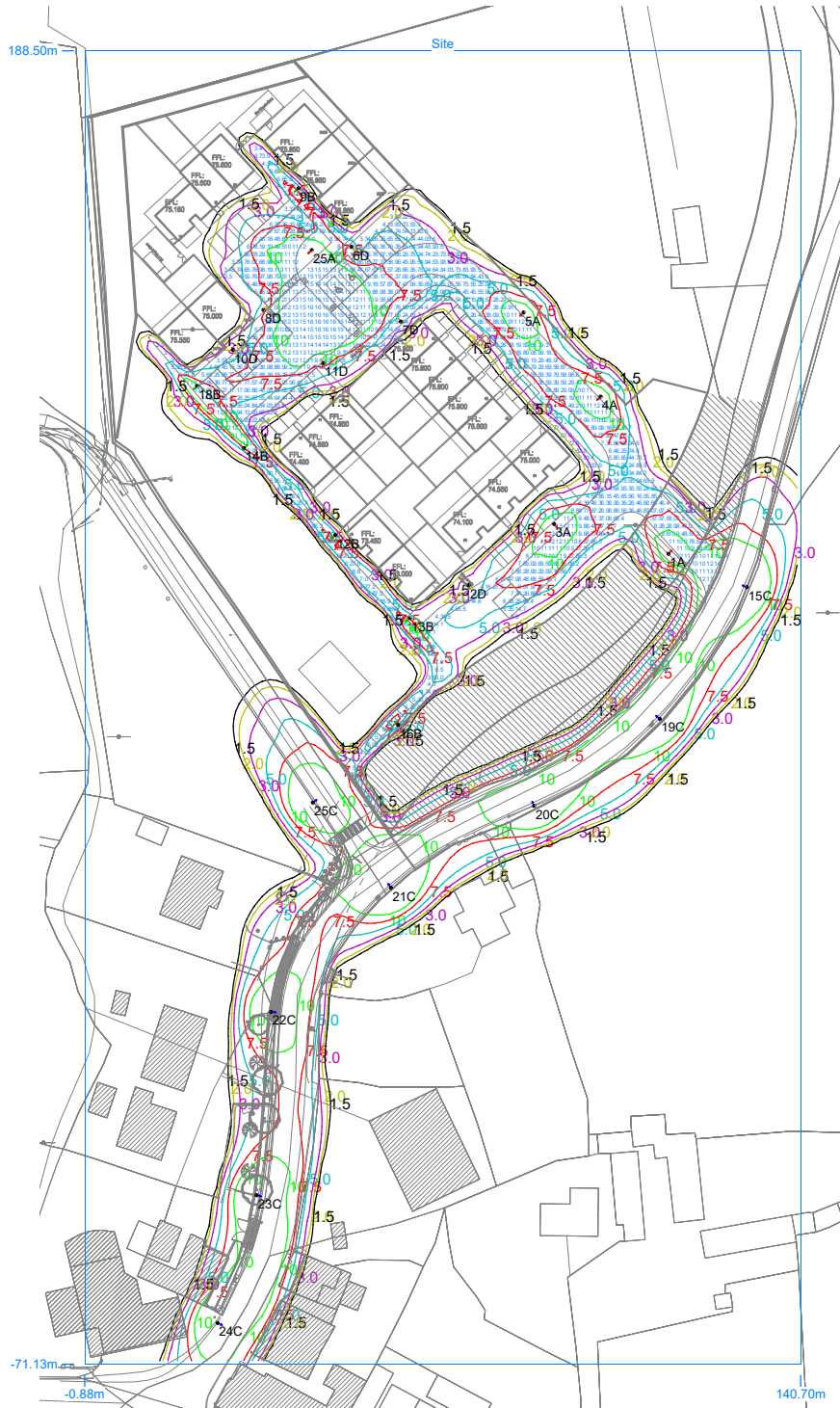


LCS	Lumens	%Lamp	%Lum
FL	98.1	2.5	4.1
FM	914.1	22.9	37.8
FH	947.4	23.7	39.2
FVH	5.3	0.1	0.2
BL	63.8	1.6	2.6
BM	215.8	5.4	8.9
BH	169.7	4.2	7.0
BVH	1.9	0.0	0.1
UL	0.0	0.0	0.0
UH	0.0	0.0	0.0
Total	2416.3	60.4	100.0

BUG rating=B1-U0-G1

# Horizontal Illuminance (lux)

Site



## Results

Eav	7.79
Emin	1.61
Emax	16.45
Emin/Emax	0.10
Emin/Eav	0.21
Emax/Eav	2.11

# Horizontal Illuminance (lux)

Walkway

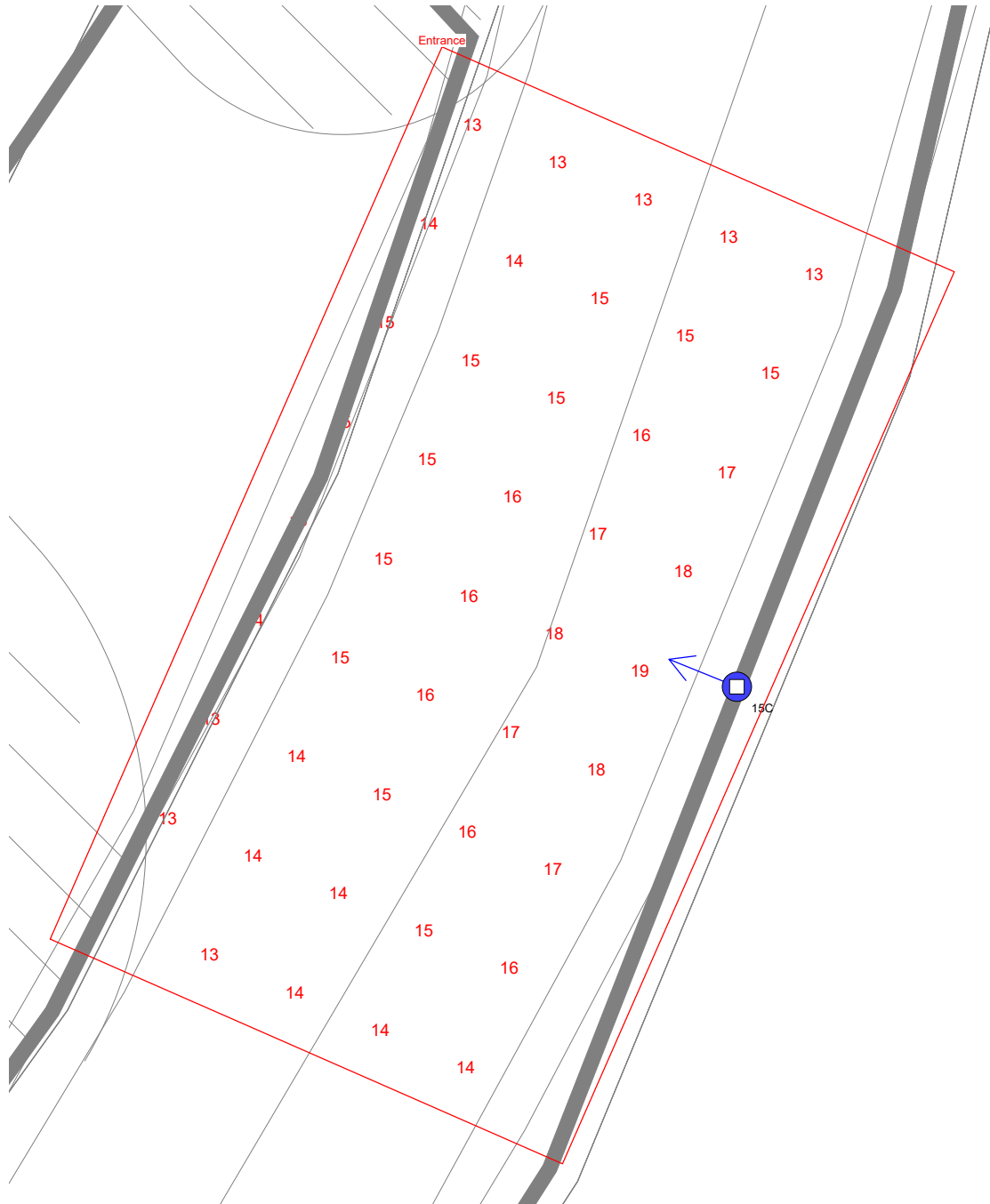


## Results

Eav	6.09
Emin	2.04
Emax	10.98
Emin/Emax	0.19
Emin/Eav	0.34
Emax/Eav	1.80

## Horizontal Illuminance (lux)

Entrance



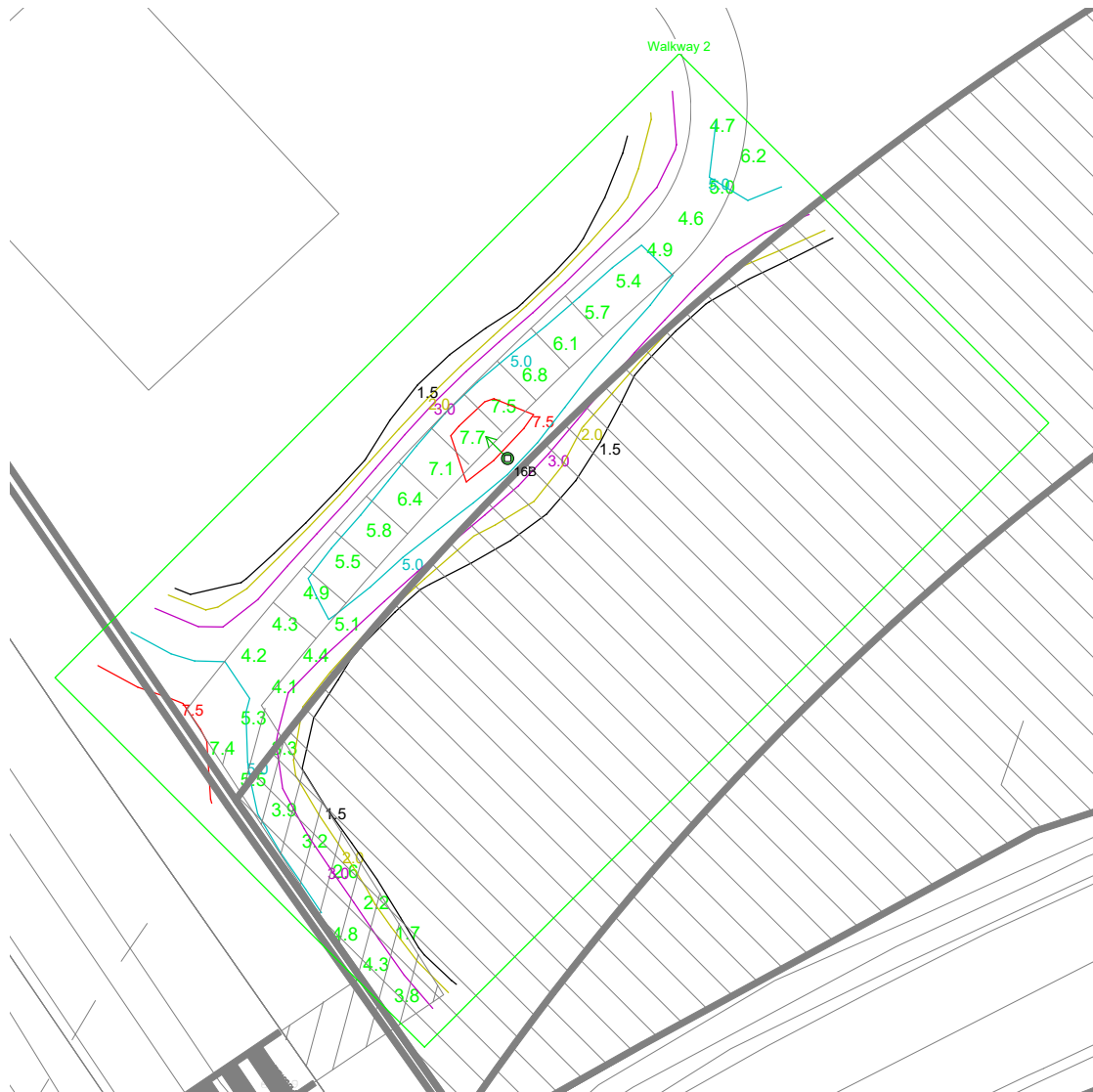
### Results

Eav	15.13
Emin	12.58
Emax	18.97
Emin/Emax	0.66
Emin/Eav	0.83
Emax/Eav	1.25



## Horizontal Illuminance (lux)

Walkway 2



### Results

Eav	4.98
Emin	1.72
Emax	7.65
Emin/Emax	0.23
Emin/Eav	0.35
Emax/Eav	1.54

# Horizontal Illuminance (lux)

R619-1

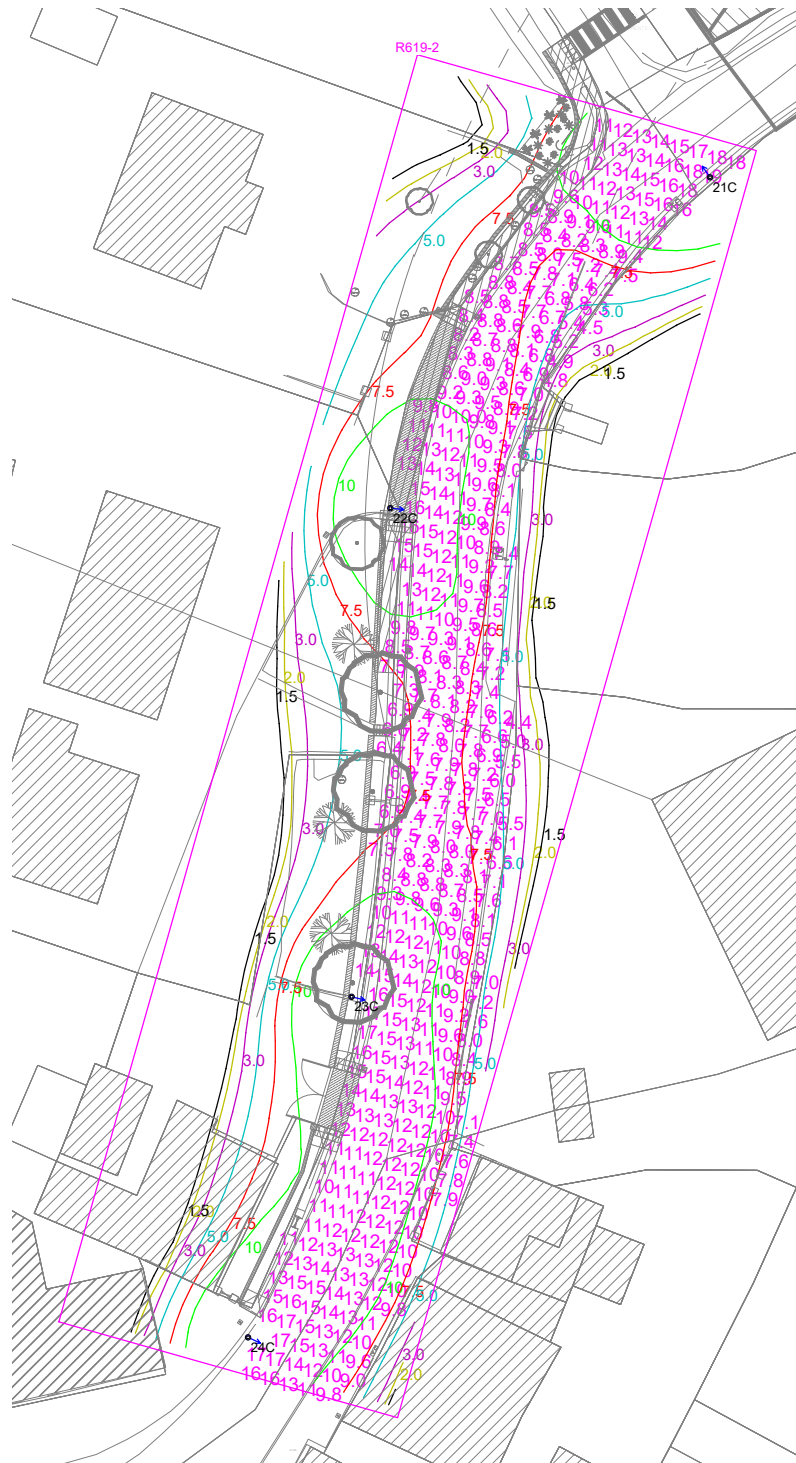


## Results

Eav	11.95
Emin	7.02
Emax	19.08
Emin/Emax	0.37
Emin/Eav	0.59
Emax/Eav	1.60

# Horizontal Illuminance (lux)

R619-2



## Results

Eav	10.41
Emin	4.39
Emax	19.07
Emin/Emax	0.23
Emin/Eav	0.42
Emax/Eav	1.83