

**DATE:** 13 May 2026  
**DESIGNER:** Alex Naper  
**PROJECT No:** SES 00926 Rev B  
**PROJECT NAME:** Woodbrook Dart Gateway- Aeval Unlimited Company



Residential area designed in accordance with EN13201-2:2015 Category P4.

Access junctions meet recommendations of EN13201-2:2015 Category C4

Step sections designed in accordance with I.S.EN17210-2021 and the recommendations of S.R. CEN/TR 17621:2021 Outdoor accessible routes with levels as per recommendations of EN12464-2:2014 5.12.15.

MF for proposed LED luminaires derived from: 0.92 x 0.90 x 0.99 (LMF (Low pollution environment & 72 month cleaning cycle) x LLMF x LSF) LLMF & LSF values @ 100,000 hours & 25 degrees C Ta.

Rev A: Updated site layout.

Rev B: Column location updated to maximise tree retention.

## Outdoor Lighting Report

**PREPARED BY:** Sabre Electrical Services Ltd.  
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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	Grid 1	725954.18	720638.80	190.00	155.95	1.50	1.50
2	Grid 2	726049.43	720711.61	51.00	57.00	1.50	1.50
3	Grid 3	725963.64	720696.69	2.13	13.05	0.71	1.00
4	Grid 4	726024.42	720661.31	42.00	27.00	1.50	1.50
5	Grid 5	725902.06	720607.26	58.50	170.50	1.50	1.50
6	Grid 6	725984.16	720676.41	34.50	57.00	1.50	1.50

### Luminaires

#### Luminaire A Data



Supplier	C U Phosco
Type	E950-28-P4A-730-C650-17W
Lamp(s)	730N
Lamp Flux (klm)	2.41
File Name	E950-28-P4A-730-C0650-17W.ies
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	659.3, 183.1, 0.3
No. in Project	7

#### Luminaire D Data



Supplier	C U Phosco
Type	P863-128-R2E-740-W5-475-62W
Lamp(s)	740SS
Lamp Flux (klm)	9.51
File Name	P863-128-R2E-740-W5-475-62W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	463.7, 84.3, 0.0
No. in Project	6

#### Luminaire E Data

Supplier	C U Phosco
Type	E950-28-F2A-730-RB-C0650-16W
Lamp(s)	730N
Lamp Flux (klm)	2.05
File Name	E950-28-F2A-730-RB-C0650-16W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	656.1, 136.2, 0.4
No. in Project	1

#### Luminaire G Data



Supplier	Urbis Schreder
Type	ALINEA Handrail 5117 - 6 LED 350mA WW Profiled Poly Clear, Sm
Lamp(s)	6 LEDs WW
Lamp Flux (klm)	0.74
File Name	ALINEA Handrail 5117 6 LED 350mA WW Profiled Poly Clear Smooth WO7312.Idt
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	681.0, 51.7, 4.1
No. in Project	4

#### Luminaire H Data



Supplier	C U Phosco
Type	P863-128-A2-4x4-740-SF-0350-65W
Lamp(s)	740SA
Lamp Flux (klm)	11.18
File Name	P863-128-A2-4x4-740-SF-0350-65W.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	292.2, 26.8, 0.0
No. in Project	4

#### Luminaire J Data



Supplier	Urbis Schreder
Type	HESTIA GEN2 MIDI 5304 Smooth deep 60 LEDs@550mA WW 730 230V
Lamp(s)	60 LEDs@550mA WW 730 230V 02-57-997
LampFlux(klm)/Colour	13.38 WW 3000K/70
File Name	HESTIA GEN2 MIDI 5304 60 LEDs 550mA WW 730 102W 506242 Smooth deep 230V...
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	300.1, 48.0, 0.0
No. in Project	1

## Luminaires

### Luminaire K Data

Supplier	Acrospire
Type	Chelsea SCL 12-400mA 730
Lamp(s)	LED
LampFlux(klm)/Colour	2.35 3000/70
File Name	Chelsea SCL 12-400mA 730.Idt
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	808.8, 1043.2, 38.6
No. in Project	5



### Luminaire L Data

Supplier	C U Phosco
Type	E950-28-P4A-822-B2-A0350-9W
Lamp(s)	822N
Lamp Flux (klm)	0.79
File Name	E950-28-P4A-822-B2-A0350-9W.ies
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	592.6, 85.2, 0.3
No. in Project	2

### Luminaire O Data

Supplier	C U Phosco
Type	E950-28-R3A-822-B2-A0350-9W
Lamp(s)	822N
Lamp Flux (klm)	0.78
File Name	E950-28-R3A-822-B2-A0350-9W.ies
Maintenance Factor	0.82
Imax70,80,90(cd/klm)	782.4, 23.0, 0.3
No. in Project	3



### Luminaire P Data

Supplier	Acrospire
Type	Chelsea SymA 12-300mA 730
Lamp(s)	LED
LampFlux(klm)/Colour	1.82 3000/70
File Name	Chelsea SymA 12-300mA 730.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	351.1, 145.2, 28.0
No. in Project	1

### Luminaire Q Data

Supplier	Acrospire
Type	Chelsea SCL 12-300mA 730
Lamp(s)	LED
LampFlux(klm)/Colour	1.82 3000/70
File Name	Chelsea SCL 12-300mA 730.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	808.8, 1043.2, 38.6
No. in Project	2

### Luminaire R Data

Supplier	C U Phosco
Type	P863-128-R2E-730-BB-W3-200-28W
Lamp(s)	730SS
Lamp Flux (klm)	3.53
File Name	P863-128-R2E-730-BB-W3-200-28W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	492.1, 89.5, 0.0
No. in Project	10



### Luminaire S Data

Supplier	C U Phosco
Type	P863-128-F2-730-BB-W3-200-28W
Lamp(s)	730SS
Lamp Flux (klm)	3.41
File Name	P863-128-F2-730-BB-W3-200-28W.ies
Maintenance Factor	0.87
Imax70,80,90(cd/klm)	457.2, 37.7, 0.6
No. in Project	2



**Layout**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
1	R	726042.73	720700.27	8.00	196.00	0.00	0.00	0.40	100%			
2	R	726034.03	720732.67	8.00	189.00	0.00	0.00	0.40	100%			
3	S	726115.27	720770.49	8.00	199.00	0.00	0.00	0.40	100%			
4	R	726044.71	720774.74	8.00	107.00	0.00	0.00	0.40	100%			
5	R	726050.98	720798.41	8.00	289.00	0.00	0.00	0.40	100%			
6	R	726021.26	720789.81	8.00	281.00	0.00	0.00	0.40	100%			
7	R	726080.04	720806.39	8.00	289.00	0.00	0.00	0.40	100%			
8	R	726087.42	720786.70	8.00	108.00	0.00	0.00	0.40	100%			
12	R	726099.18	720757.18	8.00	15.00	0.00	0.00	0.40	100%			
13	S	726106.91	720800.67	8.00	199.00	0.00	0.00	0.40	100%			
42	A	725925.02	720664.34	6.00	192.00	0.00	0.00	0.40	100%			
43	A	725909.50	720698.20	6.00	11.00	0.00	0.00	0.40	100%			
44	A	725902.99	720724.15	6.00	16.00	0.00	0.00	0.40	100%			
81	A	725963.07	720683.19	6.00	15.00	0.00	0.00	0.40	100%			
80	K	726073.47	720742.38	4.30	67.00	0.00	0.00	0.00	50%			
82	E	725961.72	720753.51	6.00	287.00	0.00	0.00	0.40	100%			
83	L	725958.52	720718.43	5.00	7.00	0.00	0.00	0.40	100%			
84	G	725963.26	720698.90	1.00	16.00	10.00	0.00	0.01	100%			
87	A	725981.30	720758.74	6.00	291.00	0.00	0.00	0.40	100%			
88	A	726009.25	720766.44	5.00	283.00	0.00	0.00	0.40	100%			
89	R	726012.16	720751.52	8.00	8.00	0.00	0.00	0.40	100%			
88	R	726024.02	720709.32	8.00	17.00	0.00	0.00	0.40	100%			
92	D	726063.55	720693.30	8.00	282.00	0.00	0.00	0.40	100%			
93	D	726024.52	720672.84	8.00	102.00	0.00	0.00	0.40	100%			
100	D	725980.52	720671.46	8.00	279.00	0.00	0.00	0.50	100%			
108	G	725962.41	720701.73	1.00	15.00	10.00	0.00	0.01	100%			
109	G	725960.75	720708.18	1.00	12.00	10.00	0.00	0.01	100%			
110	G	725961.51	720705.17	1.00	17.00	10.00	0.00	0.01	100%			
119	K	726069.03	720758.21	4.30	331.00	0.00	0.00	0.00	50%			
120	K	726059.07	720752.28	4.30	141.00	0.00	0.00	0.00	50%			
121	K	726058.48	720740.03	4.30	22.00	0.00	0.00	0.00	50%			
122	K	726061.22	720731.79	4.30	203.00	0.00	0.00	0.00	50%			
123	O	725930.44	720677.69	4.50	205.00	5.00	0.00	0.40	100%			
125	O	725919.17	720707.52	4.50	194.00	5.00	0.00	0.40	100%			
126	O	725916.93	720734.66	4.50	186.00	5.00	0.00	0.40	100%			
127	D	725905.99	720650.27	8.00	276.00	0.00	0.00	0.50	100%			

**Layout Continued**

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
139	D	725944.43	720651.17	8.00	105.00	0.00	0.00	0.50	100%			
Existing153	A	725937.26	720632.81	6.00	201.00	0.00	0.00	0.40	100%			
175	D	726101.50	720694.06	8.00	108.00	0.00	0.00	0.50	100%			
44	H	726077.86	720716.63	8.00	282.00	0.00	0.00	0.40	100%			
45	H	726108.92	720724.96	8.00	282.00	0.00	0.00	0.40	100%			
46	H	726083.71	720698.73	8.00	99.00	0.00	0.00	0.40	100%			
47	H	726113.01	720706.62	8.00	99.00	0.00	0.00	0.40	100%			
48	J	726124.41	720736.87	8.00	198.00	0.00	0.00	1.50	100%			
49	Q	725999.68	720706.35	4.30	89.00	0.00	0.00	0.00	75%			
50	L	725957.33	720735.87	5.00	16.00	0.00	0.00	0.40	100%			
51	Q	725989.53	720704.00	4.30	13.00	0.00	0.00	0.00	75%			
52	P	725990.33	720723.58	4.30	107.00	0.00	0.00	0.00	100%			

# Horizontal Illuminance (lux)

Grid 1

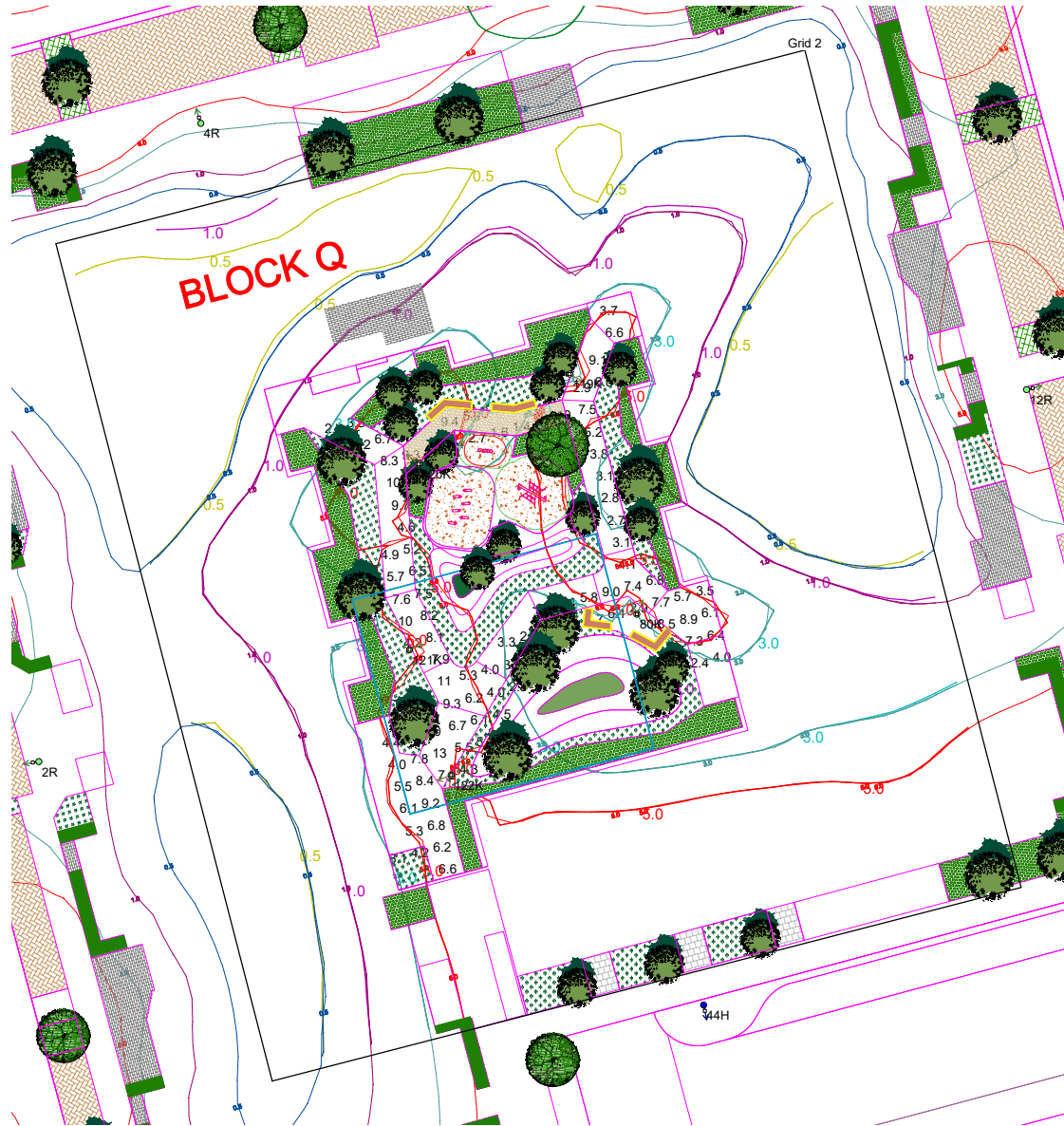


## Results

Eav	7.39
Emin	1.45
Emax	34.43
Emin/Emax	0.04
Emin/Eav	0.20

# Horizontal Illuminance (lux)

Grid 2

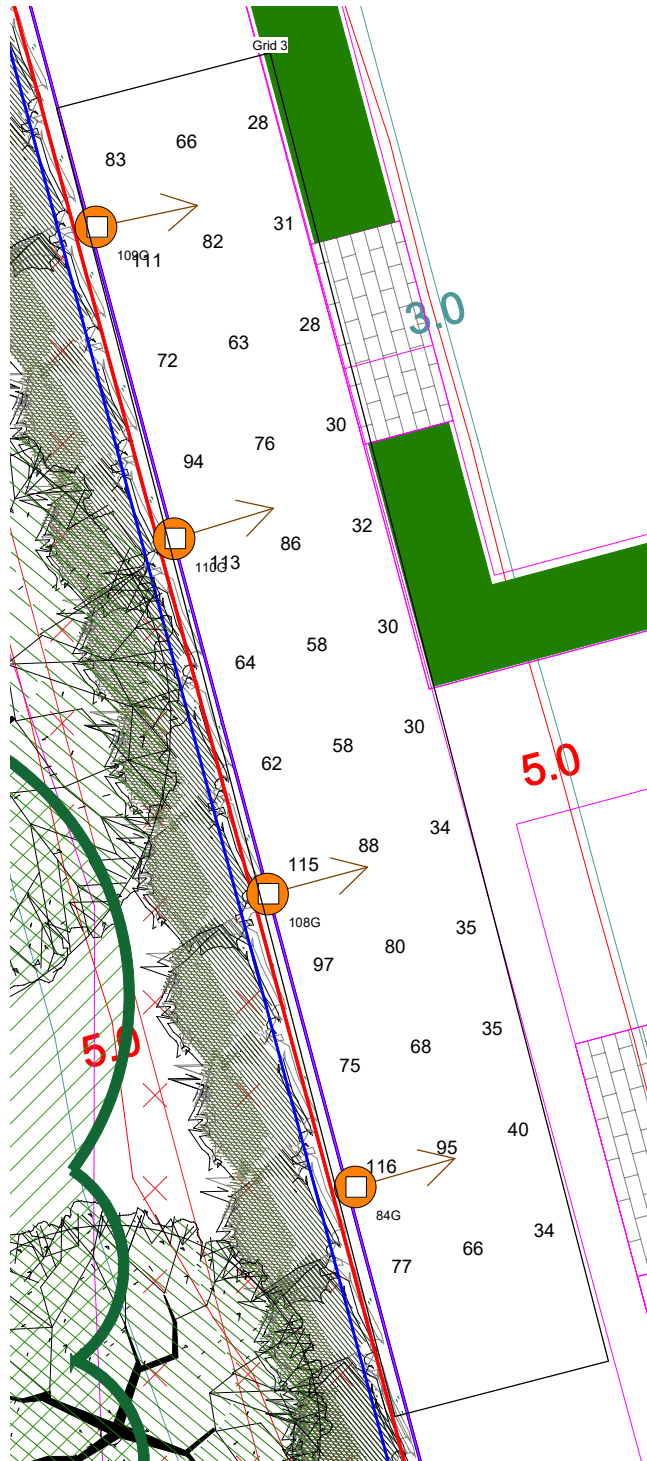


### Results

Eav	5.78
Emin	1.39
Emax	13.01
Emin/Emax	0.11
Emin/Eav	0.24

## Horizontal Illuminance (lux)

Grid 3

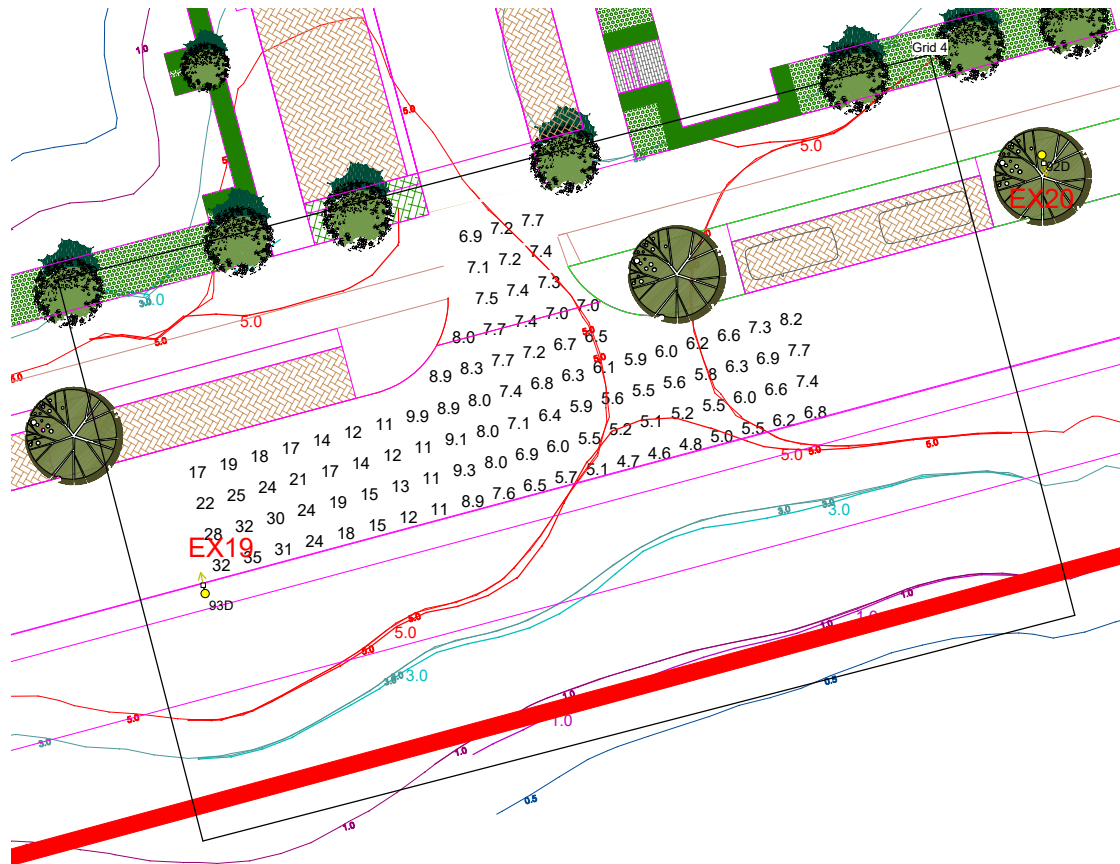


### Results

Eav	65.36
Emin	27.56
Emax	116.41
Emin/Emax	0.24
Emin/Eav	0.42

# Horizontal Illuminance (lux)

Grid 4

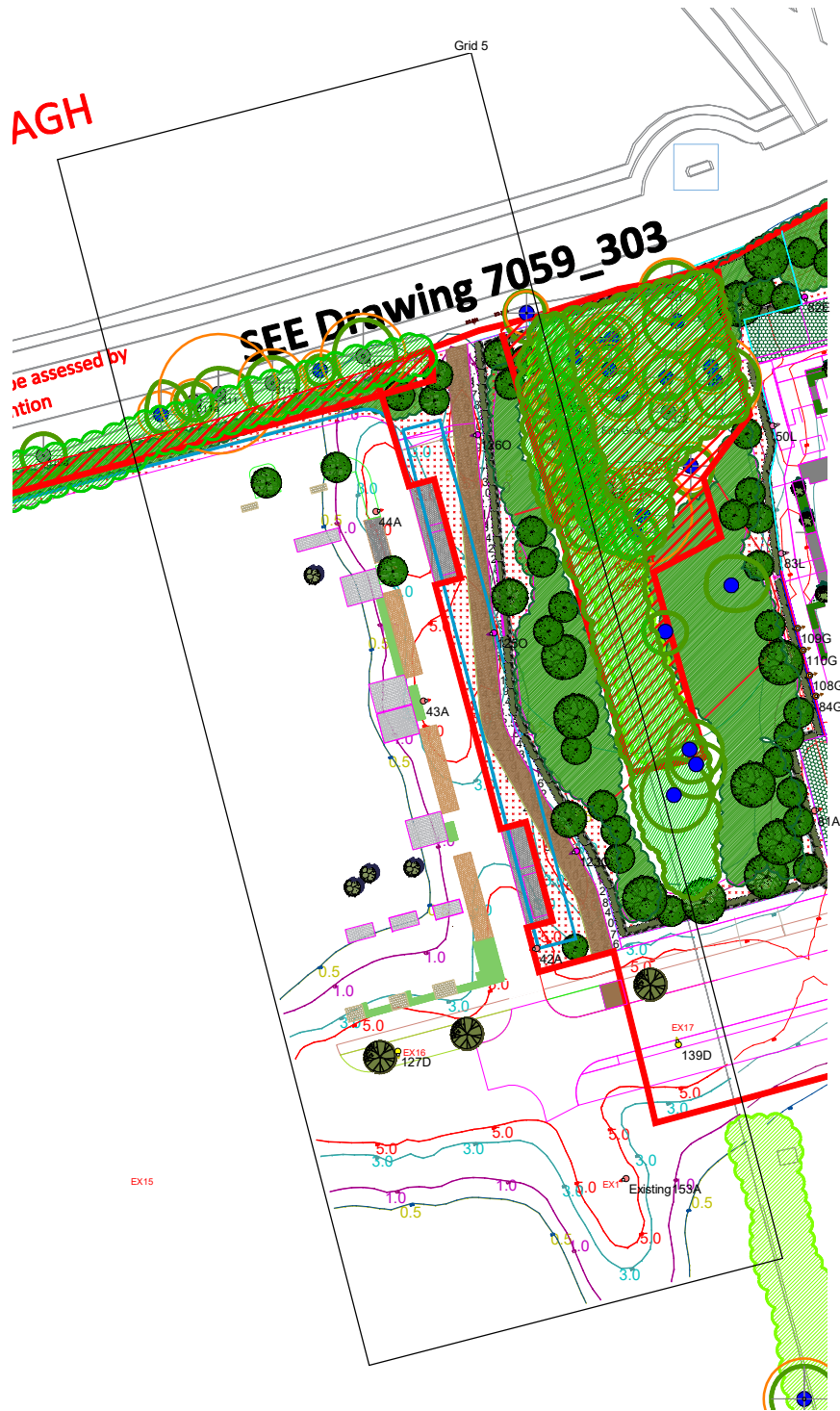


## Results

Eav	10.78
Emin	4.64
Emax	35.35
Emin/Emax	0.13
Emin/Eav	0.43

# Horizontal Illuminance (lux)

Grid 5



## Results

Eav	5.27
Emin	1.05
Emax	14.33
Emin/Emax	0.07
Emin/Eav	0.20

## Horizontal Illuminance (lux)

Grid 6



### Results

Eav	7.39
Emin	1.45
Emax	34.43
Emin/Emax	0.04
Emin/Eav	0.20