

# D. CATTERSON & ASSOCIATES

CONSULTING ENGINEERS

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15<sup>th</sup> May 2018

**Fraser Property**  
Locked Bag 2138  
North Ryde NSW 2106

**Att: Ms Nicky Blenkhorn**

Dear Nicky:

## **EASTERN CREEK QUARTER – STAGE 1 RETAIL CENTER EXTERNAL LIGHT LUX & OBTRUSIVE LIGHT**

Further to your request to provide a letter to discuss the obtrusive light generated by the lighting within our site, particularly in regards to the two residential dwellings in the south west corner of the block.

Australian Standard 4282-1997 is the current standard and while very detailed can be summarized in this particular instance as follows:-

1. The standard acknowledges that its objective is to provide a common basis for assessment of the likely effects of developments that involve the provisions of outdoor lighting. However it does acknowledge that it is only a guide and it needs to be assessed on a project by project basis.
2. Spill lighting restrictions are nominated for pre-curfew hours set by local government and more stringent spill lighting parameters are nominated for post-curfew hours after that time where there is a neighboring residential property where a dwelling exists or may be developed.
3. Commercial that are neighboring residential building shall have <4.0-lux vertical illumination and 2500Cd intensity on the face of the structure where windows occur or are likely to occur. This reduced to <2.0lux and 100Cd for residential areas with light surrounds and <1.0-lux and 500Cd for residential areas with dark surrounds.
4. Not knowing the actual window configuration we have made a calculation from ground level to 10.0m above ground on a 1.0m x 1.0m grid on the external wall of the building. We accept that there is a possibility that there is a verandah external to the building outline, however AS4282-1997 specifically nominates that these are not an area of interest.

Australian Standard 4282 is currently being considered for an upgrade and a draft of the new standard has been prepared and while in essence the above still complies, the draft has recognized that the effects of spill lighting in a rural setting with little background light will differ from the effects in say a built up area.

We have prepared our design based on:-

- a) The design must comply with the requirements of AS4282-1997 for post curfew hours as our property boundary is shared with a residential property which is <4.0-lux and <2500Cd on the building structure.
5. We have included calculation from ground level to 10.0m above ground on a 1.0m x 1.0m grid on the external wall of the building. We accept that there is a possibility that there is a verandah external to the building outline, however AS4282-1997 specifically nominates that these are not an area of interest.
- b) We have used a web based program, being AGi32 to demonstrate compliance for post-curfew hours utilizing the inbuilt compliance test in accordance with AS4282-1997.

As attached to this document we enclose the following documentation:-

- Drawing ELUX-01 "B" in black and white.
- Drawing ELUX-01 "B" printed in colour as this more clearly shows the lux levels achieved.
- A4 copy of the Obtrusive Light Test report and this is also embed in the drawing.

We trust this is satisfactory; however should there be any queries on the above, please do not hesitate to call.

Sincerely,

D A Catterson