



#### RESIDUAL DESIGN HAZARDS:

The location of existing utility services to be determined on site by the contractor.  
All street lighting installation works should be carried out in accordance with the relevant standards including:  
BS 7671, G39/1, Energy Network Association Technical Specification 43-8, HSE HSG47 and the Institution of Lighting Professionals guidance document (ILP GP03)

- Overhead electricity cable

#### GENERAL NOTES

- Before construction commences, the site engineer shall ensure that all design information is mutually compatible with all other drawings and documents provided by the overseeing organisation and all drawings and documents are to be read in conjunction with one another.
- In the event of apparent ambiguity or contradiction, SHD Lighting Consultancy Ltd and the overseeing organisation shall be notified immediately.
- SHD Lighting Consultancy Ltd accept no liability in the event of not being notified and where construction work has commenced.
- This lighting design has been prepared in accordance with the HEMSA/HEA Guidance Note - CDM2015 Regulations, Issue 1.1 dated 09/04/15 - Procedure 2 and The Construction (Design and Management) Regulations 2015 - PART 3 Health and safety duties and roles - 9. Duties of designers.

#### NOTES

- All works are to be carried out in accordance with the current Cumbria County Council street lighting design specification.
- The information on this drawing does not account for installation considerations, site conditions or provide any form of risk assessment.
- No account is taken for the blocking effect caused by buildings, trees, etc.
- The calculation shown by this drawing assumes that the whole area being considered is in the same plane, i.e. there are no changes in gradient or elevation.
- Column positions indicated upon this drawing may change without prior or additional notice due to local site or environmental constraints subject to designers approval.
- Any inaccuracies are to be reported to the overseeing organisation or site engineer immediately.
- The contractor shall liaise with the Distribution Network Operator in relation to the programming and coordination of any works associated with the connection and disconnection of street lighting equipment.
- The use of Independent Distribution Network Operator's (IDNO's) is permitted. Any chosen IDNO shall have a Service Level Agreement in place with Cumbria County Council prior to adoption of the new installation.
- The contractor shall provide Cumbria County Council street lighting department with the name, address and emergency contact details for any appointed IDNO.
- IDNO contact details shall also be stored inside the base compartment of each lighting column via means of an identification label.
- It should be assumed by the contractor that not all services have been identified during the design period. It is the responsibility of the contractor to ensure that all unidentified services are carefully located and reported.
- The contractor shall identify the location of any overhead electrical equipment prior to the undertaking of any onsite works. Should the presence of such equipment be identified, the contractor shall consult with the Distribution Network Operator for guidance.
- Any existing trees are to be cutback, removed or relocated elsewhere to avoid interference with the street lighting luminaire or prevent any future access or maintenance.
- The planting of trees near to lighting columns is to be avoided as future growth may inhibit lighting levels.
- Horizontal clearance for the maximum tree canopy shall be greater than 5m from any proposed lighting columns. Final lighting column identification numbers shall be agreed with the Cumbria County Council street lighting engineer.
- The Contractor shall provide the Cumbria County Council with as-built drawings, test certificates and column and lantern data sheets in accordance with Cumbria County Council street lighting specification.
- Lighting column foundations shall be designed in accordance with the manufacturer data sheets for the columns and soil types present (see also Cumbria County Council street lighting specification).
- The minimum distance for a lighting column to be erected from the kerb face in a service strip shall be 1.0 metres.
- The developer will be required to pay any energy liability charges with their electricity supplier until the date of formal adoption of the development.
- The developer will be responsible, unconditionally, for the condition, operation and any risk or liability of all the highways electrical equipment on all approved Section 38 agreement works until the date of formal adoption of the development.

#### STATUTORY SERVICE NOTES

- Current statutory service record plans should be obtained by the contractor / overseeing organisation before the commencement of any street lighting installation or removal works.
- It should be assumed by the contractor that not all services have been identified during the design period. It is the responsibility of the contractor to ensure that all unidentified services are carefully located and reported.
- The contractor shall identify the location of any overhead electrical or communication equipment prior to the undertaking of any onsite works. Should the presence of such equipment be identified, the contractor shall consult with the relevant statutory undertaker for further guidance.
- Installation and Removal works should be carried out in accordance with Energy Network Association Technical Specification 43-8, Electricity at Work Regulations 1989, Construction Design and Management (CDM) 2015 & G39/1 and all other relevant Health and Safety Executive regulations.
- All works in the vicinity of any overhead cables shall conform to the requirements of Health and Safety Executive, Guidance Note GS6 "Avoidance of danger from overhead power lines"
- All works in the vicinity of underground mains or cables shall conform to the requirements of Health and Safety Executive, Health and Safety Guidance HGS47 "Avoiding danger from underground services" and any additional requirements specified by the relevant undertaker.
- The contractor will be responsible for liaison with the undertakers and for programming the agreed protection and / or diversion works to any statutory undertakers apparatus into the overall works programme

#### LIGHTING CLASSIFICATION

This lighting design has been produced in accordance with :  
BS 5489-1:2020, CEN/TR 13201-1:2014 & BS EN 13201-2:2015 outdoor lighting documents and guidelines.

Lighting classification: P5 (BS 5489-1:2020, Table A.5)

Required lighting levels:  
Minimum average illuminance (Eav): >3.00 lux <4.50 lux  
Minimum illuminance (Emin): >0.60 lux  
Lighting Uniformity (Emin/Eav): >0.20 (>20%)

The details provided on this drawing are subject to comments by all the relevant approving authorities or overseeing organisation.  
No construction works shall take place until technical approval has been obtained by the approving authority or overseeing organisation.

It is to be understood that these drawings and the information shown are preliminary only and shall not be used for construction. Should the contractor commence work on site prior to obtaining technical approval, then it is entirely at their own risk and no liability shall be accepted by SHD Lighting Consultancy Ltd.

City 4

Proposed conical aluminium lighting column of 5.0 metre nominal height with a planted base as supplied by Aluminium Lighting Company to Cumbria County Council Street Lighting Specification.

Column Reference:

Luminaire Type: Thorn Isaro Pro Small

Luminaire Reference: Isaro Pro Small 12LED 350mA EWR

Mounting Type: Post top mounted

Luminaire Tilt: 0°

Lumen Output: 1.87klm

Charge Code: 42 0015 0000 100

Luminaire Wattage: 15w

Colour Temperature: Warm White (3000k)

Luminous Intensity: G3

Control Gear: DALI enabled driver

Control Type: Lucy Zodion SS9 10lux (1:1) PECU mounted in 7pin NEMA socket. Ref: SP01662 white band.

Dimming Profile: Dusk until 21:00: 100% lumen output  
21:00 until 06:00: 50% lumen output  
06:00 until Dawn: 100% lumen output

Supply: DNO electrical supply connection

Primary Isolator: DNO approved double pole isolator

Secondary Isolator: Tofco F144DP single fuse double pole cut-out

Internal Wiring: Supply cable between cut-out and luminaire shall be 1.5mm² twin & earth cable

Door Orientation: Perpendicular to kerb facing away from oncoming vehicles

City 2

Remove existing luminaire and hand back to Cumbria County Council for reuse or recycling and replace with side entry mounted Thorn Isaro Pro Small luminaire.

Luminaire Type: Thorn Isaro Pro Small

Luminaire Reference: Isaro Pro Small 12LED 350mA EWR

Mounting Type: Side entry mounted

Luminaire Tilt: 0°

Lumen Output: 1.87klm

Charge Code: 42 0015 0000 100

Luminaire Wattage: 15w

Colour Temperature: Warm White (3000k)

Luminous Intensity: G3

Control Gear: DALI enabled driver

Control Type: Lucy Zodion SS9 10lux (1:1) PECU mounted in 7pin NEMA socket. Ref: SP01662 white band.

Dimming Profile: Dusk until 21:00: 100% lumen output  
21:00 until 06:00: 50% lumen output  
06:00 until Dawn: 100% lumen output

Supply: Existing to remain

Primary Isolator: N/A

Secondary Isolator: Tofco F144DP single fuse double pole cut-out

Internal Wiring: Supply cable between cut-out and luminaire shall be 1.5mm² twin & earth cable

Door Orientation: N/A

Private solar lighting column.  
Shown for contributory lighting 'tie in' purposes only.

Existing luminaire to be removed.  
Luminaire to be removed and handed back to the Local Authority for reuse or recycling.

#### UNIT IDENTIFICATION KEY:

LC\*\* Proposed lighting column identification number

EX\*\* Existing lighting column identification number

#### ELECTRICAL CONNECTION TYPE:

DNO Distribution network operator connection

#### ISOLUX CONTOUR KEY:

0.20 Isolux contour line

0.60 Isolux contour line

2.00 Isolux contour line

R0	INITIAL DESIGN FOR REVIEW AND COMMENT	01/04/2023	SRH
REV	DESCRIPTION	DATE	BY

# SHD

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SCHEME: ARLECDON ROAD, CUMBRIA

DRAWING: S278 LIGHTING DESIGN

CLIENT: NIGEL KAY HOMES LTD

DRAWING NUMBER: SHD960-SHD-HLS-ARLECDON-ED-Lighting Layout-R0

DRAWN: SRH

CHECKED: SRH

APPROVED: R0

CONTRACT NUMBER: SHD960

DATE: 01/04/2023

SCALE @ A1: 1:250

REVISION: R0

PRELIMINARY DESIGN - NOT FOR CONSTRUCTION