



City of Westminster Cabinet Member Report

Meeting or Decision Maker:	Cabinet Member for Environment and Highways
Date:	June 2020
Classification:	For General Release
Title:	Lighting Master Plan 2020-2040
Wards Affected:	All Wards
City for All	This decision enables progress towards the City for All commitment to tackling the climate emergency, providing sustainable lighting for a safer environment, and using the right technology to help improve the lives of those who live in and visit it
Key Decision:	Yes
Financial Summary:	There are no direct implications as a result of the Plan.
Report of:	Kevin Goad – Director, City Highways

1. Executive Summary

- 1.1 This report seeks Cabinet Member approval for the Lighting Master Plan 2020-2040 and associated guidance documents.; Lighting Design Guide, Third Party Attachments / Smart Lighting Column, Temporary Public Lighting Works, and Earthing and Electrical Arrangements.
- 1.2 The Plan is an update to the Westminster Public Realm design strategy supplementary, to meet the City Plan objectives. The associated guides are updates to existing guides updated to current standards and consolidation of a number of previous Westminster guides.
- 1.3 The Plan provides a strategy to manage the application and use of external artificial light across the city. The guides provide common criteria to assist clients and designers responsible for the commissioning and designing of exterior lighting within Westminster City Council.

2. Recommendations

- 2.1 That the Cabinet Member for Environment and Highways approves adoption of the Westminster Lighting Master Plan 2020-2040.
- 2.2 That the Cabinet Member for Environment and Highways approves the following associated Westminster lighting guides;
 - i) Lighting Design Guide
 - ii) Third Party Attachments / Smart Lighting Column Guide
 - iii) Temporary Public Lighting Works Guide
 - iv) Earthing and Electrical Arrangements for Street Furniture

3. Reasons for Decision

- 3.1 The Lighting Master Plan 2020-2040 will allow the council to have a strategic approach to managing the application and use of artificial light across the city. Coordinating the use and appearance of lit assets throughout the city gives an added identity to specific areas and allows quality of a consistent approach from all parties wishing to influence the night-time economy.
- 3.2 It ensures quality through design by competent professionals so that the lighting serves its purpose, mindful of associated energy costs and likely impact on the environment, and consider the sustainability of the lighting performance for the tasks that are being lit.
- 3.3 The Lighting Design Guide supports the Lighting Master Plan and defines a standard of lighting “The Westminster Standard” appropriate to the needs of the council and its highway and public realm users to assist schemes meet a common criteria.
- 3.4 The Third Party Attachments / Smart Lighting Column guide allows the council to consider the strategy / approach to take when thinking about lighting columns as structures. Columns have been designed to support a luminaire, bracket, sign and perhaps some other specific attachments. Therefore, it is important that they are considered as a structure and their structural capacity assessed when making any attachment consideration. It is vital for public safety that a strategy and approach is in place to avoid the columns being overburdened by attachments.
- 3.5 The Temporary Public Lighting Works Guide advises on the procedures and requirements when public lighting is requested to be removed, such that appropriate solutions can be agreed to meet the needs of developments scaffolding or hoarding, whilst not adversely affecting the highway.
- 3.6 The Earthing & Electrical Arrangements for Street Furniture identifies accepted historic Westminster common practice and explores reasons behind those practices and if they should be formally adopted. This allows the benefits of those

common practices used during the current framework to become standard practice.

4. Background, including Policy Context

- 4.1 Westminster declared a climate emergency in 2019 with some of the worst air quality in the UK. And has established a council target of carbon neutrality by 2030.
- 4.2 Westminster's City Plan and City for All provides a vision of creating a world class city for people to live in a healthy, sustainable and safe environment and using our services to achieve this.
- 4.3 The Lighting Master Plan and guides use the Westminster Way public realm guide to provide a framework for all those using lighting to design, enhance, and build in the city to allow that vision to be developed and managed sustainably and consistently, improving safety through lighting and lighting against crime, and reducing carbon emissions with smart technology.

5. Documents Overview

5.1 Lighting Master Plan

- 5.1.1 The Westminster Lighting Master Plan falls under the City Plan to lay down a strategy and strategic approach to manage the application and use of artificial light across the city. It is an update and amalgamation of a number of existing guidance documents including the Westminster Public Realm design strategy supplementary and is encouraged to be used by all those who create, own and operate a lighting system within the city.
- 5.1.2 The Plan allows planners to give guidance to developers to sustainably design to meet the council's strategies, public realm, place shaping and highways teams to design, order, install and maintain a consistent aesthetic to bring an identity to specific areas of the city as well as standard lighting requirements to all areas.
- 5.1.3 The main updates from existing guidance, are to meet objectives of the city plan and contribute to the delivery of 3 key themes in Westminster's ambition to be a City for All;
- 5.1.4 There are 9 objectives to contribute to these themes;
 - i) Support the night time economy,
 - ii) Co-ordinated approach,
 - iii) Sustainability,
 - iv) Celebrate our unique heritage,
 - v) Future ready ,

- vi) Way-finding,
 - vii) Quality in design,
 - viii) Making people feel safe,
 - ix) Environment.
- 5.1.5 Please see Lighting Master Plan in Appendix B, which discusses various topics, including;
- 5.1.6 Areas of the city placed into categories to give a cohesive approach to the design and specification of lighting to deliver co-ordinated installations that suit the current and future nature of the streets and public areas.
- 5.1.7 Different types of artificial light are discussed and reviewed, from street lighting and architectural lighting, to temporary work lighting, advertising and special events. Advice is giving on what works and what should be avoided. References to technical specifications are also noted to be taken into consideration, accounting for usage, ecology and diversity. Energy saving and carbon reduction objectives are taken into account to reduce our impact on climate, and that our cherished assets are maintained and built on.
- 5.1.8 Ensuring that new items considered the future uses of the asset, Electric Vehicle Charging Points, Internet of Things devices (including sensors), 5G, and the need for this asset information to be held to assist with assessments for additional attachments.

5.2 Lighting Design Guide

- 5.2.1 Supports the Lighting Master Plan and is an update of the public lighting design strategy to meet the latest guidance and the master plan.
- 5.2.2 The design guide combines a number of previous guidance documents to provide a more cohesive guide for users, that lists Westminster's requirements that have been the councils position for several years, and updated to current standards where needed.
- 5.2.3 It defines the standard of lighting "The Westminster Standard", appropriate to the needs of the council and its highway and public realm users. It is to assist clients and designers responsible for the commissioning and designing of exterior lighting within Westminster City Council to produce schemes to meet common criteria and the requirements of the Lighting Master Plan. This also allows a more consistent palette of materials, which should reduce ongoing maintenance costs. The Guidelines are to be used in conjunction with the appropriate European and British Standards, National guidance and Westminster documents.

5.2.4 Public lighting is only one aspect of the street scene and the type and design of a lighting scheme must show regard for, and be compatible with, other street furniture and the reduction of street clutter. Reference should be made to the Westminster Way and Lighting Master Plan documents, which sets the required style for the street furniture and streetscape.

5.2.5 The Lighting Design guide is under Appendix C

5.3 Third Party Attachments / Smart Lighting Column

5.3.1 Is an update from existing guidance, amalgamating a number of attachment guides into one document in line with long held Westminster position and updated where standards have been changed.

5.3.2 The document covers the requirements and approach to be undertaken for any attachment proposed to an existing lighting column as well as considerations on how new columns can be specified to accommodate such attachments without affecting their structural capacity.

5.3.3 The Highway Code of Practice 'Well managed highway infrastructure' rightly requires authorities to consider de-cluttering their streets and this aligns with Westminster's highway strategy and attachments need to be considered under this.

5.3.4 Lighting columns are rightly seen as a facilitator in these considerations, they are located regularly across the city, have height and power. and are regularly placed across the public realm. All aspects that are desirable. However, within Westminster not all columns are the same and a number will not be suitable due to their design, age, base materials be suitable for any additional attachments.

5.3.5 Attachments covered are;

- i) Requirements for third party smart sensors / monitoring equipment
- ii) Communication and monitoring equipment including CCTV
- iii) Banners
- iv) Hanging baskets
- v) Festive decorations
- vi) Catenary systems
- vii) Electric vehicles (EV) points

5.3.6 This document looks to these requirements and provides a strategy for how such considerations can be assessed and managed now and for the future. Every attachment needs to be considered by the council and this requires due assessment time and costs to determine if the attachment can be permitted on existing equipment or if new will be required.

5.3.7 The Third Party Attachment guide is under Appendix D

5.4 Temporary Lighting Works (Rechargeable Job Orders)

5.4.1 This guide advises on the procedures and requirements where public lighting is requested to be removed which includes the provision of temporary lighting and to ensure public and workforce safety is assured while also protecting the public realm lighting assets, many of which are Cherished¹ and Listed².

5.4.2 It is the combination of a number of previous Westminster attachment guides, updated to reflect current standards and the new code of practice, updates around attachment types such as 5G and in-column Electric Vehicle Charge Points in line with Westminster's requirements.

5.4.3 The principle behind this guidance is to aid application to the Council for a "Scaffolding" or "Hoarding" installation to ensure that its effect on the Public Highway and or highway services such as public lighting is managed. By following the processes laid out, appropriate solutions can be agreed to meet the needs of the development whilst not adversely affecting the highway and related services.

5.4.4 The Council has a requirement to enable these works to be undertaken through a well-established licensing process.

5.4.5 The Temporary Lighting Works is under Appendix E

5.5 Earthing and Electrical Arrangements

5.5.1 This report identifies 11 current practices being undertaken within Westminster not currently written within the contract specifications. These are due to advances in new technologies, leading to best practice and adhering to new electrical regulations.

5.5.2 Additionally, with the increase of 3rd parties working on developments and improvements within the city, the above has led to issues around being able to influence the quality, and respectively the safety, of equipment installed within the council's public realm areas by issuing these Specifications or Standard Details to said third parties prior to the design and construction works.

5.5.3 The aim of this guide is to identify and list equipment, and methodologies for electrical and associated installations in common use in the city that are not yet included in the suite of approved Specifications and Standard Details. These

¹ Cherished assets are columns, brackets and lanterns which have a historical relevance. They are essentially all cast iron and cast bronze columns within the city. They may not have listed status

² Listed assets are those with significant historical relevance and have been protected under UK legislation, ensuring any future changes do not result in a loss of its significance

common practices have been developed as new materials and methods of work have appeared on the market, and also due to safety improvements in some items used and changes to British Standards relating to electrical and earthing arrangements. For example, earth mats rather than earth rods for electric vehicle installations.

5.5.4 11 common practices are identified and reviewed, and adoption decision advised or further works required. Guidance can be found in Appendix F

6. Financial Implications

6.1 There are no direct financial implications associated with this report. Ryan Whitaker, Finance Manager, City Management & Communities.

7. Legal implications

7.1 There are no direct legal implications associated with this report. Isaac Carter, Senior Solicitor. Highways Planning and Licensing.

7.2 The Master Plan and guides seek to formalise the Council's approach to managing the application and use of artificial light across the city to meet the legal requirements noted within the Plan and guides, including;

- i) The National Planning Policy Framework,
- ii) Clean Neighbourhoods and Environment Act
- iii) International Guidance;
 - a. Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Lighting Installations, Commission Internationale De L'Eclairage (CIE 150 - International Commission on Illumination) (2003)
 - b. Guidelines for Minimising Sky Glow CIE 126 (1997)
- iv) National Guidance
 - a. Institute of Lighting Professionals (ILP) Guidance Note 01 the Reduction of Obtrusive Light
 - b. Chartered Institute of Building Service Engineers (CIBSE) Lighting Guide 4 (LG4) Sports lighting
 - c. Chartered Institute of Building Service Engineers (CIBSE) Lighting Guide 6 (LG6) The exterior environment
 - d. Road to Zero document from the Transport Secretary
 - e. London Local Authority and Transport for London Act 2013 – Part 2 Section 4 'Lighting Attachments and Street Signs'
- v) British Standards
 - a. BS EN 13201 Road Lighting
 - b. BS 5489-1 Code of Practice for the design of road lighting; Lighting of roads and public amenity areas
 - c. BS7671 Electrical Regulations
 - d. BS EN 40 Lighting Column Design

- e. PD6547 Guidance on the use of BS EN 40-3-1 and BS EN 40-3-3
- f. BS EN ISO 9001 Quality Assurance
- g. BS 8539 Code of Practice for the selection of and installation of post installed anchors
- vi) Westminster Way a Public Realm Guide
- vii) Lighting Value Management Model (LVMM)
- viii) Westminster Artificial lighting environmental impact strategy
- ix) Westminster Adaptive Lighting Strategy

8. Ward member consultation

- 8.1 Consultation was undertaken by the Service Providers consultant, WSP, with Planning, BIDS and key landowners/stakeholders.

If you have any queries about this Report or wish to inspect any of the Background Papers please contact:

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APPENDICES

Appendix A Other Implications

Appendix B Westminster Lighting Master Plan 2020-2040

Appendix C Westminster Lighting Design Guide

Appendix D Westminster Third Party Attachments / Smart Lighting Column Guide

Appendix E Westminster Temporary Public Lighting Works Guide

Appendix F Westminster Earthing and Electrical Arrangements for Street Furniture

BACKGROUND PAPERS:

None

- *NB: For individual Cabinet Member reports only*

For completion by the **Cabinet Member for Environment and Highways**

Declaration of Interest

I have <no interest to declare / to declare an interest> in respect of this report

Signed: _____ Date: _____

NAME: **Councillor Andrew Smith** _____

State nature of interest if any

.....
(N.B: If you have an interest you should seek advice as to whether it is appropriate to make a decision in relation to this matter)

For the reasons set out above, I agree the recommendation(s) in the report entitled Electric Vehicle Charging Infrastructure Strategy 2020 - 2025.

Signed

Cabinet Member for Environment and Highways

Date

If you have any additional comment which you would want actioned in connection with your decision you should discuss this with the report author and then set out your comment below before the report and this pro-forma is returned to the Secretariat for processing.

Additional comment:
.....
.....

If you do not wish to approve the recommendations, or wish to make an alternative decision, it is important that you consult the report author, the Director of Law, City Treasurer and, if there are staffing implications, the Director of People Services (or their representatives) so that (1) you can be made aware of any further relevant considerations that you should take into account before making the decision and (2) your reasons for the decision can be properly identified and recorded, as required by law.

Note to Cabinet Member: Your decision will now be published and copied to the Members of the relevant Policy & Scrutiny Committee. If the decision falls within the criteria for call-in, it will not be implemented until five working days have elapsed from publication to allow the Policy and Scrutiny Committee to decide whether it wishes to call the matter in.

Appendix A Other Implications

1. Resources Implications

There are no resources implications arising from Lighting Master Plan and guides

2. Business Plan Implications

The guidance presented in these documents have been developed using recognised good practice and Value Management techniques and Asset Management principles. This approach has been employed on Westminster's Highway Infrastructure assets for more than ten years.

3. Risk Management Implications

Component schemes and project risks should be managed through the projects Risk Register and as part of the Well Managed Highway Infrastructure Code of Practice

4. Health and Wellbeing Impact Assessment including Health and Safety Implications

The Lighting Master Plan and guidance is considered to have a positive impact on the health and wellbeing of the community. Any works are expected to produce benefits for the community associated with a consistent lighting approach undertaken and managed by lighting professionals. Appropriately lit footway and carriageways help encourage walking and cycling and improve visibility to limit accidents.

All component schemes and projects will be identified and addressed in accordance with the Construction, Design and Management Regulations 2015. All works undertaken will be closely monitored and carried out to the requirements of the Health & Safety at Work Act 1974.

5. Crime and Disorder Implications

It is recognised that good street lighting has a deterrent effect on street crime and burglaries etc. All street lighting improvement schemes need to take into account the need for better lighting in all area including crime hot spots identified using information relating to crime and developed in liaison with the police. The change to the use of white light sources is having beneficial effects on the quality of the night-time CCTV and for individuals to be able to recognise friend or foe more easily.

6. Impact on the Environment

A strategic approach ensures that all artificial lighting is approached and considered holistically to form a co-ordinated lit environment across the city.

Manage the environment and consequences that arise from using artificial light at night with respect to humans as well as our treasured flora and fauna.

Applying the appropriate standards and national guidance helps to provide a safe and secure environment for all users including access needs for vulnerable groups.

Artificial lighting can help provide a safe environment for a range of activities such as driving, cycling, walking and sports, and can also enhance the environment by means of decorative and flood lighting of areas, features and buildings. Good lighting enables an environment to function in the way it was intended, whether it is as a safe residential street or a thriving 24/7 city centre.

7. Staffing Implications

There are no staffing implications arising from Lighting Master Plan and guides

8. Human Rights Implications

There are no human rights implications arising from Lighting Master Plan and guides

9. Energy Measure Implications

The Plan promotes the adoption of sustainable and environmentally suitable lighting solutions to manage energy as well as carbon use and reduce light pollution. They will use less energy and be recyclable/reusable where practicable

Lighting installations need to ensure quality through design by competent professionals so that the lighting serves its purpose yet is mindful of the associated energy costs. When a new or replacement lighting scheme is to be provided, that scheme shall be the most cost effective in terms of whole life costing, energy and carbon usage and consider energy efficient equipment as defined under the Energy related Products (ErP) Directive for public lighting

Electrical equipment for highway connections shall have been assessed by Elexon and have associated energy codes in order to meet un-metered equipment requirements. Equipment not holding such certification shall not be used or shall attract a commuted sum to manage the requirement for a metered electrical connection and supporting infrastructure.

10. Communications Implications

There will be a long-term commitment for the council to promote the use and adherence to the Lighting Master Plan, but this will be marginal in terms of resourcing. Key stakeholders, developers, urban designers including Bids will be informed of the decision as required.

11. IT

All components that are to be maintained by the council are to adhere to IT system requirements, including the council's asset management system and central management system.

12. Sustainability Implications

To be sustainable we must know the true costs of what we do, and these are generally hidden or ignored in favour of upfront costs. If these costs are disclosed and made meaningful and relevant, then we can look to whole life costing and sustainable lighting installations.

Opportunity to ensure the specification of lighting systems meets required standards, reduces energy use and can be recycled.

Sustainability must be balanced: looking at the task, considering social and economic as well as environmental aspects, looking to optimise existing assets whilst making selective investment in new ones. Providing the right light, in the right place, at the right time, controlled by the right system, designed by competent designers taking a whole life costing approach

A whole life costing approach shall consider the cost of equipment and construction as well as costs for the operation and maintenance of the installation taking account of energy and carbon as well as expected planned and reactive maintenance operations, this shall be based upon a 40 year asset life to maximise the life of the product.

Appendix B Westminster Lighting Master Plan 2020-2040

Appendix C Westminster Lighting Design Guide

**Appendix D Westminster Third Party Attachments / Smart Lighting
Column Guide**

Appendix E Westminster Temporary Public Lighting Works Guide

Appendix F Westminster Earthing and Electrical Arrangements for Street Furniture