



ANAVS-ACOUSTIC NOISE & VIBRATION SOLUTIONS P/L

Office 9, 438 Forest Rd, Hurstville, NSW 2220. ABN: 42 663 590 430

Phone: 9793 1393

Fax: 9708 3113

Email: info@acousticsolutions.com.au

Acoustic Report

For the Proposed Community Facility

at

No. 11 Curtis Rd, Chester Hill

Prepared by: Domeniki Tsagaris M.I.E. Aust, B.E. (UNSW)

Australian Acoustical Society (Sub).

Approved by: Moussa Zaioor M.I.E. Aust, CPENG

Australian Acoustical Society (Member).

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1.0 INTRODUCTION

ANAVS - Acoustic, Noise & Vibration Solutions Pty Ltd was commissioned to investigate the environmental noise impact of the proposed community facility at No. 11 Curtis Rd, Chester Hill on the local environment in accordance with Canterbury-Bankstown Council requirements.

Noise breakout from the use of the proposed building, including all proposed mechanical plants and equipment, is to comply with the NSW Noise Policy for Industry (2017), Noise Guide for Local Government, NSW Road Noise Policy and Canterbury-Bankstown Council requirements.

This commission involves the following:

- Inspect the site and environs.
- Measure the background noise levels at critical locations and times.
- Establish acceptable noise level criterion.
- Quantify noise emissions from the proposed community facility
- Calculate the level of noise emission, taking into account building envelope transmission loss, screen walls and distance attenuation.
- Provide in principle noise control recommendations (if necessary).
- Prepare an Environmental Noise Impact Report.

2.0 GENERAL DESCRIPTION AND ENVIRONMENT

The site is located on Curtis Rd in the suburb of Chester Hill (Figure 1 – Site Location). As per the proposed architectural plans provided by AKT Engineering & Consulting dated December 2nd, 2024, the proposal involves the change of use of an existing bowling & recreation club to a community facility (Figure 2 – Site Layout). No alterations or additions are proposed to the existing structure or building facade.

The proposed site is located within a primarily residential area with industrial premises located west of the site (Figure 3 – Surrounding Environment). The nearest residential receivers that have the potential to be affected by the operation of the proposed community facility are the tenancies located in Table 2.1 (Figure 4 – Nearest Residential Receivers).

Table 2.1 – Nearest Residential Receivers

| Receiver | Address & Location | Dwelling Type |
|----------|--|--|
| R1 | No. 9 & 9A and No. 10 Larkview Ave, Chester Hill | Single Storey Residence and Double-Storey Duplex |
| R2 | No. 7 and No. 8 Larkview Ave, Chester Hill | Single Storey Residences |
| R3 | No. 10-22 Biara St, Chester Hill | Single Storey Residences |
| R4 | No. 7 Ashton Ave, Chester Hill | Single Storey Residence |
| R5 | No. 4 Peek Pl, Chester Hill | Single Storey Residence |

As mentioned above, the existing building will be retained and will not undergo any alterations. The existing site features an on-ground car park that accommodates a total of forty-seven (47) car parking spaces including two (2) disabled spaces located at the front of the site (Figure 2 – Site Layout). **As the existing car park is approved and there are no proposed alterations, the following assessment will only examine noise emitted by the operation of the proposed community facility.**

The proposed community facility will feature a main hall, kitchen, two (2) office spaces, three (3) gazeboes and an outdoor deck (Figure 5 – Ground Floor Plan). The site also features several bowling greens along the south and south-east of the property. There will be a maximum of one hundred (100) patrons inside of the community facility at any time.

The proposed operating hours for the community facility are as follows:

- Monday to Sunday: 9:00 am – 10:00 pm

The proposed centre will be used to facilitate community-based events/services that mainly comprise of the following:

- Soccer Training
- Community services & assistance
- Group/club/board meetings
- Friday Islamic prayer
- Family events & funeral services
- Sunday Christening, Mass or similar

A maximum of one hundred (100) patrons are expected inside the community facility at any one time; however, this is only expected during Friday Prayer and Sunday Christening/Mass. At any other time, a maximum of eighty (80) patrons are expected to attend during the week for community/board meetings or family services/funeral services.

3.0 NOISE SURVEY & INSTRUMENTATION

On the 3rd of December, 2024, an engineer from this office went to the above address and carried out noise measurements to determine background noise levels at the proposed development. Unattended noise measurements (Point A) were carried out at the rear of the site adjacent to the nearest residential receiver at No. 18 Biara St (Figure 6 – Noise Reading Location – Point A).

The unattended noise measurements were conducted for seven (7) days between the 3rd of December, 2024, and the 10th of December, 2024. The noise survey was conducted to determine the L_{A90} (15 minutes) and L_{Aeq} (15 minutes) of the existing background noise levels during the day (7:00-18:00), evening (18:00-22:00) and night (22:00-7:00).

All unattended sound level measurements and analysis performed throughout this project are carried out with a NSRTW_MK3 wireless sound level data logger (Serial No. CPp0Dd04c1c9iLtiSwBRPD). The sound logger's specifications are as follows:

- Type 1 digital MEMS microphone
- Non-volatile 128 Mb recording memory
- Records L-max, L-min and Leq levels
- Log interval adjustable from 125 ms (8 points per second) up to hours
- A, C and Z weighting curves
- Oscilloscope and spectrum analyser features
- Observes and records 100% of the acoustic signal
- Software calculates global Leq according to ISO and OSHA methods
- WIFI connectivity to report measured levels remotely
- Weatherproof casing designed for indoor/outdoor applications
- Activity detection and logging.
- Long-term measurement and recording of acoustic levels for environmental impact studies.

The logger is factory calibrated and calibration certificate dated 14/08/2023 is presented in Figure 7 – Calibration Certificate.

The microphone was positioned 1.5m from ground level. The machine was calibrated prior and after reading using our Svantek SV 33A S/N: 90200 Class 1 Calibrator with no significant drift recorded. Any noise readings affected by strong wind or rain have been disregarded. A summary of those readings is presented in the table below:

Table 3.1 – Summary of Unattended Background Noise Measurements at Point A
December 3rd, 2024 – December 10th, 2024

| <i>Location</i> | <i>Time of Day</i> | <i>L_{Aeq} 15 Minute dB(A)</i> | <i>L_{90} 15 Minute dB(A)</i> | <i>RBL *</i> |
|--|---------------------------|--|---|---------------------|
| Point A – Rear Boundary of Site | Day 7:00-18:00 | 48 | 40 | 37 |
| | Evening 18:00-22:00 | 45 | 40 | 38 |
| | Night 22:00-7:00 | 41 | 38 | 35 |

*RBL is calculated as per Fact Sheet B of the NPfI (2017)

Noise data is validated using the weather zone websites addresses:

<https://www.weatherzone.com.au/station/SITE/66137/observations/2024-12-03> to
<https://www.weatherzone.com.au/station/SITE/66137/observations/2024-12-10>

The Full Average Statistical Noise Parameters L_{Aeq} , 15 minutes), L_{A90} , 15 minutes), L_{A10} , 15 minutes), L_{A1} , 15 minutes) are presented in Figure 8 – Noise Survey (Point A).

4.0 ACCEPTABLE NOISE LEVEL FROM PROPOSED DEVELOPMENT– NOISE BREAK OUT

4.1 NSW NOISE POLICY FOR INDUSTRY (2017)

The above policy seeks to promote environmental well-being through preventing and minimizing noise by providing a framework and process for deriving noise limits conditions for consent and licenses.

The Noise Policy for Industry NPfI 2017 recommends two separate noise criteria to be considered, the Intrusive Noise Criteria and the Amenity Noise Criteria. A project noise trigger level being the lowest of the amenity and the intrusiveness noise level is then determined.

If the predicted noise level L_{Aeq} from the proposed project exceeds the noise trigger level, then noise mitigation is required. The extent of any ‘reasonable and feasible’ noise mitigation required whether at the source or along the noise path is to ensure that the predicted noise level L_{Aeq} from the project at the boundary of most affected residential receiver is not greater than the noise trigger level.

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The Noise Policy for Industry 2017 recommends two separate noise criteria to be considered, the Intrusive Noise Criteria and the Amenity Noise Criteria. A project’s noise trigger level is determined as the lower of the amenity and the intrusiveness noise level.

If the predicted noise level L_{Aeq} from the proposed project exceeds the noise trigger level, then noise mitigation is required. The extent of any ‘reasonable and feasible’ noise mitigation required whether at the source or along the noise path is to ensure that the predicted noise level L_{Aeq} from the project at the boundary of the most affected residential receiver is not greater than the noise trigger level.

4.1.1 AMENITY NOISE CRITERIA

The amenity noise levels presented for different residential categories are presented in Table 2.2 of the Noise Policy for Industry 2017. These levels are introduced as guidance for appropriate noise levels in residential areas surrounding industrial areas.

The recommended amenity noise levels for the proposed development at No. 11 Curtis Rd, Chester Hill are presented in Table 4.1.1.1 below.

Table 4.1.1.1- Recommended Amenity Noise levels

| <i>Type of Receiver</i> | <i>Area</i> | <i>Time Period</i> | <i>Recommended Leq Noise Level, dB(A)</i> |
|-------------------------|-------------|--------------------|---|
| Residence | Urban | Day | 60 |
| | | Evening | 50 |
| | | Night | 45 |

Where a noise source contains certain characteristics such as tonality, impulsiveness, intermittency, irregularity or dominant low-frequency content, a correction is to be applied which is to be added to the measured or predicted noise levels at the receiver, before comparison with the criteria. Shown below are the correction factors that are to be applied:

Table 4.1.1.2 – Modifying Factor Corrections as per Fact Sheet C (Noise Policy for Industry 2017)

| <i>Factor</i> | <i>Correction</i> |
|---------------------|---|
| Tonal Noise | + 5 dB ^{1,2} |
| Low-Frequency Noise | + 2 or 5 dB ¹ |
| Intermittent Noise | + 5 dB |
| Duration | + 0 to 2 dB(A) |
| Maximum Adjustment | Maximum correction of 10 dB(A) ¹ (excluding duration correction) |

1. Where a source emits tonal and low-frequency noise, only one 5-dB correction should be applied if the tone is in the low-frequency range, that is, at or below 160 Hz.
2. Where narrow-band analysis using the reference method is required, as outlined in column 5, the correction will be determined by the ISO1996-2:2007 standard.

Correction for duration is to be applied where a single-event noise is continuous for a period of less than two and a half hours in any assessment period. The allowable exceedance of the $L_{Aeq,15min}$ equivalent noise criterion is depicted in Table 7.1.1.3 for the duration of the event. This adjustment accounts for unusual and one-off events and does not apply to regular and/or routine high-noise level events.

Table 4.1.1.3 – Adjustment for Duration as per Fact Sheet C (Noise Policy for Industry 2017)

| <i>Allowable duration of noise (one event in any 24-hour period)</i> | <i>Allowable exceedance of LAeq,15min equivalent project noise trigger level at receptor for the period of the noise event, dB(A)</i> | |
|--|---|------------------------------------|
| | <i>Daytime & evening (7 am–10 pm)</i> | <i>Night-time (10 pm–7 am)</i> |
| 1 to 2.5 hours | 2 | Nil |
| 15 minutes to 1 hour | 5 | Nil |
| 6 minutes to 15 minutes | 7 | 2 |
| 1.5 minutes to 6 minutes | 15 | 5 |
| less than 1.5 minutes | 20 | 10 |

According to Section 2.4 of the above policy, the project amenity noise level is determined as follows:

Project amenity noise level for industrial developments = recommended amenity noise level (Table 2.2) minus 5 dB(A)

To convert from a period level to a 15-minute level, 3 dB (A) are added as per Section 2.2 of the policy.

Therefore, the project amenity noise level for the proposed development at No. 11 Curtis Rd, Chester Hill is as follows:

- Day period: $60 - 5 + 3 = \mathbf{58 \text{ dB(A)}}$
- Evening period: $50 - 5 + 3 = \mathbf{48 \text{ dB(A)}}$
- Night period: $45 - 5 + 3 = \mathbf{43 \text{ dB(A)}}$

4.1.2 INTRUSIVENESS NOISE CRITERIA

Section 2.3 of the NSW Noise Policy for Industry summarizes the intrusive criteria as below:

$$L_{Aeq, 15 \text{ minute}} \leq \text{rating background level plus 5}$$

While the background noise level known as $L_{A90,15 \text{ minutes}}$ is the Noise exceeded 90% percent of a time period over which annoyance reactions may occur (taken to be 15 minutes). The RBL is defined as the overall single-figure $L_{A90,15 \text{ minutes}}$ background level representing each assessment period (day/evening/night) over the whole monitoring period.

For the short-term method, the rating background noise level is simply the lowest measured LAF90,15min level.

For the long-term method, the rating background noise level is defined as the median value of:

- all the day assessment background levels over the monitoring period for the day as per Fact sheet B of the NPfI .
- all the evening assessment background levels over the monitoring period for the evening as per Fact sheet B of the NPfI and
- all the night assessment background levels over the monitoring period for the night as per Fact sheet B of the NPfI .

The predicted noise from the source $L_{Aeq,15 \text{ min}}$ is measured at the most affected point within the most affected residential at the point where the most impact occurs. Therefore, the acceptable L_{eq} noise intrusiveness criterion for the proposal during the day, evening and night is as follows:

- Day period: $37 + 5 = \mathbf{42 \text{ dB(A)}}$
- Evening period: $38 + 5 = \mathbf{43 \text{ dB(A)}}$
- Night period: $35 + 5 = \mathbf{40 \text{ dB(A)}}$

4.1.3 PROJECT NOISE TRIGGER LEVEL

A summary of Intrusiveness and Amenity Noise Levels as determined in Sections 4.1.1 & 4.1.2 are shown in Table 4.1.3.1 below:

Table 4.1.3.1- Summary of Intrusiveness and Project Amenity Noise levels

| <i>Period</i> | <i>Intrusiveness Noise Level dB(A)</i> | <i>Project Amenity Noise level dB(A)</i> |
|--|---|---|
| Day Time (7:00am-6:00pm) | 42 | 58 |
| Evening Time (6:00pm-10:00pm) | 43 | 48 |
| Night & Early Morning (10:00pm – 7:00am) | 40 | 43 |

The project noise trigger level is the lower (that is, the most stringent) value of the amenity and intrusiveness noise levels for the day, evening and night-time. Therefore, the project noise trigger levels for the proposed development are as shown below:

- **Day period $L_{Aeq,15 \text{ min}}$: 42 dB(A)**
- **Evening period $L_{Aeq,15 \text{ min}}$: 43 dB(A)**
- **Night period $L_{Aeq,15 \text{ min}}$: 40 dB(A)**

The proposed developments and its activities including all mechanical plants will not exceed the project noise trigger level at the most sensitive location, provided all noise control recommendations in Section 6 are adhered to.

4.2 TRAFFIC NOISE GENERATION CRITERIA

Table 3 in Section 2.3.1 of the NSW Road Noise Policy, sets out traffic noise assessment criteria as follows:

Table 4.2.1 – NSW Road Noise Policy Traffic Noise Criteria

| Road Category | Type of Project/Land Use | Assessment Criteria – dB(A) | |
|---------------|---|----------------------------------|----------------------------------|
| | | Day (7am – 10pm) | Night (10pm – 7am) |
| Local Roads | Existing Residences affected by additional traffic on existing local roads generated by land use developments | L_{Aeq} (1 hour) 55 (external) | L_{Aeq} (1 hour) 50 (external) |

4.3 SLEEP DISTURBANCE

In order to minimize the potential of sleep disturbance due to transient noises from the proposed childcare during the night hours (10:00pm – 7:00am), the Noise Policy for Industry 2017 states as below:

Where the subject development/premises night-time noise levels at a residential location exceed:

- $L_{Aeq,15min}$ **40 dB(A) or the prevailing RBL plus 5 dB, [35 + 5 = 40 dB(A)], whichever is the greater, and/or**
- L_{AFmax} **52 dB(A) or the prevailing RBL plus 15 dB [35 + 15 = 50 dB(A)], whichever is the greater, a detailed maximum noise level event assessment should be undertaken.**

Further studies by the enHealth Council (2004) and the guidelines published by the World Health Organisation (1999) were reviewed and analysed in terms of the guidance on noise exposure and sleep disturbance. The enHealth report states that:

‘as a rule for planning for short-term or transient noise events, for good sleep over 8 hours the indoor sound pressure level measured as a maximum instantaneous value should not exceed approximately 45 dB(A) $L_{A, (Max)}$ more than 10 or 15 times per night’.

Given that the Community facility will operate only during daytime and evening hours, an assessment of Sleep Disturbance is not relevant to this acoustic study.

5.0 PREDICTED NOISE LEVELS ARISING FROM THE PROPOSED USE INCLUDING MECHANICAL PLANT

Four major noise producing activities at the proposed Community Facility have been considered:

- Noise from additional vehicles on the road utilising the above development and noise from vehicles in the on-ground car park. **As the existing car park is previously approved with no proposed alterations, a car park noise assessment is not required.**
- Noise from indoor activities conducted inside the community facility
- Noise from patrons in the outdoor deck & gazeboes
- Noise from Mechanical Plant & Air-Conditioning

5.1 NOISE FROM PATRONS INSIDE COMMUNITY FACILITY

A maximum of one hundred (100) patrons are expected inside the community facility at any one time; however, this is only expected during Friday Prayer and Sunday Christening/Mass. At any other time, a maximum of eighty (80) patrons are expected to attend during the week for community/board meetings or family services/funeral services.

Mass gatherings including Friday Islamic Prayer and Sunday Christening/Mass usually involve a single person speaking into a microphone at any one time with the absence of music. These events will only occur during the day time. Meetings and services will be quiet in nature (i.e. educational, counselling etc.) with each including a maximum of 80 attendees.

As per Harris/Pearson, Bennet, & Fidell (1977) report, the sound power level of (1) person talking (male & female) is as per Table 5.1.1 below.

Table 5.1.1 – Sound Power Level of Male & Females at different vocal levels

| Vocal Effort | No. of Talkers | Sound Power Levels [dB] at Octave Band Centre Frequencies [Hz]*,**,*** | | | | | | | |
|--------------|----------------|--|------|------|------|------|------|------|-------|
| | | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB(A) |
| Females | | | | | | | | | |
| Casual | 1 | 48.0 | 61.0 | 61.0 | 54.0 | 51.0 | 47.0 | 48.0 | 61.0 |
| Normal | 1 | 49.0 | 63.0 | 66.0 | 61.0 | 56.0 | 44.0 | 50.0 | 66.0 |
| Raised | 1 | 47.0 | 67.0 | 72.0 | 70.0 | 66.0 | 61.0 | 54.0 | 74.0 |
| Loud | 1 | 47.0 | 62.0 | 77.0 | 79.0 | 76.0 | 70.0 | 62.0 | 82.0 |
| Shouted | 1 | 48.0 | 68.0 | 82.0 | 89.0 | 88.0 | 81.0 | 71.0 | 93.0 |
| Males | | | | | | | | | |
| Casual | 1 | 58.0 | 62.0 | 63.0 | 55.0 | 53.0 | 51.0 | 48.0 | 63.0 |
| Normal | 1 | 60.0 | 66.0 | 69.0 | 62.0 | 58.0 | 54.0 | 48.0 | 69.0 |
| Raised | 1 | 65.0 | 71.0 | 76.0 | 70.0 | 66.0 | 61.0 | 55.0 | 76.0 |
| Loud | 1 | 69.0 | 78.0 | 85.0 | 84.0 | 79.0 | 73.0 | 63.0 | 87.0 |
| Shouted | 1 | 58.0 | 83.0 | 93.0 | 97.0 | 93.0 | 85.0 | 76.0 | 100.0 |

It is usually the case that approximately 50% of the patrons could be talking loudly at any one time in the indoor Community Facility Areas. For a number of patrons (n) in any vocal category the increase in noise level at any octave band centre frequency is $\Delta L = 10 \log_{10}(n)$.

The total noise level from all groups is determined using the equation:

$$L = 10 \log_{10} \left(\sum_{i=1}^n 10^{(L_i / 10)} \right)$$

Where L_i is the noise level from each group.

Table 5.1.2 below lists the Total Noise Level (Sound Power) L_{Aeq} from a single speaker with a raised voice talking into a microphone + patrons in the indoor Community Facility as is associated in the Friday prayers, Christening & Sunday Mass .

Table 5.1.2- Sound Power Level L_{Aeq} from Raised Speech into Microphone - Indoor Community Facility Area -

| Description | | Octave Band Centre Frequencies (Hz) | | | | | | | | |
|--|-------|-------------------------------------|----|-----|-----|-----|----|----|----|----|
| | dB(A) | 31.5 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| L _{Aeq} single Speaker with a raised voice talking into a microphone - Indoor Community Facility Area - Friday prayers, Christening & Sunday Mass | 87 | ** | 63 | 69 | 78 | 85 | 84 | 79 | 73 | 63 |

Table 5.1.3 below lists the Total Noise Levels (Sound Power) L_{Aeq} from patrons in the indoor Community Facility Area at other events.

Table 5.1.3- Sound Power Level L_{Aeq} from 80 Patrons - Indoor Community Facility Area -

| Description | | Octave Band Centre Frequencies (Hz) | | | | | | | | |
|---|-----------|-------------------------------------|----|-----|-----|-----|----|----|----|----|
| | dB(A) | 31.5 | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k |
| L_{Aeq} 80 Patrons - Indoor Community Facility Area (50% talking) at Other Events (At Casual , Normal & Raised Vocal Effort) | 89 | ** | 70 | 76 | 83 | 88 | 85 | 82 | 76 | 70 |

The sound loss through the façade of the proposed Community facility is calculated using

Templeton/Saunders equation (A-Weighted):

$$L_{p2} = L_{p1} - R + 10\log_{10}(S) - 20\log_{10}(r) - 17 + DI \text{ dB}$$

Where;

- L_{p2} Noise level at location 2 from the source;
- L_{p1} Noise level at the source;
- R Weighted sound reduction index of the façade;
- S Area of the façade;
- r Distance in meters to location 2 from the source; and
- DI Directivity associated with the source =3.

Table 5.1.4 below presents the predicted $L_{Aeq,15 \text{ min}}$ noise levels from the inside of the Community Facility at the boundaries of the nearest residential receivers.

Table 5.1.4 – Expected L_{Aeq} from Attendees inside Community Facility at Boundary of Nearest Residential Receivers*

| <i>Activity</i> | <i>Period</i> | Expected $L_{eq,15min}$ dB(A) at R1 | Expected $L_{eq,15min}$ dB(A) at R2 | Expected $L_{eq,15min}$ dB(A) at R3 | Expected $L_{eq,15min}$ dB(A) at R4 | Expected $L_{eq,15min}$ dB(A) at R5 | Complies with L90 + 5*** |
|---|----------------------------|---|---|---|---|---|-------------------------------|
| Raised Speech into Microphone (1) + One-hundred (100) Attendees Indoors – Friday Prayer & Sunday Christening/ Mass | 7.00am - 6.00pm (Day) | 37 dB(A) | 36 dB(A) | 4 dB(A) | 2 dB(A) | 37 dB(A) | Yes ✓ < 42 dB(A) - Day |
| Eighty (80) Attendees Indoors** –meetings & services during the week | 7.00am - 6.00pm (Day) | 39 dB(A) | 38 dB(A) | 6 dB(A) | 4 dB(A) | 39 dB(A) | Yes ✓ < 42 dB(A) - Day |
| | 6.00pm - 10.00pm (Evening) | 39 dB(A) | 38 dB(A) | 6 dB(A) | 4 dB(A) | 39 dB(A) | Yes ✓ < 43 dB(A) - Evening |

*Assuming all recommendations in Section 6.0 are adhered to

**50% talking

***NPfI does not apply; Exclusions listed in section 1.5 page 5 of the policy. – Background Noise level + 5 applies.

5.2 NOISE FROM MECHANICAL PLANT & EQUIPMENT

As previously mentioned, there are no proposed changes to the existing mechanical plant & equipment. Future installations of any additional AC units are to follow recommendations setout in Section 6.5 of this report.

5.3 CUMULATIVE NOISE IMPACT & COMPLIANCE

The cumulative noise emanating from the proposed development (Carpark- Already Approved-, Proposed Community Facility including the Mechanical plant & Air-Conditioning) will comply with the noise trigger levels and noise limits established for this project provided all recommendations in Section 6 are adhered to.

6.0 NOISE CONTROL RECOMMENDATIONS

6.1 MANAGEMENT OF PROPOSED CENTRE & USE OF USHERS

Attendees must be informed of the nearest residential noise receivers and the importance of minimizing indoor and outdoor noise produced.

We recommend ushers are used when attendees are arriving/departing the Community Facility. Ushers to ensure that attendees enter and leave the site in an orderly fashion and farewell and greet each other ***inside the centre only***.

Ushers should discourage people from accumulating in the street adjacent to neighboring properties. Should people gather and accumulate on-site or on the street the ushers should ask them kindly to leave the area.

6.2 SIGNS

Signs reminding attendees to minimise noise at all times shall be installed at entry and exit points of the proposed centre and car parking area. It is advised that the signs be provided in several languages to accommodate the different language needs of members of the community.

6.3 SOUND BARRIER

We recommend that the 1.8 metre Gap-Free Sound Barrier is to be maintained around the perimeter as per Figure 9 – Noise Barrier Location. The gap-free barrier is to be of lapped & capped timber, Colorbond or masonry construction. with a minimum of 15 kg/m² surface density.

6.4 OPERATION OF WINDOWS & DOORS OF THE COMMUNITY FACILITY

Existing structure is double brick structure with 10.38 mm and 6.38 mm laminated glass is to be retained. All doors are to have acoustic seals fitted around the door. A drop seal is required at the base of the external door.

We recommend that windows and doors of the proposed community centre are closed, and mechanical ventilation is used whenever Friday Islamic Prayer and Sunday Christening/Mass occurs.

6.5 MECHANICAL PLANT & EQUIPMENT

- Any new Airconditioning/ventilation units are to be located minimum 7 meters away from any residential boundary of the site.
- The outdoor Sound Power Level of any air conditioning/ventilation unit is not to exceed 75(A) and ac units to be installed on anti-vibration pads.

6.6 NOISE MANAGEMENT PLAN

A Noise Management Plan should be implemented and should include the following:

- Install a contact number at the front of the Community Facility so that complaints regarding the centre operation can be made.
- Implement a complaint handling procedure. If a noise complaint is received the complaint should be recorded on a Complaint Form. The Complaint Form should contain the following:
 - Name and Address of the Complainant
 - Time and Date the Complaint was received
 - The nature of the complaint and the time/date the noise was heard
 - The name of the employee that received the complaint
 - Actions taken to investigate the complaint and the summary of the results of the investigation
 - Indication of what was occurring at the time the noise was happening (if applicable)
 - Required remedial action (if applicable)
 - Validation of the remedial action
 - Summary of feedback to the complainant

Also a permanent register of complaints should be held on the premises, which shall be reviewed monthly by attendees to ensure all complaints are being responded to. All complaints received shall be reported to management with initial action/investigation commencing within 7 days. The complainant should also be notified of the results and actions arising from the investigation.

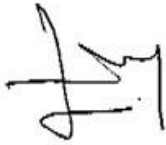
7.0 NOISE IMPACT STATEMENT

ANAVS - Acoustic, Noise & Vibration Solutions have taken background noise level measurements at the most noise sensitive locations near the proposed Community Facility at No. 11 Curtis Rd, Chester Hill. The levels of noise emission from the proposed development at No. 11 Curtis St, Chester Hill have been calculated and quantified using reliable test data.

Provided the noise controls as recommended in Section 6.0 of this report are fully implemented, we are confident that the noise emission levels will be controlled and not exceed the criteria outlined in Section 4.0 of this report and will satisfy the conditions/requirements of Canterbury-Bankstown Council.

Should you require further explanations, please do not hesitate to contact us.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'M. Zaioor', with a stylized flourish at the end.

M. Zaioor
M.S. Eng'g Sci. (UNSW).
M.I.E.(Aust), CPEng
Australian Acoustical Society (Member #1032).

8.0 APPENDIX

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Figure 1 – Site Location

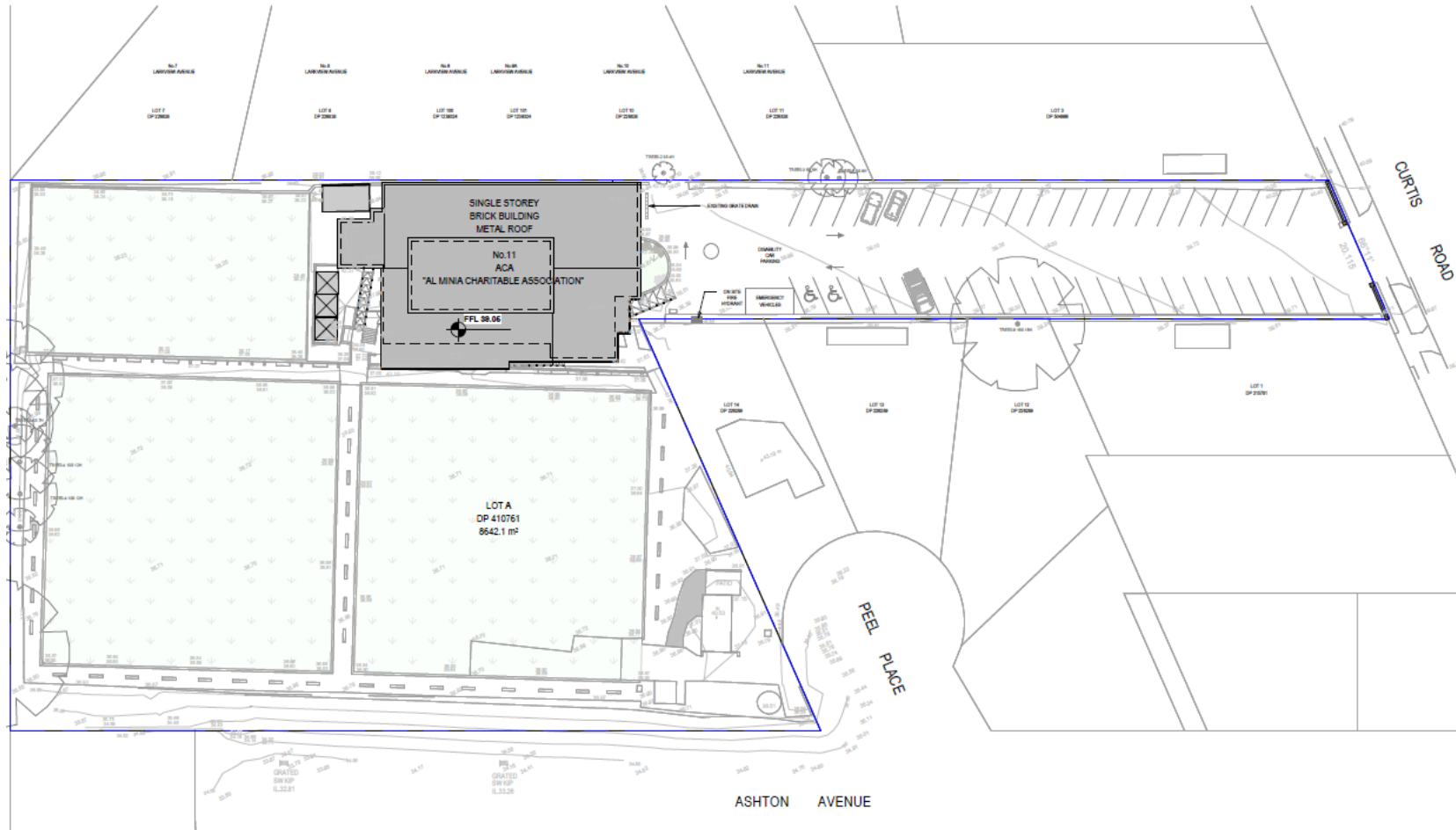


Figure 2 - Site Layout

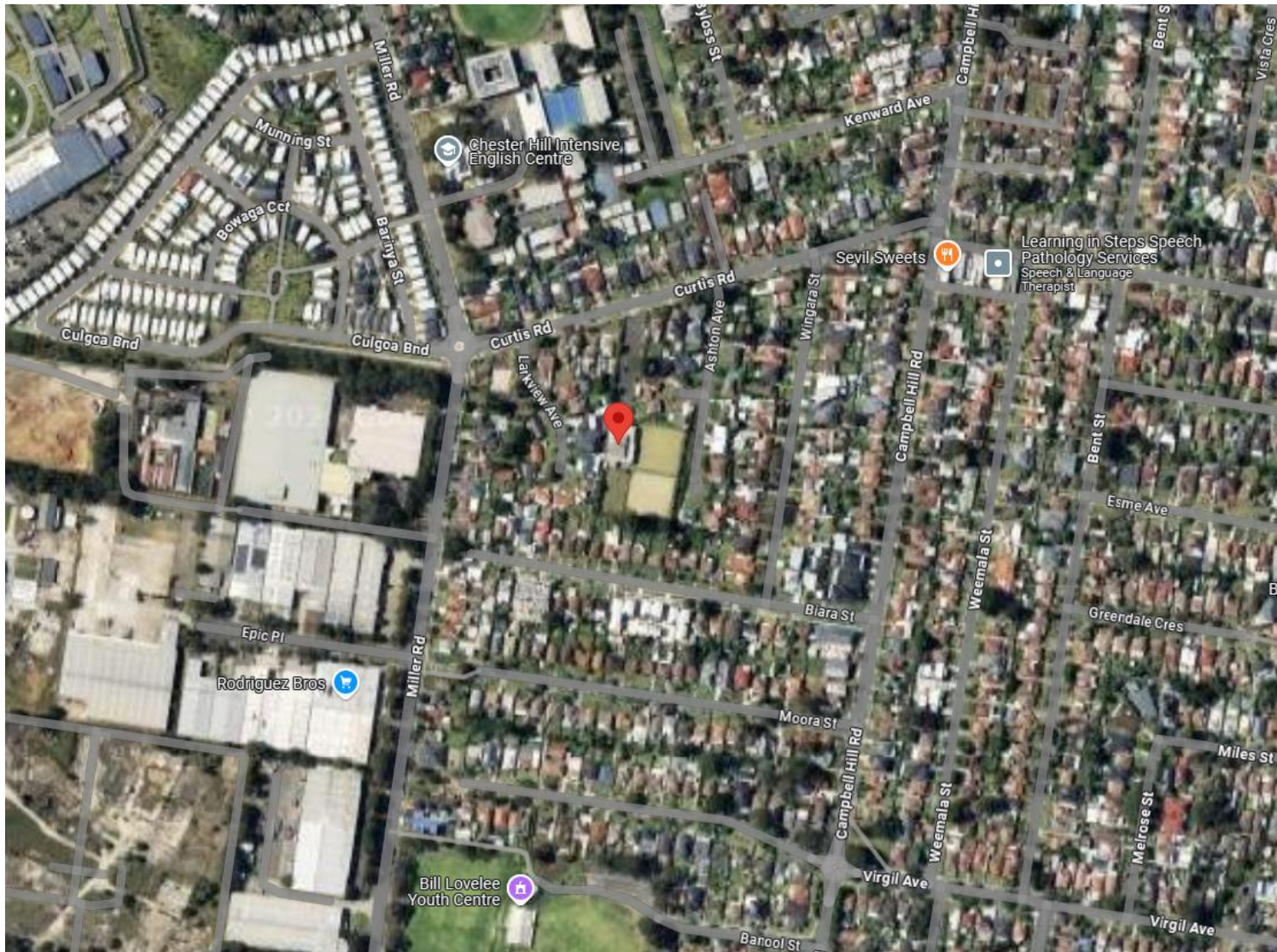


Figure 3 - Surrounding Environment



Figure 4 – Nearest Residential Receivers

Acoustic Report for Proposed Community Facility at No. 11 Curtis Rd, Chester Hill
Reference No.: 2024-338

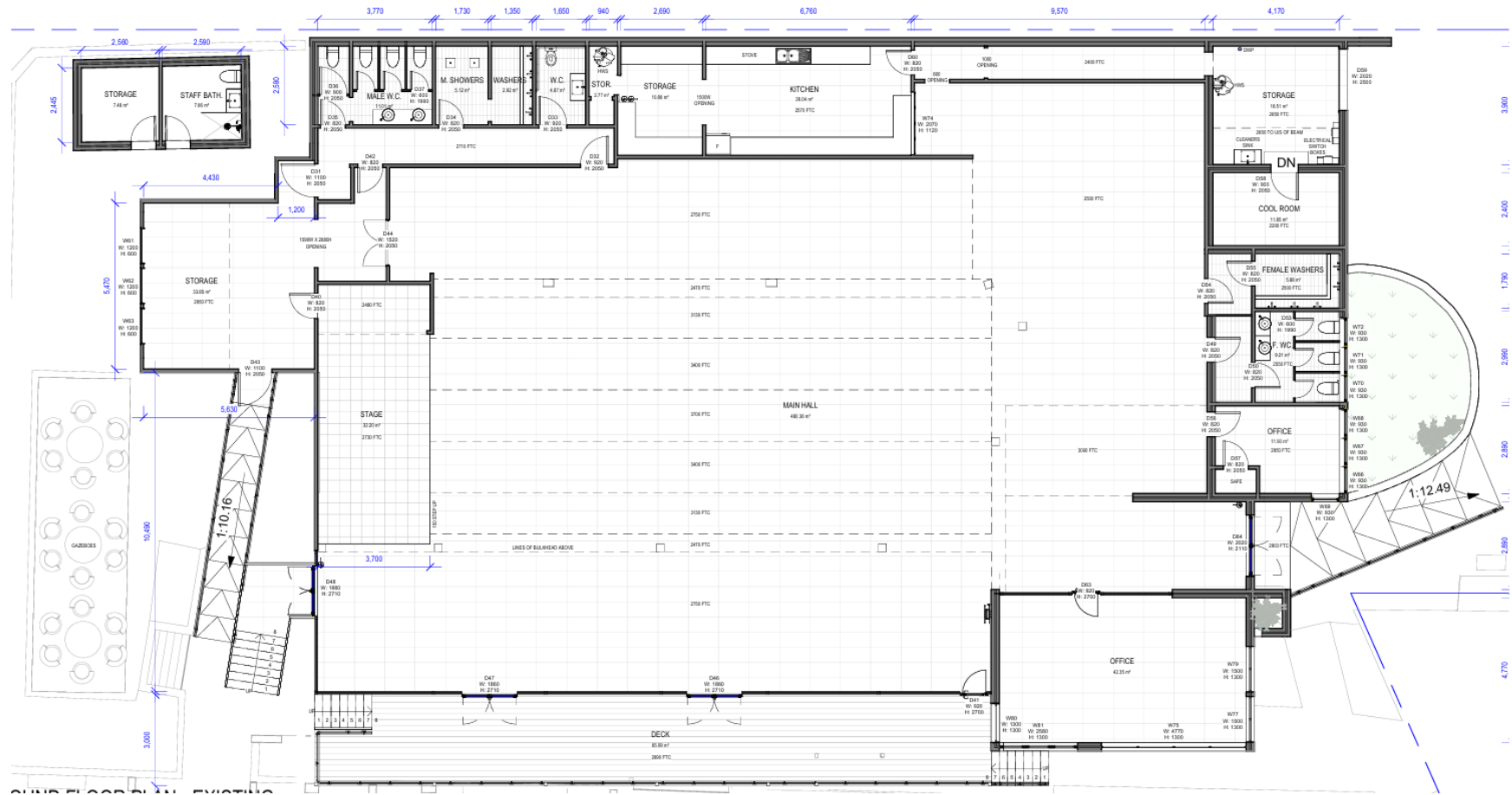



Figure 5 – Ground Floor Plan



Figure 6 - Noise Reading Location Point A



Category 2S - Traceable Certificate

instrument choice.com.au
22A Caven Road | Dry Creek | South Australia 5094
 Phone: 1300 737 871 | Fax: 1300 882 503
 customer-service@instrumentchoice.com.au
 www.instrumentchoice.com.au
 Instrument Choice is a trading name of Syntronix Pty Ltd
 (ABN: 82636621718)

| Calibration Certificate Details | | Calibration Schedule | |
|---------------------------------|----------------|----------------------|--|
| Calibration Date | 14/08/2023 | Calibration Interval | |
| Certificate Number | 25-1408202301B | Next Due Date | |

Company Details

| | |
|--------------|---|
| Company Name | ANAVS - Acoustic Noise & Vibration Solutions P/L Office 9, 438 Forest Rd Hurstville NSW 2220 Australia |
|--------------|---|

| Equipment Details | | | |
|--------------------|-------------|---------------|--------------------------------|
| Instrument Type | Sound Meter | Serial Number | CPp00d04c1c9lItSwBRPD 96043 |
| Manufacturer | Convergence | Model | NSRTW_mk3 |
| Physical Condition | Good | | |

Accuracy Calibration-2S performed (final after adjustments)
(Adjustments noted in "Any problems identified" below)

| Ambient Temperature & RH whilst performing test | | | | | |
|---|-----------------------|---|--|------------|-----------|
| 20.3°C and 52% RH | | | | | |
| Reference Meter Reading | Acceptable Difference | Supplied Meter Reading Before Calibration | Supplied Meter Reading After Calibration | Difference | Pass/Fail |
| 94.0dB | ±1dB | 93.9dB | 94.0dB | 0.0dB | Pass |
| 114.0dB | ±1dB | 113.8dB | 113.9dB | 0.1dB | Pass |

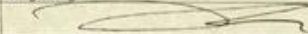
Traceability Details

| | | | |
|-------------------|---------|----------------|--------------------|
| Make | S/N | Cal Report No: | Tested at NATA Lab |
| Casella CEL-120/1 | 5230660 | C35894A | 9262 |

Any Problems Identified
 The meter is performing as expected

Category-2S Pass: ☒ Yes ☐ No

Battery Replacement: ☒ Yes ☐ No

| | |
|--------|--|
| Name | Bang Hoang |
| Signed |  |
| Date | 14/08/2023 |

The support of a scientist with every product. Call 1300 737 871 for expert advice.

Figure 7 – Calibration Certificate

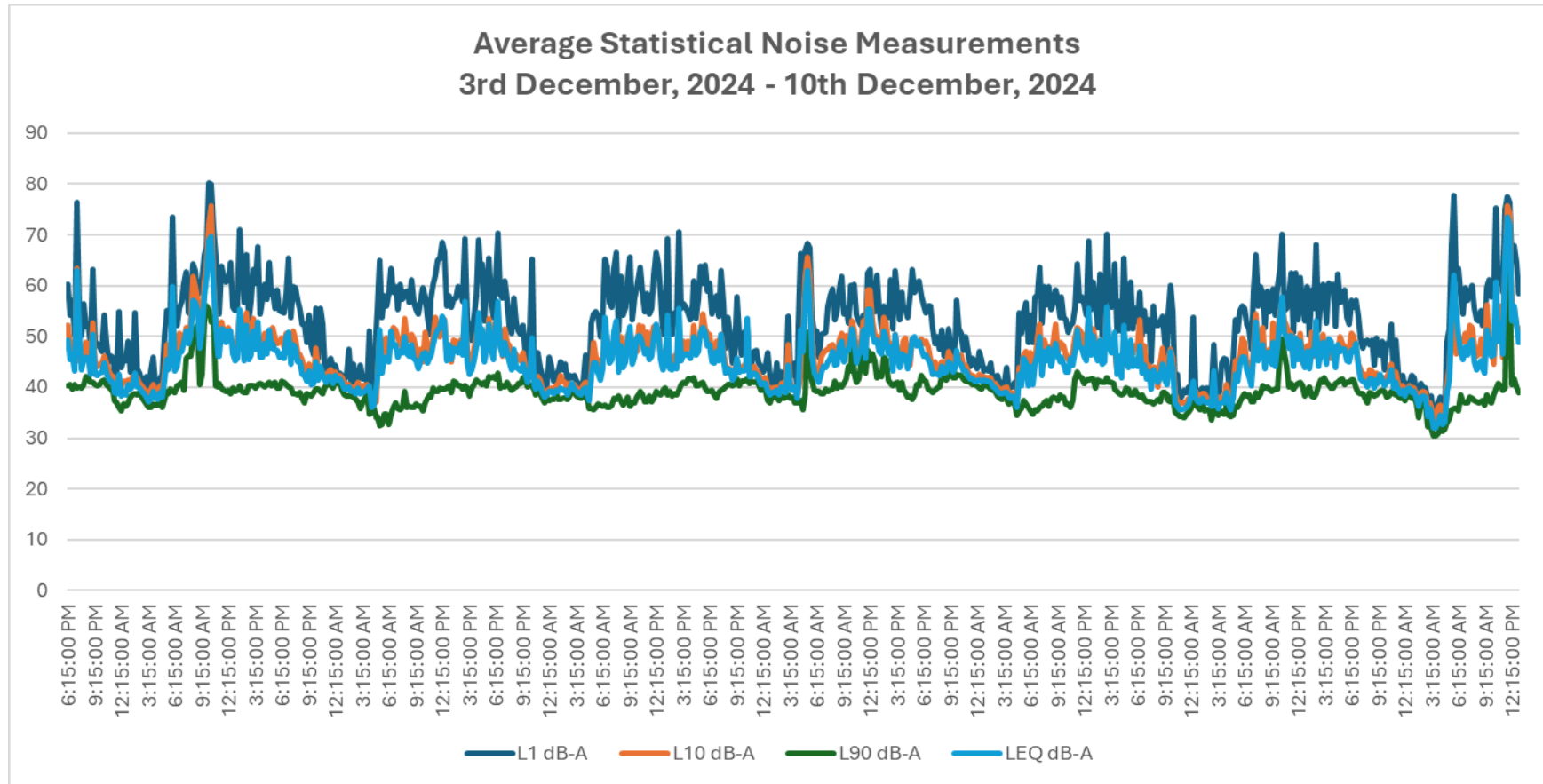


Figure 8 – Noise Survey (Point A)

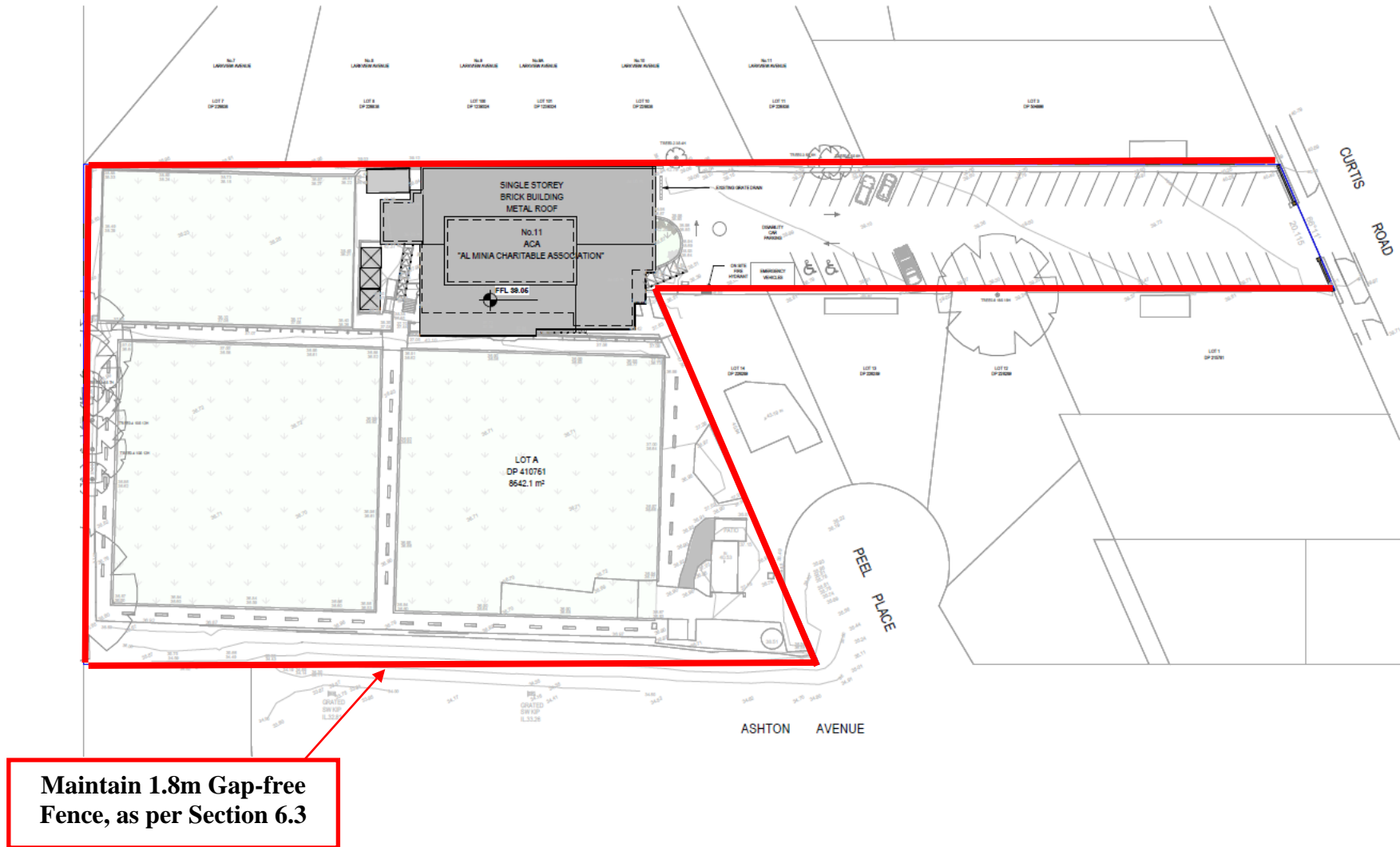


Figure 9 – Noise Barrier Location