



ENVIRONMENT PROTECTION LICENCE NO: 21029

July 2020 Monthly Report

FOR

**Princes Highway Upgrade
between Berry and Bomaderry**

Document control

File name	DSWJV-EPL21029-July-2020
Report name	Environment Protection Licence 21029 July 2020 Monthly Report – Princes Highway Upgrade between Berry and Bomaderry
Revision number	1

Approved by:



Greg Anderson

Downer Seymour Whyte
Project Director



Jacqueline McKenzie

Downer Seymour Whyte
Environmental Site
Representative

Revision history

Revision	Date	Description	Approval
0	09/08/20	Final	J. McKenzie / G. Anderson
1	17/08/20	Administrative update to correct errors in report	J. McKenzie / G. Anderson

Distribution of controlled copies

Copy no.	Issued to	Version
1		
2		
3		
4		
5		

Contents

1	INTRODUCTION	4
2	NON-COMPLIANCES	5
3	RAINFALL AND WEATHER	5
4	SEDIMENT BASIN DISCHARGE	6
5	AIR MONITORING RESULTS	7
6	NOISE MONITORING RESULTS	9
7	ENVIRONMENTAL COMPLAINTS	11
	Table 3-1 July 2020 Rainfall monitoring results	5
	Table 4-1 July 2020 Sediment basin discharge(s)	7
	Table 5-1 July 2020 Air quality monitoring results	8
	Table 6-1 July 2020 Noise Monitoring Results.....	9

1 INTRODUCTION

The Downer Seymour Whyte Joint Venture (DSWJV) is contracted by Roads and Maritime Services (Roads and Maritime) to upgrade 10.3 kilometres of the Princes Highway between Mullers Lane (south of Berry) and Cambewarra Road, Bomaderry in New South Wales (NSW) (the Project). The project will provide a four-lane divided highway (two lanes in each direction) with median separation.

The project is one of a series of upgrades to sections of the Princes Highway which aims to provide a four-lane divided highway between Waterfall and Jervis Bay Road, Falls Creek. This would improve road safety and traffic efficiency, including for freight, on the NSW South Coast.

Figure 1 provides an overview of the project location.

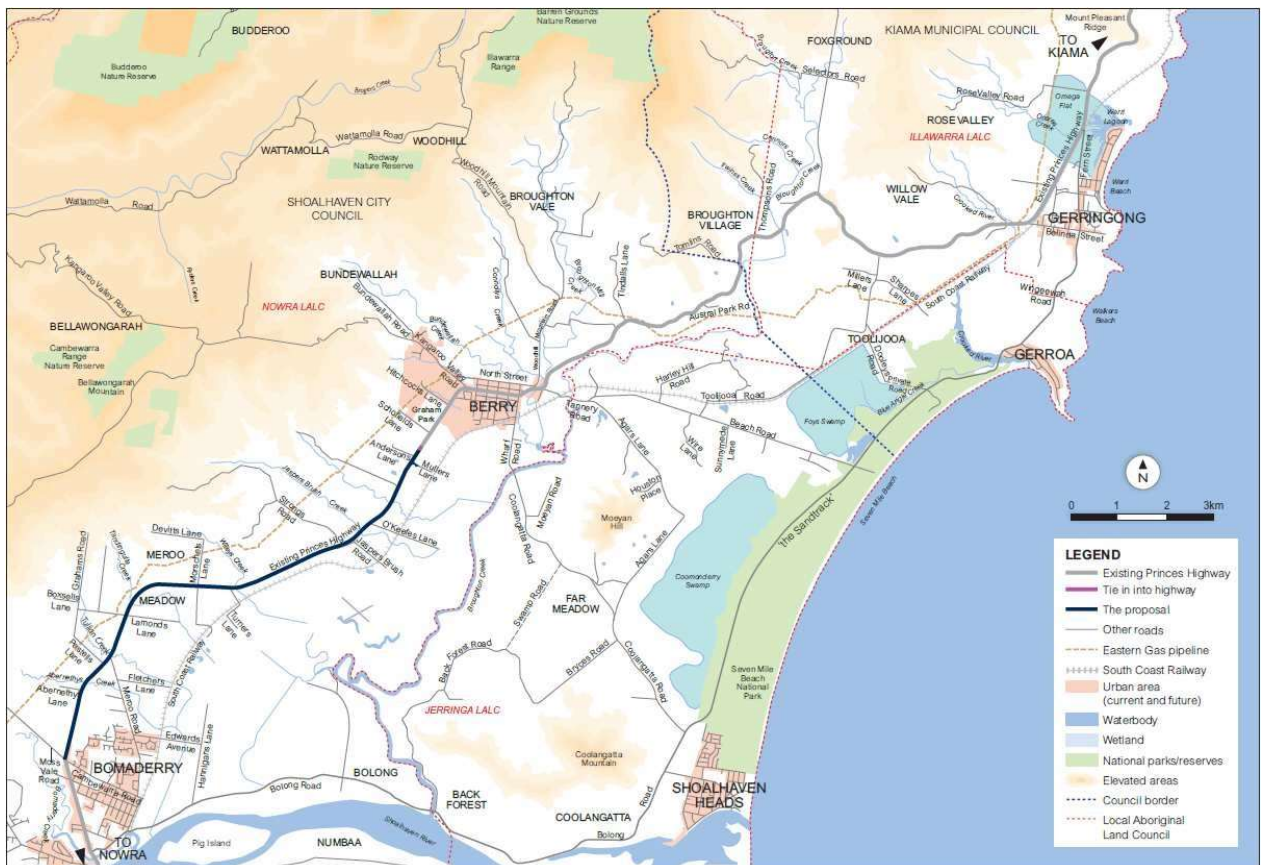


Figure 1-1 Project location

This report provides the results of monitoring undertaken during July 2020 as required by the project’s Environment Protection Licence (EPL 21029) Condition R4.1.

2 NON-COMPLIANCES

No non-compliances occurred against EPL conditions during the month of July.

3 RAINFALL AND WEATHER

The RMS automatic weather station is situated at Ison Lane, Jaspers Brush, located adjacent to the project's main ancillary compound (Ison Lane Compound) for the project. The results of rainfall monitoring for July 2020 are provided in Table 3-1 and Figure 3-1 below.

Table 3-1 July 2020 Rainfall monitoring results

Location	Monthly rainfall recorded (mm)
Ison Lane, Jaspers Brush (RMS automatic weather station)	267.2

July experienced a total of 267.2 mm rainfall recorded at the project specific weather station at Ison Lane, Jaspers Brush (RMS automatic weather station). The weather during July was wetter than average as the long-term mean expected rainfall is 116.9 mm for July as taken from the Nowra RAN Air Station Bureau of Meteorology Weather Station (Station Number 068076).

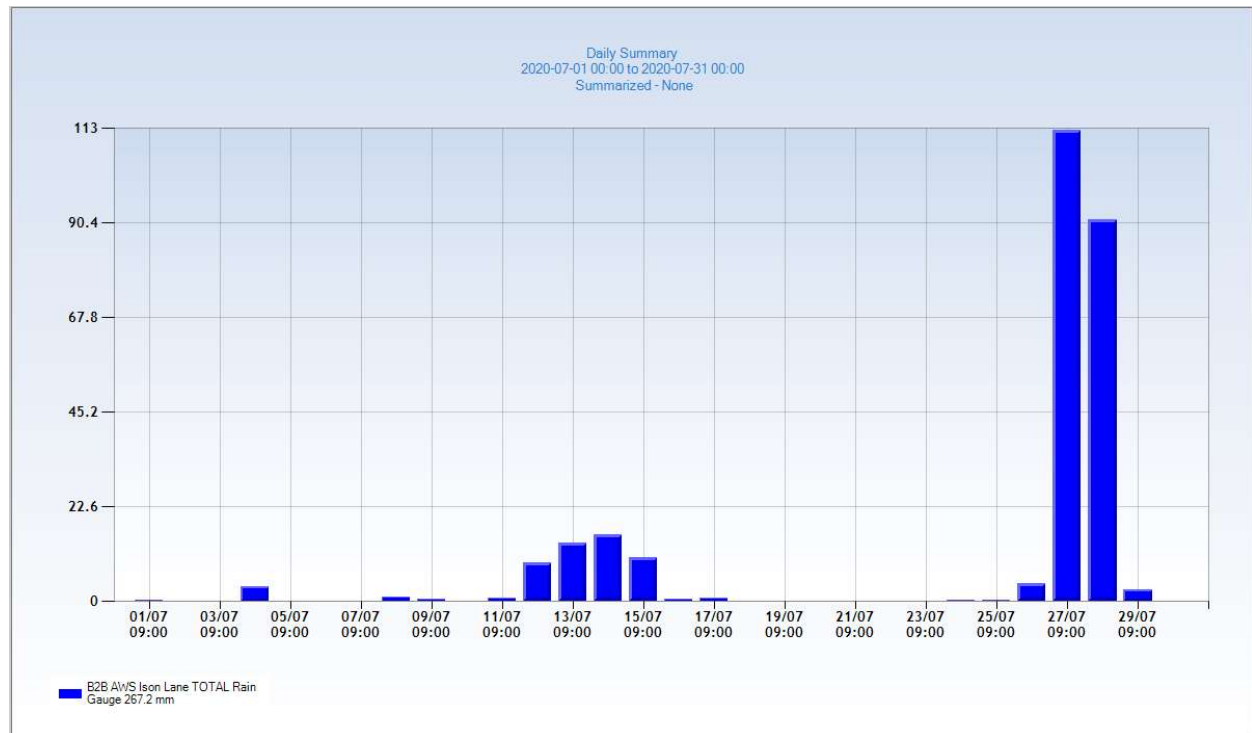


Figure 3-1 July Rainfall Results from Ison Compound Weather Station

Mild conditions prevailed during July with several days experiencing high wind speeds. The predominant wind direction for July was from WSW. The highest wind gust recorded was 61.5 km/h and the maximum wind speed was 46.3 km/h (refer Figure 3-2). DSWJV continue to monitor site activities, implement dust suppressant across site, utilise a fleet of water carts during working hours and limit dust generating activities and/or suspend work activities on days of high wind.

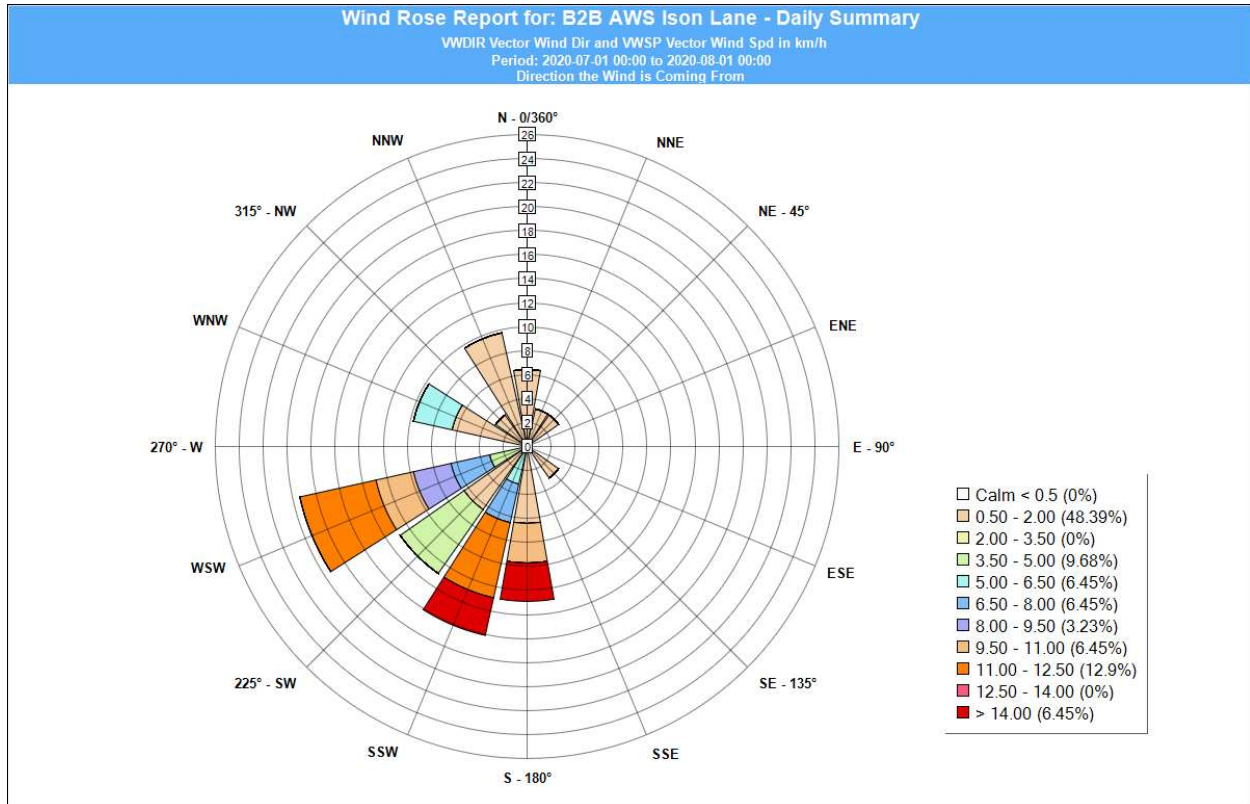


Figure 3-2 July 2020 Wind Rose Results from Ison Lane Compound Weather Station. Average Wind direction and Average Wind Speed shown.

4 SEDIMENT BASIN DISCHARGE

Sixteen sediment basins and two discharge points were licensed under the EPL during July 2020.

July was a notably wet month, with a significant event on 27th -29th delivering over 200mm of rainfall as described above. The 5-day rainfall specified in Condition L2.5 of EPL 21029 was exceeded on 27th of July. Uncontrolled discharges occurred as a result of the rainfall at sediment basins and across sites. This was reported via the EPA Environment Line on 27th July. All sediment basins were returned to operational status by 5th August. The delay in dewatering basins was primarily due to continued water ingress into site areas for a number of days after cessation of the rainfall event.

On the 20th of June 2019, in accordance with licence condition L2.6, DSWJV began to use a statistical correlation for the calculation of TSS (mg/L) from Turbidity (NTU). The correlation uses the formula of $TSS (mg/L) = 0.43 * (NTU) + 1.00$. Given that the threshold value for TSS is 50mg/l, samples if less than 114 NTU would be deemed suitable for discharge. For a factor of safety, the acceptable discharge limit was reduced to 90 NTU.

See Table 4.1 below for details on sediment basin discharges.

Table 4-1 July 2020 Sediment basin discharge(s)

EPA Identification No.	Location (adjacent address)	Discharge Date	pH (6.5-8.5)	Nephelometric Turbidity Units (<90NTU)	Oil and Grease (none visible)
PB19.82.S	Mullers Lane	21/07/20	7.5	30	None visible
PB24.45.N	B660 Princes Highway	16/07/20	7.0	70	None visible
TB21.15.N	Opposite O'Keefes Lane	No discharges in July 2020			
TB21.15.S	8 Cell Culvert	22/07/20	7.5	30	None visible
TB21.50.N	Opposite Jaspers Brush Road	23/07/20	7.55	60	None visible
TB21.70.S	Intersection at Jaspers Brush Road	23/07/20	7.0	30	None visible
TB21.70.S	Intersection at Jaspers Brush Road	31/07/20	7.0	50	None visible
TB21.90.S	Jaspers Brush Ancillary Site	24/07/20	7.5	50	None visible
		30/07/20	7.43	72	None visible
		23/07/20	6.89	4.9	None visible
TB22.10.N	Strongs Road	No discharges in July 2020			
TB22.25.S	Opposite Strongs Road	No discharges in July 2020			
TB22.30.S	Abernethy's Lane	07/07/20	7.5	60	None visible
TB22.65.S	Opposite Ison Lane	30/07/20	7	40	None visible
TB22.65.N	North of Ison Lane	07/07/20	7	20	None visible
TB22.80.N	Ison Compound	23/07/20	8.35	40	None visible
TB23.60.N	South of Ison Lane	No discharges in July 2020			
TB25.10.N	Devitts Lane	No discharges in July 2020			
TB26.15.S	North of Tandingulla Creek	23/07/20	7.5	50	None visible
		30/07/20	7.45	72.2	None visible
TB28.90.N	Abernethy's Lane	31/07	7.03	19.4	None visible
CH20.50.S	Adjacent to Flying Fox Creek	No discharges in July 2020			
CH27.81.N	Pestells Lane	No discharges in July 2020			

5 AIR MONITORING RESULTS

Dust deposition gauges for the project were installed on 19 June 2020 and changed on 20

July 2020 for a total of 31 days of deployment, ie within the NATA accredited window (30 days +/- 2 days), according to the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA, 2016).

No monitoring points exceeded the monthly criteria for total insoluble matter of 4 g/m²/month during July however one monitoring point DDG-A (10 Croziers Lane, Jaspers Brush) exceeded the rolling annual average for deposited dust, also 4 g/m²/month based on the past 12 months of data. Whilst recent months have been below the monthly criteria however two much higher results during December 2019 (10.5 g/m²/month and January 2020 g/m²/month) are the largest contributors to the current average and as noted in previous reports the poor air quality was a result of several large bushfires in the region at the time. Some very low results between April and July 2019 meant that the rolling average had remained under the criteria, however now that those months are not within the window of the rolling average the spike over the threshold is only now experienced.

Table 5-1 July 2020 Air quality monitoring results

EPA Identification No.	Location (adjacent address)	Ash Content g/m ² ,month	Combustible Matter g/m ² ,month	Total Insoluble Matter g/m ² ,month	Rolling Average (Total Insoluble Matter) g/m ² ,month
1-DDG A	10 Croziers Lane, Jaspers Brush	0.9	1.3	2.2	4.1
2-DDG B	10A Jaspers Brush Road, Jaspers Brush	1.0	0.3	1.3	2.7
3-DDG C	20C Strongs Road, Jaspers Brush	0.4	0.1	0.5	2.2
4-DDG D	10C Jaspers Brush Road, Jaspers Brush	0.7	0.1	0.8	3.2
5-DDG E	30 Ison Lane, Jaspers Brush	0.2	<0.1	0.2	1.0
6-DDG F	Lot 209 DP 1210788	0.5	0.1	0.6	2.0
7-DDG H	10 Lamonds Lane, Meroo Meadow	0.4	<0.1	0.4	2.3
8-DDG I	19 Boxsells Lane, Meroo Meadow	0.1	<0.1	0.1	1.6
9-DDG J/K	265 Princes Highway, Meroo Meadow	0.3	<0.1	0.3	1.7
10-DDG L	1028 Meroo Meadow, Meroo Meadow	1.2	<0.1	1.2	3.2
11-DDG M	32 Elvin Drive, Bomaderry	0.7	0.7	1.4	3.2
12-DDG N	9 Devitt's Lane, Meroo Meadow	0.4	0.1	0.5	1.7
13-DDG P	24 Abernethys Lane, Meroo Meadow	0.7	0.2	0.9	1.8

Note: bold type indicates a result above the relevant criteria

Figure 5-1 provides air quality data from the nearest OEH ambient air quality monitoring stations to the project (Wollongong, Kembla Grange and Albion Park, approximately 25 km north of the project area). Generally regional air quality was good or very good for the month of July.

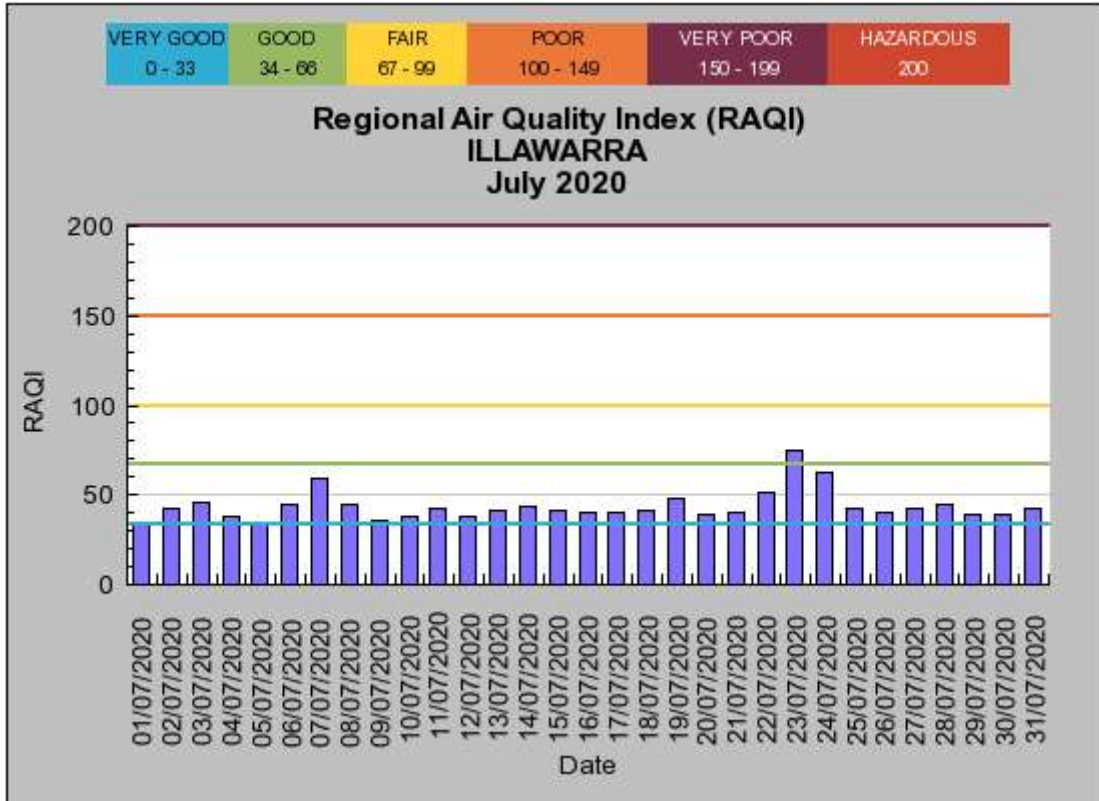


Figure 5-1: Regional Air Quality Index for July from the nearest OEH air quality monitoring stations – Illawarra (NSW OEH).

6 NOISE MONITORING RESULTS

Noise monitoring was undertaken in accordance with the Construction Noise and Vibration Management Plan (CNVMP) for the project in July 2020. No exceedances above predicted levels for the relevant activity were recorded.

Table 6-1 below summarises the attended noise monitoring undertaken in July 2020.

Table 6-1 July 2020 Noise Monitoring Results

EPA ID No.	Location description	Construction activity	Date	Time	L(A) _{eq} 15min	Comments
15	L1 - B210 Princes Highway, Jaspers	No construction works in the vicinity	31/07/2020	08:07	59.4	<ul style="list-style-type: none"> Constant traffic noise from the Princes Highway dominant noise source Excavator operating for approximately 1 minute
16	L2 - 20C Strongs Road, Jaspers Brush	Earthworks	31/07/2020	07:42	65.7	<ul style="list-style-type: none"> Excavator working on opposite side of the highway. Traffic from the Princes Highway dominant source

EPA ID No.	Location description	Construction activity	Date	Time	L(A) _{eq} 15min	Comments
17	L3 - 30 Ison Lane, Jaspers Brush	Asphalting	24/07/2020	15:22	50.9	<ul style="list-style-type: none"> Traffic from Princes Highway the dominant noise source with light and heavy vehicles Asphalting in works zone (paver, rollers, bobcat)
18	L5 - 15 Turner Lane, Jaspers Brush	Earthworks	31/07/2020	11:11	55.4	<ul style="list-style-type: none"> Traffic from Princes Highway dominant noise source Intermittent construction noise (trucks braking, reversing, squawkers)
19	L6 - B710 Princes Highway, Jaspers Brush	Earthworks	31/07/2020	14:20	59.2	<ul style="list-style-type: none"> Dominant noise source traffic from Princes Highway. No construction works in the vicinity
20	L7 - 310C Princes Highway, Jaspers Brush	Earthworks	30/07/2020	8:42	69.7	<ul style="list-style-type: none"> Dominant noise source traffic from Princes Highway. Water cart passing very close to monitor during a short period to water a batter Works visible a short distance away however not audible over traffic noise.
21	BG08 - 19 Boxsells Lane, Meroo Meadow	Earthworks	24/07/2020	12:46	54.6	<ul style="list-style-type: none"> Traffic from the Princes Highway dominant noise Trucks tipping rocks faintly audible
22	BG09 - 1028 Meroo Road, Meroo Meadow	Bridgeworks	24/07/2020	11:06	62.2	<ul style="list-style-type: none"> Constant traffic from the Princes Highway the dominant noise source Motor powered by LV operating intermittently.
23	L8 - 24 Abernethys Lane, Meroo Meadow	Earthworks	24/07/2020	12:20	61.5	<ul style="list-style-type: none"> Traffic from Princes Highway dominant noise source Construction noise intermittent (excavators scraping, reversing squawkers, bogey tipping) Roller operation was dominant during operation (0-5mins)
24	BG10 - 35 Gardenia Crescent, Bomaderry	No construction woks in the vicinity	24/07/2020	10:36	48.9	<ul style="list-style-type: none"> No construction works in the area. Highway traffic in the distance, birds chirping and occasional local traffic
25	BG11 - 38 Elvin Drive, Bomaderry	No construction woks in the vicinity	24/07/2020	11:48	62.4	<ul style="list-style-type: none"> No construction works in the area Constant traffic from the Princes Highway the dominant noise source.

7 ENVIRONMENTAL COMPLAINTS

No environmental complaints were received in July 2020