

Flintshire County Council

Street Lighting, Traffic Signals and External Electrical Infrastructure Policy – November 2023

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1. Introduction

- 1.1 This Policy outlines the basic principles and standards applied to the maintenance of Traffic Signals, Traffic Signs, Street Lighting and Illuminated/Electrical Street Furniture within the administrative area of Flintshire County Council, setting out the aims of the authority with respect to maintenance regimes and the procedures put in place to achieve those aims.
- 1.2 The overall objective is to manage and maintain a safe, effective and efficient network that not only ensures the safety of all road users, pedestrians and cyclists but also enables those seeking to engage and install non-electrical, electrical and or illumination assets on or over the adopted highway network and Councils infrastructure.

The policy will apply to:

1. Flintshire County Council owned and maintained Carriageways, Highway, Footway, Open Spaces, Amenity, Streetscene and Transportation Electrical assets and Illuminated Lighting.
 2. Flintshire County Council owned and maintained Illuminated and Electrical Street Furniture and associated equipment including CCTV, ticket machines, EV charging points etc.
 3. Town and Community Council owned Lighting maintained by the County Council on their behalf and the relevant aspects of Town and Community Council owned Lighting management and monitoring in accordance with the Highways Act 1980.
 4. Outside of scope where other stakeholders wish to erect on or over the adoptable highway network or Streetscene and transportation infrastructure.
- 1.3 The street lighting policies and specifications have been developed to support the aims and objectives of other County Council and Stakeholders strategies and initiatives such as by recognising that street lighting and illuminated street furniture plays a major part in helping to reduce crime, improving driver behaviour, pedestrian's visibility distances and promoting a safer community and reducing the fear of crime. (Crime and Disorder Act 1998)
 - 1.4 Flintshire County Council's street lighting department will endeavour to improve the environment by investing in equipment with longevity and ease of maintenance, managing and over seeing the installations of new developments and assets to be transferred to the service in line with the policy and specifications, reducing upward wasted light and reducing the carbon footprint of the service.

2. Legislative Powers

- 2.1 Flintshire County Council is not required by law to provide street lighting in most locations, however, under the highways act 1980, S97 -
"Every local highway authority may provide lighting for the purposes of any highway or proposed highway for which they are or will be the highway authority"

However Flintshire County Council is required to maintain any street lighting it does provide in a safe condition for the benefit of the community it serves.

- 2.2 On the 1st April 1967, under the provisions of the Local Government Act 1966, the County Council assumed responsibility for the maintenance and operation of highway lighting throughout the County generally, including the provision of new installations.

Roadway lighting is falls into one of two categories:

- Group A, columns of a height of 10m and above
- Group B, columns of a height of between 5m and 8m

Standards for both groups are as laid down in the British Standard Code of Practice for Street Lighting and are covered within the Street Lighting and Illumination specification.

- 2.3 Some Town and Community Councils in Flintshire retained the responsibility for footway lighting only, however some of these are placed within the highway network but do not exceed the height of 6 meters. Footway lighting is defined as a system of lighting provided for the highway, in which either:

- a. No lamp is mounted more than 4m (13ft) above ground level
- b. No lamp is mounted more than 6m (20ft) above ground level and there is at least one interval of more than 46m (50yds) between adjacent lamps in the system.

It is noted however, that on certain rural locations this may vary due to the nature and requirement of the target area for illumination and may differ to the above on criteria but based upon historic installations and as such is accepted.

- 2.4 The North and Mid Wales Trunk Road Agency (NMWTRA) is the highway authority for road lighting on trunk roads and will have its own policies and practices for maintenance of those installations. The maintenance of these lights is carried out by Flintshire County Council on behalf of NMWTRA and also utilises the Flintshire County Council specifications for installations and maintenance on many of its development and maintenance regimes.
- 2.5 Flintshire County Council as an authority have a statutory duty to provide traffic signals and certain illuminated traffic road signs as described and laid out within the traffic signs regulation and general directions Act 2023. The policy and specifications cover the duties and aspects relating to these for maintenance and functionality.
- 2.6 Flintshire County Council has a duty to ensure that all installations on, above or over the adoptable highway network and its own infrastructure are fully compliant and as such ensure that all such installations follow the appropriate request and approval process in line with the specifications and British Standards 7671.

3 Main Aims

Flintshire County Council Street Lighting Team's aims are as follows:

1. To manage our current Street Lighting and illuminated street furniture network in a safe and fit for purpose condition and in accordance with legislation and HAMP.
2. To manage the reaction time to rectify and respond to reported faults
3. To provide the highest quality of service providing excellent value for money.
4. Reduce the Carbon footprint and environmental impact of the service

The Aims will be achieved by the following

1. Ensure that a high proportion of Street Lighting and illuminated Street Furniture is functioning correctly at all times.
2. Ensure faulty Illuminated Street Furniture is wherever possible repaired within the timescales specified within this policy.
3. Visit all Illuminated Street Furniture on a regular basis in accordance with the timescale specified within this policy to undertake planned preventative maintenance and to verify their structural and electrical condition.
4. Ensure the appropriate quality of light is being provided by replacing all lamps (where applicable) on a regular basis in accordance with the timescale specified within this policy.
5. Develop a risk management strategy to undertake an effective planned renewal programme for the replacement of obsolete and life expired columns utilising the available budgets.
6. Ensure compliance with the various acts and standards such as the British Standards 7671, Electricity at Work Regulations 1989 and Flintshire County Council's specifications are met by periodically tested and inspecting all Illuminated units, electrical assets, street lighting units and rectifying identified defects.
7. Continue to develop further the management information system in order to effectively manage the inventory.
8. The service will endeavour to reduce the carbon footprint of the service in the following ways:
 - a. The purchase of low energy lighting units for all replacements
 - b. Installation of new energy saving equipment when necessary
 - c. Installation of dimming equipment in accordance with the policy
 - d. Installation of part night equipment in accordance with the policy
 - e. Installation of tried and tested equipment to reduce waste

- f. Employ appropriate recycling of life expired components
- g. Carry out timely repairs and maintenance
- h. Bulk light source change (certain areas) on a four year cycle
- i. Employ monitoring and management systems and night time inspections

4. Benefits of a Well Maintained Street Lighting Network

- 4.1 Lighting makes an important contribution to highway safety for both drivers and pedestrians and enhances both the appearance and vitality of the community. The introduction of the 1998 Crime and Disorder Act placed an obligation on Flintshire County Council to develop and implement safer community strategies.
- 4.2 The provision of modern highway lighting is one of the ways in which Flintshire County Council can demonstrate its commitment to a safer and more attractive community.
- 4.3 Analysis of highway lighting schemes indicate that they are a cost effective solution to assisting in reducing night time road traffic accidents.

5. Maintenance and Management

- 5.1 The Highways Act 1980 defines Highway Authorities as responsible for the road lighting on adopted highways or potentially adopted highways within its administrative area.
- 5.2 This legislation does not require the provision of road lighting in every location. However, where road lighting is provided, the highway authority has a duty of care with respect to maintaining that lighting in a safe condition.
- 5.3 Maintenance standards are a matter for the authority to determine and shall be in line with the approved Street lighting, traffic signals and external electrical infrastructure specifications. The two possible approaches for maintaining Street lighting are:
 - a. Planned Preventative Maintenance approach (PPM). This approach involves regularly visiting assets to undertake routine maintenance activities and replace key components (such as the lamp) even if they are still in good working order
 - b. Reactive Maintenance. This approach involves visiting assets only when they are known to have failed i.e. following notification of a fault
- 5.4 There are economic consequences with either option, however the Council will adopt the following
 - a. 'A' Roads and other roads with a requirement for complex traffic management arrangements to carry out street lighting repair work e.g. dual carriageways - Planned Preventative Maintenance Approach

b. All other locations - Reactive Maintenance Approach

- 5.5 The policy when replacing life expired equipment and components is to specify well engineered quality products so that the assets reliability is improved thus reducing long term maintenance costs.
- 5.6 Faults will be identified by undertaking night inspections, during other inspections and reports. The frequency of these inspections shall be every 28 days which will cover all illuminated assets owned and maintained by Flintshire County Council during that period of time.

The standard for repairing faults within the control of the Council will be defined into three main groups

1. 3 working days for locations assessed as traffic signals, vulnerable, CCTV sensitive, traffic calming, traffic sensitive or (speed) illuminated traffic signs
 2. 10 working days for all other locations and faults
 3. Units owned by the Council but subjected to mains supply faults (i.e. those not the responsibility of the Council) are governed by Office of Gas, Electricity and Electrical Markets (OFGEM) standards but will be reported to the Direct Network Operator (DNO) within 10 working days of inspection
- 5.7 This information along with reports made directly by members of the public to the street lighting section is entered into the street lighting management information system (Mayrise) and actioned accordingly.
- 5.8 All installations within Flintshire shall adopt a white light (low energy) approach (where practical) and shall incorporate a dimming arrangement by 30% from 2200 hrs to 0600 hrs each day, less locations assessed to be outside of this for illumination purposes such as key CCTV locations etc. These levels shall be set at 4k colour rendering with a view to potentially lower levels up to a minimum of 3.2k on certain sites such as SSSI but only after an acceptable design has been taken and agreed with the Operational North and Street Lighting Manager.

Exceptions will be, but all in agreement with the Operational North and Street Lighting Manager.

- Known accident sites
- CCTV Sites
- Sites where dimming the lighting results in the lighting level falling below the level specified in the guidance notes for roads of that category between those hours

- 5.9 Part night installations can be installed at the following

- Residential Estates
- On rural and non-residential 'A' roads
- On rural and non-residential strategic routes

- On Industrial estates

The lights will be electronically timed to turn off between midnight and 0500 hrs each day location dependant. A residual lighting level will remain on each road, based on the risk assessment but will be assessed and agreed by the Operational North and Street Lighting Manager.

A risk assessment will be completed if lighting levels are to become outside of normal illumination requirements as set within the BS 5489-1:2020 or have a major change in illumination. The Local Member will be consulted on these changes with the following groups or individuals being consulted if required

- N W Police
- T&CC Council
- Internal FCC stakeholders
- Other stakeholders or appropriate service level groups

The service will take a proactive approach to managing the lighting infrastructure, investigating new opportunities for improving the energy efficiency and carbon footprint of the service. All such applications where change is proposed shall follow a criteria of risk based approach in line with the relevant illumination and electrical standards appropriate to external illumination and the reduction of lighting levels or colour temperature if required.

These shall be carried out by the Operational North & Street Lighting Manager who will consult with the Local Member on the proposals and shall engage other user groups as identified within the risk assessment completed by the Operational North & Street Lighting Manager.

6. Lighting and Electrical Column Replacement

- 6.1 The backlog of replacements will be monitored through the inspection process shown in 7.1 to ensure the inventory remains in a safe state of repair. Any funds made available will be utilised to carry out replacement work with any assets showing signs of major defect or danger to the public being removed. These shall all be assessed on a site by site basis and with the final approval of the Operational North and Street lighting Manager.

7. Lighting standard and improvements to the inventory

- 7.1 The Council cannot specify a particular or consistent standard of lighting on any road or footway but will endeavour to meet the illumination requirements as stated within the British Standards. However on new developments and regeneration schemes the Flintshire County Council Street Lighting Specifications and required standard of lighting shall be adhered to unless prior agreement is made and approved by the Operational North and Street lighting Manager.

8. Inspection and Testing regimes

- 8.1 The Council will carry out a robust inspection and testing regime in accordance including the following:

1. Evening driven visual inspections to identify faults – These will be carried out by the Streetscene teams on a rota which ensures that every light is inspected every 28 days. This will be based upon 28 days in the Summer months and every 14 days in the Winter months)
2. Maintenance visit – These maintenance visits will be carried out every three years by the area electricians. During the visits the electrician will carry out a visual inspection of the components of the light and clean / grease the unit along with any required standards upgrade.
3. Electrical Test visit – These maintenance visits will be carried out every six years by the area electricians. The tests will be in accordance with the statutory requirements and the outcome recorded and retained. These are to be logged onto the Mayrise data base system.
4. Structural Test – Structural tests will be carried out by specialist contractors. The columns will be identified following the maintenance visit or by a programmed inspection regime of columns which have exceeded their expected life expectancy. These are to be logged onto the Mayrise data base system.

9. Town and Community Council Owned Lighting

- 9.1 There are variations in the way T&CC owned footway lighting is maintained i.e. either via the County Council or through independent contractors. Where the T&CC requests the Council to carry out the work, the lighting is maintained to same standard as Council owned lighting. The lights will be included on the Councils inventory and complaints regarding faults received directly into the Streetscene Contact Centre.
- 9.2 Once an accurate assessment of each individual T&CC lighting network is gathered, the Council would be in a position, if required, to procure energy on behalf of the T&CC at the lower rate which is available to the Council. This rate will then be offered to the T&CC with a small administrative added.
- 9.3 Should T&CC's not currently utilising the Council to maintain their lights they can request their energy procurement is made through this arrangements, a full inventory gathering exercise by the councils electricians will be required. The cost of this work will be charged at cost to the appropriate T&CC. Once this information is obtained, the Council Contact Centre can also take and pass on fault requests to the appropriate T&CC on their behalf.
- 9.4 T&CC's can take advantage of the column replacement and adoption scheme in the same way in which developers can. These must meet the relevant criteria as laid down within the specifications and must forward a commuted sum as calculated on a site by site basis by the Operational North and Street Lighting Manager.
- 9.5 All T&CC's shall forward and maintain a complete list and inventory of all their assets within and on Flintshire County Council infrastructure or on and or over the adoptable highway network. This list will be updated on the Mayrise and shall be forwarded upon request from the Operational North and Street Lighting Manager or when a change is made to the infrastructure of the T&CC's assets.

- 9.6 Any amendment or change to lighting classification that will affect any Flintshire County Council infrastructure or on and or over the adoptable highway network whether classed as footway lighting or not shall require the agreement and approval of the Operational North and Street Lighting Manager. This does not affect nor require approval for a like for like change as part of normal maintenance operations but will require approval if a change in light source or illumination elliptical output.
- 9.7 If T&CC's require or wish to remove an asset from their inventory by means of removal or temporary/permanent switch off then a full Risk and Method Statement must be forwarded along with a consultation list and agreement to remove to the Operational North and Street Lighting Manager if this asset was on Flintshire County Council infrastructure, over the adoptable highway network or affects the illumination string where a mixture of ownership of light sources exist.

10. Festive Illumination and Erections on Infrastructure

- 10.1 Flintshire County Council will manage contractual arrangements for Installations, maintenance and repairs on behalf of the Town and Community Councils if asked and will charge a small administrative amount to cover Officer time. Costs of the contractor and tender process will be borne by the relevant Town or Community Council with the aim of a reduction in cost due to economy of scale. The actual cost including staff recharges will be passed to the T&CC
- 10.2 All installations of festive or electrical illumination on Flintshire County Council infrastructure will require prior approval and inspection upon installation from the Operational North and Street Lighting Manager. Any costs incurred from such installations not gaining approval will be recharged to the relevant party. All requests must be submitted in line with the relevant specifications and hold the relevant information on the appropriate documentation.
- 10.3 Any equipment to be installed at height, on, over or within the adopted highway network or Streetscene and Transportations infrastructure will require prior approval from the Operational North and Street Lighting Manager and with the relevant supporting documentation. Any costs incurred from such installations not gaining approval will be recharged to the relevant party.

11. Adoptions to the Street Lighting and Electrical inventory

- 11.1 The standard of lighting to be provided at any location will be required to meet the Councils lighting specification and standard before it can be considered for adoption into the Councils network. The promoter will be required to submit their proposals to the Operational North and Street Lighting Manager for approval before commencement of any work and will be subject to a final site inspection prior to adoption.

In addition and prior to adopting any street lighting and illuminated street furniture into the Councils inventory from any source a 10 year energy and maintenance contribution from the scheme promoter, in the form of a Commuted Sum, will be required. The charge will be based on the energy costs plus maintenance costs projected for the 10 year period as calculated by the Operational North and Street Lighting Manager.

11.2 The standard of an asset or electrical item to be provided at any location will be required to meet the Councils lighting and electrical specification and standard before it can be considered for adoption into the Councils network. The promoter will be required to submit their proposals to the Operational North and Street Lighting Manager for approval before commencement of any work and will be subject to a final site inspection prior to adoption.

12. New Technologies and Installations

12.1 All new technologies shall be assessed based upon each individual asset or requirement. These shall be viewed in line with the Street Lighting, Traffic Signals and External Electrical Infrastructure specification criteria and evaluated for approval by the Operational North and Street Lighting Manager. Such equipment but not limited to which fall into this category would be Electric Car Charging points, Vehicle activated signs or similar, defibrillators etc. each asset will be evaluated on a site by site basis and will require approval from the Operational North and Street Lighting Manager.

12.2 All new light sources shall conform to the relevant standards and shall be monitored for suitability to install on the adoptable network and infrastructure. Any deviations to this shall be discussed and approved with and by the Operational North and Street Lighting Manager.

13. Glossy of Terms

British Standards 5489-1:2020 – the standards provide recommendations for the general principles of road lighting, including aesthetic, technical, operational and maintenance aspects. It also provides guidance on energy consumption and environmental impacts, and considers the design of lighting for all types of highways, public thoroughfares and pedestrian and cyclists subways and bridges. It also covers the design of lighting for urban centres and public amenity areas, including lighting relating to smart cities

British Standards 7671:2018 (18th edition) – the standards provide recommendations for the general principles of Electrical infrastructure and the current standard used in the UK. It came into effect from 1st January 2019 and is the national standard used for electrical installation and wiring safety across domestic, commercial, and industrial properties.

Code of Practice for Well-Managed Highway Infrastructure: The UK Road Liaison Group (UKRLG) publish a Code of Practice for Highway Authorities to following respect of highway maintenance (the Code). Whilst this Code does not place a statutory requirement on the Council, it provides Highway Authorities with guidance on highways management arrangements. Adoption of the recommendations within the Code is a matter for each Highway Authority, based on their own legal interpretation, risks, needs and priorities. The code advocates a risk-based approach to highway management, which is followed in the Council's HAMP, which recognises resource availability and prioritises areas in the greatest need, in order to provide the maximum benefit from the available investment.

Institution of Lighting Professionals Guidance Note 22 - This is the structural inspection requirements for all asset owners who are responsible for lamp posts, traffic posts, traffic signal poles, signs, CCTV, WiFi, floral decorations or similar. The documentation states and highlights the current practices and requirements of structural testing of various structures and their scoring.