

Duralie Coal CCC Meeting

Presentation –
Company Report &
Overview of Activities

February 2018

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Environment & Community Superintendent

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1. Progress at the Mine

Mining 4th Quarter 2017

- Overburden mined 678,000 BCM
- ROM Coal mined 52,480 tonnes

- Mining continuing in Weismantel pit.
- Rehandle of PAF material to Clareval Pit.
- Bulk shaping of waste emplacements.



2. Environmental Reporting & Regulators

Management Area	Project	Status
Reporting	<ul style="list-style-type: none"> EPL 11701 Annual Return Independent Environmental Audit 	<ul style="list-style-type: none"> The 2017 EPL 11701 Annual Return has been completed and submitted to the EPA during October 2017. Independent Environmental Audits of the operations are required every 3 years. An audit was undertaken during December 2017. The audit report is due for submission to DP&E in February 2018.
Regulator	<ul style="list-style-type: none"> DP&E site visit. Mine Closure Planning and Mining Operations Plan Amendment Environmental Management Plans 	<ul style="list-style-type: none"> A site visit was undertaken by DP&E on 23-Jan 2018. A MOP amendment was approved by DRG on 11-Dec-2017 and is available on the Duralie website. The new MOP also incorporates the Rehabilitation Management Plan. The MOP amendment included a revision to the rehabilitation cost estimate. The revised Environmental Management Strategy and Blast Management Plan have been approved by DPE in October 2017.

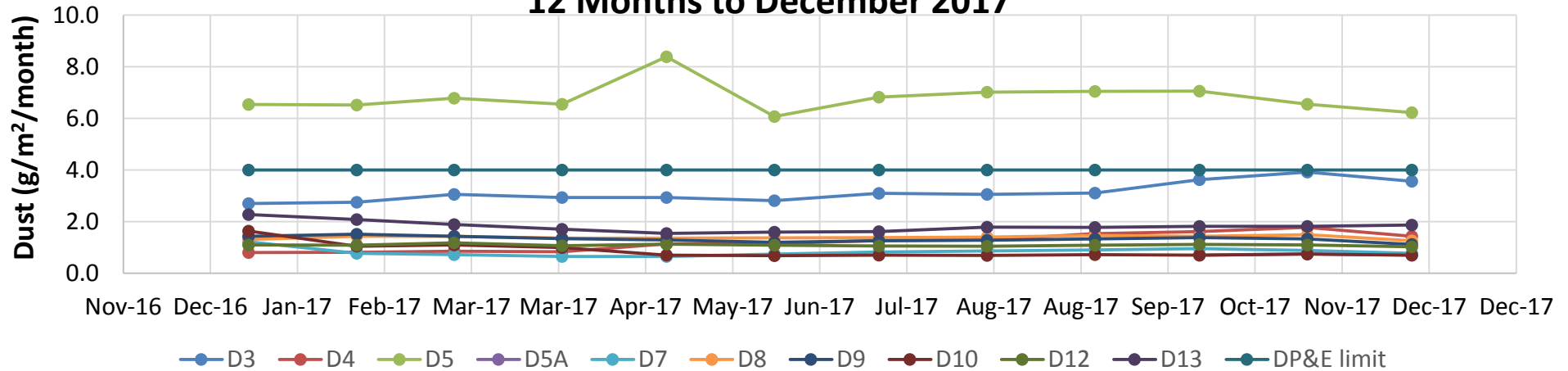
3. Environmental Management Plans & Monitoring

- a) Air Quality Management
- b) Blast Management
- c) Noise Management
- d) Water Management
- e) Rehabilitation Management
- f) Biodiversity Management



3a. Air Quality Management

**Duralie Dust Deposition - Annual Rolling Average
12 Months to December 2017**



- May-17** D4 – 4.1 Medium - 20% Dirt, 10% Coal, 0% Vegetation, 0% Insects, 70% Polysaccharide slime.
D5 – 25.2 Heavy - 70% dirt, 0% coal, 0% vegetation, 0% insects, 30% polysaccharide slime.
- Jun-17** D3 – 4.9 Heavy - 30% dirt, 0% coal, 0% vegetation, 20% insects, 50% polysaccharide slime.
D5 – 12.8 Heavy - 80% dirt, 0% coal, 0% vegetation, 0% insects, 20% polysaccharide slime.
- Aug-17** D5 – 8.8 Very heavy - 30% dirt, 0% coal, 0% vegetation, 0% insects, 70% polysaccharide slime.
- Oct-17** D3 – 11.0 Very heavy - 30% dirt, 0% coal, 0% vegetation, 0% insects and 70% polysaccharide slime.

Guide to Descriptions used by Laboratory

Coal: Black sharp angled grains with glossy conchoidal fractures or dull with cellular features.

Dirt/Minerals: Subhedral to euhedral crystalline grains including fine sand, clay and other fine mineral particulates.

Insects: Whole insects such as spiders, ants, moths or outer parts of insects including wings, legs and exoskeletons.

Vegetation: Plant debris and algae including trichomes, decomposed organic matter and charred particulates showing characteristic cellular plant structures.

Polysaccharide Slime: Slimy gelatinous material including decomposed soft body parts of insects and vegetation.

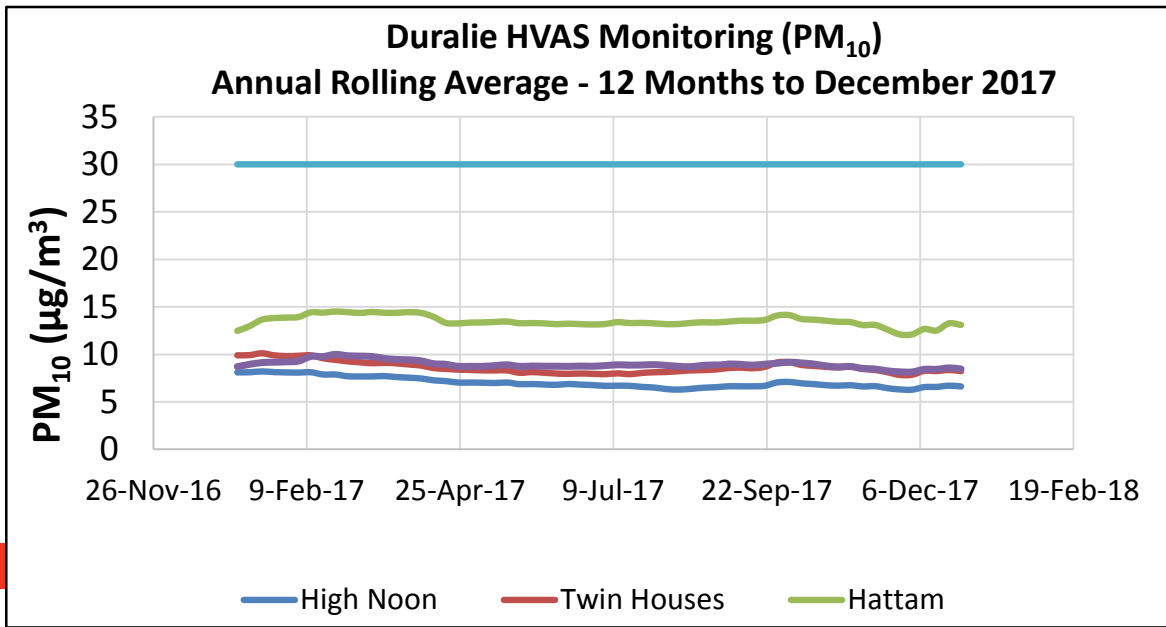
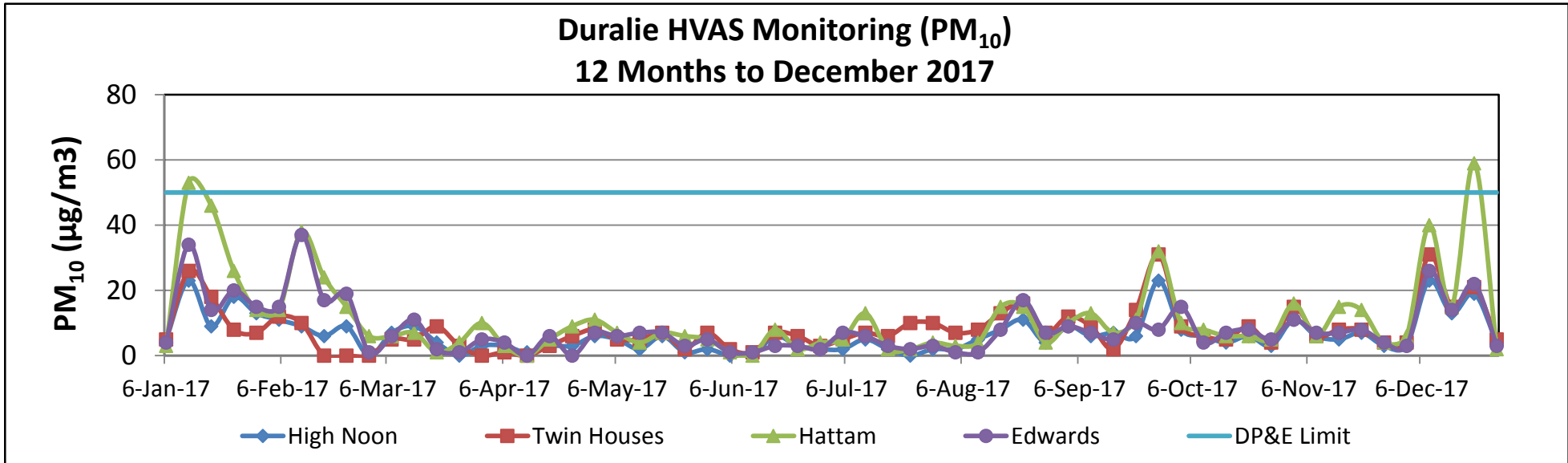
Copper Sludge: Blue-green subhedral to euhedral crystalline salts, commonly precipitated from the copper sulphate algacide solution.

Contamination: Gelatinous material such as bird droppings

- High levels in D5 due to contamination of multiple samples. Additional site D5A installed for comparison.
- Due to frequent contamination of dust gauges the HVAS results should also be used when interpreting results.



3a. Air Quality Management



- All sites below DP&E limit. Typically low results during winter and higher during spring/summer.
- Elevated results recorded at Hattam during December 2017 due to bushfire smoke.
- Flat trend over previous 12 months.
- HVAS results provide more reliable data compared to dust deposition results and should be referred to when interpreting dust emissions.

3b. Blast Management

Management Area	Project	Status
Blasting	<ul style="list-style-type: none"> Blast monitoring 	<ul style="list-style-type: none"> No blasts exceeded 115dB(L) or 5mm/s during the quarter. Total remained below 5% for the reporting period (ending 4-Sep-2017). No blasts recorded any level of fume..

Location	Date	Time	Schultz (AB1)		Fisher-Webster (AAAB3)		Moylan (AAAB4)		Weismantel Inn	Overpressure Site Exceedance ¹	Overpressure "Cumulative Exceedance" ¹	Monitored Blasts ¹
			24hr	mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	%	
Weismantel Strip 16	08-Sep-17	12:11:00	<0.22	<110.0	0.43	105.7	0.26	98.9	0.71	0.0%	0	1
Clareval Ramp 2	14-Sep-17	11:40:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	<0.22	0.0%	0	2
Weismantel Strip 16	15-Sep-17	12:09:00	<0.22	<110.0	0.39	112.3	0.28	98.2	0.78	0.0%	0	3
Weismantel Strip 16	28-Sep-17	11:27:00	<0.22	<110.0	0.47	108.3	<0.22	<110.0	0.49	0.0%	0	4
Weismantel Strip 16	06-Oct-17	11:34:00	<0.22	<110.0	0.56	109.5	<0.22	<110.0	0.87	0.0%	0	5
Weismantel Strip 16	12-Oct-17	12:05:00	<0.22	<110.0	0.53	111.5	<0.22	<110.0	0.82	0.0%	0	6
Weismantel Strip 16	18-Oct-17	14:59:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.52	0.0%	0	7
Weismantel Strip 16	26-Oct-17	12:03:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.72	0.0%	0	8
Weismantel Strip 16	10-Nov-17	11:22:00	<0.22	<110.0	0.54	104.6	<0.22	<110.0	0.75	0.0%	0	9
Weismantel Strip 16	16-Nov-17	11:46:00	<0.22	<110.0	0.5	97.0	<0.22	<110.0	0.83	0.0%	0	10
Weismantel Strip 16	23-Nov-17	11:35:00	<0.22	<110.0	0.31	105.7	<0.22	<110.0	0.38	0.0%	0	11
Weismantel Strip 16	08-Dec-17	11:47:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.45	0.0%	0	12
Weismantel Strip 16	21-Dec-17	11:03:00	<0.22	<110.0	0.37	108.3	<0.22	<110.0	0.49	0.0%	0	13
Weismantel Strip 16	11-Jan-18	14:52:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.57	0.0%	0	14

- Note: Blast Compliance: No more than 5% of total blasts for annual monitoring period to exceed an overpressure of 115 dBL or ground vibration of 5 mm/s. No blast is to exceed an overpressure of 120 dBL or ground vibration of 10 mm/s.
- Note: Where no trigger is recorded the results indicate <0.22mm/s and <110.0dBL corresponding to the blast monitor settings.

3c. Noise Management

Management Area	Project	Status
Noise	<ul style="list-style-type: none">Routine Monitoring	<ul style="list-style-type: none">Routine quarterly monitoring of operations and train noise was undertaken in January 2018. Noise monitoring results have remained below the noise criteria. Typically the operations have been inaudible or slightly audible during the monitoring. Noise reports are made available on the Duralie Coal website.
	<ul style="list-style-type: none">Real-Time Noise Management	<ul style="list-style-type: none">Real-time noise monitoring profiles continue to be monitored and generally indicate no exceedence of the performance criteria due to mining operations. Occasional noise alarms were received during the quarter and were due to meteorological conditions or external noise sources.During Q4 2017 the operations reduce to day and afternoon shifts only with no night-time works. Use of the evaporative fans has also ceased during the quarter.Operations have been ongoing in the Weismantel Pit.

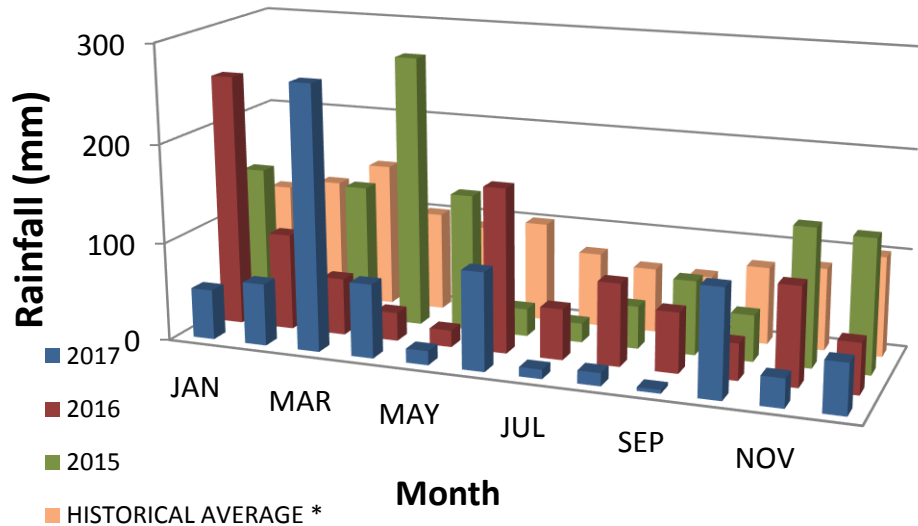
3d. Water Management

Management Area	Project	Status
Site Water Management	<ul style="list-style-type: none"> Annual water balance review. 	<ul style="list-style-type: none"> A revision of the final void water balance is being undertaken and verification of the groundwater model. The annual water balance reviews are currently being prepared.
Surface Water	<ul style="list-style-type: none"> Routine monitoring Aquatic Ecology - Macroinvertebrates 	<ul style="list-style-type: none"> Sporadic and low rainfall conditions through Spring-Summer 2017. Routine surface water monitoring completed. No rainfall events and generally low flows. All sites generally within Duralie water quality performance indicators. No obvious trending towards performance indicators. Macroinvertebrates monitoring was undertaken in September 2017. The monitoring continues to indicate negligible impacts associated with mining activities. The results reflected the extended dry period during winter and low flow condition.
Groundwater	<ul style="list-style-type: none"> Routine monitor 	<ul style="list-style-type: none"> Routine monitoring has been completed and the results continue to indicate consistency with the model trends in the Environmental Assessment.

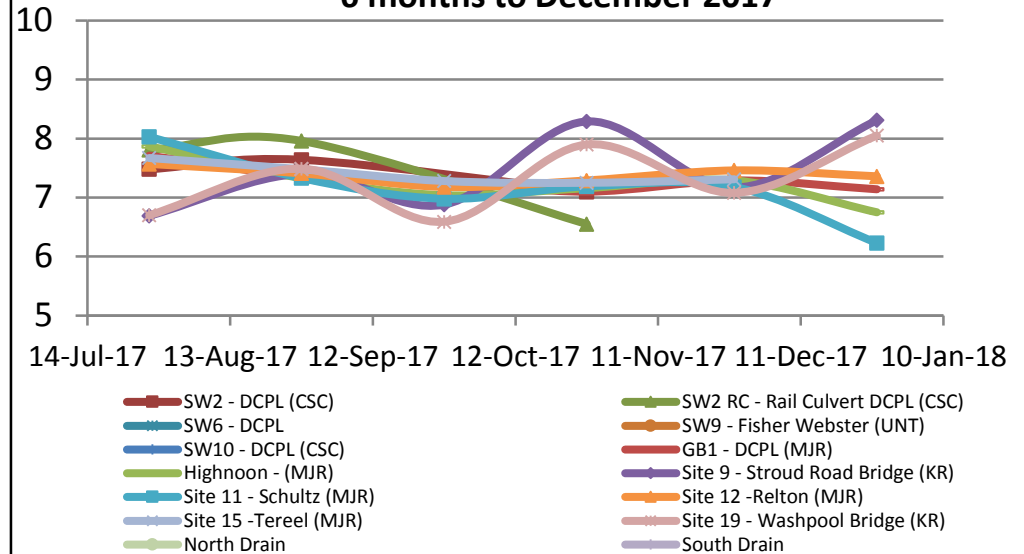


3d. Water Management

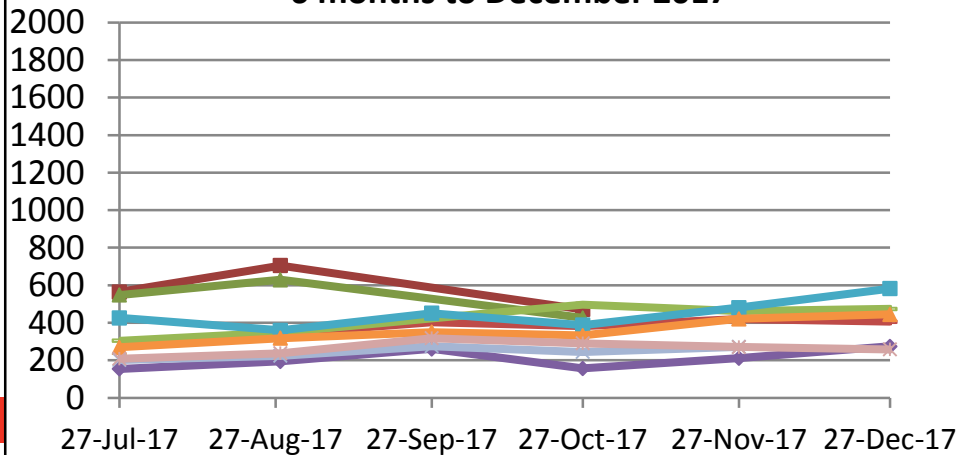
Duralie Mine Site - Monthly Rainfall



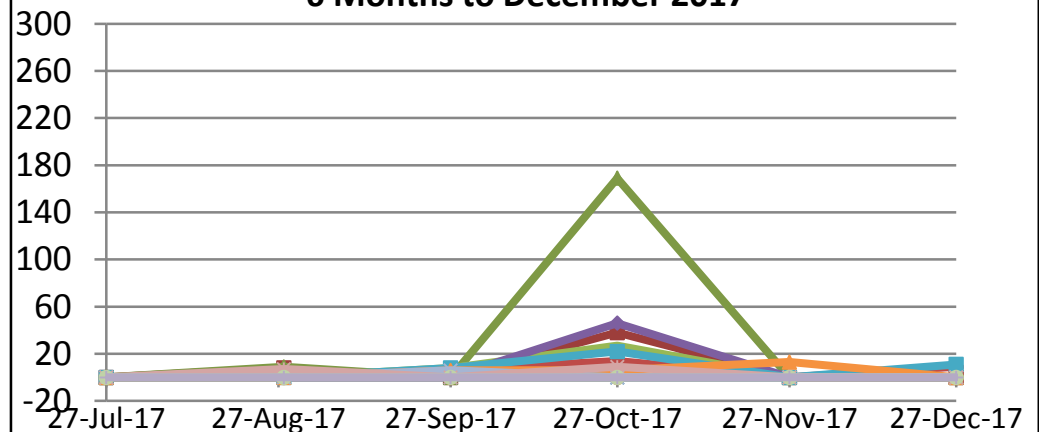
Duralie Surface Water Monitoring - pH 6 months to December 2017



Duralie Surface Water Monitoring - EC ($\mu\text{S}/\text{cm}$) 6 months to December 2017



Duralie Surface Water Monitoring - TSS (mg/L) 6 Months to December 2017



3e. Rehabilitation Management

Management Area	Project	Status
Rehabilitated Waste emplacements	<ul style="list-style-type: none">Annual Rehabilitation Monitoring - Landscape Function Analysis	<ul style="list-style-type: none">Planned for mid-2018
Waste emplacements	<ul style="list-style-type: none">Final landforms designsBulk Shaping	<ul style="list-style-type: none">Final landform designs have been progressed for the waste emplacement areas in Clareval and Weismantel.Two D11 Dozers have commenced bulk shaping works during October 2017 and will continue through 2018.



Photo: Bulk shaping on the Weismantel waste emplacement. December 2017.

3f. Biodiversity Management

Management Area	Project	Status
Biodiversity Offset	<ul style="list-style-type: none">• Revegetation works	<ul style="list-style-type: none">• Preparation has commenced for further tubestock planting in the biodiversity offset area during Autumn 2018.• Slashing and weed management activities have been undertaken during December 2018 in preparation for tubestock planting.
Flora/Fauna	<ul style="list-style-type: none">• Weed Control	<ul style="list-style-type: none">• Weeds spraying recommenced during Summer 2017/18 on Mining Leases, Offset areas and Yancoal property.
Bushfire Management	<ul style="list-style-type: none">• Bushfire Management	<ul style="list-style-type: none">• No further bushfire management activities have been undertaken during Q4 2017.

4. Community Complaints

Duralie Complaint Summary

Period: 1/10/2017 - 31/12/2017

Period: 0 Months

Total No. of Complaints: 0 (0 noise, 0 blast, 0 air quality, 0 other)

Total No. of Complainants: 0

Date/Time of Complaint	Complainant Location	Method of Complaint	Nature of Complaint	Investigation/Outcome
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5. Community Programs

Management Area	Project	Status
Community Engagement	<ul style="list-style-type: none">Chatham Clontarf Academy	<ul style="list-style-type: none">DCPL staff attended the Chatham Clontarf Academy 2017 awards night in Old Bar on 7 December 2017.