

South Gloucestershire Council

Street Lighting Policy April 2017

April 2017 (All Night PEC)

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Section 1 Overview

1.1 Foreword

South Gloucestershire Council recognises that street lighting is an integral part of the road and footway infrastructure and is important to all users of these networks. However street lighting is also a major user of energy and creator of CO₂ emissions both of which the Council has targeted for reduction.

The provision of street lighting aims to contribute to the Council's corporate priorities of ensuring South Gloucestershire Council is a 'great place to live and work'.

1.2 Purpose

The street lighting policy has been developed to provide a framework for the effective and efficient management of Street lighting that realises the vision of the Councils core strategy.

This policy seeks to ensure the street lighting team aligns to the core values and balances the needs of its customers and the priority to reduce energy consumption.

Its principle objective is to:

- Provide direction and an integrated approach to the maintenance and development requirements of street lighting.
- Seek to reduce the Council's negative impact on climate change whilst delivering the benefits of appropriate street lighting.
- Provide flexibility to evaluate and implement new technologies and policies where deemed appropriate.

1.3 Introduction

The Council is responsible for circa 30,300 street lights and 2,500 lit road traffic signs and bollards..

Street lighting can enhance the night time environment and social scene, encourage the use of facilities by young and old alike, and contribute a general 'well-being' within communities. Inappropriate lighting contributes to the excessive energy consumption, CO₂ production, nuisance, and can cause light pollution.

The Council recognises there is a significant advantage to be gained by the effective and efficient provision of street lighting in:

- Energy management
- Carbon management
- Control of light pollution
- Promoting a general feeling of well-being
- Aiding movement across the network.

1.4 Legislation

1.4.1 Street lighting

In the UK and under the Highways Act 1980, there is not a statutory requirement on local authorities to provide public lighting. Council's do however, have the power to provide lighting for any highway or proposed highway for which they are, or will be, the Highway Authority

Under the Highways Act 1980, Health and Safety at Work Act 1974 and Electricity at Work Regulations 1989 the Council has a duty to maintain its assets in a safe condition.

1.4.2 Traffic Signs and Illuminated Bollards

The Council is required by law to provide specific traffic signs and bollards in accordance with the Traffic Signs and General Directions, some of which must be illuminated.

Under the Highways Act 1980, Health and Safety at Work Act 1974 and Electricity at Work Regulations 1989 The Council has a duty to maintain these where provided, however the Council will de illuminate signs and bollards where it is deemed appropriate.

1.4.3 Road Safety

The Council has a statutory duty to promote road safety.

Section 39 of the Road Traffic Act 1988 places statutory duties on the Council to promote road safety. Under this act South Gloucestershire Council must:

- Prepare and carry out measures designed to promote road safety
- Carry out studies into traffic related accidents arising on roads within its area.

Where it is deemed appropriate Street Lighting can be used to mitigate against accident black spots generally this is through the implementation of casualty reductions schemes instigated by the Road Safety Team.

1.4.4 British Standards

The British Standard Specification and the Codes of Practice for lighting are not statutory requirements. However they are provided to give local authorities and lighting 'bodies' consistent and qualitative standards to work to.

This policy acknowledges these duties: The Maintenance and Developers Specification are created to recognise these duties but allow local issues to be considered, it is not the Councils intention to align to all National Codes of Practice.

1.5 Environmental Impact

The Council is committed to provide a sustainable environment for the residents in South Gloucestershire.

Street Lighting must therefore consider:-

- All Council policies and strategies where relevant e.g Carbon Reduction Strategy
- Ensure all new and replacement Street Lighting is:
 - Sustainable
 - Proven to be energy efficient and effective
 - Considers British and European Standards
 - Designed and manufactured to a high quality
- The recycling of all waste to:
 - Minimise landfill requirements
 - Ensure that the obligations under the W.E.E.E. directive
- Minimising the requirement for new equipment by:
 - Re-using materials where possible e.g. sign faces and photo cells
- When assessing replacement lighting schemes:
 - Appropriateness, thus avoiding the installation of unnecessary lighting wherever possible.
 - Environmental issues such as light spillage and intrusion.
 - Impact on wildlife

Street lighting can have an impact on wildlife; South Gloucestershire Council aims to be consistent with the requirements of the Natural Environment and Rural Communities Act 2006.

1.6 Localism

Where practicable the Council seeks to involve stakeholders and communities in consultation on appropriate projects, schemes, and policies.

To allow Parish and Town Councils to consider and react to local priorities, the Council will consider written requests from a Parish or Town Council to buy back or purchase services. On each occasion and where reasonably practicable the council will facilitate the request via an appropriate policy or procedure. .

1.7 Future Strategy

South Gloucestershire Council is required to continue to reduce energy and CO₂ emissions with the ambition of providing an appropriate level of lighting. The Council will monitor technological developments, innovation and evaluate accordingly.

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Section 2 Scope

The policy aims to specifically address the overarching asset management requirements of street lighting, illuminated signs and bollards that is or are proposed to be an asset of the Council and shall include:

2.1 Competencies

All personnel engaged in public lighting operations shall be competent in accordance with EWR 1989.

2.1.1 Design competencies

The objective is to provide appropriate lighting that considers whole life costing, carbon and energy reduction.

The Council urges the use of a qualified and competent street lighting engineer to design lighting schemes.

2.1.2 Installation and maintenance competencies

All persons undertaking street lighting works must be competent to carry out their appointed tasks. The operator is responsible for ensuring only competent persons are employed for the installation and maintenance of street lighting.

The operator is responsible for ensuring suitable supervision of the installation and maintenance work.

The Council will require evidence of competencies prior to any work commencing on site by means of:-

- G39/1 authorisation
- Qualifications
- Training
- Experience
- Knowledge

2.3 Maintenance Requirements

Under the Highways Act 1980, Health and Safety at Work Act 1974, Electricity at Work Regulations 1989 and with consideration for the above the Council has a duty to maintain its assets in a safe condition.

2.4 Developments and New Lighting requirements

The Council will provide a Developers Specification aligning with this policy to achieve sustainable lighting installations on new building developments.

2.5 Replacement Column Works

The Council will provide an appropriate column replacement programme that considers whole life costing, carbon and energy reduction. Replacement works

are to be prioritised and planned in accordance with the Maintenance Specification document and it is to link with design criteria and the LED programme.

2.6 Added Value

All services and works must aim to provide added value through the appropriate integration of the above work streams and other departments. This is to ensure that all design, maintenance, and environmental impacts are considered to minimise ineffective work programmes and maintenance costs.

2.7 Out of Scope

This policy **does not** specifically cover the asset management of:

- Non illuminated traffic signs and bollards
- Traffic signals
- Bus shelters
- Vehicle Activated or interactive signs
- CCTV

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Section 3 Sustainability

The Council is committed to managing its estate and operations in a way that minimises carbon emissions, reduces costs and contributes to the effective delivery of the South Gloucestershire Climate Change Strategy. It recognises the importance of providing sustainable street lighting, balancing the immediate local needs with long term environmental and economic requirements.

The Council's Carbon Management Plan is a long term plan for delivering energy and CO₂ savings across its estate and operations. Street lighting accounts for 25% of the Council's emissions, presenting an opportunity to make significant emissions reductions.

The Council will identify and implement energy saving measures to achieve emission reductions from its street lighting stock through policy change, innovation and capital investment.

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Section 4 Lighting levels and hours of illumination

The primary requirement for street lighting is to provide a sustainable and appropriate level of lighting to the road network at the appropriate times.

4.1 Lighting levels

The recommended minimum lighting levels set in the British Standards are considered to be the target level.

4.1.1 New lighting schemes

All new lighting schemes are to be designed in accordance with and to target the minimum lighting levels in the current British Standard. In addition a council approved lighting output regime (see Section 4.2) will then be applied. See Developers Specification Document for particular details

4.1.2 Existing lighting

Existing lighting installations have been designed to many different standards and lighting levels. It is not a requirement to improve on these lighting levels during future maintenance work.

Where practicable e.g. during the LED programme, the Councils approved lighting output regime section 4.2 will be applied to the existing lighting schemes. See Maintenance Specification Document for particular details

4.2 Lighting Output

The primary requirement for street lighting is to provide a sustainable and appropriate level of lighting to the road network.

Good street lighting can enhance the night time environment and social scene, encourage the use of facilities by young and old alike, and contribute a general well-being within communities. Appropriate street lighting can also be an important safety, visibility, and security aid to the highway user.

Inappropriate lighting contributes to the excessive energy consumption, CO₂ production and can cause light pollution.

The Councils standard hours for illumination will be done in accordance with the table below

<i>All Night Operation</i>	<i>35 lux [~Sunset + 15 mins] to 11:00 PM GMT</i>	<i>75%</i>
	<i>11:00 PM GMT to 06.00 AM GMT</i>	<i>50%</i>
	<i>06:00 AM (GMT) to 18 lux [~Sunrise - 15mins]</i>	<i>75%</i>

Street lighting lanterns are to be controlled with a Photo Electric Cell Unit, set to switch on at 35 lux and off at 18 lux ambient illumination level. LED drivers are to be factory pre-programmed in line with the above table.

Due to the technology, +/- 30min variation may be expected further to the one hour shift during British Summer Time (when dimming points become 12:00 PM BST & 07:00 AM BST)

See Developers or Maintenance Specification as required.

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Section 5 Maintenance

Having provided street lighting, illuminated signs, and bollards the Council has a duty of care to users of the highway network including other land that is owned and maintained by the Council.

The Council shall provide an appropriate Maintenance Specification to realise the ambition of the effective and efficient provision of street lighting.

5.1 Asset Management System (AMS)

To be able to maintain the Street lighting stock it is imperative that an accurate inventory is maintained. The Council must therefore establish and maintain an up to date and accurate inventory of all highway electrical equipment (including Authority cable networks) as part of its Asset Management System (AMS).

5.2 Maintenance Requirements

5.2.1 Routine and Non Routine

To provide effective pro-active maintenance, electrical inspection and reactive maintenance the Council will:

- Maintain a cyclical maintenance regime for lighting installations that ensure the assets correct operation and light output, minimize failures, maximise life and assess installations for structural and electrical safety.
- Manage the risk of structural failure by inspecting the columns regularly and grading their condition.
- Inspect and maintain street furniture to comply with Electricity at Works Regulations 1989
- Operate a reactive maintenance service aimed at making safe electrical hazards and repairing faults in appropriate timescales

5.2.2 Emergency Works

The Council will provide at all times competent staff and suitable equipment to respond to an emergency call-out location within 2 hours from receipt of the instruction to respond.

Section 6 Lantern Replacement

The primary requirement for street lighting is to provide a sustainable and appropriate level of lighting to the road network at the appropriate times. The Council will utilise the most appropriate technology to achieve this aim, the particular specifications of which can be found in the developers or maintenance specification documents.

The lantern replacement programme is aimed at achieving maximum benefit for the Council, giving due consideration for the economic, environmental and end user perspectives.

General criteria:

When rolling out a lantern replacement programme, the intention is to redesign and illuminate the roads to the most appropriate standard practicable. Given that existing column spacing will often vary from any current design guidance it is accepted that these intentions will not always be achieved. Furthermore the Councils approved lighting output regime section 4.2 will be applied to these existing lighting schemes.

Replacement lanterns will generally be fitted to existing columns unless a column is due for replacement (see section 7)

Where deemed appropriate the option of an additional column maybe considered where local conditions suggest.

NB: Lantern replacement is not automatic and the Council will reserve the right to remove lighting points altogether

Section 7 Column Replacement

The Council will prioritise the replacement of equipment. This shall be determined from the reported conditional Structural and Electrical inspections, the Transportation Asset Management Plan and the lantern replacement programme.

7.1 Positional Placement

Column replacement schemes will generally be undertaken on a like for like positional basis using specified equipment.

However, prior to the replacement of the street lighting the Council will consider the following: -

- Justification of replacement
- The proximity and association of, ASB, actual crime, and/or traffic accidents
- Whether the existing spacing of lighting units is appropriate
- Whether infill lighting is necessary and affordable
- Option for newly designed scheme

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Section 8 Developments, New Schemes and Alterations

The Council receives many requests for new or improved lighting. New street lighting requests come in many formats, through internal departments, developers, members of the public, elected members, parish councils etc.

New street lighting can only be installed through the following processes:

- Developments that are adopted by the Council
- Highway improvement schemes (including road safety and traffic management)
- Community safety schemes
- Supported assessments made by the lighting team following public, police, Senior Officer, Parish/Town Councils or Elected member requests

8.1 Developments

The Council shall provide an appropriate Developer Specification to realise the ambition of the effective and efficient provision of street lighting on new Building Developments.

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8.2 Highway Improvement Schemes

When new traffic management, traffic management features, or pedestrian crossings are installed it may be required to upgrade the existing lighting surrounding the area appropriately.

Improvement schemes may include:

- Controlled and pedestrian crossings
- Traffic calming
- Car parks
- Road alignment alterations including carriageway widening
- Junction improvements e.g. mini roundabouts
- Road safety enhancements that include street lighting upgrades
- Installation of cycle lanes

The extent of the lighting design should be as follows:-

Type of Scheme	Extent of Street Lighting Design
For casualty reduction schemes to address night time accidents	The area identified by the Road Safety Team
New Zebra Crossings	3 columns on each approach
New signal controlled crossings in existing lit areas	
New refuges in lit areas	1 column on each approach.
Physical traffic calming measures where the speed limit is 30mph or above	Where features are less than 100metres apart, the entire length of road between the features.
Significant carriageway widening in existing lit areas	The extent of the widening scheme
New mini-roundabouts	The junction area and 1 column on each approach
Junctions with changed priorities	
New lane merges in existing lit areas	The extent of the merge and one column on the approach

8.3 Community Safety Schemes

All requests for additional lighting should be made in writing to the Council.

The Council will use an assessment procedure that considers numerous factors used to evaluate and prioritise the new or improvement lighting scheme.

The factors considered are:

- Funding available
- Road safety and accident reduction
- Lantern replacement program
- Transportation modes
- Crime prevention
- Environmental issues
- LTP strategy
- Traffic and/or pedestrian volumes

8.4 Public Enquiries

All enquiries by the public for additional lighting or alteration to existing lighting should be made in writing to the Council.

8.4.1 New or additional lighting

Requests for additional street lighting for any purpose other than Council schemes will be re-chargeable. This will be confirmed to the person(s) making the request prior to the commencement of any work.

The factors considered are:

- Consequence of changing the status quo
- Impact on existing lighting scheme
- Impact on other stakeholders
- Road safety issues
- Maintenance implications

The Council will deal with each request on its individual merit, evaluate and respond appropriately.

8.4.2 Moving an existing street light (Residents)

All requests to relocate a lamp column must be made in writing to the Council.

Prior to agreeing to the request the Council will consider:

- The reason for the request
- The impact of change on the existing layout
- The future servicing of the unit
- The impact of the proposal on neighbours, communities and other highway users

The applicant is responsible for:

- Payment of all the Authority's costs involved in advance of the works taking place
- Payment of electricity board and any other third party costs
- Acquiring all relevant consents prior to commencement of work
- Providing written evidence of consultation to any proposal with relevant parties. e.g. neighbours and statutory bodies
- Compliance with other Council policies and procedures
- Ensuring the Authority's insurance and indemnity

All costs, charges and liabilities will be made known to the applicant in writing.

The applicant will be responsible for any additional cost variations incurred for reasons beyond the Authority's control such as moving unidentified, inaccurately recorded utility apparatus.

Section 9 Electrical Supplies

The Council would like to reduce the number of excavations and services in the ground.

9.1 Electricity supplies / Connections

Where appropriate all electrical supplies for the street lighting equipment and illuminated road traffic signs shall be provided by an REC (Regional Electricity Supply Company) or DNO (District Network Operator) or IDNO (Independent District Network Operator). This is with the exception of carriageway build outs, unless otherwise agreed with South Gloucestershire Council Lighting Engineer.

District Network Operators Injections or Independent District Network Operators Injections shall not be used in equipment installed on refuge or traffic calming islands; they will receive a Local Authority supply and be switched / fused via the supply column

The installer of any electrical installation i.e. lighting unit/bus shelter/VMS etc that are to be connected to an un-metered supply must provide a completion certificate for that installation.

9.2 Testing and inspection

Testing and inspection shall be completed in accordance with BS7671:2008 Requirements for Electrical Installations -17th Edition and carried out by a suitable, qualified, and competent person.

Testing shall be carried out in compliance with the Electricity at Work Regulations 1989 and such that no danger to persons or property or damage to equipment can occur even if the tested circuit is defective.

Certification shall be provided in accordance with BS7671:2008 Requirements for Electrical Installations -17th Edition

The values shall be in accordance with those shown in BS 7671:2008 Requirements for Electrical Installations -17th Edition to ensure the circuit protective device will function within five seconds.

Section 10 Electrical Energy Management

The Council will maintain an inventory to comply with unmetered supply regulations and aid efficient energy management.

Street lighting and lit signs consume electrical energy. The supplies to street lights are un-metered whereas supplies to homes or industry are metered. The Council maintains an inventory of the equipment installed and a meter is used to measure the hours when the lights are switched on and off. Energy is then calculated based on the inventory data and appropriate charge for the energy consumed.

Equipment shall not be added to the unmetered supply inventory without meeting the following conditions:

The equipment must

- Be UMSO approved and have a charge code
- Have a valid completion and, electrical test and inspection certificate

In addition to the above, equipment unrelated to street lighting, illuminated signs and bollards such as traffic signals, bus shelters, CCTV etc. will only be added to the unmetered supply agreement once the following conditions have been met:

- Annual funding is made available for energy use
- A maintenance regime has been formalised and annually funded by the designing section.
- Final approval is made by a Senior Officer

10.1 Competitive Energy

The Council will procure energy on the most cost effective and strategically aligned basis

To manage procurement the following requirements complied with

- To maintain an electronic inventory of the street lighting and lit sign equipment to 98% accuracy.
- All equipment must be UMSO approved.
- Have a Connection Agreement with the distribution companies. For South Gloucestershire this is with Western Power Distribution (WPD) and Central Networks (CN). A designated MPAN Account Number for each area is detailed on the Un-Metered Supplies Certificates.
- Appoint an Un-metered Supplies Officer (UMSO) and have a Meter Administration Services Agreement and operation of a pseudo-meter in the Council area.
- To obtain a Certificate of the Un-Metered Supply approving the Council's electronic inventory as accurate.
- Monthly issue of the Council's electronic inventory to the UMSO for interchange of information between the distribution and energy supply companies and calculation of charges.
- Agree load research to verify or establish actual consumption of equipment.

Compliance with these requirements enables the Authority to purchase electrical energy in the competitive market. The Public Supply Contract Regulations 1995 detail three methods of procurement these being Open, Restricted or Negotiated Procedures. The Council Contracts Engineer advised the Open Procedure for improved competition and lowest price.

10.2 'Green' or 'Brown' Energy?

The Council aims to use green energy for street lighting supplies.

This situation will be monitored and whilst the overall difference in cost is acceptable the Council will continue to use green energy.

Section 11 Attachments to Lighting Columns

11.1 Road Signs and other street furniture

The majority of lighting columns have not been designed to accommodate the stresses induced by attaching signs, banners CCTV equipment. No attachment will be permitted on any unit unless the column has been assessed and approved for suitability in compliance with Department for Transport memorandum BD26/86 or any national guidance, and to the Council's satisfaction.

11.2 Additional support

Street lighting columns are not to be used as additional support of a sign requiring two posts, unless the column is designed for that purpose.

11.3 Advertisements

Street lighting columns shall be considered as supports for advertising signs or banners provided evidence is produced to satisfy the council there is not a detrimental effect to the integrity or structural stability of the lighting columns.

The council shall be indemnified all liabilities and not be responsibility for the costs of installation and future maintenance.

Unauthorised signs will be removed by Council Officers.

11.4 Dual purpose installations

Street lighting cols are not to be doubled up as a telephone mast etc, due the maintenance logistics

11.5 Temporary supplies

Temporary supplies from street lighting columns for the supply of temporary traffic control or electricity to a temporary cabin will only be permitted with the permission of the Head of Street Care or Electricity Company and where agreement is made to pay for the electricity consumed. Supplies to conform to BS7671.

11.6 Festive lighting

The Head of Street Care and the unmetered supply administrator must approve all festive lighting installations mounted on street lighting lanterns or supplied via street lighting columns.

Where the festive lighting is at a height of 6m or more 230v will be permitted where festive lighting is below 6m or as part of tree decorations, 25v SELV will be used.

All apparatus must be installed in compliance with: -

- The Health and safety at work act 1974
- The Electricity at work regulations 1989
- The Construction, Design and management Regulations 2007
- BS7671 2008: Requirements for Electrical Installations - 17th Edition (including test and inspection)
- Equipment must be UMSO rated to allow for the payment of electricity consumed
- An agreed emergency cover must be provided.

11.7 Flower baskets

Street lighting columns are not designed as supports for flower baskets of any kind. The default policy is no baskets will be permitted on columns. From time to time and in exceptional circumstances The Council may approve the attachment of flower baskets; this must be done in writing and approved by the Head of Street Care and the structural stability of the columns proven.

11.8 CCTV Cameras

The Council deploys CCTV systems in town centres, high streets and other areas suffering from crime and anti-social behaviour. This acts as a deterrent, a detection tool and reassures the public and business community. It is accepted that the use of CCTV is becoming increasingly widespread.

11.8.1 Permanent Installation

Street lighting columns are not suitable for permanent CCTV and this is therefore not permissible. Dedicated supports designed for CCTV applications should be used.

11.8.2 Temporary (time to be agreed)

In instances where temporary CCTV installations (re-deployable CCTV – 'RCCTV') are required to assist in a feasibility study as a precursor for a permanent installation or as part of a temporary monitoring situation in the interests of crime reduction and community safety, the highway maintenance manager may approve such installations subject to electrical and column survey.

Section 12 Performance Management

12.1 Performance Indicators (KPI's)

The KPI's and targets used by the Council are:

Average number of days to complete reactive maintenance repair

% of lights not working at any one time

The number of columns replaced against target of 1,000 per annum

Lanterns replaced against target of 3,000 per annum

Kwh usage (Energy consumed)

CO2 emissions

(Former BVPI 215a) – Average number of days to repair a street light that is under the control of the local authority

(Former BVPI 215b) – Average number of days to repair a street light that is under the control of the DNO (Distribution Network Operator or Electricity Company)

Section 13 Glossary

EWR 1989	Electricity at Work Regulations 1989
WEEE	Waste Electrical and Electronic Equipment Regulations 2006
RoHS	Restriction of the use of certain Hazardous Substances in electrical and electronic equipment
UMSO	Un-metered Supply Organisation
AMS	Asset Management System
ILE	Institute of Lighting Engineers
LTP	Local Transport Plan
PBviews	The Councils Performance Management Tool
L.E.D.	Light emitting diode