SCENTRE GROUP

11 / October / 2019

Penrith City Council
601 High Street
Penrith, NSW 2750

C/- Kathryn Saunders

PL19/0065 Westfield Penrith Expansion

GENERAL

Scentre Group will engage a Contractor for the entire installation of lighting, however the design will be documented by Scentre Group designers and engineers to ensure the design is as detailed below to achieve the performance, technical and aesthetic requirements outlined in this memorandum, indicated on the creative documentation, the lighting requirements table, lighting schedule, specification and any other lighting documentation.

Below are the lighting levels required for compliance with Australian Standards and Scentre Group Specification as well as Occupational Health and Safety requirements. The project will need to comply with the following sections:

EXTERNAL LIGHTING LEVELS

The following clause is with the specification to provide the guidance for lighting levels and standards required for compliance.

Location	Illuminance (lux)	Reference Standard	Luminaire
Carpark Indoor	80	AS/NZS 1680	Energy Efficient LED fitting
Carpark Transition (Entry/Exit)	160-800	AS/NZS 1680 AS/NZS 1158	Energy Efficient LED fitting
Carpark Outdoor (P11a)	14	AS/NZS 1158	Energy Efficient LED fitting
External Pathways (P7)	14	AS/NZS 1158	Energy Efficient LED fitting
All External	-	AS 4282	Obtrusive Lighting Control

Table 1: Table of Lighting level requirements and referenced lighting standards

CONTROL STRATEGY

a) Indoor/Covered Car park general lighting zones, in a dimmable configuration (ie dimming luminaires to a minimum compliance for safe movement outside of trading hours)

i. Driveways/Lane lighting;
ii. Centre Parking space lighting;
iii. Lighting for perimeter areas open to external; and
iv. Lighting for car park entry and exit (for day and night transition mode)

This allows for Scentre Group to reduce lighting levels from 80lux to 40lux and 20lux, when the carpark has minimal occupation, in late night situations.

b) Car park roof top lighting

The car park roof top lighting will be LED lighting, as this allows for very accurate control of any light produced by the fittings. It additionally allows for us to dim lighting when the space is not being used, although it should be noted we cannot turn off the lighting altogether as this can pose a safety risk should people or vehicles be moving in the carpark.

I. From end of normal trading (varies day by day) until dawn, set the luminaires at 30% (4.5lux – bright moonlight) dim to provide adequate security lighting, energy savings and to extend the working life of the installation.

c) Footpath lighting

The footpath lighting will be LED, as this allows for accurate control of light produced by the fittings..

I. From sunset until dawn, the luminaires will be on to provide adequate lighting on the footpath.
II. The lighting will comprise a combination of pole top fittings, bollards and fittings attached to the awning of the building.
III. The lighting will not be switched or dimmed, but controlled by light level sensor.

LIGHT POLLUTION

The proposed lighting design is to comply with the requirements of AS4282, with particular attention to:

I. Minimising glare
II. Preventing light spill onto neighbouring properties
III. No light fitting will direct a light beam at any point directly into the sky.

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CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

This lighting design will be a considered approach to ensure compliance with the requirements of Australian Standards as noted above, but also take into account:

I. Coordination with Landscaping and Vegetation
II. Reduce the possibility of dark or highly overshadowed areas

REFERENCE STANDARDS

The Lighting design will be documented to be fully compliant with the following Standards:

Standard	Year	Standard Title
AS 1158	2005	Lighting for Roads and Public Spaces
AS 1680	2008	Interior and Workplace Lighting
AS 4282	1997	Control of Obtrusive Effects of Outdoor Lighting

Table 2: Table of Referenced Lighting Standards

Yours sincerely,

Leo Trimboli
Lighting Engineering Manager
Scentre Group
Design & Construction
ltrimboli@scentregroup.com
02 9028 8198