REPORT TO ASSESS COMPLIANCE WITH AS 4282-1997- CONTROL THE OBTRUSIVE EFFECTS OF OUTDOOR LIGHTING

SSD7564

PROPOSED LOT 2 SPECULATIVE FACILITY

CORNER OF HORSLEY DRIVE & COWPASTURE ROAD, HORSLEY PARK NSW

Version #2

2	Internally illuminated signage included in report	29/07/2016

For:
Fraser Property
1 Homebush Bay Drive
Rhodes NSW 2138

By:
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32 Grosvenor Crescent
Summer Hill NSW 2130

1.0 Introduction

This report is intended to assess and identify any light spill issues likely to impact neighbouring properties due to the construction of a new warehouse and office facility at Lot 2, Horsley Business Park, Horsley Drive, Horsley Park, NSW.

The site is situated within an industrial park, surrounded by industrial buildings and there are no residential lots adjacent or proposed to be located adjacent to the lot boundary.

Artificial lighting will be provided throughout the driveways, carparks and truck hardstand areas in accordance with the recommendations contained In Australian Standard 1158.3.1

Irrespective of the development approved hours of operation, the design will be considered to operate 24 hours in the assessment.

This report covers the effects of driveways, carpark and truck hardstand lighting installed at the facility and signage panel which comprise a pylon sign at the truck entry and wall mounted illuminated building signage. The report takes into account the location of topographical features, roadway surfaces and reflectance from such surfaces but does not include for any glare created from illuminated signage panel, if applicable.

2.0 References

The applicable codes and standards associated with artificial lighting design in this jurisdiction are:

1. Building Code of Australia 2015;
2. AS/NZS 1158.0 – Lighting for Roads and Public Spaces;
3. AS/NZS 1158.1.1 – Vehicular Traffic Lighting – Performance and Design Requirements;
4. AS/NZS 1158.1.2 – Vehicular Traffic Lighting – Guide to Design, Installation, Operation and Maintenance;
5. AS/NZS 1158.2 – Computer Procedures for the Calculation of Light Technical Parameters for Category P Lighting;
6. AS/NZS 1158.3 – Lighting for Roads and Public Spaces – Part 3.1 Pedestrian area (Category P) Lighting – Performance and Design Requirements;
7. AS/NZS 1158.4 – Lighting for Roads and Public Spaces – Lighting of Pedestrian Crossings;
8. AS/NZS 1158.6 – Lighting for Roads and Public Spaces – Part 6 Luminaires;
9. AS4282 – Control of the Obtrusive Effects of Outdoor Lighting.

3.0 Lighting Selection

LSI Hamilton have been chosen as the light fitting manufacturer as their fitting are of the highest standard and have demonstrated reliability and durability over a number of years ion similar developments.

The light source selected is LED as this is considered more economical from a watts/sq.m perspective and have a 50,000 rated life.

The style of fitting selected is a “shoe-box” fitting as the intention is to apply for a green star rating and this will ensure that the light pillage at the boundary and the upward light component will comply with Green Star requirements.

Consequently six different types of fittings have been specifically specified for use at this site.

1. Type P1 – External Luminaires
   Type of Fitting: LSI Hamilton XLCS-FT-LED-HO-CW
   Mounting Method: Affixed to the top of a 8m high pole Quantity:
   One (1)

2. Type P3 – External Luminaires
   Type of Fitting: LSI Hamilton XLCS-3-LED-HO-CW
   Mounting Method: Affixed to the top of a 8m high pole Quantity:
   Two (2)

3. Type P7 – External Luminaires
   Type of Fitting: LSI Hamilton XLCL-FT-LED-HO-CW
   Mounting Method: Affixed to the top of a 10m high pole Quantity:
   Seven (7)

4. Type W2 – External Luminaires
   Type of Fitting: LSI Hamilton XLCS-FT-LED-HO-CW
   Mounting Method: Affixed to the wall at 8m AFFL Quantity: Four (4)

5. Type W3 – External Luminaires
   Type of Fitting: LSI Hamilton XLCS-3-LED-HO-CW

Mounting Method: Affixed to the top of a 8m high pole Quantity:

Two (2)

6. Type C1 – Under Awning Luminaires

   Type of Fitting: LSI Hamilton CRUSM-DDM-SC-LED-

   HO-CW

   Mounting Method: Affixed to the underside of awning Quantity:

   Eighteen (18)

The placement of the exterior artificial lighting is critical to meet the requirements of the Australian Standards and enhance the general safety and wellbeing of the public using this space. This has been considered in the section of the lighting locations as detailed in the Appendix A.

4.0 External Signage

Signage is proposed in the form of a pylon sign on the property boundary adjacent to the truck entry plus there will be an illuminated signage on the South and East elevation of the building.

The signage panels will incorporate opaque and coloured Perspex covers that will diffuse and distort the light to provide even distribution over the face of the panel and will have a WML (weighted mean luminance) of <15cd/m2 at a 5.0m distance from the sign.

The light source will be LED and will not be used to illuminate the surrounding area and will only be visible from some distance from the panel.

5.0 Assessment

Light pole placement is generally selected to be around the premier of the boundary and positioned facing inwards to provide maximum illumination to the external areas with minimum light spill to adjacent properties.

The artificial lighting has been simulated across the site to determine the over spill of the various lighting sources employed at the site. The simulation has been conducted utilizing the inbuilt photometric data calculations in the AGi32 design software for . A copy of the resulting “Obtrusive Light – Compliance Report”, for pre-curfew hours in included in the lux plat included as Appendix “A”. In summary this requires that the spill of light on neighbouring properties, must not exceed 25 lux for pre-curfew hours. Curfew hours are not applicable to this site as it does not have residential neighbouring properties and there is not an intention to have residential neighbouring properties in the future.

6.0 Conclusion

Following an assessment of the lighting design and their proximity to neighbouring properties the lighting is within Australian Standard 4282

-1997 levels as evidenced by the Obtrusive Light Compliance Report found within Appendix "A".

Based on an assessment of the external signage where at a 5.0m viewing distance the WML is <15cd/m2, it is clear that the impact of these signs will be negligible and clearly not exceed the allowances of Australians Standard 4282.