



ENVIRONMENT PROTECTION LICENCE NO: 21029

October 2018 Monthly Report

FOR

**Princes Highway Upgrade
between Berry and Bomaderry**

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2			

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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.

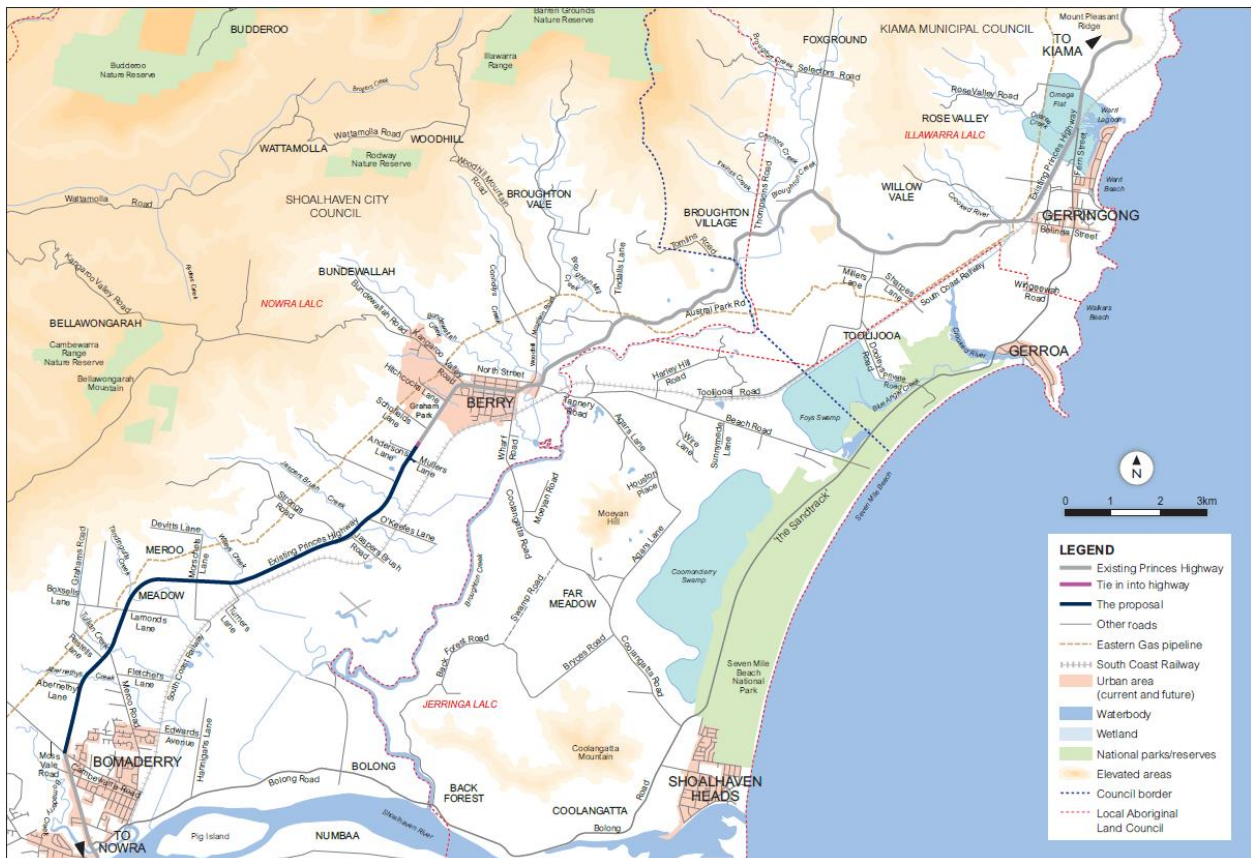


Figure 1-1 Project location

In accordance with Environment Protection Licence (EPL) Condition R4.1, the following report details the required monitoring undertaken over the October 2018 reporting period.

2 NON-COMPLIANCES

A non-compliance with EPL dust deposition gauge (DDG) concentration limits, occurred during the October 2018 reporting period. This is noted in Section 5 of this report. DSWJV will raise an internal environmental non-conformance report and will investigate real-time dust monitoring at high risk locations.

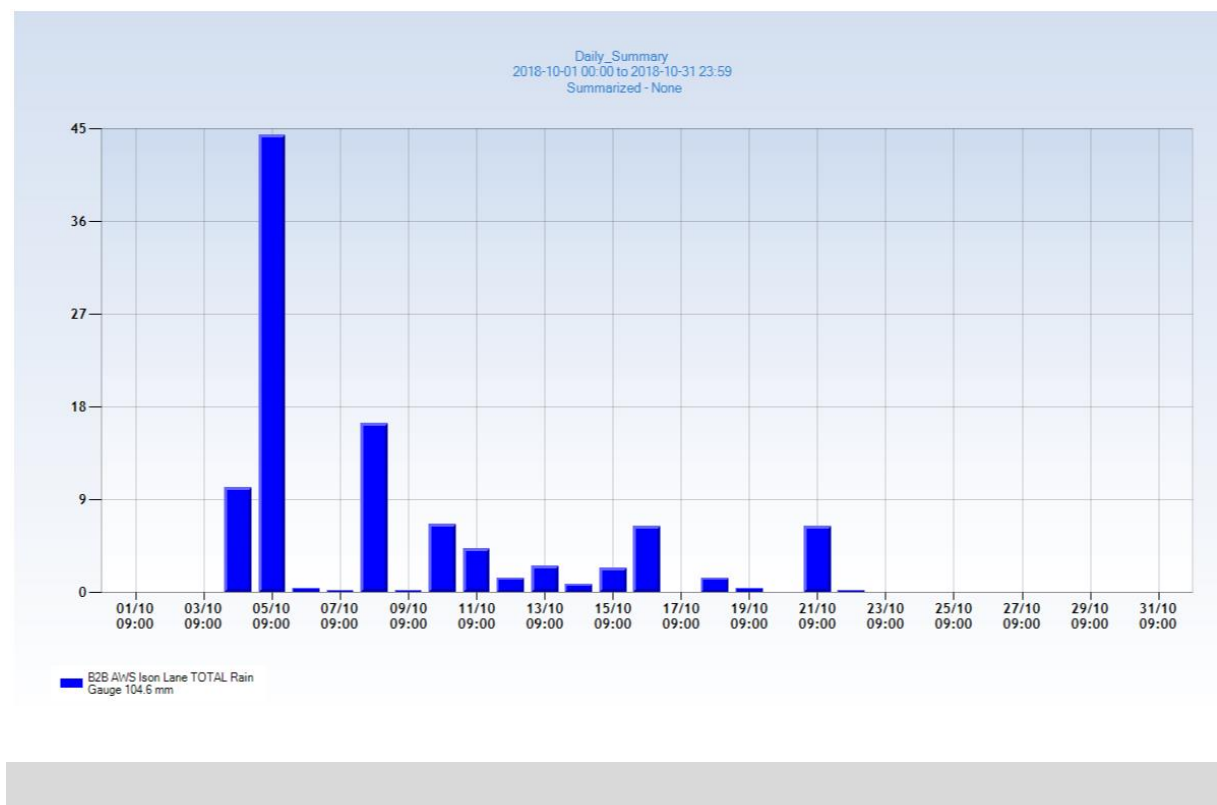
3 RAINFALL

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 October 2018 are provided in Table 3-1 below.

Table 3-1 October 2018 Rainfall monitoring results

Location	Monthly rainfall recorded (mm)
Ison Lane, Jaspers Brush (RMS automatic weather station)	104.6

October 2018 recorded seventeen rainfall events at the project specific weather station (Ison Lane, Jaspers Brush (RMS automatic weather station)). The largest rainfall event was on the 05/10/18 recording 44mm.



4 SEDIMENT BASIN DISCHARGE

The project now has seven sediment basins commissioned on the EPL. The list of basins is outlined in Table 4-1 below. Not all the sediment basins required dewatering or to be discharged in October 2018 due to a combination of the basin volumes being constructed oversized for the catchments. Additionally, not all catchments were completely disturbed allowing for some natural infiltration to the existing ground surface and some volumes of water in the basins were below levels able to be pumped out.

Table 4-1 October 2018 Sediment basin discharge

EPA Identification No.	Location (adjacent address)	Discharge Date	pH (6.5-8.5)	Total Suspended Solids (50mg/L)	Oil and Grease (none)
TB22.80N	Ison Compound	19/10/18	7.18	35	N
		29/10/18	6.55	6	N
		31/10/18	6.53	6	N
TB22250.S	Opposite Strong's Road	25/10/18	6.61	26	N
		26/10/18	6.61	26	N
TB22650.S	Opposite Isons Compound	No Discharges October 2018			
TB23400.S	Jaspers Brush North of Wileys Creek	No Discharges October 2018			
TB23450.S	Jaspers Brush North of Wileys Creek	No Discharges October 2018			
TB23800.S	Wileys side track compound	No Discharges October 2018			
TB28900.N	Abernethy's Lane	No Discharges October 2018			

5 AIR MONITORING RESULTS

Dust deposition gauges for the project were installed on 3 October and changed on the 31 October 2018 which is within the NATA accredited window (30 days +/- 2 days). Results are summarised in Table 5-1 below. October results indicate three exceedances greater than 4g/m². Wind patterns from the Isons Compound weather station recorded predominate wind direction was from the SSE throughout the month. DDG J/K is unusually high of 15.3g/m², despite there being over 100mm of rain and some insects were noted on collection of the gauge. DSWJV were undertaking earthworks in the vicinity of this location. The key strategies adopted by DSWJV to mitigate dust and air quality impacts during construction works have included the following:

- Continual use of water carts
- Covering of haul vehicles
- Stabilisation of cleared areas with hardstand materials such as concrete and crushed rock
- Hydro-mulching and laying geofabric to batters
- Reduction of cleared / exposed soils with concrete paving and geo-fabric installation
- Road sweepers.

DSWJV will continue to closely monitor activities in these work areas and implement the range of above-mentioned dust mitigation as required. DSWJV will also consider additional real-time dust monitoring to proactively assist with issues in high risk areas.

Table 5-1 October 2018 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
1-DDG A	10 Croziers Lane, Jaspers Brush	0.4	0.2	0.6
2-DDG B	10A Jaspers Brush Road, Jaspers Brush	0.4	0.1	0.5
3-DDG C	20C Strongs Road, Jaspers Brush	2.9	2.7	5.6
4-DDG D	10C Jaspers Brush Road, Jaspers Brush	0.8	0.7	1.5
5-DDG E	30 Ison Lane, Jaspers Brush	0.4	0.3	0.7
6-DDG F	Lot 209 DP 1210788	0.9	0.3	1.2
7-DDG H	10 Lamonds Lane, Meroo Meadow	2.6	0.6	3.2
8-DDG I	19 Boxsells Lane, Meroo Meadow	0.5	<0.1	0.5
9-DDG J/K	265 Princes Highway, Meroo Meadow	1.6	13.7	15.3
10-DDG L	1028 Meroo Meadow, Meroo Meadow	3.9	0.8	4.7
11-DDG M	32 Elvin Drive, Bomaderry	1.2	0.1	1.3
12-DDG N	9 Devitt's Lane, Meroo Meadow	0.5	0.1	0.6
13-DDG P	24 Abernethys Lane, Meroo Meadow	2.8	0.8	3.6

6 NOISE MONITORING RESULTS

Noise monitoring was undertaken in accordance with the Construction Noise and Vibration Management Plan (CNVMP) for the project in October 2018. Noise monitoring was also undertaken for commencement of over-pumping activities at Wileys Creek to ensure compliance with limits specified in the EPL Condition 4.2(c). Two noise complaints were also received in October 2018 and noise monitoring was undertaken to confirm compliance with CNVMP parameters. Noise monitoring results are summarised in Table 6-1 below.

Table 6-1 October 2018 Noise Monitoring Results

EPA Identification No.	Type of monitoring point	Location description	Construction activity	Date	Time	L(A) _{eq(15min)}	Comments
15	Noise monitoring	L1 - B210 Princes Highway, Jaspers Brush -	Nil no construction activity	24/10/18	16:17-16:32	74.6	Nil no construction in this area, traffic noise dominating cars, motorbikes, trucks
16	Noise monitoring	L2 - 20C Strongs Road, Jaspers Brush -	Nil no construction activity	24/10/18	15:56-16:11	63	Nil no construction in this area, traffic noise dominating cars, motorbikes, trucks
17	Noise monitoring	L3 - 30 Ison Lane, Jaspers Brush	Drainage Dewatering Isons sedimentation basin	24/10/18	15:40-15:55	56.3	Dewatering 3-inch pump constant, traffic noise – cars and trucks

EPA Identification No.	Type of monitoring point	Location description	Construction activity	Date	Time	L(A) _{eq(15min)}	Comments
18	Noise monitoring	L5 - 15 Turner Lane, Jaspers Brush	Earthworks Stockpiling and importing rock	24/10/18	9:05-9:20	54.8	Majority of noise was continuous traffic from the highway with a constant stream of cars, truck approx. every 30-60 secs. Aside from several short peaks of noise the works were inaudible except during breaks in traffic
19	Noise monitoring	L6 - B710 Princes Highway, Jaspers Brush	Nil no construction activity	24/10/18	14:41-14:56	60	Nil no construction in this area, traffic noise dominating cars, trucks
20	Noise monitoring	L7 - 310C Princes Highway, Jaspers Brush	Nil no construction activity	24/10/18	9:47-10:02	68.1	Nil no construction in this area, traffic noise dominating cars, motorbikes, trucks
21	Noise monitoring	BG08 - 19 Boxsells Lane, Meroo Meadow	Nil - aside from Traffic control using as a turnaround point during monitoring session	24/10/18	14:17-14:42	63.8	Nil no construction in this area, traffic noise dominating cars, reversing traffic truck
22	Noise monitoring	BG09 - 1028 Meroo Road, Meroo Meadow	Utilities and property adjustments Excavating trench, moving plastic pipes	24/10/18	10:24-10:39	63.9	Construction noise – excavator digging, unloading trucks by personnel, squawker reverse alarm
23	Noise monitoring	L8 - 24 Abernethys Lane, Meroo Meadow	Earthworks Trucks unloading rock and being moved by roller	24/10/18	12:10-12:25	59.8	Truck and dog unloading, roller and excavator working
24	Noise monitoring	BG10 - 35 Gardenia Crescent, Bomaderry	Nil no construction activity	24/10/18	10:58-11:13	46.5	Nil no construction in this area, traffic noise dominating cars, trucks
25	Noise monitoring	BG11 - 38 Elvin Drive, Bomaderry	Earthworks Heavy vehicles moving along haul road	24/10/18	11:38-11:53	59.7	Construction vehicles on haul road and traffic noise, cars, sports car, trucks

EPA Identification No.	Type of monitoring point	Location description	Construction activity	Date	Time	L(A) _{eq(15min)}	Comments
N/A	Noise monitoring	Wileys Creek	Over-pumping operation on float switch for culvert works	17/10/18	11:51-12:04	-	In accordance with EPL L4.2 (c) out of hours works that are not more than 5dB(A) over the background rating. Monitoring undertaken at pump 7m away from the source 58dBA Compliant at nearest sensitive receiver 135m away. Temporary noise shielding also installed.
Complaint	Noise monitoring	NCA 4B*	Earthworks Scrapers, Moxy, Grader, Water Cart movements	24/10/18	8:02-8:17	68.2	Monitoring undertaken in response to noise complaint Scrapers, moxies, graders, water carts, truck and dog tipping gravel and tailgate banging
Complaint	Noise monitoring	NCA 4B*	Earthworks Scrapers, Moxy, Grader, Water Cart movements	24/10/18	13:37-13:52	70.1	Monitoring undertaken in response to noise complaint earlier in the day Scrapers, moxies, graders, water carts, truck

*specific location of complainant withheld for privacy

7 ENVIRONMENTAL COMPLAINTS

Three environmental complaints were received in October 2018. All complaints were responded to and closed within required timeframes. Noise monitoring was undertaken and demonstrated compliance to the noise limits in the CNVMP and are outlined in Table 6-1 above.

Table 7-1 October 2018 Environmental Complaints

Complaint No.	Date/time complaint received	Nature of Complaint	Actions and due date	Status/timing
001	30/10/2018 11:29	Dirt and mulch on service road at Jaspers Brush Road	Inspected area and arranged for sweeper to clean debris from clearing operations.	Closed with 24 hours.
002	30/10/2018 9:07	Noise of earthworks construction causing stress to horse with colic. Also cited personal stress impacting ability to work.	Advised previous noise was within limits (no scrapers running, just moxies) and were not able to stop work for sick horse. Advised resident to	Closed within two hours.

Complaint No.	Date/time complaint received	Nature of Complaint	Actions and due date	Status/timing
			consider other alternatives such as relocating horses / ear muffs.	
003	24/10/18 7.32am	Construction noise from earthworks	Monitoring showed a 15 min LAeq of 72dBA. Allowable limits as per CNVMP is 73dBA. Advised that we were operating within allowable limits.	Closed within 12 hours.