Acoustics & Audio Production
ABN: 42 797 265 577
Phone: 0466 660 629
acoustics.ap@gmail.com
www.acoustics-ap.com.au

Dated: 25th January 2024

ACOUSTIC REPORT

ENVIRONMENTAL NOISE ASSESSMENT

PROPOSED CHANGE OF USE TO 'PLACE OF WORSHIP'

LOT 6, #12 HUGHIE EDWARDS DRIVE, MERRIWA WA 6030

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INTRODUCTION

Acoustics & Audio Production was engaged to provide an acoustic report for the proposed change of use to 'Place of Worship' located at Lot 6, #12 Hughie Edward Drive, MERRIWA WA 6030. The following acoustic assessment was compiled to determine the potential noise impact the proposed place of worship will have on the surrounding receivers, and also to ensure that compliance to the Environmental Protection (Noise) Regulations 1997 is achievable at all times during its intended operations.

This assessment was requested to form part of, and in support of, a change of use application to the City of Wanneroo, in order to ensure that the site complies with the applicable Environmental Protection (Noise) Regulations 1997 assigned outdoor noise levels while in operation.

OBJECTIVES

The objectives of this acoustical report are as follows:

- To ensure compliance to the Environmental Protection (Noise) Regulations 1997 is achieved at all times during its operation;
- To protect the reasonable acoustic privacy of both adjacent business and nearby residents in their dwellings and open private spaces;
- To provide noise goals and noise control recommendations to ensure the place of worship does not generate unacceptable noise levels which would potentially adversely impact upon the amenity of the surrounding businesses and residences.

SUMMARY

Based on our assessment, the calculated noise level emission associated with the proposed Place of Worship has been found that compiling with the Environmental Protection (Noise) Regulations 1997 during all hours of operation achievable, with the following recommendations implemented:

- A total maximum of 200 patrons are allowed in the premises at any one time;
- External doors and windows are to be closed at all times during operation.
- Live music is not to occur before 9am on Sunday.
- External doors to achieve a minimum certified $R_W + C_{tr}$ 31 for example 40mm solid core door including frames, with compressible silicon-based rubber seals to the full perimeter of the door and a drop-down seal to provide an airtight seal when closed;
- Implement the recommendations put forth within this report.
- To ensure compliance to the EPR 1997 is achieved, an assessment of noise emissions is recommended to be conducted by a qualified acoustical consultant once the site is in full operation.

PROJECT DESCRIPTION

The proposed Place of Worship is intending to public gatherings of worship to the surrounding community. As part of the service, live music is intended to performed for the patrons on Sunday service with a maximum of 200 patrons. A two (2) hour evening service is also intended to be provided on Wednesdays where it is expected that around 20 patrons will utilise the facility; no live music is intended on this day. Parking bays for both patrons and staff are provided at the proposed site.

The planned operating hours of the proposed 'Place of Worship' is shown in Table 1 below.

Table 1: Intended operating hours of proposed place of worship

Days	Time Period
`Wednesday	7pm to 9pm
Sunday	8:30am to 1:00pm

Figure 1: Proposed Place of Worship Site Location
(Source: City of Wanneroo – Intramaps)

ACOUSTIC ENVIRONMENT

The proposed site is identified by the City of Wanneroo District Planning Scheme No.2 as R20, Commercially Zoned and under the Metropolitan Region Scheme as Urban zoned. The commercial properties directly adjacent to the site also similarly zoned. The surrounding noise sensitive residential receivers are located to the South, East and North of the proposed site with the closest residential property being situated approximately 12m South, 40m East and 45m North of the proposed place of worship. The nearest major road is identified as Marmion Avenue, which is located to the West of the proposed place of worship.

RECEIVERS & NOISE MONITORING PROCEDURES

The nearest receiver locations were identified as the following:

1. (R1) 37 Adelong Circuit, MERRIWA;
2. (R2) 39 Adelong Circuit, MERRIWA;
3. (R3) 87 Dalvik Avenue, MERRIWA;
4. (R4) 88 Dalvik Avenue, MERRIWA;
5. (R5) 3 Tomaga Way, MERRIWA;
6. (R6) 19 Hughie Edwards Drive, MERRIWA
7. (C1) Hair Salon - 12 Hughie Edwards Drive, MERRIWA;
8. (C2) Café - 12 Hughie Edwards Drive, MERRIWA; and
9. (C3) Restaurant - 12 Hughie Edwards Drive, MERRIWA

The locations identified above, have been chosen as they are considered to be representative of the nearest receivers. Refer to Figure 2 below for the proposed site, receivers (both residential / commercial) and the onsite measurement locations that have been conducted to compile this report.

Figure 2: Proposed place of worship, nearest receivers and the ambient noise measurement locations (Source: City of Wanneroo – Intramaps)

EQUIPMENT

The following equipment was used to record existing ambient noise levels:

- Cirrus CR171 Type 1 Sound Level Meter
- Cirrus CR515 Acoustic Calibrator

Both the Cirrus Sound Level Meter and Acoustical Calibrator hold current NATA Laboratory Certification and had been field calibrated before and after the noise-monitoring period. No significant drift from the reference signal was recorded. Laboratory certificates may be provided upon request.

NOISE MONITORING

A Cirrus CR171 Type 1 Sound Level Meter was used at to measure ambient noise levels. The monitor was located in a free field position with the microphone approximately 1.4m above the ground surface level.

The sound level meter was set to record in "A" Weighting, fast response using 15-minute statistical intervals in the following measurement types; L_{Aeq}, L_{A10}, L_{A1}, L_{A90} and L_{Amax}. Ambient noise monitoring was conducted generally in accordance with Australian Standard AS1055:1997 Acoustics- Description and measurement of environmental noise.

EXISTING AMBIENT SOUND LEVELS

Sound Level measurements were conducted on Wednesday 10th January 2024 between the hours of 11am to 12pm at the property boundary of the nearest noise sensitive residential receiver identified as 87 Dalvik Avenue, MERRIWA. The purpose of conducting this onsite noise monitoring is to determine the existing ambient noise environment experienced at the surrounding premises.

Table 2 – Measured Exiting Ambient Sound Levels, L_{Aslow} dB(A) – Wednesday 10th January 2024

Location	Measured Sound Levels			
	L_{Aeq}	L_{A10}	L_{A1}	L_{Amax}
M1 (see figure 2)	50.4	49.2	62.6	71.7

METEOROLOGICAL DATA

The following meteorological conditions (shown in table 3 below) were present during the onsite monitoring conducted on Wednesday 10th January 2024.

Table 3 – Meteorological Conditions

Parameter	Result
Temperature (°C)	30°C
Wind Speed (m/s)	4.44m/s
Wind Direction	East
Humidity (%)	46%

NOISE CRITERIA

The allowable noise levels at the surrounding noise sensitive areas are determined by the Environmental Protection (Noise) Regulations 1997. Regulations 7 & 8 stipulate the allowable external noise levels determined by the calculation of an influencing factor, which is then added to the base levels shown below. As the site is intending to operate on Wednesday between 7pm and 9pm and Sunday between the hours of 8:30am to 1:00pm, our assessment will be based on the assigned outdoor noise levels for both the weekday 'evening' and the Sunday 'daytime' assessment criterions.

Table 4.1 – Baseline Assigned Outdoor Noise Level

Description	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	$L_{A(max)}$
Noise Sensitive Premises	1900 – 2200 hours all days	40 + IF	50 + IF	55 + IF
	0900 – 1900 hours Sunday and Public Holidays	40 + IF	50 + IF	65 + IF
Commercial Premises	All hours	60	75	80

Note: L_{A10} is the noise level exceeded for 10% of the time.
L_{A1} is the noise level exceeded for 1% of the time.
L_{Amax} is the maximum noise level.
IF is the influencing factor.

Table 4.2 – Influencing Factor Calculation

Description	450m Radius	100m Radius	Influencing Factors
Commercial	8%	36%	2.2dB
Industrial	0%	0%	0dB
Major Roads	Nil	Yes – Marmion Avenue	6dB
Secondary Roads	Yes – Lukin Drive	Nil	
Sports Venues	Nil	Nil	0dB
Total Influencing Factor = 8.2dB i.e. 8dB			

Based on the information in Table 4.2, an influencing factor of 8 is applied to the base line assigned noise levels for all of the nearest noise sensitive receivers identified, with the applicable assigned outdoor noise levels identified in Table 4.3 below.

Table 4.3 – Applicable Assigned Outdoor Noise Level

Description	Time of Day	Assigned Level (dB)		
		L_{A10}	L_{A1}	$L_{A(max)}$
Noise Sensitive Premises	1900 – 2200 hours all days	48	58	63
	0900 – 1900 hours Sunday and Public Holidays	48	58	73
Commercial Premises	All hours	60	75	80

CALCULATED NOISE LEVELS

Calculations have been made to determine the sound levels expected to be received by the nearest noise sensitive premises, associated with the proposed place of worship operations. These calculations are based on both the sound power levels provided in Table 5 below, and under the assumption that all recommendations put forth, are implemented.

The noise types being used within the assessment include: vehicle access / parking associated noise within the parking bays provided, conversational noise under maximum capacity, live and/or pre-recorded music, and mechanical plant within the proposed place of worship; all occurring simultaneously.

Mechanical Plant (exhaust fans, HVAC system) associated noise calculations have been based on both the site plans of the proposed restaurant and the typical range of sound power levels for the mechanical plants.

Traffic noise from cars and vans arriving and departing the site have been based on the typical Sound Power Levels of traffic (30 seconds L_{Aeq}).

The data used for the calculation of the noise levels expected to be received by the nearest noise sensitive premises from the site under a 'worst case scenario' of a maximum capacity of 200 patrons, have been based on researched Sound Power Levels (L_W) of each potential noise source. All noise sources, receivers, boundaries and structures have been plotted with acoustical modelling software to provide reliable data, by which this assessment is based.

SOUND POWER LEVELS

The effective sound power level (L_W) of the various noise sources expected to occur at the site and used in our modelling of a 'worst case scenario' of noise emission are identified in Table 5 below.

Table 5 – Source Sound Power Levels, dB

Description	Sound Power levels (dB) at Octave Band Centre Frequencies (Hz)								
	dB(A)	63	125	250	500	1k	2k	4k	8k
Speech – Relaxed Voice	92	75	86	90	92	85	82	79	68
Speech – Amplified Speech	98	81	92	96	98	91	88	85	74
Live Music	96	103	97	95	92	90	85	82	76
A/C Condenser	80	77	75	65	66	75	75	73	70
$L_{Aeq,\ 30\ second}$ one car passing at approximately 10km/h	84	90	81	81	85	78	73	69	63
$L_{Aeq,\ 30\ second}$ car door slam, ignition and drive away	77	89	81	74	72	71	68	66	60
Waste Collection	112	115	117	112	107	105	104	103	--

METHODOLOGY

Computer modelling SoundPlan 8 was used with the algorithms CONCAWE selected to predict the noise emissions. Input data used within the model are:

- Meteorological Information; and
- Topographical Data; and
- Ground Absorption Data; and
- Source Sound Levels.

METEOROLOGICAL INFORMATION

Meteorological information used in the table below is considered to represent the 'worst case' conditions for sound propagation. With wind speeds greater than those shown, noise levels may be further enhanced; however, it is likely that wind, vegetation and traffic noise will become the dominant noise source at those levels.

Table 6 – Meteorological Conditions

Parameter	Day (0700 -1900)	Night (1900 – 0700)
Temperature (°C)	20	15
Wind Speed (m/s)	4	3
Wind Direction	All	All
Humidity (%)	50	50
Pasquil Stability Factor	E	F

Note: The acoustical modelling software allows for simultaneous modelling of wind in all directions.

TOPOGRAPHICAL DATA

Topographical data was adapted from Google Earth, site photographs and proposed plans. Existing buildings have also been included as these can provide barrier attenuation when located between a source and receiver.

GROUND ABSORPTION

Ground absorption varies from a value of 0 to 1, 0 representing an acoustically reflective ground (e.g. water and bitumen) and 1 representing acoustically absorbing surface such as grass. In this case, a ground absorption value of 0.1 is used.

ASSESSMENT – PREDICTED OUTDOOR NOISE EMISSIONS

Table 7 below shows the predicted sound levels expected to be received by the nearest noise sensitive premises, attributable to the standard operations of the proposed restaurant under a 'worst case scenario' of 200 patrons and all potential noise sources occurring simultaneously, including the recommendations provided within this report being implemented.

The predicted levels are based on both the information provided by the applicant and researched acoustical technical information relating to the application. This data has been compiled and used to calculate the level of noise expected to be receiver at the surrounding noise sensitive premises under a 'worst case scenario' of all potential noise sources occurring simultaneously, with which includes the following:

Scenario 1 – Wednesday Evening Service

Standard Service – No Live Music

a) Maximum number of 20 patrons with 50% conversing simultaneously with 'raised voices';
b) Amplified speech for pastor SPL 80dB(A) @1m from the source;
c) Vehicle access within the adjacent carpark ie: Car ignition, door slam, car pass-by @ 10km/h;
d) Mechanical Plant i.e.
    i. A/C Condenser
e) Recommendations within this report, implemented.

Scenario 2 – Sunday Service
Live band service

a) Maximum number of 250 patrons with 50% conversing simultaneously with 'raised voices';
b) Live music within the site at 85dB(A) (@ 1m from the source);
c) Vehicle access within the adjacent carpark ie: Car ignition, door slam, car pass-by @ 10km/h;
d) Mechanical Plant i.e.
    i. A/C Condenser
e) Recommendations within this report, implemented.

The predicted sound levels expected to be received under a 'worst case scenario', from the scenarios identified above, have been assessed against the relevant assigned outdoor noise levels; with the results shown in Tables 7.1 and 7.2 below.

As part of our assessment the following was taken into consideration; buildings design layout, topographical data, attenuation over distance, acoustic screening between source and receiver, noting that all South and East facing external windows are covered and sealed for noise mitigation and the existing ambient noise levels currently experienced at the receivers identified at times typical to the proposed sites intended operational hours.

Modelling has been conducted with the source all sound sources expected from the place of worship intended operations under a maximum capacity 'worst-case scenario' for noise emissions expected from the site. The 'worst-case scenario' for noise emissions has been modelled with the site under maximum capacity of 200 patrons with 50% talking, live music and vehicle arrival/departure all occurring simultaneously and assume that all the acoustic recommendations put forth within this acoustic report are implemented during its operations.

Table 7.1 – Assessment of Sound Levels Under Scenario 1 at the Nearest Receivers dB(A)

Assessment Scenario	Location	Time of Day	Predicted Noise Level, L_{A10} dB(A)	Adjustment for intrusive characteristics	Assessable Noise Level, L_{A10} dB(A)	Assigned Level, L_{A10} dB(A)	Compliance to Assigned Noise Level dB(A)
Scenario 1 'Worst case scenario' for noise emissions Wednesday service	R1	Wednesday Evening Service 1900 to 2100	30	N/A	30	48	Yes
	R2		33		33		Yes
	R3		34		34		Yes
	R4		31		31		Yes
	R5		30		30		Yes
	R6		32		32		Yes
	C1		30		30	60	Yes
	C2		30		30		Yes
	C3		32		32		Yes

Table 7.2 – Assessment of Sound Levels Received Under Scenario 1 at the Nearest Receivers dB(A)

Assessment Scenario	Location	Time of Day	Predicted Noise Level, L_{A10} dB(A)	Adjustment for intrusive characteristics	Assessable Noise Level, L_{A10} dB(A)	Assigned Level, L_{A10} dB(A)	Compliance to Assigned Noise Level dB(A)
Scenario 2 'Worst case scenario' for noise emissions Sunday Service	R1	Sunday Service daytime	33	+10	43	48	Yes
	R2		36		46		Yes
	R3		37		47		Yes
	R4		34		44		Yes
	R5		33		43		Yes
	R6		29		39		Yes
	C1		33		43	60	Yes
	C2		35		45		Yes
	C3		35		45		Yes

As shown in tables 7.1 and 7.2 above, received sound level emissions attributable to the proposed Place of Worship intended operations were found that compliance to the Environmental Protection (Noise) Regulations 1997 assigned outdoor levels is achievable provided the recommendations within this report are implemented.

As compliance to the EPR is expected to be achieved at the receivers closest to the proposed site, we also expect compliance to be achieved at the receivers further away.

ASSESSMENT – PREDICTED NOISE TRANSMISSION WITHIN ADJACENT BUSINESSES

As the proposed site is situated within a commercial block, with a café, restaurant and hair salon directly adjacent to the proposed site, consideration has been given to the potential noise transmission into this area while the proposed site is in operation, under a 'worst case (noise emission) scenario' and to determine if the predicted noise levels received fall within the relevant standards and regulations. It is noted that live music is intended to be utilised on Sunday only

The Australian Standard 2107:2016 *'Acoustics - Recommended design sound levels and reverberation times for building interiors'* provides design sound level ranges for various building interiors. As the adjacent business is a bicycle repair and retail store, we believe the following indoor noise criteria is applicable for this assessment.

Table 8 – Recommended design sound levels and reverberation times for the adjacent business

Type of occupancy / activity	Design Sound Level Range
Restaurant	40 to 50
Café	40 to 50
Hair Salon	40 to 50

Based on table 8 above, we have used a L_{Aeq} 50dB(A) as the target criterion for the indoor noise level to allowed to be received within the adjacent commercial tenants (C1, C2 and C3). Table 9 below provides the results of our modelling which has been conducted under a 'worst-case scenario' for noise emissions expected to be received within the adjacent business via the dividing party wall.

Table 9.1 – Assessment of the predicted noise transmission under a 'worst case scenario' Scenario 2

Scenario 1	Location	Time of Day	Predicted Noise Level, L_{Aeq} dB(A)	Adjustment for intrusive characteristics	Assessable Noise Level, L_{A10} dB(A)	Recommended Design Sound level, L_{A1eq} dB(A)	Compliance to the Recommended Design Sound level
'Worst case scenario' for noise emissions from within proposed site	C1	Anytime	29	N/A	29	50	Yes
	C2	Anytime	31	N/A	31		Yes
	C3	Anytime	35	N/A	35		Yes

Table 9.2 – Assessment of the predicted noise transmission under a 'worst case scenario' Scenario 2

Scenario 1	Location	Time of Day	Predicted Noise Level, L_{Aeq} dB(A)	Adjustment for intrusive characteristics	Assessable Noise Level, L_{A10} dB(A)	Recommended Design Sound level, L_{A1eq} dB(A)	Compliance to the Recommended Design Sound level
'Worst case scenario' for noise emissions from within proposed site	C1	Anytime	33	N/A	33	50	Yes
	C2	Anytime	35	+10	45		Yes
	C3	Anytime	39	+10	39		Yes

As shown in Tables 9.1 and 9.2 above, the noise levels received within the adjacent commercial businesses via transmission through the dividing wall, is calculated to fall within the recommended design sound level identified, as stipulated by the Australian Standard *'Acoustics - Recommended design sound levels and reverberation times for building interiors*. Based on these findings we believe the operations of the proposed restaurant will likely be inaudible within the adjacent commercial properties identified, provided the recommendations with this report are adhered to.

NOISE CONTROL RECOMMENDATIONS

To ensure compliance to the Environmental Protection (Noise) Regulations 1997, the following noise control recommendations are given.

EXTERNAL DOORS

All external doors must have compressible silicon-based rubber seals to the full perimeter and a drop-down seal and provide an airtight seal when closed as to not compromise the acoustic performance of the system. All external doors are to be a minimum 40mm thick solid core and a achieve a minimum acoustic performance rating of R_W 32.

NOISE MANAGEMENT PLAN

One of the most effective measures that should be implemented in conjunction with the physical noise control measures recommended within this report is the Noise Management Plan (NMP). The NMP should be incorporated within the restaurant's overall management plan.

- All external doors and windows are to be closed during the proposed sites operation.
- Live music is to not occur before 9am.
- All speakers, PA equipment is to be pointing in an East / North Easterly direction. away from both the adjacent commercial and residential (See figure 3 below).
    - Utilising a speaker array with ceiling mounted speakers in conjunction with stage speakers is also recommended (see figure 3 for speaker location guide).
- A noise limiter is to be installed within the Front of House mixer to ensure that noise levels do not exceed the 87dB(A) at 1m from the source.
- It is recommended that the drum kit location is fitted with a screening barrier on the southern side and northern side, to reflect sound away from the nearest noise sensitive residential and commercial receivers.
    - Note: electric drum kits can also be beneficial to control noise breakout as the output level can be controlled via the sound mixer Front of House.
- Not permitting more than the proposed maximum number of 200 patrons to be present on the premises at any given time;
- Ensure loudspeakers are installed with appropriate resilient mounts to stop vibration or resonances being transmitted to the building structure;
- The applicant is to ensure that all reasonable and practical measures are taken in order to minimize the overall sound level and low frequency noise received at the nearest noise sensitive residential receivers to the South of the proposed site;
- Staff closing procedures are to be designed in order to minimize the risk of noise disturbance being caused to the surrounding noise sensitive receivers;
- Appropriate signage requesting patrons be mindful of the neighbourhood in leaving the premises and area quietly;
- Adequate lighting in external areas to discourage loitering when patrons leave the premises;
- Maintain a compliant register and train staff in the use of handling complaints;
- A complaints file is to be available to all staff to record any complaints received in person or by any other means. This insures complaints can be addressed at the time and ensures the applicant can review any complaints over time to identify problems and address issues;
- Waste Collection is to occur within the hours of 7am to 7pm Monday to Saturday;

PATRONS

In order to minimise antisocial behaviour including excessive noise, the following is proposed:

- Create and maintain a high-quality premise in all respects, both physically and operationally as studies conducted have indicated that poorly lit, badly maintained premises have a greater likelihood of violence, trouble and antisocial behaviour;
- Provide more than ample seating for patrons;
- Background music is to be at low levels for ambience and to not promote the raising of voices, when live music is not being utilised.
- Create a warm, relaxed and inviting atmosphere to minimise the risk of antisocial behaviour.

WASTE COLLECTION VEHICLES

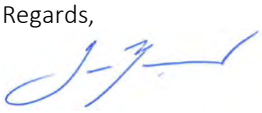
Regulation 14A of the Environmental Protection (Noise) Regulations 1997 addresses the noise emissions associated with waste collection. Fundamentally, waste collection activities are exempt from complying with the 'Assigned Levels', provided the collection only occurs between the hours of 7 am and 7 pm Monday to Saturday.

CONCLUSION

Based on the results of this assessment, noise levels calculated under a 'worst case scenario' have been found to fall within the respective assigned outdoor noise criterion for the entirety of its intended operational hours; provided the recommendations put forth within this report are implemented.

I trust the above meets your requirements on the matter. Should you have any queries do not hesitate to contact our office.

Regards,



Ian Burman
(A.A.A.S)
Noise Officer: 14009
ACOUSTICS & AUDIO PRODUCTION

APPENDIX A -
LIVE MUSIC NOISE CONTROL GUIDE

LIVE MUSIC – NOISE CONTROL SOLUTIONS

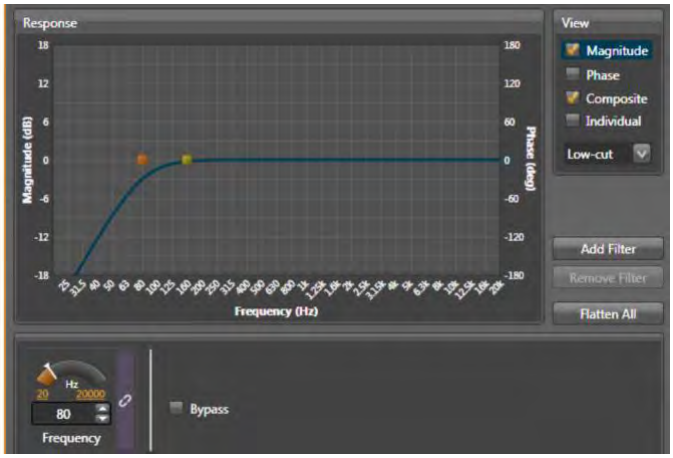
In order to mitigate breakout noise from live music to both the residential receivers and the adjacent commercial premises, the following guide is provided.

SPEAKER POSITIONING

Utilising a distributive array of supplemental ceiling speakers in the bac of the room (as shown in figure 3 below) allows for a reduction of the main stage speakers, which also reduces audio "hot spots" and reduces the amount of low frequency energy through the space. Ceiling speakers are recommended to be added in the locations illustrated below. It ia also important for the front of house sound mixer to have a speaker directly above them to aid in achieving an accurate mix. Delay compensation is to be used based on the distance from the stage speakers to the ceiling speakers in order to achieve a uniform sound.

INPUT LOW CUT FILTER

It is recommended that a low-cut filter set to ~80Hz be applied after the input stage to minimise the effects of low frequency noises like bumps and thumps that come from handling the mic and pops from speaking to close to the microphone.



INPUT LOW CUT FILTER – SIDE CHAIN

There should also be low-cut filter in line with the side chain input of the of the audio gain control. This filter can be set to around 120Hz to improve the overall performance of the audio gain control by rejecting the effects of low frequency noises.

AUTO MIXER

An auto mixer can be beneficial when there is more than one microphone. Gain sharing auto-mixers combine the signals from multiple mixers and automatically produces a constant gain from all inputs to the output with minimal feedback. It is common that the pulpit mic will have priority if multiple microphones are utilised.

AUTOMATIC GAIN CONTROL

It is essential to use a compressor within the signal chain in order to prevent large dynamic differences between the loud and soft sections of both preaching and live music. An example is provided in the image below.

FEEDBACK SUPPRESSOR

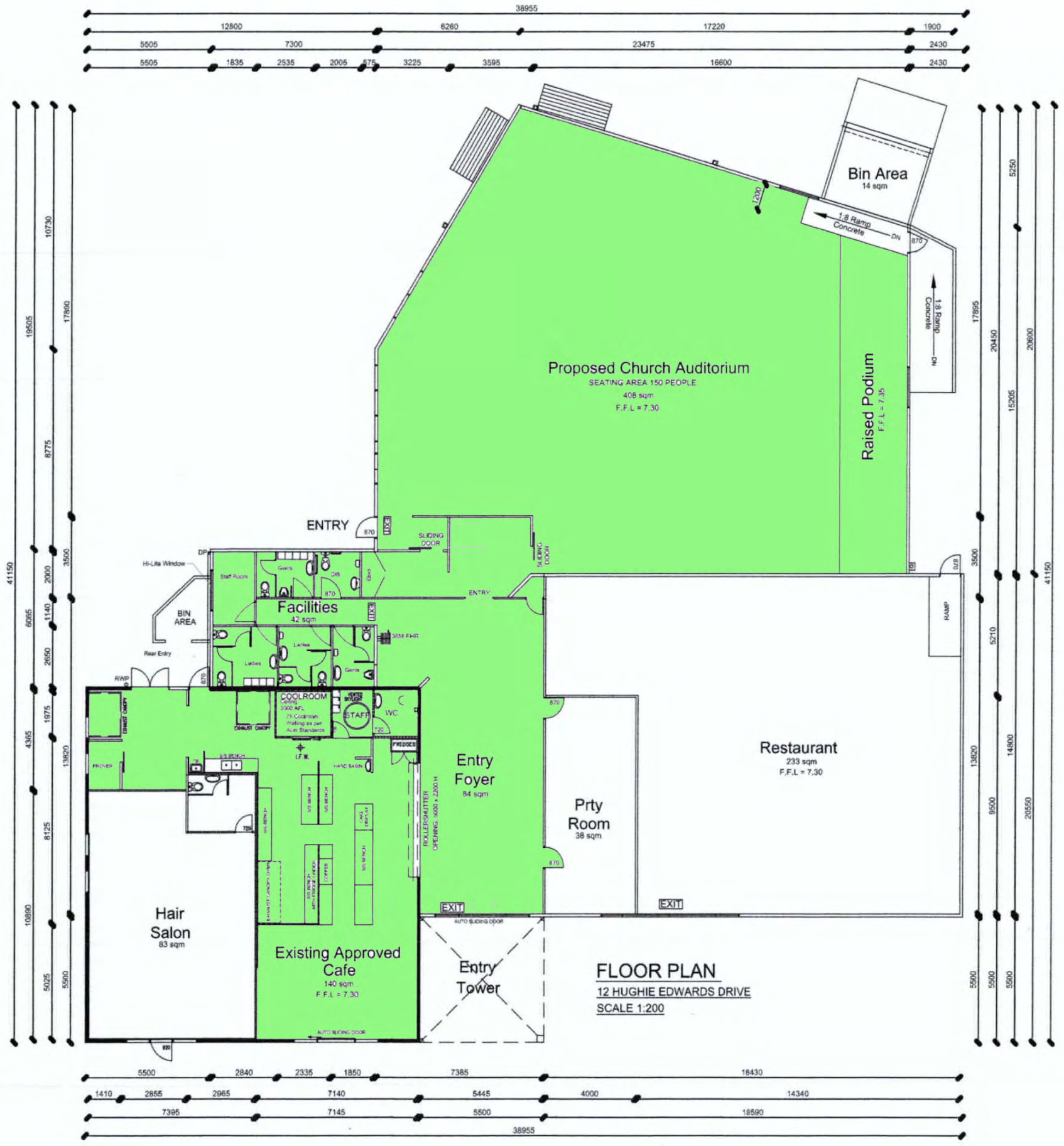
A feedback suppressor can aid can be of assistance if the if the speaker is untrained in the proper use of the microphone, such as cupping the hand around the head of the microphone, so the potential for feedback in significantly minimised.

PARAMETRIC EQUALIZATION

Parametric equalization is used for both narrow and wide band correction. After the room is set up and a flat response is achieved within the space while empty, it is recommended to boost some high frequency energy in order to compensate for the sound absorption provided when the room is full of people.

Narrow band filters are also useful in controlling room modes. At low frequencies can cause bass to sound indistinct, with the mid to mid-high range commonly be perceived as increased reverberation.

APPENDIX B -
SITE PLANS



FLOOR PLAN
12 HUGHIE EDWARDS DRIVE
SCALE 1:200

FLOOR PLAN
SCALE 1:200

CLIENT	CHISHOLM HOLDINGS PTY LTD
PROJECT	CHURCH INTERNAL TENANCY
LOCATION	LOT 6, 12 HUGHIE EDWARDS DRIVE MERRIWA

DWG TITLE	FLOOR PLAN
DATE	02/11/23
SCALE	1:200
SHEET	A02
JOB No.	12-240
DRAWN	B.C.
REV.	A

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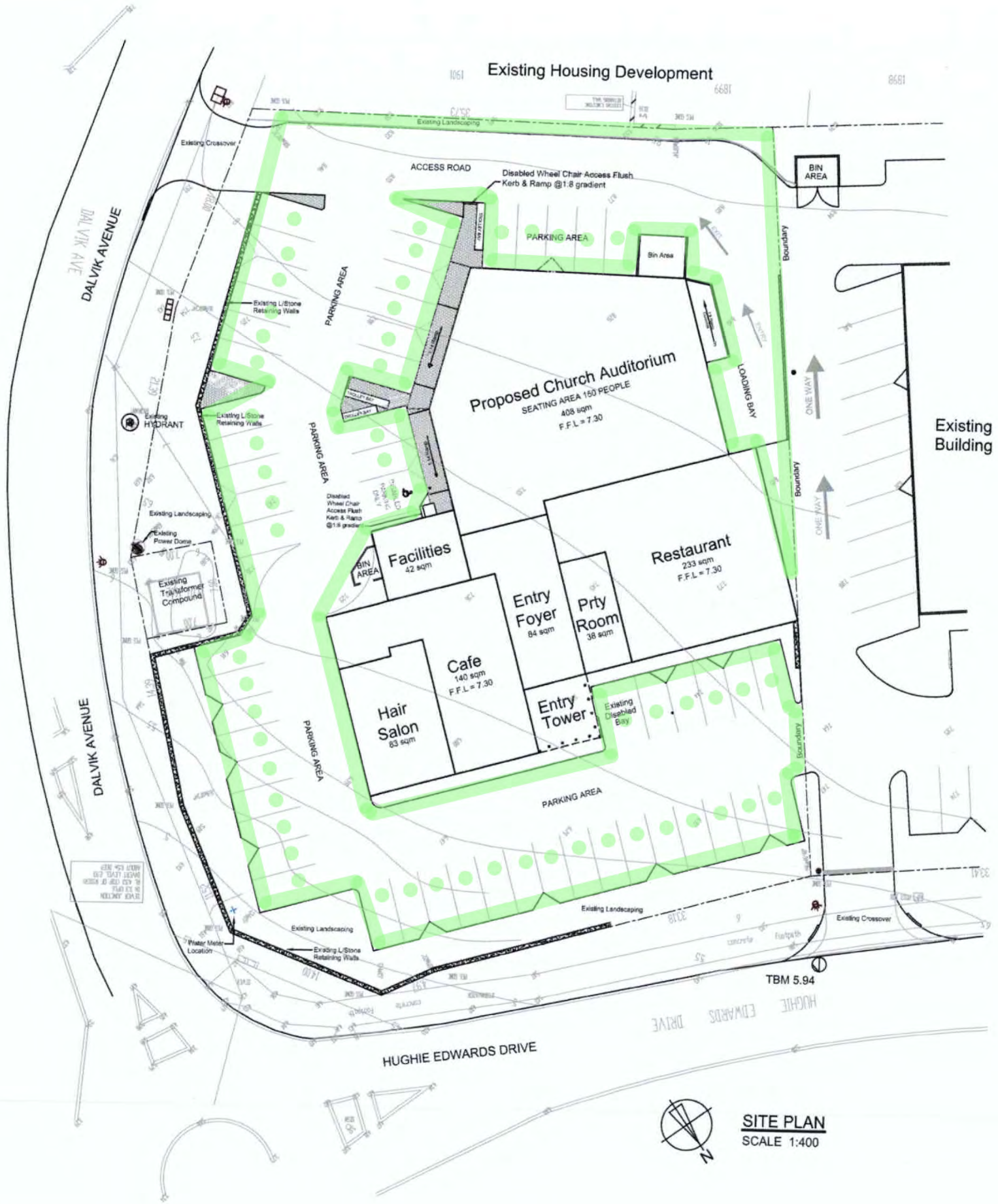

LEGEND

- T.B.M.
- HYDRANT
- STOP VALVE
- TELSTRA
- POWER DOME
- GRATED DRAIN
- STREET LAMP
- WAWA PRE-LAY
- S/W MANHOLE

N

SITE PLAN
SCALE 1:400

CLIENT	CHISHOLM HOLDINGS PTY LTD
PROJECT	CHURCH INTERNAL TENANCY
LOCATION	LOT 6, 12 HUGHIE EDWARDS DRIVE MERRIWA

DWG TITLE	SITE PLAN
DATE 02/11/23	SCALE 1:400
SHEET A01	JOB No. 12-240
DRAWN B.C.	REV. A

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