

BCC DS
RECEIVED
21/05/2026
APPLICATION REF
A006831357

Proposed Childcare Centre
66 Crossacres Street, Doolandella
(Lot 43 on RP90234)

ENVIRONMENTAL NOISE IMPACT REPORT

Prepared for

YD Childcare Pty Ltd

14 May 2026

crgref: 25071 report rev.2

1.0 INTRODUCTION

This report is in response to a request from YD Childcare Pty Ltd for a revised environmental noise impact assessment of a childcare centre development along Crossacres Street, Doolandella.

In undertaking the assessment, noise monitoring was conducted on the site, and through modelling predictions of onsite activity noise emissions were produced. Based upon the predicted noise impact levels, recommendations regarding acoustic treatment to the development have been provided.

This report responds to Items 3) and 4) of Brisbane City Council's Further Advice dated 27th February 2026 as presented below:

Noise Emissions

- 3) The submitted report "Environmental Noise Impact Report" by CRG dated 7/11/25 Reference Number 25071 Revision 1 has not addressed sensitive receptors to all boundaries. Submit an amended Environmental Noise Impact Report (specifically Section 5) which provides an assessment against PO2 of the Community facilities code and include all site boundaries in the Emerging Community zone.
- 4) Provide more information about the gate associated with the acoustic fences. Openings in barriers will not allow noise reduction through the barrier. Plans that refer to a gate should be amended to ensure that acoustic barriers are proposed as gap free elements of the development.

In relation to Item 3), all site boundaries of the childcare centre with the potential for noise sensitive receivers have been assessed including the current plant nursery to the immediate east, and the western parcel of residential land.

In relation to Item 4), we have removed any reference to gates in the acoustic barriers.

2.0 DESCRIPTION OF THE DEVELOPMENT

The site is described as Lot 43 on RP90234, 66 Crossacres Street, Doolandella. The site and surrounding properties to the east are zoned EC “*Emerging Community*”. The parcel of land bounded by Crossacres Street to the north, a plant nursery to the east, Paddington Street to the south and an existing residential property to the west. The topography of the site and surrounding land is generally flat but has a slight fall from north to south. For site location refer to Figures 1 and 2 in Appendix A.

The “*Emerging Community*” zone allows for childcare centres as stated in Section 6.2.6.2.f.iii:

“where not indicated in a neighbourhood plan, accommodates only those uses that address local need where within an existing or future residential area, including:

- A. *community services and recreational facilities ([childcare centre](#), [club](#), [community care centre](#), [community use](#), [educational establishment](#), [emergency services](#), [indoor sport and recreation](#), [outdoor sport and recreation](#), [park](#), [place of worship](#), [substation](#) and [utility installation](#));”*

The proposal is to construct a childcare centre at the northern end of the site comprising ten activity rooms, yielding spaces for 185 children. Carparking is proposed at the northern end, with two buildings through the centre and southern ends. Outdoor play spaces are proposed around perimeter of the buildings. Vehicle access to carparking is from a driveway crossover to Crossacres Street towards the western end of the northern boundary. Refer to Appendix B for development plans.

Proposed hours of operation have been assessed for between 7am and 6:30pm, Monday to Friday.

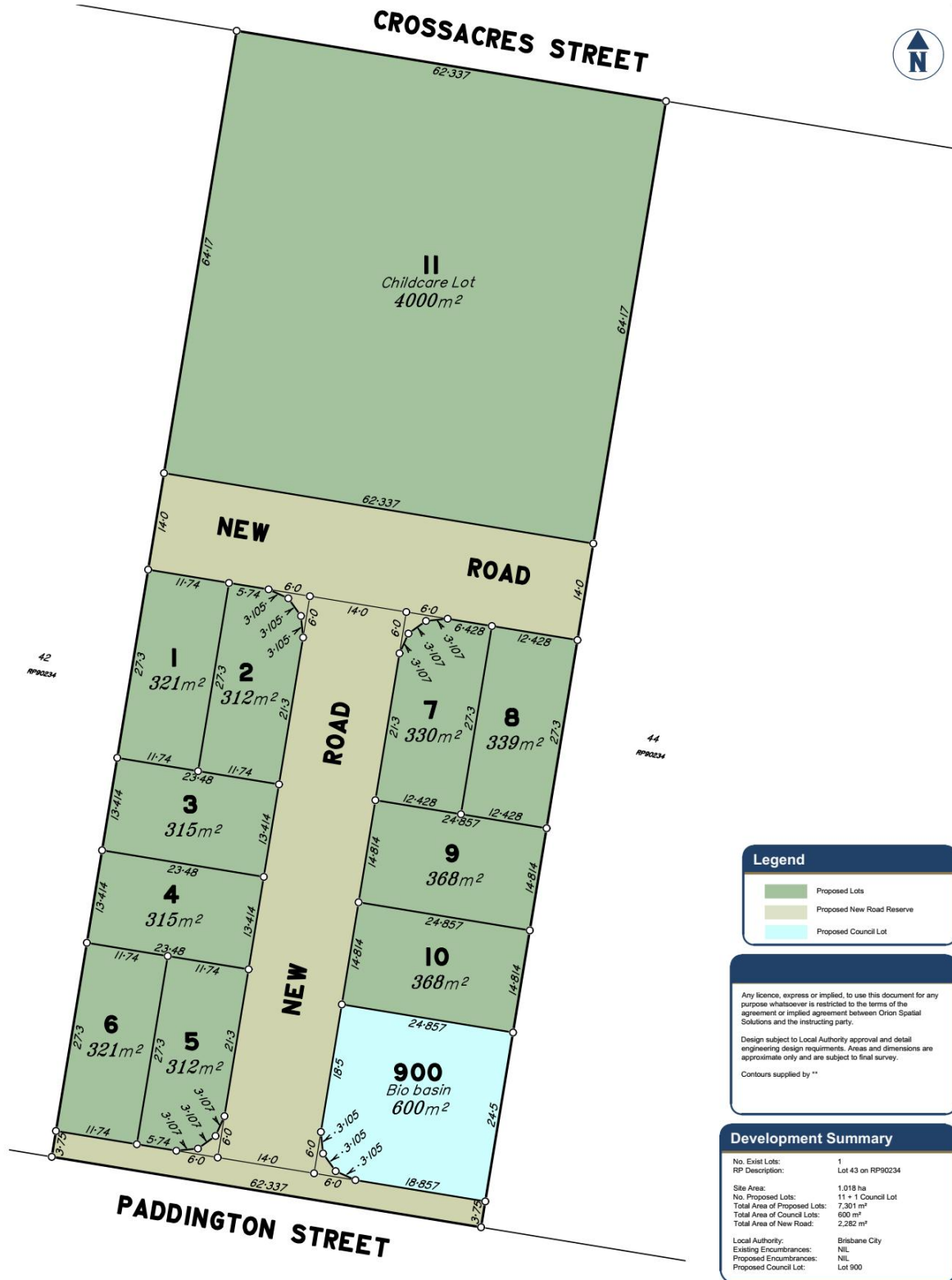
Onsite activity such as vehicle movements, children at play, waste collection and mechanical plant (i.e. air-conditioning) have been assessed to ensure that they do not impact adversely on the nearest offsite noise sensitive receivers in accordance with the Brisbane City Plan 2014 Child Care Centre Code and the Noise Impact Assessment Planning Scheme Policy.

The nearest noise sensitive receivers to the development include single and two-storey dwellings to the north across Crossacres Street (receiver R1), to the immediate east currently a plant nursery use (R2), to the south across Paddington Street (R3), and to the immediate west (R4). Further, the childcare centre forms the northern part of the original parcel of land, with residential lots proposed across the remainder of the lot assessed as both single-storey (R5 ground floors) and two-storey (R6 aboveground floors), as part of a Reconfiguration of Lot Development Application as shown over the page.

It is noted that for the eastern plant nursery (R2) and the western residential property (R4), we have assessed worst-case future two-storey dwellings. Indicative layouts for these developments are also provided on the following pages.

For noise sensitive receiver locations refer to Figure 2 in Appendix A.

Reconfiguration of Lot Application showing the Childcare Centre and Residential Lots.



Legend

- Proposed Lots
- Proposed New Road Reserve
- Proposed Council Lot

Any licence, express or implied, to use this document for any purpose whatsoever is restricted to the terms of the agreement or implied agreement between Orion Spatial Solutions and the instructing party.

Design subject to Local Authority approval and detail engineering design requirements. Areas and dimensions are approximate only and are subject to final survey.

Contours supplied by **

Development Summary

No. Existing Lots:	1
RP Description:	Lot 43 on RP90234
Site Area:	1.018 ha
No. Proposed Lots:	11 + 1 Council Lot
Total Area of Proposed Lots:	7,301 m ²
Total Area of Council Lots:	600 m ²
Total Area of New Road:	2,282 m ²
Local Authority:	Brisbane City
Existing Encumbrances:	NIL
Proposed Encumbrances:	NIL
Proposed Council Lot:	Lot 900



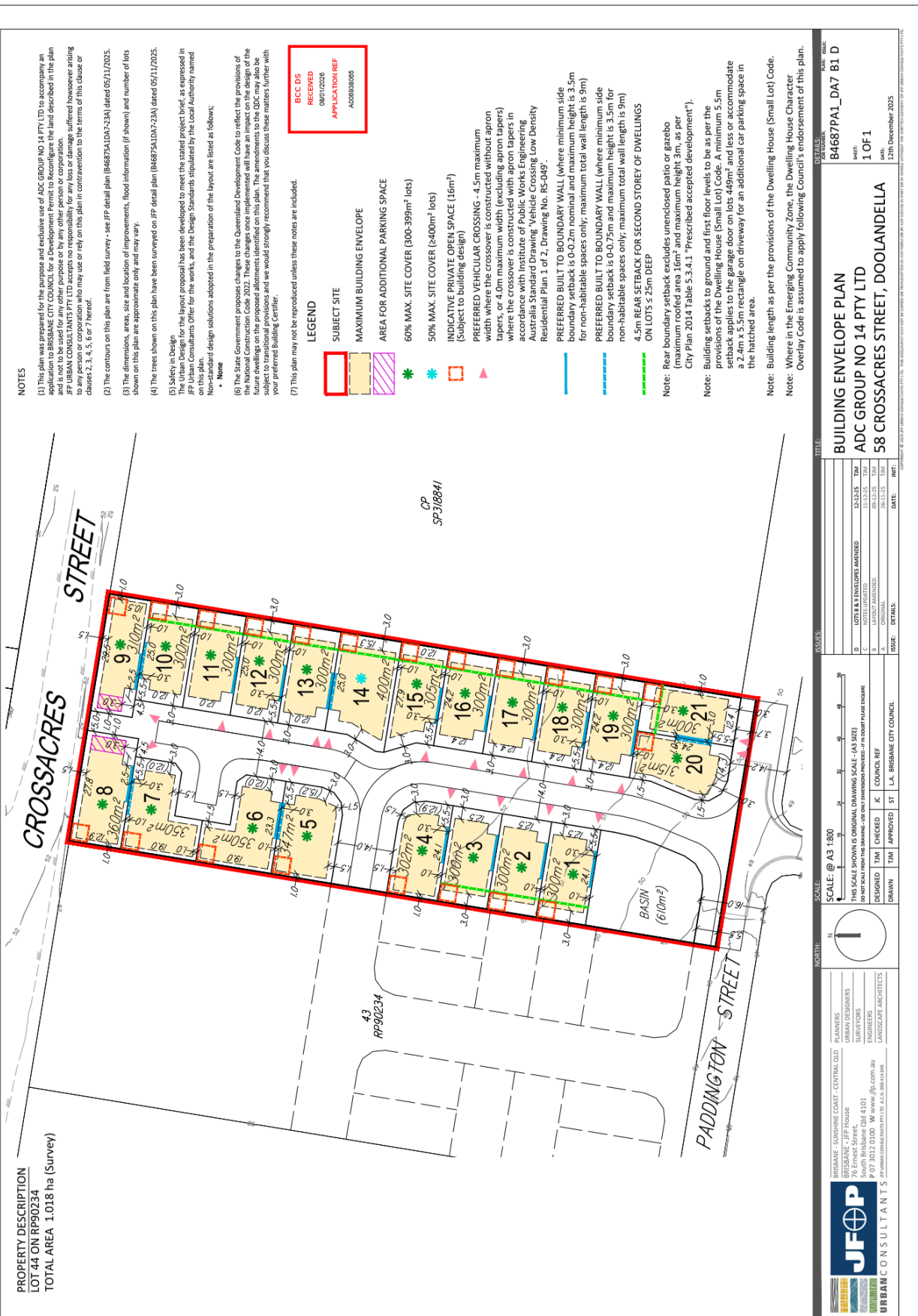
SURVEY SERVICES | DEVELOPMENT ADVISORY
 SPATIAL SOLUTIONS
 BRISBANE (07) 3902 8160
 GOLD COAST (07) 5619 5190
 ORIONSS.COM.AU | admin@orionss.com.au

Proposed Lot Reconfiguration
 66 Crossacre St, Doolandella

Plan No: S-3606-002-A
 Date: 15/05/2025
 Client: YD Childcare Pty Ltd



Indicative / expected residential lot layout of the eastern offsite parcel of land.



NOTES

(1) This plan was prepared for the purpose and exclusive use of ABC GROUP NO 14 PTY LTD to accompany an application to BRISBANE CITY COUNCIL for a Development Permit to Reconfigure the land described in the plan and is not to be used for any other purpose or by any other person or corporation.

(2) JFP URBAN CONSULTANTS PTY LTD accepts no responsibility for any loss or damage suffered however arising to any person or corporation who may use or rely on this plan in contravention to the terms of this clause or clauses 3, 4, 5, 6 or 7 hereof.

(3) The contours on this plan are from field survey - see JFP detail plan (B46875ALDA7-23A) dated 05/11/2025.

(4) The dimensions, areas, size and location of improvements, flood information (if shown) and number of lots shown on this plan are approximate only and may vary.

(5) Safety in Design

(6) The Urban Design for the layout proposal has been developed to meet the stated project brief, as expressed in the Urban Design Consultants Offer for the works, and the Design Standards stipulated by the Local Authority named on this plan.

(7) Non-standard design solutions adopted in the preparation of the layout are listed as follows:

* None

(8) The State Government proposes changes to the Queensland Development Code to reflect the provisions of the National Construction Code 2022. These changes once implemented will have an impact on the design of the development. The Urban Design Consultants Offer for the works, and the Design Standards stipulated by the Local Authority named on this plan, are subject to transitional provisions and we would strongly recommend that you discuss these matters further with your preferred Building Certifier.

(9) This plan may not be reproduced unless these notes are included.

LEGEND

SUBJECT SITE

MAXIMUM BUILDING ENVELOPE

AREA FOR ADDITIONAL PARKING SPACE

60% MAX. SITE COVER (300-399m² lots)

50% MAX. SITE COVER (≥400m² lots)

INDICATIVE PRIVATE OPEN SPACE (16m²) (Subject to building design)

PREFERRED VEHICULAR CROSSING - 4.5m maximum width where the crossover is constructed without apron tapers, or 4.0m maximum width (excluding apron tapers) where the crossover is constructed with apron tapers in accordance with Institute of Public Works Engineering Australia Standard Drawing "Vehicle Crossing Low Density Residential Plan 1 of 2, Drawing No. RS-049".

PREFERRED BUILT TO BOUNDARY WALL (where minimum side boundary setback is 0.2m nominal and maximum height is 3.5m for non-habitable spaces only; maximum total wall length is 9m)

PREFERRED BUILT TO BOUNDARY WALL (where minimum side boundary setback is 0.75m and maximum height is 3.5m for non-habitable spaces only; maximum total wall length is 9m)

4.5m REAR SETBACK FOR SECOND STOREY OF DWELLINGS

ON LOTS ≤ 25m DEEP

Note: Rear boundary setback excludes unenclosed patio or gazebo (maximum roofed area 16m² and maximum height 3m, as per City Plan 2014 Table 5.3.4.1 "Prescribed accepted development").

Note: Building setbacks to ground and first floor levels to be as per the provisions of the Dwelling House (Small Lot) Code. A minimum 5.5m setback applies to the garage door on lots 449m² and less or accommodate a 2.4m x 5.5m rectangle on driveway for an additional car parking space in the hatched area.

Note: Building length as per the provisions of the Dwelling House (Small Lot) Code.

Note: Where in the Emerging Community Zone, the Dwelling House Character Overlay Code is assumed to apply following Council's endorsement of this plan.

BCC DS RECEIVED
09/01/2020
APPLICATION REF
A000988005

TITLE		BUILDING ENVELOPE PLAN	
PROJECT NUMBER		B46875AL1_DA7_B1_D	
SHEET		1 OF 1	
DATE		12th December 2025	
ISSUES		D LOTS & S ENVELOPES AMENDED 12-12-25 TIM E LOTS & S ENVELOPES AMENDED 09-12-25 TIM A LOTS & S ENVELOPES AMENDED 09-12-25 TIM R ORIGINAL	
DATE		DATE	
TIME		TIME	
APPROVED		APPROVED	
DRAWN		DRAWN	
SCALE @ A3 1800		SCALE @ A3 1800	
NORTH		NORTH	
COUNCIL REF		COUNCIL REF	
ST		ST	
L.A.		L.A.	
BRISBANE CITY COUNCIL		BRISBANE CITY COUNCIL	
PLANNERS		PLANNERS	
URBAN DESIGNERS		URBAN DESIGNERS	
SURVEYORS		SURVEYORS	
ENGINEERS		ENGINEERS	
LANDSCAPE ARCHITECTS		LANDSCAPE ARCHITECTS	
JFOP		JFOP	
URBAN CONSULTANTS		URBAN CONSULTANTS	

3.0 AMBIENT NOISE SURVEY

3.1 Instrumentation

The following equipment was used to record ambient noise levels at the subject site location.

- Larson Davis CAL150 Calibrator; and
- Larson Davis SoundExpert 721 Environmental Noise Meter and Logger.

All instrumentation used in this assessment hold current calibration certificate from a certified calibration laboratory.

3.2 Unattended Measurement Methodology

A logger was along the eastern site boundary. The microphone was in a free-field location approximately 1.4m above ground. Refer to Figure 2 in Appendix A for the logger location.

The logger was set to record noise statistics in 15-minute blocks continually between Monday 11/06/2025 and Monday 18/06/2025.

Measurements were conducted generally in accordance with Australian Standard AS 1055 “Acoustics-Description and measurement of environmental noise”. The operation of the sound level logging equipment was field calibrated before and after the measurement session and was found to be within accepted range of the reference signal.

Weather conditions during the monitoring period were obtained from the Bureau of Meteorology website from the Archerfield weather station. Weather conditions were fine, with a temperature range between 4 and 23°C and a relative humidity range between 32 and 80%.

3.3 Unattended Measurement Results

Table 1 below presents the measured ambient noise levels from the unattended logger location. Graphical presentation of the measured levels is presented in the Appendix C.

Data collected on Saturday and Sunday 14-15/06/2025 have been excluded from the results presented in Table 1 as childcare centres typically only operate Monday to Friday.

Ambient Noise Descriptors	Time Period	Measured Level dB(A)
Morning RBL L ₉₀	6:30am to 7am	49
Daytime RBL L ₉₀	7am to 6pm	44
Afternoon RBL L ₉₀	6pm to 6:30pm	49
Evening RBL L ₉₀	6pm to 10pm	41
Night-time RBL L ₉₀	10pm to 7am	34
Daytime L _{eq 11hr}	7am to 6pm	57
Evening L _{eq 4hr}	6pm to 10pm	55
Night-time L _{eq 9hr}	10pm to 7am	53

Table 1: Measured ambient noise levels at the logger location.

We note that the 6:30am to 7am and 6pm to 6:30pm RBLs are higher than the daytime, which is most likely caused by local road traffic.

4.0 NOISE CRITERION

Brisbane City Plan 2014 “*Child Care Centre Code*” prescribes the following Performance Outcome and Acceptable Outcomes relating to acoustical amenity:

9.3.4.3 Performance outcomes and acceptable outcomes

Table 9.3.4.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes
<p>PO10 Development is of a nature and scale which does not result in noise emissions that exceed the following criteria:</p> <p>a. $L_{Aeq,adj,T}$ emitted from the development is not greater than the rating background level plus 3 at the sensitive use.</p> <p>Where T is:</p> <p>a. Day (7am to 6pm): 11 hr; b. Evening (6pm to 10pm): 4 hr; c. Night (10pm to 7am): 9hr.</p> <p>Where $L_{Aeq,adj,T}$ is the A-weighted equivalent continuous sound pressure level during measurement time T, adjusted for tonal and impulsive noise characteristics, determined in accordance with the methodology described in the Noise impact assessment planning scheme policy.</p> <p>Note—Rating background level is to be determined in accordance with the methodology described in the Noise impact assessment planning scheme policy. Note—A noise impact assessment report prepared in accordance with the methodology described in the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.</p>	<p>AO10.1 Development provides a 2m high acoustic fence and a minimum 2m wide landscaped buffer along any boundary adjoining land in a zone in the Residential zones category.</p>
	<p>AO10.2 Development ensures mechanical plant or equipment is acoustically screened from adjoining sensitive uses. Note—Mechanical plant includes generators, motors, compressors and pumps, for example air-conditioning, refrigeration or coldroom motors.</p>
	<p>AO10.3 Development does not operate before 7am or after 7pm.</p>

Based upon the measured Rating Background Levels presented in Table 1 of Section 3, the following noise limit criteria (assessed at the sensitive use) applies to the Centre:

Daytime 7am to 6pm:	47 dB(A) L_{eq} 11hr
Evening 6pm to 10pm:	44 dB(A) L_{eq} 4hr
Night-time 10pm to 7am:	37 dB(A) L_{eq} 9hr

Brisbane City Plan 2014 “*Community Facilities Code*” prescribes the following noise criterion relating to acoustical amenity in Table 9.3.5.3.B and Table 9.3.5.3.C:

Table 9.3.5.3.B—Noise (planning) criteria

Criteria location	Intrusive noise criteria	Acoustic amenity criteria		
	<p>Day, evening and night $L_{Aeq,adj,T}$ are not greater than the RBL plus the value in this column for the relevant criteria location, where T equals:</p> <ul style="list-style-type: none"> Day: 11hr Evening: 4hr Night: 9hr 	<p>Day, evening and night $L_{Aeq,adj,T}$ are not greater than the values in the below columns for the relevant criteria location, where T equals:</p> <ul style="list-style-type: none"> Day: 11hr Evening: 4hr Night: 9hr 		
		Day	Evening	Night
Emerging community zone boundary	5dB(A)	55dB(A)	50dB(A)	45dB(A)

Based upon the measured Rating Background Levels presented in Table 1 of Section 3, the following noise limit criteria (assessed at the zone boundary of the noise sensitive receiver) applies to the Centre:

Daytime 7am to 6pm:	49 dB(A) L_{eq} 11hr
Evening 6pm to 10pm:	46 dB(A) L_{eq} 4hr
Night-time 10pm to 7am:	39 dB(A) L_{eq} 9hr

Given the zone boundaries of the noise sensitive receivers (Table 9.3.5.3.B) are closer to the onsite activities compared to the sensitive uses being the offsite dwellings (Table 9.3.4.3.A), the zone boundary criterion above has been assessed in Section 5.

Table 9.3.5.3.C—Night time noise criteria

Criteria location	Where the existing $L_{Aeq,9hr}$ night at the criteria location is:	Average of the highest 15 single L_{Amax} events over a given night (10pm-7am) period is not greater than the following values at the relevant criteria location:	The absolute highest single L_{Amax} event over a given night (10pm-7am) period is not greater than the following values at the relevant criteria location:
At the zone boundary of: <ul style="list-style-type: none"> • Low density residential zone; • Low-medium density residential zone; • Medium density residential zone; • High density residential zone; • Character residential zone; • Tourist accommodation zone; • Emerging community zone. 	< 45dB(A)	50dB(A)	55dB(A)
	45 to 60dB(A)	$L_{Aeq,9hr}$ night + 5dB(A)	$L_{Aeq,9hr}$ night + 10dB(A)
	> 60dB(A)	65dB(A)	70dB(A)

Note—

- L_{Amax} : The A-weighted maximum sound pressure level determined in accordance with the methodology described in the Noise impact assessment planning scheme policy.
- $L_{Aeq,9hr}$: The A-weighted equivalent continuous sound pressure level of the development during the night-time period 10pm to 7am, determined in accordance with the methodology described in the Noise impact assessment planning scheme policy.
- dB(A): A-weighted decibels

Based upon the measured $L_{eq,9hr}$ presented in Table 1 of Section 3, the following noise limit criteria applies to the Centre:

Average (Highest 15 events): 58 L_{max}
 Highest: 63 L_{max}

5.0 PREDICTED NOISE IMPACTS

All noise source levels used in the assessment have been collected from similar assessments and from the Australian Association of Acoustical Consultant’s “Guideline for Child Care Centre Acoustic Assessment” Version 3. The SWLs provided in the Guideline have been presented in Table 2 as sound pressure levels (SPLs).

All short duration / fluctuating noise source levels assessed under the “Acoustic Quality Objectives” criterion have been corrected for impulsiveness or tonality as per Australian Standard AS 1055 “Acoustics-Description and measurement of environmental noise”.

The following noise source levels would typically occur as part of the proposed childcare centre and have been assessed within this report.

Activity / Noise Source	Event Noise Level, SPL $L_{eq \text{ event}}$ dB(A)
Car door closure	78* at 1m (1.5s)
Car bypass at 5km/hr	72 at 1m (7s)
Ten children 0-2 years at play boisterous behaviour	70 at 1m (24 children 74 at 1m)
Ten children 2-3 years at play boisterous behaviour	77 at 1m (75 children 86 at 1m)
Ten children 3 to 5 years at play boisterous behaviour	79 at 1m (86 children 88 at 1m)
Active indoor pursuits (dance / activity with music)	80 at 1m (15 minutes)
Truck bypass	78 at 1m (10s)
Goods delivery (manual unloading)	70 at 1m (5 minutes)
Waste collection	90* at 1m (2 minutes)
Air-conditioning plant (assumed beside the laundry)	60 at 2m (5 minutes)

* Denotes + 5 dB correction for impulsiveness in accordance with AS1055.

Table 2: Typical noise source levels associated with child care centres.

The L_{eq} calculation sheets (except for outdoor children’s play) in Appendix C present the assumed noise source event duration, expected number of events per assessment period and predicted 11-hour, 4 hour and 9 hour L_{eq} levels. For children’s play outside each child is assumed to be outside for a total duration of 5 hours during the daytime period. For the remaining periods, including morning and evening periods, we have assumed that children would be inside the rooms (with a worst case source level of 80 dB(A) for active indoor pursuits with music) however, it is likely that for significant amounts of the time, children would be undertaking sleep and other quiet activities.

Due to the complexity of outdoor children’s play, noise modelling of children at play has been conducted using the PEN3D environmental noise model. The PEN3D General Prediction Model (GPM) is based on the method contained in the book “Engineering Noise Control - Theory and Practice” by David Bies & Colin H Hansen of the Department of Mechanical Engineering, University of Adelaide, Publisher Unwin Hyman 1988.

The L_{eq} noise sources for children playing outside have been adjusted and digitised into the model as individual children to ensure the entire play space is utilised by the full capacity of 185 children as shown in Figure 5.1. This has been done by application of the doubling / halving rule of 3 dB, from 10 children down to one child resulting in a reduction in source level by 10 dB (formula = SWL of 10 children + 10 x log(number of children / 10)).

For the 6.30 – 7.00am and 6.00pm and 6.30pm periods traffic generation rates we have assumed one fifth of parents would drop-off / collect their children and half of the staff would arrive / leave. Further, for an absolute worst case scenario, we have assumed all children and staff arrive and depart between 7.00am to 6.00pm,

Based upon the location of proposed childcare centre activities in relation to the offsite noise sensitive receivers, we predict the following L_{eq} noise impact levels as presented in the Table 3 and Figure 5.1, and L_{max} levels in Table 4.

It is noted that due to the short duration and infrequent occurrence of waste collection and deliveries (including truck bypass) we have not included these levels within the combined impacts.

The predicted levels include the acoustic treatments detailed in Section 6.

Daytime Noise Source 7am to 6pm	Nearest BOUNDARY Predicted Component Noise Impact, SPL L_{eq} 11hr dB(A)
R1: Single and two-storey dwellings to the north across Crossacres Street	
Car door closure PARENTS	35
Car bypass at 5km/hr PARENTS	39
Car door closure STAFF	23
Car bypass at 5km/hr STAFF	25
Combined outdoor children's play: all children outside	37
Active indoor pursuits (dance / activity with music)	39
Truck bypass	22
Goods delivery (manual unloading)	23
Waste collection	46
Air-conditioning plant with acoustical screening	34
Combined daytime period noise	45
R2: Future Two-storey dwellings to the immediate east	
Car door closure PARENTS	34
Car bypass at 5km/hr PARENTS	33
Car door closure STAFF	28
Car bypass at 5km/hr STAFF	25
Combined outdoor children's play: all children outside	46
Active indoor pursuits (dance / activity with music)	42
Truck bypass	< 15
Goods delivery (manual unloading)	19
Waste collection	36
Air-conditioning plant with acoustical screening	42
Combined daytime period noise	49
R3: Single and two-storey dwellings to the south across Paddington Street	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	< 15
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Combined outdoor children's play: all children outside	30
Active indoor pursuits (dance / activity with music)	31
Truck bypass	< 15
Goods delivery (manual unloading)	< 15
Waste collection	25
Air-conditioning plant with acoustical screening	25
Combined daytime period noise	34
Daytime Criterion	49

Table 3: Predicted L_{eq} noise impact levels at offsite noise sensitive receivers.

Daytime Noise Source 7am to 6pm	Nearest BOUNDARY Predicted Component Noise Impact, SPL L _{eq} 11hr dB(A)
R4: Future Two-storey dwellings to the immediate west	
Car door closure PARENTS	44
Car bypass at 5km/hr PARENTS	35
Car door closure STAFF	15
Car bypass at 5km/hr STAFF	19
Combined outdoor children's play: all children outside	43
Active indoor pursuits (dance / activity with music)	42
Truck bypass	16
Goods delivery (manual unloading)	27
Waste collection	57
Air-conditioning plant with acoustical screening	42
Combined daytime period noise	49
R5: Future single-storey dwellings to the south within the same parcel of land	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	15
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Combined outdoor children's play: all children outside	42
Active indoor pursuits (dance / activity with music)	31
Truck bypass	< 15
Goods delivery (manual unloading)	< 15
Waste collection	32
Air-conditioning plant with acoustical screening	33
Combined daytime period noise	43
R6: Future two-storey dwellings (aboveground floor levels) to the south within the same parcel of land	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	16
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Combined outdoor children's play: all children outside	49
Active indoor pursuits (dance / activity with music)	31
Truck bypass	< 15
Goods delivery (manual unloading)	< 15
Waste collection	32
Air-conditioning plant with acoustical screening	33
Combined daytime period noise	49
Daytime Criterion	49

Table 3 (Cont.): Predicted L_{eq} noise impact levels at offsite noise sensitive receivers.

Afternoon Source 6pm to 6:30pm	Nearest BOUNDARY Predicted Component Noise Impact, SPL L _{eq} 4hr dB(A)
R1: Single and two-storey dwellings to the north across Crossacres Street	
Car door closure PARENTS	30
Car bypass at 5km/hr PARENTS	34
Car door closure STAFF	24
Car bypass at 5km/hr STAFF	27
Active indoor pursuits (dance / activity with music)	33
Truck bypass	26
Goods delivery (manual unloading)	28
Air-conditioning plant with acoustical screening	25
Combined afternoon period noise	38
R2: Future Two-storey dwellings to the immediate east	
Car door closure PARENTS	29
Car bypass at 5km/hr PARENTS	27
Car door closure STAFF	29
Car bypass at 5km/hr STAFF	26
Active indoor pursuits (dance / activity with music)	35
Truck bypass	17
Goods delivery (manual unloading)	23
Air-conditioning plant with acoustical screening	33
Combined morning period noise	39
R3: Single and two-storey dwellings to the south across Paddington Street	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	< 15
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Active indoor pursuits (dance / activity with music)	25
Truck bypass	< 15
Goods delivery (manual unloading)	< 15
Air-conditioning plant	16
Combined afternoon period noise	26
R4: Future Two-storey dwellings to the immediate west	
Car door closure PARENTS	38
Car bypass at 5km/hr PARENTS	29
Car door closure STAFF	16
Car bypass at 5km/hr STAFF	20
Active indoor pursuits (dance / activity with music)	35
Truck bypass	20
Goods delivery (manual unloading)	32
Air-conditioning plant with acoustical screening	33
Combined afternoon period noise	41
R5: Future single-storey dwellings to the south within the same parcel of land	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	< 15
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Active indoor pursuits (dance / activity with music)	25
Truck bypass	< 15
Goods delivery (manual unloading)	< 15
Air-conditioning plant with acoustical screening	24
Combined afternoon period noise	26
R6: Future two-storey dwellings (aboveground floor levels) to the south within the same parcel of land	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	< 15
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Active indoor pursuits (dance / activity with music)	25
Truck bypass	< 15
Goods delivery (manual unloading)	15
Air-conditioning plant with acoustical screening	24
Combined morning period noise	26
Evening Criterion	46

Table 3 (Cont.): Predicted L_{eq} noise impact levels at offsite noise sensitive receivers.

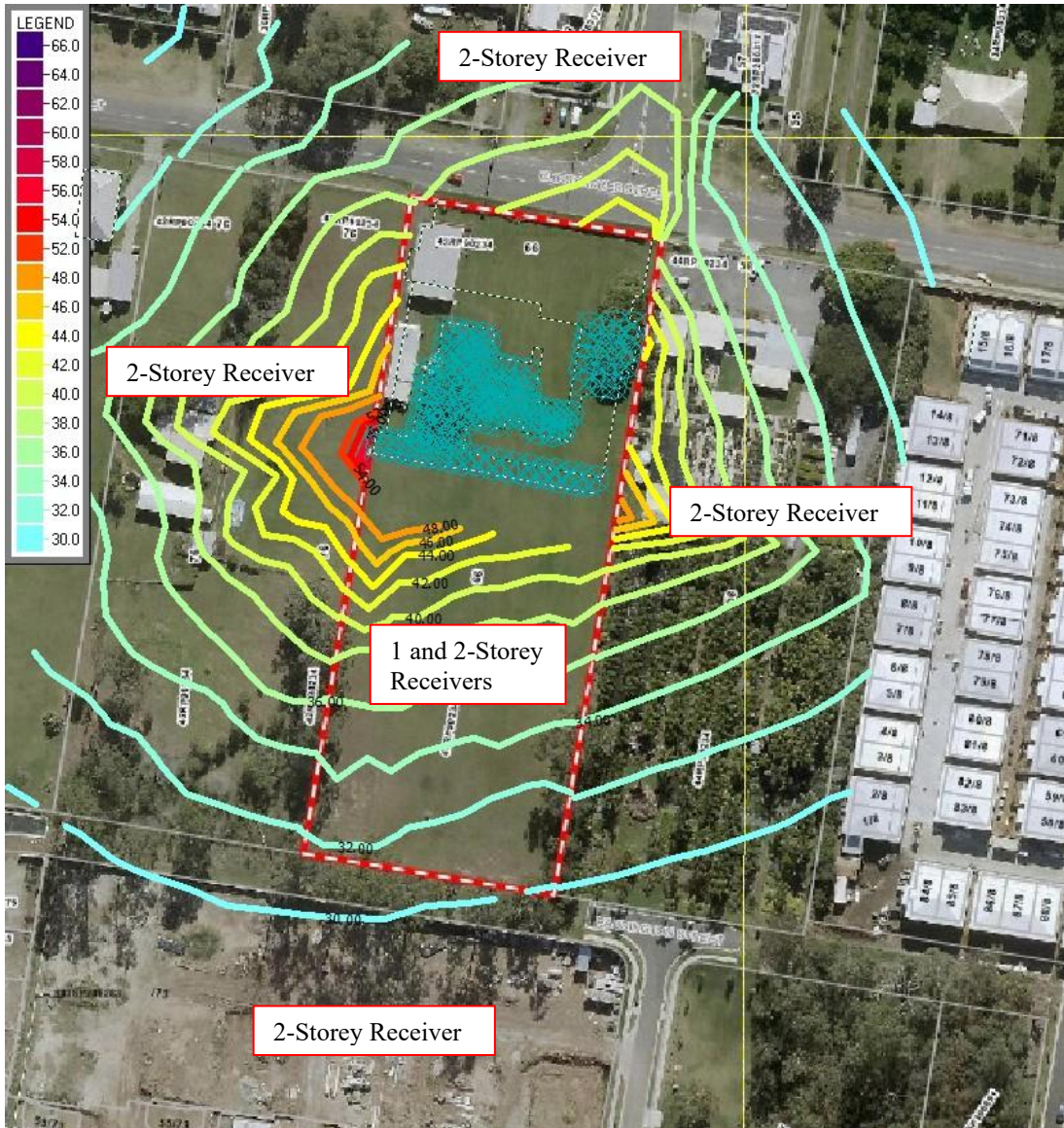
Morning Source 6:30am to 7am	Nearest BOUNDARY Predicted Component Noise Impact, SPL L_{eq}^{9hr} dB(A)
R1: Single and two-storey dwellings to the north across Crossacres Street	
Car door closure PARENTS	26
Car bypass at 5km/hr PARENTS	30
Car door closure STAFF	21
Car bypass at 5km/hr STAFF	23
Active indoor pursuits (dance / activity with music)	30
Truck bypass	22
Goods delivery (manual unloading)	< 15
Air-conditioning plant with acoustical screening	21
Combined afternoon period noise	35
R2: Future Two-storey dwellings to the immediate east	
Car door closure PARENTS	25
Car bypass at 5km/hr PARENTS	24
Car door closure STAFF	26
Car bypass at 5km/hr STAFF	23
Active indoor pursuits (dance / activity with music)	32
Truck bypass	< 15
Goods delivery (manual unloading)	20
Air-conditioning plant with acoustical screening	29
Combined morning period noise	35
R3: Single and two-storey dwellings to the south across Paddington Street	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	< 15
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Active indoor pursuits (dance / activity with music)	21
Truck bypass	< 15
Goods delivery (manual unloading)	< 15
Air-conditioning plant with acoustical screening	< 15
Combined afternoon period noise	22
R4: Future Two-storey dwellings to the immediate west	
Car door closure PARENTS	35
Car bypass at 5km/hr PARENTS	26
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	17
Active indoor pursuits (dance / activity with music)	32
Truck bypass	17
Goods delivery (manual unloading)	28
Air-conditioning plant with acoustical screening	19
Combined afternoon period noise	37
R5: Future single-storey dwellings to the south within the same parcel of land	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	< 15
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Active indoor pursuits (dance / activity with music)	21
Truck bypass	< 15
Goods delivery (manual unloading)	< 15
Air-conditioning plant with acoustical screening	20
Combined afternoon period noise	23
R6: Future two-storey dwellings (aboveground floor levels) to the south within the same parcel of land	
Car door closure PARENTS	< 15
Car bypass at 5km/hr PARENTS	< 15
Car door closure STAFF	< 15
Car bypass at 5km/hr STAFF	< 15
Active indoor pursuits (dance / activity with music)	21
Truck bypass	< 15
Goods delivery (manual unloading)	< 15
Air-conditioning plant with acoustical screening	20
Combined morning period noise	23
Night-time Criterion	39

Table 3 (Cont.): Predicted L_{eq} noise impact levels at offsite noise sensitive receivers.

Morning Source 6:30am to 7am	Nearest BOUNDARY Predicted Component Noise Impact, SPL dB(A)	
	Average L _{max}	Highest L _{max}
R1: Single and two-storey dwellings to the north across Crossacres Street		
Car door closure PARENTS	49	55
Car bypass at 5km/hr PARENTS	47	49
Car door closure STAFF	52	58
Car bypass at 5km/hr STAFF	47	49
Active indoor pursuits (dance / activity with music)	44	49
Truck bypass	54	58
Goods delivery (manual unloading)	32	36
Air-conditioning plant with acoustical screening	35	36
Combined afternoon period noise	54	58
R2: Future Two-storey dwellings to the immediate east		
Car door closure PARENTS	48	54
Car bypass at 5km/hr PARENTS	40	42
Car door closure STAFF	57	63
Car bypass at 5km/hr STAFF	46	48
Active indoor pursuits (dance / activity with music)	46	51
Truck bypass	44	48
Goods delivery (manual unloading)	37	41
Air-conditioning plant with acoustical screening	43	44
Combined morning period noise	57	63
R3: Single and two-storey dwellings to the south across Paddington Street		
Car door closure PARENTS	23	29
Car bypass at 5km/hr PARENTS	17	19
Car door closure STAFF	35	41
Car bypass at 5km/hr STAFF	24	26
Active indoor pursuits (dance / activity with music)	36	41
Truck bypass	24	28
Goods delivery (manual unloading)	16	20
Air-conditioning plant with acoustical screening	18	19
Combined afternoon period noise	36	41
R4: Future Two-storey dwellings to the immediate west		
Car door closure PARENTS	57	63
Car bypass at 5km/hr PARENTS	43	45
Car door closure STAFF	44	50
Car bypass at 5km/hr STAFF	40	42
Active indoor pursuits (dance / activity with music)	46	51
Truck bypass	48	52
Goods delivery (manual unloading)	46	50
Air-conditioning plant with acoustical screening	39	40
Combined afternoon period noise	57	63
R5: Future single-storey dwellings to the south within the same parcel of land		
Car door closure PARENTS	27	33
Car bypass at 5km/hr PARENTS	23	25
Car door closure STAFF	33	39
Car bypass at 5km/hr STAFF	26	28
Active indoor pursuits (dance / activity with music)	36	41
Truck bypass	33	37
Goods delivery (manual unloading)	26	30
Air-conditioning plant with acoustical screening	34	35
Combined afternoon period noise	36	41
R6: Future two-storey dwellings (aboveground floor levels) to the south within the same parcel of land		
Car door closure PARENTS	28	34
Car bypass at 5km/hr PARENTS	23	25
Car door closure STAFF	35	41
Car bypass at 5km/hr STAFF	28	30
Active indoor pursuits (dance / activity with music)	36	41
Truck bypass	36	40
Goods delivery (manual unloading)	29	33
Air-conditioning plant with acoustical screening	34	35
Combined morning period noise	36	41
Night-time L_{max} Criterion	58	63

Table 4: Predicted L_{max} noise impact levels at offsite noise sensitive receivers.

Figure 5.1: $L_{eq\ 11hr}$ contours from daytime, 185 outdoor children's play.



(Each blue noise source point represents two children)

6.0 RECOMMENDED ACOUSTIC TREATMENTS

6.1 Onsite Childcare Centre Operations

The following acoustic treatments and management principles are recommended to mitigate onsite childcare centre operational activity noise emissions:

- Hours of operation including deliveries occur between 6:30am and 6:30pm, Monday to Friday.
- Children play activity prior to 7am or after 6pm should be restricted to inside the centre.
- For the eastern activity rooms (Bella Rosa and Belvedere rooms as shown in Sketch No.1 in Appendix A) the eastern windows and doors are to be kept closed at all times.
- For the western activity rooms (Mancasale, Cavazolli, and Main Atelier rooms as shown in Sketch No.1 in Appendix A) the western windows and doors are to be kept closed at all times.
- When active pursuits (e.g. indoor dance / activity with music) are undertaken inside the southernmost activity rooms (Belvedere, Reggiane, Roncina and Main Atelier rooms) the southern, eastern and western windows and doors are to be kept closed
- The southernmost activity rooms (Belvedere, Reggiane, Roncina and Main Atelier rooms) are to be air-conditioned to allow windows and doors at activity rooms to be closed during active pursuits (e.g. indoor dance / activity with music).
- Construction of the acoustic barriers as detailed in Sketches 1, 2 and 3 in Appendix A. Barriers and solid walls are to be free of gaps and holes. Typical materials include 19mm lapped timber fence (40% overlap), 9mm FC sheet, toughened glass, Perspex, masonry, or a combination of the above (a minimum surface mass of 11kg/m² is required). The developer / builder can install visually permeable materials into the barrier, and/or provide materials of various textures to minimise the visual impacts of the barrier as detailed in Sketch 4 in Appendix A.
- No acoustically elevated play equipment (i.e. play forts - built play structure where the child is on an elevated platform) be located along the southern boundary (adjacent the barriers) as the recommended barriers may not provide sufficient noise attenuation of children at elevated locations. The central outdoor play space areas (i.e. north and east of the existing large tree) and the baby outdoor play areas would be suitable for play forts.
- Driveway and carpark areas be finished with surface coatings which prevent tyre squeal (an uncoated concrete or bitumen surface is acceptable). Drainage grating over trafficable areas be well secured to prevent rattling.
- Waste collection be conducted after 7am.
- Onsite mechanical plant be designed and installed to comply with the noise criterion presented in Section 4. As final plant selection has not been completed, additional acoustic assessment/s should be undertaken once plant selections are finalised. Such assessments should be undertaken prior to Building Approval; and be conditioned within the Development Approval. Based upon the assumed plant and locations, acoustical screening might be required for mechanical plant such as air-conditioning condenser units along the western boundary.

7.0 DISCUSSION and CONCLUSIONS

This report is in response to a request from YD Childcare Pty Ltd for a revised environmental noise impact assessment of a childcare centre development along Crossacres Street, Doolandella; and responds to Items 3) and 4) of Brisbane City Council's Further Advice dated 27th February 2026.

Based upon the adopted source levels and recommended treatments (i.e. acoustic barriers), individual and combined L_{eq} impacts and L_{max} impacts at the nearest assessed receiver boundaries are predicted to be within the external criterion.

It is noted that due to the short duration and infrequent occurrence of waste collection and deliveries (including truck bypass) such activities are unlikely to cause annoyance. To minimise the potential of annoyance we have recommended that waste collection be limited to after 7am and deliveries be limited to 7am to 6pm Monday to Friday.

In addition to the recommended acoustic treatments, to minimise noise emissions we have recommended (best practice management controls) that children be prevented from using outdoor play spaces before 7am and after 6pm; and when active indoor pursuits (e.g. dance / activity with music inside activity rooms) are undertaken inside the southernmost activity rooms the southern, eastern and western windows and doors be closed. We have also recommended that there be no elevated play equipment (i.e. play forts) located along the southern boundary (adjacent the barriers) as the recommended acoustic barriers may not provide sufficient noise attenuation of children at elevated locations. It is noted that based on the width of the play space area long the southern boundary, play forts are unlikely to be positioned at such locations.

We have provided an indication of potential noise impact levels of likely onsite mechanical plant and indicative acoustic treatments; although the levels are merely a guide as no plant selections have yet been completed. For this reason, furthermore detailed assessment/s should be conducted upon determination of plant. Such assessments should be undertaken prior to Building Approval; and be conditioned within the Development Approval. Based upon the assumed plant and locations, acoustical screening might be required for mechanical plant such as air-conditioning condenser units along the western boundary.

Overall, the proposed development will generally be within acceptable levels of the adopted criterion, subject to the acoustic treatments recommended in Section 6 being integrated into the design, construction and operation of the childcare centre.

Report Reviewed By:



JAY CARTER BSc
Director

Report Compiled by:



Matthew Lopez BEng
Consultant

APPENDIX A

Subject Site, Logger Location and Acoustic Treatment Sketches

Figure No. 1: Subject Site Location (Brisbane City Plan 2014 Interactive Mapping).

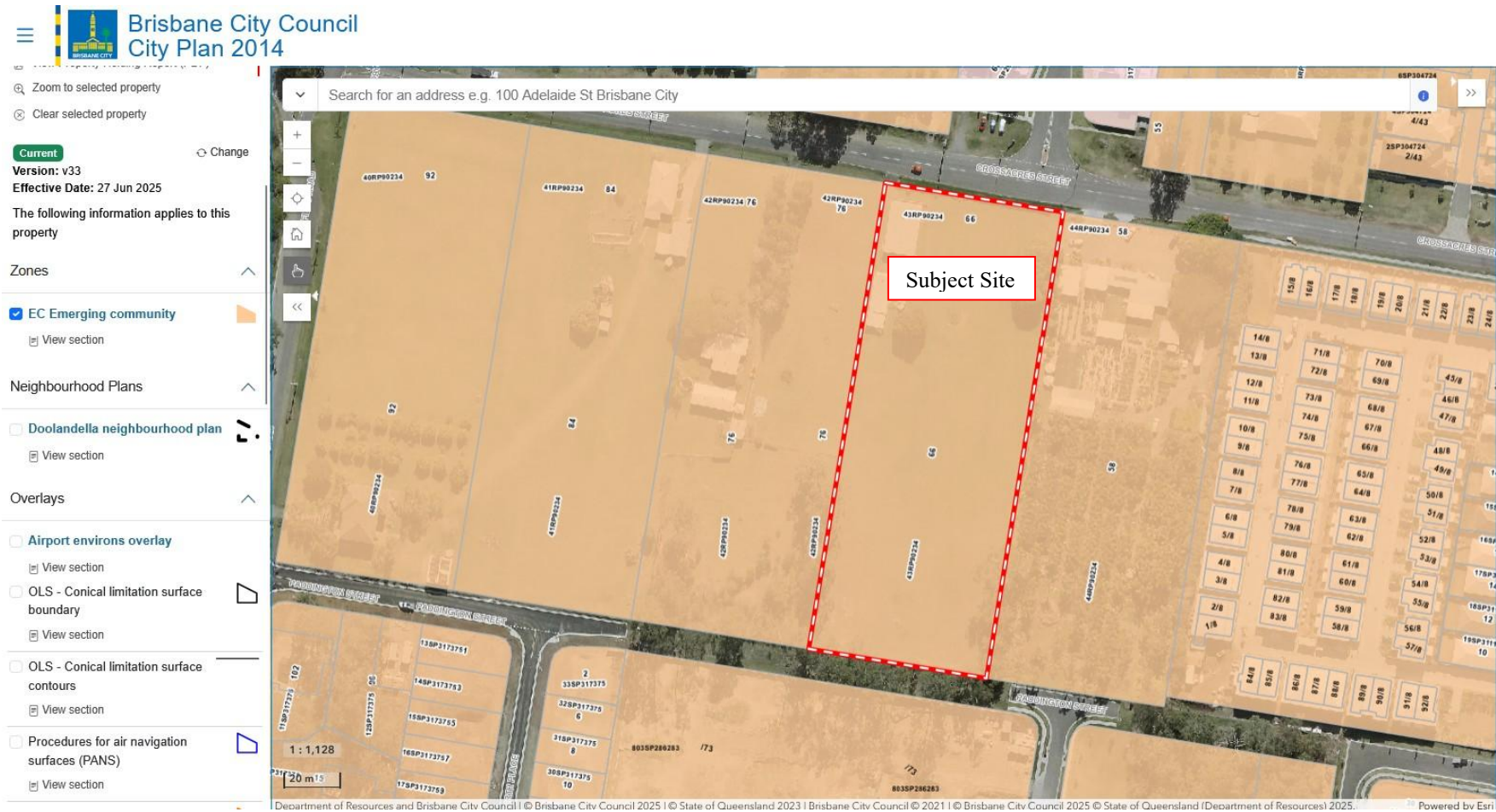
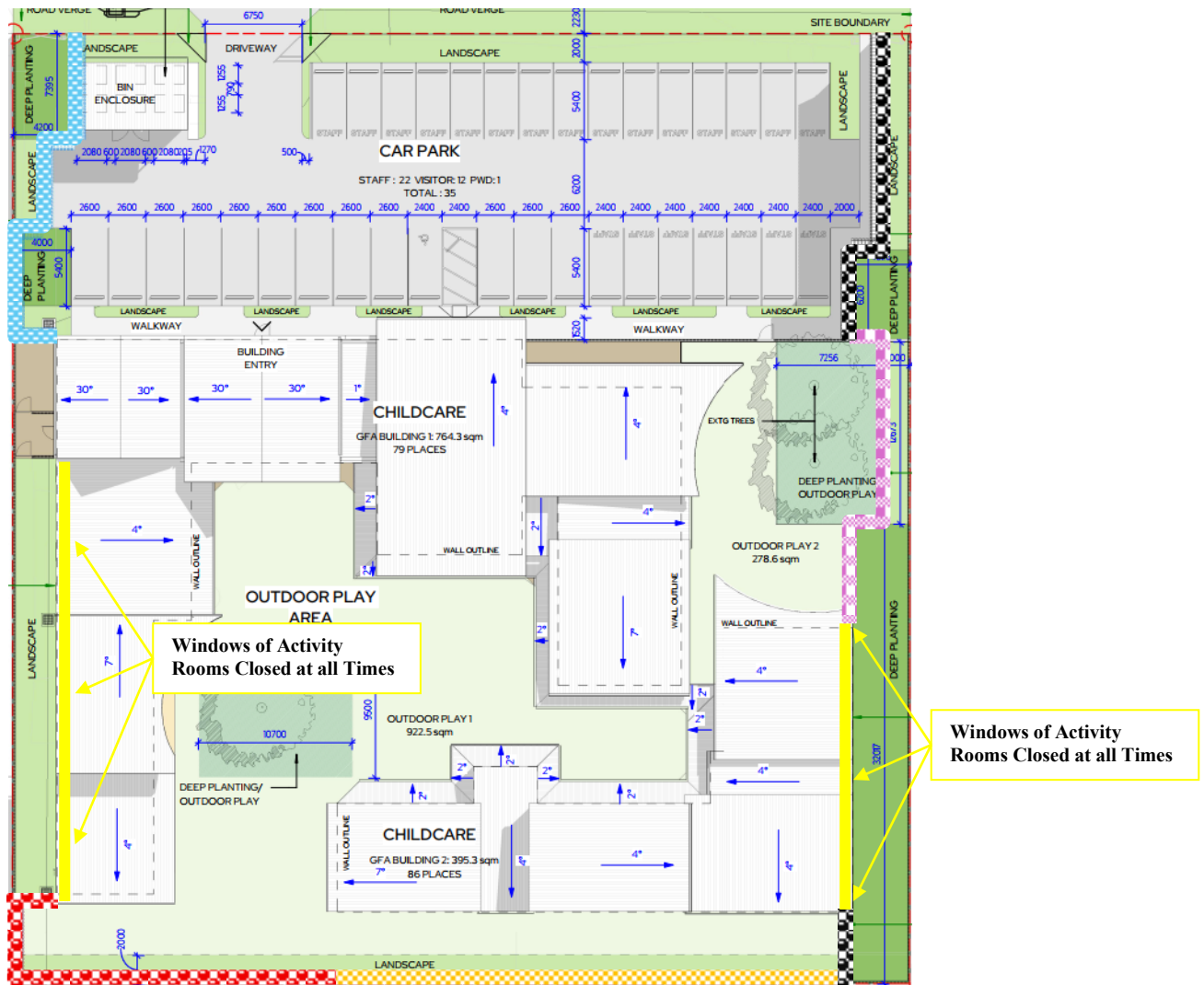







Figure No. 2: Subject Site and Logger Location (QLD Globe).



Sketch No. 1: Development Layout and Recommended Acoustic Treatments (Not to Scale).

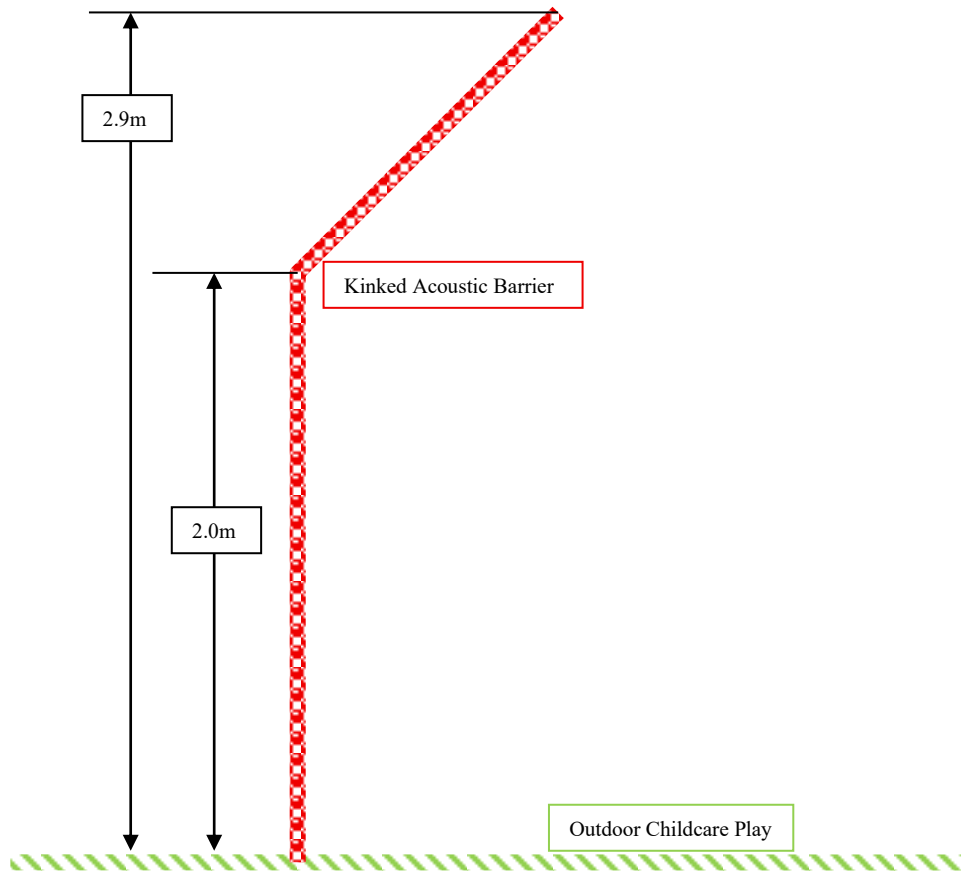


ACOUSTIC TREATMENT LEGEND

-  Recommended 4.0m high acoustic barrier constructed above the adjacent finished play space ground level or the existing ground, whichever is higher (i.e. constructed above retaining walls).
-  Recommended 2.6m KINKED high acoustic barriers (refer to kinked barrier section example in Sketch No.2) constructed above the adjacent finished play space ground level or the existing ground, whichever is higher (i.e. constructed above retaining walls).
-  Recommended 2.9m KINKED high acoustic barriers (refer to kinked barrier section example in Sketch No.2) constructed above the adjacent finished play space ground level or the existing ground, whichever is higher (i.e. constructed above retaining walls).
-  Recommended 4.4m KINKED high acoustic barriers (refer to kinked barrier section example in Sketch No.2) constructed above the adjacent finished play space / carpark grade or the existing ground, whichever is higher (i.e. constructed above retaining walls).
-  Recommended 4.8m KINKED high acoustic barriers (refer to kinked barrier section example in Sketch No.2) constructed above the adjacent carpark grade or the existing ground, whichever is higher (i.e. constructed above retaining walls).

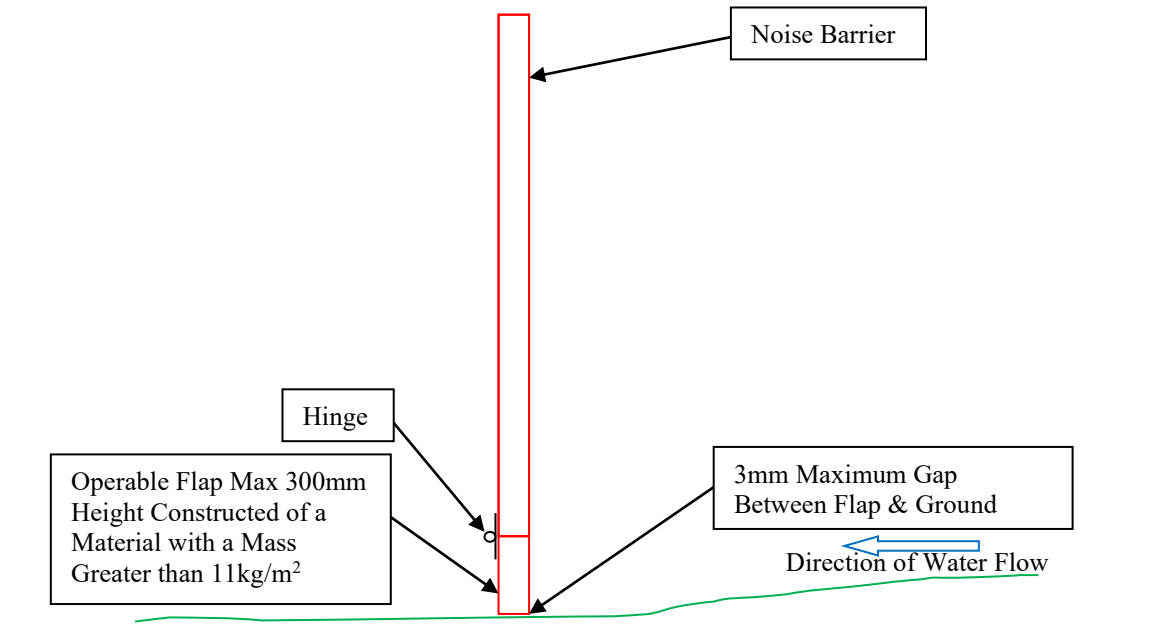
Barriers are to be free of gaps and holes. Typical materials include earth berms, 19mm lapped timber fence (40% overlap), 9mm FC sheet, toughened glass, Perspex, masonry, or a combination of the above (a minimum surface mass of 11kg/m² is required). Refer to Sketch No.3 over page for guidance on allowing stormwater overflow through acoustic barrier sections.

Sketch No. 2: Example of Kinked Barrier Section (Not to Scale).

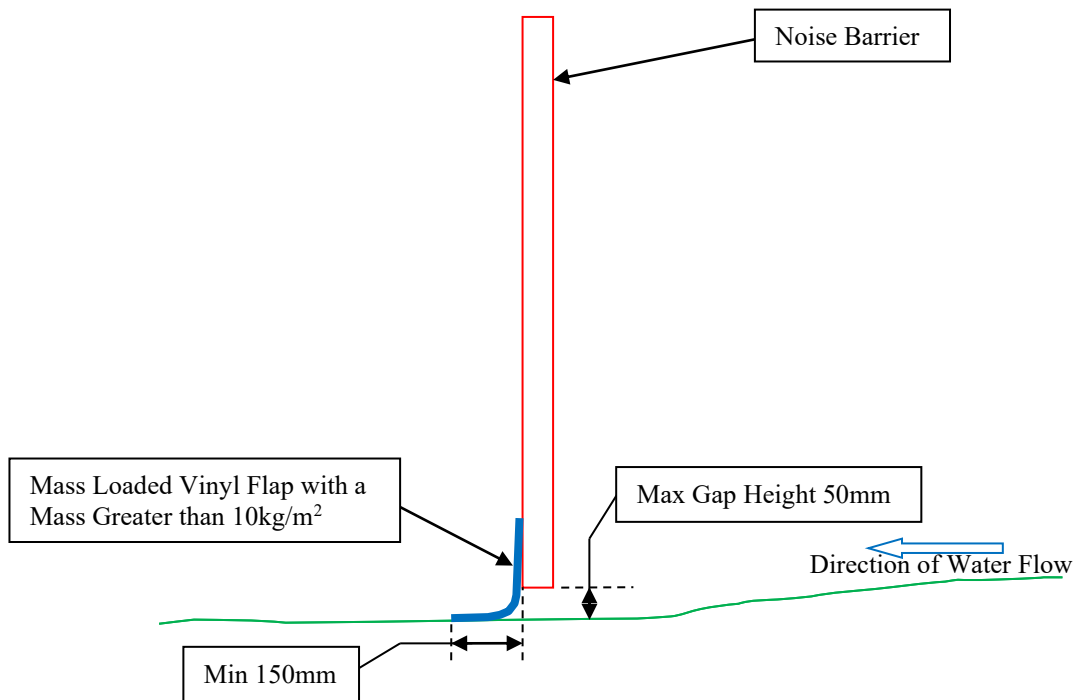


Sketch No. 3: Sectional View Illustrating a Flap to Allow Water Flow Across Property Boundary.

OPTION 1 – Mechanical Flap



OPTION 2 Mass Loaded Vinyl Flap



Sketch No. 4: Acoustic Barrier – Combination of Materials (Not to Scale).

An example of a combination barrier construction is presented in the photographs below.



The above barrier was constructed at the interface of an established residential area and a service station north of Brisbane. This barrier was constructed to a height of 3.4m above finished ground level. By incorporating a mix of materials, visual impacts were mitigated and deemed acceptable by Moreton Bay Regional Council.

APPENDIX B

Development Plans

DOOLANDELLA CHILDCARE

SITE ADDRESS: 66 Crossways St, Doolandella, QLD 4077
 SITE AREA: 4000.165 sqm
 ZONING: Emerging Community
 BUILDING USE: Class 9b



SHEET NO: A1		ISSUED BY: BOJANG REG. #5428 HUIJ HAO (BOJANG REG. #5593)	DOCUMENT DISCLAIMER <small>ISA is not liable for any errors or omissions in this document. The user of this document is advised to verify the accuracy of the information contained herein. The user of this document is advised to consult with a professional engineer or architect for any specific requirements. The user of this document is advised to consult with the relevant authorities for any specific requirements. The user of this document is advised to consult with the relevant authorities for any specific requirements.</small>	REV. NO. DATE DESCRIPTION DA-2 24-JUN-2025 GENERAL AMENDMENTS DA-3 15-JUL-2025 GENERAL AMENDMENTS DA-4 31-JUL-2025 GENERAL AMENDMENTS DA-6 13-NOV-2025 GENERAL AMENDMENTS DA-8 11-MAY-2026 UPDATE ACOUSTIC BARRIERS	PROJECT NAME DOOLANDELLA CHILDCARE <small>66 Crossways St, Doolandella, QLD 4077</small>	SHEET NAME COVER SHEET	SCALE / A1

GENERAL NOTES

- GENERAL USE & DOCUMENT CONTROL**
 - Do not scale from drawings. Use written dimensions only. Do not use data or measurements from on any digital CAD file/s.
 - These drawings are issued solely for the specified client, site, and use. No responsibility is accepted by ISA for unauthorised use or reliance without written consent.
 - These notes are not exhaustive. They do not replace relevant codes, regulations, or statutory requirements. If uncertain, contact the Building Designer or appropriate consultant before proceeding.
 - Drawings must be read with all relevant consultant documents, including but not limited to:
 - Structural, Civil, Hydraulic, Mechanical, Electrical, Energy, Landscaping, and Access reports.
- DRAWING REVISIONS & CONSULTANT COORDINATION**
 - Only documents signed and dated with a current revision listed in the revision register are valid for use.
 - The Head Contractor/Builder and subcontractors must work from the latest issue of all documents.
 - No claims will be accepted for works completed using outdated, unauthorised, or conflicting documentation.
 - All discrepancies must be clarified in writing by the appropriate consultant before continuing with works.
- SITE VERIFICATION & SURVEY**
 - The Head Contractor/Builder is responsible for verifying all dimensions, levels, setbacks, and setbacks on site before commencing fabrication or works.
 - A licensed land surveyor must undertake full layout. A title survey must be completed and submitted in DWG and PDF formats to the Building Designer before commencing site works.
- COMPLIANCE WITH NCC 2022 & AUSTRALIAN STANDARDS**

All works must comply with:

 - NCC 2022 (Volumes 1-3);
 - All applicable Australian Standards.
- FIRE SAFETY & EGRESS**
 - Exit doors and doors in egress paths must comply with NCC Clause D3D24 – operable from inside, no key required, using a single-handed downward/push action between 900–1100mm above floor, unless otherwise required by a building certifier (e.g. for child safety in early childhood centres).
 - Emergency lighting and exit signage must comply with NCC Part E4.
 - Fire hazard materials must comply with Specification 7 of NCC 2022.
 - Fire hydrants and hose reels must comply with AS 2419.1:2021 and AS 2441:2005.
 - Portable extinguishers: 2A-20B(E) dry chemical units must be installed at electrical switchboards per NCC Clause E1D4.
 - Steel columns requiring FRL must be intumescent-protected to comply with NCC.
 - Party walls must be constructed and sealed to comply with NCC fire separation clauses.
 - All service risers must achieve NCC-required fire and acoustic ratings.
- ACCESSIBILITY & INCLUSION**
 - Ensure compliance with NCC D4, AS 1428.1:2021, and AS/NZS 2890.1:2004 + 2890.6:2009.
 - PWD amenities must follow AS 1428.1:2021 Clause 15.5.2 (floor falls).
 - Accessible parking, stairs, ramps, amenities, doors and accessways must fully comply with relevant NCC & AS regulations and any other legislative requirements.
- INTERNAL CONSTRUCTION & WALL SYSTEMS**
 - Wall types and insulation must meet NCC J1–J4 and project-specific energy reports.
 - Where wall type is not shown, provide construction to match adjacent walls.
 - Wet areas to be lined with water-resistant Cementitious or equivalent.
 - Waterproofing to comply with AS 3740.2:2021 and NCC Specification 26.
 - Junctions between wall types must maintain all fire, acoustic, and thermal ratings.
 - All plasterboard walls to be IPS/Level 5 finish unless noted otherwise in writing.
 - Wall tiles to align with floor tile joints where applicable (refer to elevations for full extents).
 - All systems must be installed to manufacturer specifications and NCC & AS compliance.
- GENERAL COMPLIANCE**
 - Finishes and fittings must avoid hazards and meet Department of Education safety standards (where applicable).
 - Any non-compliant item must be rectified at the builder's cost without variation.
 - All notes and details provided must be adhered to by the Head Contractor/Builder at all times.
- ROOFING & CLADDING**
 - Roof sheeting over sarking and safety mesh (excl. awnings/translucent sheeting) must be fixed to manufacturer specs.
 - Roof covering and wall cladding must comply with AS 1562.1:1992 and NCC Clause F3D2 and F3D5.
 - Provide flashings to ensure water tightness (Colorbond finish unless noted).
 - Penetrations must be flashed with soakers and upstands.
 - Provide bird wire and vermin protection to all openings and ventilation louvers.

COMPLIANCE NOTES

The Head Contractor/Builder is responsible for ensuring that all building works comply with the most current codes, standards, and regulations in effect at the time of construction. This includes, but is not limited to, the following:

- National Construction Code (NCC) – including all applicable sections of the Building Code of Australia (BCA) across all building classes;
- Australian/New Zealand Standards (AS/NZS) – as relevant to the scope of work;
- All applicable building regulations – local, state, and federal;
- Workplace Health and Safety (WHS) legislation and requirements;
- Local council by-laws and planning conditions;
- Planning permit requirements – including any endorsed plans and conditions of approval;
- Any other relevant construction codes, standards, or regulatory guidelines.

It is the responsibility of the builder to remain up to date with changes to applicable legislation and ensure that all construction practices, materials, and methods are in full compliance throughout the duration of the project.

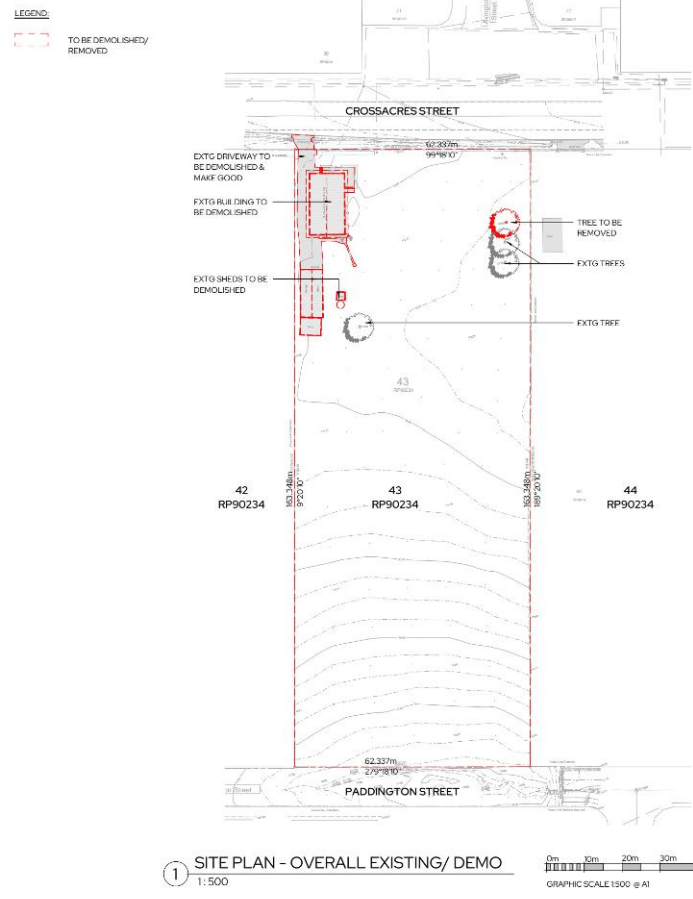
CONDITIONS OF USE

These drawings form part of a formal agreement between ISA and the Client/Principal. Use of this documentation confirms acceptance of all terms herein and within the signed agreement, including all related disclaimers and obligations. No construction or fabrication may proceed until all relevant approvals are obtained and written authorisation or certification is issued by ISA. ISA is a QBCC registered building design practice and does not provide architectural services as defined under the Architects Act 2002 (QLD). Reliance on these documents requires certification by a registered building certifier and town planning confirming full regulatory and planning compliance. All users jointly and severally indemnify and release ISA against any claims, costs, damages, or liabilities arising from unauthorised use, non-compliance, errors, or misinterpretation. If any discrepancy, ambiguity, or error is identified, work must cease immediately and written clarification must be obtained from ISA before proceeding. Use is strictly conditional on acceptance of these terms.

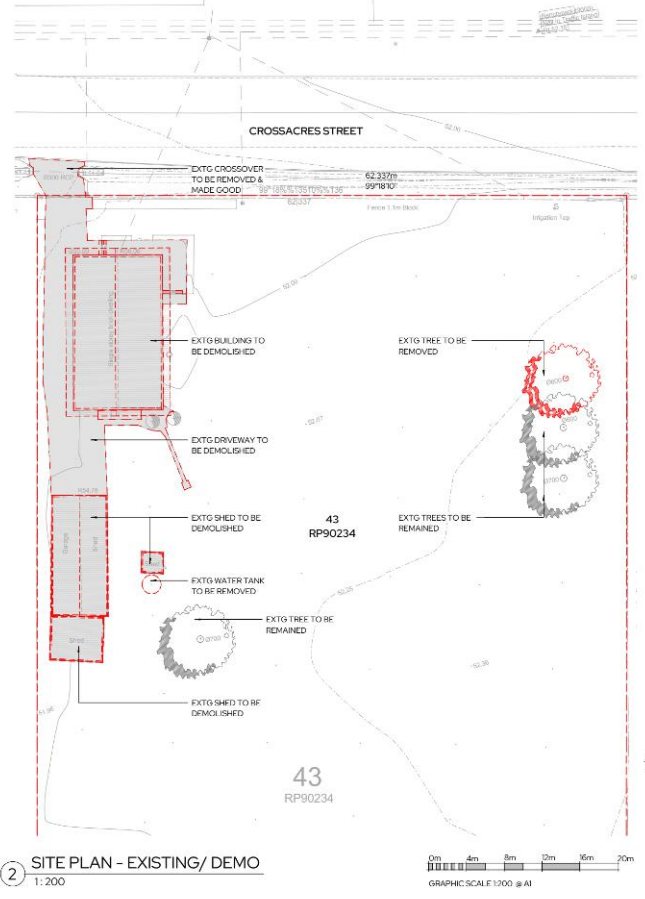
APPLICABLE CODES

CLASS	CLASS 2-9 (CONTINUED)
ACCESS & MOBILITY	ACOUSTIC
AS 4299.1995 – Adaptable housing (referenced in Livable Housing Design Guidelines, not NCC directly)	AS/NZS ISO 717.1:2004 – Airborne sound insulation
ACOUSTIC	AS/NZS ISO 717.2:2004 – Impact sound insulation
(NCC Volume 2 references performance-based criteria, not ISO standards directly. These are typically used in assessments.)	DEMOLITION & STRUCTURAL
AS/NZS ISO 717.1:2004	AS 2601:2001 – Demolition
AS/NZS ISO 717.2:2004	AS 3700.2018 – Masonry structures
DEMOLITION & STRUCTURAL	AS 3600.2018 – Concrete structures
AS 1584.2 – Timber-framed construction – Non-cyclic areas	AS 4100.2010 – Steel structures
AS 1584.3 – Timber-framed construction – Cyclic areas	AS 1720.1:2010 – Timber structures – Design
DOORS, GLAZING & CLADDING	DOORS, GLAZING & CLADDING
AS 1288.2014 – Glass in buildings	AS 1288.2021 – Glazing
AS 2047.2014 – Windows, external glazed doors	AS 2047.2014 – Windows
AS 2689.1983 – Installation of door sets	AS 1562.1:1992 – Cladding
AS 1562.1:1992 – Metal roof and wall cladding	AS 3958.1:2007 – Ceramic tiles
ENERGY EFFICIENCY	ENERGY EFFICIENCY
AS/NZS 4859.1:2018 – Thermal insulation	AS/NZS 2890.1:2004 – Thermal insulation (used in J43 and D75 pathway)
AS 1288.2014 – Glass in buildings	FIRE SAFETY
AS 3959.2018 – Bushfire-prone areas	AS 1530.1 – Combustibility
AS 3786.2014 – Smoke alarms	AS 1530.4 – Fire resistance
PARKING	AS 2441.2005 – Fire hydrants
AS/NZS 2890.1:2004 – Off-street car parking	AS 2293.1:2018 – Emergency lighting
AS/NZS 2890.6:2009 – Accessible parking	AS 3786.2014 – Smoke alarms (some Class 2 dwellings)
PLUMBING & DRAINAGE	LIFTS & VERTICAL TRANSPORT
AS/NZS 3500.0 – Glossary of terms	AS 1735.1 – General
AS/NZS 3500.1 – Water services	AS 1735.12 – Access for persons with disabilities
AS/NZS 3500.2 – Sanitary plumbing and drainage	PARKING
AS/NZS 3500.3 – Stormwater drainage	AS/NZS 2890.1:2004 – Off-street car parking
AS/NZS 3500.4 – Heated water services	AS/NZS 2890.6:2009 – Accessible parking
SERVICES & INSTALLATIONS	PLUMBING & DRAINAGE
AS 3660.1:2014 – Termite management	AS/NZS 3500.0 – Glossary
AS 3958.1:2007 – Ceramic tiles – Installation guide	AS/NZS 3500.1 – Water services
STRUCTURAL DESIGN ACTIONS	AS/NZS 3500.2 – Sanitary drainage
AS/NZS 1710.0	AS/NZS 3500.3 – Stormwater
AS/NZS 1710.2	AS/NZS 3500.4 – Heated water
AS/NZS 1710.4	SERVICES & INSTALLATIONS
WATERPROOFING	AS 1560.1:2022 – Gas installations
AS 3740.2:2021 – Wet area waterproofing	AS 3660.1:2014 – Termite protection
CLASS 2-9	AS 3958.1:2007 – Tiling
ACCESS & MOBILITY	EXTERNAL SITE ELEMENTS
AS 1428.1:2021 – Access and mobility (mandatory)	AS/NZS 1170.0 – General principles
AS 1428.1:2009 – Tactile indicators	AS/NZS 1170.1 – Design loads
AS 4299.1995 – Adaptable housing (sometimes referenced in Class 2)	AS/NZS 1170.2 – Wind actions
	AS/NZS 1170.4 – Earthquake actions

SHEET NO: A1		ISSUED BY: BOJANG REG. #5428 HUIJ HAO (BOJANG REG. #5593)	DOCUMENT DISCLAIMER <small>ISA is not liable for any errors or omissions in this document. The user of this document is advised to verify the accuracy of the information contained herein. The user of this document is advised to consult with a professional engineer or architect for any specific requirements. The user of this document is advised to consult with the relevant authorities for any specific requirements.</small>	REV. NO. DATE DESCRIPTION DA-2 24-JUN-2025 GENERAL AMENDMENTS DA-3 15-JUL-2025 GENERAL AMENDMENTS DA-4 31-JUL-2025 GENERAL AMENDMENTS DA-6 13-NOV-2025 GENERAL AMENDMENTS DA-8 11-MAY-2026 UPDATE ACOUSTIC BARRIERS	PROJECT NAME DOOLANDELLA CHILDCARE <small>66 Crossways St, Doolandella, QLD 4077</small>	SHEET NAME GENERAL INFORMATION	SCALE / A1

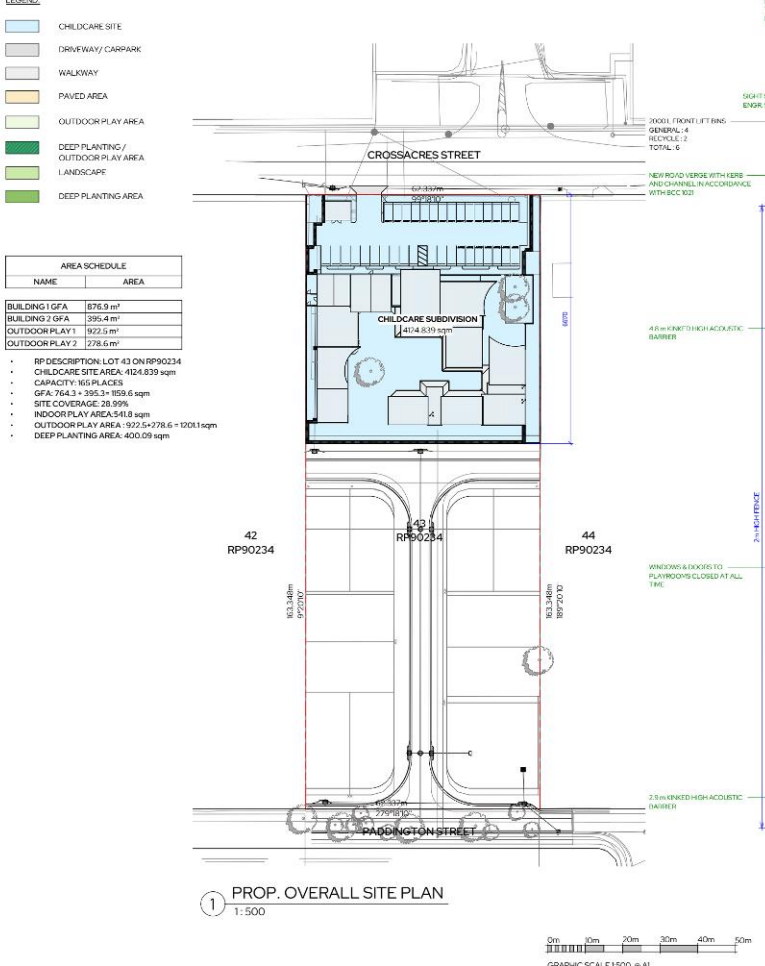


1 SITE PLAN - OVERALL EXISTING/ DEMO
1:500

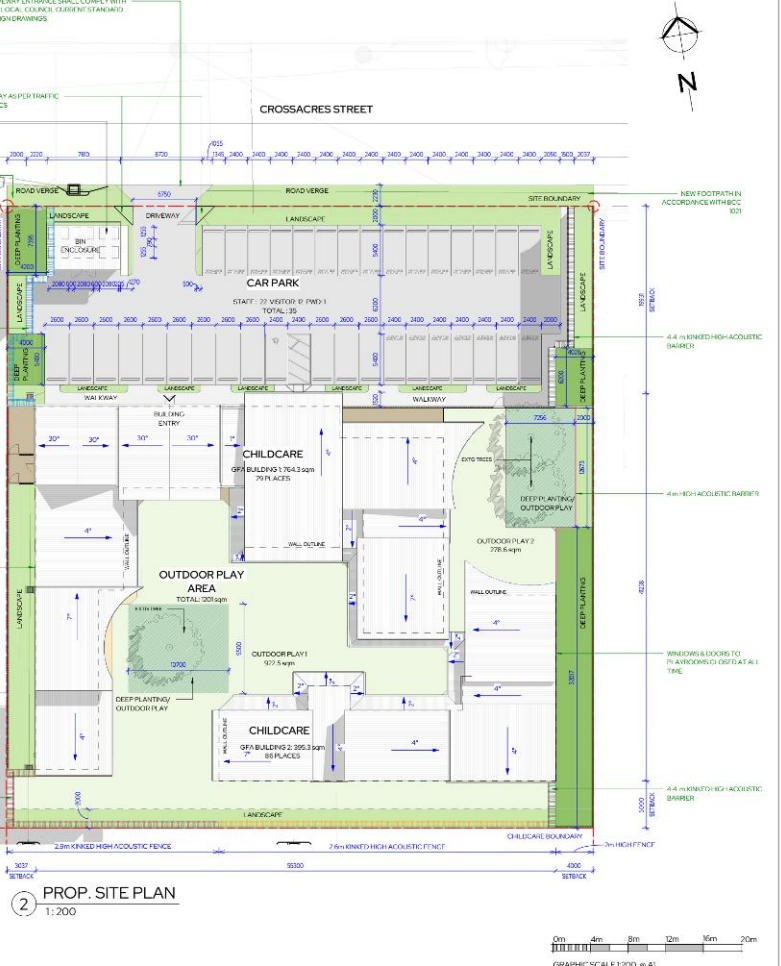


2 SITE PLAN - EXISTING/ DEMO
1:200

SHEET NO. A1		1800 481 8040 Reg. #5438 Hui Hui BOAG Reg. #5993 027 3396 0412 admin@isa.com.au www.isa.com.au Architects & Planners Chartered by the Institution of Engineers, Australia	DOCUMENT DISCLAIMER ISA is not responsible for the accuracy or completeness of the information provided in this document. The user of this document is advised to verify the accuracy and completeness of the information provided in this document. ISA is not responsible for any loss or damage arising from the use of this document.	REV. NO. DATE DESCRIPTION DA-2 24-JUN-2025 GENERAL AMENDMENTS DA-3 15-JUL-2025 GENERAL AMENDMENTS DA-4 31-JUL-2025 GENERAL AMENDMENTS DA-5 20-OCT-2025 AMENDMENTS TO OUTDOOR PLAY AREAS DA-6 13-NOV-2025 GENERAL AMENDMENTS DA-8 11-MAY-2026 UPDATE ACOUSTIC BARRIERS	PROJECT NAME: DOOLANDELLA CHILDCARE CLIENT INFORMATION: 60 Crossacres St, Doolandella, QLD 4077 KIDS EARLY LEARNING CENTRE Building 8071 Hui Hui Architects Planners, Expert Mx Plans QLD 013	SHEET NAME: EXTG SITE PLANS DRAWN BY: HH PROJECT NO: P25571 SHEET NO: DA-8 CHECKED BY: IA PROJECT STAGE: DA	SCALE: As indicated / A1 DA01-01



1 PROP. OVERALL SITE PLAN
1:500

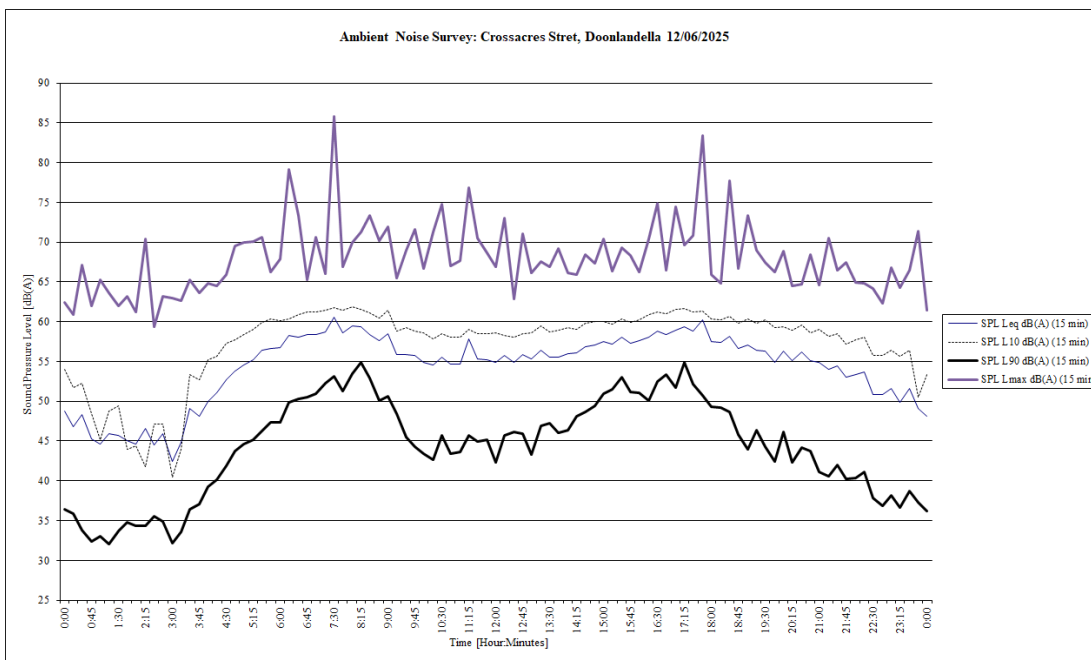
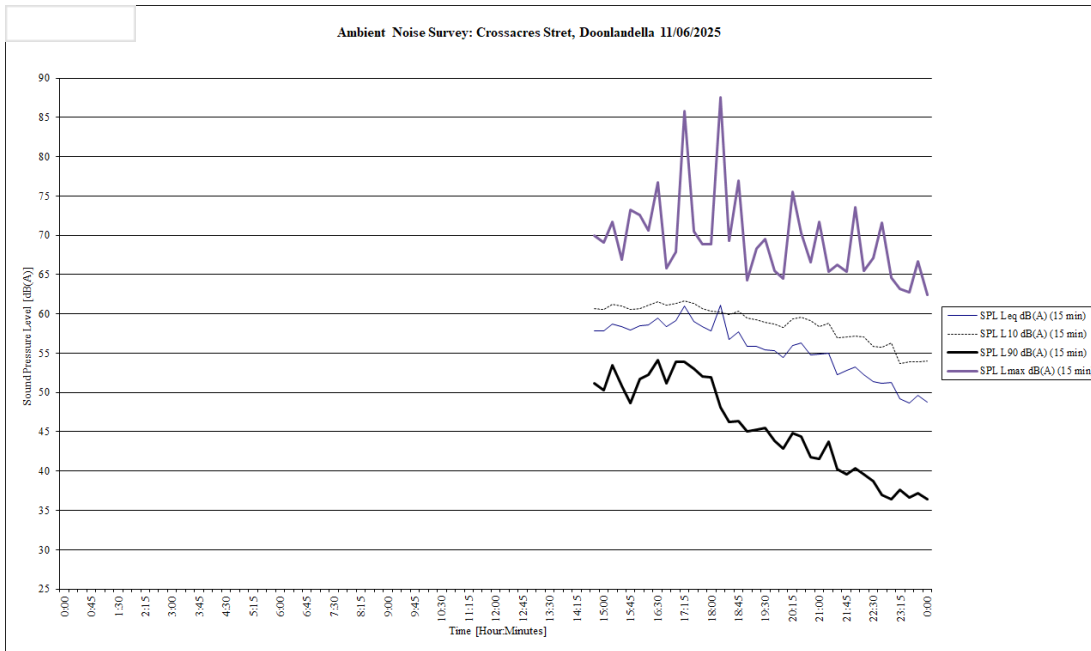


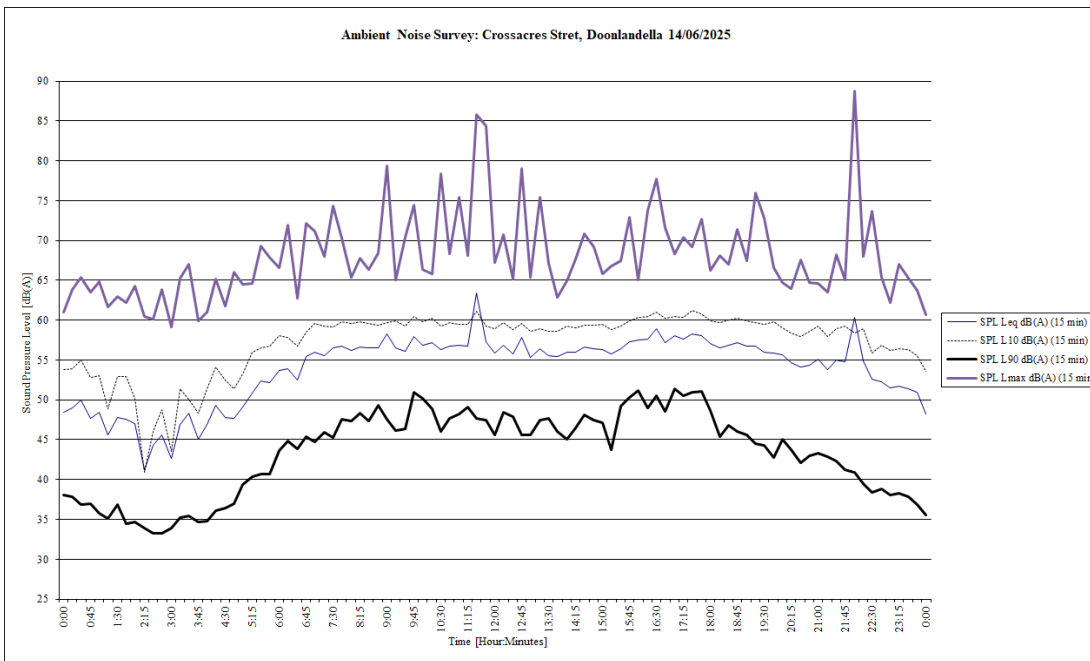
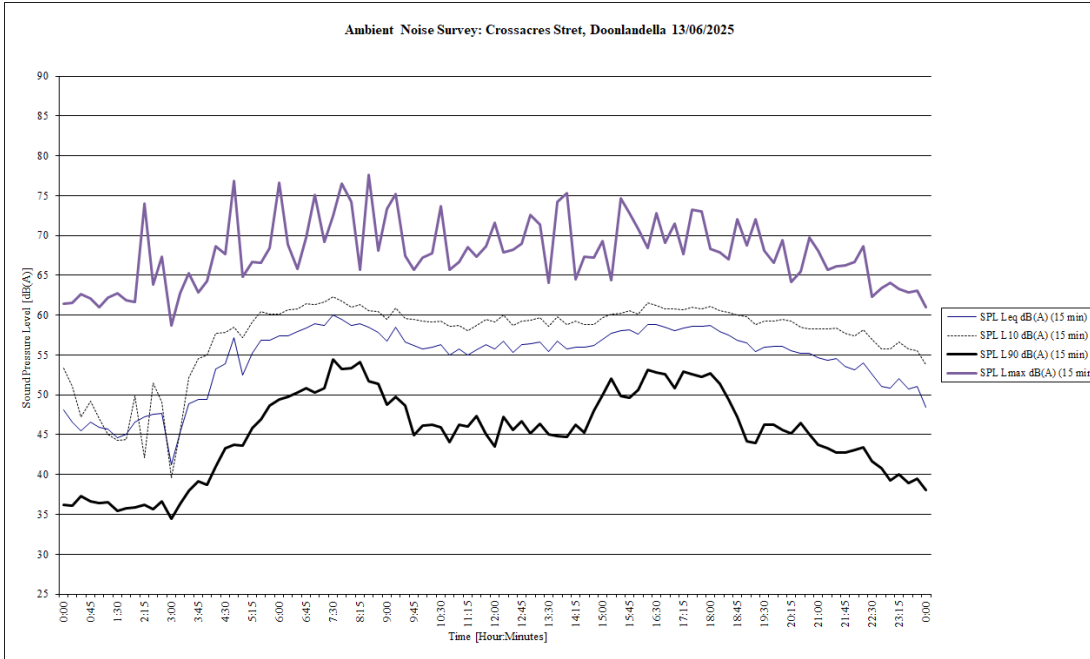
2 PROP. SITE PLAN
1:200

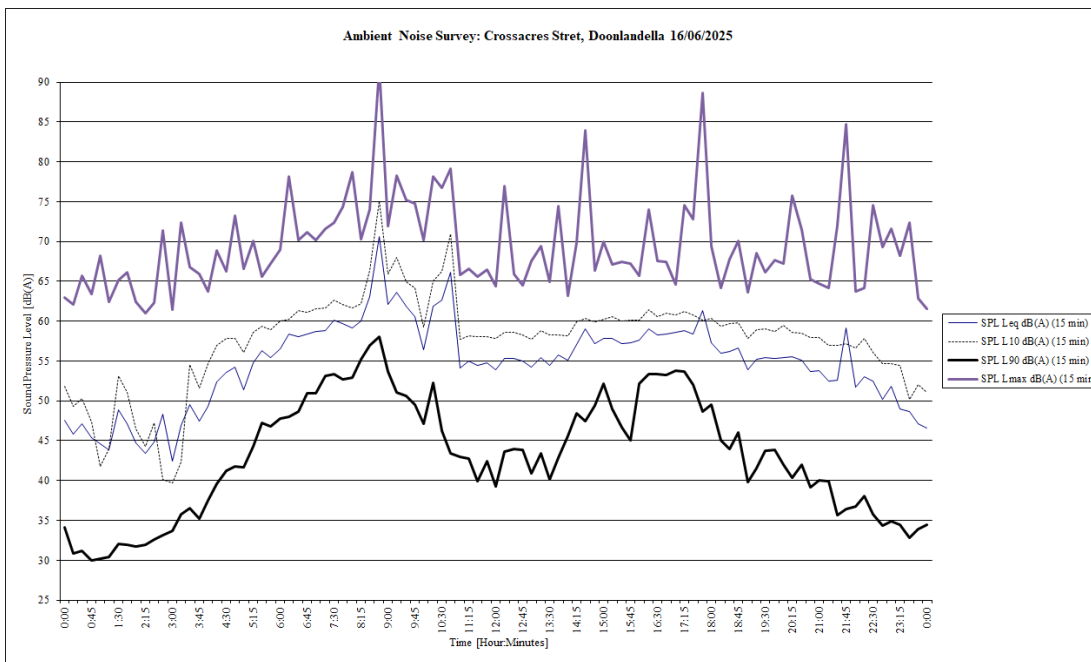
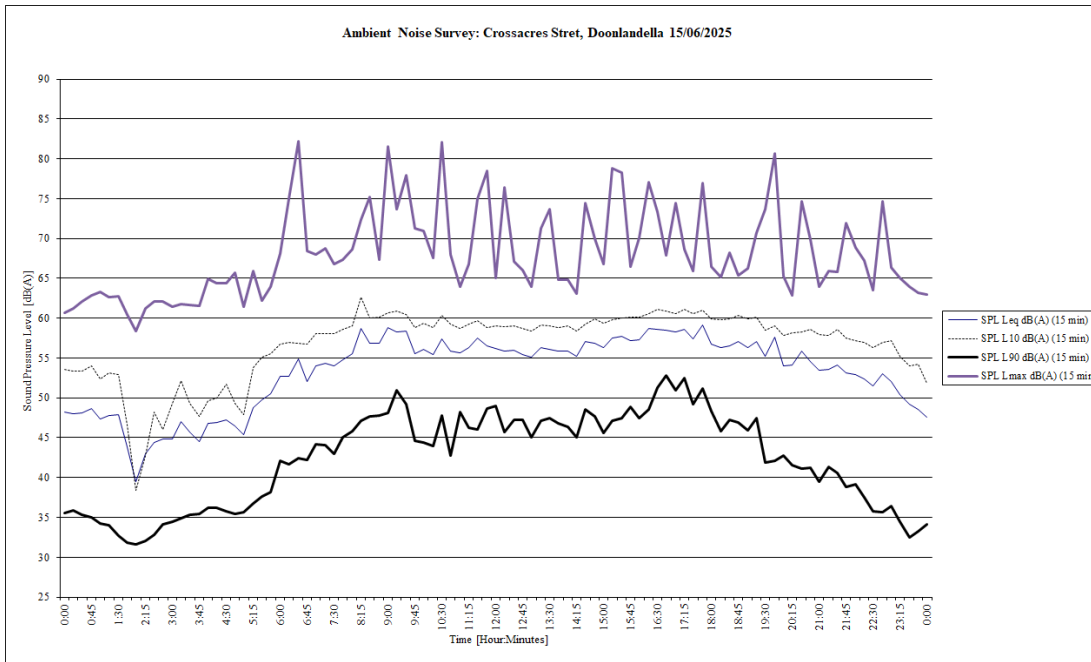
SHEET NO. A1		1800 481 8040 Reg. #5438 Hui Hui BOAG Reg. #5993 027 3396 0412 admin@isa.com.au www.isa.com.au Architects & Planners Chartered by the Institution of Engineers, Australia	DOCUMENT DISCLAIMER ISA is not responsible for the accuracy or completeness of the information provided in this document. The user of this document is advised to verify the accuracy and completeness of the information provided in this document. ISA is not responsible for any loss or damage arising from the use of this document.	REV. NO. DATE DESCRIPTION DA-3 15-JUL-2025 GENERAL AMENDMENTS DA-4 31-JUL-2025 GENERAL AMENDMENTS DA-5 20-OCT-2025 AMENDMENTS TO OUTDOOR PLAY AREAS DA-6 13-NOV-2025 GENERAL AMENDMENTS DA-8 11-MAY-2026 UPDATE ACOUSTIC BARRIERS	PROJECT NAME: DOOLANDELLA CHILDCARE CLIENT INFORMATION: 60 Crossacres St, Doolandella, QLD 4077 KIDS EARLY LEARNING CENTRE Building 8071 Hui Hui Architects Planners, Expert Mx Plans QLD 013	SHEET NAME: PROP. SITE PLANS DRAWN BY: HH PROJECT NO: P25571 SHEET NO: DA-8 CHECKED BY: IA PROJECT STAGE: DA	SCALE: As indicated / A1 DA02-01

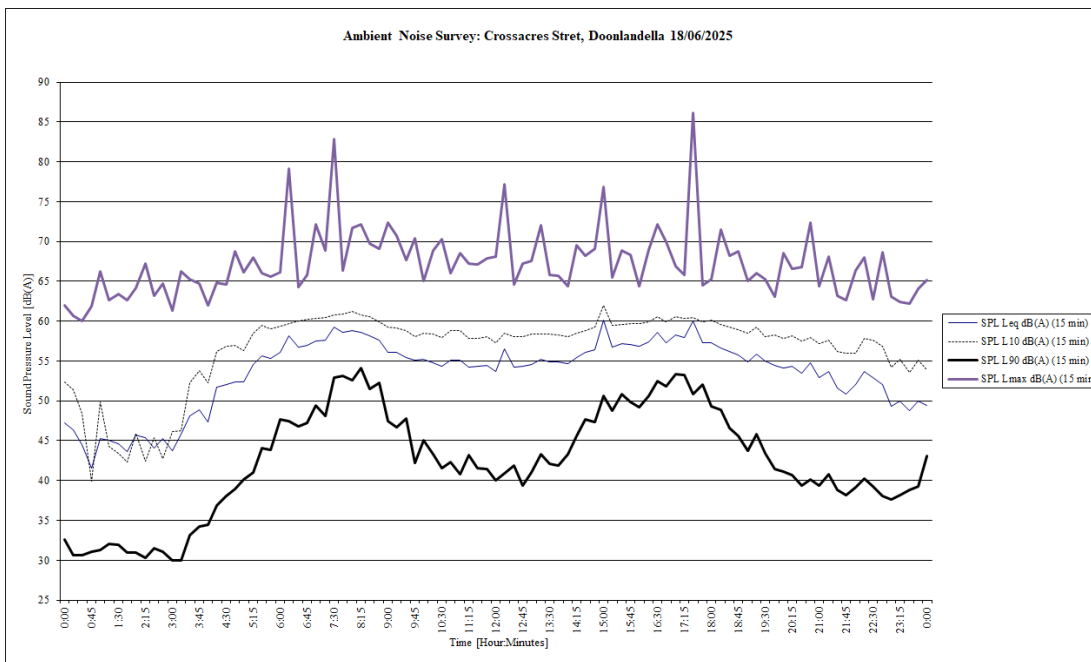
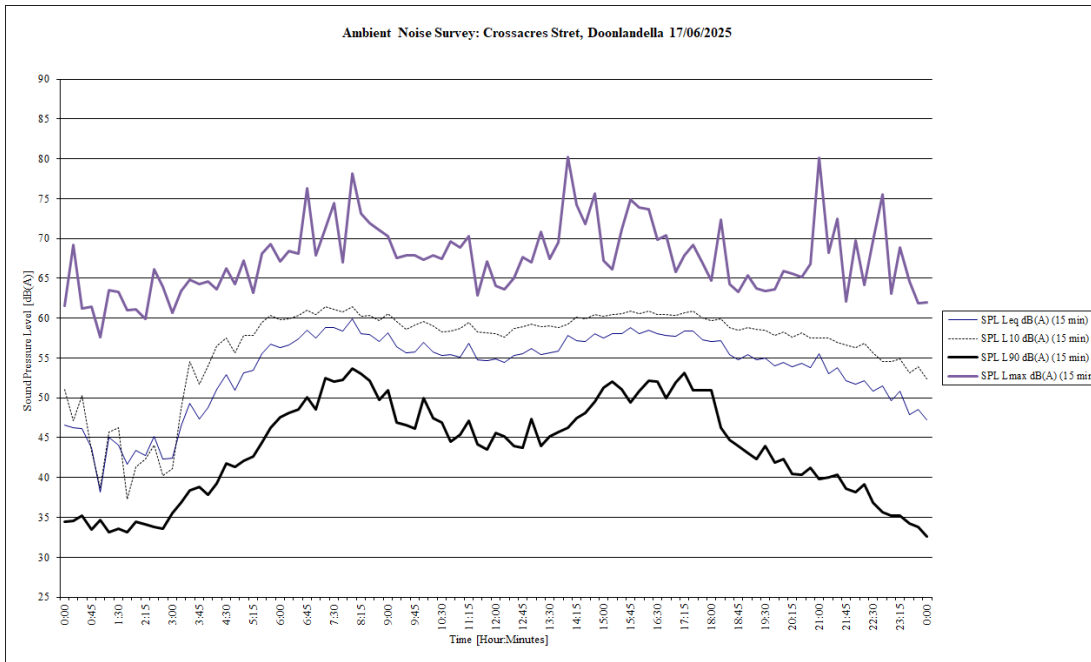
APPENDIX C

Measurement Results and Model Calculations / Predictions









CHILDREN OUTDOOR PLAY - POINT CALCULATIONS

POINT CALCULATIONS

Pen3D2000 V 1.10.0

Project Code:25071a

Project Description:Noise assessment of Doolandella Childcare

File:\\Crgking\2025\25071 Childcare Crossacres St Doolandella ONS\25071a_environ APR26 UP.PEN

Monday 11 May, 2026 at 16:35:43

Environmental Calculations

All point and line sources included. Line source segmentation angle: 2 degrees. Calculations for specified meteorology.

Noise level results are the logarithmic addition of all the noise sources
 Noise level results incorporate the incoherent ground reflection algorithm

Meteorology :

Wind speed 0.0 (m/s) Wind direction 0 Mast height 10.0 (m)
 Temperature 20.0 (C) Temperature Gradient 0.0 (C/100m) Humidity 50.0 (%)
 Surface Roughness of terrain 0.023000000 (m) Zero plane offset 0.080000000 (m)

Receptor	X Posn (m)	Y Posn (m)	Height (m)	Ground (m)	Noise Level (dB(A))
R1 W	498122.2	6945763.7	4.5	50.6	31.3
R1 NW	498189.1	6945751.9	1.8	51.6	37.0
R1 NE	498240.2	6945756.0	4.5	51.7	37.1
R1 E	498257.5	6945741.0	1.8	52.0	31.6
R2N	498228.0	6945714.4	4.5	52.3	39.0
R2C	498224.9	6945697.2	4.5	52.5	46.4
R2S	498220.0	6945661.2	4.5	52.6	46.4
R3E	498245.0	6945544.3	4.5	48.7	27.6
R3S	498172.9	6945557.7	4.5	46.6	29.6
R3W	498137.5	6945563.5	4.5	47.8	30.4
R4W	498164.0	6945717.7	4.5	52.6	43.0
R4S	498141.9	6945678.0	4.5	52.4	47.8
R5E	498195.2	6945646.9	1.8	51.3	39.9
R5W	498160.6	6945652.3	1.8	52.3	42.3
R5E	498195.2	6945646.9	4.5	51.3	41.4
R5W	498160.6	6945652.3	4.5	52.3	48.7

DAYTIME					
Leq PROPOSED ACTIVITIES IMPACTING:					
R1: Single & two-storey dwellings to the north across Crossacr			R2: Future dwellings to the immediate east		
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78 dB(A) @ 1m
Single event duration	20	seconds		Single event duration	20 seconds
Number of events in 11 hours	2	events		Number of events in 11 hours	2 events
Worst case duration in 11hrs	0.011	hours		Worst case duration in 11hrs	0.011 hours
11 hour Leq	48.0	dB(A) @ 1m		11 hour Leq	48.0 dB(A) @ 1m
Distance to receiver	21	m		Distance to receiver	34 m
Onsite building screening	0	dB(A)		Acoustic barrier screening	-5 dB(A)
Distance attenuation	-26.4	dB(A)		Distance attenuation	-30.6 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	22	dB(A)	#	Impact at boundary	12 dB(A)
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70 dB(A) @ 1m
Single event duration	900	seconds		Single event duration	900 seconds
Number of events in 11 hours	1	events		Number of events in 11 hours	1 events
Worst case duration in 11hrs	0.25	hours		Worst case duration in 11hrs	0.25 hours
11 hour Leq	53.6	dB(A) @ 1m		11 hour Leq	53.6 dB(A) @ 1m
Distance to receiver	32.5	m		Distance to receiver	30 m
Onsite building screening	0	dB(A)		Acoustic barrier screening	-5 dB(A)
Distance attenuation	-30.2	dB(A)		Distance attenuation	-29.5 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	23	dB(A)	#	Impact at boundary	19 dB(A)
Waste collection	95	dB(A) @ 1m	#	Waste collection	95 dB(A) @ 1m
Single event duration	120	seconds		Single event duration	120 seconds
Number of events in 11 hours	1	events		Number of events in 11 hours	1 events
Worst case duration in 11hrs	0.033	hours		Worst case duration in 11hrs	0.033 hours
11 hour Leq	69.8	dB(A) @ 1m		11 hour Leq	69.8 dB(A) @ 1m
Distance to receiver	15	m		Distance to receiver	50 m
Onsite building screening	0	dB(A)		Acoustic barrier screening	0 dB(A)
Distance attenuation	-23.5	dB(A)		Distance attenuation	-34.0 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	46	dB(A)	#	Impact at boundary	36 dB(A)
A/C plant	60	dB(A) @ 2m	#	A/C plant	60 dB(A) @ 2m
Single event duration	900	seconds		Single event duration	900 seconds
Number of events in 11 hours	40	events		Number of events in 11 hours	40 events
Worst case duration in 11hrs	10	hours		Worst case duration in 11hrs	10 hours
11 hour Leq	59.6	dB(A) @ 2m		11 hour Leq	59.6 dB(A) @ 2m
Distance to receiver	40	m		Distance to receiver	16 m
Onsite building screening	0	dB(A)		Acoustic barrier screening	0 dB(A)
Distance attenuation	-26.0	dB(A)		Distance attenuation	-18.1 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	34	dB(A)	#	Impact at boundary	42 dB(A)
Children outside at play PEN3D impact	37	dB(A)	#	Children outside at play PEN3D impac	46 dB(A)
Combined BOUNDARY impact	45	dB(A)		Combined BOUNDARY impact	49 dB(A)

DAYTIME							
Leq PROPOSED ACTIVITIES IMPACTING:							
R1: Single & two-storey dwellings to the north across Crossacr				R2: Future dwellings to the immediate east			
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78	dB(A) @ 1m	
Single event duration	20	seconds		Single event duration	20	seconds	
Number of events in 11 hours	2	events		Number of events in 11 hours	2	events	
Worst case duration in 11 hrs	0.011	hours		Worst case duration in 11 hrs	0.011	hours	
11 hour Leq	48.0	dB(A) @ 1m		11 hour Leq	48.0	dB(A) @ 1m	
Distance to receiver	21	m		Distance to receiver	34	m	
Onsite building screening	0	dB(A)		Acoustic barrier screening	-5	dB(A)	
Distance attenuation	-26.4	dB(A)		Distance attenuation	-30.6	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	22	dB(A)	#	Impact at boundary	12	dB(A)	
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70	dB(A) @ 1m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 11 hours	1	events		Number of events in 11 hours	1	events	
Worst case duration in 11 hrs	0.25	hours		Worst case duration in 11 hrs	0.25	hours	
11 hour Leq	53.6	dB(A) @ 1m		11 hour Leq	53.6	dB(A) @ 1m	
Distance to receiver	32.5	m		Distance to receiver	30	m	
Onsite building screening	0	dB(A)		Acoustic barrier screening	-5	dB(A)	
Distance attenuation	-30.2	dB(A)		Distance attenuation	-29.5	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	23	dB(A)	#	Impact at boundary	19	dB(A)	
Waste collection	95	dB(A) @ 1m	#	Waste collection	95	dB(A) @ 1m	
Single event duration	120	seconds		Single event duration	120	seconds	
Number of events in 11 hours	1	events		Number of events in 11 hours	1	events	
Worst case duration in 11 hrs	0.033	hours		Worst case duration in 11 hrs	0.033	hours	
11 hour Leq	69.8	dB(A) @ 1m		11 hour Leq	69.8	dB(A) @ 1m	
Distance to receiver	15	m		Distance to receiver	50	m	
Onsite building screening	0	dB(A)		Acoustic barrier screening	0	dB(A)	
Distance attenuation	-23.5	dB(A)		Distance attenuation	-34.0	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	46	dB(A)	#	Impact at boundary	36	dB(A)	
A/C plant	60	dB(A) @ 2m	#	A/C plant	60	dB(A) @ 2m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 11 hours	40	events		Number of events in 11 hours	40	events	
Worst case duration in 11 hrs	10	hours		Worst case duration in 11 hrs	10	hours	
11 hour Leq	59.6	dB(A) @ 2m		11 hour Leq	59.6	dB(A) @ 2m	
Distance to receiver	40	m		Distance to receiver	16	m	
Onsite building screening	0	dB(A)		Acoustic barrier screening	0	dB(A)	
Distance attenuation	-26.0	dB(A)		Distance attenuation	-18.1	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	34	dB(A)	#	Impact at boundary	42	dB(A)	
Children outside at play PEN3D impact	37	dB(A)	#	Children outside at play PEN3D impac	46	dB(A)	
Combined BOUNDARY impact	45	dB(A)		Combined BOUNDARY impact	49	dB(A)	

DAYTIME						
Leq PROPOSED ACTIVITIES IMPACTING:						
R3: Single & two-storey dwellings to the south across Paddis			R4: Future single-storey dwelling to the immediate west			
Car door closures in carpark PARENTS	78	dB(A) @ 1m	#	Car door closures in carpark PARENTS	78	dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5	seconds
Number of events in 11 hours	1480	events		Number of events in 11 hours	1480	events
Worst case duration in 11hrs	0.617	hours		Worst case duration in 11hrs	0.617	hours
11 hour Leq	65.5	dB(A) @ 1m		11 hour Leq	65.5	dB(A) @ 1m
Distance to receiver	155.5	m		Distance to receiver	4.2	m
Onsite building screening	-12	dB(A)		Barrier screening	-9.2	dB(A)
Distance attenuation	-43.8	dB(A)		Distance attenuation	-12.5	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	10	dB(A)	9	Impact at boundary	44	dB(A)
Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m
Single event duration	11.5	seconds		Single event duration	11.5	seconds
Number of events in 11 hours	740	events		Number of events in 11 hours	740	events
Worst case duration in 11hrs	2.364	hours		Worst case duration in 11hrs	2.364	hours
11 hour Leq	65.3	dB(A) @ 1m		11 hour Leq	65.3	dB(A) @ 1m
Distance to receiver	162.5	m		Distance to receiver	8.7	m
Onsite building screening	-12	dB(A)		Barrier screening	-11.6	dB(A)
Distance attenuation	-44.2	dB(A)		Distance attenuation	-18.8	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	9	dB(A)	8	Impact at boundary	35	dB(A)
Car door closures in carpark STAFF	78	dB(A) @ 1m	#	Car door closures in carpark STAFF	78	dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5	seconds
Number of events in 11 hours	42	events		Number of events in 11 hours	42	events
Worst case duration in 11hrs	0.018	hours		Worst case duration in 11hrs	0.018	hours
11 hour Leq	50.0	dB(A) @ 1m		11 hour Leq	50.0	dB(A) @ 1m
Distance to receiver	155.5	m		Distance to receiver	20.5	m
Onsite building screening	0	dB(A)		Barrier screening	-8.8	dB(A)
Distance attenuation	-43.8	dB(A)		Distance attenuation	-26.2	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	6	dB(A)	4	Impact at boundary	15	dB(A)
Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m
Single event duration	17.3	seconds		Single event duration	17.3	seconds
Number of events in 11 hours	21	events		Number of events in 11 hours	21	events
Worst case duration in 11hrs	0.101	hours		Worst case duration in 11hrs	0.101	hours
11 hour Leq	51.6	dB(A) @ 1m		11 hour Leq	51.6	dB(A) @ 1m
Distance to receiver	162.5	m		Distance to receiver	16.2	m
Onsite building screening	-5	dB(A)		Barrier screening	-8.5	dB(A)
Distance attenuation	-44.2	dB(A)		Distance attenuation	-24.2	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	2	dB(A)	2	Impact at boundary	19	dB(A)
Active pursuits inside (dance / activity)	80	dB(A) @ 1m	#	Active pursuits inside (dance / activity)	80	dB(A) @ 1m
Single event duration	3600	seconds		Single event duration	3600	seconds
Number of events in 11 hours	6	events		Number of events in 11 hours	6	events
Worst case duration in 11hrs	6	hours		Worst case duration in 11hrs	6	hours
11 hour Leq	77.4	dB(A) @ 1m		11 hour Leq	77.4	dB(A) @ 1m
Distance to receiver	114	m		Distance to receiver	6	m
Inside to outside open windows / doors	-5	dB(A)		Inside to outside closed windows / doors	-20	dB(A)
Distance attenuation	-41.1	dB(A)		Distance attenuation	-15.6	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	31	dB(A)	#	Impact at boundary	42	dB(A)

DAYTIME							
Leq PROPOSED ACTIVITIES IMPACTING:							
R3: Single & two-storey dwellings to the south across Paddin				R4: Future single-storey dwelling to the immediate west			
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78	dB(A) @ 1m	
Single event duration	20	seconds		Single event duration	20	seconds	
Number of events in 11 hours	2	events		Number of events in 11 hours	2	events	
Worst case duration in 11hrs	0.011	hours		Worst case duration in 11hrs	0.011	hours	
11 hour Leq	48.0	dB(A) @ 1m		11 hour Leq	48.0	dB(A) @ 1m	
Distance to receiver	163.5	m		Distance to receiver	16.2	m	
Onsite building screening	-12	dB(A)		Barrier screening	-8.0	dB(A)	
Distance attenuation	-44.3	dB(A)		Distance attenuation	-24.2	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	-8	dB(A)	0	Impact at boundary	16	dB(A)	
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70	dB(A) @ 1m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 11 hours	1	events		Number of events in 11 hours	1	events	
Worst case duration in 11hrs	0.25	hours		Worst case duration in 11hrs	0.25	hours	
11 hour Leq	53.6	dB(A) @ 1m		11 hour Leq	53.6	dB(A) @ 1m	
Distance to receiver	155.5	m		Distance to receiver	11.7	m	
Onsite building screening	-12	dB(A)		Barrier screening	-5.0	dB(A)	
Distance attenuation	-43.8	dB(A)		Distance attenuation	-21.4	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	-2	dB(A)	1	Impact at boundary	27	dB(A)	
Waste collection	95	dB(A) @ 1m	#	Waste collection	95	dB(A) @ 1m	
Single event duration	120	seconds		Single event duration	120	seconds	
Number of events in 11 hours	1	events		Number of events in 11 hours	1	events	
Worst case duration in 11hrs	0.033	hours		Worst case duration in 11hrs	0.033	hours	
11 hour Leq	69.8	dB(A) @ 1m		11 hour Leq	69.8	dB(A) @ 1m	
Distance to receiver	177	m		Distance to receiver	4.5	m	
Onsite building screening	0	dB(A)		Onsite building screening	0	dB(A)	
Distance attenuation	-45.0	dB(A)		Distance attenuation	-13.1	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	25	dB(A)	#	Impact at boundary	57	dB(A)	
A/C plant	60	dB(A) @ 2m	#	A/C plant	60	dB(A) @ 2m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 11 hours	40	events		Number of events in 11 hours	40	events	
Worst case duration in 11hrs	10	hours		Worst case duration in 11hrs	10	hours	
11 hour Leq	59.6	dB(A) @ 2m		11 hour Leq	59.6	dB(A) @ 2m	
Distance to receiver	112	m		Distance to receiver	2.7	m	
Barrier screening	0	dB(A)		Acoustic enclosure	-15.0	dB(A)	
Distance attenuation	-35.0	dB(A)		Distance attenuation	-2.6	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	25	dB(A)	#	Impact at boundary	42	dB(A)	
Children outside at play PEN3D impac	30	dB(A)	#	Children outside at play PEN3D impac	43.0	dB(A)	
Combined BOUNDARY impact	34	dB(A)		Combined BOUNDARY impact	49	dB(A)	

DAYTIME						
Leq PROPOSED ACTIVITIES IMPACTING:						
R5: Future single-storey dwellings to the south			R6: Future two-storey dwellings to the south			
Car door closures in carpark PARENTS	78	dB(A) @ 1m	#	Car door closures in carpark PARENTS	78	dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5	seconds
Number of events in 11 hours	1480	events		Number of events in 11 hours	1480	events
Worst case duration in 11hrs	0.617	hours		Worst case duration in 11hrs	0.617	hours
11 hour Leq	65.5	dB(A) @ 1m		11 hour Leq	65.5	dB(A) @ 1m
Distance to receiver	61	m		Distance to receiver	61	m
Onsite building screening	-15.9	dB(A)		Onsite building screening	-15.4	dB(A)
Distance attenuation	-35.7	dB(A)		Distance attenuation	-35.7	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	14	dB(A)	#	Impact at boundary	14	dB(A)
Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m
Single event duration	11.5	seconds		Single event duration	11.5	seconds
Number of events in 11 hours	740	events		Number of events in 11 hours	740	events
Worst case duration in 11hrs	2.364	hours		Worst case duration in 11hrs	2.364	hours
11 hour Leq	65.3	dB(A) @ 1m		11 hour Leq	65.3	dB(A) @ 1m
Distance to receiver	68	m		Distance to receiver	68	m
Onsite building screening	-13.7	dB(A)		Onsite building screening	-12.9	dB(A)
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	15	dB(A)	#	Impact at boundary	16	dB(A)
Car door closures in carpark STAFF	78	dB(A) @ 1m	#	Car door closures in carpark STAFF	78	dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5	seconds
Number of events in 11 hours	42	events		Number of events in 11 hours	42	events
Worst case duration in 11hrs	0.018	hours		Worst case duration in 11hrs	0.018	hours
11 hour Leq	50.0	dB(A) @ 1m		11 hour Leq	50.0	dB(A) @ 1m
Distance to receiver	61	m		Distance to receiver	61	m
Onsite building screening	-10.3	dB(A)		Onsite building screening	-8.0	dB(A)
Distance attenuation	-35.7	dB(A)		Distance attenuation	-35.7	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	4	dB(A)	3	Impact at boundary	6	dB(A)
Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m
Single event duration	17.3	seconds		Single event duration	17.3	seconds
Number of events in 11 hours	21	events		Number of events in 11 hours	21	events
Worst case duration in 11hrs	0.101	hours		Worst case duration in 11hrs	0.101	hours
11 hour Leq	51.6	dB(A) @ 1m		11 hour Leq	51.6	dB(A) @ 1m
Distance to receiver	68	m		Distance to receiver	68	m
Onsite building screening	-10.4	dB(A)		Onsite building screening	-7.9	dB(A)
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	5	dB(A)	3	Impact at boundary	7	dB(A)
Active pursuits inside (dance / activity)	80	dB(A) @ 1m	#	Active pursuits inside (dance / activity)	80	dB(A) @ 1m
Single event duration	3600	seconds		Single event duration	3600	seconds
Number of events in 11 hours	6	events		Number of events in 11 hours	6	events
Worst case duration in 11hrs	6	hours		Worst case duration in 11hrs	6	hours
11 hour Leq	77.4	dB(A) @ 1m		11 hour Leq	77.4	dB(A) @ 1m
Distance to receiver	20	m		Distance to receiver	20	m
Inside to outside closed windows / doors	-20	dB(A)		Inside to outside closed windows / doors	-20	dB(A)
Distance attenuation	-26.0	dB(A)		Distance attenuation	-26.0	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	31	dB(A)	#	Impact at boundary	31	dB(A)

DAYTIME							
Leq PROPOSED ACTIVITIES IMPACTING:							
R5: Future single-storey dwellings to the south				R6: Future two-storey dwellings to the south			
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78	dB(A) @ 1m	
Single event duration	20	seconds		Single event duration	20	seconds	
Number of events in 11 hours	2	events		Number of events in 11 hours	2	events	
Worst case duration in 11hrs	0.011	hours		Worst case duration in 11hrs	0.011	hours	
11 hour Leq	48.0	dB(A) @ 1m		11 hour Leq	48.0	dB(A) @ 1m	
Distance to receiver	68	m		Distance to receiver	68	m	
Onsite building screening	-9.9	dB(A)		Onsite building screening	-7.3	dB(A)	
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	2	dB(A)	1	Impact at boundary	4	dB(A)	
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70	dB(A) @ 1m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 11 hours	1	events		Number of events in 11 hours	1	events	
Worst case duration in 11hrs	0.25	hours		Worst case duration in 11hrs	0.25	hours	
11 hour Leq	53.6	dB(A) @ 1m		11 hour Leq	53.6	dB(A) @ 1m	
Distance to receiver	68	m		Distance to receiver	68	m	
Onsite building screening	-9.3	dB(A)		Onsite building screening	-6.5	dB(A)	
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	8	dB(A)	6	Impact at boundary	10	dB(A)	
Waste collection	95	dB(A) @ 1m	#	Waste collection	95	dB(A) @ 1m	
Single event duration	120	seconds		Single event duration	120	seconds	
Number of events in 11 hours	1	events		Number of events in 11 hours	1	events	
Worst case duration in 11hrs	0.033	hours		Worst case duration in 11hrs	0.033	hours	
11 hour Leq	69.8	dB(A) @ 1m		11 hour Leq	69.8	dB(A) @ 1m	
Distance to receiver	77	m		Distance to receiver	77	m	
Onsite building screening	0	dB(A)		Barrier screening	0	dB(A)	
Distance attenuation	-37.7	dB(A)		Distance attenuation	-37.7	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	32	dB(A)	#	Impact at boundary	32	dB(A)	
A/C plant	60	dB(A) @ 2m	#	A/C plant	60	dB(A) @ 2m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 11 hours	40	events		Number of events in 11 hours	40	events	
Worst case duration in 11hrs	10	hours		Worst case duration in 11hrs	10	hours	
11 hour Leq	59.6	dB(A) @ 2m		11 hour Leq	59.6	dB(A) @ 2m	
Distance to receiver	45	m		Distance to receiver	45	m	
Barrier screening	0.0	dB(A)		Barrier screening	0.0	dB(A)	
Distance attenuation	-27.0	dB(A)		Distance attenuation	-27.0	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	33	dB(A)	#	Impact at boundary	33	dB(A)	
Children outside at play PEN3D impac	42	dB(A)	#	Children outside at play PEN3D impac	49	dB(A)	
Combined BOUNDARY impact	43	dB(A)		Combined BOUNDARY impact	49	dB(A)	

EVENING					
Leq PROPOSED ACTIVITIES IMPACTING:					
R1: Single & two-storey dwellings to the north across Crossacr			R2: Future dwellings to the immediate east		
Car door closures in carpark PARENTS	78	dB(A) @ 1m	#	Car door closures in carpark PARENTS	78 dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5 seconds
Number of events in 4 hours	148	events		Number of events in 4 hours	148 events
Worst case duration in 4hrs	0.062	hours		Worst case duration in 4hrs	0.062 hours
4 hour Leq	59.9	dB(A) @ 1m		4 hour Leq	59.9 dB(A) @ 1m
Distance to receiver	32.5	m		Distance to receiver	20 m
Barrier screening	0	dB(A)		Barrier screening	-5.179 dB(A)
Distance attenuation	-30.2	dB(A)		Distance attenuation	-26.0 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	30	dB(A)	#	Impact at boundary	29 dB(A)
Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	72 dB(A) @ 1m
Single event duration	11.5	seconds		Single event duration	11.5 seconds
Number of events in 4 hours	74	events		Number of events in 4 hours	74 events
Worst case duration in 4hrs	0.236	hours		Worst case duration in 4hrs	0.236 hours
4 hour Leq	59.7	dB(A) @ 1m		4 hour Leq	59.7 dB(A) @ 1m
Distance to receiver	20	m		Distance to receiver	24 m
Barrier screening	0	dB(A)		Barrier screening	-4.96 dB(A)
Distance attenuation	-26.0	dB(A)		Distance attenuation	-27.6 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	34	dB(A)	#	Impact at boundary	27 dB(A)
Car door closures in carpark STAFF	78	dB(A) @ 1m	#	Car door closures in carpark STAFF	78 dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5 seconds
Number of events in 4 hours	21	events		Number of events in 4 hours	21 events
Worst case duration in 4hrs	0.009	hours		Worst case duration in 4hrs	0.009 hours
4 hour Leq	51.4	dB(A) @ 1m		4 hour Leq	51.4 dB(A) @ 1m
Distance to receiver	22.5	m		Distance to receiver	3 m
Onsite building screening	0	dB(A)		Barrier screening	-12.67 dB(A)
Distance attenuation	-27.0	dB(A)		Distance attenuation	-9.5 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	24	dB(A)	#	Impact at boundary	29 dB(A)
Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	72 dB(A) @ 1m
Single event duration	17.3	seconds		Single event duration	17.3 seconds
Number of events in 4 hours	10.5	events		Number of events in 4 hours	10.5 events
Worst case duration in 4hrs	0.05	hours		Worst case duration in 4hrs	0.05 hours
4 hour Leq	53.0	dB(A) @ 1m		4 hour Leq	53.0 dB(A) @ 1m
Distance to receiver	21	m		Distance to receiver	7 m
Onsite building screening	0	dB(A)		Barrier screening	-10.05 dB(A)
Distance attenuation	-26.4	dB(A)		Distance attenuation	-16.9 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	27	dB(A)	#	Impact at boundary	26 dB(A)
Active pursuits inside (dance / activity wi	80	dB(A) @ 1m	#	Active pursuits inside (dance / activity	80 dB(A) @ 1m
Single event duration	3600	seconds		Single event duration	3600 seconds
Number of events in 4 hours	0.5	events		Number of events in 4 hours	0.5 events
Worst case duration in 4hrs	0.5	hours		Worst case duration in 4hrs	0.5 hours
4 hour Leq	71.0	dB(A) @ 1m		4 hour Leq	71.0 dB(A) @ 1m
Distance to receiver	44	m		Distance to receiver	6 m
Inside to outside open windows / doors	-5	dB(A)		Inside to outside closed windows / doors	-20 dB(A)
Distance attenuation	-32.9	dB(A)		Distance attenuation	-15.6 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	33	dB(A)	#	Impact at boundary	35 dB(A)

EVENING							
Leq PROPOSED ACTIVITIES IMPACTING:							
R1: Single & two-storey dwellings to the north across Crossacr				R2: Future dwellings to the immediate east			
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78	dB(A) @ 1m	
Single event duration	20	seconds		Single event duration	20	seconds	
Number of events in 4 hours	2	events		Number of events in 4 hours	2	events	
Worst case duration in 4hrs	0.011	hours		Worst case duration in 4hrs	0.011	hours	
4 hour Leq	52.4	dB(A) @ 1m		4 hour Leq	52.4	dB(A) @ 1m	
Distance to receiver	21	m		Distance to receiver	34	m	
Onsite building screening	0	dB(A)		Acoustic barrier screening	-5	dB(A)	
Distance attenuation	-26.4	dB(A)		Distance attenuation	-30.6	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	26	dB(A)	#	Impact at boundary	17	dB(A)	
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70	dB(A) @ 1m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 4 hours	1	events		Number of events in 4 hours	1	events	
Worst case duration in 4hrs	0.25	hours		Worst case duration in 4hrs	0.25	hours	
4 hour Leq	58.0	dB(A) @ 1m		4 hour Leq	58.0	dB(A) @ 1m	
Distance to receiver	32.5	m		Distance to receiver	30	m	
Onsite building screening	0	dB(A)		Acoustic barrier screening	-5	dB(A)	
Distance attenuation	-30.2	dB(A)		Distance attenuation	-29.5	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	28	dB(A)	#	Impact at boundary	23	dB(A)	
A/C plant	60	dB(A) @ 2m	#	A/C plant	60	dB(A) @ 2m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 4 hours	2	events		Number of events in 4 hours	2	events	
Worst case duration in 4hrs	0.5	hours		Worst case duration in 4hrs	0.5	hours	
4 hour Leq	51.0	dB(A) @ 2m		4 hour Leq	51.0	dB(A) @ 2m	
Distance to receiver	40	m		Distance to receiver	16	m	
Onsite building screening	0	dB(A)		Acoustic barrier screening	0	dB(A)	
Distance attenuation	-26.0	dB(A)		Distance attenuation	-18.1	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	25	dB(A)	#	Impact at boundary	33	dB(A)	
Combined façade impact	38	dB(A)		Combined façade impact	39	dB(A)	

EVENING							
Leq PROPOSED ACTIVITIES IMPACTING:							
R3: Single & two-storey dwellings to the south across Paddin				R4: Future single-storey dwelling to the immediate west			
Car door closures in carpark PARENTS	78	dB(A) @ 1m	#	Car door closures in carpark PARENTS	78	dB(A) @ 1m	
Single event duration	1.5	seconds		Single event duration	1.5	seconds	
Number of events in 4 hours	148	events		Number of events in 4 hours	148	events	
Worst case duration in 4hrs	0.062	hours		Worst case duration in 4hrs	0.062	hours	
4 hour Leq	59.9	dB(A) @ 1m		4 hour Leq	59.9	dB(A) @ 1m	
Distance to receiver	155.5	m		Distance to receiver	4.2	m	
Onsite building screening	-12	dB(A)		Barrier screening	-9.2	dB(A)	
Distance attenuation	-43.8	dB(A)		Distance attenuation	-12.5	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	4	dB(A)	3	Impact at boundary	38	dB(A)	
Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	
Single event duration	11.5	seconds		Single event duration	11.5	seconds	
Number of events in 4 hours	74	events		Number of events in 4 hours	74	events	
Worst case duration in 4hrs	0.236	hours		Worst case duration in 4hrs	0.236	hours	
4 hour Leq	59.7	dB(A) @ 1m		4 hour Leq	59.7	dB(A) @ 1m	
Distance to receiver	162.5	m		Distance to receiver	8.7	m	
Onsite building screening	-12	dB(A)		Barrier screening	-11.6	dB(A)	
Distance attenuation	-44.2	dB(A)		Distance attenuation	-18.8	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	3	dB(A)	2	Impact at boundary	29	dB(A)	
Car door closures in carpark STAFF	78	dB(A) @ 1m	#	Car door closures in carpark STAFF	78	dB(A) @ 1m	
Single event duration	1.5	seconds		Single event duration	1.5	seconds	
Number of events in 4 hours	21	events		Number of events in 4 hours	21	events	
Worst case duration in 4hrs	0.009	hours		Worst case duration in 4hrs	0.009	hours	
4 hour Leq	51.4	dB(A) @ 1m		4 hour Leq	51.4	dB(A) @ 1m	
Distance to receiver	155.5	m		Distance to receiver	20.5	m	
Onsite building screening	0	dB(A)		Barrier screening	-8.8	dB(A)	
Distance attenuation	-43.8	dB(A)		Distance attenuation	-26.2	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	8	dB(A)	6	Impact at boundary	16	dB(A)	
Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	
Single event duration	17.3	seconds		Single event duration	17.3	seconds	
Number of events in 4 hours	10.5	events		Number of events in 4 hours	10.5	events	
Worst case duration in 4hrs	0.05	hours		Worst case duration in 4hrs	0.05	hours	
4 hour Leq	53.0	dB(A) @ 1m		4 hour Leq	53.0	dB(A) @ 1m	
Distance to receiver	162.5	m		Distance to receiver	16.2	m	
Onsite building screening	-5	dB(A)		Barrier screening	-8.5	dB(A)	
Distance attenuation	-44.2	dB(A)		Distance attenuation	-24.2	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	4	dB(A)	2	Impact at boundary	20	dB(A)	
Active pursuits inside (dance / activity)	80	dB(A) @ 1m	#	Active pursuits inside (dance / activity)	80	dB(A) @ 1m	
Single event duration	3600	seconds		Single event duration	3600	seconds	
Number of events in 4 hours	0.5	events		Number of events in 4 hours	0.5	events	
Worst case duration in 4hrs	0.5	hours		Worst case duration in 4hrs	0.5	hours	
4 hour Leq	71.0	dB(A) @ 1m		4 hour Leq	71.0	dB(A) @ 1m	
Distance to receiver	114	m		Distance to receiver	6	m	
Inside to outside open windows / doors	-5	dB(A)		Inside to outside closed windows / doors	-20	dB(A)	
Distance attenuation	-41.1	dB(A)		Distance attenuation	-15.6	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	25	dB(A)	#	Impact at boundary	35	dB(A)	

EVENING							
Leq PROPOSED ACTIVITIES IMPACTING:							
R3: Single & two-storey dwellings to the south across Paddin				R4: Future single-storey dwelling to the immediate west			
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78	dB(A) @ 1m	
Single event duration	20	seconds		Single event duration	20	seconds	
Number of events in 4 hours	2	events		Number of events in 4 hours	2	events	
Worst case duration in 4hrs	0.011	hours		Worst case duration in 4hrs	0.011	hours	
4 hour Leq	52.4	dB(A) @ 1m		4 hour Leq	52.4	dB(A) @ 1m	
Distance to receiver	163.5	m		Distance to receiver	16.2	m	
Onsite building screening	-12	dB(A)		Barrier screening	-8.0	dB(A)	
Distance attenuation	-44.3	dB(A)		Distance attenuation	-24.2	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	-4	dB(A)	0	Impact at boundary	20	dB(A)	
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70	dB(A) @ 1m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 4 hours	1	events		Number of events in 4 hours	1	events	
Worst case duration in 4hrs	0.25	hours		Worst case duration in 4hrs	0.25	hours	
4 hour Leq	58.0	dB(A) @ 1m		4 hour Leq	58.0	dB(A) @ 1m	
Distance to receiver	155.5	m		Distance to receiver	11.7	m	
Onsite building screening	-12	dB(A)		Barrier screening	-5.0	dB(A)	
Distance attenuation	-43.8	dB(A)		Distance attenuation	-21.4	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	2	dB(A)	2	Impact at boundary	32	dB(A)	
A/C plant	60	dB(A) @ 2m	#	A/C plant	60	dB(A) @ 2m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 4 hours	2	events		Number of events in 4 hours	2	events	
Worst case duration in 4hrs	0.5	hours		Worst case duration in 4hrs	0.5	hours	
4 hour Leq	51.0	dB(A) @ 2m		4 hour Leq	51.0	dB(A) @ 2m	
Distance to receiver	112	m		Distance to receiver	2.7	m	
Barrier screening	0	dB(A)		Acoustic enclosure	-15	dB(A)	
Distance attenuation	-35.0	dB(A)		Distance attenuation	-2.6	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	16	dB(A)	#	Impact at boundary	33	dB(A)	
Combined façade impact	26	dB(A)		Combined façade impact	41	dB(A)	

EVENING					
Leq PROPOSED ACTIVITIES IMPACTING:					
R5: Future single-storey dwellings to the south			R6: Future two-storey dwellings to the south		
Car door closures in carpark PARENTS	78	dB(A) @ 1m	#	Car door closures in carpark PARENTS	78 dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5 seconds
Number of events in 4 hours	148	events		Number of events in 4 hours	148 events
Worst case duration in 4hrs	0.062	hours		Worst case duration in 4hrs	0.062 hours
4 hour Leq	59.9	dB(A) @ 1m		4 hour Leq	59.9 dB(A) @ 1m
Distance to receiver	61	m		Distance to receiver	61 m
Onsite building screening	-15.9	dB(A)		Onsite building screening	-15.4 dB(A)
Distance attenuation	-35.7	dB(A)		Distance attenuation	-35.7 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	8	dB(A)	7	Impact at boundary	9 dB(A)
Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	72 dB(A) @ 1m
Single event duration	11.5	seconds		Single event duration	11.5 seconds
Number of events in 4 hours	74	events		Number of events in 4 hours	74 events
Worst case duration in 4hrs	0.236	hours		Worst case duration in 4hrs	0.236 hours
4 hour Leq	59.7	dB(A) @ 1m		4 hour Leq	59.7 dB(A) @ 1m
Distance to receiver	68	m		Distance to receiver	68 m
Onsite building screening	-13.7	dB(A)		Onsite building screening	-12.9 dB(A)
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	9	dB(A)	9	Impact at boundary	10 dB(A)
Car door closures in carpark STAFF	78	dB(A) @ 1m	#	Car door closures in carpark STAFF	78 dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5 seconds
Number of events in 4 hours	21	events		Number of events in 4 hours	21 events
Worst case duration in 4hrs	0.009	hours		Worst case duration in 4hrs	0.009 hours
4 hour Leq	51.4	dB(A) @ 1m		4 hour Leq	51.4 dB(A) @ 1m
Distance to receiver	61	m		Distance to receiver	61 m
Onsite building screening	-10.3	dB(A)		Onsite building screening	-8.0 dB(A)
Distance attenuation	-35.7	dB(A)		Distance attenuation	-35.7 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	5	dB(A)	3	Impact at boundary	8 dB(A)
Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	72 dB(A) @ 1m
Single event duration	17.3	seconds		Single event duration	17.3 seconds
Number of events in 4 hours	10.5	events		Number of events in 4 hours	10.5 events
Worst case duration in 4hrs	0.05	hours		Worst case duration in 4hrs	0.05 hours
4 hour Leq	53.0	dB(A) @ 1m		4 hour Leq	53.0 dB(A) @ 1m
Distance to receiver	68	m		Distance to receiver	68 m
Onsite building screening	-10.4	dB(A)		Onsite building screening	-7.9 dB(A)
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	6	dB(A)	4	Impact at boundary	8 dB(A)
Active pursuits inside (dance / activity)	80	dB(A) @ 1m	#	Active pursuits inside (dance / activity)	80 dB(A) @ 1m
Single event duration	3600	seconds		Single event duration	3600 seconds
Number of events in 4 hours	0.5	events		Number of events in 4 hours	0.5 events
Worst case duration in 4hrs	0.5	hours		Worst case duration in 4hrs	0.5 hours
4 hour Leq	71.0	dB(A) @ 1m		4 hour Leq	71.0 dB(A) @ 1m
Distance to receiver	20	m		Distance to receiver	20 m
Inside to outside closed windows / doors	-20	dB(A)		Inside to outside closed windows / doors	-20 dB(A)
Distance attenuation	-26.0	dB(A)		Distance attenuation	-26.0 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	25	dB(A)	#	Impact at boundary	25 dB(A)

EVENING							
Leq PROPOSED ACTIVITIES IMPACTING:							
R5: Future single-storey dwellings to the south				R6: Future two-storey dwellings to the south			
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78	dB(A) @ 1m	
Single event duration	20	seconds		Single event duration	20	seconds	
Number of events in 4 hours	2	events		Number of events in 4 hours	2	events	
Worst case duration in 4hrs	0.011	hours		Worst case duration in 4hrs	0.011	hours	
4 hour Leq	52.4	dB(A) @ 1m		4 hour Leq	52.4	dB(A) @ 1m	
Distance to receiver	68	m		Distance to receiver	68	m	
Onsite building screening	-9.9	dB(A)		Onsite building screening	-7.3	dB(A)	
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	6	dB(A)		4 Impact at boundary	9	dB(A)	
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70	dB(A) @ 1m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 4 hours	1	events		Number of events in 4 hours	1	events	
Worst case duration in 4hrs	0.25	hours		Worst case duration in 4hrs	0.25	hours	
4 hour Leq	58.0	dB(A) @ 1m		4 hour Leq	58.0	dB(A) @ 1m	
Distance to receiver	68	m		Distance to receiver	68	m	
Onsite building screening	-9.3	dB(A)		Onsite building screening	-6.5	dB(A)	
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	12	dB(A)	#	Impact at boundary	15	dB(A)	
A/C plant	60	dB(A) @ 2m	#	A/C plant	60	dB(A) @ 2m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 4 hours	2	events		Number of events in 4 hours	2	events	
Worst case duration in 4hrs	0.5	hours		Worst case duration in 4hrs	0.5	hours	
4 hour Leq	51.0	dB(A) @ 2m		4 hour Leq	51.0	dB(A) @ 2m	
Distance to receiver	45	m		Distance to receiver	45	m	
Barrier screening	0	dB(A)		Barrier screening	0	dB(A)	
Distance attenuation	-27.0	dB(A)		Distance attenuation	-27.0	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	24	dB(A)	#	Impact at boundary	24	dB(A)	
Combined façade impact	26	dB(A)		Combined façade impact	26	dB(A)	

NIGHT-TIME					
Leq PROPOSED ACTIVITIES IMPACTING:					
R1: Single & two-storey dwellings to the north across Crossacr			R2: Future dwellings to the immediate east		
Car door closures in carpark PARENTS	78	dB(A) @ 1m	#	Car door closures in carpark PARENTS	78 dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5 seconds
Number of events in 9 hours	148	events		Number of events in 9 hours	148 events
Worst case duration in 9hrs	0.062	hours		Worst case duration in 9hrs	0.062 hours
9 hour Leq	56.4	dB(A) @ 1m		9 hour Leq	56.4 dB(A) @ 1m
Distance to receiver	32.5	m		Distance to receiver	20 m
Barrier screening	0	dB(A)		Barrier screening	-5.179 dB(A)
Distance attenuation	-30.2	dB(A)		Distance attenuation	-26.0 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	26	dB(A)	#	Impact at boundary	25 dB(A)
Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	72 dB(A) @ 1m
Single event duration	11.5	seconds		Single event duration	11.5 seconds
Number of events in 9 hours	74	events		Number of events in 9 hours	74 events
Worst case duration in 9hrs	0.236	hours		Worst case duration in 9hrs	0.236 hours
9 hour Leq	56.2	dB(A) @ 1m		9 hour Leq	56.2 dB(A) @ 1m
Distance to receiver	20	m		Distance to receiver	24 m
Barrier screening	0	dB(A)		Barrier screening	-4.96 dB(A)
Distance attenuation	-26.0	dB(A)		Distance attenuation	-27.6 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	30	dB(A)	#	Impact at boundary	24 dB(A)
Car door closures in carpark STAFF	78	dB(A) @ 1m	#	Car door closures in carpark STAFF	78 dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5 seconds
Number of events in 9 hours	21	events		Number of events in 9 hours	21 events
Worst case duration in 9hrs	0.009	hours		Worst case duration in 9hrs	0.009 hours
9 hour Leq	47.9	dB(A) @ 1m		9 hour Leq	47.9 dB(A) @ 1m
Distance to receiver	22.5	m		Distance to receiver	3 m
Onsite building screening	0	dB(A)		Barrier screening	-12.67 dB(A)
Distance attenuation	-27.0	dB(A)		Distance attenuation	-9.5 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	21	dB(A)	#	Impact at boundary	26 dB(A)
Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	72 dB(A) @ 1m
Single event duration	17.3	seconds		Single event duration	17.3 seconds
Number of events in 9 hours	10.5	events		Number of events in 9 hours	10.5 events
Worst case duration in 9hrs	0.05	hours		Worst case duration in 9hrs	0.05 hours
9 hour Leq	49.5	dB(A) @ 1m		9 hour Leq	49.5 dB(A) @ 1m
Distance to receiver	21	m		Distance to receiver	7 m
Onsite building screening	0	dB(A)		Barrier screening	-10.05 dB(A)
Distance attenuation	-26.4	dB(A)		Distance attenuation	-16.9 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	23	dB(A)	#	Impact at boundary	23 dB(A)
Active pursuits inside (dance / activity with	80	dB(A) @ 1m	#	Active pursuits inside (dance / activity with	80 dB(A) @ 1m
Single event duration	3600	seconds		Single event duration	3600 seconds
Number of events in 9 hours	0.5	events		Number of events in 9 hours	0.5 events
Worst case duration in 9hrs	0.5	hours		Worst case duration in 9hrs	0.5 hours
9 hour Leq	67.4	dB(A) @ 1m		9 hour Leq	67.4 dB(A) @ 1m
Distance to receiver	44	m		Distance to receiver	6 m
Inside to outside open windows / doors	-5	dB(A)		Inside to outside closed windows / doors	-20 dB(A)
Distance attenuation	-32.9	dB(A)		Distance attenuation	-15.6 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	30	dB(A)	#	Impact at boundary	32 dB(A)

NIGHT-TIME					
Leq PROPOSED ACTIVITIES IMPACTING:					
R1: Single & two-storey dwellings to the north across Crossacr			R2: Future dwellings to the immediate east		
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78 dB(A) @ 1m
Single event duration	20	seconds		Single event duration	20 seconds
Number of events in 9 hours	2	events		Number of events in 9 hours	2 events
Worst case duration in 9hrs	0.011	hours		Worst case duration in 9hrs	0.011 hours
9 hour Leq	48.9	dB(A) @ 1m		9 hour Leq	48.9 dB(A) @ 1m
Distance to receiver	21	m		Distance to receiver	34 m
Onsite building screening	0	dB(A)		Onsite building screening	-5 dB(A)
Distance attenuation	-26.4	dB(A)		Distance attenuation	-30.6 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	22	dB(A)	#	Impact at boundary	13 dB(A)
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70 dB(A) @ 1m
Single event duration	900	seconds		Single event duration	900 seconds
Number of events in 9 hours	1	events		Number of events in 9 hours	1 events
Worst case duration in 9hrs	0.25	hours		Worst case duration in 9hrs	0.25 hours
9 hour Leq	54.4	dB(A) @ 1m		9 hour Leq	54.4 dB(A) @ 1m
Distance to receiver	32.5	m		Distance to receiver	30 m
Onsite building screening	-10	dB(A)		Onsite building screening	-5 dB(A)
Distance attenuation	-30.2	dB(A)		Distance attenuation	-29.5 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	14	dB(A)	#	Impact at boundary	20 dB(A)
A/C plant	60	dB(A) @ 2m	#	A/C plant	60 dB(A) @ 2m
Single event duration	900	seconds		Single event duration	900 seconds
Number of events in 9 hours	2	events		Number of events in 9 hours	2 events
Worst case duration in 9hrs	0.5	hours		Worst case duration in 9hrs	0.5 hours
9 hour Leq	47.4	dB(A) @ 2m		9 hour Leq	47.4 dB(A) @ 2m
Distance to receiver	40	m		Distance to receiver	16 m
Onsite building screening	0	dB(A)		Onsite building screening	0 dB(A)
Distance attenuation	-26.0	dB(A)		Distance attenuation	-18.1 dB(A)
Façade reflection	0	dB(A)		Façade reflection	0 dB(A)
Impact at boundary	21	dB(A)	#	Impact at boundary	29 dB(A)
Combined façade impact	35	dB(A)		Combined façade impact	35 dB(A)

NIGHT-TIME					
Leq PROPOSED ACTIVITIES IMPACTING:					
R3: Single & two-storey dwellings to the south across Paddis			R4: Future single-storey dwelling to the immediate west		
Car door closures in carpark PARENTS	78	dB(A) @ 1m	#	Car door closures in carpark PARENTS	78 dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5 seconds
Number of events in 9 hours	148	events		Number of events in 9 hours	148 events
Worst case duration in 9hrs	0.062	hours		Worst case duration in 9hrs	0.062 hours
9 hour Leq	56.4	dB(A) @ 1m		9 hour Leq	56.4 dB(A) @ 1m
Distance to receiver	155.5	m		Distance to receiver	4.2 m
Onsite building screening	-12	dB(A)		Barrier screening	-9.152 dB(A)
Distance attenuation	-43.8	dB(A)		Distance attenuation	-12.5 dB(A)
Facade reflection	0	dB(A)		Facade reflection	0 dB(A)
Impact at boundary	1	dB(A)	1	Impact at boundary	35 dB(A)
Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	72 dB(A) @ 1m
Single event duration	11.5	seconds		Single event duration	11.5 seconds
Number of events in 9 hours	74	events		Number of events in 9 hours	74 events
Worst case duration in 9hrs	0.236	hours		Worst case duration in 9hrs	0.236 hours
9 hour Leq	56.2	dB(A) @ 1m		9 hour Leq	56.2 dB(A) @ 1m
Distance to receiver	162.5	m		Distance to receiver	8.7 m
Onsite building screening	-12	dB(A)		Barrier screening	-11.59 dB(A)
Distance attenuation	-44.2	dB(A)		Distance attenuation	-18.8 dB(A)
Facade reflection	0	dB(A)		Facade reflection	0 dB(A)
Impact at boundary	0	dB(A)	1	Impact at boundary	26 dB(A)
Car door closures in carpark STAFF	78	dB(A) @ 1m	#	Car door closures in carpark STAFF	78 dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5 seconds
Number of events in 9 hours	21	events		Number of events in 9 hours	21 events
Worst case duration in 9hrs	0.009	hours		Worst case duration in 9hrs	0.009 hours
9 hour Leq	47.9	dB(A) @ 1m		9 hour Leq	47.9 dB(A) @ 1m
Distance to receiver	155.5	m		Distance to receiver	20.5 m
Onsite building screening	0	dB(A)		Barrier screening	-8.777 dB(A)
Distance attenuation	-43.8	dB(A)		Distance attenuation	-26.2 dB(A)
Facade reflection	0	dB(A)		Facade reflection	0 dB(A)
Impact at boundary	4	dB(A)	3	Impact at boundary	13 dB(A)
Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	72 dB(A) @ 1m
Single event duration	17.3	seconds		Single event duration	17.3 seconds
Number of events in 9 hours	10.5	events		Number of events in 9 hours	10.5 events
Worst case duration in 9hrs	0.05	hours		Worst case duration in 9hrs	0.05 hours
9 hour Leq	49.5	dB(A) @ 1m		9 hour Leq	49.5 dB(A) @ 1m
Distance to receiver	162.5	m		Distance to receiver	16.2 m
Onsite building screening	-5	dB(A)		Barrier screening	-8.462 dB(A)
Distance attenuation	-44.2	dB(A)		Distance attenuation	-24.2 dB(A)
Facade reflection	0	dB(A)		Facade reflection	0 dB(A)
Impact at boundary	0	dB(A)	1	Impact at boundary	17 dB(A)
Active pursuits inside (dance / activity)	80	dB(A) @ 1m	#	Active pursuits inside (dance / activity)	80 dB(A) @ 1m
Single event duration	3600	seconds		Single event duration	3600 seconds
Number of events in 9 hours	0.5	events		Number of events in 9 hours	0.5 events
Worst case duration in 9hrs	0.5	hours		Worst case duration in 9hrs	0.5 hours
9 hour Leq	67.4	dB(A) @ 1m		9 hour Leq	67.4 dB(A) @ 1m
Distance to receiver	114	m		Distance to receiver	6 m
Inside to outside open windows / doors	-5	dB(A)		Inside to outside closed windows / doors	-20 dB(A)
Distance attenuation	-41.1	dB(A)		Distance attenuation	-15.6 dB(A)
Facade reflection	0	dB(A)		Facade reflection	0 dB(A)
Impact at boundary	21	dB(A)	#	Impact at boundary	32 dB(A)

NIGHT-TIME							
Leq PROPOSED ACTIVITIES IMPACTING:							
R3: Single & two-storey dwellings to the south across Paddi				R4: Future single-storey dwelling to the immediate west			
Truck bypass	78	dB(A) @ 1m	#	Truck bypass	78	dB(A) @ 1m	
Single event duration	20	seconds		Single event duration	20	seconds	
Number of events in 9 hours	2	events		Number of events in 9 hours	2	events	
Worst case duration in 9hrs	0.011	hours		Worst case duration in 9hrs	0.011	hours	
9 hour Leq	48.9	dB(A) @ 1m		9 hour Leq	48.9	dB(A) @ 1m	
Distance to receiver	163.5	m		Distance to receiver	16.2	m	
Onsite building screening	-12	dB(A)		Barrier screening	-7.998	dB(A)	
Distance attenuation	-44.3	dB(A)		Distance attenuation	-24.2	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	-7	dB(A)	0	Impact at boundary	17	dB(A)	
Goods delivery	70	dB(A) @ 1m	#	Goods delivery	70	dB(A) @ 1m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 9 hours	1	events		Number of events in 9 hours	1	events	
Worst case duration in 9hrs	0.25	hours		Worst case duration in 9hrs	0.25	hours	
9 hour Leq	54.4	dB(A) @ 1m		9 hour Leq	54.4	dB(A) @ 1m	
Distance to receiver	155.5	m		Distance to receiver	11.7	m	
Onsite building screening	-12	dB(A)		Barrier screening	-5	dB(A)	
Distance attenuation	-43.8	dB(A)		Distance attenuation	-21.4	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	-1	dB(A)	1	Impact at boundary	28	dB(A)	
A/C plant	60	dB(A) @ 2m	#	A/C plant	60	dB(A) @ 2m	
Single event duration	900	seconds		Single event duration	900	seconds	
Number of events in 9 hours	2	events		Number of events in 9 hours	2	events	
Worst case duration in 9hrs	0.5	hours		Worst case duration in 9hrs	0.5	hours	
9 hour Leq	47.4	dB(A) @ 2m		9 hour Leq	47.4	dB(A) @ 2m	
Distance to receiver	112	m		Distance to receiver	4.5	m	
Barrier screening	0	dB(A)		Acoustic enclosure	-15	dB(A)	
Distance attenuation	-35.0	dB(A)		Distance attenuation	-13.1	dB(A)	
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)	
Impact at boundary	12	dB(A)	#	Impact at boundary	19	dB(A)	
Combined façade impact	22	dB(A)		Combined façade impact	37	dB(A)	

NIGHT-TIME						
Leq PROPOSED ACTIVITIES IMPACTING:						
R5: Future single-storey dwellings to the south			R6: Future two-storey dwellings to the south			
Car door closures in carpark PARENTS	78	dB(A) @ 1m	#	Car door closures in carpark PARENTS	78	dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5	seconds
Number of events in 9 hours	148	events		Number of events in 9 hours	148	events
Worst case duration in 9hrs	0.062	hours		Worst case duration in 9hrs	0.062	hours
9 hour Leq	56.4	dB(A) @ 1m		9 hour Leq	56.4	dB(A) @ 1m
Distance to receiver	61	m		Distance to receiver	61	m
Onsite building screening	-15.9	dB(A)		Onsite building screening	-15.4	dB(A)
Distance attenuation	-35.7	dB(A)		Distance attenuation	-35.7	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	5	dB(A)	3	Impact at boundary	5	dB(A)
Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	72	dB(A) @ 1m
Single event duration	11.5	seconds		Single event duration	11.5	seconds
Number of events in 9 hours	74	events		Number of events in 9 hours	74	events
Worst case duration in 9hrs	0.236	hours		Worst case duration in 9hrs	0.236	hours
9 hour Leq	56.2	dB(A) @ 1m		9 hour Leq	56.2	dB(A) @ 1m
Distance to receiver	68	m		Distance to receiver	68	m
Onsite building screening	-13.7	dB(A)		Onsite building screening	-12.9	dB(A)
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	6	dB(A)	4	Impact at boundary	7	dB(A)
Car door closures in carpark STAFF	78	dB(A) @ 1m	#	Car door closures in carpark STAFF	78	dB(A) @ 1m
Single event duration	1.5	seconds		Single event duration	1.5	seconds
Number of events in 9 hours	21	events		Number of events in 9 hours	21	events
Worst case duration in 9hrs	0.009	hours		Worst case duration in 9hrs	0.009	hours
9 hour Leq	47.9	dB(A) @ 1m		9 hour Leq	47.9	dB(A) @ 1m
Distance to receiver	61	m		Distance to receiver	61	m
Onsite building screening	-10.3	dB(A)		Onsite building screening	-8.0	dB(A)
Distance attenuation	-35.7	dB(A)		Distance attenuation	-35.7	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	2	dB(A)	2	Impact at boundary	4	dB(A)
Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	72	dB(A) @ 1m
Single event duration	17.3	seconds		Single event duration	17.3	seconds
Number of events in 9 hours	10.5	events		Number of events in 9 hours	10.5	events
Worst case duration in 9hrs	0.05	hours		Worst case duration in 9hrs	0.05	hours
9 hour Leq	49.5	dB(A) @ 1m		9 hour Leq	49.5	dB(A) @ 1m
Distance to receiver	68	m		Distance to receiver	68	m
Onsite building screening	-10.4	dB(A)		Onsite building screening	-7.9	dB(A)
Distance attenuation	-36.7	dB(A)		Distance attenuation	-36.7	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	2	dB(A)	2	Impact at boundary	5	dB(A)
Active pursuits inside (dance / activity)	80	dB(A) @ 1m	#	Active pursuits inside (dance / activity)	80	dB(A) @ 1m
Single event duration	3600	seconds		Single event duration	3600	seconds
Number of events in 9 hours	0.5	events		Number of events in 9 hours	0.5	events
Worst case duration in 9hrs	0.5	hours		Worst case duration in 9hrs	0.5	hours
9 hour Leq	67.4	dB(A) @ 1m		9 hour Leq	67.4	dB(A) @ 1m
Distance to receiver	20	m		Distance to receiver	20	m
Inside to outside closed windows / doors	-20	dB(A)		Inside to outside closed windows / doors	-20	dB(A)
Distance attenuation	-26.0	dB(A)		Distance attenuation	-26.0	dB(A)
Façade reflection	0	dB(A)		Façade reflection	0	dB(A)
Impact at boundary	21	dB(A)	#	Impact at boundary	21	dB(A)

NIGHT-TIME			
Leq PROPOSED ACTIVITIES IMPACTING:			
R5: Future single-storey dwellings to the south		R6: Future two-storey dwellings to the south	
Truck bypass	78 dB(A) @ 1m	#	Truck bypass
Single event duration	20 seconds		Single event duration
Number of events in 9 hours	2 events		Number of events in 9 hours
Worst case duration in 9hrs	0.011 hours		Worst case duration in 9hrs
9 hour Leq	48.9 dB(A) @ 1m		9 hour Leq
Distance to receiver	68 m		Distance to receiver
Onsite building screening	-9.9 dB(A)		Onsite building screening
Distance attenuation	-36.7 dB(A)		Distance attenuation
Façade reflection	0 dB(A)		Façade reflection
Impact at boundary	2 dB(A)	2	Impact at boundary
Goods delivery	70 dB(A) @ 1m	#	Goods delivery
Single event duration	900 seconds		Single event duration
Number of events in 9 hours	1 events		Number of events in 9 hours
Worst case duration in 9hrs	0.25 hours		Worst case duration in 9hrs
9 hour Leq	54.4 dB(A) @ 1m		9 hour Leq
Distance to receiver	68 m		Distance to receiver
Onsite building screening	-9.3 dB(A)		Onsite building screening
Distance attenuation	-36.7 dB(A)		Distance attenuation
Façade reflection	0 dB(A)		Façade reflection
Impact at boundary	8 dB(A)	7	Impact at boundary
A/C plant	60 dB(A) @ 2m	#	A/C plant
Single event duration	900 seconds		Single event duration
Number of events in 9 hours	2 events		Number of events in 9 hours
Worst case duration in 9hrs	0.5 hours		Worst case duration in 9hrs
9 hour Leq	47.4 dB(A) @ 2m		9 hour Leq
Distance to receiver	45 m		Distance to receiver
Barrier screening	0 dB(A)		Barrier screening
Distance attenuation	-27.0 dB(A)		Distance attenuation
Façade reflection	0 dB(A)		Façade reflection
Impact at boundary	20 dB(A)	#	Impact at boundary
Combined façade impact	23 dB(A)		Combined façade impact

NIGHT-TIME								
Lmax PROPOSED ACTIVITIES IMPACTING:								
R1: Single & two-storey dwellings to the north across Crossacres St				R2: Future dwellings to the immediate east				
Car door closures in carpark PARENTS	79	85	dB(A) @ 1m	#	Car door closures in carpark PARENTS	79	85	dB(A) @ 1m
Lmax	79.0	85.0	dB(A) @ 1m		Lmax	79.0	85.0	dB(A) @ 1m
Distance to receiver	32.5	32.5	m		Distance to receiver	20	20	m
Barrier screening	0	0	dB(A)		Barrier screening	-5.179	-5.179	dB(A)
Distance attenuation	-30.2	-30.2	dB(A)		Distance attenuation	-26.0	-26.0	dB(A)
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)
Impact at boundary	49	55	dB(A)	#	Impact at boundary	48	54	dB(A)
Car bypass @ 5km/hr PARENTS	73	75	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	73	75	dB(A) @ 1m
Lmax	73.0	75.0	dB(A) @ 1m		Lmax	73.0	75.0	dB(A) @ 1m
Distance to receiver	20	20	m		Distance to receiver	24	24	m
Barrier screening	0	0	dB(A)		Barrier screening	-4.96	-4.96	dB(A)
Distance attenuation	-26.0	-26.0	dB(A)		Distance attenuation	-27.6	-27.6	dB(A)
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)
Impact at boundary	47	49	dB(A)	#	Impact at boundary	40	42	dB(A)
Car door closures in carpark STAFF	79	85	dB(A) @ 1m	#	Car door closures in carpark STAFF	79	85	dB(A) @ 1m
Lmax	79.0	85.0	dB(A) @ 1m		Lmax	79.0	85.0	dB(A) @ 1m
Distance to receiver	22.5	22.5	m		Distance to receiver	3	3	m
Onsite building screening	0	0	dB(A)		Barrier screening	-12.67	-12.67	dB(A)
Distance attenuation	-27.0	-27.0	dB(A)		Distance attenuation	-9.5	-9.5	dB(A)
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)
Impact at boundary	52	58	dB(A)	#	Impact at boundary	57	63	dB(A)
Car bypass @ 5km/hr STAFF	73	75	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	73	75	dB(A) @ 1m
Lmax	73.0	75.0	dB(A) @ 1m		Lmax	73.0	75.0	dB(A) @ 1m
Distance to receiver	21	21	m		Distance to receiver	7	7	m
Onsite building screening	0	0	dB(A)		Barrier screening	-10.05	-10.05	dB(A)
Distance attenuation	-26.4	-26.4	dB(A)		Distance attenuation	-16.9	-16.9	dB(A)
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)
Impact at boundary	47	49	dB(A)	#	Impact at boundary	46	48	dB(A)
Active pursuits inside (dance / activity with music)	82	87	dB(A) @ 1m	#	Active pursuits inside (dance / activity with music)	82	87	dB(A) @ 1m
Lmax	82.0	87.0	dB(A) @ 1m		Lmax	82.0	87.0	dB(A) @ 1m
Distance to receiver	44	44	m		Distance to receiver	6	6	m
Inside to outside open windows / doors	-5	-5	dB(A)		Inside to outside closed windows / doors	-20	-20	dB(A)
Distance attenuation	-32.9	-32.9	dB(A)		Distance attenuation	-15.6	-15.6	dB(A)
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)
Impact at boundary	44	49	dB(A)	#	Impact at boundary	46	51	dB(A)
Truck bypass	80	84	dB(A) @ 1m	#	Truck bypass	80	84	dB(A) @ 1m
Lmax	80.0	84.0	dB(A) @ 1m		Lmax	80.0	84.0	dB(A) @ 1m
Distance to receiver	21	21	m		Distance to receiver	34	34	m
Onsite building screening	0	0	dB(A)		Onsite building screening	-5	-5	dB(A)
Distance attenuation	-26.4	-26.4	dB(A)		Distance attenuation	-30.6	-30.6	dB(A)
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)
Impact at boundary	54	58	dB(A)	#	Impact at boundary	44	48	dB(A)
Goods delivery	72	76	dB(A) @ 1m	#	Goods delivery	72	76	dB(A) @ 1m
Lmax	72.0	76.0	dB(A) @ 1m		Lmax	72.0	76.0	dB(A) @ 1m
Distance to receiver	32.5	32.5	m		Distance to receiver	30	30	m
Onsite building screening	-10	-10	dB(A)		Onsite building screening	-5	-5	dB(A)
Distance attenuation	-30.2	-30.2	dB(A)		Distance attenuation	-29.5	-29.5	dB(A)
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)
Impact at boundary	32	36	dB(A)	#	Impact at boundary	37	41	dB(A)
A/C plant	61	62	dB(A) @ 2m	#	A/C plant	61	62	dB(A) @ 2m
Lmax	61.0	62.0	dB(A) @ 1m		Lmax	61.0	62.0	dB(A) @ 1m
Distance to receiver	40	40	m		Distance to receiver	16	16	m
Onsite building screening	0	0	dB(A)		Onsite building screening	0	0	dB(A)
Distance attenuation	-26.0	-26.0	dB(A)		Distance attenuation	-18.1	-18.1	dB(A)
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)
Impact at boundary	35	36	dB(A)	#	Impact at boundary	43	44	dB(A)

NIGHT-TIME									
Lmax PROPOSED ACTIVITIES IMPACTING:									
R3: Single & two-storey dwellings to the south across Paddington St					R4: Future single-storey dwelling to the immediate west				
Car door closures in carpark PARENTS	79	85	dB(A) @ 1m	#	Car door closures in carpark PARENTS	79	85	dB(A) @ 1m	
Lmax	79.0	85.0	dB(A) @ 1m		Lmax	79.0	85.0	dB(A) @ 1m	
Distance to receiver	155.5	155.5	m		Distance to receiver	4.2	4.2	m	
Onsite building screening	-12	-12	dB(A)		Barrier screening	-9.152	-9.152	dB(A)	
Distance attenuation	-43.8	-43.8	dB(A)		Distance attenuation	-12.5	-12.5	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	23	29	dB(A)	#	Impact at boundary	57	63	dB(A)	
Car bypass @ 5km/hr PARENTS	73	75	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	73	75	dB(A) @ 1m	
Lmax	73.0	75.0	dB(A) @ 1m		Lmax	73.0	75.0	dB(A) @ 1m	
Distance to receiver	162.5	162.5	m		Distance to receiver	8.7	8.7	m	
Onsite building screening	-12	-12	dB(A)		Barrier screening	-11.59	-11.59	dB(A)	
Distance attenuation	-44.2	-44.2	dB(A)		Distance attenuation	-18.8	-18.8	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	17	19	dB(A)	#	Impact at boundary	43	45	dB(A)	
Car door closures in carpark STAFF	79	85	dB(A) @ 1m	#	Car door closures in carpark STAFF	79	85	dB(A) @ 1m	
Lmax	79.0	85.0	dB(A) @ 1m		Lmax	79.0	85.0	dB(A) @ 1m	
Distance to receiver	155.5	155.5	m		Distance to receiver	20.5	20.5	m	
Onsite building screening	0	0	dB(A)		Barrier screening	-8.777	-8.777	dB(A)	
Distance attenuation	-43.8	-43.8	dB(A)		Distance attenuation	-26.2	-26.2	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	35	41	dB(A)	#	Impact at boundary	44	50	dB(A)	
Car bypass @ 5km/hr STAFF	73	75	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	73	75	dB(A) @ 1m	
Lmax	73.0	75.0	dB(A) @ 1m		Lmax	73.0	75.0	dB(A) @ 1m	
Distance to receiver	162.5	162.5	m		Distance to receiver	16.2	16.2	m	
Onsite building screening	-5	-5	dB(A)		Barrier screening	-8.462	-8.462	dB(A)	
Distance attenuation	-44.2	-44.2	dB(A)		Distance attenuation	-24.2	-24.2	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	24	26	dB(A)	#	Impact at boundary	40	42	dB(A)	
Active pursuits inside (dance / activity)	82	87	dB(A) @ 1m	#	Active pursuits inside (dance / activity)	82	87	dB(A) @ 1m	
Lmax	82.0	87.0	dB(A) @ 1m		Lmax	82.0	87.0	dB(A) @ 1m	
Distance to receiver	114	114	m		Distance to receiver	6	6	m	
Inside to outside open windows / doors	-5	-5	dB(A)		Inside to outside closed windows / doors	-20	-20	dB(A)	
Distance attenuation	-41.1	-41.1	dB(A)		Distance attenuation	-15.6	-15.6	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	36	41	dB(A)	#	Impact at boundary	46	51	dB(A)	
Truck bypass	80	84	dB(A) @ 1m	#	Truck bypass	80	84	dB(A) @ 1m	
Lmax	80.0	84.0	dB(A) @ 1m		Lmax	80.0	84.0	dB(A) @ 1m	
Distance to receiver	163.5	163.5	m		Distance to receiver	16.2	16.2	m	
Onsite building screening	-12	-12	dB(A)		Barrier screening	-7.998	-7.998	dB(A)	
Distance attenuation	-44.3	-44.3	dB(A)		Distance attenuation	-24.2	-24.2	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	24	28	dB(A)	#	Impact at boundary	48	52	dB(A)	
Goods delivery	72	76	dB(A) @ 1m	#	Goods delivery	72	76	dB(A) @ 1m	
Lmax	72.0	76.0	dB(A) @ 1m		Lmax	72.0	76.0	dB(A) @ 1m	
Distance to receiver	155.5	155.5	m		Distance to receiver	11.7	11.7	m	
Onsite building screening	-12	-12	dB(A)		Barrier screening	-5	-5	dB(A)	
Distance attenuation	-43.8	-43.8	dB(A)		Distance attenuation	-21.4	-21.4	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	16	20	dB(A)	#	Impact at boundary	46	50	dB(A)	
A/C plant	61	62	dB(A) @ 2m	#	A/C plant	61	62	dB(A) @ 2m	
Lmax	61.0	62.0	dB(A) @ 1m		Lmax	61.0	62.0	dB(A) @ 1m	
Distance to receiver	112	112	m		Distance to receiver	4.5	4.5	m	
Barrier screening	-8	-8	dB(A)		Acoustic enclosure	-15	-15	dB(A)	
Distance attenuation	-35.0	-35.0	dB(A)		Distance attenuation	-7.0	-7.0	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	18	19	dB(A)	#	Impact at boundary	39	40	dB(A)	

NIGHT-TIME									
Lmax PROPOSED ACTIVITIES IMPACTING:									
R5: Future single-storey dwellings to the south					R6: Future two-storey dwellings to the south				
Car door closures in carpark PARENTS	79	85	dB(A) @ 1m	#	Car door closures in carpark PARENTS	79	85	dB(A) @ 1m	
Lmax	79.0	85.0	dB(A) @ 1m		Lmax	79.0	85.0	dB(A) @ 1m	
Distance to receiver	61	61	m		Distance to receiver	61	61	m	
Onsite building screening	-15.9	-15.9	dB(A)		Onsite building screening	-15.4	-15.4	dB(A)	
Distance attenuation	-35.7	-35.7	dB(A)		Distance attenuation	-35.7	-35.7	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	27	33	dB(A)	#	Impact at boundary	28	34	dB(A)	
Car bypass @ 5km/hr PARENTS	73	75	dB(A) @ 1m	#	Car bypass @ 5km/hr PARENTS	73	75	dB(A) @ 1m	
Lmax	73.0	75.0	dB(A) @ 1m		Lmax	73.0	75.0	dB(A) @ 1m	
Distance to receiver	68	68	m		Distance to receiver	68	68	m	
Onsite building screening	-13.7	-13.7	dB(A)		Onsite building screening	-12.9	-12.9	dB(A)	
Distance attenuation	-36.7	-36.7	dB(A)		Distance attenuation	-36.7	-36.7	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	23	25	dB(A)	#	Impact at boundary	23	25	dB(A)	
Car door closures in carpark STAFF	79	85	dB(A) @ 1m	#	Car door closures in carpark STAFF	79	85	dB(A) @ 1m	
Lmax	79.0	85.0	dB(A) @ 1m		Lmax	79.0	85.0	dB(A) @ 1m	
Distance to receiver	61	61	m		Distance to receiver	61	61	m	
Onsite building screening	-10.3	-10.3	dB(A)		Onsite building screening	-8.0	-8.0	dB(A)	
Distance attenuation	-35.7	-35.7	dB(A)		Distance attenuation	-35.7	-35.7	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	33	39	dB(A)	#	Impact at boundary	35	41	dB(A)	
Car bypass @ 5km/hr STAFF	73	75	dB(A) @ 1m	#	Car bypass @ 5km/hr STAFF	73	75	dB(A) @ 1m	
Lmax	73.0	75.0	dB(A) @ 1m		Lmax	73.0	75.0	dB(A) @ 1m	
Distance to receiver	68	68	m		Distance to receiver	68	68	m	
Onsite building screening	-10.4	-10.4	dB(A)		Onsite building screening	-7.9	-7.9	dB(A)	
Distance attenuation	-36.7	-36.7	dB(A)		Distance attenuation	-36.7	-36.7	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	26	28	dB(A)	#	Impact at boundary	28	30	dB(A)	
Active pursuits inside (dance / activity)	82	87	dB(A) @ 1m	#	Active pursuits inside (dance / activity)	82	87	dB(A) @ 1m	
Lmax	82.0	87.0	dB(A) @ 1m		Lmax	82.0	87.0	dB(A) @ 1m	
Distance to receiver	20	20	m		Distance to receiver	20	20	m	
Inside to outside closed windows / doors	-20	-20	dB(A)		Inside to outside closed windows / doors	-20	-20	dB(A)	
Distance attenuation	-26.0	-26.0	dB(A)		Distance attenuation	-26.0	-26.0	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	36	41	dB(A)	#	Impact at boundary	36	41	dB(A)	
Truck bypass	80	84	dB(A) @ 1m	#	Truck bypass	80	84	dB(A) @ 1m	
Lmax	80.0	84.0	dB(A) @ 1m		Lmax	80.0	84.0	dB(A) @ 1m	
Distance to receiver	68	68	m		Distance to receiver	68	68	m	
Onsite building screening	-9.9	-9.9	dB(A)		Onsite building screening	-7.3	-7.3	dB(A)	
Distance attenuation	-36.7	-36.7	dB(A)		Distance attenuation	-36.7	-36.7	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	33	37	dB(A)	#	Impact at boundary	36	40	dB(A)	
Goods delivery	72	76	dB(A) @ 1m	#	Goods delivery	72	76	dB(A) @ 1m	
Lmax	72.0	76.0	dB(A) @ 1m		Lmax	72.0	76.0	dB(A) @ 1m	
Distance to receiver	68	68	m		Distance to receiver	68	68	m	
Onsite building screening	-9.3	-9.3	dB(A)		Onsite building screening	-6.5	-6.5	dB(A)	
Distance attenuation	-36.7	-36.7	dB(A)		Distance attenuation	-36.7	-36.7	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	26	30	dB(A)	#	Impact at boundary	29	33	dB(A)	
A/C plant	61	62	dB(A) @ 2m	#	A/C plant	61	62	dB(A) @ 2m	
Lmax	61.0	62.0	dB(A) @ 1m		Lmax	61.0	62.0	dB(A) @ 1m	
Distance to receiver	45	45	m		Distance to receiver	45	45	m	
Barrier screening	0	0	dB(A)		Barrier screening	0	0	dB(A)	
Distance attenuation	-27.0	-27.0	dB(A)		Distance attenuation	-27.0	-27.0	dB(A)	
Façade reflection	0	0	dB(A)		Façade reflection	0	0	dB(A)	
Impact at boundary	34	35	dB(A)	#	Impact at boundary	34	35	dB(A)	