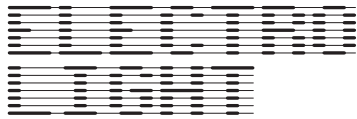


The graphic consists of a large, light gray shape with rounded corners and a diagonal cutout on the left side. A smaller, dark purple shape is positioned within the cutout, also with rounded corners. The text is centered in the upper right portion of the gray area.

Appendix G
Lighting Impact
Assessment



oOh! Media
Ref: 1308.127

Lighting Impact Assessment Outdoor Signage at 6-12 Harley St, Shailer Park, QLD

DATE	REV	COMMENT	PREPARED BY	CHECKED BY
24/11/25	REV B	For Information	CB	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

1. INTRODUCTION

Electrolight have been appointed by oOh! Media to undertake a Lighting Impact Assessment on the proposed digital signage to be installed at 6-12 Harley St, Shailer Park QLD (**proposed signage**). The objective of the assessment is to report on compliance with AS/NZS 4282:2023 Control of the Obtrusive Effects of Outdoor Lighting and the Queensland Department of Transport and Main Roads Guideline "Roadside Advertising Manual" Edition 4 - see Section 4 for further details.

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 (E_h) The value of illuminance on a designated horizontal plane
- (b) Vertical illuminance (E_v) 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 (E_{ve}).

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_u)

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.

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 proposed pylon mounted digital signage is located at 6-12 Harley St, Shailer Park and replaces the existing floodlit signage on the site (**proposed signage**). The proposed signage is oriented towards the outbound direction of traffic on the M1 Pacific Motorway. The proposed signage has a total active display (illuminated) area of approximately 62.57m². Refer to Appendix A for the proposed signage location plan, elevations and photomontages.

The proposed signage is illuminated using LEDs installed within the front face. The brightness of the LEDs shall be controlled to provide upper and lower thresholds as required as well as automatically via a local light sensor to adjust to ambient lighting conditions. The dwell time of the content displayed on the signage is 30 seconds and it is to operate 24 hours per day. As the dwell time of the content displayed on the signage is less than 60 seconds, it is defined as being dynamic content (see Section 2.4).

For the purpose of this report, the specification of the proposed signage is as outlined in Appendix B. The signage includes baffles which mitigate upward waste light, resulting in an Upward Light Ratio (ULR_u) of not more than 0.45*. Alternative digital sign manufacturers may be used for this installation as long as they have equivalent lighting and performance characteristics and are commissioned as described in this report.

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.

*The signage supplier and/or operator is responsible for complying with the Upward Light Ratio. Electrolight take no responsibility for compliance with this requirement.

4. DESIGN GUIDELINES AND STANDARDS

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

- AS/NZS 4282:2023 Control of the Obtrusive Effects of Outdoor Lighting. (**AS4282**)
- Queensland Department of Transport and Main Roads Guideline "Roadside Advertising Manual" Edition 4 - Section 3.6 - December 2022 (Refer Appendix C). (**DoT Roadside Advertising Manual**)

5. LUMINANCE ASSESSMENT

AS4282 Luminance Assessment


AS4282 outlines maximum luminance limits for signage during night time operation only, its scope does not include lighting impacts associated with daytime operation. The maximum permissible night time luminance of the signage is determined by the existing lighting environment of its surroundings. AS4282 outlines maximum average luminances for different Environmental Zones as shown in Table 1 below:

	Description	Max Average Luminance (cd/m ²)
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 proposed signage is located within Environmental Zone A3 under AS4282, therefore the maximum night time luminance is 250cd/m².

AS4282 Luminance Assessment Summary

Table 2 outlines the maximum luminance level for the proposed signage to comply with AS4282 for night time operation:

TABLE 2 - AVERAGE LUMINANCE LEVELS FOR DIGITAL ADVERTISEMENTS		
Lighting Condition	Max Permissible Luminance (cd/m2) [#]	Compliant
Night Time	90*	

[#] The signage is to be dimmed on site to ensure the maximum luminance nominated above is not exceeded.

* The maximum permissible night time luminance allowable under AS4282 is actually 250cd/m2. The luminance limit shown above was derived as a result of the calculation and assessment in Section 6, to ensure compliance with other criteria of AS4282 and any additional lighting requirements as described in this report.

During night time, the proposed signage is not to exceed the maximum luminance level nominated above to ensure compliance with AS4282.

DoT Roadside Advertising Manual Luminance Assessment

In addition to the above, the DoT Roadside Advertising Manual requires the maximum permissible luminance under varying ambient lighting conditions to be in accordance with Table 3 below. The lighting conditions vary from full sun (100,000 lux ambient) down to night time in low light conditions (0-10lux).

TABLE 3 - LUMINANCE MAXIMUMS FOR VARYING AMBIENT LIGHTING CONDITIONS FOR ELECTRONIC BILLBOARDS	
Illuminance (ambient Lighting Levels) (lux)	Luminance levels on Electronic billboard or panel (cd/m2)
0-10	150
11-40	200
41-100	250
101-400	400
401-1000	700
1001-4000	1500
4001-10000	2300
10001-40000	4000
40001-100000	6000

The proposed signage is to operate in accordance with Table 3 at all times in order to comply with the DoT Advertising Manual. In addition, the luminance of the signage during night time operation is not to exceed the value shown in Table 2.

6. AS4282 ASSESSMENT

The proposed signage 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 proposed signage operates all night, it will be assessed against the more stringent post-curfew limits.

Spill light to any adjacent Environmentally Sensitive Areas (ESA) 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 ESAs 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 of the surrounding area. AS4282 categorises the night time environment into different zones with maximum lighting limits as shown in Table 4 below:

TABLE 4 - 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 areas, the nearest dwellings with potential views to the signage are at the following locations:

Address	Zone	Within 100m	Address	Zone	Within 100m
3 Shailer Rd#	A3	Yes	13 Lilac St	A3	No
20 Shailer Rd#	A3	No	14 Lilac St	A3	No
22 Shailer Rd#	A3	No	16 Lilac St	A3	No
24 Shailer Rd#	A3	No	30 Lilac St	A3	No
26 Shailer Rd#	A3	No	32 Lilac St	A3	No
28 Shailer Rd#	A3	No	4-1 Harley St	A3	Yes
11 Lilac St	A3	No	4-2 Harley St	A3	Yes

The nominated property is a vacant lot. Calculation points were placed at a 10m setback from the property boundary, up to a height equal to the height of the proposed signage.

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

The signage (and surrounding environment) was modelled in lighting calculation program AGI32 to determine the effect (if any) of the light spill from the proposed signage. Photometric data for the signage was provided by the manufacturer* with the maximum luminances corresponding to the night time limit outlined in Table 2 of Section 5. Appendix D shows the lighting model and the results of the calculations.

Under AS4282, the maximum allowable vertical illuminance to dwellings at a distance of 100m or greater from signage displaying dynamic content is 2 lux for Zone A3 (as outlined in Table 4). The maximum illuminance for Zone A3 properties at a distance of 100m or greater from the signage is 0.29 lux at 20 Shailer Rd.

Where dwellings are within 100m from signage displaying dynamic content, the maximum vertical illuminance is 50% of the limits outlined in Table 4, namely 1 lux for Zone A3. The maximum illuminance for Zone A3 properties within 100m from the signage is 0.96 lux at 3 Shailer Rd.

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

Environmentally Sensitive Areas

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

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

Threshold Increment Assessment

The Threshold Increment was also calculated for the outbound direction of traffic on M1 Pacific Motorway, Harley St (southbound), Shailer Rd (eastbound), and Shailer Rd left turn to Harley St (northbound). 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 18.28% 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. Clause 3.3.3.b) of AS4282 states that digital signage shall have an Upward Waste Light Ratio (ULR_L) of not more than 0.45. ULR_L of the specified signage is not more than 0.384. The proposed signage therefore complies with this requirement.

Luminous Intensity


The luminous intensity limits nominated in the standard are not applicable for internally illuminated signage.

AS2482 Summary

It can therefore be seen that the proposed signage complies with all relevant requirements of AS4282 Control of the Obtrusive Effects of Outdoor Lighting.

7. SUMMARY

- The proposed signage to be installed at 6-12 Harley St, Shailer Park, shall be commissioned on site to yield the following maximum luminances:

COMPLYING LUMINANCE LEVELS FOR DIGITAL ADVERTISEMENTS		
Lighting Condition	Max Permissible Luminance (cd/m ²)	Compliant
Night Time	90	

LUMINANCE MAXIMUMS FOR VARYING AMBIENT LIGHTING CONDITIONS FOR ELECTRONIC BILLBOARDS	
Illuminance (ambient Lighting Levels) (lux)	Luminance levels on Electronic billboard or panel (cd/m ²)
0-10	150
11-40	200
41-100	250
101-400	400
401-1000	700
1001-4000	1500
4001-10000	2300
10001-40000	4000
40001-100000	6000

- The proposed signage has been found to comply with all relevant requirements of AS/NZS 4282:2023 Control of the Obtrusive Effects of Outdoor Lighting and the Queensland Department of Transport and Main Roads Guideline "Roadside Advertising Manual" Edition 4.
- In complying with the above requirements, the proposed signage shall not result in unacceptable glare nor shall it adversely impact the safety of pedestrians, residents or vehicular traffic. Additionally, the signage shall not cause any unacceptable amenity impacts to nearby residential dwellings, accommodation or environmental receivers.

8. DESIGN CERTIFICATION

The proposed signage to be installed at 6-12 Harley St, Shailer Park, if commissioned according to this report, complies with the following criteria, guidelines and standards:

- AS/NZS 4282:2023 Control of the Obtrusive Effects of Outdoor Lighting.
- Queensland Department of Transport and Main Roads Guideline "Roadside Advertising Manual" Edition 4 - Section 3.6 - December 2022.



Ryan Shamier MIES

Master Design Science (Illumination)

B. Elec Eng (Hons)

Member of the Illuminating Engineering Society of Australia and New Zealand (MIES)

Registered Professional Engineer Queensland (RPEQ 21425)

Senior Lighting Designer

Electrolight Sydney

24/11/25

APPENDIX A PROPOSED SIGNAGE LOCATION AND ELEVATIONS

AERIAL VIEW

NOTE: SIGN SIZE, POSITION AND STRUCTURE INDICATIVE AND SUBJECT TO DETAIL SITE SURVEY AND ALL NECESSARY APPROVALS.

Date:	November 2024	PLANS ELEVATION
Drawn By:	NIS	
Scale:	1:1	Drawings No. 0406
Scale:	NIS	1:1
Drawing No.:	021125-611	Rev. 06
Job No.:	QLD-DUT-0211	

UPGRADE TO SINGLE SPEC DIGITAL BILLBOARD STRUCTURE
SIZE 150MM X 4.10M
AT CNR HARLEY ST & SHAILER RD, SHAILER PARK, QLD 4127
PHOTO AND PHOTOMONTAGES

CNR HARLEY ST & SHAILER RD SHAILER PARK QLD 4127

ohi

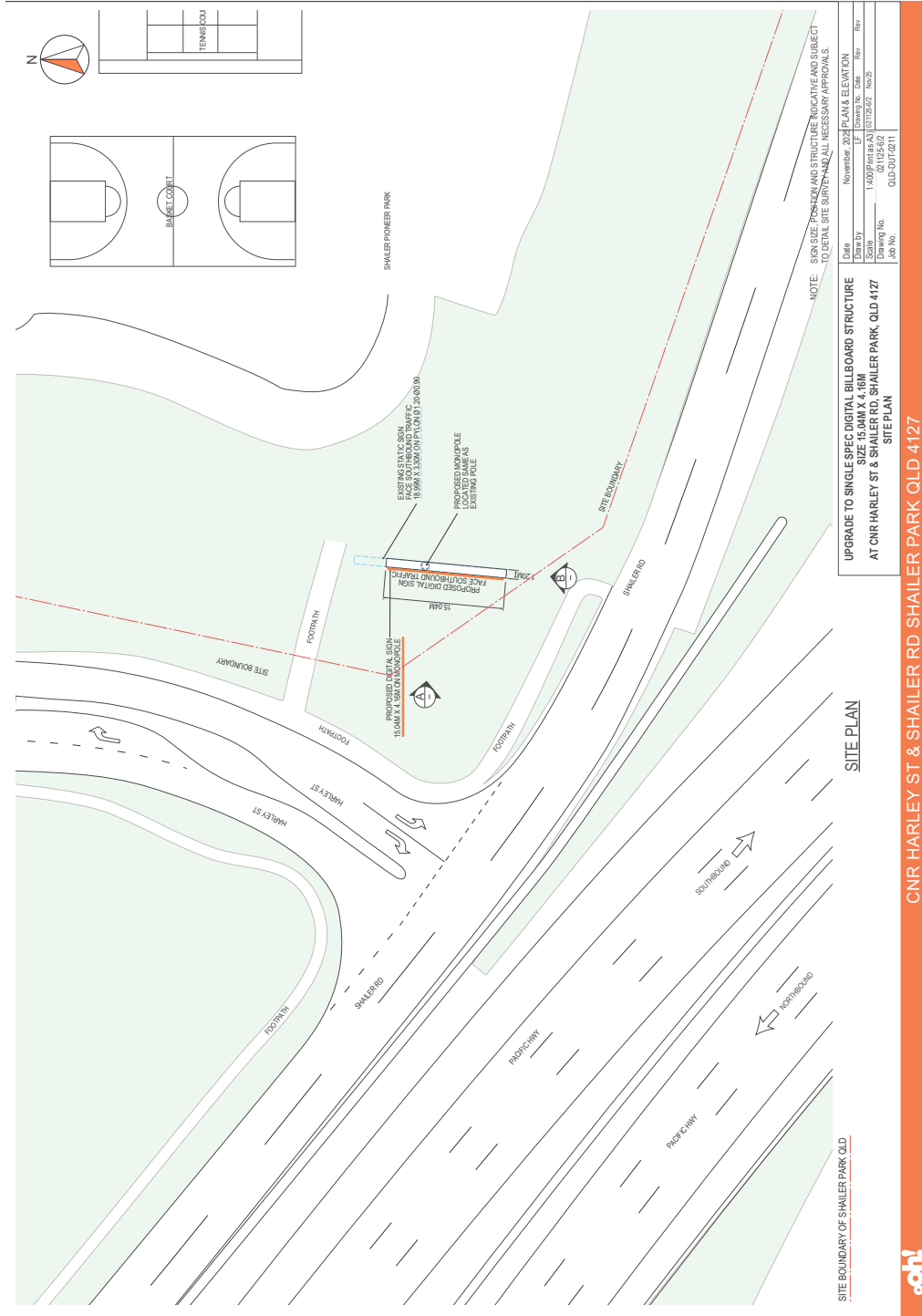
EXISTING SOUTHBOUND VIEW

PROPOSED SOUTHBOUND VIEW (A PANEL)

EXISTING SOUTHBOUND VIEW DISTANT

PROPOSED SOUTHBOUND VIEW DISTANT

APPENDIX A PROPOSED SIGNAGE LOCATION AND ELEVATIONS



APPENDIX A PROPOSED SIGNAGE LOCATION AND ELEVATIONS



PROPOSED SOUTHBOUND VIEW



EXISTING SOUTHBOUND VIEW

NOTE: SIGN SIZE, POSITION AND STRUCTURE INDICATIVE AND SUBJECT TO DETAIL SITE SURVEY AND ALL NECESSARY APPROVALS.

UPGRADE TO SINGLE SPEC DIGITAL BILLBOARD STRUCTURE
SIZE 15.04M X 4.16M
AT CNR HARLEY ST & SHAILER RD, SHAILER PARK, QLD 4127
PHOTO AND PHOTOMONTAGES

Date	November 2024	PLAN & ELEVATION
Drawn by	LF	Sheet No. Date Rev. Rev.
Scale	N/A	0/1125-6/8 - 1/2000
Drawing No.	021125-6/8	
Job No.	QLD-DUT-0211	



CNR HARLEY ST & SHAILER RD SHAILER PARK QLD 4127



PROPOSED SOUTHBOUND DISTANT VIEW (APPROX. 220M)



EXISTING SIGNAGE WILL BE REPLACED

EXISTING SOUTHBOUND DISTANT VIEW (APPROX. 220M)

NOTE: SIGN SIZE, POSITION AND STRUCTURE INDICATIVE AND SUBJECT TO DETAIL SITE SURVEY AND ALL NECESSARY APPROVALS.

UPGRADE TO SINGLE SPEC DIGITAL BILLBOARD STRUCTURE
SIZE 15.04M X 4.16M
AT CNR HARLEY ST & SHAILER RD, SHAILER PARK, QLD 4127
PHOTO AND PHOTOMONTAGES

Date	November 2024	PLAN & ELEVATION
Drawn by	LF	Sheet No. Date Rev. Rev.
Scale	N/A	0/1125-6/8 - 1/2000
Drawing No.	021125-6/8	
Job No.	QLD-DUT-0211	



CNR HARLEY ST & SHAILER RD SHAILER PARK QLD 4127

APPENDIX B
DIGITAL SIGNAGE SPECIFICATION

Big Screen Video

Specs: Outdoor 10mm SMD

Product Specifications	
Catalogue no.	BSV-YATR-10
Physical Pitch	10mm, physical
Pixel Density	10,000 pixel/m ²
Pixel Configuration	SMD LED
Module Dimensions (WxH)	320mm x 160mm
Module Resolution (WxH)	32 x 16 pixels
Cabinet Material	Aluminium
Viewing Angle	H 140 Deg. / V 140 Deg.
Best Viewing Distance	10+m
Maintenance	Rear access
Protection Degree	IP65 front; IP54 rear
Panel Net Weight	approx. 45kg/sqm
Gray Scale	16-bit Color Processing Depth
Product Specifications	
Refresh Rate	3840+ Hz
Display Control	Synchronous control
Power Supply	220V, 50Hz
Operation Temp.	-20° ~60°
Display Dimming	Auto/Manual, 8~256 Levels
Signal Transfer	Text, image, graphics animations, video
Power Consumption (Max./Avg.)	0.6kw/sqm; 0.2kw/sqm
MTBF	50,000hrs
Lifetime	100,000hrs
Luminance	7000 nits
Lifetime (Normal Temp)	100,000Hrs

Bringing spaces to life.

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p.1

APPENDIX C DESIGN GUIDELINES

QUEENSLAND DEPARTMENT OF TRANSPORT AND MAIN ROADS GUIDELINE “ROADSIDE ADVERTISING GUIDE”

Technical Volume

Table 3.6.1.4 – Electronic billboard device dwell times

Electronic billboard – Display Dwell Time (seconds)	
Device is visible from a motorway or motorway standard road	25
Device is visible from a state-controlled road (not motorway or motorway standard road) with a speed limit of 80 km/h and above	15
Device is visible from a state-controlled road (not motorway or motorway standard road) with a speed limit of less than and not equal to 80 km/h	10

3.6.1.5 Brightness, illumination and luminance

The department’s aim is for electronic billboards to exhibit consistent apparent brightness in all lighting conditions, by maintaining a consistent ratio between the ambient light (illumination) and light emitted by the billboard (luminance).

This allows the billboard to be easily read and reduces the time taken for a motorist to view the billboard content.

Due to the fast rate of change in ambient light during dusk and dawn periods, particular attention needs to be given to the luminance levels that are output during these periods to ensure that a consistent apparent brightness is maintained.

Any change to brightness levels should be applied during a message transition, not while an image is being displayed. This removes the risk that a motorist will be distracted by changing sign brightness.

The following Table 3.6.1.5 indicates the suggested luminance maximums for varying ambient lighting conditions. The final luminance levels are to be determined based on the site specific requirements. For example, illumination levels of an electronic billboard operating in an ambient lighting environment of 10 lux must be 150 cd / m². Luminance levels must adapt to meet the ambient illumination values in the table below.

Table 3.6.1.5 – Luminance maximums for varying ambient lighting conditions for electronic billboards

Illuminance (ambient light levels) (lux)	Luminance levels on electronic billboard or panel (cd / m ²)
0-10	150
11-40	200
41-100	250
101-400	400
401-1000	700
1001-4000	1500
4001-10000	2300
10001-40000	4000
40001-100000	6000

APPENDIX D
OBTRUSIVE LIGHT AND THRESHOLD INCREMENT CALCULATIONS

Environmental Zone Legend:

- A0
- A1
- A2
- A3
- A4
- Property within 100m of signage



APPENDIX D OBTRUSIVE LIGHT AND THRESHOLD INCREMENT CALCULATIONS

Calculation Summary			
Project: TI			
Label	CalcType	Units	Max
Harley St Southbound	Obtrusive - TI	%	2.64
M1 Pacific Motorway outbound	Obtrusive - TI	%	18.28
Shailer Rd eastbound	Obtrusive - TI	%	10.13
Shailer Rd left to Harley St NB	Obtrusive - TI	%	5.77

Calculation Summary			
Project: A3 within 100m			
Label	CalcType	Units	Max
3 Shailer Rd_1_Ill_Seg1	Obtrusive - Ill	Lux	0.96
3 Shailer Rd_Ill_Seg1	Obtrusive - Ill	Lux	0.00
4-1 Harley St_Ill_Seg1	Obtrusive - Ill	Lux	0.00
4-1 Harley St_Ill_Seg2	Obtrusive - Ill	Lux	0.00
4-2 Harley St_Ill_Seg1	Obtrusive - Ill	Lux	0.00
4-2 Harley St_Ill_Seg2	Obtrusive - Ill	Lux	0.00

Calculation Summary			
Project: A3 greater than 100m			
Label	CalcType	Units	Max
11 Lilac St_Ill_Seg1	Obtrusive - Ill	Lux	0.00
11 Lilac St_Ill_Seg2	Obtrusive - Ill	Lux	0.12
13 Lilac St_Ill_Seg1	Obtrusive - Ill	Lux	0.00
13 Lilac St_Ill_Seg2	Obtrusive - Ill	Lux	0.12
14 Lilac St_Ill_Seg1	Obtrusive - Ill	Lux	0.00
14 Lilac St_Ill_Seg2	Obtrusive - Ill	Lux	0.09
16 Lilac St_Ill_Seg1	Obtrusive - Ill	Lux	0.12
16 Lilac St_Ill_Seg2	Obtrusive - Ill	Lux	0.12
20 Shailer Rd_Ill_Seg1	Obtrusive - Ill	Lux	0.00
20 Shailer Rd_Ill_Seg2	Obtrusive - Ill	Lux	0.29
22 Shailer Rd_Ill_Seg1	Obtrusive - Ill	Lux	0.00
22 Shailer Rd_Ill_Seg2	Obtrusive - Ill	Lux	0.24
24 Shailer Rd_Ill_Seg1	Obtrusive - Ill	Lux	0.00
24 Shailer Rd_Ill_Seg2	Obtrusive - Ill	Lux	0.12
26 Shailer Rd_Ill_Seg1	Obtrusive - Ill	Lux	0.00
26 Shailer Rd_Ill_Seg2	Obtrusive - Ill	Lux	0.12
28 Shailer Rd_Ill_Seg1	Obtrusive - Ill	Lux	0.00
28 Shailer Rd_Ill_Seg2	Obtrusive - Ill	Lux	0.12
30 Lilac St_Ill_Seg1	Obtrusive - Ill	Lux	0.00
30 Lilac St_Ill_Seg2	Obtrusive - Ill	Lux	0.12
32 Lilac St_Ill_Seg1	Obtrusive - Ill	Lux	0.00
32 Lilac St_Ill_Seg2	Obtrusive - Ill	Lux	0.12

APPENDIX D

OBTRUSIVE LIGHT AND THRESHOLD INCREMENT CALCULATIONS

Obtrusive Light - Compliance Report

AS/NZS 4282:2023, A3 - Medium District Brightness, Curfew

Filename: 1308.127 - Shailer Park QLD - Rev A

20/11/2025 4:21:40 PM

Illuminance

Maximum Allowable Value: 2 Lux *

Calculations Tested (28):

<u>Calculation Label</u>	<u>Test Results</u>	<u>Max. Illum.</u>
20 Shailer Rd_III_Seg1	PASS	0.00
20 Shailer Rd_III_Seg2	PASS	0.29
24 Shailer Rd_III_Seg1	PASS	0.00
24 Shailer Rd_III_Seg2	PASS	0.12
26 Shailer Rd_III_Seg1	PASS	0.00
26 Shailer Rd_III_Seg2	PASS	0.12
22 Shailer Rd_III_Seg1	PASS	0.00
22 Shailer Rd_III_Seg2	PASS	0.24
28 Shailer Rd_III_Seg1	PASS	0.00
28 Shailer Rd_III_Seg2	PASS	0.12
30 Lilac St_III_Seg1	PASS	0.00
30 Lilac St_III_Seg2	PASS	0.12
32 Lilac St_III_Seg1	PASS	0.00
32 Lilac St_III_Seg2	PASS	0.12
16 Lilac St_III_Seg1	PASS	0.12
16 Lilac St_III_Seg2	PASS	0.12
14 Lilac St_III_Seg1	PASS	0.00
14 Lilac St_III_Seg2	PASS	0.09
4-1 Harley St_III_Seg1	PASS	0.00
4-1 Harley St_III_Seg2	PASS	0.00
4-2 Harley St_III_Seg1	PASS	0.00
4-2 Harley St_III_Seg2	PASS	0.00
11 Lilac St_III_Seg1	PASS	0.00
11 Lilac St_III_Seg2	PASS	0.12
13 Lilac St_III_Seg1	PASS	0.00
13 Lilac St_III_Seg2	PASS	0.12
3 Shailer Rd_1_III_Seg1	PASS	0.96
3 Shailer Rd_III_Seg1	PASS	0.00

Threshold Increment (TI)

Maximum Allowable Value: 20 %

Calculations Tested (4):

<u>Calculation Label</u>	<u>Adaptation Luminance</u>	<u>Test Results</u>
M1 Pacific Motorway outbound	1	PASS
Shailer Rd eastbound	1	PASS
Harley St Southbound	1	PASS
Shailer Rd left to Harley St NB	1	PASS

*Where property is within 100m of dynamic signage, 50% of this maximum value shall be used.