1. **Introduction**

It is a policy of Cavan County Council to ensure the development of a sustainable energy efficient public lighting network. Public Lighting is a highly valued and visible asset with the potential to make a significant contribution to the wider community in terms of accessibility, road safety and the fostering of commercial activities.

1. **Design Standards & Guidelines**

It is essential that all External Lighting schemes comply with the current CEN (European Committee for Standardisation) and BS (British Standards) Code of Practices. Cavan County Council requires the installation of energy efficient exterior lighting schemes, using the best available technologies.

Measures required to achieve this include the use of lanterns with efficient optics which would minimise light pollution, optimization of scheme layout, use of energy efficient lamps and electronic control gear, 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 <https://www.theilp.org.uk>

The conditions set out hereunder are required to ensure that County Cavan has a public lighting system that will:

* Support environmental best practice
* Support energy efficient design and whole life maintenance
* Be designed and installed by competent personnel
* Be designed and installed to the relevant and appropriate Standards and Codes of Practice.

All External Lighting Schemes must meet the requirements of the following documents, as amended:

* SR CEN/TR 13201-1:2014
* BS5489: 2013
* ET101: 2008 and ET211:2003
* ESB National Code of Practice for Customer Interface 4th Edition 2008
* Relevant conditions established by the Commission for Energy Regulation (CER) ([www.cer.ie](http://www.cer.ie))
* Guidance for the Reduction of Obtrusive Light, Institution of Lighting Professionals, Jan 2012 ([www.theilp.org.uk](http://www.theilp.org.uk))

Public Lighting (on roadways and in residential areas) is provided for Road Safety reasons and not for security

1. **Lighting Designer Requirements**

To ensure established exterior lighting design standards are applied to residential and commercial developments; external lighting designs are required to be undertaken and certified by a trained and competent Lighting Designer who has successfully completed the Institution of Lighting Professionals (ILP) Diploma in Exterior Lighting.

This includes a requirement that exterior lighting schemes should be designed from junctions and traffic (both Pedestrian and Vehicular) conflict areas back e.g. T-junctions, pedestrian crossings etc. The illuminance / luminance at conflict areas should be as per BS5489 and EN13201 for the particular scheme/location.

The External Lighting Designer shall ensure lighting designs meet standards and maximises energy efficiency with consideration to maintenance and whole life costs.

1. **General Requirements for New Developments**

External Lighting design reports to BS 5489-1:2013 & I.S. EN 13201-2:2015 as amended, shall be submitted with details on the make and model of proposed lamps, to the Planning Authority for approval.

The lighting designs for all new schemes and modifications to existing developments must include provision for up-grading street lighting at existing junctions, entrances and access roads in addition to any lighting requirements for the proposed development.

For new installations in Residential Areas, Cavan County Council requires light-emitting diode (LED) lamps, which should be energy efficient, easy to maintain and cost effective.

Lighting Design Reports should be produced using *Lighting Reality*, *Calculux* or equivalent and must include, at a minimum, the following:

* Roadway Report Summary, providing information on:
* Road Data
* Column and Luminaire data
* Polar Diagram
* Lux Plot
  + Luminance (cd/m2)
  + Site Layout Map of the proposed Public Light Scheme, to a scale of 1/500 or 1/1000, detailing the positions of:-
    1. lighting column positions reference and numbers;
    2. micro pillars;
    3. mini pillars and supply circuits;
    4. ducting locations;
    5. schedule of lanterns installed within the development

1. **Additional Cavan County Council Requirements**

* Decorative lighting will only be considered in exceptional circumstances. Decorative lighting is generally energy inefficient, expensive to run and expensive to maintain.
* Landscape design and layout shall take into consideration the agreed public lighting design and no trees shall be planted within falling distance of a public lighting column.
* Ducting to service the new public lights, shall be installed underground and shall be accessible to public lighting maintenance service providers and shall not be located in private property.

1. **Specifications**
   1. **Columns**

* Columns for public lighting should be made of steel or aluminium alloy and certified to IS EN 40 Series.
  1. **Photocells**
* All photocells should be manufactured to accord with BS 5972 and have a 35/18 Lux switching regime.
  1. **Luminaries**
* Luminaries shall comply with I.S. EN 60598-2-3
* The Institution of Engineering and Technology (IET) Code of Practice for the Application of LED Lighting Systems 2013.
* Lamps to have minimum Lumens per Watt (Efficacy) value of 100.
* Colour temperature of the light source to be 4000k or less.
* A minimum Colour Rendering (RA) value of 60 is required for new installations.
* All lanterns to include dimmable and programmable control gear (either pre-programmed or alterable post installation).
* All LEDs shall be sealed to IP67.
* Cavan County Council does not accept SOX or mercury sources in new exterior lighting Schemes.
* Lighting schemes in the charge of Cavan County Council include equipment manufactured by various suppliers such as Phillips, WRTL, Urbis, CU Phosco, Thorn and others. In order to facilitate maintenance Cavan County Council recommends the use of common brands for which spare parts are likely to be available for the whole life duration of the asset.
* Cavan County Council may also consider luminaries produced by other less common suppliers / manufacturers provided that the proposed lantern meets the minimum technical requirements as set out in this document, with a demonstrated regard for thermal management of heat for electronic control gear, with readily available parts and being economically feasible to maintain.