



Kent Design Guide



Movement & Connectivity

Street Lighting



Street Lighting

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GENERAL

Lighting may not be appropriate in all locations or situations. We recommend that all developments engage in early joint discussions with the local Planning Authority and KCC Street Lighting Department to ensure the right lighting solution is achieved. If lighting it is to be provided and is proposed for adoption it will need to be to current KCC requirements.

Therefore, early communication will assist your plans and potentially avoid unnecessary abortive lighting designs.

Lighting design parameters

The fundamental purpose of street lighting is to enable safe movement by pedestrians, cyclists and other road users, and enabling drivers to assess any hazards. When undertaking a lighting design, the relevant lighting standards, and industry guidance documents must be consulted to ensure the proposed lighting arrangement is appropriate for the road type and is compliant with the relevant defined lighting standards. It is recommended that the services of a qualified lighting consultant are engaged.



Lighting equipment can have a major impact on the appearance of a street and should be planned as part of the overall design concept at the outset of the process and regarded as an integral part of the design rather than being superimposed onto the layout at a later date.



As with other forms of street furniture, there are longer-term maintenance issues associated with the choice and location of lighting equipment. When undertaking the lighting design, careful consideration must be given to this and considered placement of lighting columns in relation to other items of street furniture, combined with the use of appropriate equipment, (such as fold down columns on footpaths) will ensure a compliant scheme that can be taken onto maintenance by KCC. KCC has a list of standard equipment that should be consulted before commencing a lighting design.



 Street lights at the back of the footway

Lighting columns, wherever practicable, shall be sited at the back of footways or verges no less than 0.8 metres from the edge of carriageway. All road lighting must be located within the proposed highway boundary. If, for any reason, you feel this cannot be achieved, you must discuss the reasons and obtain approval from the Street Lighting and Agreements departments within KCC. Where columns are erected in service strips or verges, all planting shall be kept clear to prevent obstruction of access for maintenance purposes.

Lighting columns should be placed so that they do not impinge on available widths of footways in the interests of wheelchair users and people pushing prams or pose a hazard for blind or partially sighted people as per the Disability Discrimination Acts 1995 and 2005 (Equality Act 2010).



 Lighting both the carriageway and the footway

Lighting should illuminate both the carriageway and the footway, including any traffic-calming features, to enable road users to see potential obstacles and each other after dark. The lighting design should ensure that shadows are avoided in streets where pedestrians may be vulnerable. Adequate lighting helps reduce the fear of crime and can encourage increased pedestrian activity.



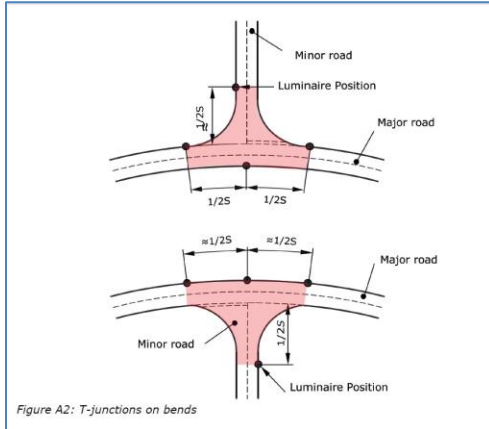
Technical assessment of the lighting design

If street Lighting is to be provided at a site, a formal street lighting submission must be made available to the KCC street Lighting department for review, comment and approval.

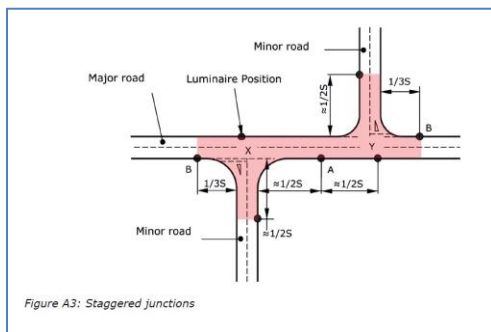
You must submit a layout plan accurately indicating lighting column positions, including the distance of each column from the kerb/carriageway edge. The plans must also provide details of the proposed column heights and lantern types

The submission should contain, but not be limited to:

- Street Lighting lux level calculations in the format of a Lighting Reality PDF report that show the tie in with existing lighting – if appropriate.
- Confirmation of the specifications for the lighting columns, secondary isolators, and any illuminated signs (if required at the site) and Central Management System.
- Details of the electrical supply provider, Distribution Network Operator (DNO) or Independent Distribution Network Operator (IDNO) to the lighting equipment; location of the development site; a plan that defines the extents of the adoptable area or the S38 and S278 limits and landscaping drawings.



☞ Above and below – examples of street light positioning



Luminaire Switching

KCC uses a Central Management System (CMS) to collect energy usage data, identify faults and switch the street lighting at the appropriate ambient illuminance levels. All newly installed street lighting across Kent will need to be fitted with CMS Lighting Control Units (LCU) as part of the installation process. Please contact KCC street lighting department for guidance on this procedure.



 A tree planted in a poor position that blocks the illumination of the street light

Conflict with Trees

Integration of street lighting, tree planting & landscaping should be developed harmoniously by Developers, their Design Consultants, Local Planning Authorities and the Highway Authority.

The height & spread of some trees may conflict with the effective function of the lighting and create areas of shadow which can increase risks for road users and pedestrians. Tree foliage can also cause damage to the lighting due to branch movement and residue deposits.

Combined arboriculture and lighting advice should be obtained at an early stage. Wherever possible trees should be sited away from lighting columns. New tree planting should be carried out once the lighting column positions are known in order to comply with BS 5489-1:2020 or current edition.

If the development site has existing mature trees in existence, the lighting must be designed as near as possible to the required standard while avoiding conflict with such trees.

Electricity Services

Wiring will be in accordance with the latest edition of BS7671. Standard wiring diagrams that illustrate correct wiring arrangements within columns, signs and feeder pillars are available from KCC street Lighting upon request. You are responsible for all wiring other than DNO or IDNO electrical supplies. Supplies to the lighting columns will be provided by the DNO unless otherwise specified. If an IDNO is chosen for the electrical supplies, approval must be sought from the street lighting department and details of the IDNO, inclusive of their service level agreement, schedule of rates and emergency procedures, must be provided as part of the formal street lighting submission.

Ducting for Private Cable Networks

All ducts for street lighting installations must be 100mm diameter orange uPVC to BS EN 50086-2-4. The ducts must be high or medium density and have a wall thickness of not less than 5mm. Ducts must have “Caution street lighting cable below” tape on top of the duct when laid. Each duct must be fitted with a pigmented, stranded polypropylene or equivalent rot-proof material draw rope of 5kN breaking load, the ends of which must project from the duct and be secured to marker posts or blocks. Schematics must be provided as part of the adoption process.



Means of Isolation

Each lamp circuit must be protected by one of the following methods:

1. For secondary isolation on a DNO supply, a double pole switched isolator unit incorporating a disconnector and a high breaking capacity type fuse to BS88, rated in accordance with the lamp manufacturer's recommendations, must be supplied. This unit, which must be capable of being locked in the "off" position, must have shrouding or some other barrier provided, to prevent contact with live parts affording a degree of protection of at least 1P2X and removable only by the use of a tool. If there is a need to provide a second circuit, for example: to a sign, a unit with a disconnector and 2 fuses, to BS88 must be provided; or
2. Cut-outs, provided for private cabling networks owned by us, must consist of a substantial moulded plastic, drip proof enclosure designed primarily for use in street lighting columns. They must provide switched, double pole isolation by a disconnector and incorporate a high breaking capacity fuse to BS88, rated in accordance with the lamp manufacturer's recommendations. They must be capable of providing one, two or three separately fused upward circuits or one upward circuit and two dedicated double pole outgoing circuits to each sign etc. Terminals must be large enough to take the steel wire armoured cable specified in straight connections or looped services and have integral brass cable glands.

Illuminated Signs

Traffic signs, where required, should be illuminated in line with the current [The Traffic Signs Regulations and General Directions \(TSRGD\)](#). Please ensure that your traffic engineer has access to the most recent relevant data to determine the illumination requirements.

Signs within 20mph zones do not need to be illuminated.

Identification Numbering

All road lighting columns illuminated signs and bollards must be identified with a gazetteer reference using an alpha/numeric combination of up to seven digits. Gazetteer assignation plans and the correct sticker specification will be available upon request from the street lighting department. You should be aware that these cannot be generated until the roads in question have had the street names agreed by the local district planning authority and you will need to provide a plan with the road names clearly showing to enable the plans to be compiled.

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Please note, if the street lighting is not offered for adoption within a reasonable length of time from the date of the formal S38 / S278 approval then it may need to be upgraded to meet the current KCC lighting specification prior to adoption being agreed.

To ensure that the selected street lighting equipment is to KCC's current requirements please contact the street lighting department who will be able to advise and provide the relevant documents.

Useful Documents

[BS 5489-1:2020 - TC | 31 May 2020 | BSI Knowledge](#)

[BS 7671:2018/A3:2024 | 31 Jul 2024 | BSI Knowledge](#)

[BS EN 50086-2-4:1994 | 15 Sep 1994 | BSI Knowledge](#)

tsrgd.co.uk/pdf/tsrgd/tsrgd2016.pdf

[Code of Practice | CIHT](#)

[Institute of Lighting Professionals – Resources](#)

[Managing highway infrastructure - Kent County Council](#)

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