

## **Street Lighting and Other Illuminated Infrastructure Policy Statement 2018**

<b>Contents</b>	<b>Page</b>
Introduction	1
Legal Issues	2
Risk Based Approach	3
Competencies and Training	4
Inspection and Fault Reporting	5
Maintenance	7
Records Maintenance	8
Health and Safety	8
Lifecycle Planning	9
Environmental Management	10
Review Procedure	11

### **1. Introduction**

- 1.1. Through this policy Stockport Council will provide Street Lighting and other Illuminated Infrastructure (e.g. illuminated signs, bollards, building lights and Christmas lighting) that:
- deliver the right quality and amount of light in the right place and at the right time;
  - is delivered via a risk based approach for lighting management that is suitably recorded and documented;
  - deliver value for money through the adoption of appropriate technology;
  - deliver infrastructure which is environmentally sustainable and gives best value;
  - deliver infrastructure which supports integrated transport, and crime reduction;
  - sets out a clear lighting maintenance practice,
  - is delivered in an efficient and robust manner with regards to the collection, processing and recording of lighting asset inventory and condition data, including: scenario planning and investment modelling; management; performance monitoring; and electricity purchase.
- 1.2. The policy is written with reference to the Well Managed Highway Infrastructure Code of Practice 2016 (WMHI) with special reference to Part D. It is also written to integrate with the Street lighting Investment Programme which by the end of 2022/23 will have replaced all street lights with LEDs and carried out a range of other illumination upgrades in the borough. This will deliver a step change in the future maintenance regime with a reduction in routine lamp change activities and a significant reduction in energy requirements.
- 1.3. The most recently adopted functional network hierarchy will be considered when looking at planning lighting work to ensure that the lighting level meets the needs of all users.
- 1.4. For the purpose of this policy street lights and other illuminated infrastructure will also cover these assets in parks, greenspaces, cemeteries on public rights of way

and in car parks which are managed by the Council's street lighting and sign maintenance team.

## 2. Legal Issues

2.1. The legal requirements that have to be met by the Council surrounding lighting are identified below.

- **New Roads and Street Works Act 1991** Under this act it is the duty of the street authority to coordinate and regulate works carried out on the highway.
- **Electrical Safety, Quality and Continuity Regulations 2002** Instructs on the recording of all underground cables. The Code of practice for recording of underground apparatus in streets should also be referred to.
- **Highways Act 1980** Though under the powers of Section 97 of the Highways Act the council does not have an obligation to put up or power street lighting it does, however, have an obligation to maintain street lighting that has been put in so that it is in a safe condition. There is also a need to consider the safety of the highway being maintained though again this does not require street lighting as a default position.
- **Electricity at Work Regulations** These regulations place an obligation on duty holders to maintain electrical systems so far as is reasonably practicable, in order to prevent danger. Periodic testing to lighting should comply with requirements outlined in BS7671.
- **Traffic Signs Regulations and General Directions** Certain road signs have to be illuminated in certain situations as do some traffic bollards. The requirements for traffic sign illumination are set out in the Traffic Signs Regulations and General Directions. Mandatory and discretionary provisions are laid down for signs depending on the material they are made from and the general lighting conditions where they are situated.
- **Clean Neighbourhoods and Environment Act 2005** Identifies artificial light as a potential statutory nuisance, however, it is considered unlikely to include street lights. Stockport Council seeks to be a good neighbour and so will minimise the impact of lighting where possible on neighbouring properties.
- **Crime and Disorder Act 1998** In exercising the Highways Act powers, the Highway Authority is required under s.17 of the Crime and Disorder Act 1998 to have regard to the effect on crime and disorder in the exercise of those powers and to have regard to the need to do all it reasonably can to prevent crime and disorder. However, there is no overriding duty on a local authority to provide or keep lit systems of street lighting to prevent crime.
- **Conservation (Natural Habitats, & c) Regulations 1994 and 2007 amendments** European Protected Species of plants and animals must be considered when lighting is installed or upgraded. Bats are one such species which can be adversely effected and should be given special consideration. The natural environment will be considered when lighting schemes are planned by the Council.
- **Climate Change Act 2008** Climate Reduction Targets includes all electricity used for non-domestic lighting. As such the Council would look to reduce the amount of electricity and carbon emissions relating to street lighting and other illuminated equipment.

- **Civic Amenities Act 1967** Conservation areas which have been designated in Stockport will need to be considered when lighting work is carried out. Any changes that would have a noticeable impact on the appearance of lighting columns, in terms of design or colour, will be discussed with the Conservation Officer.
- 2.2. A Highway Authority may be challenged if it removed a system of road lighting or failed to maintain one in operation if it cannot demonstrate that the reason the system of road lighting was installed is no longer applicable i.e. if a system of road lighting was installed as an accident remedial measure and the level of night time accidents increased following its removal or a system of lighting was installed as a crime reduction initiative and crime increased following the removal or downgrading of the lighting.
- 2.3. An Authority is not liable for accidents arising from a failure to light a highway unless the accident arises because the authority has failed to take reasonable steps to prevent objects it has placed in and around the highway (e.g. road signs, lighting columns, bus shelters etc.) from becoming a danger to the public. Lighting is an obvious way of warning of this danger at night. However, reflective surfaces and appropriate placement also needs to be considered in these situations.

### **3. Risk Based Approach**

- 3.1. There are a range of issues that need to be identified and addressed to keep a lighting scheme running successfully including:
- outages
  - day-burners
  - wilful damage;
  - overhanging trees and vegetation;
  - vehicle damage;
  - misaligned brackets;
  - missing doors;
  - unsecured or missing lantern bowls;
  - missing identification numbers; and
  - the majority of LED diodes have failed.
- 3.2. These need to be assessed for appropriate action and suitable response timescales. This may involve assistance from a number of council employees and contractors to remedy the faults. Under no circumstances should an electrically dangerous item of equipment be left in operation.
- 3.3. When considering the need and response time to repair issues with street lighting and illuminated infrastructure council assets, Council employees will use the following risk matrix:

Likelihood of Event Occurring	Consequence of Event Occurring				
	Negligible	Low	Medium	High	Severe
Negligible	1	2	3	4	5
Very Low	2	4	6	8	10
Low	3	6	9	12	15
Medium	4	8	12	16	20
High	5	10	15	20	25
Key to Risks					
Low		Medium		High	

#### 3.4. Priority Responses defined by colour

Risk factor	Priority Response
25	1
15 to 25	2
9 to 12	3
5 to 8	4
2 to 4	5
1	6

Priority	Response time
1	2 hour (Emergency Fault)
2	24hour (Non-emergency affecting specific road safety provision i.e. bollard, column or sign damaged or missing)
3	14 Calendar Days
4	28 Calendar Days
5	Considered For Planned Maintenance
6	Review At Next Inspection

## 4. Competences and Training

- 4.1. In order to meet the needs of Regulation 16 of the Electricity at Work Regulations which states “No person shall be engaged in any work activity where technical knowledge or experience is necessary to prevent danger or where appropriate,

injury, unless he possesses such knowledge or experience, or is under such degree of supervision as may be appropriate having regard to the nature of the work". The Council will undertake to monitor the competencies and training of its staff and contractors.

- 4.2. Training and competency of all employees and contractors involved in the maintenance of street lighting and illuminated infrastructures will be recorded and these records will be available for inspection by the Council and the Councils representatives such as our insurance providers.
- 4.3. Call handling staff will receive training to enable them to identify appropriate actions and response needs for reports from the public. This will include the response to emergencies and to ensure appropriate co-ordination between them and the emergency response teams.
- 4.4. The Councils Contractors will ensure that their employees and sub-contractors will have the appropriate training and evidence of this will be provided to the Council. The Staff involved in providing emergency response service must be competent and able to exercise their risk based judgement as to the action required.

## **5. Inspection, and Fault Reporting**

- 5.1. To maintain a service to the public the Council will utilise the following methods for identifying failure regarding street lighting and illuminated infrastructure.
- 5.2. **Find and Fix** – The Council will identify faults and other issues via a night inspection in areas where repeated problems are recorded. The Council will also undertake find and fix in the Town Centre and District Centres pre-Christmas. After the transition to LEDs the Council will move to a system which has a greater dependence on public reporting as the LED lanterns have a far more significant life expectancy. Any faults and actions will be recorded in Confirm enabling the identification of repeat problems which need further investigation. Where an immediate repair cannot be undertaken then the speed of the action will be assigned a priority using the matrix in section 3.
- 5.3. **Public reporting** – The Council has always encouraged the public to report defects relating to street lighting and illuminated infrastructure. This is supported by online reporting, which the public are encouraged to do as a preferred method, on the Council website. Some street light faults are hazardous and dangerous to the public, these include:
  - exposed cables
  - damaged, knocked down, or unstable street lights or signs
  - missing or loose doors and covers
  - unsecured or missing lighting bowls / hanging equipment
- 5.4. In these cases the public are asked on the website to ring 0161 217 6111 to report the fault as these need a rapid response.

- 5.5. This method of reporting will be promoted to ensure that the Council is made aware of issues on the network. These requests and subsequent actions will be recorded in Confirm. The speed of the action will be assigned a priority using the matrix in section 3.
- 5.6. **Visual Inspection of electrical equipment** - The condition of the electrical equipment and wiring will be visually checked at each cyclic maintenance or repair visit and any issues identified for necessary action. For older lighting stock with non-LED lanterns this will take place at least every 3 years, for LED lanterns this will be at least every 6 years. With regards to illuminated signs this will take place at least biennially, until the LED retro-fit work has been completed and then inspection will be carried out on a 6 year frequency. Traffic bollards will be cleaned and inspected annually following gritting activities. The condition based on visual inspection will be recorded after all maintenance or repair visits and any issues identified for necessary action. The speed of the action will be assigned a priority using the matrix in section 3.
- 5.7. **Electrical Testing** - This testing will be carried out by a competent person provided by the Council contractor. All test equipment will be correctly calibrated and regularly certified. Testing will be undertaken every 6 years. To achieve this one sixth of the lighting stock will be tested annually. The results of electrical inspection and testing must be recorded. Confirm will be used to store electrical test information for individual item of equipment enabling them to be readily available for monitoring purposes. Where repairs are identified the speed of the action will be assigned a priority using the matrix in section 3. Supply to the Column may be the responsibility of the District Network Operator (DNO) and they will be responsible for faults on their supply cable. The DNO operate under their own response times for repairs.
- 5.8. **Structural inspection and Testing** Column or post inspections need to be undertaken to identify those in need of replacement. This is to minimise the risk of structural failure which could result in damage to property, injury and fatalities. This will include: visual inspection of columns or posts at any inspection or repair visit. This will be at a minimum of once every 6 years.
- 5.9. Steel lighting columns and sign post will be routinely checked for structural stability and /or defects. This includes ultrasound testing to measure the thickness of the metal. Concrete columns will be visually assessed. The assessment will assign a risk category for each unit and a level of potential failure which advises on a future inspection date. The ultrasound testing will place the columns in to the following risk categories.

<b>Risk category</b>	<b>Explanation</b>
<b>Re-inspect the column in 6 years' time</b>	The column is assessed as low risk
<b>Re-inspect the column in 3 years' time</b>	Some early signs of defects or risk factors such as corrosion
<b>Re-inspect the column in 1 year's time</b>	There are significant defects that could deteriorate rapidly. However, there is negligible risk of a major failure
<b>Remedial</b>	The surveyor considers that the risk of major failure of the column beyond the next year exceeds acceptable levels and requires replacement in the next year's programme

5.10. It is important to note that although the worst risk category refers to the need for replacement within a year of inspection this does not mean to say that the column is an immediate danger to the public. The risk score is intended to assist with capital programme planning on an annual basis rather than indicating a need for immediate or emergency maintenance.

5.11. Records will be available of the inspections and testing and key information will be recorded in Confirm.

## **6. Maintenance**

6.1. As well as inspection and testing there is also maintenance work. Some of this work will be undertaken at the same time as inspection and testing of street light or other pieces of illuminated infrastructure while other activities will be carried out separately.

6.2. A replacement and sleeving programme for columns identified as needing replacement/ repair will be developed annually based on the findings of testing and inspection.

6.3. A painting programme for columns will be developed in response to visual inspection findings where this is appropriate for maintenance of the asset.

6.4. Street lights will be cleaned as part of the electrical inspection and testing process.

6.5. Traffic bollards will be cleaned annually.

6.6. Where street lights or other piece illuminated infrastructure are affected by tree cover, these units will be considered for additional cleaning as appropriate.

6.7. Christmas lighting and other specialist features will be tested accordingly, maintained and erected / removed where appropriate.

- 6.8. Lamp replacements on traditional lighting have been carried out on a 3 year cycle. For LEDs it is recognised that there is a longer lifespan, however, cleaning activities and component changes will need to be programmed. The routine maintenance regime will be tailored to meet the needs of the different LEDs used and their age based on the information held in the Asset Management System. Currently the Council is utilising Confirm.
- 6.9. Structure lighting e.g. Stockport viaduct and high mast lighting will be maintained using specialist access equipment. External providers will be used to carry out foundation / electrical testing, routine inspection and maintenance as required.
- 6.10. When new columns are erected following accident damage or as part of a new scheme, consideration should be given to the most appropriate position on a highway taking into account position of residential properties and access. Utility services may restrict the positioning however where possible new columns should be installed at property boundaries and / or at the back of footway.

## **7. Records Maintenance**

- 7.1. Asset Management Data is held by the Council in an Asset Management System. The data held within the system will enable the Council to undertake robust lifecycle planning. The data will be entered in to tablet computers on site.
- 7.2. This information will be updated when amendments are made to a street light or other pieces of illuminated infrastructure to ensure that the supply inventory is maintained accurately. This will enable the inventory to be submitted to the DNO in the agreed format. This will also ensure that the Council will benefit from the new energy saving equipment fitted. The system will also be used to develop asset inventory, ensure correct equipment is installed, assist with lifecycle planning, deterioration modelling and to record warranties so equipment fails can be replaced should it fail prematurely.
- 7.3. All emergency work is recorded in the Asset Management System as an enquiry linked to a job or a job raised. The incident is then properly tracked and recorded. If the incident was a result of vehicle impact then details of the vehicle(s) should be recorded on an accident report sheet and procedures for the recovery of costs followed.
- 7.4. All visits to a street light or other pieces of illuminated infrastructure will be recorded in the Asset Management System.

## **8. Health and Safety**

- 8.1. The Health and Safety at Work Act 1974 in conjunction with the Construction (Design and Management) Regulation 2015 require Highways Authorities to carry out work in a safe manner.



8.2. Council employees and contractors will comply with the following requirements:-

- Lone worker policy must be followed where applicable
- Plan inspection/testing routes in advance of leaving the office
- Organise any necessary traffic management to ensure safe working
- Check with Highway operations and The Council's highway management team if there are any emergency / safety repair works taking place in the area
- Inform colleagues of their intended whereabouts
- Ensure they have necessary equipment
- Ensure that their vehicle is roadworthy
- Park legally when carrying out work
- Wear a high visibility safety vest or jacket and safety shoes while working on site. Carry out a basic risk assessment of the location and act upon it to keep themselves and others safe
- Employees must remain aware of their surroundings and approaching hazards while performing work

8.3. In the case of electrical equipment the employees and contractors must have the appropriate training for the task being undertaken.

## **9. Lifecycle Planning**

9.1. The Council's current LED programme is based on the Council's Life Cycle Plan for the street lighting stock in the borough. The Council predicted an increasing cost for the replacement of equipment and energy which assisted with the development of a 5 year programme of replacement to move to LED technology.

9.2. The Council's Life Cycle Plan did not identify the need for a mass replacement or repair of columns, however column replacements / repair will be required on a needs basis to achieve adequate lighting levels and where required based on routine condition testing. This decision was based on extensive data available on the condition of steel lighting columns with up to 10 years of surveys and visual inspection of concrete columns. Therefore the Council proposes to maintain a programme of structural assessment, replacement and repair on an annual basis with locations selected based on risk.

9.3. The Council will continue to trial new technologies as they become available and keep the electricity suppliers up-to-date on the inventory details of our network. The Council will also seek to continue to use the most appropriate electricity supplier for energy requirements. Consortiums and flexible purchasing arrangements will be considered.

9.4. Where new specialist feature lighting are requested and approved for aesthetic purposes, the Street Lighting team will expect that they will be accompanied with a relevant maintenance funding stream to bridge the gap between the cost of standard equipment and the chosen lighting and where appropriate decommissioning funding.

- 9.5. Where the Council has adopted higher specification street lighting and other illuminated infrastructure as part of a planning application and section 38 / 278 agreement, the Council will seek commuted sums to contribute to the future maintenance of the scheme.
- 9.6. When working with the police and community safety team lighting improvements are often identified to help address crime. However, this should only be considered when lighting improvements are supported by the realistic opportunity that people committing criminal acts will be seen doing so and other supportive work by the community safety team as lighting alone is not a deterrent.
- 10. Environmental Management**
- 10.1. Section 2 of the policy statement identified several environmental areas that need to be considered when installing or modifying street lighting and other illuminated infrastructure.
- 10.2. **Climate Change** – The Council will continually seek to improve the energy efficiency of its street lighting and illuminated equipment. This will in turn reduce the Councils energy consumption and its CO<sub>2</sub> production. This would include the removal of lit signs and bollards where the current legislation indicates that reflective signage can be used instead. In all cases changes to the equipment used by the Council will be carefully researched and all current best practice guidance utilised.
- 10.3. **Trees** – Trees should be considered when planning a street lighting scheme. Stockport has a large number of street trees. These trees may limit the placement of lighting columns due to the need to avoid damaging roots and branches. These trees can also, due to growth, impede the lighting received from a scheme and increase the need for cleaning of illuminated equipment and street lights. Key to this is the early involvement of the Councils Arboricultural Officer in all schemes near trees to ensure that the actions taken will support the needs of the area both now and in the future. Work will also follow the guidance provided in the NJUG Guidelines for the planning, installation and maintenance of Utility Services in proximity to trees. Consideration should also be given when planting trees and selecting appropriate species in the vicinity of existing street lighting equipment.
- 10.4. **Protected Species** - Artificial lighting can have a negative impact on people and wildlife. Problems caused to wildlife can include disorientation due to an inability to navigate, disruption to breeding cycles and inability to hunt for night predators. Bats are often specifically considered but are not the only species affected by lighting. Consideration should be given to the potential negative effects of a change to an existing or new lighting scheme. As part of the design process, recommendations in BS5489 will be followed where appropriate and other national relevant guidance.
- 10.5. **Dark Sky** - The presence of artificial lighting can give light pollution that impedes visions of the night sky and impacts on the enjoyment of rural areas. A large proportion of this is attributed to street lighting. While street lighting reduces some light spillage it does not completely remove the negative effects of lighting in this

regard. Therefore this will always be considered in the implementation of all new schemes. This is especially important in areas where there is currently no lighting and it will impact on a rural area which may also be important for biodiversity. Recommendations from BS5489 will be considered. The LED lantern that has been selected for installation borough-wide directs lights onto the highway and provides no light above the horizontal.

- 10.6. In locations where lighting is desired but will cause environmental issues it may be possible to consider reducing the hours of operation by switching off when there is little need for lighting. An example of this would be lighting in parks. This is a common request to identify walkways, buildings, entrances and exits. However, lighting needs to reflect reasonable user expectation and light in a way that is effective. For example a play area with non through routes and tennis courts etc. could have part night lighting unlit to limit unwanted activities in that area. Main through routes may not need all night lighting in areas which are particularly sensitive in biodiversity terms and have value with regards the environment. It will also minimise disturbance to local residents and discourage antisocial behaviour.
  - 10.7. **Conservation** - The development of plans to modify or install new street lighting and other illuminated infrastructure within zones designated as conservation areas will be considered in line with their needs to protect the special architectural or historic interest. Key to this is the early involvement of the Councils Conservation Officer in all such schemes to ensure that the actions being taken will support the needs of the area. Where possible and funding allows, this would include the maintenance of existing historic street lighting features or the use of replica replacements to maintain the 'feel' of the area.
  - 10.8. **Waste Management** - Lamps and luminaires will be recycled where possible and disposed of appropriately to minimise negative environmental impact. The end of life needs of a product will be considered when purchasing new equipment. Most lamps are considered hazardous waste. Lamp and Luminaire Producer Schemes, funded by a levy on new products, exist to ensure the disposal of such equipment in line with the WEEE Regulations and Environment Agency requirements and Stockport Council takes part in a relevant disposal scheme. All waste will be disposed of appropriately.
- 11. Review Procedure**
- 11.1. The policy will be reviewed in 2023 unless significant changes need to be made earlier.