



ENVIRONMENT PROTECTION LICENCE NO: 21029

February 2019 Monthly Report

FOR

**Princes Highway Upgrade
between Berry and Bomaderry**

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Approved by:




Brad Binns

Jacqueline McKenzie

Downer Seymour Whyte
Project Director

Downer Seymour Whyte
Environmental Site
Representative

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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 February 2019 as required by the project’s Environment Protection Licence (EPL 21029) Condition R4.1 .

2 NON-COMPLIANCES

There were two non-compliances with EPL conditions in February 2019:

1. Sediment control failure: an earth bund on Bomaderry Straight was identified to have failed outside of construction hours during an intense rainfall event. A small amount of sediment-laden water entered the clean water drain and was subsequently deposited in a grassy area in the adjacent property. The earth bund was immediately reinstated, and coir logs installed along project boundary at outlet of the clean water drain as an additional control. The property owner was notified of the incident, and did not have any concerns.
2. Works outside EPL premised area: construction works were being undertaken for an alternate access driveway for a resident (including a new culvert). During an inspection, it was noted that the site boundary fencing had been installed beyond the current EPL premised area, which was subsequently confirmed by survey. The works were within the project limits identified in the REF and within the previously premised area of the EPL prior to the premise boundary being reduced. The EPL boundary is currently being revised to ensure all areas required for construction including temporary works, are included in the premised area. Construction crew and survey team have been advised of the need to confirm EPL boundary during site establishment and construction phase.

3 RAINFALL AND WEATHER

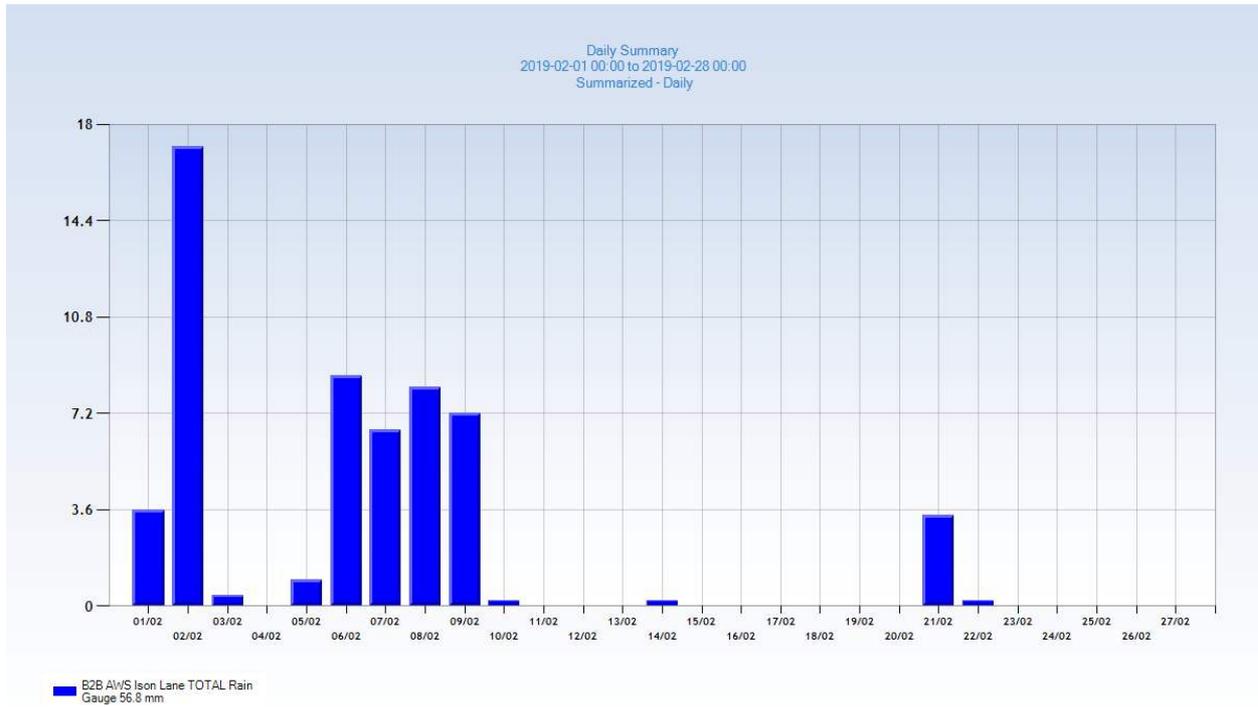
The RMS automatic weather station is situated at Ison Lane, Jaspers Brush, located adjacent to a main ancillary compound (Isons Compound) for the project. The results of rainfall monitoring for February 2019 are provided in Figure 3-1 and Figure 3-2 below.

Figure 3-1 February 2019 Rainfall monitoring results

Location	Monthly rainfall recorded (mm)
Ison Lane, Jaspers Brush (RMS automatic weather station)	56.8mm

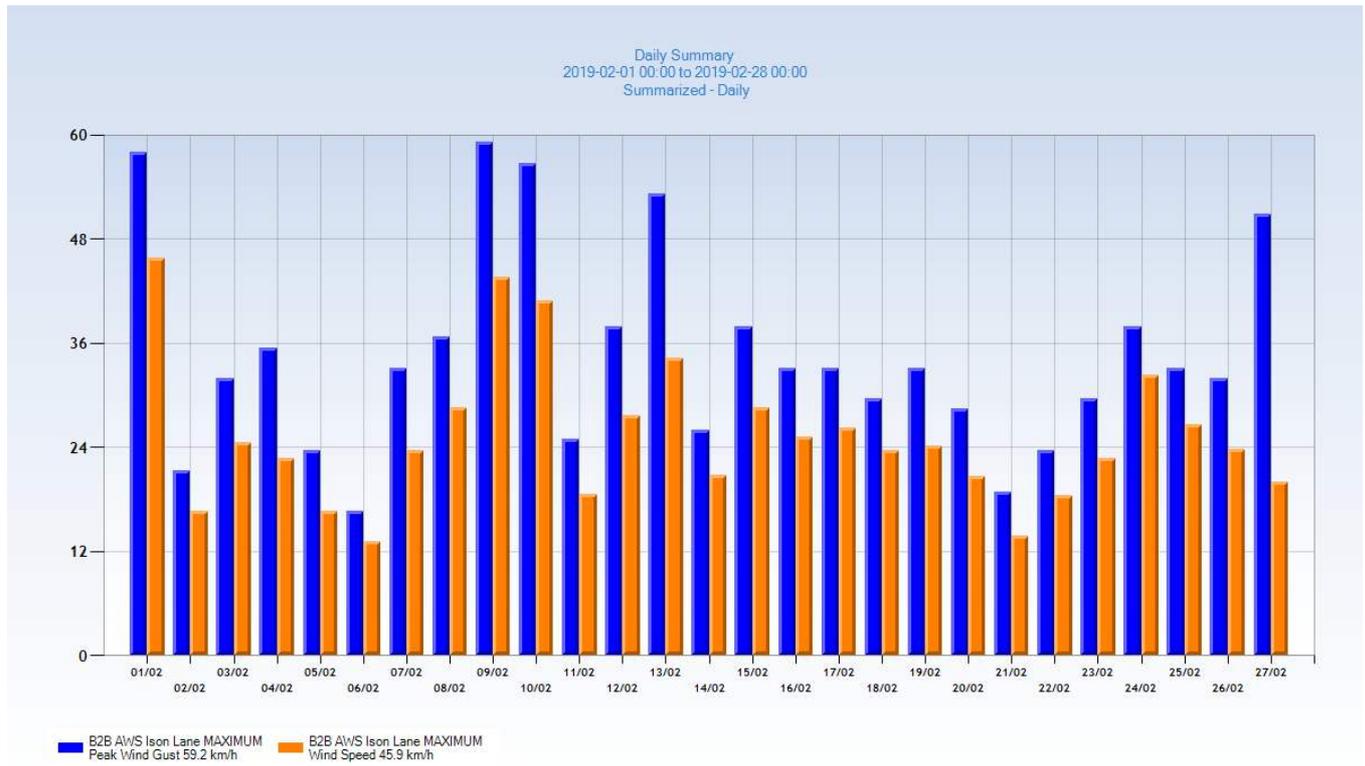
February 2019 recorded eight rainfall events at the project specific weather station (Ison Lane, Jaspers Brush (RMS automatic weather station)). The largest rainfall event was continuous over the 6-9/02/19 recording 30.6 mm, while the largest single day rainfall was 17.6mm on 02/02/2019.

Figure 3-2 February Rainfall Results Ison Compound Weather Station



During February the predominate wind was from the South. The highest wind gust recorded was 59.2 km/h and maximum wind speed was 45.9 km/h (refer Figure 3-3). DSWJV continue to monitor site activities, apply polymer dust suppressants across the site and maintain a fleet of water carts during working hours.

Figure 3-3 February 2019 Wind Results Isons Compound Weather Station



4 SEDIMENT BASIN DISCHARGE

Thirteen sediment basins were commissioned and licensed under the EPL during February 2019. The list of basins is outlined in Table 4-1 below. The most recent basins to be commissioned were TB25700.N, south of Devitts Lane and TB26150S, north of Tandingulla Creek.

Table 4-1 February 2019 Sediment basin discharge(s)

EPA Identification No.	Location (adjacent address)	Discharge Date	pH (6.5-8.5)	Total Suspended Solids (<50mg/L)	Oil and Grease (none visible)
PB19820.S	Mullers Lane	No discharges in February 2019			
TB21150.S	Opposite O'Keeffe's Lane	08/02/2019	7.86	10	None visible
TB21500.N	Opposite Jaspers Brush Road	12/02/2019	6.9	22	None visible
		13/02/2019	7.25	12	None visible
		14/02/2019	6.89	26	None visible
TB22250.S	Opposite Strong's Road	No discharges in February 2019			
TB22650.S	Opposite Isons Compound	04/02/2019	8.32	30	None visible
		06/02/2019	7.9	<5	None visible
		06/02/2019	8.48	10	None visible
		08/02/2019	7.9	12	None visible
TB23400.S	Jaspers Brush North of Wileys Creek	No discharges in February 2019			
TB23450.S	Jaspers Brush North of Wileys Creek	No discharges in February 2019			
TB22800.N	Ison Compound	06/02/2019	7.37	7	None visible
TB23800.S	Wileys side track compound	No discharges in February 2019			
TB25100.N	Devitts Lane	No discharges in February 2019			
TB25700.N	North of Tandingulla Creek	No discharges in February 2019			
TB26150S	South of Devitts Lane	No discharges in February 2019			
TB28900.N	Abernethy's Lane	No discharges in February 2019			

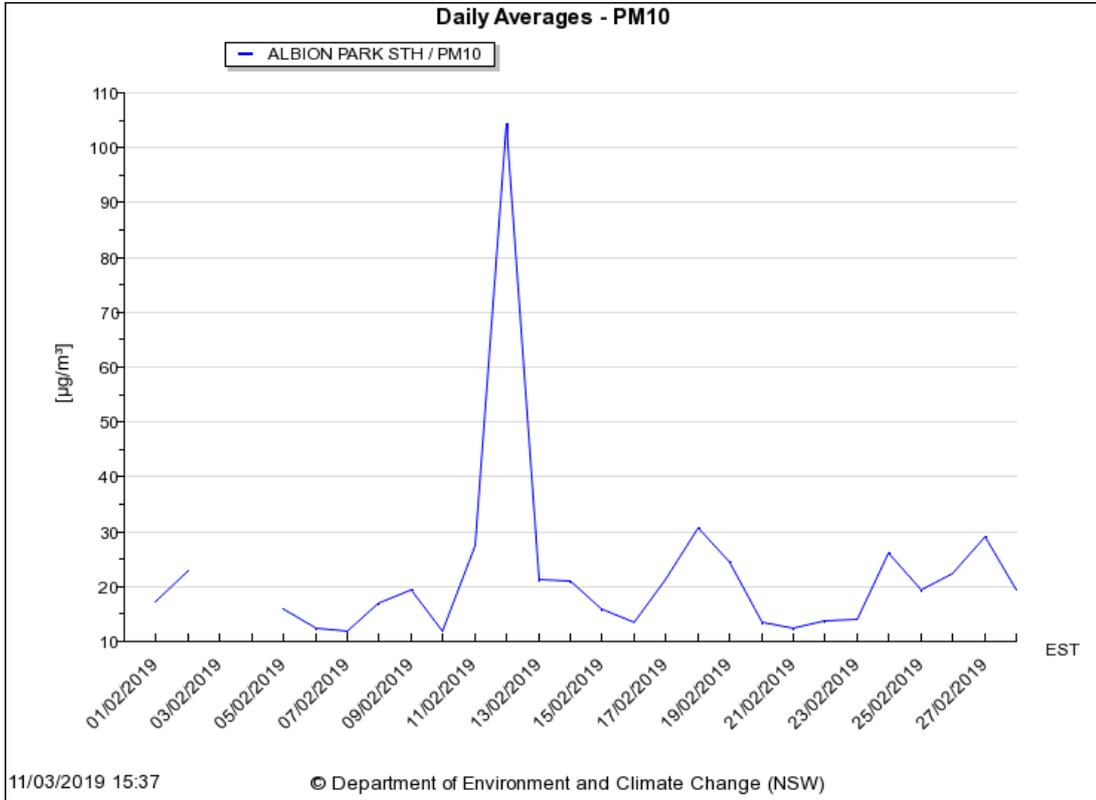
***Lab results for Total Suspended Solids limit of reporting = 5 mg/L**

5 AIR MONITORING RESULTS

Dust deposition gauges for the project were installed on 29 January 2019 and changed on 27 February 2019 within the NATA accredited window (30 days +/- 2 days). Air quality has been assessed according to the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA, 2016). Results are summarised in Table 5-1 below.

Less rainfall was received in February than previous periods with the latter half of the month being particularly dry and hot conditions prevailing. On the 12 February 2019 a dust storm affecting large parts of NSW moved through the project area bringing a large volume of dust which is likely to have contributed to increased levels of deposited dust, in the month of February. Figure 5-1 provides air quality data at the nearest OEH ambient air quality monitoring station to the project (Albion Park, approximately 25 km north of the project area).

Figure 5-1 - Daily Average PM10 levels at Albion Park South NSW Air Quality Monitoring Station, courtesy of NSW Office of Environment and Heritage



Exceedances of the monthly criteria were observed at EPL monitoring locations DDG-C, DDG-F, DDG-H, DDG-M and DDG-P (refer Table 5-1). The project location with the highest increase in dust levels was Lamonds Lane (DDG-H) where a new work area had recently been opened for earthworks, temporarily creating higher levels of dust. The area has now been stabilised/compacted and dust levels are expected to reduce.

Despite the increase in deposited dust at some monitoring locations during February the rolling average at most locations remains below the relevant criteria for the construction period to date. The only exception to this is monitoring point DDG-P at Abernethys Lane, which has a rolling average of 4.1 g/m²/month. DSWJV will continue to review and implement air quality control measures in this area including the use of water carts, polymer spray and stabilisation of working areas where possible.

Table 5-1 February 2019 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	2.8	1.1	3.9	3.4
2-DDG B	10A Jaspers Brush Road, Jaspers Brush	2.9	0.5	3.4	1.8
3-DDG C	20C Strongs Road, Jaspers Brush	4.4	0.9	5.3	3.4
4-DDG D	10C Jaspers Brush Road, Jaspers Brush	2.0	0.3	2.3	2.0
5-DDG E	30 Ison Lane, Jaspers Brush	2.4	0.3	2.7	1.5
6-DDG F	Lot 209 DP 1210788	4.2	0.5	4.7	3.1
7-DDG H	10 Lamonds Lane, Meroo Meadow	6.3	0.8	7.1	3.2
8-DDG I	19 Boxsells Lane, Meroo Meadow	3.3	0.4	3.7	1.5
9-DDG J/K	265 Princes Highway, Meroo Meadow	2.7	0.3	3.0	3.7
10-DDG L	1028 Meroo Meadow, Meroo Meadow	2.9	0.5	3.4	3.7
11-DDG M	32 Elvin Drive, Bomaderry	3.6	0.8	4.4	2.4
12-DDG N	9 Devitt's Lane, Meroo Meadow	3.1	0.6	3.7	2.0
13-DDG P	24 Abernethys Lane, Meroo Meadow	3.5	0.6	4.1	4.1

Note: bold type indicates a result above the relevant criteria

6 NOISE MONITORING RESULTS

Noise monitoring was undertaken in accordance with the Construction Noise and Vibration Management Plan (CNVMP) for the project in February 2019. No exceedances above predicted levels for the relevant activity were recorded.

The results of February noise monitoring are summarised in Table 6-1 below.

Table 6-1 February 2019 Noise Monitoring Results

EPA ID No.	Location description	Construction activity	Date	Time	L(A) _{eq} 15min	Comments
15	L1 - B210 Princes Highway, Jaspers	Nil - no construction nearby	14/02/19	12:41 12:56	71.3	Nil construction noise nearby Traffic with light and heavy vehicles
16	L2 - 20C Strongs Road, Jaspers Brush	Earthworks	14/02/19	12:14 12:29	70.3	Construction noise dominating; Bulldozer operating back and forth to form haul road, refuelling truck arriving and refuelling dozer. Excavator operating across highway with padfoot roller (audible during breaks in traffic). Traffic with light and heavy vehicles.
17	L3 - 30 Ison Lane, Jaspers Brush	Compound Operation	14/02/19	11:43 11:58	49.7	No construction work audible, vehicles entering/exiting Isons compound but did not register over highway traffic. Traffic with light and heavy vehicles
18	L5 - 15 Turner Lane, Jaspers Brush	Earthworks	14/02/19	13:03 13:18	53.6	Excavator in distance, trucks unloading rock at the Old Wileys Switch, workers intermittently using power tools. Traffic with light and heavy vehicles - traffic noise dominating
19	L6 - B710 Princes Highway, Jaspers Brush	Earthworks	14/02/19	11:16 11:31	54.5	Excavator moving from in front of monitor to some distance away down haul road (squawker sounding). LV moving past on haul road (one occasion). Traffic with light and heavy vehicles - traffic noise dominating
20	L7 - 310C Princes Highway, Jaspers Brush	Nil - no construction nearby	14/02/19	14:23 14:38	66.3	Nil construction noise nearby. Traffic with light and heavy vehicles - traffic noise dominating
21	BG08 - 19 Boxsells Lane, Meroo Meadow	Nil - no construction nearby	14/02/19	10:44 10:59	51.9	Nil construction noise nearby. Traffic passing by on road next to monitor (4 occasions), birds chirping, thrum of insects.
22	BG09 - 1028 Meroo Road, Meroo Meadow	Earthworks	14/02/19	14:45 15:00	66.2	Excavator operating, moving and forming rock. Grader working back and forth to form ground - Construction noise dominating. Intermittent traffic on Meroo Road
23	L8 - 24 Abernethys Lane, Meroo Meadow	Earthworks	14/02/19	10:19 10:34	60.6	Truck and dog unloading fines (some distance away), excavator moving past on haul road, Moxey and dozer mobilising at Abernethys work area - construction noise dominating. Traffic noise with light and heavy vehicles
24	BG10 - 35 Gardenia Crescent, Bomaderry	Nil - no construction nearby	14/02/19	15:13 15:28	59.9	Nil construction noise nearby. Traffic with light and heavy vehicles - traffic noise dominating

EPA ID No.	Location description	Construction activity	Date	Time	L(A) _{eq} 15min	Comments
25	BG11 - 38 Elvin Drive, Bomaderry	Earthworks	14/02/19	9:55 10:10	56.9	Excavator operating, loading Moxys that were driving away from monitor down haul road. Traffic with light and heavy vehicles – traffic noise dominating

7 ENVIRONMENTAL COMPLAINTS

There were no environmental complaints in the month of February. DSWJV will continue to respond to complaints in a swift and appropriate manner, when and if they arise.

