Mulpha Norwest

LIGHTING MEASUREMENT REPORT

EXISTING ILLUMINATED SIGNAGE AT OLD WINDSOR RD, BELLA VISTA (CNR NORBRIK DRIVE)

29th August 2022

Ref: 3211

Lighting Compliance Report

Existing Illuminated Signage at Old Windsor Rd, Bella Vista (cnr Norbrik Drive)

DATE	REV	COMMENT	PREPARED BY	CHECKED BY
29/8/22	A	Issued for Information	DS	RS

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1. INTRODUCTION

Electrolight was engaged by Mulpha Norwest to provide night time luminance ("brightness") measurements of the existing signage installed at Old Windsor Rd, Bella Vista (cnr Norbrik Drive). The signage is comprised of two signs, Sign A and Sign B. Sign A is oriented towards the Northbound traffic direction on Old Windsor Rd. Sign B is oriented towards the Southbound traffic direction on Old Windsor Rd.

The report will confirm compliance with the requirements outlined in the Electrolight Lighting Impact Assessment report issued on the 11th August 2022 revision A.

Compliance with the Electrolight Lighting Impact Assessment Report requirements will in turn demonstrate that the signage complies with the following:

- Relevant Conditions arising from the Lighting Impact Assessment: 200 cd/m2 during night time.
- AS 4282-2019 Control of the Obtrusive Effects of Outdoor Lighting.

Luminance measurements were taken with the signage displaying a 100% white image (representing worst case brightness) during night time operation. Figure 1A and 1B below shows the signage displaying the 100% white image. Further details are provided in Section 2 below.

Figure 1A: The Sign A displaying a 100% white image ready for measurement

Figure 1B: The Sign B displaying a 100% white image ready for measurement

2. LUMINANCE MEASUREMENTS

Luminance Measurements were undertaken on Thursday 18th August 2022 at 6:00pm – 6:10pm using a Gossen Mavo-Spot 2 luminance meter (Serial Number 7C41314). This meter was calibrated on 29th November 2021 by UNSW (Report #21261.2).

The general luminance measurement methodology was as follows:

A minimum of 10 equidistant measurement points were taken across the signage face. All luminance measurements were undertaken with a viewing direction approximately normal to the sign, at a viewing distance of approximately 100m and a height of approximately 1.5m off the ground. Measurements were undertaken ensuring that the signage display was not blocked by any obstructions (such as tree branches).

The average measured luminance for the signage was as follows:

Existing Signage Sign A – Measurement Summary

SKY CONDITION	AVERAGE SIGN LUMINANCE (CD/M2)	MAX ALLOWABLE AVG LUMINANCE (CD/M2)	MAX SIGN DIMMING PERCENTAGE (%)	COMPLIES? (YES/NO)
Night-time	54	200	Note 1	YES

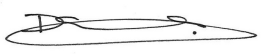
Existing Signage Sign B – Measurement Summary

SKY CONDITION	AVERAGE SIGN LUMINANCE (CD/M2)	MAX ALLOWABLE AVG LUMINANCE (CD/M2)	MAX SIGN DIMMING PERCENTAGE (%)	COMPLIES? (YES/NO)
Night-time	50	200	Note 1	YES

Note 1: Dimming level of the sign when tested was unavailable and that this compliance is reliant on the level as set dated 18/08/22.

It can be seen from the above measurements that both Sign A and Sign B comply with the required luminance requirements for all sky conditions.

The detailed results of the luminance measurements are shown in Appendix A.



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Electrolight

29/8/22

APPENDIX A – SIGNAGE LUMINANCE MEASUREMENTS

Signage Measurement values listed below. Note: Drawings are not to scale and point locations indicative only. Refer Section 2 for methodology for measurement.

Sign A: Nighttime:

× 49 cd/m2	× 54 cd/m2	× 58 cd/m2	× 60 cd/m2	× 42 cd/m2
× 50 cd/m2	× 57 cd/m2	× 61 cd/m2	× 60 cd/m2	× 51 cd/m2

Sign B: Nighttime:

× 64 cd/m2	× 61 cd/m2	× 54 cd/m2	× 49 cd/m2	× 44 cd/m2
× 54 cd/m2	× 55 cd/m2	× 35 cd/m2	× 49 cd/m2	× 33 cd/m2