

**ITEM 5. DRAFT SYDNEY LIGHTS DESIGN CODE – PUBLIC EXHIBITION****FILE NO: S100845.005****SUMMARY**

This report seeks Council's approval to place the draft Sydney Lights Design Code 2014 on public exhibition and Council's endorsement to progress the pedestrian lighting improvement program and directions for creative lighting applications for the City.

The Sydney Lights Design Code (the Code) establishes key design principles and material and lighting palettes to be used for the city's streets and public spaces.

This Code updates the current Interim Sydney Lights Design Code 2006 and provides design guidelines, objectives and palette selections for lighting in the City that aligns with Sustainable Sydney 2030 aspirations and sustainability targets, and includes a program of lighting improvements for pedestrians and cyclists. The Code also responds to other strategies such as OPEN Sydney and the Public Art Strategy, which encourage creative use of lighting to contribute to the night time economy, enhance our built environment and provide pedestrian safety.

While the Code establishes the lighting technical and palette specifications, the implementation of lighting projects will be delivered either via capital works upgrades or as individual projects to be endorsed by Council.

The Sydney Lights Design Code 2014 is part of a co-ordinated series of Design Codes that provide specific objectives and technical information for the design of the public domain in the City of Sydney Local Government Area (LGA).

**RECOMMENDATION**

It is resolved that:

- (A) Council approve the public exhibition of Draft Sydney Lights Design Code 2014, as shown at Attachment A to be subject report, for a minimum period of four weeks;
- (B) Council endorse the Pedestrian Lighting Improvement Plan as shown in Attachment D to the subject report;
- (C) Council endorse the preparation of a Creative Lighting Implementation Plan including project scoping for Martin Place and City Properties, Monuments and Artworks as the first phase; and
- (D) the outcomes of the public exhibition and a final Sydney Lights Design Code 2014 be reported back to Council for adoption.

**ATTACHMENTS**

- Attachment A:** Draft Sydney Lights Design Code 2014  
(Note – Hard copies of this Attachment will be circulated separately from the Agenda Paper in limited numbers. It will be available for inspection on Council’s Website and at the One Stop Shop and Neighbourhood Service Centres).
- Attachment B:** Sydney Lights Palette
- Attachment C:** Ausgrid Back of Pole Light Fixture
- Attachment D:** Pedestrian Lighting Improvement Plan
- Attachment E:** Creative Lighting Masterplan

**BACKGROUND**

1. The City of Sydney Interim Sydney Lights Design Code 2006 currently provides the design guidelines, objectives and palette selections for public domain lighting in the City LGA.
2. This interim document required updating and finalisation to be more aligned with Sustainable Sydney 2030 sustainability targets and to respond to other City strategies such as the Cycle Strategy, Liveable Green Network, OPEN Sydney and Public Art Strategy.
3. Key project objectives include:
  - (a) update and finalise the draft Interim Sydney Lights Design Code 2006 to reflect Sustainable Sydney 2030 sustainability targets and directions;
  - (b) update strategic objectives for functional and creative lighting for all areas of the City of Sydney;
  - (c) review and confirm lighting levels and lighting palette for all areas of the City of Sydney's public domain, with particular emphasis on lighting for pedestrians cyclists;
  - (d) review and update the lighting technical details and specifications to reflect the City's current portfolio of technologies, including LED lighting and installation approaches to meet the City's lighting objectives;
  - (e) develop a creative lighting approach that will contribute to legibility and vibrancy in the city in the form of a Creative Lighting Masterplan to guide public / private sector lighting investment; and
  - (f) provide guidelines for the private sector when delivering public domain lighting to ensure alignment with the City's lighting objectives.
4. Steensen Varming with sub consultants McGreggor Coxall were engaged to assist in the preparation of the Sydney Lights Design Code.
5. A Project Control Group comprising of staff from City Operations, City Projects, City Life and City Planning Development and Transport was formed to guide the preparation of the Code.
6. The Sydney Lights Design Code forms part of a co-ordinated series of Public Domain Design Codes that provide specific objectives and technical information for the design of public spaces in the City. Other Public Domain Design Codes include:
  - (a) Sydney Street Design Code (adopted July 2013) – provides materials palette and design directions for the City's streets;
  - (b) Sydney Signs Design Code – provides the design manual and guidelines for the City's signage in the public domain including regulatory, wayfinding, parks and community building signage. Council endorsed the pedestrian wayfinding design manual in December 2013. Code preparation is substantially underway, with community building signage palette due for completion in 2014;

- (c) Sydney Parks Design Code – provides guidelines and requirements for park design and construction. The current draft document is currently being reviewed; and
- (d) Sydney Landscape Design Code - provides guidelines and requirements to establish landscape treatments delivered by private development. Consultants have been engaged, with final completion expected at the end of 2014.

### Context

- 7. The Sydney Lights Design Code applies to all areas within the City LGA that are under Council's control.

### Code Format

- 8. The Code focuses on two main components for the provision of public domain lighting:
  - (a) **Functional Use** – provides a co-ordinated and sustainable approach to the lighting of streets and public spaces, and setting lighting levels and standards to provide pedestrians, cyclists and vehicles with a safe and comfortable visual environment at night. This section includes design and technical guidelines and allocates lighting palette, luminaire selections and lighting levels based on street hierarchy, public space context and location; and
  - (b) **Creative Lighting Masterplan** – promotes urban design lighting applications to enhance and define the city structure and its legibility at night time, improve the city image and make it an attractive place to visit.

### Key Principles and Directions

- 9. The Code sets out the following key principles:
  - (a) **Principle 1 - Enhance Public Spaces Public Life** – promotes provision of appropriate lighting levels to enhance the night time experience and vibrancy of the city to encourage people to stay and enjoy the city at night.
  - (b) **Principle 2 - Promote Sustainability** – use of energy efficient LED technology and lighting practices to reduce greenhouse gas emissions.
  - (c) **Principle 3 - Promote Safety and Inclusive Design** – establish appropriate lighting levels, standards and criteria to promote a safe public domain.
  - (d) **Principle 4 - Promote Active Transport** – encourage pedestrian and cycle use at night through appropriate applications of lighting to facilitate clear safe wayfinding and orientation; and
  - (e) **Principle 5 - Respect Distinctiveness and Place** – development of a strategic framework of targeted creative lighting applications to express distinctiveness and place.

**Differences Between 2006 Interim Lights Code and Draft Sydney Lights Design Code**

10. The update of the 2006 Interim Lights Code includes the following key changes:
  - (a) inclusion of current LED rollout program and other sustainability initiatives, such as lighting controls;
  - (b) inclusion of a section of design principles for public domain lighting schemes;
  - (c) inclusion of lighting applications and requirements for pedestrian and cyclist amenity;
  - (d) inclusion of directions for creative lighting applications;
  - (e) acknowledgement of the CBD and South-Eastern Light Rail proposal in terms of specialised lighting elements and light levels for sections of the route in the City LGA;
  - (f) inclusion of a range of lighting levels for functional lighting applications to allow appropriate allocation by City technical staff when assessing lighting proposals; and
  - (g) update of standard lighting palette with elements that accommodate LED and smart lighting technology.

**Lighting Levels**

11. The Code references and uses the current Australian Standards when setting lighting levels for streets and public spaces.
12. Each lighting project is unique in terms of the allocation of the most appropriate lighting level. The Code, therefore, in most instances, provides a range of lighting levels and requirements that consider a range of factors including pedestrian and vehicle numbers, crime statistics and desired night time environment.
13. The achievement of a particular illuminance requirement is not the only factor contributing to a safe public domain. People's perceptions of safety are much more governed by issues such as facial recognition, contrast ratio, glare and colour discrimination, as well as the overall atmosphere created. A lighting design needs to consider all of these factors, and not just be limited to distribution of light across the ground, to achieve a safe design solution.

**Lighting Palette**

14. The City owns and operates over 8,500 public domain lights. The remaining 13,500 lights within City LGA are primarily owned and maintained by Ausgrid.
15. The Code aims to provide a strong visual identity with a consistent language of lighting elements, as well as improve performance of individual items by retrofitting with LED luminaires.
16. For the City Centre and Village Main streets, the City's Smartpole™ range will be the main public domain lighting element.

17. For George Street, the Code also includes the S3 Smartpole™ range with a special beacon light pole, which is currently under design development to provide public domain lighting along the proposed light rail route within the City LGA.
18. Local streets are mainly lit by Ausgrid lighting on timber or galvanised steel poles with outreach arms usually directed to the road carriageway.
19. In early 2014, Ausgrid adopted a standard back of pole LED luminaire that provides an energy efficient, low emission option for pedestrian lighting. The fixture includes shields and buffers that will reduce instances of obtrusive lighting effects to adjacent residential properties.
20. As well as the Ausgrid pedestrian lighting, a range of City pedestrian pole top lights that use LED technology is also included in the palette range for use in public spaces and streets where additional lighting is required for pedestrian and cycle amenity (see Attachment B). The City pole top light palette includes the light fixture under design development by Tzannes Associates as part of the public domain furniture design project.
21. The Code, however, does in special circumstances have a degree of flexibility to allow the use of bespoke lighting poles (e.g. Prince Alfred Park and Hyde Park lighting) to express distinctiveness of place.

#### **Pedestrian Lighting Improvement Plan**

22. Pedestrian lighting improvements to date have been delivered as part of the LED project rollout, major streetscape improvements or to address deficient lighting levels at specific locations.
23. To further improve pedestrian lighting safety and amenity in local streets, it is proposed to undertake a rollout program of the recently available Ausgrid back of pole lighting fixtures. These fixtures were recently trialled along Arthur and Fitzroy Streets, Surry Hills (see Attachment C) and have resulted in noticeable improvement to footpath lighting amenity.
24. The Pedestrian Lighting Improvement Plan (see Attachment D) has been developed in keeping with the pedestrian routes identified in the Liveable Green Network Masterplan. In many instances, lighting improvements will also benefit cycle paths that are aligned with identified pedestrian routes. It is anticipated that this map will be regularly reviewed to incorporate future urban renewal and developments.
25. The Pedestrian Lighting Improvement Plan emphasises the following connections:
  - (a) major pedestrian connections into the City Centre;
  - (b) pedestrian connections between Village Centres;
  - (c) village main streets and public transport hubs; and
  - (d) connections to major destinations (e.g. Moore Park Stadia and Sydney University).

### Creative Lighting Masterplan

26. The City currently does not have a creative lighting plan that articulates aspirations to add vibrancy and legibility of the city by targeted lighting applications.
27. The Code promotes a creative lighting approach that emphasises selected precincts and elements. It sets out the following key directions for creative lighting applications:
  - (a) **City Structure and Precincts** – lighting applications to highlight key city structure and precincts including:
    - (i) City Centre Skyline;
    - (ii) Harbour Foreshore Walk;
    - (iii) Chinatown;
    - (iv) Harbour Village North;
    - (v) Kings Cross;
    - (vi) Oxford Street;
    - (vii) Green Square Town Centre; and
    - (viii) Village Main Street;
  - (b) **City Centre** – lighting applications reinforce the legibility of the city centre including:
    - (i) George Street;
    - (ii) Martin Place;
    - (iii) east-west Connections such as Park Street, Hay Street and Bridge Street; and
    - (iv) laneways;
  - (c) **Distinctive Accents** – lighting applications to individual elements across the city such as monuments, trees and landmark buildings; and
  - (d) **Special Lighting Elements** – in particular circumstances, use of special non-standard lighting elements for functional lighting applications as a means to reinforce distinctive place and character.
28. Attachment E provides mapping and images to further articulate the proposed scope and range of creative lighting applications.
29. Implementation of the Creative Lighting Masterplan will require preparation of a creative lighting implementation plan to fully scope proposed projects to ensure co-ordination with functional lighting requirements and broader public domain proposals for an area.

30. A Lighting Implementation Masterplan also allows the private sector to progress the development of a lighting scheme for their buildings in a consistent and co-ordinated manner.
31. It is recommended that a long term staged approach to implementation be undertaken. Staging and timing will involve identifying project priorities based on:
  - (a) available funding allocated in the City's capital works program;
  - (b) strategic opportunities to link with other existing public domain projects and public art programs (City Art);
  - (c) contribution of a creative lighting application can help to achieve the City's strategic objectives in OPEN Sydney, Retail Action Plan and Tourism Action Plan; and
  - (d) private sector interest to contribute and partner with the City to deliver a creative lighting application.

### **Creative Lighting Masterplan Implementation – Early Start Projects**

32. It is recommended that the early start projects for the Creative Lighting Masterplan implementation be:
  - (a) **Martin Place** – Martin Place is a key east-west pedestrian link flanked by architectural landmarks, including Sydney GPO. The Martin Place Stakeholders Group (property and business owners) has expressed interest in the potential of creative lighting applications to express the verticality of Martin Place and to showcase distinctive architectural features. Property owners undertaking building upgrade projects and refurbishments have requested the City's desired directions for building façade lighting so that these can be incorporated into their works. Timely development of design and scope documentation may enable private sector participation in delivering a co-ordinated lighting vision for Martin Place; and
  - (b) **City Properties, Monuments and Artworks** – scope and undertake a program of improved illumination for City-owned properties, monuments and artworks that would benefit from a lighting upgrade to establish recognisable night time landmarks.
33. Preparation of Creative Lighting Implementation Plans and feasibility studies for Martin Place and City properties, monuments and artworks will be the initial work undertaken to scope project extents.

### **KEY IMPLICATIONS**

#### **Strategic Alignment - Sustainable Sydney 2030**

34. *Sustainable Sydney 2030* is a vision for the sustainable development of the city to 2030 and beyond. It includes 10 strategic directions to guide the future of the city, as well as 10 targets against which to measure progress. This report is aligned with the following strategic directions and objectives:
  - (a) Direction 2 - A Leading Environmental Performer – Sydney Lights promotes the use of energy efficient LED technology to reduce greenhouse gas emissions;



- (b) Direction 4 - A City for Walking and Cycling – Sydney Lights promotes pedestrian and cycle focused lighting to support safety and identify key routes for night time journeys;
- (c) Direction 5 - A Lively and Engaging City Centre – Sydney Lights promotes creative use of lighting to define precincts and highlight landmarks and features of the city at night time;
- (d) Direction 7 - A Cultural and Creative City – Sydney Lights supports artistic application of lighting for public art proposals; and
- (e) Direction 9 - Sustainable Development, Renewal and Design – Sydney Lights gives guidance and standards for the provision of sustainable public lighting for renewal areas.

### **Organisational Impact**

35. No major organisational impact is anticipated.

### **Social / Cultural / Community**

36. The Code will promote the development of streets and public spaces that are more inviting and accessible for use and community interaction and contribute to Sydney being a creative city.

### **Environmental**

37. In 2011, the City commenced a roll-out of new energy-efficient LED Street and park lighting, which will save over 40 per cent electricity use and carbon pollution compared to the lights being replaced, and save nearly \$800,000 a year in electricity bills and reduced maintenance costs.
38. The Code updates the current lighting technical guidelines to reflect the City's lighting sustainability LED initiatives, as well as ensure that public domain lighting delivered by the private sector is aligned to the City's sustainability targets.
39. The Pedestrian Lighting Improvement Plan will increase overall energy consumption and greenhouse gas emissions. The project will add 736 tonnes CO<sub>2</sub> per year on completion, which equates to a 1.7 per cent increase in Council's 2012/13 carbon footprint. This increase will be partially off-set by the better than expected carbon reductions being achieved by Council's existing LED public lighting retrofit program. In addition, if the existing Ausgrid roadway lights were replaced by energy efficient LED lights at the same time, then an overall saving of 3,600 tonnes CO<sub>2</sub> could be achieved.

### **Economic**

40. Improving lighting quality of streets and public spaces will have a positive economic impact through increased pedestrian use and encouragement of further street activation and outdoor dining.

**CRITICAL DATES / TIME FRAMES**

41. Phase One of the Pedestrian Lighting Improvement Plan (see Attachment D) that covers the Liveable Green Network pedestrian priority routes will be delivered over a four year period (2014/15 – 2017/18 financial years). Timing subject to Ausgrid's approval on individual projects.
42. It is envisaged that Creative Lighting Masterplan implementation will be a long-term rollout over the next 10 to 25 year period. In many instances, it is anticipated that implementation will be incorporated as part of streetscape capital works projects or provided by the private sector in partnership with the City.

**BUDGET IMPLICATIONS**

43. The Pedestrian Improvement Lighting Plan has an annual budget allocation of \$110,420 for the 2014/15 financial year and \$500,000 for the 2015/16, 2016/17 and 2017/18 financial years that will complete Phase One of the program. A capital works bid application will be prepared for undertaking Phase Two over the financial years 2018/19 to 2019/20.
44. The Creative Lighting Masterplan implementation has an allocation of \$2,000,000 in the 10 year capital works financial plan. The proposed focus of this expenditure will be to progress creative lighting schemes for Martin Place and the City's monuments and artworks, which will initially involve preparation of creative lighting feasibility studies and detailed design documentation.

**OPTIONS**

45. Not proceeding with exhibiting and adopting the draft Sydney Lights Code will result in continued use of the draft interim Lighting Design Code 2006. This option is not recommended as the Interim Code needs to be updated and reviewed to reflect Sustainable Sydney 2030 directions and initiatives in LED lighting, and give developers clear directions on the City's lighting requirements.

**PUBLIC CONSULTATION**

46. It is proposed that the draft Sydney Lights Code be placed on public exhibition for a period of four weeks for comment. The outcome of the public exhibition process will be reported back to Council prior to adoption of a final Code.
47. The City's website includes a Public Domain webpage that provides easy reference to the City's Public Domain Codes and resources, particularly for developers and contractors.

**KIM WOODBURY**

Chief Operating Officer

Bridget Smyth, Design Director

George Angelis, Manager City infrastructure and Traffic Operations

Laurie Johnson, Program Manager Public Domain Strategy