

Date: 10/03/2020

Our Reference: 19049

COX Architecture

Level 6, 155 Clarence Street
Sydney NSW, 2000

Attention: Anthony Crozier, John Ferendinos

Re: CNSW COE – External Lighting Strategy Report – SSD-10354 Response to Submissions

Dear Anthony,

Please find below the response to submissions regarding the external lighting strategy for the Cricket NSW Centre of Excellence.

Item 65 – Lighting

It is acknowledged that lighting within the facility is key to providing a safe and welcoming environment for users of the facility and the general public. Given the sensitive location of the proposal in a relatively isolated yet environmentally sensitive location, balancing the need for a safely lit, yet environmentally appropriate lighting is vital. The PPOM contains lighting principles for developments within Sydney Olympic Park; however, this is not referenced in the EIS submission and therefore needs to be addressed.

The Parklands Plan of Management (PPOM) Section 3.24.9 defines the Lighting Management Principle for the Parklands. These requirements are addressed – in the External Lighting Strategy Report as follows:

Lighting of the Parklands will always be kept to a minimum to discourage inappropriate night-time uses and activities, and where present will meet appropriate lighting standards.

Detailed discussion of the lighting requirements are included in the External Lighting Strategy Report, including the minimisation of lighting through measures such as: careful placement of lamps (provided only where required for site functionality), dimming and switching off lighting in curfew hours and use of glare shields (NFO optic on site plans). Appropriate lighting standards are referenced in Section 7 – Design Criteria.

- *No lighting should interfere with the nocturnal activities of wildlife, particularly in the wetland areas.*

This is addressed in Section 7 – Design criteria – “minimise impact on external lighting on biota” and Section 8.2 – Effects on biota.

- *Lighting that is necessary, should not exceed fitness for purpose nor extend beyond the area of intended illumination while also being appropriate to the setting.*

Lighting will be provided only where required, including careful selection of optics and glare shields to reduce light spill – refer to appendix drawing External Lighting Strategy, Concept design.

- *Alternatives to lighting, as a means of protecting or highlighting elements of an area, should always be given careful consideration during planning and design.*

Security fence has been provided around the site to limit public access and minimise lighting requirements.

- *Lighting should be non-intrusive to neighbouring residents or Parkland users and be considerate of the cumulative effects with other lighting - within and outside the Parklands.*

Preliminary light spill assessment has been conducted to comply with AS 4282 (refer Section 8), with spill lighting calculations provided as Appendix B.

- *Lighting controls should be managed judiciously to limit hours of operation to suit the circumstances of the site; ensure a lack of lighting to deter visitation to inappropriate areas and to support visitation to areas where after-dark use is desirable or invited.*

Refer report Section 9.3 (Switching and control), Sections 9.4-9.12 for reduced lighting levels (or switched off), and drawing External Lighting Strategy – Concept Design – Curfew.

- *Lighting should not be used in the Parklands for the sole purposes of decoration or promotion.*

No decorative or promotional lighting has been proposed as part of the external lighting strategy.

Number 67 – Biodiversity Report

SOPA recommends that the following standards outlined in the Applicant's Biodiversity Report are incorporated into the proposal:

- *Luminaire design, post height, placement and operation must avoid the direct illumination of sensitive areas including the Parramatta River, artificial wetlands, and retained vegetation and replacement plantings, and minimise the indirect light spill in the 50 m and 100 m buffer around those respective areas. Glare shields must be used to further reduce the indirect impact of light spill on habitat within the subject property. Warm spectrum (3000k) lighting must be used reduce the impact on nocturnal animals such as microchiropteran bats and the Green and Golden Bell Frog."*

These requirements are addressed in the External Lighting Strategy Report as follows:

Luminaire selection is discussed in Section 9.1 – General purpose luminaires.

Pole heights are discussed in Section 9.2 – General purpose poles – pole heights are selected from the Parklands Elements Design Manual and are generally low-height, 6m poles.

Preliminary placement of luminaires is shown in appendix drawing: External Lighting Strategy, Concept Design, Non-Curfew.

Operation of lighting is discussed in Section 9.3 – Switching and Control.

Note the proposed cricket facility is within the 50m and 100m buffer of the river and artificial wetlands, however, spill has been minimised through placement of luminaires, reduced curfew lighting levels and by the switching strategy – eg. turning off carpark lights and pathway lights near the river and artificial wetlands – refer drawing: External lighting strategy, Concept Design - Curfew.

Glare shields have been incorporated into the design where possible – refer Appendix B luminaire type XXX-nfo (neighbour friendly optic).

Warm spectrum lighting is specified in Section 9.1 (3000K for all external luminaires).

- *The upward light output ratio must be less than 5% relative to their installed mounting orientation; and*

Upward light ratio per AS 4282 for Zone A1 is defined as 0 – Section 8.1.

Preliminary calculation UWLR is 0% for both curfew and non-curfew. Refer Appendix B.

- *External lighting of the fields must not extend past 10pm. External security and way-finding lighting must be designed and operated in accordance with the lighting management principles of the SOPA Parklands Plan of Management.*

We note curfew period will commence at 10pm.

External lighting on the main oval is proposed around the perimeter pathway only. Curfew lighting strategy is detailed in Section 9.4 and drawing: External Lighting Strategy, Concept Design – Curfew. This includes dimming fittings around the oval from P3 to a P4 category as discussed in Section 9.3, turning off pathway lighting where not required during curfew, dimming and turning off carpark lighting where not required during curfew and dimming maintenance road access luminaires during curfew. This meets requirements for lighting minimisation as per the PPOM and as discussed in Item 65 above.

Yours Faithfully,



Lachlan Kanaley
LCI