

Duralie Coal CCC Meeting

Presentation –
Company Report &
Overview of Activities

February 2017

Michael Plain
Environment & Community Superintendent

Table of Contents

1. Agenda Item 7a - Progress at the Mine
2. Agenda Item 7b - Environmental Reporting
3. Agenda Item 7c - Environmental Management Plans & Monitoring
4. Agenda Item 7d - Community Complaints
5. Agenda Item 7e - Community Programs



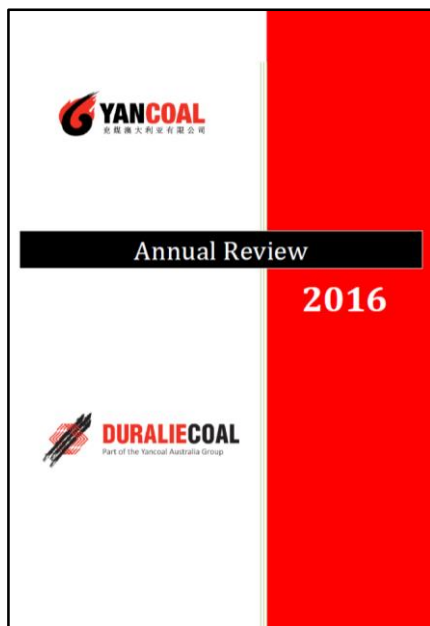
1. Progress at the Mine

Mining 4th Quarter 2016

- Overburden mined 904,000 BCM
- ROM Coal mined 204,000 tonnes
- Mining in Clareval & Weismantel continued.
- Reduced rate of mining following roster change in September 2016.

2. Environmental Reporting & Regulators

Management Area	Project	Status
Reporting	<ul style="list-style-type: none"> Annual Review 2016 EPBC (2010/5396) Annual Biodiversity Report 	<ul style="list-style-type: none"> The Annual Review 2016 was amended and provided to the CCC on 21-Dec-2017. The Annual Review was accepted by DRE on 23-Dec-2017 and DP&E on 13-Dec-2016. The annual report on the implementation of the Duralie biodiversity management plan was submitted to the Commonwealth Department of the Environment on 13-Jan-2017.
Regulator	<ul style="list-style-type: none"> DRE site inspection. DP&E site inspection. Joint Agency Dams Compliance Audit. 	<ul style="list-style-type: none"> An annual site inspection was undertaken on 14-Dec-2016. This included comments on the Annual Review 2016 and review of the rehabilitation progress. An annual site inspection was undertaken on 15-Dec-2016. DCPL has received the draft reports for the joint agency dams compliance audit of the Duralie mine site undertaken on 30-Aug-2016. DCPL has provided comments on the reports to the EPA prior to being finalised.



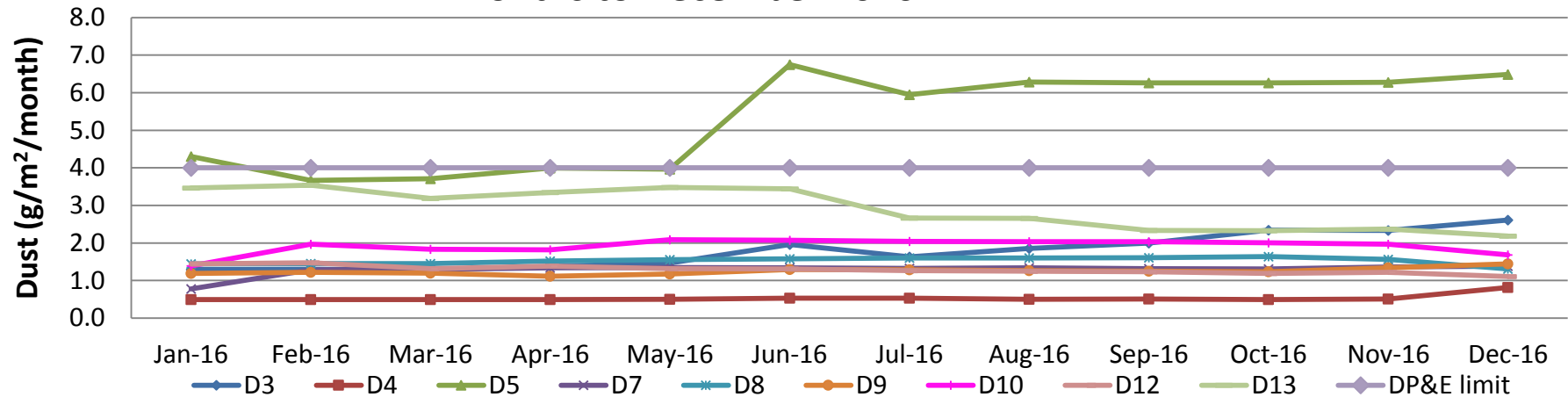
3. Environmental Management Plans & Monitoring

- 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 2016**



- May-16** D13 – 4.7 Medium - 40% Dirt 0% Coal 20% Vegetation 10% Insects 30% Polysaccharide Slime
- Jun-16** D3 – 6.4 Very High - 10% Dirt 0% Coal 20% Vegetation 20% Insects 50% Polysaccharide Slime.
D5 – 40.6 Very Heavy - 40% Dirt 0% Coal 20% Vegetation 20% Insects 20% Polysaccharide Slime
- Nov-16** D5 – 9.5 Very heavy - 40% Dirt, 0% Coal, 10% Vegetation, 0% Insects and 50% Polysaccharide slime.
- Dec-16** D8 – 5.7 Medium - 40% dirt, 0% coal, 20% vegetation, 10% insects, 30% 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 algicide solution.

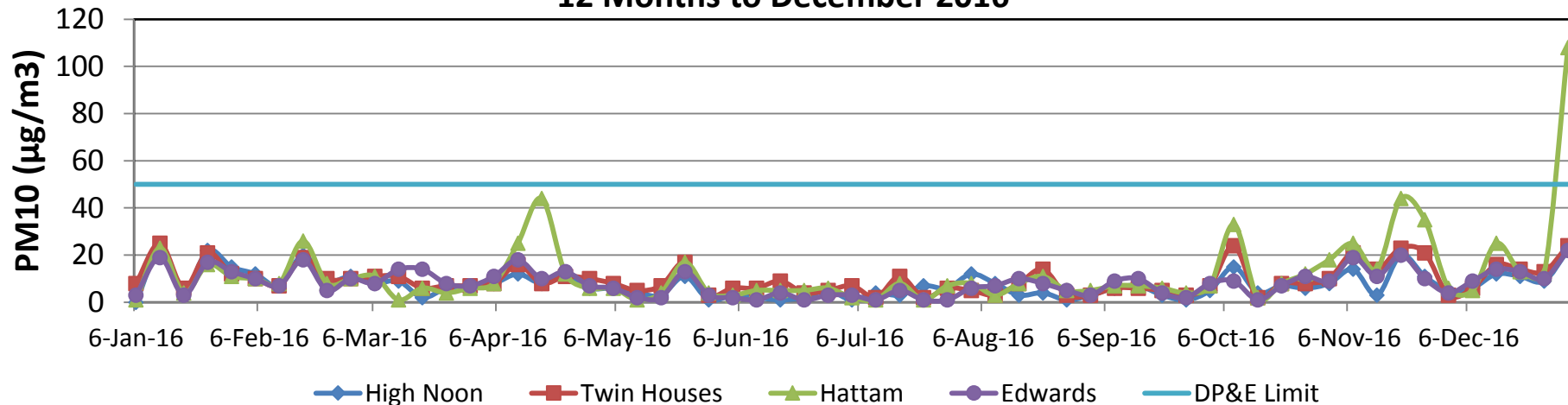
Contamination: Gelatinous material such as bird droppings

- High levels in D5 due to contamination of multiple samples from bird droppings.
- Due to frequent contamination of dust gauges the HVAS results should also be used when interpreting results.

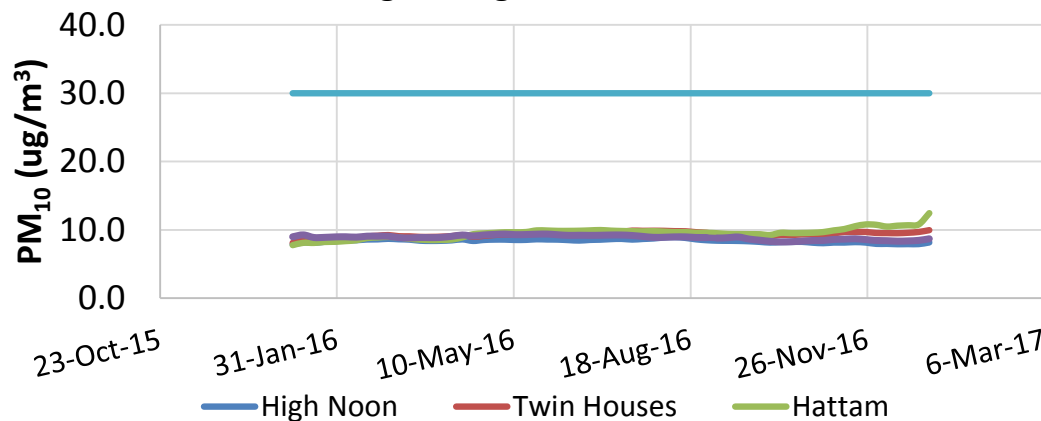


3a. Air Quality Management

**Duralie HVAS Monitoring (PM₁₀)
12 Months to December 2016**



**Duralie HVAS Monitoring (PM₁₀)
Annual Rolling Average - 12 Months to Dec 2016**



- All sites below DP&E limit. Typically low results during winter and higher during spring/summer.
- A single abnormal high result recorded at Hattam on 31 December 2016.
- 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 remains below 5% for the reporting period (ending 4-Sep-17).

Location	Date	Time	Schultz (AB1)		Fisher-Webster (AAAB3)		Moylan (AAAB4)		Weismantel Inn		Overpressure Site Exceedance ¹	Overpressure "Cumulative Exceedance" ¹	Monitored Blasts ¹	Fume Rating
		24hr	mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	dBL	%			
Clareval Block 7	04-Nov-16	14:37:00	<0.22	<110.0	0.46	108.1	0.38	107.7	1.19		0.0%	0	14	Nil
Weismantel Strip 16	03-Dec-16	11:17:00	<0.22	<110.0	0.57	111.9	<0.22	<110.0	0.63		0.0%	0	15	Nil
Weismantel Strip 16	14-Dec-16	14:36:00	<0.22	<110.0	0.45	108.8	0.41	97.5	0.53		0.0%	0	16	Nil
Weismantel Strip 16	16-Dec-16	11:12:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.32		0.0%	0	17	Nil
Clareval Block 7	21-Dec-16	11:09:00	<0.22	<110.0	0.35	102.1	0.54	102.4	1.36		0.0%	0	18	Nil
Clareval Block 7	06-Jan-17	12:12:00	<0.22	<110.0	0.33	104.6	0.42	104.2	0.92		0.0%	0	19	Nil
Clareval Block 7	12-Jan-17	12:05:00	<0.22	<110.0	0.302	102.7	0.49	102.8	0.74		0.0%	0	20	Nil
Weismantel Strip 16	19-Jan-17	11:37:00	<0.22	<110.0	0.25	104.9	<0.22	<110.0	0.35		0.0%	0	21	Nil

- 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.



3c. Noise Management

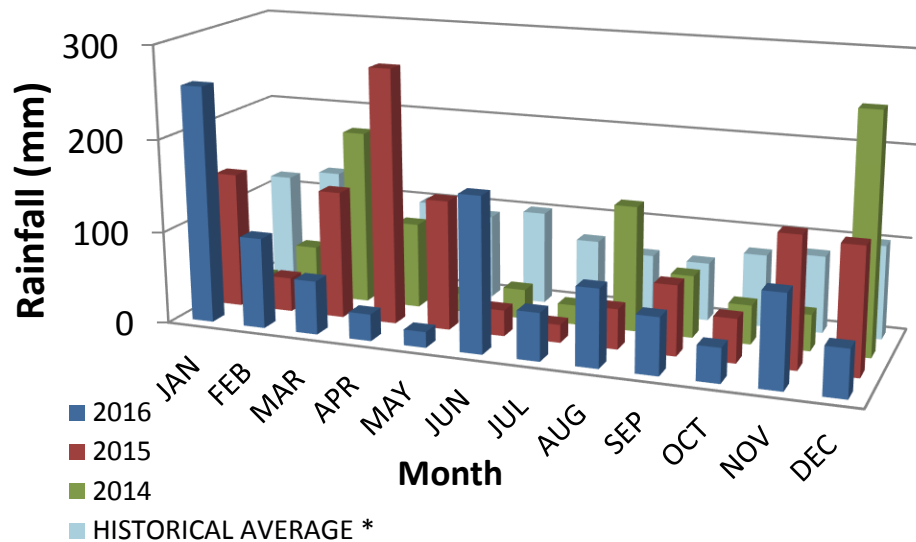
Management Area	Project	Status
Noise	<ul style="list-style-type: none">Routine Monitoring	<ul style="list-style-type: none">Routine quarterly monitoring of operations and train noise was undertaken in November 2016 and January 2017. Noise monitoring results have remained below the noise criteria. Typically 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 meteorological conditions or external noise sources.

3d. Water Management

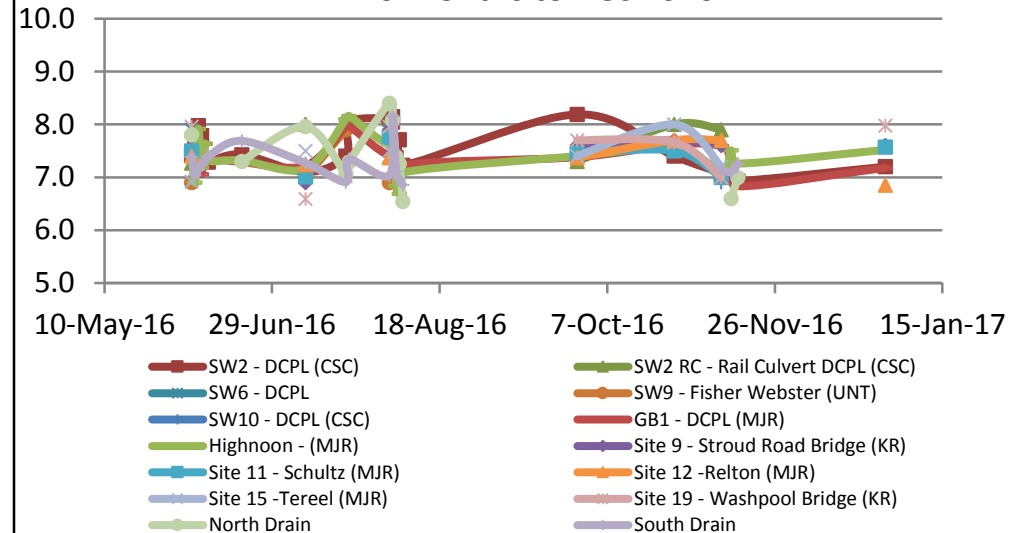
Management Area	Project	Status
Surface Water	<ul style="list-style-type: none">• Routine monitoring• Irrigation	<ul style="list-style-type: none">• Below average rainfall conditions through Spring/Summer 2016-17.• Routine surface water monitoring completed. All sites generally within DEP water quality performance indicators. No obvious trending towards performance indicators.• Irrigation activities have continued during the quarter with dry ground conditions persisting.
	<ul style="list-style-type: none">• Sediment dam desilting	<ul style="list-style-type: none">• Routine desilting of sediment dams has been undertaken in RS6 dam, ROM pad dam, and the workshop dam during January 2016.
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

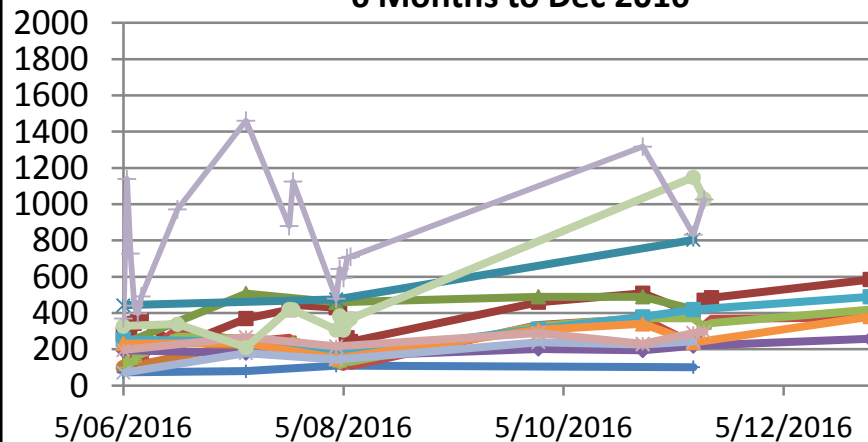
Duralie Mine Site - Monthly Rainfall



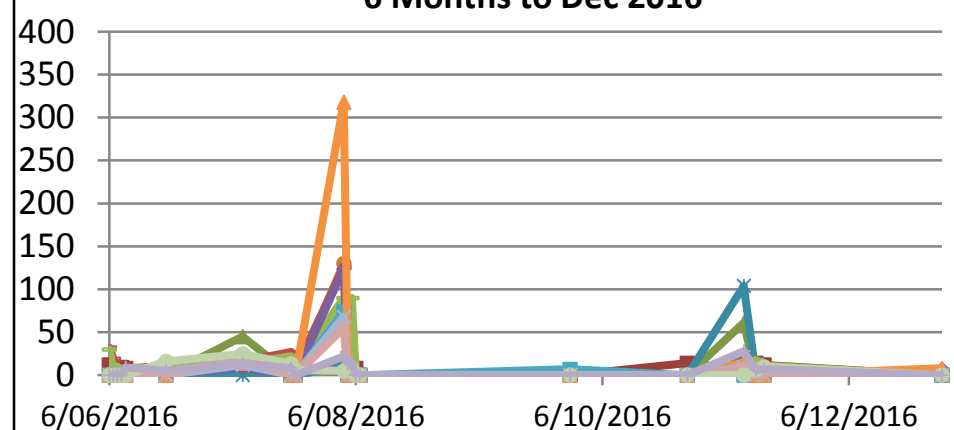
**Duralie Surface Water Monitoring - pH
6 Months to Dec 2016**



**Duralie Surface Water Monitoring - EC ($\mu\text{S}/\text{cm}$)
6 Months to Dec 2016**



**Duralie Surface Water Monitoring - TSS (mg/L)
6 Months to Dec 2016**



3e. Rehabilitation Management

Management Area	Project	Status
Waste emplacement	<ul style="list-style-type: none"> Rehabilitation maintenance 	<ul style="list-style-type: none"> Maintenance on areas with erosion or poor establishment identified in the rehabilitation monitoring report completed in January 2017.
Visual screening	<ul style="list-style-type: none"> Weismantel northern perimeter bund 	<ul style="list-style-type: none"> Shaping and rehabilitation of the perimeter bund around the north extent of Weismantel has been completed in January 2017.



Photo: Rehabilitation maintenance – Dec 2016



Photo: Rehabilitation maintenance – Jan 2017



Photo: Rehabilitation maintenance – Jan 2017

3f. Biodiversity Management

Management Area	Project	Status
Biodiversity Offset	<ul style="list-style-type: none"> Revegetation works 	<ul style="list-style-type: none"> Revegetation of approximately 80 hectares of offset area for native woodland was undertaken in December 2016. Due to delays with back burning the revegetation methods involved slashing and broadcast seeding with native tree and shrub species. Approximately 50 hectares of alluvial flats are proposed for tube-stock planting in March 2017. The native tree and shrub tube-stock is currently being grown.
	<ul style="list-style-type: none"> Nest box program 	<ul style="list-style-type: none"> The annual nest box monitoring report has now been completed for the monitoring undertaken in September 2016. The Duralie Nestbox program currently includes 151 nest boxes for a range of hollow-dependent species and 18 nest boxes specifically targeting the squirrel glider. An additional 35 nest boxes were installed in September 2016. A total of 20 species have been recorded using the nest boxes including 11 mammals, 5 birds, 3 reptiles and 1 frog species. Two threatened species have been recorded; the Squirrel Glider and Brush-tailed Phascogale.
	<ul style="list-style-type: none"> Offset Area Vegetation monitoring 	<ul style="list-style-type: none"> Monitoring of the offset revegetation works is Scheduled to be undertaken in January 2016.



Photo: Native tree seed from Duralie Offset Area



Photo: Spreading native tree and shrub seed – Dec 2016.

3f. Biodiversity Management

Management Area	Project	Status
Bushfire Management	<ul style="list-style-type: none">Bushfire Management	<ul style="list-style-type: none">Hazard reduction burning activities were planned for winter/spring 2016, however further delays have resulted in no burning to date. Continued discussions have been held with the RFS to conduct fire management activities and any such activities will be assessed and implemented to ensure the most appropriate period for ecological burn activities.
Flora/Fauna	<ul style="list-style-type: none">Weed ControlWild Dog Control Program 2016	<ul style="list-style-type: none">Weeds spraying has continued during on Mining Leases, Offset areas and Yancoal property.A wild dog control program has been completed from mid October 2016 through to mid December 2016. The program included trapping and shooting of wild dogs and foxes on the Stratford and Duralie Mining Leases and the biodiversity offset areas.A total of 21 wild dogs and 3 foxes were captured during the program.



Photo: Wild dog captured - Dec 2016

4. Community Complaints

Duralie Complaint Summary

Period: 1/10/2016 - 31/12/2016

Period: 3 Months

Total No. of Complaints: 6 (1 noise, 0 blast, 5 air quality, 0 other)

Total No. of Complainants: 6

Date/Time of Complaint	Complainant Location	Method of Complaint	Nature of Complaint	Investigation/Outcome
1/11/2016 9:00hrs	5.5km NE of mine.	Mobile	Odour from mine	Complaint: "Strong odour from mine site." <ul style="list-style-type: none"> DCPL staff inspected the area along Terreel Rd at 10am however the odour had passed. DCPL arranged to meet with the complainant to further discuss the matter and other general progress at Duralie. No further action has been requested at this point.
1/11/2016 8:15hrs	Approx. 3.4km NNE of mine	Community hotline	Odour from mine	Complaint: "Gas smell". DCPL returned phone call at 1:30pm, no answer. Called again on 2/11/16 at 9:40am, no answer. <ul style="list-style-type: none"> DCPL returned call again on 2/11/16 at 1:45pm. Complainant advised this was the first time they had smelt the odour and were not sure what it was coming from. DCPL provided information on spon com and self-heating issues and the measures being taken by Duralie to manage the issue. DCPL staff offered to meet with the landholder if the issue continued. No further response required at this time.
1/11/2016 8:30hrs	6.0km NE of mine	Community hotline	Odour from mine	Complaint: "Awful smell of sulfur, don't normally smell it". DCPL returned phone call at 1:30pm, no answer. <ul style="list-style-type: none"> DCPL returned call again on 2/11/16 at 9:30am. Complainant advised they had only smelt the odour a few times however it was the worst yesterday morning. DCPL provided information on spon com and self-heating issues and the measures being taken by Duralie to manage the issue. DCPL staff offered to meet with the landholder if the issue continued. No further response required at this time.
5/12/2016 9:00hrs	Approx. 3.4km NNE of mine	EPA hotline	Odour from mine	EPA Hotline Incident Description: <i>Strong coal smell coming from Duralie Coal Mine Bucketts Way Stroud Road</i> . DCPL provided a response to the EPA on 5 December 2016. No further information has been request. DCPL continue to manage any odours from the mine site.

4. Community Complaints cont.

Duralie Complaint Summary

Period: 1/10/2016 - 31/12/2016

Period: 3 Months

Total No. of Complaints: 6 (1 noise, 0 blast, 5 air quality, 0 other)

Total No. of Complainants: 6

Date/Time of Complaint	Complainant Location	Method of Complaint	Nature of Complaint	Investigation/Outcome
21/12/2016 12:11hrs	Approx. 1.5km NNW of operation.	Email	Odour from mine	<p>Complaint: "Odours worse than ever, it's been 5hrs of hell. When are these poisonous emissions going to stop? What are you doing about it?"</p> <ul style="list-style-type: none"> • The Ops Manager and OCE were immediately notified of complaint. An inspection of Martins Crossing Rd and Duralie Rd was undertaken and no smell was noticeable at 12:30pm. The OCE advised there had been no increased level of odours noticeable during the morning. • DCPL called a nearby neighbour to follow-up on odours. They advised the odours had improved although they could still smell them occasionally in the early morning and evening and it was noticeable this morning. • Weather observations: There was a southerly change at around 6am on 21/12 which coincides with the time of the complaint. • Phone call to complainant on 22/12/2016 to discuss odours and management measures undertaken by DCPL.
21/12/2016 20:00hrs	Approx. 1.5km W of mining operation	Community hotline	Noise	<p>Complaint: "Noise and explosions. I am an asthmatic."</p> <ul style="list-style-type: none"> • DCPL called the complainant on 23/12/2016. The complaint advised they thought the explosion and noise came from the mine direction. DCPL advised there had been no blasting at this time. The complainant advised it was not normal mine operation noise. They also stated there was an odour present. They did not want any further information or follow-up. • The complaint was reported to the operations manager. The source of the explosion noise is unknown and possibly not related to the mine. Management of odours from the PAF waste emplacement is ongoing.

5. Community Programs

Management Area	Project	Status
Community Engagement	Stratford Coal Community Support Program 2017	<ul style="list-style-type: none"> The Stratford Coal Community Support Program will run again during 2017. The program will be advertised in the local newspaper and applications will close on 31 March 2017. Information is also available on the Duralie Coal website.
Community Engagement	Stratford Coal Education Support Fund 2017	<ul style="list-style-type: none"> The Stratford Coal Education Support Program has been advertised through the Gloucester Advocate during December to January. Application forms have been available at the MidCoast Council Gloucester Office. Applications closed on 27 January 2017 and all applications will be reviewed over the coming month prior to the allocation of funding. A presentation will be arranged for the successful recipients.
Community Engagement	Clontarf Foundation	<ul style="list-style-type: none"> Yancoal has entered into a partnership program with the Clontarf Foundation providing support to young indigenous boys through high school academies across Australia. DCPL representatives will visit the Chatham High School Academy in February 2017.



Photo: Gloucester RSL members and DCPL staff with the new trailer and seating for RSL services – Nov 2016.