

Consultant Advice



From: Aviva Gunzburg **Date:** 11 Aug. 20 **File No:** S32110\003\N-421\ca200131s0007 **Pages:** 3
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Response to DPIE comment regarding potential adverse lighting impacts

This document outlines NDYLIGHT's approach to lighting provision for the proposed WSU Bankstown, to address DPIE's query:

"Details must be submitted demonstrating how internal/external lighting associated with the proposal will be controlled to ensure no adverse off-site light spill impacts"

In addition to this we note council comments:

"Any lighting of the premises must be installed in accordance with AS 4282–1997 'Control of the obtrusive effects of outdoor lighting', to avoid annoyance to the occupants of adjoining premises or glare to motorists on nearby roads. The intensity, colour or hours of illumination of the lights must be varied if Council considers there are any adverse effects on the amenity of the area."

In this document we identify how lighting can potentially have adverse impacts, and how those impacts can be addressed, including compliance with AS4282-1997. We also describe our understanding of the term 'off-site'.

OFF-SITE AREAS AND POTENTIAL ADVERSE LIGHT SPILL IMPACTS

Commercial Buildings

There are commercial and civic facilities around the site, which are generally occupied during daylight hours. Potential adverse lighting impacts from adjacent properties are limited to glare from luminaires whose light source is not well shielded.

Residential Buildings

Residential buildings are generally occupied during night-time hours. Potential adverse lighting impacts from adjacent properties include glare from luminaires whose light source is not well shielded and illumination into light sensitive rooms, such as bedrooms.

Parkland

Parklands are home to both diurnal and nocturnal animals. Night-time illumination can potentially, negatively impact their behaviour and health. In addition, people using parks at night could potentially be affected by bright, unshielded light sources that cause glare.

Sky

Skyglow is a problem worldwide and is caused by quantity of illumination bouncing from the ground plane into the sky, as well as direct illumination from luminaires.

ADVERSE LIGHTING IMPACTS AND HOW THEY WILL BE ADDRESSED THROUGH THE CONTROL OF THE LIGHTING

Night-time luminance

Buildings can appear overly bright and obtrusive when contrasted against the night sky. To mitigate this potential impact, internal and external lighting for the proposal will be fitted with a combination of timeclocks, dimmers, motion and daylight sensor control, which will limit the quantity of light and its brightness at all times.

Internal lighting will be dimmed or switched off when an area is not in use. External lighting will be dimmed to safe movement light levels during low activity periods, with a proportion of lighting being turned off when the area is not in use.

Glare

Glare is caused when there is high contrast between a light source and the area surrounding it. The potential for glare will be mitigated in several ways. Internal luminaires will be compliant with UGR <20. External luminaires with direct view light-sources will have candela values compliant with AS4282.2019. High brightness external luminaires will be full cut-off type distributions to limit visibility of the light source. All directional spotlights will have glare shields and will not be aimed towards neighbouring properties.

Spill light

Spill light is caused by the poor control of light sources or poorly aimed directional light. It only applies to this proposal's external lighting. Potential spill light into neighbouring properties will be mitigated by several measures. LED luminaires with tightly controlled beam distributions will be specified. Luminaires with a broad distribution of light have low lumen output so that spill light greater than moonlight does not reach windows of adjacent properties or into the parkland. Lighting will be compliant with AS4282.2019 (which is the updated version of the standard and incorporates requirements set out in AS4282-1997).

Skyglow

Skyglow is caused by a mixture of light bouncing off the ground surface and from direct illumination from luminaires. The potential contribution of the proposal to skyglow will be mitigated in the following ways. Spaces will not be over-lit. Lighting to spaces will be consistent with surrounding areas, while being sufficient to provide safety and amenity. This will limit light reflected from the ground into the sky. None of the installed luminaires will be designed to direct light straight up into the sky. All luminaires will be aimed onto objects to minimise any upwards light spill from the light source.

Implementation of the above measures will ensure that the potential adverse impacts of lighting are mitigated, and the off-site areas described on the previous page will not be adversely affected by night-time luminance, glare or spill light, and the proposal's contribution to skyglow will be minimised.

Regards

NDYLIGHT

A handwritten signature in black ink, appearing to read 'Aviva Gunzburg', with a long, sweeping flourish extending to the right.

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