



Lighting Application Specialists (LIAS) Design

CONFIDENTIAL – Commercially Sensitive

Project Name: Carlow Link Project R0

LIAS Reference: D-559670

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



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 mixed.
- 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 ESNB low voltage assets 230v, any larger ESNB assets such as 400v or above. We advise you refer to the ESNB guidance docs on set back from ESNB 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.

DATE: 12 March 2024
DESIGNER: Seán Campbell
PROJECT No: D-559670
PROJECT NAME: Carlow Link Project R0



*Using new locations indicated on the drawing plotted
All wattages with CLO Active & Dimming Profile 2A 12am to 6am
(E3/E4 zone 6yr clean)@MF= 0.83 Height 8m,*

This preliminary design is produced by the Application specialist Lighting (LiAS) team of Signify based information supplied by the client for the purpose identifying suitable products of and costing the proposal. Design cannot be used for this Construction as the PSDP will require sign off of all design works. Signify are not the PSDP on this project or any project. 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, several assumptions may have been applied in order to create an indicative lighting proposal and costing model, according to lighting guidelines and incorporating industry best practice methods.

Carlow Link Project R0



Our global brands are

PHILIPS interact

Seán Campbell - Key Account Manager

Road Lighting Ireland, BSc(Eng.), MSc, Interim CEng, MIEI, AMEI,

Signify Ireland Ltd

+353 87 062 9330 sean.campbell@signify.com

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

We are a carbon neutral company

PHILIPS

hue personal wireless lighting

interact Pro

Onsite install and commissioning on mobile app

BrightSites

by Signify



CONFIDENTIAL – Commercially Sensitive

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	672471.21	676994.62	110.75	84.76	1.50	1.49
2	Grid 2	672352.11	676927.56	119.10	88.44	1.49	1.50
3	Grid 3	672277.44	676885.33	74.75	67.69	1.49	1.47

Luminaires

Luminaire A Data

Supplier	Philips
Type	BGP530 T35 S GRN30/- NO
Lamp(s)	GRN30/830/-
LampFlux(klm)/Colour	3.00 -/
File Name	BGP530 T35 1xGRN30_830 S.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	331.1, 37.9, 0.0
No. in Project	21

Luminaire B Data

Supplier	Philips
Type	BGP530 T35 DM GRN19/- NO
Lamp(s)	GRN19/830/-
LampFlux(klm)/Colour	1.90 -/
File Name	BGP530 T35 1xGRN19_830 DM.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	532.8, 73.7, 0.0
No. in Project	10

Luminaire C Data

Supplier	Philips
Type	BCB500 T25 A LED35/- NO
Lamp(s)	LED35/830/-
Lamp Flux (klm)	3.50
File Name	BCB500 T25 1 xLED35_830 A.ies
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	203.3, 812.6, 213.5
No. in Project	11

Luminaire D Data

Supplier	Philips
Type	BGP530 T35 DM GRN70/- NO
Lamp(s)	GRN70/830/-
LampFlux(klm)/Colour	5.00 -/
File Name	BGP530 T35 1xGRN70_830 DM.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	521.9, 72.2, 0.0
No. in Project	6

Luminaire E Data

Supplier	Philips
Type	BGP530 T35 DW GRN70/- NO
Lamp(s)	GRN70/830/-
LampFlux(klm)/Colour	5.00 -/
File Name	BGP530 T35 1xGRN70_830 DW.Idt
Maintenance Factor	0.83
Imax70,80,90(cd/klm)	622.4, 75.4, 0.0
No. in Project	2

Layout

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
1	A	672327.65	676934.30	8.00	-61.89	0.00	0.00	1.00	100%			
2	A	672318.84	676929.59	8.00	-61.89	0.00	0.00	1.00	100%			
3	A	672310.02	676924.88	8.00	-61.89	0.00	0.00	1.00	100%			
4	A	672301.26	676920.13	8.00	-61.89	0.00	0.00	1.00	100%			
5	A	672292.41	676915.43	8.00	294.00	0.00	0.00	1.00	100%			
6	A	672292.34	676915.32	8.00	252.00	0.00	0.00	1.00	100%			
7	A	672292.69	676915.44	8.00	346.00	0.00	0.00	1.00	100%			
8	A	672338.53	676932.30	8.00	36.00	0.00	0.00	1.00	100%			
9	A	672338.45	676932.38	8.00	84.00	0.00	0.00	1.00	100%			
10	A	672338.23	676932.38	8.00	123.00	0.00	0.00	1.00	100%			
11	A	672343.86	676928.39	8.00	73.00	0.00	0.00	1.00	100%			
12	A	672343.71	676928.47	8.00	114.00	0.00	0.00	1.00	100%			
13	A	672344.06	676928.25	8.00	14.00	0.00	0.00	1.00	100%			
14	A	672362.25	676942.27	8.00	170.00	0.00	0.00	1.00	100%			
15	A	672362.35	676942.27	8.00	96.00	0.00	0.00	1.00	100%			
16	A	672362.66	676942.15	8.00	41.00	0.00	0.00	1.00	100%			
17	A	672285.68	676900.05	8.00	29.00	0.00	0.00	1.00	100%			
18	A	672301.08	676920.38	6.50	114.00	0.00	0.00	1.00	50%			
19	A	672309.82	676925.14	6.50	114.00	0.00	0.00	1.00	50%			
20	A	672318.67	676929.81	6.50	114.00	0.00	0.00	1.00	50%			
21	A	672327.52	676934.42	6.50	114.00	0.00	0.00	1.00	50%			
22	C	672480.43	677007.61	1.00	118.69	0.00	0.00	0.00	100%			
23	C	672466.66	677000.07	1.00	118.69	0.00	0.00	0.00	100%			
24	C	672452.89	676992.53	1.00	118.69	0.00	0.00	0.00	100%			
25	C	672439.12	676985.00	1.00	118.69	0.00	0.00	0.00	100%			
26	C	672425.35	676977.46	1.00	118.69	0.00	0.00	0.00	100%			
27	C	672411.58	676969.93	1.00	118.69	0.00	0.00	0.00	100%			
28	C	672397.81	676962.39	1.00	118.69	0.00	0.00	0.00	100%			
29	C	672384.04	676954.86	1.00	118.69	0.00	0.00	0.00	100%			
30	C	672370.27	676947.32	1.00	118.69	0.00	0.00	0.00	100%			
31	B	672490.30	677021.03	6.00	118.00	0.00	0.00	1.00	100%			
32	B	672490.51	677020.69	6.50	298.00	0.00	0.00	1.00	100%			
33	B	672499.02	677026.96	6.00	118.00	0.00	0.00	1.00	100%			
34	B	672499.23	677026.63	6.50	298.00	0.00	0.00	1.00	100%			
35	B	672507.82	677032.62	6.00	118.00	0.00	0.00	1.00	100%			
36	B	672508.03	677032.28	6.50	298.00	0.00	0.00	1.00	100%			

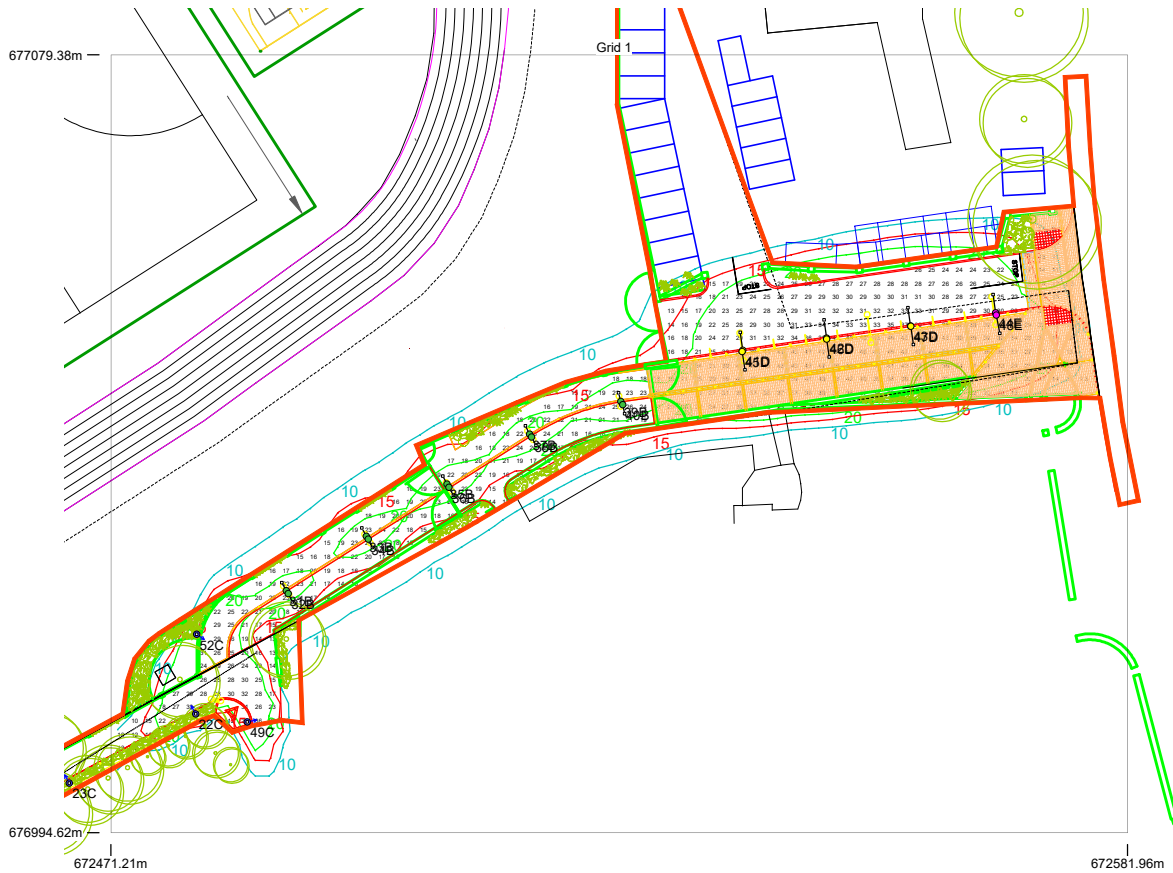
CONFIDENTIAL – Commercially Sensitive

Layout Continued

ID	Type	X	Y	Height	Angle	Tilt	Cant	Out-reach	Dimmed to	Target X	Target Y	Target Z
37	B	672516.82	677038.08	6.00	118.00	0.00	0.00	1.00	100%			
38	B	672517.02	677037.75	6.50	298.00	0.00	0.00	1.00	100%			
39	B	672526.75	677041.61	6.00	104.00	0.00	0.00	1.00	100%			
40	B	672526.96	677041.28	6.50	282.00	0.00	0.00	1.00	100%			
41	D	672540.01	677047.19	8.00	98.27	0.00	0.00	2.00	100%			
42	D	672549.16	677048.52	8.00	98.27	0.00	0.00	2.00	100%			
43	D	672558.30	677049.85	8.00	98.27	0.00	0.00	2.00	100%			
44	E	672567.57	677051.29	8.00	98.27	0.00	0.00	2.00	100%			
45	D	672539.96	677047.07	6.00	278.51	0.00	0.00	2.00	100%			
46	D	672549.14	677048.44	6.00	278.51	0.00	0.00	2.00	100%			
47	D	672558.32	677049.81	6.00	278.51	0.00	0.00	2.00	100%			
48	E	672567.63	677051.03	6.00	281.00	0.00	0.00	2.00	100%			
49	C	672486.08	677006.74	1.00	11.00	0.00	0.00	0.00	100%			
52	C	672480.55	677016.29	1.00	325.00	0.00	0.00	0.00	100%			

Horizontal Illuminance (lux)

Grid 1



Results

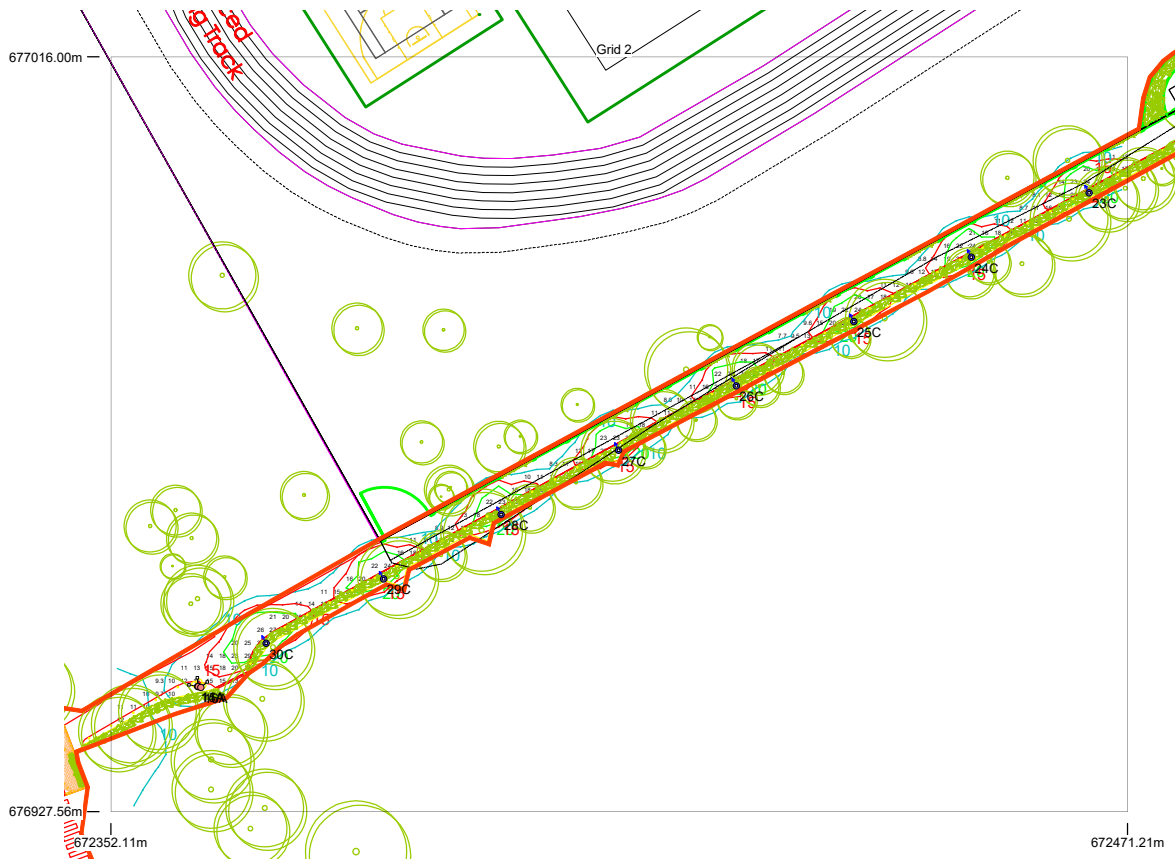
Eav	25.35
Emin	8.99
Emax	50.28
Emin/Emax	0.18
Emin/Eav	0.35

CONFIDENTIAL – Commercially Sensitive

This design remains the property of Signify Ireland Ltd

Horizontal Illuminance (lux)

Grid 2



Results

Eav	16.91
Emin	7.72
E _{max}	47.81
E _{min} /E _{max}	0.16
E _{min} /E _{av}	0.46

Horizontal Illuminance (lux)

Grid 3



Results

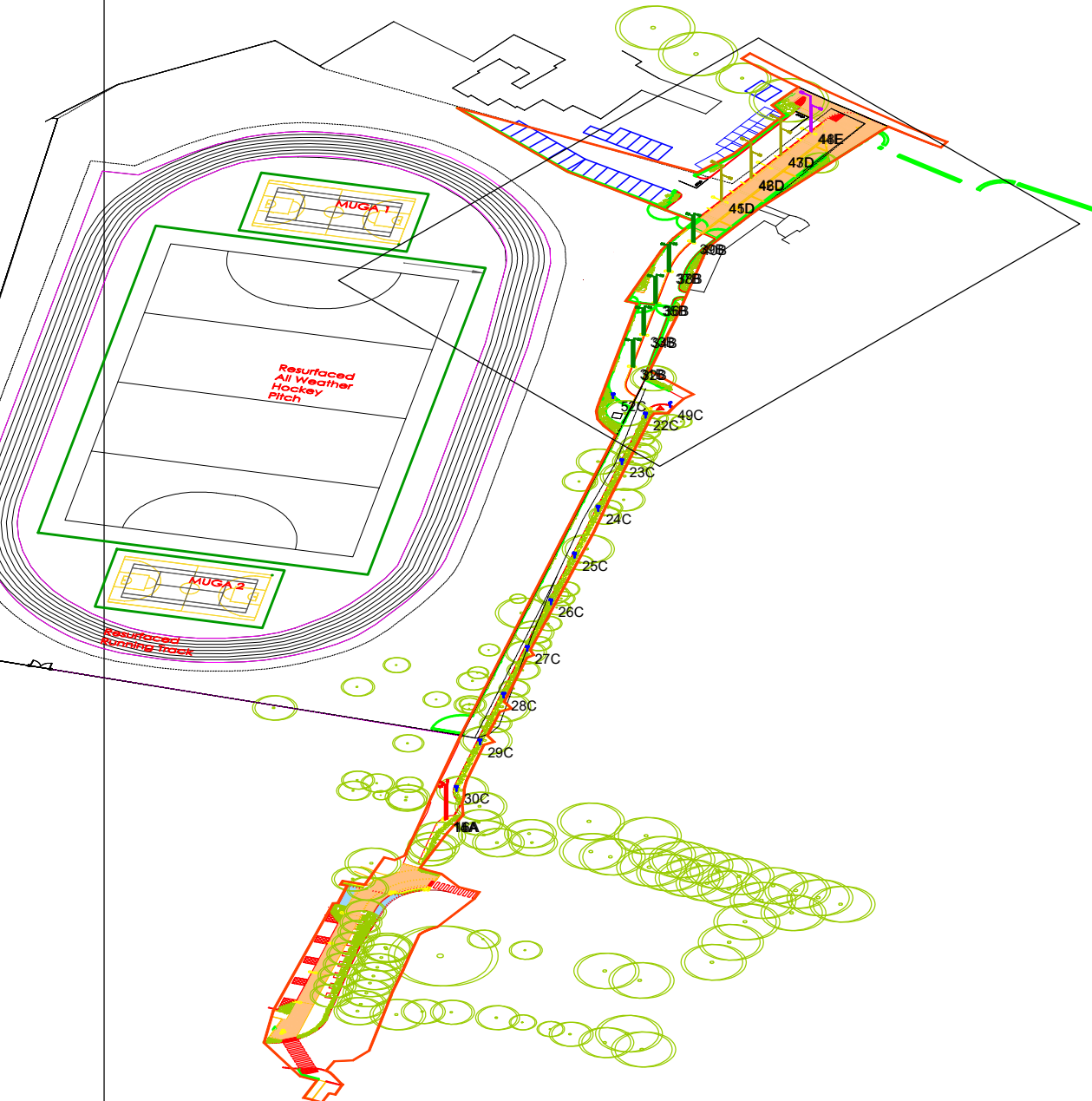
Eav	12.32
Emin	4.89
Emax	18.15
Emin/Emax	0.27
Emin/Eav	0.40

CONFIDENTIAL – Commercially Sensitive

This design remains the property of Signify Ireland Ltd

Horizontal Illuminance (lux)

Grid 1

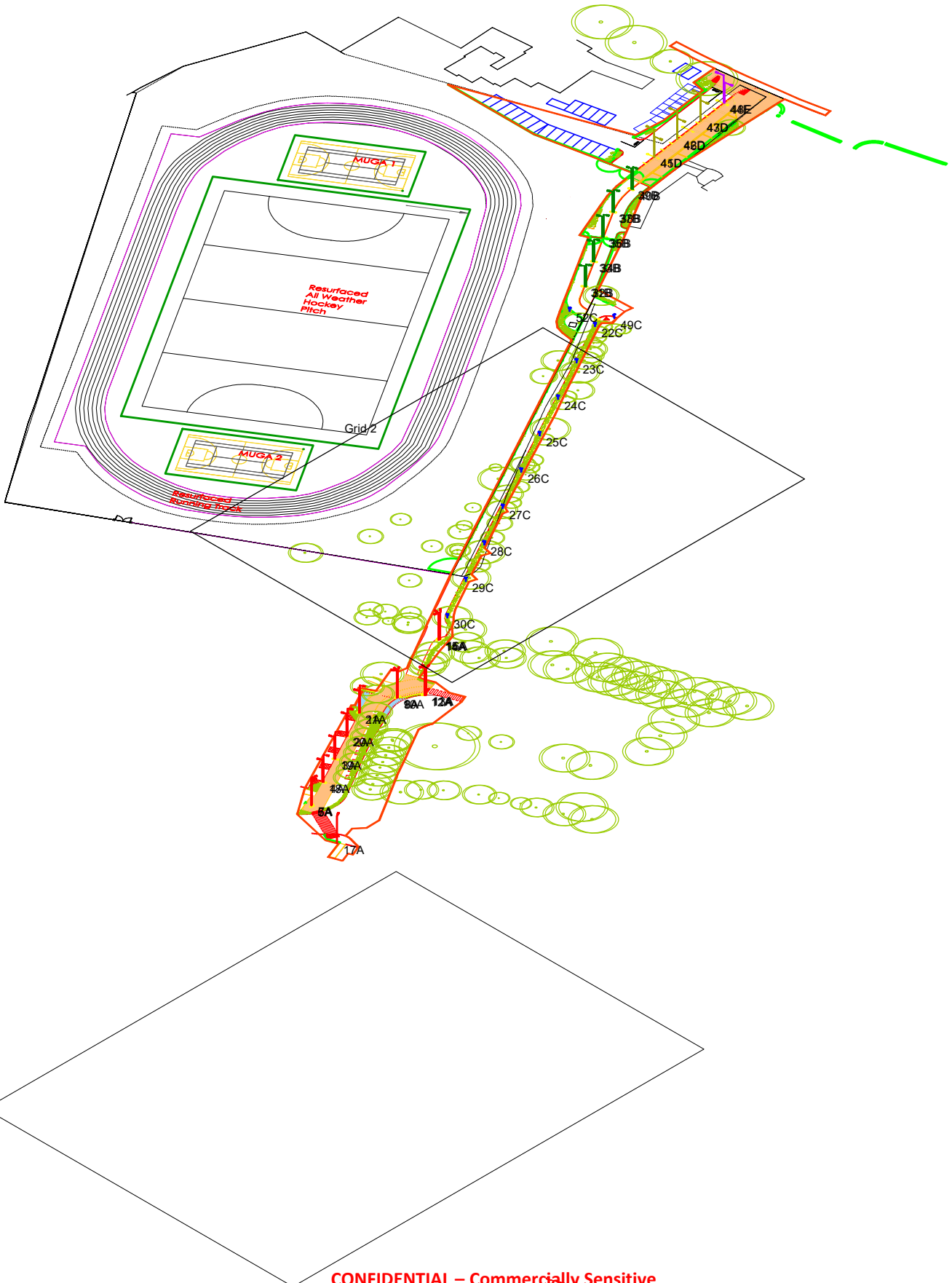


CONFIDENTIAL – Commercially Sensitive

This design remains the property of Signify Ireland Ltd

Horizontal Illuminance (lux)

Grid 2



CONFIDENTIAL – Commercially Sensitive

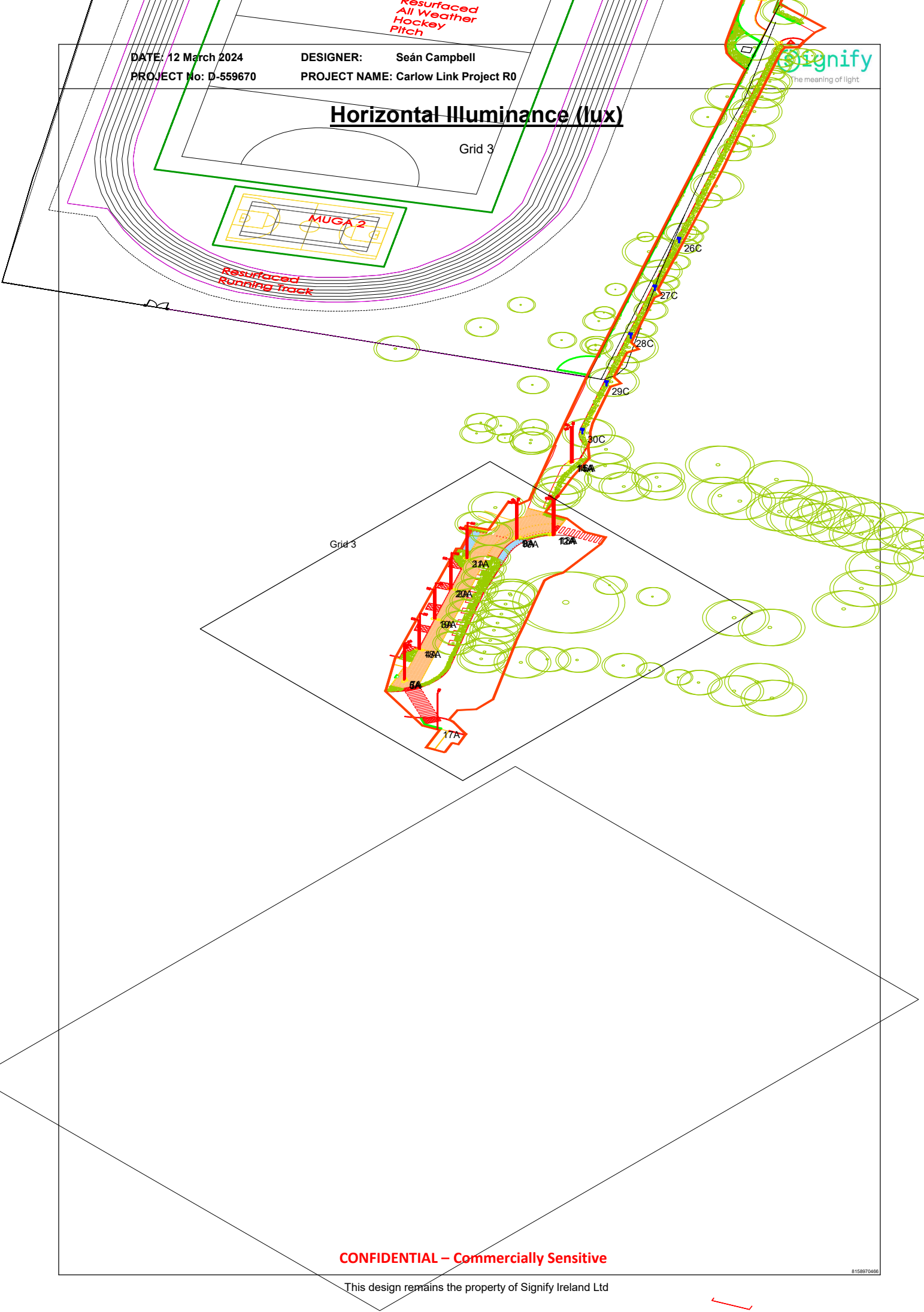
Resurfaced
All Weather
Hockey
Pitch

DATE: 12 March 2024
PROJECT No: D-559670

DESIGNER: Seán Campbell
PROJECT NAME: Carlow Link Project R0



Horizontal Illuminance (lux)



CONFIDENTIAL – Commercially Sensitive

This design remains the property of Signify Ireland Ltd

8158970486

Signify

the meaning of light