

LIGHTING IMPACT ASSESMENT REPORT
FOR
NJC NEW STABLES COMPLEX

Prepared by:

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Project Title: NJC New Stables Complex

Project Number: 20484

Revision History

Rev No.	Date	Description	By	Checked	Approved
A	20.09.21	Preliminary Issue	PM	JC	PM

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1.1 GENERAL

This report describes the proposed external lighting for the proposed new Stables Complex at the Newcastle Jockey Club (NJC) site on Darling St and Chatham Road Broadmeadow. It provides an assessment of the expected impact of the this proposed external lighting, and demonstrates how this lighting satisfies relevant Australian Standards, including AS1158.3.1:2020 – Lighting for roads and public spaces Pedestrian area (Category P) lighting and AS4282:2019 – Control of the Obtrusive effects of Outdoor lighting.

1.2 PROPOSED EXTERNAL LIGHTING

The external lighting for the proposed new Stables Complex at the Newcastle Jockey Club (NJC) has been designed to mitigate impacts on the surrounding residential areas, including the residences on the opposite side of both Darling Street and Chatham Streets which are the closest to this proposed development.

To that end the lighting has been designed in accordance with the relevant Australian Standards, including AS1158.3.1:2020 and AS4282:2019, and the results of the lighting calculations, including lux plots and obtrusive lighting calculation results are included later in this report.

One main consideration to the lighting design was the expected operating hours of the external lighting, which is expected to be early in the mornings to facilitate safe trackwork, so say from 2:30am to daylight, and for evening general attendance (dusk to say 6pm). So as these operating hours fall into the post-curfew hours in terms of obtrusive lighting calculation in accordance with AS4282:2019, the most stringent restrictions applied.

So, with these design constraints in mind, high cut off light fittings with concealed lamps were selected, and their location and aiming is such that they are aimed away from surrounding residential areas where possible to reduce the amount of light spill.

The external lighting proposed is generally as shown on the external lighting layout plans as shown on drawings 20484-E03 and 20484-E04. As can be seen from these plans this generally consists of lighting off the buildings for internal passageways, post top lights on 5.5m poles for carpark and roadway areas, and lighting integrated into the structure (eg handrail lights) for external stairs and ramps.

As noted above, the location and aiming of these lights have been considered so that the light sources have been concealed from the surrounding residential areas where possible, but still providing the required lux levels as required by the relevant Australian Standard which includes AS1158.3.1:2020, particularly for the carpark and roadway areas which also consist of drop off and pick up areas.

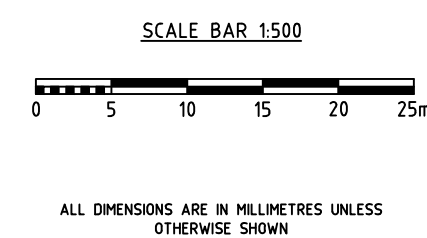
Luminaires on external stairwells and ramps are intended to be integrated into the stairwell and ramp structures using concealed/recessed puck style lights and the like to help mitigate impacts on the surrounding residential areas as the light sources will generally be concealed.

APPENDIX 1 – EXTERNAL LIGHTING LAYOUTS



- ## NOTES

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| A | PRELIMINARY ISSUE | MC | PM | 19.07.21 |
| REV | REVISION DETAILS | BY | APP. | DATE |



DESIGN BY:
ELECTRICAL PROJECTS AUSTRALIA P/L
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20484 E04 A

APPENDIX 2 – EXTERNAL LIGHTING CALCULATION RESULTS

Calculation Summary					
Project: NJC NEW COMPLEX STABLES					
Label	CalcType	Units	Avg	Max	Max/Avg
DRIVEWAY	Illuminance	Lux	4.48	7.9	1.76
DRIVEWAY_1	Illuminance	Lux	4.82	8.7	1.80
DRIVEWAY_2	Illuminance	Lux	5.22	8.5	1.63
DROP OFF - PICK UP ZONE	Illuminance	Lux	10.75	42.7	3.97
MAINTENANCE DROP OFF_Planar	Illuminance	Lux	10.00	37.8	3.78
STAFF CARPARK_Planar	Illuminance	Lux	13.53	27.5	2.03
WASTE BINS	Illuminance	Lux	20.23	22.3	1.10

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APPENDIX 3– EXTERNAL LIGHTING DESIGN CERTIFICATION

Date: 20 September 2021

Avid Project Management
PO Box 206
CARRINGTON NSW 2294

**Re: DESIGN CERTIFICATE
EXTERNAL LIGHTING**

Project Address: Corner of Chatham Streets & Darling Streets
Project Name: NJC New Stables Complex

Pursuant to the provisions of Environmental Planning and Assessment Act in respect of the above project –

I, Paul Malanchuk,
of Electrical Projects Australia
at 386, Maitland Road, Newcastle

Hereby certify that;

- I am a practicing electrical engineer.
- The external lighting for the development has been designed in accordance with;
 - AS1158.3.1:2005 Pedestrian Area (Category P) Lighting, AS/NZS 1158.3.1-2020
 - AS4282-2019 Control of Effects of Obtrusive lighting
- The electrical design that relates to this certification is based on the following drawings:
 - 20484-E03 – Ground Floor External Lighting Layout - Rev A
 - 20484-E04 – First Floor External Lighting Layout – Rev A

Signed:



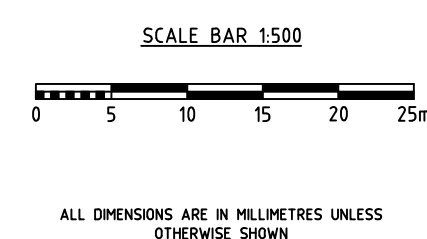
Date: 20/09/2021

On behalf of Electrical Projects Australia



- ## NOTES

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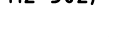


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