

# **Noise Impact Assessment**

## ***Cadence Residential Development***

### **Lots 336 & 349 on S3173 in Ripley**

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AV Jennings Properties Ltd


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Prepared by:	Matthew Keylock
Position:	Engineer - Acoustics
Signed:	
Date:	10 November 2020

Approved by:	Sasho Temelkoski RPEQ 13551
Position:	Manager - Acoustics
Signed:	
Date:	10 November 2020

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atf ATP Engineering Trust  
ABN: 95 634 079 845

**Gold Coast**  
34 Lakefront Crescent  
Varsity Lakes, QLD 4227  
Ph: (07) 5593 0487

**Brisbane**  
Studio 5, 33 Vulture Street  
West End QLD 4101  
Ph: 0499 015 150

**Perth**  
Suite 59, 102 Railway Street  
West Perth WA 6005  
Ph: (08) 9265 1424

E-mail: [admin@atpconsulting.com.au](mailto:admin@atpconsulting.com.au)  
Internet: [www.atpconsulting.com.au](http://www.atpconsulting.com.au)

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# Executive Summary

A master planned development is proposed within the boundaries of the Ripley Valley Priority Development Area (PDA) with a total site area of 19.62 ha over the land described as Lots 336 and 349 on S3173, Binnies Road and Daleys Road in Ripley.

Initially the proponent of the development was Rix Super Pty Ltd, and ATP Consulting was engaged to carry out a conceptual noise impact assessment (NIA). Issue 1 of the NIA report was prepared in May 2017 and was lodged in support of the Material Change of Use (MCU) application to Ipswich City Council (ICC). Since then, multiple iterations of the development layout have been subject of acoustic assessment either in response to information request by ICC or due to changes in the masterplan.

Issue 5 of this report is an update on the previous TNIA and considers the latest masterplan of the *Cadence* Residential Development (Revision U dated 24 September 2020).

The subject site is located outside the ANEF contours for RAAF Base Amberley and is not subject to any requirements for aircraft noise mitigation.

Within an ultimate design planning horizon, the road network in Ripley will be significantly upgraded. Binnies Road (west of Tempo Drive) and Daleys Road (or the new roads replacing them) are expected to become major collector roads. Some of the dwellings in the first row of allotments at the proposed subdivision, nearest to Tempo Drive, would be impacted by traffic noise. The traffic noise levels at the most exposed facades of the future dwellings are predicted to be up to 64dB(A) L<sub>10,18h</sub>.

The design of dwellings on the allotments that do not comply with the noise criteria (highlighted in Table 6.1 of this report) must have private open spaces (POS) located along the protected facades facing the rear laneways, or U-shaped courtyards protected from the traffic noise on the main roads.

With considerations of the dwelling type, the most pragmatic mitigation measures are deemed to be building envelope acoustic upgrade based on floor plan specific acoustic design at building approval stage. Considerations should be given during the building design stage of the traffic noise affected lots to locate noise insensitive areas towards the roads and position the outdoor living area along a shielded façade.

The building envelope of the dwellings to be constructed on the traffic noise affected allotments (refer to Table 7.1) should be constructed in accordance with AS3671-1989 to ensure compliance with the 1-hour maximum internal noise criteria from SDAP Code 1 (refer to Table 4.2). Alternatively, the dwellings can be constructed to achieve the minimum R<sub>w</sub> ratings as per Noise Category 2 of QDC MP4.4.

Provided the recommended planning and design noise control measures are implemented in the construction of *Cadence* residential development, there should be no further noise constraints to the establishment of the proposed development.

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## Acoustics Glossary

<b>A-weighting</b>	Correction to sound levels to mimic the response of the human ear at low sound frequencies.
<b>dB(A)</b>	The A-weighted sound pressure level.
<b>Hz (Hertz)</b>	Hertz is the standard measure of the frequency of oscillations in a wave motion. The frequency is most often measured in cycles per second (cps) or Hertz (Hz). Frequency of 1 Hz is one cycle per second.
<b>L<sub>Aeq,T</sub></b>	“Average-energy” sound level used in situations where sound varies over time. L <sub>Aeq,T</sub> is the A-weighted sound pressure level that has the same energy as the fluctuating sound over the time period T sec.
<b>L<sub>A01,T</sub></b>	Measure of the maximum sound level. L <sub>A01,T</sub> is a statistical parameter that is the A-weighted sound pressure level that is exceeded for 1% of the measurement time T.
<b>L<sub>A10,T</sub></b>	L <sub>A10,T</sub> is a statistical parameter that is the A-weighted sound pressure level that is exceeded for 10% of the measurement time T. Used as a traffic noise descriptor in Queensland.
<b>L<sub>A90,T</sub></b>	Background sound level. L <sub>A90,T</sub> is a statistical parameter that is the A-weighted sound pressure level that is exceeded for 90% of the measurement time T.
<b>Noise</b>	Unwanted sound.
<b>Sound power</b>	The sound energy radiated per unit time by a sound source, measured in Watts (W).
<b>Sound Power Level, L<sub>w</sub> (SWL)</b>	Logarithmic measure of sound power on a decibel scale, referenced to the human hearing threshold of $1 \times 10^{-12}$ W.
<b>Sound pressure</b>	The fluctuations in air, measured in Pascals (Pa).
<b>Sound Pressure Level, L<sub>p</sub> (SPL)</b>	Logarithmic measure of sound pressure on a decibel scale, referenced to the human hearing threshold of $2 \times 10^{-5}$ Pa.
<b>Weighted Sound Reduction Index (R<sub>w</sub>)</b>	A single-number quantity which characterises the airborne sound insulation of a material or building element over a range of frequencies.

# 1. Introduction

## 1.1 Project Background

A master planned development is proposed within the boundaries of the Ripley Valley Priority Development Area (PDA) with a total site area of 19.62 ha over the land described as Lots 336 and 349 on S3173, Binnies Road and Daleys Road in Ripley. Initially the proponent of the development was Rix Super Pty Ltd, and ATP Consulting was engaged to carry out a conceptual noise impact assessment (NIA). Issue 1 of the NIA report was prepared in May 2017 and was lodged in support of the Material Change of Use (MCU) application to Ipswich City Council (ICC). Since then, multiple iterations of the development layout have been subject of acoustic assessment either in response to information request by ICC or due to changes in the masterplan.

Issue 5 of this report is an update on the previous TNIA and considers the latest masterplan of the *Cadence Residential Development* (Revision U dated 24 September 2020).

## 1.2 Study Objectives

Study objectives are as follows:

- Identification of the noise constraints that are applicable to the proposed development.
- Development of a 3D model of the proposed development site, based on site specific terrain survey information, using advanced sound propagation modelling software SoundPLAN. The model considers the topography of the site and the modified plan of development with particular emphasis on the residential allotments nearest to Binnies Road, Daleys Road and the future access road through the middle of the site.
- Consideration of future traffic flows along the assessed roads considering ultimate scenario of fully established *Cadence Residential Development*.
- Prediction of traffic noise levels ( $L_{10(18\text{-hour})}$ ) at the proposed development considering ultimate design traffic flow scenario. The traffic noise propagation modelling results are presented as noise contour maps over the whole of the proposed development site clearly identifying where the relevant road traffic noise criteria are exceeded to identify the zones of potential traffic noise impact.
- Noise contour maps are provided for receivers at representative heights, reflecting the height of low-set and high-set houses likely to be constructed in this type of development.
- Recommendation of traffic noise mitigation measures based on acoustic treatment to the traffic noise affected dwellings and appropriate buildings orientation to protect the noise amenity of the private open spaces (formal outdoor areas).



### 1.3 Site Description

The proposed development is located at 143 to 163 Daleys Road and 145 Binnies Road in Ripley on the land described as Lots 336 and 349 on S3173. The land, with a total area of 19.62 ha, is within the boundaries of the Ripley Valley Priority Development Area (PDA). Under the Ipswich Planning Scheme, the land is currently zoned as “Future Urban”.

The location of the subject site is presented in Figures 1.1 and 1.2.



Figure 1.1 Site Location



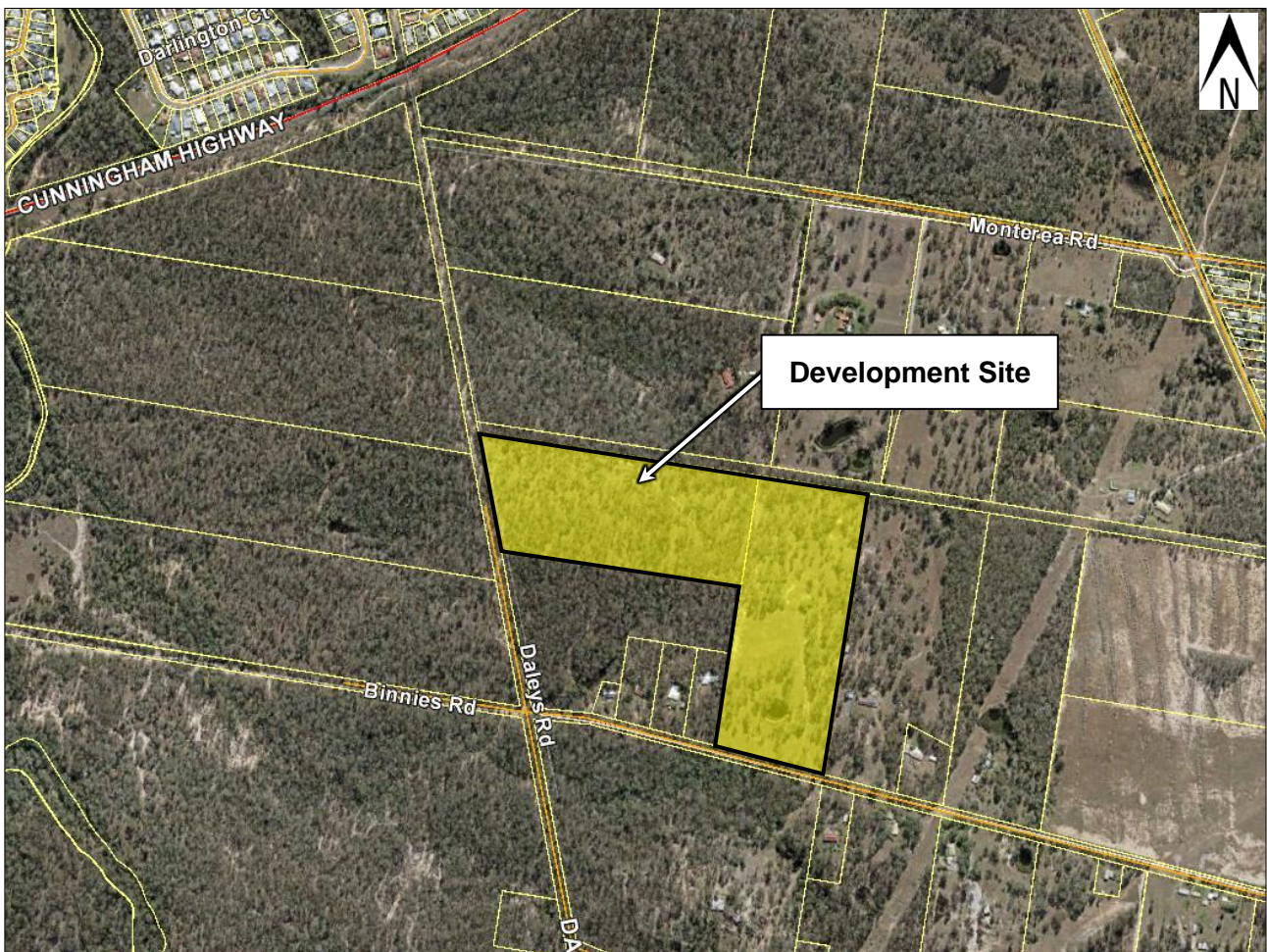


Figure 1.2 Development Site

## 1.4 Development Description

The proposed development site is to be subdivided into 323 residential allotments with 339 total dwellings, park with an area of 5,004m<sup>2</sup> and park detention area of 9,313 m<sup>2</sup>.

The existing road infrastructure, including Binnies Road and Daleys Road, is currently unsealed tracks which carry minimal traffic. Significant upgrades to the road infrastructure and construction of new utilities and services will be required before the proposed subdivision can be established. Much of the land in the Ripley Valley area is currently undergoing, or in the near future will undergo, major development and transformation from bushland or rural residential into urban or suburban communities.

Ipswich City Council Planning and Development Department has advised that, should major residential development be established at the subject site, the road network would be completely redesigned and rebuilt at the detailed design stage of the development. Binnies Road and Daleys Road will cease to exist and will be replaced by new or upgraded suburban collector roads servicing these new developments.

The proposed plan of development, as proposed by AV Jennings Properties Ltd, Revision U dated 24 September 2020, is presented in Appendix A.

## 2. Acoustic Constraints

### 2.1 Overview

ATP Consulting Engineers carried out site-specific and desktop analysis of the general environmental noise constraints in the wider area around the proposed development site. A list of noise sources and their potential for impact on the development is presented in Table 2.1.

**Table 2.1 Noise Constraints**

Environmental Noise Sources	Description	Noise Impact	Comments
Traffic Noise	Cunningham Highway and Centenary Highway	No	The site is not located within the transport noise corridors or Cunningham Highway or Centenary Highway. Therefore, the site is not impacted by traffic noise from these highways.
Traffic Noise	Future suburban collector roads (currently named Binnies Road and Daleys Road and Tempo Drive connecting Binnies Road to the development north of the site)	Yes	The subject site and surrounding developments will be serviced by suburban collector roads that will potentially carry a large number of vehicles. Future dwellings built in close proximity to these roads have a potential to be impacted by traffic noise.
Aircraft Noise	RAAF Base Amberley	No	The site is located 6km from the nearest airport (RAAF Base Amberley) and is outside the applicable ANEF contours. Therefore, the site is not impacted by aircraft noise.

### 2.2 Traffic Noise – Transport Noise Corridors

Department of Transport and Main Roads (TMR) and the Department of Infrastructure, Local Government and Planning (DILGP) have designated a number of state-controlled roads in Queensland as 'Transport Noise Corridors'. Centenary Highway and Cunningham Highway are State-controlled Roads and are designated as transport noise corridors according to DILGP's SPP Interactive Mapping System.

Under the Queensland Development Code (QDC) MP4.4 (*Buildings in a Transport Noise Corridor*), any noise sensitive developments located within the zone of traffic noise impact of a Transport Noise Corridor have to be designed for prevention of noise ingress. The zone of traffic noise impact is dependent on the type of road and number of vehicles and may extent as far as 250 metres on both sides from a major road (e.g. Pacific Motorway).

The subject site is located 650m away from the Cunningham Highway and 1,130m away from the Centenary Highway. Therefore, the site is not impacted by traffic noise from these highways.

The location of the proposed development site relative to the transport noise corridors of Centenary Highway and Cunningham Highway is presented in Figure 2.1.



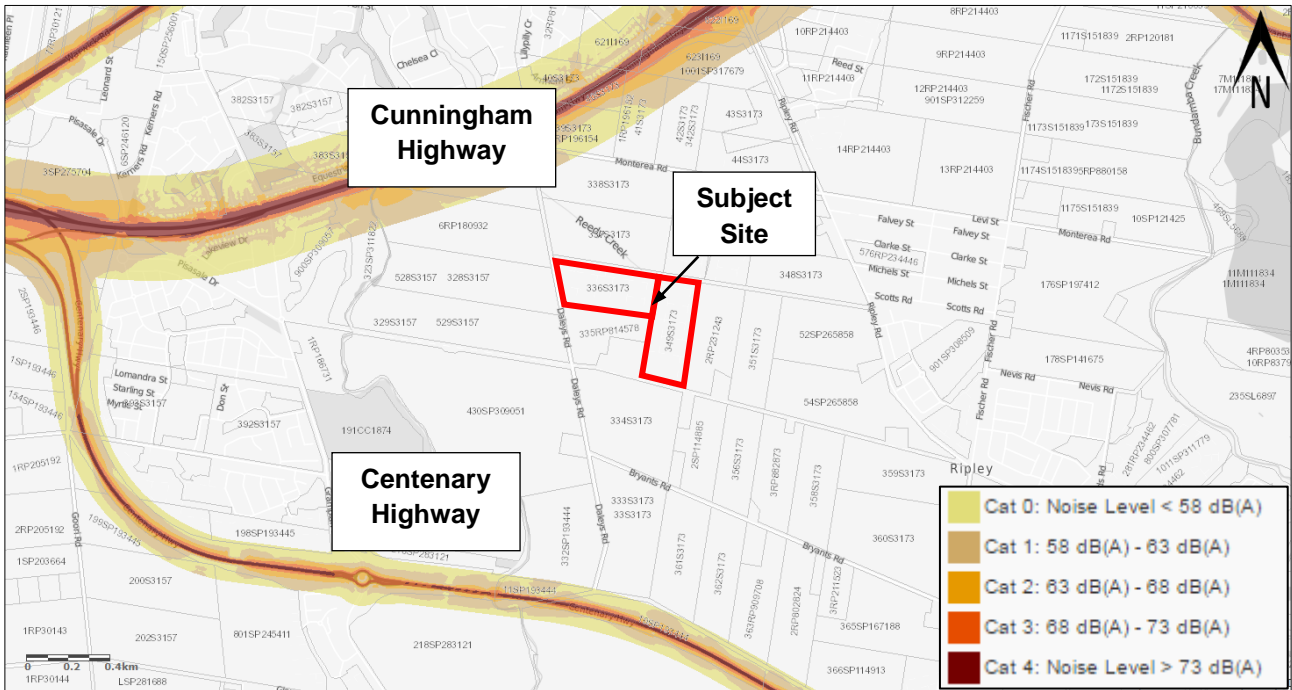


Figure 2.1 Subject Site Relative to Designated Transport Noise Corridors (QDC Extract)

### 2.3 Aircraft Noise

The subject site is located 6km from RAAF Base Amberley and is outside of the designated ANEF contours, as presented in Figure 2.2.

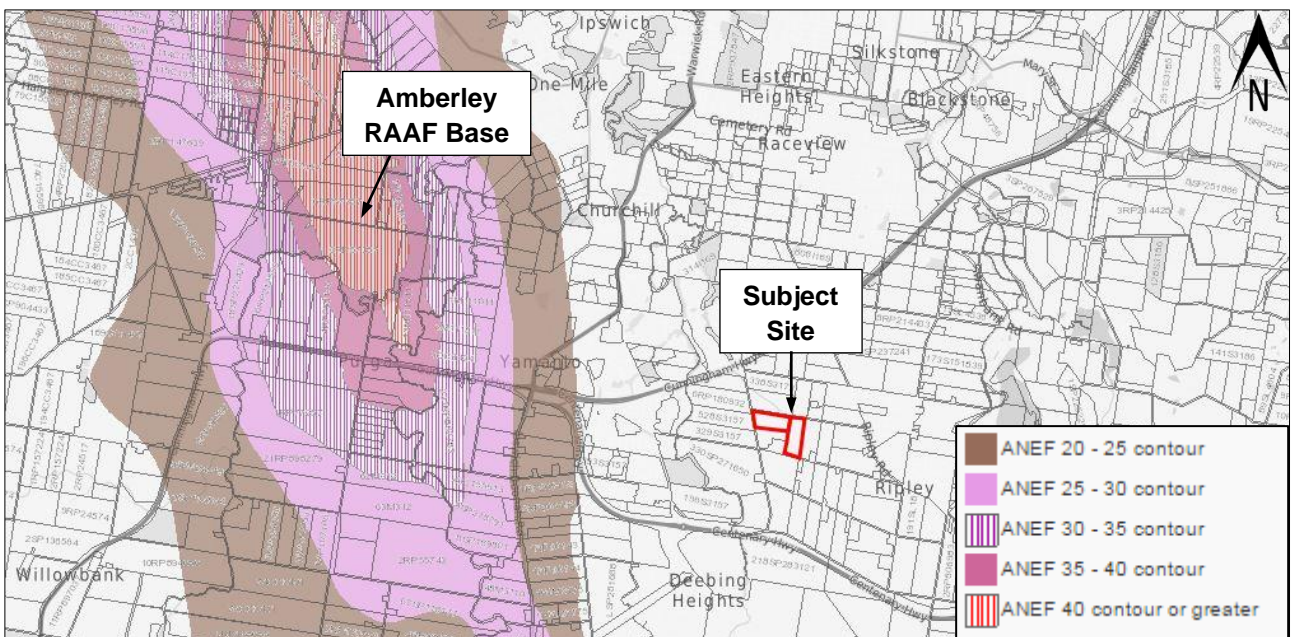


Figure 2.2 Subject Site Relative to RAAF Base Amberley

In accordance with *Ipswich Planning Scheme Part 11 – Overlays, Table 11.4.2, Specific Outcomes and Probable Solutions for Defence Facilities*, dwellings located outside the ANEF contours are not subject to acoustic design requirements.

### 3. Existing Noise Amenity

The subject site is currently rural land and bushland. There is minimal traffic or aircraft noise, and the noise amenity is typical of rural areas in Australia. Due to limited access to the subject site and lack of any site-specific noise sources of interest, ATP has not carried out noise monitoring at the subject site.

ATP refers to long term noise monitoring carried out previously at a similar rural area located in White Rock, also situated in the Ripley Valley PDA.

#### 3.1 Noise Measurement Location

Noise measurements have been carried out in bushland at White Rock to obtain information about the ambient noise levels. Unattended noise monitoring using noise loggers was carried out at two locations between 6 and 13 October 2016.

The noise measurement locations are listed in Table 3.1.

**Table 3.1 Noise Measurement Location**

Location	Distance from Centenary Highway	Coordinates	
Loc. 1	~ 396m	27°41'4.00"S	152°50'11.00"E
Loc. 2	~ 1,240m	27°41'29.83"S	152°50'24.90"E

The measurement locations, overlaid on a map of the Ripley Valley PDA, are presented in Figure 3.1.

Appendix B includes photos showing the noise loggers as they were installed in the bushland at White Rock in October 2016.



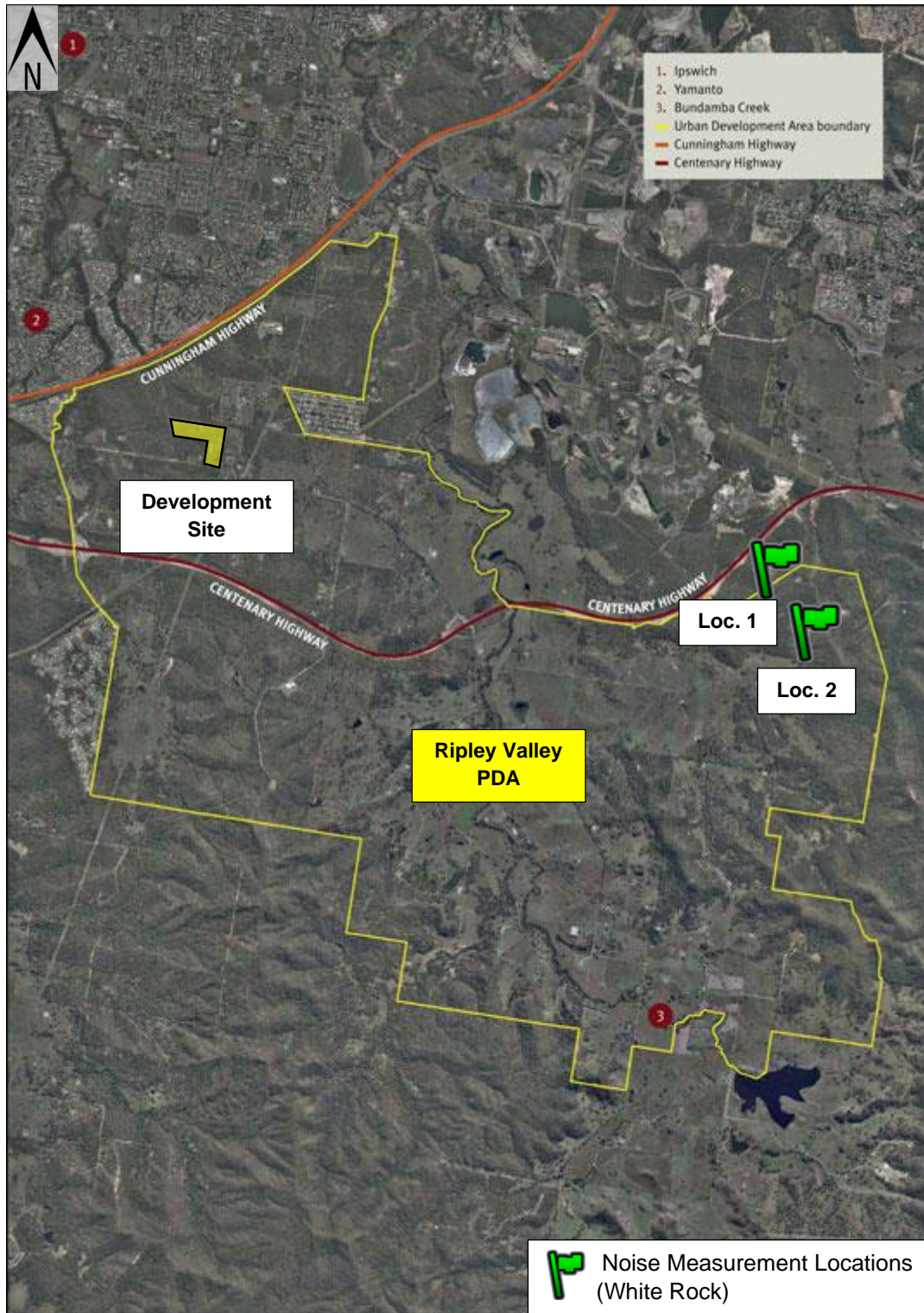


Figure 3.1 Noise Measurement Locations – Ripley Valley PDA



### 3.2 Equipment Used

The noise measurements were carried out using the equipment presented in Table 3.2.

**Table 3.2 Measurement Equipment**

Location	Unattended Measurements
Location 1	ARL Ngara (S/N 8780d4)
Location 2	ARL Ngara (S/N 8780d2)

The noise measurement instruments conform to ASIEC61672.1-2004 and the measurements were undertaken in accordance with AS1055-1997 and AS2702-1984. Calibration was performed during set up and download of the data from the noise measurement instruments with a calibration drift of <0.2 dB(A).

### 3.3 Meteorological Conditions

The prevailing meteorological conditions during the noise measurement period were fine with light winds and temperatures ranging from 6 to 32 °C.

Meteorological data over the noise measurement period is presented in Appendix C.

### 3.4 Noise Measurement Results

The results of the noise measurements undertaken from 6 to 13 October 2016 are presented in Table 3.3 and in Appendix D.

**Table 3.3 Unattended Noise Measurement Results**

Date	Environmental Noise Levels					
	L <sub>10</sub> (18-hour) dB(A)		L <sub>90</sub> (18-hour) dB(A)		L <sub>90</sub> (8-hour) dB(A)	
	Loc. 1	Loc. 2	Loc. 1	Loc. 2	Loc. 1	Loc. 2
06 October 2016 (Thursday)	36	46	30	38	26	42
07 October 2016 (Friday)	39	47	32	40	28	47
08 October 2016 (Saturday)	37	46	31	39	26	47
09 October 2016 (Sunday)	38	46	29	37	25	44
10 October 2016 (Monday)	39	45	32	38	28	48
11 October 2016 (Tuesday)	-	47	-	39	-	47
12 October 2016 (Wednesday)	-	46	-	36	-	40
13 October 2016 (Thursday)	-	47	-	38	-	41
<b>Average</b>	<b>38</b>	<b>46</b>	<b>31</b>	<b>38</b>	<b>27</b>	<b>44</b>

The predominant noise sources observed at Locations 1 and 2 were natural sounds from the surrounding bushland, such as birds and insects. Traffic noise from Centenary Highway was inaudible at Location 2 and could only be heard as a very quiet, distant hum at Location 1.

The night-time background ( $L_{A90}$ ) noise levels at Location 1 were very low which is typical of rural areas. The night-time background noise levels at Location 2 were significantly higher, because Location 2 is near a dam and there was a chorus of frogs and insects from sunset until the early hours of the morning.

Australian Standard AS1055.2-1997 Appendix A provides typical noise levels for various residential areas in Australia. The background noise levels at rural/bushland areas (except those near dams or watercourses influenced by loud chorus of frogs and insects) usually corresponds to Noise Area Category R1 (Areas with negligible transportation) from AS1055.2-1997.

The definitions of Noise Area Category R1 is presented in Table 3.4.

**Table 3.4 Noise Area Category**

Noise Area Category	Average background A-weighted sound pressure level, $L_{A90,T}$					
	Monday to Saturday			Sundays and public holidays		
	0700-1800	1800-2200	2200-0700	0900-1800	1800-2200	2200-0900
<b>R1</b> - Areas with negligible transportation	40	35	30	40	35	30
<b>R2</b> - Areas with low density transportation	45	40	35	45	40	35
<b>R3</b> - Areas with medium density transportation or some commerce or industry	50	45	40	50	45	40

## 4. Traffic Noise Criteria

### 4.1 Traffic Noise Assessment Criteria

Under the *Ipswich Planning Scheme Part 12 – Reconfiguring A Lot Code*, Table 12.5.2 – *Specific Outcomes and Probable Solutions for Moderate and Major Subdivisions*, Specific Outcome 12, the road traffic noise criteria is based on the Department of Transport and Main Roads (TMR) criteria presented in the *Road Traffic Noise Management: Code of Practice*.

The relevant traffic noise criteria are based on the State Development Assessment Provisions (SDAP) State Code 1: *Development in a state-controlled road environment* and is presented in Table 4.1.

**Table 4.1 External Traffic Noise Criteria**

Transport infrastructure	Development type	Location within Development	Environmental Criteria
State-controlled Road	Accommodation activities <sup>1</sup>	All façades	≤60dB(A) L <sub>10</sub> (18hr) façade corrected (measured L <sub>90</sub> (8hr) free field between 10pm and 6am ≤ 40dB(A))
			≤63dB(A) L <sub>10</sub> (18hr) façade corrected (measured L <sub>90</sub> (8hr) free field between 10pm and 6am > 40dB(A))
	Residential care facilities	Private open spaces/Passive recreation areas	≤57dB(A) L <sub>10</sub> (18hr) free field (measured L <sub>90</sub> (18hr) free field between 6am and midnight ≤ 45dB(A))
			≤60dB(A) L <sub>10</sub> (18hr) free field (measured L <sub>90</sub> (18hr) free field between 6am and midnight > 45dB(A))

The existing background noise levels at night-time, in terms of the L<sub>90</sub>(8hr) noise descriptor, are generally below 40dB(A) which is typical of rural bushland. However, after the development is established the noise environment will transition from rural to urban and the night-time background noise levels are expected to exceed 40dB(A).

Therefore, the applicable traffic noise criteria are:

- Building facades (façade adjusted<sup>2</sup>): 63 dB(A) L<sub>10</sub>(18hr); and
- Private open spaces (free-field<sup>3</sup>): 60 dB(A) L<sub>10</sub>(18hr).

<sup>1</sup> Definition of accommodation activity from SDAP includes residential dwellings, relocatable home park, residential care/retirement facility, tourist park and short-term accommodation, among others.

<sup>2</sup> The façade adjusted noise criterion contains +2.5dB(A) adjustment factor for the sound energy reflected from the hard surface of a typical building. This adjustment factor is applicable for areas within 3m from a hard-reflective vertical surface.

<sup>3</sup> "Free-field" refers to open space with no reflected noise.

## 4.2 Internal Noise Criteria

In case of exceedance of the relevant external criterion, any future noise sensitive land uses<sup>4</sup> have to be designed and constructed to prevent traffic noise ingress. The internal noise criteria are specified in SDAP State Code 1: *Development in a state-controlled road environment*.

Table 1.2.2: *Environmental Emissions* from SDAP State Code 1, specifies that residential buildings are designed and constructed using materials which ensure that habitable rooms meet the internal noise criteria, as presented in Table 4.2.

**Table 4.2 Residential Internal Design Sound Levels**

Type of occupancy	Noise Level
Habitable Rooms	≤ 35 dB(A) Leq (1 hour) (maximum hour over 24 hours)

If the design of the traffic noise impacted residential building is carried out based on measurement of the traffic noise levels on site, the noise levels are to be measured in accordance with AS1055.1–1997 *Acoustics – Description and measurement of environmental noise*.

The above noise criteria (external and internal noise criteria) were discussed and agreed with Ipswich City Council officers on the meeting held on 28 July 2017.

<sup>4</sup> Noise sensitive land uses are dwellings, educational facilities, community facilities, medical centres and places of worship.

## 5. Traffic Noise Calculation Methodology

Traffic noise impacts on the proposed development, within an ultimate planning horizon (after the development is fully established), were calculated using SoundPLAN noise propagation modelling software.

SoundPLAN calculates traffic noise as per the procedure specified in the UK Department of Transport Welsh Office *Method of Calculation of Road Traffic Noise* (CoRTN'88). This is an accepted traffic noise calculation procedure applied widely in Australia.

### 5.1 Road Classifications

Description of the road classifications used in Australia are presented in Table 5.1.

**Table 5.1 Road Classifications**

Type of Road	Road Hierarchy	Vehicle speed	Typical number of vehicles per day
Motorway and arterial	Motorway	Up to 110km/h	Over 30,000
	Arterial	Up to 80km/h	20,000 to 30,000
Collector and distributor roads	Suburban route	Up to 80km/h	10,000 to 20,000
	District access	Up to 60km/h	3,000 to 10,000
Local roads	Neighbourhood access	Up to 50km/h	Less than 3,000
	Local access	Up to 50km/h	Less than 1,000

Binnies Road and Daleys Road will likely be upgraded as part of redevelopment of the Ripley Valley area, as discussed in Section 1.4 of this report.

The estimated annual average daily traffic (AADT) volumes have been based on an extract from the Jacobs Report "*Ripley Valley Priority Development Area Ipswich Strategic Transport Model Update – Phase 1 – Ultimate Development Scenario Summary Technical Note*" (Document Reference Number: IH124300-200-CT-TNE-0001 | Rev 2) which is presented in Appendix E.

The daily two-way volumes provided for Binnies Road, Daleys Road and the Tempo Drive, are assumed to be equivalent to the AADT and are provided in Table 5.2.

Local roads within the development are expected to carry less than 1,000 vehicles per day, therefore there will be no significant traffic noise impacts from the local roads.



## 5.2 Modelling Assumptions

The assumptions and data used in development of the traffic noise propagation model are presented in Table 5.2.

**Table 5.2 Data and Assumptions – Traffic Noise Model**

Parameter	Data/Assumptions
Traffic flows, year 2034	<ul style="list-style-type: none"> <li>• Binnies Road (East of Tempo Drive): 2,450 vehicles AADT</li> <li>• Binnies Road (West of Tempo Drive): 6,100 vehicles AADT</li> <li>• Daleys Road: 950 vehicles AADT</li> <li>• Tempo Drive (North to South): 7,150 vehicles AADT</li> </ul>
Vehicle speed	<ul style="list-style-type: none"> <li>• All roads - 60km/h</li> </ul>
Heavy vehicles	<ul style="list-style-type: none"> <li>• All roads - 5%</li> </ul>
Calculation Procedure	<ul style="list-style-type: none"> <li>• CoRTN (Calculation of Road Traffic Noise)</li> <li>• SoundPLAN grid spacing is 5m</li> </ul>
Road Traffic Volume for CoRTN procedure	<ul style="list-style-type: none"> <li>• The CoRTN procedure requires traffic volume data input for 18 hours. Traffic volume for 18-hour period (6:00am to midnight) was considered as 95% of the 24-hour AADT.</li> </ul>
Road Surface	<ul style="list-style-type: none"> <li>• Dense graded asphalt (DGA) for all roads, requiring no correction factor.</li> </ul>
Buildings	<ul style="list-style-type: none"> <li>• Future buildings at the development are omitted from the model.</li> </ul>
Receivers	<ul style="list-style-type: none"> <li>• Noise levels have been calculated at 1.8m AGL (Ground Floor) and 4.6m AGL (Upper Floor of a two-storey dwelling).</li> </ul> <p>Note: AGL – above ground level</p> <ul style="list-style-type: none"> <li>• <b>Building Façades:</b> Receptors were attached to the façades of the proposed building. Receptors are placed at a height of 1.5m above each floor level.</li> <li>• SoundPLAN adds +2.5dB(A) to the calculated noise levels when the receptors are attached to the buildings, thus the tabulated traffic noise levels are façade adjusted.</li> <li>• <b>Outdoor Play Areas:</b> Receptors were placed at 1.5m above ground level within the outdoor play areas (north, south and alfresco) at a free-field location.</li> <li>• 5m grid spacing was used for calculation of noise contour maps.</li> </ul>
Terrain	<ul style="list-style-type: none"> <li>• Existing ground surface contours of 0.5m interval were incorporated in the model.</li> </ul>
Noise Mitigation Measures	<ul style="list-style-type: none"> <li>• No noise barriers at the proposed development were considered in the model.</li> <li>• The location of the private open spaces is assumed to be located on the shielded side of the future dwellings.</li> </ul>

Excerpt from the SoundPLAN 3D noise propagation model is presented in Figure 5.1.

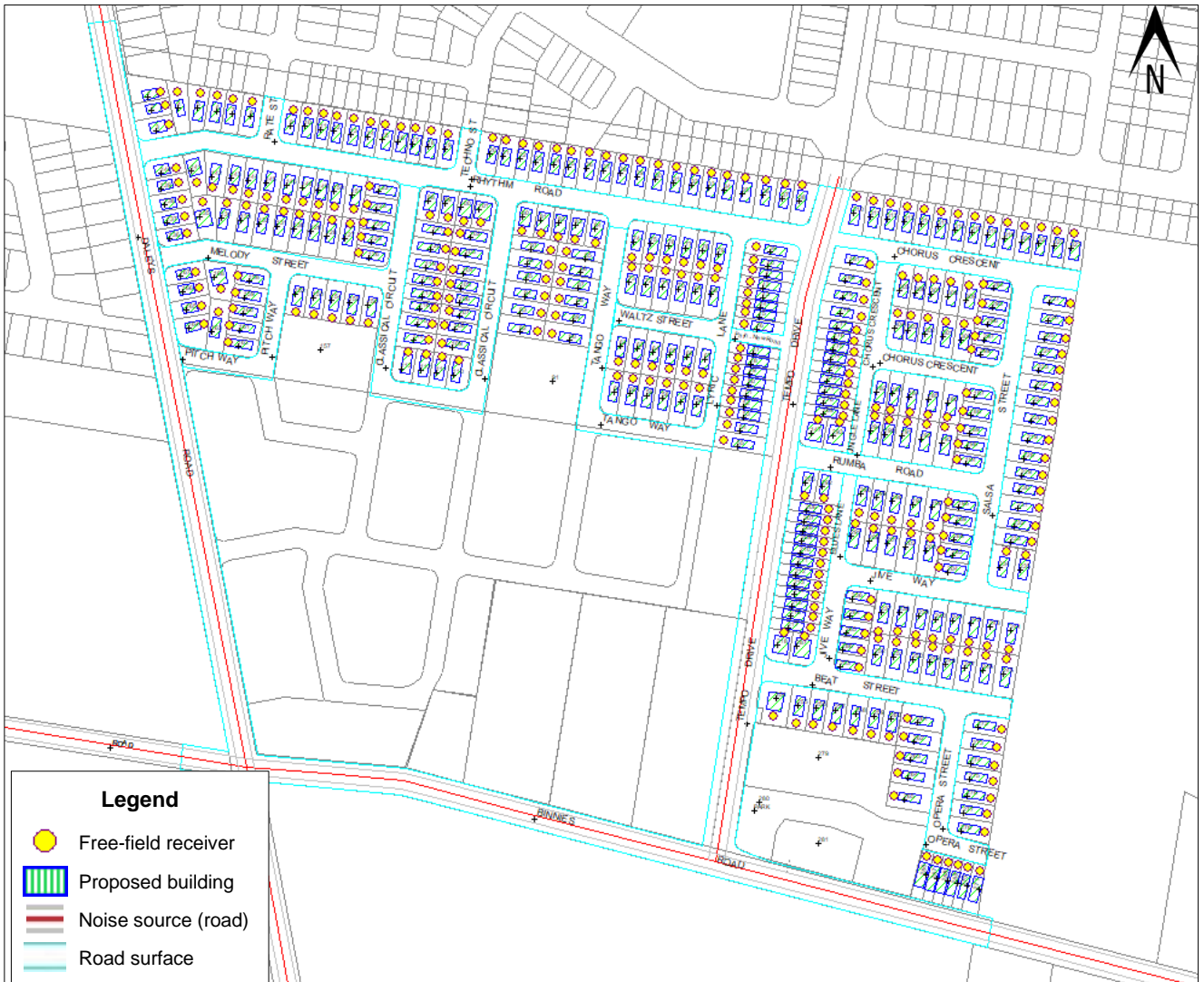


Figure 5.1 3D SoundPLAN 2034 Noise Contour Model Excerpt

## 6. Calculated Traffic Noise Levels

### 6.1 External Façades

The traffic noise levels at the ground and first floors, assessed against the external façade noise criteria, are presented in Table 6.1.

**Table 6.1 Traffic Noise Levels at Ground and First Floor Façades**

Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 1	53	Yes	55	Yes
Lot 2	53	Yes	55	Yes
Lot 3	53	Yes	55	Yes
Lot 4	45	Yes	46	Yes
Lot 5	42	Yes	44	Yes
Lot 6	41	Yes	43	Yes
Lot 7	40	Yes	42	Yes
Lot 8	38	Yes	41	Yes
Lot 9	37	Yes	39	Yes
Lot 10	36	Yes	38	Yes
Lot 11	36	Yes	38	Yes
Lot 12	36	Yes	38	Yes
Lot 13	36	Yes	38	Yes
Lot 14	36	Yes	38	Yes
Lot 15	36	Yes	38	Yes
Lot 16	36	Yes	38	Yes
Lot 17	36	Yes	38	Yes
Lot 18	38	Yes	39	Yes
Lot 19	38	Yes	39	Yes
Lot 20	38	Yes	40	Yes
Lot 21	38	Yes	40	Yes
Lot 22	39	Yes	40	Yes
Lot 23	38	Yes	40	Yes
Lot 24	39	Yes	40	Yes
Lot 25	39	Yes	41	Yes
Lot 26	39	Yes	41	Yes
Lot 27	40	Yes	42	Yes
Lot 28	40	Yes	42	Yes
Lot 29	41	Yes	43	Yes
Lot 30	41	Yes	43	Yes
Lot 31	42	Yes	44	Yes
Lot 32	42	Yes	45	Yes
Lot 33	44	Yes	46	Yes

Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 34	46	Yes	48	Yes
Lot 35	48	Yes	50	Yes
Lot 36	52	Yes	53	Yes
Lot 37	56	Yes	57	Yes
Lot 38	62	Yes	63	Yes
Lot 39	61	Yes	63	Yes
Lot 40	61	Yes	62	Yes
Lot 41	62	Yes	63	Yes
Lot 42	62	Yes	63	Yes
Lot 43	62	Yes	63	Yes
Lot 44	62	Yes	63	Yes
Lot 45	62	Yes	63	Yes
Lot 46	63	Yes	63	Yes
Lot 47	62	Yes	63	Yes
Lot 48	62	Yes	63	Yes
Lot 49	62	Yes	63	Yes
Lot 50	62	Yes	63	Yes
Lot 51	62	Yes	63	Yes
Lot 52	61	Yes	63	Yes
Lot 53	61	Yes	63	Yes
Lot 54	61	Yes	63	Yes
Lot 55	61	Yes	63	Yes
Lot 56	50	Yes	52	Yes
Lot 57	49	Yes	51	Yes
Lot 58	48	Yes	50	Yes
Lot 59	48	Yes	49	Yes
Lot 60	47	Yes	48	Yes
Lot 61	47	Yes	48	Yes
Lot 62	44	Yes	46	Yes
Lot 63	43	Yes	46	Yes
Lot 64	43	Yes	46	Yes
Lot 65	43	Yes	46	Yes
Lot 66	44	Yes	47	Yes
Lot 67	48	Yes	49	Yes
Lot 68	46	Yes	48	Yes
Lot 69	44	Yes	46	Yes
Lot 70	44	Yes	46	Yes
Lot 71	43	Yes	45	Yes
Lot 72	44	Yes	46	Yes
Lot 73	44	Yes	46	Yes

Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 74	41	Yes	43	Yes
Lot 75	42	Yes	44	Yes
Lot 76	43	Yes	45	Yes
Lot 77	44	Yes	46	Yes
Lot 78	45	Yes	48	Yes
Lot 79	47	Yes	49	Yes
Lot 80	40	Yes	42	Yes
Lot 81	39	Yes	42	Yes
Lot 82	40	Yes	42	Yes
Lot 83	39	Yes	42	Yes
Lot 84	41	Yes	43	Yes
Lot 85	41	Yes	43	Yes
Lot 86	41	Yes	43	Yes
Lot 87	42	Yes	44	Yes
Lot 88	42	Yes	44	Yes
Lot 89	42	Yes	45	Yes
Lot 90	44	Yes	45	Yes
Lot 91	0	Yes	0	Yes
Lot 92	45	Yes	46	Yes
Lot 93	43	Yes	44	Yes
Lot 94	43	Yes	44	Yes
Lot 95	42	Yes	44	Yes
Lot 96	42	Yes	44	Yes
Lot 97	41	Yes	44	Yes
Lot 98	38	Yes	39	Yes
Lot 99	37	Yes	40	Yes
Lot 100	39	Yes	40	Yes
Lot 101	41	Yes	42	Yes
Lot 102	42	Yes	44	Yes
Lot 103	43	Yes	45	Yes
Lot 104	44	Yes	45	Yes
Lot 105	43	Yes	45	Yes
Lot 106	44	Yes	45	Yes
Lot 107	45	Yes	45	Yes
Lot 108	45	Yes	45	Yes
Lot 109	45	Yes	46	Yes
Lot 110	47	Yes	47	Yes
Lot 111	47	Yes	47	Yes
Lot 112	47	Yes	48	Yes
Lot 113	47	Yes	48	Yes



Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 114	44	Yes	47	Yes
Lot 115	43	Yes	46	Yes
Lot 116	42	Yes	45	Yes
Lot 117	42	Yes	45	Yes
Lot 118	42	Yes	45	Yes
Lot 119	41	Yes	44	Yes
Lot 120	40	Yes	44	Yes
Lot 121	39	Yes	42	Yes
Lot 122	37	Yes	39	Yes
Lot 123	38	Yes	41	Yes
Lot 124	40	Yes	42	Yes
Lot 125	40	Yes	42	Yes
Lot 126	42	Yes	44	Yes
Lot 127	41	Yes	44	Yes
Lot 128	42	Yes	44	Yes
Lot 129	42	Yes	44	Yes
Lot 130	43	Yes	45	Yes
Lot 131	44	Yes	45	Yes
Lot 132	43	Yes	45	Yes
Lot 133	43	Yes	45	Yes
Lot 134	43	Yes	45	Yes
Lot 135	44	Yes	46	Yes
Lot 136	54	Yes	55	Yes
Lot 137	54	Yes	55	Yes
Lot 138	54	Yes	55	Yes
Lot 139	54	Yes	55	Yes
Lot 140	54	Yes	55	Yes
Lot 141	45	Yes	47	Yes
Lot 142	38	Yes	41	Yes
Lot 143	38	Yes	40	Yes
Lot 144	37	Yes	39	Yes
Lot 145	37	Yes	40	Yes
Lot 146	36	Yes	39	Yes
Lot 147	64	No	64	No
Lot 148	36	Yes	39	Yes
Lot 149	36	Yes	38	Yes
Lot 150	36	Yes	38	Yes
Lot 151	36	Yes	38	Yes
Lot 152	46	Yes	47	Yes
Lot 153	46	Yes	47	Yes

Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 154	46	Yes	47	Yes
Lot 155	46	Yes	46	Yes
Lot 156	46	Yes	47	Yes
Lot 157	0	Yes	0	Yes
Lot 158	44	Yes	45	Yes
Lot 159	44	Yes	45	Yes
Lot 160	45	Yes	45	Yes
Lot 161	45	Yes	46	Yes
Lot 162	50	Yes	50	Yes
Lot 163	52	Yes	52	Yes
Lot 164	54	Yes	55	Yes
Lot 165	54	Yes	55	Yes
Lot 166	54	Yes	55	Yes
Lot 167	54	Yes	55	Yes
Lot 168	45	Yes	47	Yes
Lot 169	61	Yes	62	Yes
Lot 170	61	Yes	63	Yes
Lot 171	61	Yes	63	Yes
Lot 172	61	Yes	63	Yes
Lot 173	61	Yes	63	Yes
Lot 174	61	Yes	63	Yes
Lot 175	61	Yes	63	Yes
Lot 176	61	Yes	63	Yes
Lot 177	61	Yes	63	Yes
Lot 178	62	Yes	63	Yes
Lot 179	62	Yes	63	Yes
Lot 180	62	Yes	63	Yes
Lot 181	62	Yes	63	Yes
Lot 182	43	Yes	45	Yes
Lot 183	40	Yes	43	Yes
Lot 184	40	Yes	42	Yes
Lot 185	39	Yes	41	Yes
Lot 186	39	Yes	41	Yes
Lot 187	39	Yes	41	Yes
Lot 188	39	Yes	41	Yes
Lot 189	39	Yes	41	Yes
Lot 190	45	Yes	47	Yes
Lot 191	44	Yes	46	Yes
Lot 192	43	Yes	45	Yes
Lot 193	42	Yes	44	Yes

Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 194	42	Yes	43	Yes
Lot 195	42	Yes	44	Yes
Lot 196	42	Yes	44	Yes
Lot 197	43	Yes	45	Yes
Lot 198	44	Yes	47	Yes
Lot 199	45	Yes	47	Yes
Lot 200	43	Yes	45	Yes
Lot 201	43	Yes	45	Yes
Lot 202	42	Yes	44	Yes
Lot 203	42	Yes	44	Yes
Lot 204	42	Yes	43	Yes
Lot 205	63	Yes	63	Yes
Lot 206	62	Yes	63	Yes
Lot 207	62	Yes	63	Yes
Lot 208	62	Yes	63	Yes
Lot 209	62	Yes	63	Yes
Lot 210	62	Yes	63	Yes
Lot 211	62	Yes	63	Yes
Lot 212	62	Yes	63	Yes
Lot 213	62	Yes	63	Yes
Lot 214	62	Yes	63	Yes
Lot 215	62	Yes	63	Yes
Lot 216	62	Yes	63	Yes
Lot 217	61	Yes	63	Yes
Lot 218	63	No	64	No
Lot 219	38	Yes	40	Yes
Lot 220	38	Yes	39	Yes
Lot 221	38	Yes	39	Yes
Lot 222	39	Yes	40	Yes
Lot 223	38	Yes	39	Yes
Lot 224	38	Yes	39	Yes
Lot 225	39	Yes	40	Yes
Lot 226	39	Yes	40	Yes
Lot 227	38	Yes	40	Yes
Lot 228	39	Yes	40	Yes
Lot 229	40	Yes	41	Yes
Lot 230	40	Yes	42	Yes
Lot 231	41	Yes	42	Yes
Lot 232	39	Yes	41	Yes
Lot 233	40	Yes	42	Yes

Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 234	41	Yes	43	Yes
Lot 235	41	Yes	42	Yes
Lot 236	44	Yes	46	Yes
Lot 237	43	Yes	45	Yes
Lot 238	42	Yes	45	Yes
Lot 239	42	Yes	45	Yes
Lot 240	42	Yes	45	Yes
Lot 241	42	Yes	45	Yes
Lot 242	42	Yes	45	Yes
Lot 243	42	Yes	45	Yes
Lot 244	42	Yes	44	Yes
Lot 245	45	Yes	47	Yes
Lot 246	46	Yes	47	Yes
Lot 247	45	Yes	47	Yes
Lot 248	45	Yes	47	Yes
Lot 249	45	Yes	47	Yes
Lot 250	46	Yes	47	Yes
Lot 251	45	Yes	47	Yes
Lot 252	44	Yes	46	Yes
Lot 253	50	Yes	51	Yes
Lot 254	62	Yes	64	No
Lot 255	54	Yes	56	Yes
Lot 256	52	Yes	54	Yes
Lot 257	50	Yes	52	Yes
Lot 258	49	Yes	51	Yes
Lot 259	48	Yes	50	Yes
Lot 260	48	Yes	50	Yes
Lot 261	44	Yes	47	Yes
Lot 262	48	Yes	49	Yes
Lot 263	48	Yes	50	Yes
Lot 264	49	Yes	50	Yes
Lot 265	50	Yes	51	Yes
Lot 266	59	Yes	60	Yes
Lot 267	59	Yes	60	Yes
Lot 268	59	Yes	60	Yes
Lot 269	59	Yes	60	Yes
Lot 270	59	Yes	60	Yes
Lot 271	59	Yes	60	Yes
Lot 272	46	Yes	48	Yes
Lot 273	45	Yes	48	Yes

Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 274	46	Yes	48	Yes
Lot 275	47	Yes	49	Yes
Lot 276	47	Yes	49	Yes
Lot 277	49	Yes	50	Yes
Lot 278	50	Yes	51	Yes
Lot 282	44	Yes	45	Yes
Lot 283	41	Yes	43	Yes
Lot 284	44	Yes	45	Yes
Lot 285	45	Yes	46	Yes
Lot 286	48	Yes	49	Yes
Lot 287	55	Yes	56	Yes
Lot 288	41	Yes	43	Yes
Lot 289	40	Yes	42	Yes
Lot 290	47	Yes	49	Yes
Lot 291	44	Yes	46	Yes
Lot 292	54	Yes	55	Yes
Lot 293	54	Yes	55	Yes
Lot 294	46	Yes	49	Yes
Lot 295	37	Yes	40	Yes
Lot 296	40	Yes	42	Yes
Lot 297	39	Yes	41	Yes
Lot 298	39	Yes	41	Yes
Lot 299	39	Yes	40	Yes
Lot 300	40	Yes	42	Yes
Lot 301	41	Yes	43	Yes
Lot 302	42	Yes	44	Yes
Lot 303	43	Yes	45	Yes
Lot 304	44	Yes	45	Yes
Lot 305	49	Yes	49	Yes
Lot 306	47	Yes	48	Yes
Lot 307	45	Yes	46	Yes
Lot 308	45	Yes	46	Yes
Lot 309	43	Yes	44	Yes
Lot 310	64	No	64	No
Lot 311	55	Yes	56	Yes
Lot 312	51	Yes	52	Yes
Lot 313	49	Yes	50	Yes
Lot 314	47	Yes	48	Yes
Lot 315	45	Yes	46	Yes
Lot 316	44	Yes	45	Yes



Receiver	Ground Floor Noise Levels		First Floor Noise Levels	
	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 external façade criteria:</i>	63		63	
Lot 317	43	Yes	44	Yes
Lot 318	42	Yes	43	Yes
Lot 319	42	Yes	43	Yes
Lot 320	41	Yes	42	Yes
Lot 321	40	Yes	41	Yes
Lot 322	40	Yes	41	Yes
Lot 323	40	Yes	40	Yes

## 6.2 Private Open Spaces

The traffic noise levels at the private open spaces, assessed against the private open space noise criteria, are presented in Table 6.2.

**Table 6.2 Traffic Noise Levels at Private Open Spaces**

Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 1_POS	38	Yes
Lot 2_POS	34	Yes
Lot 3_POS	33	Yes
Lot 4_POS	38	Yes
Lot 5_POS	36	Yes
Lot 6_POS	34	Yes
Lot 7_POS	32	Yes
Lot 8_POS	31	Yes
Lot 9_POS	30	Yes
Lot 10_POS	29	Yes
Lot 11_POS	29	Yes
Lot 12_POS	29	Yes
Lot 13_POS	29	Yes
Lot 14_POS	28	Yes
Lot 15_POS	28	Yes
Lot 16_POS	28	Yes
Lot 17_POS	28	Yes
Lot 18_POS	28	Yes
Lot 19_POS	29	Yes
Lot 20_POS	29	Yes
Lot 21_POS	29	Yes
Lot 22_POS	29	Yes

Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 23_POS	29	Yes
Lot 24_POS	29	Yes
Lot 25_POS	29	Yes
Lot 26_POS	30	Yes
Lot 27_POS	30	Yes
Lot 28_POS	30	Yes
Lot 29_POS	30	Yes
Lot 30_POS	31	Yes
Lot 31_POS	31	Yes
Lot 32_POS	32	Yes
Lot 33_POS	33	Yes
Lot 34_POS	34	Yes
Lot 35_POS	35	Yes
Lot 36_POS	39	Yes
Lot 37_POS	42	Yes
Lot 38_POS	49	Yes
Lot 39_POS	42	Yes
Lot 40_POS	35	Yes
Lot 41_POS	35	Yes
Lot 42_POS	35	Yes
Lot 43_POS	35	Yes
Lot 44_POS	35	Yes
Lot 45_POS	35	Yes
Lot 46_POS	40	Yes
Lot 47_POS	38	Yes
Lot 48_POS	36	Yes
Lot 49_POS	36	Yes
Lot 50_POS	36	Yes
Lot 51_POS	37	Yes
Lot 52_POS	38	Yes
Lot 53_POS	39	Yes
Lot 54_POS	41	Yes
Lot 55_POS	44	Yes
Lot 56_POS	37	Yes
Lot 57_POS	34	Yes
Lot 58_POS	33	Yes
Lot 59_POS	33	Yes
Lot 60_POS	32	Yes
Lot 61_POS	33	Yes
Lot 62_POS	36	Yes
Lot 63_POS	34	Yes

Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 64_POS	34	Yes
Lot 65_POS	35	Yes
Lot 66_POS	35	Yes
Lot 67_POS	39	Yes
Lot 68_POS	36	Yes
Lot 69_POS	35	Yes
Lot 70_POS	33	Yes
Lot 71_POS	32	Yes
Lot 72_POS	32	Yes
Lot 73_POS	32	Yes
Lot 74_POS	34	Yes
Lot 75_POS	33	Yes
Lot 76_POS	33	Yes
Lot 77_POS	33	Yes
Lot 78_POS	35	Yes
Lot 79_POS	37	Yes
Lot 80_POS	32	Yes
Lot 82_POS	33	Yes
Lot 83_POS	32	Yes
Lot 84_POS	33	Yes
Lot 85_POS	32	Yes
Lot 86_POS	33	Yes
Lot 87_POS	33	Yes
Lot 88_POS	33	Yes
Lot 89_POS	34	Yes
Lot 90_POS	35	Yes
Lot 91_POS	0	Yes
Lot 92_POS	36	Yes
Lot 93_POS	34	Yes
Lot 94_POS	34	Yes
Lot 95_POS	34	Yes
Lot 96_POS	33	Yes
Lot 97_POS	33	Yes
Lot 98_POS	29	Yes
Lot 99_POS	31	Yes
Lot 100_POS	30	Yes
Lot 101_POS	31	Yes
Lot 102_POS	29	Yes
Lot 103_POS	30	Yes
Lot 104_POS	30	Yes
Lot 105_POS	31	Yes

Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 106_POS	31	Yes
Lot 107_POS	30	Yes
Lot 108_POS	31	Yes
Lot 109_POS	31	Yes
Lot 110_POS	35	Yes
Lot 111_POS	30	Yes
Lot 112_POS	29	Yes
Lot 113_POS	31	Yes
Lot 114_POS	34	Yes
Lot 115_POS	33	Yes
Lot 116_POS	32	Yes
Lot 117_POS	32	Yes
Lot 118_POS	32	Yes
Lot 119_POS	32	Yes
Lot 120_POS	31	Yes
Lot 121_POS	30	Yes
Lot 122_POS	28	Yes
Lot 123_POS	28	Yes
Lot 124_POS	30	Yes
Lot 125_POS	31	Yes
Lot 126_POS	32	Yes
Lot 127_POS	27	Yes
Lot 128_POS	27	Yes
Lot 129_POS	28	Yes
Lot 130_POS	28	Yes
Lot 131_POS	28	Yes
Lot 132_POS	28	Yes
Lot 133_POS	29	Yes
Lot 134_POS	30	Yes
Lot 135_POS	33	Yes
Lot 136_POS	38	Yes
Lot 137_POS	32	Yes
Lot 139_POS	31	Yes
Lot 140_POS	37	Yes
Lot 141_POS	34	Yes
Lot 142_POS	31	Yes
Lot 143_POS	31	Yes
Lot 144_POS	30	Yes
Lot 145_POS	30	Yes
Lot 146_POS	30	Yes
Lot 147_POS	48	Yes

Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 148_POS	29	Yes
Lot 149_POS	29	Yes
Lot 150_POS	29	Yes
Lot 151_POS	30	Yes
Lot 152_POS	38	Yes
Lot 153_POS	38	Yes
Lot 154_POS	37	Yes
Lot 155_POS	37	Yes
Lot 156_POS	37	Yes
Lot 157_POS	0	Yes
Lot 158_POS	34	Yes
Lot 159_POS	35	Yes
Lot 160_POS	36	Yes
Lot 161_POS	38	Yes
Lot 162_POS	42	Yes
Lot 163_POS	33	Yes
Lot 164_POS	41	Yes
Lot 165_POS	37	Yes
Lot 166_POS	36	Yes
Lot 167_POS	36	Yes
Lot 168_POS	37	Yes
Lot 169_POS	34	Yes
Lot 170_POS	34	Yes
Lot 171_POS	33	Yes
Lot 172_POS	33	Yes
Lot 173_POS	33	Yes
Lot 174_POS	34	Yes
Lot 175_POS	34	Yes
Lot 176_POS	34	Yes
Lot 177_POS	34	Yes
Lot 178_POS	34	Yes
Lot 179_POS	36	Yes
Lot 180_POS	34	Yes
Lot 181_POS	37	Yes
Lot 182_POS	35	Yes
Lot 183_POS	33	Yes
Lot 184_POS	33	Yes
Lot 185_POS	33	Yes
Lot 186_POS	32	Yes
Lot 187_POS	31	Yes
Lot 188_POS	30	Yes

Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 189_POS	32	Yes
Lot 190_POS	34	Yes
Lot 191_POS	33	Yes
Lot 192_POS	33	Yes
Lot 193_POS	32	Yes
Lot 194_POS	34	Yes
Lot 195_POS	34	Yes
Lot 196_POS	34	Yes
Lot 197_POS	34	Yes
Lot 198_POS	35	Yes
Lot 199_POS	36	Yes
Lot 200_POS	35	Yes
Lot 201_POS	34	Yes
Lot 202_POS	33	Yes
Lot 203_POS	33	Yes
Lot 204_POS	34	Yes
Lot 205_POS	50	Yes
Lot 206_POS	36	Yes
Lot 207_POS	35	Yes
Lot 208_POS	35	Yes
Lot 209_POS	35	Yes
Lot 210_POS	35	Yes
Lot 211_POS	35	Yes
Lot 212_POS	35	Yes
Lot 213_POS	35	Yes
Lot 214_POS	35	Yes
Lot 215_POS	35	Yes
Lot 216_POS	35	Yes
Lot 217_POS	35	Yes
Lot 218_POS	48	Yes
Lot 219_POS	29	Yes
Lot 220_POS	29	Yes
Lot 221_POS	29	Yes
Lot 222_POS	29	Yes
Lot 223_POS	28	Yes
Lot 224_POS	28	Yes
Lot 225_POS	28	Yes
Lot 226_POS	28	Yes
Lot 227_POS	28	Yes
Lot 228_POS	29	Yes
Lot 229_POS	29	Yes

Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 230_POS	30	Yes
Lot 231_POS	30	Yes
Lot 232_POS	30	Yes
Lot 233_POS	31	Yes
Lot 234_POS	31	Yes
Lot 235_POS	30	Yes
Lot 236_POS	33	Yes
Lot 237_POS	34	Yes
Lot 238_POS	34	Yes
Lot 239_POS	34	Yes
Lot 240_POS	34	Yes
Lot 241_POS	34	Yes
Lot 242_POS	34	Yes
Lot 243_POS	34	Yes
Lot 244_POS	34	Yes
Lot 245_POS	33	Yes
Lot 246_POS	33	Yes
Lot 247_POS	33	Yes
Lot 248_POS	33	Yes
Lot 249_POS	34	Yes
Lot 250_POS	34	Yes
Lot 251_POS	34	Yes
Lot 252_POS	35	Yes
Lot 253_POS	33	Yes
Lot 254_POS	50	Yes
Lot 255_POS	46	Yes
Lot 256_POS	44	Yes
Lot 257_POS	42	Yes
Lot 258_POS	40	Yes
Lot 259_POS	40	Yes
Lot 260_POS	40	Yes
Lot 261_POS	35	Yes
Lot 262_POS	40	Yes
Lot 263_POS	40	Yes
Lot 264_POS	41	Yes
Lot 265_POS	42	Yes
Lot 266_POS	43	Yes
Lot 267_POS	41	Yes
Lot 268_POS	40	Yes
Lot 269_POS	39	Yes
Lot 270_POS	39	Yes



Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 271_POS	41	Yes
Lot 272_POS	36	Yes
Lot 273_POS	36	Yes
Lot 274_POS	36	Yes
Lot 275_POS	37	Yes
Lot 276_POS	37	Yes
Lot 277_POS	39	Yes
Lot 278_POS	40	Yes
Lot 282_POS	36	Yes
Lot 283_POS	32	Yes
Lot 284_POS	32	Yes
Lot 285_POS	32	Yes
Lot 286_POS	32	Yes
Lot 287_POS	40	Yes
Lot 288_POS	33	Yes
Lot 289_POS	32	Yes
Lot 290_POS	37	Yes
Lot 291_POS	35	Yes
Lot 292_POS	42	Yes
Lot 293_POS	40	Yes
Lot 294_POS	36	Yes
Lot 295_POS	29	Yes
Lot 296_POS	33	Yes
Lot 297_POS	29	Yes
Lot 298_POS	31	Yes
Lot 299_POS	30	Yes
Lot 300_POS	33	Yes
Lot 301_POS	34	Yes
Lot 302_POS	35	Yes
Lot 303_POS	37	Yes
Lot 304_POS	37	Yes
Lot 305_POS	41	Yes
Lot 306_POS	40	Yes
Lot 307_POS	38	Yes
Lot 308_POS	38	Yes
Lot 309_POS	37	Yes
Lot 310_POS	54	Yes
Lot 311_POS	46	Yes
Lot 312_POS	42	Yes
Lot 313_POS	39	Yes
Lot 314_POS	37	Yes

Receiver	L <sub>10,18hr</sub> dB(A)	Complies with noise criteria?
<i>SDAP – State Code 1 private open space criteria:</i>	60	
Lot 315_POS	35	Yes
Lot 316_POS	34	Yes
Lot 317_POS	33	Yes
Lot 318_POS	32	Yes
Lot 319_POS	31	Yes
Lot 320_POS	31	Yes
Lot 321_POS	30	Yes

Full SoundPLAN results, including tabulated noise levels are presented in Appendix F.

Noise contour maps indicating the propagation of traffic noise across the development are presented in Appendix G.

The noise contour maps are presented for heights of 1.8m and 4.6m above ground level, corresponding to the ground floor and first floor, respectively.

## 7. Discussions and Recommendations

### 7.1 Extent of Traffic Noise Impact

The traffic noise modelling results indicate that the first row of some of the allotments along Tempo Drive connecting to Binnies Road will be impacted by traffic noise at both ground and/or first floors. Table 7.1 summarises the allotments impacted by traffic noise.

**Table 7.1 Traffic Noise Impacts**

Road	Allotments Impacted by Traffic Noise	Highest Traffic Noise Level, LA10,18h dB(A)	
		Ground Floor	Upper Floor
Tempo Drive	Lot 147	64 dB(A) (QDC Noise Category 2)	64 dB(A) (QDC Noise Category 2)
	Lot 218	63-64 dB(A) (QDC Noise Category 2)	64 dB(A) (QDC Noise Category 2)
	Lot 254	62 dB(A) (No acoustic requirements as <63 dB(A))	64 dB(A) (QDC Noise Category 2)
	Lot 310	64 dB(A) (QDC Noise Category 2)	64 dB(A) (QDC Noise Category 2)

The traffic noise impact is limited to the first row of allotments nearest to Tempo Drive. The interior of the development is free of traffic noise impacts. Once the development is established, future buildings will screen the interior of the development from traffic noise and further reduce the traffic noise levels at the interior.

### 7.2 Options for Noise Mitigation

Traffic noise mitigation measures will be required to address the noise impacts on the first row of allotments. The traffic noise mitigation measures are required to ensure compliance with the traffic noise criteria for:

- Residential dwellings
- Private open spaces (outdoor living areas) of residential dwellings

#### 7.2.1 Residential Dwellings

The most exposed facades of some dwellings nearest to Tempo Drive, specifically Lots 147, 218, 254 and 310, will have traffic noise levels exceeding the traffic noise criteria. The future dwellings on these allotments will require to be designed and constructed in accordance with AS3671-1989 to achieve the internal noise criteria from SDAP Code 1. Alternatively, the dwellings can be constructed to achieve the minimum R<sub>w</sub> ratings as per Noise Category 2 specified in Schedule 1 of the Queensland Development Code (QDC) Mandatory Part 4.4 (*Buildings in a Transport Noise Corridor*).

## 7.2.2 Outdoor Living Areas

Under the *Road Traffic Noise Management: Code of Practice*, protection of private open spaces of residential dwellings is an important consideration. It is required to provide at least one designated private open space per dwelling which complies with the traffic noise criteria of 60 dB(A)  $L_{10,18hr}$ .

There are three main noise mitigation options:

- Locate the outdoor living areas along the protected façade of the future houses or in a protected courtyard.
- Provide a noise barrier to reduce the traffic noise levels.
- Provide a larger separation distance (distance buffer) between the outdoor living area and road.

## 7.3 Recommended Noise Mitigation Measures

The development layout shows that there will be a mix of dwellings to be constructed along Tempo Drive, where all traffic noise impacted dwellings are located. It is recommended that the design of dwellings on the allotments that do not comply with the noise criteria (highlighted in Table 6.1) have private open spaces (POS) located along the protected facades facing the rear laneways, or U-shaped courtyards protected from the traffic noise on the main roads.

With consideration of the above information, the most pragmatic mitigation measures are deemed to be building envelope acoustic upgrade based on floor plan specific acoustic design at building approval stage.

Due consideration should be given during the building design stage to locate noise insensitive areas towards the roads and position the outdoor living area along a shielded façade.

The building envelope of the dwellings to be constructed on the traffic noise affected allotments (refer to Table 7.1) should be constructed in accordance with AS3671-1989 to ensure compliance with the 1-hour maximum internal noise criteria from SDAP Code 1 (refer to Table 4.2). Alternatively, the dwellings can be constructed to achieve the minimum  $R_w$  ratings as per Noise Category 2 of QDC MP4.4.

Overall, traffic noise impact is limited to the first rows of allotments nearest to Tempo Drive intersecting through the development, but beyond that there are no acoustic constraints on the development.

Provided the recommended noise control measures are implemented in the design and construction of *Cadence* residential development, there should be no further noise constraints to the establishment of the proposed development.

## 8. Conclusions

Based on the results of the traffic noise impact assessment for the proposed *Cadence* residential development at Lots 336 and 349 on S3173, Ripley, following conclusions are made:

- The subject site is located outside the ANEF contours for RAAF Base Amberley and is not subject to any requirements for aircraft noise mitigation.
- Within an ultimate design planning horizon, the road network in Ripley will be significantly upgraded. Binnies Road (west of Tempo Drive) and Daleys Road (or the new roads replacing them) are expected to become major collector roads.
- Some of the dwellings in the first row of allotments at the proposed subdivision, nearest to Tempo Drive, would be impacted by traffic noise. The traffic noise levels at the most exposed facades of the future dwellings are predicted to be up to 64dB(A)  $L_{10,18h}$ .
- The design of dwellings on the allotments that do not comply with the noise criteria (highlighted in Table 6.1) must have private open spaces (POS) located along the protected facades facing the rear laneways, or U-shaped courtyards protected from the traffic noise on the main roads.
- With considerations of the dwelling type, the most pragmatic mitigation measures are deemed to be building envelope acoustic upgrade based on floor plan specific acoustic design at building approval stage.
- Considerations should be given during the building design stage of the traffic noise affected lots to locate noise insensitive areas towards the roads and position the outdoor living area along a shielded façade.
- The building envelope of the dwellings to be constructed on the traffic noise affected allotments (refer to Table 7.1) should be constructed in accordance with AS3671-1989 to ensure compliance with the 1-hour maximum internal noise criteria from SDAP Code 1 (refer to Table 4.2). Alternatively, the dwellings can be constructed to achieve the minimum  $R_w$  ratings as per Noise Category 2 of QDC MP4.4.
- Provided the recommended planning and design noise control measures are implemented in the construction of *Cadence* residential development, there should be no further noise constraints to the establishment of the proposed development.

## 9. References

- Australian Standard AS1055.1-1997 (*Acoustics - Description and Measurement of Environmental Noise Part 1: General Procedures*)
- Australian Standard AS1055.2-1997 (*Acoustics - Description and Measurement of Environmental Noise Part 2: Application to Specific Situations*)
- Australian Standard AS1055-2018 (*Acoustics - Description and Measurement of Environmental Noise*)
- Australian Standard AS/NZS2107-2016 (*Acoustics – Recommended design sound levels and reverberation times for building interiors*)
- Australian Standard ASIEC61672.1-2004 (*Electroacoustics - Sound level meters – Specifications*)
- Department of Environment and Heritage Protection, 2013, *Noise Measurement Manual*
- Department of Transport and Main Roads, 2013, *Transport Noise Management: Code of Practice, Volume 1 – Road Traffic Noise*
- Department of State Development, Manufacturing, Infrastructure and Planning, 2018, *State Development Assessment Provisions (Version 2.6)*, 7 February 2020
- Department of Transport and Main Roads, 2013, *Transport Noise Management Code of Practice: Volume 1 – Road Traffic Noise*
- Department of Transport and Main Roads, 2017, *Development Affected by Environmental Emissions from Transport Policy (Version 4)*
- Ipswich City Council, *Ipswich Planning Scheme*
- International Standard ISO9613 (*Acoustics – Attenuation of sound during propagation outdoors*)
- Queensland Government, 1994, '*Environmental Protection Act, 1994*'
- Queensland Government, 2008, '*Environmental Protection (Noise) Policy 2008*'
- Queensland Government, 2008, '*Environmental Protection (Noise) Policy 2019*'
- Queensland Government, 2015, '*Queensland Development Code (QDC) MP4.4 (Buildings in a Transport Noise Corridor)*'



## Appendix A – Development Plan





**DEVELOPMENT SUMMARY**

<span style="background-color: #00FFFF; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	280m <sup>2</sup> - 349m <sup>2</sup>	(58)
<span style="background-color: #FFC0CB; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	350m <sup>2</sup> - 400m <sup>2</sup>	(86) (Excluding Terrace Houses)
<span style="background-color: #D8BFD8; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	401m <sup>2</sup> - 500m <sup>2</sup>	(113)
<span style="background-color: #FFDAB9; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	501m <sup>2</sup> - 600m <sup>2</sup>	(12)
<span style="background-color: #FFFACD; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Duplex Housing (D)	(1) (2 Dwellings)
<span style="background-color: #FFD700; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Terrace Houses	(44)
<span style="background-color: #E0E0E0; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Townhouse Site	(1) (20 Dwellings)
<span style="background-color: #90EE90; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Park	(1)
<span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Drainage Reserves	(3)
<span style="background-color: #4169E1; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span>	Temporary Drainage Reserve	(4)

Total Site Area - 19.62 ha  
 Park Detention Area - 9313 m<sup>2</sup>  
 Park - 5004 m<sup>2</sup>  
 Total Lots - 323  
 Total Dwellings - 339  
 Overall Density - 17.2 dwellings/hectare

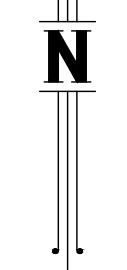
- NOTES:**
1. Drawn to scale on an A1 sheet.
  2. Contour Interval: 0.5m
  3. All dimensions and areas are subject to ICC approval and confirmation by survey.

U	Lots 39-54 Boundaries amended	BRJ	24/09/2020
T	Lots 280 & 281 amended, Emt C in Lot 280 added, Stage boundaries amended	BRJ	15/09/2020
S	Lots 266-271 & Gravel Access Hatching Removed	JEW	4/03/2020
R	Staging & Lots Update	JEW	12/12/2019
Q	Minor Update	SDS	27/08/2019
P	Lot Layout and Stage Boundaries Amended	SDS	31/07/2019
O	Road Names & Lot 254 Updated	JEW	24/06/2019
N	Stage 1A/1C Minor Amendment	JEW	13/03/2019
M	Stage 1A/1B Minor Amendment	JEW	5/11/2018
L	Road 1 Intersection	JEW	18/10/2018
K	Updated Layout	JEW	16/10/2018
J	Detention modified and Park Added	JEW	4/05/2018
I	Updated layout	JKC	15/03/2018
H	Updated Layout	JKC	8/03/2018
G	Design Review only - Not Actioned	JKC	14/02/2018
F	Minor Update	JKC	14/02/2018
E	Updated Layout	DJL	15/12/2017
D	Updated Layout	JKC	8/12/2017
C	Updated Layout	JKC	30/11/2017
B	Updated Layout	JKC	29/11/2017
Issue	Revision	Int	Date

Title:  
**Plan of Proposed Subdivision of Lots 1 - 323**  
 (Cancelling Lots 336 & 349 on S3173)

Client:	AV JENNINGS
Locality:	RIPLEY
Local Gov:	ICC
Surveyed By:	Prepared By: JKC
Date Created:	Approved: SWM
Scale:	1:1500
Comp File:	
Plan No:	08070_002_PRO





- NOTES:
1. Drawn to scale on an A1 sheet.
  2. Contour Interval: 0.5m
  3. All dimensions and areas are subject to ICC approval and confirmation by survey.

U	Lots 39-54 Boundaries amended	BRJ	24/09/2020
T	Lots 280 & 281 amended, Emt C in Lot 280 added, Stage boundaries amended	BRJ	15/09/2020
S	Lots 266-271 & Gravel Access Hatching Removed	JEW	4/03/2020
R	Staging & Lots Update	JEW	12/12/2019
Q	Minor Update	SDS	27/08/2019
P	Lot Layout and Stage Boundaries Amended	SDS	31/07/2019
O	Road Names & Lot 254 Updated	JEW	24/06/2019
N	Stage 1A/1C Minor Amendment	JEW	13/03/2019
M	Stage 1A/1B Minor Amendment	JEW	5/11/2018
L	Road 1 Intersection	JEW	18/10/2018
K	Updated Layout	JEW	16/10/2018
J	Detention modified and Park Added	JEW	4/05/2018
I	Updated layout	JKC	15/03/2018
H	Updated Layout	JKC	8/03/2018
G	Design Review only - Not Actioned	JKC	14/02/2018
F	Minor Update	JKC	14/02/2018
E	Updated Layout	DJL	15/12/2017
D	Updated Layout	JKC	8/12/2017
C	Updated Layout	JKC	30/11/2017
B	Updated Layout	JKC	29/11/2017
Issue	Revision	Int	Date

Title:  
**Plan of Proposed Subdivision of Lots 1 - 323 with Contours (Cancelling Lots 336 & 349 on S3173)**

Client: **AV JENNINGS**

Locality:	RIPLEY		
Local Gov:	ICC	Prepared By:	JKC
Surveyed By:		Approved:	SWM
Date Created:	27/11/2017	Scale:	1:1500
Comp File:			
Plan No:	<b>08070_002_PRO</b>		



**LEGEND:**

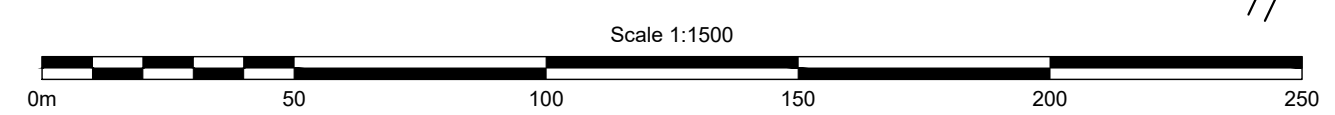
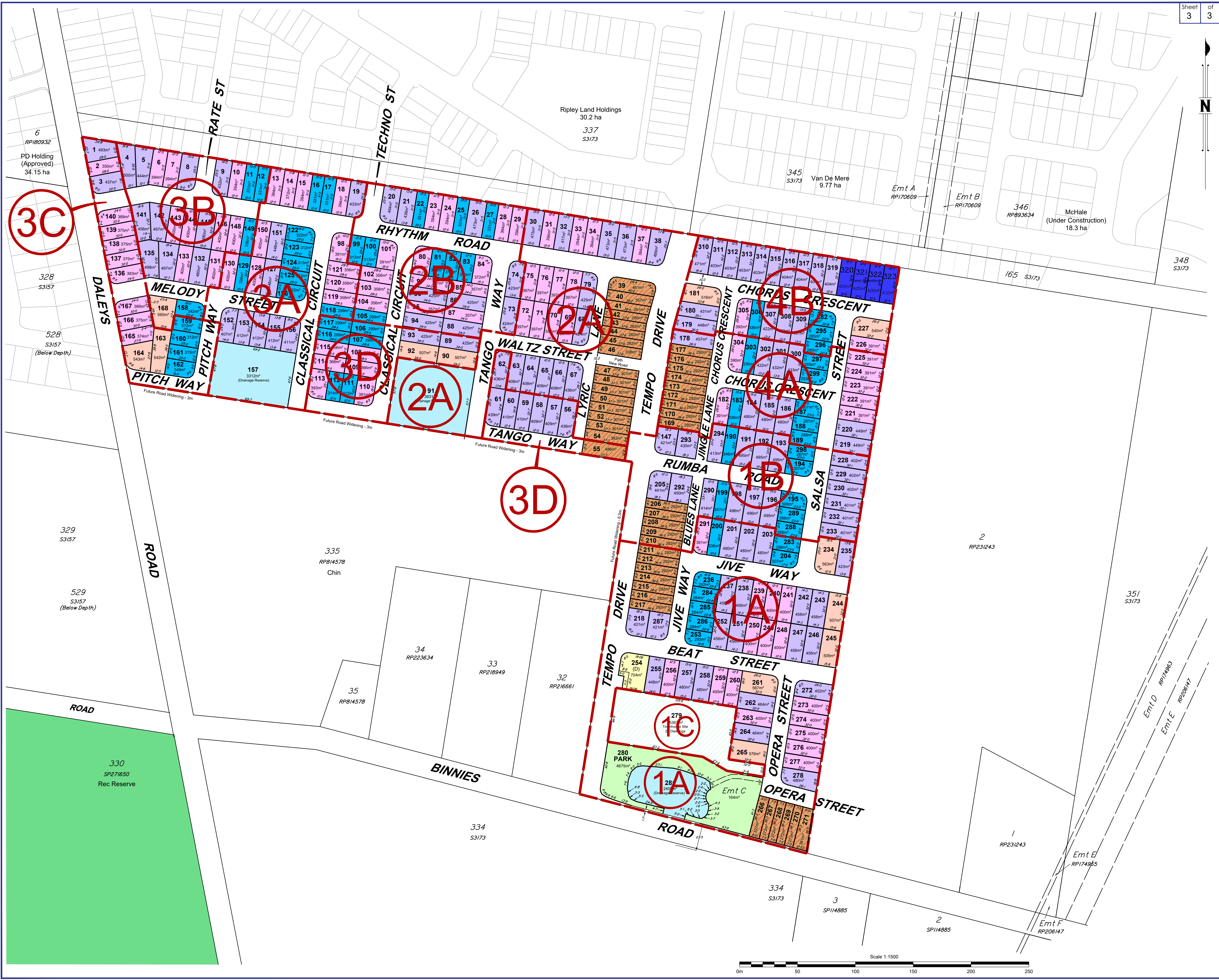
- Stage Boundary
- Stage Number

- NOTES:**
1. Drawn to scale on an A1 sheet.
  2. Contour Interval: 0.5m
  3. All dimensions and areas are subject to ICC approval and confirmation by survey.

U	Lots 39-54 Boundaries amended	BRJ	24/09/2020
T	Lots 280 & 281 amended, Emt C in Lot 280 added, Stage boundaries amended	BRJ	15/09/2020
S	Lots 266-271 & Gravel Access Hatching Removed	JEW	4/03/2020
R	Staging & Lots Update	JEW	12/12/2019
Q	Minor Update	SDS	27/08/2019
P	Lot Layout and Stage Boundaries Amended	SDS	31/07/2019
O	Road Names & Lot 254 Updated	JEW	24/06/2019
N	Stage 1A/1C Minor Amendment	JEW	13/03/2019
M	Stage 1A/1B Minor Amendment	JEW	5/11/2018
L	Road 1 Intersection	JEW	18/10/2018
K	Updated Layout	JEW	16/10/2018
J	Detention modified and Park Added	JEW	4/05/2018
I	Updated layout	JKC	15/03/2018
H	Updated Layout	JKC	8/03/2018
G	Design Review only - Not Actioned	JKC	14/02/2018
F	Minor Update	JKC	14/02/2018
E	Updated Layout	DJL	15/12/2017
D	Updated Layout	JKC	8/12/2017
C	Updated Layout	JKC	30/11/2017
B	Updated Layout	JKC	29/11/2017
Issue	Revision	Int	Date

Title:  
**Plan of Proposed Subdivision of Lots 1 - 323 Staging Plan**  
(Cancelling Lots 336 & 349 on S3173)  
Client: **AV JENNINGS**

Locality:	RIPLEY		
Local Gov:	ICC	Prepared By:	JKC
Surveyed By:		Approved:	SWM
Date Created:	27/11/2017	Scale:	1:1500
Comp File:			
Plan No:	<b>08070_002_PRO</b>		





## Appendix B – Site Photos

**Subject Site at Ripley**



**Photo 1: Lot 349 on S3173, viewed from Binnies Road**



**Photo 2: Lot 349 on S3173, viewed from Binnies Road**



## Noise Measurements at Similar Location in White Rock, Ripley PDA



Photo 3: Noise logger at Location 1 (North)



Photo 4: Noise logger at Location 2 (South)



## Appendix C – Meteorological Data

# Amberley, Queensland October 2016 Daily Weather Observations



Australian Government  
Bureau of Meteorology

Date	Day	Temps		Rain mm	Evap mm	Sun hours	Max wind gust			9am					3pm						
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C					km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Sa	9.0	26.7	0			W	52	09:34	20.4	29		W	24	1013.0	25.8	18		WNW	31	1010.3
2	Su	4.7	29.4	0			NW	37	13:21	20.3	40		NW	7	1016.6	28.4	20		N	9	1010.6
3	Mo	15.1	22.9	0			W	56	17:16	20.9	58	8	E	7	1009.3	22.1	88	8	NNW	13	1005.8
4	Tu	11.3	25.9	13.6			WSW	39	14:24	19.8	48		NW	19	1014.5	24.6	22		WNW	22	1011.2
5	We	10.0	28.8	0			WSW	39	12:24	22.2	34		NNW	11	1017.6	27.2	18		W	17	1015.0
6	Th	5.8	29.3	0			ENE	37	18:16	20.9	30		NW	11	1022.6	28.5	15		N	6	1018.4
7	Fr	6.9	30.2	0			ENE	33	16:25	20.3	46		W	6	1024.2	29.1	26		E	9	1019.1
8	Sa	9.2	32.2	0			WSW	33	13:57	22.5	53	6	NNW	7	1021.0	31.3	15		WSW	17	1015.2
9	Su	10.9	25.6	0			E	39	14:01	23.5	56		NE	7	1019.8	22.2	59	8	E	24	1018.6
10	Mo	16.7	29.6	0			NE	30	16:08	20.7	59	8	N	7	1018.8	28.8	41		SE	4	1011.9
11	Tu	13.0	31.6	0			ENE	41	17:09	25.4	54		NW	11	1010.1	29.0	24	8	W	24	1008.6
12	We	14.7	25.1	0			NE	37	17:01	21.2	51	8	ESE	9	1016.1	24.2	47	4	NE	20	1011.1
13	Th	10.3	26.2	2.4			ESE	39	15:57	20.4	47		SSW	19	1014.7	24.1	32		SE	19	1012.1
14	Fr	9.1	24.4	0			SSE	41	08:55	20.8	39	8	SE	28	1022.2	22.5	37	4	E	19	1019.2
15	Sa	7.3	24.5	0			ENE	37	14:37	19.9	44		ENE	11	1024.0	23.7	36	2	E	24	1019.6
16	Su	6.2	26.8	0			NE	43	14:29	19.9	51		SSW	6	1021.5	25.2	39	2	ENE	28	1015.0
17	Mo	11.4	30.6	0			W	65	16:29	22.7	57		NNW	7	1014.8	29.0	32	5	N	17	1007.0
18	Tu	7.9	26.5	11.6			ENE	26	18:16	19.6	40		S	7	1018.2	25.5	19		NE	9	1013.9
19	We	7.5	29.6	0			NE	37	16:59	21.2	53		NNW	4	1018.7	28.3	22	3	S	6	1014.2
20	Th	11.1	28.8	0			ENE	44	14:26	23.0	52	3	SE	4	1021.4	25.4	57	4	ENE	30	1017.7
21	Fr	14.3	28.2	0			NNE	44	12:48	24.2	53	6	NE	17	1022.4	25.9	41	1	ENE	30	1017.4
22	Sa	13.0	30.0	0			NW	41	12:20	23.4	54	8	NW	11	1016.8	27.6	39	8	SW	7	1010.9
23	Su	14.0	22.7	3.8			WNW	28	00:28	17.3	50	7	W	11	1015.9	22.0	26	2	ENE	9	1013.6
24	Mo	5.8	27.7	0			NW	39	11:31	19.5	48		NW	6	1019.1	27.0	15		W	15	1013.5
25	Tu	7.7	28.9	0			NE	37	16:05	20.7	58		W	7	1020.1	28.0	16		NE	9	1015.5
26	We	10.7	31.3	0			ENE	39	15:11	23.7	51		NNW	26	1020.2	29.1	38		ENE	15	1014.3
27	Th	12.8	31.4	0			E	37	17:21	23.9	49	7	NNW	13	1017.7	30.3	28	7	S	2	1012.1
28	Fr	14.0	29.7	0			NE	37	17:03	24.4	59	8	WSW	9	1017.5	28.4	43	3	NE	19	1012.7
29	Sa	17.0	29.5	0			ENE	39	14:51	24.3	60	8	NNE	9	1019.3	27.1	41	1	ENE	26	1015.0
30	Su	13.7	29.5	0			ENE	41	15:51	23.8	57	7	NNW	7	1019.8	27.7	44	1	ENE	26	1013.8
31	Mo	16.4	31.2	0			NE	37	17:15	23.8	57	8	NNW	19	1013.3	29.7	38		N	11	1008.6
<b>Statistics for October 2016</b>																					
Mean		10.9	28.2							21.8	49	7		11	1018.1	26.7	33	4		16	1013.6
Lowest		4.7	22.7							17.3	29	3	#	4	1009.3	22.0	15	1	S	2	1005.8
Highest		17.0	32.2	13.6			W	65		25.4	60	8	SE	28	1024.2	31.3	88	8	WNW	31	1019.6
Total				31.4																	

Observations were drawn from Amberley AMO (station 040004)

Some cloud observations are from automated equipment; these are somewhat different to those made by a human observer and may not appear every day.

IDCJDW4002.201610 Prepared at 16:04 GMT on 16 Dec 2016

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Users of this product are deemed to have read the information and accepted the conditions described in the notes at

<http://www.bom.gov.au/climate/dwo/IDCJDW0000.pdf>



## Appendix D – Noise Measurement Results





ATP160902  
 Noise Logger Results - Location 1 (North)  
 Traffic Noise

Acoustic Research Laboratories Pty Ltd - Type 1 Environmental Noise Logger  
 Logger Serial Number 8780d4  
 Measurement Title 20161005\_182625  
 Measurement started at 05/10/2016 - 18:26:27  
 Measurement stopped at 14/10/2016 - 11:12:15  
 Frequency Weighting A  
 Time Averaging 125 ms  
 Statistical Interval 15 min  
 Auxiliary Power Not Applicable  
 Tape Recorder Not Applicable  
 Short Term Leq Not Applicable  
 Short Term Leq Length Not Applicable  
 Start Trigger Not Applicable  
 Stop Trigger Not Applicable  
 Master Timer Not Applicable  
 Sub Timer Not Applicable  
 Pre-measurement Reference Not Applicable  
 Post-measurement Reference Not Applicable  
 Engineering Units dB SPL

**Note**  
 — : No data recorded

Use for average	Date	Day	L10 18hr day (6am-12am)	L10 1hr max 6am-10pm	Time for L10 1hr max 6am -10pm	L10 1hr max 10pm-6am	Time for L10 1hr max 10pm -6am	L90 18hr (6am-12am)	L90 8hr (10pm-6am)	Leq 18hr (6am-12am)	Leq 8hr (10pm-6am)
X	5/10/16	Wednesday	—	—	—	—	—	—	—	—	—
✓	6/10/16	Thursday	36	46	6:45	46	5:45	30	26	35	33
✓	7/10/16	Friday	39	46	6:45	45	5:45	32	28	37	36
X	8/10/16	Saturday	37	43	6:45	45	5:45	31	26	36	32
X	9/10/16	Sunday	38	44	11:45	44	5:45	29	25	37	29
✓	10/10/16	Monday	39	47	17:45	44	5:45	32	28	38	32
X	11/10/16	Tuesday	—	—	—	—	—	—	—	—	—
X	<b>AVERAGE</b>		38	46		45		31	27	37	34







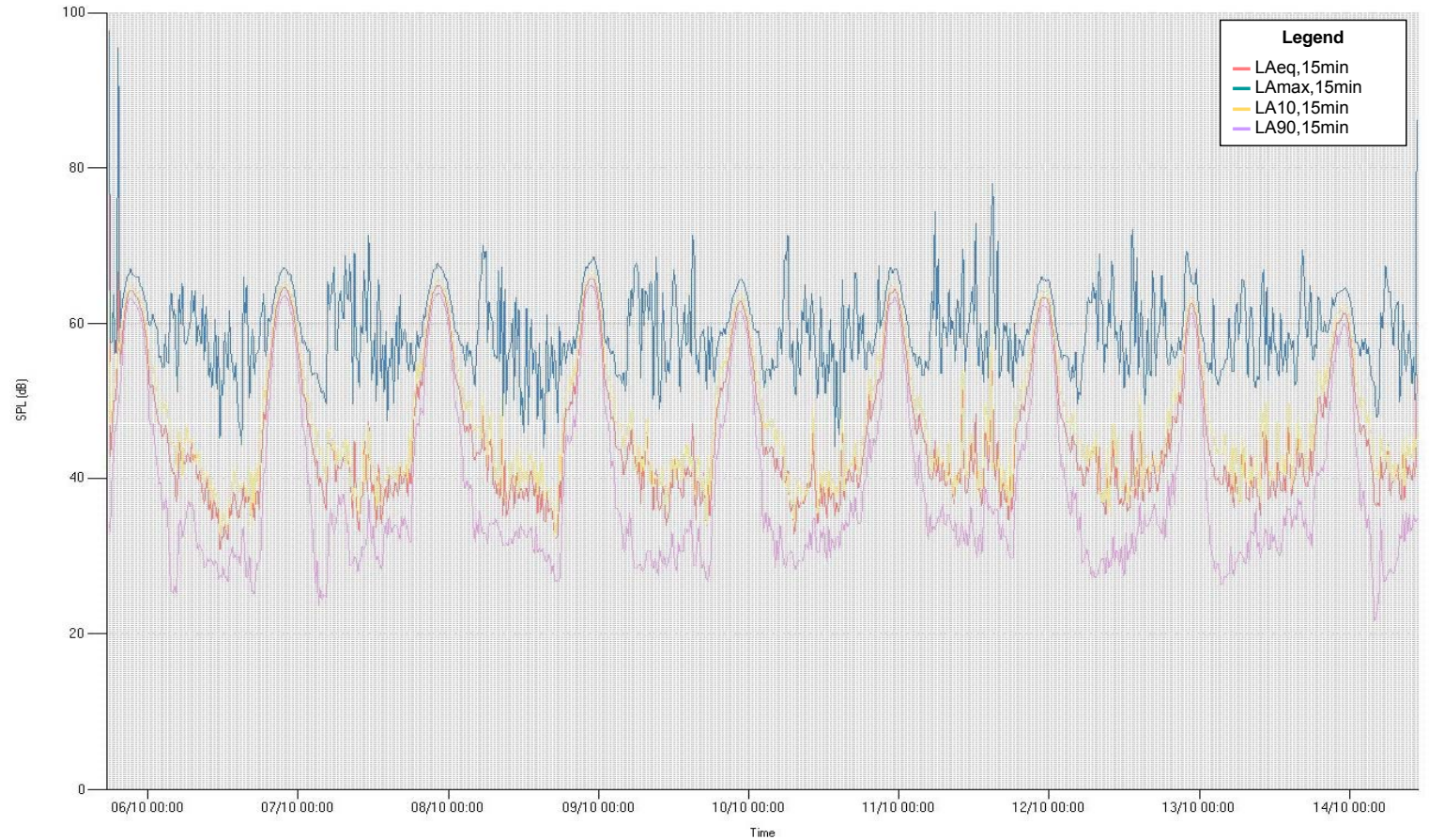
ATP160902  
 Noise Logger Results - Location 2 (South)  
 Traffic Noise

Acoustic Research Laboratories Pty Ltd - Type 1 Environmental Noise Logger  
 Logger Serial Number 8780d2  
 Measurement Title 20161005\_173505  
 Measurement started at 05/10/2016 - 17:35:06  
 Measurement stopped at 14/10/2016 - 10:48:02  
 Frequency Weighting A  
 Time Averaging 125 ms  
 Statistical Interval 15 min  
 Auxiliary Power Not Applicable  
 Tape Recorder Not Applicable  
 Short Term Leq Not Applicable  
 Short Term Leq Length Not Applicable  
 Start Trigger Not Applicable  
 Stop Trigger Not Applicable  
 Master Timer Not Applicable  
 Sub Timer Not Applicable  
 Pre-measurement Reference Not Applicable  
 Post-measurement Reference Not Applicable  
 Engineering Units dB SPL

**Note**

— : No data recorded

Use for average	Date	Day	L10 18hr day (6am-12am)	L10 1hr max 6am-10pm	Time for L10 1hr max 6am -10pm	L10 1hr max 10pm-6am	Time for L10 1hr max 10pm -6am	L90 18hr (6am-12am)	L90 8hr (10pm-6am)	Leq 18hr (6am-12am)	Leq 8hr (10pm-6am)
X	5/10/2016	Wednesday	—	—	—	—	—	—	—	—	—
√	6/10/2016	Thursday	46	65	9:45:00 PM	65	10:45:00 PM	38	42	44	49
√	7/10/2016	Friday	47	64	9:45:00 PM	66	10:45:00 PM	40	47	46	53
X	8/10/2016	Saturday	46	62	9:45:00 PM	66	10:45:00 PM	39	47	44	52
X	9/10/2016	Sunday	46	60	9:45:00 PM	63	10:45:00 PM	37	44	45	50
√	10/10/2016	Monday	45	57	9:45:00 PM	65	11:45:00 PM	38	48	44	53
√	11/10/2016	Tuesday	47	58	9:45:00 PM	64	11:45:00 PM	39	47	45	51
√	12/10/2016	Wednesday	46	56	9:45:00 PM	63	10:45:00 PM	36	40	44	47
√	13/10/2016	Thursday	47	59	9:45:00 PM	62	11:45:00 PM	38	41	45	49
X	14/10/2016	Friday	—	—	—	—	—	—	—	—	—
	<b>AVERAGE</b>		46	60		64		38	44	45	50



## Appendix E – Predicted Ultimate Traffic Flows

## Binnies Road, Ripley

### Binnies Road / Road 1 Intersection - Turn Volumes Explanation and Justification

#### 1. Introduction

This advice has been prepared to provide further information relating to the turn volumes methodology used for the proposed Binnies Road / Road 1 intersection (Ultimate Scenario).

#### 2. Turn Volumes Methodology

Turning volumes at the Road 1 / Binnies Road intersection have been estimated based on forecast daily two-way traffic volumes on each approach to the intersection extracted from Jacobs report *“Ripley Valley Priority Development Area Ipswich Strategic Transport Model Update - Phase 1 - Ultimate Development Scenario Summary Technical Note”* (Document Reference Number: IH124300-200-CT-TNE-0001 | Rev 2) as per previous advice.

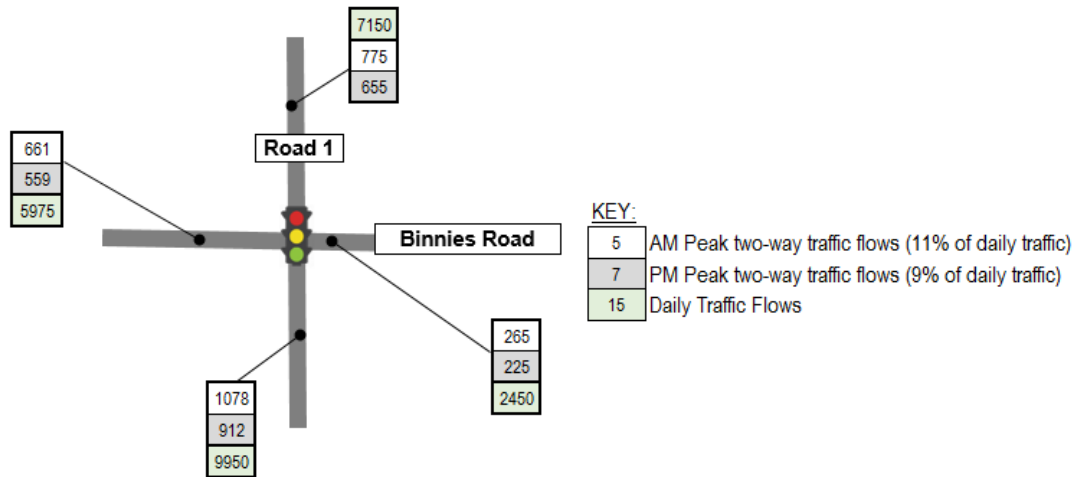
Figure 2.1 below shows Daily Two Way flows extracted from Jacobs report.



Figure 2.1 – Daily Two-way Volumes at Road 1 and Binnies Road (Extracted from Jacobs Report)

To forecast peak hour traffic flows it has been assumed that AM and PM Peak traffic flows accounts to 20% of daily traffic flows, with 11% of Daily Traffic accounting for AM Peak traffic volumes and 9% of Daily Traffic accounting for the PM Peak traffic volumes.

This has been summarised below as follows:



**Figure 2.2 – Daily, AM and PM Peak hour two-way traffic flows along Binnies Road and Road 1**

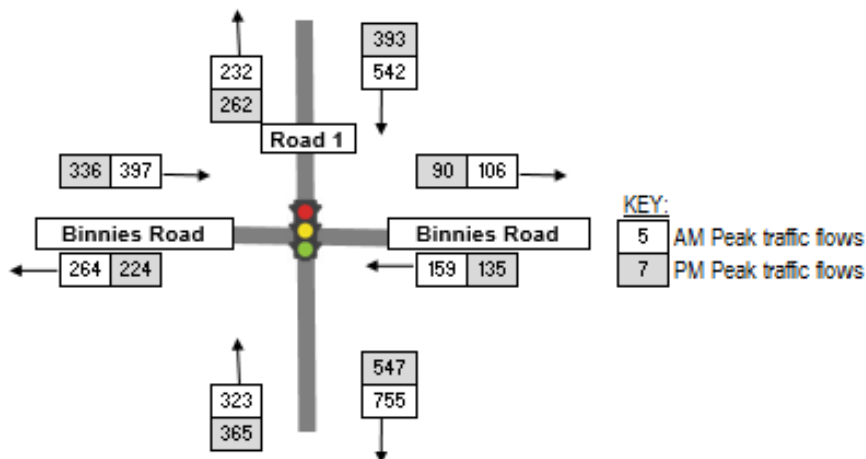
The two-way flows for the AM and PM Peak hours as shown in Figure 2.2 have been assigned to northbound / southbound direction and eastbound / westbound direction based on the following directional splits:

Road 1 south and north AM Peak – 30% northbound / 70% southbound  
 Road 1 south and north PM Peak – 40% northbound / 60% southbound

Binnies Road west AM Peak – 60% eastbound / 40% westbound  
 Binnies Road west PM Peak – 60% eastbound / 40% westbound

Binnies Road east AM Peak – 40% eastbound / 60% westbound  
 Binnies Road east PM Peak – 40% eastbound / 60% westbound

Figure 2.3 shows the directional Peak Hour trips along Road 1 and Binnies Road based on the above directional splits adopted.



**Figure 2.3 – Approach and Exit AM and PM Peak hour flows at Road 1 / Binnies Road Intersection**





Turning volumes at the intersections have been estimated using the ratio of each exit volumes and applying to the approach volume. For example Binnies Road north approach percentage turn distribution for ahead movement has been derived by dividing 755 exit volumes for Road 1 southbound / by all exit volumes (106+755+264) = 67%. All the percentage turn volumes are shown in Figure 2.4 below.

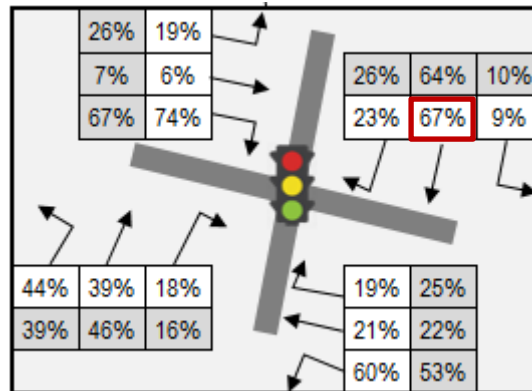


Figure 2.4 – Road 1 / Binnies Road Percentage Turn Volumes based on Exit AM and PM Peak volumes

Approach volumes as shown in Figure 2.3 have been applied to the percentage turn volumes shown in Figure 2.4 to calculate turns movement at the Road 1 / Binnies Road intersection. This has been shown in Figure 2.5 below as included with the original SIDRA calculation submission.



Figure 2.5 – Road 1 / Binnies Road Intersection Traffic Flows (Ultimate Scenario based on the Two-way Daily Flows Extracted from Jacobs model).



## Appendix F – Tabulated Traffic Noise Levels

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 1	GF	N	50.0
	F1		51.5
Lot 1	GF	E	35.0
	F1		38.5
Lot 1	GF	S	45.7
	F1		47.7
Lot 1	GF	W	52.8
	F1		54.7
Lot 2	GF	N	45.5
	F1		47.7
Lot 2	GF	E	35.0
	F1		38.6
Lot 2	GF	S	46.5
	F1		48.7
Lot 2	GF	W	52.6
	F1		54.6
Lot 3	GF	N	46.8
	F1		48.8
Lot 3	GF	E	35.6
	F1		39.0
Lot 3	GF	S	47.7
	F1		49.9
Lot 3	GF	W	52.6
	F1		54.6
Lot 4	GF	N	44.6
	F1		46.4
Lot 4	GF	E	33.7
	F1		37.3
Lot 4	GF	S	38.9
	F1		41.9
Lot 4	GF	W	44.1
	F1		46.1
Lot 5	GF	N	42.4
	F1		44.3
Lot 5	GF	E	33.5
	F1		36.9
Lot 5	GF	S	41.0
	F1		43.2
Lot 5	GF	W	42.0
	F1		44.1
Lot 6	GF	N	41.0
	F1		43.1
Lot 6	GF	E	33.0
	F1		36.5
Lot 6	GF	S	39.6
	F1		41.5
Lot 6	GF	W	36.7
	F1		39.7
Lot 7	GF	N	39.8
	F1		42.0

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 7	GF	E	33.4
	F1		36.5
Lot 7	GF	S	39.1
	F1		41.1
Lot 7	GF	W	33.9
	F1		37.8
Lot 8	GF	N	38.1
	F1		40.8
Lot 8	GF	E	34.1
	F1		36.4
Lot 8	GF	S	37.8
	F1		40.0
Lot 8	GF	W	34.8
	F1		37.8
Lot 9	GF	N	36.7
	F1		39.2
Lot 9	GF	E	33.0
	F1		36.0
Lot 9	GF	S	36.3
	F1		38.4
Lot 9	GF	W	36.7
	F1		39.2
Lot 10	GF	N	35.7
	F1		38.4
Lot 10	GF	E	32.7
	F1		36.0
Lot 10	GF	S	36.0
	F1		37.8
Lot 10	GF	W	32.3
	F1		35.7
Lot 11	GF	N	35.2
	F1		37.9
Lot 11	GF	E	32.3
	F1		35.8
Lot 11	GF	S	35.5
	F1		37.3
Lot 11	GF	W	32.0
	F1		35.5
Lot 12	GF	N	34.8
	F1		37.6
Lot 12	GF	E	32.8
	F1		35.9
Lot 12	GF	S	35.8
	F1		37.6
Lot 12	GF	W	31.9
	F1		35.5
Lot 13	GF	N	34.4
	F1		37.3
Lot 13	GF	E	32.9
	F1		36.1

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 13	GF	S	35.9
	F1		37.6
Lot 13	GF	W	32.1
	F1		35.6
Lot 14	GF	N	34.1
	F1		36.9
Lot 14	GF	E	33.1
	F1		36.3
Lot 14	GF	S	36.2
	F1		37.7
Lot 14	GF	W	32.1
	F1		35.5
Lot 15	GF	N	33.9
	F1		36.7
Lot 15	GF	E	33.0
	F1		36.5
Lot 15	GF	S	36.3
	F1		37.7
Lot 15	GF	W	32.3
	F1		35.6
Lot 16	GF	N	34.0
	F1		36.6
Lot 16	GF	E	33.2
	F1		36.7
Lot 16	GF	S	36.1
	F1		37.7
Lot 16	GF	W	31.9
	F1		35.3
Lot 17	GF	N	33.8
	F1		36.5
Lot 17	GF	E	33.4
	F1		37.0
Lot 17	GF	S	35.7
	F1		37.5
Lot 17	GF	W	32.0
	F1		35.4
Lot 18	GF	N	33.6
	F1		36.3
Lot 18	GF	E	33.8
	F1		37.1
Lot 18	GF	S	37.5
	F1		38.8
Lot 18	GF	W	32.4
	F1		35.7
Lot 19	GF	N	33.8
	F1		36.3
Lot 19	GF	E	35.7
	F1		37.9
Lot 19	GF	S	37.6
	F1		38.8

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 19	GF	W	32.3
	F1		35.5
Lot 20	GF	N	33.6
	F1		36.3
Lot 20	GF	E	35.1
	F1		38.9
Lot 20	GF	S	38.1
	F1		39.7
Lot 20	GF	W	33.4
	F1		35.9
Lot 21	GF	N	32.7
	F1		35.8
Lot 21	GF	E	35.5
	F1		38.9
Lot 21	GF	S	38.0
	F1		39.8
Lot 21	GF	W	32.2
	F1		35.5
Lot 22	GF	N	34.2
	F1		36.7
Lot 22	GF	E	35.0
	F1		38.5
Lot 22	GF	S	38.5
	F1		40.2
Lot 22	GF	W	33.2
	F1		36.4
Lot 23	GF	N	34.3
	F1		36.9
Lot 23	GF	E	35.2
	F1		38.6
Lot 23	GF	S	38.3
	F1		39.9
Lot 23	GF	W	33.2
	F1		36.3
Lot 24	GF	N	34.5
	F1		37.1
Lot 24	GF	E	35.4
	F1		38.9
Lot 24	GF	S	38.5
	F1		40.1
Lot 24	GF	W	32.9
	F1		36.1
Lot 25	GF	N	33.8
	F1		36.8
Lot 25	GF	E	36.5
	F1		39.3
Lot 25	GF	S	39.1
	F1		40.8
Lot 25	GF	W	33.1
	F1		36.3

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 26	GF	N	34.7
	F1		37.5
Lot 26	GF	E	36.2
	F1		39.2
Lot 26	GF	S	39.3
	F1		41.1
Lot 26	GF	W	33.8
	F1		37.0
Lot 27	GF	N	35.0
	F1		37.8
Lot 27	GF	E	36.8
	F1		39.6
Lot 27	GF	S	39.8
	F1		41.5
Lot 27	GF	W	33.4
	F1		36.7
Lot 28	GF	N	35.4
	F1		38.4
Lot 28	GF	E	36.8
	F1		39.6
Lot 28	GF	S	40.3
	F1		42.2
Lot 28	GF	W	34.1
	F1		37.3
Lot 29	GF	N	35.7
	F1		38.8
Lot 29	GF	E	36.8
	F1		39.6
Lot 29	GF	S	40.8
	F1		42.7
Lot 29	GF	W	35.0
	F1		38.4
Lot 30	GF	N	36.2
	F1		39.3
Lot 30	GF	E	37.2
	F1		39.8
Lot 30	GF	S	40.9
	F1		42.7
Lot 30	GF	W	34.9
	F1		38.0
Lot 31	GF	N	36.6
	F1		39.6
Lot 31	GF	E	37.3
	F1		40.1
Lot 31	GF	S	41.5
	F1		43.5
Lot 31	GF	W	34.8
	F1		38.0
Lot 32	GF	N	38.1
	F1		40.9



Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 32	GF	E	37.7
	F1		40.5
Lot 32	GF	S	42.4
	F1		44.5
Lot 32	GF	W	35.1
	F1		38.4
Lot 33	GF	N	38.4
	F1		41.3
Lot 33	GF	E	38.0
	F1		41.0
Lot 33	GF	S	43.7
	F1		46.0
Lot 33	GF	W	35.6
	F1		38.9
Lot 34	GF	N	40.5
	F1		43.3
Lot 34	GF	E	39.2
	F1		42.0
Lot 34	GF	S	45.9
	F1		48.0
Lot 34	GF	W	36.0
	F1		39.5
Lot 35	GF	N	42.3
	F1		45.2
Lot 35	GF	E	43.2
	F1		45.3
Lot 35	GF	S	48.1
	F1		50.1
Lot 35	GF	W	36.8
	F1		40.3
Lot 36	GF	N	46.1
	F1		48.4
Lot 36	GF	E	48.2
	F1		49.8
Lot 36	GF	S	51.7
	F1		53.1
Lot 36	GF	W	37.8
	F1		41.3
Lot 37	GF	N	49.6
	F1		51.6
Lot 37	GF	E	53.7
	F1		55.0
Lot 37	GF	S	55.6
	F1		56.8
Lot 37	GF	W	38.8
	F1		42.7
Lot 38	GF	N	54.5
	F1		56.1
Lot 38	GF	E	62.2
	F1		62.9

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 38	GF	S	59.3
	F1		60.5
Lot 38	GF	W	40.2
	F1		44.6
Lot 39	GF	W	39.6
	F1		43.5
Lot 39	GF	S	52.4
	F1		54.1
Lot 39	GF	E	61.4
	F1		62.5
Lot 39	GF	N	56.2
	F1		56.8
Lot 40	GF	W	39.9
	F1		43.6
Lot 40	GF	S	49.2
	F1		51.2
Lot 40	GF	E	61.3
	F1		62.4
Lot 40	GF	N	51.5
	F1		53.1
Lot 41	GF	W	40.2
	F1		43.9
Lot 41	GF	S	50.5
	F1		52.4
Lot 41	GF	E	61.7
	F1		63.0
Lot 41	GF	N	50.0
	F1		51.8
Lot 42	GF	W	40.5
	F1		44.1
Lot 42	GF	S	48.7
	F1		50.9
Lot 42	GF	E	62.1
	F1		63.1
Lot 42	GF	N	50.4
	F1		52.2
Lot 43	GF	W	40.8
	F1		44.4
Lot 43	GF	S	48.2
	F1		50.6
Lot 43	GF	E	62.3
	F1		63.3
Lot 43	GF	N	49.1
	F1		51.2
Lot 44	GF	W	40.9
	F1		44.6
Lot 44	GF	S	47.6
	F1		50.1
Lot 44	GF	E	62.4
	F1		63.4

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 44	GF	N	48.3
	F1		50.7
Lot 45	GF	W	41.1
	F1		44.7
Lot 45	GF	S	49.6
	F1		51.8
Lot 45	GF	E	62.4
	F1		63.4
Lot 45	GF	N	47.7
	F1		50.1
Lot 46	GF	W	41.5
	F1		45.1
Lot 46	GF	S	56.0
	F1		56.9
Lot 46	GF	E	62.6
	F1		63.3
Lot 46	GF	N	49.6
	F1		51.7
Lot 47	GF	W	42.1
	F1		45.7
Lot 47	GF	S	48.4
	F1		51.0
Lot 47	GF	E	62.4
	F1		63.2
Lot 47	GF	N	56.0
	F1		56.8
Lot 48	GF	W	42.4
	F1		45.7
Lot 48	GF	S	48.6
	F1		51.2
Lot 48	GF	E	62.2
	F1		63.2
Lot 48	GF	N	48.1
	F1		50.6
Lot 49	GF	W	42.5
	F1		45.8
Lot 49	GF	S	48.5
	F1		51.2
Lot 49	GF	E	61.9
	F1		63.1
Lot 49	GF	N	48.1
	F1		50.5
Lot 50	GF	W	42.8
	F1		45.8
Lot 50	GF	S	49.2
	F1		51.9
Lot 50	GF	E	61.8
	F1		63.1
Lot 50	GF	N	48.4
	F1		50.8

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 51	GF	W	43.4
	F1		46.1
Lot 51	GF	S	48.4
	F1		51.3
Lot 51	GF	E	61.6
	F1		63.0
Lot 51	GF	N	48.8
	F1		51.0
Lot 52	GF	W	43.5
	F1		46.0
Lot 52	GF	S	48.7
	F1		51.6
Lot 52	GF	E	61.0
	F1		62.8
Lot 52	GF	N	48.2
	F1		50.5
Lot 53	GF	W	43.6
	F1		46.1
Lot 53	GF	S	50.8
	F1		53.2
Lot 53	GF	E	61.4
	F1		62.9
Lot 53	GF	N	48.9
	F1		51.1
Lot 54	GF	W	43.6
	F1		46.1
Lot 54	GF	S	52.5
	F1		54.7
Lot 54	GF	E	61.2
	F1		62.7
Lot 54	GF	N	49.8
	F1		52.5
Lot 55	GF	W	43.7
	F1		46.2
Lot 55	GF	S	56.2
	F1		58.1
Lot 55	GF	E	60.8
	F1		62.5
Lot 55	GF	N	50.8
	F1		53.8
Lot 56	GF	N	39.6
	F1		42.1
Lot 56	GF	E	48.4
	F1		50.1
Lot 56	GF	S	50.0
	F1		51.5
Lot 56	GF	W	41.6
	F1		44.2
Lot 57	GF	N	39.0
	F1		41.6

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 57	GF	E	44.7
	F1		46.9
Lot 57	GF	S	48.7
	F1		50.5
Lot 57	GF	W	41.4
	F1		43.9
Lot 58	GF	N	38.4
	F1		40.9
Lot 58	GF	E	43.0
	F1		45.5
Lot 58	GF	S	48.2
	F1		49.8
Lot 58	GF	W	41.6
	F1		43.8
Lot 59	GF	N	37.8
	F1		40.4
Lot 59	GF	E	41.8
	F1		44.0
Lot 59	GF	S	47.5
	F1		49.0
Lot 59	GF	W	41.3
	F1		43.5
Lot 60	GF	N	37.3
	F1		40.0
Lot 60	GF	E	40.5
	F1		43.1
Lot 60	GF	S	47.1
	F1		48.3
Lot 60	GF	W	42.0
	F1		43.8
Lot 61	GF	N	36.8
	F1		39.6
Lot 61	GF	E	40.9
	F1		43.1
Lot 61	GF	S	46.7
	F1		47.8
Lot 61	GF	W	42.7
	F1		44.1
Lot 62	GF	N	37.6
	F1		40.1
Lot 62	GF	E	39.7
	F1		42.8
Lot 62	GF	S	44.2
	F1		46.1
Lot 62	GF	W	42.5
	F1		43.7
Lot 63	GF	N	38.3
	F1		40.7
Lot 63	GF	E	39.6
	F1		43.0

Cadence Residential Development  
 145 Binnies Road, Ripley  
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 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 63	GF	S	43.1
	F1		46.0
Lot 63	GF	W	40.5
	F1		43.2
Lot 64	GF	N	38.9
	F1		41.7
Lot 64	GF	E	40.0
	F1		43.4
Lot 64	GF	S	43.2
	F1		46.3
Lot 64	GF	W	39.4
	F1		43.2
Lot 65	GF	N	39.6
	F1		42.5
Lot 65	GF	E	40.5
	F1		43.9
Lot 65	GF	S	43.4
	F1		46.3
Lot 65	GF	W	39.4
	F1		43.3
Lot 66	GF	N	40.9
	F1		43.6
Lot 66	GF	E	43.8
	F1		46.3
Lot 66	GF	S	43.7
	F1		46.6
Lot 66	GF	W	39.5
	F1		43.4
Lot 67	GF	N	42.2
	F1		45.1
Lot 67	GF	E	46.8
	F1		48.4
Lot 67	GF	S	47.5
	F1		49.4
Lot 67	GF	W	39.8
	F1		43.8
Lot 68	GF	N	40.7
	F1		42.9
Lot 68	GF	E	44.4
	F1		45.9
Lot 68	GF	S	46.0
	F1		47.7
Lot 68	GF	W	38.6
	F1		42.3
Lot 69	GF	N	41.0
	F1		43.3
Lot 69	GF	E	41.2
	F1		43.7
Lot 69	GF	S	43.8
	F1		45.8



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 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 69	GF	W	38.3
	F1		42.0
Lot 70	GF	N	38.4
	F1		40.9
Lot 70	GF	E	40.0
	F1		43.0
Lot 70	GF	S	43.5
	F1		45.6
Lot 70	GF	W	38.5
	F1		42.1
Lot 71	GF	N	37.9
	F1		40.3
Lot 71	GF	E	39.7
	F1		42.6
Lot 71	GF	S	43.3
	F1		45.3
Lot 71	GF	W	38.8
	F1		42.1
Lot 72	GF	N	37.4
	F1		39.8
Lot 72	GF	E	39.5
	F1		42.5
Lot 72	GF	S	43.7
	F1		45.6
Lot 72	GF	W	40.6
	F1		42.7
Lot 73	GF	N	36.9
	F1		39.4
Lot 73	GF	E	39.4
	F1		42.3
Lot 73	GF	S	44.2
	F1		45.6
Lot 73	GF	W	41.1
	F1		42.6
Lot 74	GF	N	41.2
	F1		42.9
Lot 74	GF	E	37.9
	F1		41.1
Lot 74	GF	S	41.2
	F1		42.9
Lot 74	GF	W	39.6
	F1		41.4
Lot 75	GF	N	42.0
	F1		43.8
Lot 75	GF	E	37.9
	F1		41.2
Lot 75	GF	S	39.8
	F1		41.9
Lot 75	GF	W	36.8
	F1		40.0

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 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 76	GF	N	42.8
	F1		44.8
Lot 76	GF	E	38.1
	F1		41.3
Lot 76	GF	S	39.6
	F1		41.9
Lot 76	GF	W	36.0
	F1		39.6
Lot 77	GF	N	43.8
	F1		46.1
Lot 77	GF	E	38.5
	F1		41.6
Lot 77	GF	S	39.9
	F1		42.1
Lot 77	GF	W	36.3
	F1		39.9
Lot 78	GF	N	45.3
	F1		47.5
Lot 78	GF	E	39.2
	F1		42.2
Lot 78	GF	S	40.6
	F1		43.0
Lot 78	GF	W	36.7
	F1		40.3
Lot 79	GF	N	47.3
	F1		49.0
Lot 79	GF	E	47.3
	F1		49.0
Lot 79	GF	S	41.1
	F1		43.4
Lot 79	GF	W	37.2
	F1		40.8
Lot 80	GF	N	37.7
	F1		39.5
Lot 80	GF	E	35.6
	F1		40.2
Lot 80	GF	S	39.6
	F1		41.6
Lot 80	GF	W	37.5
	F1		39.2
Lot 81	GF	N	37.7
	F1		39.6
Lot 81	GF	E	38.5
	F1		41.3
Lot 81	GF	S	39.2
	F1		41.9
Lot 81	GF	W	33.8
	F1		37.4
Lot 82	GF	N	38.6
	F1		40.3

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 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 82	GF	E	37.3
	F1		41.1
Lot 82	GF	S	40.2
	F1		42.3
Lot 82	GF	W	35.0
	F1		38.2
Lot 83	GF	N	38.5
	F1		40.3
Lot 83	GF	E	37.4
	F1		40.8
Lot 83	GF	S	39.4
	F1		41.7
Lot 83	GF	W	37.2
	F1		39.4
Lot 84	GF	N	39.5
	F1		41.2
Lot 84	GF	E	41.3
	F1		42.7
Lot 84	GF	S	39.8
	F1		41.8
Lot 84	GF	W	34.5
	F1		38.2
Lot 85	GF	W	38.8
	F1		40.6
Lot 85	GF	S	38.0
	F1		42.3
Lot 85	GF	E	41.2
	F1		43.0
Lot 85	GF	N	35.7
	F1		38.5
Lot 86	GF	W	39.2
	F1		41.0
Lot 86	GF	S	37.5
	F1		42.7
Lot 86	GF	E	41.0
	F1		42.7
Lot 86	GF	N	35.7
	F1		38.4
Lot 87	GF	W	39.5
	F1		41.2
Lot 87	GF	S	39.5
	F1		43.8
Lot 87	GF	E	41.6
	F1		43.3
Lot 87	GF	N	35.0
	F1		37.9
Lot 88	GF	W	40.0
	F1		41.7
Lot 88	GF	S	39.2
	F1		43.8

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 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 88	GF	E	41.5
	F1		43.3
Lot 88	GF	N	35.2
	F1		38.1
Lot 89	GF	W	40.2
	F1		41.9
Lot 89	GF	S	41.0
	F1		44.9
Lot 89	GF	E	41.6
	F1		43.2
Lot 89	GF	N	36.0
	F1		38.6
Lot 90	GF	W	40.7
	F1		42.0
Lot 90	GF	S	43.6
	F1		44.8
Lot 90	GF	E	41.0
	F1		42.8
Lot 90	GF	N	36.0
	F1		38.6
Lot 92	GF	W	40.1
	F1		41.8
Lot 92	GF	S	44.8
	F1		46.0
Lot 92	GF	E	43.2
	F1		44.6
Lot 92	GF	N	35.6
	F1		38.4
Lot 93	GF	W	39.7
	F1		41.3
Lot 93	GF	S	41.3
	F1		44.2
Lot 93	GF	E	42.6
	F1		44.3
Lot 93	GF	N	35.5
	F1		38.2
Lot 94	GF	W	39.3
	F1		41.0
Lot 94	GF	S	39.8
	F1		43.7
Lot 94	GF	E	42.6
	F1		44.2
Lot 94	GF	N	34.6
	F1		37.5
Lot 95	GF	W	38.6
	F1		40.5
Lot 95	GF	S	40.0
	F1		43.5
Lot 95	GF	E	42.0
	F1		44.0

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Receiver	Floor	Facade	L10,18hr dB(A)
Lot 95	GF	N	34.4
	F1		37.3
Lot 96	GF	W	38.5
	F1		40.3
Lot 96	GF	S	37.1
	F1		42.0
Lot 96	GF	E	41.7
	F1		43.7
Lot 96	GF	N	34.9
	F1		37.8
Lot 97	GF	W	38.1
	F1		40.0
Lot 97	GF	S	37.5
	F1		41.8
Lot 97	GF	E	41.4
	F1		43.6
Lot 97	GF	N	34.9
	F1		37.8
Lot 98	GF	N	37.9
	F1		39.3
Lot 98	GF	E	34.2
	F1		38.5
Lot 98	GF	S	36.0
	F1		38.5
Lot 98	GF	W	35.2
	F1		38.2
Lot 99	GF	N	37.0
	F1		38.7
Lot 99	GF	E	35.4
	F1		39.3
Lot 99	GF	S	37.1
	F1		39.7
Lot 99	GF	W	32.5
	F1		36.3
Lot 100	GF	N	38.5
	F1		39.8
Lot 100	GF	E	33.8
	F1		38.8
Lot 100	GF	S	36.9
	F1		39.3
Lot 100	GF	W	33.5
	F1		36.9
Lot 101	GF	N	37.3
	F1		39.0
Lot 101	GF	E	40.6
	F1		42.3
Lot 101	GF	S	38.4
	F1		41.2
Lot 101	GF	W	32.6
	F1		36.5

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Receiver	Floor	Facade	L10,18hr dB(A)
Lot 102	GF	W	34.3
	F1		37.5
Lot 102	GF	S	39.4
	F1		42.7
Lot 102	GF	E	42.1
	F1		44.1
Lot 102	GF	N	34.4
	F1		37.5
Lot 103	GF	W	35.9
	F1		38.6
Lot 103	GF	S	39.8
	F1		43.0
Lot 103	GF	E	43.1
	F1		44.6
Lot 103	GF	N	34.6
	F1		37.5
Lot 104	GF	W	36.3
	F1		39.1
Lot 104	GF	S	39.4
	F1		43.1
Lot 104	GF	E	43.5
	F1		44.9
Lot 104	GF	N	34.2
	F1		37.2
Lot 105	GF	W	36.6
	F1		39.4
Lot 105	GF	S	38.0
	F1		43.0
Lot 105	GF	E	42.9
	F1		44.5
Lot 105	GF	N	34.2
	F1		37.2
Lot 106	GF	W	35.2
	F1		38.9
Lot 106	GF	S	40.8
	F1		43.6
Lot 106	GF	E	44.2
	F1		45.4
Lot 106	GF	N	35.3
	F1		38.3
Lot 107	GF	W	36.4
	F1		39.7
Lot 107	GF	S	40.5
	F1		43.6
Lot 107	GF	E	44.6
	F1		45.4
Lot 107	GF	N	35.5
	F1		38.0
Lot 108	GF	W	36.9
	F1		40.1



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 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 108	GF	S	42.6
	F1		45.0
Lot 108	GF	E	44.7
	F1		45.4
Lot 108	GF	N	34.8
	F1		37.9
Lot 109	GF	W	36.7
	F1		40.1
Lot 109	GF	S	44.2
	F1		45.9
Lot 109	GF	E	44.7
	F1		45.6
Lot 109	GF	N	35.2
	F1		38.0
Lot 110	GF	N	35.1
	F1		37.9
Lot 110	GF	E	44.6
	F1		45.3
Lot 110	GF	S	46.5
	F1		47.3
Lot 110	GF	W	41.3
	F1		42.9
Lot 111	GF	N	34.9
	F1		37.8
Lot 111	GF	E	41.3
	F1		43.8
Lot 111	GF	S	46.6
	F1		47.3
Lot 111	GF	W	41.2
	F1		42.7
Lot 112	GF	N	35.0
	F1		37.8
Lot 112	GF	E	41.3
	F1		43.6
Lot 112	GF	S	46.8
	F1		47.5
Lot 112	GF	W	41.6
	F1		43.0
Lot 113	GF	N	34.9
	F1		37.7
Lot 113	GF	E	41.8
	F1		43.6
Lot 113	GF	S	47.0
	F1		47.7
Lot 113	GF	W	43.5
	F1		44.4
Lot 114	GF	W	42.9
	F1		43.9
Lot 114	GF	S	44.0
	F1		46.5

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 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 114	GF	E	42.5
	F1		45.1
Lot 114	GF	N	35.1
	F1		37.7
Lot 115	GF	W	42.6
	F1		43.6
Lot 115	GF	S	41.7
	F1		45.5
Lot 115	GF	E	41.9
	F1		45.0
Lot 115	GF	N	35.2
	F1		37.8
Lot 116	GF	W	42.1
	F1		43.2
Lot 116	GF	S	39.8
	F1		44.4
Lot 116	GF	E	41.8
	F1		44.9
Lot 116	GF	N	35.2
	F1		38.2
Lot 117	GF	W	41.9
	F1		43.0
Lot 117	GF	S	37.0
	F1		42.6
Lot 117	GF	E	41.6
	F1		44.7
Lot 117	GF	N	34.6
	F1		37.8
Lot 118	GF	W	41.4
	F1		42.5
Lot 118	GF	S	38.4
	F1		43.0
Lot 118	GF	E	41.6
	F1		44.7
Lot 118	GF	N	33.9
	F1		37.0
Lot 119	GF	W	40.5
	F1		41.8
Lot 119	GF	S	38.9
	F1		43.0
Lot 119	GF	E	41.3
	F1		44.4
Lot 119	GF	N	33.9
	F1		37.0
Lot 120	GF	W	39.7
	F1		41.2
Lot 120	GF	S	38.1
	F1		42.1
Lot 120	GF	E	40.3
	F1		43.8

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Receiver	Floor	Facade	L10,18hr dB(A)
Lot 120	GF	N	34.3
	F1		37.3
Lot 121	GF	W	37.3
	F1		39.9
Lot 121	GF	S	37.3
	F1		40.7
Lot 121	GF	E	39.0
	F1		42.3
Lot 121	GF	N	34.3
	F1		37.4
Lot 122	GF	W	34.1
	F1		37.0
Lot 122	GF	S	35.1
	F1		37.9
Lot 122	GF	E	36.5
	F1		39.2
Lot 122	GF	N	36.4
	F1		38.3
Lot 123	GF	W	34.8
	F1		38.2
Lot 123	GF	S	35.2
	F1		38.2
Lot 123	GF	E	37.7
	F1		40.5
Lot 123	GF	N	33.2
	F1		36.6
Lot 124	GF	W	37.1
	F1		39.4
Lot 124	GF	S	35.4
	F1		39.1
Lot 124	GF	E	39.6
	F1		41.6
Lot 124	GF	N	33.8
	F1		36.9
Lot 125	GF	W	37.9
	F1		40.2
Lot 125	GF	S	36.8
	F1		40.8
Lot 125	GF	E	40.4
	F1		42.4
Lot 125	GF	N	33.6
	F1		36.8
Lot 126	GF	W	38.5
	F1		40.8
Lot 126	GF	S	42.1
	F1		44.4
Lot 126	GF	E	40.9
	F1		42.9
Lot 126	GF	N	33.1
	F1		36.5

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Receiver	Floor	Facade	L10,18hr dB(A)
Lot 127	GF	N	32.8
	F1		36.4
Lot 127	GF	E	37.7
	F1		40.6
Lot 127	GF	S	41.3
	F1		43.5
Lot 127	GF	W	38.0
	F1		40.1
Lot 128	GF	N	33.0
	F1		36.4
Lot 128	GF	E	38.1
	F1		41.1
Lot 128	GF	S	41.6
	F1		43.8
Lot 128	GF	W	38.0
	F1		40.1
Lot 129	GF	N	33.4
	F1		36.5
Lot 129	GF	E	37.4
	F1		40.7
Lot 129	GF	S	42.0
	F1		44.1
Lot 129	GF	W	38.8
	F1		40.5
Lot 130	GF	N	33.6
	F1		36.7
Lot 130	GF	E	37.8
	F1		41.3
Lot 130	GF	S	43.0
	F1		44.8
Lot 130	GF	W	39.2
	F1		40.8
Lot 131	GF	N	33.9
	F1		36.9
Lot 131	GF	E	40.4
	F1		42.4
Lot 131	GF	S	43.6
	F1		45.1
Lot 131	GF	W	37.0
	F1		39.4
Lot 132	GF	N	34.1
	F1		37.2
Lot 132	GF	E	40.7
	F1		42.4
Lot 132	GF	S	42.7
	F1		44.6
Lot 132	GF	W	36.9
	F1		39.4
Lot 133	GF	N	34.6
	F1		37.7

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 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 133	GF	E	38.9
	F1		41.2
Lot 133	GF	S	43.3
	F1		45.0
Lot 133	GF	W	38.4
	F1		40.6
Lot 134	GF	N	36.2
	F1		39.0
Lot 134	GF	E	37.0
	F1		40.1
Lot 134	GF	S	43.3
	F1		45.0
Lot 134	GF	W	38.9
	F1		41.3
Lot 135	GF	N	38.1
	F1		41.0
Lot 135	GF	E	34.4
	F1		38.2
Lot 135	GF	S	44.3
	F1		45.9
Lot 135	GF	W	43.7
	F1		45.7
Lot 136	GF	N	45.6
	F1		47.6
Lot 136	GF	E	36.7
	F1		39.9
Lot 136	GF	S	50.0
	F1		51.1
Lot 136	GF	W	54.0
	F1		55.0
Lot 137	GF	N	46.0
	F1		48.1
Lot 137	GF	E	36.3
	F1		39.6
Lot 137	GF	S	46.5
	F1		48.3
Lot 137	GF	W	53.9
	F1		55.1
Lot 138	GF	N	46.6
	F1		48.7
Lot 138	GF	E	36.0
	F1		39.4
Lot 138	GF	S	45.9
	F1		47.8
Lot 138	GF	W	53.7
	F1		55.0
Lot 139	GF	N	46.0
	F1		48.1
Lot 139	GF	E	36.0
	F1		39.3

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 139	GF	S	46.4
	F1		48.5
Lot 139	GF	W	53.7
	F1		55.1
Lot 140	GF	N	50.5
	F1		51.7
Lot 140	GF	E	35.7
	F1		39.2
Lot 140	GF	S	45.5
	F1		47.7
Lot 140	GF	W	54.0
	F1		55.2
Lot 141	GF	N	45.3
	F1		46.5
Lot 141	GF	E	34.0
	F1		37.8
Lot 141	GF	S	37.8
	F1		40.2
Lot 141	GF	W	45.0
	F1		46.5
Lot 142	GF	N	36.9
	F1		39.5
Lot 142	GF	E	34.8
	F1		38.2
Lot 142	GF	S	38.1
	F1		40.5
Lot 142	GF	W	38.1
	F1		40.7
Lot 143	GF	N	37.6
	F1		39.8
Lot 143	GF	E	34.6
	F1		38.2
Lot 143	GF	S	37.4
	F1		39.7
Lot 143	GF	W	35.4
	F1		38.3
Lot 144	GF	N	36.2
	F1		38.7
Lot 144	GF	E	34.1
	F1		37.5
Lot 144	GF	S	36.6
	F1		38.8
Lot 144	GF	W	34.3
	F1		37.5
Lot 145	GF	N	35.7
	F1		38.1
Lot 145	GF	E	34.7
	F1		38.4
Lot 145	GF	S	36.7
	F1		39.7

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 145	GF	W	34.3
	F1		37.5
Lot 146	GF	N	35.1
	F1		37.6
Lot 146	GF	E	34.7
	F1		38.5
Lot 146	GF	S	36.2
	F1		39.1
Lot 146	GF	W	33.6
	F1		36.8
Lot 147	GF	N	57.4
	F1		59.1
Lot 147	GF	E	40.6
	F1		45.1
Lot 147	GF	S	59.2
	F1		59.8
Lot 147	GF	W	63.5
	F1		64.0
Lot 148	GF	N	35.1
	F1		37.5
Lot 148	GF	E	33.7
	F1		37.6
Lot 148	GF	S	35.9
	F1		38.6
Lot 148	GF	W	33.8
	F1		37.2
Lot 149	GF	N	34.7
	F1		37.4
Lot 149	GF	E	33.8
	F1		37.7
Lot 149	GF	S	36.0
	F1		38.4
Lot 149	GF	W	33.8
	F1		37.4
Lot 150	GF	N	33.1
	F1		36.5
Lot 150	GF	E	34.8
	F1		38.0
Lot 150	GF	S	35.7
	F1		38.2
Lot 150	GF	W	33.7
	F1		37.5
Lot 151	GF	N	33.2
	F1		36.6
Lot 151	GF	E	35.1
	F1		38.1
Lot 151	GF	S	35.7
	F1		38.3
Lot 151	GF	W	34.0
	F1		37.6



Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 152	GF	N	33.9
	F1		37.1
Lot 152	GF	E	42.0
	F1		43.4
Lot 152	GF	S	46.0
	F1		46.7
Lot 152	GF	W	42.3
	F1		43.3
Lot 153	GF	N	33.9
	F1		37.1
Lot 153	GF	E	41.7
	F1		43.0
Lot 153	GF	S	45.9
	F1		46.7
Lot 153	GF	W	42.3
	F1		43.4
Lot 154	GF	N	33.8
	F1		37.0
Lot 154	GF	E	41.3
	F1		42.8
Lot 154	GF	S	45.7
	F1		46.6
Lot 154	GF	W	42.4
	F1		43.4
Lot 155	GF	N	33.6
	F1		36.9
Lot 155	GF	E	41.5
	F1		42.8
Lot 155	GF	S	45.5
	F1		46.4
Lot 155	GF	W	42.0
	F1		43.1
Lot 156	GF	N	33.6
	F1		37.0
Lot 156	GF	E	42.3
	F1		44.0
Lot 156	GF	S	45.5
	F1		46.8
Lot 156	GF	W	41.8
	F1		42.9
Lot 158	GF	W	41.2
	F1		42.7
Lot 158	GF	S	40.5
	F1		44.0
Lot 158	GF	E	43.9
	F1		44.8
Lot 158	GF	N	35.9
	F1		38.8
Lot 159	GF	W	42.0
	F1		43.7

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 159	GF	S	41.3
	F1		44.4
Lot 159	GF	E	44.4
	F1		45.2
Lot 159	GF	N	33.8
	F1		37.3
Lot 160	GF	W	43.8
	F1		45.2
Lot 160	GF	S	41.3
	F1		44.9
Lot 160	GF	E	44.7
	F1		45.4
Lot 160	GF	N	34.3
	F1		37.8
Lot 161	GF	W	45.2
	F1		46.3
Lot 161	GF	S	43.1
	F1		46.0
Lot 161	GF	E	44.8
	F1		45.6
Lot 161	GF	N	34.7
	F1		38.0
Lot 162	GF	W	48.7
	F1		49.5
Lot 162	GF	S	49.8
	F1		50.4
Lot 162	GF	E	45.1
	F1		45.8
Lot 162	GF	N	34.5
	F1		38.1
Lot 163	GF	N	35.0
	F1		38.5
Lot 163	GF	E	45.3
	F1		46.7
Lot 163	GF	S	51.5
	F1		52.2
Lot 163	GF	W	48.9
	F1		49.7
Lot 164	GF	N	46.7
	F1		49.0
Lot 164	GF	E	40.6
	F1		42.5
Lot 164	GF	S	52.2
	F1		52.9
Lot 164	GF	W	54.3
	F1		55.2
Lot 165	GF	N	46.5
	F1		48.6
Lot 165	GF	E	38.7
	F1		41.8

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 165	GF	S	47.7
	F1		49.5
Lot 165	GF	W	53.9
	F1		55.0
Lot 166	GF	N	45.4
	F1		47.6
Lot 166	GF	E	38.4
	F1		41.6
Lot 166	GF	S	47.1
	F1		49.1
Lot 166	GF	W	53.9
	F1		55.0
Lot 167	GF	N	49.1
	F1		50.4
Lot 167	GF	E	37.7
	F1		41.0
Lot 167	GF	S	45.7
	F1		48.0
Lot 167	GF	W	53.9
	F1		55.0
Lot 168	GF	N	41.4
	F1		43.4
Lot 168	GF	E	36.5
	F1		40.6
Lot 168	GF	S	44.5
	F1		46.4
Lot 168	GF	W	44.9
	F1		46.5
Lot 169	GF	W	60.5
	F1		62.2
Lot 169	GF	S	51.5
	F1		53.3
Lot 169	GF	E	39.6
	F1		44.1
Lot 169	GF	N	48.7
	F1		50.9
Lot 170	GF	W	61.0
	F1		62.7
Lot 170	GF	S	48.9
	F1		51.1
Lot 170	GF	E	39.8
	F1		44.2
Lot 170	GF	N	49.3
	F1		51.4
Lot 171	GF	W	61.2
	F1		62.9
Lot 171	GF	S	49.3
	F1		51.4
Lot 171	GF	E	39.8
	F1		44.2

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 171	GF	N	49.4
	F1		51.5
Lot 172	GF	W	61.1
	F1		62.9
Lot 172	GF	S	49.1
	F1		51.2
Lot 172	GF	E	39.7
	F1		44.1
Lot 172	GF	N	49.0
	F1		51.2
Lot 173	GF	W	61.0
	F1		62.9
Lot 173	GF	S	48.8
	F1		51.0
Lot 173	GF	E	39.7
	F1		44.0
Lot 173	GF	N	49.6
	F1		51.7
Lot 174	GF	W	61.0
	F1		62.9
Lot 174	GF	S	49.4
	F1		51.5
Lot 174	GF	E	39.7
	F1		44.0
Lot 174	GF	N	48.7
	F1		51.0
Lot 175	GF	W	61.0
	F1		63.0
Lot 175	GF	S	48.5
	F1		50.7
Lot 175	GF	E	39.7
	F1		44.0
Lot 175	GF	N	49.0
	F1		51.2
Lot 176	GF	W	61.1
	F1		63.0
Lot 176	GF	S	48.6
	F1		50.9
Lot 176	GF	E	39.7
	F1		44.0
Lot 176	GF	N	49.5
	F1		51.7
Lot 177	GF	W	61.1
	F1		63.0
Lot 177	GF	S	49.2
	F1		51.4
Lot 177	GF	E	39.7
	F1		44.0
Lot 177	GF	N	52.0
	F1		53.8

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 178	GF	W	61.5
	F1		63.2
Lot 178	GF	S	51.9
	F1		53.8
Lot 178	GF	E	39.7
	F1		44.0
Lot 178	GF	N	54.1
	F1		55.5
Lot 179	GF	W	61.6
	F1		63.0
Lot 179	GF	S	52.8
	F1		54.5
Lot 179	GF	E	39.6
	F1		43.9
Lot 179	GF	N	54.6
	F1		55.9
Lot 180	GF	W	61.6
	F1		62.9
Lot 180	GF	S	53.2
	F1		54.7
Lot 180	GF	E	39.5
	F1		43.8
Lot 180	GF	N	55.2
	F1		56.4
Lot 181	GF	W	61.7
	F1		62.8
Lot 181	GF	S	53.7
	F1		55.2
Lot 181	GF	E	39.3
	F1		43.6
Lot 181	GF	N	56.9
	F1		57.7
Lot 182	GF	N	41.7
	F1		43.6
Lot 182	GF	E	37.1
	F1		40.9
Lot 182	GF	S	40.4
	F1		42.6
Lot 182	GF	W	43.1
	F1		44.7
Lot 183	GF	N	39.8
	F1		41.7
Lot 183	GF	E	36.7
	F1		40.3
Lot 183	GF	S	39.4
	F1		41.9
Lot 183	GF	W	39.5
	F1		42.8
Lot 184	GF	N	39.0
	F1		40.9

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 184	GF	E	36.1
	F1		39.6
Lot 184	GF	S	39.3
	F1		41.5
Lot 184	GF	W	39.7
	F1		42.1
Lot 185	GF	N	38.5
	F1		40.2
Lot 185	GF	E	35.5
	F1		38.9
Lot 185	GF	S	38.9
	F1		41.1
Lot 185	GF	W	39.4
	F1		41.4
Lot 186	GF	N	37.9
	F1		39.6
Lot 186	GF	E	34.8
	F1		38.3
Lot 186	GF	S	38.5
	F1		40.6
Lot 186	GF	W	38.8
	F1		40.8
Lot 187	GF	W	39.3
	F1		40.8
Lot 187	GF	S	37.1
	F1		39.3
Lot 187	GF	E	34.3
	F1		37.6
Lot 187	GF	N	37.4
	F1		39.2
Lot 188	GF	W	38.5
	F1		40.5
Lot 188	GF	S	37.7
	F1		40.1
Lot 188	GF	E	34.5
	F1		37.8
Lot 188	GF	N	36.8
	F1		38.9
Lot 189	GF	W	39.4
	F1		41.2
Lot 189	GF	S	36.9
	F1		39.8
Lot 189	GF	E	34.8
	F1		38.1
Lot 189	GF	N	37.1
	F1		39.2
Lot 190	GF	N	39.5
	F1		41.8
Lot 190	GF	E	37.2
	F1		40.8

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 190	GF	S	45.4
	F1		47.3
Lot 190	GF	W	40.3
	F1		43.4
Lot 191	GF	N	39.0
	F1		41.1
Lot 191	GF	E	36.7
	F1		40.2
Lot 191	GF	S	44.2
	F1		45.8
Lot 191	GF	W	40.6
	F1		42.9
Lot 192	GF	N	38.3
	F1		40.4
Lot 192	GF	E	36.1
	F1		39.5
Lot 192	GF	S	42.8
	F1		44.6
Lot 192	GF	W	40.1
	F1		42.3
Lot 193	GF	N	37.9
	F1		39.9
Lot 193	GF	E	35.2
	F1		38.7
Lot 193	GF	S	41.9
	F1		43.5
Lot 193	GF	W	39.8
	F1		41.8
Lot 194	GF	W	41.9
	F1		43.4
Lot 194	GF	S	41.4
	F1		43.1
Lot 194	GF	E	35.2
	F1		38.9
Lot 194	GF	N	36.7
	F1		39.1
Lot 195	GF	W	41.9
	F1		44.1
Lot 195	GF	S	37.6
	F1		41.3
Lot 195	GF	E	35.7
	F1		39.4
Lot 195	GF	N	40.2
	F1		43.8
Lot 196	GF	N	41.8
	F1		44.1
Lot 196	GF	E	35.9
	F1		39.7
Lot 196	GF	S	40.9
	F1		43.2



Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 196	GF	W	40.6
	F1		42.9
Lot 197	GF	N	42.7
	F1		45.1
Lot 197	GF	E	36.8
	F1		40.6
Lot 197	GF	S	41.3
	F1		43.6
Lot 197	GF	W	41.2
	F1		43.5
Lot 198	GF	N	43.6
	F1		46.6
Lot 198	GF	E	37.2
	F1		41.1
Lot 198	GF	S	41.6
	F1		44.0
Lot 198	GF	W	41.1
	F1		43.8
Lot 199	GF	N	45.4
	F1		47.4
Lot 199	GF	E	37.7
	F1		41.5
Lot 199	GF	S	42.5
	F1		44.9
Lot 199	GF	W	41.6
	F1		44.3
Lot 200	GF	N	40.7
	F1		42.9
Lot 200	GF	E	38.1
	F1		41.5
Lot 200	GF	S	43.0
	F1		45.2
Lot 200	GF	W	42.3
	F1		44.6
Lot 201	GF	N	39.7
	F1		42.2
Lot 201	GF	E	37.8
	F1		41.1
Lot 201	GF	S	42.5
	F1		44.6
Lot 201	GF	W	41.4
	F1		43.8
Lot 202	GF	N	39.4
	F1		41.7
Lot 202	GF	E	37.4
	F1		40.8
Lot 202	GF	S	42.1
	F1		44.2
Lot 202	GF	W	41.1
	F1		43.4

Cadence Residential Development  
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 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 203	GF	N	39.1
	F1		41.2
Lot 203	GF	E	36.3
	F1		39.8
Lot 203	GF	S	41.7
	F1		43.7
Lot 203	GF	W	40.9
	F1		43.1
Lot 204	GF	W	41.7
	F1		43.3
Lot 204	GF	S	41.3
	F1		43.4
Lot 204	GF	E	35.8
	F1		39.6
Lot 204	GF	N	36.8
	F1		39.5
Lot 205	GF	N	58.1
	F1		59.1
Lot 205	GF	E	41.0
	F1		45.5
Lot 205	GF	S	58.0
	F1		59.1
Lot 205	GF	W	62.5
	F1		63.3
Lot 206	GF	W	62.0
	F1		63.0
Lot 206	GF	S	49.3
	F1		51.5
Lot 206	GF	E	40.8
	F1		44.7
Lot 206	GF	N	53.0
	F1		54.9
Lot 207	GF	W	62.1
	F1		63.1
Lot 207	GF	S	49.3
	F1		51.5
Lot 207	GF	E	41.1
	F1		44.9
Lot 207	GF	N	49.0
	F1		51.1
Lot 208	GF	W	62.1
	F1		63.1
Lot 208	GF	S	48.7
	F1		51.0
Lot 208	GF	E	41.1
	F1		44.9
Lot 208	GF	N	49.0
	F1		51.1
Lot 209	GF	W	62.1
	F1		63.1

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 209	GF	S	49.2
	F1		51.5
Lot 209	GF	E	41.0
	F1		45.0
Lot 209	GF	N	48.2
	F1		50.4
Lot 210	GF	W	62.1
	F1		63.1
Lot 210	GF	S	49.6
	F1		51.7
Lot 210	GF	E	41.0
	F1		45.0
Lot 210	GF	N	48.9
	F1		51.0
Lot 211	GF	W	62.0
	F1		63.1
Lot 211	GF	S	50.0
	F1		52.1
Lot 211	GF	E	41.1
	F1		45.1
Lot 211	GF	N	49.2
	F1		51.3
Lot 212	GF	W	61.9
	F1		63.0
Lot 212	GF	S	49.3
	F1		51.6
Lot 212	GF	E	41.1
	F1		45.1
Lot 212	GF	N	49.3
	F1		51.4
Lot 213	GF	W	61.9
	F1		63.0
Lot 213	GF	S	49.7
	F1		51.9
Lot 213	GF	E	41.3
	F1		45.2
Lot 213	GF	N	49.2
	F1		51.3
Lot 214	GF	W	61.8
	F1		63.0
Lot 214	GF	S	49.4
	F1		51.6
Lot 214	GF	E	41.2
	F1		45.2
Lot 214	GF	N	49.3
	F1		51.4
Lot 215	GF	W	61.7
	F1		62.9
Lot 215	GF	S	49.3
	F1		51.5

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 215	GF	E	41.4
	F1		45.2
Lot 215	GF	N	48.9
	F1		51.1
Lot 216	GF	W	61.6
	F1		62.8
Lot 216	GF	S	49.4
	F1		51.6
Lot 216	GF	E	41.2
	F1		45.3
Lot 216	GF	N	49.0
	F1		51.1
Lot 217	GF	W	61.3
	F1		62.5
Lot 217	GF	S	52.1
	F1		53.8
Lot 217	GF	E	41.2
	F1		45.2
Lot 217	GF	N	49.3
	F1		51.4
Lot 218	GF	N	57.2
	F1		58.9
Lot 218	GF	E	41.9
	F1		46.1
Lot 218	GF	S	59.3
	F1		60.0
Lot 218	GF	W	63.4
	F1		64.1
Lot 219	GF	W	38.4
	F1		39.6
Lot 219	GF	S	36.5
	F1		38.9
Lot 219	GF	E	35.4
	F1		37.9
Lot 219	GF	N	36.0
	F1		37.9
Lot 220	GF	W	38.3
	F1		39.4
Lot 220	GF	S	36.7
	F1		38.9
Lot 220	GF	E	35.0
	F1		37.6
Lot 220	GF	N	35.9
	F1		37.7
Lot 221	GF	W	38.1
	F1		39.2
Lot 221	GF	S	36.2
	F1		38.2
Lot 221	GF	E	35.2
	F1		37.4

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 221	GF	N	36.2
	F1		38.2
Lot 222	GF	W	38.6
	F1		39.7
Lot 222	GF	S	36.1
	F1		38.5
Lot 222	GF	E	34.8
	F1		37.1
Lot 222	GF	N	36.1
	F1		38.1
Lot 223	GF	W	38.2
	F1		39.3
Lot 223	GF	S	36.3
	F1		38.2
Lot 223	GF	E	34.5
	F1		36.9
Lot 223	GF	N	35.7
	F1		37.9
Lot 224	GF	W	37.8
	F1		39.0
Lot 224	GF	S	35.4
	F1		37.5
Lot 224	GF	E	34.2
	F1		36.7
Lot 224	GF	N	36.3
	F1		38.4
Lot 225	GF	W	38.5
	F1		39.6
Lot 225	GF	S	35.3
	F1		37.4
Lot 225	GF	E	34.0
	F1		36.5
Lot 225	GF	N	35.4
	F1		37.9
Lot 226	GF	W	39.0
	F1		40.1
Lot 226	GF	S	35.9
	F1		37.8
Lot 226	GF	E	34.1
	F1		36.3
Lot 226	GF	N	37.6
	F1		39.3
Lot 227	GF	W	38.0
	F1		39.3
Lot 227	GF	S	35.7
	F1		37.4
Lot 227	GF	E	33.8
	F1		36.1
Lot 227	GF	N	38.4
	F1		39.7

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 228	GF	W	38.8
	F1		40.1
Lot 228	GF	S	36.7
	F1		39.2
Lot 228	GF	E	35.7
	F1		38.2
Lot 228	GF	N	35.9
	F1		37.9
Lot 229	GF	W	39.9
	F1		41.0
Lot 229	GF	S	38.5
	F1		40.7
Lot 229	GF	E	36.1
	F1		38.5
Lot 229	GF	N	35.7
	F1		37.8
Lot 230	GF	W	40.4
	F1		41.6
Lot 230	GF	S	37.9
	F1		40.3
Lot 230	GF	E	36.3
	F1		38.7
Lot 230	GF	N	36.8
	F1		38.8
Lot 231	GF	W	40.5
	F1		41.8
Lot 231	GF	S	37.0
	F1		39.9
Lot 231	GF	E	36.6
	F1		38.9
Lot 231	GF	N	38.3
	F1		39.9
Lot 232	GF	W	39.2
	F1		40.9
Lot 232	GF	S	36.9
	F1		40.1
Lot 232	GF	E	36.8
	F1		39.1
Lot 232	GF	N	35.9
	F1		38.3
Lot 233	GF	W	40.0
	F1		41.6
Lot 233	GF	S	38.6
	F1		41.2
Lot 233	GF	E	36.6
	F1		39.1
Lot 233	GF	N	36.3
	F1		38.8
Lot 234	GF	N	36.8
	F1		38.9

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 234	GF	E	37.4
	F1		39.7
Lot 234	GF	S	40.8
	F1		42.7
Lot 234	GF	W	40.5
	F1		42.1
Lot 235	GF	N	36.0
	F1		38.4
Lot 235	GF	E	37.7
	F1		39.8
Lot 235	GF	S	40.8
	F1		42.4
Lot 235	GF	W	38.3
	F1		40.8
Lot 236	GF	W	44.1
	F1		45.8
Lot 236	GF	S	41.2
	F1		44.3
Lot 236	GF	E	38.1
	F1		41.8
Lot 236	GF	N	40.1
	F1		42.3
Lot 237	GF	N	38.7
	F1		41.0
Lot 237	GF	E	37.8
	F1		41.2
Lot 237	GF	S	42.2
	F1		45.0
Lot 237	GF	W	42.5
	F1		44.4
Lot 238	GF	N	38.3
	F1		40.5
Lot 238	GF	E	37.2
	F1		40.7
Lot 238	GF	S	42.3
	F1		45.0
Lot 238	GF	W	41.3
	F1		43.8
Lot 239	GF	N	37.9
	F1		40.1
Lot 239	GF	E	36.3
	F1		39.9
Lot 239	GF	S	42.3
	F1		44.8
Lot 239	GF	W	41.0
	F1		43.6
Lot 240	GF	N	37.7
	F1		39.8
Lot 240	GF	E	36.0
	F1		39.7



Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 240	GF	S	42.3
	F1		44.8
Lot 240	GF	W	39.9
	F1		43.2
Lot 241	GF	N	37.4
	F1		39.5
Lot 241	GF	E	36.0
	F1		39.7
Lot 241	GF	S	42.0
	F1		44.7
Lot 241	GF	W	39.8
	F1		43.2
Lot 242	GF	N	37.1
	F1		39.2
Lot 242	GF	E	35.7
	F1		39.4
Lot 242	GF	S	41.7
	F1		44.5
Lot 242	GF	W	40.3
	F1		43.2
Lot 243	GF	N	36.9
	F1		39.0
Lot 243	GF	E	37.7
	F1		40.2
Lot 243	GF	S	42.1
	F1		44.7
Lot 243	GF	W	38.8
	F1		42.2
Lot 244	GF	N	36.5
	F1		38.7
Lot 244	GF	E	39.1
	F1		41.0
Lot 244	GF	S	42.2
	F1		44.4
Lot 244	GF	W	38.7
	F1		41.9
Lot 245	GF	N	36.8
	F1		39.1
Lot 245	GF	E	40.2
	F1		42.0
Lot 245	GF	S	45.2
	F1		47.1
Lot 245	GF	W	39.3
	F1		42.7
Lot 246	GF	N	37.0
	F1		39.4
Lot 246	GF	E	39.7
	F1		41.7
Lot 246	GF	S	45.5
	F1		47.4

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 246	GF	W	40.6
	F1		43.8
Lot 247	GF	N	37.2
	F1		39.6
Lot 247	GF	E	37.9
	F1		40.6
Lot 247	GF	S	45.3
	F1		47.3
Lot 247	GF	W	40.0
	F1		43.7
Lot 248	GF	N	37.4
	F1		39.8
Lot 248	GF	E	36.3
	F1		39.8
Lot 248	GF	S	45.1
	F1		47.2
Lot 248	GF	W	39.7
	F1		43.6
Lot 249	GF	N	37.7
	F1		40.1
Lot 249	GF	E	36.3
	F1		39.8
Lot 249	GF	S	45.3
	F1		47.1
Lot 249	GF	W	40.9
	F1		44.4
Lot 250	GF	N	38.1
	F1		40.5
Lot 250	GF	E	36.7
	F1		40.1
Lot 250	GF	S	45.6
	F1		47.2
Lot 250	GF	W	41.6
	F1		44.8
Lot 251	GF	N	38.8
	F1		41.1
Lot 251	GF	E	37.4
	F1		40.8
Lot 251	GF	S	44.8
	F1		46.7
Lot 251	GF	W	41.7
	F1		44.6
Lot 252	GF	N	40.2
	F1		42.3
Lot 252	GF	E	38.4
	F1		41.7
Lot 252	GF	S	43.0
	F1		45.7
Lot 252	GF	W	43.6
	F1		45.6

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 253	GF	W	49.9
	F1		51.3
Lot 253	GF	S	49.5
	F1		50.4
Lot 253	GF	E	39.5
	F1		42.8
Lot 253	GF	N	39.3
	F1		42.2
Lot 254	GF	N	57.6
	F1		58.7
Lot 254	GF	E	43.9
	F1		47.1
Lot 254	GF	S	58.1
	F1		59.4
Lot 254	GF	W	62.4
	F1		63.5
Lot 255	GF	N	52.1
	F1		53.8
Lot 255	GF	E	43.0
	F1		45.9
Lot 255	GF	S	53.9
	F1		55.8
Lot 255	GF	W	53.1
	F1		55.5
Lot 256	GF	N	48.3
	F1		51.3
Lot 256	GF	E	42.3
	F1		45.1
Lot 256	GF	S	51.8
	F1		53.9
Lot 256	GF	W	47.6
	F1		50.4
Lot 257	GF	N	46.7
	F1		49.0
Lot 257	GF	E	41.5
	F1		44.3
Lot 257	GF	S	49.7
	F1		52.0
Lot 257	GF	W	45.7
	F1		48.5
Lot 258	GF	N	45.1
	F1		48.0
Lot 258	GF	E	40.6
	F1		43.5
Lot 258	GF	S	48.7
	F1		50.9
Lot 258	GF	W	44.3
	F1		47.1
Lot 259	GF	N	43.9
	F1		46.8

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 259	GF	E	39.8
	F1		42.7
Lot 259	GF	S	48.2
	F1		50.2
Lot 259	GF	W	44.0
	F1		46.9
Lot 260	GF	N	42.8
	F1		45.2
Lot 260	GF	E	38.5
	F1		41.9
Lot 260	GF	S	47.9
	F1		49.7
Lot 260	GF	W	43.7
	F1		46.8
Lot 261	GF	W	43.0
	F1		46.2
Lot 261	GF	S	44.3
	F1		47.0
Lot 261	GF	E	37.2
	F1		40.5
Lot 261	GF	N	43.3
	F1		44.5
Lot 262	GF	W	47.6
	F1		49.3
Lot 262	GF	S	46.3
	F1		48.4
Lot 262	GF	E	37.5
	F1		40.8
Lot 262	GF	N	38.0
	F1		41.3
Lot 263	GF	W	48.0
	F1		49.8
Lot 263	GF	S	46.3
	F1		48.4
Lot 263	GF	E	37.6
	F1		40.9
Lot 263	GF	N	40.7
	F1		42.9
Lot 264	GF	W	48.6
	F1		50.2
Lot 264	GF	S	47.2
	F1		49.1
Lot 264	GF	E	38.6
	F1		41.7
Lot 264	GF	N	41.8
	F1		43.8
Lot 265	GF	W	49.4
	F1		50.9
Lot 265	GF	S	49.5
	F1		51.0

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 265	GF	E	41.6
	F1		43.8
Lot 265	GF	N	42.6
	F1		44.6
Lot 266	GF	N	43.6
	F1		45.5
Lot 266	GF	E	43.8
	F1		46.0
Lot 266	GF	S	59.1
	F1		59.9
Lot 266	GF	W	54.5
	F1		55.7
Lot 267	GF	N	43.1
	F1		45.0
Lot 267	GF	E	43.2
	F1		45.6
Lot 267	GF	S	59.2
	F1		60.0
Lot 267	GF	W	44.3
	F1		46.9
Lot 268	GF	N	43.0
	F1		44.9
Lot 268	GF	E	44.0
	F1		46.3
Lot 268	GF	S	59.2
	F1		60.0
Lot 268	GF	W	43.4
	F1		46.2
Lot 269	GF	N	42.7
	F1		44.7
Lot 269	GF	E	45.7
	F1		47.8
Lot 269	GF	S	59.1
	F1		60.1
Lot 269	GF	W	44.2
	F1		46.8
Lot 270	GF	N	42.7
	F1		44.6
Lot 270	GF	E	47.2
	F1		49.0
Lot 270	GF	S	59.2
	F1		60.1
Lot 270	GF	W	46.0
	F1		48.2
Lot 271	GF	N	42.4
	F1		44.4
Lot 271	GF	E	52.9
	F1		54.7
Lot 271	GF	S	59.2
	F1		60.2

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 271	GF	W	47.5
	F1		49.4
Lot 272	GF	W	45.6
	F1		47.8
Lot 272	GF	S	42.8
	F1		46.5
Lot 272	GF	E	41.5
	F1		43.2
Lot 272	GF	N	42.1
	F1		43.0
Lot 273	GF	W	44.8
	F1		47.7
Lot 273	GF	S	43.5
	F1		46.9
Lot 273	GF	E	42.2
	F1		43.8
Lot 273	GF	N	37.7
	F1		41.1
Lot 274	GF	W	45.6
	F1		48.1
Lot 274	GF	S	43.5
	F1		46.8
Lot 274	GF	E	42.8
	F1		44.4
Lot 274	GF	N	39.3
	F1		41.9
Lot 275	GF	W	46.7
	F1		48.7
Lot 275	GF	S	45.3
	F1		47.8
Lot 275	GF	E	43.5
	F1		45.1
Lot 275	GF	N	38.9
	F1		42.1
Lot 276	GF	W	47.1
	F1		49.1
Lot 276	GF	S	46.1
	F1		48.3
Lot 276	GF	E	44.4
	F1		45.9
Lot 276	GF	N	39.7
	F1		42.6
Lot 277	GF	W	48.8
	F1		50.0
Lot 277	GF	S	48.3
	F1		49.6
Lot 277	GF	E	45.0
	F1		46.6
Lot 277	GF	N	41.0
	F1		43.2

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 278	GF	W	49.2
	F1		50.3
Lot 278	GF	S	49.8
	F1		50.9
Lot 278	GF	E	46.0
	F1		47.7
Lot 278	GF	N	41.5
	F1		43.6
Lot 282	GF	W	44.1
	F1		44.8
Lot 282	GF	S	37.8
	F1		39.5
Lot 282	GF	E	33.4
	F1		36.9
Lot 282	GF	N	42.9
	F1		43.6
Lot 283	GF	W	40.5
	F1		42.8
Lot 283	GF	S	38.5
	F1		42.1
Lot 283	GF	E	36.0
	F1		39.7
Lot 283	GF	N	38.0
	F1		40.4
Lot 284	GF	W	43.7
	F1		45.3
Lot 284	GF	S	41.9
	F1		44.9
Lot 284	GF	E	38.8
	F1		42.4
Lot 284	GF	N	40.3
	F1		42.8
Lot 285	GF	W	44.5
	F1		46.2
Lot 285	GF	S	43.0
	F1		45.9
Lot 285	GF	E	38.6
	F1		42.3
Lot 285	GF	N	39.2
	F1		42.0
Lot 286	GF	W	48.2
	F1		49.3
Lot 286	GF	S	48.1
	F1		49.2
Lot 286	GF	E	38.9
	F1		42.3
Lot 286	GF	N	41.4
	F1		43.8
Lot 287	GF	N	48.4
	F1		50.4



Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 287	GF	E	41.6
	F1		45.0
Lot 287	GF	S	54.6
	F1		55.5
Lot 287	GF	W	50.5
	F1		51.8
Lot 288	GF	W	41.1
	F1		43.3
Lot 288	GF	S	38.2
	F1		41.8
Lot 288	GF	E	36.7
	F1		39.8
Lot 288	GF	N	38.2
	F1		40.7
Lot 289	GF	W	40.2
	F1		42.3
Lot 289	GF	S	39.1
	F1		42.0
Lot 289	GF	E	36.1
	F1		39.6
Lot 289	GF	N	36.7
	F1		39.6
Lot 290	GF	N	45.9
	F1		49.0
Lot 290	GF	E	37.8
	F1		41.7
Lot 290	GF	S	44.1
	F1		46.2
Lot 290	GF	W	46.8
	F1		48.8
Lot 291	GF	N	40.1
	F1		42.4
Lot 291	GF	E	38.6
	F1		42.2
Lot 291	GF	S	43.4
	F1		45.6
Lot 291	GF	W	43.5
	F1		45.2
Lot 292	GF	N	54.2
	F1		55.2
Lot 292	GF	E	40.2
	F1		44.3
Lot 292	GF	S	50.9
	F1		52.7
Lot 292	GF	W	51.2
	F1		52.8
Lot 293	GF	N	48.5
	F1		50.6
Lot 293	GF	E	39.5
	F1		43.6

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 293	GF	S	54.1
	F1		55.0
Lot 293	GF	W	49.5
	F1		51.3
Lot 294	GF	N	40.4
	F1		42.5
Lot 294	GF	E	37.3
	F1		41.2
Lot 294	GF	S	46.3
	F1		48.7
Lot 294	GF	W	45.8
	F1		47.8
Lot 295	GF	W	37.4
	F1		39.8
Lot 295	GF	S	36.9
	F1		38.9
Lot 295	GF	E	33.6
	F1		37.0
Lot 295	GF	N	36.1
	F1		39.1
Lot 296	GF	W	40.4
	F1		41.9
Lot 296	GF	S	37.2
	F1		39.3
Lot 296	GF	E	33.6
	F1		37.1
Lot 296	GF	N	37.6
	F1		39.9
Lot 297	GF	W	37.9
	F1		40.0
Lot 297	GF	S	36.3
	F1		38.6
Lot 297	GF	E	33.8
	F1		37.2
Lot 297	GF	N	38.9
	F1		40.8
Lot 298	GF	W	39.1
	F1		41.3
Lot 298	GF	S	37.3
	F1		40.4
Lot 298	GF	E	35.0
	F1		38.5
Lot 298	GF	N	36.8
	F1		39.0
Lot 299	GF	W	38.5
	F1		40.4
Lot 299	GF	S	37.6
	F1		39.1
Lot 299	GF	E	33.9
	F1		37.3

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 299	GF	N	36.5
	F1		39.1
Lot 300	GF	N	39.9
	F1		41.7
Lot 300	GF	E	34.3
	F1		38.0
Lot 300	GF	S	37.7
	F1		39.3
Lot 300	GF	W	37.8
	F1		40.3
Lot 301	GF	N	41.0
	F1		42.8
Lot 301	GF	E	34.9
	F1		38.5
Lot 301	GF	S	38.3
	F1		39.9
Lot 301	GF	W	38.4
	F1		40.9
Lot 302	GF	N	41.8
	F1		43.5
Lot 302	GF	E	35.5
	F1		39.2
Lot 302	GF	S	39.0
	F1		40.8
Lot 302	GF	W	38.6
	F1		41.5
Lot 303	GF	N	43.2
	F1		44.7
Lot 303	GF	E	36.1
	F1		39.8
Lot 303	GF	S	40.0
	F1		41.9
Lot 303	GF	W	38.3
	F1		41.7
Lot 304	GF	N	42.7
	F1		44.5
Lot 304	GF	E	36.6
	F1		40.4
Lot 304	GF	S	40.7
	F1		42.7
Lot 304	GF	W	43.8
	F1		45.3
Lot 305	GF	N	48.5
	F1		49.3
Lot 305	GF	E	36.4
	F1		40.3
Lot 305	GF	S	42.2
	F1		44.1
Lot 305	GF	W	47.5
	F1		48.8

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 306	GF	N	47.1
	F1		48.0
Lot 306	GF	E	35.7
	F1		39.6
Lot 306	GF	S	40.2
	F1		42.3
Lot 306	GF	W	39.1
	F1		42.3
Lot 307	GF	N	45.3
	F1		46.4
Lot 307	GF	E	35.1
	F1		39.0
Lot 307	GF	S	40.0
	F1		41.9
Lot 307	GF	W	38.2
	F1		41.4
Lot 308	GF	N	44.9
	F1		45.7
Lot 308	GF	E	34.6
	F1		38.4
Lot 308	GF	S	39.4
	F1		41.1
Lot 308	GF	W	38.1
	F1		41.0
Lot 309	GF	N	42.8
	F1		44.0
Lot 309	GF	E	34.0
	F1		37.8
Lot 309	GF	S	38.6
	F1		40.3
Lot 309	GF	W	37.3
	F1		40.0
Lot 310	GF	N	58.6
	F1		59.1
Lot 310	GF	E	40.9
	F1		45.3
Lot 310	GF	S	59.1
	F1		60.1
Lot 310	GF	W	63.5
	F1		63.9
Lot 311	GF	N	52.6
	F1		53.9
Lot 311	GF	E	38.7
	F1		42.8
Lot 311	GF	S	54.5
	F1		55.6
Lot 311	GF	W	52.9
	F1		54.3
Lot 312	GF	N	48.9
	F1		50.5

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 312	GF	E	37.3
	F1		41.2
Lot 312	GF	S	51.3
	F1		52.4
Lot 312	GF	W	41.1
	F1		44.6
Lot 313	GF	N	46.4
	F1		48.0
Lot 313	GF	E	36.3
	F1		40.0
Lot 313	GF	S	48.7
	F1		49.9
Lot 313	GF	W	39.9
	F1		43.1
Lot 314	GF	N	43.9
	F1		45.8
Lot 314	GF	E	35.5
	F1		39.2
Lot 314	GF	S	46.8
	F1		47.9
Lot 314	GF	W	39.0
	F1		42.1
Lot 315	GF	N	42.2
	F1		44.1
Lot 315	GF	E	34.7
	F1		38.4
Lot 315	GF	S	45.2
	F1		46.4
Lot 315	GF	W	38.4
	F1		41.3
Lot 316	GF	N	40.9
	F1		42.9
Lot 316	GF	E	34.1
	F1		37.8
Lot 316	GF	S	44.0
	F1		45.1
Lot 316	GF	W	37.5
	F1		40.4
Lot 317	GF	N	38.6
	F1		40.9
Lot 317	GF	E	33.7
	F1		37.3
Lot 317	GF	S	43.1
	F1		44.1
Lot 317	GF	W	36.9
	F1		39.7
Lot 318	GF	N	38.2
	F1		40.5
Lot 318	GF	E	33.2
	F1		36.9

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at External Building Facades

Receiver	Floor	Facade	L10,18hr dB(A)
Lot 318	GF	S	42.2
	F1		43.2
Lot 318	GF	W	36.4
	F1		39.2
Lot 319	GF	N	37.5
	F1		39.8
Lot 319	GF	E	32.9
	F1		36.5
Lot 319	GF	S	41.6
	F1		42.6
Lot 319	GF	W	35.8
	F1		38.7
Lot 320	GF	N	36.5
	F1		38.9
Lot 320	GF	E	32.5
	F1		36.1
Lot 320	GF	S	40.9
	F1		41.8
Lot 320	GF	W	35.5
	F1		38.3
Lot 321	GF	N	35.9
	F1		38.3
Lot 321	GF	E	32.2
	F1		35.9
Lot 321	GF	S	40.4
	F1		41.4
Lot 321	GF	W	34.8
	F1		37.8
Lot 322	GF	N	35.6
	F1		38.0
Lot 322	GF	E	32.5
	F1		35.9
Lot 322	GF	S	39.8
	F1		40.8
Lot 322	GF	W	34.9
	F1		37.6
Lot 323	GF	N	34.8
	F1		37.3
Lot 323	GF	E	32.9
	F1		35.9
Lot 323	GF	S	39.5
	F1		40.4
Lot 323	GF	W	34.4
	F1		37.1

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at Private Open Spaces

Receiver	L10,18hr dB(A)
Lot 1_POS	38
Lot 2_POS	34
Lot 3_POS	33
Lot 4_POS	38
Lot 5_POS	36
Lot 6_POS	34
Lot 7_POS	32
Lot 8_POS	31
Lot 9_POS	30
Lot 10_POS	29
Lot 11_POS	29
Lot 12_POS	29
Lot 13_POS	29
Lot 14_POS	28
Lot 15_POS	28
Lot 16_POS	28
Lot 17_POS	28
Lot 18_POS	28
Lot 19_POS	29
Lot 20_POS	29
Lot 21_POS	29
Lot 22_POS	29
Lot 23_POS	29
Lot 24_POS	29
Lot 25_POS	29
Lot 26_POS	30
Lot 27_POS	30
Lot 28_POS	30
Lot 29_POS	30
Lot 30_POS	31
Lot 31_POS	31
Lot 32_POS	32
Lot 33_POS	33
Lot 34_POS	34
Lot 35_POS	35
Lot 36_POS	39
Lot 37_POS	42
Lot 38_POS	49
Lot 39_POS	42
Lot 40_POS	35
Lot 41_POS	35
Lot 42_POS	35
Lot 43_POS	35
Lot 44_POS	35
Lot 45_POS	35
Lot 46_POS	40
Lot 47_POS	38
Lot 48_POS	36

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at Private Open Spaces

Receiver	L10,18hr dB(A)
Lot 49_POS	36
Lot 50_POS	36
Lot 51_POS	37
Lot 52_POS	38
Lot 53_POS	39
Lot 54_POS	41
Lot 55_POS	44
Lot 56_POS	37
Lot 57_POS	34
Lot 58_POS	33
Lot 59_POS	33
Lot 60_POS	32
Lot 61_POS	33
Lot 62_POS	36
Lot 63_POS	34
Lot 64_POS	34
Lot 65_POS	35
Lot 66_POS	35
Lot 67_POS	39
Lot 68_POS	36
Lot 69_POS	35
Lot 70_POS	33
Lot 71_POS	32
Lot 72_POS	32
Lot 73_POS	32
Lot 74_POS	34
Lot 75_POS	33
Lot 76_POS	33
Lot 77_POS	33
Lot 78_POS	35
Lot 79_POS	37
Lot 80_POS	32
Lot 81_POS	32
Lot 82_POS	33
Lot 83_POS	32
Lot 84_POS	33
Lot 85_POS	32
Lot 86_POS	33
Lot 87_POS	33
Lot 88_POS	33
Lot 89_POS	34
Lot 90_POS	35
Lot 92_POS	36
Lot 93_POS	34
Lot 94_POS	34
Lot 95_POS	34
Lot 96_POS	33
Lot 97_POS	33



Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at Private Open Spaces

Receiver	L10,18hr dB(A)
Lot 98_POS	29
Lot 99_POS	31
Lot 100_POS	30
Lot 101_POS	31
Lot 102_POS	29
Lot 103_POS	30
Lot 104_POS	30
Lot 105_POS	31
Lot 106_POS	31
Lot 107_POS	30
Lot 108_POS	31
Lot 109_POS	31
Lot 110_POS	35
Lot 111_POS	30
Lot 112_POS	29
Lot 113_POS	31
Lot 114_POS	34
Lot 115_POS	33
Lot 116_POS	32
Lot 117_POS	32
Lot 118_POS	32
Lot 119_POS	32
Lot 120_POS	31
Lot 121_POS	30
Lot 122_POS	28
Lot 123_POS	28
Lot 124_POS	30
Lot 125_POS	31
Lot 126_POS	32
Lot 127_POS	27
Lot 128_POS	27
Lot 129_POS	28
Lot 130_POS	28
Lot 131_POS	28
Lot 132_POS	28
Lot 133_POS	29
Lot 134_POS	30
Lot 135_POS	33
Lot 136_POS	38
Lot 137_POS	32
Lot 138_POS	32
Lot 139_POS	31
Lot 140_POS	37
Lot 141_POS	34
Lot 142_POS	31
Lot 143_POS	31
Lot 144_POS	30
Lot 145_POS	30

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at Private Open Spaces

Receiver	L10,18hr dB(A)
Lot 146_POS	30
Lot 147_POS	48
Lot 148_POS	29
Lot 149_POS	29
Lot 150_POS	29
Lot 151_POS	30
Lot 152_POS	38
Lot 153_POS	38
Lot 154_POS	37
Lot 155_POS	37
Lot 156_POS	37
Lot 158_POS	34
Lot 159_POS	35
Lot 160_POS	36
Lot 161_POS	38
Lot 162_POS	42
Lot 163_POS	33
Lot 164_POS	41
Lot 165_POS	37
Lot 166_POS	36
Lot 167_POS	36
Lot 168_POS	37
Lot 169_POS	34
Lot 170_POS	34
Lot 171_POS	33
Lot 172_POS	33
Lot 173_POS	33
Lot 174_POS	34
Lot 175_POS	34
Lot 176_POS	34
Lot 177_POS	34
Lot 178_POS	34
Lot 179_POS	36
Lot 180_POS	34
Lot 181_POS	37
Lot 182_POS	35
Lot 183_POS	33
Lot 184_POS	33
Lot 185_POS	33
Lot 186_POS	32
Lot 187_POS	31
Lot 188_POS	30
Lot 189_POS	32
Lot 190_POS	34
Lot 191_POS	33
Lot 192_POS	33
Lot 193_POS	32
Lot 194_POS	34

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at Private Open Spaces

Receiver	L10,18hr dB(A)
Lot 195_POS	34
Lot 196_POS	34
Lot 197_POS	34
Lot 198_POS	35
Lot 199_POS	36
Lot 200_POS	35
Lot 201_POS	34
Lot 202_POS	33
Lot 203_POS	33
Lot 204_POS	34
Lot 205_POS	50
Lot 206_POS	36
Lot 207_POS	35
Lot 208_POS	35
Lot 209_POS	35
Lot 210_POS	35
Lot 211_POS	35
Lot 212_POS	35
Lot 213_POS	35
Lot 214_POS	35
Lot 215_POS	35
Lot 216_POS	35
Lot 217_POS	35
Lot 218_POS	48
Lot 219_POS	29
Lot 220_POS	29
Lot 221_POS	29
Lot 222_POS	29
Lot 223_POS	28
Lot 224_POS	28
Lot 225_POS	28
Lot 226_POS	28
Lot 227_POS	28
Lot 228_POS	29
Lot 229_POS	29
Lot 230_POS	30
Lot 231_POS	30
Lot 232_POS	30
Lot 233_POS	31
Lot 234_POS	31
Lot 235_POS	30
Lot 236_POS	33
Lot 237_POS	34
Lot 238_POS	34
Lot 239_POS	34
Lot 240_POS	34
Lot 241_POS	34
Lot 242_POS	34

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at Private Open Spaces

Receiver	L10,18hr dB(A)
Lot 243_POS	34
Lot 244_POS	34
Lot 245_POS	33
Lot 246_POS	33
Lot 247_POS	33
Lot 248_POS	33
Lot 249_POS	34
Lot 250_POS	34
Lot 251_POS	34
Lot 252_POS	35
Lot 253_POS	33
Lot 254_POS	50
Lot 255_POS	46
Lot 256_POS	44
Lot 257_POS	42
Lot 258_POS	40
Lot 259_POS	40
Lot 260_POS	40
Lot 261_POS	35
Lot 262_POS	40
Lot 263_POS	40
Lot 264_POS	41
Lot 265_POS	42
Lot 266_POS	43
Lot 267_POS	41
Lot 268_POS	40
Lot 269_POS	39
Lot 270_POS	39
Lot 271_POS	41
Lot 272_POS	36
Lot 273_POS	36
Lot 274_POS	36
Lot 275_POS	37
Lot 276_POS	37
Lot 277_POS	39
Lot 278_POS	40
Lot 282_POS	36
Lot 283_POS	32
Lot 284_POS	32
Lot 285_POS	32
Lot 286_POS	32
Lot 287_POS	40
Lot 288_POS	33
Lot 289_POS	32
Lot 290_POS	37
Lot 291_POS	35
Lot 292_POS	42
Lot 293_POS	40

Cadence Residential Development  
 145 Binnies Road, Ripley  
 Lot 336 & 349 on S3173  
 Calculated Traffic Noise Levels at Private Open Spaces

Receiver	L10,18hr dB(A)
Lot 294_POS	36
Lot 295_POS	29
Lot 296_POS	33
Lot 297_POS	29
Lot 298_POS	31
Lot 299_POS	30
Lot 300_POS	33
Lot 301_POS	34
Lot 302_POS	35
Lot 303_POS	37
Lot 304_POS	37
Lot 305_POS	41
Lot 306_POS	40
Lot 307_POS	38
Lot 308_POS	38
Lot 309_POS	37
Lot 310_POS	54
Lot 311_POS	46
Lot 312_POS	42
Lot 313_POS	39
Lot 314_POS	37
Lot 315_POS	35
Lot 316_POS	34
Lot 317_POS	33
Lot 318_POS	32
Lot 319_POS	31
Lot 320_POS	31
Lot 321_POS	30
Lot 322_POS	30
Lot 323_POS	29



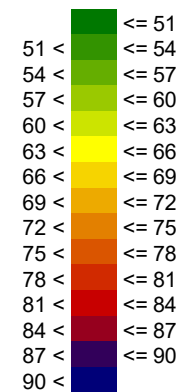
## Appendix G – Traffic Noise Contours

**Cadence Residential Development**  
**145 Binnies Road, Ripley**  
**Lot 336 & 349 on S3173**




**Traffic Noise Modelling**  
**Year 2034**

**Ground Floor (1.8m AGL)**

Traffic noise level  
Facade adjusted  
Adjusted for Queensland Conditions<sub>1</sub>  
L<sub>10,18hr</sub> dB(A)



**Legend**

-  Adjacent buildings
-  Emission line
-  Road surface

**SCALE @ A4 1:4000**



Grid Spacing: 5m  
Project Engineer: Sam Fraser  
Created: 10/11/2020  
Processed with SoundPLAN 8.2

<sub>1</sub>As per procedure of TMR Code of Practice Volume 1



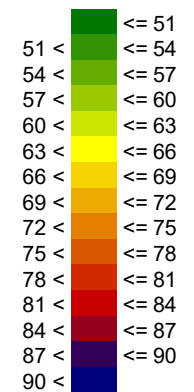


**Cadence Residential Development**  
**145 Binnies Road, Ripley**  
**Lot 336 & 349 on S3173**




**Traffic Noise Modelling**  
**Year 2034**

**First Floor (4.6m AGL)**

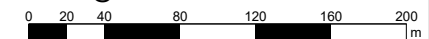
Traffic noise level  
Facade adjusted  
Adjusted for Queensland Conditions<sub>1</sub>  
 $L_{10,18hr}$  dB(A)



**Legend**

-  Adjacent buildings
-  Emission line
-  Road surface

**SCALE @ A4 1:4000**



Grid Spacing: 5m  
Project Engineer: Sam Fraser  
Created: 10/11/2020  
Processed with SoundPLAN 8.2

<sub>1</sub>As per procedure of TMR Code of Practise Volume 1

