Signify

Lighting Application Specialists (LiAS)

Preliminary Design

Project Name: Kishoge Public Lighting R1

LiAS Reference: D-461800

Key Account Manager: Seán Campbell

Email: Seán.Campbell@signify.com

Phone: +353 87 062 9330

Address: Suite 12, Plaza 256, Blanchardstown Corporate Park 2, Dublin 15, Dublin, D15 TR96

PHILIPS interact PHILIPS hue MODULAR LIGHTING INSTRUMENTS COLORKINETICS

Lighting Application Notes

This preliminary design is produced by the Lighting Application Specialist (LiAS) team of Signify based on information supplied by the Customer for the purpose of identifying suitable products and costing the proposal. This design cannot be used for Construction. This design does not purport to eliminate health and safety risks as a risk assessment has not been undertaken. Depending on the level of information received, a number of assumptions may have been applied in order to create an indicative lighting proposal and costing model, according to lighting industry guidelines and incorporating industry best practice methods. These assumptions are documented below and will require confirmation by the Principle Designer nor are we the PSDP (which is not Signify) during the detailed design phase.

Project Specific Comments/Assumptions

- Lighting Calculation has been produced to achieve Lighting Class as specified by Client
- Where column heights have not been provided/specified, these have been assumed to be 6m & 8m.
- It has been assumed that luminaires will be mounted post-top on outreach brackets).

Generic Comments/Assumptions (unless otherwise stated above)

- Preliminary Design proposals produced by the Signify LiAS Team are not to be used for installation purposes. It is the responsibility of the Principle Designer and/or Principle Contractor to ensure all Installation and Maintenance can be done in a safe manner, carried out by competent persons, based on their agreed Risk Assessments and Method Statements.
- The Luminaire Maintenance Factors have been based on 6-year cleaning intervals within an E3/E4 Environmental Zone and it is assumed that lamp/luminaire failures will be replaced on a 'spot replacement'.
- Energy consumptions have been based on the luminaire/s having Constant Light Output (CLO) enabled and the quoted wattage/s are the average over 100,000 hours (without dimming).
- The design calculations produced by Signify do not account for the effect obstructions, such as trees, will cause.
- Signify has not been provided with utility plans showing Buried, Above Ground or Overhead utilities. Therefore, all column/ luminaire locations are indicative and are subject to review/verification by the Principle Designer.
- Unless stated otherwise, Signify has not visited site. Therefore, all column/luminaire locations are indicative and are subject to an onsite verification arranged/performed by the Principle Designer.
- Signify has not produced any Private Cable Network electrical calculations or reviewed the DNO network to confirm power supplies to the proposed lighting.
- Signify has not performed any asset condition testing and therefore assumes that any existing lighting columns/wall mounted brackets are structurally capable of supporting the weight & windage of the proposed luminaire/s. This must be verified by the Principle Designer before installation works commence.
- Unless stated otherwise, Signify is not supplying the new lighting columns (including brackets etc) and therefore it is the responsibility of the Principle Designers to confirm that all proposed equipment is suitable for the intended locations (e.g. raise & lower, ground condition, foundation type, saline environment, etc).
- Unless stated otherwise, luminaires will be supplied in their standard colour.

- **WARNING** - *All proposed locations are only adversary and will need to be measured and set back from any ESBN low voltage assets 230v, any larger ESBN assets such as 400v or above. We advise you refer to the ESBN guidance docs on set back from ESBN assets before setting out the site or sending anyone to work. This will be down to the installation contractor to set out the column locations on site.*

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Using new locations indicated on the drawing plotted
All wattages with CLO Active & Dimming Profile 2A 12am to 6am
@Various mounting height MF = 0.76&0.83 (E3/E4 zone 6yr clean)
Lantern A - 2.6Klm DW50 16W 3000K
Lantern B - 12.5Klm DX51 78W 3000K
Lantern C - 8Klm DW50 46W 3000K
Lantern D - 8Klm DX51 46W 3000K
Grid One P2, Grid Two C2, Grid Three P3.

Kishoge Public Lighting R1

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Seán Campbell
Key Account Manager – Road Lighting Ireland,
BSc(Eng.), MSc, Interim CEng, MIEI, AMEI,
Signify Ireland +353 87 062 9330
Suite 12, 2nd Floor, Plaza 256,
Blanchardstown Corporate Park,
Dublin, D15 TR96, Ireland

Signify

A carbon neutral company

Our global brands are

PHILIPS interact COLOR KINETICS hue personal wireless lighting

WiZ BrightSites by Signify trulifi by Signify NatureConnect by Signify

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	511.67	346.18	241.95	146.92	1.49	1.50
2	Grid 2	531.39	381.75	89.20	56.92	1.49	1.50
3	Grid 3	490.47	345.70	106.82	137.91	1.48	1.50

Luminaires

Luminaire A Data

Supplier	Philips
Type	BGP701 DW50
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	2.60
File Name	Luma Gen2 Nano_BGP701_DW50_2600_20LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	595.5, 51.0, 0.0
No. in Project	7

Luminaire B Data

Supplier	Philips
Type	BGP703 DX51
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	12.50
File Name	Luma Gen2 Mini_BGP703_DX51_12500_40LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	467.9, 27.1, 0.0
No. in Project	1

Luminaire C Data

Supplier	Philips
Type	BGP703 DW50
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	8.00
File Name	Luma Gen2 Mini_BGP703_DW50_8000_40LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	595.5, 51.0, 0.0
No. in Project	17

Luminaire D Data

Supplier	Philips
Type	BGP703 DX51
Lamp(s)	LED-HB 5.2S 730
Lamp Flux (klm)	8.00
File Name	Luma Gen2 Mini_BGP703_DX51_8000_40LED_5.2S_CLO_L90_730.ies
Maintenance Factor	0.76
Imax70,80,90(cd/klm)	467.9, 27.1, 0.0
No. in Project	9

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
1	A	506.87	470.82	6.00	180.00	0.00	0.00	0.20			
2	A	505.67	445.91	6.00	162.00	0.00	0.00	0.20			
3	A	508.90	432.82	6.00	270.00	5.00	0.00	0.20			
5	D	563.25	409.79	6.00	268.00	0.00	0.00	0.20			
6	D	611.47	407.15	6.00	181.00	0.00	0.00	0.20			
7	D	617.89	424.26	6.00	180.00	0.00	0.00	0.20			
8	D	599.75	435.84	6.00	271.00	0.00	0.00	0.20			
9	D	552.99	382.30	6.00	89.00	0.00	0.00	0.20			

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Target X	Target Y	Target Z
10	D	578.81	424.56	6.00	1.00	0.00	0.00	0.20			
11	D	534.40	394.61	6.00	356.00	0.00	0.00	0.20			
12	D	545.59	411.79	8.00	266.00	0.00	0.00	0.20			
13	C	709.13	419.75	8.00	9.00	0.00	0.00	0.20			
15	C	623.90	378.04	8.00	100.00	0.00	0.00	0.20			
16	C	670.11	378.02	8.00	89.59	0.00	0.00	0.20			
17	C	612.08	392.58	8.00	278.00	0.00	0.00	0.20			
18	C	730.24	373.32	8.00	15.00	0.00	0.00	0.20			
19	B	564.73	370.38	8.00	22.00	0.00	0.00	0.20			
20	C	708.18	444.54	8.00	352.00	0.00	0.00	0.20			
21	C	732.20	419.04	8.00	197.00	0.00	0.00	0.20			
22	C	715.98	392.90	8.00	18.00	0.00	0.00	0.20			
23	C	742.49	386.58	8.00	197.00	0.00	0.00	0.20			
24	C	732.20	448.61	8.00	173.00	0.00	0.00	0.20			
25	C	713.68	481.81	8.00	350.00	0.00	0.00	0.20			
26	C	737.26	479.14	8.00	166.00	0.00	0.00	0.20			
27	C	708.11	378.46	8.00	92.00	0.00	0.00	0.20			
28	C	691.14	392.47	8.00	270.00	0.00	0.00	0.20			
29	C	650.76	392.83	8.00	272.00	0.00	0.00	0.20			
30	C	585.39	392.78	8.00	285.00	0.00	0.00	0.20			
31	C	591.58	366.15	8.00	131.00	0.00	0.00	0.20			
32	D	579.89	409.92	6.00	297.00	0.00	0.00	0.20			
31	A	504.62	413.18	6.00	172.00	0.00	0.00	0.20			
32	A	501.46	389.48	6.00	158.00	0.00	0.00	0.20			
33	A	513.21	378.98	6.00	250.00	0.00	0.00	0.20			
34	A	544.10	376.44	6.00	272.00	0.00	0.00	0.20			

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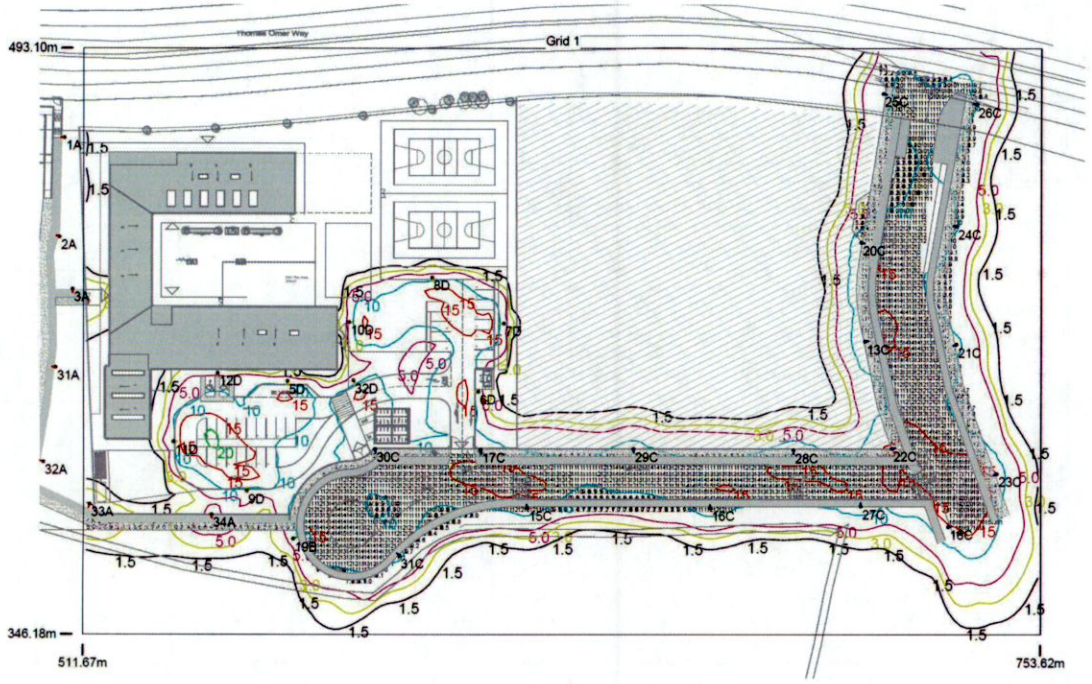
Horizontal Illuminance (lux)

Grid 1



Results

Eav	12.03
Emin	2.53
Emax	20.00
Emin/Emax	0.13
Emin/Eav	0.21

Horizontal Illuminance (lux)

Grid 2

Results

Eav	12.12
Emin	3.68
Emax	20.71
Emin/Emax	0.18
Emin/Eav	0.30

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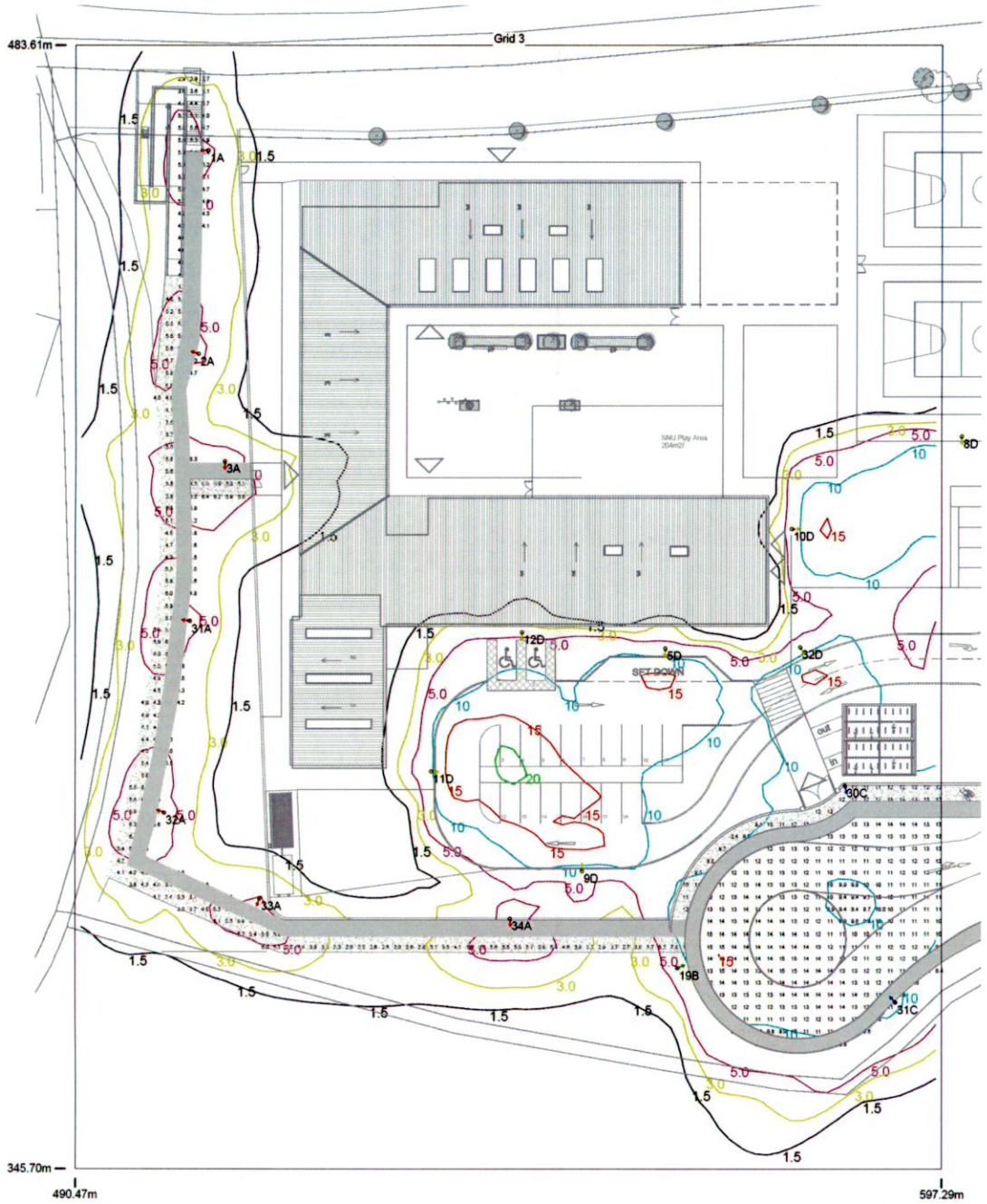
Horizontal Illuminance (lux)

Grid 3

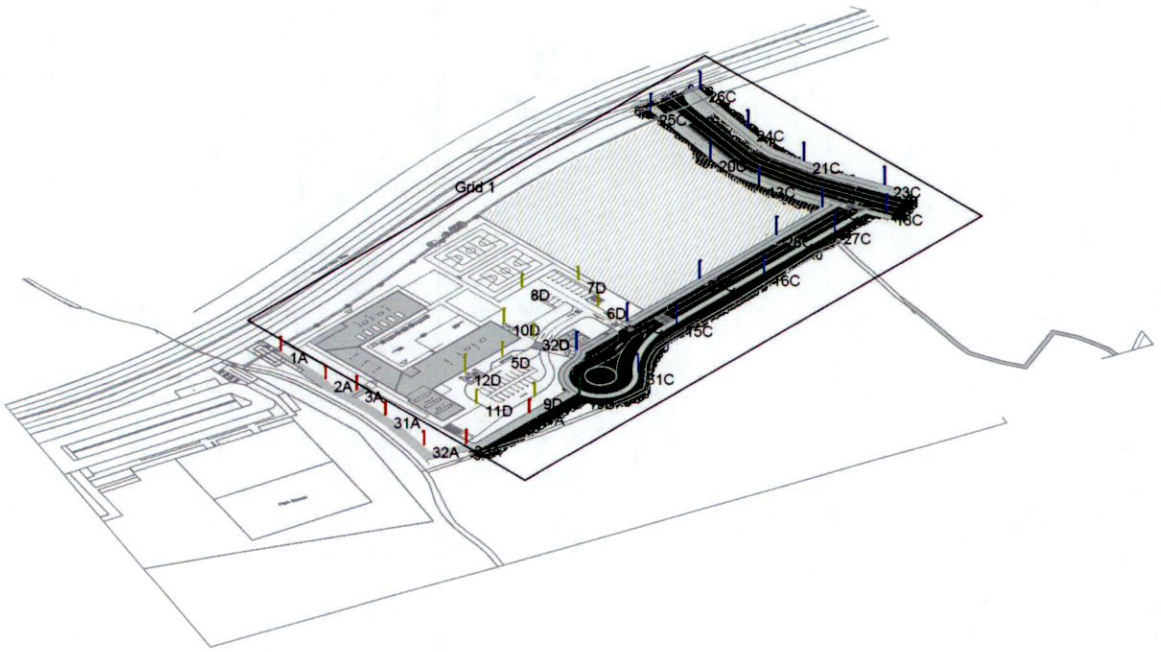


Results

Eav	8.83
Emin	2.54
Emax	15.01
Emin/Emax	0.17
Emin/Eav	0.29

Horizontal Illuminance (lux)

Grid 1



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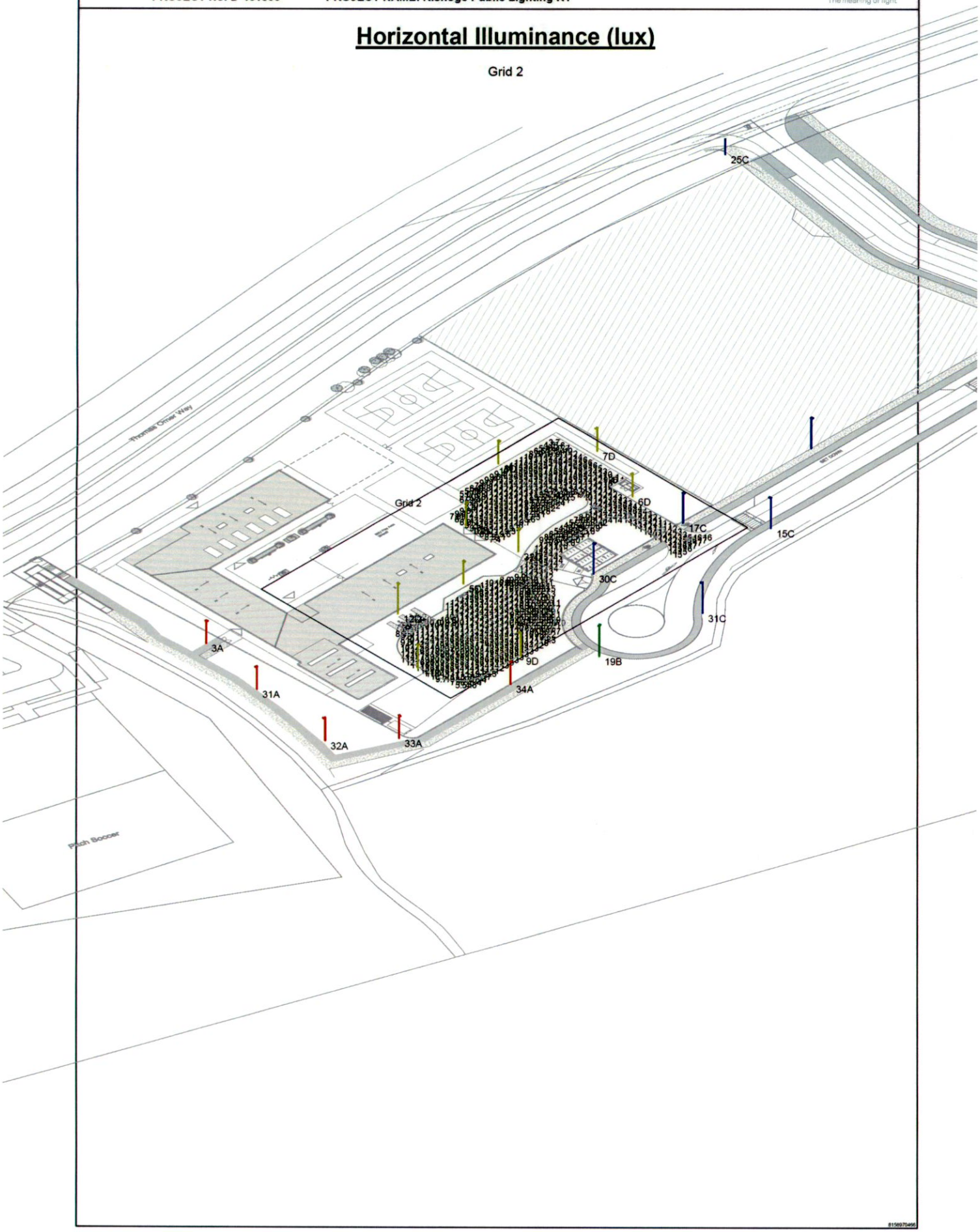
Horizontal Illuminance (lux)

Grid 2



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Horizontal Illuminance (lux)

Grid 3