



# Road Traffic Noise Assessment Report

Cooma Road Quarry

Report Number: R146469AC R0 14-07-22



AUSTRALIAN BUSINESS AWARDS  
2013 ACT BUSINESS OF THE YEAR



Rudds Consulting Engineers Pty Ltd

Head Office: 5 Bodalla Place  
Fyshwick ACT 2609

Tel: (02) 6240 2900

Fax: (02) 6280 9951

E-mail: [manager@rudds.com.au](mailto:manager@rudds.com.au)

Web: [www.rudds.com.au](http://www.rudds.com.au)

ABN 16 054 221 162

VIC Office: Suite 29 Level 4, 150 Albert Road,  
South Melbourne VIC 3205

Tel: (03) 9682 6525

Fax: (03) 9682 6294

E-mail: [manager.vic@rudds.com.au](mailto:manager.vic@rudds.com.au)

Web: [www.rudds.com.au](http://www.rudds.com.au)

ABN 49 141 632 519

The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Rev No	Reason for Issue	Author		Approver for Issue	
		Name	Date	Name	Date
00	For Information	Chris Hang	22 July 2014	Jeremy Lofts	22 July 2014

This report has been prepared in accordance with the scope of services described in the contract or agreement between Rudds Consulting Engineers Pty Ltd ABN 16 054 221 162 (Rudds) or Rudds Acoustics Pty Ltd ABN 41 147 203 610 and the client. The report relies upon data, surveys, measurements and results taken at or under the particular times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the client. Furthermore, the report has been prepared solely for use by the client and Rudds accepts no responsibility for its use by other parties.

## Contents

---

SECTIONS	Page
<b>Section 1 - Introduction .....</b>	<b>4</b>
<b>Section 2 - Acoustic Requirements.....</b>	<b>5</b>
2.1 Road Traffic Noise.....	5
<b>Section 3 - Methodology.....</b>	<b>7</b>
3.1 Road Traffic Noise Monitoring.....	7
<b>Section 4 - Results and Assessment .....</b>	<b>9</b>
4.1 Long-Term Road Traffic Noise Monitoring .....	9
4.2 Short-Term Road Traffic Noise Monitoring.....	9
4.3 Truck Despatch Analysis .....	11
<b>Section 5 - Conclusion .....</b>	<b>15</b>
<b>Section 6 - Appendices .....</b>	<b>16</b>
Appendix A Glossary of Terms .....	16
Appendix B Long Term Logging Results .....	17
B.1 7/36 Pannamena Crescent, Jerrabomberra NSW .....	17
B.2 21 Macadamia Close, Jerrabomberra NSW .....	24
B.3 17 Nimbus Place, Karabar NSW.....	31

TABLES	Page
Table 1 Road Traffic Noise Assessment Criteria for Residential Land Uses.....	5
Table 2 Project Specific Noise Criteria .....	6
Table 3 Assessment Locations for Existing Land Uses.....	6
Table 4 Long-Term Noise Logging Results .....	9
Table 5 Short-Term Noise Survey Results .....	10
Table 6 Truck Despatch Log in May .....	12
Table 7 A-weighted Sound Exposure Levels for Truck Pass-bys.....	12
Table 8 Truck Contribution to the Road Traffic Noise.....	13
Table 9 Truck Contribution at the Logger Location.....	14

FIGURES	Page
Figure 1 Monitoring Locations 1 and 2 .....	7
Figure 2 Monitoring Location 3 .....	8
Figure 3 Short-Term Noise Survey – Road Side, Edwin Land Parkway.....	10
Figure 4 Short-Term Noise Survey – 17 Nimbus Place, Karabar NSW.....	11

## Section 1 - Introduction

---

Holcim (Australia) Pty Ltd (Holcim Australia) operates Cooma Road Quarry, an existing hard rock quarry located approximately 6 kilometres south of Queanbeyan, New South Wales (NSW). Holcim Australia was granted a Development Consent under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) on 27 September 2013 by the NSW Minister for Planning and Infrastructure.

In accordance with Condition 8 of Schedule 3 of the Cooma Road Quarry Development Consent, Holcim are required to:

‘within 6 months from the date of this consent, the Applicant shall commission a suitably qualified person, to conduct an independent Road Noise Audit of the Edwin Land Parkway. This audit must:

- (a) be undertaken in consultation with Council and the EPA;
  - (b) assess the noise generated by heavy vehicles generated by the development on the Edwin Land Parkway against the relevant criteria under the NSW Road Noise Policy; and
  - (c) consider whether additional mitigation measures are required to address any potential exceedances under the criteria specified in the NSW Road Noise Policy,
- to the satisfaction of the Director-General. ‘

Rudds Acoustics Pty Ltd (Rudds) is pleased to provide the acoustic service for assessing the road traffic noise on the Edwin Land Parkway.

## Section 2 - Acoustic Requirements

### 2.1 Road Traffic Noise

The NSW Road Noise Policy (RNP) was introduced on 1 July 2011 to replace the Environmental Criteria for Road Traffic Noise (ECRTN). The RNP provides strategies to address road traffic noise, determines different road categories and defines clear criteria for each of the road categories. The document also defines the management responsibility that applies to each road category as follows:

1. State government is responsible for freeways, motorways and arterial roads
2. Local councils are responsible for sub-arterial roads and local roads.

Table 1 contains road traffic noise assessment criteria for residential land uses. This assessment is a façade corrected criteria when measured at 1 metre from the most exposed façade of the building.

**TABLE 1 ROAD TRAFFIC NOISE ASSESSMENT CRITERIA FOR RESIDENTIAL LAND USES**

Road Category	Type of project and land use	Assessment Criteria - dB(A)	
		Day (7 a.m.-10 p.m.)	Night (10 p.m.-7 a.m.)
Freeway/ arterial/ sub- arterial roads	1. Existing residences affected by noise from <b>new</b> freeway/arterial/sub-arterial road corridors	L <sub>Aeq</sub> (15 hour) 55 (external)	L <sub>Aeq</sub> (9 hour) 50 (external)
	2. Existing residences affected by noise from <b>redevelopment</b> of existing freeway/arterial/sub-arterial roads	L <sub>Aeq</sub> (15 hour) 60 (external)	L <sub>Aeq</sub> (9 hour) 55 (external)
	3. Existing residences affected by <b>additional traffic</b> on existing freeway/arterial/sub-arterial roads generated by land use developments		
Local Roads	4. Existing residences affected by noise from <b>new</b> local road corridors	L <sub>Aeq</sub> (1 hour) 55 (external)	L <sub>Aeq</sub> (1 hour) 50 (external)
	5. Existing residences affected by noise from <b>redevelopment</b> of existing local roads		
	6. Existing residences affected by <b>additional traffic</b> on existing local roads generated by land use developments		

(Source: NSW Road Noise Policy, Page 11, Table 3)

In addition to the requirements outlined in Table 1, there are two specific “relative” road traffic noise increase criteria. These are described as follows:

1. Any increase in road traffic noise from an existing or proposed freeway/ arterial/ sub-arterial road or transitway must not exceed 12 dB. For the purpose of determining the relative increase, any existing noise level below 30 dBA is deemed to be 30 dBA.
2. Wherever the road traffic noise level without the development is within 2 dB of, or exceeds, the relevant day or night assessment criterion, the increase in road traffic noise as a result of the development must not exceed 2 dB above the existing road traffic noise level.

Where the criteria are exceeded it does not automatically mean the development cannot go ahead. It means that careful and thorough consideration of feasible and reasonable noise mitigation options must be undertaken in order to reduce the acoustic impact of the development.

In this case, Cooma Road Quarry is a land use development and will generate addition traffic on its haul route. Edwin Land Parkway is considered as an arterial road and used by Cooma Road Quarry for truck movement on public road. Thus, the development will result in **additional traffic** on Edwin Land Parkway. The noise criteria in Table 2 are applied.

**TABLE 2 PROJECT SPECIFIC NOISE CRITERIA**

Road Category	Type of project and land use	Assessment Criteria - dB(A)	
		Day (7 a.m.-10 p.m.)	Night (10 p.m.-7 a.m.)
Freeway/ arterial/ sub- arterial roads	Existing residences affected by <b>additional traffic</b> on existing freeway/arterial/sub-arterial roads generated by land use developments	L <sub>Aeq</sub> (15 hour) 60 (external)	L <sub>Aeq</sub> (9 hour) 55 (external)

The RNP also specifies the nominated locations for assessment and is re-produced in Table 3.

**TABLE 3 ASSESSMENT LOCATIONS FOR EXISTING LAND USES**

Assessment Type	Assessment Location
External noise levels at residence	<p>The noise level should be assessed at 1 metre from the façade and a height of 1.5 metres from the floor.</p> <p>Separate noise criteria should be set and assessment carried out for each façade of a residence, except in straightforward situations where the residence façade most affected by road traffic noise can be readily identified.</p> <p>The residential noise level criterion includes an allowance for noise reflected from the façade (façade correction). Therefore, when taking a measurement in the free field where reflection during measurement is unlikely (as, for instance, when measuring on open land before a residence is built), an appropriate correction – generally 2.5 dB – should be added to the measured value. The façade correction should not be added to measurement taken 1 metre from the façade of an existing building. Free field measurements should be taken at least 15 metres from any wall, building or other reflecting pavement surfaces on the opposite side of the roadway, and at least 3.5 metres from any wall, building or other pavement surface, behind or at the sides of the measurement point which would reflect the sound.</p>

## Section 3 - Methodology

### 3.1 Road Traffic Noise Monitoring

Long term noise logging was undertaken at three residential sites along Edwin Land Parkway. They are:

- 1) 7/36 Pannamena Crescent, Jerrabomberra NSW from 1 May to 13 May 2014  
At this location, due to the close distance between the fence and the façade affected by the road traffic noise, the microphone is placed on top of the fence. The fence is 1.8 m high.
- 2) 21 Macadamia Close, Jerrabomberra NSW from 1 May to 13 May 2014  
At this location, the microphone is placed 1 metre from façade and 1.5 metres above the ground. There is a concrete panel noise wall which is approximately 2 metres high at the residential block boundary facing Edwin Land Parkway. On top of that solid wall, there is a glazing section about 1 metre high.
- 3) 17 Nimbus Place, Karabar NSW from 15 May to 23 May 2014  
At this location, it is difficult to place the microphone 1 metre from façade and 1.5 metres above the ground without disturbing the normal living of the residence. Therefore the microphone is placed on top of the 2.4 metres high wood fence. Short term attended measurements were conducted by placing the microphone on top of the fence and 1 metre from façade and 1.5 metres above the ground for comparison on 15 May.

The equipment used for long term noise logging and short term attended measurement is as following,

1. ARL Model EL-316 type 1 noise logger                      Serial No. 16-207-006
2. ARL Model EL-316 type 1 noise logger                      Serial No. 16-004-036
3. Larson Davis Model 831 Type 1 Sound Level Metre        Serial No. 0002412
4. Larson Davis model Cal200 type 1 acoustic calibrator    Serial No. 8102

Figure 1 and Figure 2 show the monitoring location with the background aerial photo obtained from a government website.

**FIGURE 1      MONITORING LOCATIONS 1 AND 2**



(Source: [www.actmapi.act.gov.au](http://www.actmapi.act.gov.au))

**FIGURE 2 MONITORING LOCATION 3**

(Source: [www.actmapi.act.gov.au](http://www.actmapi.act.gov.au))

Operator attended noise monitoring was conducted on Tuesday 13 May 2014 besides the Edwin Land Parkway. The measurement location is about 8 metres from the road line mark on the north side where the road is generally slope up from east to west.

The equipment used for short term attended measurement is as following,

1. Larson Davis Model 831 Type 1 Sound Level Metre      Serial No. 0002412
2. Larson Davis model Cal200 type 1 acoustic calibrator      Serial No. 8102

The calibration levels of the noise logger and sound level meter were checked before and after the measurement. No significant drift was observed. The equipment used above holds valid NATA calibration certification. The certificates are available upon request.



## Section 4 - Results and Assessment

### 4.1 Long-Term Road Traffic Noise Monitoring

Weather data was obtained from Bureau of Meteorology Australia from the Canberra Airport weather station. All data where 15-minute average wind speeds exceed 5 m/s and where there was any rainfall have been excluded from the results in accordance with INP methodology.

Table 4 lists the measured noise levels at the monitoring locations after weather exclusion has been undertaken. The long term noise logging results are attached in Appendix C. From Table 4, it can be seen that the measured noise levels at 3 locations comply with the criteria.

**TABLE 4 LONG-TERM NOISE LOGGING RESULTS**

Location	Road Traffic Noise Level, LAeq, dB		Road Traffic Noise Criteria		Complies with Criteria?	
	Day (7 a.m.-10 p.m.)	Night (10 p.m.-7 a.m.)	Day (7 a.m.-10 p.m.)	Night (10 p.m.-7 a.m.)		
Location 1 7/36 Pannamena Crescent	56	48	LAeq(15 hour) 60 (external)	LAeq(9 hour) 55 (external)	Yes	Yes
Location 2 21 Macadamia Close	54	41			Yes	Yes
Location 3 17 Nimbus Place	53	46			Yes	Yes

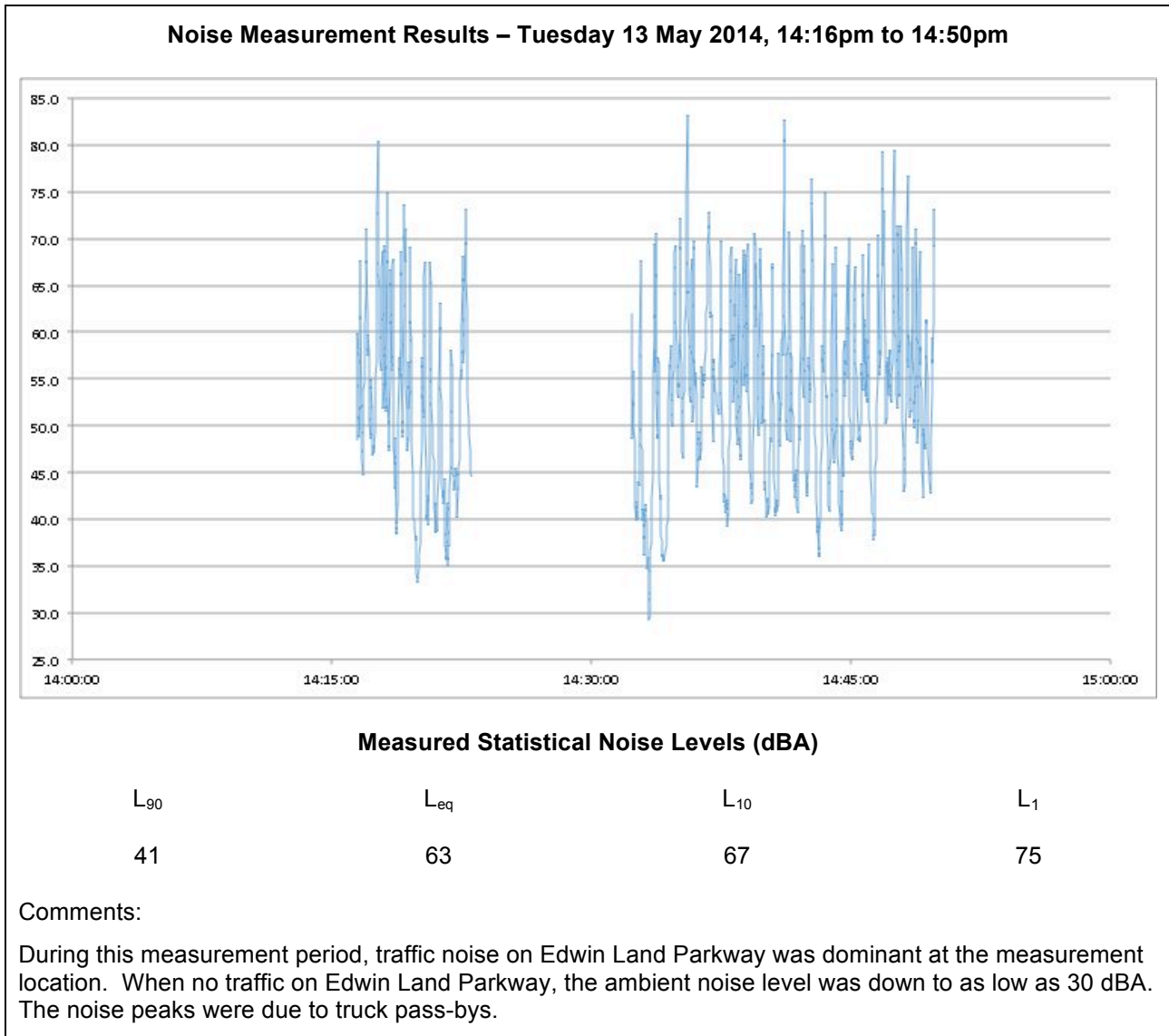
As discussed previously, the noise monitoring was undertaken at the top of the fence for location 1, 7/36 Pannamena Crescent and Location 3, 17 Nimbus Place. In both cases, the fence will be providing shielding to the properties, so the actual noise level at 1.5 metres above ground level will be lower than reported in Table 4.

### 4.2 Short-Term Road Traffic Noise Monitoring

#### 4.2.1 Besides the Road

Operator attended noise monitoring was conducted on Tuesday 13 May 2014 besides the Edwin Land Parkway. Figure 4 contains the results of the attended noise measurement at 8 metres from the edge of road line mark and 1.5 metres above ground.

**FIGURE 3 SHORT-TERM NOISE SURVEY – ROAD SIDE, EDWIN LAND PARKWAY**



**4.2.2 Within the Backyard of 17 Nimbus Place, Karabar NSW**

Short term attended measurements were conducted by placing the microphone on top of the fence and 1 metre from façade and 1.5 metres above the ground for comparison on 15 May.

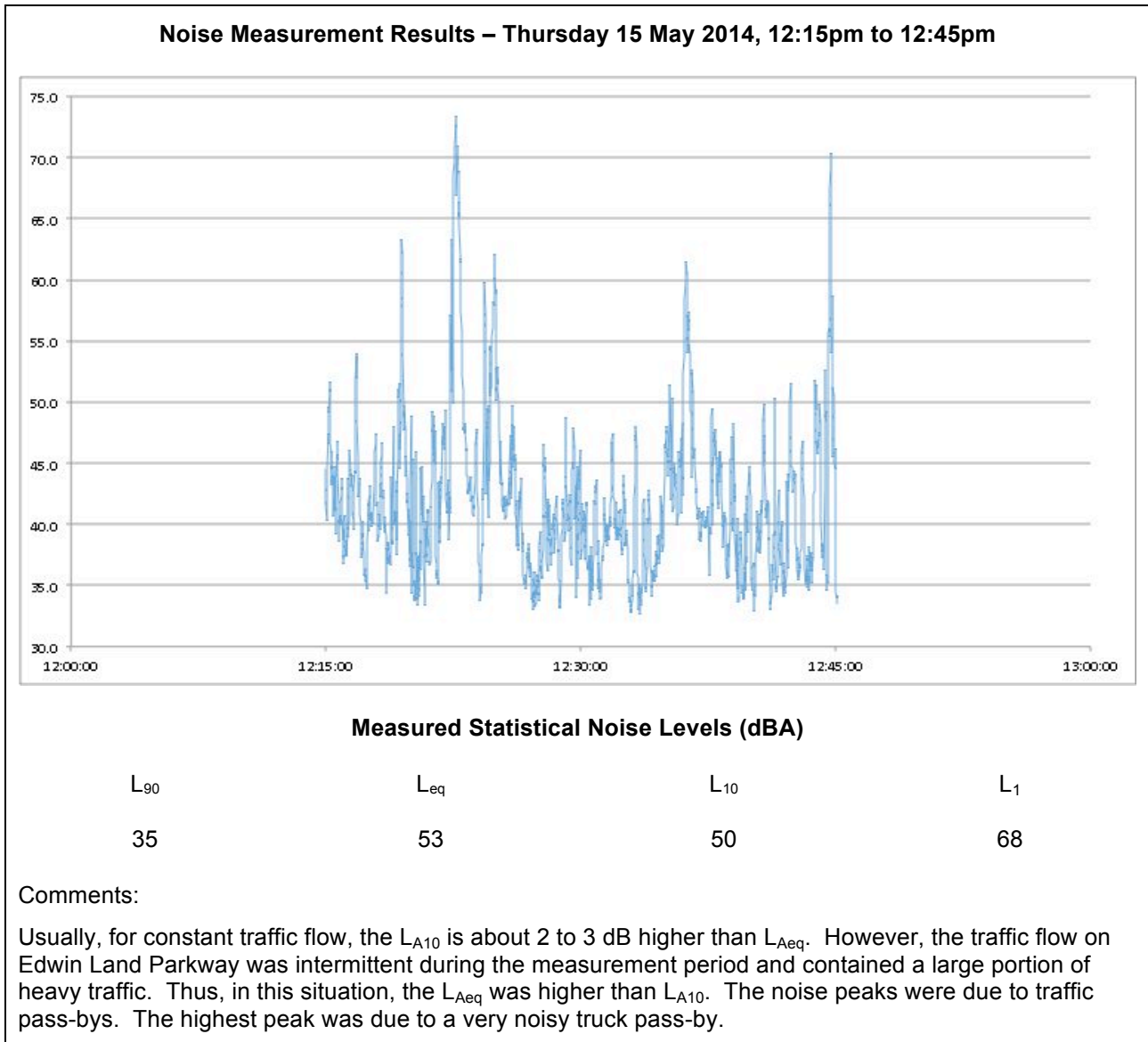
Table 5 lists the measured noise levels on top of the fence and 1 metre from façade and 1.5 metres above the ground. During this measurement period, traffic noise on Edwin Land Parkway was dominant at the measurement location. When no traffic on Edwin Land Parkway, urban noise was audible such as bird calls and dog barks. One aircraft noise event occurred within this measurement period. Figure 4 contains the results of the attended noise measurement at 1 metre from façade and 1.5 metres above ground.

**TABLE 5 SHORT-TERM NOISE SURVEY RESULTS**

Location	Road Traffic Noise Level from 12:15pm to 12:45pm, L <sub>Aeq</sub> dB
On top of the fence	55
1 metre from façade and 1.5 metres above ground	53
Difference	2

From Table 5, it is safe to conclude that the logging results for 17 Nimbus Place in Table 4 should be deducted by 2 dB to reflect the noise levels at 1 metre from façade and 1.5 metres above the ground. With the logging results in Table 4 comply with the criteria, it can be concluded that the noise levels at 1 metre from façade and 1.5 metres above the ground will comply with the criteria.

**FIGURE 4 SHORT-TERM NOISE SURVEY – 17 NIMBUS PLACE, KARABAR NSW**



**4.3 Truck Despatch Analysis**

A truck despatch log in May 2014 was obtained from the Quarry operator. Table 6 shows the despatch log for truck departures from Cooma Road Quarry.

Rudds has been told that the log has been developed based off a site ticketing system, whereby the truck drivers receive a ticket prior to leaving and the time of receipt is recorded on the ticket. As a result of this process, tickets may be received at an earlier time than the physical departure of the truck, e.g. trucks are not allowed to leave site prior to 6am, so all truck departure times shown in Table 6 as leaving prior to 6am will not have physically left the site until after 6 am in the morning. Another example is that the driver may receive the ticket following loading, then stop to have a meal break prior to departing the site.

**TABLE 6 TRUCK DESPATCH LOG IN MAY**

	3am -	4am -	5am -	6am -	7am -	8am -	9am -	10am -	11am -	Noon -	1pm -	2pm -	3pm -	4pm -	Total Loads
Day	4am	5am	6am	7am	8am	9am	10am	11am	Noon	1pm	2pm	3pm	4pm	5pm	
1/5	0	0	0	5	10	20	11	23	17	21	17	21	19	5	169
2/5	0	0	0	13	9	9	9	13	9	10	7	13	11	1	104
3/5	0	0	0	1	0	4	0	4	6	0	0	0	0	0	15
6/5	0	0	0	13	15	15	12	16	14	10	11	13	2	0	121
7/5	0	3	7	0	6	11	9	11	11	13	8	14	1	0	94
8/5	0	0	10	14	11	8	5	10	7	6	4	11	11	3	100
9/5	0	0	0	17	10	10	7	10	9	11	7	14	10	3	108
10/5	0	0	10	4	14	8	11	14	9	12	3	10	7	1	103
12/5	0	0	0	19	9	12	5	7	11	8	3	9	11	7	101
13/5	0	8	2	9	12	10	8	8	11	11	7	9	6	0	101
14/5	0	1	10	8	14	12	10	14	11	8	12	11	4	0	115
15/5	0	0	9	13	14	13	13	13	17	12	15	21	9	8	157
16/5	0	0	4	12	14	16	13	17	18	15	11	20	8	1	149
17/5	0	0	0	2	0	2	1	1	0	0	0	0	0	0	6
19/5	0	0	1	12	11	10	13	9	12	17	10	18	14	6	133
20/5	0	4	3	15	12	20	20	21	24	16	15	20	14	0	184
21/5	0	6	6	15	16	21	16	20	21	6	4	20	17	3	171
22/5	0	17	0	13	17	16	19	19	18	19	15	18	20	0	191
23/5	0	6	6	12	14	22	16	19	19	17	15	19	11	1	177
24/5	0	0	6	3	11	7	7	10	7	0	0	0	0	0	51
26/5	0	1	6	18	17	21	12	26	19	27	18	14	0	0	179
Loads/ Hr	0	46	80	218	236	267	217	285	270	239	182	275	175	39	2529

Table 7 shows the A-weighted sound exposure levels for truck pass-by's measured at 8 metres from the edge of road line mark on 13 May 2014.

**TABLE 7 A-WEIGHTED SOUND EXPOSURE LEVELS FOR TRUCK PASS-BYS**

	A-weighted Sound Exposure Level, $L_{AE}$ , dBA			
	Event 1	Event 2	Event 3	Average
Truck loaded up the hill on the west-bound lane	76.1	78.1	80.0	78.4
Truck unloaded down the hill on the east-bound lane	85.3	81.5	81.5	83.2

The truck despatch log in Table 6 only counted the trucks leaving the Quarry. To calculate the truck noise contribution to the road traffic noise, Rudds have assumed the same number of truck returns to the Quarry during the same time period. Rudds also assumed that the all the despatch trucks and return trucks were utilising Edwin Land Parkway as the haul route. This is likely to be an over-estimate of actual truck numbers along Edwin Land Parkway and is considered to be a conservative assumption for assessment purposes. Truck contribution at 8 metres from the edge of road line mark has been calculated and listed in Table 8.

**TABLE 8 TRUCK CONTRIBUTION TO THE ROAD TRAFFIC NOISE AT 8 METRES**

Date	15 hours	9 hours	L <sub>Aeq(15 hour)</sub> , dBA	L <sub>Aeq(9hour)</sub> , dBA
1/05/2014	164	5	59	46
2/05/2014	91	13	57	50
3/05/2014	14	1	49	39
6/05/2014	108	13	57	50
7/05/2014	84	10	56	49
8/05/2014	76	24	56	53
9/05/2014	91	17	57	52
10/05/2014	89	14	57	51
12/05/2014	82	19	56	52
13/05/2014	82	19	56	52
14/05/2014	96	19	57	52
15/05/2014	135	22	58	53
16/05/2014	133	16	58	51
17/05/2014	4	2	43	42
19/05/2014	120	13	58	50
20/05/2014	162	22	59	53
21/05/2014	144	27	59	54
22/05/2014	161	30	59	54
23/05/2014	153	24	59	53
24/05/2014	42	9	53	49
26/05/2014	154	25	59	53
Average	104	16	57	51

As discussed previously, this is the truck noise level at 8 metres from the road with no shielding. The truck contribution at the logger locations is lower than this and has been calculated and listed in Table 9 by taking the setback distance into consideration.

**TABLE 9 TRUCK CONTRIBUTION AT THE LOGGER LOCATION**

Location	Truck Contribution, LAeq, dB		Road Traffic Noise Criteria		Complies with Criteria?	
	Day (7 a.m.-10 p.m.)	Night (10 p.m.-7 a.m.)	Day (7 a.m.-10 p.m.)	Night (10 p.m.-7 a.m.)	Day (7 a.m.-10 p.m.)	Night (10 p.m.-7 a.m.)
Location 1 7/36 Pannamena Crescent	50	44	LAeq(15 hour) 60 (external)	LAeq(9 hour) 55 (external)	Yes	Yes
Location 2 21 Macadamia Close	48	37			Yes	Yes
Location 3 17 Nimbus Place	47	42			Yes	Yes

## **Section 5 - Conclusion**

---

Rudds has undertaken an acoustic assessment for the road traffic noise on Edwin Land Parkway. Due to the development of Cooma Road Quarry, additional heavy vehicle traffic was generated on Edwin Land Parkway.

The following has been considered as part of the assessment:

1. Holcim Cooma Quarry Operational Licence Conditions of Consent relating to road traffic noise.
2. The NSW Road Noise Policy

Based upon the findings of this assessment, the requirements of this document were achieved.

We trust this information meets your current requirements. If you have any questions I can be contacted on 02 6240 2979 or 0430 911 827

Sincerely,

Chris Hang PhD. ME. BE. M.A.A.S.

## Section 6 - Appendices

---

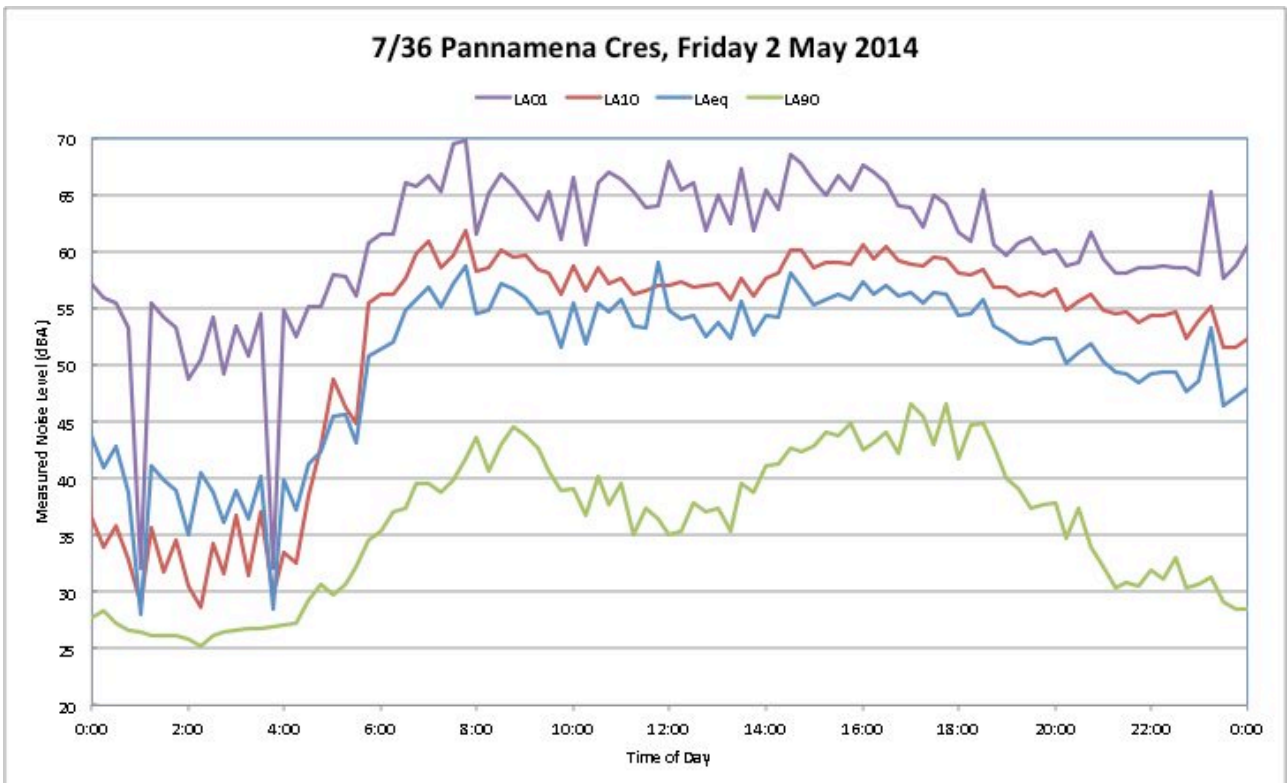
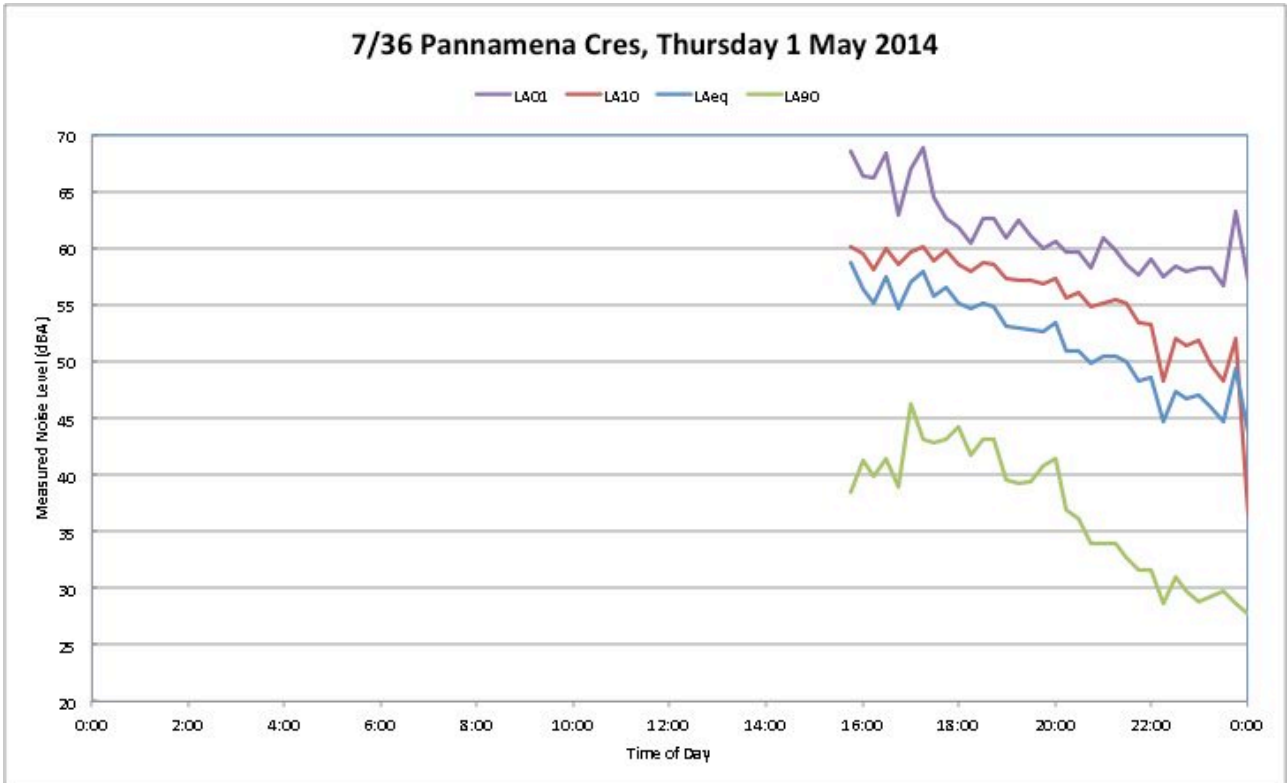
### Appendix A Glossary of Terms

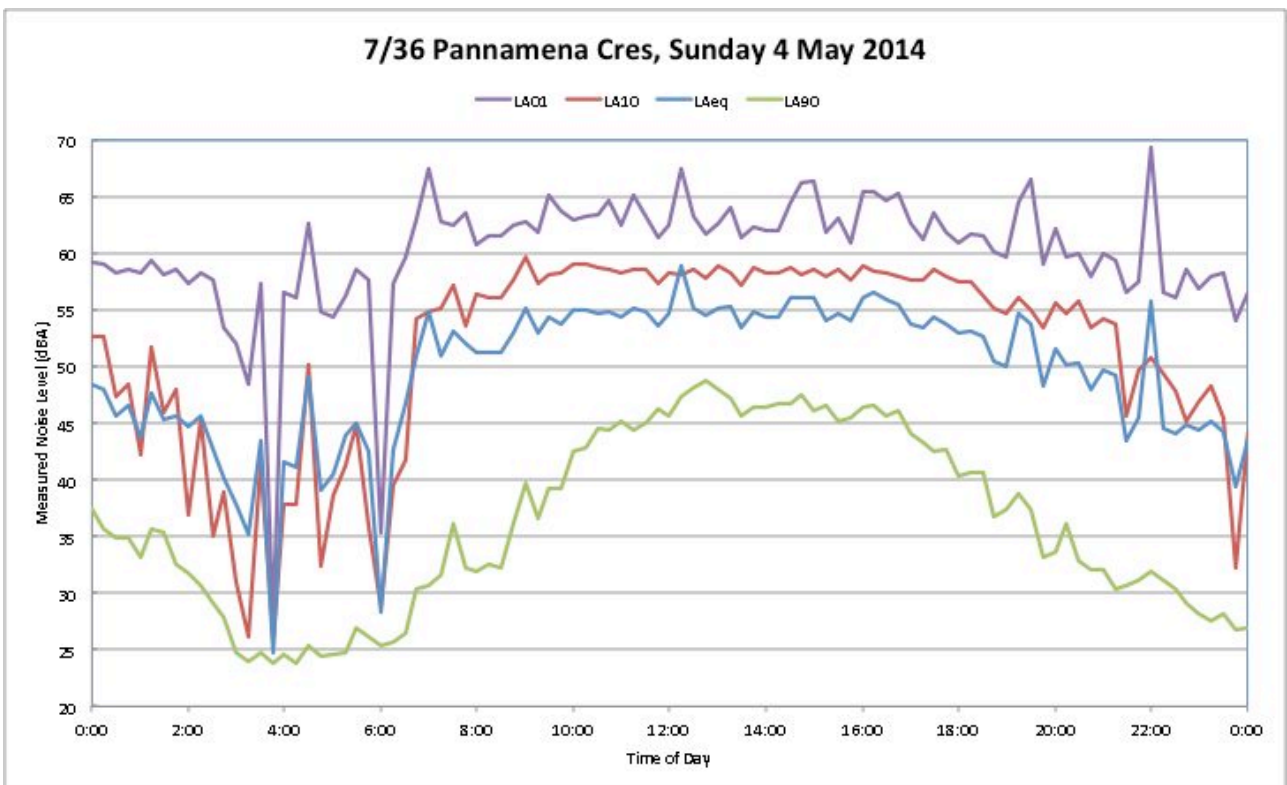
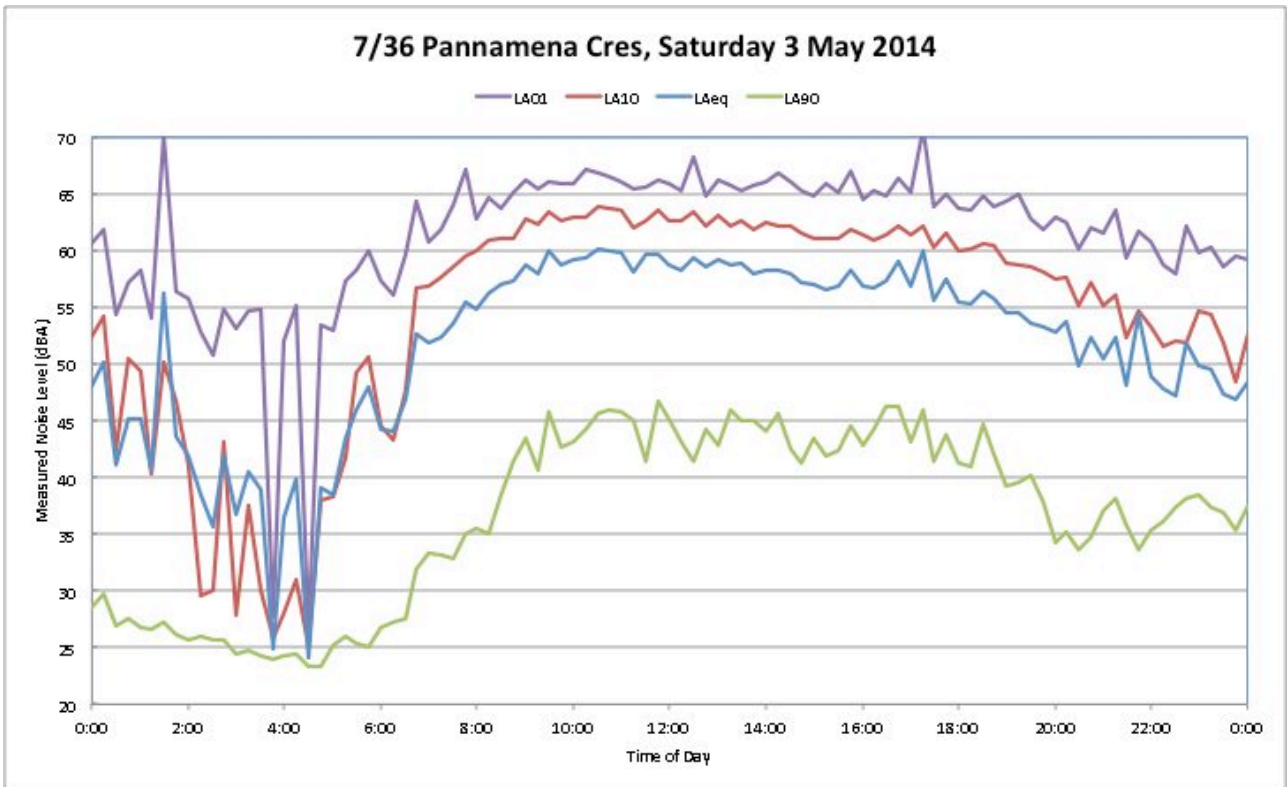
dB	Decibel. This is the unit measurement of sound.
dBA	A weighted decibel is the most commonly used descriptor. The A weighting is an adjustment to the raw sound level to approximate what the average human ear can hear, which is less sensitive at very low and very high frequencies.
Lw or SWL	Sound power level. This is the total radiated sound energy.
Lp or SPL	Sound pressure level. This is the measurable sound level at a given distance from an item.
$L_{max}$	The RMS maximum noise level of a measurement
$L_{10}$	90 <sup>th</sup> percentile sound level of a measurement. Often called the average maximum noise level
$L_{eq}$	The energy average noise level of a measurement.
$L_{90}$	10 <sup>th</sup> percentile sound level of a measurement. Often called the average background noise level
$L_{min}$	The minimum noise level of a measurement
$L_{eq(T)}$	The time (T) equivalent energy noise level. The time interval is often in blocks of 10 or 15 minutes for short term measurements, or hours for long-term measurements. Common increments for long term measurements are 1 hour, day, night, 18 hours and 24 hours.
$L_{eq(8h)}$	The 8 hour equivalent energy noise level. Primarily used for occupational noise assessments
$LC_{peak}$	The C weighted peak noise level. Primarily used for occupational noise assessments
Dw	The Weighted Level Difference as defined in AS/NZS ISO 717.1:2004. This is the single number rating describing the ability of a partition to reduce noise as measured in the field with no standardisation or normalisation.
Rw	The Weighted Sound Reduction Index. This is the single number rating describing the ability of a building element to reduce noise as measured in a laboratory. Assessed in accordance with AS/NZS ISO 717.1:2004.
NRC	Noise Reduction Coefficient. The NRC defines how much sound is absorbed by a surface. An NRC of 0 means it absorbs no sound while an NRC of 1 means it will absorb most sound.
CAC	Ceiling Attenuation Class. The CAC determines how much cross-talk will occur between one room and another through the ceiling cavity where both rooms have the tested ceiling tile. This is an ideal situation, with no wall head leaks and no services penetrations in the ceiling. Therefore, it defines the ideal, best possible result as tested in a laboratory.

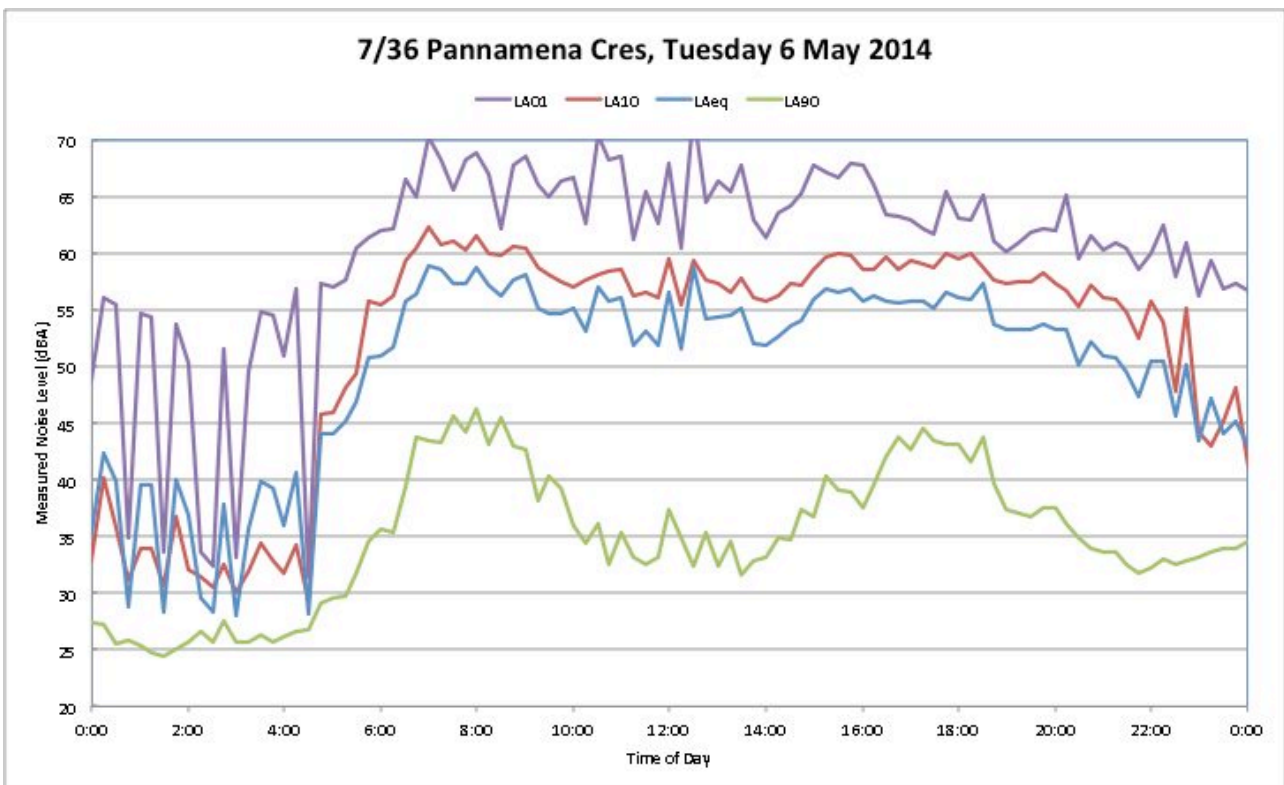
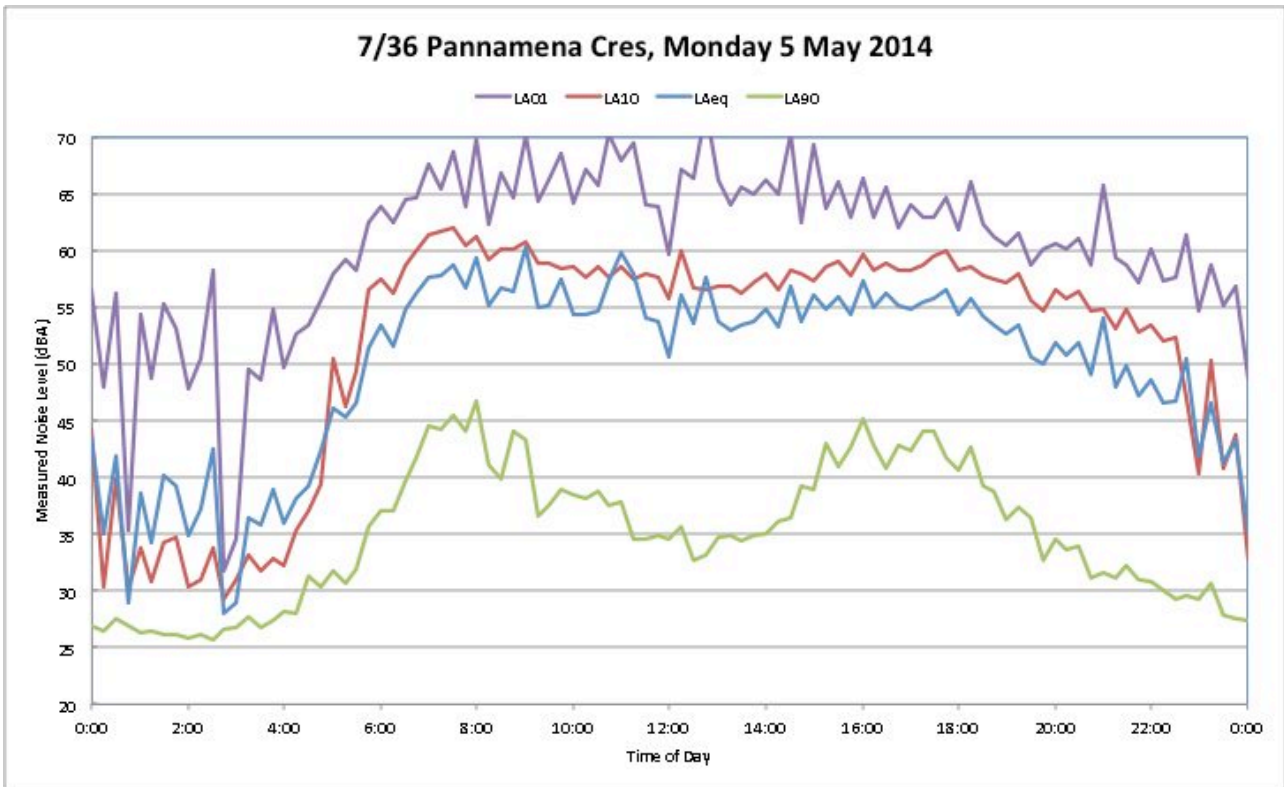


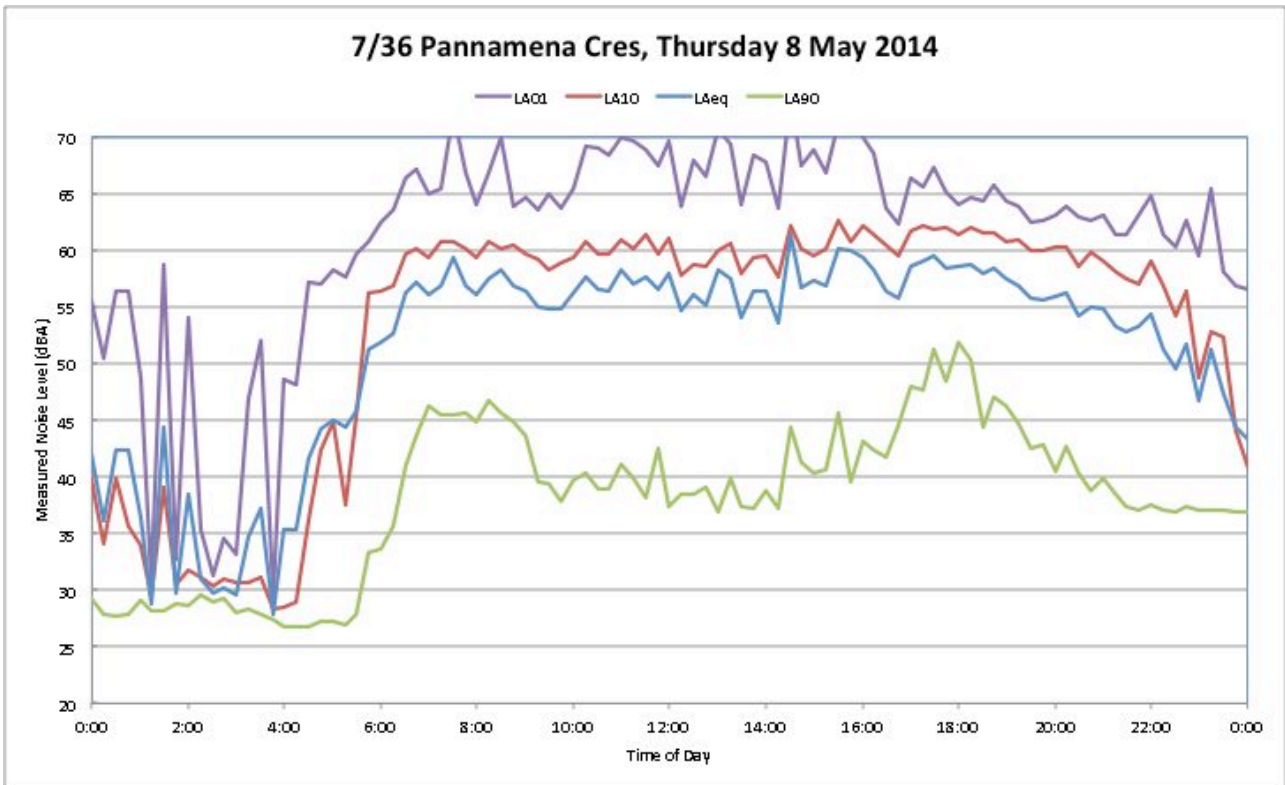
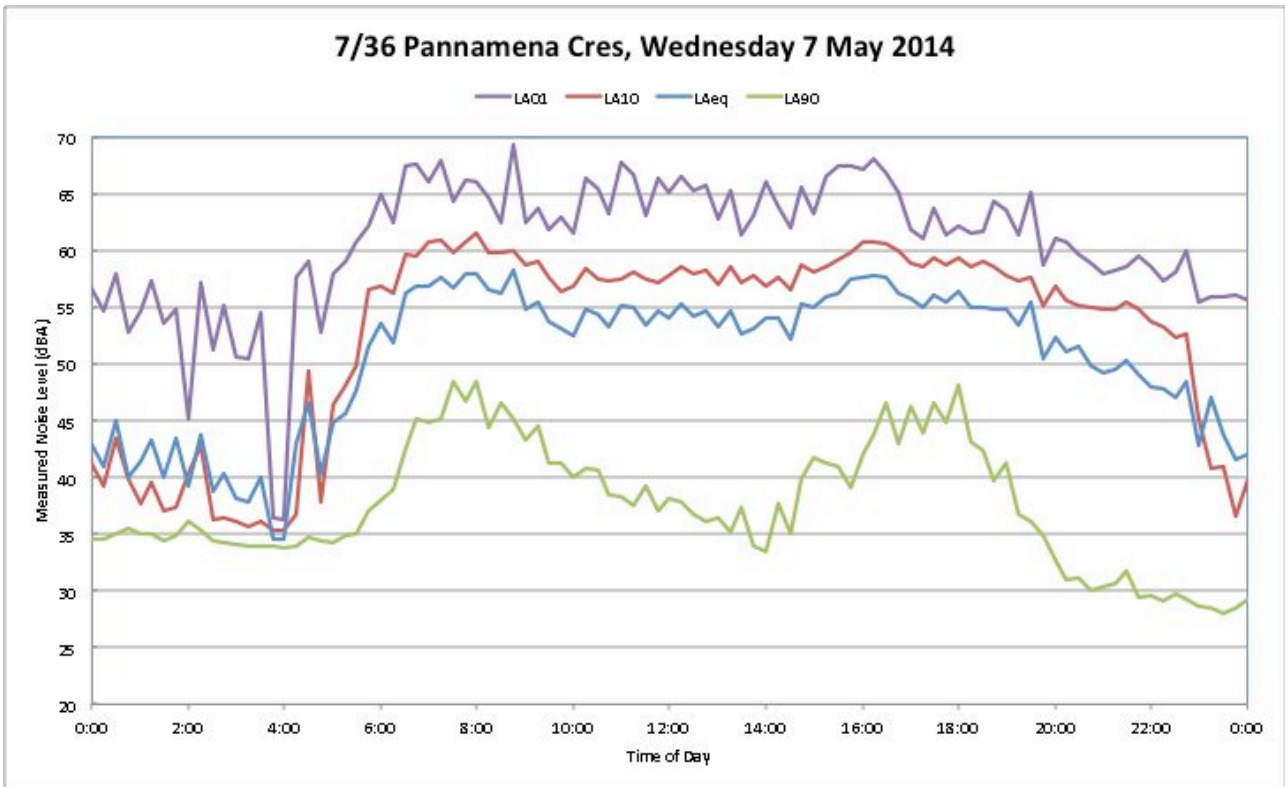
## Appendix B Long Term Logging Results

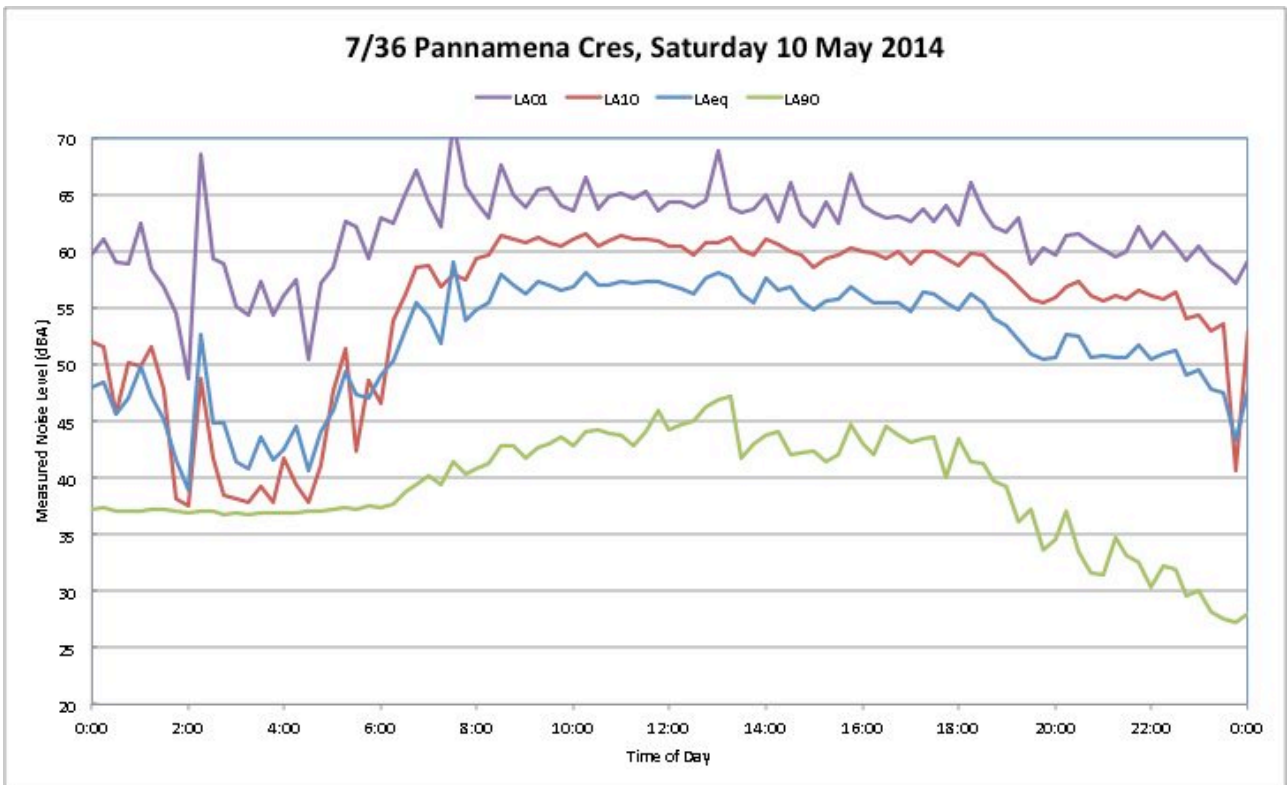
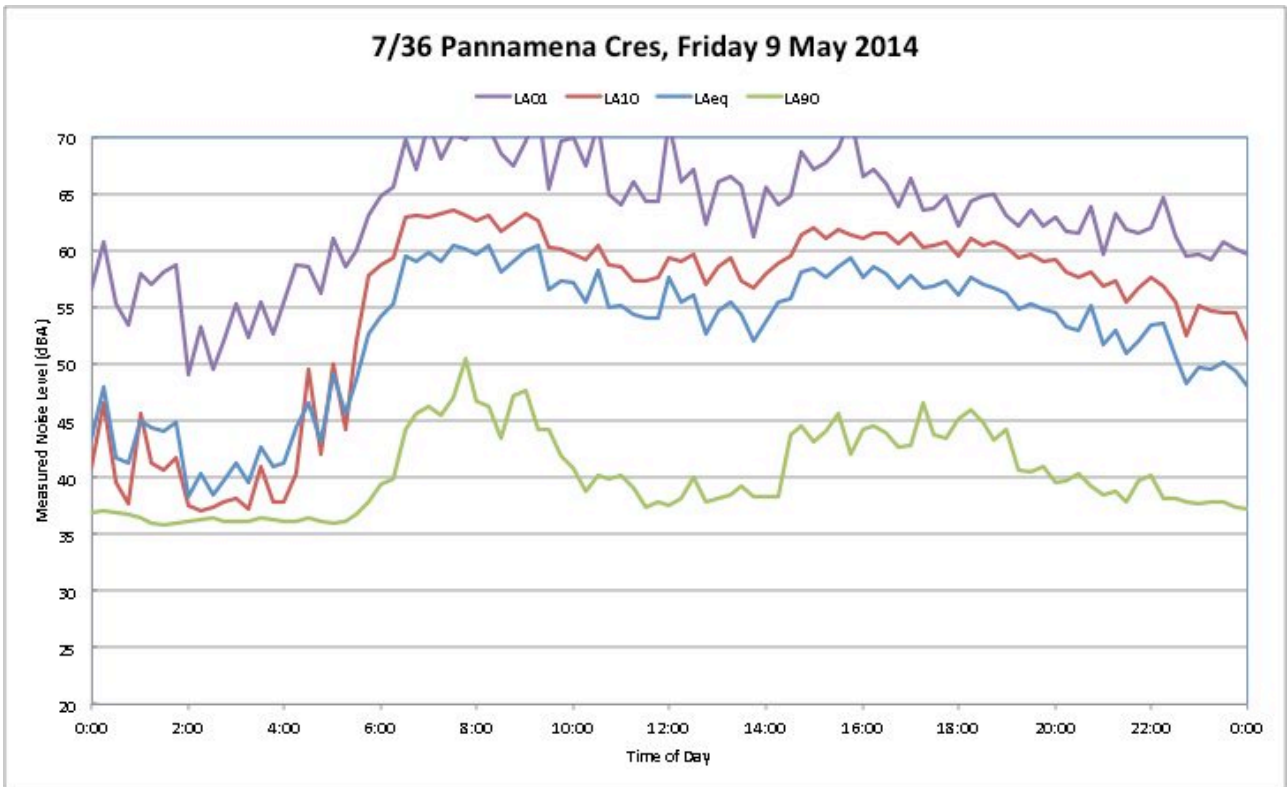
### B.1 7/36 Pannamena Crescent, Jerrabomberra NSW

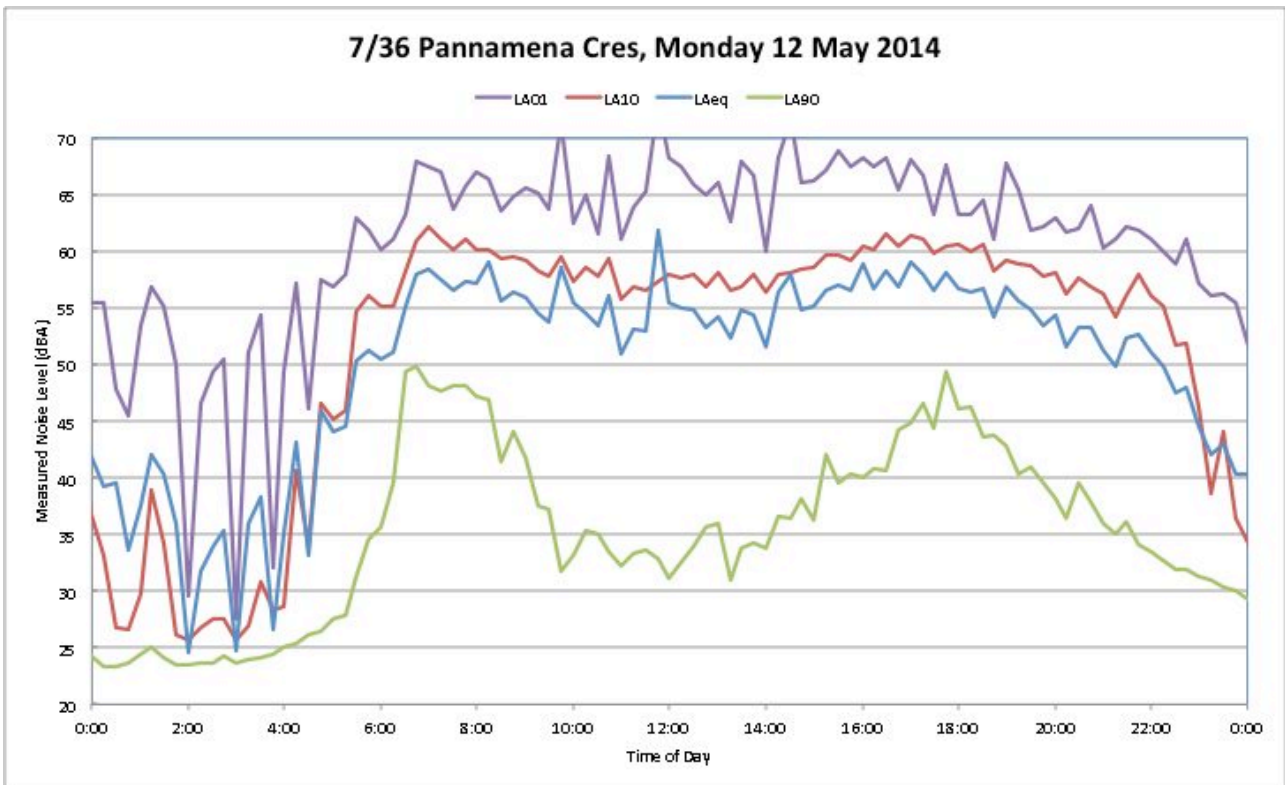
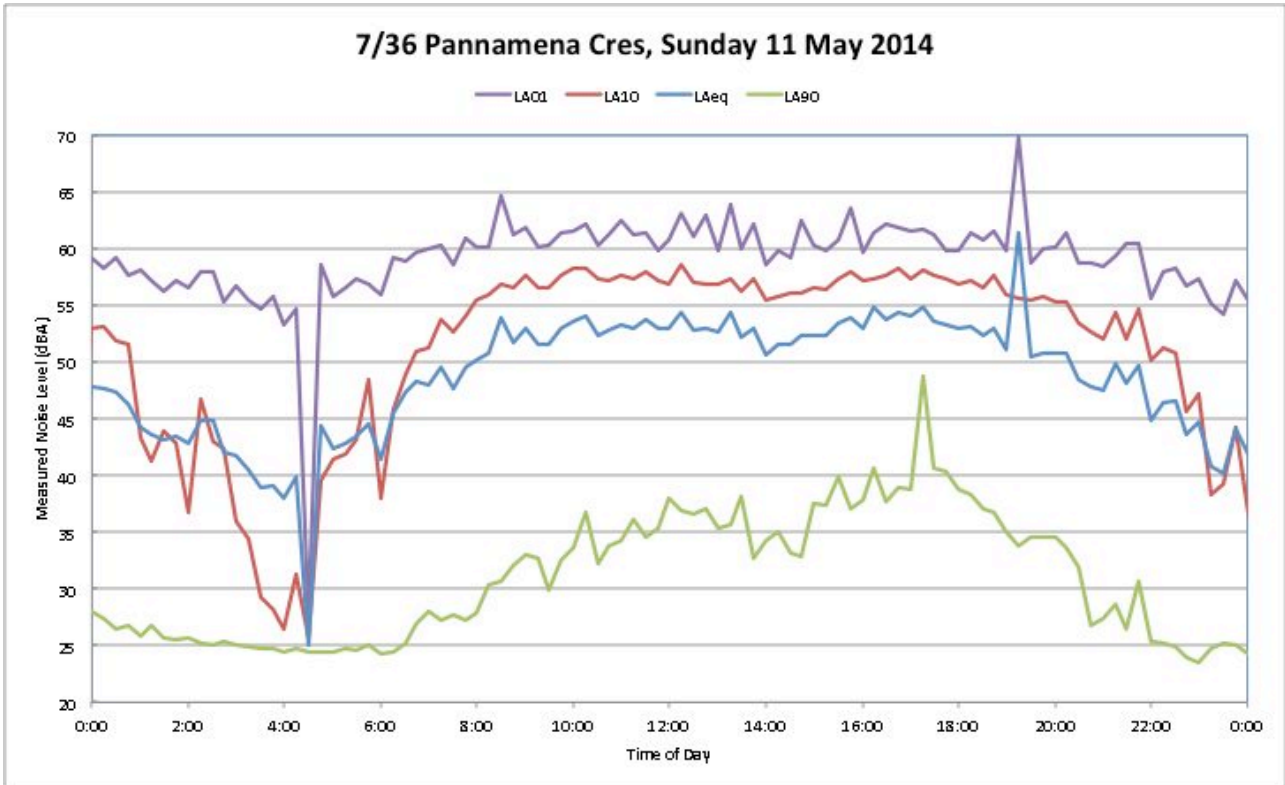


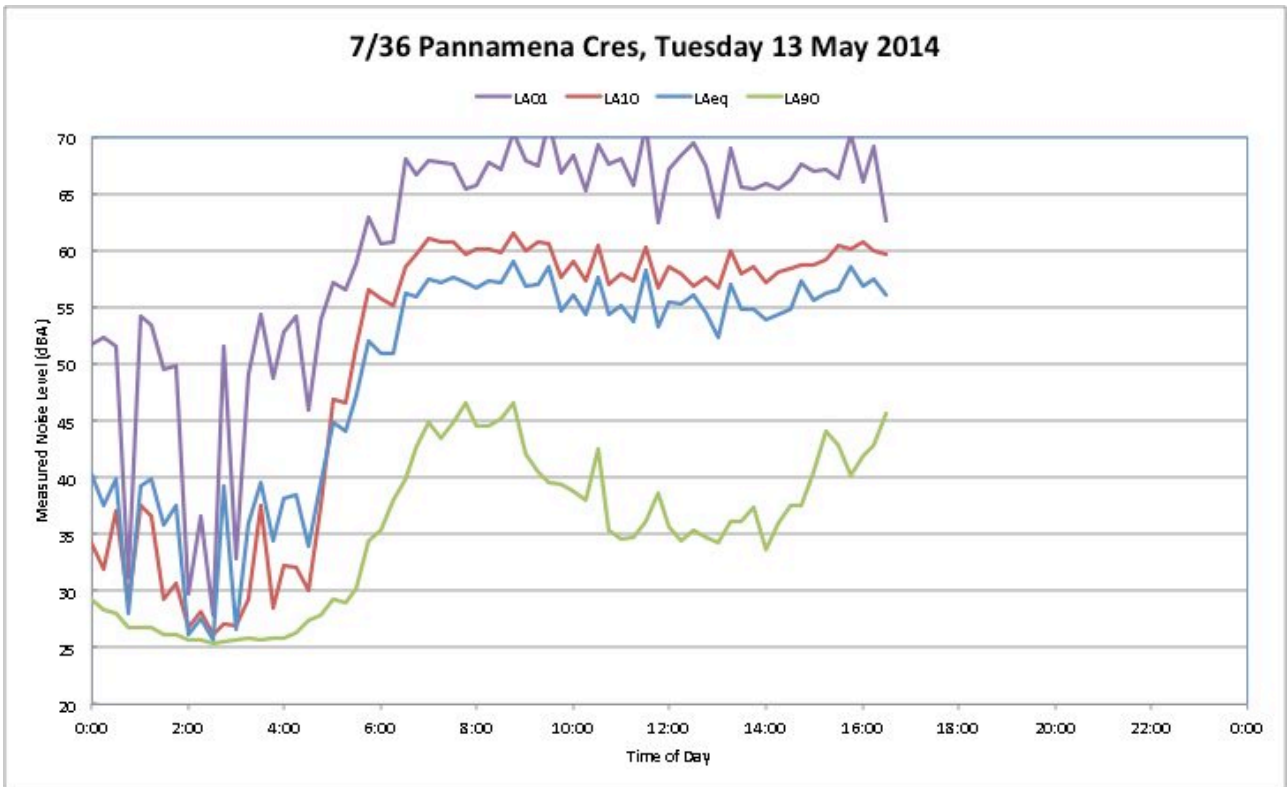




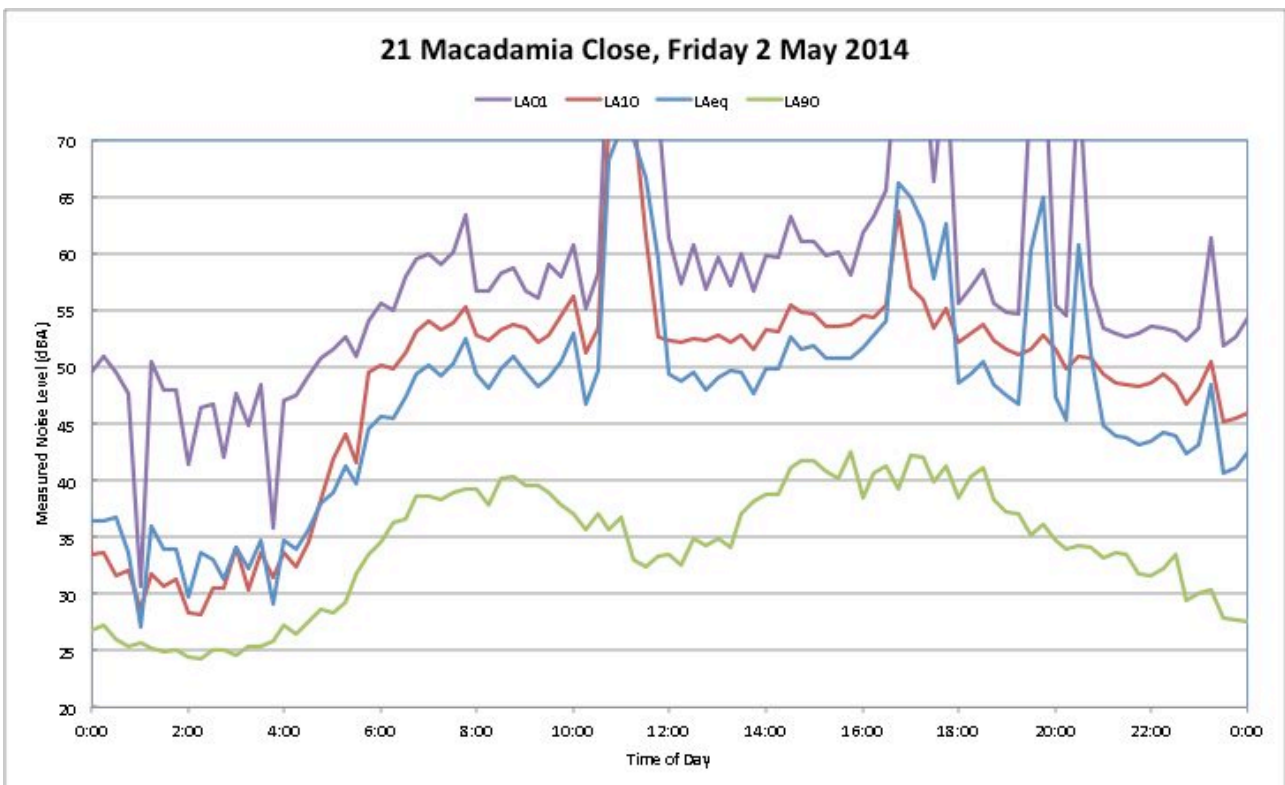
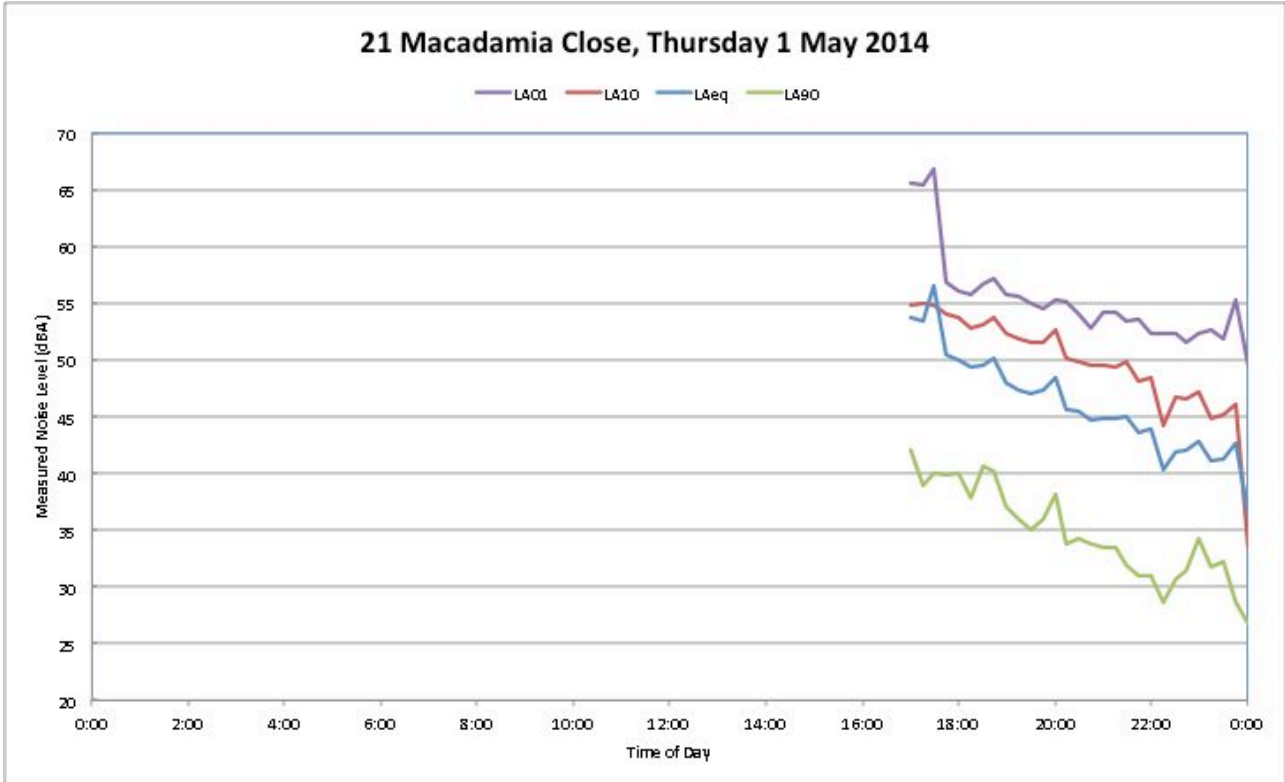




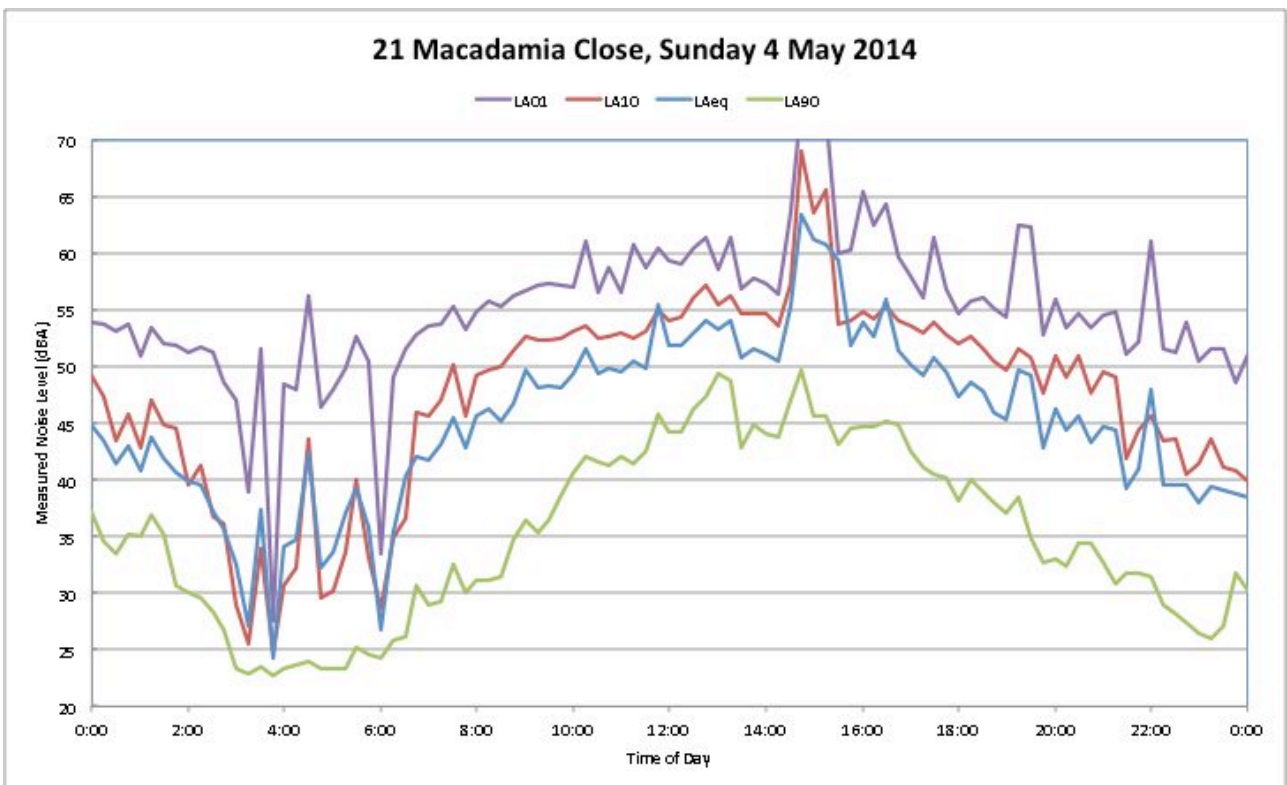
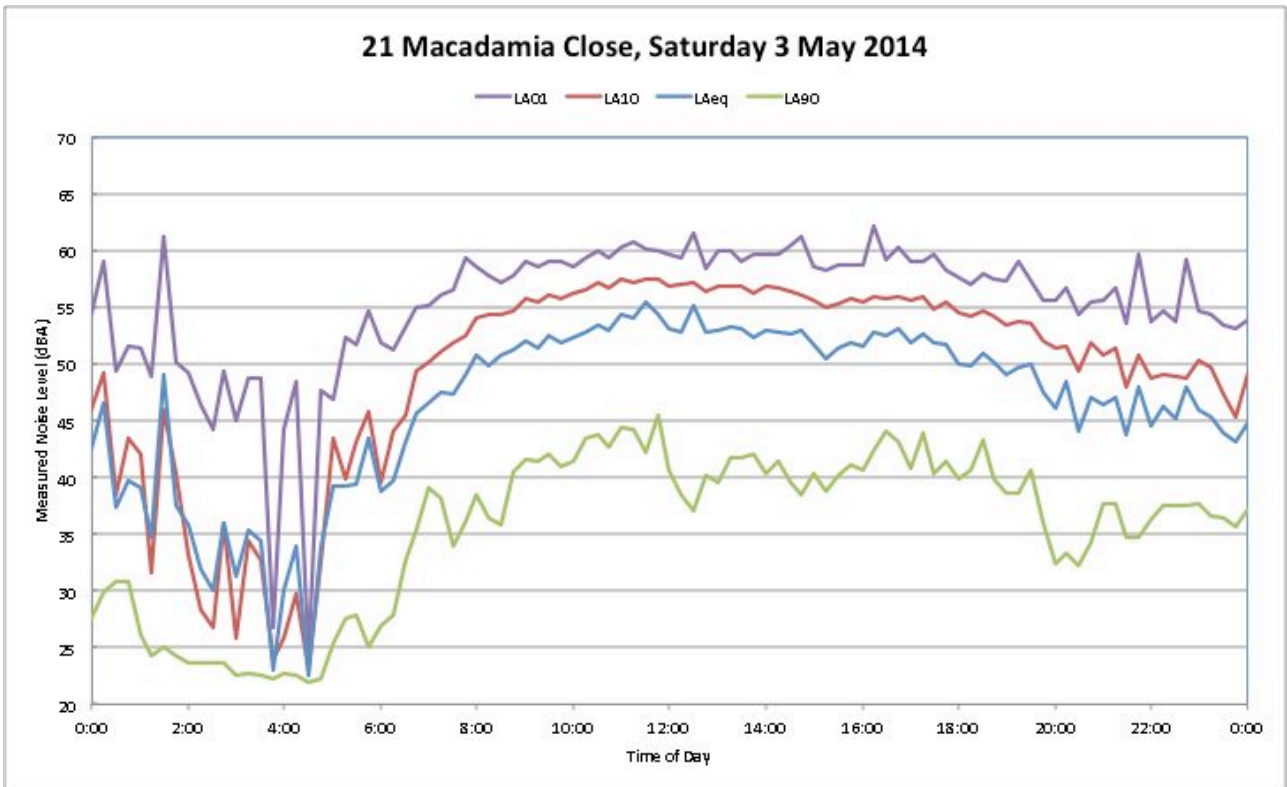


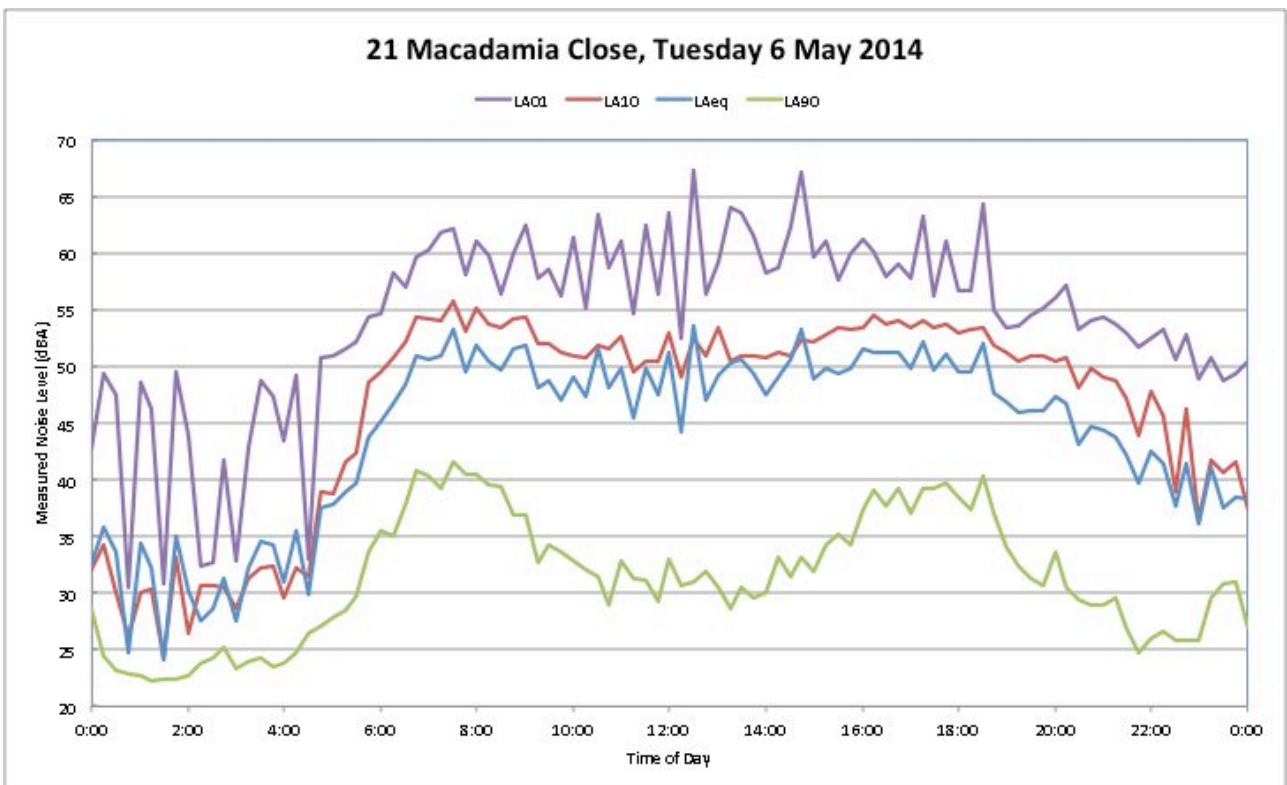
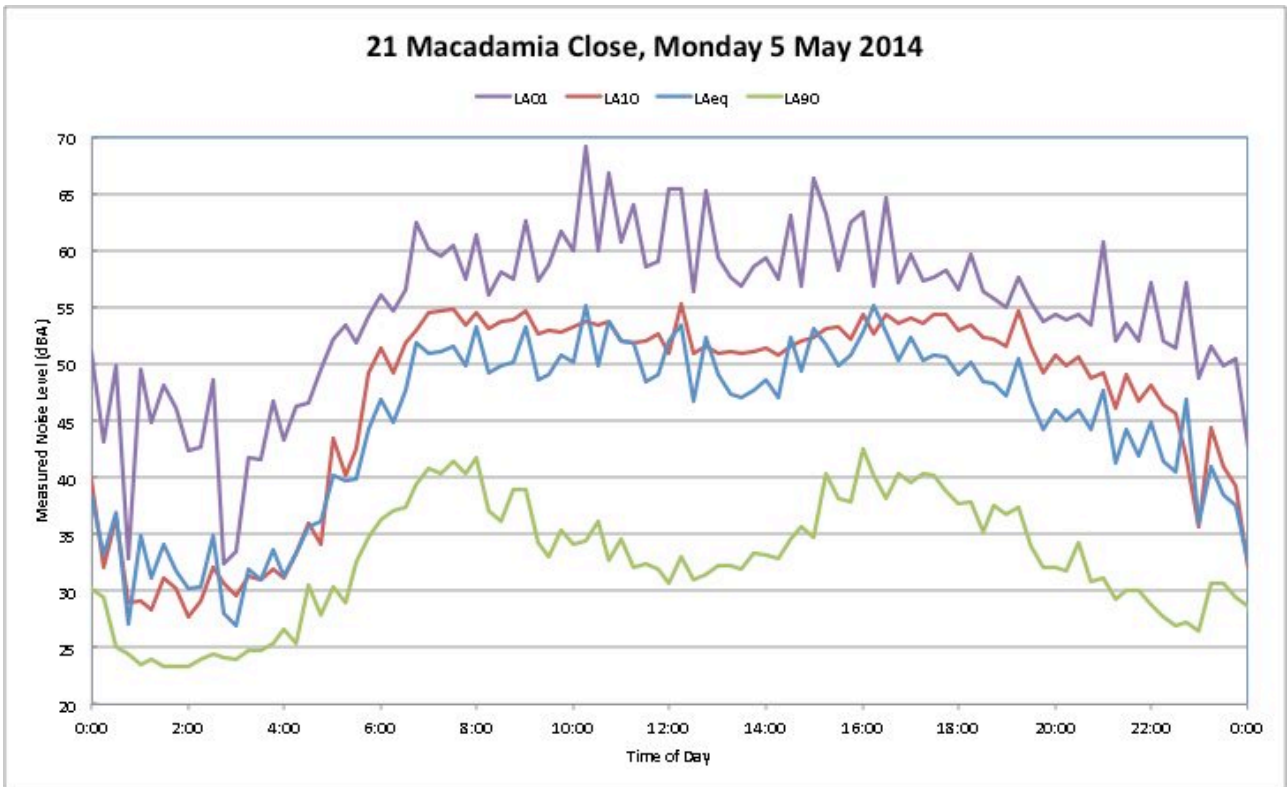


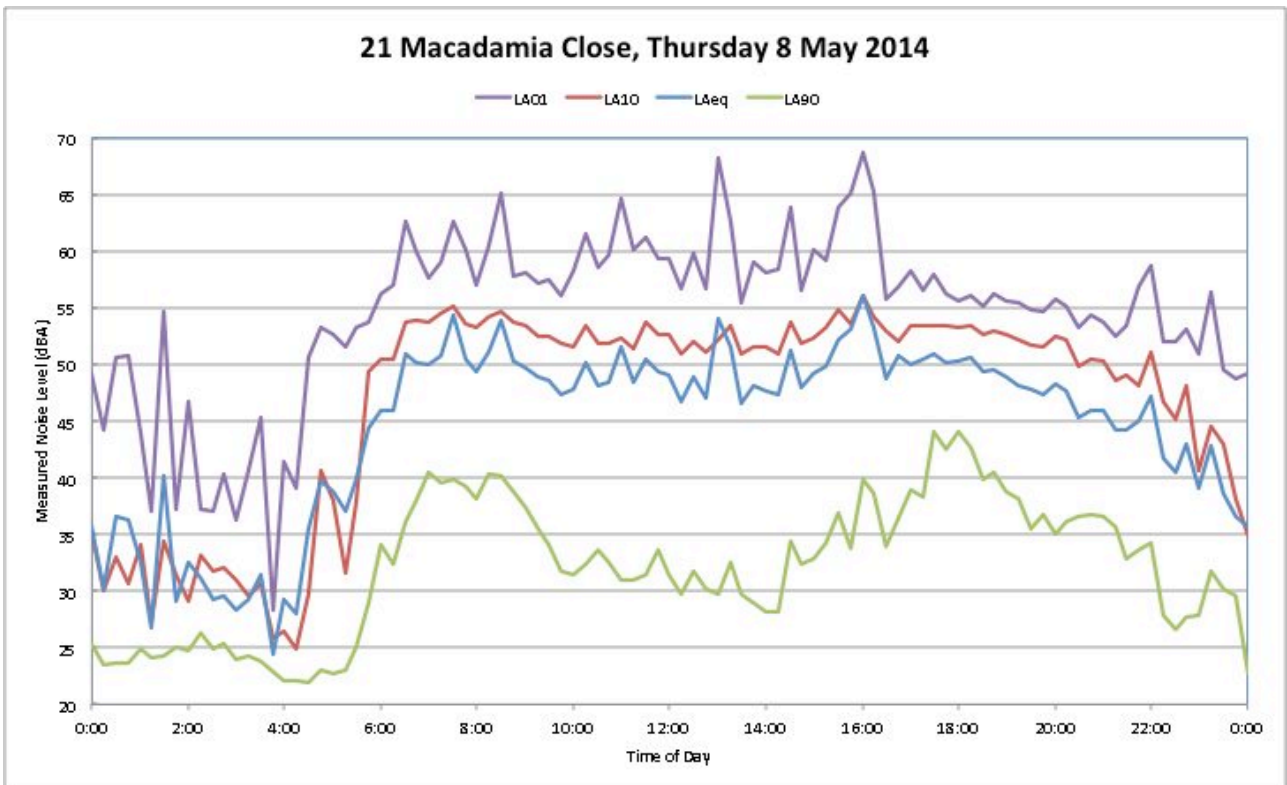
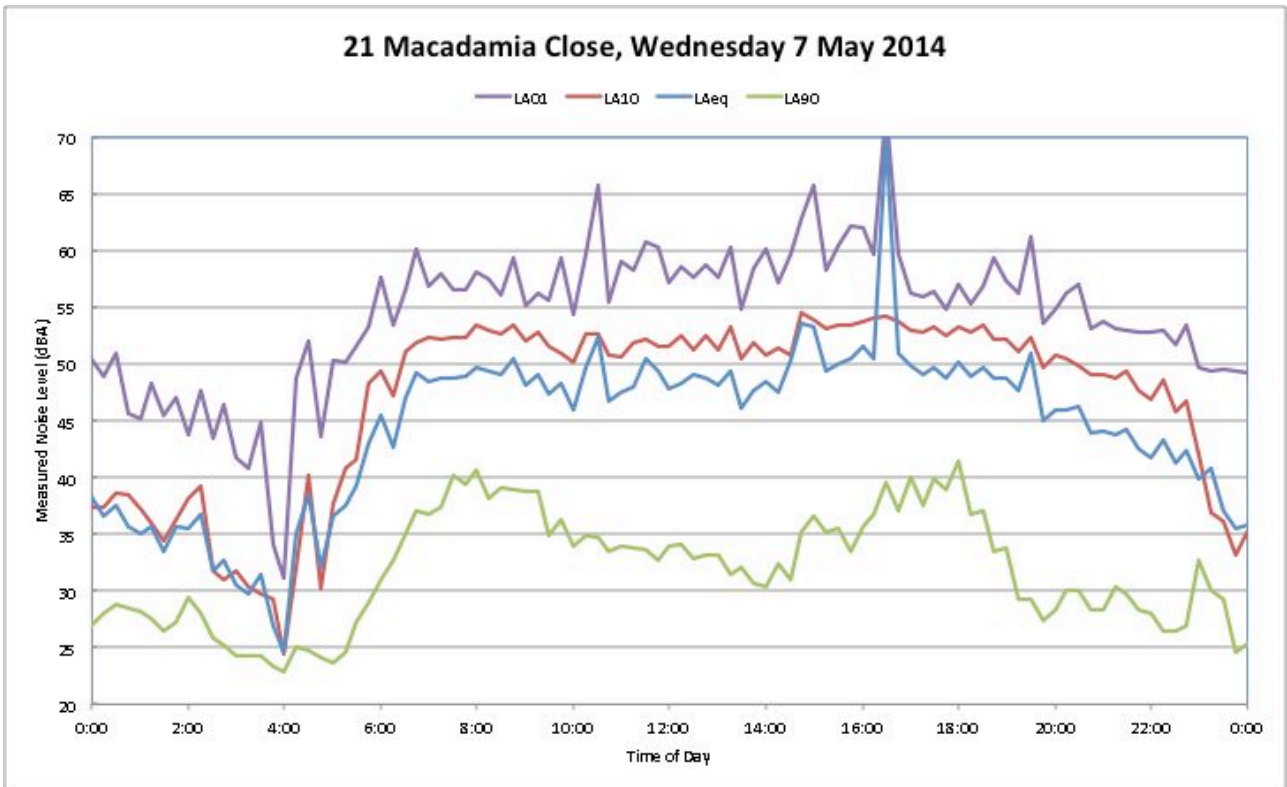
**B.2 21 Macadamia Close, Jerrabomberra NSW**

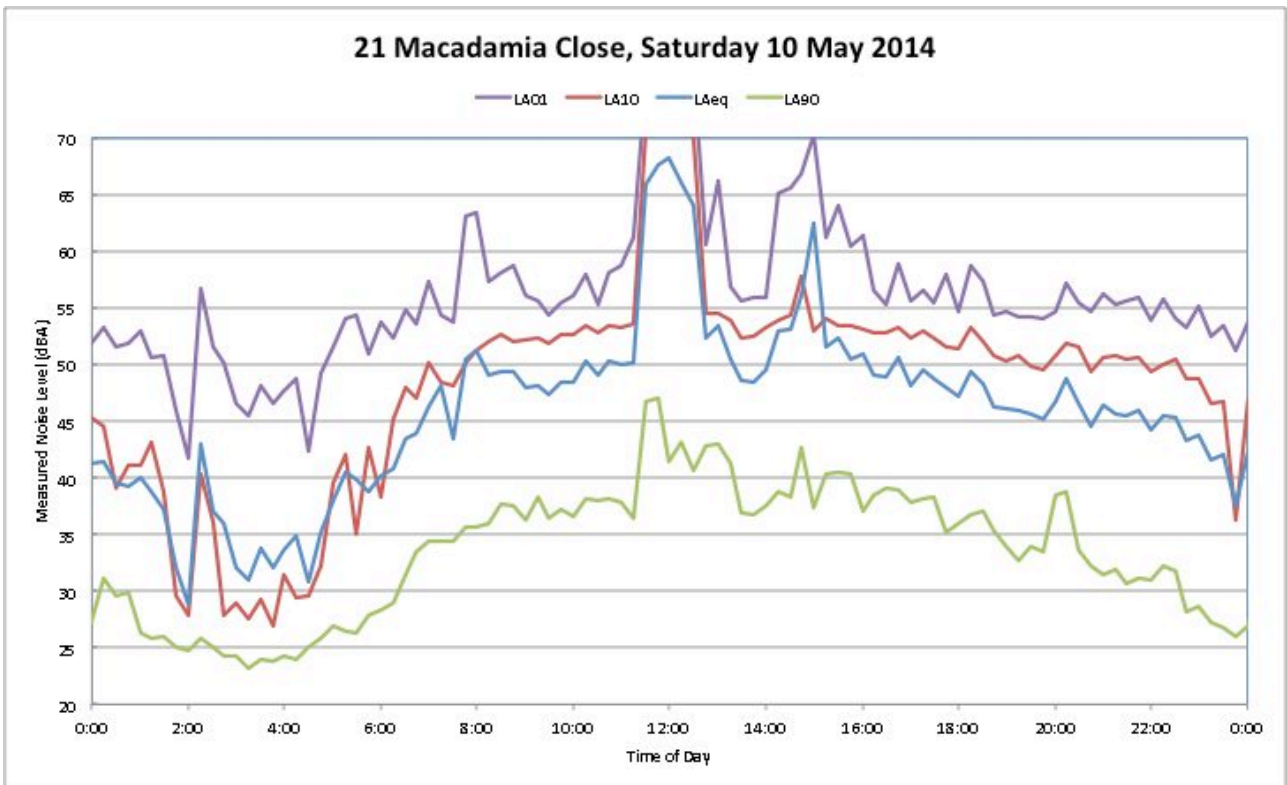
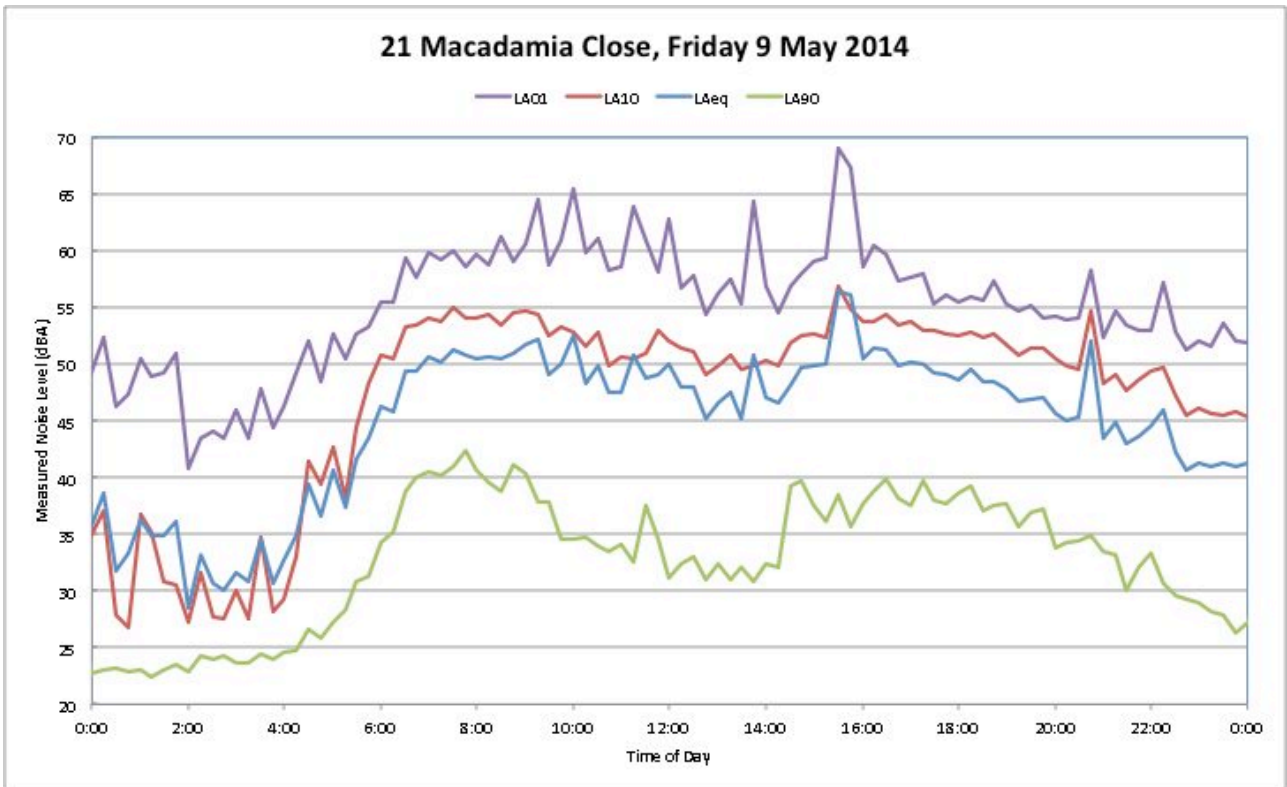


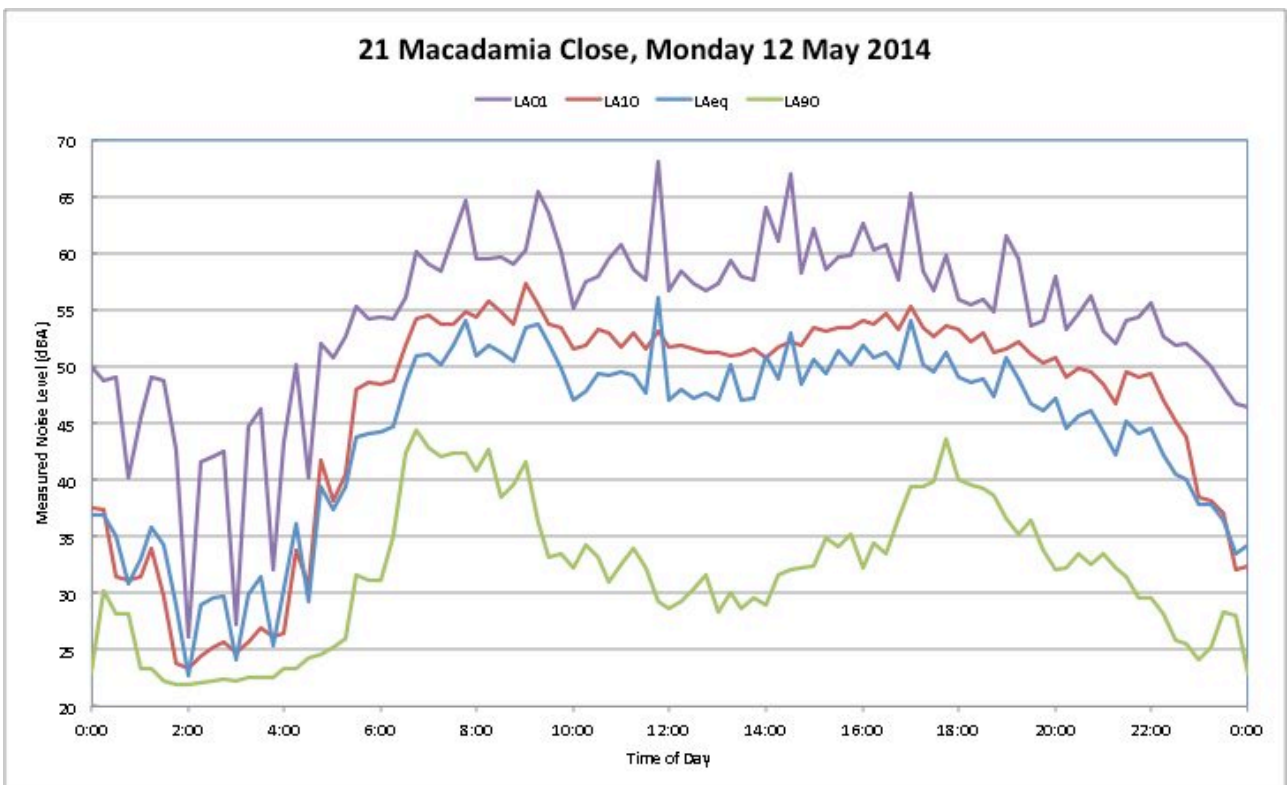
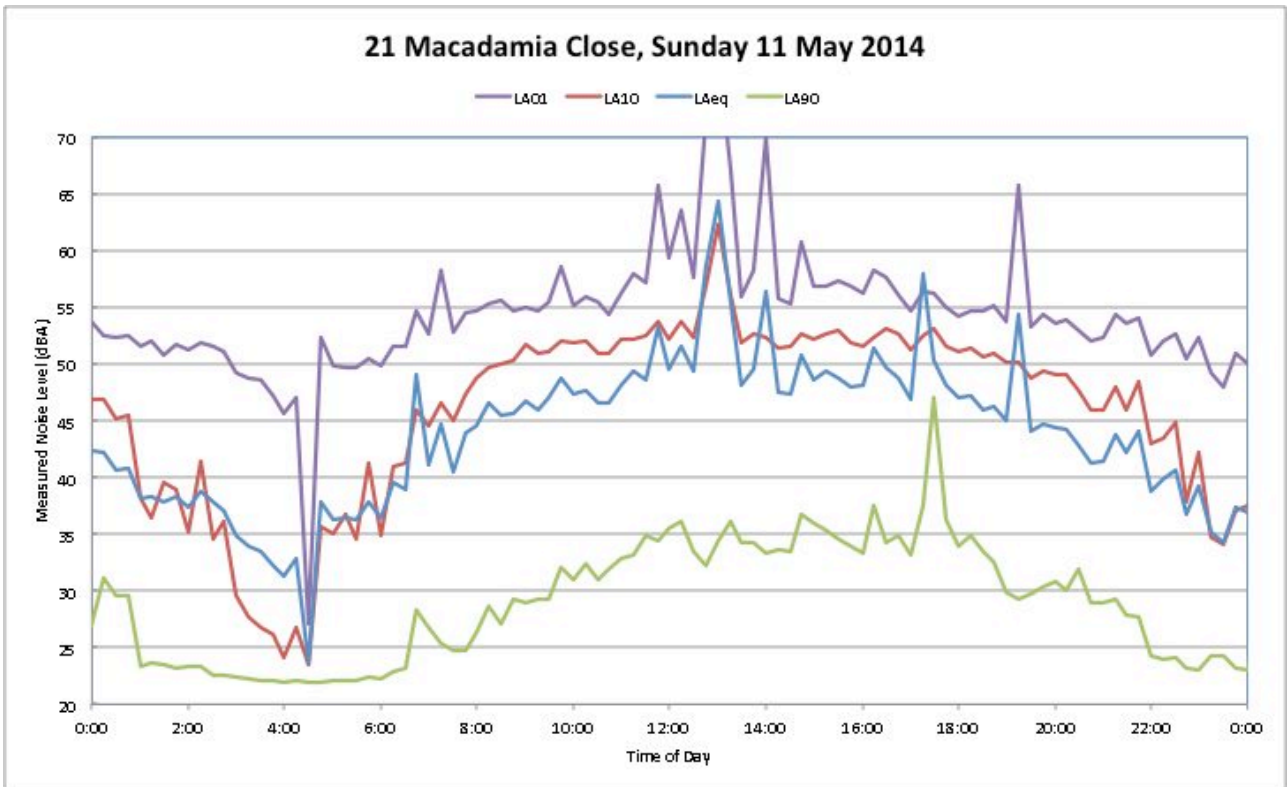


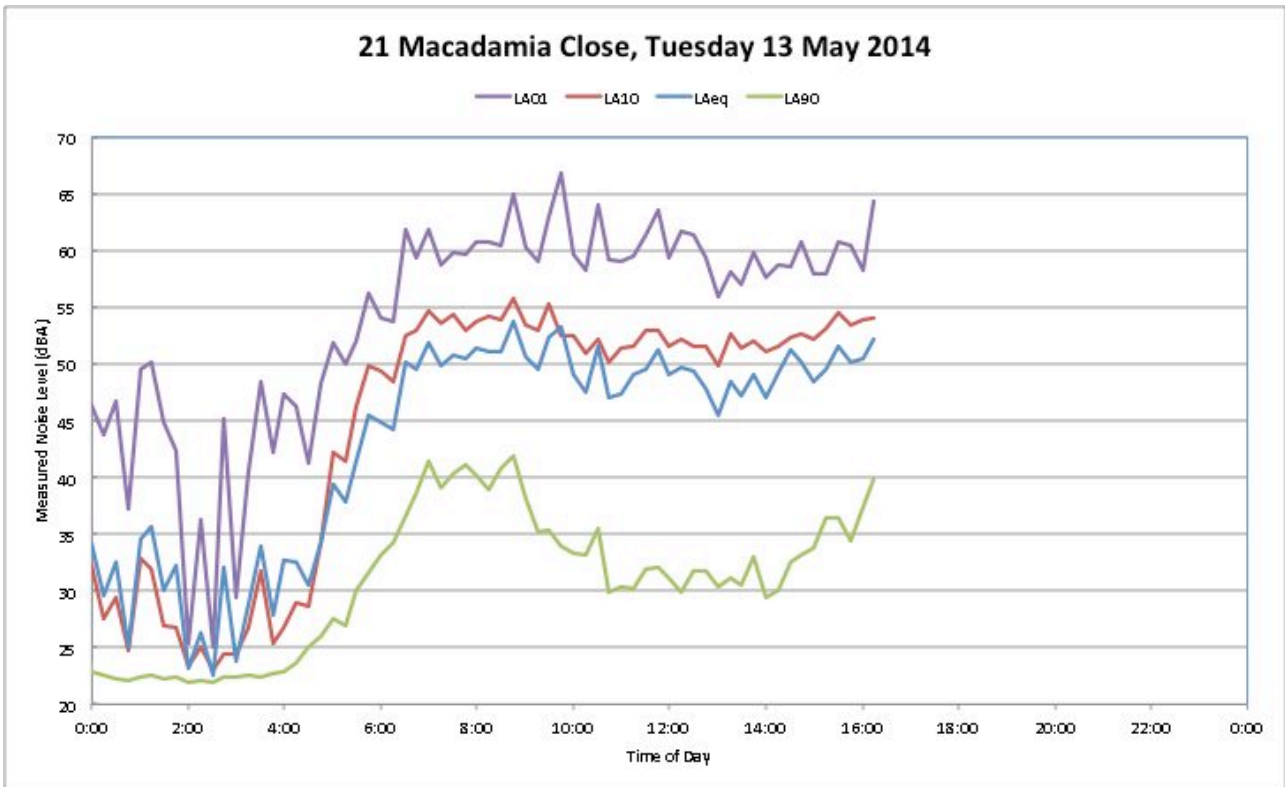












**B.3 17 Nimbus Place, Karabar NSW**

