

Commercial 1 (Unit 27)

+612 9587 9702

*DELIVERING SOUND ADVICE*

637-645 Forest Road

office@koikasacoustics.com

Bexley NSW 2207

www.koikasacoustics.com

ABN: 12 058 524 771

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## **ACOUSTICAL REPORT**

### **PROPOSED RESIDENTIAL DEVELOPMENT**

### **74 FERN AVENUE, BRADBURY NSW**

**Date:** Monday, 22 February 2021

**File Reference:** 4552R20210203mj74FernAvenueBradbury\_DAV3.docx



**ACOUSTICAL REPORT**  
**PROPOSED RESIDENTIAL DEVELOPMENT**  
**74 FERN AVENUE, BRADBURY NSW**

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## 1.0 INTRODUCTION

Koikas Acoustics Pty Ltd was engaged by Capital Developments to prepare a noise impact assessment for the proposed development at 74 Fern Avenue, Bradbury NSW seeking approval for the construction of a new townhouse and apartment residential development.

For the DA proposal, the acoustic adequacy of the proposed design must be assessed in terms of standard planning guidelines issued by Council in their Local Environment Plan (LEP) and Development Control Plan (DCP), and also in terms of other standard planning guidelines related to common sources of noise.

As per Council guidelines and other standard planning instruments, Koikas Acoustics has determined a traffic noise associated with Hoxton Park Road and its impact on future occupants of the development require an assessment at the current DA stage.

This report presents the results and findings of an acoustic assessment for the subject proposal. In-principle acoustic treatments and noise control recommendations are included (where required) so that the premises may operate in compliance with the nominated acoustic planning levels.



## 2.0 THE PROPOSAL

The development is proposed to occupy the site at 74 Fern Avenue, Bradbury NSW. The application is for multiple new townhouses and apartment residential developments. The current development design can be seen in architectural drawings as prepared by Integrated Design Group, detailed in Table 1. All calculations and noise modelled scenarios conducted for this assessment are referenced to these architectural drawings.

<b>Table 1. Design drawings used in the assessment</b>			
<b>Drawing Title</b>	<b>Drawing No.</b>	<b>Revision</b>	<b>Date</b>
Site/Roof Plan	0101	Q	17/12/20
Ground Floor Plan	0102	Q	17/12/20
AD1, 2, 3	AD100	H	17/12/20
AD1 Ground Floor Plan	AD101	L	17/12/20
AD1 Elevations	AD102	K	17/12/20
AD2 Ground Floor Plan	AD103	L	17/12/20
AD2 Elevations	AD104	K	17/12/20
AD2 Elevations	AD105	H	17/12/20
AD3 Ground Floor Plan & Elevations	AD106	K	17/12/20
AD3 Elevations	AD107	H	17/12/20
AD1 & AD2 Typical Plan And Section	AD108	K	17/12/20
AD3 Typical Plan And Section	AD109	K	17/12/20
AD4 General Arrangement	AD113	D	17/12/20
AD5 General Arrangement	AD114	D	17/12/20
AD6 General Arrangement	AD115	D	17/12/20
APT 1, 2	APT100	H	17/12/20
APT 1 Ground & Typical Floor Plan	APT102	L	17/12/20
APT 1 Elevations	APT104	K	17/12/20
Apartment Section	APT107	K	17/12/20
APT 2 Ground Floor Plan	APT110	H	17/12/20
APT2 General Arrangement	APT111	J	17/12/20
APT2 Elevations	APT112	K	17/12/20
APT2 Elevations	APT113	H	17/12/20
Notes	<ol style="list-style-type: none"> <li>Detailed above are the plans and drawings available at the time of assessment. Where design changes are made without the prior knowledge of Koikas Acoustics, the assessment results and conclusions published within this report may be incorrect.</li> </ol>		



The development location is situated in a primarily suburban residential area. The subject site is classified as R1 ‘ Low-Density Residential’ as per relevant land zoning maps included in the Campbelltown City Council Local Environment Plan 2012. Surrounding properties are also predominantly residential in classification, also located within R2 ‘ Low-Density Residential’ zoning.

The subject site and surrounding properties are identified on the aerial photograph included as Figure 1.

Prevailing ambient noise conditions on-site and in the local area are generally the result of typical environmental noise such as distant traffic and localised domestic noise sources.



Figure 1. Aerial photo of the subject site, monitoring locations and surrounding area (image source – Sixmaps)

### 3.0 AMBIENT NOISE SURVEY

Existing external ambient noise levels were measured by installing a sound level meter data logger at the boundary of 74 Fern Avenue that fronts Appin Road. A Type 1 precision Noise Sentry noise logger was used for the survey. The installed location at the boundary meant that the microphone was approximately 1.5-2 metres above the ground level. This meter was placed to measure existing background and traffic noise levels that would be common for the proposed façades fronting Appin Road.

The instrument was set-up to measure A-frequency and 'Fast' time-weighted noise levels. Noise level data was stored within the logger memory at 15-minutes intervals for a period of about one week between Thursday 28<sup>th</sup> January and Wednesday 3<sup>rd</sup> February 2021.

Calibration readings were taken before and after each survey with a NATA calibrated and certified Larson Davis CAL200 precision acoustic calibrator. No system drift was observed for this meter.

BOM weather records for the nearest available weather station indicate that inclement weather conditions did adversely impact on the noise survey. Noise data affected by inclement weather has been removed.

Table 2. Summary of noise logger results [dB]				
Location	Period, T <sup>1</sup>	Ambient noise level LAeq	Rating background level LA90	Traffic noise level LAeq Period
74 Fern Avenue	Day	62	49	62
	Evening	61	46	
	Night	59	38	59
Notes	1.	The NSW EPA NPI refers to Night as 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and public holidays.		
	2.	Refer to <b>Appendix A</b> for unattended noise logger graph.		

An attended noise survey was conducted on Wednesday 27<sup>th</sup> January 2021 to quantify the spectral characteristic of the road traffic noise. Each survey was conducted with an NTi XL2 sound level meter set to A-frequency weighting and fast time response. Surveys were conducted for durations deemed sufficient to represent the underlying ambient and background noise environment without the influence of extraneous noise or noise from the subject development.



## 4.0 ACOUSTIC REQUIREMENTS

### 4.1 CAMPBELLTOWN CITY COUNCIL – 389/2017/DA-RA

2. Pursuant to clause 101(2)(c) of the Infrastructure SEPP, an acoustic report is required to be submitted with the application.

### 4.2 ROAD TRAFFIC NOISE – ISEPP/DOP

In accordance with Clause 102 of the State Environmental Planning Policy (Infrastructure) 2007, hereafter referred to as ISEPP, development for the purpose of residential, place of public worship, hospital, educational facility or child care centre use must be designed to consider the indoor noise amenity of future occupants.

Where the development is for residential use, and the site is adjacent to a classified road that carries an annual daily traffic volume of more than 20,000 vehicles, and that the consent authority considers is likely to be impacted by road noise or vibration, maximum allowable indoor traffic noise levels are defined as:

- LAeq 35dB in any bedroom in the building between the hours of 10pm and 7am.
- LAeq 40dB elsewhere in the building (excluding a garage, kitchen bathroom or hallway) at any other time.

ISEPP requires that before any application is determined under which this clause applies, consideration must be given to guidelines that are issued by the Director-General. It is the understanding of Koikas Acoustics that the Director-General has issued guidelines relating to the determination of suitable indoor noise levels for development with open windows allowing natural ventilation of indoor areas. The Director-General has recommended under this condition (open windows) that indoor noise levels should not exceed:

- LAeq 45dB in any bedroom in the building between the hours of 10pm and 7am.
- LAeq 50dB elsewhere in the building (excluding a garage, kitchen bathroom or hallway) at any other time.

The NSW Department of Planning (DoP) supports the design targets of ISEPP and the Director-General guidelines within their road/rail noise guidelines (*Development near rail corridors and busy roads, Interim Guideline 2008*). The DoP guideline further defines the duration under which noise levels are assessed, being LAeq 9 hours (10pm to 7am) for bedrooms and LAeq 15 hours (7am to 10pm) elsewhere.



A summary of the applied traffic noise planning levels is included in Table 3.

<b>Table 3. Design criteria for internal spaces</b>			
<b>Description</b>	<b>Area</b>	<b>Period</b>	<b>L<sub>Aeq</sub> (Period) [dB]</b>
Windows and doors closed	Bedrooms	10pm to 7am	35
	Living areas	at any time	40
Windows & doors open (natural ventilation)	Bedrooms	10pm to 7am	45
	Living areas	at any time	50
Notes 1.	Assessment period for bedrooms taken as the 9 hours period between 10pm and 7am. Assessment period for living areas taken as the 15 hours period between 7am and 10pm.		



## 5.0 EXTERNAL NOISE INTRUSION ASSESSMENT

Calculating the level of traffic noise that is transmitted through a façade and into a room is dependent upon the external façade noise level, the sound insulation performance of the building façade (inclusive of all building components), and the level of acoustic absorption that is present within the subject room.

In accordance with *AS3671-1989 Acoustics – Road traffic noise intrusion*, the prediction of façade traffic noise levels considers a forecast increase in traffic volumes over a 10 year planning period. In the absence of RMS traffic volume data for the specific road corridor, Koikas Acoustics has adopted a forecast 2% p.a. increase in traffic volumes over a 10 year period.

### 5.1 FAÇADE TRAFFIC NOISE LEVELS

A calibrated CadnaA noise model was used to predict external façade traffic noise levels. Maximum levels are predicted to be  $L_{Aeq\ 15\ hour}\ 62\ dB$  /  $L_{Aeq\ 9\ hour}\ 59\ dB$  along the western façades of the townhouses and apartments fronting Appin Road (AD4, AD3, AD2 and APT2). Reduced noise exposure along the sides of the buildings will result from the limited field of view of traffic and partial noise shielding from other buildings in the development. The least noise-exposed façade of the development is at the rear of the proposed buildings where a high level of noise shielding is generated by the subject building and surrounding buildings (APT1, APT2, AD1, AD5 and AD6).

### 5.2 RECOMMENDED CONSTRUCTION MATERIALS

Indoor noise levels were calculated to determine the acoustic performance of the proposed building facade. The noise modelling and subsequent analysis conclude the following:



## 5.2.1 External walls

Table 4. External walls recommendations	
Recommended construction	Area to which the recommendation applies
<ul style="list-style-type: none"> <li>• 18mm HardiePanel compressed sheet</li> <li>• One layer of 6mm compressed fibre cement</li> <li>• 90mm timber stud</li> <li>• 75mm Earthwool glasswool insulation (14kg/m<sup>3</sup>)</li> <li>• One layer of 13mm standard plasterboard</li> </ul>	All external FC cladding walls, for the 1 <sup>st</sup> -floor bedrooms, fronting Appin Road, in development AD4.
<ul style="list-style-type: none"> <li>• 18mm HardiePanel compressed sheet</li> <li>• 90mm timber stud</li> <li>• 75mm Earthwool glasswool insulation (14kg/m<sup>3</sup>)</li> <li>• One layer of 13mm standard plasterboard</li> </ul>	All other external FC cladding walls as identified on the architectural elevations for development buildings AD2, AD3, AD4 and APT2
<ul style="list-style-type: none"> <li>• 110mm brick</li> <li>• 40mm cavity</li> <li>• 90mm timber stud</li> <li>• 75mm Earthwool glasswool insulation (14kg/m<sup>3</sup>)</li> <li>• One layer of 10mm standard plasterboard</li> </ul>	All external brick veneer walls as identified on the architectural elevations, across development buildings AD2, AD3, AD4 and APT2

## 5.2.2 Ceiling/roof

Table 5. Ceiling/roof recommendations	
Recommended construction	Area to which the recommendation applies
<ul style="list-style-type: none"> <li>• 0.6mm metal roofing</li> <li>• One layer of 9mm compressed fibre cement</li> <li>• Pitched timber frame</li> <li>• 150mm ceiling insulation</li> <li>• One layer of 13mm Fyrchek plasterboard</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• 0.6mm metal roofing</li> <li>• One layer of 6mm compressed fibre cement</li> <li>• Pitched timber frame</li> <li>• 150mm ceiling insulation</li> <li>• Two layers of 13mm standard plasterboard</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• 0.6mm metal roofing</li> <li>• One layer of 18mm plywood</li> <li>• Pitched timber frame</li> <li>• 150mm ceiling insulation</li> <li>• Two layers of 13mm standard plasterboard</li> </ul>	<p>All external roofing areas across developments</p> <ul style="list-style-type: none"> <li>- AD2 (Units 5, 6, 7 and 8)</li> <li>- AD3 (Entire Roof)</li> <li>- AD4 (Entire Roof)</li> <li>- APT2 (Units 6, 7, 8 and 9)</li> </ul>
<ul style="list-style-type: none"> <li>• 0.6mm metal roofing</li> <li>• Pitched timber frame</li> <li>• 150mm ceiling insulation</li> <li>• One layer of 13mm standard plasterboard</li> </ul>	All other external roofing areas across developments AD2 and APT2



### 5.2.3 Glass windows and doors

Recommendations for glass windows and doors are included in Table 6.

<b>Table 6. Glazing recommendations</b>		
<b>Room</b>	<b>Glass recommendation</b>	<b>Seals</b>
AD4 Ground Floor Bedrooms	6.38mm laminated glass	Q-lon and fin
AD4 1 <sup>st</sup> Floor Bedrooms	6.38mm laminated + 46mm air gap + 8.38mm laminated glass	Q-lon and fin
AD3 Living Areas	6.38mm laminated glass	Q-lon and fin
AD3 Bedroom 1	6.38mm laminated glass	Q-lon and fin
AD3 Bedroom 2	6.38mm laminated glass	Q-lon and fin
AD3 Bedroom 3	10.38mm laminated glass	Q-lon and fin
AD2 Bedroom 1	6.38mm laminated glass	Q-lon and fin
AD2 Bedroom 2	6.38mm laminated glass	Q-lon and fin
AD2 Kitchen/Dining/Living	6.38mm laminated glass	Q-lon and fin
AD2 Master Bedroom	6.38mm laminated glass	Q-lon and fin
All Windows in AD1	6.38mm laminated glass	Q-lon and fin
All Windows APT1	6.38mm laminated glass	Q-lon and fin
All Windows APT2	6.38mm laminated glass	Q-lon and fin

In addition to the minimum glass recommendation, the installed window/glazed door systems (inclusive of framing and seals) must achieve a minimum acoustic rating of:

- Rw 32 for 6.38mm laminated glass;
- Rw 34 for 10.38mm laminated glass;
- Rw 45 for 6.38mm laminated glass+ 46mm air gap + 8.38mm laminated glass
- and comply with Notes 1 to 5 below.

For all other developments not mentioned in the recommendations above (AD1, AD5, AD6 and APT1), standard building materials will be sufficient to comply with the ISEPP Road Traffic Noise Criteria.

Koikas Acoustics notes that the recommendations provided in this report are for the minimum required glazing predicted to achieve satisfactory acoustic performance. Design factors such as safety, thermal or energy efficiency are outside the scope of this report and should be assessed accordingly. It is the Client's responsibility to ensure all glazed windows and sliding doors installed



on-site to meet all building design requirements.

#### Notes

1. Recommendation based on typical aluminium framed sliding windows/doors with no weep holes in the frame.
2. Window frames should be tightly fitted to the external wall minimising any air gaps. Any air gaps present should be packed with timber and an appropriate acrylic sealant such as Knauf Bindex (or approved equivalent).
3. All open-able windows and glazed door systems should be airtight when closed.
4. Q-lon type seals or the equivalent should be fitted along the perimeter of all glazing systems to minimise air gaps. For sliding glass systems that cannot incorporate Q-lon seals, heavy-duty fin-type seals such as Schlegel SilentFin could be used. If the windows/doors are not designed to be air-tight when closed, the reduced performance of the windows/doors could compromise the acoustic integrity of the building facade.
5. Recommended glass systems have been calculated based on current architectural drawings as established within this report.

#### 5.2.4 Timber entry doors

The entry door to the units in all developments should be a minimum 40mm thick solid-core timber with acoustic perimeter and door bottom seals. Suitable acoustic seals could be Raven type RP10/RP10si door frame/perimeter seals, RP8si door bottom seals, Lorient IS7025 and IS8011si seals or an approved equivalent from another manufacturer.

#### 5.2.5 Ventilation

In the event of high external traffic noise levels, naturally ventilating rooms through the opening of windows and/or doors may not be suitable. This is due to the level of traffic noise being transmitted through the open doors resulting in a breach of the applied noise criterion.

As a general rule, where windows or doors opened sufficiently to provide natural ventilation to a room, the indoor noise level is 10dB below the outside noise level. Therefore, a window or sliding door to a room may be opened to provide natural ventilation where the outdoor noise level does not exceed 10dB above the “Windows open” criteria as detailed within this report.



For this development, all habitable spaces fronting Appin Road of developments AD4 and AD3 are all not suitable for natural ventilation through open windows/doors. Therefore, windows and doors will need to be closed to achieve the acoustic criteria. The design of the ventilation to these rooms is to consider windows and doors being closed.

All other rooms may be naturally ventilated through open windows/doors. Ventilation requirements are summarised below in Table 7.

<b>Table 6. Ventilation Requirements</b>	
<b>Ventilation Required</b>	<b>Area to which the recommendation applies</b>
Mechanical Ventilation	<p>All habitable rooms fronting Appin Road for developments</p> <ul style="list-style-type: none"> <li>- AD3 (All Units, Living, Bedroom 2 and Bedroom 3)</li> <li>- AD4 (All Units, Ground Floor and First Floor Bedrooms fronting Appin Road)</li> </ul>
Natural Ventilation	<p>All Units across developments</p> <ul style="list-style-type: none"> <li>- AD1 (Entire Development)</li> <li>- AD2 (Entire Development)</li> <li>- AD3 (Non-habitable rooms and all other habitable rooms)</li> <li>- AD4 (Non-habitable rooms and all other habitable rooms)</li> <li>- AD5 (Entire Development)</li> <li>- AD6 (Entire Development)</li> <li>- APT1 (Entire Development)</li> <li>- APT2 (Entire Development)</li> </ul>

Ventilation solutions that meet relevant building standards should be advised by a ventilation specialist. Possible options that may be considered (pending final approval from a ventilation specialist) include:

- Borrowed air from elsewhere in the dwelling/unit



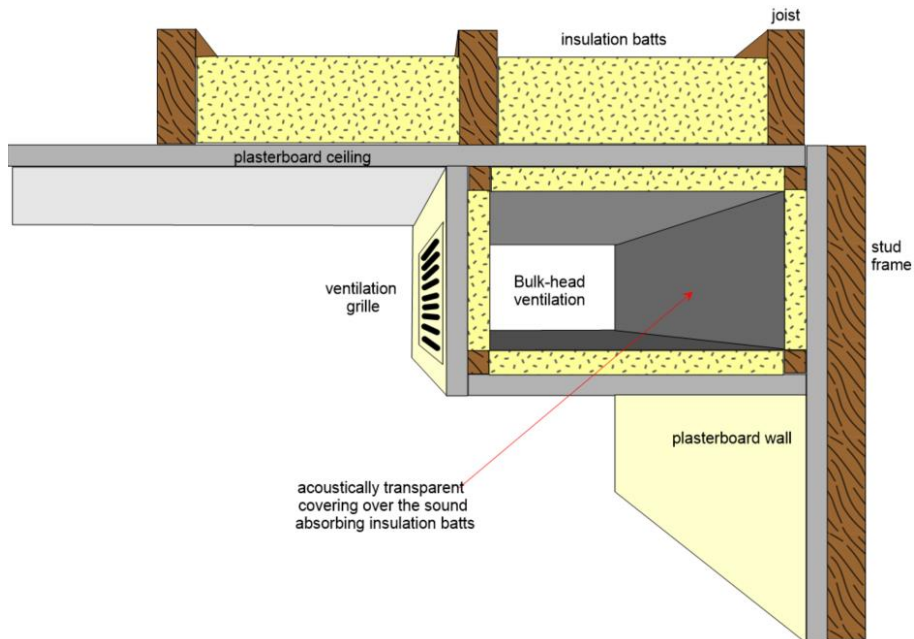
- Incorporating a component of fresh air into a ducted air conditioning system Installing a small air supply fan and acoustically treated duct
- Round or square ceiling mounted ventilation duct fan that incorporating a minimum of 3 metres of sound-absorbing to the inner surfaces of the ductwork



- DuctTech Phone: (02) 9674 1577

- Email: salesnsw@ducttech.com.au

- Installing a small air supply fan and acoustically treated duct into a ceiling bulkhead



- Installing a wall-mounted ventilator such as the Acoustica Aeropac or similar



Any penetrations in the walls or roof to accommodate ventilation system/s should not impact the acoustic integrity of the building façade. An acoustical engineer should review any proposed ventilation solution that proposes a penetration of the building façade.

## 6.0 CONCLUSION

Koikas Acoustics was requested to prepare an acoustic report for the proposed residential development at 74 Fern Avenue, Bradbury NSW. The acoustic report is to accompany a development application being submitted to Campbelltown City Council.

The assessment considers potential noise impacts to future occupants of the development, and to surrounding residents such that acceptable acoustic amenity for the area is maintained.

Acoustic planning levels have been referenced from current ISEPP and NSW DoP acoustic planning guidelines and requirements.

The included recommendations are based on designs prepared by Integrated Design Group.

The conclusions reached in this report should assist Council in making their determination of the proposal in terms of compliance with the necessary acoustic design requirements. A further detailed acoustic report may be required for the CC submission should the building design be amended, or as required by Council.

The building can be sufficiently insulated against existing external sources of noise in the area such as road traffic, provided the recommendation in Section 5.2 are implemented into the design. These recommendations should be verified before construction.

In our professional opinion, there is sufficient scope within the proposed building design to achieve the applied acoustic planning guidelines.



**APPENDIX A**

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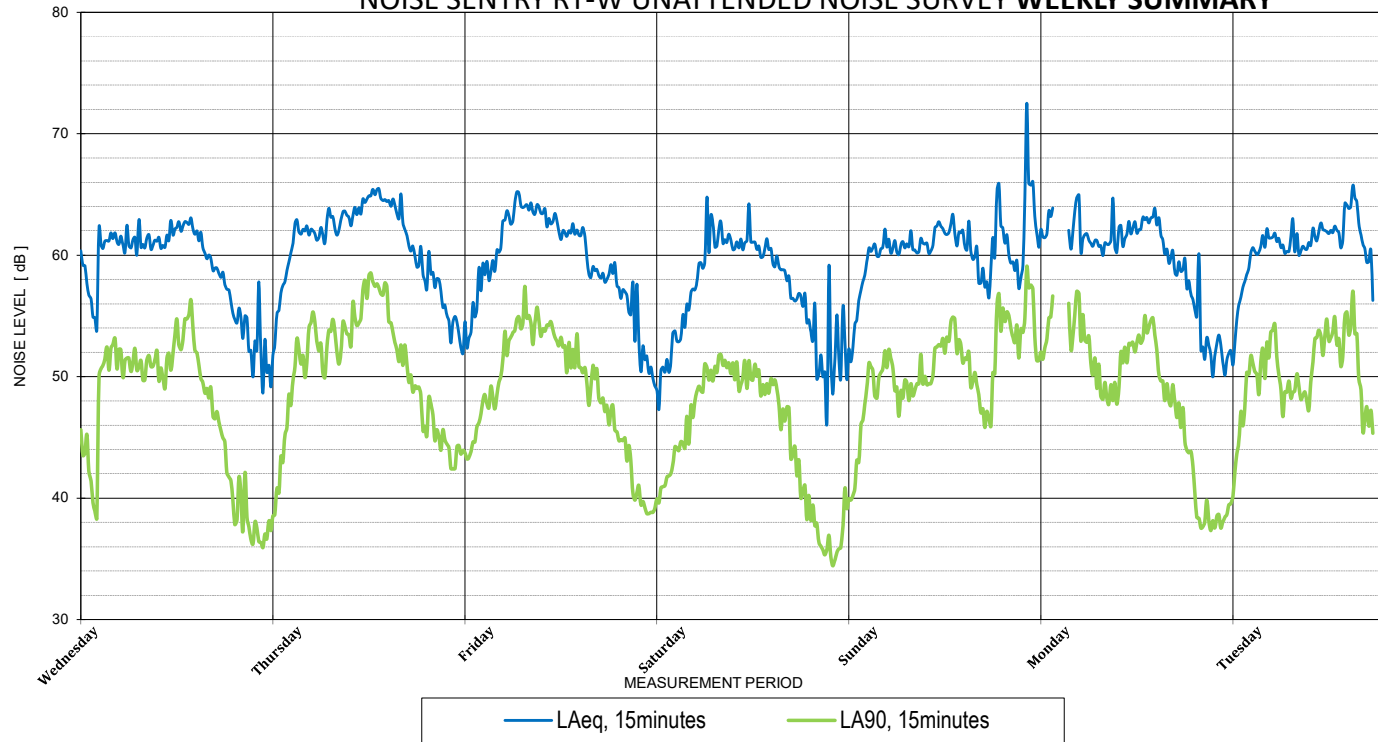
**APPENDIX A**

WEEKLY SUMMARY

LOGGER LOCATION: 74 Fern Avenue, Bradbury

PERIOD: 27th January to the 3rd February 2021

NOISE SENTRY RT-W UNATTENDED NOISE SURVEY WEEKLY SUMMARY



SUMMARY OF AMBIENT NOISE LEVELS

	LA90	LA90	LA90
	Daytime	Evening	Night-time
Day 1	50	45	38
Day 2	51	49	37
Day 3	50	47	43
Day 4	48	41	39
Day 5	49	46	36
Day 6	48	45	52
Day 7	48	46	38
<b>RBL</b>	<b>49</b>	<b>46</b>	<b>38</b>

	LAeq	LAeq	LAeq
	Daytime	Evening	Night-time
Day 1	62	60	57
Day 2	63	63	57
Day 3	63	59	57
Day 4	61	58	54
Day 5	61	60	57
Day 6	62	60	64
Day 7	62	63	56
<b>Average</b>	<b>62</b>	<b>61</b>	<b>59</b>

SUMMARY OF TRAFFIC & MISC. NOISE LEVELS

LAeq 15 hrs	0700-2200	62	dB
LAeq 9 hrs	2200-0700	59	dB
Max LAeq 1 hr	0700-2200	63	dB
Max LAeq 1 hr	2200-0700	60	dB

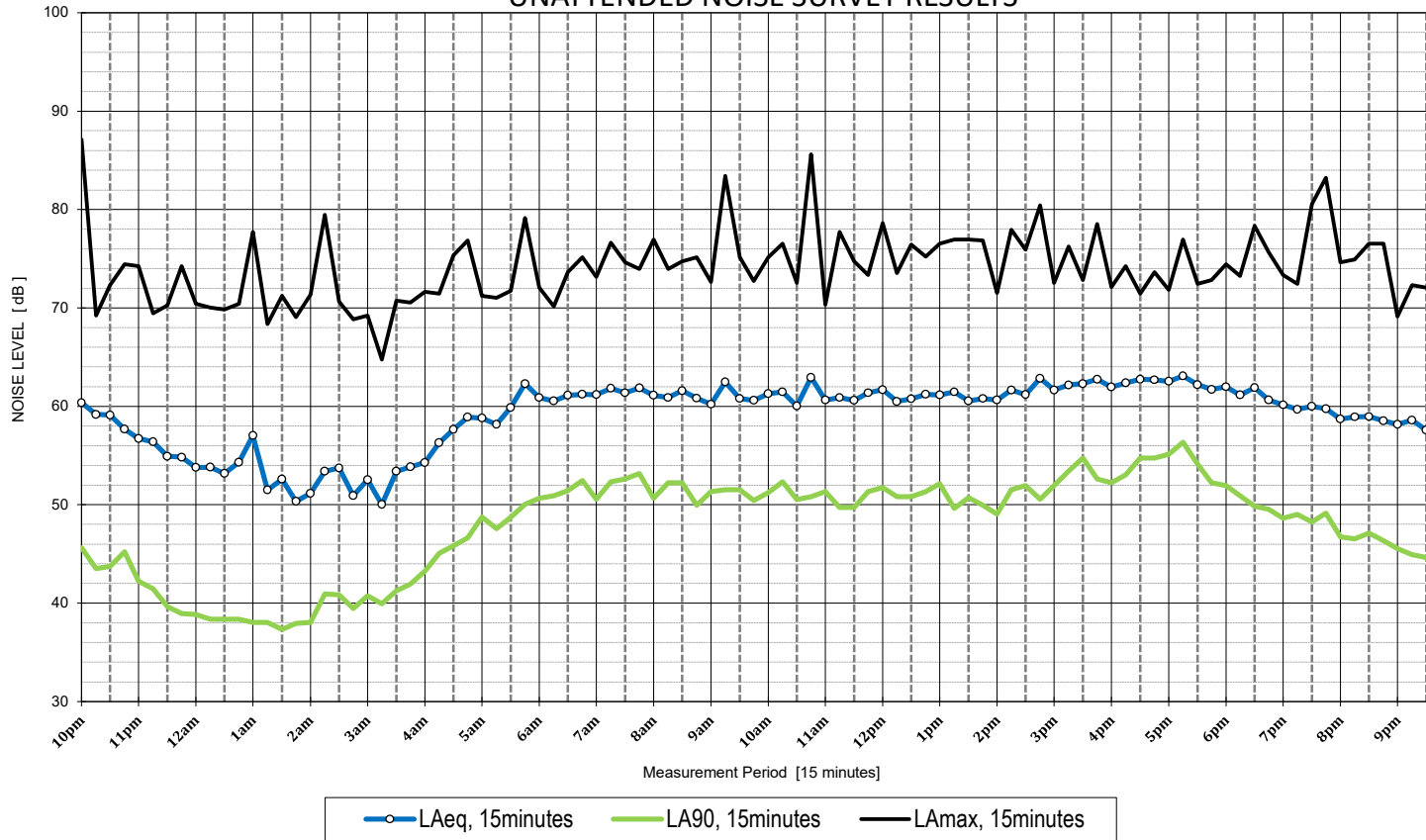
\* Sundays and Public Holidays the hours change to 0800

DAY 1

LOGGER LOCATION: 74 Fern Avenue, Bradbury

DATE: Wednesday, 27 January 2021

### UNATTENDED NOISE SURVEY RESULTS



#### AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	50	dB
LA90 Evening	1800-2200	45	dB
LA90 Night-time	2200-0700	38	dB

#### AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	62	dB
LAeq Evening	1800-2200	60	dB
LAeq Night-time	2200-0700	57	dB

#### TRAFFIC & MISC. NOISE METRICS

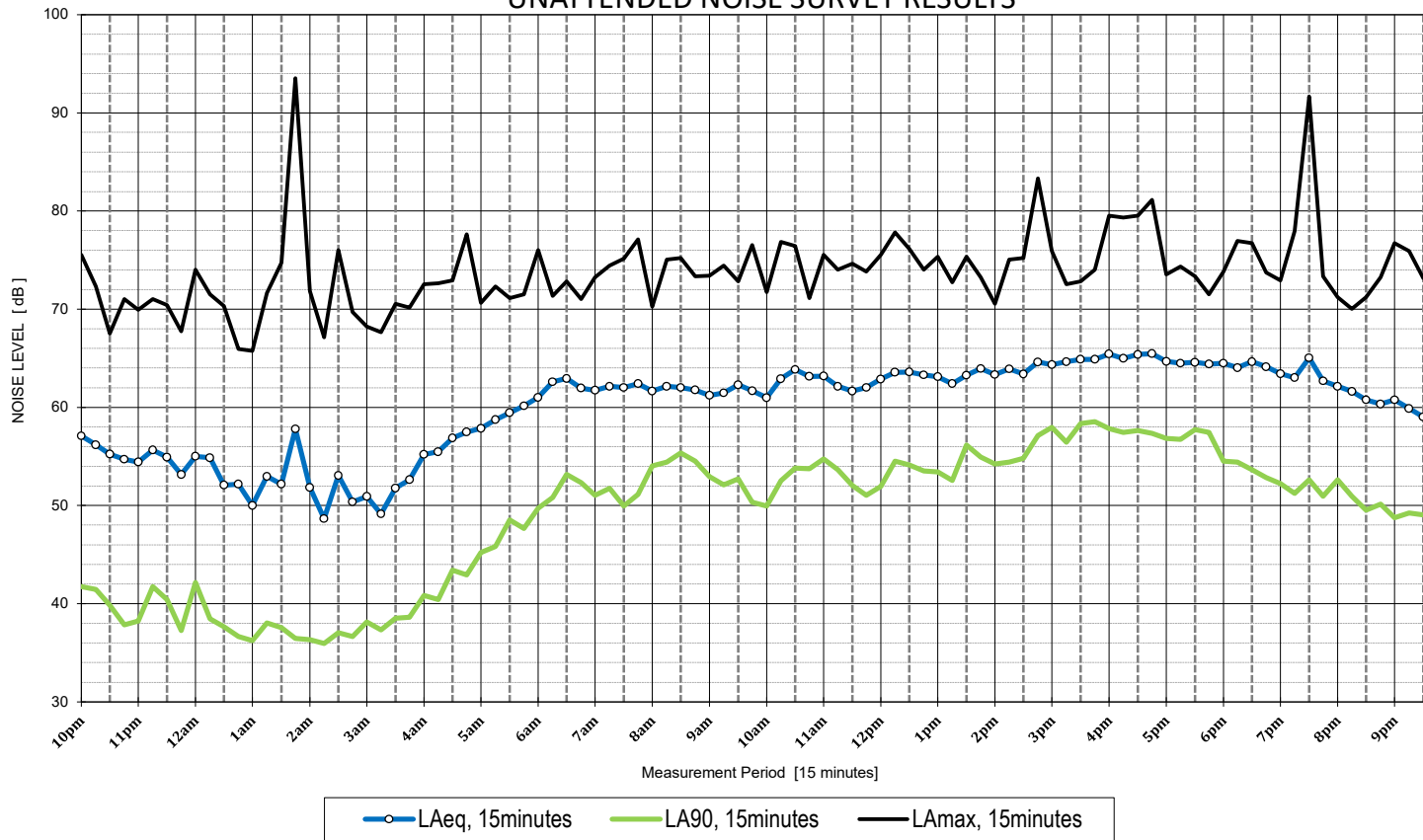
LAeq 15 hours	0700-2200	61	dB
LAeq 9 hours	2200-0700	57	dB
Max LAeq 1 hour	0700-2200	62	dB
Max LAeq 1 hour	2200-0700	60	dB

DAY 2

LOGGER LOCATION: 74 Fern Avenue, Bradbury

DATE: Thursday, 28 January 2021

### UNATTENDED NOISE SURVEY RESULTS



#### AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	51	dB
LA90 Evening	1800-2200	49	dB
LA90 Night-time	2200-0700	37	dB

#### AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	63	dB
LAeq Evening	1800-2200	63	dB
LAeq Night-time	2200-0700	57	dB

#### TRAFFIC & MISC. NOISE METRICS

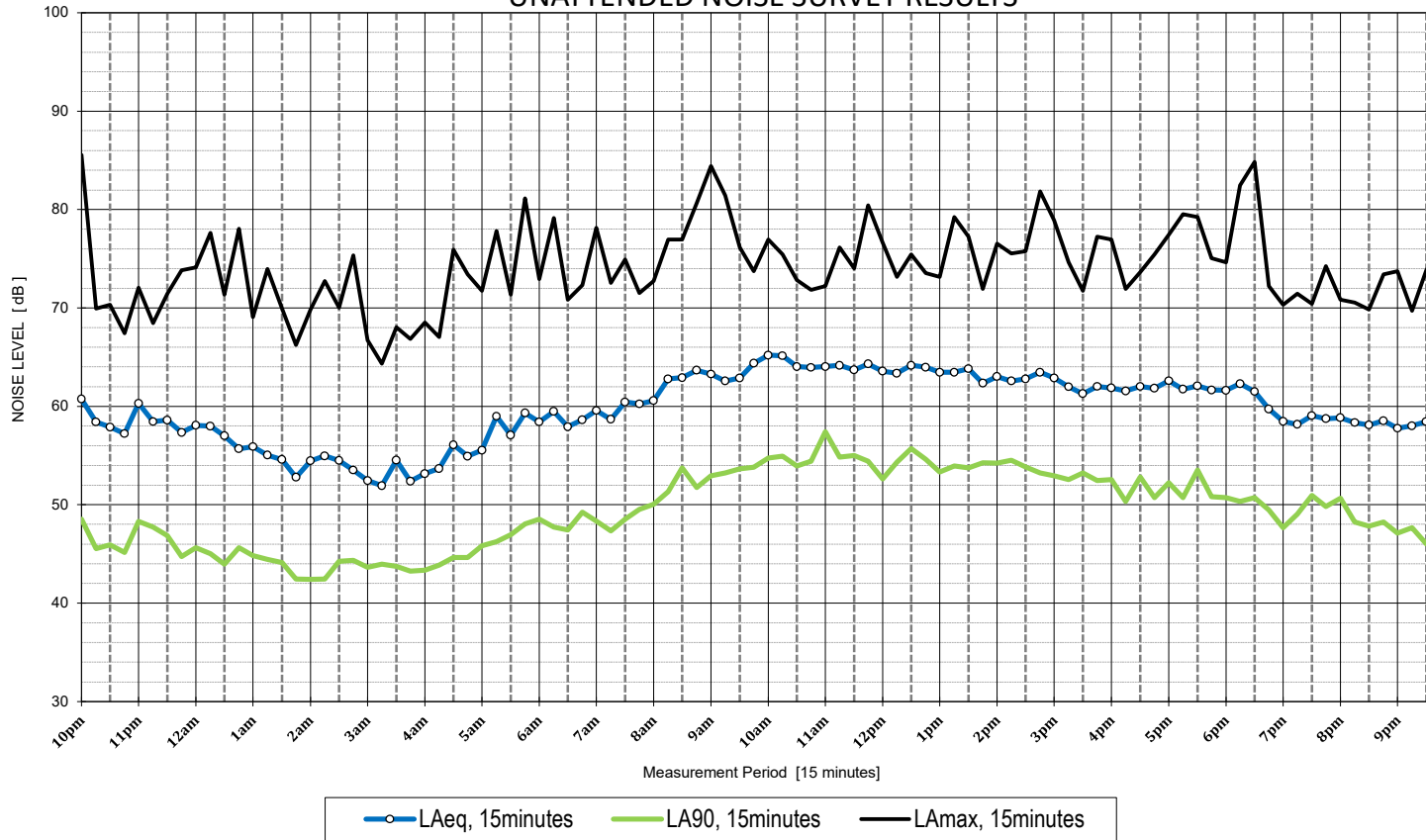
LAeq 15 hours	0700-2200	63	dB
LAeq 9 hours	2200-0700	57	dB
Max LAeq 1 hour	0700-2200	65	dB
Max LAeq 1 hour	2200-0700	60	dB

DAY 3

LOGGER LOCATION: 74 Fern Avenue, Bradbury

DATE: Friday, 29 January 2021

### UNATTENDED NOISE SURVEY RESULTS



#### AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	50	dB
LA90 Evening	1800-2200	47	dB
LA90 Night-time	2200-0700	43	dB

#### AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	63	dB
LAeq Evening	1800-2200	59	dB
LAeq Night-time	2200-0700	57	dB

#### TRAFFIC & MISC. NOISE METRICS

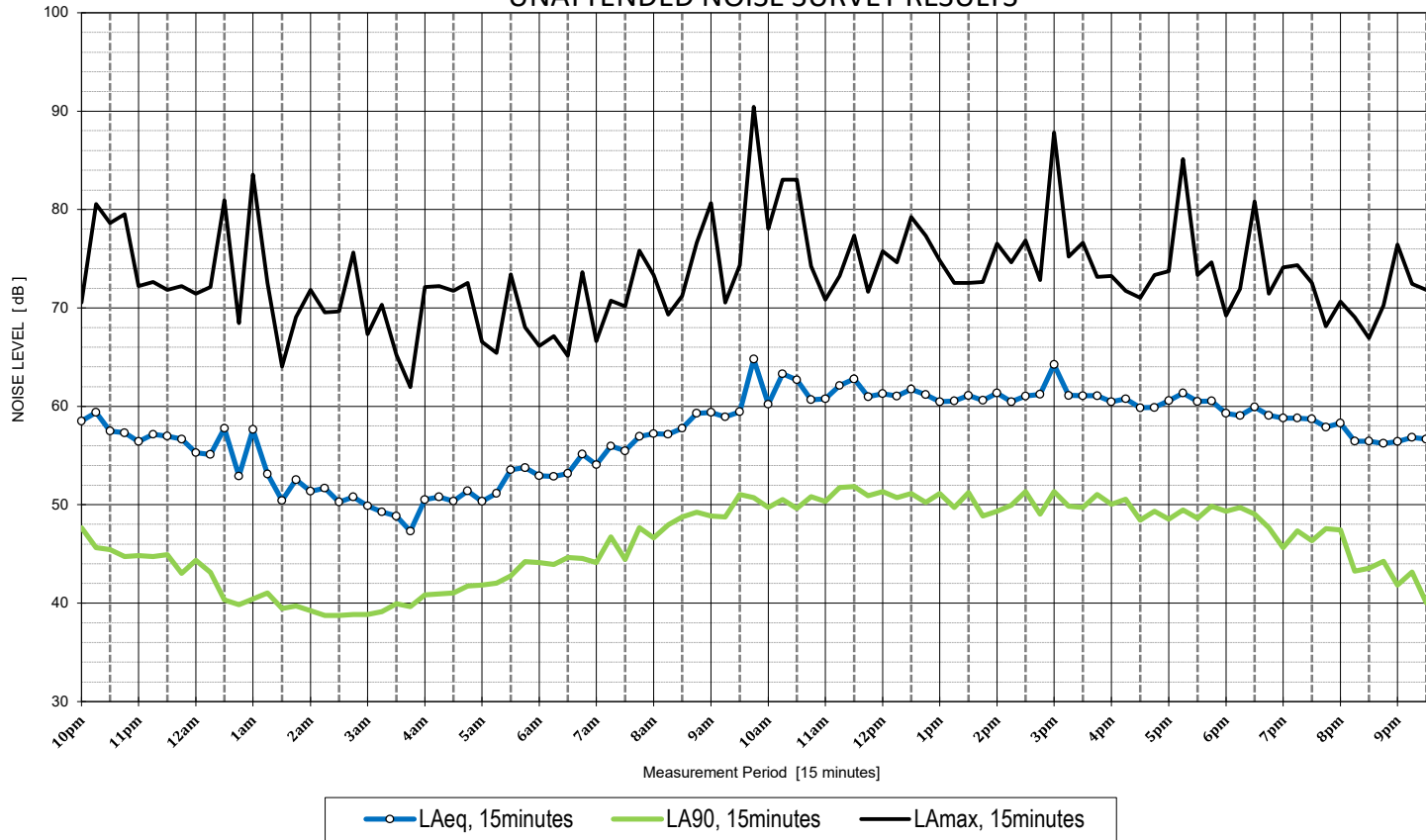
LAeq 15 hours	0700-2200	62	dB
LAeq 9 hours	2200-0700	57	dB
Max LAeq 1 hour	0700-2200	64	dB
Max LAeq 1 hour	2200-0700	59	dB

DAY 4

LOGGER LOCATION: 74 Fern Avenue, Bradbury

DATE: Saturday, 30 January 2021

### UNATTENDED NOISE SURVEY RESULTS



#### AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	48	dB
LA90 Evening	1800-2200	41	dB
LA90 Night-time	2200-0700	39	dB

#### AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	61	dB
LAeq Evening	1800-2200	58	dB
LAeq Night-time	2200-0700	54	dB

#### TRAFFIC & MISC. NOISE METRICS

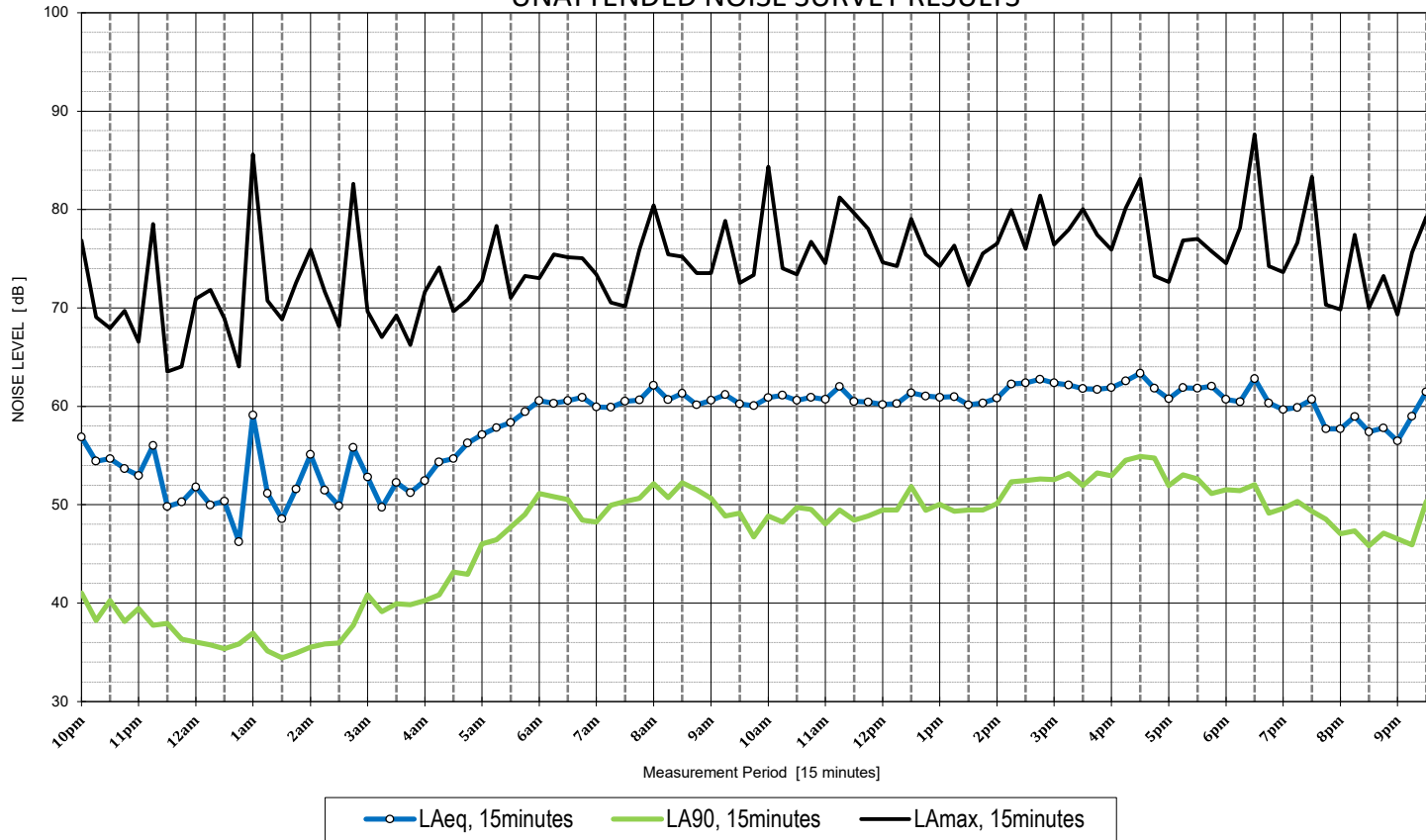
LAeq 15 hours	0700-2200	60	dB
LAeq 9 hours	2200-0700	54	dB
Max LAeq 1 hour	0700-2200	62	dB
Max LAeq 1 hour	2200-0700	57	dB

DAY 5

LOGGER LOCATION: 74 Fern Avenue, Bradbury

DATE: Sunday, 31 January 2021

### UNATTENDED NOISE SURVEY RESULTS



#### AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0800-1800	49	dB
LA90 Evening	1800-2200	46	dB
LA90 Night-time	2200-0800	36	dB

#### AMBIENT NOISE METRICS

LAeq Daytime	0800-1800	61	dB
LAeq Evening	1800-2200	60	dB
LAeq Night-time	2200-0700	57	dB

#### TRAFFIC & MISC. NOISE METRICS

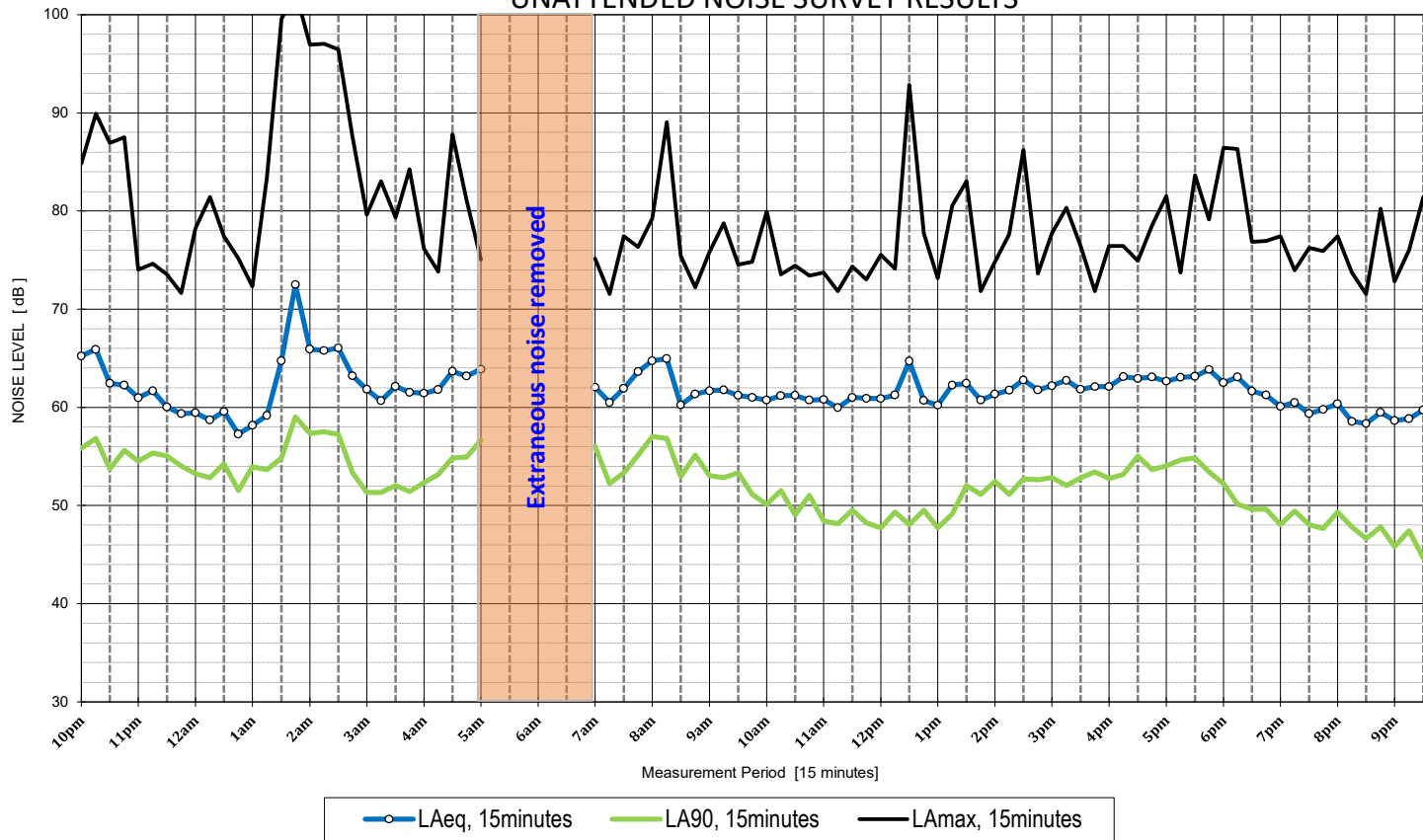
LAeq 15 hours	0700-2200	61	dB
LAeq 9 hours	2200-0700	56	dB
Max LAeq 1 hour	0700-2200	62	dB
Max LAeq 1 hour	2200-0700	59	dB

DAY 6

LOGGER LOCATION: 74 Fern Avenue, Bradbury

DATE: Monday, 1 February 2021

UNATTENDED NOISE SURVEY RESULTS



AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	48	dB
LA90 Evening	1800-2200	45	dB
LA90 Night-time	2200-0700	52	dB

AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	62	dB
LAeq Evening	1800-2200	60	dB
LAeq Night-time	2200-0700	64	dB

TRAFFIC & MISC. NOISE METRICS

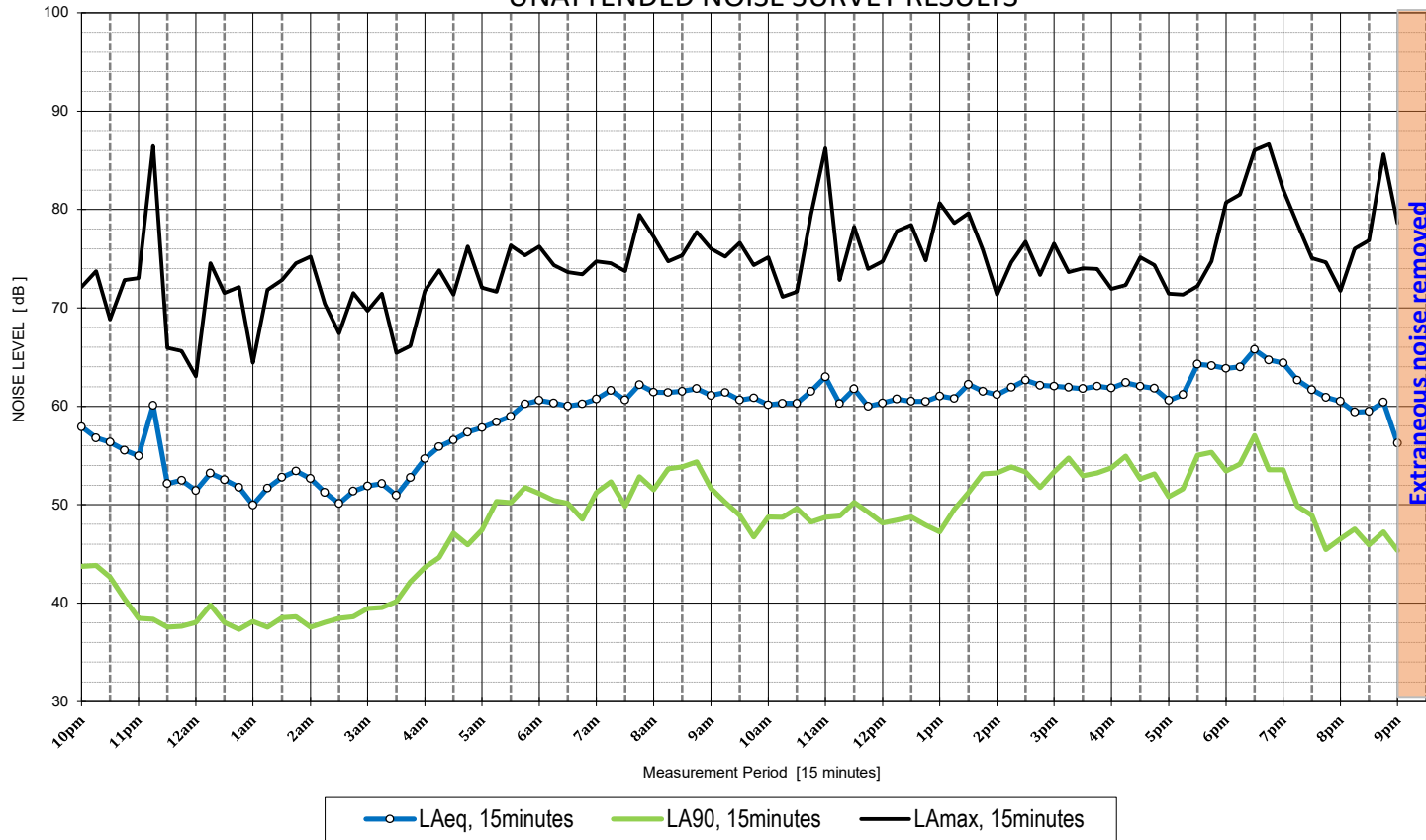
LAeq 15 hours	0700-2200	62	dB
LAeq 9 hours	2200-0700	64	dB
Max LAeq 1 hour	0700-2200	63	dB
Max LAeq 1 hour	2200-0700	68	dB

DAY 7

LOGGER LOCATION: 74 Fern Avenue, Bradbury

DATE: Tuesday, 2 February 2021

### UNATTENDED NOISE SURVEY RESULTS



#### AMBIENT BACKGROUND NOISE METRICS

Descriptor	Period	Level	Units
LA90 Daytime	0700-1800	48	dB
LA90 Evening	1800-2200	46	dB
LA90 Night-time	2200-0700	38	dB

#### AMBIENT NOISE METRICS

LAeq Daytime	0700-1800	62	dB
LAeq Evening	1800-2200	63	dB
LAeq Night-time	2200-0700	56	dB

#### TRAFFIC & MISC. NOISE METRICS

LAeq 15 hours	0700-2200	62	dB
LAeq 9 hours	2200-0700	56	dB
Max LAeq 1 hour	0700-2200	64	dB
Max LAeq 1 hour	2200-0700	60	dB

**APPENDIX B**

**A  
P  
P  
E  
N  
D  
I  
X  
  
B**

**APPENDIX B**

**\*\* Cadna/A \*\***

**74 Fern Avenue, Bradbury  
(Scenario 1 - Ground Level)**

Noise Sources:

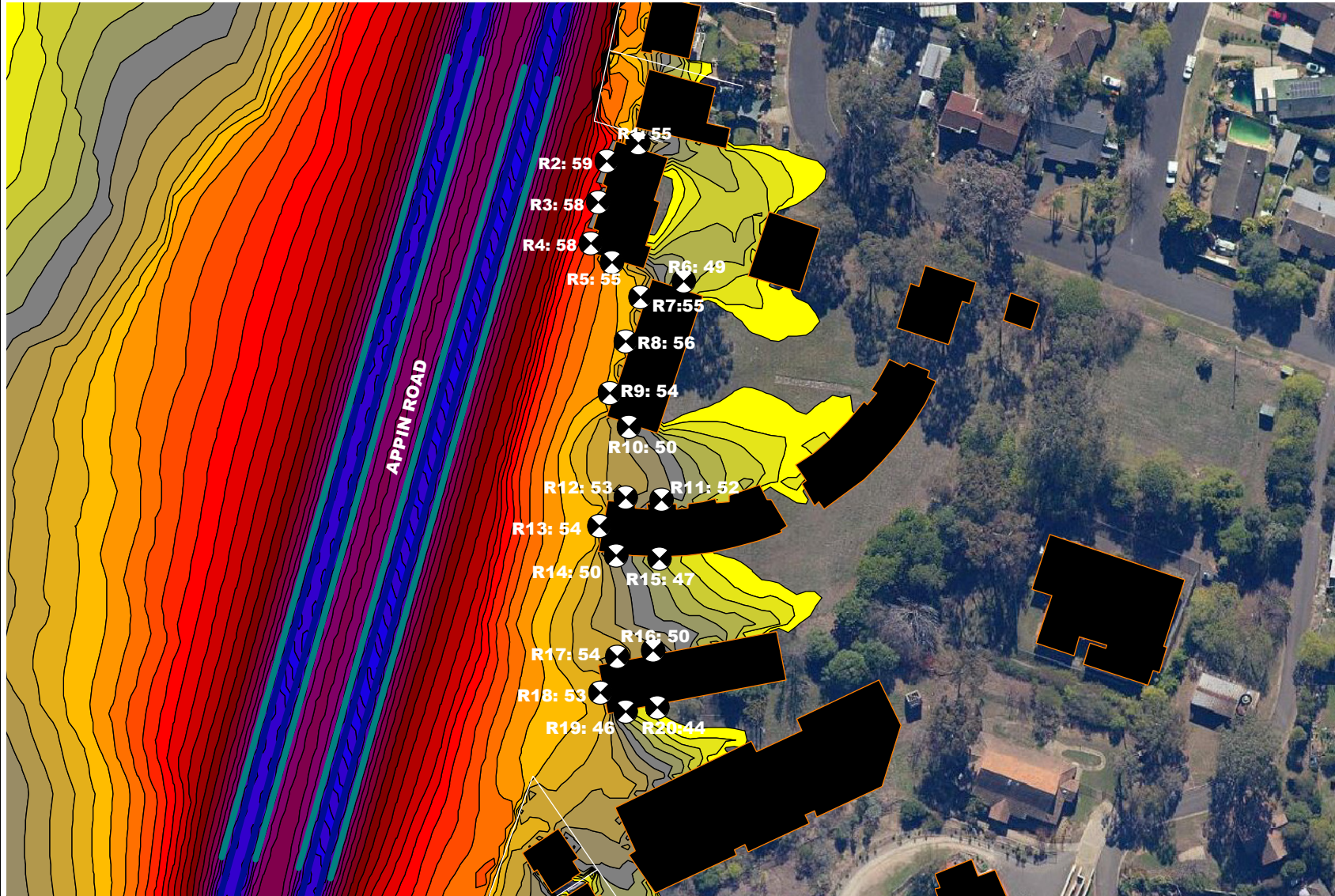
~ Appin Road

Note:

- LAeq15hrs noise level contours and receiver points are at a height of 1.5 m above the ground floor level.

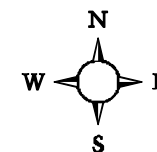
- The maximum reading at the resident is 59 dB

PRINT DATE: 08/02/21



- Line Source
- Building
- Barrier
- 3D-Reflector
- Contour Line
- Receiver

- > 45.0 dB
- > 50.0 dB
- > 55.0 dB
- > 60.0 dB
- > 65.0 dB
- > 70.0 dB
- > 75.0 dB
- > 80.0 dB
- > 85.0 dB



**\*\* Cadna/A \*\***

**74 Fern Avenue, Bradbury  
(Scenario 2 - 1st Floor Levels)**

Noise Sources:

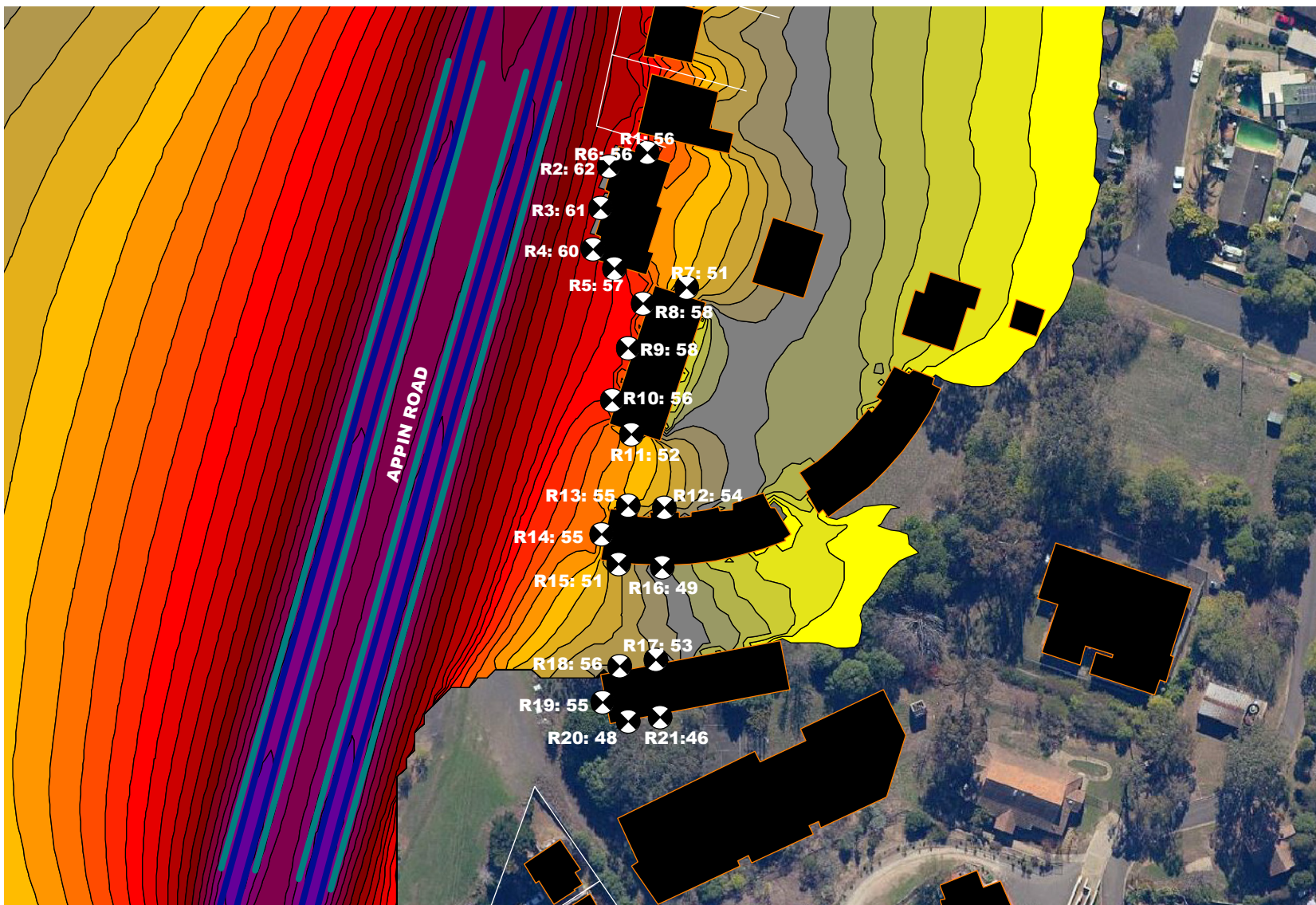
~ Appin Road







Note:










- LAeq15hrs noise level contours and receiver points are at a height of 1.5 m above the first floor level.

- The maximum reading at the resident is 62 dB

PRINT DATE: 08/02/21

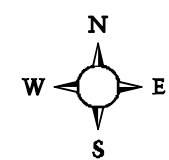


-  Line Source
-  Building
-  Barrier
-  3D-Reflector
-  Contour Line
-  Receiver

-  > 45.0 dB
-  > 50.0 dB
-  > 55.0 dB
-  > 60.0 dB
-  > 65.0 dB
-  > 70.0 dB
-  > 75.0 dB
-  > 80.0 dB
-  > 85.0 dB

**koikasacoustics** PTY LTD  
CONSULTANTS IN NOISE & VIBRATION

JOB NUMBER: 4552  
CLIENT: Capital Developments P/L.  
SITE ADDRESS: 74 Fern Avenue, Bradbury  
ASSESSED TO: Road Traffic Noise ISEPP/DOP  
LIMITING CRITERIA: 40 dB(A) - All Living Areas  
35 dB(A) - Bedrooms (Night)



**\*\* Cadna/A \*\***

**74 Fern Avenue, Bradbury  
(Scenario 3 - 2nd Floor Levels)**

Noise Sources:

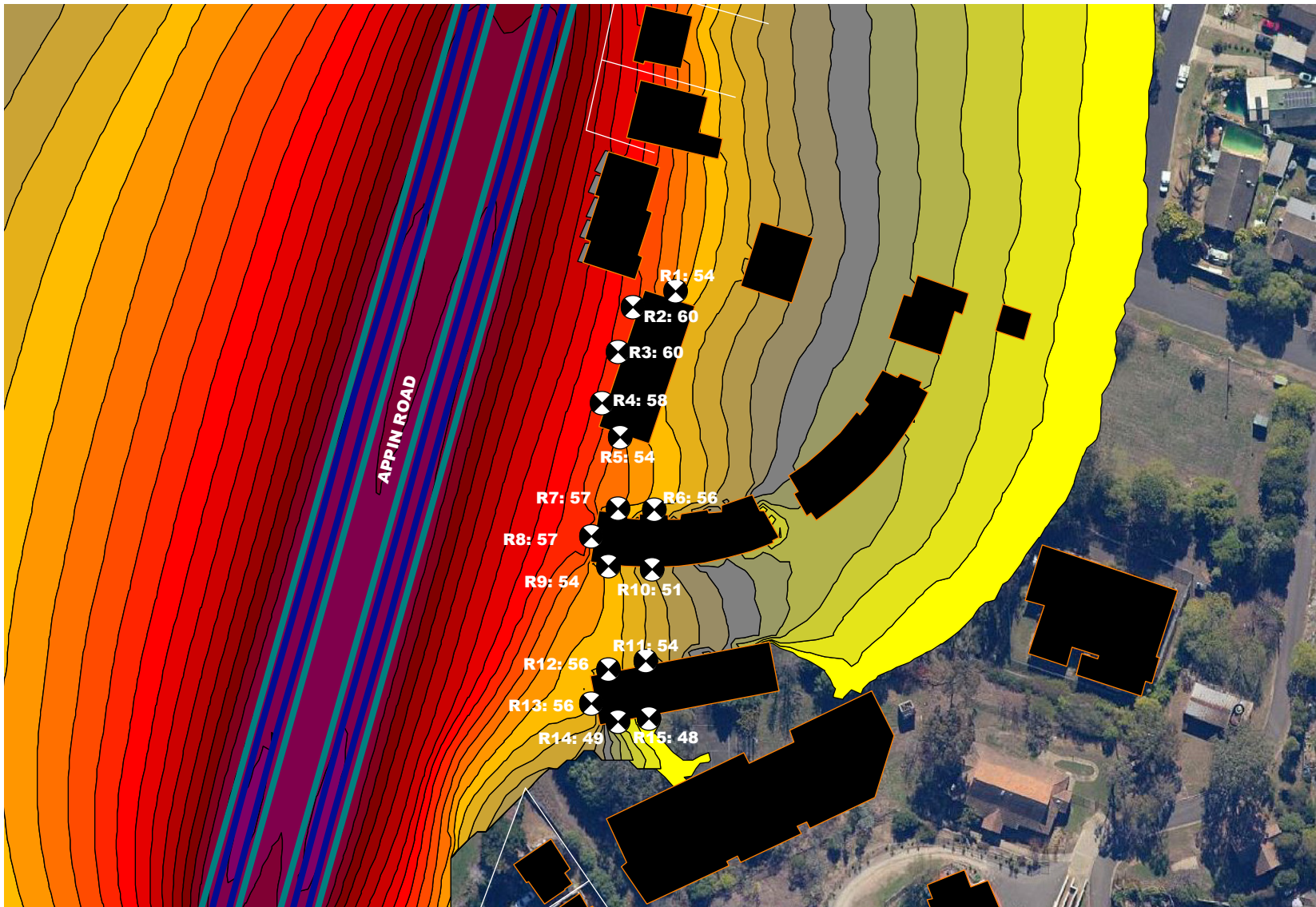
~ Appin Road







Note:










- LAeq15hrs noise level contours and receiver points are at a height of 1.5 m above the second floor level.

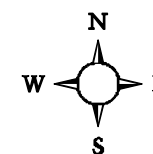
- The maximum reading at the resident is 60 dB

PRINT DATE: 08/02/21



-  Line Source
-  Building
-  Barrier
-  3D-Reflector
-  Contour Line
-  Receiver

-  > 45.0 dB
-  > 50.0 dB
-  > 55.0 dB
-  > 60.0 dB
-  > 65.0 dB
-  > 70.0 dB
-  > 75.0 dB
-  > 80.0 dB
-  > 85.0 dB



**APPENDIX C**

**A  
P  
P  
E  
N  
D  
I  
X  
  
C**

**APPENDIX C**

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD4 06 - Bed 1

## ROOM DATA

H 3 m D 3 m  
 W 3.5 m V 31.5 m<sup>3</sup>

		63	125	250	500	1k	2k	4k	8k	Area
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>42</u>	<u>47</u>	<u>43</u>	<u>43</u>	<u>47</u>	<u>44</u>	<u>35</u>	<u>23</u>	<u>53</u>
STL 1	110mm brick,40mm cavity,90mm stud,75mm 14kg/m <sup>3</sup> insul,10mm pb	31	44	55	50	59	68	71	79	1.5
STL 2										
STL 3										
STL 4										
	Noise through Component 1	7	-1	-16	-11	-16	-28	-40	-60	8
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>9</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>10</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>44</u>	<u>51</u>	<u>48</u>	<u>50</u>	<u>55</u>	<u>52</u>	<u>44</u>	<u>34</u>	<u>59</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	6.5
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	4.0
STL 3										
STL 4										
	Noise through Component 1	29	31	10	4	6	-4	-12	-26	33
	Noise through Component 2	27	29	22	21	23	20	8	-6	33
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>31</b>	<b>33</b>	<b>22</b>	<b>21</b>	<b>23</b>	<b>20</b>	<b>9</b>	<b>4</b>	<b>36</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>44</u>	<u>51</u>	<u>48</u>	<u>50</u>	<u>55</u>	<u>52</u>	<u>44</u>	<u>34</u>	<u>59</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	9.0
STL 2										
STL 3										
STL 4										
	Noise through Component 1	30	33	12	6	8	-2	-10	-25	35
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>30</b>	<b>33</b>	<b>13</b>	<b>8</b>	<b>10</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>35</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<b>Frequency</b>	<b>63</b>	<b>125</b>	<b>250</b>	<b>500</b>	<b>1k</b>	<b>2k</b>	<b>4k</b>	<b>8k</b>	<b>Tot</b>
	Façade 1	9	6	5	5	5	5	5	5	10
	Façade 2	31	33	22	21	23	20	9	4	36
	Façade 3	30	33	13	8	10	6	5	5	35
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>34</b>	<b>36</b>	<b>23</b>	<b>21</b>	<b>23</b>	<b>21</b>	<b>12</b>	<b>10</b>	<b>38</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD4 06 - Bedroom 2

## ROOM DATA

H 2.8 m      D 3.2 m  
 W 4.6 m      V 41.2 m<sup>3</sup>

		<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Area</u>
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>51</u>	<u>54</u>	<u>52</u>	<u>53</u>	<u>59</u>	<u>58</u>	<u>50</u>	<u>41</u>	<u>64</u>
STL 1	18mm comp sheet, 6mm cfc, 90mm stud with 75mm insul, 13mm pb	20	25	43	51	55	58	59	59	6.3
STL 2	6.38mm laminated + 46 mm air gap + 8.38 mm laminated	24	22	35	44	50	54	60	60	2.8
STL 3	Single 40mm Solid Core + Lorient IS7025 and IS8011si seals	23	27	33	32	29	35	40	44	2.1
STL 4										
	Noise through Component 1	32	30	10	3	5	1	-8	-17	34
	Noise through Component 2	25	29	15	6	7	1	-13	-22	31
	Noise through Component 3	25	23	15	17	26	19	6	-7	30
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>34</b>	<b>33</b>	<b>19</b>	<b>18</b>	<b>26</b>	<b>19</b>	<b>7</b>	<b>1</b>	<b>37</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>44</u>	<u>49</u>	<u>46</u>	<u>47</u>	<u>51</u>	<u>49</u>	<u>42</u>	<u>33</u>	<u>56</u>
STL 1	18mm comp sheet, 6mm cfc, 90mm stud with 75mm insul, 13mm pb	20	25	43	51	55	58	59	59	8.5
STL 2										
STL 3										
STL 4										
	Noise through Component 1	27	26	5	-2	-2	-7	-15	-24	29
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>27</b>	<b>26</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>30</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>43</u>	<u>50</u>	<u>49</u>	<u>50</u>	<u>57</u>	<u>56</u>	<u>48</u>	<u>39</u>	<u>61</u>
STL 1	0.6mm metal, 6mm cfc, pitched frame, 150mm ceiling insul, 2x13mm pb	21	38	48	55	50	46	49	53	14.7
STL 2										
STL 3										
STL 4										
	Noise through Component 1	27	17	6	0	12	15	4	-10	28
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>27</b>	<b>17</b>	<b>8</b>	<b>6</b>	<b>13</b>	<b>15</b>	<b>7</b>	<b>5</b>	<b>28</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<u>Frequency</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Tot</u>
	Façade 1	34	33	19	18	26	19	7	1	37
	Façade 2	27	26	8	6	6	5	5	5	30
	Façade 3	27	17	8	6	13	15	7	5	28
	Façade 4	0	0	0	0	0	0	0	0	0
	<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>	<b>35</b>	<b>34</b>	<b>19</b>	<b>18</b>	<b>27</b>	<b>21</b>	<b>12</b>	<b>9</b>	<b>38</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD4 05 - Bedroom 1

## ROOM DATA

H 3 m      D 3 m  
 W 3.6 m      V 32.4 m<sup>3</sup>

		63	125	250	500	1k	2k	4k	8k	Area
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>44</u>	<u>51</u>	<u>48</u>	<u>50</u>	<u>55</u>	<u>52</u>	<u>44</u>	<u>34</u>	<u>59</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	5.6
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	4.0
STL 3										
STL 4										
	Noise through Component 1	28	30	10	4	6	-5	-13	-27	32
	Noise through Component 2	27	29	21	21	23	20	8	-6	33
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>30</b>	<b>33</b>	<b>22</b>	<b>21</b>	<b>23</b>	<b>20</b>	<b>9</b>	<b>4</b>	<b>35</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>44</u>	<u>51</u>	<u>48</u>	<u>50</u>	<u>55</u>	<u>52</u>	<u>44</u>	<u>34</u>	<u>59</u>
STL 1	110mm brick,40mm cavity,90mm stud,75mm 14kg/m3 insul,10mm pb	31	44	55	50	59	68	71	79	2.7
STL 2										
STL 3										
STL 4										
	Noise through Component 1	12	5	-9	-2	-6	-18	-29	-47	13
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>13</b>	<b>8</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>14</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<b>Frequency</b>	<b>63</b>	<b>125</b>	<b>250</b>	<b>500</b>	<b>1k</b>	<b>2k</b>	<b>4k</b>	<b>8k</b>	<b>Tot</b>
	Façade 1	30	33	22	21	23	20	9	4	35
	Façade 2	13	8	5	6	5	5	5	5	14
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>31</b>	<b>33</b>	<b>22</b>	<b>21</b>	<b>23</b>	<b>21</b>	<b>11</b>	<b>9</b>	<b>36</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD4 05 - Bedroom 2

## ROOM DATA

H 2.6 m      D 3.1 m  
 W 4.7 m      V 37.9 m<sup>3</sup>

		<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Area</u>
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>51</u>	<u>54</u>	<u>50</u>	<u>52</u>	<u>58</u>	<u>57</u>	<u>49</u>	<u>40</u>	<u>63</u>
STL 1	18mm comp sheet, 6mm cfc, 90mm stud with 75mm insul, 13mm pb	20	25	43	51	55	58	59	59	7.3
STL 2	6.38mm laminated + 46 mm air gap + 8.38 mm laminated	24	22	35	44	50	54	60	60	2.8
STL 3	Single 40mm Solid Core + Lorient IS7025 and IS8011si seals	23	27	33	32	29	35	40	44	2.1
STL 4										
	Noise through Component 1	33	31	9	3	5	1	-8	-17	35
	Noise through Component 2	25	30	13	6	6	1	-13	-23	31
	Noise through Component 3	25	23	14	17	26	18	5	-8	30
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>35</b>	<b>34</b>	<b>17</b>	<b>17</b>	<b>26</b>	<b>19</b>	<b>7</b>	<b>1</b>	<b>38</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>43</u>	<u>51</u>	<u>50</u>	<u>50</u>	<u>57</u>	<u>56</u>	<u>48</u>	<u>39</u>	<u>61</u>
STL 1	0.6mm metal, 6mm cfc, pitched frame, 150mm ceiling insul, 2x13mm pb	21	38	48	55	50	46	49	53	14.6
STL 2										
STL 3										
STL 4										
	Noise through Component 1	27	18	7	0	12	15	4	-9	28
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>27</b>	<b>18</b>	<b>9</b>	<b>6</b>	<b>13</b>	<b>15</b>	<b>7</b>	<b>5</b>	<b>28</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<u>Frequency</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Tot</u>
	Façade 1	35	34	17	17	26	19	7	1	38
	Façade 2	27	18	9	6	13	15	7	5	28
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
	<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>	<b>35</b>	<b>34</b>	<b>18</b>	<b>18</b>	<b>26</b>	<b>20</b>	<b>11</b>	<b>8</b>	<b>38</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD3 07 - Living

## ROOM DATA

H 2.7 m      D 5.65 m  
 W 4.2 m      V 64.1 m<sup>3</sup>

		<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Area</u>
<i>KLD, timber and tile floor, furnished (RT60, sec)</i>		0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.64
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>43</u>	<u>50</u>	<u>45</u>	<u>46</u>	<u>52</u>	<u>47</u>	<u>37</u>	<u>23</u>	<u>56</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	5.1
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	6.2
STL 3										
STL 4										
	Noise through Component 1	25	29	6	-1	3	-9	-20	-38	31
	Noise through Component 2	27	30	20	19	22	18	3	-15	33
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>29</b>	<b>32</b>	<b>20</b>	<b>19</b>	<b>22</b>	<b>18</b>	<b>6</b>	<b>3</b>	<b>35</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>43</u>	<u>50</u>	<u>45</u>	<u>47</u>	<u>52</u>	<u>47</u>	<u>37</u>	<u>23</u>	<u>56</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	2.9
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	6.2
STL 3										
STL 4										
	Noise through Component 1	23	27	3	-2	0	-12	-23	-41	28
	Noise through Component 2	27	30	20	20	22	18	3	-15	33
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>28</b>	<b>31</b>	<b>20</b>	<b>20</b>	<b>22</b>	<b>18</b>	<b>6</b>	<b>3</b>	<b>34</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<u>Frequency</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Tot</u>
	Façade 1	29	32	20	19	22	18	6	3	35
	Façade 2	28	31	20	20	22	18	6	3	34
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>32</b>	<b>35</b>	<b>23</b>	<b>22</b>	<b>25</b>	<b>21</b>	<b>10</b>	<b>8</b>	<b>37</b>

## TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD3 07 - Bedroom 2

### ROOM DATA

H 2.45 m      D 4 m  
 W 3 m        V 29.4 m<sup>3</sup>

		<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Area</u>
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>40</u>	<u>46</u>	<u>42</u>	<u>44</u>	<u>48</u>	<u>43</u>	<u>33</u>	<u>20</u>	<u>52</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	11.0
STL 2										
STL 3										
STL 4										
	Noise through Component 1	27	29	7	1	2	-10	-20	-37	31
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>27</b>	<b>29</b>	<b>9</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>31</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>43</u>	<u>50</u>	<u>47</u>	<u>49</u>	<u>54</u>	<u>50</u>	<u>40</u>	<u>28</u>	<u>58</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	3.9
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	1.4
STL 3	Single 40mm Solid Core + Lorient IS7025 and IS8011si seals	23	27	33	32	29	35	40	44	2.1
STL 4										
	Noise through Component 1	26	28	8	1	3	-8	-18	-34	30
	Noise through Component 2	22	24	16	15	17	14	0	-16	27
	Noise through Component 3	18	21	12	15	23	13	-2	-19	26
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>28</b>	<b>30</b>	<b>18</b>	<b>18</b>	<b>24</b>	<b>16</b>	<b>4</b>	<b>0</b>	<b>33</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<u>Frequency</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Tot</u>
	Façade 1	27	29	9	6	7	5	5	5	31
	Façade 2	28	30	18	18	24	16	4	0	33
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
	<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>	<b>31</b>	<b>32</b>	<b>19</b>	<b>19</b>	<b>24</b>	<b>17</b>	<b>9</b>	<b>8</b>	<b>35</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD3 07 - Bedroom 3

## ROOM DATA

H 2.45 m      D 3.1 m  
 W 3.2 m      V 24.3 m<sup>3</sup>

		63	125	250	500	1k	2k	4k	8k	Area
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>47</u>	<u>51</u>	<u>49</u>	<u>49</u>	<u>55</u>	<u>54</u>	<u>45</u>	<u>35</u>	<u>60</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	4.9
STL 2	10.38mm Laminated Glass	22	26	31	33	33	34	39	44	2.7
STL 3										
STL 4										
	Noise through Component 1	32	31	11	3	6	-2	-11	-25	34
	Noise through Component 2	26	24	18	16	21	20	6	-9	30
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>33</b>	<b>32</b>	<b>19</b>	<b>16</b>	<b>21</b>	<b>20</b>	<b>8</b>	<b>3</b>	<b>36</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>41</u>	<u>47</u>	<u>45</u>	<u>44</u>	<u>49</u>	<u>46</u>	<u>37</u>	<u>26</u>	<u>54</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	7.4
STL 2										
STL 3										
STL 4										
	Noise through Component 1	27	29	9	0	2	-8	-17	-32	31
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>27</b>	<b>29</b>	<b>10</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>31</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>44</u>	<u>52</u>	<u>47</u>	<u>46</u>	<u>54</u>	<u>54</u>	<u>45</u>	<u>35</u>	<u>59</u>
STL 1	0.6mm metal, 6mm cfc, pitched frame, 150mm ceiling insul, 2x13mm pb	21	38	48	55	50	46	49	53	9.9
STL 2										
STL 3										
STL 4										
	Noise through Component 1	29	19	4	-4	9	13	1	-13	29
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>29</b>	<b>19</b>	<b>8</b>	<b>5</b>	<b>11</b>	<b>14</b>	<b>6</b>	<b>5</b>	<b>29</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<b>Frequency</b>	<b>63</b>	<b>125</b>	<b>250</b>	<b>500</b>	<b>1k</b>	<b>2k</b>	<b>4k</b>	<b>8k</b>	<b>Tot</b>
	Façade 1	33	32	19	16	21	20	8	3	36
	Façade 2	27	29	10	6	7	5	5	5	31
	Façade 3	29	19	8	5	11	14	6	5	29
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>35</b>	<b>34</b>	<b>20</b>	<b>17</b>	<b>22</b>	<b>21</b>	<b>11</b>	<b>10</b>	<b>38</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD2 08 - Bedroom 1

## ROOM DATA

H 2.7 m D 3 m  
 W 3.4 m V 27.5 m<sup>3</sup>

		63	125	250	500	1k	2k	4k	8k	Area
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>42</u>	<u>49</u>	<u>44</u>	<u>45</u>	<u>52</u>	<u>48</u>	<u>38</u>	<u>24</u>	<u>56</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	2.7
STL 2										
STL 3										
STL 4										
	Noise through Component 1	23	26	3	-4	0	-11	-21	-39	28
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>24</b>	<b>26</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>28</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>40</u>	<u>47</u>	<u>42</u>	<u>43</u>	<u>49</u>	<u>45</u>	<u>35</u>	<u>21</u>	<u>53</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	4.0
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	3.6
STL 3										
STL 4										
	Noise through Component 1	23	26	3	-4	-1	-12	-22	-41	28
	Noise through Component 2	23	25	16	14	17	13	-1	-19	28
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>26</b>	<b>28</b>	<b>16</b>	<b>14</b>	<b>17</b>	<b>14</b>	<b>5</b>	<b>3</b>	<b>31</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<b>Frequency</b>	<b>63</b>	<b>125</b>	<b>250</b>	<b>500</b>	<b>1k</b>	<b>2k</b>	<b>4k</b>	<b>8k</b>	<b>Tot</b>
	Façade 1	24	26	7	5	6	5	5	5	28
	Façade 2	26	28	16	14	17	14	5	3	31
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>28</b>	<b>30</b>	<b>17</b>	<b>15</b>	<b>18</b>	<b>15</b>	<b>9</b>	<b>8</b>	<b>33</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD2 08 - Bedroom 2

## ROOM DATA

H 2.7 m      D 2.7 m  
 W 3.4 m      V 24.8 m<sup>3</sup>

		63	125	250	500	1k	2k	4k	8k	Area
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<b>40</b>	<b>46</b>	<b>40</b>	<b>41</b>	<b>47</b>	<b>42</b>	<b>32</b>	<b>18</b>	<b>51</b>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	4.9
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	2.8
STL 3										
STL 4										
	Noise through Component 1	25	26	2	-5	-2	-14	-24	-42	28
	Noise through Component 2	22	23	13	11	14	10	-4	-22	27
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>27</b>	<b>28</b>	<b>14</b>	<b>12</b>	<b>15</b>	<b>11</b>	<b>4</b>	<b>3</b>	<b>31</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>										<b>0</b>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<b>0</b>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<b>0</b>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>SUMMARY OF RESULTS</b>		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<b>Frequency</b>	<b>63</b>	<b>125</b>	<b>250</b>	<b>500</b>	<b>1k</b>	<b>2k</b>	<b>4k</b>	<b>8k</b>	<b>Tot</b>
	Façade 1	27	28	14	12	15	11	4	3	31
	Façade 2	0	0	0	0	0	0	0	0	0
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
	<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>	<b>27</b>	<b>28</b>	<b>14</b>	<b>13</b>	<b>15</b>	<b>12</b>	<b>7</b>	<b>7</b>	<b>31</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD2 08 - Kitchen/Dining/Living

## ROOM DATA

H 2.7 m      D 12.25 m  
 W 4.9 m      V 162.1 m<sup>3</sup>

KLD, timber and tile floor, furnished (RT60, sec)		<a href="#">63</a>	<a href="#">125</a>	<a href="#">250</a>	<a href="#">500</a>	<a href="#">1k</a>	<a href="#">2k</a>	<a href="#">4k</a>	<a href="#">8k</a>	Area
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<a href="#">0.6</a>	<a href="#">0.6</a>	<a href="#">0.6</a>	<a href="#">0.7</a>	<a href="#">0.7</a>	<a href="#">0.7</a>	<a href="#">0.6</a>	<a href="#">0.6</a>	<a href="#">0.64</a>
STL 1	110mm brick,40mm cavity,90mm stud,75mm 14kg/m <sup>3</sup> insul,10mm pb	<a href="#">42</a>	<a href="#">49</a>	<a href="#">44</a>	<a href="#">45</a>	<a href="#">52</a>	<a href="#">48</a>	<a href="#">38</a>	<a href="#">24</a>	<a href="#">56</a>
STL 2		31	44	55	50	59	68	71	79	33.1
STL 3										
STL 4										
	Noise through Component 1	16	10	-6	0	-1	-14	-28	-50	17
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>16</b>	<b>11</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>17</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<a href="#">41</a>	<a href="#">47</a>	<a href="#">44</a>	<a href="#">45</a>	<a href="#">50</a>	<a href="#">47</a>	<a href="#">38</a>	<a href="#">26</a>	<a href="#">54</a>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	<a href="#">18</a>	<a href="#">22</a>	<a href="#">40</a>	<a href="#">48</a>	<a href="#">51</a>	<a href="#">58</a>	<a href="#">58</a>	<a href="#">62</a>	<a href="#">2.0</a>
STL 2	6.38mm Laminated Glass	<a href="#">18</a>	<a href="#">22</a>	<a href="#">27</a>	<a href="#">30</a>	<a href="#">33</a>	<a href="#">32</a>	<a href="#">36</a>	<a href="#">40</a>	<a href="#">5.6</a>
STL 3										
STL 4										
	Noise through Component 1	15	18	-3	-10	-8	-18	-27	-44	20
	Noise through Component 2	20	22	14	13	15	13	-1	-17	26
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>22</b>	<b>24</b>	<b>15</b>	<b>14</b>	<b>16</b>	<b>14</b>	<b>5</b>	<b>3</b>	<b>27</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>		<a href="#">41</a>	<a href="#">47</a>	<a href="#">44</a>	<a href="#">45</a>	<a href="#">50</a>	<a href="#">47</a>	<a href="#">38</a>	<a href="#">26</a>	<a href="#">54</a>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	<a href="#">18</a>	<a href="#">22</a>	<a href="#">40</a>	<a href="#">48</a>	<a href="#">51</a>	<a href="#">58</a>	<a href="#">58</a>	<a href="#">62</a>	<a href="#">2.4</a>
STL 2	6.38mm Laminated Glass	<a href="#">18</a>	<a href="#">22</a>	<a href="#">27</a>	<a href="#">30</a>	<a href="#">33</a>	<a href="#">32</a>	<a href="#">36</a>	<a href="#">40</a>	<a href="#">2.0</a>
STL 3	Single 40mm Solid Core + Lorient IS7025 and IS8011si seals	<a href="#">23</a>	<a href="#">27</a>	<a href="#">33</a>	<a href="#">32</a>	<a href="#">29</a>	<a href="#">35</a>	<a href="#">40</a>	<a href="#">44</a>	<a href="#">2.1</a>
STL 4										
	Noise through Component 1	16	19	-2	-9	-7	-17	-27	-43	21
	Noise through Component 2	16	18	10	9	11	9	-5	-21	21
	Noise through Component 3	11	13	4	7	15	6	-9	-25	19
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>20</b>	<b>22</b>	<b>11</b>	<b>11</b>	<b>16</b>	<b>11</b>	<b>2</b>	<b>0</b>	<b>25</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>		<a href="#">40</a>	<a href="#">45</a>	<a href="#">41</a>	<a href="#">43</a>	<a href="#">47</a>	<a href="#">43</a>	<a href="#">34</a>	<a href="#">21</a>	<a href="#">52</a>
STL 1	0.6mm metal, 6mm cfc, pitched frame, 150mm ceiling insul, 2x13mm pb	<a href="#">21</a>	<a href="#">38</a>	<a href="#">48</a>	<a href="#">55</a>	<a href="#">50</a>	<a href="#">46</a>	<a href="#">49</a>	<a href="#">53</a>	<a href="#">3.3</a>
STL 2	6.38mm Laminated Glass	<a href="#">18</a>	<a href="#">22</a>	<a href="#">27</a>	<a href="#">30</a>	<a href="#">33</a>	<a href="#">32</a>	<a href="#">36</a>	<a href="#">40</a>	<a href="#">11.0</a>
STL 3										
STL 4										
	Noise through Component 1	14	2	-12	-17	-7	-7	-20	-37	14
	Noise through Component 2	22	23	14	14	15	12	-2	-19	27
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>23</b>	<b>23</b>	<b>15</b>	<b>14</b>	<b>16</b>	<b>13</b>	<b>4</b>	<b>3</b>	<b>27</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<b>Frequency</b>	<a href="#">63</a>	<a href="#">125</a>	<a href="#">250</a>	<a href="#">500</a>	<a href="#">1k</a>	<a href="#">2k</a>	<a href="#">4k</a>	<a href="#">8k</a>	<b>Tot</b>
	Façade 1	16	11	5	6	6	5	5	5	17
	Façade 2	22	24	15	14	16	14	5	3	27
	Façade 3	20	22	11	11	16	11	2	0	25
	Façade 4	23	23	15	14	16	13	4	3	27
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>27</b>	<b>28</b>	<b>19</b>	<b>18</b>	<b>21</b>	<b>18</b>	<b>10</b>	<b>9</b>	<b>31</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room AD2 08 - Master Bedroom

## ROOM DATA

H 2.45 m      D 3.3 m  
 W 4 m        V 32.3 m<sup>3</sup>

		63	125	250	500	1k	2k	4k	8k	Area
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>44</u>	<u>48</u>	<u>45</u>	<u>45</u>	<u>51</u>	<u>49</u>	<u>42</u>	<u>30</u>	<u>56</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	6.4
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	3.5
STL 3										
STL 4										
	Noise through Component 1	29	28	7	-1	2	-7	-14	-30	31
	Noise through Component 2	26	25	18	15	18	17	6	-11	30
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>31</b>	<b>30</b>	<b>18</b>	<b>15</b>	<b>18</b>	<b>17</b>	<b>8</b>	<b>3</b>	<b>34</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>43</u>	<u>51</u>	<u>46</u>	<u>45</u>	<u>35</u>	<u>35</u>	<u>45</u>	<u>33</u>	<u>54</u>
STL 1	0.6mm metal, 6mm cfc, pitched frame, 150mm ceiling insul, 2x13mm pb	21	38	48	54	50	46	49	53	13.2
STL 2										
STL 3										
STL 4										
	Noise through Component 1	28	18	3	-4	-10	-6	1	-15	28
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>28</b>	<b>18</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>28</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<b>Frequency</b>	<b>63</b>	<b>125</b>	<b>250</b>	<b>500</b>	<b>1k</b>	<b>2k</b>	<b>4k</b>	<b>8k</b>	<b>Tot</b>
	Façade 1	31	30	18	15	18	17	8	3	34
	Façade 2	28	18	7	5	5	5	6	5	28
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>32</b>	<b>30</b>	<b>19</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>11</b>	<b>9</b>	<b>35</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room APT2 09 - Kitchen/Dining

## ROOM DATA

H 2.7 m D 5.1 m  
 W 4.25 m V 58.5 m<sup>3</sup>

		<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Area</u>
<i>KLD, timber and tile floor, furnished (RT60, sec)</i>		0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.64
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>40</u>	<u>46</u>	<u>39</u>	<u>40</u>	<u>49</u>	<u>46</u>	<u>37</u>	<u>24</u>	<u>53</u>
STL 1	110mm brick,40mm cavity,90mm stud,75mm 14kg/m <sup>3</sup> insul,10mm pb	31	44	55	50	59	68	71	79	3.8
STL 2										
STL 3										
STL 4										
	Noise through Component 1	9	2	-16	-10	-9	-21	-34	-55	10
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>10</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>11</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>39</u>	<u>46</u>	<u>39</u>	<u>40</u>	<u>49</u>	<u>45</u>	<u>36</u>	<u>22</u>	<u>53</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	2.1
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	9.4
STL 3										
STL 4										
	Noise through Component 1	18	21	-4	-10	-4	-15	-25	-43	23
	Noise through Component 2	25	28	16	15	21	18	4	-14	31
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>26</b>	<b>29</b>	<b>16</b>	<b>15</b>	<b>21</b>	<b>18</b>	<b>7</b>	<b>3</b>	<b>31</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<u>Frequency</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Tot</u>
	Façade 1	10	7	5	5	5	5	5	5	11
	Façade 2	26	29	16	15	21	18	7	3	31
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>26</b>	<b>29</b>	<b>17</b>	<b>16</b>	<b>21</b>	<b>18</b>	<b>10</b>	<b>8</b>	<b>32</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room APT2 09 - Living

### ROOM DATA

H 2.7 m      D 4.6 m  
 W 4.25 m      V 52.8 m<sup>3</sup>

		<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Area</u>
<i>KLD, timber and tile floor, furnished (RT60, sec)</i>		0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.64
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>39</u>	<u>44</u>	<u>37</u>	<u>37</u>	<u>44</u>	<u>40</u>	<u>30</u>	<u>15</u>	<u>49</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	6.7
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	4.8
STL 3										
STL 4										
	Noise through Component 1	23	25	0	-8	-3	-14	-25	-44	27
	Noise through Component 2	23	23	12	9	14	10	-4	-24	27
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>26</b>	<b>27</b>	<b>12</b>	<b>10</b>	<b>14</b>	<b>11</b>	<b>4</b>	<b>3</b>	<b>30</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>40</u>	<u>46</u>	<u>39</u>	<u>40</u>	<u>49</u>	<u>46</u>	<u>37</u>	<u>24</u>	<u>53</u>
STL 1	110mm brick,40mm cavity,90mm stud,75mm 14kg/m3 insul,10mm pb	31	44	55	50	59	68	71	79	6.4
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	4.8
STL 3										
STL 4										
	Noise through Component 1	11	5	-13	-7	-7	-19	-31	-53	12
	Noise through Component 2	24	25	14	12	19	16	3	-15	29
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>24</b>	<b>25</b>	<b>14</b>	<b>13</b>	<b>19</b>	<b>17</b>	<b>6</b>	<b>3</b>	<b>29</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<u>Frequency</u>	<u>63</u>	<u>125</u>	<u>250</u>	<u>500</u>	<u>1k</u>	<u>2k</u>	<u>4k</u>	<u>8k</u>	<u>Tot</u>
	Façade 1	26	27	12	10	14	11	4	3	30
	Façade 2	24	25	14	13	19	17	6	3	29
	Façade 3	0	0	0	0	0	0	0	0	0
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>28</b>	<b>29</b>	<b>16</b>	<b>15</b>	<b>20</b>	<b>18</b>	<b>9</b>	<b>8</b>	<b>32</b>

# TRAFFIC NOISE INTRUSION CALCULATIONS

Job 4552  
 Client Capital Developments P/L  
 Site 74 Fern Avenue, Bradbury NSW  
 Room APT2 05 - Bedroom 2

## ROOM DATA

H 2.7 m      D 3.4 m  
 W 3.6 m      V 33.0 m<sup>3</sup>

		63	125	250	500	1k	2k	4k	8k	Area
<i>Bedroom, carpet floor, furnished (RT60, sec)</i>		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
<b>EXTERNAL FAÇADE 1 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>37</u>	<u>41</u>	<u>38</u>	<u>39</u>	<u>44</u>	<u>40</u>	<u>31</u>	<u>16</u>	<u>48</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	6.7
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	1.2
STL 3	Single 40mm Solid Core + Lorient LE1515 and IS8100si seals	21	25	28	27	31	35	39	43	3.3
STL 4										
	Noise through Component 1	22	21	0	-7	-5	-16	-25	-44	24
	Noise through Component 2	15	13	6	4	6	3	-10	-29	18
	Noise through Component 3	16	15	9	11	12	4	-9	-28	20
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 1</b>	<b>23</b>	<b>23</b>	<b>12</b>	<b>12</b>	<b>13</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>27</b>
<b>EXTERNAL FAÇADE 2 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>42</u>	<u>46</u>	<u>43</u>	<u>42</u>	<u>50</u>	<u>48</u>	<u>39</u>	<u>27</u>	<u>54</u>
STL 1	18mm comp sheet, 90mm stud with 75mm insul, 13mm pb	18	22	40	48	51	58	58	62	8.6
STL 2	6.38mm Laminated Glass	18	22	27	30	33	32	36	40	0.6
STL 3										
STL 4										
	Noise through Component 1	28	27	6	-3	2	-7	-16	-32	30
	Noise through Component 2	17	15	8	4	9	8	-5	-21	20
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 2</b>	<b>28</b>	<b>27</b>	<b>11</b>	<b>7</b>	<b>11</b>	<b>9</b>	<b>4</b>	<b>3</b>	<b>31</b>
<b>EXTERNAL FAÇADE 3 - NOISE LEVEL, LAeq, Period [dB]</b>		<u>39</u>	<u>46</u>	<u>43</u>	<u>43</u>	<u>49</u>	<u>45</u>	<u>46</u>	<u>21</u>	<u>54</u>
STL 1	0.6mm metal, pitched frame, 150mm ceiling insul, 13mm pb	10	20	35	45	50	46	49	53	12.2
STL 2										
STL 3										
STL 4										
	Noise through Component 1	34	31	13	3	4	4	2	-28	36
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 3</b>	<b>34</b>	<b>31</b>	<b>14</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>5</b>	<b>36</b>
<b>EXTERNAL FAÇADE 4 - NOISE LEVEL, LAeq, Period [dB]</b>										<u>0</u>
STL 1										
STL 2										
STL 3										
STL 4										
	Noise through Component 1	0	0	0	0	0	0	0	0	0
	Noise through Component 2	0	0	0	0	0	0	0	0	0
	Noise through Component 3	0	0	0	0	0	0	0	0	0
	Noise through Component 4	0	0	0	0	0	0	0	0	0
	<b>NOISE THROUGH FAÇADE 4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SUMMARY OF RESULTS		<b>Noise Transmission Through Each Façade LAeq,Period [dB]</b>								
	<b>Frequency</b>	<b>63</b>	<b>125</b>	<b>250</b>	<b>500</b>	<b>1k</b>	<b>2k</b>	<b>4k</b>	<b>8k</b>	<b>Tot</b>
	Façade 1	23	23	12	12	13	7	1	0	27
	Façade 2	28	27	11	7	11	9	4	3	31
	Façade 3	34	31	14	7	7	7	7	5	36
	Façade 4	0	0	0	0	0	0	0	0	0
<b>CALCULATED INDOOR TRAFFIC NOISE LEVEL, LAeq, Period [dB]</b>		<b>35</b>	<b>33</b>	<b>17</b>	<b>14</b>	<b>16</b>	<b>13</b>	<b>10</b>	<b>8</b>	<b>37</b>