

**PROPOSED SHOP, HALL AND CHILDCARE CENTRE
7 HARDEY ROAD
GLEN FORREST**

ENVIRONMENTAL ACOUSTIC ASSESSMENT

FEBRUARY 2024

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**ENVIRONMENTAL ACOUSTIC ASSESSMENT
PROPOSED SHOP, HALL AND CHILDCARE CENTRE
GLEN FORREST**

Job No: 24009

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FOR

STATEWEST PLANNING

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1. INTRODUCTION

Herring Storer Acoustics were commissioned by Statewest Planning to undertake an acoustic assessment of noise emissions associated with the proposed shop, hall and child care centre to be located at 7 Hardey Road, Glen Forrest.

The report considers noise received at the neighbouring premises from the proposed development for compliance with the requirements of the *Environmental Protection (Noise) Regulations 1997*. This report considers noise emissions from:

- Children playing within the outside play areas of the centre;
- Mechanical Plant;
- Deliveries; and
- Usage of the hall.

We note that from information received from DWER, the bitumised area would be considered as a road, thus noise relating to motor vehicles is exempt from the *Environmental Protection (Noise) Regulations 1997*. We note that these noise sources are rarely critical in the determination of compliance. However, as requested by council and for completeness, they have been included in the assessment, for information purposes only.

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

2. SUMMARY

Noise received at the neighbouring residences from the outdoor play areas would comply with the requirements of the *Environmental Protection (Noise) Regulations 1997*, provided outdoor play is limited to the day period (ie after 7am).

Noise from the mechanical services has also been assessed to comply with the relevant criteria given the implementation of a barrier. However, as the design of the mechanical services has not been undertaken at this stage of the project, it is recommended that the mechanical services design be reviewed for compliance with the Regulatory requirements.

Noise from deliveries has been assessed to comply at all hours.

With regards to noise associated with the hall, it is understood that during meetings and usage of the hall, that no music is played, nor calls to worship or bells utilised.

It is noted that noise associated with cars movements and cars starting are exempt from complying with the Regulations. However, noise emissions from car doors is not strictly exempt from the Regulations. Noise received at the existing neighbouring residences from these noise sources would comply with the Regulatory requirements, at all times given the conditions listed below.

Thus, noise emissions from the proposed development, would be deemed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* for the proposed hours of operation, with the inclusion of the following:

- 1 Although the proposed childcare facility would open before 7 am (ie during the night period), the outdoor play area would not be used until after 7am. Thus, noise received at the neighbouring existing residences from the outdoor play area needs to comply with the assigned day period noise level.
- 2 Children music played inside would be background only with doors/windows opened. If music were to be played at a higher level, doors/windows would require to be closed.
- 3 No specialist acoustic fencing required for ground floor outdoor play areas of the childcare facility.
- 4 Based on the preliminary assessment, the mechanical plant would need to be barriered by a barrier at least 500mm above the top of the plant.
- 5 No restrictions on parking bays.
- 6 A noise management plan to be created and implemented by the operator once building license is approved, but prior to occupation.
- 7 The assessment of noise emissions from the mechanical plant to be revised / updated once selections and placement of equipment have been finalised.

3. 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. For highly sensitive area of a noise sensitive premises this is determined by the calculation of an influencing factor, which is then added to the base levels shown below in Table 3.1. The influencing factor is calculated for the usage of land within two circles, having radii of 100m and 450m from the premises of concern. For other areas within a noise sensitive premises, the assigned noise levels are fixed throughout the day, as listed in Table 3.1.

TABLE 3.1 - BASELINE ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{Amax}
Noise sensitive premises: highly sensitive area	0700 - 1900 hours Monday to Saturday (Day)	45 + IF	55 + IF	65 + IF
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	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
Noise sensitive premises: any area other than highly sensitive area	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.

Under the Regulations, a highly sensitive area means that area (if any) of noise sensitive premises comprising –

- (a) A building, or a part of a building, on the premises that is used for a noise sensitive purpose; and
- (b) Any other part of the premises within 15 m of that building or that part of the building.

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 – <ul style="list-style-type: none"> (a) is more than 3 dB L_{AFast} or is more than 3 dB L_{AFast} 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 – <ul style="list-style-type: none"> (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, <p>is greater than 3 dB 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_{ASlow} levels.</p>

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 3.2 below.

TABLE 3.2 - ADJUSTMENTS TO MEASURED LEVELS

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

Note: These adjustments are cumulative to a maximum of 15 dB.

The neighbouring locations have been shown in Figure 3.1, identified as:

- R1 – Commercial location to the North at 1400 Great Eastern Highway;
- R2 – Commercial locations to the West at 1320 Great Eastern Highway and 4 Hardey Road;
- R3 – Residential location to the west at 8 Hardey Road;
- R4 – Residential locations to the west at 12, 14 and 16 Hardey Road;
- R5 – Residential location to the north at 1460 Great Eastern Highway;
- R6 – Residential location to the east at 13 Welsh Glen; and
- R7 – Residential locations to the east at 5, and 9 Welsh Glen and 175 Strettle Road.

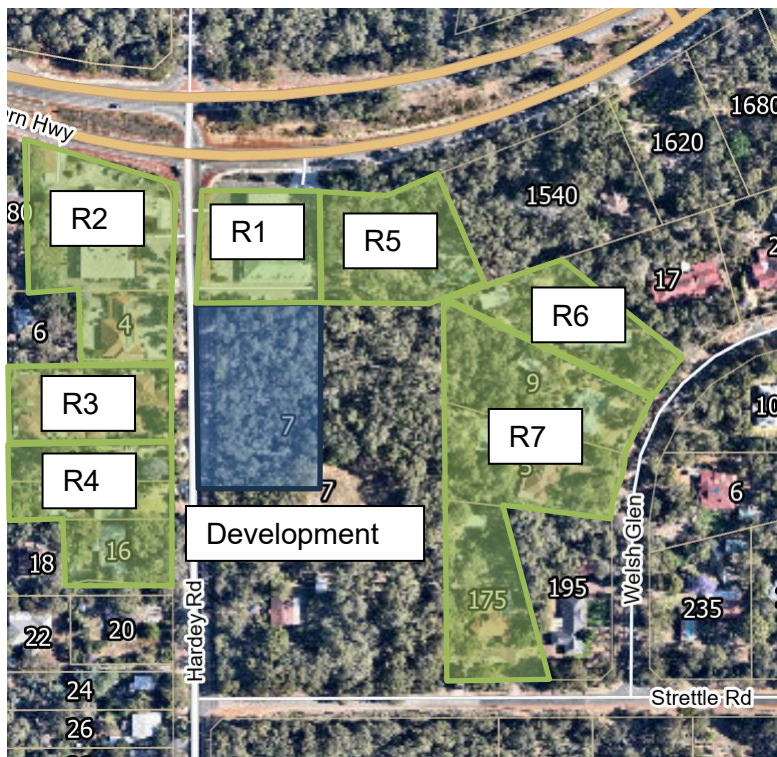


FIGURE 3.1 – KEY RECEPTORS

A breakdown of the influencing factor for locations has been shown in Table 3.3 and the assigned outdoor noise levels have been shown in Table 3.4.

TABLE 3.3 – INFLUENCING FACTOR

Receptor	Type	Influencing Factor
R1	Commercial	N/A
R2	Commercial	N/A
R3	Residential	+9
R4	Residential	+4
R5	Residential	+8
R6	Residential	+6
R7	Residential	+2

TABLE 3.4 - ASSIGNED OUTDOOR NOISE LEVEL

Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{Amax}
R1, R2 Commercial	All Hours	60	75	80
R3	0700 - 1900 hours Monday to Saturday (Day)	54	64	74
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	49	59	74
	1900 - 2200 hours all days (Evening)	49	59	64
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	44	54	64
R4	0700 - 1900 hours Monday to Saturday (Day)	49	59	69
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	44	54	69
	1900 - 2200 hours all days (Evening)	44	54	59
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	39	49	59
R5	0700 - 1900 hours Monday to Saturday (Day)	53	63	73
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	48	58	73
	1900 - 2200 hours all days (Evening)	48	58	63
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	43	53	63
R6	0700 - 1900 hours Monday to Saturday (Day)	51	61	71
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	46	56	71
	1900 - 2200 hours all days (Evening)	46	56	61
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	41	51	61
R7	0700 - 1900 hours Monday to Saturday (Day)	47	57	67
	0900 - 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day)	42	52	67
	1900 - 2200 hours all days (Evening)	42	52	57
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	37	47	57

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.

4. PROPOSAL

From information supplied, we understand that the development normal hours of operations would likely be:

- Shop between 0900 to 0530, Monday to Friday; 0800 to 1800, Saturday and Sunday
- Hall between 1900 to 1930, Monday and between 0600 to 0700 and 1700 to 1800 on Sunday;
- Childcare Centre between 0630 to 1800 hours, Monday to Friday (closed on public holidays). It is understood that the proposed childcare centre will cater for 46 children.

It is noted that although the proposed child care centre would open before 7 am (ie during the night period), the outdoor play area would not be intended to be used until after 7am.

Deliveries at this stage would be limited to any specific operating hours.

Similarly, mechanical plant would possibly operate all hours of the day.

5. MODELLING

To assess the noise received at the neighbouring premises from the proposed development, noise modelling was undertaken using the noise modelling program SoundPlan.

Calculations were carried out using the DWER's weather conditions, which relate to worst case noise propagation, as stated in the Department of Environment Regulation "*Draft Guidance on Environmental Noise for Prescribed Premises*". These conditions include winds blowing from sources to the receiver(s).

Calculations were based on the sound power levels used in the calculations are listed in Table 5.1, as well as plans and contours provide by the client.

TABLE 5.1 – SOUND POWER LEVELS

Item	Sound Power Level, dB(A)
Children Playing	<24 months 78 (per 10 children)
	Between 24 and 36 months 85 (per 10 children)
	>36 months 87 (per 10 children)
Car Moving in Car Park	79
Car Starting	85
Door Closing	87
Air conditioning condensing Unit	Shop, 1 @ 74
	Hall, 1 @ 74
	Childcare 3 @ 74 each
Kitchen/Bathroom Exhaust	Shop, 1 @ 71
	Hall, 1 @ 71
	Childcare 2 @ 71 each
Cold Room Condenser	Shop, 1 @ 74
Music	90 (interior)
Delivery Truck	84

Notes:

- 1 Acoustic modelling of outdoor play noise was made, based on 46 children within the outdoor play area (ie worst case scenario) broken down as follows:
 - 0-12 months – 4 places
 - 12-24 months– 12 places
 - 24 to 36 months– 10 places
 - 36+ months – 20 places
- 2 Outdoor play has been assessed only, as these locations are closer to the receivers, compliance with outdoor play would yield compliance with indoor play.
- 3 Childcare music played inside would be background only with doors/windows opened. If music were to be played at a higher level, doors/windows would require to be closed.
- 4 The noise level for the mechanical plant has been based on the sound power levels used for previous assessment of child care centres. From other studies, we understand that the noise associated with the condensing units would be conservative to ensure compliance. It is recommended that a further acoustic study be conducted once mechanical selection and placement has been determined.
- 5 For this development, the mechanical plant units have been considered roof mounted with a barrier at least 500mm above top of units.
- 6 No specialist acoustic fencing required for ground level outdoor play area.
- 7 To determine the restriction to the parking, a point noise source was located in each car bay.

- 8 Modelling shows that noise received at the neighbouring residences from car doors closing would comply with the assigned noise level for both day and night period.
- 9 With personnel only arriving before 7am, there would be no car starts before 7am.
- 10 Calculations were undertaken for the receivers at 1.5 metres above the ground level.
- 11 Noise modelling was undertaken to a number of different receiver locations for each of the neighbouring residences. However, to simplify the assessment, only the noise level in the worst case location (ie highest noise level), have been listed.
- 12 Whilst the assessment is broad in nature, if there are any concerns in regards to specific items such as screaming of children, children crying, etc they can be addressed in a Noise Management Plan to be provided by the operator after Building License, but before occupation.

6. ASSESSMENT

The tables below show the assessment of noise emissions of concern from the operation. Standard building construction will be sufficient to ensure that noise from inside the building will meet the regulations.

Details for the modelling including mechanical plant locations and receiver locations are shown on a plan in Appendix B.

The resultant noise levels at the neighbouring residence from children playing outdoors and mechanical plant are tabulated in Table 6.1.

From previous measurements, noise emissions from children playing does not contain any annoying characteristics, however mechanical plant emissions would be considered tonal and attract a +5 dB(A) Penalty. Noise emissions from outdoor play needs to comply with the assigned L_{A10} noise levels.

**TABLE 6.1 - ACOUSTIC MODELLING RESULTS FOR L_{A10} CRITERIA
 OUTDOOR PLAY AREAS AND MECHANICAL PLANT**

Neighbouring Premises	Calculated Noise Level (dB(A))	
	Children Playing	Mechanical Plant
R1 Commercial	40	35 (40)
R2 Commercial	39	33 (38)
R3 Residential	42	33 (38)
R4 Residential	43	32 (37)
R5 Residential	38	30 (35)
R6 Residential	33	24 (29)
R7 Residential	38	27 (32)

() Includes +5 dB(A) penalty for tonality

With regards to noise associated with cars within the parking area, resultant noise levels are tabulated in Tables 6.2 and 6.3. It is noted that noise emissions from a moving car being an L_{A1} noise level, with noise emissions from cars starting and doors closing being an L_{Amax} noise level.

Based on the definitions of tonality, noise emissions from car movements and car starts, being an L_{A1} and L_{Amax} respectively, being present for less than 10% of the time, would not be considered tonal. Thus, no penalties would be applicable, and the assessment would be as listed in Table 6.2 (Car Moving) and Table 6.3 (Car Starting). However, noise emissions from car doors closing could be impulsive, hence the +10dB penalty has been included in the assessment.

**TABLE 6.2 - ACOUSTIC MODELLING RESULTS L_{A1} CRITERIA
 CAR MOVING**

Neighbouring Premises	Calculated Noise Level (dB(A))
R1 Commercial	44
R2 Commercial	37
R3 Residential	38
R4 Residential	40
R5 Residential	37
R6 Residential	27
R7 Residential	28

**TABLE 6.3 - ACOUSTIC MODELLING RESULTS L_{Amax} CRITERIA
 CAR STARTING / DOOR CLOSING**

Neighbouring Premises	Calculated Noise Level (dB(A))			
	Car Start		Car Door	
	Day Period	Night Period	Day Period	Night Period
R1 Commercial	57	57	58 [68]	58 [68]
R2 Commercial	45	45	46 [56]	46 [56]
R3 Residential	46	46	47 [57]	47 [57]
R4 Residential	46	46	47 [57]	47 [57]
R5 Residential	41	41	42 [52]	42 [52]
R6 Residential	31	31	32 [42]	32 [42]
R7 Residential	33	33	33 [43]	33 [43]

[] Includes +10 dB(A) penalty for impulsiveness.

With regards to noise associated with deliveries, resultant noise levels are tabulated in Table 6.4 assessed against an L_{A1} noise level.

Similar to above, deliveries would not have any penalties for annoying characteristics.

**TABLE 6.4 - ACOUSTIC MODELLING RESULTS L_{A1} CRITERIA
 DELIVERIES**

Neighbouring Premises	Calculated Noise Level (dB(A))
R1 Commercial	35
R2 Commercial	33
R3 Residential	33
R4 Residential	30
R5 Residential	29
R6 Residential	21
R7 Residential	23

Finally, with regards to noise associated with the hall, it is understood that during meetings and usage of the hall, that no music is played, nor calls to worship or bells utilised.

Tables 6.5 to 6.12 summarise the applicable Assigned Noise Levels, and assessable noise level emissions for each identified noise.

**TABLE 6.5 – ASSESSMENT OF L_{A10} NOISE LEVEL EMISSIONS
 OUTDOOR PLAY (DAY PERIOD)**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Commercial	40	60	Complies
R2 Commercial	39	60	Complies
R3 Residential	42	54	Complies
R4 Residential	43	49	Complies
R5 Residential	38	53	Complies
R6 Residential	33	51	Complies
R7 Residential	38	47	Complies

**TABLE 6.6 – ASSESSMENT OF L_{A10} NIGHT PERIOD NOISE LEVEL EMISSIONS
 MECHANICAL PLANT**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Commercial	40	60	Complies
R2 Commercial	38	60	Complies
R3 Residential	38	44	Complies
R4 Residential	37	39	Complies
R5 Residential	35	43	Complies
R6 Residential	29	41	Complies
R7 Residential	32	37	Complies

**TABLE 6.7 – ASSESSMENT OF L_{A1} NIGHT PERIOD NOISE LEVEL EMISSIONS
 CAR MOVEMENTS**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Commercial	44	75	Complies
R2 Commercial	37	75	Complies
R3 Residential	38	54	Complies
R4 Residential	40	49	Complies
R5 Residential	37	53	Complies
R6 Residential	27	51	Complies
R7 Residential	28	47	Complies

**TABLE 6.8 – ASSESSMENT OF L_{Amax} DAY PERIOD NOISE LEVEL EMISSIONS
 CAR STARTING**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Commercial	57	80	Complies
R2 Commercial	45	80	Complies
R3 Residential	46	74	Complies
R4 Residential	46	69	Complies
R5 Residential	41	73	Complies
R6 Residential	31	71	Complies
R7 Residential	33	67	Complies

**TABLE 6.9 – ASSESSMENT OF L_{Amax} NIGHT PERIOD NOISE LEVEL EMISSIONS
 CAR STARTING**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Commercial	57	80	Complies
R2 Commercial	45	80	Complies
R3 Residential	46	64	Complies
R4 Residential	46	59	Complies
R5 Residential	41	63	Complies
R6 Residential	31	61	Complies
R7 Residential	33	57	Complies

**TABLE 6.10 – ASSESSMENT OF L_{Amax} DAY PERIOD NOISE LEVEL EMISSIONS
 CAR DOOR**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Commercial	68	80	Complies
R2 Commercial	56	80	Complies
R3 Residential	57	74	Complies
R4 Residential	57	69	Complies
R5 Residential	52	73	Complies
R6 Residential	42	71	Complies
R7 Residential	43	67	Complies

**TABLE 6.11 – ASSESSMENT OF L_{Amax} NIGHT PERIOD NOISE LEVEL EMISSIONS
 CAR DOOR**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Commercial	68	80	Complies
R2 Commercial	56	80	Complies
R3 Residential	57	64	Complies
R4 Residential	57	59	Complies
R5 Residential	52	63	Complies
R6 Residential	42	61	Complies
R7 Residential	43	57	Complies

**TABLE 6.12 – ASSESSMENT OF L_{A1} NIGHT PERIOD NOISE LEVEL EMISSIONS
 DELIVERIES**

Location	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
R1 Commercial	35	75	Complies
R2 Commercial	33	75	Complies
R3 Residential	33	54	Complies
R4 Residential	30	49	Complies
R5 Residential	29	53	Complies
R6 Residential	21	51	Complies
R7 Residential	23	47	Complies

With the operating hours as proposed, operations from the hall would only be at the same time as active hours of the shop during 1700 to 1800 on Sunday. There would be not cross over in active hours for the Childcare.

Based on the above, the calculated noise level of the other facilities to the hall would be 14 dB(A) inside and the following assessment applies, including a +15 Penalty for “Inside with Doors and Windows Closed”.

**TABLE 6.13 – ASSESSMENT OF LA10 NIGHT PERIOD NOISE LEVEL EMISSIONS
 HALL**

Location	Calculated Noise Level dB(A)	Penalty dB(A)	Assessable Noise Level dB(A)	Applicable Assigned Noise Level (dB(A))	Exceedance to Assigned Noise Level
Hall	14	+15	29	44	Complies

7. CONCLUSION

Noise received at the neighbouring residences from the outdoor play areas would comply with the requirements of the *Environmental Protections (Noise) Regulations 1997*, provided outdoor play is limited to the day period (ie after 7am).

Noise from the mechanical services has also been assessed to comply with the relevant criteria given the implementation of a barrier. However, as the design of the mechanical services has not been undertaken at this stage of the project, it is recommended that the mechanical services design be reviewed for compliance with the Regulatory requirements.

Noise from deliveries has been assessed to comply at all hours.

Noise from music associated with the hall has been assessed to comply at all hours, given doors and windows are closed.

It is noted that noise associated with cars movements and cars starting are exempt from complying with the Regulations. However, noise emissions from car doors is not strictly exempt from the Regulations. Noise received at the existing neighbouring residences from these noise sources would comply with the Regulatory requirements, at all times given the conditions listed below.

Thus, noise emissions from the proposed development, would be deemed to comply with the requirements of the *Environmental Protection (Noise) Regulations 1997* for the proposed hours of operation, with the inclusion of the following:

- 1 Although the proposed childcare facility would open before 7 am (ie during the night period), the outdoor play area would not be used until after 7am. Thus, noise received at the neighbouring existing residences from the outdoor play area needs to comply with the assigned day period noise level.
- 2 Children music played inside would be background only with doors/windows opened. If music were to be played at a higher level, doors/windows would require to be closed.
- 3 No specialist acoustic fencing required for ground floor outdoor play areas of the childcare facility.
- 4 Based on the preliminary assessment, the mechanical plant would need to be barriered by a barrier at least 500mm above the top of the plant.

- 5 No restrictions on parking bays.
- 6 A noise management plan to be created and implemented by the operator once building license is approved, but prior to occupation.
- 7 The assessment of noise emissions from the mechanical plant to be revised / updated once selections and placement of equipment have been finalised.

Finally, it is recommended to adopt best practices in managing a child care centre to reduce noise, including but not limited to no amplified music to be played outside, and favouring soft finishes in the outdoor play area.

APPENDIX A

PLANS

SHOP:
 AREA DESIGNATED = 2050 m²
 AREA SHOP = 313 m²

CAR PARKING CALCULATION:
 ○ 1 SPACE x 15 m² GLA IN LOCAL CENTRE
 PARKING BAYS FOR SHOP = 21 BAYS (MINIMUM) + 1 ACCESSIBLE BAY MINIMUM

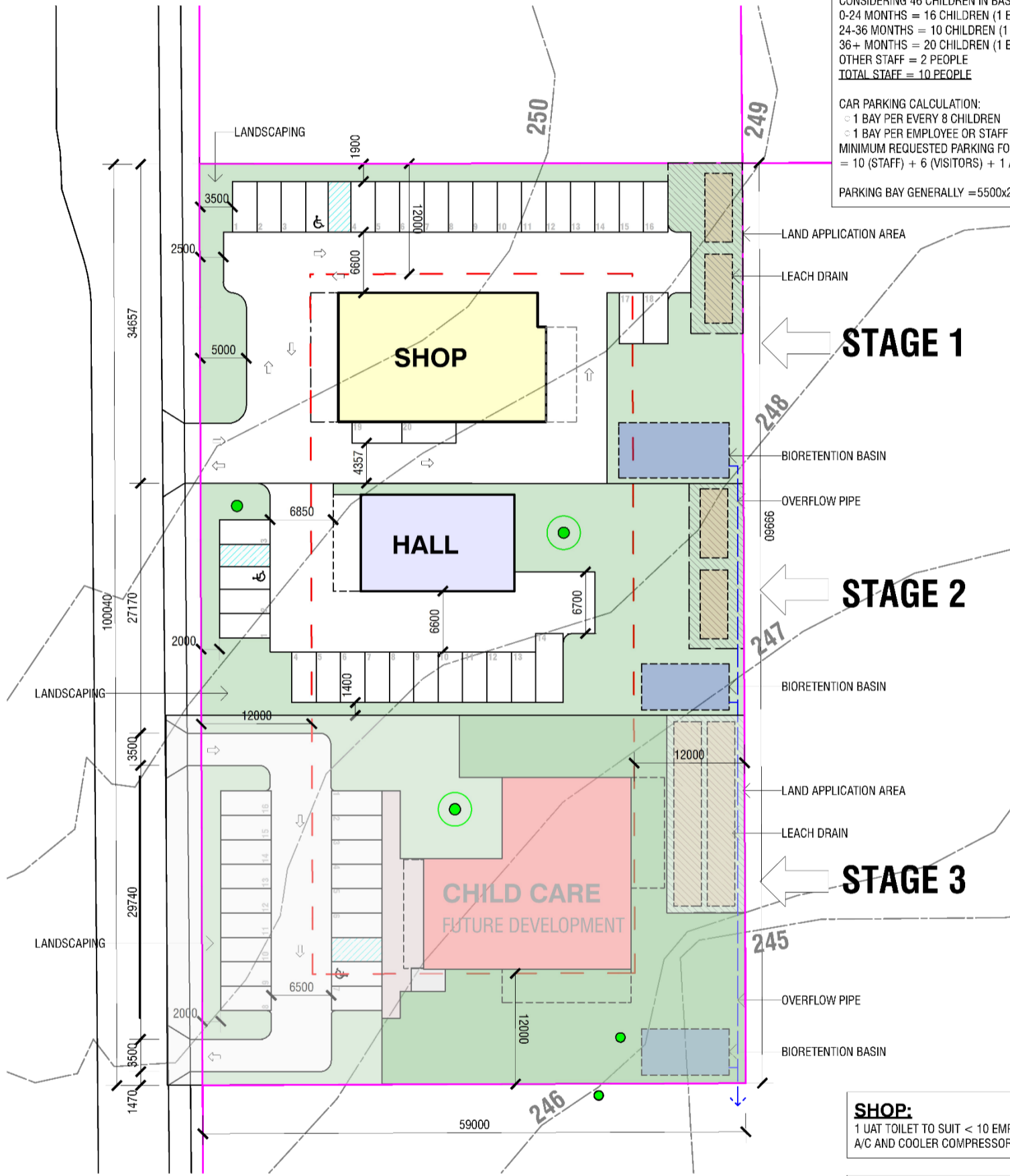
HALL:
 AREA DESIGNATED = 1500 m²
 AREA HALL = 175 m²

CAR PARKING CALCULATION:
 ○ 1 SPACE PER 4 PERSONS CAPABLE OF BEING ACCOMMODATED
 PARKING BAYS FOR HALL = 13 BAYS (MINIMUM) + 1 ACCESSIBLE BAY MINIMUM

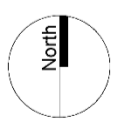
CHILD CARE:
 AREA DESIGNATED = 2350 m²
 AREA CHILD CARE = 394 m²

CONSIDERING 46 CHILDREN IN BASE OF THE AREA:
 0-24 MONTHS = 16 CHILDREN (1 EDUCATOR PER 4 CHILDREN = 4 EDUCATORS)
 24-36 MONTHS = 10 CHILDREN (1 EDUCATOR PER 5 CHILDREN = 2 EDUCATORS)
 36+ MONTHS = 20 CHILDREN (1 EDUCATOR PER 10 CHILDREN = 2 EDUCATORS)
 OTHER STAFF = 2 PEOPLE
TOTAL STAFF = 10 PEOPLE

CAR PARKING CALCULATION:
 ○ 1 BAY PER EVERY 8 CHILDREN
 ○ 1 BAY PER EMPLOYEE OR STAFF MEMBER
 MINIMUM REQUESTED PARKING FOR CHILD CARE BUILDING =
 = 10 (STAFF) + 6 (VISITORS) + 1 ACC BAY = 16 BAYS + 1 ACCESSIBLE BAY MINIMUM
 PARKING BAY GENERALLY = 5500x2600 mm



LOCATION PLAN
 SCALE 1:500



SHOP:
 1 UAT TOILET TO SUIT < 10 EMPLOYEES
 A/C AND COOLER COMPRESSORS TO BE LOCATED AT EAST ELEVATION-ROOF MOUNTED

- POTENTIAL BLACK COCKATOO HABITAT TREE WITH HOLLOW
- POTENTIAL BLACK COCKATOO HABITAT TREE

STAGE	REV.	DESCRIPTION	DATE
CP		CONCEPT LOCATION PLAN	06/10/23
	1	SHOP AREA MODIFICATIONS & 2 CAR BAYS ADDED	12/10/23
	2	LOCATION PLAN OPTION B ADDED	16/10/23
	3	LOCATION PLAN OPT C & D	26/10/23
	4	SWEPT PATH ADDED TO SHOP PLAN FOR TRANSPORT DESIGN	08/11/23
	5	STAGED NOTATIONS ADDED	09/11/23
	6	FINAL NOTATION ADDED	24/11/23

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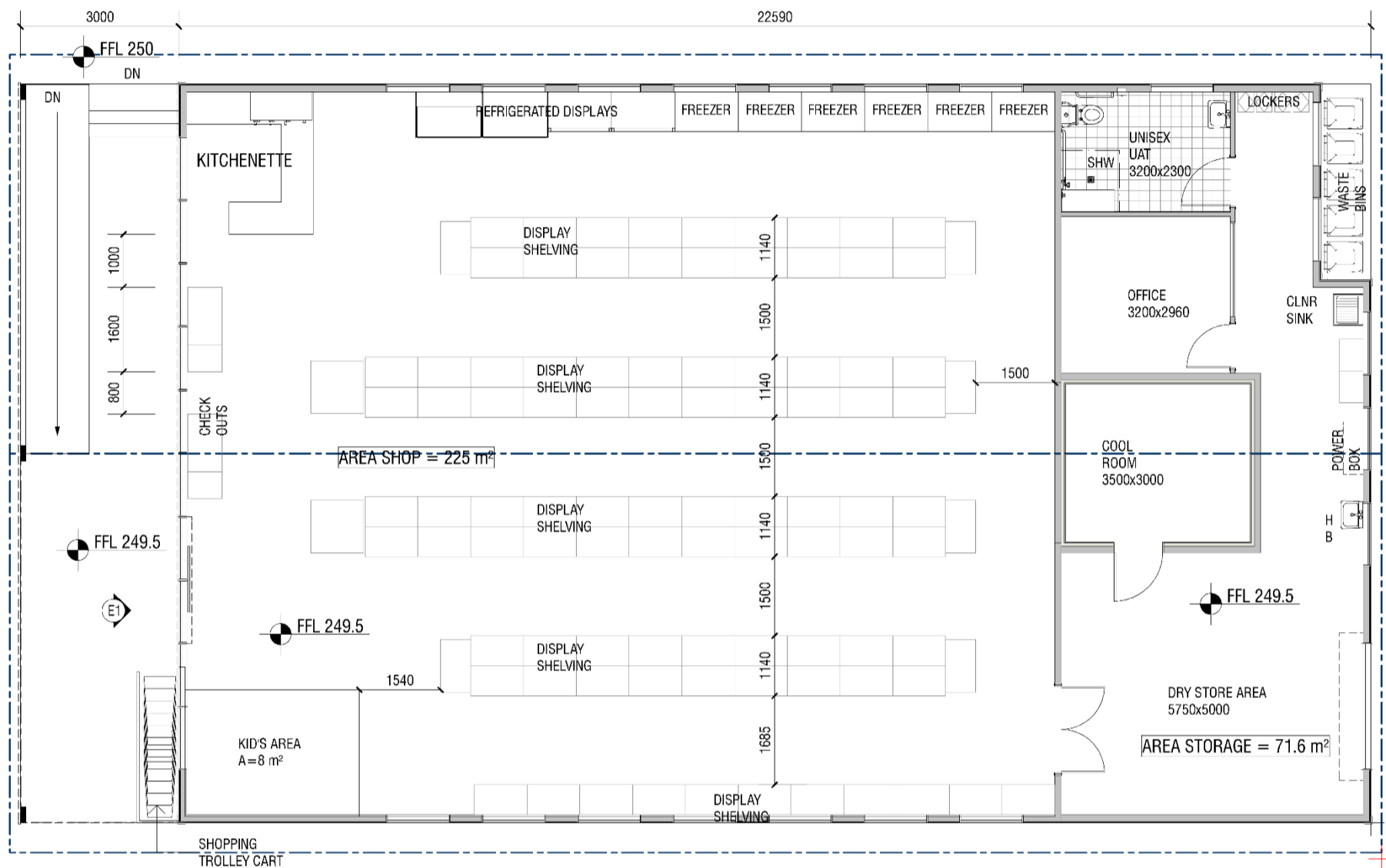
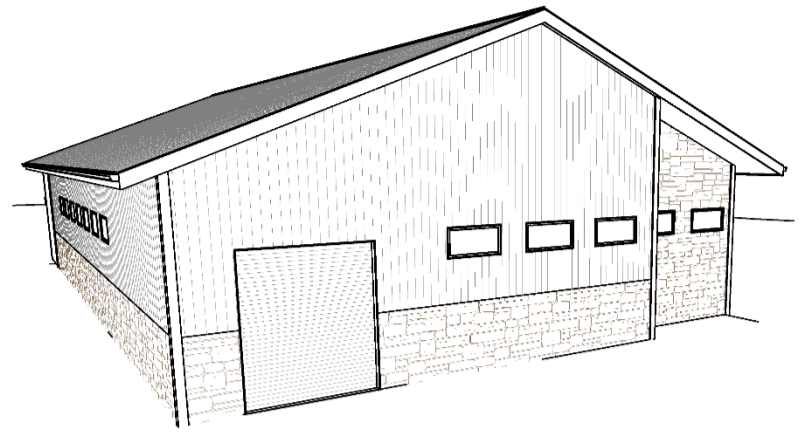
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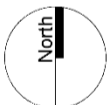
MUNDARING GOSPEL TRUST
 7 HARDEY ROAD,
 GLEN FORREST
 LOCATION PLAN

PROJECT No 10650923

DESIGNED DS	CHECKED DS	DWG N° A 1.0	REV 6
SHEET SIZE A3	DATE 24/11/2023		

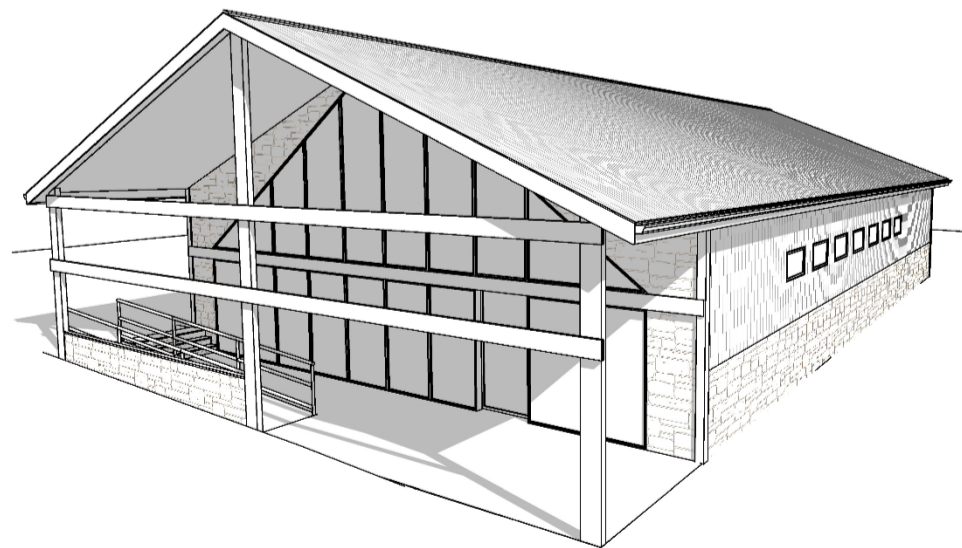


01
A 3.0
02



CONCEPT SHOP FLOOR PLAN

SCALE 1:100



STAGE	REV.	DESCRIPTION	DATE
CP		CONCEPT LOCATION PLAN	06/10/23
	1	SHOP AREA MODIFICATIONS & 2 CAR BAYS ADDED	12/10/23
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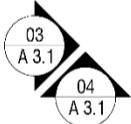
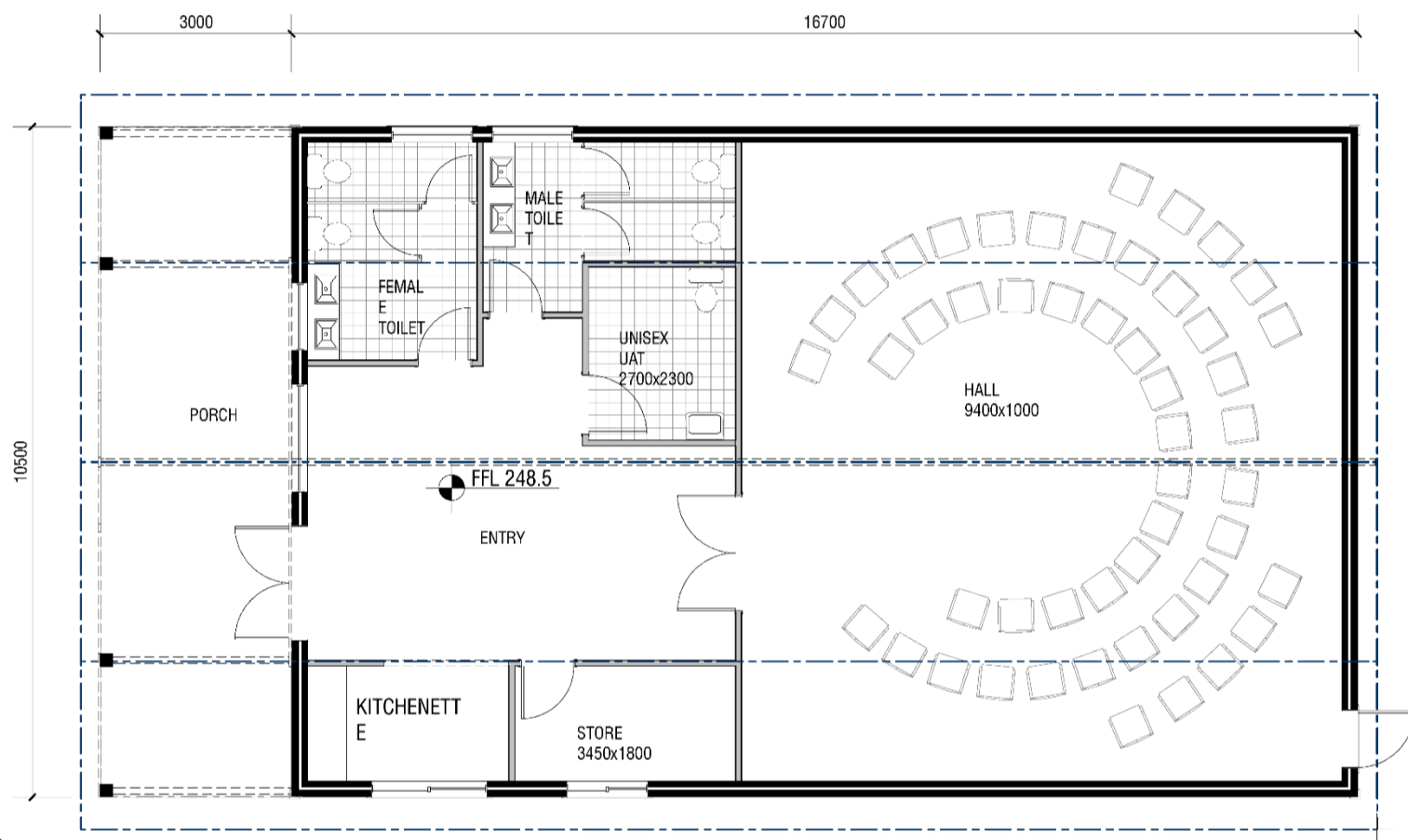
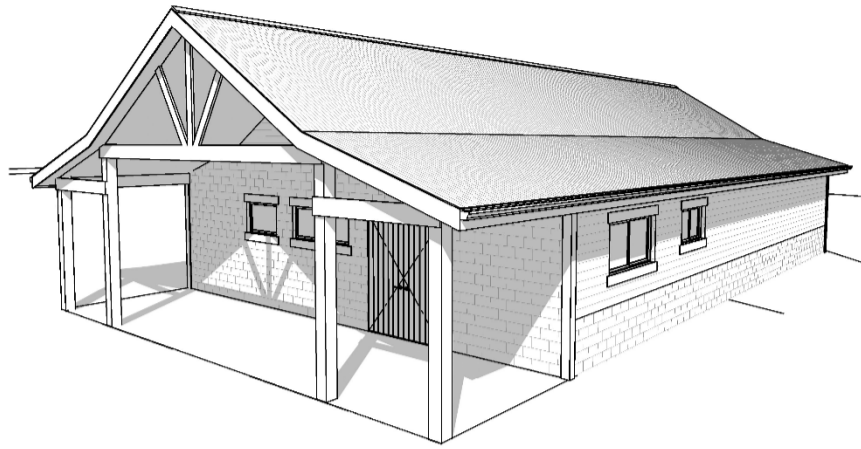
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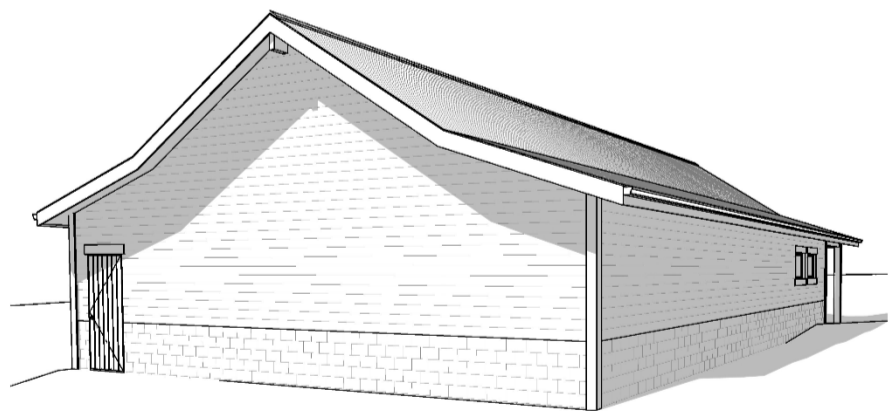
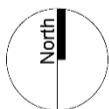
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MUNDARING GOSPEL TRUST
 7 HARDEY ROAD,
 GLEN FORREST
 CONCEPT SHOP FLOOR PLAN

PROJECT No 10650923			
DESIGNED DS	CHECKED DS	DWG N°	REV
SHEET SIZE A3	DATE 24/11/2023	A 2.0	6



CONCEPT HALL FLOOR PLAN
SCALE 1:100



STAGE	REV.	DESCRIPTION	DATE
CP		CONCEPT LOCATION PLAN	06/10/23
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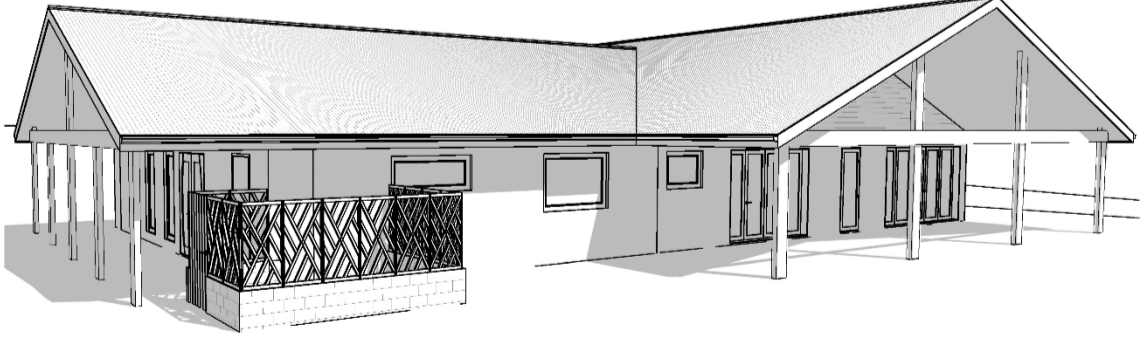
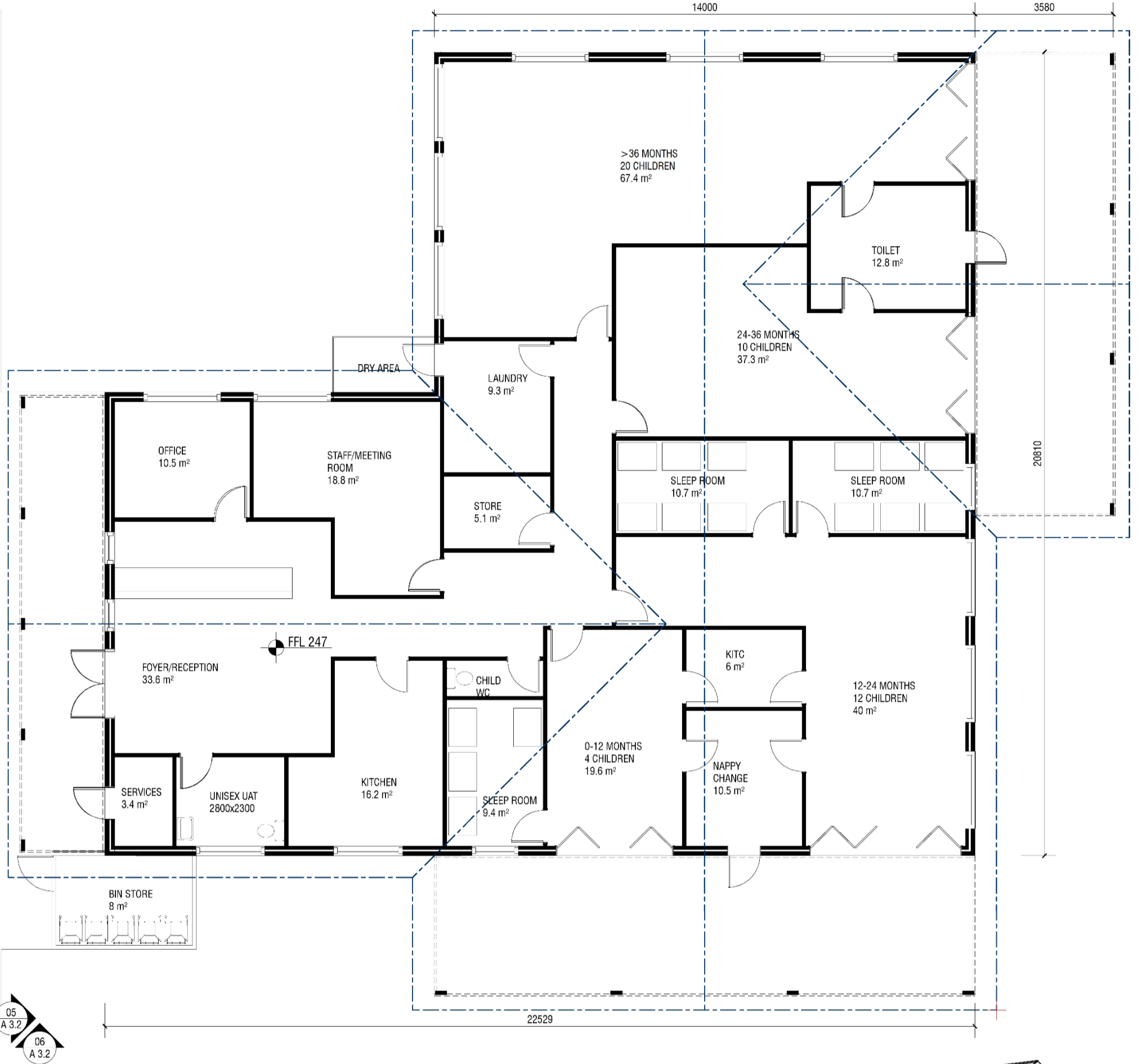
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GLEN FORREST
CONCEPT HALL FLOOR PLAN

PROJECT No 10650923			
DESIGNED DS	CHECKED DS	DWG N° A 2.1	REV 6
SHEET SIZE A3	DATE 24/11/2023		



CONCEPT CHILDCARE CENTRE FLOOR PLAN
SCALE 1:100



STAGE	REV.	DESCRIPTION	DATE
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CONCEPT CHILDCARE CENTRE FLOOR PLAN

PROJECT No 10650923

DESIGNED DS	CHECKED DS	DWG N° A 2.2	REV 6
SHEET SIZE A3	DATE 24/11/2023		

APPENDIX B

MECHANICAL PLANT & RECEIVER LOCATIONS

