

Committee(s) Streets & Walkways Sub Committee Port Health & Environmental Services Committee Planning & Transportation Committee	Dated: 8 July 2021 13 July 2021 20 July 2021
Subject: City Lighting Strategy - Update	Public
Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?	1, 2, 10, 11, 12
Does this proposal require extra revenue and/or capital spending?	No
If so, how much?	N/A
What is the source of Funding?	N/A
Has this Funding Source been agreed with the Chamberlain's Department?	N/A
Report of: Director of the Built Environment	For Information
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Summary

This report provides Members with an update on the implementation of the City's innovative Lighting Strategy from 2018 that sought to deliver a holistic and co-ordinated approach to lighting the Square Mile.

That Strategy was initially driven by the project to upgrade the City's street lighting to energy efficient LED units and to implement a new smart control system. That workstream is now coming to a close and has been highly successful, creating opportunities to use this technology to deliver wider benefits. In so doing, this approach also established new cross-departmental governance on lighting and challenged conventional thinking behind how lighting impacts the public realm.

With the City's evolving Climate Action Strategy now targeting 'net zero' for carbon emissions in the Square Mile by 2040, the focus of this collective approach will start to shift towards sustainability and the wider City stakeholder community. With that in mind, the introduction of new planning advice, a review of current regulation and the establishment of new communication channels will lead behaviour change as the City seeks to reconsider the night-time lighting of buildings in the Square Mile.

Recommendation(s)

Members are recommended to note the progress & next steps outlined in this report.

Main Report

Background

1. In early 2020, Streets & Walkways and Planning & Transportation Committees received a report updating Members on the implementation of the City's innovative Lighting Strategy, including information on the on-going rollout of LED street lighting and the next series of initiatives intended to deliver the objectives set out within that strategy.
2. Since then, Covid-19 has affected some of those initiatives but others have been able to continue, including the LED rollout which has now been completed. In addition, the City's adoption of a radical Climate Action Strategy places a new emphasis on energy & carbon emissions as the City seeks to become 'net zero' in its operations by 2027 and 'net zero' for the Square Mile by 2040.
3. This report provides the latest position, updating Members on progress despite Covid-19, and the direction the City intends to take on lighting the Square Mile going forward.

Current Position

Lighting Strategy & Street Lighting Upgrade

4. In terms of background, Members may recall from previous reports that in 2018, the City developed, consulted on and adopted an innovative Lighting Strategy for its streets. This was developed in parallel to a £4m investment to upgrade the City's street lighting inventory to more energy efficient LED units.
5. That LED programme was able to safely continue during 2020 despite Covid-19 and was substantially completed at the end of last year. Snagging has now finished, allowing a Gateway 6 Project Closure report to be submitted to Streets & Walkways & Project Sub Committees after recess.
6. Previewing some of the findings that will be included in that report, the project was completed on time & to budget and delivered the following benefits:
 - A 57% saving (2.9 Million KWh) in energy pa (compared to current year estimates without these changes)
 - A 78% saving (2,000 tonnes) of CO₂ emissions pa
 - A 20% reduction in the number of lighting assets
 - A 56% reduction in maintenance costs (compared to 2017 when the project progressed through Gateway 5)
 - The introduction of a real-time mesh-based control management system for dynamic control of the lighting as well as energy monitoring and fault reporting.
 - The establishment of different lighting profiles for different lanterns, enabling the City to move away from a 'one size fits all approach' to lighting the Square Mile.

- A softening of the 'look & feel' of the City's night-time environment by using a range of warmer colour temperatures.
7. Being able to raise & lower lighting remotely has enabled the City to work with the City Police on using lighting to help manage problem areas suffering from anti-social behaviour, whilst the use of more efficient lanterns have enabled us to reduce light spillage in areas of concern to the City's Pollution Control team.
 8. Ensuring the right type of lighting is used in the right place at the right time remains a core objective of the Lighting Strategy which has three broad themes:
 - The lighting needs for our streets & spaces
 - A focus on environmental themes & sustainability
 - The technical requirements of lighting management & control
 9. Between the Lighting Strategy and LED rollout, we have rebalanced our public realm lighting, moving away from a traffic dominated and overly lit environment, establishing a more human & less traffic dominated scale aligned to our Transport Strategy & Public Realm objectives.
 10. Being able to set individual lighting timings (when lights come on and off), lighting levels (high to low) and temperatures (warm to cold) has enabled us to explore opportunities to change the look & feel of the City at night as well as make our lighting operate more efficiently and sustainably.
 11. An example has been Peters Hill between Carter Lane and Queen Victoria St which had previously been 'over-lit' with too many lanterns producing excessive glare from bright white lights. Instead, warmer, lower lighting levels were introduced with fewer overall lanterns, some at ground level built into handrails. This served to create a calmer and more welcoming space, more in keeping with this key pedestrian route from the Millennium Bridge.

Wider Interest & Opportunities

12. Feedback from City stakeholders to the LED rollout and Lighting Strategy has been universally positive, including residents of the Barbican where a series of changes on the highwalk to refresh the night-time look and feel have been welcomed.
13. Interest from outside the City remains high with the LED project winning industry-level awards, whilst the creation of a holistic strategy continues to be recognised as innovative and ground-breaking. Both Members and officers have been invited to participate in local, national and international research groups, publications and webinars to provide more information on the Lighting Strategy, share the expertise developed to date and lead discussion about the future of street lighting.
14. Interest in how the City went about building this strategy and the opportunities it creates has been wide ranging, with the Centre for London working with the City,

GLA, Cross River Partnership, Illuminated River and other partners to advise on a pan-London approach to lighting. This research, entitled “Seeing clearly: A new vision for London’s lighting”, was published in March 2021 and attracted plenty of industry and public authority interest, influencing policy on lighting going forward.

15. At the same time, the London School of Economics was commissioned to undertake a City-based study to better understand how public realm lighting can positively impact the lives of those who live and work in the area. The study focused on the Culture Mile area, helping us understand how the area can be improved to provide a better environment for all after dark
16. The March 2020 Committee report also explained there had been international interest in the City’s approach through the Lighting Urban Community International (LUCI) association. LUCI is a network of over 70 towns & cities that share information and work together to promote light as a tool for social, cultural and economic development.
17. LUCI had approached the City to consider hosting their 2021 conference but for obvious reasons this had to be deferred. Nevertheless, the City remains an active contributor to LUCI, with officers interviewed for their recent ‘Exploring City Nightscapes’ publication which set out 12 international case studies where light plays a key role in shaping and maintaining their quality nightscape.
18. Discussions with LUCI continue about potentially hosting a future event, but this will be subject to external funding and the appetite for face to face international events post-pandemic. In the meantime, the New London Architecture have separately approached the City about hosting an exhibition in the City Centre in Autumn 2021 to showcase the good work delivered to date.
19. The City has also been asked to be a key contributor to the “ENLIGHTEN me” project, a European funded project about lighting, health and well-being. It aims to develop dedicated guidelines and recommendations for cities, along with tools for better decision making on the impact of lighting on health and wellbeing covering lighting policies, measures, technologies and interventions.
20. Finally, the previous Lighting Strategy report also noted the opportunity to progress a review of the external lighting of St Paul’s Cathedral which is historically owned, managed and maintained by the City Corporation. As DBE’s current local risk budgets are insufficient to deliver such a scheme, officers continue to investigate alternative sources of funding such as external sponsorship and / or a future CIL Neighbourhood funding application.

Lighting Board

21. From a governance perspective, one of the key outcomes of developing the Lighting Strategy was the creation of a cross-departmental Lighting Board to direct the approach being taken and to drive the Lighting Strategy forward.
22. That Board continues to meet on a quarterly basis to review issues and opportunities, and includes representation from:

- DBE's street lighting, public realm & road safety teams
- DBE's planning & development officers
- The City Police
- Licensing & Pollution Control
- Open Spaces
- Energy Management
- Community & Children's Services.

23. Moving forward, it is intended for this Lighting Board to develop & own a series of actions to ensure this initiative maintains momentum, in particular building on the work done so far to develop planning guidance for developments and to establish a clear direction under the Climate Action Strategy.

Climate Action

24. In terms of the Climate Action agenda, the City has adopted a radical new strategy which sets out how the organisation will achieve net zero, build climate resilience and champion sustainable growth, both in the UK and globally, in the next two decades.

25. By adopting this strategy, the City Corporation has committed to:

- Achieve net zero carbon emissions from our own operations by 2027
- Achieve net zero carbon emissions across our investments and supply chain by 2040
- Support the achievement of net zero for the Square Mile by 2040
- Embed climate resilience in our buildings, public spaces & infrastructure

26. In this context, the work done to deliver the Lighting Strategy and LED upgrade is perfectly aligned to this ambition, but there is clearly work to be done with all stakeholders (in the context of lighting) to achieve this goal and accelerate the transition to net zero. Targeting energy efficiency as part of a renewable energy strategy will become increasingly important, alongside embedding circular economy, climate resilience and low carbon principles into our public realm design.

27. As an example, the LED programme not just delivers benefits in terms of carbon reduction, but it also contributes towards climate resilience because LED lights produce less heat, minimising their contribution to the heat island effect. As a result, they reduce the adverse impacts on biodiversity which is under threat from climate change, plus they are more reliable in extreme temperatures which are starting to become more prevalent as our climate changes.

28. However, in terms of buildings in the City, figures from the Climate Action team suggest 44% of greenhouse gas emissions within the Square Mile come from non-domestic buildings in the baseline year (2018/19), making this a key area of focus. For existing non-domestic buildings in the square mile, the Climate Action Strategy is targeting a reduction in energy consumption of 40% between 2020

and 2030, requiring a mix of improved technical advice and communications to deliver.

Lighting from Buildings

29. The challenge of moving towards a carbon neutral City will require a response from developers and building managers in how they light their buildings, both in terms of architectural external lighting and their approach to lighting their buildings internally.
30. With this in mind, the City's Planning team will look to bring forward proposals later this year for a new Planning Advice Note that sets out best practice, challenging developments to deliver environmentally sustainable building lighting that reduces energy usage and complements the public realm.
31. In terms of background to this work, building control regulations already require energy efficient lighting controls to be in place for developments, whilst the National Planning Policy Framework (NPPF), which comprises Government planning policy for England, states that planning policies and decisions should ensure that development limits the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.
32. The National Planning Practice Guidance (NPPG) provides further guidance on the policies in the NPPF, and whilst it acknowledges the wider benefits of artificial light, it suggests that it is not always necessary and has the potential to become 'light pollution' or 'obtrusive light'. It provides guidance for assessing when development might have implications for light pollution and, where implications arise, recognises the importance of getting the right light in the right place at the right time. Given change can be costly and difficult, getting the design right and setting appropriate conditions at the planning stage is essential.
33. With that in mind, the City's Local Plan (Policy DM15.7(5)) already requires that developments design internal and external lighting to reduce energy consumption, avoid spillage of light beyond where it is needed and protect the amenity of light-sensitive uses such as housing, hospitals and areas of importance to nature conservation. In parallel, draft City Plan 2036 Policy DE8 requires the design of new developments to incorporate measures to reduce light spillage from internal and external lighting, particularly where it would impact adversely on neighbouring occupiers, the public realm & biodiversity.
34. The aim of the new Planning Advice Note is therefore to provide clear advice regarding the expectations of Policy DM15.7 (and, after adoption of the new City Plan 2036, Policies DE8 and DE9(2) or their equivalents) and to provide technical details as to how those expectations can be met. It will also look to include appropriate guidance on lighting advertisements and signage for buildings, as well as internal & external architectural lighting. Such guidance will help make the Square Mile a safer, more sustainable, more legible place, with the needs of businesses, residents and biodiversity carefully balanced in the context of the City's Climate Action agenda.

35. In terms of enforcement against owners of buildings not meeting this criteria, the existing powers are somewhat limited within the planning process as they are linked to planning conditions for new development and cannot be imposed retrospectively on existing buildings that do not already have such conditions in place. From an environmental perspective, enforcement powers are typically focused on directed light (such as security lighting) dealt with via statutory nuisance provisions, but such limitations make it challenging for planning and enforcement authorities to control or enforce against owners of buildings with seemingly inefficient lighting management regimes.
36. The City's emerging climate action agenda is intended to 'shine a light' on inefficient practices across the wider remit of environmental sustainability, making this area ideal for the development of a wider engagement strategy as we start to set out the route towards net zero. Establishing and promoting best practice through the proposed advice note, supported by case studies aligned to the Climate Action Strategy's behaviour change awareness campaign, will complement existing planned actions to engage businesses and SMEs on this topic.
37. By comparison, driving change through additional enforcement beyond the existing planning and statutory nuisance limitations would likely require amended primary legislation based on an extensive evidence base, demonstrating that current enforcement powers are insufficient for these purposes. That would best be considered once the intended advice note has been consulted on and embedded, but an initial review of the powers currently available will still be undertaken as part of this process.

Proposals

38. There are continuing opportunities for the City Corporation to be seen to lead on this exciting & developing area of work, with the following activities planned:
- The City will seek to embed more efficient, effective and appropriate use of lighting in the next wave of public realms schemes and maintenance works going forward in the next 12 months.
 - Lighting will be one of the tools used to establish a unique 'look & feel' for the Culture Mile quarter, ensuring a night-time focus is embedded in the project from the outset, starting with a trial later this year.
 - Bespoke lighting timings and levels will continue to be used to help address localised anti-social behaviour and crime & disorder issues, including drug use and noise from late night bars at closing time.
 - As part of the move away from a 'one size fits all' approach to lighting our streets, a series of core timing profiles will be developed and implemented in the next six months to better fit the needs of the City's transport hubs, residential areas, night-time economy hotspots and our riverside & open spaces.

- Engagement will continue with the wider lighting community, across London, the UK and beyond, to share the City's best practice outcomes, continue to support technical innovation and to learn lessons from elsewhere.
- A Planning Advice Note for the management of internal & external lighting in new developments will be brought forward for consultation before the end of the year to provide greater certainty and clarity regarding compliance with Local Plan policies.
- A review of current statutory regulations and enforcement powers in relation to building owners will be conducted in parallel to the proposed planning advice.
- As part of the Climate Action Strategy, a behaviour change communications campaign will be formulated to raise awareness of lighting with building owners, managers & developers.
- Further night walks with Members will be planned from November (once the clocks go back) to help illustrate the achievements so far and the issues and challenges going forward.

Strategic Implications

39. These actions meet a series of key objectives contained within the Corporate Plan. These include:

- We will ensure people are safe & feel safe by tackling anti-social behaviour & protecting our streets & open spaces
- We will ensure people enjoy good health & wellbeing by better service design & delivery
- We will develop & trial smart innovations and improve the experience of moving through our spaces
- We will curate a vibrant, attractive & complementary blend of uses of space
- We will create & transform streets & public spaces for people to admire & enjoy
- We will champion a distinctive & high-quality residential, worker, student & visitor offer
- We will drive down the negative effects of our own activities
- We will provide environmental stewardship in use of resources
- We will influence UK and global policy to protect the environment
- We will maintain our streets & public spaces to high standards

Financial Implications

40. Full financial implications arising from the change to LED lighting will be set out in the upcoming Gateway 6 report on that project to Streets & Walkways and Project Sub Committees.

Equalities Implications

41. The impact of lighting on safety, health & wellbeing will continue to be monitored in line with the City's public sector equality duties and in accordance with the overall Lighting Strategy.

Resource & Risk Implications

42. Progression of the above actions are dependent on sufficient staff resources being available in light of the recovery from the Covid-19 pandemic and wider corporate priorities.

Security Implications

43. Liaison with the police as a key stakeholder throughout the development of the City's Lighting Strategy has ensured that any amendment to the City's lighting levels considers the issues of crime, disorder & counter terrorism.

Conclusion

44. The City's Lighting Strategy represents a genuinely innovative opportunity to create a joined up and holistic approach to managing the look & feel of the Square Mile at night. The Strategy has created the framework, and the LED project the mechanism, to deliver a step change in approach, with benefits in terms of sustainability, cultural opportunity and public realm safety.

45. With the emerging Climate Action Strategy now establishing the importance of taking steps to deliver a net zero Square Mile in the medium term, the focus of the strategy will now shift towards the question of delivering energy efficient lighting in the wider City community, as well as promote the City's best practice across London & beyond.

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