Eye Drive Sydney Pty Ltd

Ref: 3823

LIGHTING IMPACT ASSESSMENT
OUTDOOR SIGNAGE AT
GLEBE ISLAND SILOS, SOMMERVILLE RD, GLEBE ISLAND

DATE	REV	COMMENT	PREPARED BY	CHECKED BY
24/02/25	REV D	For Information	NL	RS

Electrolight Australia
ABN: 44 600 067 392
australia@electrolight.com
www.electrolight.com

4/414 Bourke St
Surry Hills, NSW 2010
T + 61 2 9267 4777

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CONTENTS

1. INTRODUCTION

Electrolight have been appointed by Eye Drive Sydney Pty Ltd to undertake a Lighting Impact Assessment on the existing frontlit signage installed at Glebe Island Silos, Sommerville Rd, Glebe Island. This assessment includes a review of the signage lighting against the *Bays West Stage 1 Design Guide* and the *Bays West Stage 1 Draft Master Plan and Urban Design Framework* and reports on compliance with the *State Environmental Planning Policy (Industry and Employment) 2021*, *NSW Transport Corridor Outdoor Advertising and Signage Guidelines*, and A*S/NZS 4282:2023 Control of the Obtrusive Effects of Outdoor Lighting*. This report supports a modification application seeking a 3 year consent duration for the display of the signage.

This report includes a review of the Bays West documents and will determine, if residential development occurs within the White Bay Power Station area (Site B) within the 3 year consent duration, that the current signage lighting will comply with the relevant Standards and Guidelines outlined in Section 4.

2. DEFINITIONS

2.1 Illuminance

The physical measure of illumination is illuminance. It is the luminous flux arriving at a surface divided by the area of the illuminated surface. Unit: lux (lx); 1 lx = 1 lm/m2.

(a) Horizontal illuminance (Eh) The value of illuminance on a designated horizontal plane
(b) Vertical illuminance (Ev) The value of illuminance on a designated vertical plane

Where the vertical illuminance is considered in the situation of potentially obtrusive light at a property boundary it can be referred to as environmental vertical illuminance (Eve).

2.2 Luminance

The physical quantity corresponding to the brightness of a surface (e.g. a lamp, luminaire or reflecting material such as the road surface) when viewed from a specified direction. SI Unit: candela per square metre (cd/m2) – also referred to as "nits".

2.3 Luminous Intensity

The concentration of luminous flux (perceived light power) emitted in a specified direction. Unit: candela (cd).

2.4 Dynamic content

Where the luminous image, pattern, colour or direction of light changes over an interval of less than 60 seconds.
Note: Definition source is AS4282.

2.5 Obtrusive Light

Spill light which, because of quantitative or directional attributes, gives rise to annoyance, discomfort, distraction, or a reduction in ability to see essential information such as transport signals.
Note: Obtrusive light includes the impact on humans and environmental receivers.

2.6 Threshold Increment

The measure of disability glare expressed as the percentage increase in luminance contrast threshold required between an object and its background for it to be seen equally well with a source of glare present.

Note: The required value is a maximum for compliance of the lighting scheme.

2.7 Environmentally Sensitive Area (ESA)

Area of ecological value including, bushland, waterways and marine and coastal areas.
Note: Definition source is AS4282.

2.8 AGI32 Light Simulation Software

AGI32 (by U.S. company Lighting Analysts/Revalize) is an industry standard lighting simulation software package that can accurately model and predict the amount of light reaching a designated surface or workplane. AGi32 has been independently tested against the International Commission On Illumination (CIE) benchmark, CIE 171:2006, Test Cases to Assess the Accuracy of Lighting Computer Programs.

2.9 Upward Light Ratio Luminaire (ULR_L)

The ratio of the luminous flux of a luminaire that is emitted, at and above the horizontal, divided by the total luminaire flux when the luminaire is mounted in its designed position, and excluding reflected light from surfaces or obstructions.

Note: Definition source is AS4282.

2.10 Environmental Receiver

Any identified living species (plants, animals and other organisms) and their locations indicated, that may be impacted by the proposed lighting system.

Note: Definition source is AS4282.

3. SITE DESCRIPTION AND SCOPE

The signage lighting is located on the southern and western elevations at Glebe Island Silos, Sommerville Rd, Glebe Island. The total display (illuminated) area of the signage is 1,171.8 m2. Refer to Appendix A for the signage location plan, elevations and photomontages.

The signage is illuminated using top mounted 120W LED floodlights mounted on a bracket arm located 2m out from the sign. Refer Appendix B for further luminaire specification details. The luminaires are aimed 11 degrees (from vertical) towards the sign (i.e directed away from the normal traffic viewing direction). The signage lighting currently operates from dusk until 11pm daily.

Environmental impact assessments, including the management of artificial light for the protection of specific entities protected by environmental legislation, is beyond the scope of this assessment and is by others.

4. DESIGN GUIDELINES AND STANDARDS

The Lighting Impact Assessment will review the signage lighting against the following Criteria, Design Guidelines and Standards.

- State Environmental Planning Policy (Industry and Employment) 2021 (**SEPP Industry and Employment**)
- Transport Corridor Outdoor Advertising & Signage Guidelines 2017 (**Transport Guidelines**)
- AS/NZS 4282:2023 Control of the Obtrusive Effects of Outdoor Lighting (**AS4282**)

5. LUMINANCE ASSESSMENT

The maximum permissible night time luminance of the signage lighting is determined by the existing lighting and land use zoning environment of its surroundings. AS4282 outlines maximum average luminances for different Environmental Zones as shown in Table 1 below:

TABLE 1 - AS4282 MAXIMUM AVERAGE NIGHT TIME LUMINANCE FOR SIGNAGE

	Description	Max Average Luminance (cd/m2)
A4	High district brightness e.g. Town and city centres and other commercial areas, residential areas abutting commercial areas, industrial and Port areas and Transport Interchanges	350
A3	Medium district brightness e.g. Suburban areas in towns and cities, generally roadways with streetlighting through suburban, rural or semi-rural areas	250
A2	Low district brightness e.g. Sparsely inhabited rural and semi-rural areas, generally roadways without streetlighting through suburban, rural or semi-rural areas other than intersections	150
A1	Dark e.g. Relatively uninhabited rural areas (including terrestrial, marine, aquatic and coastal areas), generally roadways without streetlighting through rural areas	50
A0	Intrinsically Dark e.g. UNESCO Starlight Reserve, IDA: Dark Sky Parks, Reserves or Sanctuaries, major optical observatories, other accreditations for dark sky places for example astrotourism, heritage value, astronomical importance, wildlife/ ecosystem protection, lighting for safe access may be required	0.1

Based on an assessment of the surrounding environment, the signage lighting is located within Environmental Zone A4 under AS4282, therefore, the maximum night time luminance is 350cd/m2.

AS4282 does not include limits for daytime operation of illuminated signage. However, the Transport Guidelines outlines maximum permissible luminance limits for various lighting conditions, including daytime. Under the Transport Guidelines, the signage is classified as being within which is described as an area Zone 3, which is described as an area with generally medium off-street ambient lighting e.g. small to medium shopping/ commercial centres. Under the Guidelines, the maximum night time luminance for illuminated signs within Zone 3, with an area over 10m2, is 200 cd/m2 (taken to be 25% of the maximum daytime limit of 800 cd/m2 as per the previous revision of the Guidelines).

Table 2 below outlines the maximum luminance levels to comply with AS4282 and the Transport Guidelines for the various lighting conditions listed below:

TABLE 2 - MAXIMUM LUMINANCE LEVELS FOR DIGITAL ADVERTISEMENTS

Lighting Condition	Max Permissible Luminance (cd/m2)	Compliant
Day Time	N/A (OFF)	✓
Night time until 11pm (pre-curfew)	58*	✓
Night time 11pm until 6am (post-curfew)	OFF	✓

*The maximum permissible luminance allowance under AS4282 and the Transport Guidelines is actually 200cd/m2. The luminance level shown above is the existing calculated Luminance of the signage which shall remain unchanged.

It can be seen from Table 2 that should residential development occur within the White Bay Power Station area (Site B of the Bays West Stage 1 Design Guide) within the 3 year consent duration, then the existing luminance of the signage can remain unchanged.

6. AS4282 ASSESSMENT

The signage lighting has been assessed against the lighting criteria and requirements outlined in AS4282.

AS4282 provides limits for different obtrusive factors associated with dark hours (night time) operation of outdoor lighting systems. Two sets of limiting values for spill light are given based on whether the lighting is operating before a curfew (known as "pre-curfew" operation) or operating after a curfew (known as post-curfew or curfewed operation). Pre-curfew spill lighting limits are higher than post-curfew values, on the understanding that spill light is more obtrusive late at night when residents are trying to sleep. Under AS4282, the post-curfew period is taken to be between 11pm and 6am daily. As the signage switches off at 11pm, it will be assessed against the pre-curfew limits.

Spill light to any adjacent Environmentally Sensitive Areas are assessed against the more stringent post-curfew limits, as outlined in Clause 3.2.1 of AS4282.

Illuminance Assessment

The AS4282 assessment includes a review of nearby residential dwellings and Environmentally Sensitive Areas and calculation of the amount of vertical illuminance (measured in Lux) that they are likely to receive from the signage during night time operation.

The acceptable level of vertical illuminance will in part be determined by the night time lighting environment around the dwellings. AS4282 categorises the night time environment into different zones with maximum lighting limits as shown in Table 3 below:

TABLE 3 - AS4282 MAXIMUM VALUES OF VERTICAL ILLUMINANCE

	Max Vertical Illuminance (lx)		Description
	Pre-curfew	Post-curfew	
A4	25	5	High district brightness e.g. Town and city centres and other commercial areas, residential areas abutting commercial areas, industrial and Port areas and Transport Interchanges
A3	10	2	Medium district brightness e.g. Suburban areas in towns and cities, generally roadways with streetlighting through suburban, rural or semi-rural areas
A2	5	1	Low district brightness e.g. Sparsely inhabited rural and semi-rural areas, generally roadways without streetlighting through suburban, rural or semi-rural areas other than intersections
A1	2	0.1	Dark e.g. Relatively uninhabited rural areas (including terrestrial, marine, aquatic and coastal areas), generally roadways without streetlighting through rural areas
A0	0	0	Intrinsically Dark e.g. UNESCO Starlight Reserve, IDA: Dark Sky Parks, Reserves or Sanctuaries, major optical observatories, other accreditations for dark sky places for example astrotourism, heritage value, astronomical importance, wildlife/ecosystem protection, lighting for safe access may be required

Residential Dwellings

Based on an assessment of the surrounding area, the nearest residential dwellings with potential views to the signage are the future dwellings at the following locations:

Address	Zone
Southern Development Blocks	A4
Wedge Development	A4

As such, the future dwellings above will form the focus of the illuminance assessment.

The signage lighting (and surrounding environment) was modelled in lighting calculation program AGI32 to determine the effect (if any) of the light spill from the signage lighting. Photometric data for the luminaires was provided by the lighting manufacturer*. The results of the calculations are shown in Appendix C.

Under AS4282, the maximum allowable illuminance to dwellings in Zone A4 is 25 Lux (as outlined in Table 3). It can be seen from the lighting model that the maximum illuminance to dwellings in Zone A4 is 0.26 lux at Southern Development Blocks.

The signage lighting therefore complies with the relevant illuminance limits for nearby residential dwellings.

Environmentally Sensitive Areas

No Environmentally Sensitive Areas were identified in the vicinity of the signage. The limits in AS4282 therefore do not apply.

Threshold Increment Assessment

The Threshold Increment was also calculated for the traffic on the M4 Western Distributor Freeway (inbound), and the M4 Western Distributor Freeway (inbound). The calculation grids were located at 1.5m above ground level, with a viewing distance of between 10m to 200m from the signage and a windscreen cutoff angle of 20 degrees (as outlined in AS1158). The calculation results show that the Threshold Increment does not exceed 1.86% for any traffic approach (the allowable maximum under the standard is 20%).

Upward Waste Light Assessment

In order to reduce light pollution and associated environmental impacts, AS4282 includes requirements that limit upward waste light into the night sky from signage lighting. AS4282 states that externally illuminated signage shall have an Upward Waste Light Ratio (ULR_l) of not more than 0.03. The calculations show that the maximum ULRL of the signage lighting is 0.012 - refer Appendix C. The signage lighting therefore complies with this requirement.

* Electrolight takes no responsibility for the accuracy of third party provided photometric data.

Luminous Intensity

AS4282 nominates Luminous Intensity limits where a light source (such as a floodlight) can be directly viewed from a residential dwelling or Environmentally Sensitive Area, as shown in Table 4 below:

TABLE 4 - MAXIMUM LUMINOUS INTENSITIES PER LUMINAIRE FOR EXTERNALLY ILLUMINATED SIGNAGE			
Environmental Zone	Non-Curfew L1 luminous intensity (cd)	Non-Curfew L2 luminous intensity (cd)	Curfew luminous intensity (cd)
A4	25000	50000	2500
A3	12500	25000	2500
A2	7500	12500	1000
A1	2500	5000	500
A0	As close to 0 as possible, without impacting safety	As close to 0 as possible, without impacting safety	0

It can be seen from the lighting model that the maximum luminance intensity to dwellings in Zone A4 is 998 cd. The signage lighting therefore complies with the maximum A4 AS4282 luminous intensities limit of 25000 cd for pre-curfew operation.

AS4282 Assessment Summary

It can therefore be seen that the signage complies with all relevant requirements of AS4282.

7. SEPP ASSESSMENT

Table 5 below outlines the illumination assessment criteria from the SEPP Industry and Employment Schedule 5 - Clause 7 Illumination. In addition to the criteria, responses have been included demonstrating that the signage is in compliance.

TABLE 5 - ILLUMINATION ASSESSMENT CRITERIA

Assessment Criteria	Response	Compliant?
Would illumination result in unacceptable glare?	The signage complies with the Threshold Increment limits of AS4282, demonstrating that the illumination will not cause unacceptable glare.	✓
Would illumination affect safety for pedestrians, vehicles or aircraft?	The signage complies with the Threshold Increment limits of AS4282, demonstrating that the illumination will not cause unacceptable glare. The relatively low intensity limits the risk to pedestrians, vehicles or aircraft.	✓
Would illumination detract from the amenity of any residence or other form of accommodation?	The signage complies with the illuminance (spill lighting) limits of AS4282, demonstrating that the illumination will not detract form the amenity of any residence or other form of accommodation	✓
Can the intensity of the illumination be adjusted, if necessary?	The existing signage is not dimmable, however the luminance of the signage is comparatively low for this type of area.	✓
Is the illumination subject to a curfew?	The sign is subject to a curfew and switches off at 11pm.	✓

8. SUMMARY

- The signage lighting installed at Glebe Island Silos, Sommerville Rd, Glebe Island, shall operate according to the table below:

COMPLYING LUMINANCE LEVELS FOR EXTERNALLY ILLUMINATED ADVERTISMENTS		
Lighting Condition	Max Permissible Luminance (cd/m2)	Compliant
Day Time	N/A (OFF)	✓
Night time until 11pm (pre-curfew)	58	✓
Night time 11pm until 6am (post-curfew)	OFF	✓

- The signage lighting has been found to comply with all relevant requirements of AS4282, the Transport Guidelines and SEPP Industry and Employment.
- In complying with the above requirements, the signage lighting shall not result in unacceptable glare nor shall it adversely impact the safety of pedestrians, residents or vehicular traffic. Additionally, the signage lighting shall not cause any unacceptable amenity impacts to nearby residential dwellings or accommodation or environmental receivers.

9. DESIGN CERTIFICATION

The signage lighting installed at Glebe Island Silos, Sommerville Rd, Glebe Island, if operated according to this report, complies with the following criteria, guidelines and standards:

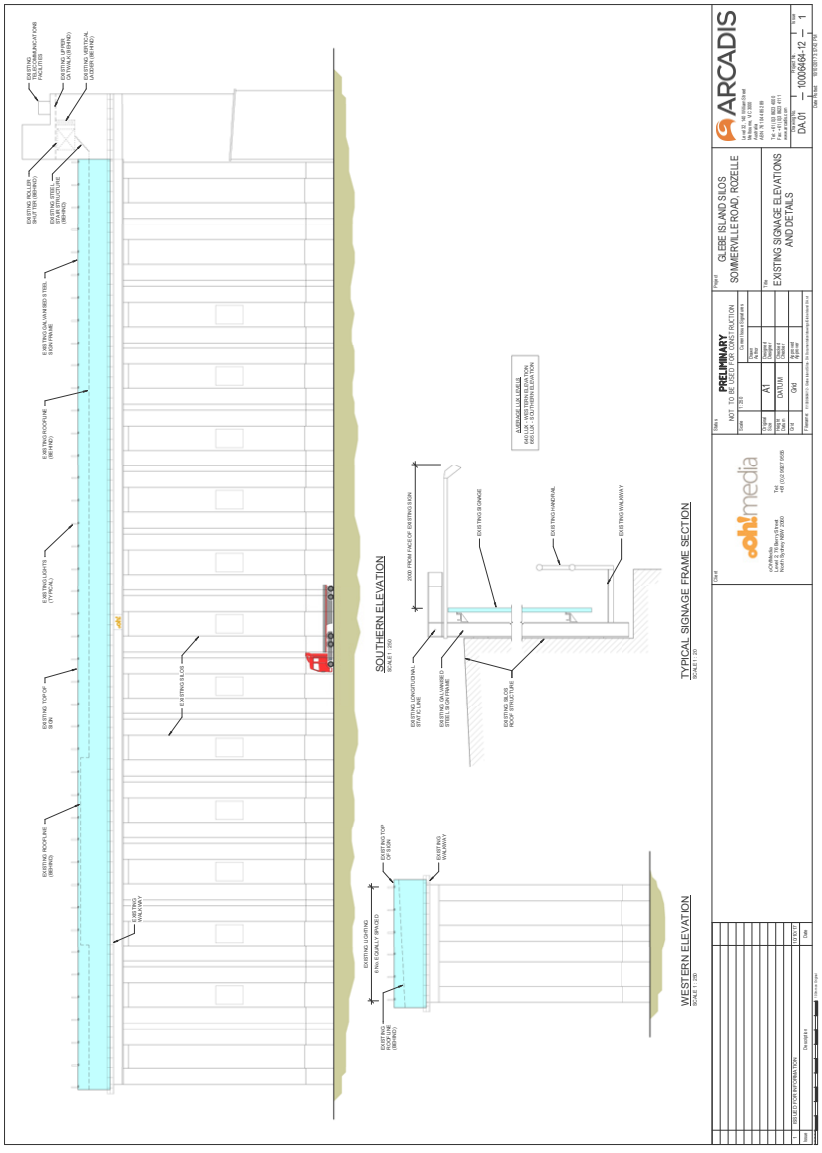
- State Environmental Planning Policy (Industry and Employment) 2021
- Transport Corridor Outdoor Advertising & Signage Guidelines 2017
- AS/NZS 4282:2023 Control of the Obtrusive Effects of Outdoor Lighting

Ryan Shamier MIES

M.Des.Sc(Illumination) B.Eng (Elec)
Member of the Illuminating Engineering Society of Australia and New Zealand (MIES)
Registered Professional Engineer - New South Wales (PRE0000868)

Senior Lighting Designer
Electrolight Sydney
24/02/25

APPENDIX A
SIGNAGE LOCATION, ELEVATIONS & PHOTOMONTAGES



APPENDIX A
SIGNAGE LOCATION, ELEVATIONS & PHOTOMONTAGES

2.6 Glebe Island Silos Planning Approval 2012 (DA 041-09-2011)

The following images show the Glebe Island Silos and associated signage following the 2012 planning approval.

Figure 2.15 View of the silos with advertising signage, May 2014
Source: oOh!media

Figure 2.16: View of the silos with advertising signage, September 2014
Source: oOh!media

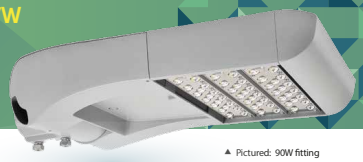
APPENDIX B
LUMINAIRE SPECIFICATION

tigerlight Leaders in energy efficient lighting

Tiger LED Street/Area Light

30W 60W 90W **120W** 150W - 300W fittings available on special order

Class-leading performance - **now 120 lm/W**
Highest quality components
Built for ultra-dependable performance.



▲ Pictured: 90W fitting

Class-leading light output

Super-efficient 120+ lumens/watt
3,920 lumens (30W) - 14,920 lumens (120W)
Batwing lenses are standard
Range of other lens options available on special order.

Premium components for ultimate reliability

Top performance Cree XPG2 LEDs & renowned Xitanium driver
10KV surge protection
50,000+ hours life, 5 year warranty.

Compact modular design

Lower cost of manufacture from economies of scale
Efficient heat management dimensions.

Robust, glass-free construction

IP67 rating for dust and water exposure
IK08 rating for impact & vandal resistance
Polyester-coated aluminium casing
Stainless steel fascia on modules (304 grade)
Polycarbonate optical lenses.

Applications

- Street lighting and area lighting
- Private roads, rail networks, hospitals, university grounds, shopping centres
- Car parks, forecourts & plaza areas.

120 lm/W | BATWING BEAM | IP 67 | 5 Year Warranty

Fully tested and certified

IES files & photometric profiles available.
TUV reports available for following standards:

IEC/EN 60598-1: 2008	IEC/EN 60598-2-3/A1: 2011
EN 62493:2010	IEC62471: 2008
IEC62471-2:2009	EN 55015: 2013
EN61547:2009	EN61000-3-2/A2:2009
EN 61000-3-3:2013	(EU) 1194/2012:2012-12-12
(EC) 244/2009:2009-03-18	

ENEC: No.: U6140888771007
CB: No. : SG-LE-0095
IK08 rating, 3G vibration, 1000 hours salt mist test reports furnished upon request.

CE CB IP67 IK08 ErP

Practical installer-friendly design

- Easy to open for quick installation.
- One 6mm allen key fits all bolts. Bolts cannot fall to ground.
- Fittings contain built-in spirit levels to simplify installation.
- WAGO press-release connectors present for quick and easy installation.

- Spigot is assembled for a horizontal tenon mount. Reverse the spigot assembly for vertical pole mount.
- Spigot is adjustable -20° to +20° from the horizontal or vertical position to allow for tilting if required.

tigerlight
www.tigerlight.com.au
t: 1300 184 437
f: 02 9913 8876
e: info@tigerlight.com.au
National Support Centre:
Unit 8, 1 Vuko Place,
Warriewood,
NSW, 2102
Local branches in Sydney & NSW North Coast, Melbourne, Brisbane, Adelaide, Perth

APPENDIX C

OBTRUSIVE LIGHTING AND THRESHOLD INCREMENT CALCULATIONS - DIRECT CONTRIBUTION FROM FLOODLIGHTS*

Calculation Summary			
Project: Obtrusive - A4			
Label	CalcType	Units	Max
Southern Development Blocks_Cd_ Seg1	Obtrusive - Cd	N.A.	998
Southern Development Blocks_Cd_ Seg2	Obtrusive - Cd	N.A.	976
Southern Development Blocks_Ill_ Seg1	Obtrusive - Ill	Lux	0.08
Southern Development Blocks_Ill_ Seg2	Obtrusive - Ill	Lux	0.05
Wedge Development_Cd_Seg1	Obtrusive - Cd	N.A.	0
Wedge Development_Cd_Seg2	Obtrusive - Cd	N.A.	865
Wedge Development_Cd_Seg3	Obtrusive - Cd	N.A.	852
Wedge Development_Cd_Seg4	Obtrusive - Cd	N.A.	0
Wedge Development_Cd_Seg5	Obtrusive - Cd	N.A.	0
Wedge Development_Ill_Seg1	Obtrusive - Ill	Lux	0.00
Wedge Development_Ill_Seg2	Obtrusive - Ill	Lux	0.05
Wedge Development_Ill_Seg3	Obtrusive - Ill	Lux	0.01
Wedge Development_Ill_Seg4	Obtrusive - Ill	Lux	0.00
Wedge Development_Ill_Seg5	Obtrusive - Ill	Lux	0.00

Calculation Summary			
Project: Ti			
Label	CalcType	Units	Max
M4 Western Distributor Freeway_ Inbound	Obtrusive - TI	%	1.34
M4 Western Distributor Freeway_ Outbound	Obtrusive - TI	%	0.22

* The total illuminance shown in the report is a sum of the direct light from the floodlight and the indirect light reflected from the signage surface

APPENDIX C

OBTRUSIVE LIGHTING CALCULATIONS - REFLECTED CONTRIBUTION FROM FLOODLIGHTS OFF SIGNAGE SURFACE*

Calculation Summary			
Project: Obtrusive - A4			
Label	CalcType	Units	Max
Southern Development Blocks_Cd_ Seg1	Obtrusive - Cd	N.A.	0
Southern Development Blocks_Cd_ Seg2	Obtrusive - Cd	N.A.	0
Southern Development Blocks_Ill_ Seg1	Obtrusive - Ill	Lux	0.18
Southern Development Blocks_Ill_ Seg2	Obtrusive - Ill	Lux	0.08
Wedge Development_Cd_Seg1	Obtrusive - Cd	N.A.	0
Wedge Development_Cd_Seg2	Obtrusive - Cd	N.A.	0
Wedge Development_Cd_Seg3	Obtrusive - Cd	N.A.	0
Wedge Development_Cd_Seg4	Obtrusive - Cd	N.A.	0
Wedge Development_Cd_Seg5	Obtrusive - Cd	N.A.	0
Wedge Development_Ill_Seg1	Obtrusive - Ill	Lux	0.00
Wedge Development_Ill_Seg2	Obtrusive - Ill	Lux	0.10
Wedge Development_Ill_Seg3	Obtrusive - Ill	Lux	0.01
Wedge Development_Ill_Seg4	Obtrusive - Ill	Lux	0.00
Wedge Development_Ill_Seg5	Obtrusive - Ill	Lux	0.00

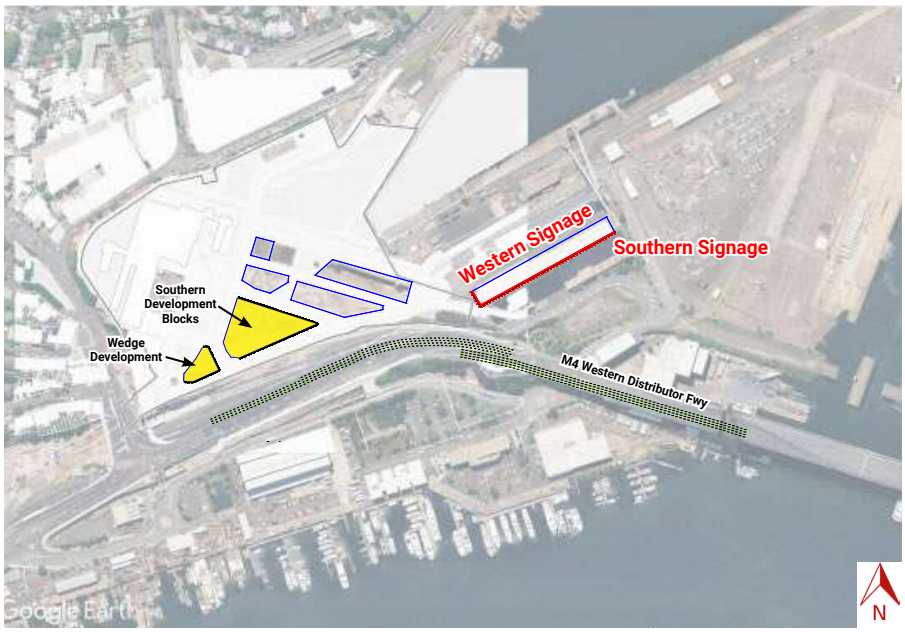
Calculation Summary			
Project: Ti			
Label	CalcType	Units	Max
M4 Western Distributor Freeway_ Inbound	Obtrusive - TI	%	0.52
M4 Western Distributor Freeway_ Outbound	Obtrusive - TI	%	0.37

* The total illuminance shown in the report is a sum of the direct light from the floodlight and the indirect light reflected from the signage surface

APPENDIX C
OBTRUSIVE LIGHTING AND THRESHOLD INCREMENT CALCULATIONS*

Environmental Zone Legend:

- A0
- A1
- A2
- A3
- A4



* The total illuminance shown in the report is a sum of the direct light from the floodlight and the indirect light reflected from the signage surface

APPENDIX C
OBTRUSIVE AND THRESHOLD INCREMENT CALCULATIONS - DIRECT CONTRIBUTION FROM FLOODLIGHTS

Obtrusive Light - Compliance Report

AS/NZS 4282:2023, A4 - High District Brightness, Non-Curfew L1
Filename: 3823 LIA Glebe Island Silos - Direct Model Floodlights (Luminious Intensity and Ti) rev A.AGI
30/01/2025 6:48:34 PM

Illuminance

Maximum Allowable Value: 25 Lux

Calculations Tested (7):

Calculation Label	Test Results	Max. Illum.
Wedge Development_III_Seg1	PASS	0.00
Wedge Development_III_Seg2	PASS	0.05
Wedge Development_III_Seg3	PASS	0.01
Wedge Development_III_Seg4	PASS	0.00
Wedge Development_III_Seg5	PASS	0.00
Southern Development Blocks_III_Seg1	PASS	0.08
Southern Development Blocks_III_Seg2	PASS	0.05

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 25000 Cd

Calculations Tested (7):

Calculation Label	Test Results
Wedge Development_Cd_Seg1	PASS
Wedge Development_Cd_Seg2	PASS
Wedge Development_Cd_Seg3	PASS
Wedge Development_Cd_Seg4	PASS
Wedge Development_Cd_Seg5	PASS
Southern Development Blocks_Cd_Seg1	PASS
Southern Development Blocks_Cd_Seg2	PASS

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (2):

Calculation Label	Adaptation Luminance	Test Results
M4 Western Distributor Freeway_Inbound	5	PASS
M4 Western Distributor Freeway_Outbound	5	PASS

APPENDIX C
OBTRUSIVE AND THRESHOLD INCREMENT CALCULATIONS -
REFLECTED CONTRIBUTION FROM FLOODLIGHTS OFF SIGNAGE SURFACE

Obtrusive Light - Compliance Report

AS/NZS 4282:2023, A4 - High District Brightness, Non-Curfew L1
Filename: 3823 LIA Glebe Island Silos - Indirect Model with Floodlights (Obtrusive) rev A
30/01/2025 6:45:31 PM

Illuminance

Maximum Allowable Value: 25 Lux

Calculations Tested (7):

Calculation Label	Test Results	Max. Illum.
Wedge Development_Ill_Seg1	PASS	0.00
Wedge Development_Ill_Seg2	PASS	0.10
Wedge Development_Ill_Seg3	PASS	0.01
Wedge Development_Ill_Seg4	PASS	0.00
Wedge Development_Ill_Seg5	PASS	0.00
Southern Development Blocks_Ill_Seg1	PASS	0.18
Southern Development Blocks_Ill_Seg2	PASS	0.08

Luminous Intensity (Cd) At Vertical Planes

Maximum Allowable Value: 25000 Cd

Calculations Tested (7):

Calculation Label	Test Results
Wedge Development_Cd_Seg1	PASS
Wedge Development_Cd_Seg2	PASS
Wedge Development_Cd_Seg3	PASS
Wedge Development_Cd_Seg4	PASS
Wedge Development_Cd_Seg5	PASS
Southern Development Blocks_Cd_Seg1	PASS
Southern Development Blocks_Cd_Seg2	PASS

Obtrusive Light - Compliance Report

AS/NZS 4282:2023, A4 - High District Brightness, Non-Curfew L1
Filename: 3823 LIA Glebe Island Silos - Direct Model Screen Sim (Ti) rev A
30/01/2025 6:46:49 PM

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (2):

Calculation Label	Adaptation Luminance	Test Results
M4 Western Distributor Freeway_Inbound	5	PASS
M4 Western Distributor Freeway_Outbound	5	PASS