

Level 5
151 Clarence Street
Sydney NSW 2000
Australia

t +61 2 9320 9320
d +61 2 9320 9552
f +61 2 9320 9321

tim.carr@arup.com.au
www.arup.com

25 February 2019

TO WHOM IT MAY CONCERN

Ken Rosewall Arena (KRA) Upgrade

Obtrusive Lighting Statement

Introduction

Arup is commissioned by Tennis Australia to design and upgrade the existing sports lighting scheme for KRA. As part of the submission, one of the design criteria to be complied with is light spill based on the Australian Standards, the SOPA Masterplan 2030, the major event impact assessment guidelines and other related SOPA publications.

Design Proposal

The lighting proposal is to illuminate KRA stadium court to the recommended minimum lighting for televised events broadcasting in high definition of 2000 lux. This is to be achieved by flood lights mounted upon the new roof structure. These flood lights shall be aimed downward towards the tennis court. The new proposed flood lights will be below the roof and PTFE Membrane material.

Relevant Technical Design Target

It is recommended that the most relevant technical design standard is:

- Lighting complies with AS 4282 – Control of Obtrusive Effects of Outdoor Lighting

This standard provides technical recommendation with regards to:

- Limitation of potential spill light upon on adjacent residential properties
- Agreeing a light curfew during which time a lower level lighting condition is required
- Control of the maximum visible brightness of luminaire
- Control potential glare experiences by road users

Furthermore, it should be noted that the above standard also states the following:

- The potential obtrusive effects of outdoor lighting are applicable to outdoor lighting, interior lighting is excluded
- The standard does not apply to lighting systems which are installed for the purposes of colour television broadcasting
- The standard is applicable to assessing the impact on residential developments and road users only

Compliance

Based on the above, it is concluded that the design will meet the intent of AS 4282-1997 due to:

- The lighting is to be designed to meet broadcast requirements and therefore is excluded from the limits recommended within AS 4282-1997
- The proposed flood lights will be under a roof and PTFE Membrane hence they will be inside the building envelope and are therefore excluded from the limits recommended within AS 4282-1997
- There are no residential developments adjacent to the KRA – the nearest residential development is approximately 0.5klm
- The proposed court lighting is not visible to road users and therefore does not create any risk of glare

Conclusion

Based on these findings we can conclude that the proposed lighting modifications will not produce obtrusive effects as per the Australian Standards and are therefore compliant with the intent of AS 4282-1997.

Yours sincerely



Tim Carr
Australasia Lighting Leader