

Noise Assessment

Modification to Trading Hours

McDonald's Operation

4 Heritage Drive, Chisholm, NSW

Prepared For: McDonald's Australia Limited

September 2026

MAC242119-02RP1

Document Information

Noise Assessment

Modification to Trading Hours

McDonald's Operation

4 Heritage Drive, Chisholm, NSW

Prepared for: McDonald's Australia Limited

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Thornleigh NSW 2120

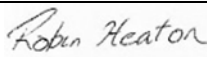
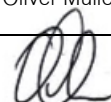
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1 Introduction

Muller Acoustic Consulting Pty Ltd (MAC) has been commissioned by McDonald's Australia Limited (MCD) to prepare a Noise Assessment (NA) to quantify emissions from proposed modification to trading hours of the McDonald's Operation (the operation) located at 4 Heritage Drive, Chisholm, NSW.

The NA has quantified potential operational and sleep disturbance noise emissions from the operation during the proposed modified hours and recommends reasonable and feasible noise controls where required.

This assessment has been undertaken in accordance with the following documents:

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI) 2017;
- NSW Department of Environment and Climate Change (DECCW) – NSW Interim Construction Noise Guideline (ICNG), July 2009;
- NSW Department of Environment, Climate Change and Water (DECCW) – NSW Road Noise Policy (RNP), March 2011;
- NSW Environment Protection Authority (EPA), Approved methods for the measurement and analysis of environmental noise in NSW, 2022;
- Australian Standard AS 1055:2018 - Acoustics - Description and measurement of environmental noise - General Procedures;
- International Organisation for Standardisation (ISO) 9613-1:1993 (ISO9613:1) - Acoustics - Attenuation of Sound During Propagation Outdoors - Part 1: Calculation of the Absorption of Sound by the Atmosphere;
- International Organisation for Standardisation (ISO) 9613-2:1996 (ISO9613:2) - Acoustics - Attenuation of Sound during Propagation Outdoors - Part 2: General Method of Calculation; and
- ISO/TR 17534-3 - Acoustics — Software for the calculation of sound outdoors — Part 3: Recommendations for quality assured implementation of ISO 9613-2 in software according to ISO 17534-1.

A glossary of terms, definitions and abbreviations used in this report is provided in **Appendix A**.

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2 Project Description

2.1 Background

The operation is located at 4 Heritage Drive, Chisholm, NSW, which is part of the Chisholm town centre precinct. **Appendix B** provides the site layout plans of the operation and surrounding town centre development.

The area surrounding the operation site comprises of residential, commercial and educational land uses with the town centre zoned E1 for local centre with the surrounding residential lots zoned R1 for general residential. To the west and south of the operation site is the approved Chisholm town centre development, comprising of a supermarket and speciality retails premises as well as several other commercial pad sites. An educational receiver located on the far side of the shopping centre carpark. An additional educational receiver is located to the north of the operation, across the town centre carpark and Tigerhawk Drive. It is noted that the educational and commercial premises are unlikely to be occupied during the proposed extended hours, however as a conservative approach, they have been included in this assessment. The nearest existing residential receivers to the operation are located to the east across Settlers Boulevard with additional residential receivers located to the south and west of the operation on the far side of the town centre.

The ambient noise environment surrounding the proposed operation is dominated by commercial and construction noise from the town centre development along with educational noise from the surrounding schools and childcare centres and urban hum from the residential dwellings.

The operation is currently approved to operate 5am to 12am, seven days a week. Approval is being sought to allow the operation to trade 24 hours a day, seven days a week. It is noted that hours of operation for deliveries and waste collection are not proposed to change as part of this application, accordingly these activities have not been considered as part of this assessment.

2.2 Proposed Activities & Operating Hours

There are several key activities associated with the operation that have the potential to generate acoustic impacts on nearby receivers. **Table 1** provides a summary of operational noise sources and the assessment period in which they propose to occur.

Table 1 Noise Generating Activities		
Activity/Source	Period ¹	Operational
Customer light vehicles in Car Park	Day	✓
	Evening	✓
	Night	✓
Drive-Thru operations including the Customer Ordering Displays (COD)	Day	✓
	Evening	✓
	Night	✓
Mechanical plant	Day	✓
	Evening	✓
	Night	✓
Internal Sales Activities	Day	✓
	Evening	✓
	Night	✓

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

2.3 Receiver Review

A review of residential receivers in proximity to the project has been completed and are summarised in **Table 2**. **Figure 1** provides a locality plan showing the position of these receivers in relation to the project.

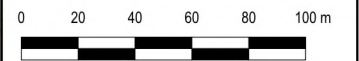
Table 2 Receiver Locations				
Receiver	Description	Receiver Height	Coordinates (MGA56)	
			Easting	Northing
R01	Residential	1.5/4m	371941	6374979
R02	Residential	1.5m	371911	6374980
R03	Residential	1.5m	371807	6374906
R04	Residential	1.5m	371820	6374862
R05	Residential	1.5m	371825	6374843
R06	Residential	1.5/4m	372210	6374793
R07	Residential	1.5m	372211	6374808
R08	Residential	1.5/4m	372215	6374825
R09	Residential	1.5m	372216	6374843
R10	Residential	1.5m	372219	6374877
FR01	Future Residential	1.5m	372237	6374957
FR02	Future Residential	1.5m	372221	6374891
FR03	Future Residential	1.5m	372218	6374859
ED01	Educational	1.5m	372149	6374970
ED02	Educational	1.5m	372005	6374915
C01	Commercial	1.5m	372148	6374829
C02	Commercial	1.5m	372037	6374833



FIGURE 1
Locality Plan
MAC242119-02
Chisholm McDonald's

KEY

- Boundary
- Noise Monitoring Location
- Receivers



3 Noise Policy and Guidelines

3.1 Noise Policy for Industry

The EPA released the Noise Policy for Industry (NPI) in October 2017 which provides a process for establishing noise criteria for consents and licenses enabling the EPA to regulate noise emissions from scheduled premises under the Protection of the Environment Operations Act 1997. The objectives of the NPI are to:

- provide noise criteria that is used to assess the change in both short term and long-term noise levels;
- provide a clear and consistent framework for assessing environmental noise impacts from industrial premises and industrial development proposals;
- promote the use of best-practice noise mitigation measures that are feasible and reasonable where potential impacts have been identified; and
- support a process to guide the determination of achievable noise limits for planning approvals and/or licences, considering the matters that must be considered under the relevant legislation (such as the economic and social benefits and impacts of industrial development).

The policy sets out a process for industrial noise management involving the following key steps:

1. Determine the Project Noise Trigger Levels (PNTLs) (ie criteria) for a development. These are the levels (criteria), above which noise management measures are required to be considered. They are derived by considering two factors: shorter-term intrusiveness due to changes in the noise environment; and maintaining the noise amenity of an area.
2. Predict or measure the noise levels produced by the development with regard to the presence of annoying noise characteristics and meteorological effects such as temperature inversions and wind.
3. Compare the predicted or measured noise level with the PNTL, assessing impacts and the need for noise mitigation and management measures.
4. Consider residual noise impacts - that is, where noise levels exceed the PNTLs after the application of feasible and reasonable noise mitigation measures. This may involve balancing economic, social and environmental costs and benefits from the proposed development against the noise impacts, including consultation with the affected community where impacts are expected to be significant.
5. Set statutory compliance levels that reflect the best achievable and agreed noise limits for the development.
6. Monitor and report environmental noise levels from the development.

3.1.1 Project Noise Trigger Levels (PNTL)

The policy sets out the procedure to determine the PNTLs relevant to an industrial development. The PNTL is the lower (ie, the more stringent) of the **Project Intrusiveness Noise Level (PINL)** and **Project Amenity Noise Level (PANL)** determined in accordance with Section 2.3 and Section 2.4 of the NPI.

3.1.2 Rating Background Level (RBL)

The Rating Background Level (RBL) is a parameter determined from noise monitoring and is used for assessment purposes. As per the NPI, the RBL is an overall single figure background level representing each assessment period (day, evening and night) over the noise monitoring period.

3.1.3 Project Intrusiveness Noise Level (PINL)

The PINL ($LA_{eq}(15min)$) is the $RBL + 5dB$ and seeks to limit the degree of change a new noise source introduces to an existing environment. Hence, when assessing intrusiveness, background noise levels need to be measured.

Background noise levels need to be determined before intrusive noise can be assessed. The NPI states that background noise levels to be measured are those that are present at the time of the noise assessment and without the subject development operating. For the assessment of modifications to existing premises, the noise from the existing premises should be excluded from background noise measurements. It is noted that the exception is where the premises has been operating for a significant period of time and is considered a normal part of the acoustic environment; it may be included in the background noise assessment under the following circumstances:

- the development must have been operating for a period in excess of 10 years in the assessment period/s being considered and is considered a normal part of the acoustic environment; and,
- the development must be operating in accordance with noise limits and requirements imposed in a consent or licence and/or be applying best practice.

Where a project intrusiveness noise level has been derived in this way, the derived level applies for a period of 10 years to avoid continuous incremental increases in intrusiveness noise levels. This approach is consistent with the purpose of the intrusiveness noise level to limit significant change in the acoustic environment. The purpose of the project amenity noise level is to moderate against background noise creep.

3.1.4 Project Amenity Noise Level (PANL)

The PANL is relevant to a specific land use or locality. To limit continuing increases in intrusiveness levels, the ambient noise level within an area from all combined industrial sources should remain below the recommended amenity noise levels specified in Table 2.2 (of the NPI). The NPI defines two categories of amenity noise levels:

- **Amenity Noise Levels (ANL)** – are determined considering all current and future industrial noise within a receiver area; and
- **Project Amenity Noise Level (PANL)** – is the recommended level for a receiver area, specifically focusing on the project being assessed.

Additionally, Section 2.4 of the NPI states: “to ensure that industrial noise levels (existing plus new) remain within the recommended amenity noise levels for an area, a project amenity noise level applies for each new source of industrial noise as follows”:

PANL for new industrial developments = recommended **ANL** minus 5dBA.

The following exceptions apply when deriving the PANL:

- areas with high traffic noise levels;
- proposed developments in major industrial clusters;
- existing industrial noise and cumulative industrial noise effects; and
- greenfield sites.

The NPI states with respect to high traffic noise areas:

The level of transport noise, road traffic noise in particular, may be high enough to make noise from an industrial source effectively inaudible, even though the L_{Aeq} noise level from that industrial noise source may exceed the project amenity noise level. In such cases the project amenity noise level may be derived from the L_{Aeq} , period(traffic) minus 15 dB(A).

Where relevant this assessment has considered influences of traffic with respect to amenity noise levels (ie areas where existing traffic noise levels are 10dB greater than the recommended amenity noise level).

Furthermore, Section 2.4 of the NPI states “where the project amenity noise level applies and it can be met, no additional consideration of cumulative industrial noise is required.”

The recommended amenity noise levels as per Table 2.2 of the NPI are reproduced in **Table 3**.

Table 3 Amenity Noise Levels

Receiver Type	Noise Amenity Area	Time of day	Recommended amenity noise level dB LAeq(period)
Residential	Rural	Day	50
		Evening	45
		Night	40
	Suburban	Day	55
		Evening	45
		Night	40
	Urban	Day	60
		Evening	50
		Night	45
Hotels, motels, caretakers' quarters, holiday accommodation, permanent resident caravan parks.	See column 4	See column 4	5dB above the recommended amenity noise level for a residence for the relevant noise amenity area and time of day
School Classroom	All	Noisiest 1-hour period when in use	35 (internal) 45 (external)
Hospital ward			
- internal	All	Noisiest 1-hour	35
- external	All	Noisiest 1-hour	50
Place of worship			
- internal	All	When in use	40
Passive Recreation	All	When in use	50
Active Recreation	All	When in use	55
Commercial premises	All	When in use	65
Industrial	All	When in use	70

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note: The recommended amenity noise levels refer only to noise from industrial noise sources. However, they refer to noise from all such sources at the receiver location, and not only noise due to a specific project under consideration. The levels represent outdoor levels except where otherwise stated.

Types of receivers are defined as rural residential; suburban residential; urban residential; industrial interface; commercial; industrial – see Table 2.3 and Section 2.7 of the NPI.

3.1.5 Maximum Noise Assessment Trigger Levels

The potential for sleep disturbance from maximum noise level events from a project during the night-time period needs to be considered. The NPI considers sleep disturbance to be both awakenings and disturbance to sleep stages.

Where night-time noise levels from a development/premises at a residential location exceed the following criteria, a detailed maximum noise level event assessment should be undertaken:

- $L_{Aeq}(15min)$ 40dB or the prevailing RBL plus 5dBA, whichever is the greater, and/or
- L_{Amax} 52dB or the prevailing RBL plus 15dBA, whichever is the greater.

A detailed assessment should cover the maximum noise level, the extent to which the maximum noise level exceeds the rating background noise level, and the number of times this happens during the night-time period.

Other factors that may be important in assessing the impacts on sleep disturbance include:

- how often the events would occur;
- the distribution of likely events across the night-time period and the existing ambient maximum events in the absence of the development;
- whether there are times of day when there is a clear change in the noise environment (such as during early morning shoulder periods); and
- current understanding of effects of maximum noise level events at night.

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4 Existing Environment

4.1 Unattended Noise Monitoring

To quantify the existing background noise environment of the area, unattended noise monitoring was conducted at two locations representative of the ambient environment surrounding the project site. The selected monitoring location are shown in **Figure 1** and are considered representative of surrounding residential receivers as per Fact Sheet B1.1 of the NPI.

The unattended noise surveys were conducted in general accordance with the procedures described in Australian Standard AS 1055:2018, "Acoustics – Description and Measurement of Environmental Noise".

The measurements were carried out using two Svantek 977 noise analyser from Tuesday 1 September 2026 to Thursday 10 September 2026 the acoustic instrumentation used carries current NATA calibration and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed $\pm 0.5\text{dBA}$. All equipment carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per the EPA's Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022). Data affected by adverse meteorological conditions have been excluded from the results in accordance with methodologies provided in Fact Sheet A4 of the NPI.

The results of long-term unattended noise monitoring are provided in **Table 4**. The measured daily ABLs for the background monitoring are provided in **Table C1** in **Appendix C** along with the daily noise monitoring charts.

Table 4 Background Noise Monitoring Summary

Monitoring Location	Period ¹	Measured Background	Measured dB LAeq
		Noise Level (LA90) dB RBL	
L1 (R01-R05)	Day	38	54
	Evening	33	47
	Night	27	46
L2 (R06-R10 & FR01-FR03)	Day	43	60
	Evening	35	52
	Night	29	50

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note: Excludes periods of wind or rain affected data. Meteorological data obtained from the Bureau of Meteorology weather station Paterson (Tocal) AWS (32.6°S 151.6°E 30m AMSL).

Note: Calibration certificates of the sound level meters used for this project are available on request.

4.2 Attended Noise Monitoring

To supplement the unattended noise assessment and to quantify the changes in ambient noise in the community surrounding the operation, one 15 minute attended measurement was completed at each monitoring location.

The attended noise survey was conducted in general accordance with the procedures described in Standards Australia AS 1055:2018, "Acoustics – Description and Measurement of Environmental Noise".

All acoustic instrumentation used carries appropriate and current NATA (or manufacturer) calibration certificates with records of all calibrations maintained by MAC as per Approved Methods for the measurement and analysis of environmental noise in NSW (EPA, 2022) and complies with AS/NZS IEC 61672.1-2019-Electroacoustics - Sound level meters - Specifications. Calibration of all instrumentation was checked prior to and following measurements. Drift in calibration did not exceed ± 0.5 dBA.

The attended noise monitoring was conducted using one Svantek 971 noise analyser at the site (see **Figure 1**) Tuesday 1 September 2026 to quantify ambient background noise levels.

The attended measurements were completed during calm and clear meteorological conditions and confirmed that ambient traffic and children at play noise dominated the surrounding environment. The results of the short-term noise measurement and observations are summarised in **Table 5**.

Table 5 Operator-Attended Noise Survey Results					
Date/ Time (hrs)	Noise Descriptor (dBA re 20 μ Pa)			Meteorology	Description and SPL, dBA
	L _{Amax}	L _{Aeq}	L _{A90}		
01/09/2026 12:14	71	56	43	WD: NW WS: 1.8m/s Rain: Nil	Children in CCC 45-55 Birds 40-62 Construction 40-54 Traffic 42-71
01/09/2026 12:51	85	62	49	WD: NW WS: 1.6m/s Rain: Nil	Traffic 45-85 Children in School 43-50 Birds 46-55 Wind in Vegetation 47-54

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

5 Assessment Criteria

5.1 Operational Project Noise Trigger Levels (Criteria)

This section outlines the determination of PNTLs and Maximum Noise Assessment Trigger Levels in accordance with NPI methodology.

5.1.1 Project Intrusiveness Noise Levels

The PINL for the project are presented in **Table 6** and have been determined based on the RBL +5dBA and only apply to residential receivers.

Table 6 Project Intrusiveness Noise Levels					
Location	Receiver Type	Period ¹	Measured RBL dB LA90	Adopted RBL dB LA90	PINL dB LAeq(15min)
L1 (R01-R05)	Residential	Day	38	38	43
		Evening	33	33	38
		Night	27	30 ²	35
L2 (R06-R10 & FR01-FR03)	Residential	Day	43	43	48
		Evening	35	35	40
		Night	29	30 ²	35

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: Where this level is less than 30dBA for the night period, the rating background noise level is set to 30dBA.

5.1.2 NPI Receiver Type

Classification of residential receivers in the surrounding area have been determined by review of the measured RBLs and a tally of the features for each category described in Table 2.3 of the NPI. The overall tally of features and resulting classifications are provided in **Table 7**. The detailed assessment of receiver categories is provided in **Appendix D**. This classification is used in conjunction with the intrusiveness criteria to determine the limiting criteria.

Table 7 Determination of NPI Residential Receiver Category			
Receiver/Location/Catchment	Rural	Suburban	Urban
L1 (R01-R05)	3	3	6
L2 (R06-R10 & FR01-FR03)	1	5	6

5.1.3 Project Amenity Noise Levels

The relevant PANL for residential receivers and other receiver types (ie non-residential) potentially affected by the project are presented in **Table 8**.

Table 8 Amenity Noise Levels and Project Amenity Noise Levels					
Receiver Type	Noise Amenity Area	Assessment Period ¹	Recommended ANL dB LAeq(period)	ANL dB LAeq(period) ²	PANL dB LAeq(15min) ³
L1 (R01-R05)	Urban	Day	60	55	53
		Evening	50	45	45
		Night	45	40	43
L2 (R06-R10 & FR01-FR03)	Urban	Day	60	50	53
		Evening	50	42	45
		Night	45	40	43
Educational (ED01-ED02)		When in use	35 (internal 1 hr)	35 (internal 1 hr)	38 (internal 1 hr) 48 (external 1 hr) ⁴
Commercial (C01-C02)		When in use	65	60	63

Note 1: Day- the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: Project Amenity Noise Level equals the Amenity Noise Level -5dB as there is other industry in the area.

Note 3: Includes a +3dB adjustment to the amenity period level to convert to a 15-minute assessment period as per Section 2.2 of the NPI.

Note 4: External level based on 10dB loss through partially open window.

5.1.4 Project Noise Trigger Levels

The PNTL are the lower of either the PINL or the PANL. **Table 9** presents the derivation of the PNTLs in accordance with the methodologies outlined in the NPI.

Table 9 Project Noise Trigger Levels					
Receiver Type	Noise Amenity Area	Assessment Period ¹	PINL dB LAeq(15min)	PANL dB LAeq(15min)	PNTL dB LAeq(15min)
L1 (R01-R05)	Urban	Day	43	53	43
		Evening	38	45	38
		Night	35	43	35
L2 (R06-R10 & FR01-FR03)	Urban	Day	48	53	48
		Evening	40	45	40
		Night	35	43	35
Educational (ED01-ED02)	All	Noisiest 1 hour period	N/A	38 (internal 1 hr) 48 (external 1 hr) ²	43 (external 1 hr)
Commercial (C01-C02)	All	When in Use	N/A	63	68

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note 2: External level based on 10dB with windows open for adequate ventilation (NPI).

5.1.5 Maximum Noise Trigger Levels

The maximum noise trigger levels shown in **Table 10** are based on nighttime RBLs and trigger levels as per Section 2.5 of the NPI. The trigger levels will be applied to transient noise events that have the potential to cause sleep disturbance.

Table 10 Maximum Noise Trigger Levels Night			
L1 (R01-R05) - NPI Residential Receivers			
LAeq(15min)		LAmax	
40dB LAeq(15min) or RBL + 5dB		52dB LAmax or RBL + 15dB	
Trigger	40	Trigger	52
RBL +5dB	35	RBL +15dB	45
Highest	40	Highest	52
L2 (R06-R10 & FR01-FR03) - NPI Residential Receivers			
LAeq(15min)		LAmax	
40dB LA eq(15min) or RBL + 5dB		52dB LAmax or RBL + 15dB	
Trigger	40	Trigger	52
RBL +5dB	35	RBL +5dB	45
Highest	40	Highest	52

Note 1: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

Note: NPI identifies that maximum of the two values is to be adopted which is shown in bold font.

The NPI uses the maximum noise trigger levels as a screening tool to determine the potential for sleep disturbance. Essentially, exceeding the maximum noise trigger levels, does not result in sleep disturbance, but 'triggers' a further detailed assessment of maximum noise level (transient) events, considering additional factors such as the maximum noise level, the extent to which the maximum noise level exceeds the RBL, the number of times the event occurs, the distribution of events over the nighttime period and the time of night the event occurs.

To undertake a detailed maximum noise level assessment, the NPI provides additional guidance from the EPA NSW Road Noise Policy (RNP). Section 5.4 of the RNP outlines that a maximum internal noise level of 50-55dBA is unlikely to awaken people from sleep. Taking into account a 10dB loss for a partially open window an external level of 65dBA is unlikely to awaken internal occupants. Hence, an external noise level of 65dB LAmax has been adopted to assess the potential for sleep disturbance for residential receivers.

6 Modelling Methodology

A computer model was developed to quantify project noise emissions to neighbouring receivers using DGMR (iNoise, Version 2026) noise modelling software. iNoise is an intuitive and quality assured software for industrial noise calculations in the environment. 3D noise modelling is considered industry best practice for assessing noise emissions from projects.

The model incorporated a three-dimensional digital terrain map giving all relevant topographic information used in the modelling process. Additionally, the model uses relevant noise source data, ground type, attenuation from barrier or buildings and atmospheric information to predict noise levels at the nearest potentially affected receivers. Where relevant, modifying factors in accordance with Fact Sheet C of the NPI have been applied to calculations.

The model calculation method used to predict noise levels was in accordance with ISO 9613:1 and ISO 9613:2 including corrections for meteorological conditions using CONCAWE¹. The ISO 9613 standards are the most used noise prediction method worldwide. Many countries refer to ISO 9613 in their noise legislation. However, the ISO 9613 standard does not contain guidelines for quality assured software implementation, which leads to differences between applications in calculated results. In 2015 this changed with the release of ISO/TR 17534-3. This quality standard gives clear recommendations for interpreting the ISO 9613 method. iNoise fully supports these recommendations. The models and results for the 19 test cases are included in the software.

6.1 Mitigation Included in Design and Noise Control Recommendations

The noise model adopted the following assumptions, controls and recommendations:

- the project is constructed as per the site design and plans (as presented in **Appendix B**) which includes the barrier attenuation provided by the project buildings orientation; and
- the mechanical air-conditioning (AC) plant is located on the plant deck of the operation which is surrounded by the roof parapet and extends a minimum of 400mm above level of the highest item of plant.

¹ Report no. 4/18, "the propagation of noise from petroleum and petrochemical complexes to neighbouring communities", Prepared by C.J. Manning, M.Sc., M.I.O.A. Acoustic Technology Limited (Ref.AT 931), CONCAWE, Den Haag May 1981

6.2 Sound Power Levels

Table 11 presents the sound power level for each noise source modelled in this assessment. It is noted that sound power levels were sourced from manufacturer's specifications or from in-field measurements at similar project sites.

Table 11 Acoustically Significant Sources - Sound Power Levels dBA (re 10⁻¹² Watts)			
Item and number modelled per 15 minutes	Individual Sound Power Level	Modelled Sound Power Level dB LAeq(15min)	Source Height ¹
Operation			
Cold Room Condenser (x2)	75	78	1.0m
Customer Ordering Displays (x2)	71	74	1.0m
Car idle, start up and drive off (x15) ^{2,3}	67	79	0.5m
Customers vehicles travelling through Car Park (15 cars per 15min) ^{2,3}	67	79	0.5m
Customers vehicles travelling through Drive-Thru (15 cars per 15min) ^{3,4}	67	79	0.5m
Fan 01 CE314V (x1)	67	67	0.3m
Fan 02 CDG354 (x1)	73	73	0.8m
Fan 03 CDG354 (x1)	73	73	0.8m
Fan 04 CDG404 (x1)	77	77	0.8m
Fan 05 CEEC25D (x1)	66	66	0.2m
Fan 06 CE356 (x1)	63	63	0.4m
Fan 07 PUE354ER (x1)	64	64	0.3m
Fan 08 AP00636AP (x1)	49	49	0.4m
AC Plant 01 Actron PKY620T (x1)	81	81	1.7m
AC Plant 02 Actron PKV330T (x1)	80	80	1.4m
AC Plant 03 Actron ACPCG340 (x1)	80	80	1.3m
Maximum Noise Level Assessment (LAmax), Nighttime periods (10pm to 7am)			
Door Slam		87	0.5m
Patron Yelling		92	0.5m

Note 1: Height above the relative ground or building below source.

Note 2: Includes a duration adjustment assuming vehicles operate for three (3) minutes continuously within a period of 15-minutes.

Note 3: There is a 50% reduction in onsite customer light vehicles after 10pm.

Note 4: Modelled as a moving point source with adjustments for length of travelled path, velocity and number of movements in a 15-minute period.

7 Assessment Results

7.1 Operational Noise Assessment

Noise predictions from all operational noise sources have been quantified at surrounding receivers. The coincidence of all plant occurring onsite simultaneously for an entire 15-minute period is unlikely. However, it is probable that several plant may operate simultaneously on occasion for a limited duration. To account for this, modelling has adopted the LAeq(15min) contribution of sources which were derived from manufacturer's specifications or from in-field measurements of operation sources or activities. Results of the noise modelling predictions are presented in **Table 12** for operations during the night period.

Table 12 Operational Noise Predictions Night Period– All Receivers			
Rec	Predicted Noise Level dB LAeq(15min)	PNTL dB LAeq(15min)	Compliant
R01	<35	35	✓
R02	<35	35	✓
R03	<35	35	✓
R04	<35	35	✓
R05	<35	35	✓
R06	<35	35	✓
R07	<35	35	✓
R08	<35	35	✓
R09	<35	35	✓
R10	<35	35	✓
FR01	<35	35	✓
FR02	<35	35	✓
FR03	<35	35	✓
ED01	<35	43	✓
ED02	<35	43	✓
C01	42	63	✓
C02	<35	63	✓

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

7.2 Maximum Noise Level Assessment

In assessing maximum noise events, typical L_{Amax} noise levels from transient events were assessed at the nearest residential receivers. For the sleep disturbance assessment, a Sound Power Level of 87dBA for a car door slam and 92dBA for a customer yelling were adopted for maximum noise level (L_{Amax}) events during the night period. Predicted noise levels from L_{Amax} events for assessed receivers are presented in **Table 13**.

Table 13 Maximum Noise Level Assessment (Night)

Night Period						
Rec	Predicted Noise Level				Trigger Level	Compliant
	dB LAmax				NPI dB LAmax	
	Door Slam	Door Slam	Yell at Entry	Yell at COD		
	Northern Most Car Space	Waiting Bay Car Space				
R01	<35	<35	<35	<35	52	✓
R02	<35	<35	<35	<35	52	✓
R03	<35	<35	<35	<35	52	✓
R04	<35	<35	<35	<35	52	✓
R05	<35	<35	<35	<35	52	✓
R06	40	<35	<35	<35	52	✓
R07	41	<35	<35	41	52	✓
R08	42	<35	<35	43	52	✓
R09	<35	36	<35	45	52	✓
R10	<35	38	<35	46	52	✓
FR01	<35	<35	<35	40	52	✓
FR02	<35	37	<35	45	52	✓
FR03	<35	37	<35	46	52	✓

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods.

The predicted maximum levels results show compliance with the maximum noise trigger levels for door slams in the northern most and waiting bay car spaces and yelling near the COD and at the entry.

8 Discussion and Conclusion

Muller Acoustic Consulting Pty Ltd (MAC) has completed a Noise Assessment (NA) to quantify emissions from the proposed modification to trading hours of the McDonald's Operation (the operation) located at 4 Heritage Drive, Chisholm, NSW. The assessment has quantified potential operation emissions pertaining to customer generated noise, including light vehicles, mechanical plant for the operation during the proposed extended hours.

The results of the NA demonstrate that noise emissions from the operation would satisfy the relevant PNTLs at all assessed receivers for all assessment periods once noise controls for the project are implemented (see **Section 6.1**):

- the project is constructed as per the site design and plans (as presented in **Appendix B**) which includes the barrier attenuation provided by the project buildings orientation; and
- the mechanical air-conditioning (AC) plant is located on the plant deck of the operation which is surrounded by the roof parapet and extends a minimum of 400mm above level of the highest item of plant.

Furthermore, sleep disturbance is not anticipated, as emissions from maximum noise events (ie impact noise from light vehicle door slams), during the night period are predicted to satisfy the NPLs maximum noise trigger levels.

Accordingly, the Noise Assessment supports the Development Application for the proposed modification to trading hours at the operation incorporating the recommendations and controls outlined in this report.

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Appendix A – Glossary of Terms

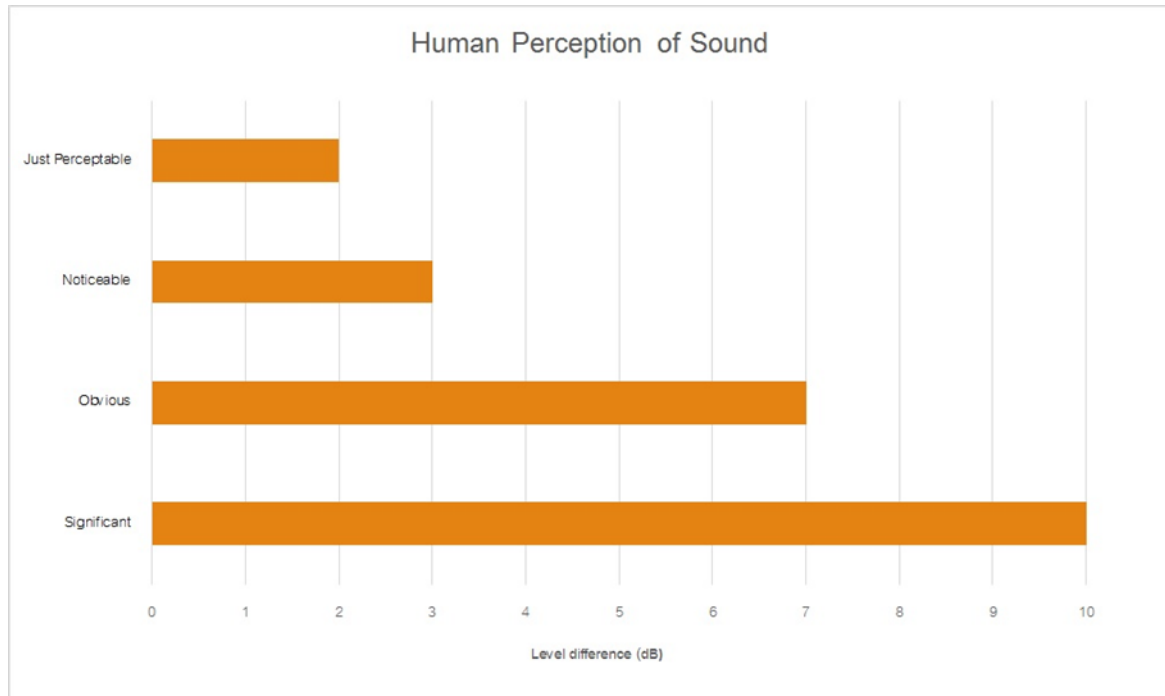
A number of technical terms have been used in this report and are explained in **Table A1**.

Table A1 Glossary of Acoustical Terms	
Term	Description
1/3 Octave	Single octave bands divided into three parts
Octave	A division of the frequency range into bands, the upper frequency limit of each band being twice the lower frequency limit.
ABL	Assessment Background Level (ABL) is defined in the NPI as a single figure background level for each assessment period (day, evening and night). It is the tenth percentile of the measured L90 statistical noise levels.
Ambient Noise	The total noise associated with a given environment. Typically, a composite of sounds from all sources located both near and far where no particular sound is dominant.
A Weighting	A standard weighting of the audible frequencies designed to reflect the response of the human ear to sound.
Background Noise	The underlying level of noise present in the ambient noise, excluding the noise source under investigation, when extraneous noise is removed. This is usually represented by the LA90 descriptor
dBA	Noise is measured in units called decibels (dB). There are several scales for describing noise, the most common being the 'A-weighted' scale. This attempts to closely approximate the frequency response of the human ear.
dB(Z), dB(L)	Decibels Z-weighted or decibels Linear (unweighted).
Extraneous Noise	Sound resulting from activities that are not typical of the area.
Hertz (Hz)	The measure of frequency of sound wave oscillations per second - 1 oscillation per second equals 1 hertz.
LA10	A sound level which is exceeded 10% of the time.
LA90	Commonly referred to as the background noise, this is the level exceeded 90% of the time.
LAeq	Represents the average noise energy or equivalent sound pressure level over a given period.
LAmx	The maximum sound pressure level received at the microphone during a measuring interval.
Masking	The phenomenon of one sound interfering with the perception of another sound. For example, the interference of traffic noise with use of a public telephone on a busy street.
RBL	The Rating Background Level (RBL) as defined in the NPI, is an overall single figure representing the background level for each assessment period over the whole monitoring period. The RBL, as defined is the median of ABL values over the whole monitoring period.
Sound power level (Lw or SWL)	This is a measure of the total power radiated by a source in the form of sound and is given by $10 \cdot \log_{10} (W/W_0)$. Where W is the sound power in watts to the reference level of 10^{-12} watts.
Sound pressure level (Lp or SPL)	the level of sound pressure; as measured at a distance by a standard sound level meter. This differs from Lw in that it is the sound level at a receiver position as opposed to the sound 'intensity' of the source.

Table A2 provides a list of common noise sources and their typical sound level.

Table A2 Common Noise Sources and Their Typical Sound Pressure Levels (SPL), dBA	
Source	Typical Sound Pressure Level
Threshold of pain	140
Jet engine	130
Hydraulic hammer	120
Chainsaw	110
Industrial workshop	100
Lawn-mower (operator position)	90
Heavy traffic (footpath)	80
Elevated speech	70
Typical conversation	60
Ambient suburban environment	40
Ambient rural environment	30
Bedroom (night with windows closed)	20
Threshold of hearing	0

Figure A1 – Human Perception of Sound



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Appendix B – Site Plans

ARCHITECTURAL DRAWINGS

DA000	E	COVER SHEET
DA001	E	3D VIEWS
DA002	B	SURVEY
DA003	E	OVERALL SITE PLAN
DA004	E	SITE PLAN
DA010	E	SITE SIGNAGE PLAN
DA011	D	SIGNAGE DETAILS
DA012	B	SIGNAGE DETAILS
DA013	B	SIGNAGE DETAILS
DA101	E	PROPOSED FLOOR PLAN
DA201	E	SOUTH & WEST BUILDING ELEVATIONS
DA202	E	EAST & NORTH BUILDING ELEVATIONS
DA205	B	FINISHES SCHEDULE



McDONALDS CHISHOLM
REVISED DA ISSUE - MAY 2025

General Notes

The information contained in this document is copyright and may not be used or reproduced for any other project or purpose. Do not scale drawings. The drawings show design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacture. These are computer generated drawings. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.

maitland

city council

Approved Plans

NO. DA/2024/1115

DEVELOPMENT APPLICATION

15/07/2025

Client  McDonald's Australia Limited ABN. 43 008 496 928 ☎02 9875 6666 Project Manager  NATIONAL DEVELOPMENT GROUP	Architect ABN 34 001 435 430 Richmond+Ross CONSULTING ENGINEERS AND PROJECT LEADERS 38 Willoughby Road Crows Nest NSW 2065 TEL: (02) 9490 9600 FAX: (02) 9438 1224 Consultants	Project McDONALDS CHISHOLM Lot 11 DP 1280255 Location CHISHOLM PLAZA 4 HERITAGE DRIVE CHISHOLM NSW 2322 COVER PAGE Project Number 240406 Drawing Number DA000 Issue E
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Revisions	General Notes	Drawing Notes
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C E D A	REVISED DA ISSUE 16.05.2025 DA ISSUE 20.01.2025 12.02.2024	DA DS DA DS DS
Issue Description	Date	Chk Int

General Notes

Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification dimensions are not clear. All dimensions are in millimeters. A discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.

Drawing Notes



SETTLERS BLVD

TIGERHAWK DRIVE

FUTURE PAD SITE
(BY OTHERS)

McDONALD'S

PROPOSED DEVELOPMENT
BY OTHERS

PROPOSED DEVELOPMENT
BY OTHERS

Revisions

E	REVISED DA ISSUE	01/05/2025	SH	DS
D	REVISED DA ISSUE	18/03/2025	SH	DS
B	DA ISSUE	20/01/2025	SH	EA
A	DA ISSUE	12/12/2024	SH	DS
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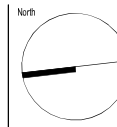
General Notes

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Drawing Notes

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city council

Approved Plans
NO. DA/2024/1115
DEVELOPMENT APPLICATION
15/07/2025



Client

McDonald's Australia Limited
ABN: 45 008 496 928
Suite 2.02, 1 Chandos Street, St Leonards
NSW 2055
TEL: (02) 9449 9600

Project Manager

Architect

Richmond+Ross
CONSULTING ENGINEERS AND PROJECT MANAGERS
Suite 2.02, 1 Chandos Street, St Leonards
NSW 2055
TEL: (02) 9449 9600

Project

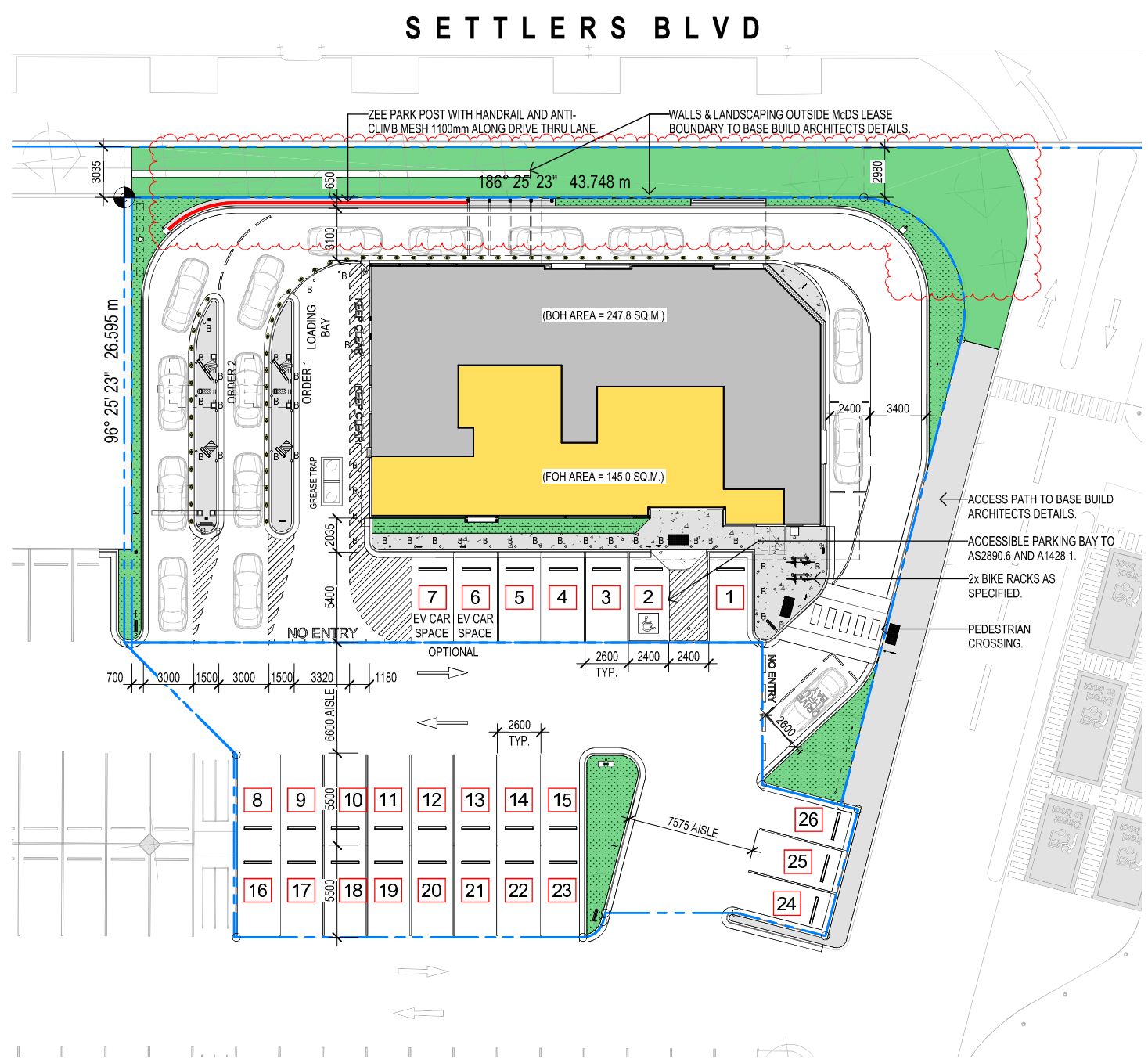
McDONALDS CHISHOLM
Lot 11 DP 1280255
Location
CHISHOLM PLAZA
4 HERITAGE DRIVE
CHISHOLM NSW 2322

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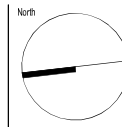
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Drawing		
OVERALL SITE PLAN		
Project Number	Drawing Number	Issue
240406	DA003	E

NOTES

- LEASE AREA = 1323 SQ.M.
PARKING LEASE AREA = 602 SQ.M.
BUILDING FOOTPRINT = 410.2 SQ.M.
BUILDING AREA = 145 SQ.M.
(BOH AREA = 247.8 SQ.M.)
- DINING ROOM SEATING CAPACITY = 52 SEATS.
- PARKING: 26 CAR SPACES.
9 X 2600 X 5400 CAR SPACES (1, 3-7, 24-26).
16 X 2600 X 5500 CAR SPACES (8-23).
1 X 2400 X 5400 ACCESSIBLE SPACE WITH
2400 X 5400 SHARED SPACE.
13 CARS IN DRIVE THRU QUEUE.
1 X 2600 X 5400 3RD WINDOW WAITING BAY.
1 X 2600 X 5400 WAITING BAY.
1 X LOADING BAY.



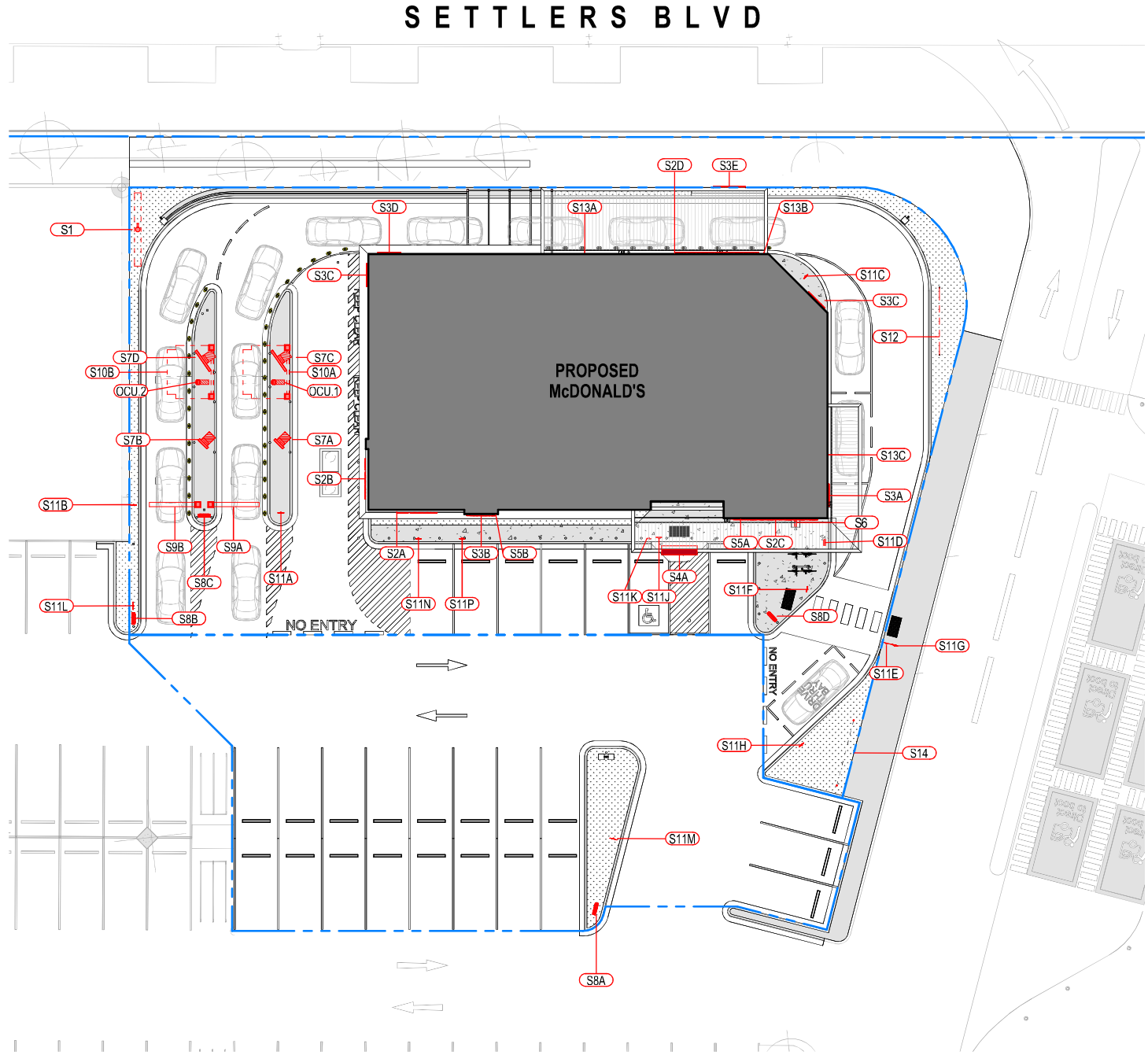
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A	DA ISSUE	20/01/2025 SH BA
A	DA ISSUE	12/12/2024 SH DS
Issue Description	Date	CHK INT



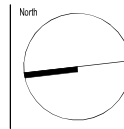
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Drawing		
SITE PLAN		
Project Number	Drawing Number	Issue
240406	DA004	E

NOTE: REFER TO DRAWINGS A011, A012 & A013 FOR RELEVANT SIGNAGE DETAILS.

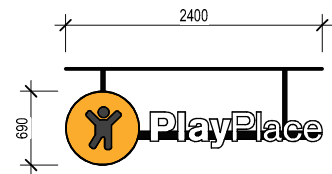
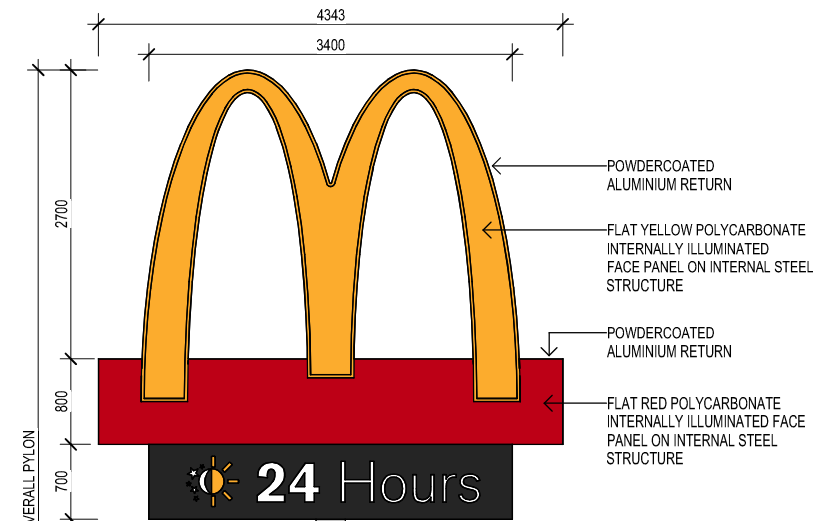
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S2A	Play Place Wall Sign (Arm Bracket)	Yes
S2B	Play Place Wall Sign (Arm Bracket)	Yes
S2C	"McDonald's" Wordmark Wall Sign	Yes
S2D	"McDonald's" Wordmark Wall Sign	Yes
S3A	"Golden Arches" Wall Sign	Yes
S3B	"Golden Arches" Wall Sign	Yes
S3C	"Golden Arches" Wall Sign	Yes
S3D	"Golden Arches" Wall Sign	Yes
S3E	"Golden Arches" Wall Sign	Yes
S4A	"McDonald's" Wordmark Wall Sign	Yes
S5A	"McCafe" Button Sign Ø1200mm	Yes
S5B	"McCafe" Wall Sign	Yes
S6	McDelivery Wall Sign (Double Sided)	Yes
S7A	OUTDOOR MENUBOARD SINGLE 55"	Yes
S7B	OUTDOOR MENUBOARD SINGLE 55"	Yes
S7C	OUTDOOR MENUBOARD DOUBLE 55"	Yes
S7D	OUTDOOR MENUBOARD DOUBLE 55"	Yes
S8A	Directional Sign - Entry	Yes
S8A Side 2	Directional Sign - Blank	Yes
S8B	Directional Sign - Drive Thru - Right Arrow	
S8B Side 2	Directional Sign - Drive Thru - Left Arrow	Yes
S8C	Directional Sign - Drive Thru - Double Arrow - Any Lane Any Time	Yes
S8C Side 2	Directional Sign - Blank	Yes
S8D	Directional Sign - Thank You	Yes
S8D Side 2	Directional Sign - No Entry	Yes
S9A	Height Clearance Gantry Sign	Yes
S9B	Height Clearance Gantry Sign	Yes
S10A	Canopy - Drive Thru - Wording "1. Order here"	Yes
S10B	Canopy - Drive Thru - Wording "1. Order here"	Yes
S11A	No Pedestrian Access Sign	No
S11B	No Pedestrian Access Sign	No
S11C	No Pedestrian Access Sign	No
S11D	Bicycle Parking Sign	No
S11E	Pedestrian Crossing Sign	No
S11F	Pedestrian Caution - Look Both Ways Sign	No
S11G	Pedestrian Caution - Look Both Ways Sign	No
S11H	Drive Thru Wait Bay #1 Sign	No
S11J	Pedestrian Caution - Look Both Ways Sign	No
S11K	Accessible Parking Sign	No
S11L	Speed Sign (10km/hr)	No
S11M	Speed Sign (10km/hr)	No
S11N	Electric Vehicle Charging Bay #1 Sign (Optional)	No
S11P	Electric Vehicle Charging Bay #2 Sign (Optional)	No
S12	Flag Poles	No
S13A	Drive-Thru Information Sign "2. PAY HERE"	No
S13B	Drive-Thru Information Sign "3. PICK UP HERE"	No
S13C	Drive-Thru Information Sign "4. PICK UP HERE"	No
S14	Banner Signage	No



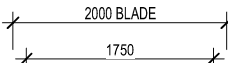
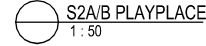
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C DA ISSUE	20/01/2025 91 EA	
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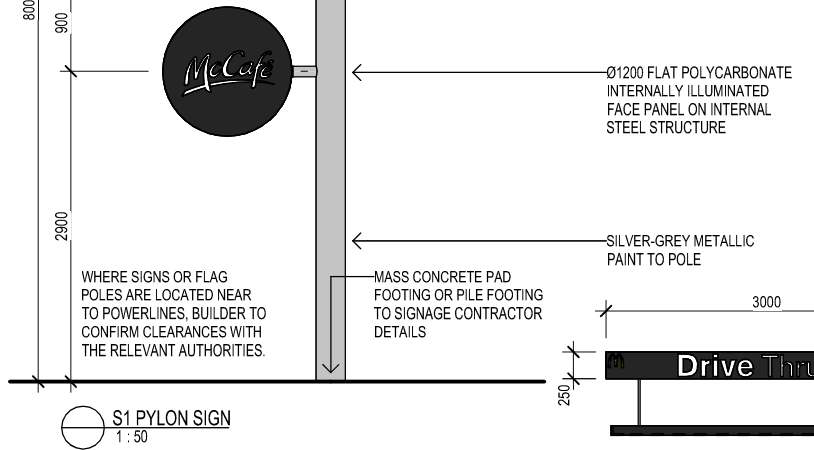
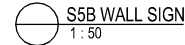
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SITE SIGNAGE PLAN		
Project Number	Drawing Number	Issue
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YELLOW LOGO WITH INDIVIDUAL POLYCARBONATE LETTERING FIXED TO FRAME. INTERNALLY ILLUMINATED. WHITE LETTERS.

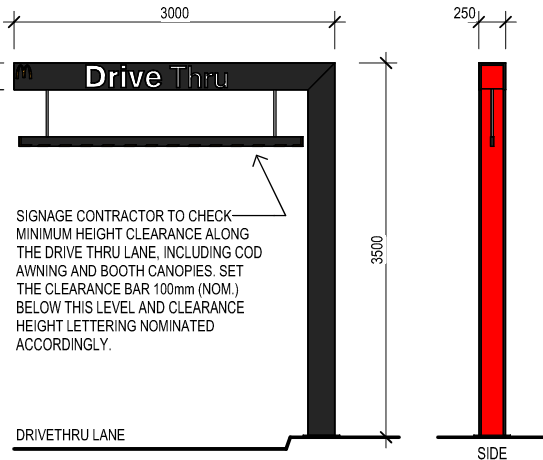


INDIVIDUAL HALO ILLUMINATED REVERSE PAN FABRICATED ALUMINIUM CHANNEL LETTERS. BRUSHED ALUMINIUM FINISH.

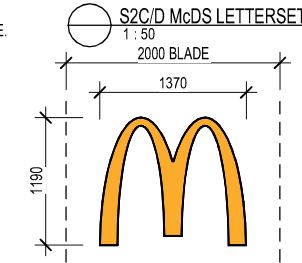


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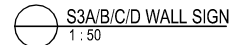
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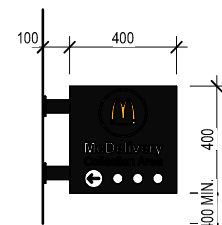
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YELLOW FLAT FACE POLYCARBONATE LOGO. INTERNALLY ILLUMINATED. YELLOW LOGO



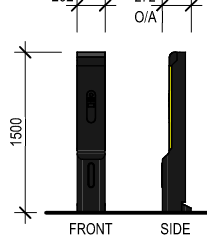
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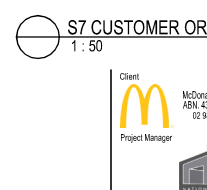
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S7A/B



S7C/D



S7E/F



S7A/B

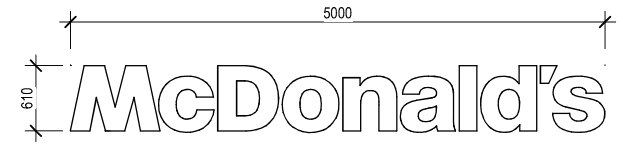
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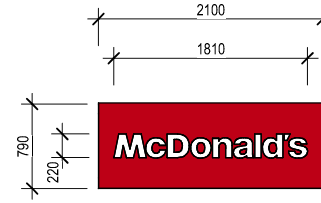
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S7C/D

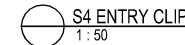
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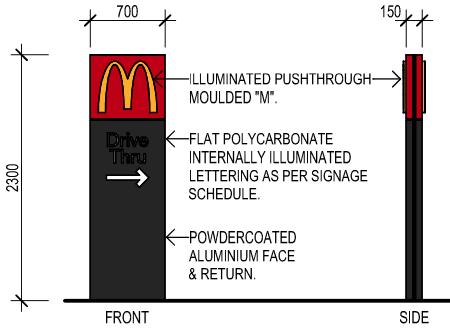
INDIVIDUAL FULLY MOULDED ACRYLIC PRISMATIC LETTERING. INTERNALLY ILLUMINATED. WHITE LETTERS.



LED ILLUMINATED WORDMARK ONLY. RED CLIP TO BE CONSTRUCTED BY THE BUILDER.



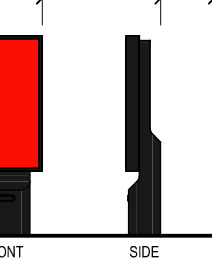
S4 ENTRY CLIP



FRONT



FRONT



FRONT



FRONT

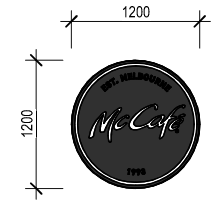
SIDE

SIDE

SIDE

SIDE

SIDE



FABRICATED METAL BUTTON SIGN. OPAL FACES WITH BLACK VINYL GRAPHICS. LED ILLUMINATION.



S5A WALL SIGN - BUTTON

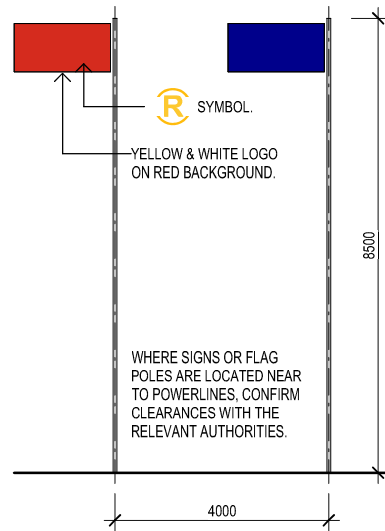
ALTERNATIVE WORDING (TITLE CASE):
- ENTRY
- NO ENTRY
- WELCOME
- THANK YOU
- DRIVETHRU / ANY LANE
- ANY TIME

maitland
city council
Approved Plans
NO. DA/2024/1115
DEVELOPMENT APPLICATION
15/07/2025

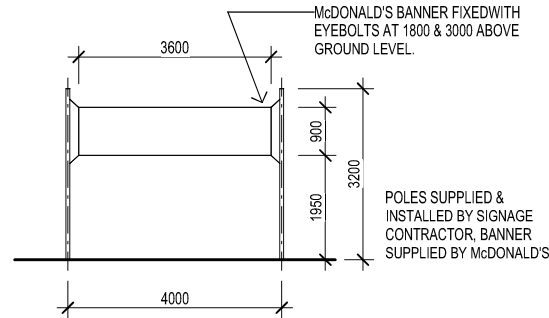
Revisions	General Notes	Drawing Notes
D B A Issue Description	10/03/2025 20/01/2025 12/12/2024 Date Chk Int	Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contract manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.

Client McDonald's Australia Limited ABN 43 008 498 928 02 9875 6666 Project Manager	Architect Richmond+Ross CONSULTING ENGINEERS AND PROJECT MANAGERS Suite 2.02, 1 Chandos Street, St Leonards NSW 2055 TEL: (02) 9480 9600 FAX: (02) 9481 7274	Project McDONALDS CHISHOLM Lot 11 DP 1280255 Location CHISHOLM PLAZA 4 HERITAGE DRIVE CHISHOLM NSW 2322
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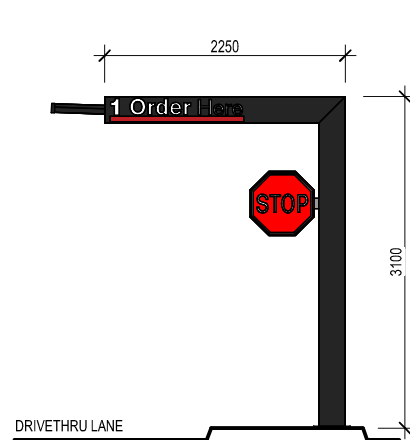
DA ISSUE	NOT TO BE USED DURING CONSTRUCTION
Scale As indicated @ A3	Series SPECIAL (SASL/CH/MD/224-01)
Drawing SIGNAGE DETAILS	Project Number 240406
Project Number 240406	Drawing Number DA011
Drawing Number DA011	Issue D



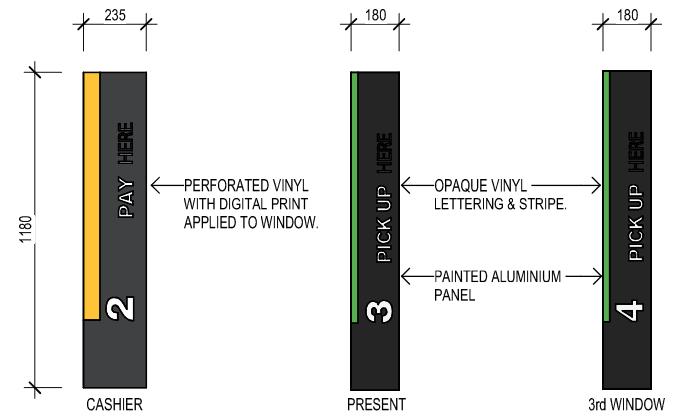
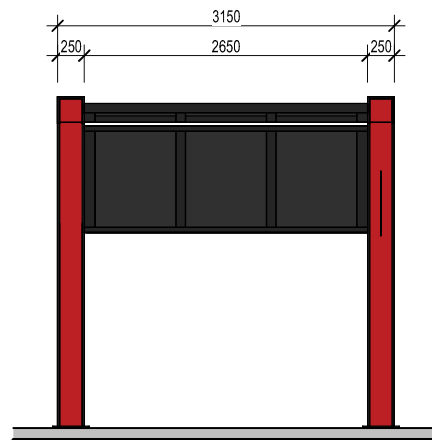
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1 : 100



S14 BANNER POLES
1 : 100



S10 ORDER CANOPY
1 : 50



S13 INFORMATION BOARDS
1 : 20

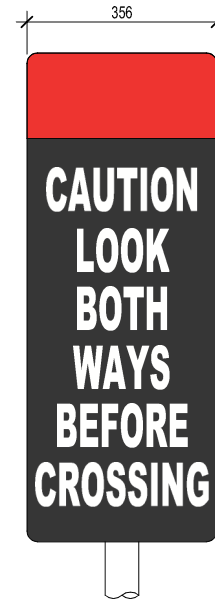
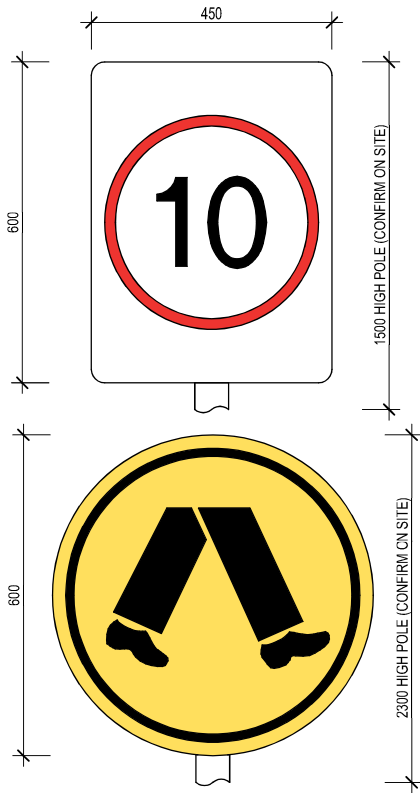


Revisions	General Notes	Drawing Notes
B DA ISSUE A DA ISSUE Issue Description	Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacture. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimetres. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.	



Project
McDONALDS CHISHOLM
Lot 11 DP 1280255
Location
CHISHOLM PLAZA
4 HERITAGE DRIVE
CHISHOLM NSW 2322

DA ISSUE NOT TO BE USED DURING CONSTRUCTION		
Scale	Series	
As indicated @ A3	SPECIAL	(SPECIAL) (SPECIAL) (SPECIAL)
SIGNAGE DETAILS		
Project Number	Drawing Number	Issue
240406	DA012	B



MCDONALD'S Signage Colours

	McDonalds Gold PMS 1235 C 122 U CMYK 0.29.96.0 RGB 255.188.13 HEX FFBC0D		McDonalds Red PMS 2035 C CMYK 0.100.95.0 RGB 219.0.7 HEX DB0007
--	---	--	---

	Green PMS 350 C CMYK 80.43.86.42 RGB 43.82.51 HEX 2B5233
--	--

	Charcoal PMS Cool Gray 11C CMYK 0.0.0.80 RGB 45.45.45 HEX 2D2D2D
--	--

	Light Grey PMS Cool Gray 1C CMYK 0.0.0.8 RGB 247.247.247 HEX B69A81
--	---

	Black PMS Black 6 C CMYK 82.71.59.75 RGB 16.24.32 HEX 101820
--	--

	Reflex Blue PMS Reflex Blue CMYK 100.96.13.9 RGB 0.22.137 HEX 001689
--	--

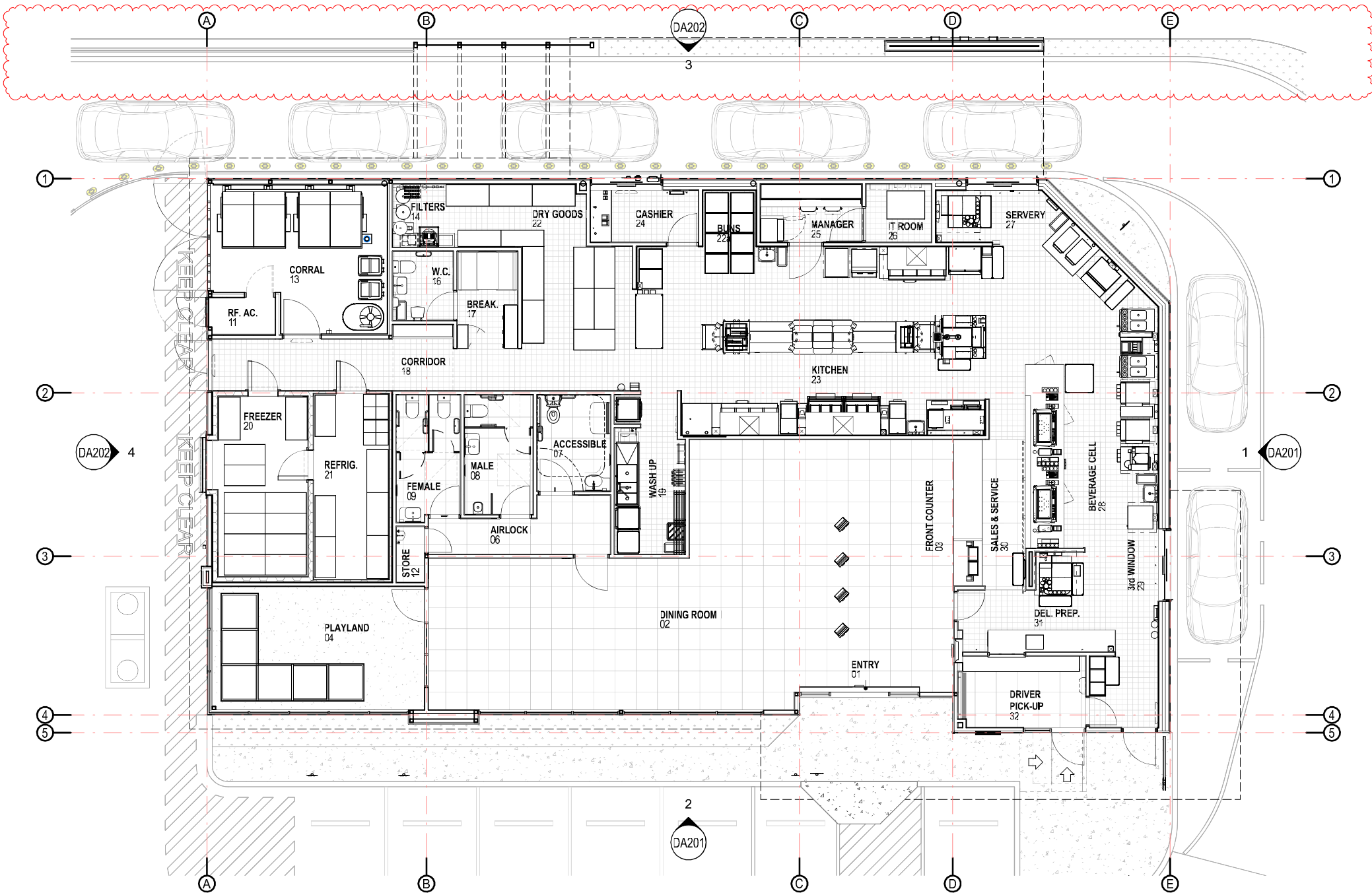
DEPENDING ON LOCATION WITHIN SITE, S11 SIGNAGE SHOULD BE SET A MINIMUM OF 2m ABOVE TOP OF KERB TO PREVENT OBSTRUCTION TO OCCASIONAL PEDESTRIANS, OR TO REDUCE INTERFERENCE FROM PARKED VEHICLES. IF THIS DOESNT APPLY, SIGNAGE HEIGHTS SHALL BE SET AS NOTED.

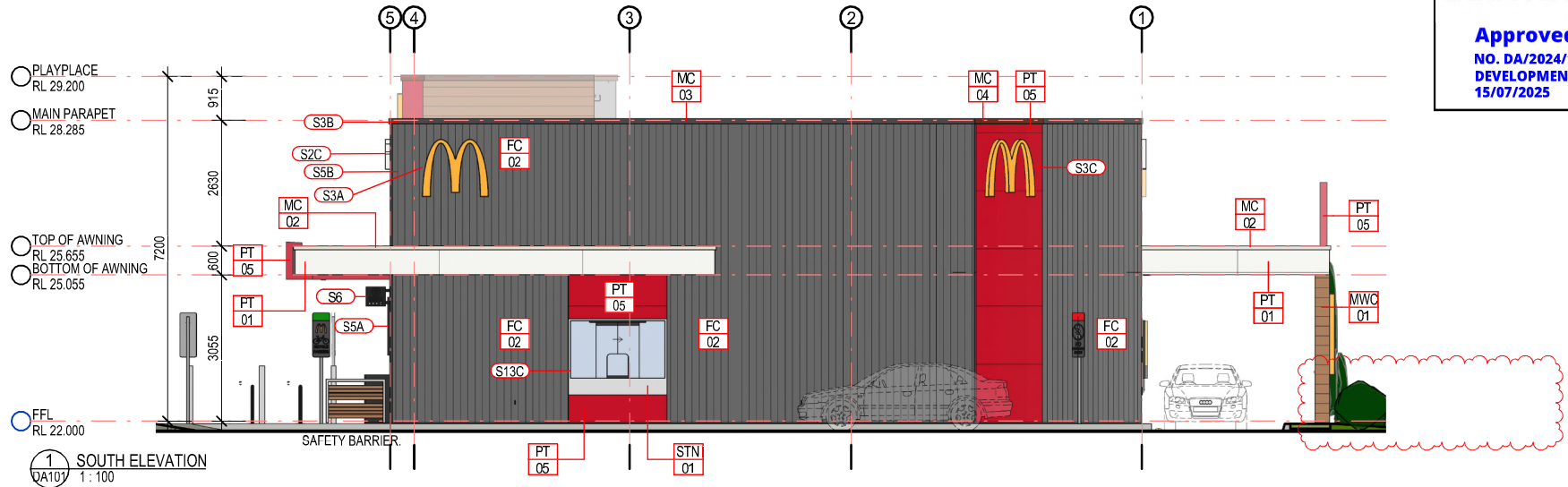
Revisions	General Notes	Drawing Notes
B DA ISSUE A DA ISSUE Issue Description	20.01.2025 SH BA 12.12.2024 SH DS Date Chk Int	Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contract manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimetres. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.



Client
McDonalds CHISHOLM
Lot 11 DP 1280255
Location
CHISHOLM PLAZA
4 HERITAGE DRIVE
CHISHOLM NSW 2322

Scale	Series
1:10 @ A3	SPECIAL
Drawing	Signage Details
Project Number	Drawing Number
240406	DA013
Issue	B





Revisions	General Notes	Drawing Notes
E REVISED DA ISSUE D REVISED DA ISSUE B DA ISSUE A DA ISSUE Issue Description	11/05/2025 SH1 CS 18/03/2025 CS 20/01/2025 SH1 BA 12/12/2024 SH1 CS Date Chk Int	Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contract manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.



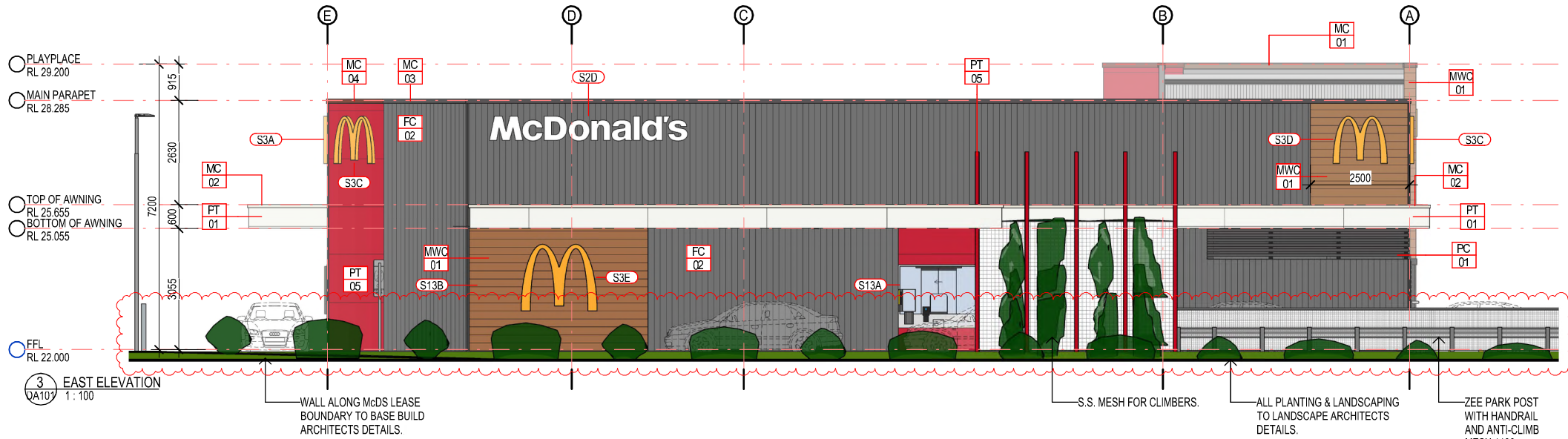
Architect
Richmond+Ross
CONSULTING ENGINEERS AND PROJECT MANAGERS
Suite 2.02, 1 Chandos Street, St Leonards NSW 2055
TEL: (02) 9449 9600 FAX: (02) 94381274

Client
McDonald's Australia Limited
ABN 43 008 496 928
02 9875 6666
Suite 2.02, 1 Chandos Street, St Leonards NSW 2055
TEL: (02) 9449 9600 FAX: (02) 94381274

Project
MCDONALDS CHISHOLM
Lot 11 DP 1280255
Location
CHISHOLM PLAZA
4 HERITAGE DRIVE
CHISHOLM NSW 2322

DA ISSUE
NOT TO BE USED DURING CONSTRUCTION

Scale	Series		
1:100 @ A3	SPECIAL (SPECIAL USE ONLY)		
Drawing	Project Number	Drawing Number	Issue
SOUTH & WEST BUILDING ELEVATIONS	240406	DA201	E



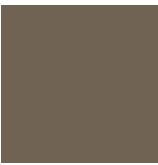
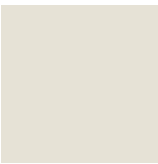
Revisions	General Notes	Drawing Notes
E REVISED DA ISSUE D REVISED DA ISSUE B DA ISSUE A DA ISSUE Issue Description	Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work. 01.05.2025 SH CS 18.03.2025 SH CS 20.01.2025 SH BA 12.12.2024 SH CS Date Chk Int	



Project
McDONALDS CHISHOLM
Lot 11 DP 1280255
Location
CHISHOLM PLAZA
4 HERITAGE DRIVE
CHISHOLM NSW 2322

DA ISSUE
NOT TO BE USED DURING CONSTRUCTION

Scale 1:100 @ A3	Series SPECIAL (BASED ON MDA/2024-03)
Drawing EAST & NORTH BUILDING ELEVATIONS	
Project Number 240406	Drawing Number DA202
Issue E	

EXTERNAL FINISHES SCHEDULE						
CODE	No.	AREA	DESCRIPTION	MANUFACTURER	COLOUR	IMAGE
FC	02	MAIN BUILDING WALLS	FIBRE CEMENT WEATHERTEX VERTICAL WEATHERBOARDS	WEATHERTEX	WAYWARD GREY PG1G8	
MC	01	PARAPET CAPPING - ADJACENT TIMBER LOOK CLADDING (PLAYLAND)	PREFINISHED METAL CAPPING / FLASHING	COLORBOND	JASPER	
MC	02	PARAPET CAPPING - AWNINGS	PREFINISHED METAL CAPPING / FLASHING	COLORBOND	SURFMIST	
MC	03	PARAPET CAPPING - MAIN BUILDING WALLS	PREFINISHED METAL CAPPING / FLASHING	COLORBOND	WOODLAND GREY	
MC	04	PARAPET CAPPING	PREFINISHED METAL CAPPING / FLASHING	COLORBOND	MANOR RED	
MWC	01	PLAYPLACE & PARAPETS	TIMBER LOOK ALUMINIUM CLADDING SYSTEM USING KNOTWOOD 200mm CLADDING PROFILE	KNOTWOOD	LIGHT OAK	
MWC	02	ROOF WELL (INTERNAL PARAPET LINING)	CUSTOM ORB CORRUGATED STEEL RIVET FIXED VERTICALLY TO FRAMES	LYSAGHT	ZINCALUME	

Revisions		General Notes		Drawing Notes	
B	DA ISSUE	20.01.2025	BA		
A	DA ISSUE	12.12.2024	BA		
Issue Description		Date	Chk	Int	

Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimetres. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.

maitland

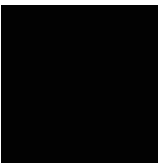
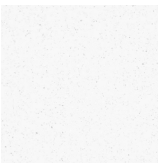
city council

Approved Plans

NO. DA/2024/1115

DEVELOPMENT APPLICATION

15/07/2025

EXTERNAL FINISHES SCHEDULE						
CODE	No.	AREA	DESCRIPTION	MANUFACTURER	COLOUR	IMAGE
PC	01	CORRAL BATTENS & ROOF ACCESS, ELEC. ROOM DOORS	POWDERCOAT FINISH	DULUX DURATEC ZEUS	LUNAR ECLIPSE SATIN (BLACK)	
PC	02	ALUMINIUM WINDOWS & DOOR FRAMES. REFER NOTE 1.	POWDERCOAT FINISH	DULUX DURATEC ZEUS	LUNAR ECLIPSE SATIN (BLACK)	
PT	01	FASCIAS (RIBBON)	PAINT FINISH. REFER SPECIFICATION FOR DETAILS ON PAINT TYPE & APPLICATION	DULUX	VIVID WHITE PW1H9	
PT	02	MAIN BUILDING WALLS	PAINT FINISH. REFER SPECIFICATION FOR DETAILS ON PAINT TYPE & APPLICATION	DULUX	WAYWARD GREY PG1G8	
PT	05	BLADE WALL & DRIVETHRU WINDOWS	PAINT FINISH. REFER SPECIFICATION FOR DETAILS ON PAINT TYPE & APPLICATION	DULUX	DULUX HOT LIPS PB1F2	
STN	01	DRIVETHRU WINDOW SILL & SURROUND	RECONSTITUTED STONE. REFER TO DECOR DOCUMENTS	REFER DECOR	REFER DECOR	

Client

McDonald's Australia Limited

ABN: 45 008 496 926

02 9875 6666

Project Manager



Architect

Richmond+Ross

CONSULTING ENGINEERS AND PROJECT MANAGERS

Suite 2.02, 1 Chandos Street, St Leonards

NSW 2055

TEL: (02) 9449 9600

150/154-014-452-420

NSW 2065

FAX: (02) 94381224

Project

McDONALDS CHISHOLM

Lot 11 DP 1280255

Location

CHISHOLM PLAZA

4 HERITAGE DRIVE

CHISHOLM NSW 2322

Scale

@ A3

SPECIAL

Drawing

FINISHES SCHEDULE

Project Number

Drawing Number

Issue#

240406

DA205

B

DA ISSUE

NOT TO BE USED DURING CONSTRUCTION

File Name: C:\Users\daniel@oneDrive - Richmond & Ross\Documents\240406_McDONALDS_CHISHOLM_NSW_SITE_DAL_CENTRAL_R2024_DanielSandow\7272.rvt

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Appendix C – Noise Monitoring Charts

Table C1 Background Noise Monitoring Summary – Location L1

Date	Measured Background Noise Level (LA90) dB ABL ¹			Measured dB LAeq(period)		
	Day	Evening	Night	Day	Evening	Night
Tuesday 01 September 2026	--	32	26	--	48	47
Wednesday 02 September 2026	40	31	24	54	47	47
Thursday 03 September 2026	42	33	25	58	47	46
Friday 04 September 2026	36	36	27	54	48	44
Saturday 05 September 2026	33	35	32	52	48	44
Sunday 06 September 2026	34	32	27	50	44	47
Monday 07 September 2026	38	33	30	53	47	46
Tuesday 08 September 2026	39	31	26	52	46	47
Wednesday 09 September 2026	39	35	30	54	47	47
Thursday 10 September 2026	--	--	--	--	--	--
Location1 – RBL / Leq Overall	38	33	27	54	47	46

Note 1: Assessment background level (ABL) – the single-figure background level representing each assessment period day, evening and night as per NPI Fact Sheet A.

Note 2: Measurement removed due to adverse weather as per NPI Fact Sheet A.

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods

Table C2 Background Noise Monitoring Summary – Location L2

Date	Measured Background Noise Level (LA90) dB ABL ¹			Measured dB LAeq(period)		
	Day	Evening	Night	Day	Evening	Night
Tuesday 01 September 2026	--	35	28	--	51	50
Wednesday 02 September 2026	46	35	26	63	52	50
Thursday 03 September 2026	47	37	27	64	52	51
Friday 04 September 2026	42	38	29	58	53	50
Saturday 05 September 2026	37	37	33	57	51	47
Sunday 06 September 2026	36	35	29	54	50	49
Monday 07 September 2026	42	35	32	60	53	50
Tuesday 08 September 2026	44	34	28	58	52	50
Wednesday 09 September 2026	45	39	29	59	55	51
Thursday 10 September 2026	--	--	--	--	--	--
Location2 – RBL / Leq Overall	43	35	29	60	52	50

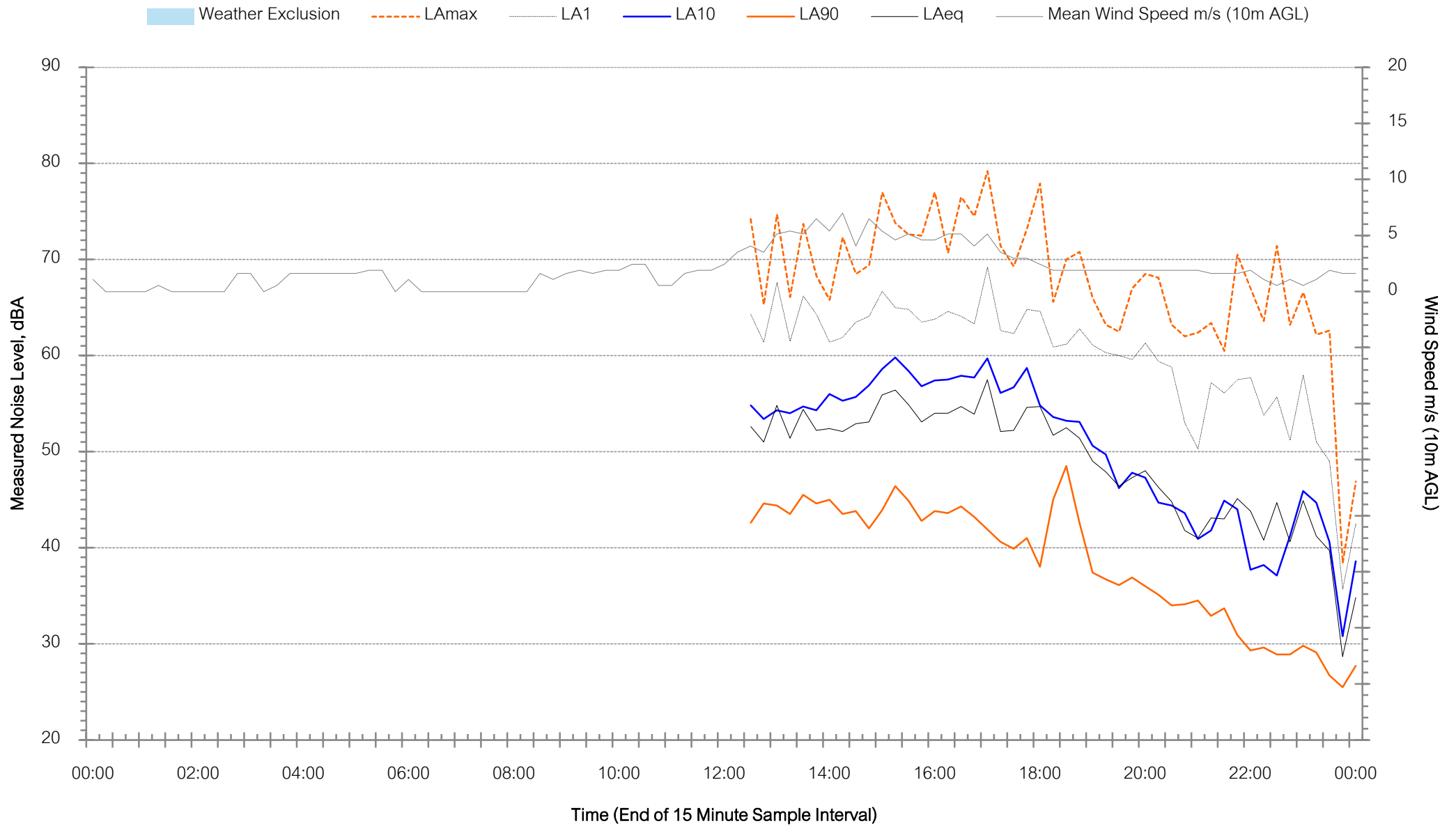
Note 1: Assessment background level (ABL) – the single-figure background level representing each assessment period day, evening and night as per NPI Fact Sheet A.

Note 2: Measurement removed due to adverse weather as per NPI Fact Sheet A.

Note: Day - the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays; Evening - the period from 6pm to 10pm; Night - the remaining periods

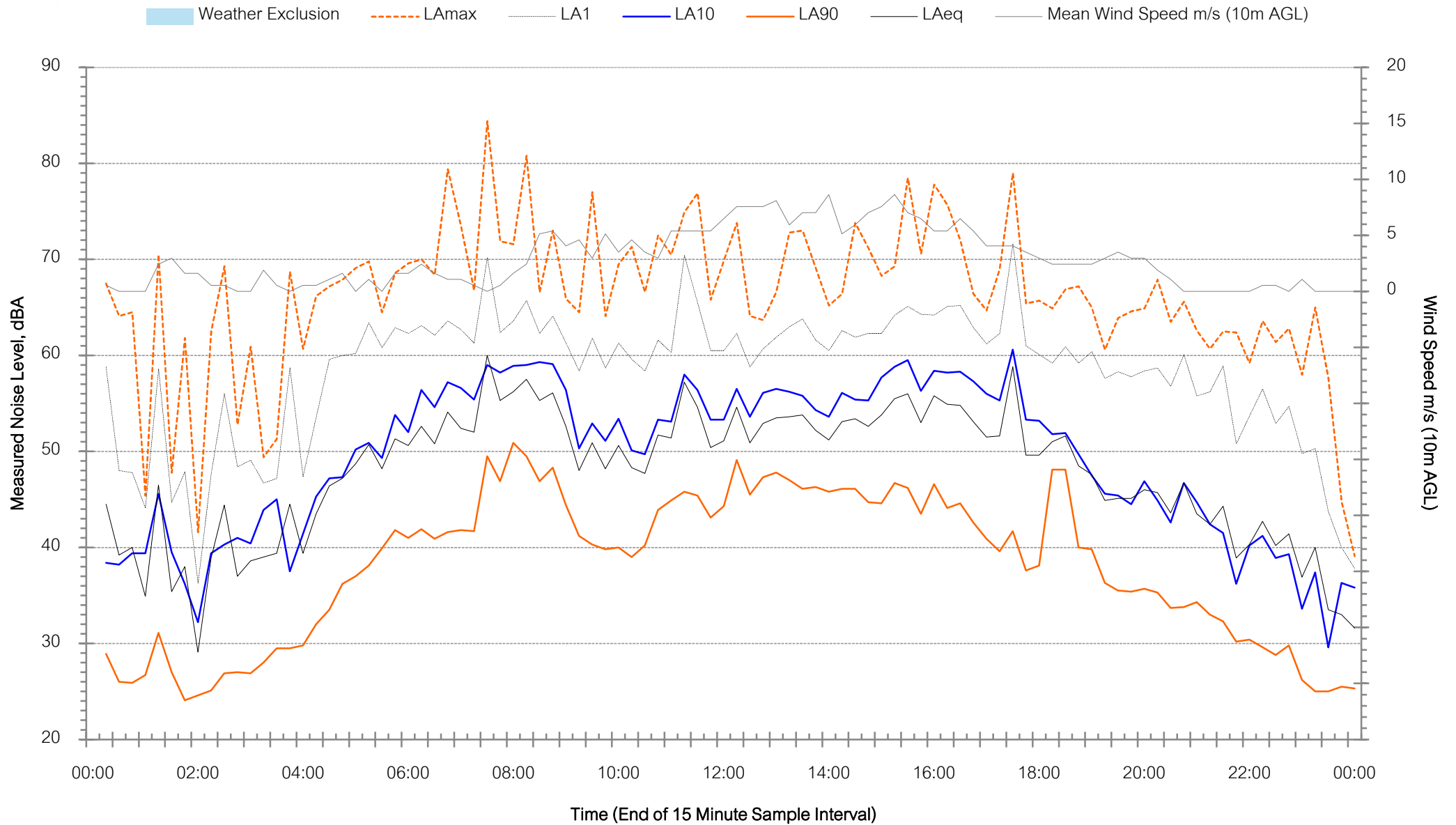
Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Tuesday 1 September 2026



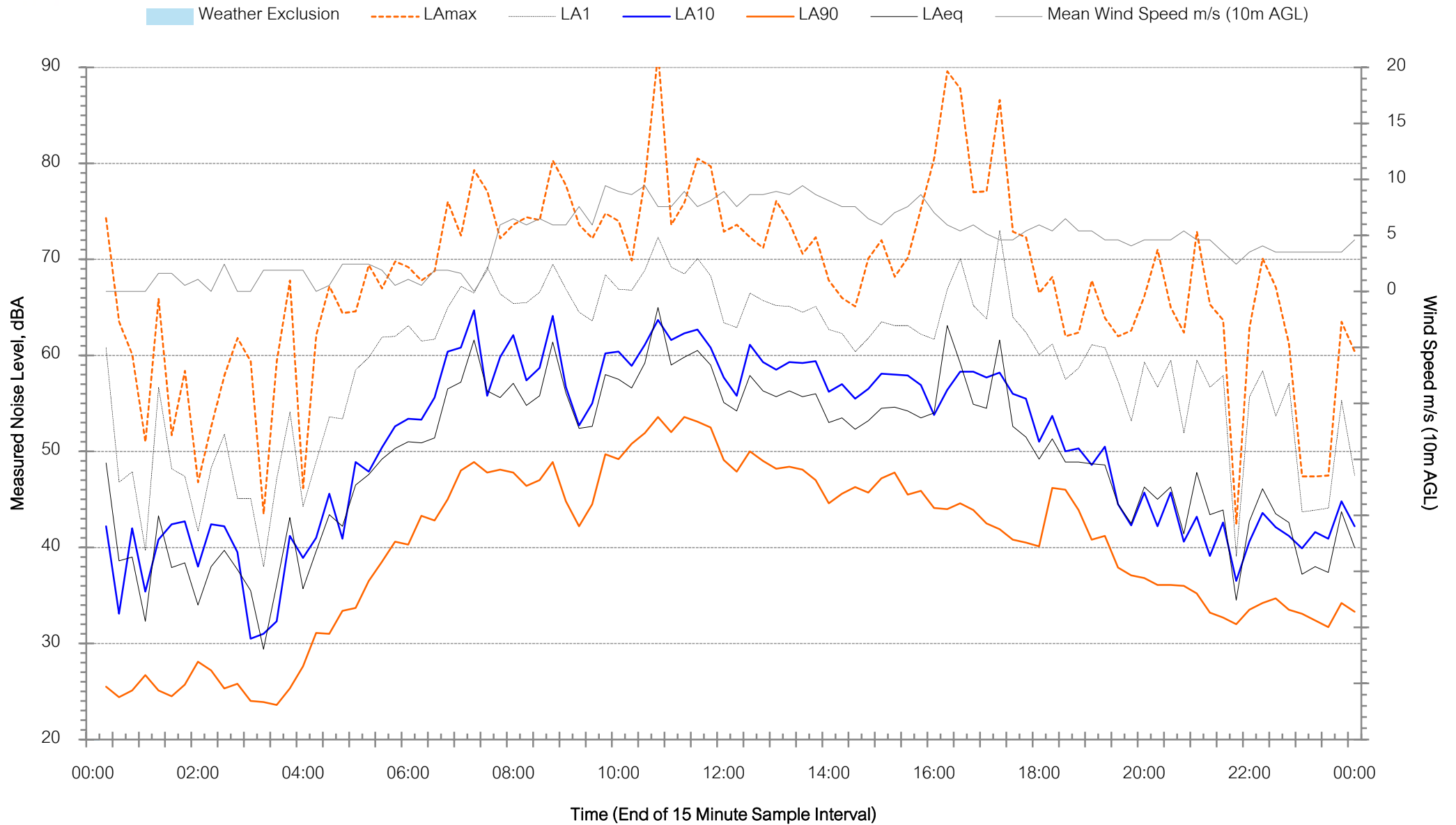
Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Wednesday 2 September 2026



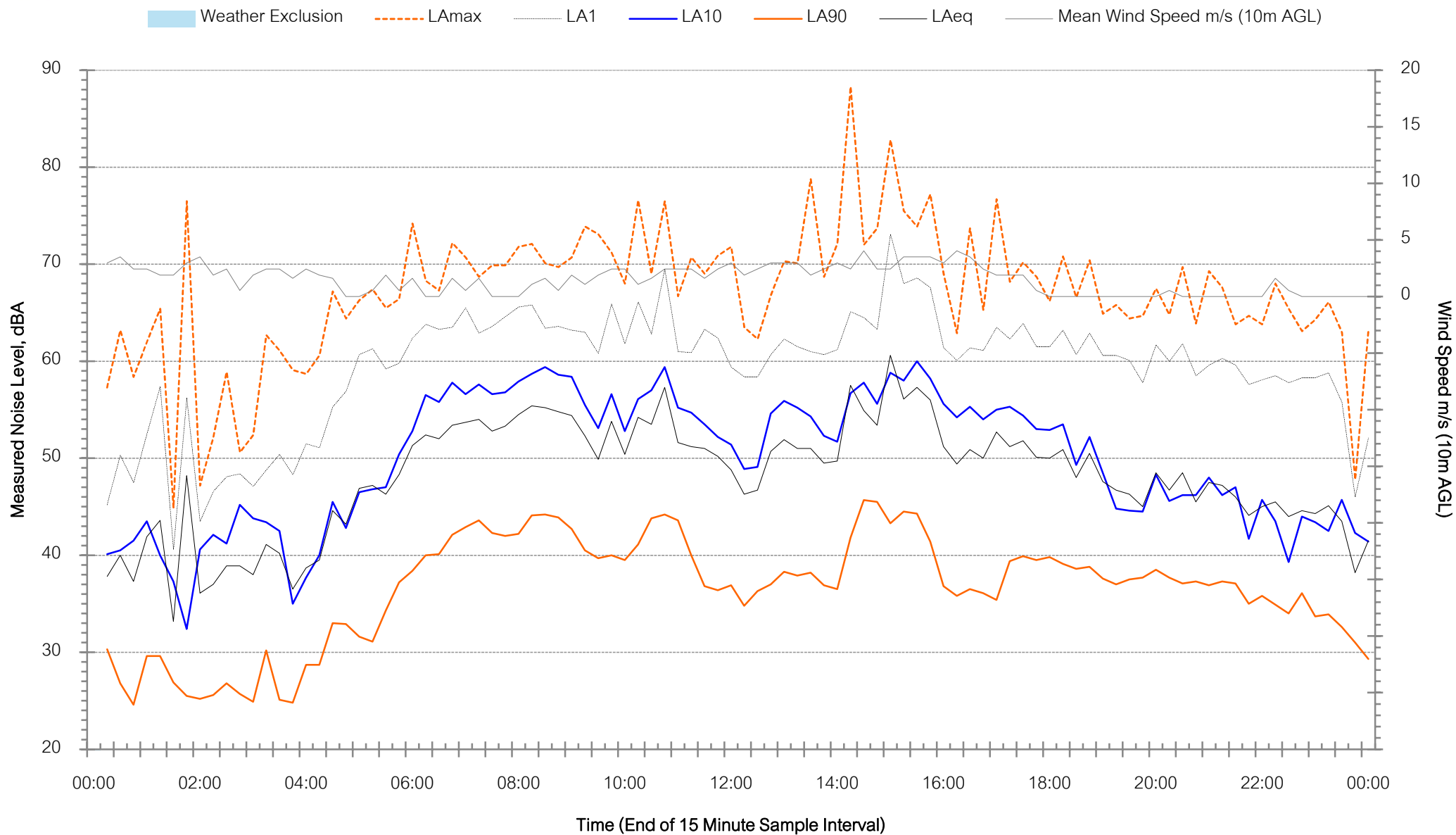
Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Thursday 3 September 2026



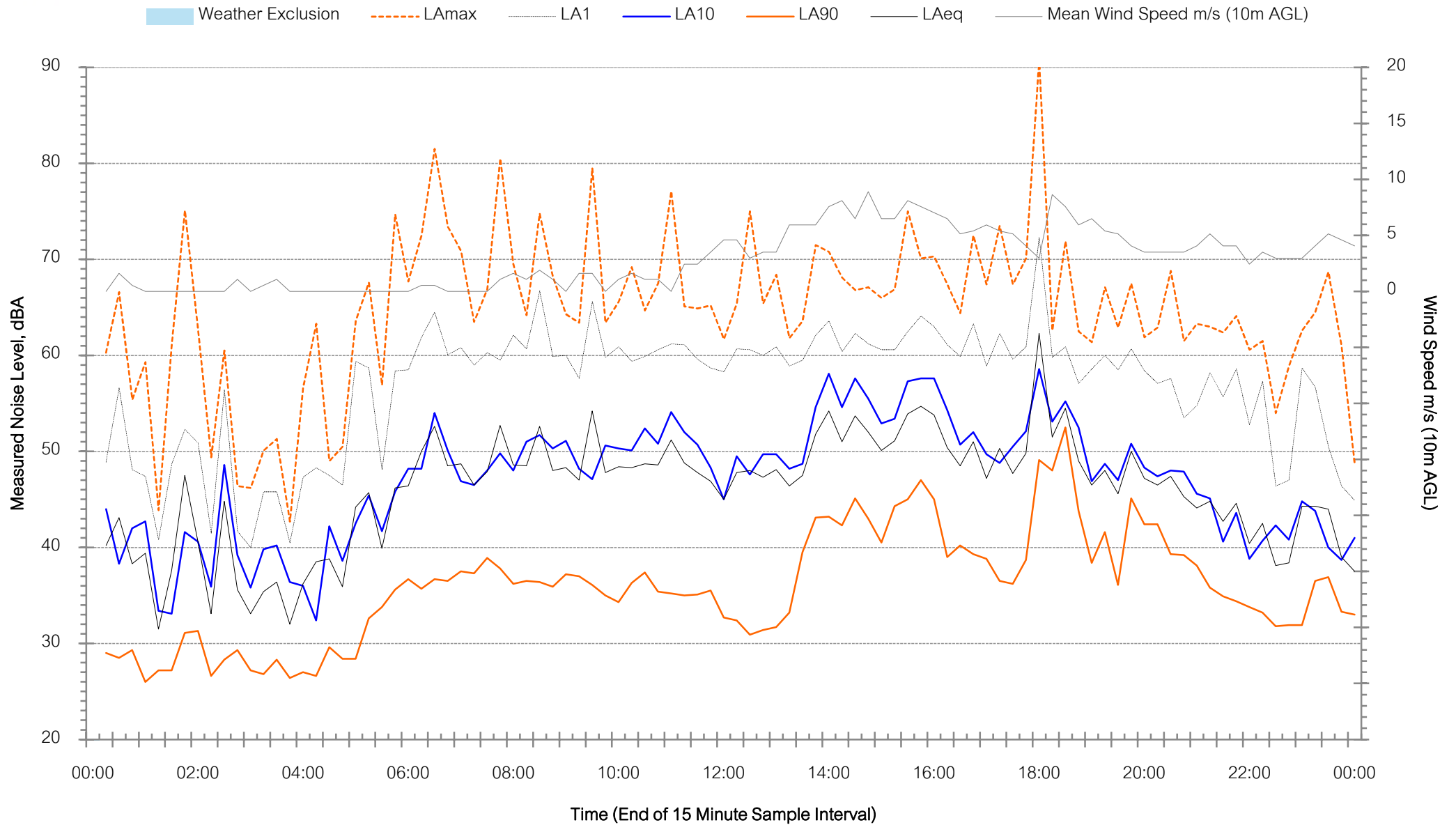
Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Friday 4 September 2026



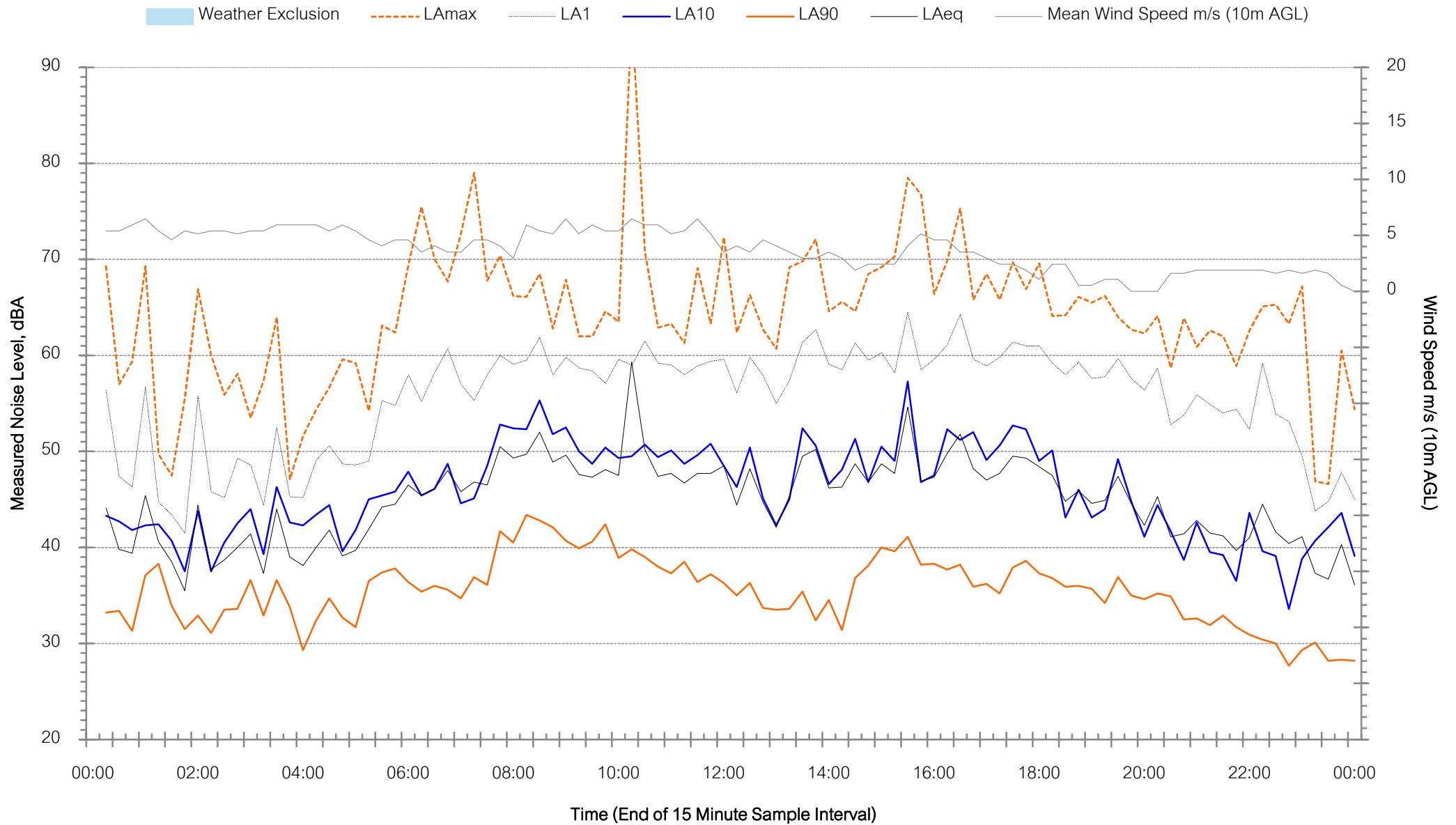
Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Saturday 5 September 2026



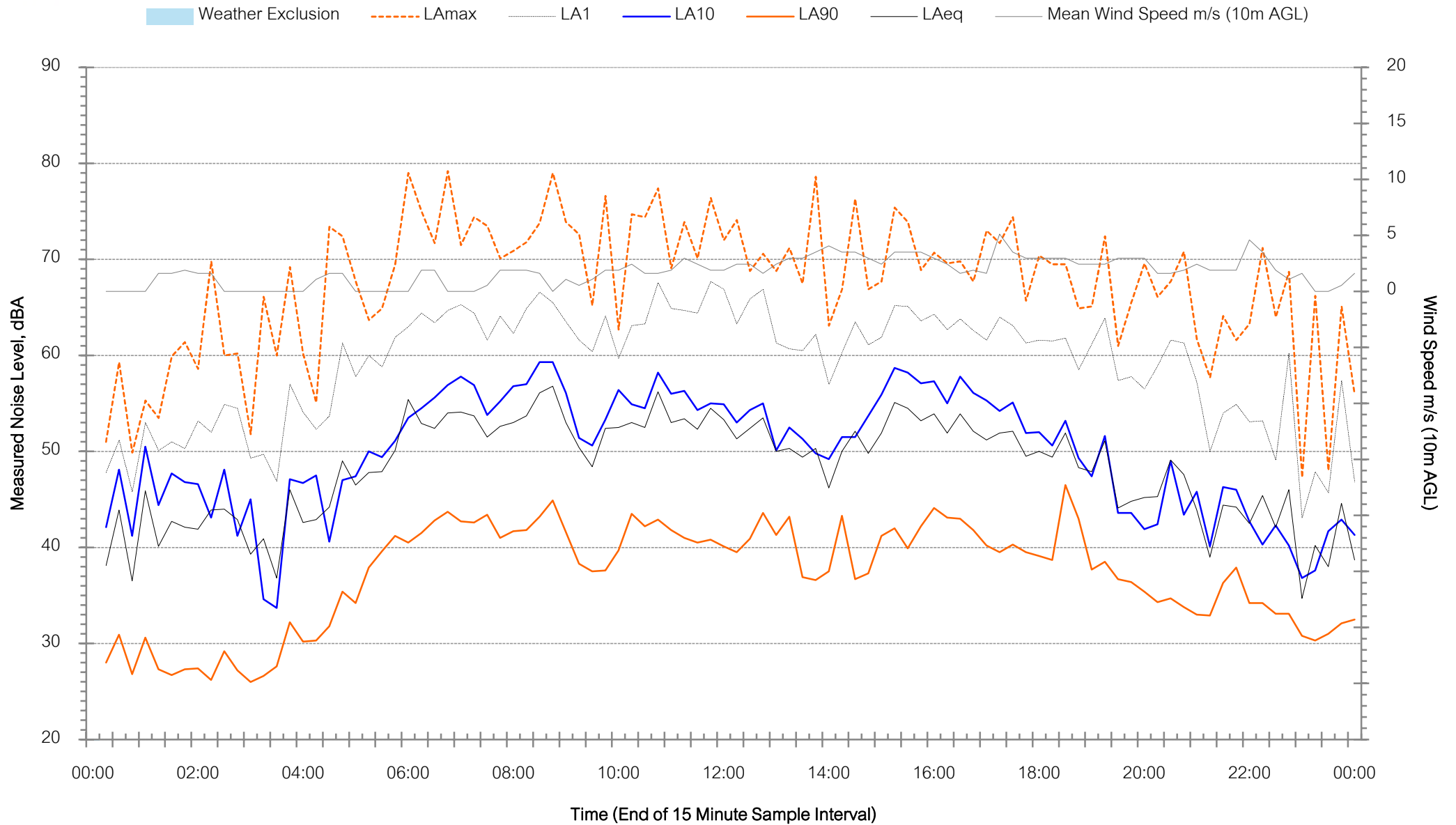
Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Sunday 6 September 2026



Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Monday 7 September 2026



Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Tuesday 8 September 2026



Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Wednesday 9 September 2026



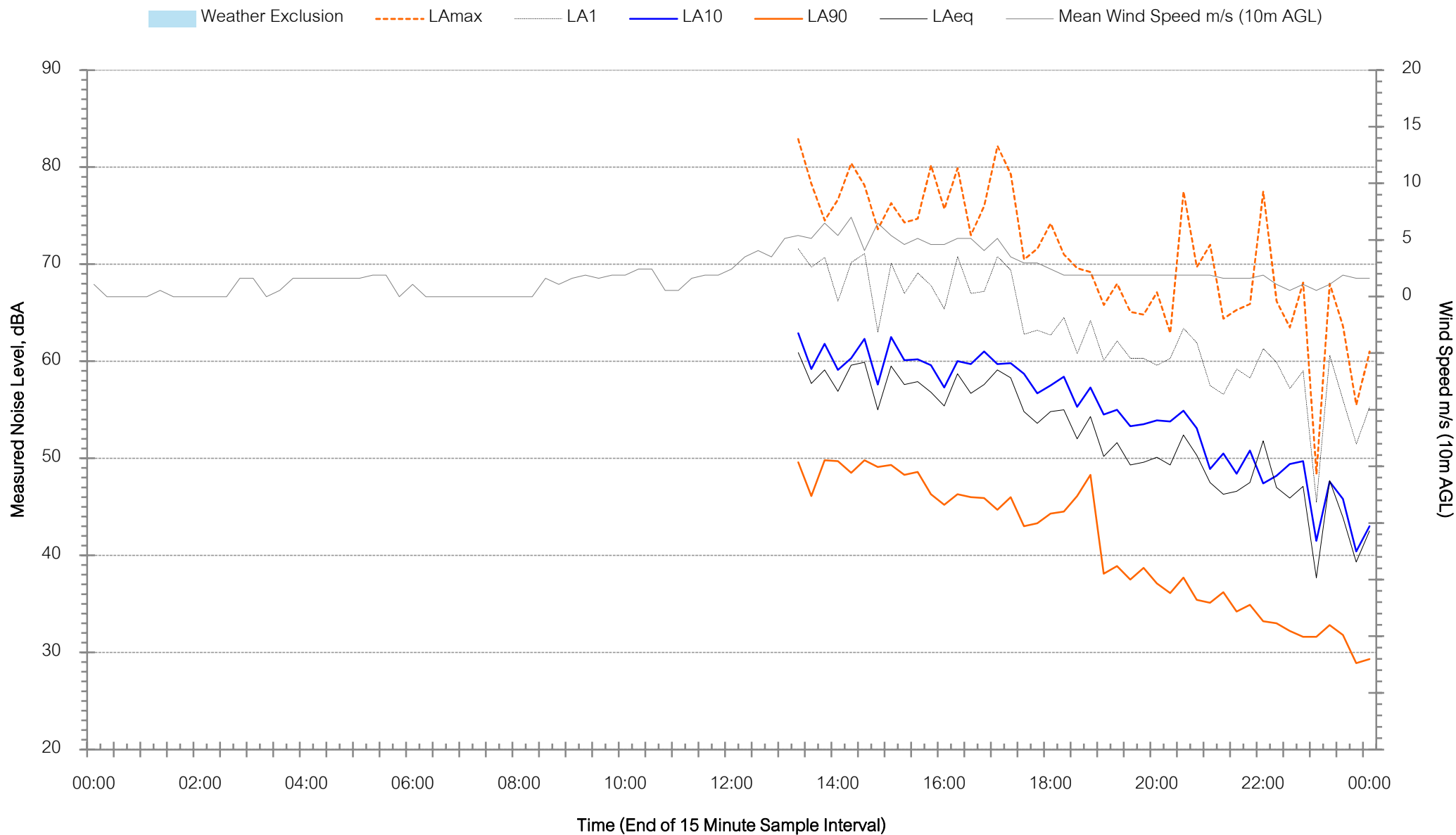
Background Noise Levels

L1 - Heritage Drive, Chisholm, NSW - Thursday 10 September 2026



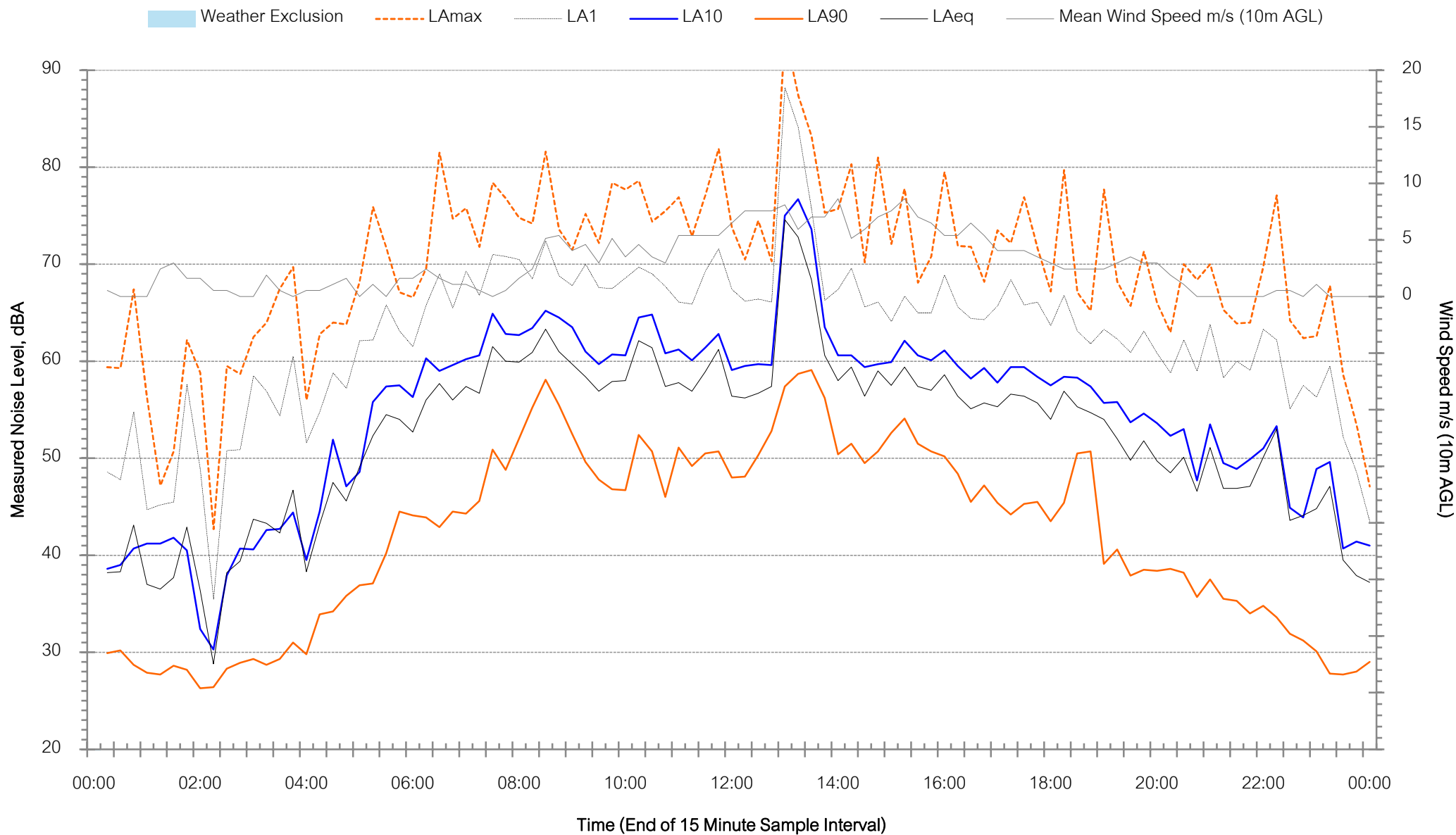
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Tuesday 1 September 2026



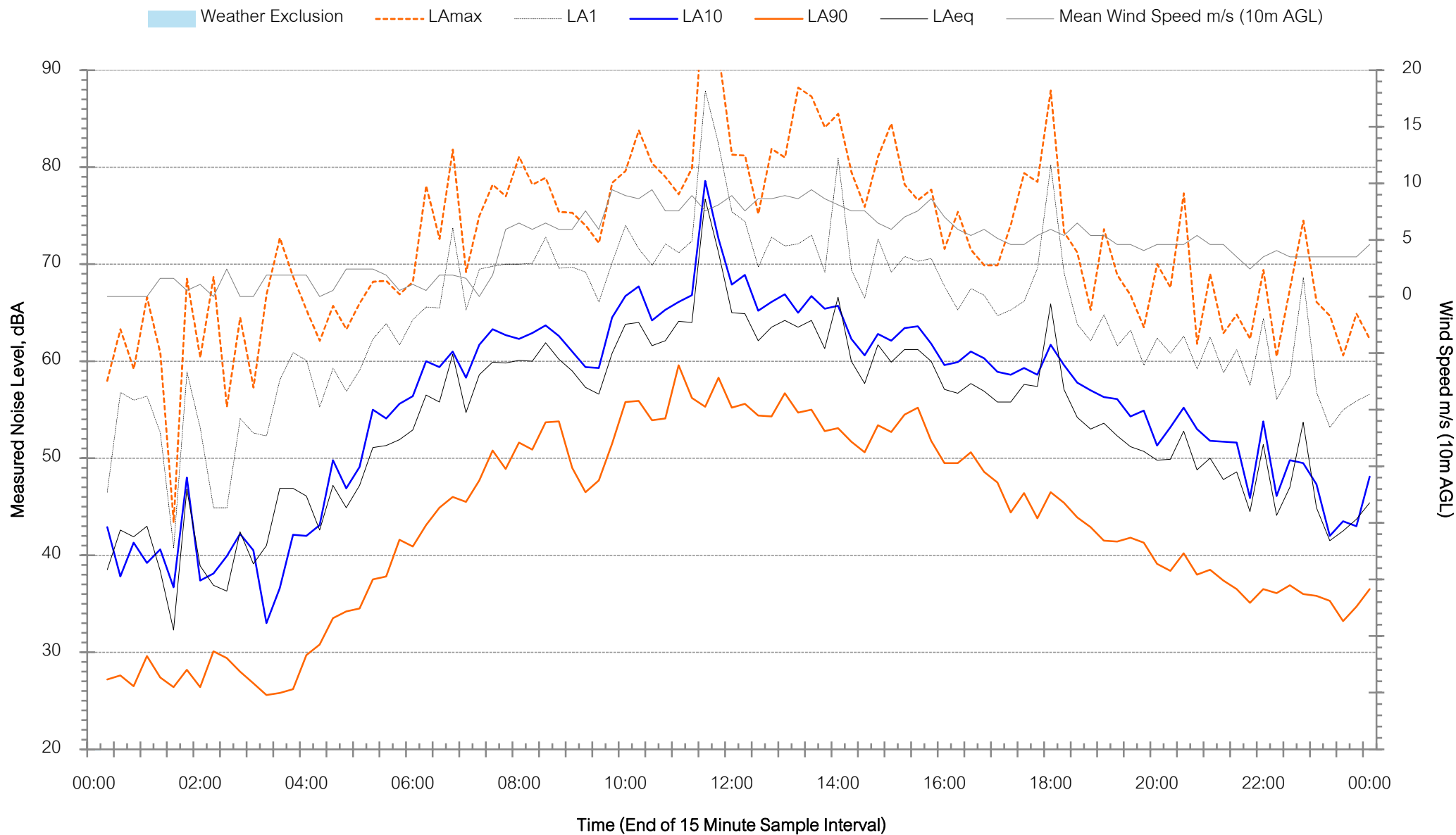
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Wednesday 2 September 2026



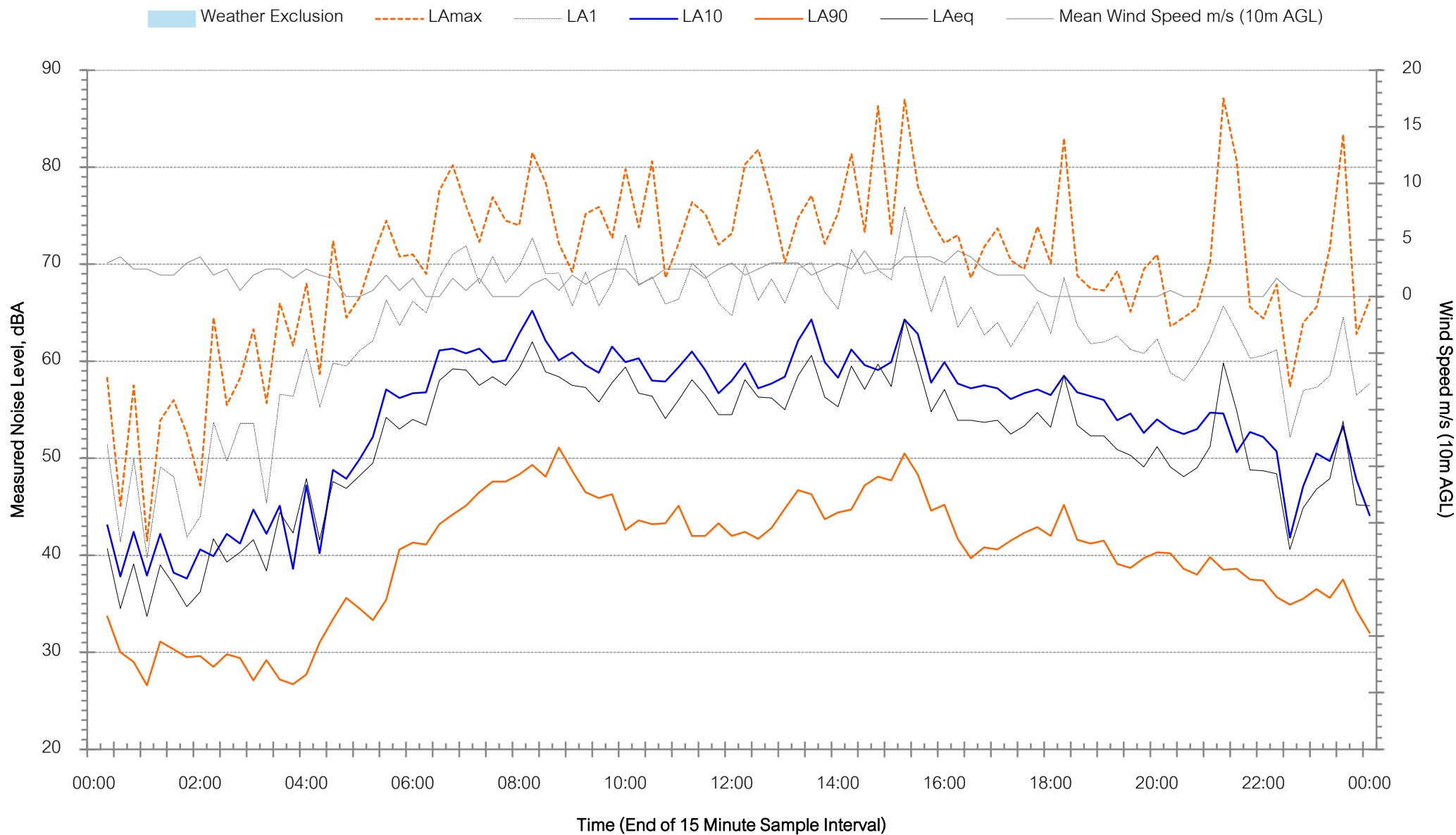
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Thursday 3 September 2026



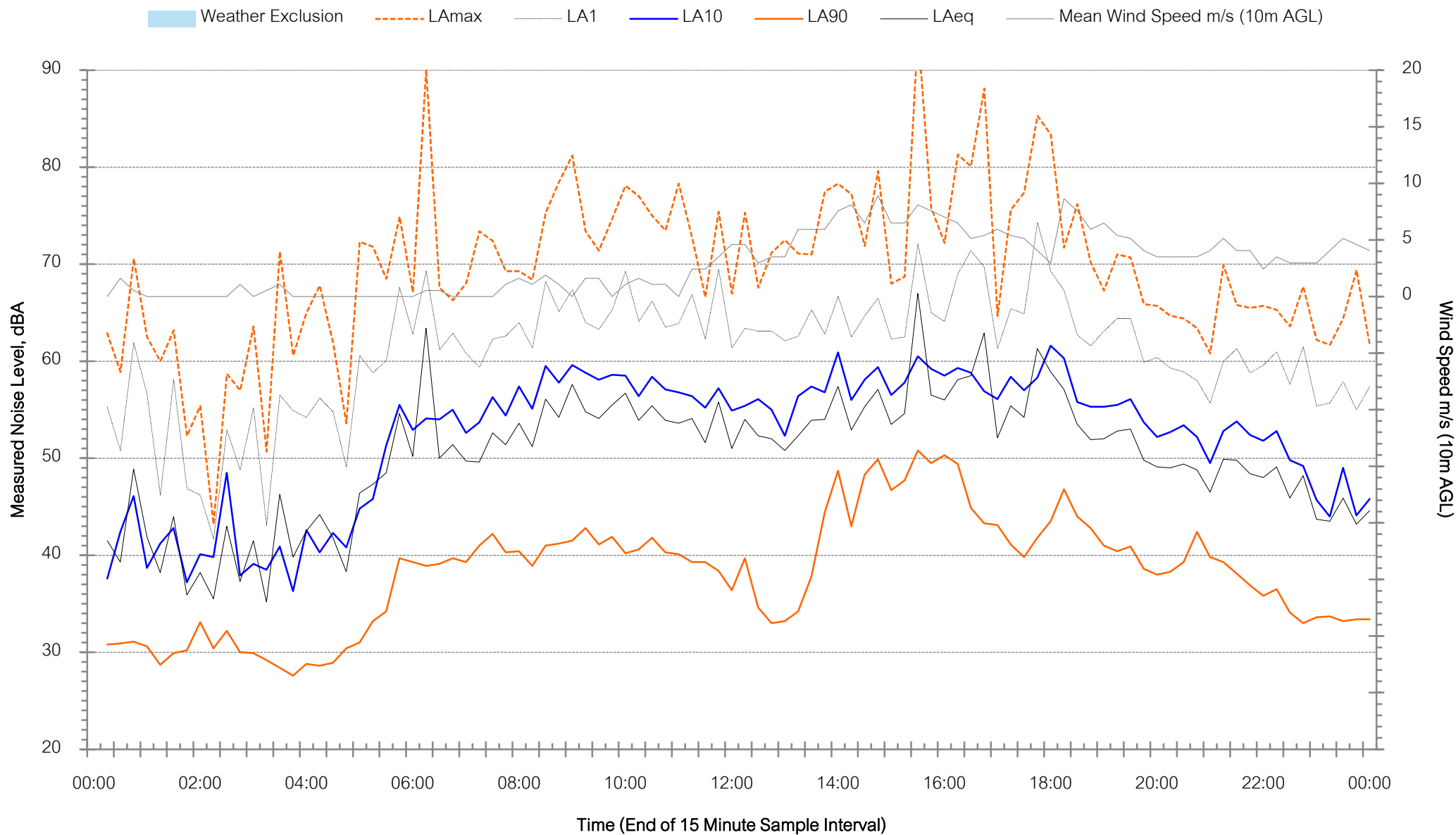
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Friday 4 September 2026



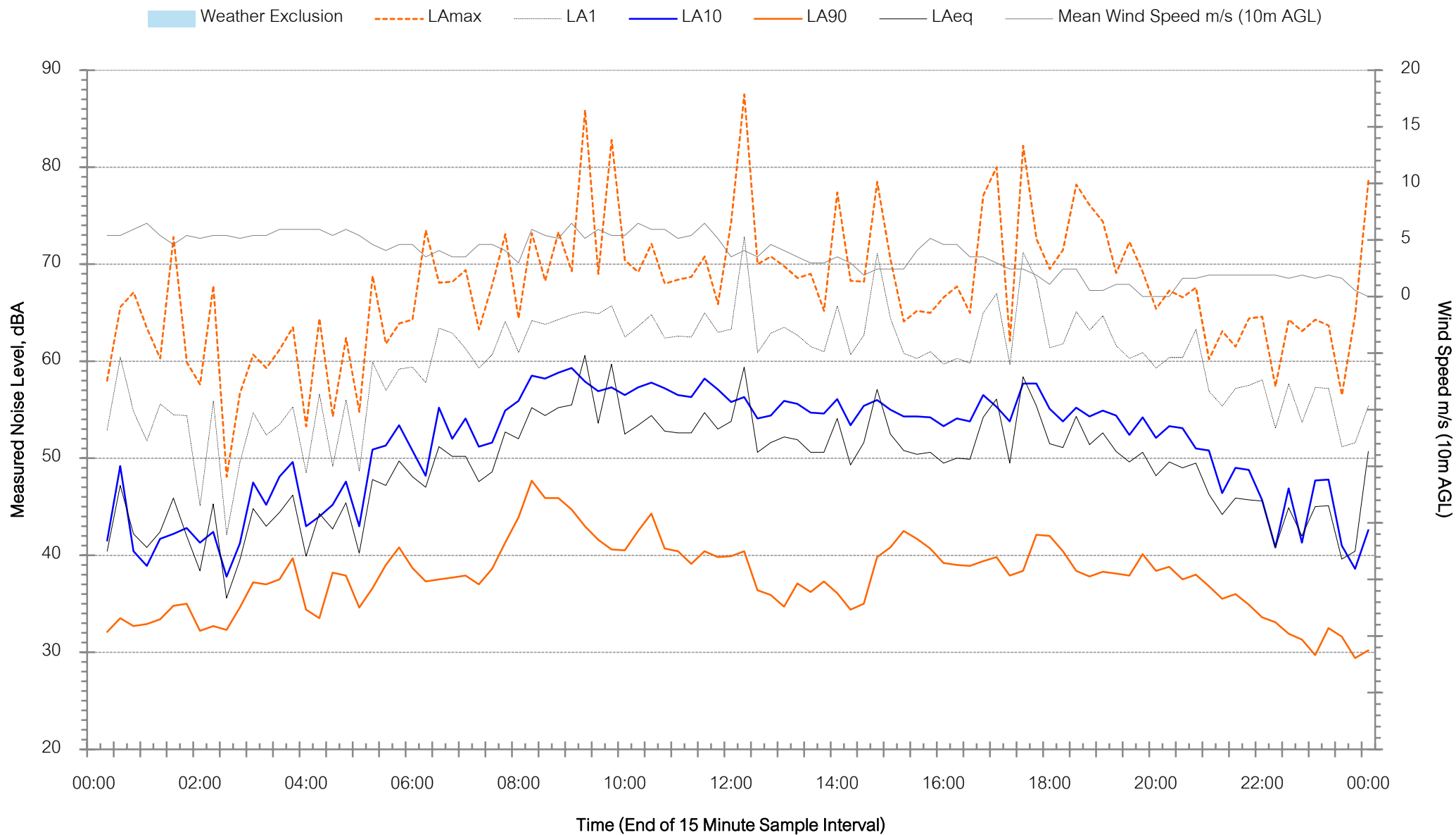
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Saturday 5 September 2026



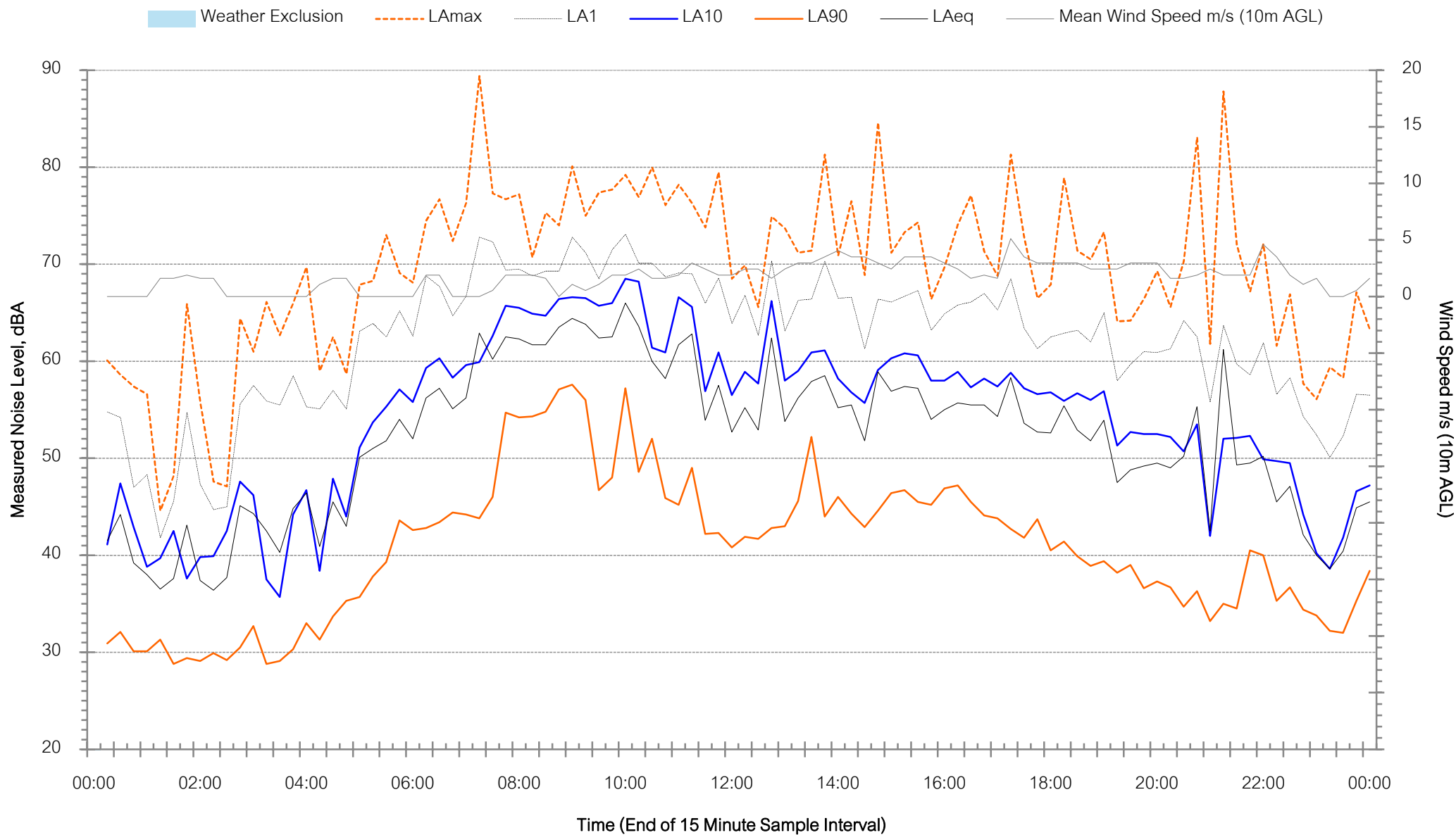
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Sunday 6 September 2026



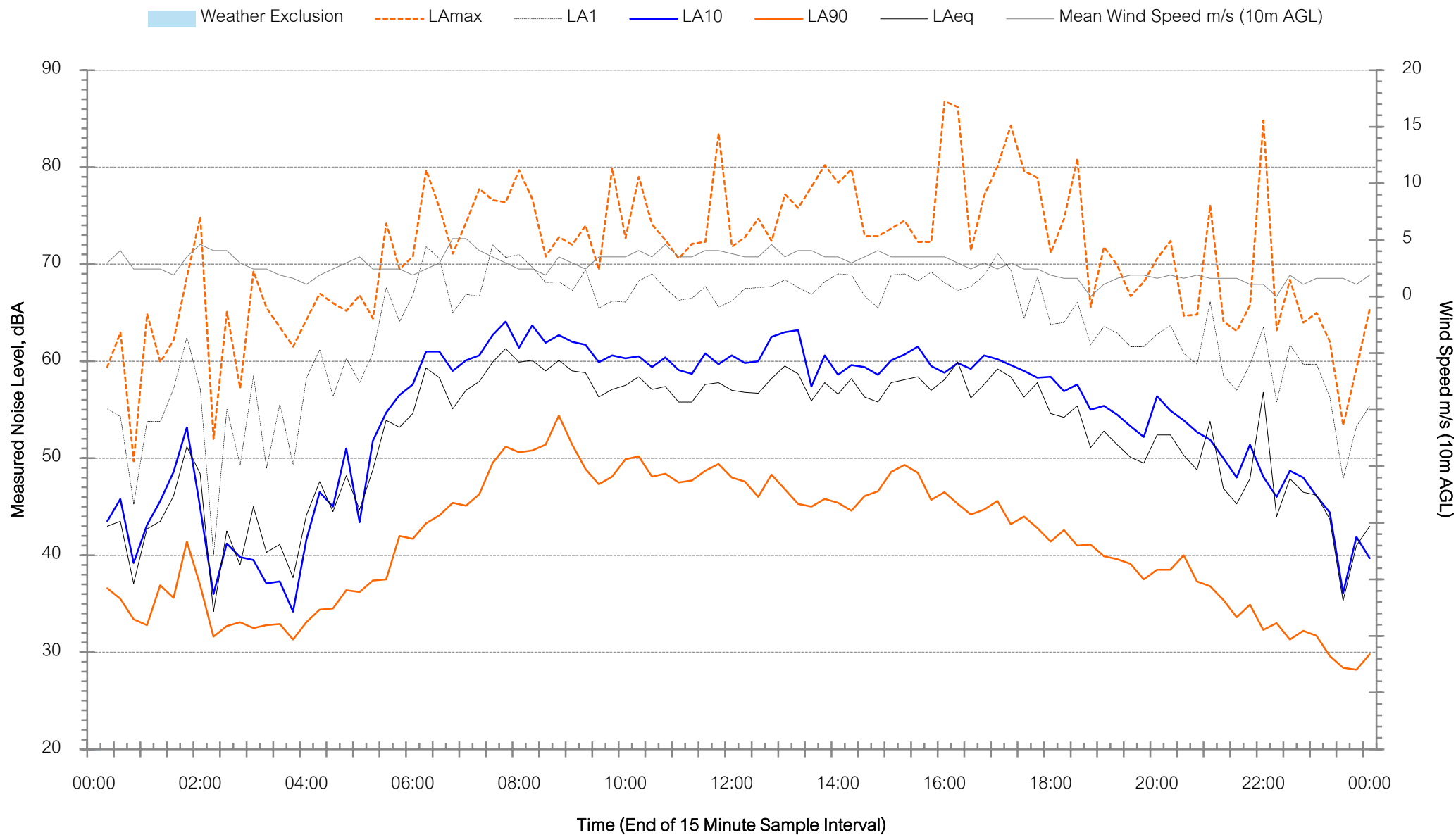
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Monday 7 September 2026



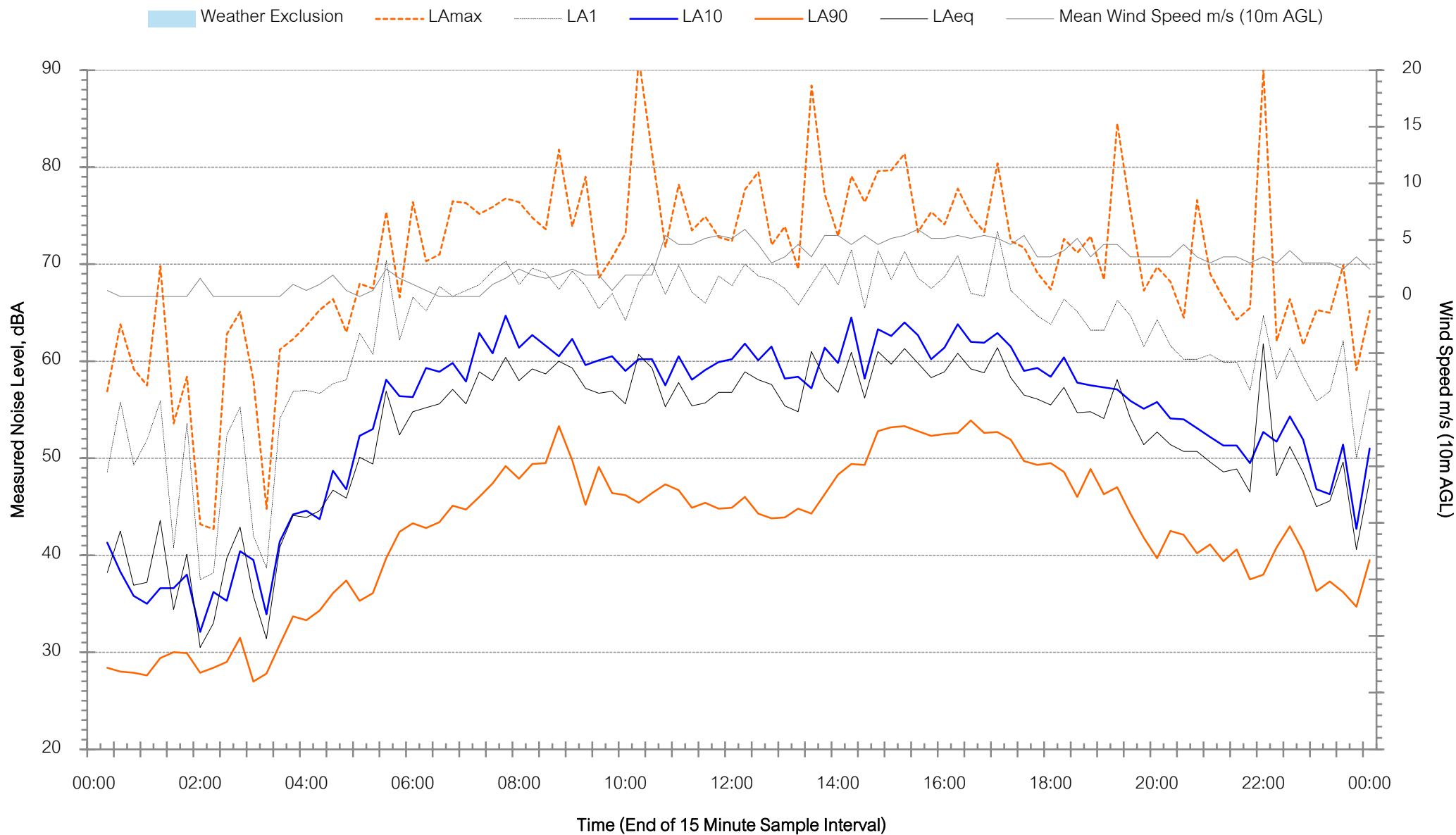
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Tuesday 8 September 2026



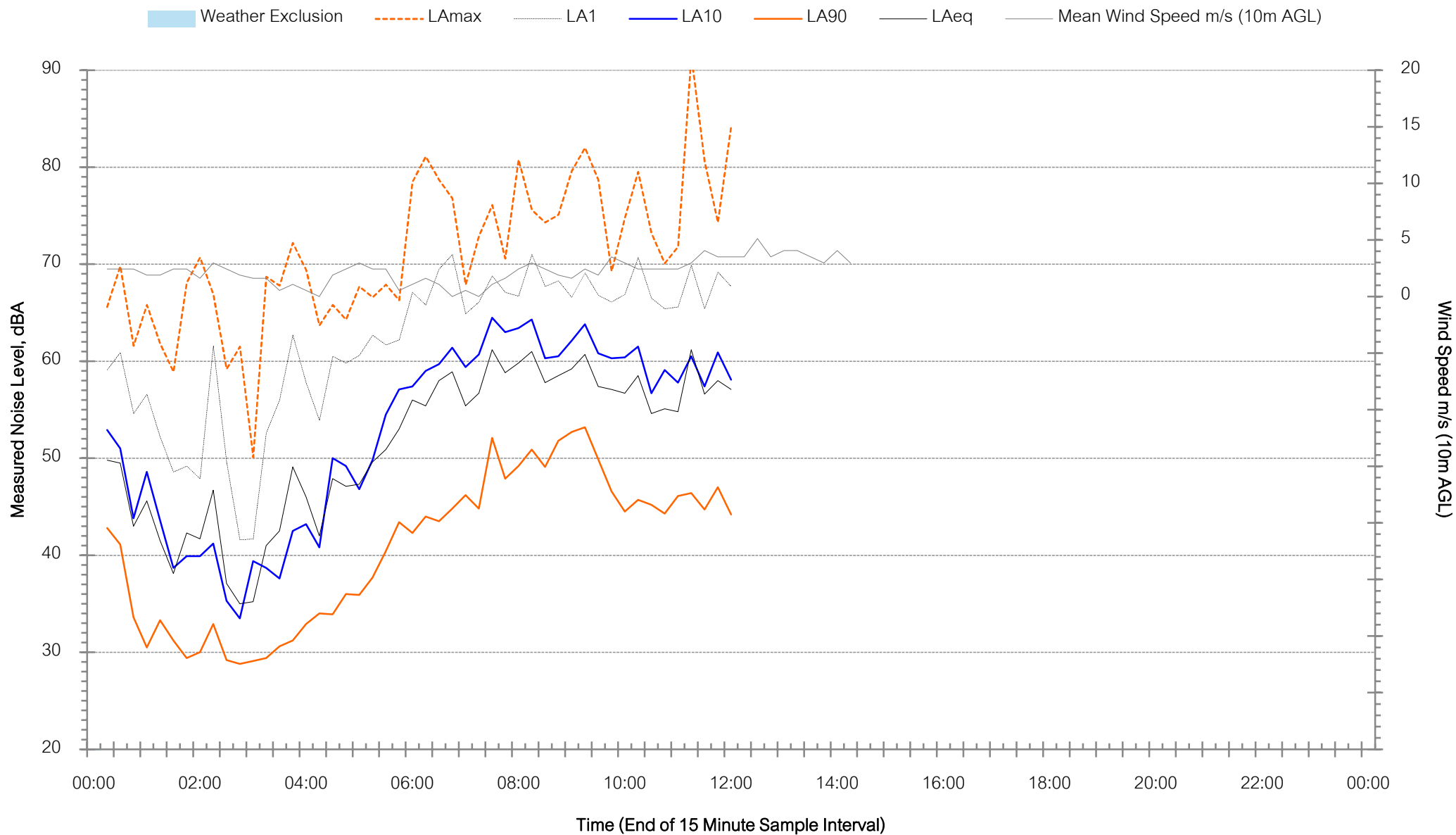
Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Wednesday 9 September 2026



Background Noise Levels

L2 - Tigerhawk Drive, Chisholm, NSW - Thursday 10 September 2026



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Appendix D – Determination of NPI

Receiver Category

Table D1 - Determination of NPI Residential Receiver Category																
Location/ Catchment			Measured RBL dB LA90(period)			Land Use Zone		Typical Existing Background Noise Levels			Rural Residential - an area with an acoustical environment that:		Suburban Residential - an area that has:		Urban Residential- an area with an acoustical environment that:	
								Table 2.3 NPI								
						Rural	Suburban	Urban	Commercial, Industrial	RURAL Daytime <40 Eve <35 Night <30	SUBURBAN Daytime <45 Eve <40 Night <35	URBAN Daytime >45 Eve >40 Night >35	is dominated by natural sounds. having little or no road traffic noise generally characterised by low background noise levels. Settlement patterns would be typically sparse	local traffic with characteristically intermittent traffic flows or with some limited commerce or industry. evening ambient noise levels defined by the natural environment and human activity.	is dominated by 'urban hum' or industrial source noise has through-traffic with characteristically heavy and continuous traffic flows during peak is near commercial districts or industrial districts has any combination of the above	
Location 1	Day	38			✓			✓					✓			✓
	Evening	33			✓			✓					✓			✓
	Night	27			✓			✓					✓			✓
Location 2	Day	43			✓				✓							✓
	Evening	35			✓				✓							✓
	Night	29			✓			✓								✓

where urban hum means the aggregate sound of many unidentifiable, mostly traffic and/or industrial related sound sources

Assessment																						
Location	Rural	Suburban	Urban	Rural	Suburban	Urban		Rural - RBL	Suburban - RBL	Urban - RBL	Rural - Description				Suburban - Description			Urban - Description				
Location 1	3	3	6	0	0	3		3	0	0	0	0	0	0	0	0	0	3	0	0	3	0
Location 2	1	5	6	0	0	3		1	2	0	0	0	0	0	0	0	0	3	0	0	3	0

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ABN: 36 602 225 132
Ph: +61 2 4920 1833

mulleracoustic.com

