



Street Lighting Strategy 2023 – 2033

"A Strategy for a modern network of efficient and effective street lighting"

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If you would like to know more or have had an incident involving a street lighting asset,
please contact SMBC and one of our team will be happy to help

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FOREWORD

Street lighting plays a big part in the safety of those using our highway network and the quality of life for our communities. It is our aspiration that people who live, work, and visit Solihull should be able to feel safe while minimising impact to the environment.

This strategy sets out the Council's aspirations for maintaining and improving street lighting in Solihull. It outlines the drivers for change including carbon reduction and financial savings. We are committed to making changes to the network which are both efficient and environmentally friendly, using the latest technology wherever possible.

I am delighted to endorse this strategy to improve street lighting and the benefits it will deliver to our residents and visitors.

A handwritten signature in black ink, appearing to read 'K Hawkins'.

Councillor Ken Hawkins - Cabinet Member for Environment and Infrastructure - Solihull Council

Introduction

As a Lighting Authority, Solihull Metropolitan Borough Council is charged with the management and provision of street lighting and other illuminated street furniture within the Borough. This involves fulfilling a number of statutory obligations and making judgements and decisions about how to maintain existing lighting as well as when, where and how to provide new lighting.

The Highways Act empowers local authorities to light roads but does not place a duty to do so. The council has a duty of care to road users and has an obligation to light obstructions on the highway. The council has a statutory duty under the Highways Act, to ensure the safety of the highway, and this includes any lighting equipment placed on the highway. The Electricity at Work Regulations imposes a duty on the owners and operators of electrical equipment to ensure its safety.

The last strategy for Street Lighting was published in 2012 to cover the period to 2022. Since 2012, there has been significant change and investment in the street lighting asset base across the Borough, most notably around the use of LED technology.

The Highways Act 1980,

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, and may for that purpose :

- (A) Contract with any persons for the supply of gas, electric or other means of lighting ; and
- (B) Construct and maintain such lamps, posts and other works as they consider necessary

Our investment in the lantern replacement programme has delivered large reductions in energy usage and carbon emissions, whilst delivering an improved offer to those who use the road network on their journeys in and through the Borough every day. Energy usage has fallen from a high of 11,583,752 kWh in 2015/16 to just over 5,555,889 kWh at the end of 2020/21. When combined with a wider decarbonisation of the National Grid, associated carbon emissions have fallen from 5,750 tonnes to 1,394 tonnes over the same time period, a 75% decrease which has helped the Council achieve its climate change objectives.

The step change in our assets has also been matched by changes to our working practices. LEAN tools and techniques have been employed throughout the service area and robust procurement and contract monitoring processes help to ensure the in-house service continues to offer value for money. The service area has continued its tradition of investing in the next generation, creating apprenticeships for both electrical and business administration functions.

Further opportunities lie ahead over the lifetime of a new strategy. Whilst there does not appear to have been much change to date in terms of the remote control and monitoring and collection of wider environmental data through the street lighting network, the Smart Cities movement is gathering momentum and will need to be considered and evaluated carefully. Changes in how and why we use electricity, particularly for electric vehicles, will undoubtedly shape other opportunities that may also have a result on our service area.

There will also be challenges ahead. Although we have seen investment in our lantern stock and a resultant fall in energy usage and carbon emissions, future development growth associated with the Local Plan will mean a pressure to add more assets to our inventory. Maximising the life of our existing assets, particularly columns, and investing in their replacement in a financially sustainable way will also continue.

This new Street Lighting Strategy sets out the vision for the service for the next ten years and the Council's strategic aims and key policies in delivering that vision. Accompanying the Strategy is a comprehensive Action Plan to ensure delivery of these aims.

About the Borough

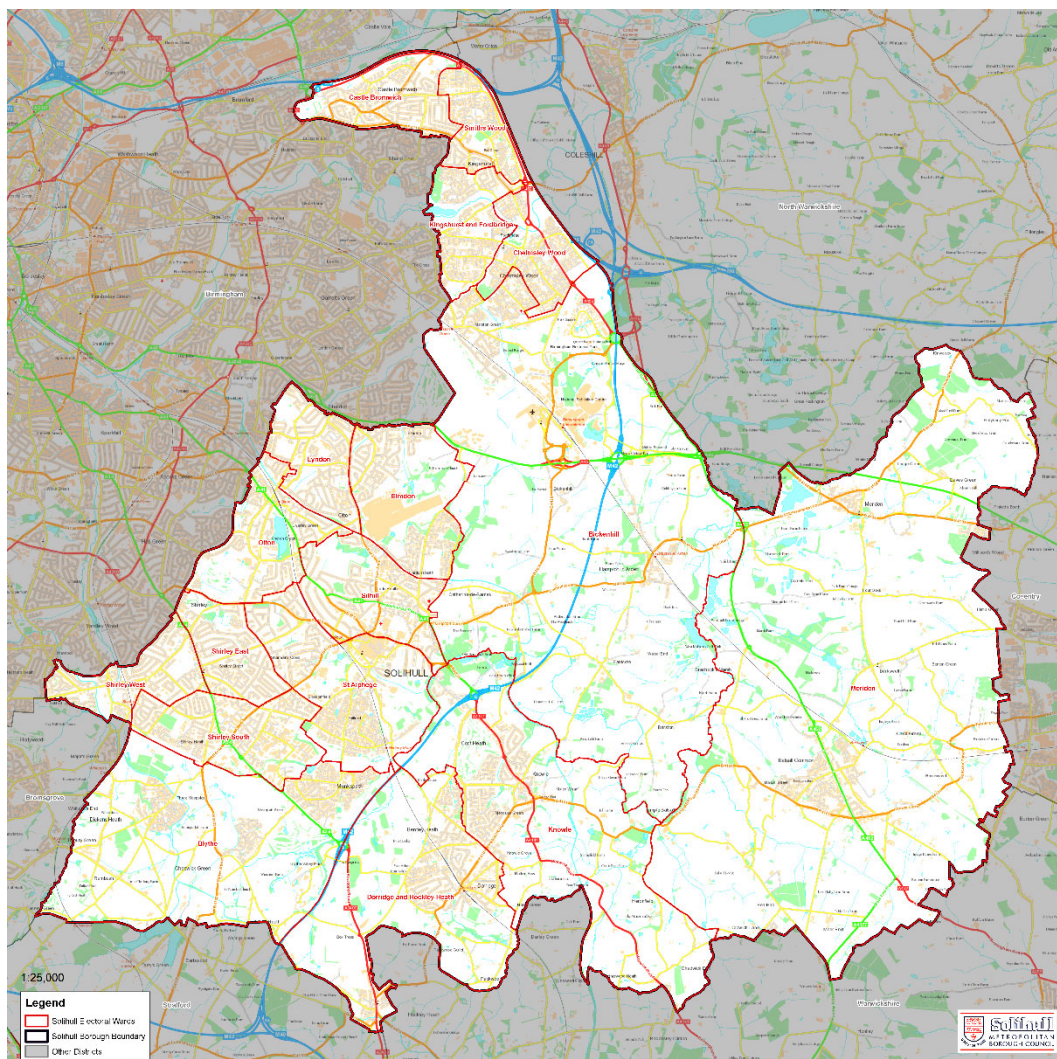
Within the Borough of Solihull, there are currently 23,501 street lighting units in operation. Whilst provided principally on Solihull's road network, units can also be found within pedestrianised areas of the town and local centres and on many footpaths, cycle ways and walkways.

In addition to the 23,501 street lighting units, 2,595 road signs and 1,727 bollards are currently illuminated on the Boroughs road network. The street lighting service also maintains lighting units within parks and car parks on behalf of other Council departments.

It is widely acknowledged that street lighting that is modern, well designed, installed and maintained can provide a number of benefits to the community. Such benefits include:

- Promoting sustainable transport, public transport, cycling and walking
- Facilitating social inclusion by providing the freedom to use streets after dark
- Promoting economic development by supporting a 24-hour leisure economy
- Assisting with 24-hour use of the existing road infrastructure
- Facilitating lifelong learning by encouraging after dark access to educational facilities
- Assisting the emergency services to identify locations and carry out their duties
- The potential to prevent night-time personal injury collisions
- The potential to prevent street crime and to reduce the fear of crime



The provision of an effective street lighting service is therefore a key area of work for the Council.



Natural Environment

The council is required to adhere to environmental considerations and specifies that the service company must work within the requirements of the Environmental Protection Act 1990, including Sections 102 to 103 of the Clean Neighbourhood and Environment Act 2004-5.

Protection of the natural environment and wildlife habitats is essential in street lighting design and commences with a full site survey on all new installations. The main principles and design considerations confirm the following:

DO 	DO NOT 
<ul style="list-style-type: none">✓ Work collaboratively to ensure appropriate impacts are mitigated✓ Seek solutions that cause minimal impact to the built and natural environment.✓ Liaise with the SMBC Conservation, Landscape and Ecology teams to understand what potential impacts may arise.✓ Consider the need for lighting and the requirements of SMBC early in the design process	<ul style="list-style-type: none">✗ Install lighting in sensitive ecological areas such as sites supporting particularly light-sensitive species of conservation significance.✗ Use highly reflective surfaces under light.✗ Provide excessive lighting or use beyond the minimum necessary amount of light needed for the task.✗ Directly illuminate bat roosts or important areas for nesting birds and fragment important bat foraging corridors.

Whilst councils must look into complaints about artificial light entering premises if the light could be classed as a 'statutory nuisance' (Environmental Protection Act 1990), this does not apply to light from street lights. Street lighting must still be well designed to ensure it is lighting the street area as intended and no excess and or undesirable light is emitted towards residential properties or polluting the night time sky.



Community Safety

When considering the provision of new assets, the council will always ask the question “Do I need to light it?” If so then the lighting shall be designed under the principal of Ultra Efficient Lighting (UEL) which means that the right light will be provided at the right time, in the right place, controlled by the right system.

When considering the need to provide street lighting on new developments, consultation should also be undertaken with the safer communities teams via email safersolihull@solihull.gov.uk. We would look to ensure all developments are safe by design and thus ensure potential issues are mitigated at the outset. It should be noted that the safer communities team will be guided by the Crime and Disorder Act 1998 of which section 17 places the following duty on Councils

Crime and Disorder Act 1998

Without prejudice to any other obligation imposed on it, it shall be the duty of each authority to which this section applies to exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent,

- (A) crime and disorder in its area (including anti-social and other behaviour adversely affecting the local environment); and
- (B) the misuse of drugs, alcohol and other substances in its area
- (C) re-offending in its area and
- (D) serious violence in its area

Strategic Vision

The vision and aspirations of the Council with respect to the management of street lighting in Solihull are embodied in the following vision statement.

SMBC
2022

In providing its street lighting service, the council will aim to harness the benefits offered by street lighting in an efficient, cost effective way, whilst minimising any adverse impact on the built and natural environment.

Through this we will seek to achieve the following strategic objectives:

1. To minimise future energy usage and carbon emissions from street lighting through the use of appropriate lighting standards and by ensuring that new street lighting is provided only where necessary.
2. To ensure that illuminated signs and bollards are used only where essential for the purposes of road safety and minimising congestion.
3. Promote and maintain the safety for all highway users, particularly the more vulnerable modes of walking and cycling.
4. Deliver well-designed street lighting in keeping with the environment which helps to provide good quality of place, encouraging walking and cycling.
5. Maintain the street lighting network to a good standard.
6. Develop and implement a cost effective street lighting solution, deploying the latest technological innovations that provide benefits to public, the environment and service efficiencies.
7. Look for opportunities to undertake diming and switching off of street lighting assets wherever possible.

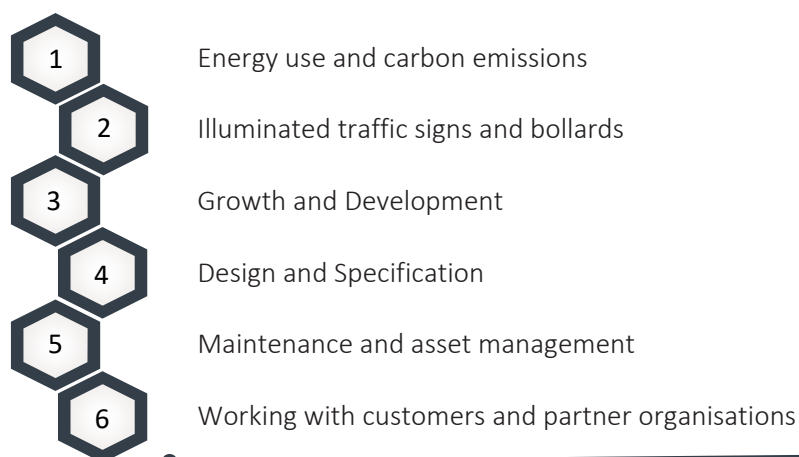


The Strategy

In delivering this vision for the Street Lighting Service the Council will:

- Aim to act in the best interests of the customer and authority at all times
- Have consideration for the natural and built environments
- Continually seek to improve energy efficiency and reduce carbon emissions
- Give full consideration to the impact of its actions on safety and crime
- Strive to reduce the cost of the service to the Council and residents of Solihull whilst still maintaining an effective and efficient service
- Wherever practicable, adopt best practice in the equipment, design and maintenance of the street lighting asset including where appropriate the use of emerging and innovative technologies.
- Take forward assessments to dim and switch off street lighting where this is determined to be appropriate.

These guiding principles underpin the strategy and how the service will be delivered through a number of key aims and policies which cover the six service areas:



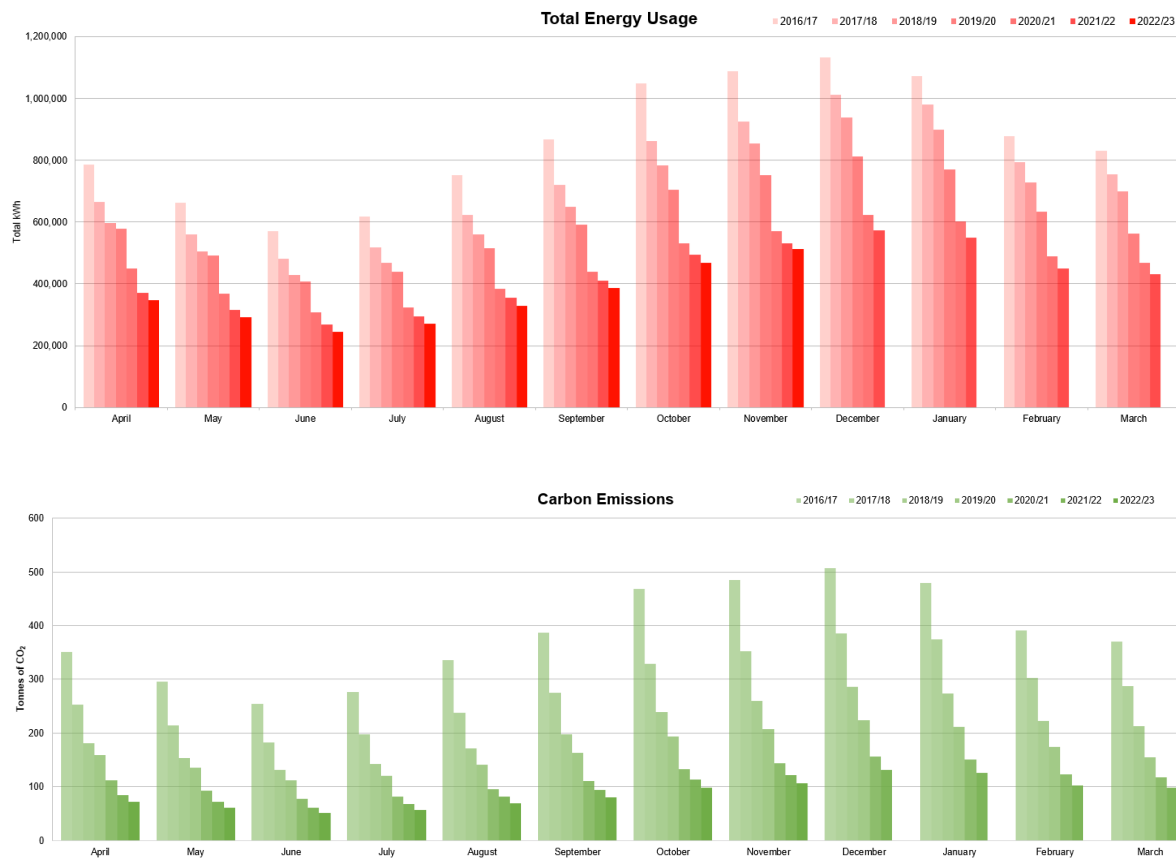
In producing this strategy it has not been the intention to repeat all the current policies, practices and procedures which form the framework for the current street lighting service nor go into the detail of standards for wiring and other requirements which can be found within the Solihull MBC Street Lighting Specification document.

Instead, the approach taken has been to focus on those areas where the previous strategy either promoted actions that have subsequently been completed or new actions arising from thought process changes which would bring increased benefits, efficiency and value for money to the service. On this basis, set out below are the strategies for achieving the six strategic objectives and a number of associated key policies through which the Strategy will be implemented



Energy Usage and Carbon Emissions

Energy usage has fallen from a high of 10,305,192 kWh in 2016/17 to just over 5,044,600 kWh at the end of 2021/22. When combined with a wider de-carbonisation of the National Grid, associated carbon emissions have fallen from 4,603 tonnes to 595 tonnes over the same time period, a decrease which has helped the Council achieve its climate change objectives.



Aim

To minimise future energy usage and carbon emissions from street lighting through the use of appropriate lighting standards and by ensuring that new street lighting is provided only where necessary.

Key Policies

To minimise future energy usage and carbon emissions Solihull Council will:

- Ensure new schemes are designed appropriately to ensure roads/areas are not over lit;
- Seek to install solar and or wind powered assets wherever possible;
- Only install new columns where it is shown to be absolutely necessary
- Utilisation of CMS to allow for potential energy efficiency operations such as dimming and switching off of street lighting where possible.



Illuminated Traffic Signs and Bollards

There are currently 2,595 road signs and 1,727 bollards illuminated on the Boroughs road network, a number of which remain on 24 hours a day.

Whilst 603 signs are now LED, a further 806 have been identified for such a change, with the remainder being de-illuminated due to a change in lighting requirements. This work will have a positive impact on street clutter and can have cost benefits in terms of reduced energy consumption and maintenance requirements.

Aim

To ensure that illuminated signs and bollards are used only where essential for the purposes of road safety and minimising congestion.

Key Policies

Solihull Council will:

- Undertake regular reviews of existing traffic signs and remove any unnecessary sign lighting;
- Seek opportunities to replace illuminated bollards with reflective bollards where appropriate



Growth and Development

Solihull's Local Plan recognises that the Borough provides some of the best housing in the West Midlands, with values consistently above the regional average. Solihull is a strong attractor of households, given its location, connectivity, local environment, excellent schools and the strength of the local economy and employment opportunities.

More housing is needed because of population and household growth. Population is projected to increase by around 23,369 from 217,047 in 2020 to 240,417 in 2036, an increase of 10.8%. The number of households is projected to increase by 13.8% over the period 2020 to 2036 from 91,059 to 103,595. This requires delivery of 15,017 additional homes in the period 2020-2036.¹

Such development will result in future energy and maintenance costs for such lighting installations being passed on to the Local Authority through the highway adoption process.

Whilst the need for lighting in urban areas is understandable and accepted, lighting may not be desirable in remote rural locations, particularly where it has not been provided due to local communities need or request but instead installed purely as part of a developers desire to make their development 'special'. If developments change the use of an area there may be the need for some lighting, especially if active travel is being promoted or new schools are built due to the growing population.

¹ Figures taken from the Solihull MBC Local Plan, updated figures for Solihull population and household projections will be available in 2024 based on 2021 census data.

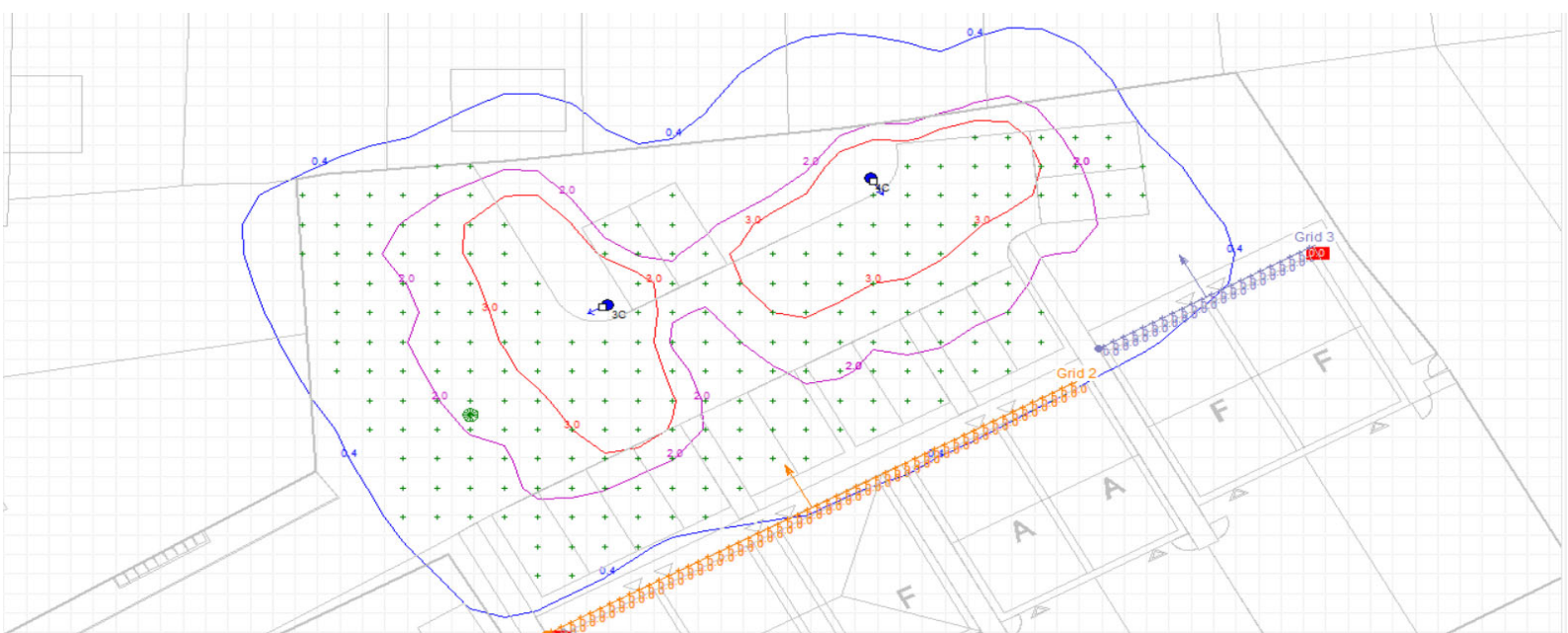
Aim

To ensure that new developments do not place an unnecessary burden on the Street Lighting service by the implementation of appropriate and up to date control processes.

Key Policies

With regard to new developments, processes will be drawn up to ensure that:

- Consider whether new developments, particularly on the urban fringe, require the provision of street lighting (see previous commentary around natural environment considerations. when reviewing the need for lighting, developers should consult the safer communities team on safersolihull@solihull.gov.uk to discuss the proposals
- Existing lighting levels are evaluated if an area changes use or character;
- The full costs associated with changes to the Council's inventory are recovered from developers where new columns are installed or existing arrangements altered.





Design and Specification

When considering any street lighting scheme it is important to take into account both the natural and built environments. Light pollution is a problem which is becoming increasingly serious. During the 1990s, the area in England with pure, dark skies reduced by some 27% (CPRE 2011).

This reduction in dark skies can impact heavily on areas that are of ecological interest, with effects on mammals, birds, insects and trees. Lighting can also impact on the appearance of the built environment; with 374 listed buildings and 20 conservation areas, this is of particular importance to Solihull.

Aim

To take full account of both the natural and built environments in the design of new street lighting schemes and ensure that designs and selection of equipment match the needs of the specific location for which they are intended

Key Policies

The Council will ensure that:

- Schemes take into account the recommendations made in the 2006 document published by English Heritage and the Department for Transport entitled 'Streets For All: West Midlands';
- Schemes to introduce new lighting within existing areas consider existing trees and that column positions are sited so as to not require serious vegetation works;
- Where new streets are proposed, planting regimes will take full account of the initial street lighting design;
- Minimum desirable clearances from the edge of the carriageway are achieved where possible with new or replacement lighting schemes;
- New locations for lighting columns permit a lighting scheme to meet the requirements of the most up to date version of BS5489-1.



Maintenance and Asset Management

It remains as important today as it did 10 years ago that street lighting equipment is maintained to the highest possible standard so that it performs at its optimum; does not waste money and generate unnecessary carbon. It is also important that the street lighting inventory, which is used to calculate the Boroughs annual energy charge, is updated as soon as possible after any on site change, so as to ensure that the correct payment is made to the energy provider. In addition, it is important where residents, developers, public utilities or other bodies require lighting columns to be relocated to facilitate their works, or where damage or vandalism occurs, full costs are recovered by the Council.

Aim

To continue to maintain a fit for purpose street lighting asset by managing the service in accordance with sound asset management principles and nationally accepted good practice.

Key Policies

Solihull Council will:

- Continue to undertake maintenance in accordance with the requirements set out in "Well managed Highway Infrastructure: A Code of Practice", the Institution of Lighting Professionals Technical Reports and good industry practice;
- Ensure we continue to enhance and maintain an up to date and accurate inventory of all highway electrical equipment (including authority cable networks) as part of the asset management system;



Working with Customers and Partner Organisations

Customers, residents and the travelling public in Solihull are central to the Council's vision for the Borough. The Council is committed to delivering maximum value and to be open, honest, approachable and trustworthy in its dealing with the public. Street lighting is regarded by the public as a particularly important service because of the potential impact it can have on convenience and safety.

The service by its nature involves working with a number of partner organisations and third parties. It is important that interfaces with these organisations and the public work as efficiently and effectively as possible. Central to this is the way in which the Council communicates its actions and the reasons for them.

A key interface for the authority is that with the company responsible for distributing electricity in the borough, the Distribution Network Operator, who is responsible for ensuring the good provision of electrical services to the Council's apparatus. The performance of the Distribution Network Operator has a direct impact on the performance of the Council street lighting service.

Keeping partner organisations properly informed is essential. Under the Traffic Management Act, statutory notices are issued to cover a variety of works that require the opening up of the Public Highway. Such works include the installation, transfer, disconnection and reconnection of electrical supply.

The Council also deals with a number of requests for attachments and connections to its street lighting columns from external organisations. It is important for the Council to control this process well so that the integrity of the asset is not compromised.

In some cases, the actions of third parties can have a potentially negative impact on the service. The Council here has a responsibility to ensure that these impacts are limited and that an unnecessary burden is not placed upon the majority of Council residents by the actions of a few.

Aim

To work effectively with customers, partner organisations, third parties and other service providers for the overall benefit of the service.

Key Policies

Solihull Council will:

- Seek to maintain >98% of its street lights in working order at any one time;
- Respond to reported faults promptly by aiming to repair instances of a single light being out within 28 working days of receiving notification. For cases where 2 or more lights are out, the aim will be to attend to these within 7 days of receiving notification;
- Clearly state the authority's policy in relation to the provision of its public lighting service covering all the organisations and services involved in delivering the service;
- Communicate planned works to all those potentially affected in a timely way and ensure that appropriate channels are available for the reporting of issues relating to street lighting
- Ensure full compliance with statutory notification procedures for works undertaken by the Distribution Network Operator and the Council's own works;
- Undertake dialogue with the Distribution Network Operator to address how the existing service can be improved;
- Monitor the performance of the Distribution Network Operator on the repair of faults which are its responsibility and new connections;
- Not encourage third-party connections and attachments to the Council's apparatus. However, where these are considered to be of value to the community, are not for commercial purposes and an alternative suitable electrical supply is not available, such connections may be permitted with the written approval of the Council;

- Ensure that traffic signs that are attached to lighting columns use the correct method, do not exceed the lighting column manufacturers recommended criteria for weight and wind loading;
- Ensure that all columns in town centres/shopping areas are designed to carry attachments (banners and hanging baskets, festive illuminations etc...) at the start of their life;
- Promptly remove signs and attachments to lighting columns that have not been approved by the Council, recovering the costs of removal, storage and disposal from those responsible;
- Work with West Midlands Police to endeavour to identify the vehicle owner or culprit of damage or vandalism;
- Work with third parties to enable their works to progress whilst still maintaining the integrity of the lighting system by the installation of temporary lighting if required;
- Recharge to third parties all costs incurred by the Council, its contractors, subcontractors and agents for the works undertaken for the third party.

Action Plan

Action	Link to Strategic Objective
Review and remove where possible all non-essential street lighting.	1 - Energy use and carbon emissions 2 - Illuminated traffic signs and bollards 3 - Growth and Development
Ensure street lighting schemes are designed and lit to suit the area	2 - Illuminated traffic signs and bollards 3 - Growth and Development 4 - Design and Specification
Ensure street lighting levels are maintained to an appropriate and safe standard for the use of the road	2 - Illuminated traffic signs and bollards 3 - Growth and Development 5 - Maintenance and asset management
Review opportunities to utilise a CMS for dimming assets or switch off locations where possible	1 - Energy use and carbon emissions 2 - Illuminated traffic signs and bollards 3 - Growth and Development 4 - Design and Specification 5 - Maintenance and asset management 6 - Working with customers and partner organisations
Ensure that existing lighting levels are evaluated if an area changes use or character.	2 - Illuminated traffic signs and bollards 3 - Growth and Development 4 - Design and Specification
Ensure that Street Design Guide and updated specifications for developers work fully reflect the requirements of the Street Lighting Strategy.	3 - Growth and Development 4 - Design and Specification
Ensure continued standardisation of lighting stock including all new installations bring completed to SMBC standard specification of street lighting	4 - Design and Specification 5 - Maintenance and asset management 6 - Working with customers and partner organisations
Continue to support the councils commitment to carbon reduction	1 - Energy use and carbon emissions 2 - Illuminated traffic signs and bollards 3 - Growth and Development 4 - Design and Specification 5 - Maintenance and asset management 6 - Working with customers and partner organisations

Looking to the Future

This Strategy provides a clear vision for the street lighting service between 2023 and 2033.

The aim is that by 2033, energy usage and carbon emissions will continue to be minimised as far as practically possible within appropriate and relevant political, environmental, legal and technological limits. Lighting will only have been provided where necessary and subjected to appropriate control and will seek to be adaptive lighting via CMS and sensors to manage lighting levels based on real time usage.

Although the street lighting stock will have increased as a result of new developments, this will not have placed an unnecessary burden on the Street Lighting Service.

New street lighting schemes whether built by the Council or developers, will have taken into account both the natural and built environments and value for money will have been obtained for the purchase of street lighting equipment, services and energy.

Through the identified aims and objectives, the Boroughs' street lighting stock will have continued to be modern, well designed by a Competent Lighting Professional, installed and maintained, providing clear benefits to Solihull's residents, visitors and road users.

Solihull Metropolitan Borough Council will continue to work to make the borough a safe, efficient and attractive place to live in, work in and visit.

The development of our street lighting strategy contributes to this through reduced carbon emissions, and improved quality of place. Wherever possible we will link the upgrade of street lighting with other work projects and future opportunities. These may include the provision of on-street residential electric vehicle charging points on lamp columns.

It may also be possible to utilise a CMS for 'Smart City' technology which is rapidly becoming available, and various 'Smart City' applications are currently being designed and developed, with the possibility and potential delivery of sensory applications.

The street lighting service will be continuing to provide a significant contribution to the achievement of the Council's priorities and aspirations for the people of Solihull.

If you would like to know more or have had an incident involving a street lighting asset, please contact SMBC and one of our team will be happy to help

streetl@solihull.gov.uk

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