



# DA ACOUSTIC REPORT

---

Maitland Christian School - Block B

**ID: 11820-3 R01v1**

**30 October 2023**

**Prepared For:**

Clive Furnass, Paynter Dixon

Level 3, 5 Rider Boulevard,  
Rhodes NSW 2138

Email: [clive.furnass@paynterdixon.com.au](mailto:clive.furnass@paynterdixon.com.au)

**DOCUMENT INFORMATION**

**Author:** Sri Harsha Eati



**Issue:** R01

**Version:** 1

Date	Version	To	Email
20/10/2023	A DRAFT	Clive Furnass	clive.furnass@paynterdixon.com.au
23/10/2023	B DRAFT	Clive Furnass	clive.furnass@paynterdixon.com.au
30/10/2023	1	Clive Furnass	clive.furnass@paynterdixon.com.au

**Prepared By:**

PJ Knowland Pty. Ltd.

*t/a PKA Acoustic Consulting*

PO Box 345, Lane Cove NSW 1595

ABN 87 256 407 546, ACN 621 896 204

T (02) 9460 6824 · E admin@pka.com.au



## CONTENTS

1.0	INTRODUCTION	5
2.0	SUMMARY	5
3.0	SITE DESCRIPTION	6
3.1	Site Location	6
3.2	Operational Details	7
4.0	ACOUSTIC CRITERIA	8
4.1	NSW EPA Noise Policy for Industry (NPfI)	8
4.2	EPA NSW Interim Construction Noise Guidelines (ICNG)	9
4.3	Construction Vibration Criteria	9
4.4	Traffic Noise Intrusion	10
5.0	NOISE SURVEY & PROJECT NOISE GOALS	11
5.1	Methodology	11
5.2	Instrumentation	11
5.3	Project Noise Goals	11
5.3.1	Ambient Noise Measurements & Project Trigger Levels	11
5.3.2	Traffic Noise Levels & Reduction Required	12
5.3.3	EPA NSW Interim Construction Noise Guidelines	12
6.0	ASSESSMENT & DISCUSSION	13
6.1	Noise Breakout from Student Activity	13
6.2	Noise Breakout from Increased Car Parking Activity	14
6.3	Traffic Noise Intrusion	14
6.3.1	Walls & Roof	14
6.3.2	Doors & Windows	14
7.0	RECOMMENDATIONS	15
	APPENDIX A DRAWINGS USED TO PREPARE REPORT	17
	APPENDIX B NOISE MEASUREMENTS (GRAPHICAL)	18

---

*This firm is a member of the Association of Australian Acoustical Consultants.*

*The work reported herein has been carried out in accordance with the terms of membership. We stress that the advice given herein is for acoustic purposes only, and that the relevant authorities should be consulted with regard to compliance with regulations governing areas other than acoustics.*

---

## LIST OF FIGURES

Figure 3-1 Site Location	6
Figure 3-2 Site Plan	7
Figure 7-1 Extent of Recommended Acoustic Barrier and Heights (Second Floor)	15

## LIST OF TABLES

Table 4-1 Noise Criteria - Amenity for receiver buildings	8
Table 4-2 Noise Levels Residential Receivers (Extract from EPA ICNG)	9
Table 5-1 NPfI Project Noise Trigger Levels at Residential Boundaries	11
Table 5-2 Traffic Noise Levels and Noise Reduction Required	12
Table 5-3 EPA NSW Interim Construction Noise Guidelines Criteria for site	12
Table 6-1 Calculated Noise Impact at Residential Receivers from Indoor Areas of Block B	13
Table 6-2 Calculated Noise Impact at Residential Receivers from Outdoor Play Areas	13
Table 6-3 Calculated Increase in Noise Generation from Changes to Carpark Activity	14

## 1.0 INTRODUCTION

PKA has been conducted by Clive Furnass of Paynter Dixon to conduct an acoustic assessment for the proposed development of the Block B building at Arise Christian College, Metford, located at 75 – 81 Chelmsford Drive, Metford. The assessment has been conducted as part of the DA approval documentation to be submitted to the council.

This report will address the noise breakout to sensitive receivers and relevant acoustic treatment and management measures that will need to be incorporated to meet the relevant acoustic criteria from the use of the proposed development.

## 2.0 SUMMARY

An acoustic assessment has been conducted in accordance with the acoustic requirements of Maitland City Council and NSW EPA Noise Policy for Industry (2017) to assess the noise breakout for the proposed development and to set noise goals for future operation and mechanical plant. In addition, traffic noise intrusion was assessed to ensure compliance with the relevant standards.

Unattended noise measurements were conducted on site for a period of 7 days to obtain background noise levels. Project specific noise goals were established, and the noise impact was calculated to the nearest sensitive receivers based on architectural and operational plans provided to PKA.

Based on the survey conducted and calculations performed, the proposed development would comply with the Maitland City Council if the recommendations made in Section 7.0 of this report are implemented.

### 3.0 SITE DESCRIPTION

#### 3.1 Site Location

The proposed development for the Block B expansion is within the existing Maitland Christian College premises located at 75-81 Chelmsford Drive, Metford. The site is bound by Chelmsford Drive to the north, a public playground to the west and the existing school premises on the remaining sides. The site location is shown in Figure 3-1.

The nearest sensitive residential receivers are located across Chelmsford Drive at approximately 45m from the boundary of the proposed works.

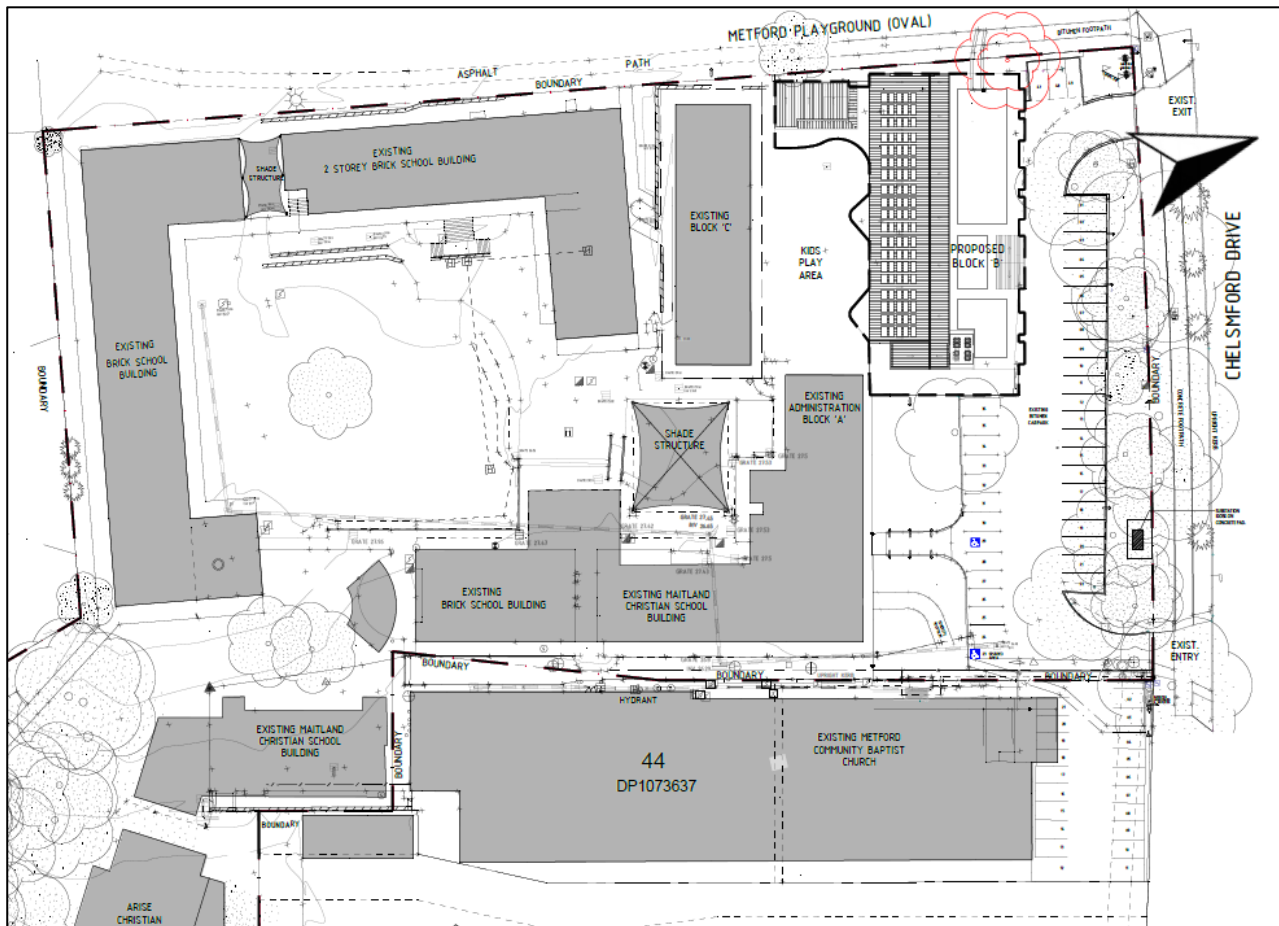
**Figure 3-1 Site Location**

Source: Six Maps, 2023



**Figure 3-2 Site Plan**

(Extract from architectural plans)



### 3.2 Operational Details

PKA reviewed the Operational Plan of Management and Traffic Impact Assessment prepared by SECA Solution (dated 4<sup>th</sup> October 2023 and 5<sup>th</sup> October 2023 respectively) which provide the following operational details that were used in the preparation of this report. The list of architectural plans used in the preparation of this report and presented in Appendix A of this report.

- The school currently operates between 8am and 4pm Monday to Friday. The current enrolment of the entire school comprises of a total of 715 students and 98 staff members.
- The proposed expansion of Block B includes six additional learning spaces with a potential increase of 168 students and 6 staff members.
- There are currently no changes proposed to out of hours use including the use of OOSH and community programmes and as they are operating within the existing approval of premises, this component is not being assessed as part of this assessment.
- The changes to the car parking spaces include the incorporation of 6 additional staff car parking spaces to the existing 38 spaces.
- It is estimated that an additional 56 vehicular movements will be generated from the increased use (from the current 811vph during AM peak and 726 vph during the PM peak).

## 4.0 ACOUSTIC CRITERIA

### 4.1 NSW EPA Noise Policy for Industry (NPfI)

Noise generated from the use of commercial premises and from mechanical noise is generally assessed against the requirements of the NSW EPA *Noise Policy for Industry 2017 (NPfI)*.

The policy sets out two separate criteria to ensure environmental noise objectives are met. The first criterion considers intrusive noise to residential properties and the second is set to ensure the amenity of the land use is protected. The lower value of both criteria is considered to be the Project noise trigger level, which is the limit of the  $L_{Aeq, 15min}$  noise level that must not be exceeded for the corresponding period of the day.

#### Amenity Criterion

To limit continuing increases in noise levels, the maximum ambient noise level within an area from commercial noise sources should not normally exceed the levels as specified in Table 2.2 of the policy for the specified time of the day. The NPfI recommends the following Amenity Noise Levels for various receiver premises.

**Table 4-1 Noise Criteria - Amenity for receiver buildings**

*All values in dB(A)*

Type of receiver	Time of day	Recommended Amenity Noise Level $L_{Aeq, (period)}$
Residential (Suburban)	Day	55 dB(A)
	Evening	45 dB(A)
	Night	40 dB(A)

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:

Project amenity noise level for development = recommended amenity noise level **minus 5 dB(A)**.

To standardise the time periods for the intrusiveness and amenity noise levels, this policy assumes that the Amenity  $L_{Aeq, 15min}$  will be taken to be equal to the  $L_{Aeq, period} + 3$  decibels (dB).

#### Intrusiveness Criterion

The intrusiveness of a stationary noise source may be considered acceptable if the average of the maximum A-weighted levels of noise,  $L_{Aeq, 15\text{ minute}}$  from the source do not exceed by more than 5dB the Rating Background Level (RBL) measured in the absence of the source. This applies during all times of the day and night. There also exists an adjustment factor to be applied as per the character of the noise source. This includes factors such as tonal, fluctuating, low frequency, impulsive, intermittent etc. qualities of noise. The RBL is determined in accordance with Section 2.3 of the NSW EPA NPfI. The intrusiveness criterion is  $L_{Aeq, 15\text{ minute}} < RBL + 5$ .



## 4.2 EPA NSW Interim Construction Noise Guidelines (ICNG)

The NSW EPA *Interim Construction Noise Guideline* (ICNG) is used for the assessment.

The document aims at managing noise from construction works regulated by the EPA. Details of noise limits are presented in the following Table 4-2.

**Table 4-2 Noise Levels Residential Receivers (Extract from EPA ICNG)**

Time of day	Management level $L_{Aeq}$ (15 min)	Application
Recommended standard hours: Monday to Friday 7 am to 6 pm	Noise affected RBL + 10 dB	The noise affected level represents the point above which there may be some community reaction to noise.  Where the predicted or measured $L_{Aeq}$ (15 min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level.  The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
Saturday 8 am to 1 pm  No work on Sundays or public holidays	Highly noise affected 75 dB	The highly noise affected level represents the point above which there may be strong community reaction to noise.  Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or mid-morning or mid-afternoon for works near residences if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside recommended standard hours	Noise affected RBL + 5 dB	A strong justification would typically be required for works outside the recommended standard hours.  The proponent should apply all feasible and reasonable work practices to meet the noise affected level.  Where all feasible and reasonable practices have been applied and noise is more than 5 dB above the noise affected level, the proponent should negotiate with the community.

## 4.3 Construction Vibration Criteria

Where demolition and excavation is proposed, there is the potential for vibration impact on the neighbouring buildings' amenity and on structures. The EPA ICNG states that human comfort (amenity) vibration is to be measured and assessed in accordance with *Assessing Vibration – a technical guideline* (DECC 2006).

In general, structural damage due to vibration can be of concern when hammering, blasting, vibration rolling, crushing, piling and other vibration inducing construction works are carried out.

The EPA ICNG does not have specific structural vibration damage criteria however the RTA Environmental Noise Management Manual (2001) recommends the use of the following Standards:

- British Standard BS 7385: Part 2: Evaluation and Measurement for Vibrations in Buildings – Part 2 Guide to Damage Levels from Ground-Borne Vibration
- AS 2187.2 Explosives-Storage, transport and use, Part 2: Use of Explosives
- German Standard DIN 4150, Part 3: Structural Vibration in Buildings: Effects on Structures

#### 4.4 Traffic Noise Intrusion

The NSW Educational Facilities Standards & Guidelines (EFSG) provides the following internal noise level assessment requirement for educational spaces affected by traffic noise intrusion.

*“Road Noise for general learning areas, music, drama, movement studios and halls shall be assessed consistent with the requirements of State Environmental Planning Policy (Infrastructure) 2007 - regulation 102. An assessment should be undertaken where directed for any site impacted by traffic noise. Generally, it is recommended for all sites impacted by noise from roads with greater than 20,000 vehicles AADT and required for all sites impacted by noise from roads with greater than 40,000 vehicles AADT. The guideline internal noise levels presented in Acoustic Performance Guidelines (section 11.06) is to be used in the assessment.”*

This is consistent with the NSW Department of Planning recommendations which establishes (Section 3.6.1 of the *Development near Rail Corridors and Busy Roads – Interim Guideline*) “a recommended max Level dBA” for educational institutions at 40 dB(A). Although clarity is not provided regarding the exact descriptor or period, the document states that these values are based on the Environmental Criteria for Road Traffic (EPA 1999) which clarifies this requirement as a maximum internal value of  $L_{Aeq(1hr)}$  40 dB(A).

## 5.0 NOISE SURVEY & PROJECT NOISE GOALS

### 5.1 Methodology

Unattended noise monitoring was conducted on site between 11<sup>th</sup> and 18<sup>th</sup> October 2023 to record the existing ambient and traffic noise levels. The noise monitor was programmed to store the L<sub>n</sub> percentile noise levels for each 15-minute sampling period. Measurements were made of L<sub>min</sub>, L<sub>max</sub>, L<sub>90</sub>, and L<sub>eq</sub> and were later retrieved for analysis. Noise data from adverse weather conditions was excluded accordingly. The positions of noise monitors are shown in Figure 3-1. The results and summary of the noise monitoring are listed in graphical form in Appendix B of this report.

### 5.2 Instrumentation

Noise measurements were conducted using the following equipment:

- Sound analyser NTi XL2 Sound Level Meters, Serial numbers: A2A- 20149-E0.
- Sound calibrator Larson Davis CAL200 Acoustic Calibrator, Serial number 11419.

The instruments were calibrated before and after the noise measurements and there were no adverse deviations between the two. The analysers are type 1 and comply with AS IEC 61672.2-2004. The instruments carry traceable calibration certificates.

### 5.3 Project Noise Goals

#### 5.3.1 Ambient Noise Measurements & Project Trigger Levels

The tables below present the results of the ambient noise monitor measurements and the established noise breakout goals. The assessment periods are defined by the NSW NPfl are as Daytime: 7 am to 6 pm, Evening: 6 pm to 10 pm and Night: 10 pm to 7 am.

**Table 5-1 NPfl Project Noise Trigger Levels at Residential Boundaries**

Receiver Type	Period	Measured RBL (L <sub>A90</sub> )	NSW Noise Policy for Industry Criteria		Project Noise Trigger Levels L <sub>Aeq15min</sub>
			Amenity L <sub>Aeq15min</sub>	Intrusiveness L <sub>Aeq15min</sub>	
Residential (Suburban)	Day	48 dB(A)	53 dB(A)	53 dB(A)	53 dB(A)
	Evening	41 dB(A)	43 dB(A)	46 dB(A)	43 dB(A)
	Night	34 dB(A)	38 dB(A)	39 dB(A)	38 dB(A)

The school is proposed to operate only during the daytime. The evening and night-time criteria has been provided only for informational purposes.

**5.3.2 Traffic Noise Levels & Reduction Required**

Table 5-2 below presents the traffic noise levels at the noise monitor from the vehicular activity on Chelmsford Drive. The values were used in estimating the required acoustic design of the façade elements of the subject development based on the distance from the traffic, their orientations, and shielding to the road.

**Table 5-2 Traffic Noise Levels and Noise Reduction Required**

Measured Traffic Noise Level (Maximum Repeatable $L_{Aeq1hour}$ at Location of Noise Monitor	Internal Design Noise Level ( $L_{Aeq1hour}$ )	Traffic Noise Reduction Required
61 dB(A)	40 dB(A)	21 dB(A)

**5.3.3 EPA NSW Interim Construction Noise Guidelines**

Assuming that the construction works are proposed during normal daytime working hours 7 am to 6 pm, the noise criteria are presented in the following Table 5-3.

**Table 5-3 EPA NSW Interim Construction Noise Guidelines Criteria for site**

Receivers	Measured Daytime Background	Noise affected level (Criterion)	Highly Noise Affected (Criterion)
Residential	48 dB(A)	58 dB(A)	75 dB(A)

## 6.0 ASSESSMENT & DISCUSSION

### 6.1 Noise Breakout from Student Activity

Calculations were performed based on source sound pressure levels associated with children noise derived from extensive measurements conducted by PKA in the past. For this assessment, PKA is considering a spatial sound pressure level of  $L_{Aeq15min}$  of 62 dB(A) within each of the six learning spaces. Although when measured in smaller periods, the noise may be more transient and louder, a 15-minute average is being considered as the criteria is based on this averaged timeframe.

The following table presents the results of the calculations showing the estimated noise impact from the use of the outdoor areas and the indoor areas of the learning centre through the opened glazing. The noise calculations below consider effects of distance loss, attenuation from inside to outside and effects of directivity.

**Table 6-1 Calculated Noise Impact at Residential Receivers from Indoor Areas of Block B**

Calculated noise impact at Nearest Identified Residential Boundary	Period	NPfi Project Trigger Levels	Compliance?
$L_{Aeq-15min}$ <36 dB(A)	Day 7am to 6pm	$L_{Aeq-15min}$ 53 dB(A)	Yes

The current existing area is currently being used as a playground and any proposed supervised outdoor activity is not expected to increase the noise level when compared to the existing activity. The following table presents the results of calculations of the estimated noise impact from the outdoor areas, specifically the central assembly area and the rooftop terrace play areas. The calculations consider effects of distance loss, barrier effects and directivity (including the recommendations made in Section 7.0). An even distribution of children across these areas was assumed for the calculations.

**Table 6-2 Calculated Noise Impact at Residential Receivers from Outdoor Play Areas**

Combined Source SWL from Students in Outdoor Play Areas	Period	NPfi Project Trigger Levels	Calculated Noise Impact at Nearest Identified Residential Boundary	Compliance?
$L_{Aeq-15min}$ 93dB(A)* total (calculations were modelled based on an extrapolated dB/m <sup>2</sup> across the total area)	Day	$L_{Aeq-15min}$ 53 dB(A)	$L_{Aeq-15min}$ 48 dB(A)	Yes

\*Assuming a raised male voice sound power level of 74dB(A) and 50% of the 168 children speaking at any given time.

The results of the calculations show that acoustic compliance is readily achieved for the use of the indoor and outdoor play areas. No additional mitigation measures will be necessary.

## 6.2 Noise Breakout from Increased Car Parking Activity

Typically, to estimate the noise impact from the use of the carparks and vehicular movements, time frames of movements, sound power levels of vehicles and the number of movements are considered. However, in this case, the current use of vehicular activity on site is approved and has been for a significant period. This activity in turn forms part of the acoustic amenity of the site, represents the ambient nature of the surroundings and is generally accepted by the surrounding community.

Therefore, in line with guidelines such as the NSW EPA Road Noise Policy, PKA adopted an approach of estimating the change in noise generated rather than estimating the exact total noise impact. The following table presents the results of these calculations.

**Table 6-3 Calculated Increase in Noise Generation from Changes to Carpark Activity**

Time	Current VPH	New VPH from Proposed Activity	Increase in Noise Generated
AM Peak	811 vph	867vph	<1dB(A) Calculated 0.29dB(A)
PM Peak	726 vph	782vph	<1dB(A) Calculated 0.32(A)

The calculations show that the predicted increase in noise impact is less than 0.5dB(A) which is extremely insignificant and is not generally perceived or consistently measurable in a non-controlled environment (generally a 1dB tolerance is acceptable in measurements). Therefore, the proposed increase to the use of the carpark and vehicular activities will not affect the acoustic quality of the surroundings and will be in line with the current existing approved operation of the school.

## 6.3 Traffic Noise Intrusion

Calculations have been carried out to specify the building façade elements. The acoustic requirements are given below.

### 6.3.1 Walls & Roof

The calculations show that the façade and roof should have a Weighted Sound Reduction index of  $R_w$  40 which is readily met by masonry construction or standard light-weight construction that meets general BASIX requirements.

### 6.3.2 Doors & Windows

It is recommended that all doors and windows directly facing Chelmsford Drive (entire north façade of Block B building) be upgraded to a achieve a minimum sound reduction of  $R_w$ 28. This is typically achieved using 5mm lam glass or a solid core door with the appropriate use of perimeter and threshold acoustic seals such as silicone Q-lon seals (avoid brush seals).

## 7.0 RECOMMENDATIONS

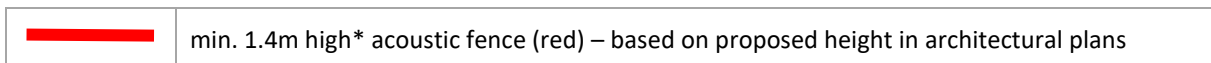
Based on the architectural plans, operational activity proposed, and calculations performed by PKA, the proposed Block B expansion will comply with the established acoustic criteria provided the following recommendations are implemented.

### 1. Architectural Treatment

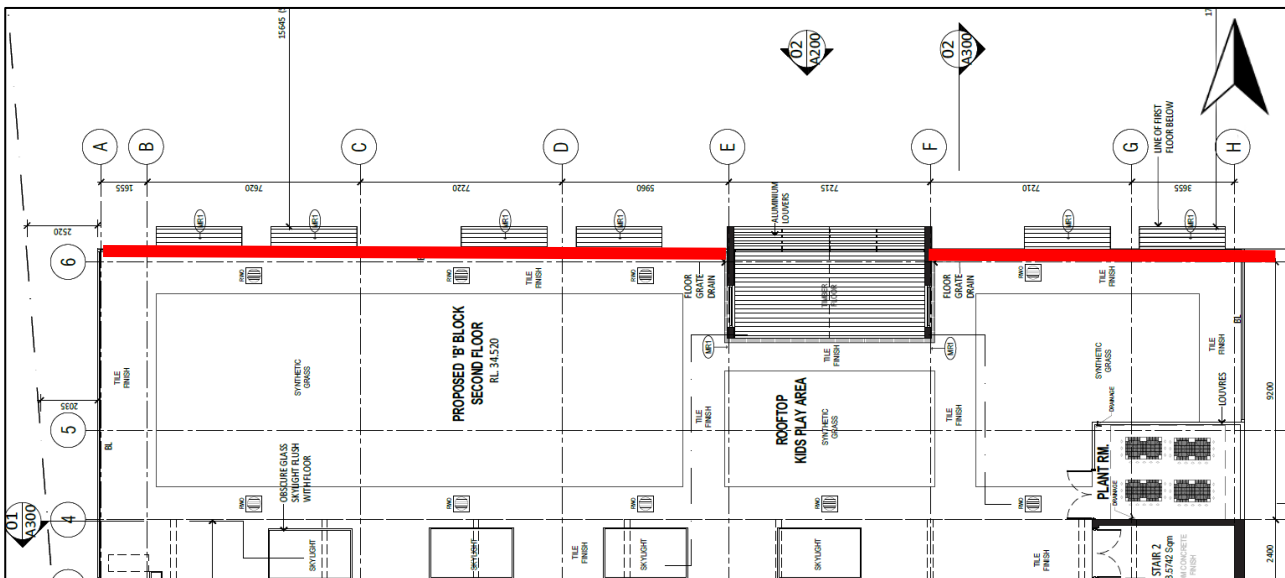
Acoustic fences along the northern boundary (facing Chelmsford Drive) of terrace will be required with the following minimum heights are required to be installed at the boundary as shown in Figure 7-1 below. Structural requirements must be checked with the relevant authority. The acoustic barrier must be of solid construction (with no air gaps or penetrations including the connections and structural bases) such as:

- Polycarbonate Transparent Sheeting (selection must ensure the  $R_w$  rating is met).
- Timber fence with double lapped boards of standard 15mm thickness, allowing a continuous thickness of 30mm.
- Aerated Concrete panels such as Hebel.
- Masonry or Precast concrete panels.
- Any combination of the above. Other options are possible provided that the  $R_w$  rating is met.

**Figure 7-1 Extent of Recommended Acoustic Barrier and Heights (Second Floor)**



\*Although the recommended barrier is not tall with respect to the children’s height, due to the residential receivers being single storey receivers across Chelmsford Drive, an effective loss in line of sight is achieved.



### 2. Outdoor Plant and equipment

At the time of preparation of this report, an equipment schedule was unavailable (typically available prior to the CC stage of the development). The selection of the final mechanical and plant

equipment must be checked so that the rated sound power/pressure levels will comply at the boundary of the sensitive residences with the criteria listed in Section 5.3.1.

### 3. Traffic Noise Intrusion

To mitigate traffic noise intrusion into the indoor learning areas, the façade of the building must be treated as detailed in Section 6.3 of this report.

### 4. Construction Noise & Vibration

If the preparation of a Construction Noise & Vibration Management Plan or general adherence to construction noise and vibration limits is required by the certifying authority, the noise criteria established in Sections 4.2, 4.3, and Table 5-3 must be considered.

### 5. Complaints Handling

If any complaints occur from other external residents/receivers during operation, section 11 titled "Reviewing performance" of the *NSW Industrial Noise Policy (INP)* provides a method of complaint handling and management. Post negotiations, the following recommendations should be implemented (taken from the NSW INP).

*Where residual noise impacts have been negotiated, it is recommended that the proponent run a complaints-monitoring system. Components of such a system could include:*

- *a complaint hotline to record receiver complaints regarding the development.*
- *a system for logging complaints and dealing with them.*
- *a database of complaints and the proponent's responses/actions. This should be readily accessible to the community and regulatory authorities.*
- *a system for providing feedback to the community. (This could be in the form of regular meetings with affected residents, or a newsletter.)*

#### General Disclaimer

The acoustic recommendations made are ones that satisfies the acoustic requirements only. No representation is given that it is fit for any other purpose. The build-up must be checked and designed by others to verify that it complies with all necessary fire rating, structural, waterproofing, durability, and any other non-acoustic requirements.



## APPENDIX A DRAWINGS USED TO PREPARE REPORT

This report was prepared using drawings provided by Paynter Dixon, Project No. MCS0107.

No.	Rev.	Title	Date
DA000	P8	Cover Sheet Location Plan	25-10-2023
DA001	P6	Overall Site Plan	04-10-2023
DA002	P6	Site Analysis Plan	04-10-2023
DA003	P1	Shadow Diagram	25-10-2023
DA010	P7	Existing Floor Plan Block 'B'	18-10-2023
DA011	P9	Demolition Plan Block 'B'	27-10-2023
DA100	P10	Proposed Ground Floor Block 'B'	26-10-2023
DA101	P8	Proposed First Floor Block 'B'	26-10-2023
DA102	P8	Proposed Second Floor Block 'B'	26-10-2023
DA103	P8	Proposed Roof Plan Block 'B'	26-10-2023
DA110	P8	Proposed Site Works Plan Block 'B'	27-10-2023
DA111	P5	Proposed Carpark Plan Block 'B'	10-10-2023
DA112	P1	Proposed Carpark Sweep Plan Block 'B'	09-10-2023
DA200	P7	Elevations Sheet 1	23-10-2023
DA210	P2	External Finishes Schedule	23-10-2023
DA300	P7	Section	23-10-2023
DA400	P7	Perspective Images Sheet 1	27-10-2023
DA401	P3	Perspective Images Sheet 3	27-10-2023



### 11820 Arise Christian College, Metford

Project Address: 75-81 Chelmsford Dr, Metford NSW 2323

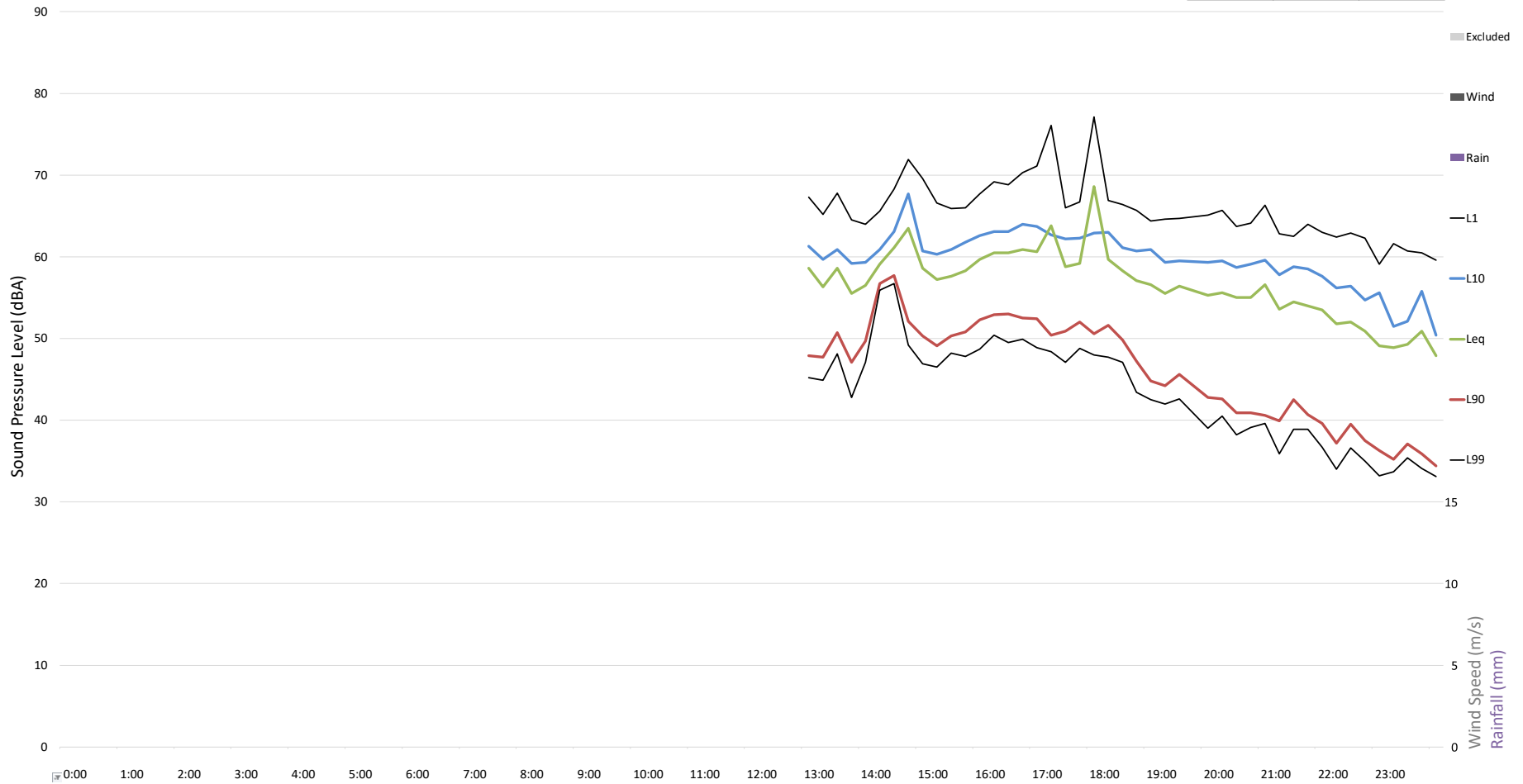
Logger Location: At the West Boundary of School Approximately 10m from Chemsfold Drive Measruing Existing Traffic & Back

BOM weather data: Newcastle Nobbys IDN60901



11/10/2023 Wednesday  
Existing Ambient Noise Levels (dBA)

	Daytime 07:00 - 18:00		Evening 18:00 - 22:00		Nighttime 22:00 - 07:00	
	Measured	Corrected	Measured	Corrected	Measured	Corrected
L <sub>Aeq</sub> dB					55.9	55.9
L <sub>A90</sub> dB					33.7	33.7



### 11820 Arise Christian College, Metford

Project Address: 75-81 Chelmsford Dr, Metford NSW 2323

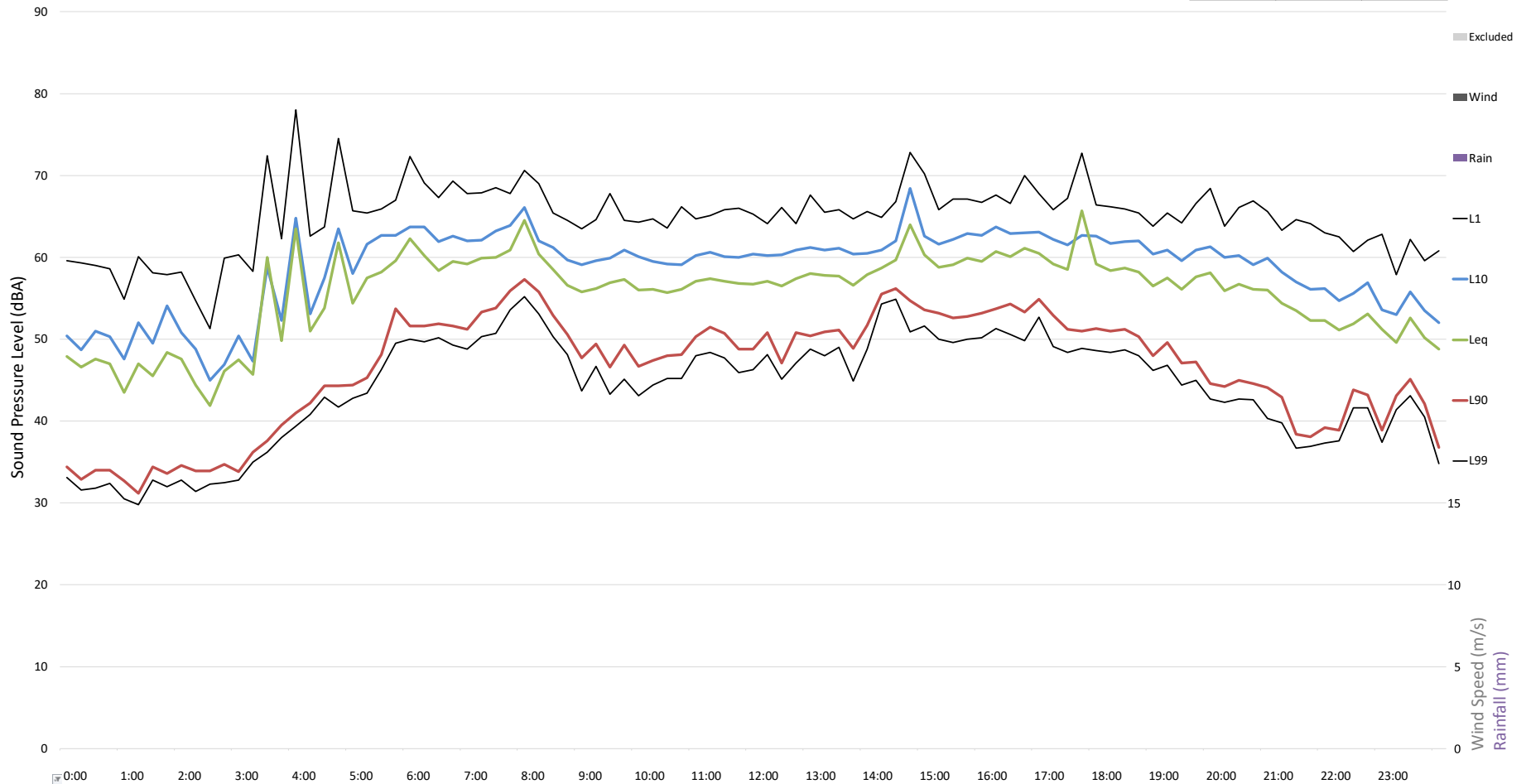
Logger Location: At the West Boundary of School Approximately 10m from Chelmsfold Drive Measruing Existing Traffic & Back

BOM weather data: Newcastle Nobbys IDN60901



12/10/2023 Thursday  
Existing Ambient Noise Levels (dBA)

	Daytime 07:00 - 18:00		Evening 18:00 - 22:00		Nighttime 22:00 - 07:00	
	Measured	Corrected	Measured	Corrected	Measured	Corrected
L <sub>Aeq</sub> dB	59.4	59.4	56.9	56.9	54.6	54.6
L <sub>A90</sub> dB	47.8	47.8	40.7	40.7	38.9	38.9



### 11820 Arise Christian College, Metford

Project Address: 75-81 Chelmsford Dr, Metford NSW 2323

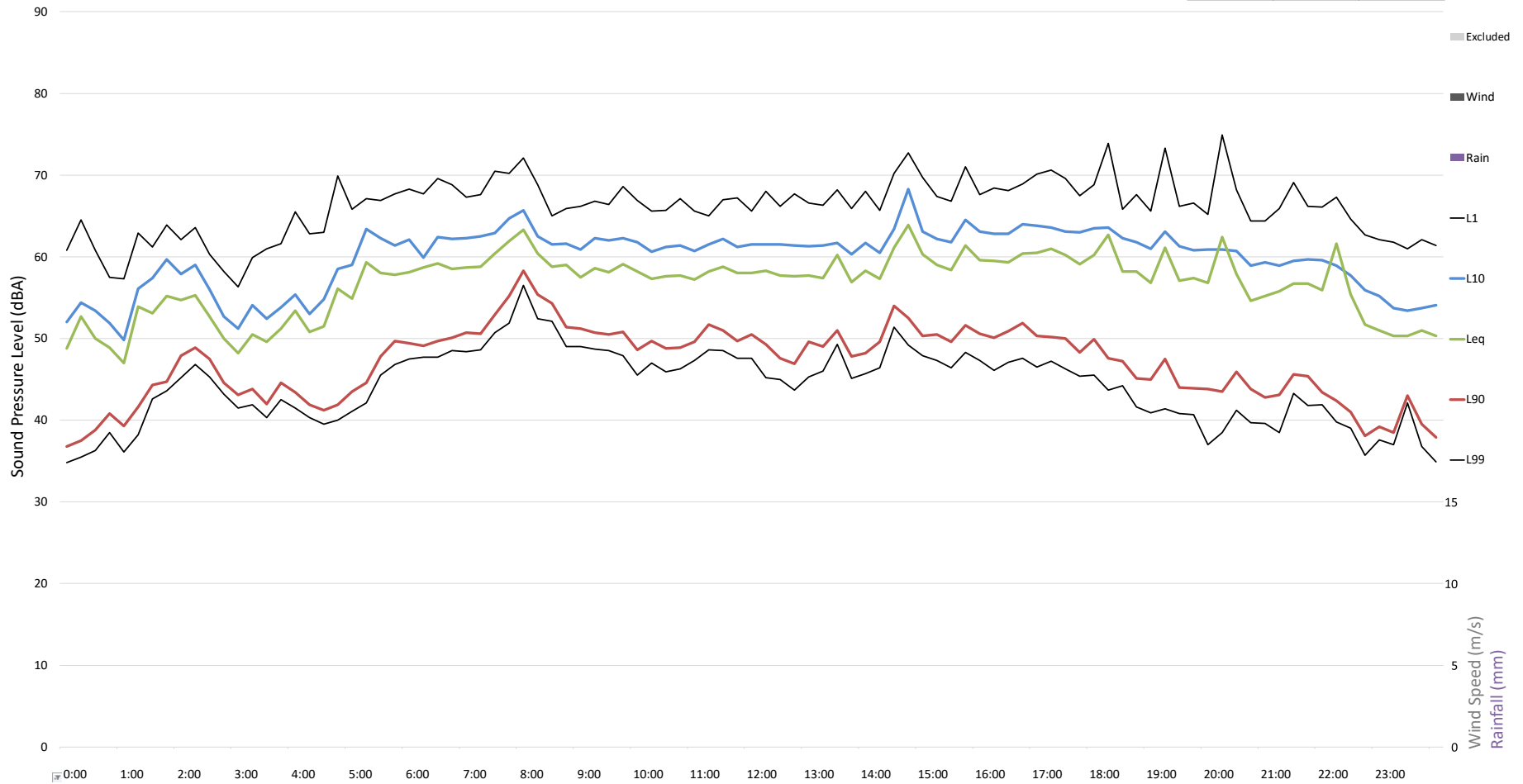
Logger Location: At the West Boundary of School Approximately 10m from Chelmsfold Drive Measruing Existing Traffic & Back

BOM weather data: Newcastle Nobbys IDN60901



13/10/2023 Friday  
Existing Ambient Noise Levels (dBA)

	Daytime 07:00 - 18:00		Evening 18:00 - 22:00		Nighttime 22:00 - 07:00	
	Measured	Corrected	Measured	Corrected	Measured	Corrected
L <sub>Aeq</sub> dB	59.4	59.4	58.7	58.7	54.0	54.0
L <sub>A90</sub> dB	48.4	48.4	43.3	43.3	35.9	35.9



### 11820 Arise Christian College, Metford

Project Address: 75-81 Chelmsford Dr, Metford NSW 2323

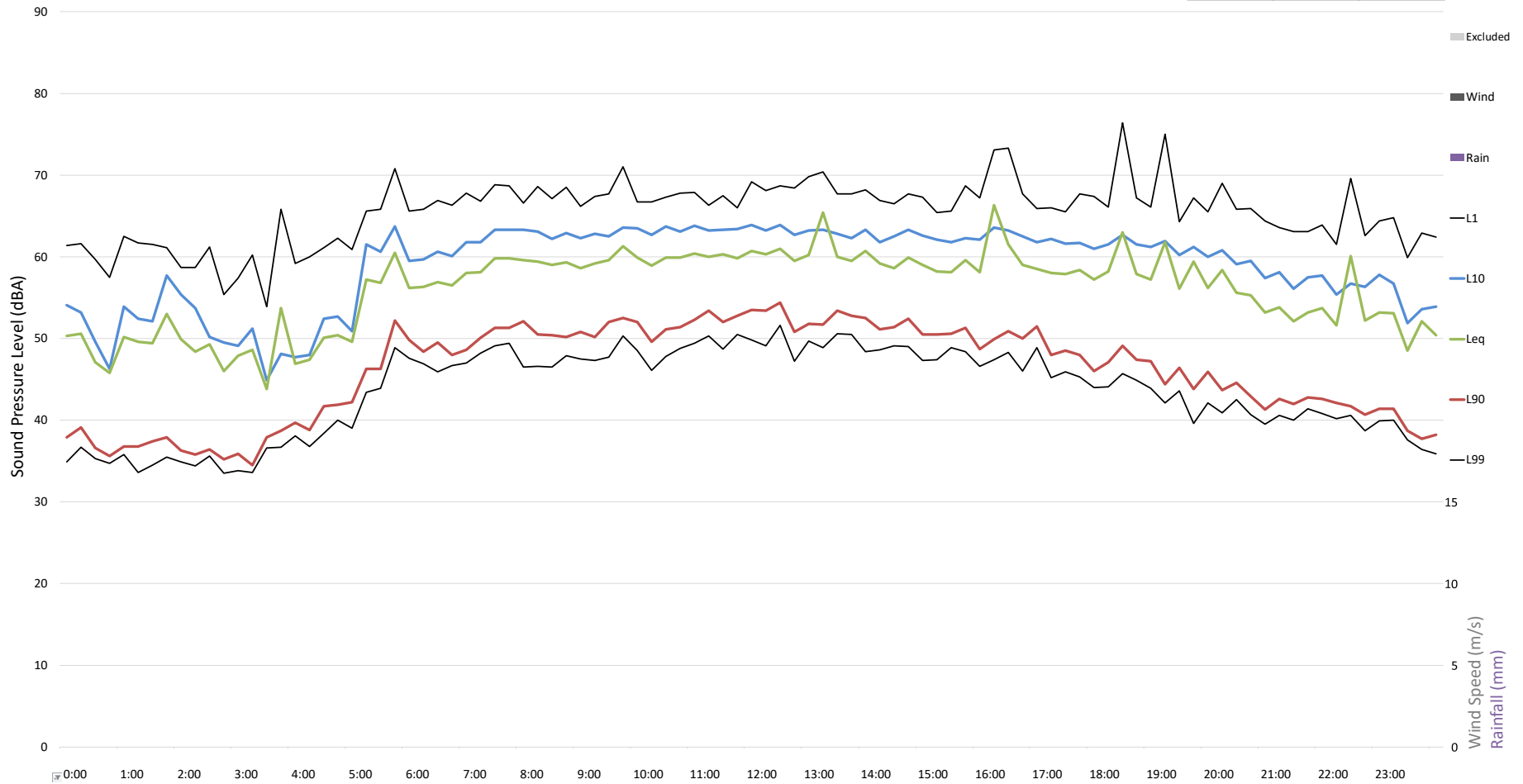
Logger Location: At the West Boundary of School Approximately 10m from Chelmsfold Drive Measruing Existing Traffic & Back

BOM weather data: Newcastle Nobbys IDN60901



14/10/2023  Saturday  
Existing Ambient Noise Levels (dBA)

	Daytime 07:00 - 18:00		Evening 18:00 - 22:00		Nighttime 22:00 - 07:00	
	Measured	Corrected	Measured	Corrected	Measured	Corrected
L <sub>Aeq</sub> dB	60.2	60.2	57.8	57.8	52.4	52.4
L <sub>A90</sub> dB	49.0	49.0	42.3	42.3	34.5	34.5



### 11820 Arise Christian College, Metford

Project Address: 75-81 Chelmsford Dr, Metford NSW 2323

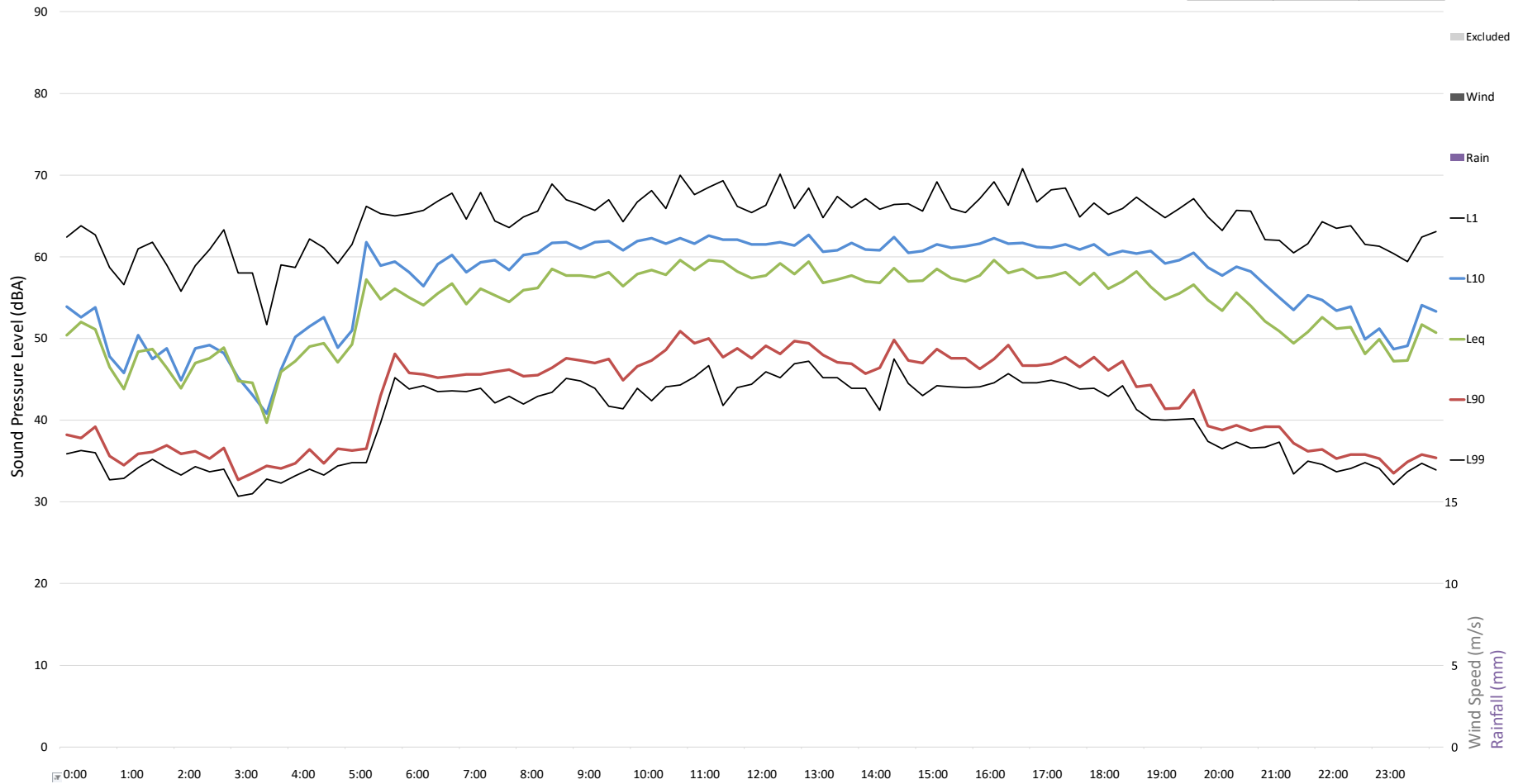
Logger Location: At the West Boundary of School Approximately 10m from Chelmsfold Drive Measruing Existing Traffic & Back

BOM weather data: Newcastle Nobbys IDN60901



15/10/2023 Sunday  
Existing Ambient Noise Levels (dBA)

	Daytime 08:00 - 18:00		Evening 18:00 - 22:00		Nighttime 22:00 - 08:00	
	Measured	Corrected	Measured	Corrected	Measured	Corrected
L <sub>Aeq</sub> dB	57.9	57.9	54.2	54.2	56.4	56.4
L <sub>A90</sub> dB	46.2	46.2	38.0	38.0	33.7	33.7



### 11820 Arise Christian College, Metford

Project Address: 75-81 Chelmsford Dr, Metford NSW 2323

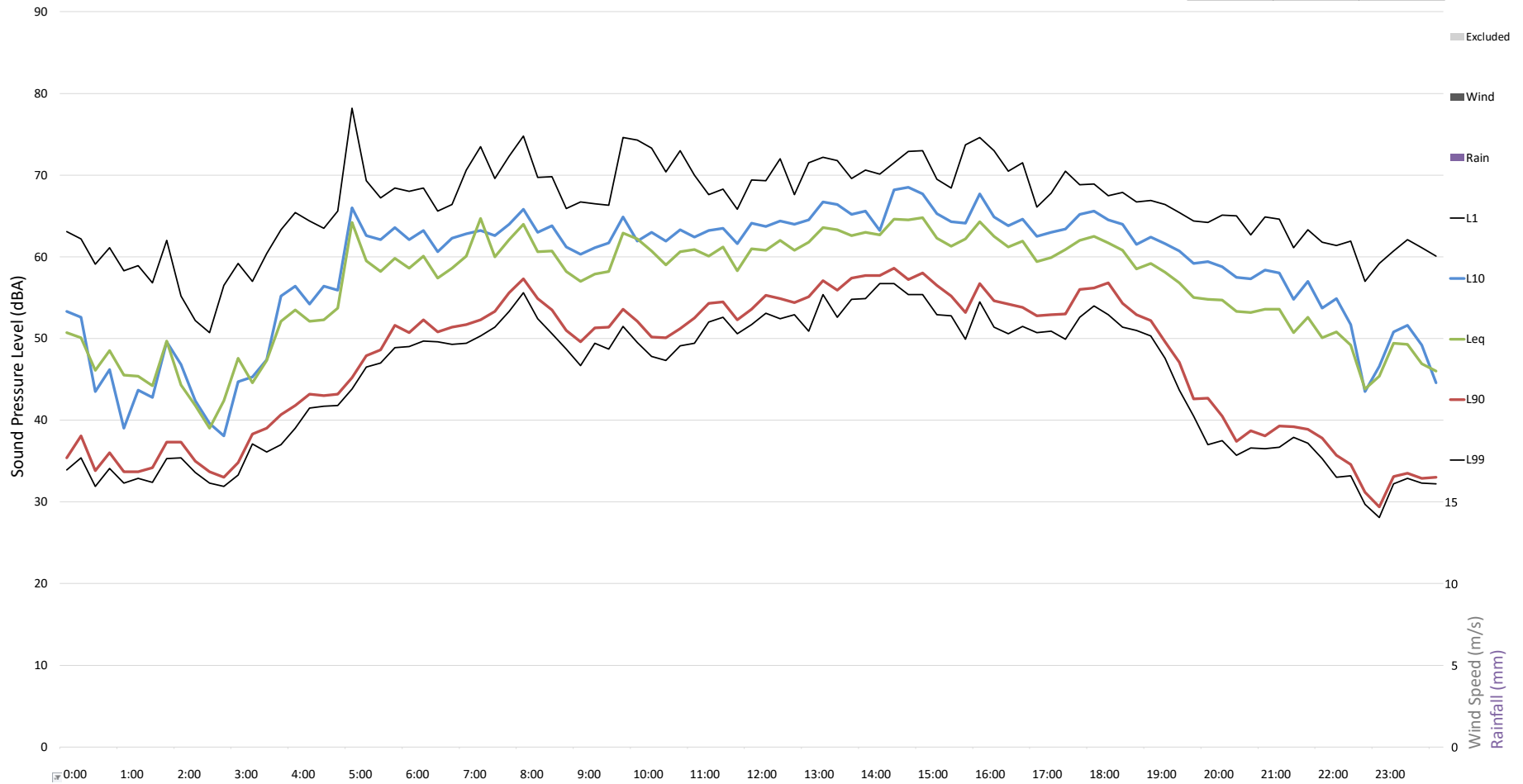
Logger Location: At the West Boundary of School Approximately 10m from Chelmsfold Drive Measruing Existing Traffic & Back

BOM weather data: Newcastle Nobbys IDN60901



16/10/2023  Monday  
Existing Ambient Noise Levels (dBA)

	Daytime 07:00 - 18:00		Evening 18:00 - 22:00		Nighttime 22:00 - 07:00	
	Measured	Corrected	Measured	Corrected	Measured	Corrected
L <sub>Aeq</sub> dB	61.8	61.8	57.6	57.6	53.9	53.9
L <sub>A90</sub> dB	51.2	51.2	38.4	38.4	32.4	32.4





11820 Arise Christian College, Metford

Project Address: 75-81 Chelmsford Dr, Metford NSW 2323

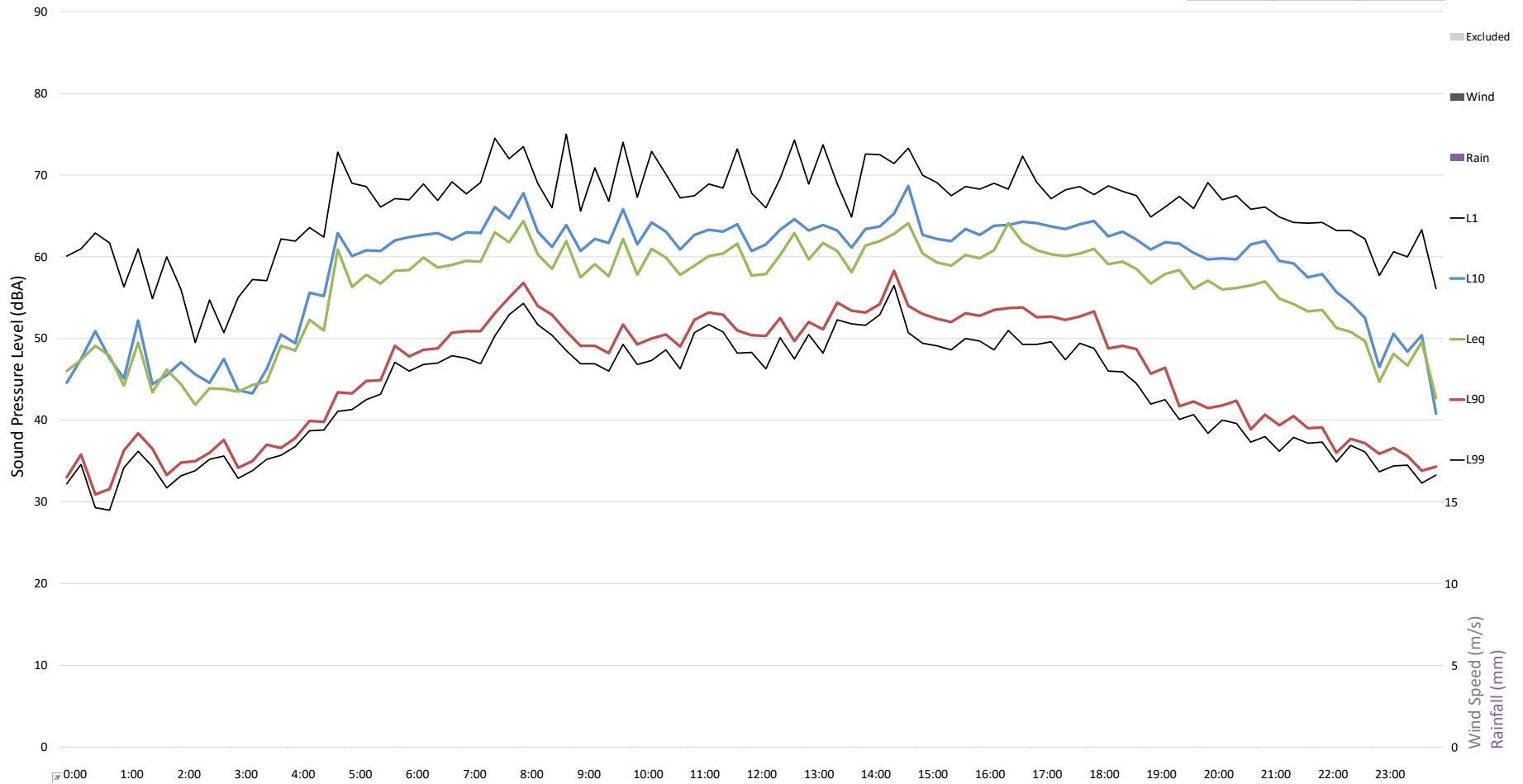
Logger Location: At the West Boundary of School Approximately 10m from Chelmsfold Drive Measruing Existing Traffic & Back

BOM weather data: Newcastle Nobbys IDN60901



17/10/2023 Tuesday  
Existing Ambient Noise Levels (dBA)

	Daytime 07:00 - 18:00		Evening 18:00 - 22:00		Nighttime 22:00 - 07:00	
	Measured	Corrected	Measured	Corrected	Measured	Corrected
L <sub>Aeq</sub> dB	60.8	60.8	57.5	57.5	53.7	53.7
L <sub>A90</sub> dB	49.4	49.4	39.2	39.2	33.6	33.6



### 11820 Arise Christian College, Metford

Project Address: 75-81 Chelmsford Dr, Metford NSW 2323

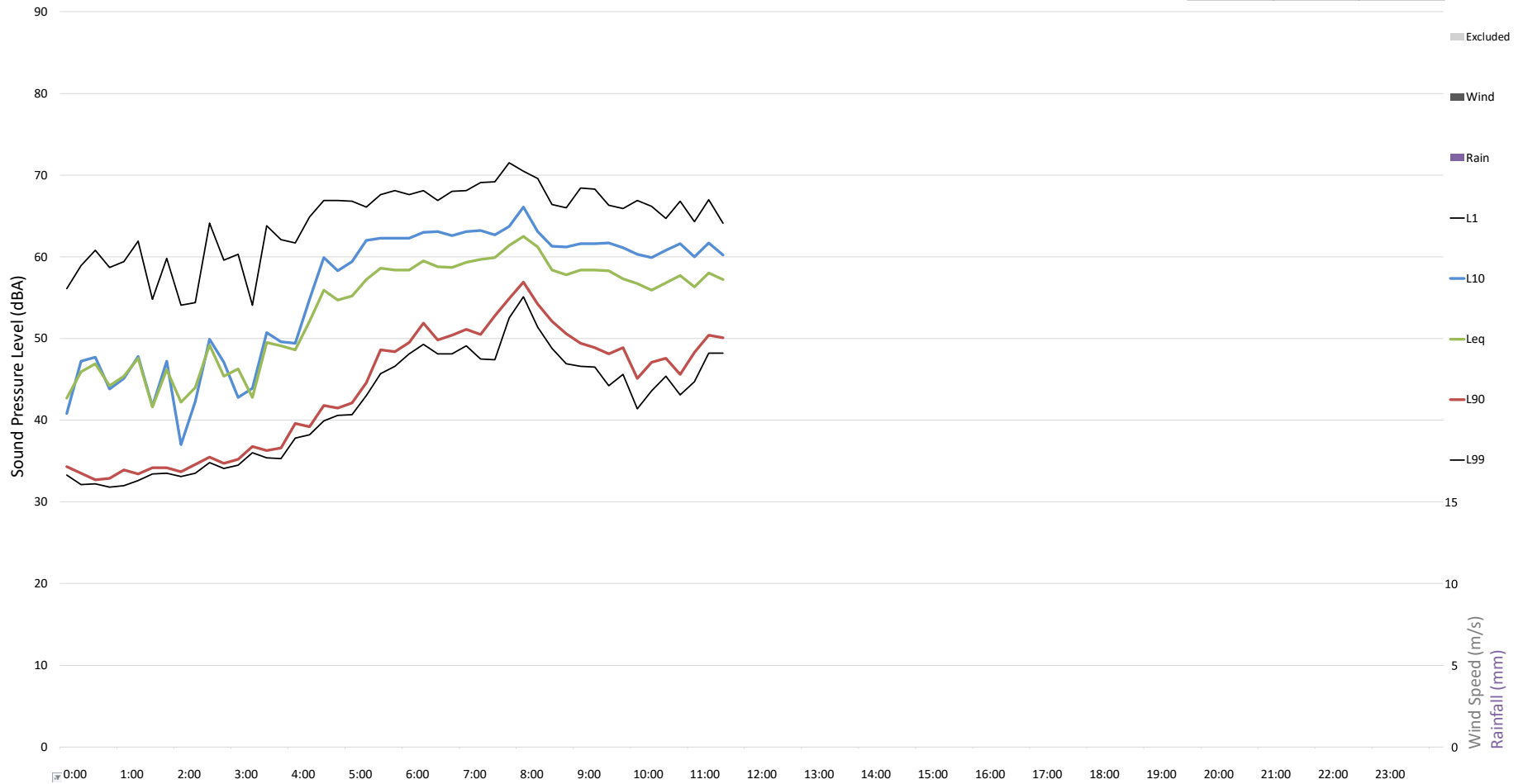
Logger Location: At the West Boundary of School Approximately 10m from Chemsfold Drive Measruing Existing Traffic & Back

BOM weather data: Newcastle Nobbys IDN60901



18/10/2023 Wednesday  
Existing Ambient Noise Levels (dBA)

	Daytime 07:00 - 18:00		Evening 18:00 - 22:00		Nighttime 22:00 - 07:00	
	Measured	Corrected	Measured	Corrected	Measured	Corrected
L <sub>Aeq</sub> dB						
L <sub>A90</sub> dB						





PO Box 345, Lane Cove 1595

+612 9460 6824 — [admin@pka.com.au](mailto:admin@pka.com.au)