

DATE: 5 November 2019
DESIGNER: Julian Joseph
PROJECT No: 100090.POS.001.A
PROJECT NAME: Summer Lane POS



Due to the ecologically sensitive nature of the site, low level bollards have been placed at footpath junctions and at all entrances.

The bollard lighting does not meet any recognised standard but will aid navigation of the footpath during the hours of darkness.

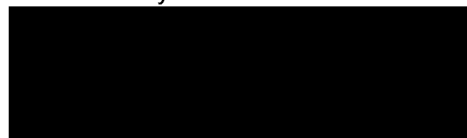
The LEAP has been lit to the following level:

Eav: 10.48 lux Emin/Eav: 0.40

Controls should be put in place to restrict operation of lighting to a minimum through the night. Controls for complete switch off from 10pm - 5am should be considered.

Outdoor Lighting Report

PREPARED BY: Joseph Lighting Design Ltd
Milton Keynes



www.josephlighting.co.uk

Layout Report

General Data

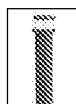
Dimensions in Metres Angles in Degrees

Calculation Grids

ID	Grid Name	X	Y	X' Length	Y' Length	X' Spacing	Y' Spacing
1	FOOTPATH BOLLARD LIGHTING	488899.74	98317.95	109.87	172.18	1.48	1.50
2	LEAP	488967.30	98379.58	56.36	34.04	1.48	1.48

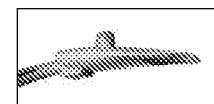
Luminaires

Luminaire A Data



Supplier	Urbis-Schreder
Type	PHAROS 5119 Asymmetrical 8 LEDs 350mA NW Cylindrical, PC, Sm
Lamp(s)	8 LEDs
Lamp Flux (klm)	0.84
File Name	PHAROS 5119 8 LEDs 350mA NW 356012 C yindrical PC Smooth Asymmetrical TF.idt
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	428.1, 946.1, 43.4
No. in Project	11

Luminaire B Data



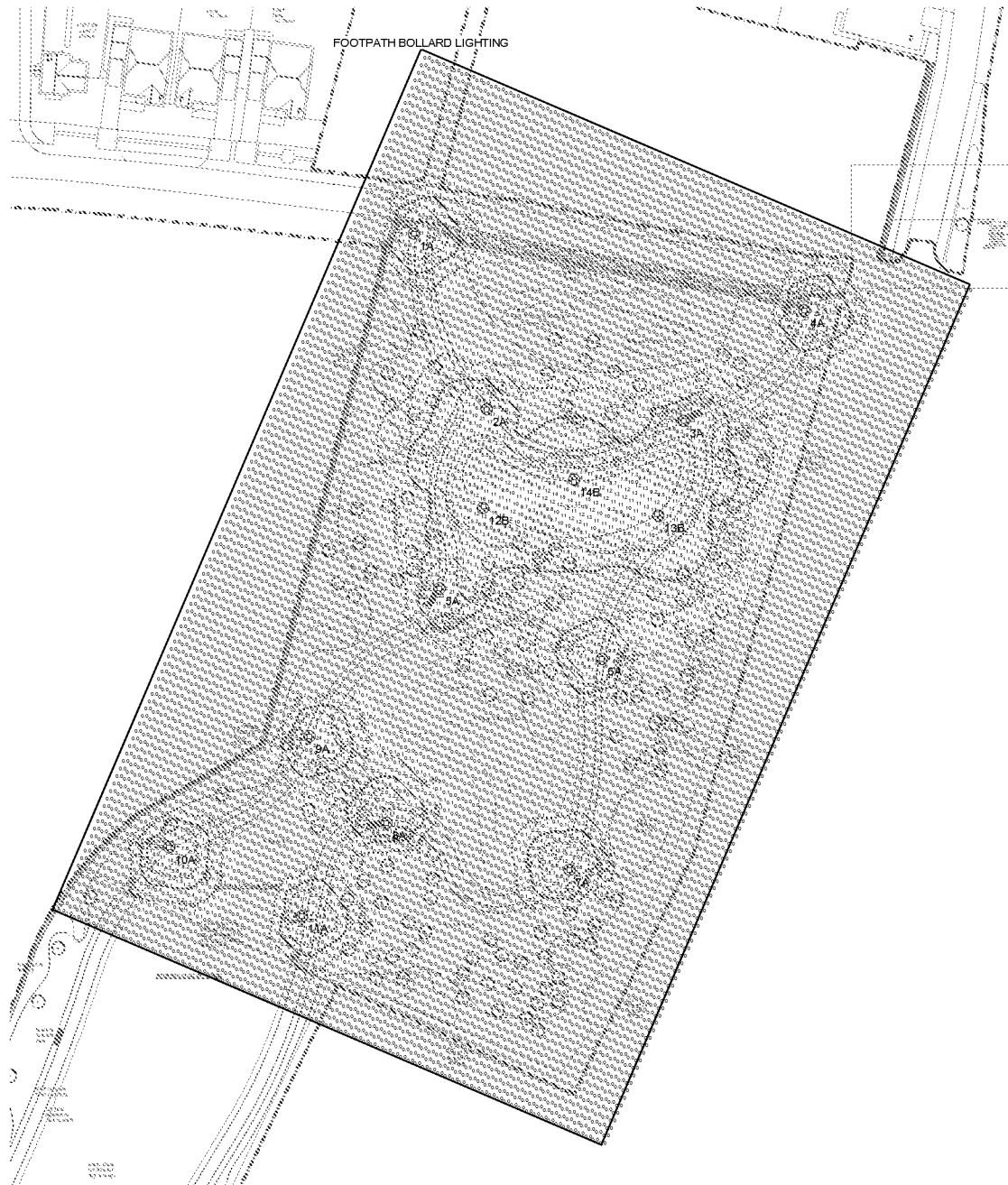
Supplier	Urbis-Schreder
Type	AXIA 2.1 5241 - 16 NVSL219CT 600mA WWV 230V Integrated lenses
Lamp(s)	16 NVSL219CT 600mA_WWV
LampFlux(klm)/Colour	3.36 WWV 3000K/80
File Name	AXIA 2_1 5241 16 NVSL219CT 600mA WWV 3 2W 402432 Integrated lenses - 230V 25d 16...
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	927.5, 159.3, 0.0
No. in Project	3

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	488966.28	98442.34	1.00	350.00	0.00	0.00	0.00			
2	A	488979.70	98409.93	1.00	220.00	0.00	0.00	0.00			
3	A	489015.91	98407.89	1.00	291.00	0.00	0.00	0.00			
4	A	489038.16	98428.18	1.00	344.00	0.00	0.00	0.00			
5	A	488970.98	98376.99	1.00	350.00	0.00	0.00	0.00			
6	A	489000.85	98364.01	1.00	162.00	0.00	0.00	0.00			
7	A	488994.89	98325.26	1.00	143.00	0.00	0.00	0.00			
8	A	488961.18	98333.88	1.00	93.00	0.00	0.00	0.00			
9	A	488947.01	98349.85	1.00	331.00	0.00	0.00	0.00			
10	A	488921.25	98329.38	1.00	308.00	0.00	0.00	0.00			
11	A	488945.68	98316.78	1.00	350.00	0.00	0.00	0.00			
12	B	488978.90	98391.82	5.00	55.00	0.00	0.00	0.40			
13	B	489011.28	98390.42	5.00	118.00	0.00	0.00	0.40			
14	B	488995.71	98397.03	5.00	272.00	0.00	0.00	0.40			

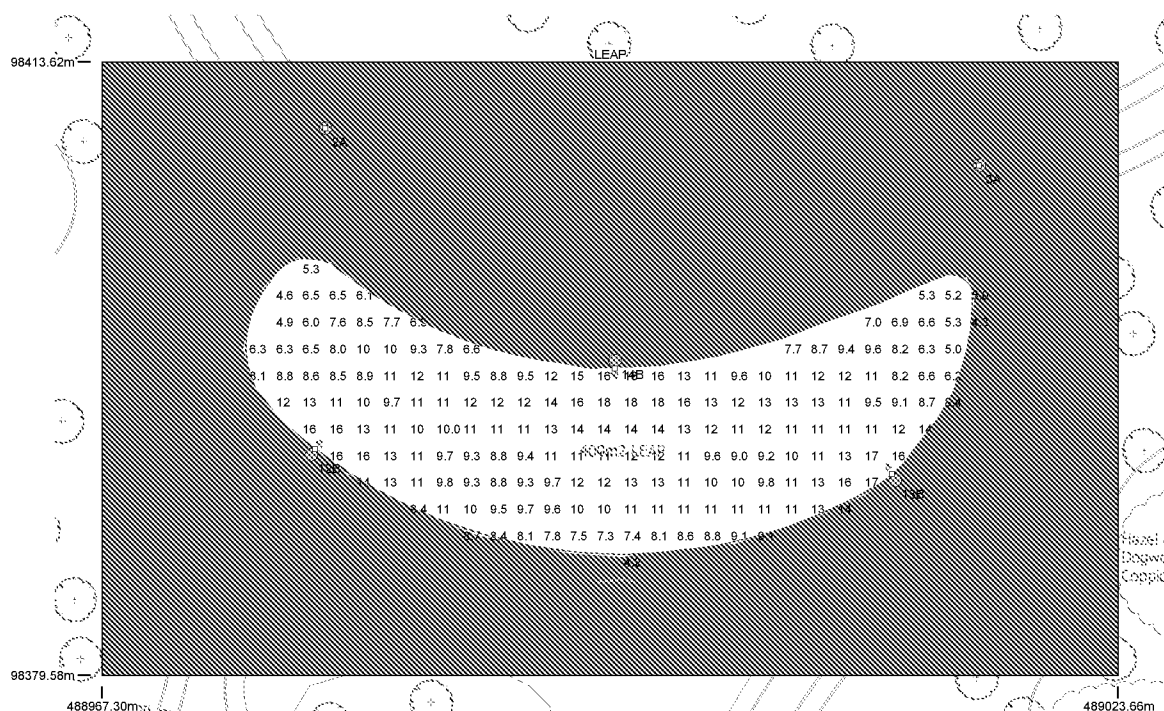
Horizontal Illuminance (lux)

FOOTPATH BOLLARD LIGHTING



Horizontal Illuminance (lux)

LEAP



Results

Eav	10.48
Emin	4.18
Emax	18.09
Emin/Emax	0.23
Emin/Eav	0.40