

DATE: 6 December 2024
DESIGNER: Mark Kenny Lighting Consultancy Ltd
PROJECT No: MKL060
PROJECT NAME: Redrow Homes Development - Hook Meadow, Westergate



Spine Road Lighting Classification: P4 (BS 5489-1 2020, Table A.5)

Minimum maintained average illuminance (Eav): >5.00 <7.50 lux

Minimum illuminance (Emin): >1.00 lux

Lighting Uniformity (Emin/Eav): >0.20 (20%)

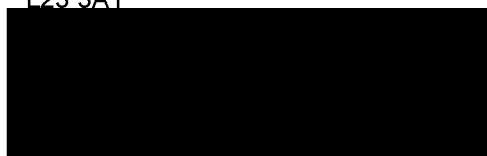
N.B - Areas lit with low level bollard lighting does not conform to standards as laid out in BS 5489-1 2020, Table A.5

Lighting Design - Revision R4

Base Drawing File Title - Site Layout 19 Stripped Back.dwg

Outdoor Lighting Report

PREPARED BY: Mark Kenny Lighting Consultancy Ltd
173 College Road
Crosby
Merseyside
L23 3AT



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	493675.01	104758.27	138.00	34.50	1.50	1.50
2	Grid 2	493631.84	104824.33	66.00	21.00	1.50	1.50
3	Grid 3	493476.20	104803.05	161.58	34.50	1.50	1.50
4	Grid 4	493679.77	104784.02	67.50	27.00	1.50	1.50
5	Grid 5	493566.09	104825.17	136.50	67.50	1.50	1.50
6	Grid 6	493531.79	104826.76	27.00	65.97	1.50	1.50
7	Grid 7	493469.49	104831.50	34.50	57.00	1.50	1.50
8	Grid 8	493471.88	104763.01	21.00	43.50	1.50	1.50
9	Grid 9	493534.75	104763.11	24.00	58.50	1.50	1.50
10	Grid 10	493594.75	104762.97	22.50	58.50	1.50	1.50
11	Grid 11	493625.03	104764.96	37.50	46.50	1.50	1.50
12	Grid 12	493387.80	104753.67	92.81	27.00	1.50	1.50
13	Grid 13	493358.31	104722.88	473.92	209.92	1.90	1.50

Luminaires



Luminaire A Data

Supplier	D W Windsor
Type	KIRIUM PRO MINI 16LED 3k A1 400mA UM SUG 42 0018 0000 100
Lamp(s)	16 x 3k LED
Lamp Flux (klm)	2.76
File Name	KIRIUM PRO MINI 16LED 3k A1_400mA U MSUG 42 0018 0000 100.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	741.1, 276.2, 0.0
No. in Project	13

Luminaire B Data

Supplier	PM1 WW
Type	PM1 WW
Lamp(s)	9 x LUXEON Tx 3K LED
Lamp Flux (klm)	1.20
File Name	PM1 WW N V2.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	190.3, 155.7, 117.6
No. in Project	41

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	493693.21	104780.62	6.00	254.00	0.00	0.00	0.30			
2	A	493723.99	104780.86	6.00	269.00	0.00	0.00	0.30			
3	A	493755.93	104778.63	6.00	268.00	0.00	0.00	0.30			
4	A	493789.94	104779.68	6.00	273.00	0.00	0.00	0.30			
5	A	493664.57	104793.54	6.00	35.00	0.00	0.00	0.30			
6	A	493650.54	104822.18	6.00	238.00	0.00	0.00	0.30			
7	A	493618.91	104826.61	6.00	267.00	0.00	0.00	0.30			
8	A	493580.49	104819.08	6.00	90.00	0.00	0.00	0.30			

Layout Continued

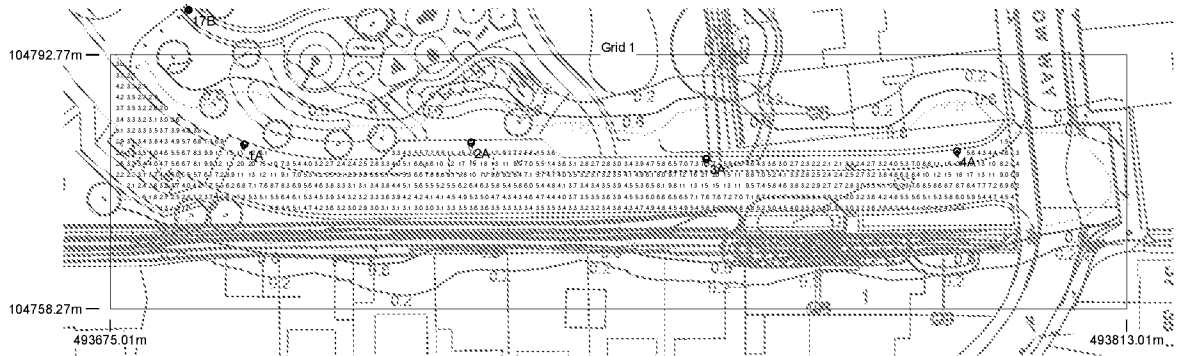
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
9	A	493511.65	104814.24	6.00	88.00	0.00	0.00	0.30			
10	A	493551.33	104818.34	6.00	97.00	0.00	0.00	0.30			
11	A	493481.06	104820.92	6.00	358.00	0.00	0.00	0.30			
12	B	493542.15	104832.76	1.00	358.00	0.00	0.00	0.00			
13	B	493488.08	104801.58	1.00	178.00	0.00	0.00	0.00			
14	B	493487.51	104779.78	1.00	179.00	0.00	0.00	0.00			
15	B	493487.15	104767.81	1.00	179.00	0.00	0.00	0.00			
16	B	493715.35	104822.44	1.00	127.00	0.00	0.00	0.00			
17	B	493685.64	104798.86	1.00	130.00	0.00	0.00	0.00			
18	B	493696.26	104807.32	1.00	132.00	0.00	0.00	0.00			
19	B	493705.78	104814.89	1.00	128.00	0.00	0.00	0.00			
20	B	493549.33	104848.62	1.00	182.00	0.00	0.00	0.00			
21	B	493544.49	104863.43	1.00	0.00	0.00	0.00	0.00			
22	B	493544.43	104876.68	1.00	359.00	0.00	0.00	0.00			
23	B	493489.91	104841.31	1.00	177.00	0.00	0.00	0.00			
24	B	493481.87	104855.64	1.00	358.00	0.00	0.00	0.00			
25	B	493490.29	104869.70	1.00	180.00	0.00	0.00	0.00			
26	B	493548.94	104768.70	1.00	184.00	0.00	0.00	0.00			
27	B	493540.84	104787.41	1.00	0.00	0.00	0.00	0.00			
28	B	493549.37	104815.16	1.00	179.00	0.00	0.00	0.00			
29	B	493549.40	104801.88	1.00	180.00	0.00	0.00	0.00			
30	B	493610.23	104769.16	1.00	182.00	0.00	0.00	0.00			
31	B	493609.84	104783.75	1.00	182.00	0.00	0.00	0.00			
32	B	493602.27	104799.67	1.00	0.00	0.00	0.00	0.00			
33	B	493608.78	104814.83	1.00	180.00	0.00	0.00	0.00			
34	B	493643.31	104776.68	1.00	180.00	0.00	0.00	0.00			
35	B	493636.14	104792.87	1.00	328.00	0.00	0.00	0.00			
36	B	493654.63	104800.13	1.00	136.00	0.00	0.00	0.00			
37	B	493473.19	104767.68	1.00	90.00	0.00	0.00	0.00			
38	B	493456.59	104767.56	1.00	90.00	0.00	0.00	0.00			
39	B	493439.92	104767.41	1.00	90.00	0.00	0.00	0.00			
40	B	493422.31	104767.46	1.00	93.00	0.00	0.00	0.00			
41	B	493405.82	104768.65	1.00	86.00	0.00	0.00	0.00			
42	A	493632.44	104840.04	6.00	0.00	0.00	0.00	0.30			
43	A	493633.21	104868.26	6.00	359.00	0.00	0.00	0.30			
44	B	493689.03	104868.72	1.00	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
45	B	493686.64	104880.16	1.00	311.00	0.00	0.00	0.00			
46	B	493640.49	104883.77	1.00	270.00	0.00	0.00	0.00			
47	B	493677.27	104873.66	1.00	40.00	0.00	0.00	0.00			
48	B	493655.95	104883.82	1.00	270.00	0.00	0.00	0.00			
49	B	493666.33	104878.50	1.00	89.00	0.00	0.00	0.00			
50	B	493626.84	104877.91	1.00	90.00	0.00	0.00	0.00			
51	B	493600.87	104883.44	1.00	269.00	0.00	0.00	0.00			
52	B	493588.76	104883.36	1.00	271.00	0.00	0.00	0.00			
53	B	493590.88	104873.82	1.00	136.00	0.00	0.00	0.00			
54	B	493614.64	104883.55	1.00	269.00	0.00	0.00	0.00			

Horizontal Illuminance (lux)

Grid 1

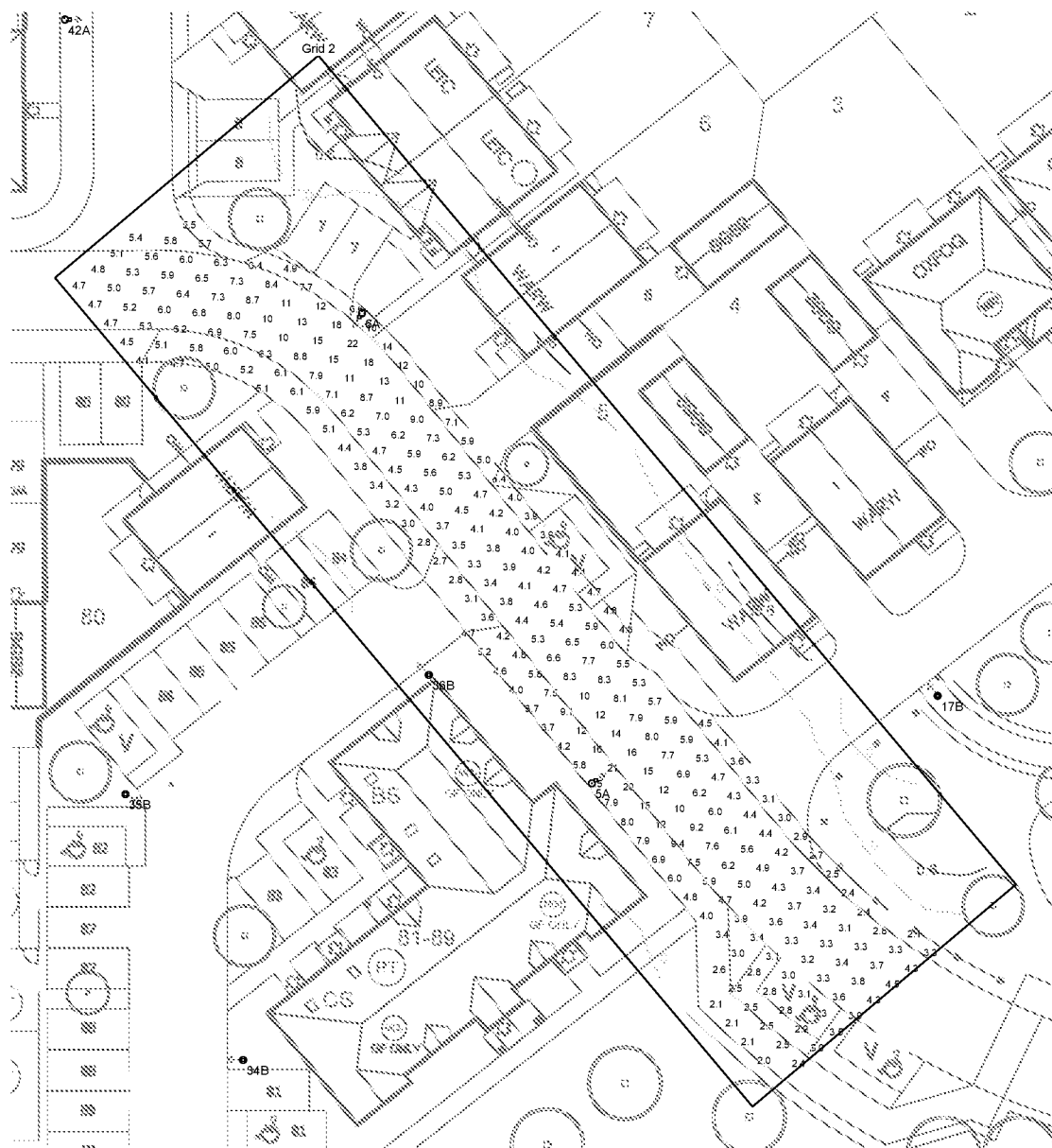


Results

Eav	5.75
Emin	1.29
Emax	21.05
Emin/Emax	0.06
Emin/Eav	0.23

Horizontal Illuminance (lux)

Grid 2

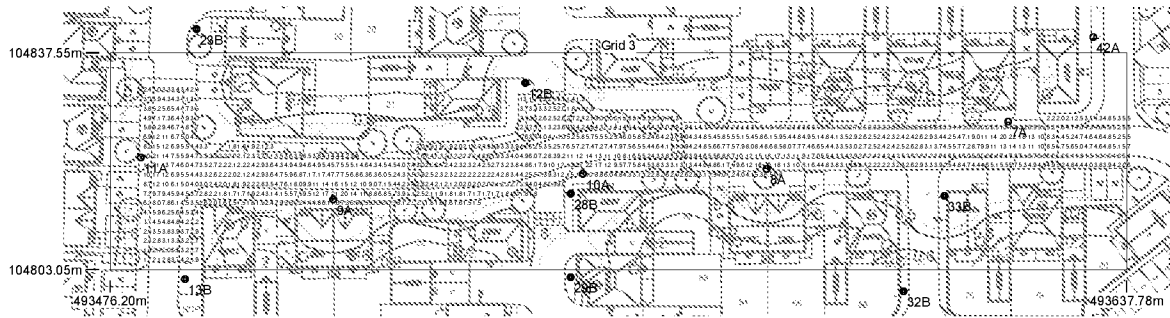


Results

Eav	5.95
Emin	2.04
Emax	21.68
Emin/Emax	0.09
Emin/Eav	0.34

Horizontal Illuminance (lux)

Grid 3



Results

Eav	5.27
Emin	1.29
Emax	21.78
Emin/Emax	0.06
Emin/Eav	0.25

Horizontal Illuminance (lux)

Grid 4

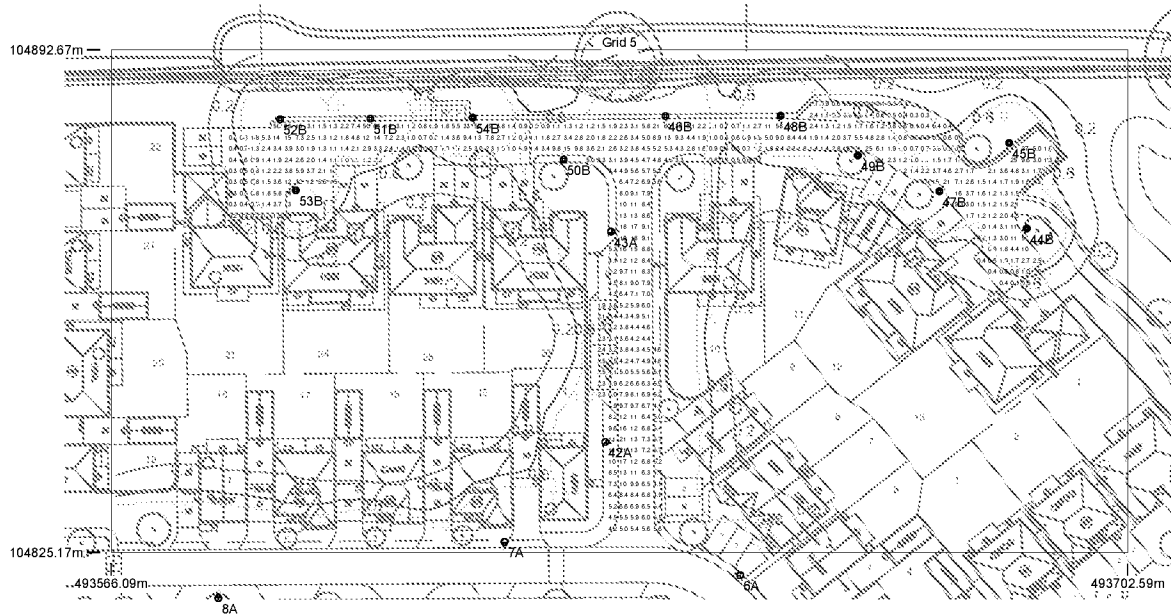


Results

Eav	3.56
Emin	0.35
E _{max}	27.77
Emin/E _{max}	0.01
Emin/Eav	0.10

Horizontal Illuminance (lux)

Grid 5

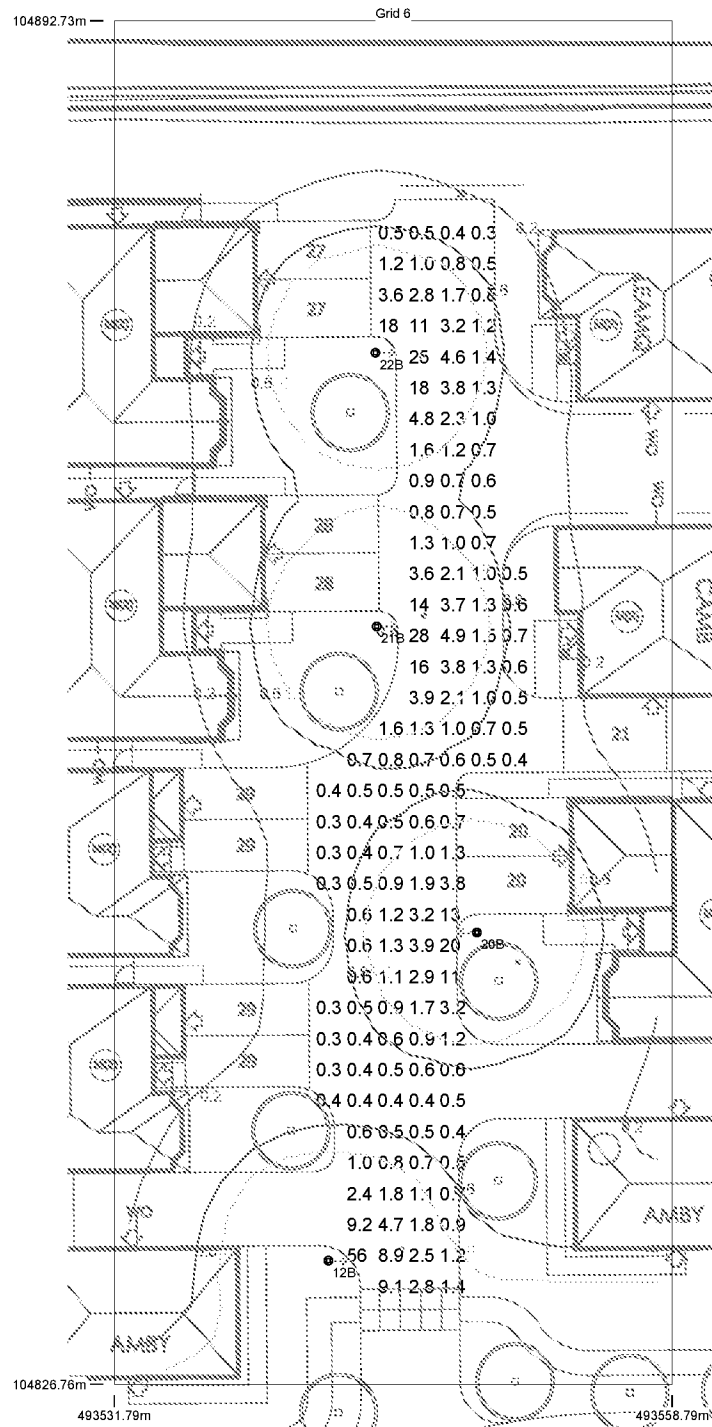


Results

Eav	5.57
Emin	0.21
Emax	63.90
Emin/Emax	0.00
Emin/Eav	0.04

Horizontal Illuminance (lux)

Grid 6

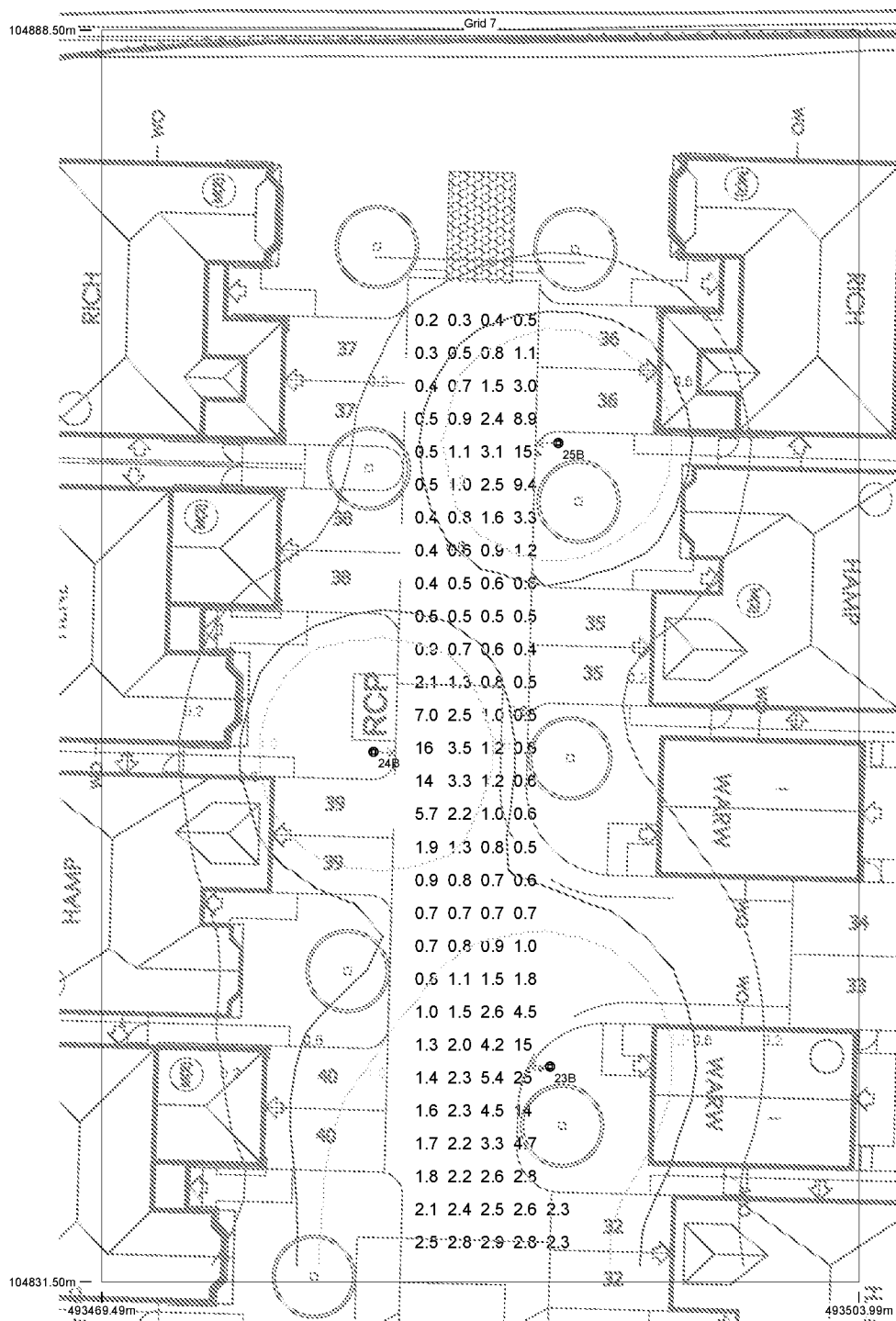


Results

Eav	2.93
Emin	0.30
Emax	55.79
Emin/Emax	0.01
Emin/Eav	0.10

Horizontal Illuminance (lux)

Grid 7

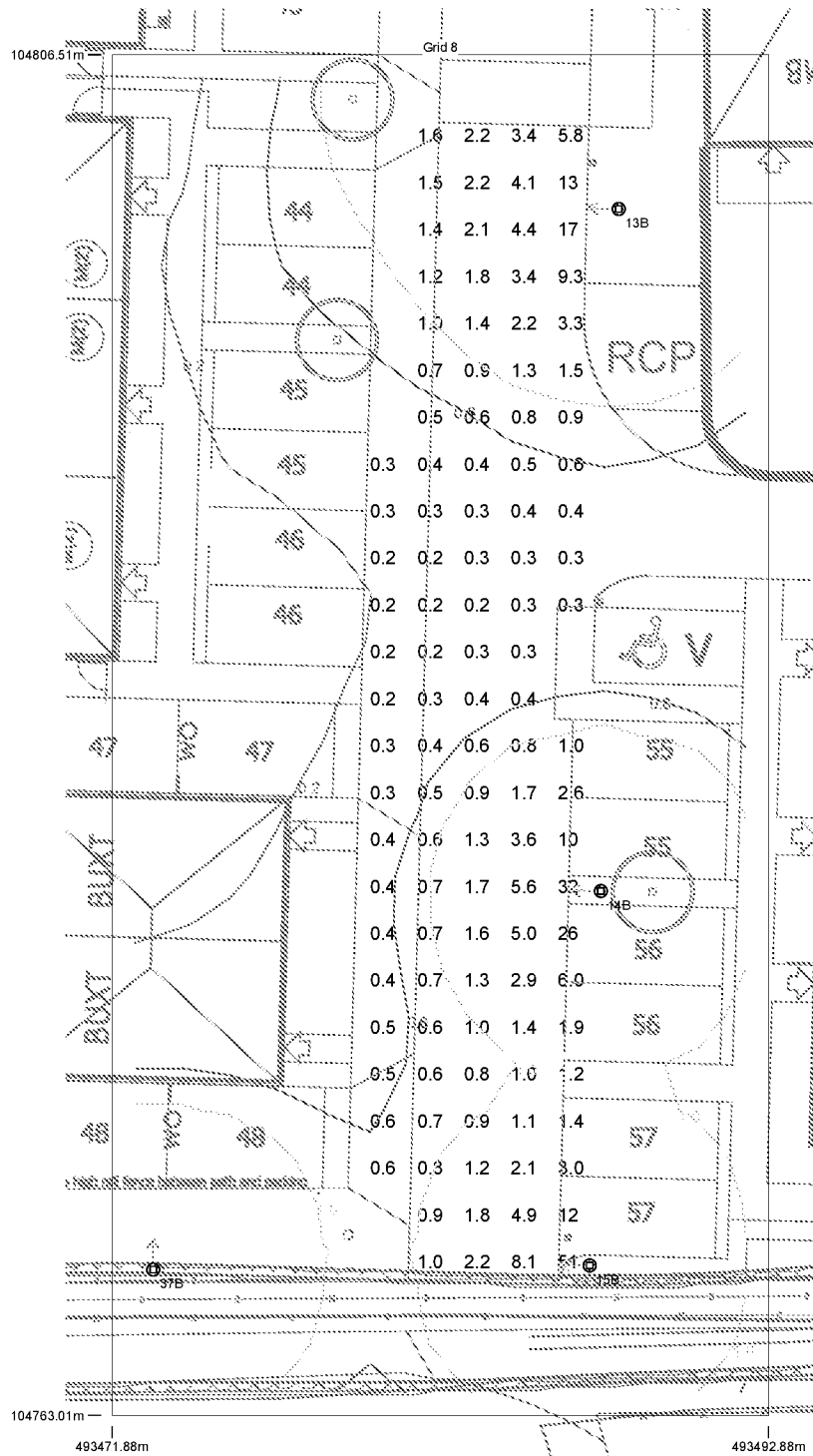


Results

Eav	2.46
Emin	0.22
Emax	24.90
Emin/Emax	0.01
Emin/Eav	0.09

Horizontal Illuminance (lux)

Grid 8

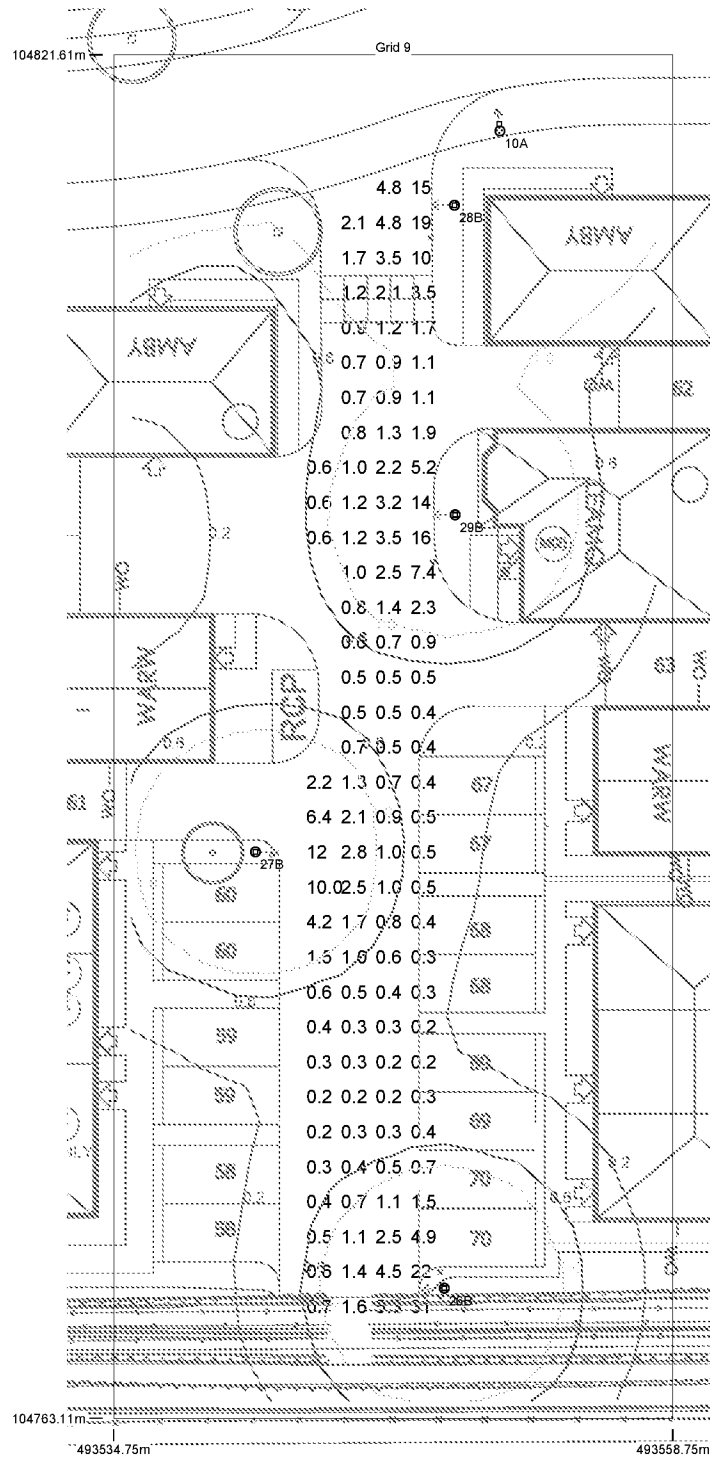


Results

Eav	2.76
Emin	0.20
Emax	51.04
Emin/Emax	0.00
Emin/Eav	0.07

Horizontal Illuminance (lux)

Grid 9

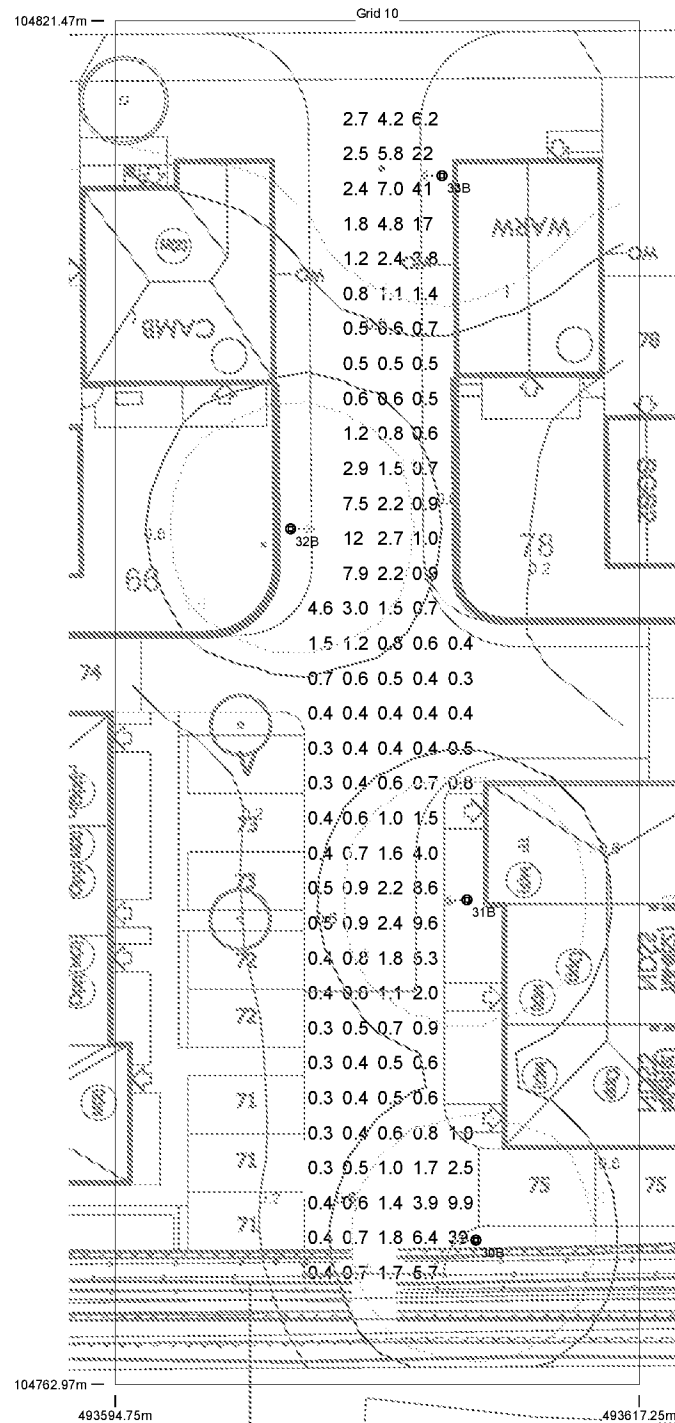


Results

Eav	2.53
Emin	0.23
Emax	30.75
Emin/Emax	0.01
Emin/Eav	0.09

Horizontal Illuminance (lux)

Grid 10

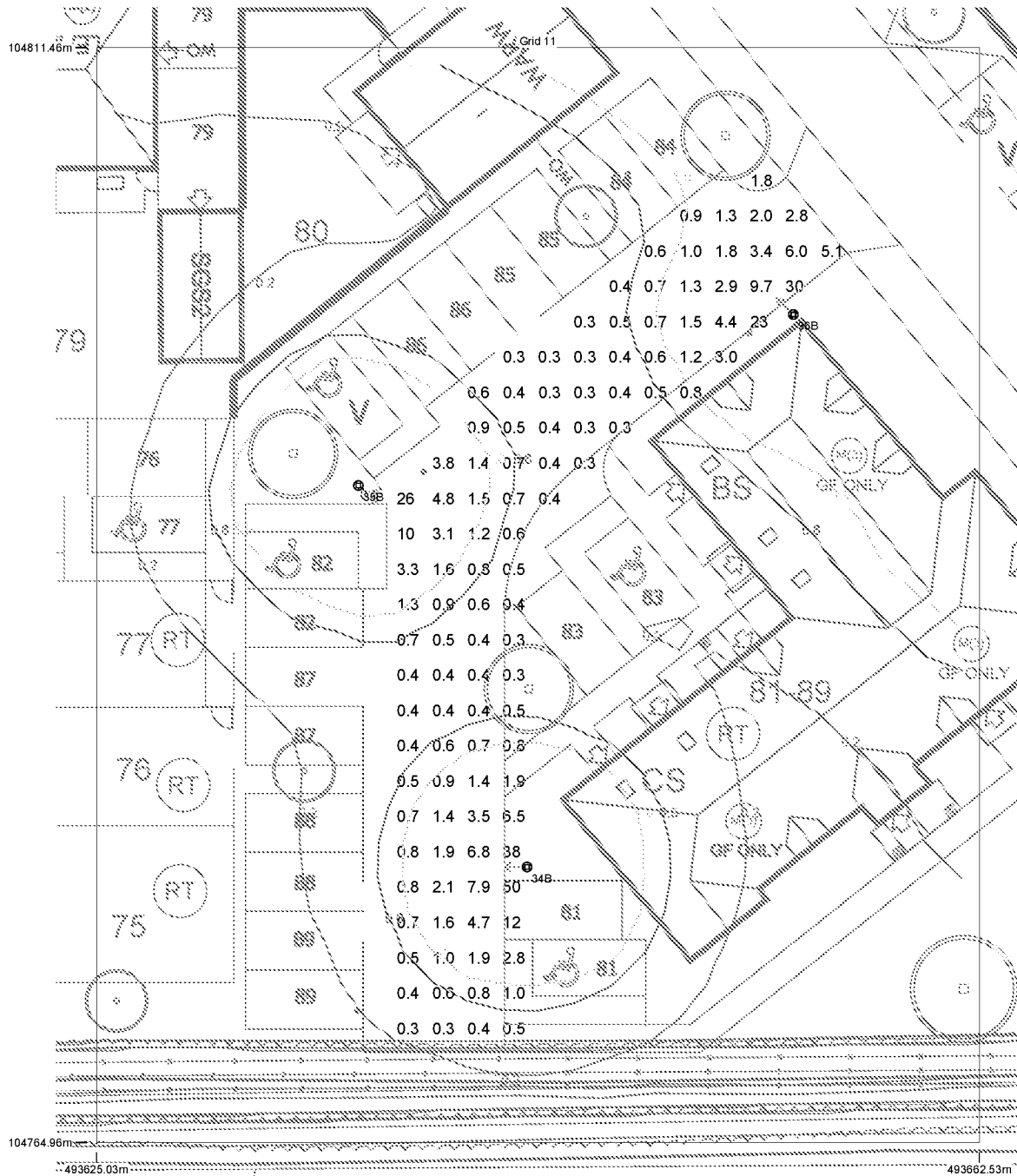


Results

Eav	2.58
Emin	0.29
Emax	40.86
Emin/Emax	0.01
Emin/Eav	0.11

Horizontal Illuminance (lux)

Grid 11

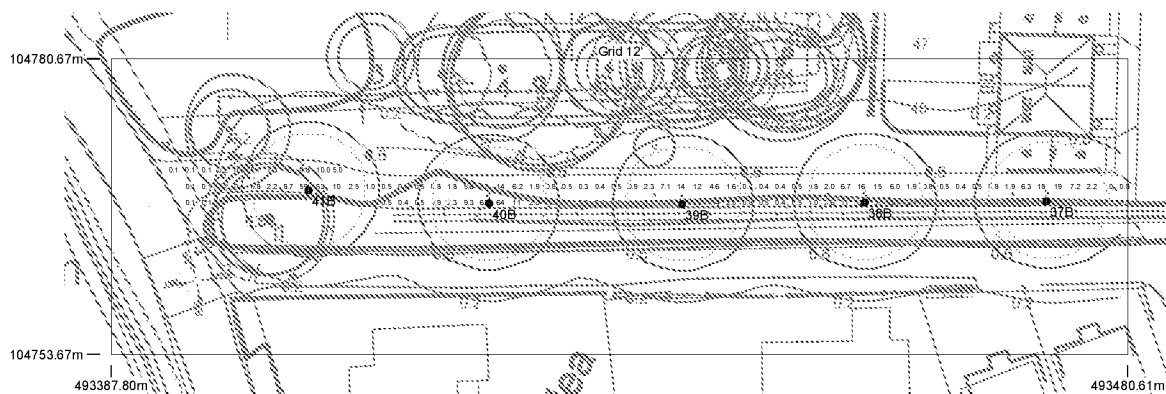


Results

Eav	3.05
Emin	0.26
Emax	50.43
Emin/Emax	0.01
Emin/Eav	0.08

Horizontal Illuminance (lux)

Grid 12

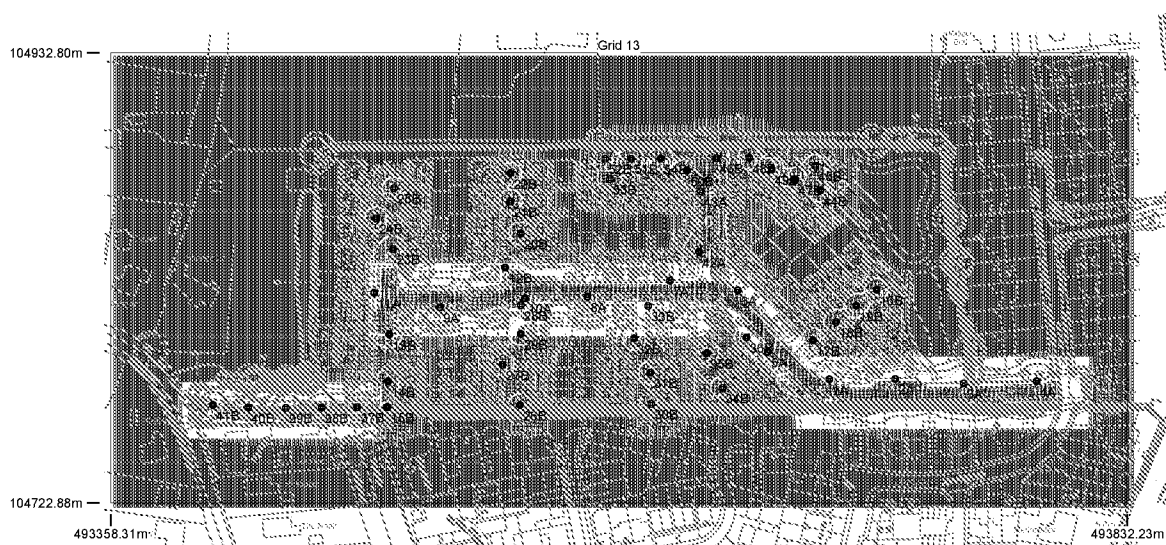


Results

Eav	8.18
Emin	0.06
Emax	63.81
Emin/Emax	0.00
Emin/Eav	0.01

Horizontal Illuminance (lux)

Grid 13



Results

Eav	0.56
Emin	0.00
Emax	68.18
Emin/Emax	0.00
Emin/Eav	0.00