

DATE: 26 February 2021
DESIGNER: Loveday Lighting Limited
PROJECT No: LL1171
PROJECT NAME: M606 Bradford



External Lighting Design

Lighting classification: (As taken from BS 5489-1:2020 (Table 4) & BS EN 12464-2:2014, Table 5.9)

Maintained lighting levels for outdoor car parks

Medium traffic, e.g. parking areas of department stores, office buildings, plants, sports and multipurpose building complexes

Desired Lighting Levels:

Minimum maintained average illuminance (Eav): >10.00 lux
Emin/Eav (Uniformity) => 0.25 (25%)

Overspill + Office Car Parks.

PREPARED BY: Loveday Lighting Limited

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Layout Report

General Data

Dimensions in Metres Angles in Degrees
Local Origin at 418063390.50m x 427572290.27m

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	Grid 1	557.00	1151.00	132.00	250.00	1.50	1.50
2	Grid 2	434.00	1251.00	123.00	150.00	1.50	1.50

Luminaires

Luminaire A Data

Supplier	
Type	BGP703 DX10 BL1
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	9.00
File Name	Luma Gen2 Mini_BGP703_DX10 BL1_9000_40LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	503.9, 72.3, 0.0
No. in Project	10

Luminaire B Data

Supplier	
Type	BGP702 DM33 BL1
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	3.40
File Name	Luma Gen2 Micro_BGP702_DM33 BL1_3400_20LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	294.8, 10.3, 0.0
No. in Project	6

Luminaire F Data

Supplier	
Type	BGP703 DW50 BL1
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	12.00
File Name	Luma Gen2 Mini_BGP703_DW50 BL1_12000_40LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	581.9, 40.5, 0.0
No. in Project	1

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	649.22	1208.35	8.00	201.00	0.00	0.00	0.40			
2	A	639.01	1229.60	8.00	201.00	0.00	0.00	0.40			
3	A	628.83	1251.01	8.00	204.00	0.00	0.00	0.40			
4	A	616.22	1277.35	8.00	208.00	0.00	0.00	0.40			
5	A	605.62	1299.25	8.00	207.00	0.00	0.00	0.40			
6	A	595.04	1321.54	8.00	201.00	0.00	0.00	0.40			
7	A	585.08	1342.38	8.00	208.00	0.00	0.00	0.40			
8	A	572.99	1310.24	6.00	25.00	0.00	0.00	0.40			
9	A	578.92	1287.63	6.00	32.00	0.00	0.00	0.40			



Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
10	A	591.18	1262.26	6.00	25.00	0.00	0.00	0.40			
11	F	656.00	1179.34	8.00	127.00	0.00	0.00	0.40			
12	B	527.42	1365.98	6.00	298.00	0.00	0.00	0.40			
13	B	510.16	1357.83	6.00	297.00	0.00	0.00	0.40			
14	B	509.09	1340.09	6.00	24.00	0.00	0.00	0.40			
15	B	518.42	1318.03	6.00	24.00	0.00	0.00	0.40			
16	B	531.47	1334.98	6.00	204.00	0.00	0.00	0.40			
17	B	525.63	1348.90	6.00	203.00	0.00	0.00	0.40			



Horizontal Illuminance (lux)

Grid 1



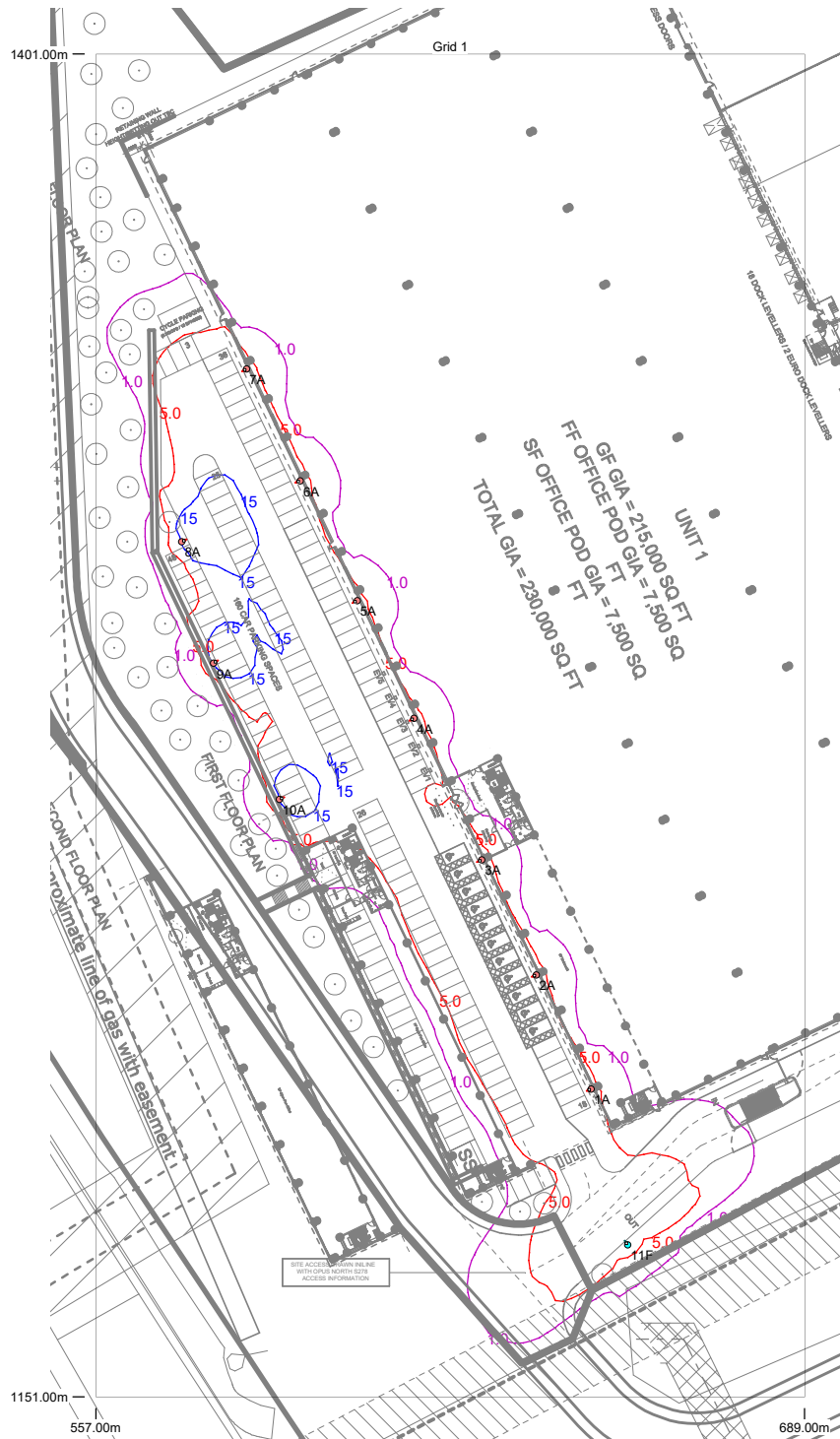
Results

Eav	10.15
Emin	2.66
Emax	23.65
Emin/Emax	0.11
Emin/Eav	0.26



Horizontal Illuminance (lux)

Grid 1



Results

Eav	10.15
Emin	2.66
Emax	23.65
Emin/Emax	0.11
Emin/Eav	0.26



Horizontal Illuminance (lux)

Grid 2



Results

Eav	10.03
Emin	2.67
Emax	17.19
Emin/Emax	0.16
Emin/Eav	0.27



Horizontal Illuminance (lux)

Grid 2



Results

Eav	10.03
Emin	2.67
Emax	17.19
Emin/Emax	0.16
Emin/Eav	0.27