

Project Title:	South Wokingham R10
Project No/ Document Reference:	A389-TN019 - C
Date:	05 May 2026
Author:	Rebecca Fletcher

R10 Lighting

1. Introduction

- 1.1. A sitewide lighting strategy has been produced for the South Wokingham development to discharge condition 24 of the outline planning application.
- 1.2. 5 lighting zones were defined as follows:
 - 1.2.1. Zone 1: General Residential Areas – lighting to reflect national and local standards in residential areas in accordance with BS EN 5489-1:2000.
 - 1.2.2. Zone 2: Parcel Open Space – spaces to be left predominantly unlit for reasons of ecology.
 - 1.2.3. Zone 3: SANG – access footpaths will be left predominantly unlit for reasons of ecology and to ensure bats are not dissuaded.
 - 1.2.4. Zone 4: Secondary Road with Bus Route – lit as a “main bus route” with higher luminance level than that of residential roadways.
 - 1.2.5. Zone 5: SWDR – lighting designed by WBC.
- 1.3. The R10 reserved matters application included a lighting design which complied with the overarching strategy with lighting levels of 0.6lux being achieved on the adopted highways.

2. Consultation during R10 Reserved Matters process

- 2.1. Internal discussions and consultation with the Designing Out Crime Officer (DOCO) have led WBC to the conclusion that the overarching lighting strategy needs to go further in respect of the lighting provision. The following points were noted:
 - 2.1.1. Shared surfaces and private drives – lighting provision should not be limited solely to secondary and tertiary streets. Lighting should be provided to private drives and shared surfaces also.
 - 2.1.2. Apartment courtyards – Bollard lighting is not considered appropriate for parking courtyards. Consideration to be given to providing columns, compliant with BS5489, balancing needs of illuminating parking spaces and minimising impacts on neighbouring properties.
 - 2.1.3. Key links within Public Open Space – particularly where routes form part of the wider active travel networks.





3. R10 Proposals

- 3.1. The proposals submitted for the R10 Reserved Matters applications are shown below. Generally, adopted streets achieve 0.6lux.
- 3.2. Areas of private driveway/shared surfaces that are unlit are circled in orange below. Apartment parking courtyards that are unlit are circled in green below.



Figure 1 R10 RM Lighting Design

3.3. A solution to light these areas has been developed using solar luminaires mounted on 6m high columns.

3.4. The proposed lighting design is shown below: Drawings and calculations are included in the appendix.

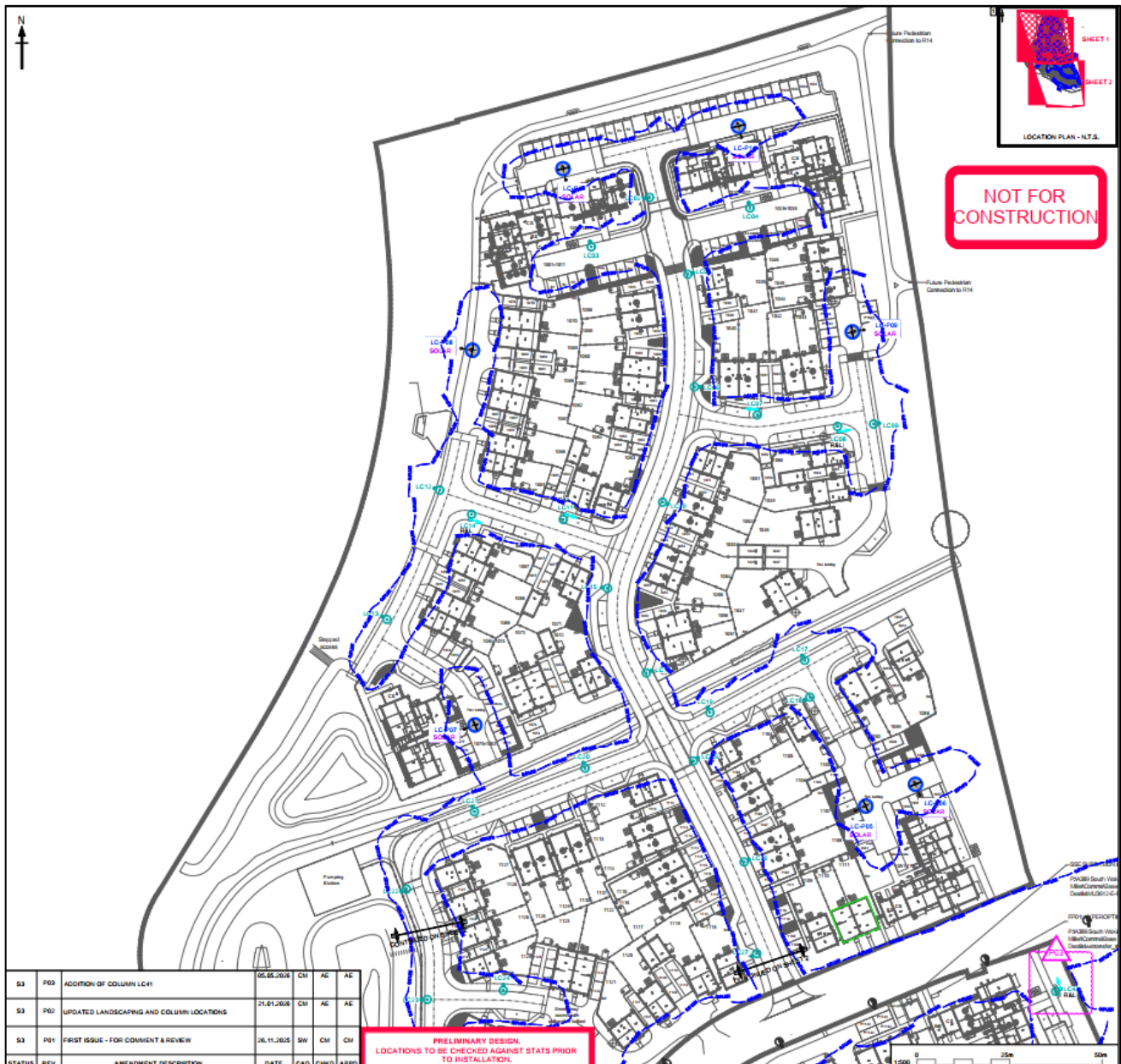


Figure 2 R10 Lighting proposal with solar luminaires in private areas – sheet 1 (north)

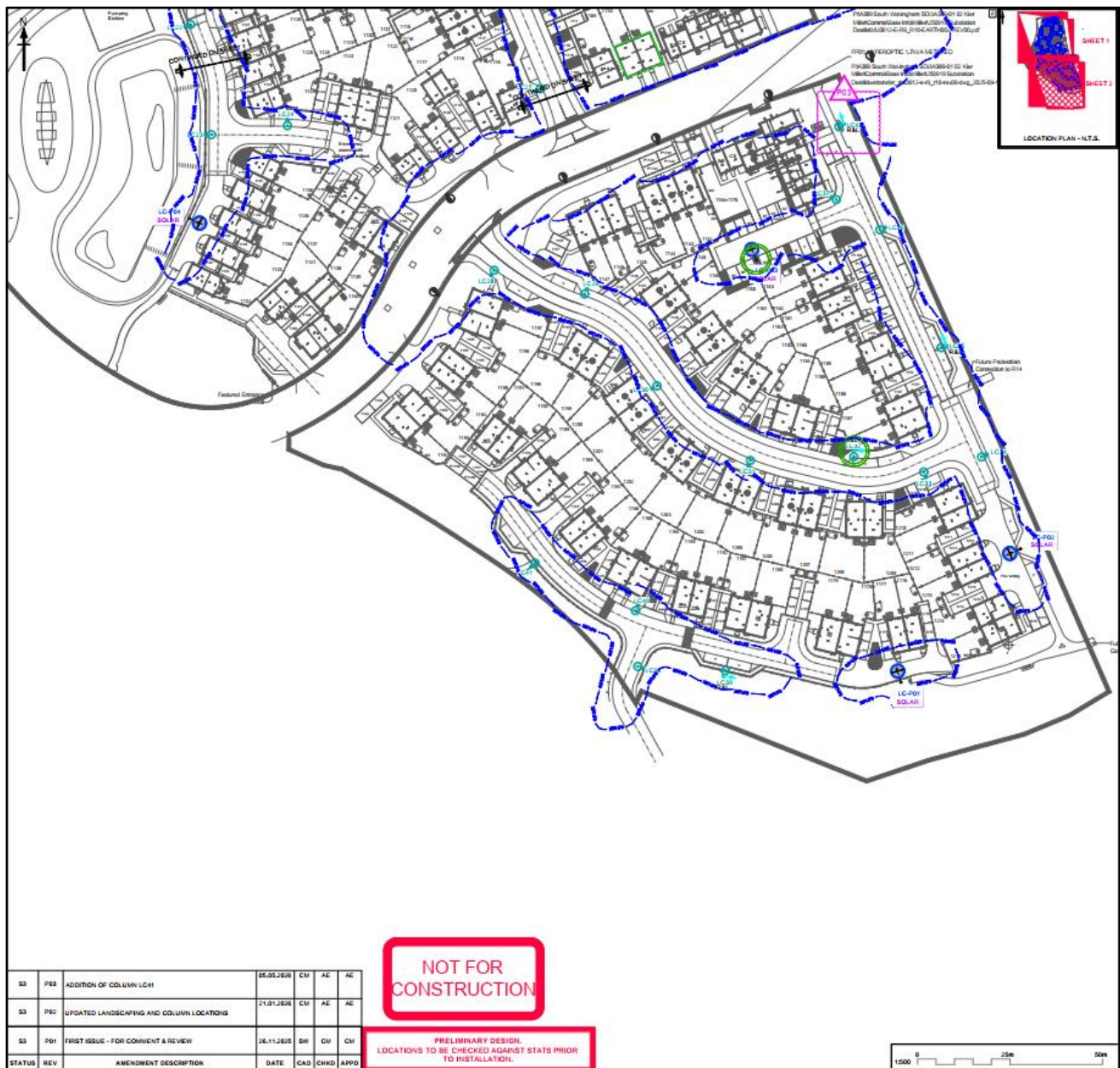


Figure 3 R10 Lighting proposal with solar luminaires in private areas – sheet 2 (south)

4. Conclusion

- 4.1. The inclusion of solar luminaires on key private driveways/shared streets and within apartment parking courtyards brings the lighting levels to 0.6lux throughout the residential areas of the development. This should provide a safer environment for all residents whilst meeting the ecological criteria for the site.



Appendix A

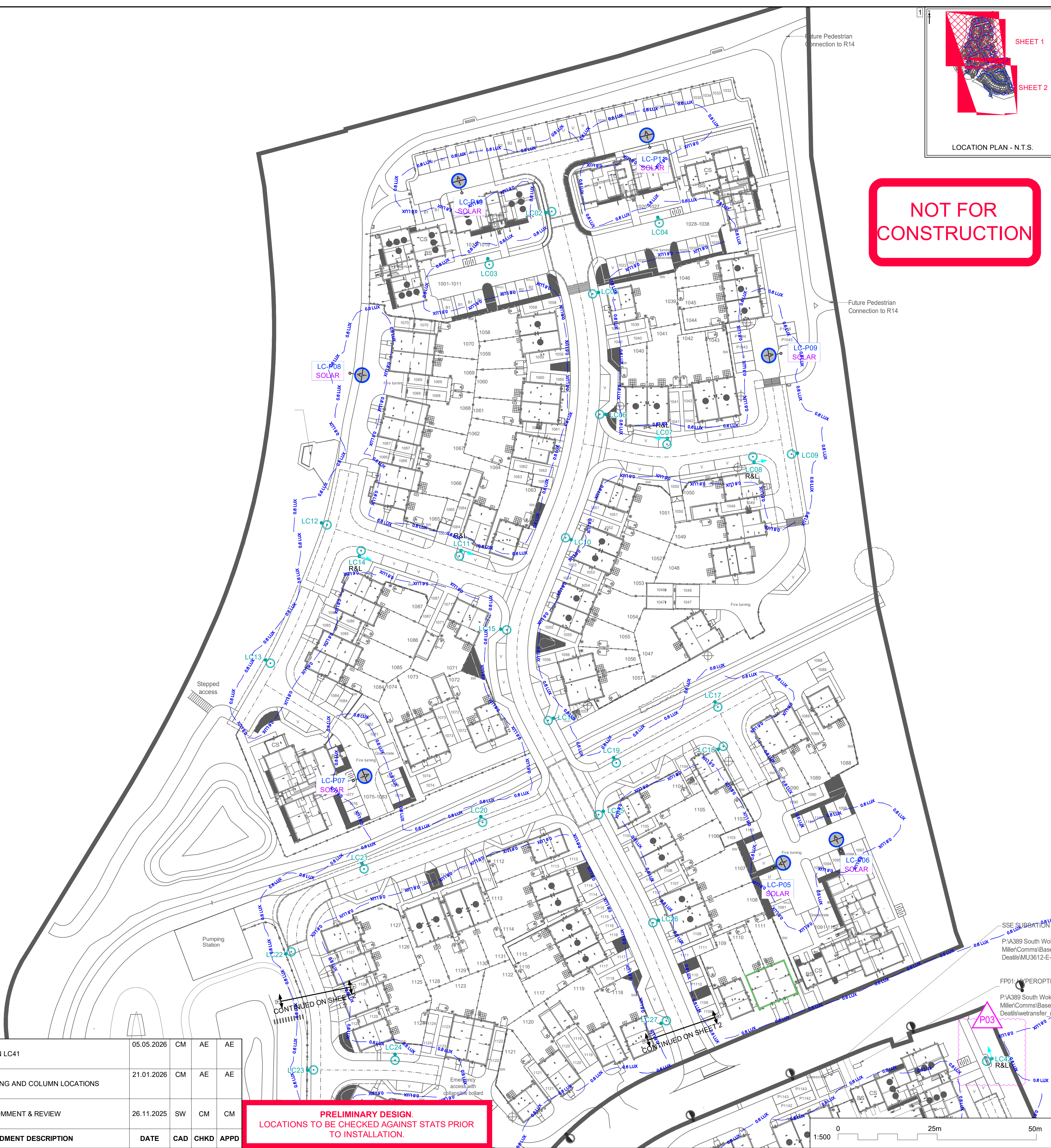
Proposed Lighting lux contours

Proposed Lighting calculations

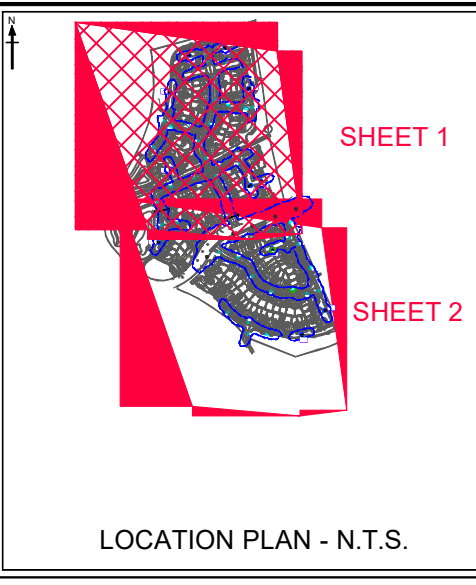
DFL CAD FILE: C:\Users\Comma\Documents\Designs for Lighting Ltd\DFL - Documents\Designs for Lighting Ltd\DFL - HLG-XX-DR-EO-13003\3811-004.dwg

S3	P03	ADDITION OF COLUMN LC41	05.05.2026	CM	AE	AE
S3	P02	UPDATED LANDSCAPING AND COLUMN LOCATIONS	21.01.2026	CM	AE	AE
S3	P01	FIRST ISSUE - FOR COMMENT & REVIEW	26.11.2025	SW	CM	CM
STATUS	REV	AMENDMENT DESCRIPTION	DATE	CAD	CHKD	APPD

PRELIMINARY DESIGN.
LOCATIONS TO BE CHECKED AGAINST STATS PRIOR
TO INSTALLATION.



**NOT FOR
CONSTRUCTION**



- Notes**
1. THIS IS AN AUTOCAD DRAWING AND SHOULD NOT BE AMENDED BY HAND.
 2. THE EXISTING LOCATIONS ARE APPROXIMATE AND THEIR ACCURACY CANNOT BE GUARANTEED.
 3. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
 4. DRAWING TO BE READ IN CONJUNCTION WITH OTHER CONTRACT DOCUMENTS.
 5. THIS DRAWING MUST NOT BE SCALED.
 6. COLUMN LOCATIONS TO BE CHECKED AGAINST UTILITY DRAWINGS FOR CONFLICTS BY A COMPETENT ENGINEER.
 7. CONTRACTOR SHOULD SATISFY THEMSELVES THAT ANY UTILITY DRAWINGS AFFECTING THE SCHEME ARE ACCURATE AND UP TO DATE PRIOR TO COMMENCEMENT.
 8. ISO LUX CONTOURS SHOWN ARE APPROXIMATE ONLY AND DO NOT TAKE INTO ACCOUNT THE BLOCKING EFFECTS OF TREES, MAN MADE OBJECTS OR CHANGES IN TOPOGRAPHY.
 9. THE LIGHTING LAYOUT AND ASSOCIATED ELEMENTS ARE SUBJECT TO CHANGE AND ARE SHOWN FOR ILLUSTRATIVE CONTEXT ONLY.
 10. DUE TO THE NATURE OF THE STANDALONE SOLAR EQUIPMENT, DFL CANNOT GUARANTEE THE EQUIPMENT WILL PROVIDE THE NECESSARY LIGHTING LEVELS ALL YEAR ROUND.
 11. IT IS RECOMMENDED THAT TREES BE REVIEWED SO THAT THEY ARE LOCATED AS FAR FROM THE PROPOSED COLUMNS TO MAXIMIZE THE EFFECTIVENESS OF THE SOLAR PANELS.
 12. ALL LUMINAIRES TO BE POWERED BY INTEGRAL SOLAR PANELS. SECONDARY SOLAR PANELS TO BE COLUMN MOUNTED WITH MANUFACTURE SUPPLIED U-BOLTS AND TO BE SOUTH FACING.

PRIVATE COLUMN INFORMATION DETAIL

COLUMN NO. LC-P###
**POWER TYPE
**LUMINAIRE REFERENCE
*COLUMN TYPE
COLUMN POSITION

COLUMN TYPE 1 = PROPOSED 6M ALUMINIUM LIGHTING COMPANY CONICAL TAPERED COLUMN WITH A SPIGOT ADAPTOR OF 64MM.

LANTERN TYPE A REFERENCE: POST TOP MOUNTED ACROSPIRE DEFENDER 55 LUMINAIRE, 8W, 3000K AND 1340 LUMEN OUTPUT. LANTERN TO BE CONTROLLED BY AN INTEGRATED TIME CLOCK AND PIR MOTION SENSOR.

KEY:

QTY.	SYMBOL	DESCRIPTION
11		PROPOSED COLUMN COMPLETE WITH LANTERN. [SEE COLUMN / LANTERN INFORMATION DETAIL ABOVE FOR FURTHER INFORMATION.]
		PROPOSED TREE RELOCATION
		0.6 LUX ISO-CONTOUR

KEY PROPOSED

QTY.	SYMBOL	DESCRIPTION
42		PROPOSED 6m ALUMINIUM LIGHTING COMPANY CONICAL TAPERED COLUMN WITH POST TOP MOUNTED PHILIPS LUMINAIRE GEN 2 MICRO BGP702, DM10 OPTIC WITH BL1 REAR LOUVRE, 10 LED, 2700K AND 2000 LUMEN OUTPUT. LANTERN TO BE INSTALLED WITH 0 DEGREE TILT.
		RAISE AND LOWER COLUMN
		DIRECTION OF FALL FOR RAISE AND LOWER COLUMN
		COLUMN INSTALLED AS PART OF ADJACENT SCHEME.
		PROPOSED INDICATIVE COLUMN ID NUMBERS.

DFL
LIGHTING DESIGN-ELECTRICALS-SMART CITIES-ENERGY REDUCTION-LIGHTING IMPACT

DFL-UK (Designs for Lighting Ltd)
17/18 City Business Centre
Winchester, Hampshire, SO23 7TA
Tel: 01962 855080
Email: info@df-uk.com

ABLEY LETCHFORD PARTNERSHIP
Consulting Engineers

**SOUTH WOKINGHAM
PARCEL R1**

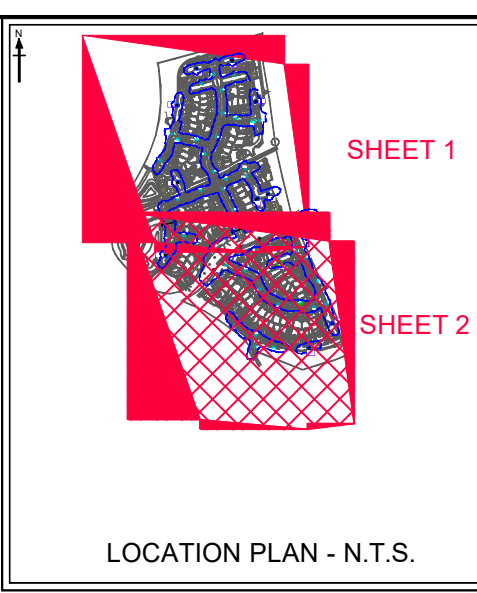
**LIGHTING LAYOUT
PRIVATE & ADOPTABLE**

DESIGNED	CAD	CHECKED	APPROVED
ME	SW	CM	CM

ISSUE DATE: NOV 2025
SHEET: 1 of 2
SCALE: 1:500
SHEET SIZE: A1

DRAWING NUMBER	ORIGINATOR	VOLUME	LOCATION	TYPE	ROLE	NUMBER
3811-DFL-HLG-XX-DR-EO-13003						

JOB NUMBER	STATUS	REVISION
3811	S3	P03



- COLUMN NO.**

****POWER TYPE**

**LC-P###
SOLAR**

***COLUMN TYPE**

****LUMINAIRE REFERENCE**

COLUMN POSITION

COLUMN TYPE 1 = PROPOSED 6M ALUMINIUM LIGHTING COMPANY CONICAL TAPERED COLUMN WITH A SPIGOT ADAPTOR OF 64MM.

LANTERN TYPE A REFERENCE: POST TOP MOUNTED ACROSPHERE DEFENDER 55 LUMINAIRE, BW, 3000K AND 1340 LUMEN OUTPUT. LANTERN TO BE CONTROLLED BY AN INTEGRATED TIME CLOCK AND PIR MOTION SENSOR.



DRAWING TITLE							
LIGHTING LAYOUT PRIVATE & ADOPTABLE							
DESIGNED		GAD		CHECKED		APPROVED	
ME		SW		CM		CM	
ISSUE DATE		SHEET		SCALE		SHEET SIZE	
NOV 2025		2 of 2		1:500		A1	
DRAWING NUMBER		PROJECT		LOCATION		ROLE	
		ORIGINATOR		VOLUME		NUMBER	
3811-DR-FLG-XX-DR-EO-13004							
JOB NUMBER				STATUS		REVISION	
3811				S3		P03	

PRELIMINARY DESIGN.
LOCATIONS TO BE CHECKED AGAINST STATS PRIOR
TO INSTALLATION.

DATE: 5 May 2026
DESIGNER: DFL
PROJECT No: 3811
PROJECT NAME: South Wokingham Parcel R10



Location: South Wokingham Parcel R10 (Private Lighting)

Environmental Zone: E3

Design Class: P5

Eav: 3.00 - 4.50 Lux

Emin: 0.60 Lux

Lighting classes as per BS5489-1:2020, the lighting levels for which are taken from EN 13201-2:2015

COLUMNS ARE INSTALLED WITH A FOCUS ON WAYFINDING PURPOSES ONLY

3811-DFL-HLG-XX-CA-EO-13003-S3-P03

PREPARED BY: Connor MacDonald
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website: www.dfi-uk.com

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 - Wayfinding Only	483367.03	167801.07	49.10	19.64	1.49	1.40
2	Grid 2 - Wayfinding Only	483300.20	167779.75	40.81	16.89	1.46	1.41
3	Grid 3 - Wayfinding Only	483261.30	167908.60	24.15	40.03	1.42	1.48
4	Grid 4 - Wayfinding Only	483133.30	167892.09	33.94	18.03	1.48	1.39
5	Grid 5 - Wayfinding Only	483253.48	167970.96	28.00	37.64	1.47	1.45
6	Grid 6 - Wayfinding Only	483142.39	167994.13	19.38	29.04	1.49	1.45
7	Grid 7 - Wayfinding Only	483135.51	168084.78	21.96	48.03	1.46	1.46
8	Grid 8 - Wayfinding Only	483260.59	168105.88	23.28	20.64	1.45	1.47
9	Grid 9 - Wayfinding Only	483157.41	168148.07	93.59	17.48	1.49	1.46

Luminaires

Luminaire A Data

Supplier	
Type	BGP702 DW50
Lamp(s)	LED-HB 5.2S 727
Lamp Flux (klm)	3.60
File Name	Luma Gen2 Micro_BGP702_DW50_3600_20_LED_5.2S_CLO_L90_727.ies
Maintenance Factor	0.90
Imax70,80,90(cd/klm)	595.5, 51.0, 0.0
No. in Project	6

Luminaire B Data

Supplier	
Type	BGP702 DM10 BL1
Lamp(s)	LED-HB 5.2S 727
Lamp Flux (klm)	2.00
File Name	Luma Gen2 Micro_BGP702_DM10 BL1_2000_10LED_5.2S_CLO_L90_727.ies
Maintenance Factor	0.90
Imax70,80,90(cd/klm)	512.4, 86.8, 0.0
No. in Project	41

Luminaire C Data

Supplier	
Type	GFS-Defender-8W-T3 3K
Lamp(s)	
Lamp Flux (klm)	1.24
File Name	GFS-Defender-8W-T3 3K.ies
Maintenance Factor	0.75
Imax70,80,90(cd/klm)	687.3, 75.8, 8.8
No. in Project	11

Layout

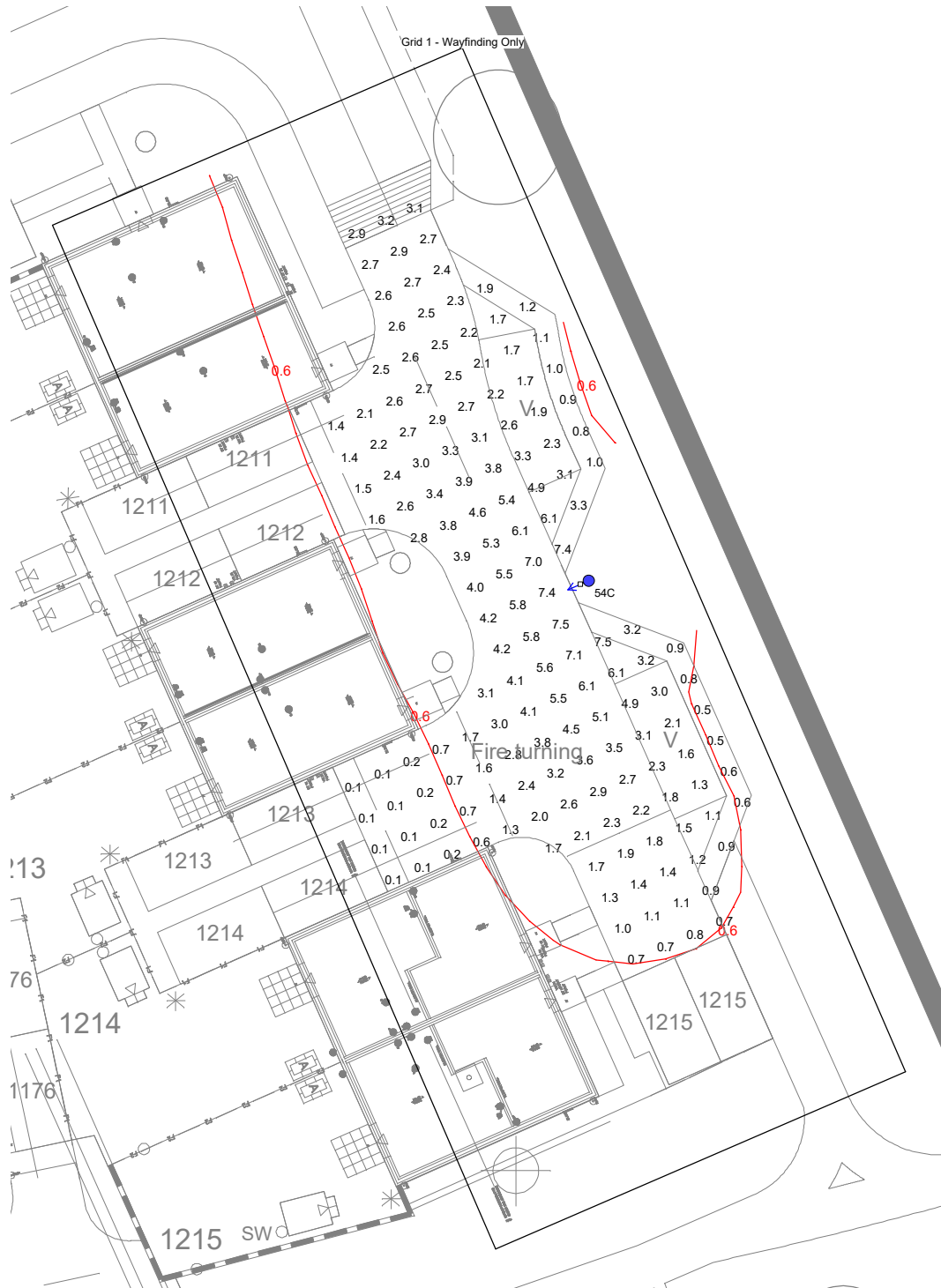
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	B	483333.04	167877.63	6.00	214.00	0.00	0.00	0.40			
2	B	483316.48	167909.53	6.00	210.00	0.00	0.00	0.40			
4	B	483192.89	168150.72	6.00	12.00	0.00	0.00	0.40			
5	B	483178.26	168139.13	6.00	285.00	0.00	0.00	0.40			
6	B	483221.11	168149.58	6.00	284.00	0.00	0.00	0.40			
7	A	483198.02	167918.42	6.00	313.00	0.00	0.00	0.40			
8	A	483230.06	167921.96	6.00	119.00	0.00	0.00	0.40			
9	A	483255.11	167932.47	6.00	114.00	0.00	0.00	0.40			
10	A	483285.53	167944.26	6.00	114.00	0.00	0.00	0.40			
22	A	483195.62	167891.31	6.00	145.00	0.00	0.00	0.40			
23	A	483313.00	167954.65	6.00	112.00	0.00	0.00	0.40			
22	B	483249.62	167807.35	6.00	247.00	0.00	0.00	0.40			
23	B	483343.97	167848.22	6.00	207.00	0.00	0.00	0.40			
25	B	483327.61	167842.09	6.00	114.00	0.00	0.00	0.40			
26	B	483279.47	167845.20	6.00	67.00	0.00	0.00	0.40			
27	B	483235.84	167892.92	6.00	247.00	0.00	0.00	0.40			
28	B	483209.99	167896.69	6.00	58.00	0.00	0.00	0.40			
30	B	483301.98	167917.73	6.00	334.00	0.00	0.00	0.40			
33	B	483206.14	168130.62	6.00	194.00	0.00	0.00	0.40			
34	B	483207.96	168099.88	6.00	175.00	0.00	0.00	0.40			
35	B	483256.32	168090.10	6.00	189.00	0.00	0.00	0.40			
36	B	483223.53	168093.83	6.00	266.00	0.00	0.00	0.40			
37	B	483199.27	168068.29	6.00	161.00	0.00	0.00	0.40			
38	B	483194.84	168023.29	6.00	209.00	0.00	0.00	0.40			
39	B	483136.31	168072.55	6.00	340.00	0.00	0.00	0.40			
40	B	483145.85	168064.10	6.00	72.00	0.00	0.00	0.40			
41	B	483207.38	167999.84	6.00	215.00	0.00	0.00	0.40			
42	B	483176.47	167998.48	6.00	288.00	0.00	0.00	0.40			
43	B	483146.51	167986.70	6.00	291.00	0.00	0.00	0.40			
44	B	483127.29	167963.87	6.00	21.00	0.00	0.00	0.40			
45	B	483154.88	167938.59	6.00	267.00	0.00	0.00	0.40			
46	B	483235.54	168027.43	6.00	298.00	0.00	0.00	0.40			
47	B	483221.26	167972.35	6.00	204.00	0.00	0.00	0.40			
48	B	483221.94	167946.37	6.00	26.00	0.00	0.00	0.40			
49	B	483132.83	167934.56	6.00	3.00	0.00	0.00	0.40			
50	B	483236.32	168015.48	6.00	29.00	0.00	0.00	0.40			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
53	B	483308.04	167849.05	6.00	266.00	0.00	0.00	0.40			
51	B	483253.55	167865.99	6.00	30.00	0.00	0.00	0.40			
52	B	483209.97	168013.36	6.00	297.00	0.00	0.00	0.40			
53	B	483181.52	168045.74	6.00	353.00	0.00	0.00	0.40			
54	B	483171.51	168065.57	6.00	252.00	0.00	0.00	0.40			
55	B	483245.41	168087.76	6.00	101.00	0.00	0.00	0.40			
44	B	483272.93	167788.30	6.00	74.00	0.00	0.00	0.40			
45	B	483220.77	167817.77	6.00	43.00	0.00	0.00	0.40			
46	B	483251.05	167790.36	6.00	167.00	0.00	0.00	0.40			
47	B	483122.19	168037.99	6.00	326.00	0.00	0.00	0.40			
47	C	483171.73	168155.74	6.00	104.00	0.00	0.00	0.40			
49	C	483219.09	168167.21	6.00	104.00	0.00	0.00	0.40			
50	C	483143.48	168110.26	6.00	351.00	0.00	0.00	0.40			
51	C	483252.17	168115.25	6.00	191.00	0.00	0.00	0.40			
52	C	483144.33	168007.54	6.00	22.00	0.00	0.00	0.40			
53	C	483250.01	167985.64	6.00	18.00	0.00	0.00	0.40			
54	C	483353.10	167822.69	6.00	204.00	0.00	0.00	0.40			
55	C	483320.79	167786.66	6.00	106.00	0.00	0.00	0.40			
56	C	483281.68	167900.77	6.00	113.00	0.00	0.00	0.40			
57	C	483128.31	167912.02	6.00	335.00	0.00	0.00	0.40			
58	C	483267.26	167989.79	6.00	111.00	0.00	0.00	0.40			
58	B	483305.32	167937.61	6.00	200.00	0.00	0.00	0.40			

Horizontal Illuminance (lux)

Grid 1 - Wayfinding Only

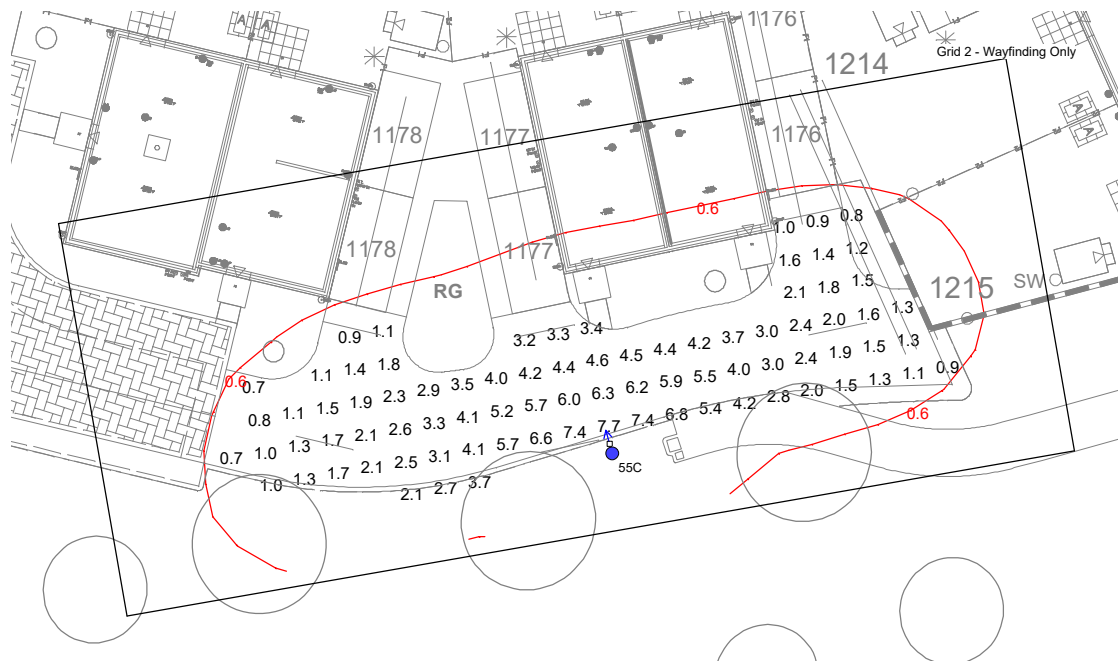


Results

Eav	2.56
Emin	0.07
Emax	7.54
Emin/Emax	0.01
Emin/Eav	0.03

Horizontal Illuminance (lux)

Grid 2 - Wayfinding Only

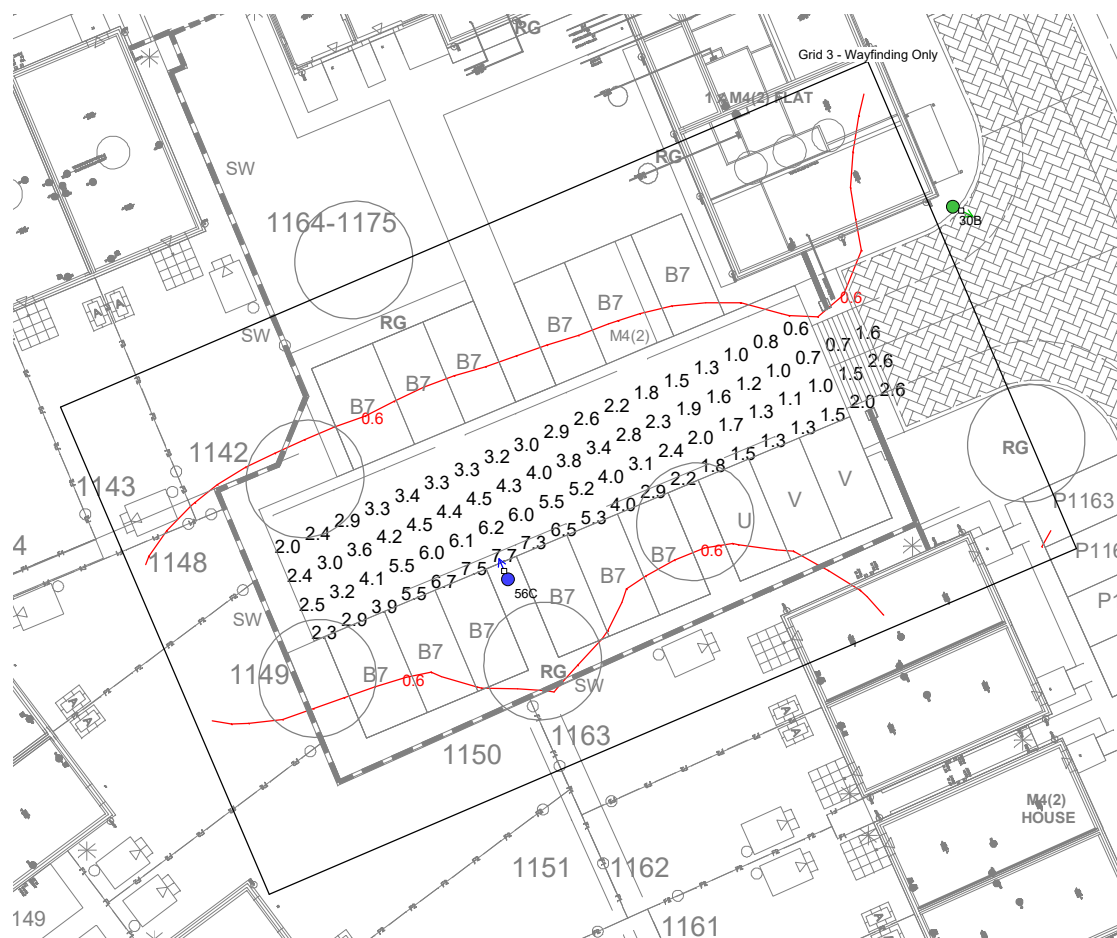


Results

Eav	2.94
Emin	0.66
Emax	7.70
Emin/Emax	0.09
Emin/Eav	0.22

Horizontal Illuminance (lux)

Grid 3 - Wayfinding Only

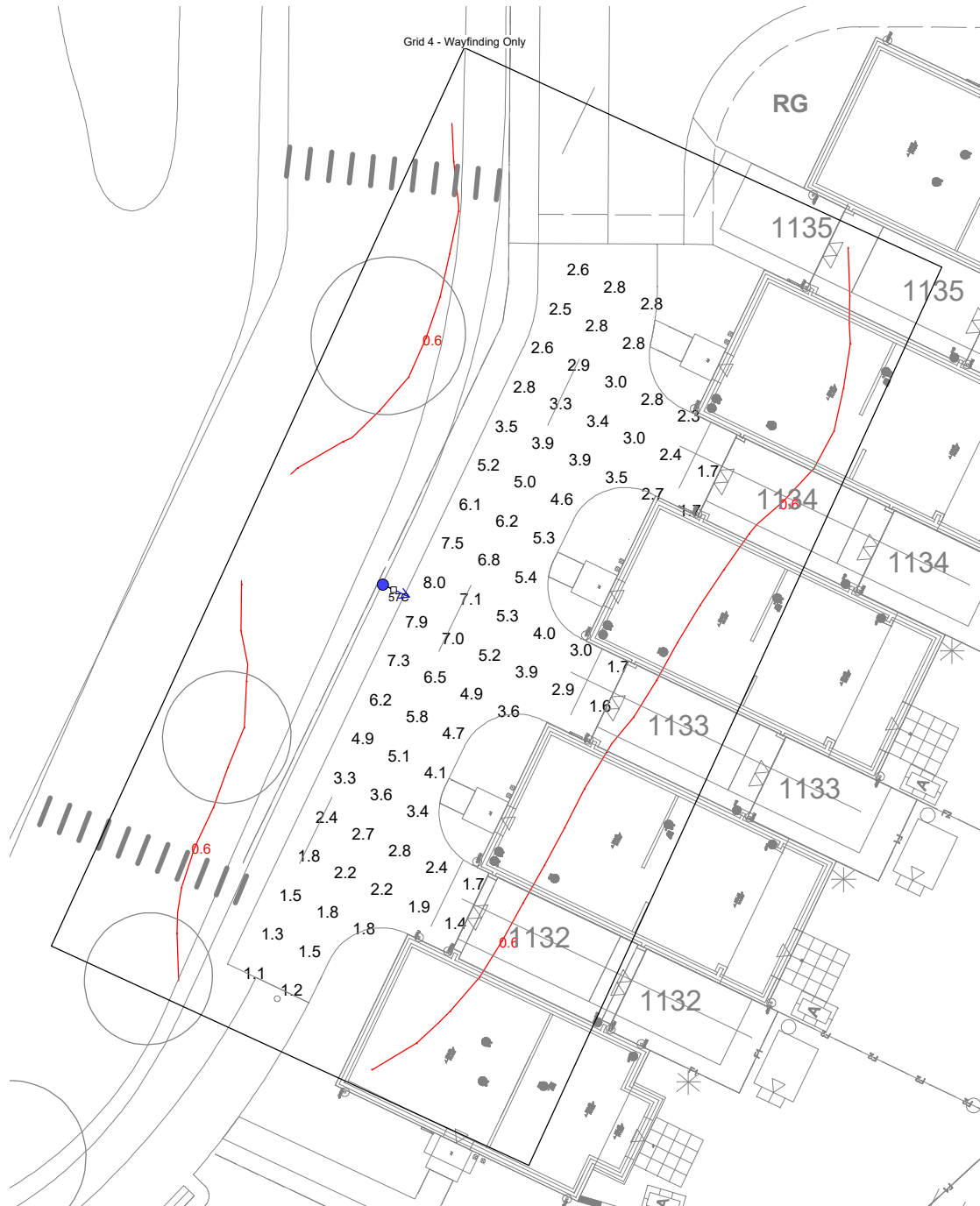


Results

Eav	3.15
Emin	0.62
E _{max}	7.68
Emin/E _{max}	0.08
Emin/Eav	0.20

Horizontal Illuminance (lux)

Grid 4 - Wayfinding Only

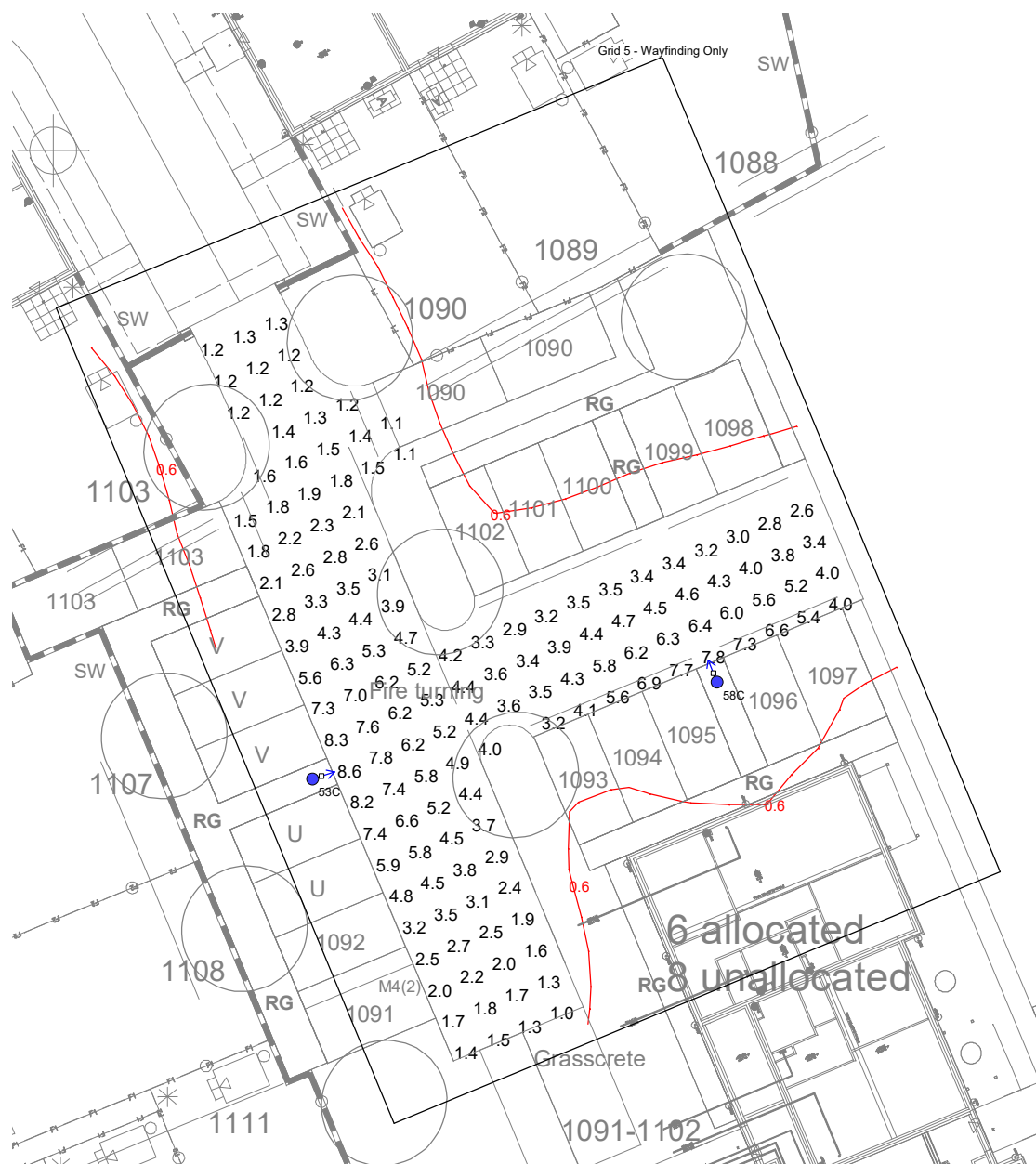


Results

Eav	3.66
Emin	1.07
Emax	7.97
Emin/Emax	0.13
Emin/Eav	0.29

Horizontal Illuminance (lux)

Grid 5 - Wayfinding Only

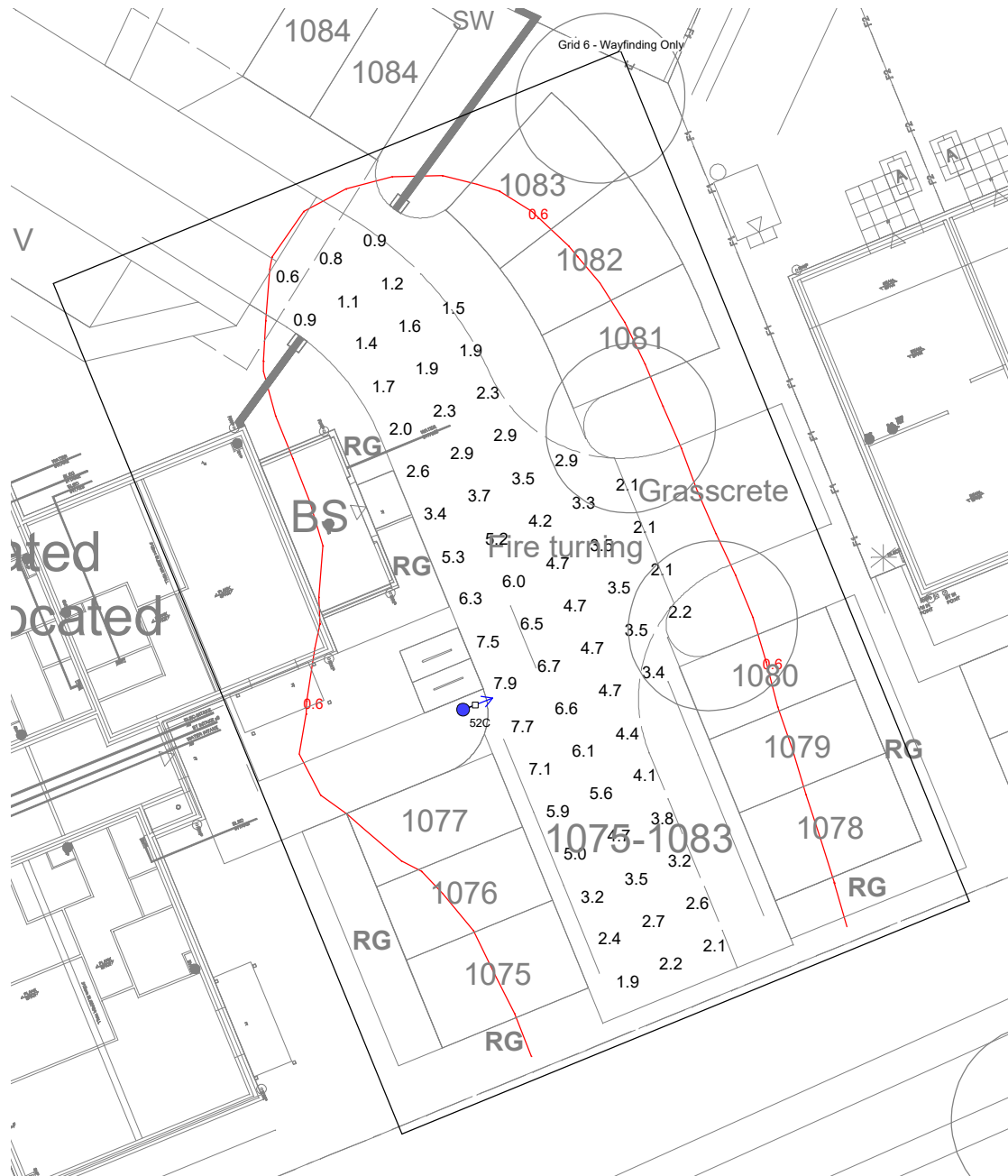


Results

Eav	3.78
Emin	1.04
E _{max}	8.62
Emin/E _{max}	0.12
Emin/Eav	0.28

Horizontal Illuminance (lux)

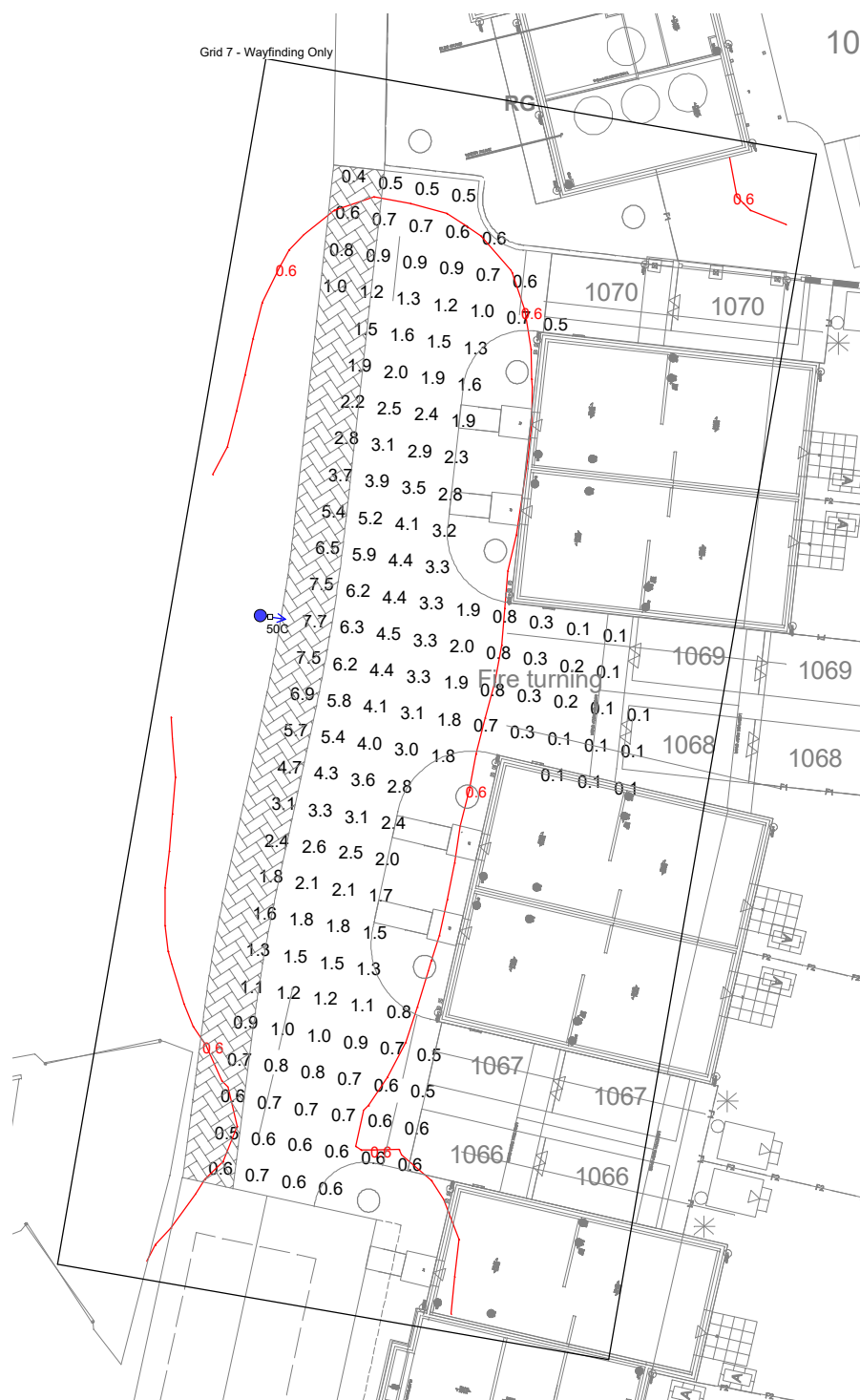
Grid 6 - Wayfinding Only



Results

Eav	3.58
Emin	0.64
E _{max}	7.88
E _{min} /E _{max}	0.08
E _{min} /E _{av}	0.18

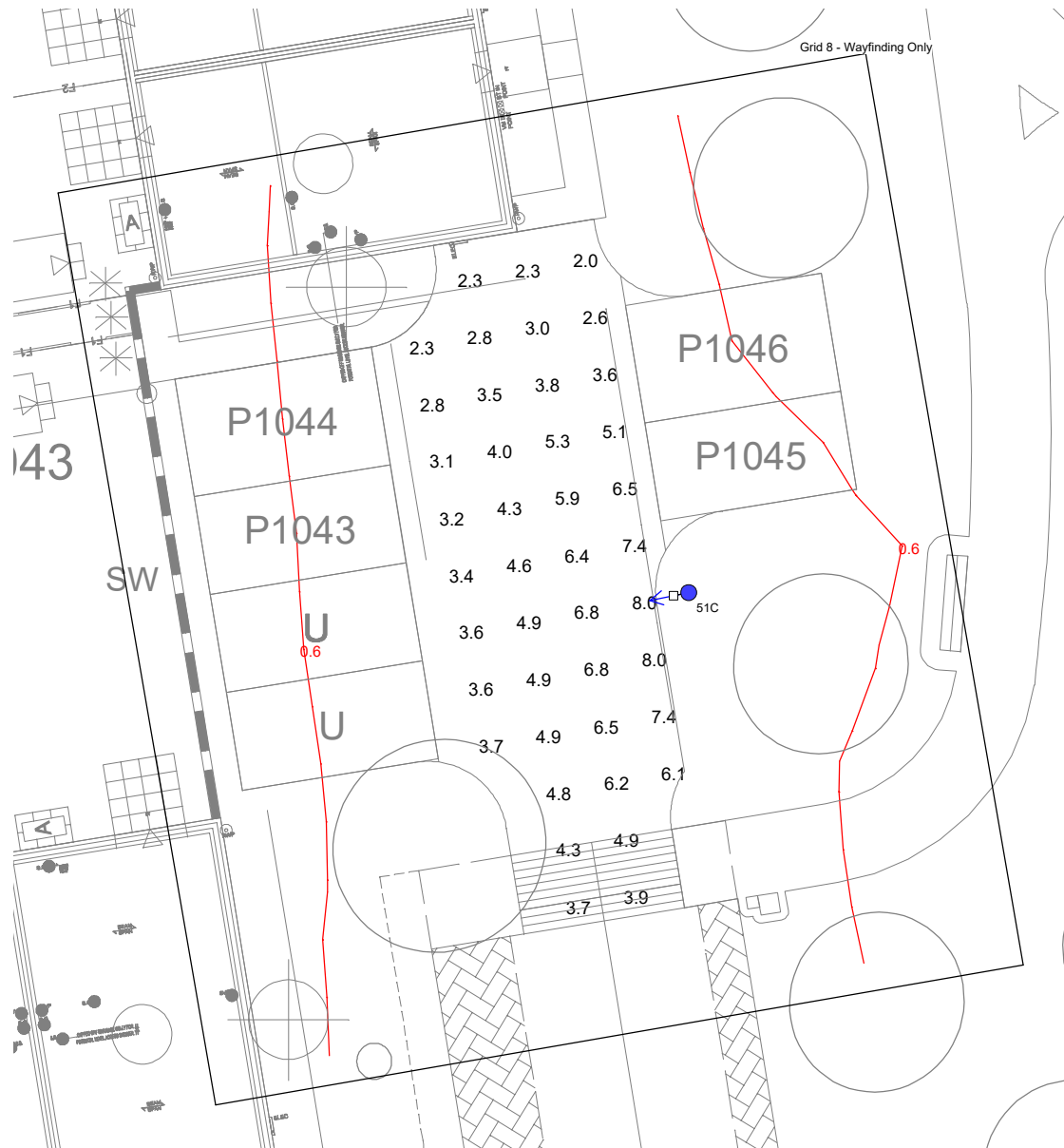
Grid 7 - Wayfinding Only



Eav	1.96
Emin	0.06
Emax	7.73
Emin/Emax	0.01
Emin/Eav	0.03

Horizontal Illuminance (lux)

Grid 8 - Wayfinding Only

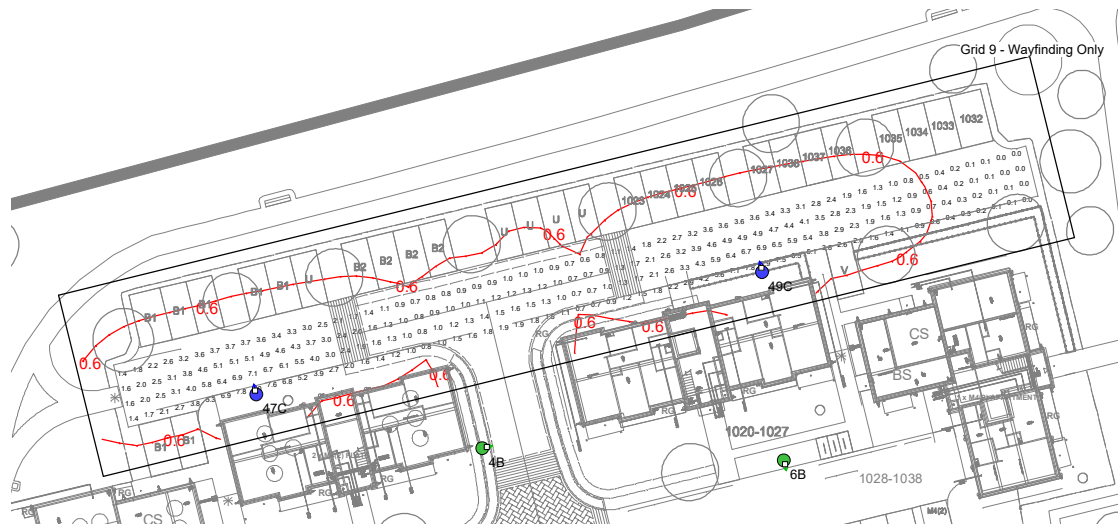


Results

Eav	4.60
Emin	2.01
Emax	7.98
Emin/Emax	0.25
Emin/Eav	0.44

Horizontal Illuminance (lux)

Grid 9 - Wayfinding Only



Results

Eav	2.44
Emin	0.03
Emax	8.01
Emin/Emax	0.00
Emin/Eav	0.01