

Project Title:	South Wokingham R10
Project No/ Document Reference:	A389-TN019
Date:	21 January 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. Shared surfaces and private drives will be unlit.
 - 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)

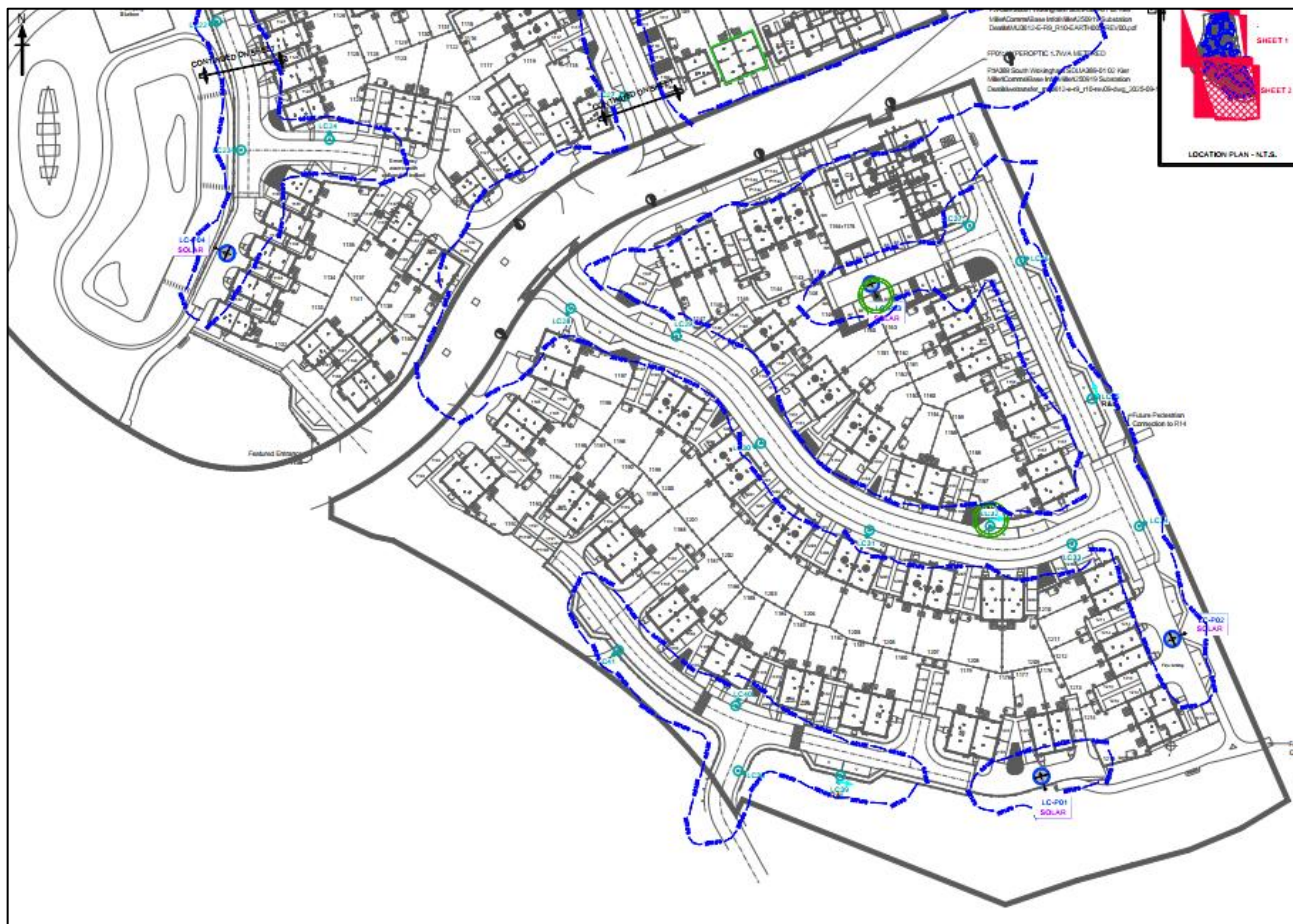


Figure 3 R10 Lighting proposal with solar luminaires in private areas – sheet 2 (south)

4. Conclusion

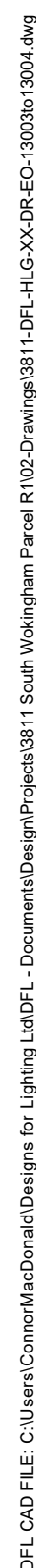
- 4.1. The inclusion of solar luminaires on key private driveways/shared streets and within apartment parking courtyards brings the lighting levels to 0.6lux throughout the residential areas of the development. This should provide a safer environment for all residents whilst meeting the ecological criteria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



Appendix A

Proposed Lighting lux contours

Proposed Lighting calculations



- PRIVATE COLUMN INFORMATION DETAIL**

The diagram shows a vertical column with a luminaire at the top. A box labeled 'LC-P### SOLAR' is connected to the column by a line labeled 'COLUMN NO.'. A line labeled '**POWER TYPE' points to the top of the column. A line labeled '*COLUMN TYPE' points to the luminaire. A line labeled '**LUMINAIRE REFERENCE' points to the luminaire. A line labeled 'COLUMN POSITION' points to the base of the column.

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 0.6 LUX ISO-CONTOUR

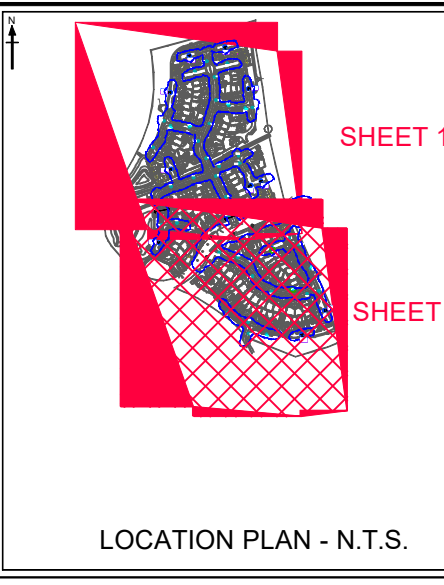
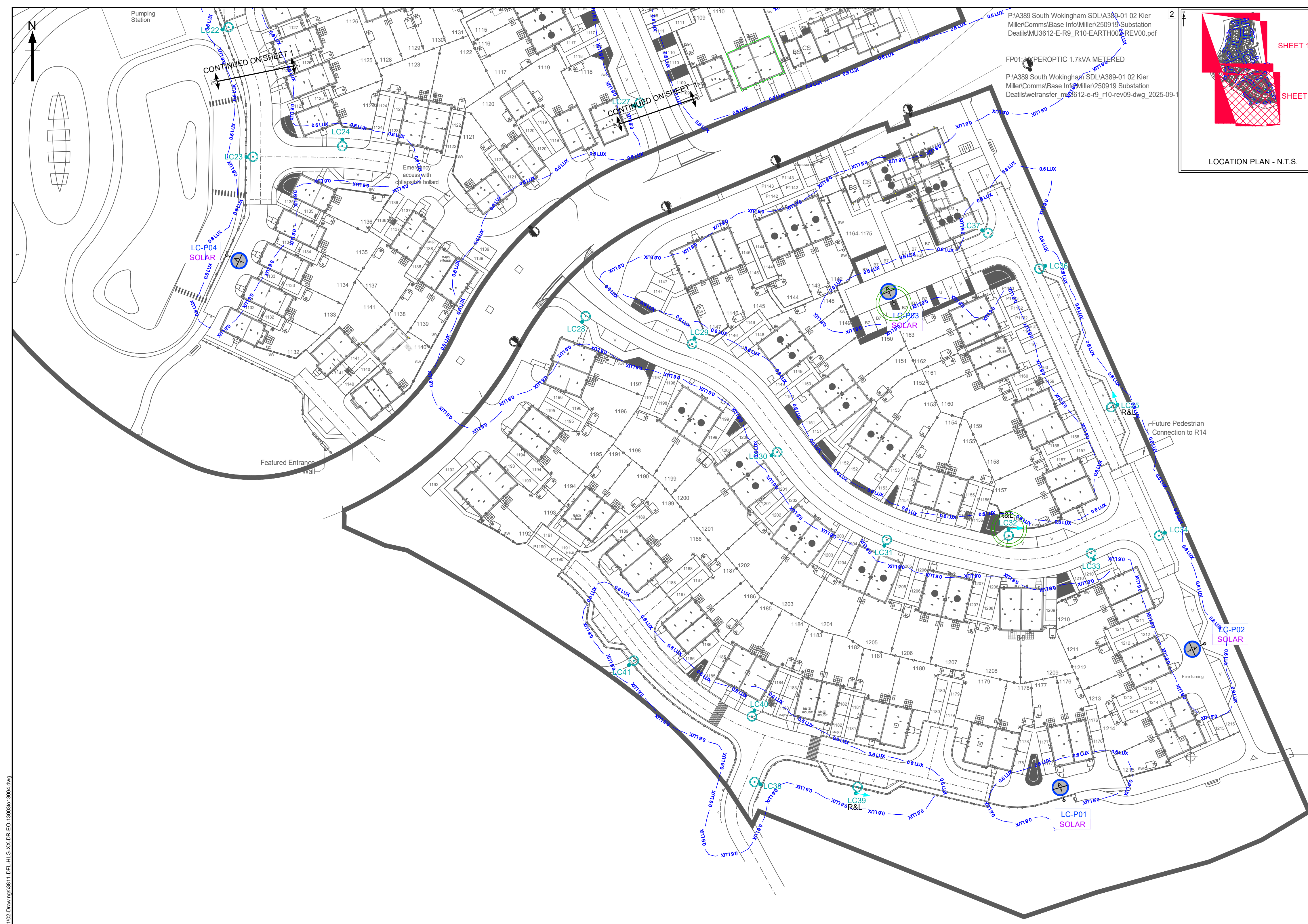
- DESIGNERS
- DFL**
- LIGHTING DESIGN-ELECTRICAL-SMART CITIES-
ENERGY REDUCTION-LIGHTING IMPACT
- DFL-UK (Designs for Lighting Ltd)**
17/18 City Business Centre
Winchester, Hampshire, SO23 7TA
Tel: 01962 855080
Email: info@dfi-uk.com



DESIGNED	CAD	CHECKED	APPROVED
ME	SW	CM	CM
ISSUE DATE	SHEET	SCALE	SHEET SIZE
NOV 2025	1 of 2	1:500	A1
DRAWING NUMBER			
PROJECT - ORGANIZATION - SOLAR - LOCATION - TYPE - ROLE - NUMBER			
3811-DFL-HLG-XX-DR-EO-13003			
JOB NUMBER	STATUS		REVISION
3811	S3		P02

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.



- Notes**
- THIS IS AN AUTOCAD DRAWING AND SHOULD NOT BE AMENDED BY HAND.
 - THE EXISTING LOCATIONS ARE APPROXIMATE AND THEIR ACCURACY CANNOT BE GUARANTEED.
 - ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED.
 - DRAWING TO BE READ IN CONJUNCTION WITH OTHER CONTRACT DOCUMENTS.
 - THIS DRAWING MUST NOT BE SCALED.
 - COLUMN LOCATIONS TO BE CHECKED AGAINST UTILITY DRAWINGS FOR CONFLICTS BY A COMPETENT ENGINEER.
 - CONTRACTOR SHOULD SATISFY THEMSELVES THAT ANY UTILITY DRAWINGS AFFECTING THE SCHEME ARE ACCURATE AND UP TO DATE PRIOR TO COMMENCEMENT.
 - 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.
 - THE LIGHTING LAYOUT AND ASSOCIATED ELEMENTS ARE SUBJECT TO CHANGE AND ARE SHOWN FOR ILLUSTRATIVE CONTEXT ONLY.
 - DUE TO THE NATURE OF THE STANDALONE SOLAR EQUIPMENT, DFL CANNOT GUARANTEE THE EQUIPMENT WILL PROVIDE THE NECESSARY LIGHTING LEVELS ALL YEAR ROUND.
 - 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.
 - 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 SOLAR

**LUMINAIRE REFERENCE

COLUMN POSITION

COLUMN TYPE

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

0.8 LUX 0.6 LUX ISO-CONTOUR

KEY PROPOSED

QTY. SYMBOL DESCRIPTION

40  PROPOSED 6m ALUMINIUM LIGHTING COMPANY CONICAL TAPERED COLUMN WITH POST TOP MOUNTED PHILIPS LUMA 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.

R&L RAISE AND LOWER COLUMN

 DIRECTION OF FALL FOR RAISE AND LOWER COLUMN

 COLUMN INSTALLED AS PART OF ADJACENT SCHEME.

LC0# PROPOSED INDICATIVE COLUMN ID NUMBERS.

DFL

LIGHTING DESIGN-ELECTRICALS-MART 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**

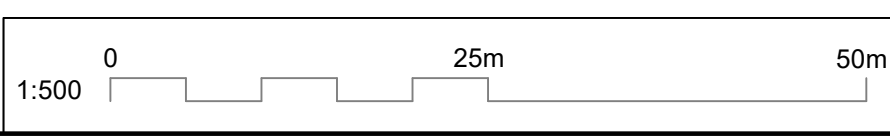
**LIGHTING LAYOUT
PRIVATE & ADOPTABLE**

DESIGNED	CAD	CHECKED	APPROVED
ME	SW	CM	CM
ISSUE DATE	SHEET	SCALE	SHEET SIZE
NOV 2025	2 of 2	1:500	A1
DRAWING NUMBER	ORIGINATOR	VOLUME	LOCATION
3811-DFL-HLG-XX-DR-EO-13004			
JOB NUMBER	STATUS	REVISION	
3811	S3	P02	

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

**NOT FOR
CONSTRUCTION**

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



DFL CAD FILE: C:\Users\Comer\Documents\Designs for Lighting Ltd\DFL - Documents\Design\Projects\3811 South Wokingham Parcel R1\02-Drawings\3811-DFL-HLG-XX-DR-EO-13004.dwg

DATE: 21 January 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-P02

PREPARED BY: Connor MacDonald
Senior Lighting Engineer
+44 (0)1962 855080
17/18 City Business Centre,
Winchester Hants,
SO23 7TA.
e-mail: connor.macdonald@dfi-uk.com
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	40

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

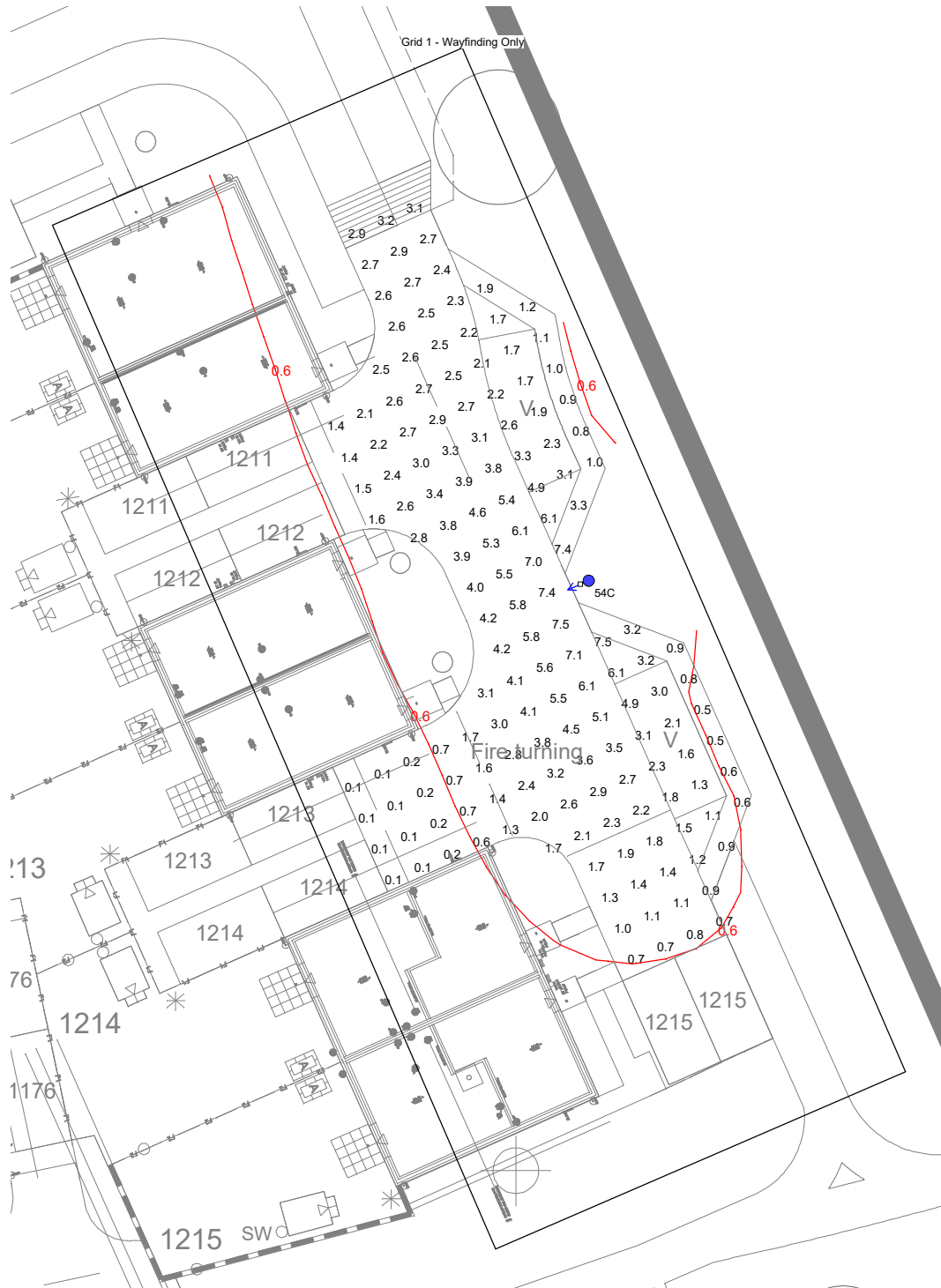
ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	B	483333.04	167877.63	6.00	214.00	0.00	0.00	0.40			
2	B	483316.48	167909.53	6.00	210.00	0.00	0.00	0.40			
4	B	483192.89	168150.72	6.00	12.00	0.00	0.00	0.40			
5	B	483178.26	168139.13	6.00	285.00	0.00	0.00	0.40			
6	B	483221.11	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			

Horizontal Illuminance (lux)

Grid 1 - Wayfinding Only

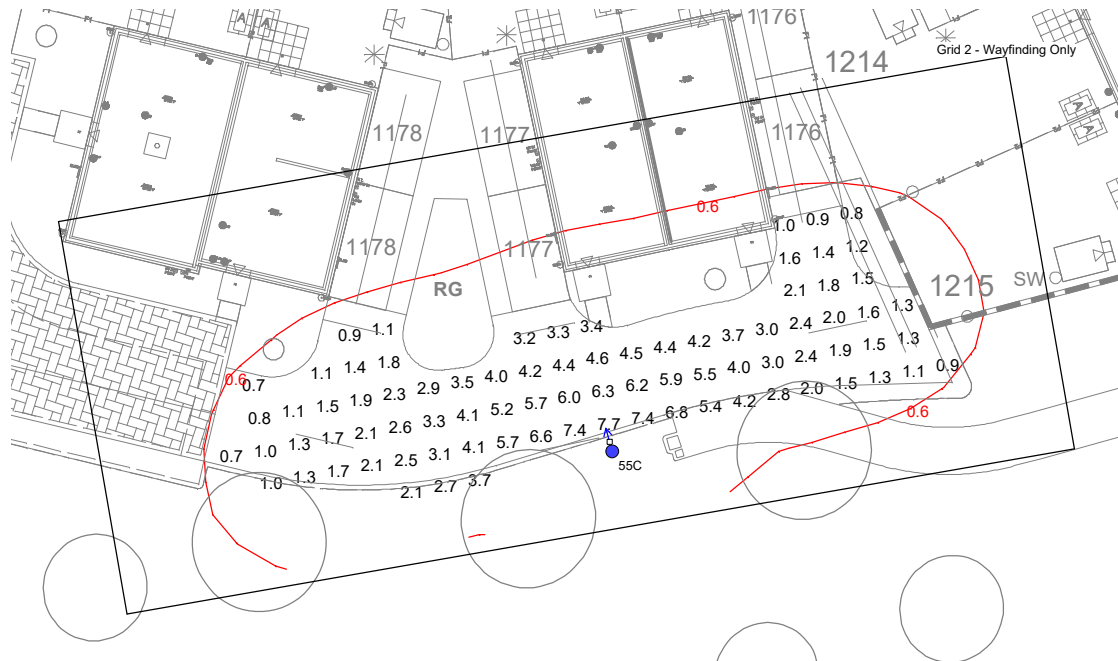


Results

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

Horizontal Illuminance (lux)

Grid 2 - Wayfinding Only

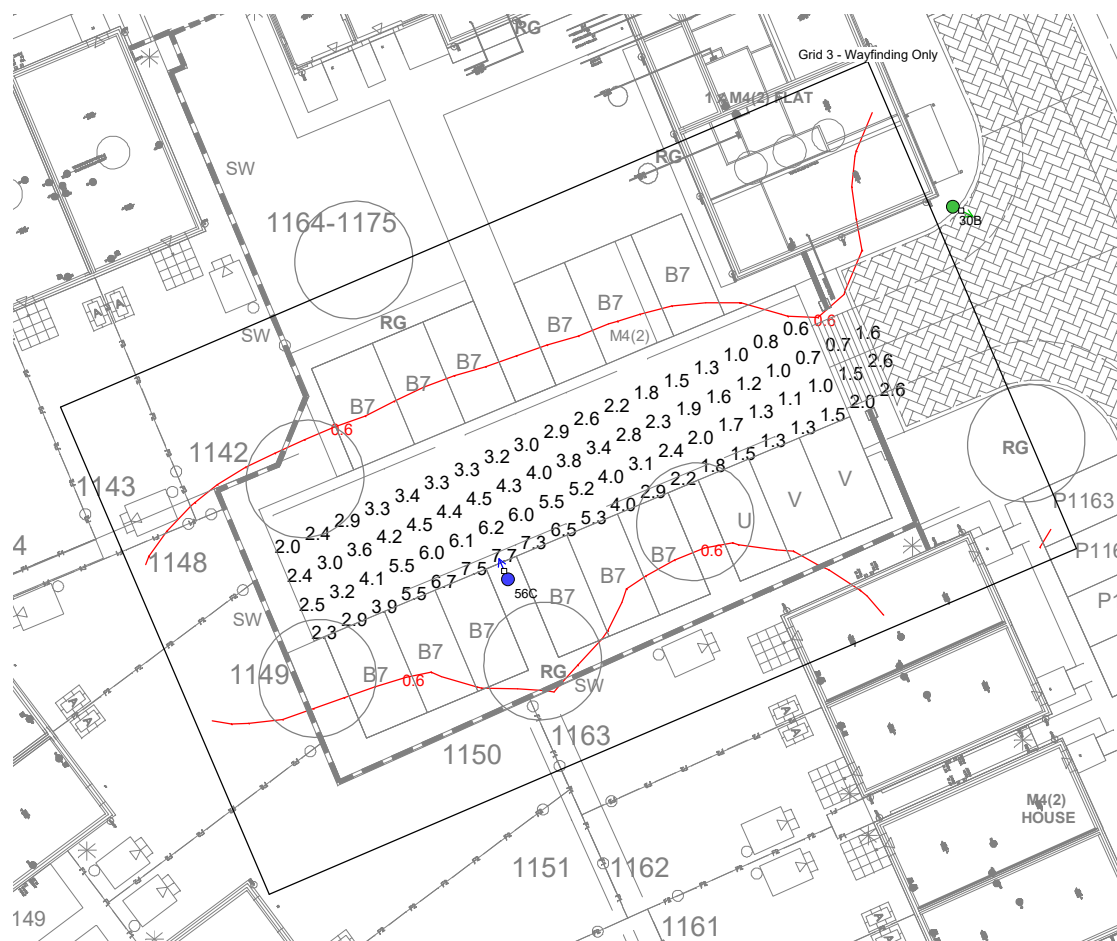


Results

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

Horizontal Illuminance (lux)

Grid 3 - Wayfinding Only

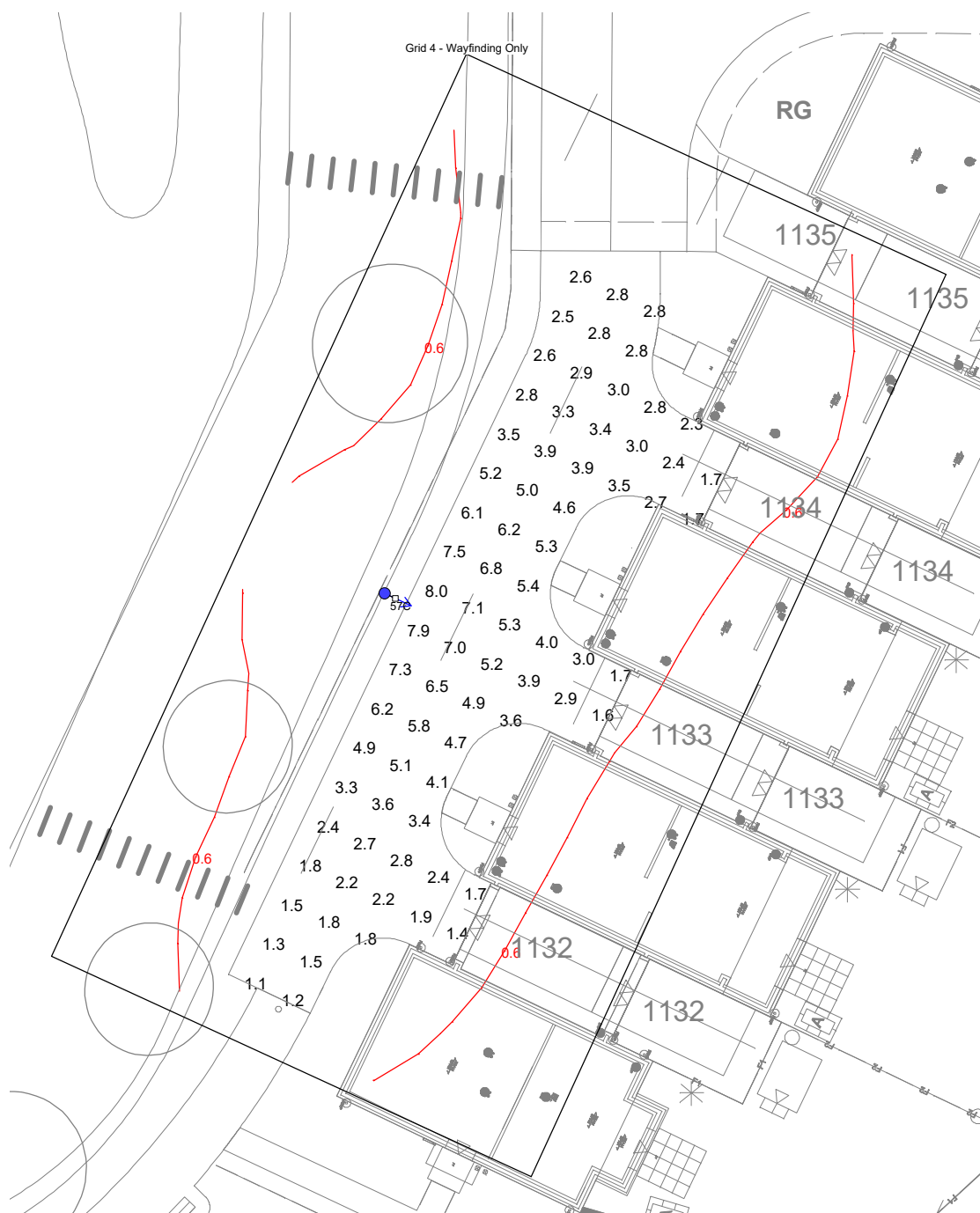


Results

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

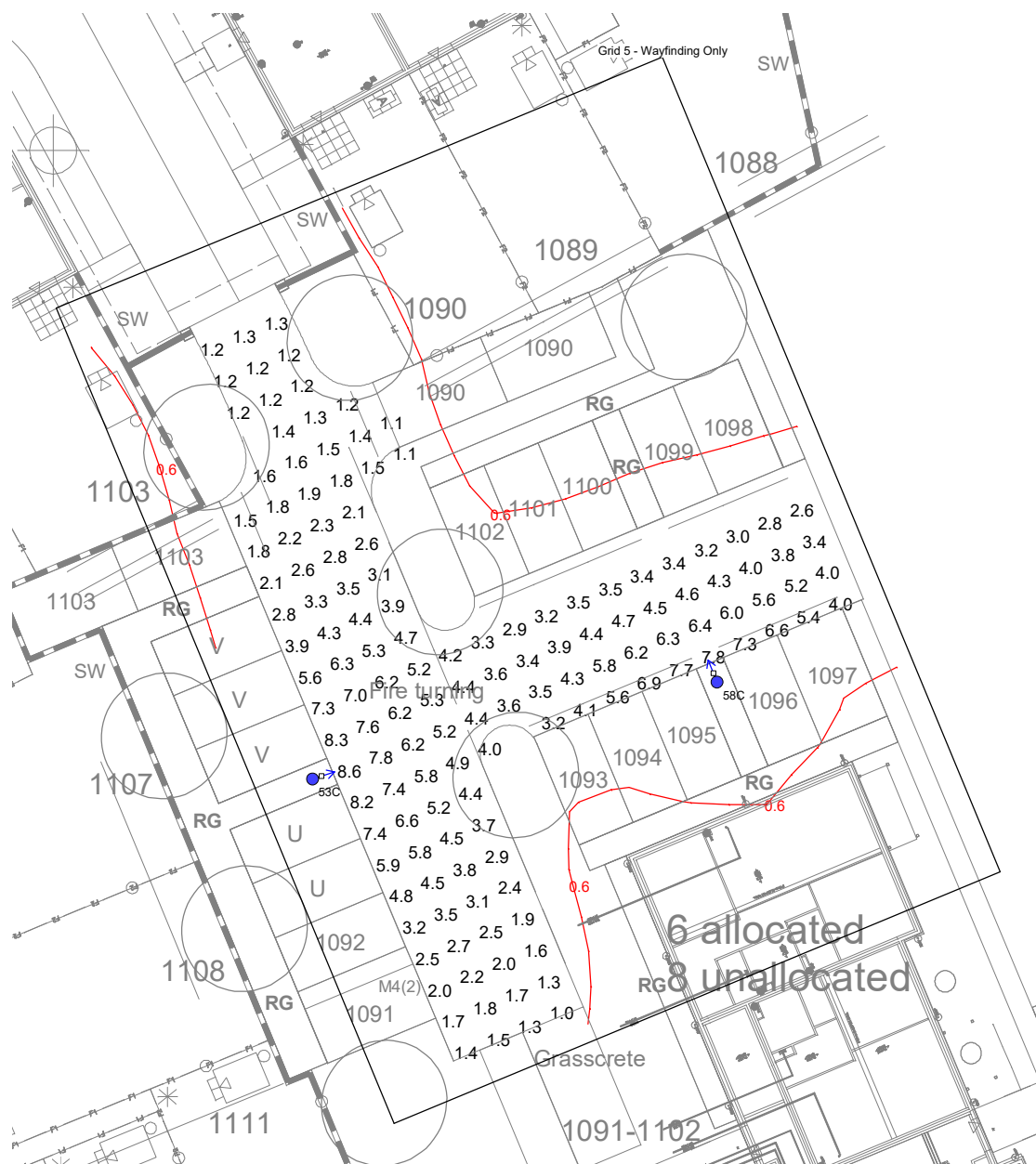


Results

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

Horizontal Illuminance (lux)

Grid 5 - Wayfinding Only

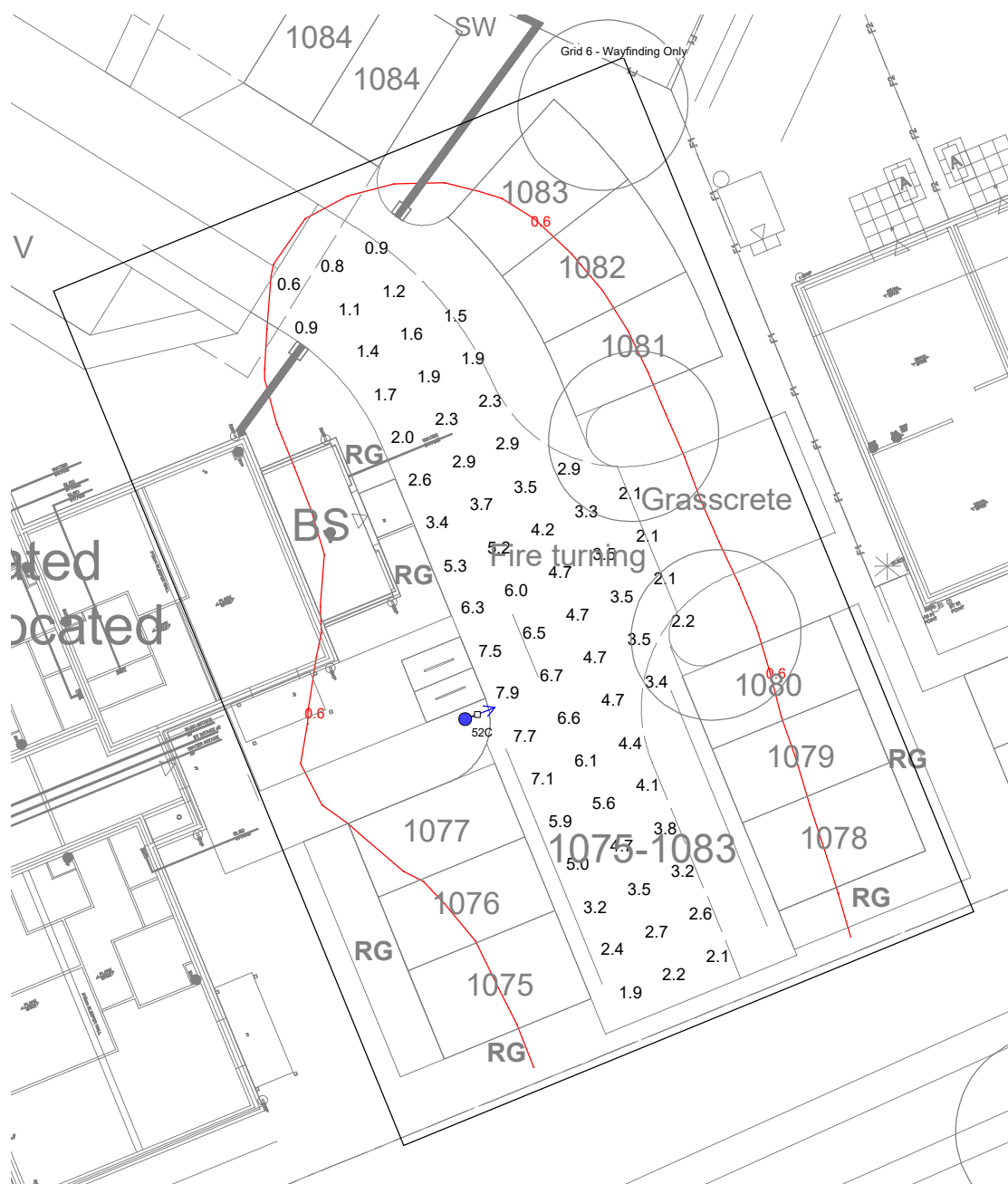


Results

Eav	3.78
Emin	1.04
Emax	8.62
Emin/Emax	0.12
Emin/Eav	0.28

Horizontal Illuminance (lux)

Grid 6 - Wayfinding Only



Results

Eav	3.58
Emin	0.64
Emax	7.88
Emin/Emax	0.08
Emin/Eav	0.18

Horizontal Illuminance (lux)

Grid 7 - Wayfinding Only

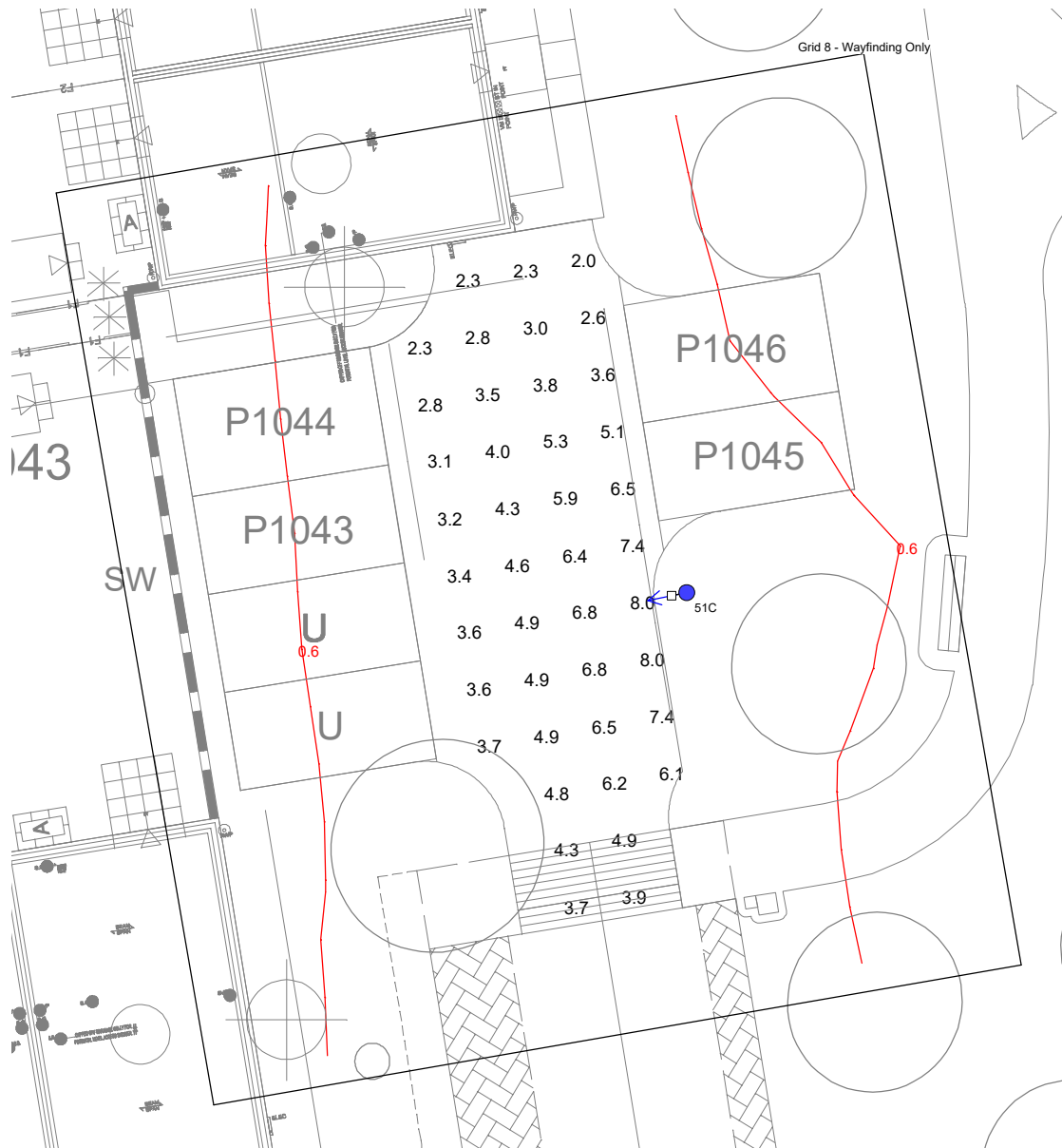


Results

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

Horizontal Illuminance (lux)

Grid 8 - Wayfinding Only

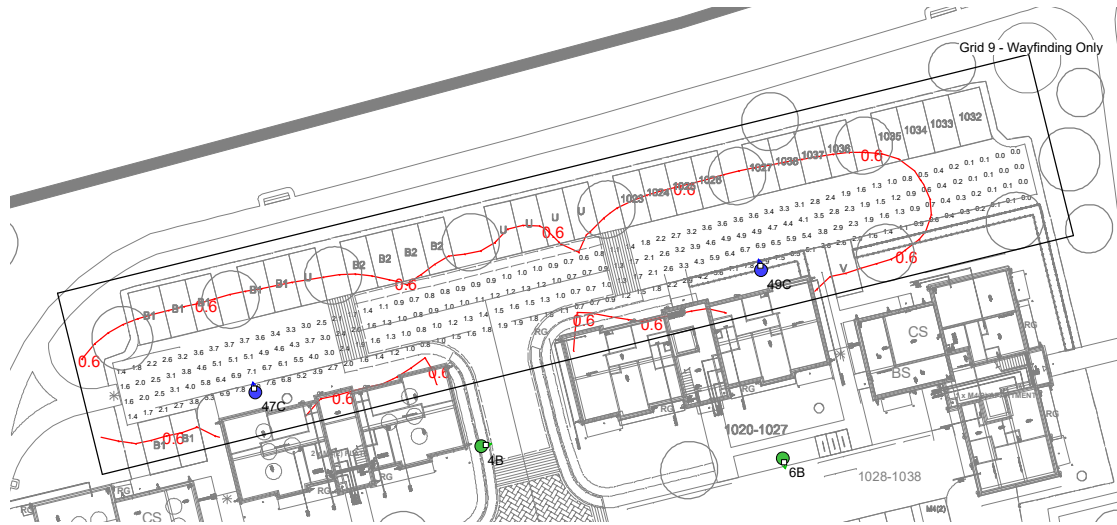


Results

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