

Duralie Coal CCC Meeting

Presentation –
Company Report &
Overview of Activities

May 2018

Michael Plain
Environment & Community Superintendent

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1. Progress at the Mine

Mining 1st Quarter 2018

- Overburden mined 572,000 BCM
- ROM Coal mined 119,000 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">Commonwealth Approval EPBC 2010/5396 Annual Compliance ReportIndependent Environmental Audit	<ul style="list-style-type: none">The 2018 EPBC 2010/5396 Annual Compliance Report has been completed and submitted to the DoEE in April 2018.Independent Environmental Audits of the operations are required every 3 years. An audit was undertaken during December 2017. The audit report was submitted to DP&E on 26 February 2018.
Regulator	<ul style="list-style-type: none">No change during period.	

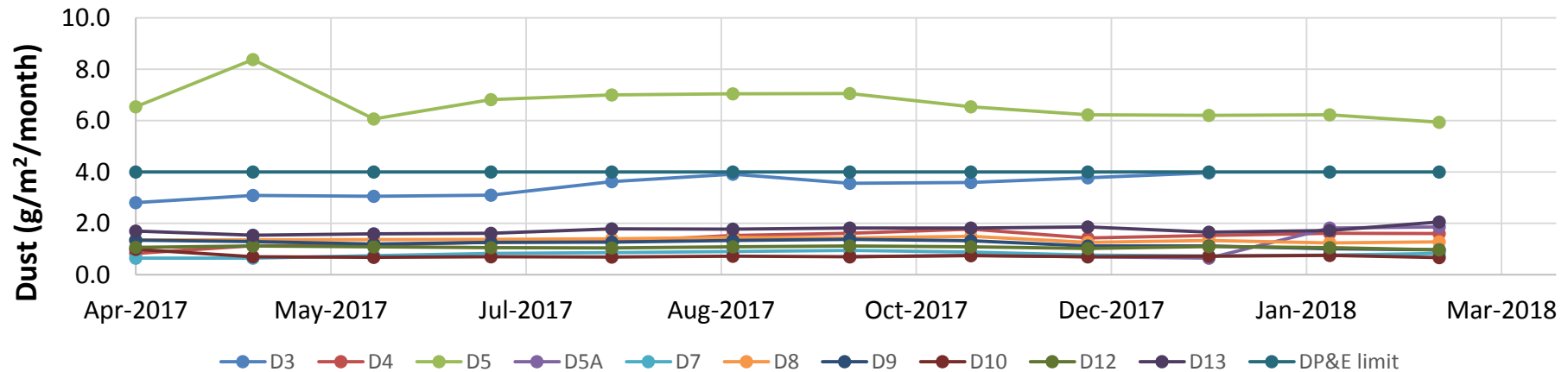
3. Environmental Management Plans & Monitoring

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



3a. Air Quality Management

**Duralie Dust Deposition - Annual Rolling Average
12 Months to March 2018**



- 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.
- Mar-18** D3 – 6.4 Very Heavy - 30% Dirt, 0% Coal, 0% Vegetation, 10% Insects, 60% Polysaccharide Slime. D13 – 5.2 Very Heavy - 30% Dirt, 0% Coal, 0% Vegetation, 0% Insects, 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.

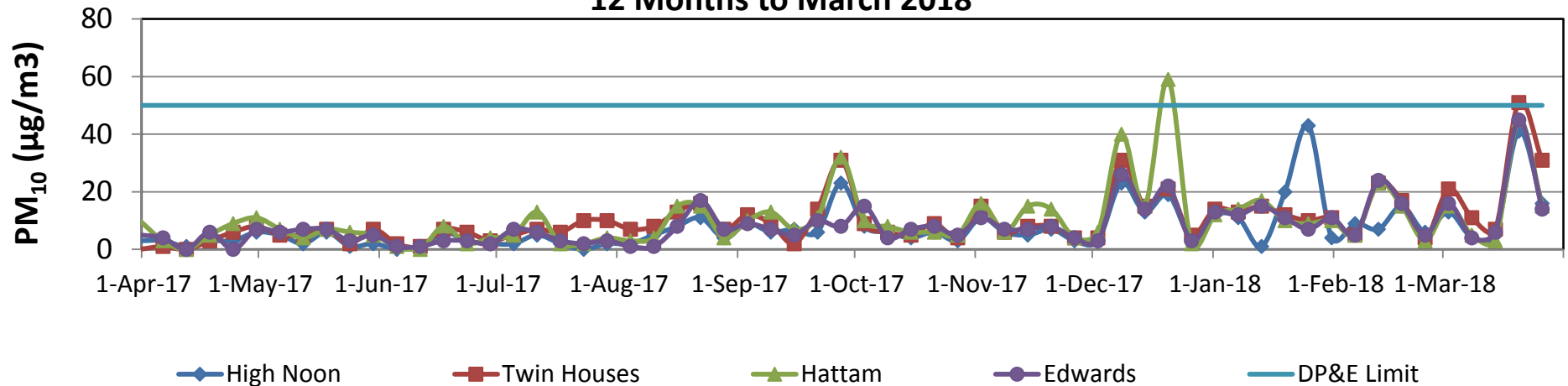
Contamination: Gelatinous material such as bird droppings

- 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.

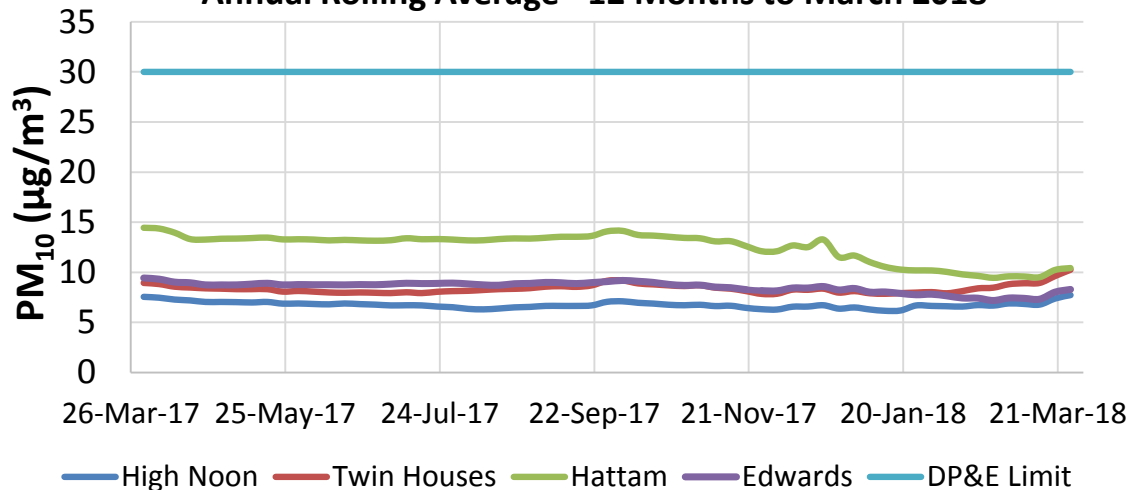


3a. Air Quality Management

Duralie HVAS Monitoring (PM₁₀)
12 Months to March 2018



Duralie HVAS Monitoring (PM₁₀)
Annual Rolling Average - 12 Months to March 2018



- 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.
- High results across all monitors on 20-Mar-18 due to hazy conditions across valley following a southerly change and prolonged dry weather.
- 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). One blast recorded a level 2A fume, i.e. minor.

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	11-Jan-18	14:52:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.57	0.0%	0	14
Weismantel Strip 16	17-Jan-18	11:05:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	<0.22	0.0%	0	15
Weismantel Strip 16	25-Jan-18	11:47:00	<0.22	<110.0	0.46	106.3	<0.22	<110.0	0.77	0.0%	0	16
Weismantel Strip 16	01-Feb-18	16:11:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.56	0.0%	0	17
Weismantel Strip 16	09-Feb-18	11:40:00	<0.22	<110.0	0.39	103.9	<0.22	<110.0	0.7	0.0%	0	18
Weismantel Strip 16	22-Feb-18	14:36:00	<0.22	<110.0	0.7	102.7	<0.22	<110.0	1.32	0.0%	0	19
Weismantel Strip 16	02-Mar-18	10:38:00	<0.22	<110.0	0.54	105.0	<0.22	<110.0	0.85	0.0%	0	20
Weismantel Strip 16	09-Mar-18	11:39:00	<0.22	<110.0	0.59	103.9	<0.22	<110.0	1.2	0.0%	0	21
Weismantel Strip 16	21-Mar-18	14:21:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.45	0.0%	0	22

- 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

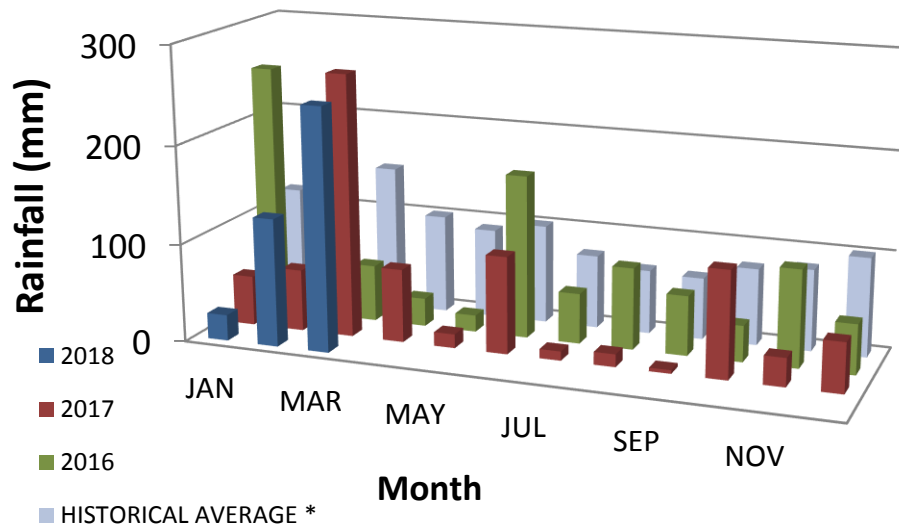
Management Area	Project	Status
Noise	<ul style="list-style-type: none">Routine Monitoring	<ul style="list-style-type: none">Routine quarterly monitoring of operations and train noise was undertaken in April 2018. Noise monitoring results have remained below the noise criteria. Typically the operations 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.Operations have been ongoing in the Weismantel Pit.

3d. Water Management

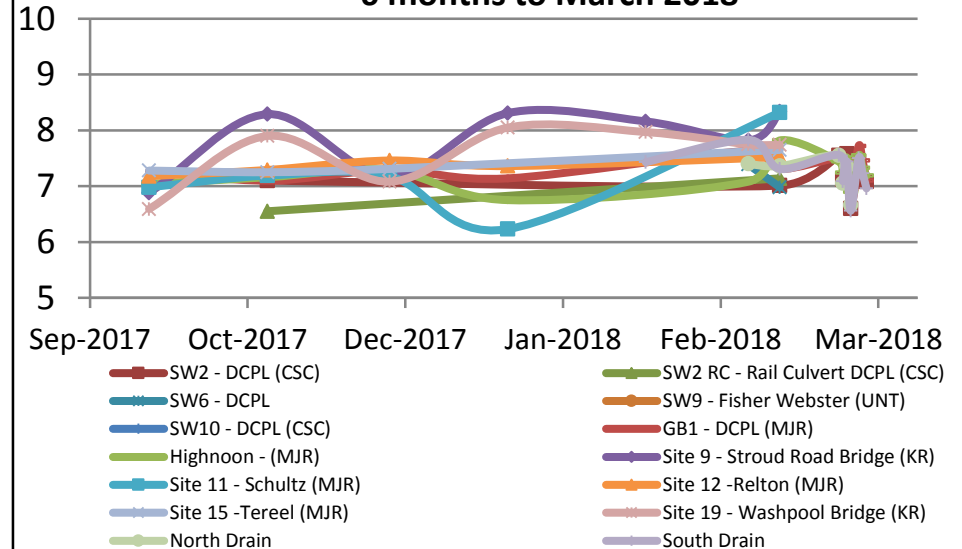
Management Area	Project	Status
Site Water Management	<ul style="list-style-type: none">Annual water balance review.	<ul style="list-style-type: none">A revision of the final void water balance is being undertaken and verification of the groundwater model.The annual water balance review for 2017 is currently being prepared and will be included in the Annual Review.
Surface Water	<ul style="list-style-type: none">Routine monitoringAquatic Ecology - Macroinvertebrates	<ul style="list-style-type: none">Sporadic and low rainfall conditions through Summer 2017/18 follow by a single large rain event in March 2018.Routine surface water monitoring completed. All sites generally within Duralie water quality performance indicators. No obvious trending towards performance indicators.Macroinvertebrates monitoring was undertaken in February 2018. 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

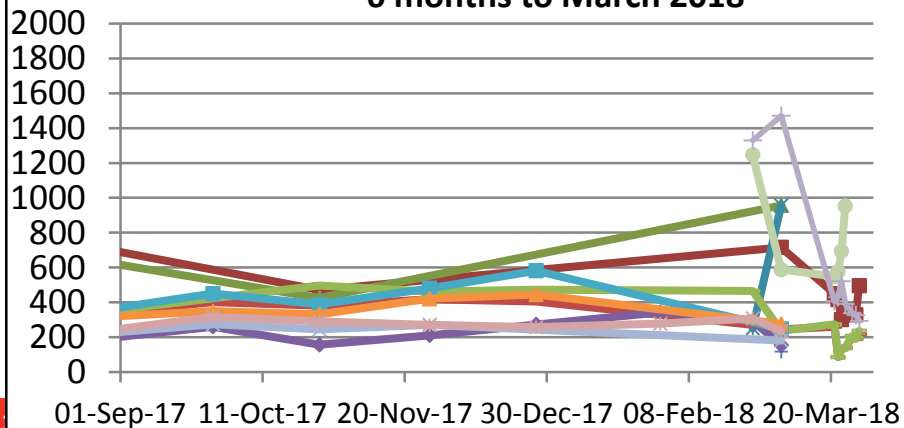
Duralie Mine Site - Monthly Rainfall



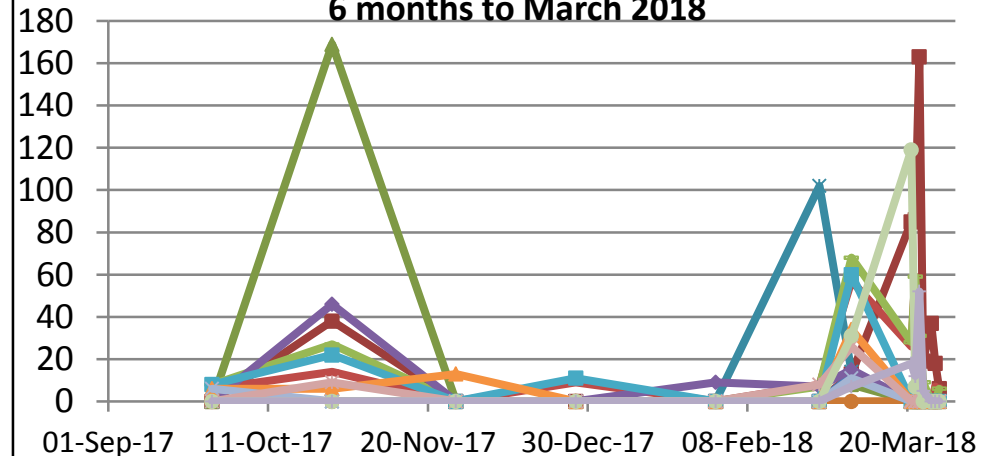
Duralie Surface Water Monitoring - pH
6 months to March 2018



Duralie Surface Water Monitoring - EC ($\mu\text{S}/\text{cm}$)
6 months to March 2018



Duralie Surface Water Monitoring - TSS (mg/L)
6 months to March 2018



3e. Rehabilitation Management

Management Area	Project	Status
Rehabilitation Monitoring	<ul style="list-style-type: none"> Vegetation Monitoring - Landscape Function Analysis Fauna Monitoring 	<ul style="list-style-type: none"> Planned for mid-2018 Fauna monitoring was undertaken during January 2018. The final report is being finalised.
Rehabilitated Waste emplacements	<ul style="list-style-type: none"> Final landforms designs Bulk Shaping Rehabilitation Works 	<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 continued bulk shaping works on the Weismantel waste emplacement. Approximately 40ha completed. Rehabilitation of 20ha was completed in April 2018, including topsoil spreading, ground preparation and seeding.



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. Due to the slow germination of tubestock the planting has been delayed until September 2018.
Flora/Fauna	<ul style="list-style-type: none"> Fauna Monitoring Weed Control 	<ul style="list-style-type: none"> Fauna monitoring was undertaken during January 2018. The final report is being finalised. Weeds spraying continued during Summer and Autumn 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 Q1 2018.



Photo: Masked Owl in a nest box in the offset area recorded during fauna monitoring in Jan 2018.



Photo: Phascogale in the southern offset area recorded during fauna monitoring in Jan 2018.

3g. Mine Closure Planning

Management Area	Project	Status
Mine Closure Planning	<ul style="list-style-type: none"> Stakeholder engagement 	<ul style="list-style-type: none"> Communications with the community consultative committee (CCC) have been established regarding mine closure planning. This presentation will continue to be updated to provide relevant information through the CCC forum.
	<ul style="list-style-type: none"> Landforms 	<ul style="list-style-type: none"> Preparation of a geotechnical assessment and specifications for the final void design have commenced during Q1 2018 to ensure the long-term void is safe and stable.
	<ul style="list-style-type: none"> Water management and final void water balance 	<ul style="list-style-type: none"> Review of the final void site water balance has commenced to ensure the balance incorporates the final landform design, surface water inflows and outflows to/from final void.
	<ul style="list-style-type: none"> Topsoil Resources 	<ul style="list-style-type: none"> A topsoil stocktake is prepared annually to ensure adequate topsoil is available for rehabilitation.
	<ul style="list-style-type: none"> Mine Water Dams 	<ul style="list-style-type: none"> Preparation of a strategy for decommissioning of the mine water dams has commenced. Auxiliary Dam 1 has been dewatered. Preparations have commenced for pumping mine water to the Clareval void.
Final land use	<ul style="list-style-type: none"> Potential final land use planning 	<ul style="list-style-type: none"> Draft plan prepared in 2017.

Note: Refer to Duralie Mining Operations Plan & Rehabilitation Management Plan Table 14 Mine Closure Planning Schedule.

4. Community Complaints

Duralie Complaint Summary

Period: 1/01/2018 - 31/03/2018

Period: 3 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
Support Programs	<ul style="list-style-type: none"> Stratford Coal Education Support Fund 2018 	<ul style="list-style-type: none"> A great response to the Education Support Program for 2018 was received again with a strong round of applicants. The fund is now in it's 22nd year and has contributed a total of over \$700,000 including \$22,000 in 2018. A presentation for the 2018 recipients of the Education Support Program was held at the Bucketts Way Motel on 21-Mar-2017. Support was provided to assist with the costs of education and training for 6 students, 3 businesses and 1 school based traineeships.
Support Programs	Stratford Coal Community Support Program 2018	<ul style="list-style-type: none"> The Stratford Coal Community Support Program is running again in 2018. Applications for the program closed on 31 March 2018. The support program committee will review all applications and a presentation will be held during May 2018 for the successful recipients.

