



**ENVIRONMENT PROTECTION LICENCE NO: 21029**

**March 2020 Monthly Report**

FOR

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**Princes Highway Upgrade  
between Berry and Bomaderry**

## Document control

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# 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 March 2020 as required by the project’s Environment Protection Licence (EPL 21029) Condition R4.1.

## 2 NON-COMPLIANCES

As reported in February 2020 dust gauge DDG-M was found missing. The gauge was redeployed on 20 March 2020 to match the sampling period of other dust deposition gauges for the project and therefore no data was obtained for this monitoring location for March.

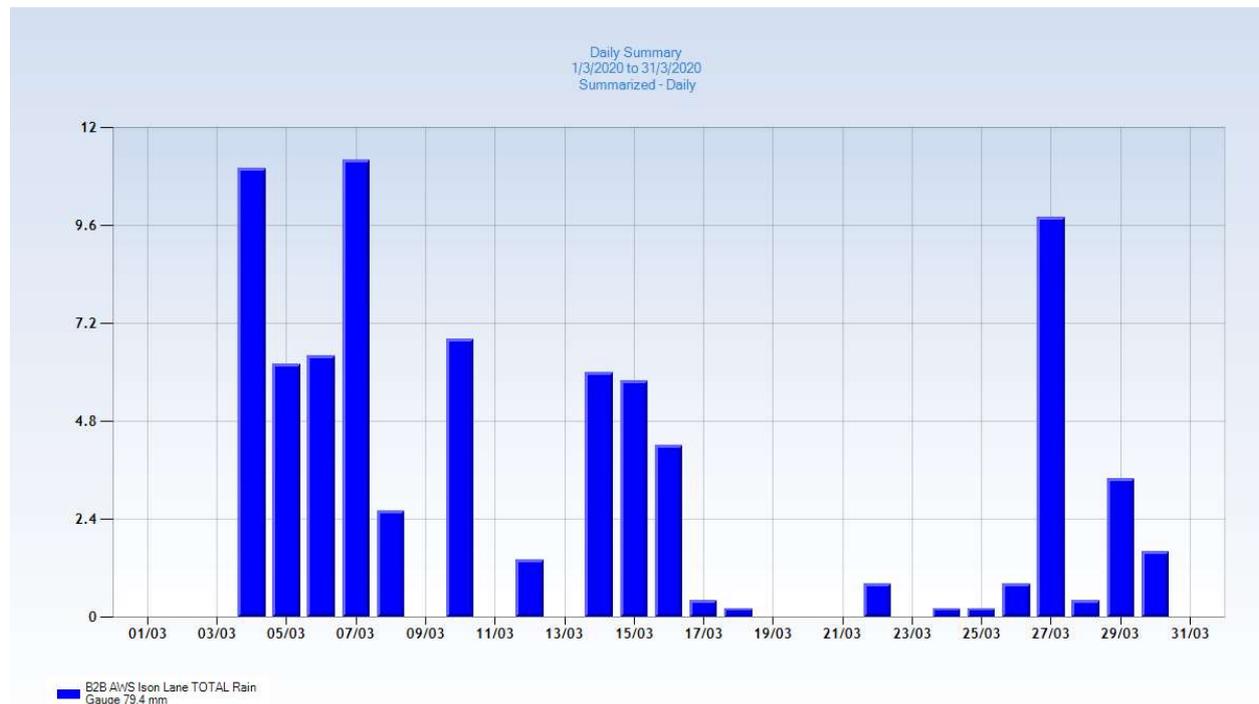
## 3 RAINFALL AND WEATHER

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 March 2020 are provided in Table 3-1 and Figure 3-1 below.

**Table 3-1 March 2020 Rainfall monitoring results**

Location	Monthly rainfall recorded (mm)
Ison Lane, Jaspers Brush (RMS automatic weather station)	79.4

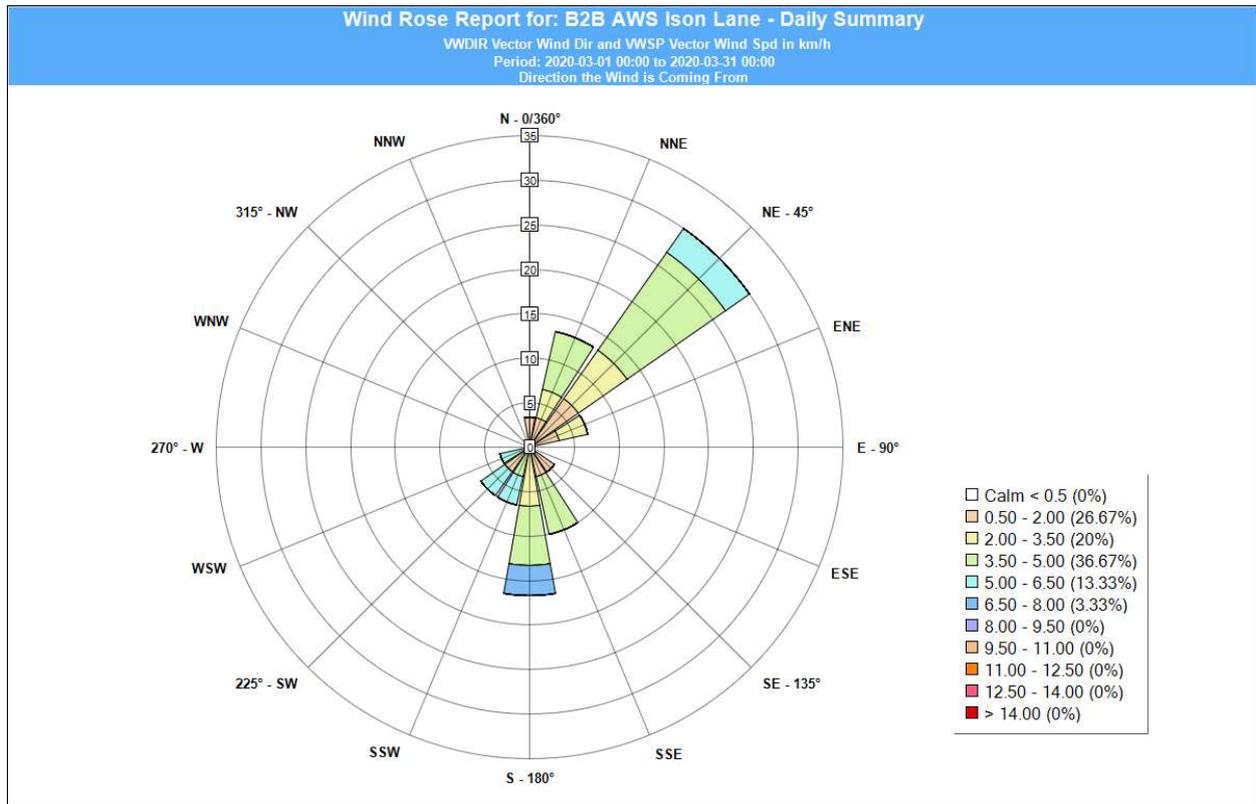
March experienced a total of 79.4mm rainfall recorded at the project specific weather station at Ison Lane, Jaspers Brush (RMS automatic weather station). The long-term mean expected rainfall is 124.4 mm for March as taken from the Nowra RAN Air Station Bureau of Meteorology Weather Station (Station Number 068076).



**Figure 3-1 March Rainfall Results from Ison Compound Weather Station**

Mild conditions prevailed during March with several days of moderate wind speeds. The predominant wind direction for March was from the northeast. The highest wind gust recorded was 52.1 km/h and maximum wind speed was 40 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 March 2020 Wind Rose Results from Ison Lane Compound Weather Station. Average Wind direction and Average Wind Speed shown.**

## 4 SEDIMENT BASIN DISCHARGE

Nineteen sediment basins and one discharge point were licensed under the EPL during March 2020.

On the 20<sup>th</sup> of June 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 March 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	11/03/20	7	60	None visible
PB24.45.N	B660 Princes Highway	No discharges in March 2020			
TB21.15.N	Opposite O'Keefes Lane	02/03/20	7.5	40	None visible
TB21.50.N	Opposite Jaspers Brush Road	11/03/20	7	40	None visible
TB21.70.S	Intersection at Jaspers Brush Road	24/03/20	7.5	50	None visible
TB21.90.S	Jaspers Brush Ancillary Site	09/03/20	7	20	None visible
		23/03/20	7	30	None visible
TB22.10.N	Strongs Road	20/03/20	7	60	None visible
		31/03/20	7	30	None visible
TB22.25S	Opposite Strongs Road	20/03/20	7.5	25	None visible
TB22.30.N	South of Strongs Road	13/03/20	7	40	None visible
TB22.65.S	Opposite Ison Lane	No discharges in March 2020			
TB22.65N	North of Ison Lane	13/03/20	7	50	None visible
		18/03/20	7.5	60	None visible
		25/03/20	7.5	20	None visible
TB22.80.N	Ison Compound	11/03/20	8	50	None visible
TB23.60N	South of Ison Lane	11/03/20	7.5	50	None visible
TB25.10.N	Devitts Lane	03/03/20	7.5	50	None visible
		10/03/20	7	30	None visible
		12/03/20	6.6	34	None visible
		13/03/20	7	30	None visible
		19/03/20	7	35	None visible
TB25.70N	South of Devitts Lane	23/03/20	7.5	60	None visible
TB25.75.N	South of Devitts Lane	23/03/20	7.5	50	None visible
TB26.15S	North of Tandingulla Creek	18/03/20	7.5	40	None visible
TB26.15N	North of Tandingulla Creek	17/03/20	7.2	44	None visible

		20/03/20	7.2	44	None visible
TB28.90.N	Abernethy's Lane	12/03/20	6.6	10	None visible
		13/03/20	6.6	4	None visible
		14/03/20	6.6	10	None visible
		20/03/20	6.98	5	None visible
		20/03/20	7.1	7	None visible
		31/03/20	7	10	None visible
CH27.81N	Pestells Lane	12/03/20	6.8	33	None visible
		14/03/20	6.6	33	None visible
		17/03/20	7.0	1	None visible

## 5 AIR MONITORING RESULTS

Dust deposition gauges for the project were installed on 21 February 2020 and changed on 20 March 2020 for a total of 28 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).

As noted in the February 2020 report dust gauge DDG-M was missing, since the preceding month it has been recovered and was redeployed on 20 March 2020 in order for the sampling period at this gauge to match that of all other dust deposition gauges for the project.

Total insoluble matter exceeded the relevant criteria of 4g/m<sup>2</sup>/month at monitoring location DDG-L (Meroo Meadow) during the month of March, however the rolling average remained below the relevant criteria. Minimal earthworks occurred during March due to the wet conditions, however some topsoil screening/sieving occurred in the work area to the north of this monitoring location as well as some earthworks further north on the western side of the Princes Highway. Dust levels will be closely monitored over the coming period to ensure dust levels are minimised in this location. Works will be altered or ceased in this area if required to manage dust levels. Results are summarised in Table 5-1 below.

**Table 5-1 March 2020 Air quality monitoring results**

EPA Identification No.	Location (adjacent address)	Ash Content g/m <sup>2</sup> ,month	Combustible Matter g/m <sup>2</sup> ,month	Total Insoluble Matter g/m <sup>2</sup> ,month	Rolling Average (Total Insoluble Matter) g/m <sup>2</sup> ,month
1-DDG A	10 Croziers Lane, Jaspers Brush	1.1	0.5	1.6	3.4
2-DDG B	10A Jaspers Brush Road, Jaspers Brush	0.6	<0.1	0.6	2.9
3-DDG C	20C Strongs Road, Jaspers Brush	0.5	<0.1	0.5	2.5
4-DDG D	10C Jaspers Brush Road, Jaspers Brush	1.1	0.2	1.3	3.9
5-DDG E	30 Ison Lane, Jaspers Brush	0.2	<0.1	0.2	1.0
6-DDG F	Lot 209 DP 1210788	0.8	0.2	1.0	2.4
7-DDG H	10 Lamonds Lane, Meroo Meadow	0.8	0.1	0.9	3.3
8-DDG I	19 Boxsells Lane, Meroo Meadow	0.5	<0.1	0.5	1.7
9-DDG J/K	265 Princes Highway, Meroo Meadow	0.5	<0.1	0.5	3.7
10-DDG L	1028 Meroo Meadow, Meroo Meadow	2.0	3.3	<b>5.3</b>	3.3
11-DDG M	32 Elvin Drive, Bomaderry	Gauge redeployed March 20			
12-DDG N	9 Devitt's Lane, Meroo Meadow	1.7	0.3	2.0	1.9
13-DDG P	24 Abernethys Lane, Meroo Meadow	0.5	0.1	0.6	1.5

**Note:** bold type indicates a result above the relevant criteria

Figure 5-1 provides air quality data from the nearest OEHL 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 for the month of March.

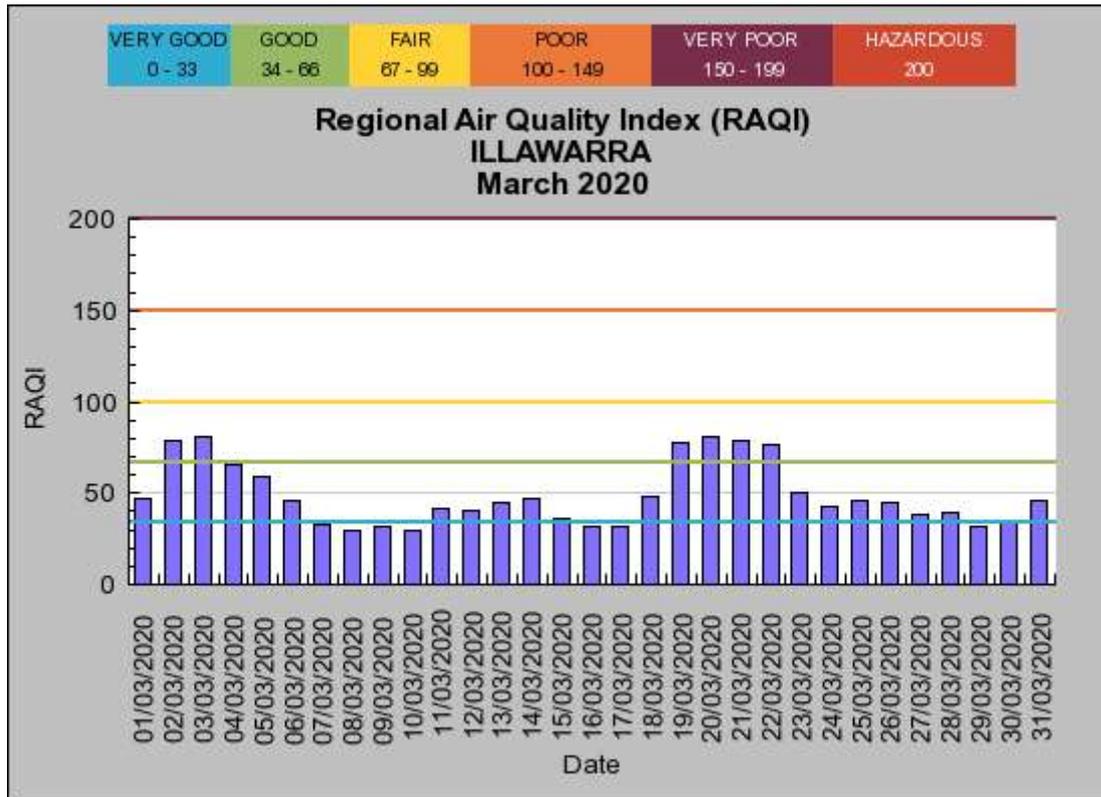


Figure 5-1: Regional Air Quality Index for March from the nearest OEH air quality monitoring stations – Illawarra (NSW OEH).

## 6 NOISE MONITORING RESULTS

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

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

**Table 6-1 March 2020 Noise Monitoring Results**

EPA ID No.	Location description	Construction activity	Date	Time	L(A)eq 15min	Comments
15	L1 - B210 Princes Highway, Jaspers	Earthworks, Furnishings	23/03/2020	11:22	57.5	<ul style="list-style-type: none"> <li>Constant Princes Highway traffic near to monitor the dominant noise source, works occurring on opposite side of the highway.</li> <li>Topsoil being delivered to area with a bogey truck, skid steer spreading material in preparation for landscaping. 5T excavator digging remainder of vegetated drain.</li> </ul>
16	L2 - 20C Strongs Road, Jaspers Brush	Earthworks, Rock crushing, screening and hammering	31/03/2020	13:09	69.1	<ul style="list-style-type: none"> <li>2 x 30T excavators digging approx 50m away from monitor.</li> <li>2 x 20 T excavators loading rock crushing plant approx. 100m away.</li> <li>Constant traffic from Princes Highway with works being the dominant noise source.</li> </ul>
17	L3 - 30 Ison Lane, Jaspers Brush	No construction works	20/03/2020	13:54	46.9	<ul style="list-style-type: none"> <li>No construction works within the vicinity. No works were audible over the sound of traffic from the Princes Highway.</li> </ul>
18	L5 - 15 Turner Lane, Jaspers Brush	Earthworks, Bridgeworks	23/03/2020	11:49	54.9	<ul style="list-style-type: none"> <li>Constant traffic from Princes Highway dominant noise source.</li> <li>Local traffic driving next to monitor on Turners Lane (3 occurrences)</li> <li>Concrete agi truck and pump in operation on opposite side of Princes Highway.</li> <li>Reversing squawker on plant that was not visible (8 occurrences)</li> <li>Loud bangs from delivery truck tailgate (2 occurrences)</li> </ul>
19	L6 - B710 Princes Highway, Jaspers Brush	Earthworks	27/03/2020	11:29	65.8	<ul style="list-style-type: none"> <li>Truck and dog trucks delivering gravel material which was then spread by a grader.</li> <li>Constant traffic from Princes Highway with works being the dominant noise source.</li> </ul>
20	L7 - 310C Princes Highway, Jaspers Brush	Earthworks	25/03/2020	9:10	69.9	<ul style="list-style-type: none"> <li>Constant Princes Highway traffic works occurring on opposite side of the highway.</li> <li>Large excavator loading multiple Moxy Trucks in a cut to fill operation.</li> </ul>

EPA ID No.	Location description	Construction activity	Date	Time	L(A) <sub>eq</sub> 15min	Comments
21	BG08 - 19 Boxsells Lane, Meroo Meadow	Rock crushing, screening and hammering	20/03/2020	10:30	66.9	<ul style="list-style-type: none"> <li>Road profiler removing asphalt near to monitor. 2 x rock crushers operating 100m away.</li> </ul>
22	BG09 - 1028 Meroo Road, Meroo Meadow	Earthworks, Bridgeworks	20/03/2020	13:13	56.9	<ul style="list-style-type: none"> <li>Personnel working on superstructure of bridge (handrails, walkways).</li> <li>Excavator working on opposite side of the highway</li> </ul>
23	L8 - 24 Abernethys Lane, Meroo Meadow	Earthworks, Bridgeworks	20/03/2020	9:20	54.4	<ul style="list-style-type: none"> <li>Constant traffic from Princes Highway</li> <li>Excavator placing topsoil several hundred metres away.</li> <li>Personnel working on bridge deck several hundred metres away.</li> </ul>
24	BG10 - 35 Gardenia Crescent, Bomaderry	No construction works	20/03/2020	12:20	55.7	<ul style="list-style-type: none"> <li>No construction works in vicinity, local traffic on Gardenia Crescent and distant traffic on Princes Highway dominant noise sources.</li> </ul>
25	BG11 - 38 Elvin Drive, Bomaderry	No construction works	20/03/2020	8:45	63.3	<ul style="list-style-type: none"> <li>Constant traffic from Princes Highway</li> <li>No construction works occurring in the vicinity</li> </ul>

## **7 ENVIRONMENTAL COMPLAINTS**

There were no environmental complaints received in March 2020.