



**PLANNING SOLUTIONS
1 PORTER STREET
KALGOORLIE**

**STATE PLANNING POLICY 5.4
NOISE MANAGEMENT PLAN**

SEPTEMBER 2022

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ACOUSTIC ASSESSMENT

1 PORTER STREET

KALGOORLIE

Job No: 22292

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FOR

PLANNING SOLUTIONS

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1. INTRODUCTION

Herring Storer Acoustics was commissioned by Planning Solutions to undertake an acoustical assessment of noise received within the proposed development at 1 Porter Street, Kalgoorlie.

As part of the study, the following was carried out:

- Obtain noise levels associated with vehicle movements on Hannan Street.
- Determine by noise modelling the noise levels that would be received within the development from vehicles travelling on Hannan Street.
- Assess the predicted noise levels received at residence for compliance with the requirements of the WAPC State Planning Policy 5.4 "Road and Rail Noise" (SPP 5.4).
- If exceedances are predicted, comment on possible noise amelioration options for compliance with the appropriate criteria.

For information, the development plan is attached in Appendix A.

2. SUMMARY

Under the WAPC State Planning Policy 5.4, for this development, the appropriate "Noise Targets" to be achieved under SPP 5.4, external to a residence are:

External	
Day	Maximum of 55 dB(A) L_{Aeq}
Night	Maximum of 50 dB(A) L_{Aeq}

The policy states that the "outdoor targets are to be met at all outdoor areas as far as reasonable and practical to do so using the various noise mitigation measures outlined in the guidelines". The Policy also states, under Section 6 – Policy Measures that "a reasonable degree of acoustic amenity for living areas on each residential lot". The policy recognises that "it may not be practicable to meet the outdoor noise targets".

The Policy states the following acceptable internal noise levels:

Internal	
Living and Work Areas	$L_{Aeq(Day)}$ of 40 dB(A)
Bedrooms	$L_{Aeq(Night)}$ of 35 dB(A)

For this development, compliance with the requirements of SP 5.4, noise modelling and assessment are based on the day period for residence located adjacent to the Hannan Street, as compliance with the day period would yield compliance with the night period.

Noise associated with vehicles travelling on Hannan Street, would be at maximum 43 dB $L_{Aeq(Day)}$ and as a result no "Quiet House" design is required for this development.

3. CRITERIA

3.1 NOISE

The Western Australian Planning Commission (WAPC) released on 6th September 2019 State Planning Policy 5.4 “Road and Rail Noise”. The requirements of State Planning Policy 5.4 are outlined below.

POLICY APPLICATION (Section 4)

When and where it applies (Section 4.1)

SPP 5.4 applies to the preparation and assessment of planning instruments, including region and local planning schemes; planning strategies, structure plans; subdivision and development proposals in Western Australia, where there is proposed:

- a) noise-sensitive land-use within the policy’s trigger distance of a transport corridor as specified in **Table 1**;
- b) New or major upgrades of roads as specified in **Table 1** and maps (**Schedule 1,2 and 3**); or
- c) New railways or major upgrades of railways as specified in maps (**Schedule 1, 2 and 3**); or any other works that increase capacity for rail vehicle storage or movement and will result in an increased level of noise.

Policy trigger distances (Section 4.1.2)

Table 1 identifies the State’s transport corridors and the trigger distances to which the policy applies.

The designation of land within the trigger distances outlined in **Table 1** should not be interpreted to imply that land is affected by noise and/or that areas outside the trigger distances are un-affected by noise.

Where any part of the lot is within the specified trigger distance, an assessment against the policy is required to determine the likely level of transport noise and management/mitigation required. An initial screening assessment (**guidelines: Table 2: noise exposure forecast**) will determine if the lot is affected and to what extent.”

TABLE 1: TRANSPORT CORRIDOR CLASSIFICATION AND TRIGGER DISTANCES

Transport corridor classification	Trigger distance	Distance measured from
Roads		
Strategic freight and major traffic routes Roads as defined by Perth and Peel Planning Frameworks and/or roads with either 500 or more Class 7 to 12 Austroads vehicles per day, and/or 50,000 per day traffic volume	300 metres	Road carriageway edge
Other significant freight/traffic routes These are generally any State administered road and/or local government road identified as being a future State administered road (red road) and other roads that meet the criteria of either >=23,000 daily traffic count (averaged equivalent to 25,000 vehicles passenger car units under region schemes)	200 metres	Road carriageway edge
Passenger railways		
	100 metres	Centreline of the closest track
Freight railways		
	200 metres	Centreline of the closest track

Proponents are advised to consult with the decision making authority as site specific conditions (significant differences in ground levels, extreme noise levels) may influence the noise mitigation measures required, that may extend beyond the trigger distance.

POLICY MEASURES (Section 6)

The policy applies a performance-based approach to the management and mitigation of transport noise. The policy measures and resultant noise mitigation will be influenced by the function of the transport corridor and the type and intensity of the land-use proposed. Where there is risk of future land-use conflict in close proximity to strategic freight routes, a precautionary approach should be applied. Planning should also consider other broader planning policies. This is to ensure a balanced approach takes into consideration reasonable and practical considerations.

Noise Targets (Section 6.1)

Table 2 sets out noise targets that are to be achieved by proposals under which the policy applies. Where exceeded, an assessment is required to determine the likely level of transport noise and management/mitigation required.

In the application of the noise targets the objective is to achieve:

- *indoor noise levels as specified in **Table 2** in noise sensitive areas (for example, bedrooms and living rooms of houses, and school classrooms); and*
- *a reasonable degree of acoustic amenity for outdoor living areas on each residential lot. For non-residential noise-sensitive developments, for example schools and child care centres the design of outdoor areas should take into consideration the noise target.*

It is recognised that in some instances, it may not be reasonable and/or practicable to meet the outdoor noise targets. Where transport noise is above the noise targets, measures are expected to be implemented that balance reasonable and practicable considerations with the need to achieve acceptable noise protection outcomes.

TABLE 2: NOISE TARGETS

Proposals	New/Upgrade	Noise Targets		
		Outdoor		Indoor
		Day (L _{Aeq} (Day) dB) (6 am-10 pm)	Night (L _{Aeq} (Night)dB) (10 pm-6 am)	(L _{Aeq} dB)
Noise-sensitive land-use and/or development	New noise sensitive land use and/or development within the trigger distance of an existing/proposed transport corridor	55	50	L _{Aeq} (Day) 40(Living and work areas) L _{Aeq} (Night) 35 (bedrooms)
Roads	New	55	50	N/A
	Upgrade	60	55	N/A
Railways	New	55	50	N/A
	Upgrade	60	55	N/A

Notes:

- *The noise target is to be measured at one metre from the most exposed, habitable façade of the proposed building, which has the greatest exposure to the noise-source. A habitable room has the same meaning as defined in State Planning Policy 3.1 Residential Design Codes.*
- *For all noise-sensitive land-use and/or development, indoor noise targets for other room usages may be reasonably drawn from Table 1 of Australian Standard/New Zealand Standard AS/NZS 2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors (as amended) for each relevant time period.*
- *The 5dB difference in the criteria between new and upgrade infrastructure proposals acknowledges the challenges in achieving noise level reduction where existing infrastructure is surrounded by existing noise-sensitive development.*
- *Outdoor targets are to be met at all outdoor areas as far as is reasonable and practical to do so using the various noise mitigation measures outlined in the guidelines. For example, it is likely unreasonable for a transport infrastructure provider to achieve the outdoor targets at more than 1 or 2 floors of an adjacent development with direct line of sight to the traffic.*

Noise Exposure Forecast (Section 6.2)

*When it is determined that SPP 5.4 applies to a planning proposal as outlined in Section 4, proponents and/or decision makers are required to undertake a preliminary assessment using **Table 2**: noise exposure forecast in the guidelines. This will provide an estimate of the potential noise impacts on noise-sensitive land-use and/or development within the trigger distance of a specified transport corridor. The outcomes of the initial assessment will determine whether:*

- *no further measures are required.*
- *noise-sensitive land-use and/or development is acceptable subject to deemed-to-comply mitigation measures; or*
- *noise-sensitive land-use and/or development is not recommended. Any noise-sensitive land-use and/or development is subject to mitigation measures outlined in a noise management plan.”*

3.2 APPROPRIATE CRITERIA

Based on the above, the following criteria are proposed for this development:

External

Day	55 dB(A) L_{Aeq}
Night	50 dB(A) L_{Aeq}

Internal

Sleeping Areas	35 dB(A) $L_{Aeq(night)}$
Living Areas	40 dB(A) $L_{Aeq(day)}$

Additional to these criteria, noise received at an outdoor area, where practicable, should also achieve an L_{Aeq} of 50 dB(A) during the night period.

4. MEASUREMENTS AND OBSERVATIONS

Due to the location of the development, no measurements were taken to calibrate the noise model.

Typically, the noise modelling software SoundPlan overpredicts noise levels, and this approach is generally considered conservative.

Similarly, the development is approximately 250m at the closest point to the road, which would relate to a 43 dB $L_{Aeq(day)}$ based on a noise screening survey, without adjustment for buildings and barriers in the way. Regardless, the full noise model was conducted for thoroughness.

If confirmation measurements are required, these can be completed at a later date.

5. MODELLING

To determine the noise levels from traffic from the Hannan Street, acoustic modelling was carried out using SoundPlan, using the Calculation of Road Traffic Noise (CoRTN)¹ algorithms.

The input data for the model included:

- Topographical data, with the ground level within the development based on natural ground levels as per Google Earth.
- Development layout as supplied by client (Shown in Appendix A).
- Road Traffic data as per Table 5.1.
- Adjustments as listed in Table 5.2.

TABLE 5.1 - NOISE MODELLING INPUT DATA

Parameter	Hannan Street (Current) 2020*	Hannan Street (Future) 2042*
Traffic Volumes	10,008 vpd	15,472 vpd
Percentage traffic 0600 – 2400 hours (Assumed)	94%	94%
Heavy Vehicles (%) (Assumed)	18.9%	18.9%
Speed (km/hr)	50km/hr	50km/hr
Road Surface	Chip Seal	Dense Grade Asphalt

* From MRWA, shown in Appendix B

TABLE 5.2 – ADJUSTMENTS FOR NOISE MODELLING

Description	Value
Façade Reflection Adjustment	+2.5 dB
Conversion from $L_{A10(18\text{ hour})}$ to $L_{Aeq(16\text{ hour})}$ (Day)	-0.9 dB*
Adjustment for Future Modelled Noise	-1.7 dB

* Based on DEFRA Calculation.

Based on the DEFRA Calculation, the difference between the $L_{Aeq,(16hr)}$ and $L_{Aeq,(8hr)}$ is -8.4 dB, hence, the day period is the critical period for compliance. Hence, achieving compliance with the day period criteria would also result in compliance with the night period criteria.

6. DISCUSSION / RECOMMENDATION

Under the WAPC State Planning Policy 5.4, for this development, the appropriate “Noise Targets” to be achieved under SPP 5.4, external to a residence are:

External

Day	Maximum of 55 dB(A) L_{Aeq}
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The Policy states the following acceptable internal noise levels:

Internal

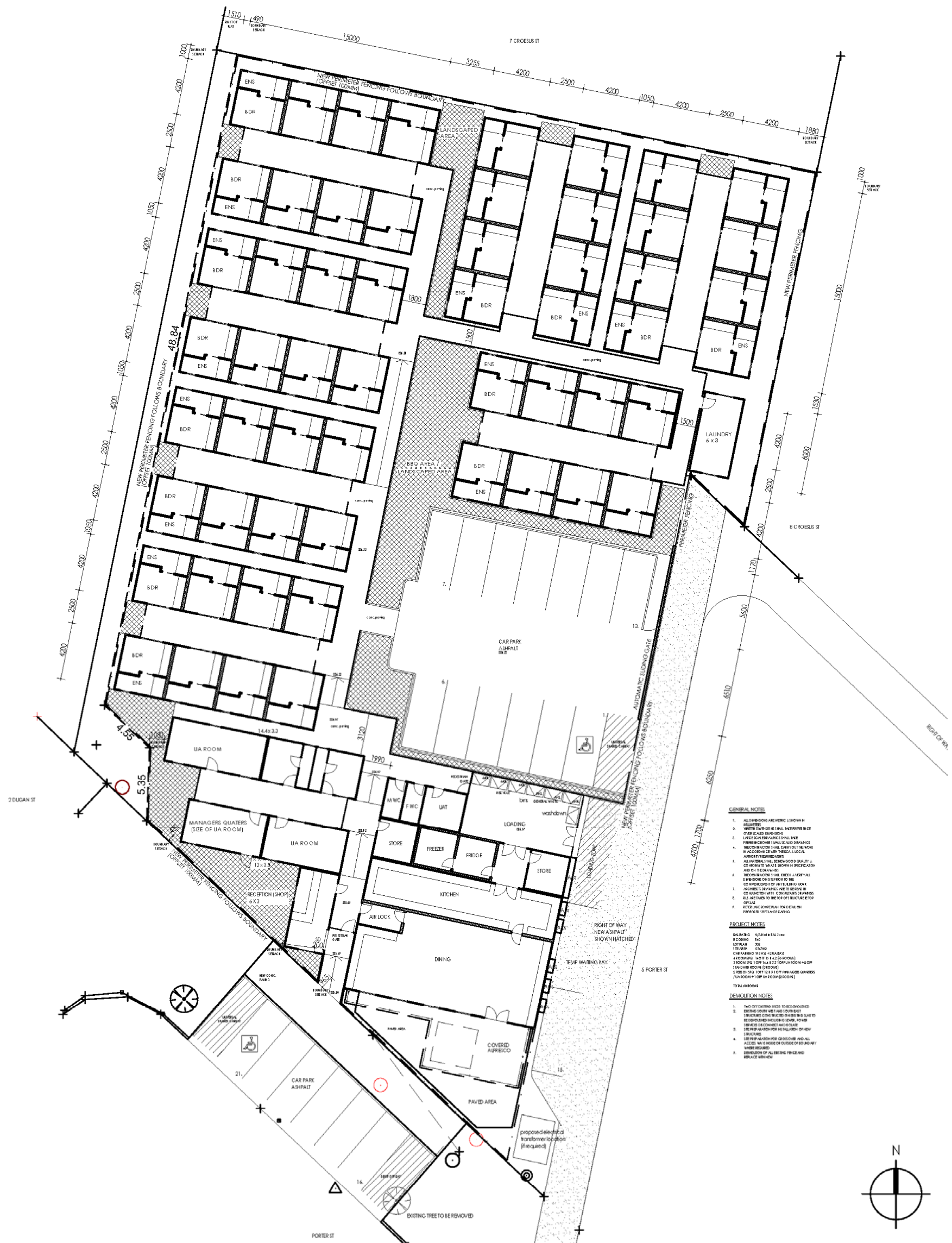
Living and Work Areas	$L_{Aeq(Day)}$ of 40 dB(A)
Bedrooms	$L_{Aeq(Night)}$ of 35 dB(A)

For this development, compliance with the requirements of SP 5.4, noise modelling and assessment are based on the day period for residence located adjacent to Hannan Street, as compliance with the day period would yield compliance with the night period.

Noise associated with vehicles travelling on Hannan Street, would be at maximum 43 dB $L_{Aeq(Day)}$ and as a result no “Quiet House” design is required for this development.

APPENDIX A

DEVELOPMENT PLAN



- GENERAL NOTES**
1. ALL DIMENSIONS ARE HEREIN LISTED IN METERS.
 2. WITH DIMENSIONS UNLESS OTHERWISE SPECIFIED OVER LOCAL DIMENSIONS.
 3. LANDSCAPED AREAS SHALL BE REFERENCED TO THE LOCAL DIMENSIONS IN ACCORDANCE WITH THE LOCAL ACTING REGULATIONS.
 4. ALL DIMENSIONS SHALL BE REFERENCED TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
 5. DIMENSIONS SHALL BE CHECKED AGAINST THE ARCHITECT'S DRAWING TO THE COMPLETION OF ALL BUILDING WORK.
 6. DIMENSIONS SHALL BE CHECKED AGAINST THE ARCHITECT'S DRAWING TO THE COMPLETION OF ALL BUILDING WORK.
 7. DIMENSIONS SHALL BE CHECKED AGAINST THE ARCHITECT'S DRAWING TO THE COMPLETION OF ALL BUILDING WORK.
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 9. DIMENSIONS SHALL BE CHECKED AGAINST THE ARCHITECT'S DRAWING TO THE COMPLETION OF ALL BUILDING WORK.
 10. DIMENSIONS SHALL BE CHECKED AGAINST THE ARCHITECT'S DRAWING TO THE COMPLETION OF ALL BUILDING WORK.
- PROJECT NOTES**
- BLANKING: KARHORE BAL 2006
 2 COORS: 240
 10 PLAN: 300
 10000: 10000
 CAR PARKING: 10000 x 3000 (10000)
 10000: 10000 x 3000 (10000)
 10000: 10000 x 3000 (10000)
 10000: 10000 x 3000 (10000)
 10000: 10000 x 3000 (10000)
- DEMOLITION NOTES**
1. DEMOLITION OF ALL EXISTING BUILDINGS AND STRUCTURES TO BE DEMOLISHED.
 2. DEMOLITION OF ALL EXISTING BUILDINGS AND STRUCTURES TO BE DEMOLISHED.
 3. DEMOLITION OF ALL EXISTING BUILDINGS AND STRUCTURES TO BE DEMOLISHED.
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NO.	REVISION	DATE
A-1	PRELIMINARY JDAP ISSUE	14.09.22

**PROPOSED LODGING HOUSE ACCOMMODATION
 1 PORTER ST KALGOORLIE**

JOB NO.	ISSUE	REVISION	DRAWING
2204	HJA	A 1	A1.02
SCALE	N/A		
DATE	23.06.2022		

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APPENDIX B

MRWA FUTURE TRAFFIC DATA



Hourly Volume

Great Eastern Hwy (H005)

2020/21
Monday to Friday

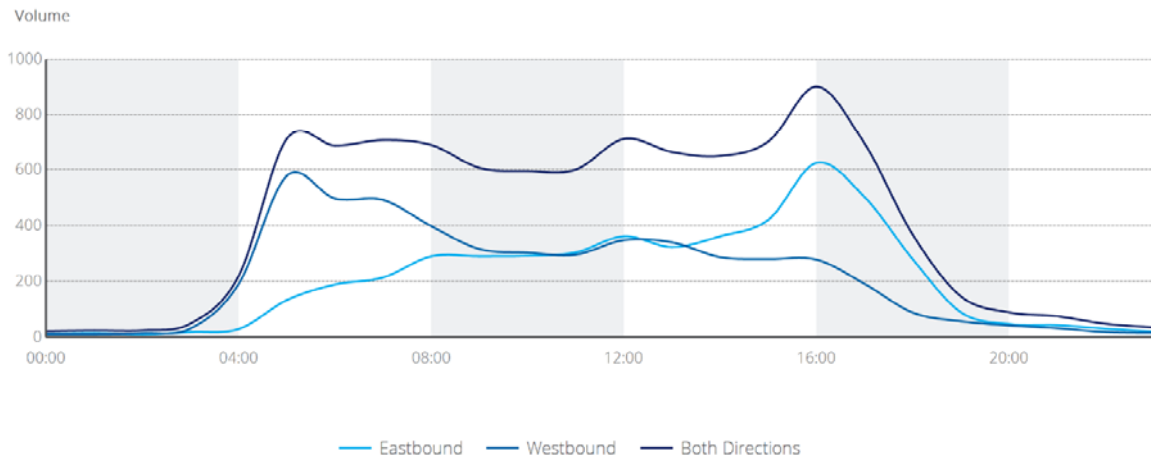
East of Atbara St (SLK 587.92)

	All Vehicles				Heavy Vehicles						
	E	EB	W	WB	Both	E	EB	W	WB	Both	%
00:00		11		10	21		0		1	1	4.8
01:00		14		10	24		1		1	2	8.3
02:00		10		14	24		0		3	3	12.5
03:00		18		31	49		1		4	5	10.2
04:00		29		191	220		8		34	42	19.1
05:00		133		578	711		34		80	114	16.0
06:00		189		497	686		42		100	142	20.7
07:00		214		492	706		60		96	156	22.1
08:00		290		398	688		70		93	163	23.7
09:00		290		316	606		69		80	149	24.6
10:00		292		303	595		68		77	145	24.4
11:00		304		296	600		71		79	150	25.0
12:00		362		348	710		78		76	154	21.7
13:00		323		340	663		70		84	154	23.2
14:00		362		287	649		65		73	138	21.3
15:00		421		280	701		76		62	138	19.7
16:00		624		278	902		86		55	141	15.6
17:00		502		191	693		79		37	116	16.7
18:00		279		88	367		42		14	56	15.3
19:00		89		57	146		12		7	19	13.0
20:00		47		42	89		6		5	11	12.4
21:00		43		32	75		4		3	7	9.3
22:00		30		18	48		1		2	3	6.3
23:00		20		15	35		2		2	4	11.4
TOTAL		4896		5112	10008		945		1068	2013	20.1



Peak Statistics

AM	TIME	11:45	06:30	06:45	11:30	06:30	06:45
	VOL	364	588	762	80	116	172
PM	TIME	16:15	12:30	16:15	16:15	13:15	13:15
	VOL	659	363	928	90	86	156





Our ref: 30072-1-22292

15 September 2022

Planning Solutions
Level 1, 251 St Georges Terrace
Perth, WA 6000

Attention: Jozef Ewing
Address: jozef.ewing@planningsolutions.com.au

Dear Jozef,

**1 PORTER STREET, KALGOORLIE – MECHANICAL PLANT
ACOUSTIC CONSULTANCY**

SUMMARY

Based on information provided, noise emissions from mechanical plant associated with the development at 1 Porter Street, Kalgoorlie would meet the *Environmental Protection (Noise) Regulations 1997* when enclosed.

With regards to glass dropping into bins, to meet the *Environmental Protection (Noise) Regulations 1997* during the day period, an enclosure would be required. Thus, the emptying of glass into the bins needs to be managed to occur during the day period only.

CRITERIA

The allowable noise level at the surrounding locales is prescribed by the *Environmental Protection (Noise) Regulations 1997*. Regulations 7 & 8 stipulate maximum allowable external noise levels determined by the calculation of an influencing factor, which is then added to the base levels shown below in Table 1. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern.

TABLE 1 - BASELINE ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{Amax}
Noise sensitive premises	0700 - 1900 hours Monday to Saturday (Day)	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day Period)	40 + IF	50 + IF	65 + IF
	1900 - 2200 hours all days (Evening)	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	35 + IF	45 + IF	55 + 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.

It is a requirement that received noise be free of annoying characteristics (tonality, modulation and impulsiveness), defined below as per Regulation 9.

“impulsiveness” means a variation in the emission of a noise where the difference between L_{Apeak} and L_{Amax Slow} is more than 15 dB when determined for a single representative event;

“modulation” means a variation in the emission of noise that –

- (a) is more than 3dB L_{A Fast} or is more than 3 dB L_{A Fast} in any one-third octave band;
- (b) is present for more at least 10% of the representative assessment period; and
- (c) is regular, cyclic and audible;

“tonality” means the presence in the noise emission of tonal characteristics where the difference between –

- (a) the A-weighted sound pressure level in any one-third octave band; and
- (b) the arithmetic average of the A-weighted sound pressure levels in the 2 adjacent one-third octave bands,

is greater than 3dB when the sound pressure levels are determined as L_{Aeq,T} levels where the time period T is greater than 10% of the representative assessment period, or greater than 8 dB at any time when the sound pressure levels are determined as L_{A Slow} levels.

Where the noise emission is not music, if the above characteristics exist and cannot be practicably removed, then any measured level is adjusted according to Table 2 below.

TABLE 2 – ADJUSTMENTS TO MEASURED NOISE LEVELS

Where tonality is present	Where modulation is present	Where impulsiveness is present
+5 dB(A)	+5 dB(A)	+10 dB(A)

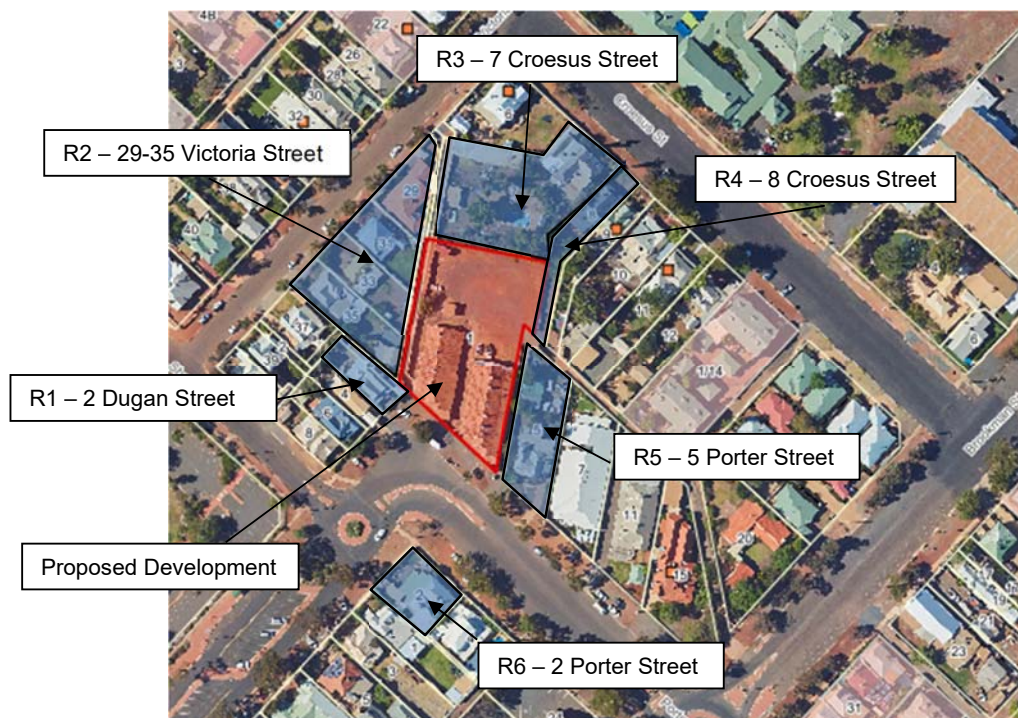
The nearest affected locations have been identified as:

- R1 – Residential Premises at 2 Dugan Street
- R2 – Residential Premises at 29-35 Victoria Street
- R3 – Residential Premises at 7 Croesus Street
- R4 – Residential Premises at 8 Croesus Street
- R5 – Residential Premises at 5 Porter Street
- R6 – Residential Premises at 2 Porter Street

The influencing factor at the residential premises has been conservatively estimated at + 1 dB as follows:

Commercial Premises within the Inner Circle	10%	+0.5
Commercial Premises within the Outer Circle	10%	+0.5
TOTAL		+1

FIGURE 1 – AREA MAP



Accordingly, the Assigned Noise Levels are as per Table 4 below.

TABLE 4 - ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{Amax}
Residential Premises	0700 – 1900 hours Monday to Saturday	46	56	66
	0900 - 1900 hours Sunday and Public Holidays	41	51	66
	1900 – 2200 hours all days	41	51	56
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	46	56

Notes: 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.

CALCULATED NOISE LEVELS

Based on information provided we believe that the development will have an air-conditioning unit for each module (total 56), the UA rooms and dining room, as well as a single kitchen exhaust associated with the kitchen.

Similarly, it is understood that the disposal of rubbish from the dining area, specifically noise associated with the dropping of glass bottles within the bins is of potential concern.

As this development is posited as a multi-party lodging house, it has been assumed that the occupants would provide their own transportation, and as a result noise from busses idling have not been assessed. If required, this can be assessed in a separate acoustic assessment and addressed in a noise management plan.

TABLE 5 – SOUND POWER LEVEL

Item	Sound Power Level dB(A)
Air conditioning Unit	64 (61 Night Mode)
Kitchen Exhaust	75
Glass Dropping in Bin	110 L _{Amax}

Using the above sound power level and development plans (Attached), modelling software “SoundPLAN” was utilised to calculate the noise highest noise level at each of the premises, shown below.

TABLE 6 – CALCULATED NOISE LEVELS

Item	Noise Level dB(A)			
	Mechanical Plant*	Mechanical Plant Barrired/Enclosed	Glass Dropping in Bin	Glass Dropping in Bin (With Enclosure)
R1 - 2 Dugan Street	34 (31)	28 (25)	59	49
R2 - 29 Victoria Street**	40 (37)	33 (30)	59	49
R3 - 7 Croseus Street	31 (28)	27 (24)	56	46
R4 - 8 Croseus Street	34 (31)	29 (26)	57	48
R5 - 5 Porter Street	41 (38)	30 (27)	73	56
R6 - 2 Porter Street	30 (27)	22 (19)	56	50

*Noise level in brackets () indicates “Night Mode”

** For R2, the highest noise level at all locations has been utilised.

ASSESSMENT

Due to the nature of noise emissions, it is unlikely for the emissions to contain annoying characteristics, however, to ensure a conservative assessment the penalty associated with “Tonality” has been applied. For Mechanical Plant and Vehicles Idling. Similarly, for Glass Dropping, the penalty associated with “Impulsiveness” has been applied. These adjustments are listed in Table 7 below.

TABLE 7 – APPLICABLE ADJUSTMENTS NOISE LEVELS, dB(A)

Item	Noise Level dB(A)			
	Mechanical Plant*	Mechanical Plant Barriered/Enclosed	Glass Dropping in Bin	Glass Dropping in Bin (With Enclosure)
R1 - 2 Dugan Street	39 (36)	33 (30)	69	59
R2 - 29 Victoria Street	45 (42)	38 (35)	69	59
R3 - 7 Croseus Street	36 (33)	32 (29)	66	56
R4 - 8 Croseus Street	39 (36)	34 (31)	67	58
R5 - 5 Porter Street	46 (43)	35 (32)	83	66
R6 - 2 Porter Street	35 (32)	27 (24)	66	60

*Noise level in brackets () indicates “Night Mode”

Table 8, 9, 10 and 11 shows the applicable Assigned Noise Levels, and assessable noise level emissions associated for the scenario associated with the mechanical plant.

As mechanical plant noise is continuous throughout the day and night, it has been assessed against the L_{A10} assigned noise level for all time periods, only utilising “night mode” during the night time period. As noted above the emissions are for all units operating simultaneously, even though in reality there will be a degree of diversity in operation, ie likely 40-60% of units operating at the same time. As a result, the assessment of mechanical plant would be deemed conservative.

TABLE 8 – ASSESSMENT OF MECHANICAL PLANT

Measurement Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable L _{A10} Assigned Level (dB)	Exceedance to Assigned Noise Level (dB)
R1 - 2 Dugan Street	39	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	39	1900 – 2200 hours all days	41	Complies
	36	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies
R2 - 29 Victoria Street	45	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	45	1900 – 2200 hours all days	41	+1
	42	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	+6
R3 - 7 Croseus Street	36	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	36	1900 – 2200 hours all days	41	Complies
	33	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies
R4 - 8 Croseus Street	39	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	39	1900 – 2200 hours all days	41	Complies
	36	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies
R5 - 5 Porter Street	46	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	46	1900 – 2200 hours all days	41	+5
	43	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	+7
R6 - 2 Porter Street	35	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	35	1900 – 2200 hours all days	41	Complies
	32	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies

TABLE 9 – ASSESSMENT OF MECHANICAL PLANT WITH ENCLOSURES

Measurement Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable L _{A10} Assigned Level (dB)	Exceedance to Assigned Noise Level (dB)
R1 - 2 Dugan Street	33	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	33	1900 – 2200 hours all days	41	Complies
	30	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies
R2 - 29 Victoria Street	38	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	38	1900 – 2200 hours all days	41	Complies
	35	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies
R3 - 7 Croseus Street	32	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	32	1900 – 2200 hours all days	41	Complies
	29	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies
R4 - 8 Croseus Street	34	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	34	1900 – 2200 hours all days	41	Complies
	31	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies
R5 - 5 Porter Street	35	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	35	1900 – 2200 hours all days	41	Complies
	32	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies
R6 - 2 Porter Street	27	0700 – 1900 hours Monday to Saturday, 0900 - 1900 hours Sunday and Public Holidays	46	Complies
	27	1900 – 2200 hours all days	41	Complies
	24	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	36	Complies

As dropping of glass dropping into bins is infrequent, it has been assessed against the $L_{A_{Max}}$ assigned noise level for all time periods.

TABLE 10 – ASSESSMENT OF GLASS DROPPING

Measurement Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable $L_{A_{Max}}$ Assigned Level (dB)	Exceedance to Assigned Noise Level (dB)
R1 - 2 Dugan Street	69	0700 – 1900 hours Monday to Saturday	66	+3
		0900 - 1900 hours Sunday and Public Holidays	66	+3
		1900 – 2200 hours all days	56	+13
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+13
R2 - 29 Victoria Street	69	0700 – 1900 hours Monday to Saturday	66	+3
		0900 - 1900 hours Sunday and Public Holidays	66	+3
		1900 – 2200 hours all days	56	+13
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+13
R3 - 7 Croseus Street	66	0700 – 1900 hours Monday to Saturday	66	Complies
		0900 - 1900 hours Sunday and Public Holidays	66	Complies
		1900 – 2200 hours all days	56	+10
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+10
R4 - 8 Croseus Street	67	0700 – 1900 hours Monday to Saturday	66	+1
		0900 - 1900 hours Sunday and Public Holidays	66	+1
		1900 – 2200 hours all days	56	+11
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+11
R5 - 5 Porter Street	83	0700 – 1900 hours Monday to Saturday	66	+17
		0900 - 1900 hours Sunday and Public Holidays	66	+17
		1900 – 2200 hours all days	56	+27
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+27
R6 - 2 Porter Street	66	0700 – 1900 hours Monday to Saturday	66	Complies
		0900 - 1900 hours Sunday and Public Holidays	66	Complies
		1900 – 2200 hours all days	56	+10
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+10

TABLE 11 – ASSESSMENT OF GLASS DROPPING WITH ENCLOSURE

Measurement Location	Assessable Noise Level, dB(A)	Applicable Times of Day	Applicable L _A Max Assigned Level (dB)	Exceedance to Assigned Noise Level (dB)
R1 - 2 Dugan Street	59	0700 – 1900 hours Monday to Saturday	66	Complies
		0900 - 1900 hours Sunday and Public Holidays	66	Complies
		1900 – 2200 hours all days	56	+3
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+3
R2 - 29 Victoria Street	59	0700 – 1900 hours Monday to Saturday	66	Complies
		0900 - 1900 hours Sunday and Public Holidays	66	Complies
		1900 – 2200 hours all days	56	+3
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+3
R3 - 7 Croseus Street	56	0700 – 1900 hours Monday to Saturday	66	Complies
		0900 - 1900 hours Sunday and Public Holidays	66	Complies
		1900 – 2200 hours all days	56	Complies
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	Complies
R4 - 8 Croseus Street	58	0700 – 1900 hours Monday to Saturday	66	Complies
		0900 - 1900 hours Sunday and Public Holidays	66	Complies
		1900 – 2200 hours all days	56	+2
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+2
R5 - 5 Porter Street	66	0700 – 1900 hours Monday to Saturday	66	Complies
		0900 - 1900 hours Sunday and Public Holidays	66	Complies
		1900 – 2200 hours all days	56	+10
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+10
R6 - 2 Porter Street	60	0700 – 1900 hours Monday to Saturday	66	Complies
		0900 - 1900 hours Sunday and Public Holidays	66	Complies
		1900 – 2200 hours all days	56	+4
		2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays	56	+4

CONCLUSION

Noise from the proposed development to the adjacent premises associated with mechanical play would comply with the *Environmental Protection (Noise) Regulations 1997* during day time without enclosures, and at all day and evening periods with an enclosure.

It is recommended that the enclosures implemented exceed the height of mechanical plant by at least a metre and be placed as close to plant as practicable.

Noise from the proposed development to the adjacent premises associated with glass dropping into the bins would comply with the *Environmental Protection (Noise) Regulations 1997*, during the day time period, if enclosed with a roof around the bin.

It is recommended that disposal of bottles be only conducted during the day time period via management. Alternatively, other noise control measures such as use of a glass crusher, or a more complete bin enclosure be utilised.

We trust the above meets your requirements on this matter. Should you have any queries, please do not hesitate to contact this office.

Yours faithfully,
For **HERRING STORER ACOUSTICS**

Geoffrey Harris

Att.



- GENERAL NOTES**
1. ALL DIMENSIONS ARE GIVEN UNLESS OTHERWISE SPECIFIED.
 2. METRE DIMENSIONS SHALL TAKE PRECEDENCE OVER LOCAL DIMENSIONS.
 3. UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS SHALL BE TO THE FACE OF THE WORK UNLESS OTHERWISE SPECIFIED.
 4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS.
 5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS.
 6. THE CONTRACTOR SHALL CHECK ALL WORK AND ALL DIMENSIONS ON SITE TO BE IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS.
 7. THE CONTRACTOR SHALL CHECK ALL WORK AND ALL DIMENSIONS ON SITE TO BE IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS.
 8. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS.
 9. THE CONTRACTOR SHALL CHECK ALL WORK AND ALL DIMENSIONS ON SITE TO BE IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS.
 10. THE CONTRACTOR SHALL CHECK ALL WORK AND ALL DIMENSIONS ON SITE TO BE IN ACCORDANCE WITH THE LOCAL AUTHORITY REQUIREMENTS.
- PROJECT NOTES**
- BALANCE: 100% 100% 100%
 - COORD: 100%
 - DRAW: 100%
 - SITE: 100%
 - CIVIL: 100%
 - MECHANICAL: 100%
 - ELECTRICAL: 100%
 - PLUMBING: 100%
 - PAINT: 100%
 - LANDSCAPE: 100%
 - FURNITURE: 100%
 - LIGHTING: 100%
 - SIGNAGE: 100%
 - SECURITY: 100%
 - ACCESSIBILITY: 100%
 - SUSTAINABILITY: 100%
 - SAFETY: 100%
 - COMPLIANCE: 100%
 - QUALITY: 100%
 - TIMING: 100%
 - BUDGET: 100%
 - RISK: 100%
 - COMMUNICATION: 100%
 - COLLABORATION: 100%
 - TRANSPARENCY: 100%
 - ACCOUNTABILITY: 100%
 - INTEGRITY: 100%
 - ETHICS: 100%
 - LEGAL: 100%
 - REGULATORY: 100%
 - STANDARDS: 100%
 - BEST PRACTICE: 100%
 - INNOVATION: 100%
 - LEADERSHIP: 100%
 - TEAMWORK: 100%
 - POSITIVITY: 100%
 - RESILIENCE: 100%
 - ADAPTABILITY: 100%
 - FLEXIBILITY: 100%
 - OPENNESS: 100%
 - HONESTY: 100%
 - COURTESY: 100%
 - RESPECT: 100%
 - EMPLOYMENT: 100%
 - ENVIRONMENTAL: 100%
 - SOCIAL: 100%
 - ECONOMIC: 100%
 - CULTURAL: 100%
 - EDUCATIONAL: 100%
 - RECREATIONAL: 100%
 - HEALTH: 100%
 - WELL-BEING: 100%
 - SAFETY: 100%
 - SECURITY: 100%
 - COMPLIANCE: 100%
 - QUALITY: 100%
 - TIMING: 100%
 - BUDGET: 100%
 - RISK: 100%
 - COMMUNICATION: 100%
 - COLLABORATION: 100%
 - TRANSPARENCY: 100%
 - ACCOUNTABILITY: 100%
 - INTEGRITY: 100%
 - ETHICS: 100%
 - LEGAL: 100%
 - REGULATORY: 100%
 - STANDARDS: 100%
 - BEST PRACTICE: 100%
 - INNOVATION: 100%
 - LEADERSHIP: 100%
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 - POSITIVITY: 100%
 - RESILIENCE: 100%
 - ADAPTABILITY: 100%
 - FLEXIBILITY: 100%
 - OPENNESS: 100%
 - HONESTY: 100%
 - COURTESY: 100%
 - RESPECT: 100%
 - EMPLOYMENT: 100%
 - ENVIRONMENTAL: 100%
 - SOCIAL: 100%
 - ECONOMIC: 100%
 - CULTURAL: 100%
 - EDUCATIONAL: 100%
 - RECREATIONAL: 100%
 - HEALTH: 100%
 - WELL-BEING: 100%
- DEMOLITION NOTES**
1. DEMOLITION OF EXISTING BUILDING AND ALL CONTENTS TO BE REMOVED.
 2. DEMOLITION OF EXISTING BUILDING AND ALL CONTENTS TO BE REMOVED.
 3. DEMOLITION OF EXISTING BUILDING AND ALL CONTENTS TO BE REMOVED.
 4. DEMOLITION OF EXISTING BUILDING AND ALL CONTENTS TO BE REMOVED.
 5. DEMOLITION OF EXISTING BUILDING AND ALL CONTENTS TO BE REMOVED.
 6. DEMOLITION OF EXISTING BUILDING AND ALL CONTENTS TO BE REMOVED.

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No.	REVISION	DATE
A-1	PRELIMINARY JDAF ISSUE	14.09.22

PROPOSED LODGING HOUSE ACCOMMODATION
1 PORTER ST KALGOORLIE

JOB NO.	2204	ISSUE	REVISION	DRAWING
DRAWN	HJA			
SCALE	N/A	A	1	A1.02
DATE	23.06.2022			

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