

LiAS Design Notes

This preliminary design is produced by the Lighting Application Specialist (LiAS) team of Signify UK 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, as this design does not purport to eliminate health and safety risks as a CDM Regulation 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 Principal Designer (which is not Signify UK) during the detailed design phase.

Project Specific Design Comments:

- Where 'Lighting Classes' have not been provided/specified, the calculations have been produced using 'CWL12-BRWD-XX-XX-RP-E-000600_Internal and External Lighting Report_S4_C01'.
 - Where column heights have not been provided/specified, these have been assumed to be 10m.
 - It has been assumed that luminaires will be mounted post-top.
 - Luminaires used have zero (0%) upward light output, meaning full cut-off above the horizontal. Furthermore, all luminaires are mounted horizontally so the peak beam is under 70 degrees from its downward vertical.
 - Illuminance levels around the Oak Tree are under 1 lux at ground level. The surrounding columns are 6m tall and the lanterns have internal louvres with full backward cut-off (Philips ref BL2).
 - Bollards have been removed from around the attenuation basin.
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- Preliminary Design proposals produced by the Signify LiAS Team are not to be used for installation purposes. It is the responsibility of the Principal Designer and/or Principal 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 Principal 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 Principal 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 Principal 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 Principal 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.

Luminaire Schedule

- EX-A

Column Quantity - 11

Column Height - 10m

Lantern Quantity - 11

Lantern - Philips LumiStreet BGP292

Optic - DX51

Lamp - LED80 727
- EX-B

Building Mounted Floodlight @10m on main building / @ 6m on generator building

Quantity - 12

Lantern - Philips ClearFlood G2 BVP655

Optic - A65-WB

Lamp - LED100 727
- EX-C

Column Quantity - 12

Column Height - 6m

Lantern Quantity - 12

Lantern - Philips LumiStreet BGP292

Optic - DM10 BL2 (Back Louvre Full Cut Off)

Lamp - LED80 727
- EX-D

Building Mounted Floodlight @4m

Quantity - 14

Lantern - Philips ClearFlood G2 BVP655

Optic - A65-VWB

Lamp - LED100 727
- EX-E

Building Mounted Floodlight @ 10m

Quantity - 2

Lantern - Philips ClearFlood G2 BVP656

Optic - A65-WB

Lamp - LED400 727
- EX-F

Column Quantity - 2

Column Height - 10m

Lantern Quantity - 2

Lantern - Philips LumiStreet BGP294

Optic - DW10

Lamp - LED240 727
- EX-G

Column Quantity - 3

Column Height - 10m

Lantern Quantity - 3

Lantern - Philips LumiStreet BGP292

Optic - DX10

Lamp - LED120 727

Signify Contacts:

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07933 647 399, george.pointing@signify.com

Rev	DSR no.	Comment	Date	LiAS	KAM	Project Number	Project Name
0	D-563105	INITIAL PROPOSAL	03/04/24	MG	GP	0400971167	CLW12 DATA CENTRE EXTERNALS
1	D-573978	UPDATED PROPOSAL	05/06/24	MG	GP		
S4R0	5861120	UPDATED PROPOSAL	20/12/24	MG	GP	Scale & Sheet Size NTS @ A3	Drawing Name LiAS DESIGN NOTES & LUMINAIRE SCHEDULE
S4R1	5925931	UPDATED PROPOSAL USING DRAWING CWL12-BYES-SW-XX-DR-E-680201_External Security Layout_S5_C06	27/12/24	MG	GP		
S4R4	6209606	LUMINAIRES REMOVED FROM CWL12.3 & 12.4 BUILDINGS	05/05/25	MG	GP	Sheet No DWG EX 00	
S4R5	6216967	LOW LEVEL BOLLARDS ADDED AROUND POND	08/05/25	MG	GP		
S4R6	6339929	LIGHTING CHANGED TO 2700K & CLEARFLOOD TO GEN2	14/07/25	MG	GP		
S4R7	6339929	BOLLARDS REMOVED	04/08/25	CG	GP		

Lighting Proposal Terms and Conditions of Use
These terms apply to the use of this preliminary proposal produced by Signify UK. This “ Proposal ” is understood to mean this document, a CAD drawing, lighting calculations, written documents, verbal conversations or any medium used to demonstrate or communicate the proposed lighting scheme using products from Signify's brands. A “ Customer ” is the person or organisation for whom the Proposal is intended. The “ CDM Regulations ” means The Construction, Design and Management Regulations 2015, the Safety, Health & Welfare at Work Act 2005, The Construction (Design & Management) Regulations (Northern Ireland) 2015.
This Proposal is for guidance only and cannot be relied upon for purposes of installation or Health and Safety.
The supply and installation of this lighting scheme are subject to a contract being agreed between Customer and Signify.

PROPOSAL
(NOT FOR CONSTRUCTION)



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Grid 1
Results - Horizontal Illuminance (lux)
Eav= 20.39
Emin= 5.01
Emax= 100.29
Emin/Emax= 0.05
Emin/Eav= 0.25
Emax/Eav= 4.92

Grid 2
Results - Horizontal Illuminance (lux)
Eav= 0.04
Emin= 0.01
Emax= 0.10
Emin/Emax= 0.06
Emin/Eav= 0.15
Emax/Eav= 2.53

Grid 3
Results - Horizontal Illuminance (lux)
Eav= 0.37
Emin= 0.19
Emax= 1.71
Emin/Emax= 0.11
Emin/Eav= 0.51
Emax/Eav= 4.61

Grid 4
Results - Horizontal Illuminance (lux)
Eav= 20.06
Emin= 8.70
Emax= 42.38
Emin/Emax= 0.21
Emin/Eav= 0.43
Emax/Eav= 2.11

Grid 5
Results - Horizontal Illuminance (lux)
Eav= 25.49
Emin= 10.48
Emax= 47.24
Emin/Emax= 0.22
Emin/Eav= 0.41
Emax/Eav= 1.85

Grid 6
Results - Horizontal Illuminance (lux)
Eav= 52.65
Emin= 40.63
Emax= 56.32
Emin/Emax= 0.72
Emin/Eav= 0.77
Emax/Eav= 1.07

Grid 7
Results - Horizontal Illuminance (lux)
Eav= 27.72
Emin= 6.92
Emax= 64.01
Emin/Emax= 0.11
Emin/Eav= 0.25
Emax/Eav= 2.31

- EX-A Column Quantity - 11
Column Height - 10m
Lantern Quantity - 11
Lantern - Philips LumiStreet BGP292
Optic - DX51
Lamp - LED80 727
- EX-B Building Mounted Floodlight @10m on main building / @ 6m on generator building
Quantity - 12
Lantern - Philips ClearFlood G2 BVP655
Optic - A65-WB
Lamp - LED100 727
- EX-C Column Quantity - 12
Column Height - 6m
Lantern Quantity - 12
Lantern - Philips LumiStreet BGP292
Optic - DM10 BL2 (Back Louvre Full Cut Off)
Lamp - LED90 727
- EX-D Building Mounted Floodlight @4m
Quantity - 14
Lantern - Philips ClearFlood G2 BVP655
Optic - A65-WB
Lamp - LED100 727
- EX-E Building Mounted Floodlight @ 10m
Quantity - 2
Lantern - Philips ClearFlood G2 BVP656
Optic - A65-WB
Lamp - LED400 727
- EX-F Column Quantity - 2
Column Height - 10m
Lantern Quantity - 2
Lantern - Philips LumiStreet BGP294
Optic - DW10
Lamp - LED240 727
- EX-G Column Quantity - 3
Column Height - 10m
Lantern Quantity - 3
Lantern - Philips LumiStreet BGP292
Optic - DX10
Lamp - LED120 727

- Notes:
- Unless agreed otherwise, the lighting proposal produced by the Lighting Application Specialist (LIAS) team of Signify UK&I is not intended for construction purposes, as it does not take into account the elimination of health and safety risks at this stage. For further details please refer to sheet number **DWG 00**
 - Do not scale for this drawing

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Project Number	0400971167
Scale & Sheet Size	1:500 @ A1
Sheet No	DWG EX 01



Project Name	CLW12 DATA CENTRE EXTERNALS
Drawing Name	PROPOSED EXTERNAL LIGHTING LAYOUT