



Comhairle Cathrach
& Contae **Luimnigh**

Limerick City
& County Council

Limerick City and County Council Public Lighting and Product Specification 2022

All Street Lighting Schemes must meet the requirements of

- CEN code of practice EN 13201-1: 2015
- CEN code of practice EN 13201-5:2015 relating to Energy Benchmarking
- BS5489: 2013 (and any future updates to these documents).
- ET101: 2008 and ET211:2003.
- ESB National Code of Practice for Customer Interface 4th Edition 2008

http://www.esb.ie/esbnetworks/en/downloads/national_code_of_practice.pdf

Limerick City and County Council wishes to promote the installation of energy efficient exterior lighting schemes. Measures required to achieve this include the use of lanterns with efficient optics which would minimize light pollution, optimization of scheme layout, use of energy efficient lamps and electronic control gear, capable of factory set dimming, complying with best practice and taking account of the 'Campaign for Dark Skies' issues where appropriate. Therefore all lighting schemes shall incorporate the requirements of, "Guidance notes for the Reduction of Light Pollution" issued by the Institution of Lighting Professionals and available as a download from its website Professionals www.theilp.org.uk.

The lighting design for all new schemes and modifications to existing developments must include the upgrade of the lighting on junctions from the public road in addition to any lighting being provided within the development.

There is also a need to ensure a continuity of illumination between the development and the town/village core, in cases where the development is on the outskirts of the town/village. The latter can be achieved either by the developer directly extending the existing lighting network or by the levying of a special contribution, which would enable the Limerick City and County Council to carry out the works.

Where suitable, low brightness energy efficient lighting schemes should be considered with a view to enhancing the night-time scene combining improved security with attractive modern street furniture.

1. Light Emitting Diode Lamps (LED) LED lighting is the preferred technology for outdoor lighting based on the energy efficiency achievable compared to current HID technology and reflecting the need to accord with government energy reduction policy.
Limerick City and County Council currently requires the use of LEDs lights in all schemes to be at 4,000K, neutral white but this may change as industry standards change.
2. The Lighting Design shall include sufficient survey detail / background detail to clearly show the **lux/contour** levels generated by the proposed lighting installation.
3. The lighting design shall be designed and signed by a competent Lighting Design Engineer, which shall comply with BS5489:2013 and BS EN 13201:2003.
4. The installation of schemes in residential areas shall comply with the Code of Practice for Public Lighting ET211: 2003, the National Rules for Electrical Installations (ET 101: 2008), current at time of issue and shall include the provision of a Customer Service Pillar(s) in line with the requirements of ESB Networks National Code Of Practice For Customer Interface (current edition).
5. The lighting design shall include a legible plot of the lux/contour levels superimposed on the Site Layout Plan to a scale of **1/500** (along with supporting calculations) ensuring maintained minimum point illuminance as outlined below is achieved for Limerick City & County Council's approval.
6. The installation of schemes in residential areas shall comply with the Code of Practice for Public Lighting ET211: 2003, the National Rules for Electrical Installations (ET 101: 2008), current at time of issue and shall include the provision of a Customer Service Pillar(s) in line with the requirements of ESB Networks National Code Of Practice For Customer Interface (current edition).
7. Limerick City and County Council's preference is for unmetered tariff and larger developments can achieve this by using multi connection points to keep each connection below 2kW.
8. The Public Lighting Layout shall indicate the location of **all** lighting columns, ducting, micro and shall include their reference numbers (as per design calculations), the supply circuits, ESB and Local Authority micro pillars and shall include a schedule of lanterns to be installed, inclusive of proposed lantern type and including a photograph.
9. The Lighting Design Engineer shall confirm how the proposed lighting columns between car parking spaces will be protected from being hit causing them damage and damage to vehicles. – FI
10. The Recommended Minimum Specification for Public Lighting shall be as follows:
 - The specification for the LED Lanterns (Ra>60) is lighting Class S3/P3;
 - The LED's have a required maintained minimum point illuminance of **1.5** lux for proposed and existing footways & average illuminance of **7.5** lux for roadways and car parking areas;

- Columns for public lighting should be manufactured from steel or aluminium alloy and certified to ISEN 40 Series. Columns are generally octagonal with a minimum wall thickness of 3mm. Steel columns and brackets should be hot-dip galvanised. Columns should be coated outside with a protective coating to at least 150mm above planting depth. Such coating is usually this is applied to the bottom 1250 mm of the pole, but may be more for higher columns.
 - Typical mounting heights are 6 m for residential and subsidiary roads, 8 m, 10 m and for normal traffic routes, and 12 m and higher for high-speed dual carriageways and motorways.
 - LED Lantern, minimum of 150lumens/w;
 - Neutral White 4000K. Side-Entry or Post-Top Mounted;
 - LM6 Marine Salt Protection.
 - Ingress Protected IP65.
 - Impact Resistance IK09;
 - Outreach arms can be installed at tilt angles of 0, or 5 degrees to the horizontal. Tilt angles of 0 degrees should only be used on very narrow streets, as the light emitted by the lamp does not reach as wide an area as with larger tilt angles. Outreach arms used should ideally be used generally.
 - Luminaires shall be LEDs and shall comply with I.S. EN 60598-2-3 and IEC 62722-2-1;
 - LED installations comply with the IET Code of Practice for the Application of LED Lighting Systems 2014;
 - The lanterns shall be equipped with electronic control gear, controlled by photocells (photocells have individual NEMA sockets on each lamp for standard photocell) **micro photocells will not be acceptable.** All photocells should be manufactured to accord with BS 5972 and have a 35/18 Lux switching on LED lanterns;
 - Dusk to midnight switching is provided in walkways, amenity and play areas, dusk to dawn otherwise;
 - The lantern type is a SEAI triple E Registered product. Lanterns shall comply with the appropriate standards BSEN60598 and IEC62722-2-1: 2014 and only brands for which spare parts will be readily available for many years to come will be accepted.
 - A photograph of the proposed lantern shall be submitted;
 - Details of all lighting column types proposed shall be submitted;
11. Limerick City and County Council require a 10 year manufacturers **Parts and Labour Warranty on Lantern** to be submitted (not a limited warranty). The warranty must state the development to which it covers, and that the supplier is satisfied that this warranty can be handed over by the Developer to the Limerick City and County Council when the development is taken in charge or any phase of the development.
 12. Limerick City and County Council require a 10 year manufacturers **Parts and Labour Warranty on Photocell** to be submitted. The warranty must state the development to which it covers, and that the supplier is satisfied that this warranty can be handed over by the Developer to the Limerick City and County Council when the development is taken in charge or any phase of the development.
 13. The Warranties will commence when the lighting has been fully certified and is fully operational and all is received and agreed with the Planning Authority.

14. Lights Fixed to Buildings Public Lights can be fixed to buildings, usually in streets where space is limited. The permission of the building owner and that of ESBN is required before lights can be attached to buildings. A wayleave agreement should be signed by the consenting owner to ensure continuity in the event of future transfer of ownership of the property.
15. Lighting of Steps should be illuminated from the bottom up to highlight the step edges, e.g. the lighting column should be erected at the bottom of the steps where possible and practicable. In some cases it may also be necessary to erect columns along the length of the steps. Light units built into walls or low level bollards are to be avoided, in so far as possible, due to maintenance /vandalism issues.
16. Public lights should not be erected beneath or adjacent to HV & LV overhead power lines without explicit approvals from ESB Networks. Ref. ESB Code of Practice for Avoiding Hazards from Overhead Electricity Lines.
17. Where mains cables are overhead- carried on ESB Networks Ltd. wood or steel poles – it has been normal practice to provide street lighting from lanterns mounted on brackets fixed on these poles. As these brackets are always close to live ESB networks, only duly qualified persons, authorised by the Local Authority are permitted to install or work on this type of installation. Since 2010 ESB has discouraged the erection of new assets on its Network Poles and hence a ducted underground supply feeding stand-alone public lighting columns is the preferred option for new installations. An interface box is required for new or replacement lanterns or brackets erected on ESB Network poles. Ref. ESB Requirements for Work on Public Lighting on ESB's Networks 2010.
18. Standards of Ducting should be made of PVC to IS135 Class B having a minimum 50mm diameter for public lighting cable and 100mm diameter for ESB network supply distribution cable to lighting micro pillar. Ducting shall be red coloured and have the words "Street Lighting" stamped on it in 9mm high lettering at 1m intervals, with the lettering labels facing upwards in the trench. Warning tape must always be used.
19. New Public Lighting installations, using an underground supply, must always be connected through a micro-pillar, serving public lighting installations only. It is not acceptable to connect any other type of installation (e.g. pedestrian crossing lights) through a PL micro-pillar. Public Lighting installed along the Public road at the curtilage of a development shall be connected via a separate micro-pillar (and MPRN) to any lights with the development itself. Micro-pillars shall be separated from mini-pillars by a distance of at least 2m.
20. The installation of schemes in Residential Areas shall comply with the Code of Practice for Public Lighting ET211: 2003 or latest upgrade. All exterior lighting schemes shall include the provision and installation of a Customer Service Pillar (Micro Pillar).
21. All lighting points shall be accessible by means of a hydraulic hoist, for maintenance purposes. Such a hoist requires a minimum paved vehicular access of 3.5 metres. In exceptional circumstances, if such access is not available special arrangements shall be made such as the use of **hinged columns**.
22. All public lighting columns, electric cable circuits and the associated feeder pillars serving the public lights shall be installed in public areas, at the locations as per an approved Lighting Engineers Public Lighting Layout, with columns generally at the back of footpaths, on boundary lines and not in private property.
23. All lighting columns shall be octagonal galvanised steel to BS EN40 as outlined below.

24. Failure of any lighting components shall be immediately rectified by the applicant by either replacing the luminaire / photocell or by installing a temporary replacement luminaire / photocell until the defective luminaire / photocell has been repaired or replaced.
25. Any proposed **hedging or shrubs** within a 10-metre radius of any proposed public lighting has to be kept to a **maximum height of 1.2m** above ground level. Under no circumstances is any light to be erected under or close to any existing trees. Under no circumstances is any **tree/trees** to be planted within a 10m radius of any lighting column/columns.
26. Supplementary night time lighting should be provided at all new zebra crossings.
27. Certification of completed installations by a contractor registered with ECSSA or RECI must be provided to ESB Networks in order for installations to be energised. The Applicant shall submit written confirmation to the Planning Authority from Limerick City and County Council's Public Lighting Contractor that public lighting is fully operational and that all connections, cabling, micro pillars and all associated items are in order prior to the occupation of any units within any phase of the development.
28. Lighting Design Engineer shall submit certification to the Planning Authority to confirm that the lighting has been erected as per the approved design upon completion of any phase of the development and prior to the occupation of any units within any phase of the development.