SUFFOLK
STREETLIGHTING
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Streetlighting

Design and Construction Guide

* This document is subject to regular review and update. The Proposer should seek confirmation from the Council that this version is the latest document before applying the content.

Suffolk
County Council

Contents

1 Introduction

1.1 Background

Suffolk County Council (the 'Council') owns approximately 80,000 street lighting assets installed across the County. The Council is responsible for the operation (including energy costs), ongoing planned and reactive maintenance and replacement of life expired assets.

Although the asset quantity remains relatively constant, the Council does, from time to time, adopt additional street lighting assets into its asset register, the key reasons being:

- The accrual of new, replaced or upgraded street lighting assets, normally as a result of developer S38 or S278 agreements.
- The installation of new, replaced or upgraded street lighting assets as part of a highway improvement scheme (e.g., public realm improvements)

When adopting new, replacement or upgraded assets the Council need to ensure the street lighting has been designed and constructed in accordance with appropriate standards.

1.2 Document Purpose

Application of the requirements of this document will allow a Proposer to comply with the Council's design and construction requirements ensuring that if submitted for adoption, the appropriate standards for permanent accrual into its street lighting asset register are met.

1 Terms of reference

1.3 Definitions

In this document the following words and expressions shall, save where the context or the express provisions of this document otherwise require or admits, be deemed to have the following meanings:

"Apparatus"	Means all of the following: Lighting column attachments, control gear, feeder pillars, flood lighting, illuminated bollards, illuminated centre island beacons, illuminated traffic signs, lighting columns and lantern units, luminaires, non-illuminated traffic signs, traffic sign posts, private cable network, school crossing patrol warning lights, street market electrical infrastructure, subway lighting.
"Council"	Means Suffolk County Council.
"Design Pack"	Means the design pack detailed in Section 5 (Design).
"Proposer"	Means the person(s) responsible for the development / scheme – eg, a Council Officer, a third party acting on behalf of the Council, a private developer or a consultant acting on behalf of a developer.
"Council's SL Contractor"	Means Suffolk County Council's Term Service Contractor.

1.4 Reference Documents

The documents listed below are the relevant standard that may apply when preparing a design and installing street lighting:

- Suffolk County Council - Street Lighting Part Night Lighting Policy.
- Suffolk County Council - Street Lighting Dimming Strategy.
- Suffolk County Council - Specification Appendices.
- Suffolk County Council - Standard Detail Drawings.
- BS5489: Part 1 - Design of Road Lighting.
- BSEN 13201: Parts 1 to 5 – Road Lighting.
- Institute of Lighting Professionals Technical Reports and Professional Lighting Guides.
- Design Manual for Road and Bridges.
- BS7671 - IET Wiring Regulations 18th edition with current amendments.
- PD6547 - 2023 Guidance on the use of BSEN 40-3-1 and 40-3-3.
- Health and Safety Executive GS6 – Avoiding Danger from Overhead Power Lines.
- Energy Networks Association – Engineering Recommendation G39.
- National Grid Technical Guidance 287 – Third party guidance for working near National Grid Electricity Transmission equipment.
- HSE Guidance Note GS6 (Avoiding Danger from Overhead Power Lines)

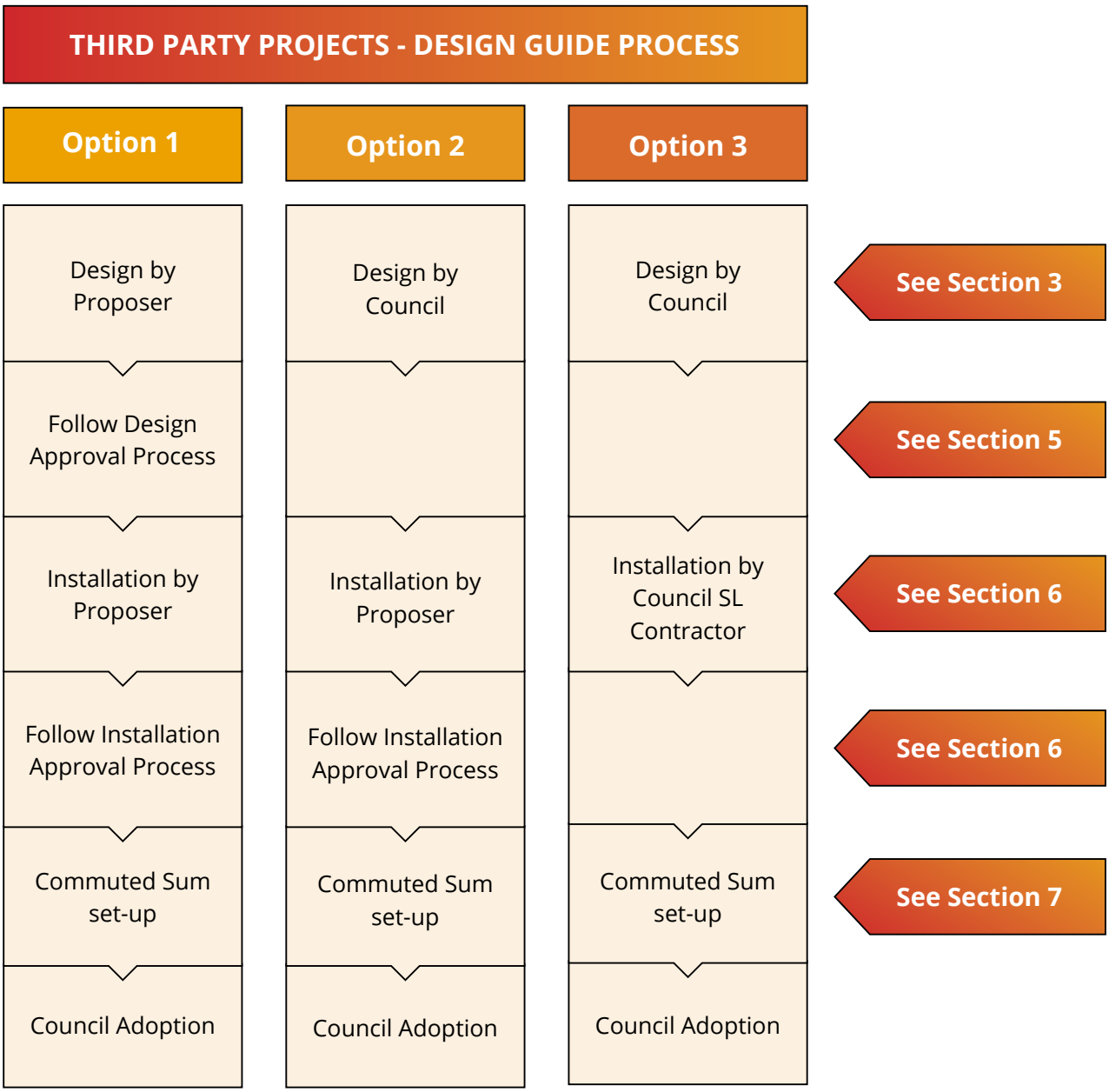
* Please note that reference documents are subject to change, replacement or withdrawal without notice. In such cases the Proposer may need to seek advice from the Council.

2 Project delivery

2.1 Delivery Options

When seeking to deliver a new, replaced or upgraded street lighting project the Proposer has the delivery options described in the flow chart below available to it.

This content of this document applies to all three options.



3 Design requirements

3.1 Design Delivery Options

The Proposer has two options available when delivering a design for street lighting. These are 'design by the Council' or 'design by the Proposer'.

3.1.1 Design by the Council

If a scheme is designed by the Council, the approval process described in section 5 (Design Approval Process) shall not apply – also refer to flow chart in section 2 (Project Delivery) above.

Design costs shall be determined for each project based on the 'design costs' in section 7 (Proposer Costs).

3.1.2 Design by Proposer

If a lighting scheme is designed by the Proposer (or an appointed third party), the approval process described in section 5 (Design Approval Process) shall be applied – also refer to flow chart in section 2 (Project Delivery) above.

When designed by the Proposer, design costs shall be payable by the Proposer.

Lighting designs shall be prepared and presented in the format described in the street lighting design pack (see section 5 (Design Approval Process) below).

3.2 Lighting Design Standards

The lighting design standards and parameters applicable to all new and replacement street lighting schemes are detailed within this section.

3.2.1 Lighting Classes (General)

Lighting classifications appropriate to the scheme shall be selected from the table below.

Table 1

Road Hierarchy	Reference Document	Traffic Flow* / Lighting Class
Strategic Route (i.e. 'A' Class Roads and dual carriageways)	BS5489 Part 1:2020, Table A.2	High to very high (M2)
		Low to moderate (M3)
		Very Low (M4)
Main Distributor (i.e, 'B' class roads)	BS5489 Part 1:2020, Table A.3	High to very high (P1)
		Low to moderate (P2)
		Very low (P3)
Secondary Distributor (i.e, Principal classified roads)	BS5489 Part 1:2020, Table A.5	Busy (P2)
		Normal (P3)
		Quiet (P4)
Link Road (i.e, Principal unclassified roads such as residential bus routes)	BS5489 Part 1:2020, Table A.5	E1/E2 (P3)
		E1/E2 (P4)
Local Access Road (i.e. Residential roads)	BS5489 Part 1:2020, Table A.5	E1/E2 (P4)
		E1/E2 (P5)
Minor Road (i.e. Cul-de-sacs and NMU routes)	BS5489 Part 1:2020, able A.5	E1/E2 (P5)
		E1/E2 (P6)

* Traffic flow definitions (extracted from BS5489-1)

Traffic Flow	Definition
High to very High traffic flow	average daily traffic (ADT) > 40k.
Low to moderate traffic flow	average daily traffic (ADT) >7k and <40k.
Very low traffic flow	average daily traffic (ADT) < 7,000.
Busy traffic flow	traffic usage is high (local amenities such as clubs, shopping facilities, public houses, etc).
Normal	traffic usage is of a level equivalent to a housing estate access road.
Quiet	traffic usage is residential road and is mainly associated with the adjacent properties or properties on other equivalent roads accessed from this road.

3.2.2 Conflict Areas

Conflict areas shall be applied where strategic routes, main distributor and secondary distributor roads meet each other at junctions or roundabouts.

When conflict areas are identified, a lighting design solution will be designed by application of the requirements of BS5489 Part 1 1:2020 Table A.4. and ILP Professional Lighting Guide PLG02 (The Application of Conflict Areas on the Highway).

Footways and cycle paths located directly adjacent to a conflict area shall, unless agreed otherwise with the Council, be included within the conflict area calculation. Where there are footways or cycle paths that are segregated from the conflict area by a verge, swale or similar, these will generally not be include in the conflict area.

3.2.3 Environmental Requirements

The environmental zone appropriate to the scheme shall be selected from the table below.

Table 2 - Environmental Zones

Environmental Zone	Surroundings	Description
E0	Protected	Not applicable.
E1	Natural	Not applicable.
E2	Low district brightness	All roads in the county outside the town and district centres.
E3	Medium district brightness	Including roads within Ipswich, Bury St Edmunds, Felixstowe, Lowestoft, Newmarket.
E4	High district brightness	Not applicable.

Town centres are for the areas depicted above for E3 Medium district brightness can be located at Suffolk Town Centres.zip

3.2.4 Conservation Areas

Where units are to be replaced in conservation areas, these shall be designed on a like-for-like basis to maintain the aesthetic appearance of the surrounding area.

For new installations, the Council shall be consulted regarding equipment specification; in the first instance this shall generally be the standard specification with the lantern and column finished to RAL 9005 Black.

Conservations areas can be located at:

https://www.eastsuffolk.gov.uk/planning/geographic-information-system/

https://www.babergh.gov.uk/w/conservation-area-appraisals-1

https://midsuffolk.gov.uk/w/conservation-area-appraisals-1

https://www.westsuffolk.gov.uk/planning/Conservation/conservationareasandappraisals.cfm

https://www.ipswich.gov.uk/planning-and-building-control/conservation-and-urban-design/conservation-areas

3.2.5 Pedestrian Crossings and Zebra Crossings

Where the zebra crossing or controlled pedestrian crossing areas are located within, or adjacent to a conflict area, the conflict area shall be extended to include both the crossing and its approach.

Where Zebra crossings are located remote from a conflict area, the design solution shall be developed by application of ILP Technical Report TR12 (Lighting of pedestrian crossings), the result being that supplementary horizonal and vertical lighting will be provided to increase the ambient horizontal lighting levels.

- Horizontal carpet illumination – 3.5 times ambient illumination level.
- Vertical front of path grid – 2 times ambient illumination level.
- Vertical centre grid – 2 times ambient illumination level.
- Vertical back of path grid – 1.5 times ambient illumination level.

Where controlled pedestrian crossings are located remote from a conflict area, a separate conflict area shall be applied as per the requirements of TR12. Negative contrast should also be applied where possible.

3.2.6 Cycle-paths and Cycleways

All cycle-paths and cycleways shall be lit to the lighting design standards and parameters for minor roads, as described in Table 1 above.

Cycleways adjacent to or within M class roads shall be subject to separate lighting calculations that demonstrates compliance with the required light levels.

For P class roads the cycleway shall be incorporated into the P class calculation.

The same requirement shall apply to cycleways introduced onto existing roads.

3.3 Lighting Design Parameters

3.3.1 Lantern Unit Mounting Heights

Typical mounting heights for lantern units based on road type are detailed in the table below. Where there is more than one option, the preferred mounting heights for any given scheme shall be agreed with the Council.

Table 3 - Lantern Mounting Heights

Road Hierarchy	Nominal Mounting Height
Strategic Route	10m or 12m
Main Distributor	10m
Secondary Distributor	8m
Link Road	6m or 8m
Local Access Road	6m
Minor Road	5m or 6m
Remote footpaths	5m

3.3.2 Maintenance Factors (MF)

It is important that all lighting calculation use the correct maintenance factor. Designers shall determine the maintenance factors applicable to the scheme by application of the relevant British Standards and manufacturers data. The calculation applied determining the maintenance factor for a scheme shall be submitted to the Council with each lighting design submission.

3.3.3 Light Source Colour Temperatures

All cycle-paths and cycleways shall be lit to the lighting design standards and parameters for minor roads, as described in Table 1.

4 Apparatus requirements

4.1 General

A schedule of Apparatus approved for use on new and replacement street lighting schemes within the County is scheduled in Appendix A (Street Lighting Apparatus). Additional requirements are provided within this section.

The Council has a comprehensive suite of street lighting standard detail drawings available on the Council's website – link - Standard Detail Drawings.

If the proposer wishes to seek a departure from any of the Apparatus requirements within this document, written approval will be required from the Council. The approval process is outlined in section 4.6 below.

4.2 Cable Networks

If a scheme is designed by the Council, the approval process described in section 5 (Design Approval Process) shall not apply – also refer to flow chart in section 2 (Project Delivery) above.

Design costs shall be determined for each project based on the 'design costs' in section 7 (Proposer Costs).

4.2.1 Distribution Network Operator Requirements

All powered Apparatus shall have a supply derived from a Distribution Network Operator (DNO) supply point. The Council preference is for the DNO supply to be connected directly into each lighting column / illuminated signpost and a private cable network from the nearest lighting column or feeder pillar to be connected into all other street lighting Apparatus where the DNO will not allow a DNO connection e.g. illuminated signs on roundabouts / apparatus on centre islands. If the Proposer is intending to use a different type of cable network arrangement, approval should be applied for before commencement of any works.

The proposer shall be responsible for all works associated with obtaining DNO contestable and non-contestable works (disconnections, transfers and connections).

The Proposer's design proposals for DNO works shall be presented in the format described in the street lighting design pack.

4.2.2 Private Cable Network Standards

The Proposer shall replace all existing private cable network (PCN) affected by the works during the installation of new or replacement street lighting Apparatus, in addition:

- The Proposer's design proposals for PCN works shall be presented in the format described in the street lighting design pack;
- Cable types and sizes shall be determined using BS7671 compliant industry standard cable calculation software such as "Amtech" or similar approved;
- No cable joints shall be used on existing or proposed PCN;
- Where the existing private cable network consists of overhead supply cables, the Proposer shall replace the overhead cables with an underground private cable network or dedicated DNO supplies.

Where Apparatus has an electricity supply derived from another third party PCN, the Proposer shall replace the supply with a DNO derived connection point located within the Council's highway boundary.

4.2.3 Cable Network Terminations

DNO and private cable network cables shall be terminated into Apparatus in accordance with the termination arrangement standard drawings detailed in the Council's standard detail drawings.

4.3 Illuminated and Non-illuminated Traffic Signs

The Proposer shall design all traffic signs and traffic sign layouts to comply fully with the Traffic Signs Regulations and General Directions (TSRGD).

The Proposer shall be responsible for ensuring that any traffic signs attached to lighting columns are not of a size that exceeds the design limitations of the lighting column.

If any signage is required on existing columns, the Proposer will be responsible for arrangement and payment of EN40 Structural testing to ensure the existing asset can accommodate the additional wind and loading. Where the result determines the attachment of signage is not acceptable, the proposer would need to fund the replacement of the asset upon approval from the Council.

4.4 Lighting Columns

Lighting columns shall be tubular steel hot dipped galvanised in accordance with BS EN ISO 1461.

Lighting columns shall be coated internally and externally on the part of the column intended to enter the ground and for 250mm above ground level with a glass flake root protection consisting of two pack epoxy glass flake protective coating, on top of the galvanising. The colour of the glass flake root should be consistent throughout all phases of a development.

Lighting columns and detachable brackets shall have a unique identification mark which indicates the year of manufacturer, the column reference number and information by which the material can be identified for recycling. The identification plate shall be 60mm x 90mm minimum and manufactured from a durable material suitable for the life of the column. The identification plate shall also have the date of installation and name of installation contractor.

Lighting Column terrain category, exposure coefficient (Ce(z)), topography factor (f) and reference wind velocity speed (V ref,0) as defined in BS EN 40-3-1 shall be as detailed below.

Table 4 – Lighting Column Specifics

Administrative Area	Suffolk
10 min mean wind velocity (m/sec)	23
Maximum altitude (m)	86
Rationalized wind loading region	Extra Light*
Rationalized wind loading factor (N/m²)	350
Lighting column height ≤8m	Terrain Category III
Lighting column height >8m	Terrain Category II

* **Note;** Column manufacturer should be referred to if proposed lighting columns are within 5km of the coastline.

Lighting Columns shall have a planted base with foundations constructed in accordance with the local ground conditions, note; typical details are provided within the Council's standard detail drawings but these details will need to be confirmed on a scheme specific basis.

All columns installed on remote footpaths, or where there is no vehicular access for a van mounted mobile elevated work platform, shall be based hinged and supplied in accordance with Appendix A (Street Lighting Apparatus) or similar approved. Columns installed in centre islands to have installation of mid hinged columns considered to facilitate future maintenance.

Lighting columns shall be fitted with single doors unless otherwise agreed with the Council. Lighting column door locks shall be 'foxes head' type fitted with an M8 standard triangular door key. Lighting columns shall generally be installed so that the door openings face away from oncoming traffic.

Lighting column base compartment shall incorporate a non-hygroscopic hardwood backboard minimum (width) 90mm & (thickness) 15mm to accommodate the cut out, service cable and other control assemblies. Cable entry slots have a minimum size of 150mm x 75mm.

Lighting column doors shall be as detailed below.

Table 5 – Lighting Column Doors*

Column Height (m)	Diameter of base (mm)	Door size (mm)
<6m	140	500 x 100
≥6m	168	600 x 115

* No earth cable shall be connected to the column door.

Lighting columns with a nominal height ≥6m shall be designed to support a 0.3sq.m traffic sign mounted at a clearance height of 3m above ground level (eccentricity from the centre line of the column to the centre of area of the sign shall be taken as 300mm). The orientation of the sign shall be selected to produce the most adverse effects for the design condition being considered., The mass shall be taken as 5kg and the shape coefficient of the sign shall be taken as 1.8.

Lighting columns shall incorporate Suffolk County Council identification number plates, 2m above ground level facing 45° across the road or pavement towards oncoming traffic. In some areas instead of number plates The Client may request the number to be stencilled onto the Lighting Unit using Paint and 50mm or smaller stencils.

Lighting columns shall be fitted with M8 brass earth studs, 30mm long threaded whole length, with two plain brass washers and two brass hexagonal nuts within the base compartment easily accessible through the door opening. These shall be welded or brazed to the access door and the inside wall of the column and shall be distinctly and permanently marked using a metal label **"SAFETY ELECTRICAL CONNECTION - DO NOT REMOVE"**.

The Contractor shall supply and connect to the main earth stud a sufficient length of earth cable, correctly sized and coloured, minimum size 10mm², for connection by the DNO.

Where columns are mounted on structures or in situations where there is a risk that a detached door could cause an accident if it fell onto the area below, the door shall be attached by a chain or other approved tethering device.

4.5 Lantern Units

Lantern units shall, unless otherwise agreed with the Council, be of the type specified in Appendix A (Street Lighting Apparatus).

Lantern units shall be fitted with a 7 pin NEMA socket with NFC DALI Driver and be PECU controlled.

4.6 Apparatus Departure Application

Where the Proposer is seeking a departure from the Apparatus specified within Appendix A (Street Lighting Apparatus), a formal submission shall be made. Such submission shall include:

(a) A table completed for the departure Apparatus in the same format as that presented in Appendix A (Street Lighting Apparatus).

(b) Full details of the departures applicable to the Apparatus being proffered and explanation of the reasons for the proposed departure.

The information shall be submitted in sufficient time to afford the Council a reasonable opportunity to consider the departure, and in any event it shall be not less than forty (40) business days prior to the proposed scheme implementation date.

The Council shall, normally within twenty (20) business days, formally grant or withhold its approval of the street lighting Apparatus departure. If the Council withholds approval, an explanation of the grounds for rejection will be provided.

On occasion the Council may accept a departure subject to the introduction of a refined commuted sum value. If a refined life cycle maintenance and operation sum value is considered acceptable to the Council this will be detailed within the Council's SL Contractor's grant or withhold notice – for refined life cycle maintenance and operation sum details see Section 8 (Costs) for details.

5 Design approval process

5.1 Design Pack Preparation

A street lighting Design Pack is required for any new or replacement street lighting schemes.

Sample Design Packs are available for information purposes – please contact the Council for details.

Table 6 – Design Pack Content

Item	Document	Content Description
1	Design Review Report	This Section includes information on: Site Survey Feedback, Designed Lighting Class selection, Column Positions, ecology report, above ground obstructions.
2	Existing & Proposed Road Lighting Layout Drawing(s) (as a combined drawing)	ACAD drawing (Minimum 1:500 scale), detailing all existing and proposed Apparatus: Existing & proposed lighting Columns, Illuminated and non-illuminated signs, Low voltage mains Obstructions e.g. trees, dropped kerbs, etc,.
3	Proposed Horizontal ISO-Contours Drawing(s)*	ISO contour lines for the applicable lighting class .e.g. P4 = 5 lux and 1 lux lines.
4	Road Lighting Calculations (Max, Min, SSL & STAG) (where applicable)	Straight road lighting calculations showing calculated maximum and minimum spacings for single sided, staggered, opposite and twin central configurations.
5	Area Lighting Calculation *	Area calculations provided for conflict areas, and all housing estate roads which have a complex geometry that are not suitable for straight road calculations.
6	Management Information System Schedule	Apparatus Data Set information required for adoption.
7	Private cable network Cable Calculations (where applicable)	Cable calculations produced on licensed software to show compliance with BS7671.
8	Lighting Column Attachments Schedule	Schedule provides details of all existing attachments to lighting columns, photographs of each and also a proposal for relocation and/or replacement.
9	Design Stage Risk Assessment (CDM)	Design hazard elimination and risk reduction form which details all risks and measures taken by the design team to eliminate.
10	Street Lighting Apparatus Schedule	Schedule contains information on all existing and proposed Apparatus, including location, electricity supply type & works, electrical termination, lantern / lamp type / column height.

* All lighting design calculations shall be prepared using the industry standard street lighting design software "Lighting Reality" or similar approved.

5.2 Design Submission

The Proposer shall submit the completed design pack to the Suffolk County Council Street Lighting Design Engineer for the Council to assess and approve where all criteria is met.

In accordance with 7.2, the approval process will attract a minimum cost of £950. A purchase order with full invoicing details will need to be provided from which an invoice will be raised and payment made to the council prior to carrying out the assessment.

5.3 Design Acceptance

Normally within thirty (30) business days of receipt of the design submission the Council shall review the design submission and serve a written notice either:

(a) confirming that the Council is satisfied that the proposed design meets the required standards; or

(b) issuing a design amendment notice to the Proposer stating that the required standards have not been achieved to the Councils reasonable satisfaction, setting out in sufficient detail the way in which the required standards have not been achieved.

Where paragraph (b) applies, the Proposer shall rectify or procure the rectification of the design, so that the required standards are met to the Councils satisfaction. Upon completion of any rectification works, the Proposer shall again submit a design pack to the Council for approval where the council will respond within a further thirty (30) business days.

If after this second design submission the lighting design still does not meet the required council standards, then a further design amendment notice will be issued to the Proposer and the subsequent re-submission of the lighting design will be subject to a further £950 assessment fee. The above process shall be repeated until such time the Council issues written notice confirming that the Council is satisfied that the proposed design meets the required standards.

6 Installation approval process

6.1 Installation by Council's SL Contractor

Where the Proposer has the street lighting installation works completed by the Council's designated SL Contractor, the Proposer shall be responsible for the procurement and management of said SL Contractor's services including all costs and programming of the works.

6.2 Installation by the Proposer

The Proposer's street lighting installation contractor shall be HERS accredited.

If the Proposer has the street lighting installation works completed by its own contractor – whether designed by the Council, or not - then the Proposer shall follow the pre-installation and installation approval process that follows within this Section.

6.2.1 Pre-installation – Proposer Adoption

Where working on existing Council highway and apparatus as part of a S278 agreement, the Proposer shall provide written notice of any existing Apparatus affected by the Proposers works not less than thirty (30) days before commencement of the works. The notice given shall confirm when the Proposer intends to take possession of the site and therefore the affected Apparatus within it. In any case, at the commencement of the works date the Proposer will adopt the affected Apparatus and all maintenance and repair works will become the responsibility of the Proposer. Where notification is not provided and the council's streetlighting contractor attends site due to a fault being reported by the Council's central management system, all abortive costs will be passed to the Proposer.

All responsibility for maintenance and repairs will continue to be the responsibility of the Proposer until receipt of an Apparatus acceptance notice from the Council as described in Section 6.2.4.

6.2.2 Installation Process - On-going Site Inspections

The Proposer shall confirm to the Council the intended start and anticipated works completion date no less than ten (10) business days before commencement of the works. If at any time the works completion date is extended beyond the original anticipated works completion date then the Proposer shall confirm the revised works completion date no less within two (2) business days of becoming aware of the revision.

The Council may at any time carry out random checks to ensure that installation of the relevant street lighting Apparatus is being carried out in accordance with good industry practice and that the required standards are being met. If at any time the Council is not satisfied (acting reasonably) that the required standards are being met, the Council will inform the Proposer.

6.2.3 Installation Process - Completion Notification

Upon completion of the works the Proposer shall notify the Council of completion in writing, such notification shall include the following hand-over information:

- As installed drawings, original design data in accordance with Section 5 (Design Approval Process);
- The nature, location and extent of the works and a description of the Apparatus to be inspected (including a plan showing the location of the installed Apparatus);
- Details of any cable distribution networks forming part of the Apparatus and proposed to be taken over by the Council including the prior Council agreement to accept this type of network;
- Electrical test certificates for the street lighting Apparatus;
- Written confirmation from the developer that the Apparatus complies with the required standards detailed within this Standard Development Specification;
- Details of any agreed departures from the Standard Development Specification together with written confirmation from the Council's SL Contractor that the departures have been deemed acceptable;
- Sufficient relevant information to allow the Council to confirm compliance with any Legislation.

6.2.4 Adoption following completion

Upon completion of the works the Proposer shall notify the Council of completion in writing. See costs associated with installation acceptance inspections in Section 7.

Normally within fifteen (15) business days of receipt of written notification of completion from the Proposer, the Council shall inspect the relevant Apparatus and within ten (10) business days of such inspection shall serve a written notice and either:

(a) Issue an Apparatus acceptance notice to the Council and Proposer confirming the Apparatus inspected achieves the required standards to the Council's reasonable satisfaction; or

(b) Issue an Apparatus amendment notice to the Council and Proposer stating the required standards have not been achieved to the Council's reasonable satisfaction, setting out in sufficient detail the way in which the required standards have not been achieved.

When paragraph (a) applies, subject to receipt of the life cycle maintenance and operation sum from the Proposer, the Council shall adopt the street lighting Apparatus into the scope of the Council's street lighting Contract.

When paragraph (b) applies, the Proposer shall rectify or procure the rectification of such rejection(s) so that the required standards are met to the Council's satisfaction. Upon completion of any rectification works the Proposer shall again serve written notice in accordance with section 6.2.3 above and the process shall be repeated until an Apparatus acceptance notice is issued.

7 Proposer Costs

7.1 Design Costs

The Proposer has two options available when delivering a design for street lighting, these are 'design by the Council' or 'design by the Proposer'. If the Proposer's preference is for the design to be 'design by the Council' the Proposer can request a design fee proposal from the Council. Note; such requests will normally take no less than twenty (20) business days to process.

7.2 Design Review and Approval Costs

If a scheme is designed by the Council the approval process described in section 5 does not apply. Where the Proposer's preference is for the design to be 'designed by the Proposer' the Council will levy a design review and approval fee, the fee will vary based on the scheme size and in accordance with 5.2. The Proposer can request, from the Council, a lighting design assessment and resulting approval; such requests are generally responded to within thirty (30) business days. Note that design requests where the Council has been directly appointed to carry out will be prioritised in the first instance.

7.3 Installation Costs

The Proposer's HERS accredited contractor can carry out the street lighting installation themselves or the Proposer can request a quotation for the installation works to be carried out by the Council's Street Lighting Contractor by emailing – streetlightingled@suffolkhighways.org

7.4 Commuted Sums

7.4.1 Life Cycle Adoption Sums

The following life cycle maintenance and operation sums shall be applied to all street lighting improvement schemes.

Table 7 – Life Cycle Adoption Sums

Item	Description	Life Cycle Cost
1	Standard lighting column ≤6m	£1,758.00
2	Standard lighting column >6m ≤8m	£2,138.00
3	Standard lighting column >8m ≤10m	£2,212.00
4	Heritage lighting column ≤6m	£3,125.00
5	Heritage lighting column >6m ≤8m	£3,392.00
6	Heritage lighting column >8m ≤10m	£3,494.00
7	Raise & Lower lighting column	£2,530.00
8	Traffic sign illuminated on lighting column	£1,022.00
9	Traffic sign illuminated on sign post mounted	£1,713.00

* Note; values reviewed annually by the Council (Current version 2025)

The life cycle maintenance and operation sums detailed within the table above are calculated from established contract sums. If the Proposer's designer is proposing the use of street lighting Apparatus that differs from the already agreed sums then the Proposer will need to formally agree refined rates with the Council at design stage, for details of the process applicable to gaining approval to use alternative Apparatus see Section 4.

The life cycle maintenance and operation sums quoted in the table above shall be applied to each item of street lighting Apparatus installed by the Proposer. The sum applicable to the proposed scheme shall be paid as a one-off adoption fee to the Council upon completion of the scheme, and before an Apparatus acceptance notice is issued by the Council.

The calculation below demonstrates the how the life cycle maintenance and operation sum is calculated.

7.4.2 Sample Life Cycle Scheme Calculation

Installation on new a development consisting of 6 no. street lighting columns of 6m nominal height and 1 no. illuminated traffic sign.

Table 8 Sample Life Cycle Scheme Calculation

Item	Description	Qty	Rate	Life cycle cost
1	Standard Lighting Unit – < or equal to 6m Mounting Height	6	£1,725.17	£10,548.00
2	Internally Illuminated Sign mounted on wide-based Post	1	£1,679.47	£1,713.00
			Total	**£12,261.00**

8 Change Control

8.1 Change Protocol – Initial Enquiry

If the design and/or installation works to be executed departs from that approved by the Council the Proposer shall request a change. The following information should be included with the change request:

- The nature, location and extent of the works;
- A scope of works outlining the design requirements (if any) and the installation requirements (if any) – see note below;
- Design programming details including any special consultation requirements;
- Installation programming details including any special requirements with respect to liaison with third parties;
- Procurement details with respect to other works included within the scheme;
- Design proposals to include design completion timescales and any project specific considerations;
- Installation requirements including any requirement for the Council's SL Contractor to work with other contractors on the scheme.

* **Note;** The Council representative may opt for a two stage change process – issuing a change request in the first instance for the design works only with a view to issuing a second change for the installation works once the design has been reviewed by the Council and agreed.

8.2 Change Protocol – Council Confirmation

Upon receipt of the change request the Council will normally provide confirmation of acceptance or rejection within fifteen (15) days. At this stage the Council can reject the notice as a cancellation, request changes or accept the notice.

Appendix A Street Lighting Apparatus

Table 1 – Apparatus General

Lighting Column	
Fixed shaft 5m-12m	As per Table 2 below.

Raise and Lowering (Hinged) Column	
Abacus 5m hinged column	T051RLS/FD/EBG/GFR base hinged with glass flake root, access door & security bolt
Abacus 6m hinged column	T061/RLS/FD/EBG/GFR base hinged with glass flake root, access door & security bolt
Abacus 8m hinged column	T081/RLS/FD/EBG/GFR base hinged with glass flake root, access door & security bolt
Valmont 5m mid hinged column	Trent (mid hinged) galvanised with glass flake root and access door

Heritage Column	
All column heights	Standard Lighting column able to accept Embellishment Kit

Heritage / Decorative Bracket arms	
UP TO 1.5m outreach	Scroll bracket to fit column as per Table 1, as per Client Requirements

Embellishment Kit	
All column heights	TMP non-metallic ESSEX kit comprising base and shoulder casting

Tie-Wraps	
All assets (where stencil not specified)	LEGRAND 'COLSON' Wrap around belt type

Road Lighting Lanterns	
5m, 6m, 8m	CU Phosco E950
8m, 10m, 12m	CU Phosco P863

Heritage / Decorative Lanterns	
Teardrop – All heights	Acrospire Mini/Small/Large Birkdale
Post top – All heights	Acrospire Muirfield / Streetcare

Appendix A Street Lighting Apparatus

Table 1 – Apparatus General

Post Top Lanterns (Only to be used in special circumstances at the discretion of the Council)	
ASD Enso	All types 5/6m
Acrospire Chelsea	All types 5/6m

Zebra Lanterns	
CU Phosco	P863 with appropriate optic

Bulkhead Lanterns	
Holophane Wallpackette	All LED types 5/6m
ASD Stealth	All LED types 5/6m
ASD Anti Vandal Bulkhead	All LED types 5/6m

Subway Lanterns	
ASD Invincible	600mm/1200mm/1500mm Cornice
ASD Titan	600mm/1200mm/1500mm Surface

CMS Nodes	
All assets	Telensa GPS nodes all types and factory fitted where specified

Photocells (where specified)	
All road lighting assets	Lucy Zodion SS6, RTE Oasis 2000
Sign lights	RTE Microstar

Pole / Wall Brackets	
	As per Specification

Control Boxes	
	As per Specification

Illuminated Sign Posts	
As per Lighting Columns from Table 2	Reduced in height as per Client's requirements

Appendix A Street Lighting Apparatus

Table 1 – Apparatus General

Illuminated Sign Lights	
Type A1	Simmonsigns LUA 3x1W & 6x1W LED
Type B1	Simmonsigns LUB 15W LED

Sign Light Brackets	
LUA/PTS76	Single post top LUA sign light 76mm diameter post
LUA/PTD76	Back-to-back post top LUA sign light 76mm diameter post
LUA/TBS76/89/114	Single shaft mounted LUA sign light 76mm/89mm/114mm diameter post / column
LUA/TBD76/89/114	Back-to-back shaft mounted LUA sign light 76mm, 89mm/114mm diameter post / column
LUB/PTS76	Single post top LUB sign light 76mm diameter post
LUB/PTD76	Back-to-back post top LUB sign light 76mm diameter post
LUB/PTS114	Single post top LUB sign light 114mm diameter post
LUB/PTD114	Back-to-back post top LUB sign light 114mm diameter post
LUA/LUB/PTD76	Back-to-back post top LUA and LUB sign light 76mm diameter post

Illuminated Bollards	
Base Lit	Simmonsigns Lumiflex 4x1W single / double aspect with sign face as specified by Client
Non-Illuminated	<60mph road - Simmonsigns Weebolflex with single / double aspect, reflective graphics, all sides with sign face as specified by Client and installed into NAL ground mounted socket or similar approved =>60mph road TMP Mega Flecta

Belisha Beacons	
All heights	Simmonsigns Modubel / Simmonsigns Modustar / Portland Zebstar Plus
Mid Post	Simmonsigns Midubel / Simmonsigns Midustar / Portland Zebstar Mid Plus

Appendix A Street Lighting Apparatus

Table 1 – Apparatus General

Centre Island Beacon	
All heights	Simmonsigns ModuCIC Charles Endirect AVG-C-N400
School / Horse Flasher	Simmonsigns Pulsa 4004/TEL/FI c/w 2part CMS Antenna Node

Sub Fuses / Double Pole Isolators	
L3T/SFE/K3/6.0/350+E (secondary isolator for columns with single luminaire) or similar approved.	Isolator with single fuse and blank fuseway
Charles Endirect Ltd L3T/S2F/ K3/6.0/350+E (secondary isolator for columns with two luminaires or one luminaire and one sub circuit) or similar approved.	Isolator, 2 x fuses
Charles Endirect Ltd L4/S3F/ D3/6.0/350+510E (secondary isolator for columns with three luminaires or two luminaires and one sub circuit or one luminaire and two sub circuits) or similar approved.	Isolator, 3 x fuses

Feeder Pillars	
Fisher & Company	All types
Charles Endirect	All types
Haldo	All types
Lucy	All types

Earth Pits / Rods	
Furse	All types

Table 2 – Lighting Columns

Column Height (m)	Planting Depth (mm)	Minimum Door Opening		Column Type	Luminaire	Spigot Dimensions		Attached Sign Plate Area For Calculation Purposes (m2) at height of 2.5m	Base Compartment Nominal External Diameter (mm)	Shaft Dimensions (mm)
		Height (mm)	Width (mm)		Weight/ Windage (up to) (Kg/m2)	Length (mm)	Width (mm)			
5	800	500	100	Side Entry	11 / 0.10	100	42	0.3	140	76
5	800	500	100	Post Top	11 / 0.10	100	76	0.3	140	76
6	1000	500	100	Side Entry	11 / 0.10	100	42	0.3	140	76
6	1000	500	100	Post Top	11 / 0.10	100	76	0.3	140	76
8	1200	600	115	Double Arm	16 / 0.12	100	42	0.6	168	114
8	1200	600	115	Single Arm	16 / 0.12	100	42	0.6	168	114
10	1500	600	115	Single Arm	16 / 0.12	100	42	0.6	168	114
10	1500	600	115	Double Arm	16 / 0.12	100	42	0.6	168	114
12	1700	600	115	Single Arm	21 / 0.15	100	42	0.6	194	140
12	1700	600	115	Double Arm	21 / 0.15	100	42	0.6	194	140

Suffolk County Council

Thank you for reading