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Adopted Public Lighting
Policy 14th May 2018



PUBLIC LIGHTING POLICY

1. Introduction

Tipperary County Council has a stock of approximately 16,000 street lights. Historically the maintenance and energy costs associated with street lighting were very expensive with maintenance costs in the period 2008 -2011 of €60 per light per annum. In the period 2012-2016 maintenance costs reduced to approximately €28 per light and in 2017 maintenance costs have reduced further due to the council moving to a price per item contract to circa €15 per light per annum. The introduction of LED lights in recent years has reduced the maintenance bill as LED's have to be maintained less frequently. Furthermore LED's are more energy efficient with up to 50 percent energy savings being made. By the end of Q1 2018, Tipperary County Council expects to have 1,600 or circa 10% of our lighting stock as LED lights.

It is a policy of Tipperary 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. It should be noted that the stock of lighting will increase owing to the taking in charge of estates, construction of new housing schemes, new road schemes, urban renewal etc.

2. Policy Objectives

The objective of this policy is to help the Roads Section achieve these aims by:

- a) Providing a safe road network for all road users.
- b) Achieving energy conservation and sustainability (in accordance with national policies and strategies)
- c) Minimising any negative environmental effect of public lighting whilst enhancing the night-time ambiance.
- d) Ensuring the public lighting is in keeping with and is properly integrated into the infrastructure.

3. Policy Strategies

It is proposed that the following strategies be adopted in order to achieve the objective of the Public Lighting policy in a cost effective manner. The policy strategy comprises of two main facets:

- a) The Council maintains a database and management system for its stock of public lights.
- b) The provision of new public lighting together with the upkeep and refurbishment of the existing stock be managed on a programme basis.



4.0 Database and Management System:

The Roads Section will use a database to manage the public lighting stock. This will entail the use of a software package to manage the database and surveyed information. The Roads Section will maintain a street lighting inventory of equipment and maintenance records.

4.1 Programme:

Existing lighting schemes:

Existing lighting schemes will be assessed to prioritise which schemes should be carried out first to ensure that limited funds are spent in a cost effective manner. The need for the replacement or refurbishment of existing lighting will be brought about by a number of criteria the major ones being: -

- a) The poor structural or electrical condition of the existing lighting
- b) The poor standard of the existing lighting and a demand for better lighting
- c) A desire to reduce energy and or maintenance costs

Each of these criteria will have to be assessed when public lighting upgrade works are being considered. In many cases the criteria will be interrelated, for instance the replacement of an existing system of lighting in a poor state of repair will most likely result in better lighting, a reduction of maintenance costs and a possible reduction of energy costs.

Where existing lighting is being assessed for replacement or refurbishment, the actual condition of the equipment and energy consumption will be the major factors determining the priority for replacement.

Prioritisation of funding

It is recommended that priority be given as follows:

- 1) Any dangerous or substandard poles and fittings must be dealt with as soon as possible.
- 2) Expensive, inefficient and high energy use lighting is replaced as soon as possible to meet the council's binding energy targets.
- 3) The repair, renewal and replacement of existing lighting stock is undertaken on a phased basis whereby full streets are done together rather than doing lights intermittently.
- 4) Infill lighting and the extension of existing lighting schemes are undertaken on a phased basis within the 50kph zone.
- 5) Lighting at junctions will be considered as part of junction improvement works within the 50kph zone.



- 6) Public lighting will only be provided by the council for road safety purposes and not for security purposes.
- 7) For this reason, public lighting should be provided as a priority on traffic routes within all 50 kph speed limit areas.
- 8) Where there is existing CCTV, consideration will be given to the effectiveness of the public lighting.

The replacement of lanterns over to LED will be, subject to the availability of finances, concentrated on locations that are on traffic route lighting as opposed to housing estates. The greatest energy reductions are achieved on replacing lights on traffic routes where the existing wattages are higher. Tipperary County Council will be prioritising section of lights that have a high percentage of faults so as to cut down on maintenance costs.

Some Practical Applications of Policy:

Church Floodlights

- Tipperary County Council will not increase the number of church floodlights in the county.
- Flood lighting of churches, heritage sites etc should not be provided by the County Council as a rule. Where the running costs of such public lighting is currently being paid by the Council this arrangement will continue.
- Tipperary County Council will consider dimming and / or turning off lights where same is appropriate i.e. unused carparks. This will be done in accordance with the nationally agreed burn profiles with ESB.

5. 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. Tipperary 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 Tipperary 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)
- Guidance for the Reduction of Obtrusive Light, Institution of Lighting Professionals, Jan 2012 (www.theilp.org.uk)

6. Lighting Designer Requirements

To ensure established exterior lighting design standards are applied to residential and commercial developments where relevant; 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.

7. 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, Tipperary County Council requires light-emitting diode (LED) lamps, which should be energy efficient, easy to maintain and cost effective.

All relevant Irish, British and European Standards and Codes of Practice must be met. Any proposed lights must be listed on the SEAI Triple E register.



Lighting Design Reports should be produced 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:-
 - a) lighting column positions reference and numbers;
 - b) micro pillars;
 - c) mini pillars and supply circuits;
 - d) ducting locations;
 - e) schedule of lanterns installed within the development

Upon completion the Planning Authority will require the submission of a Certificate of Compliance (Safe Electric Certificate) along with as constructed drawings, calculations, specifications and particulars. The specifications for products for certificates will include Declaration of Performance for materials/products.

It will also be a requirement that where lights are installed on a public road as part of a new development that these lights will have to be on a separate circuit from the rest of the development with associated separate MPRN and pillars.

The first energy bill with MPRN details for the street lighting should be submitted to the Planning Authority after completion of the lighting scheme and each phase thereafter.

8. Additional Tipperary 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.



9. Specifications

9.1. Columns

- Columns for public lighting should be made of steel or aluminium alloy and certified to IS EN 40 Series.

9.2. Photocells

- All photocells should be manufactured to accord with BS 5972 and have a 35/18 Lux switching regime.

9.3. 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 shall apply.
- Lamps to have minimum Lumens per Watt (Efficacy) value of 100.
- Colour temperature of the light source to be 4000k or less. This will be reviewed on ongoing basis.
- A minimum Colour Rendering (RA) value of 65 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 IP66.
- Tipperary County Council will not accept SOX, SON or mercury sources in new exterior lighting schemes.
- Lighting schemes in the charge of Tipperary County Council include equipment manufactured by various suppliers such as Phillips, WRTL, Urbis, CU Phosco, Thorn, Verde Led and others. In order to facilitate maintenance Tipperary 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.
- Tipperary 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.