

Duralie Coal CCC Meeting

Presentation –
Company Report &
Overview of Activities

August 2019

Michael Plain
Environment & Community Superintendent

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1. Progress at the Mine

Mining 1st Half 2019

- No mining operations were undertaken at Duralie during the first half of 2019.
- Mining completed in Weismantel pit early October 2018. Last ROM coal railed on 4 October 2018.
- Rehandle of PAF material to Clareval Pit continued up to December 2018.
- Bulk shaping and rehabilitation of waste emplacements continued up to December 2018.

2. Environmental Reporting & Regulators

Management Area	Project	Status
Reporting	<ul style="list-style-type: none">Commonwealth EPBC Annual Compliance Report 2018Duralie Coal Mine Annual Review 2018	<ul style="list-style-type: none">The EPBC (2010/5396) Approval annual compliance report was prepared and submitted to the Department of the Environment & Energy on 12 April 2019.The Duralie Coal Mine 2018 Annual Review is currently being prepared. The Annual Review will be made available to the CCC and on the Duralie Coal website.
Regulator	<ul style="list-style-type: none">Environmental Management Plans	<ul style="list-style-type: none">No changes

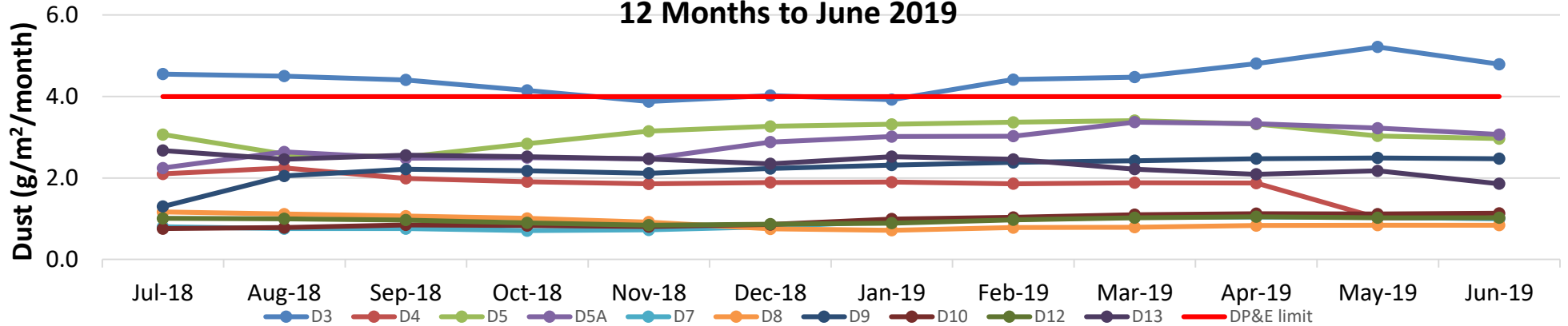
3. Environmental Management Plans & Monitoring

- 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 June 2019**



- Jul-18** D3 - Very Heavy - 10% Dirt, 90% Polysaccharide Slime
- Aug-18** D5A - Insects, bird droppings and vegetation. Sample slightly turbid and grey in colour. Medium - 60% Dirt, 40% Polysaccharide Slime
- Oct-18** D3 - 20% Dirt, 10% Vegetation, 10% Insects and 60% Polysaccharide Slime
- Nov-18** D5 - 30% Dirt and 70% Polysaccharide Slime
- Dec-18** D5A - Very Heavy - 40% Dirt, 0% Coal, 0% Vegetation, 10% Insects, 50% Polysaccharide Slime
- Feb-19** D3 - Heavy - 40% Dirt, 60% Polysaccharide slime
- Mar-19** D3 - Very Heavy - 20% Dirt, 0% Coal, 10% Vegetation, 10% Insects and 60% Polysaccharide Slime
- Apr-19** D3 - Very Heavy - 40% Dirt, 0% Coal, 10% Vegetation, 10% Insects, 40% Polysaccharide slime
- May-19** D3 - Very Heavy - 20% Dirt, 80% Polysaccharide Slime
- Jun-19** D3 - Heavy - 20% Dirt, 80% 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

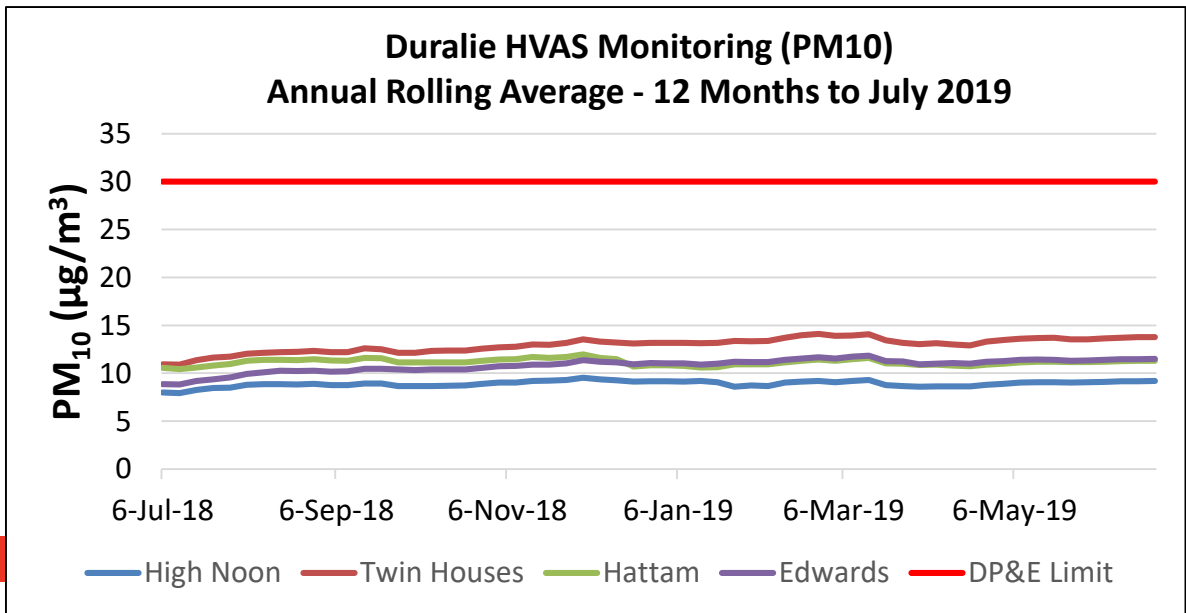
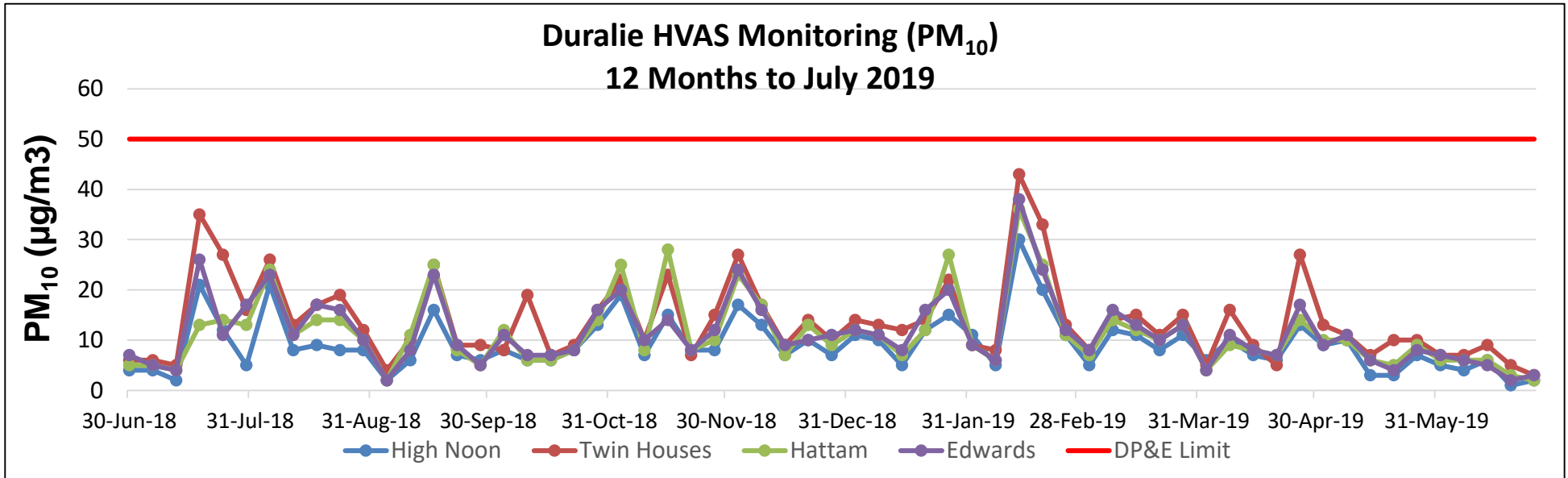
- High levels in D3 and D5 due to contamination of multiple samples. Additional site D5A installed for comparison
- Due to frequent contamination of dust gauges the HVAS results should also be used when interpreting results

29 July 2019



DURALIE COAL
Part of the Yancoal Australia Group

3a. Air Quality Management



- All sites below DP&E limit. Typically low results during winter and higher during spring/ summer.
- Minor increasing 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">Blast activities at the DCM were completed on 17 August 2018. No further blasting is proposed until further notice.

- 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

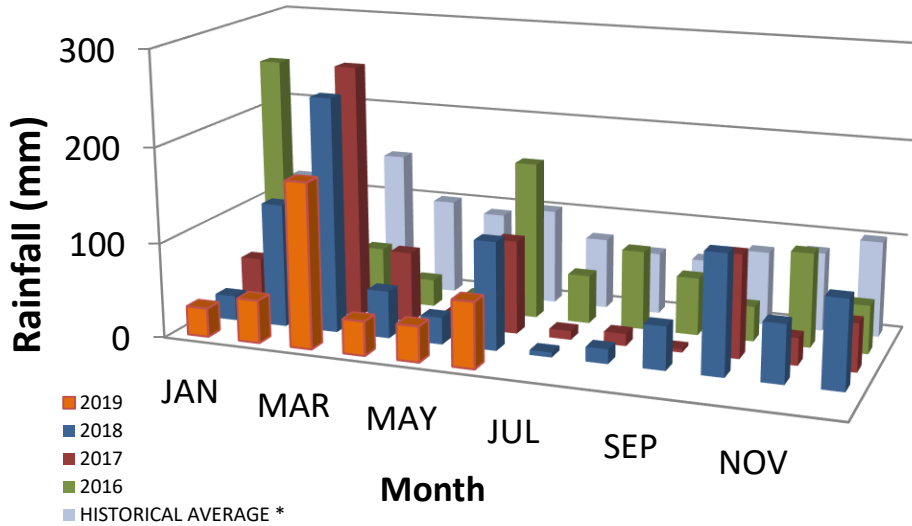
Management Area	Project	Status
Noise Monitoring	<ul style="list-style-type: none"> Routine Monitoring 	<ul style="list-style-type: none"> Routine quarterly monitoring of operations is not required whilst no operations are being undertaken at the Duralie Mine. No operations were undertaken during the previous quarter. Noise reports are made available on the Duralie Coal website.
Noise Management Plan	<ul style="list-style-type: none"> Noise Management Plan revision 	<ul style="list-style-type: none"> The Noise Management Plan has been updated to amend the noise monitoring program during times when no operations are occurring. The revised NMP clarifies that noise monitoring is only required to be undertaken at times when operations are occurring.
	<ul style="list-style-type: none"> Real-Time Noise Management 	<ul style="list-style-type: none"> During Q4 2018 operations at the Duralie Mine ceased. A dayshift crew is expected to return to Duralie during H2 2019. In accordance with the revised NMP real-time noise monitoring has now ceased whilst no evening or night-time operations are undertaken.

3d. Water Management

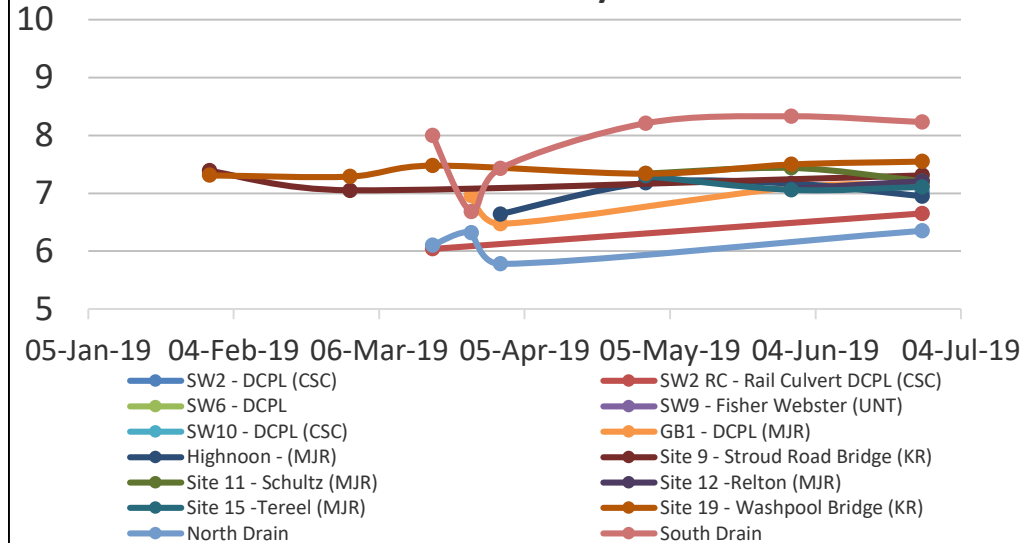
Management Area	Project	Status
Site Water Management	<ul style="list-style-type: none"> Annual water balance review. 	<ul style="list-style-type: none"> The 2018 annual site water balance review has been completed. A summary is included in the Annual Review.
Surface Water	<ul style="list-style-type: none"> Routine monitoring 	<ul style="list-style-type: none"> Sporadic and low rainfall conditions persisted through autumn/winter 2019. Routine surface water monitoring completed. All sites generally within Duralie water quality performance indicators. No obvious trending towards performance indicators.
Irrigation	<ul style="list-style-type: none"> Irrigation Annual monitoring 	<ul style="list-style-type: none"> Monitoring of soil and pasture condition in the irrigation area was undertaken during May 2019. No irrigation is currently being undertaken in the first flush areas. Irrigation has continued on the PAF waste emplacement. The irrigation report will assess the need for any ongoing monitoring following the cessation of irrigation.
Groundwater	<ul style="list-style-type: none"> Routine monitoring 	<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

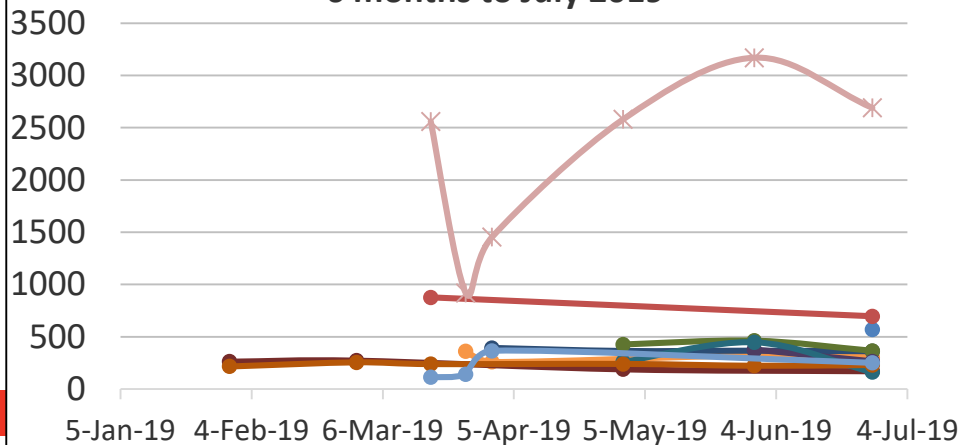
Duralie Mine Site - Monthly Rainfall



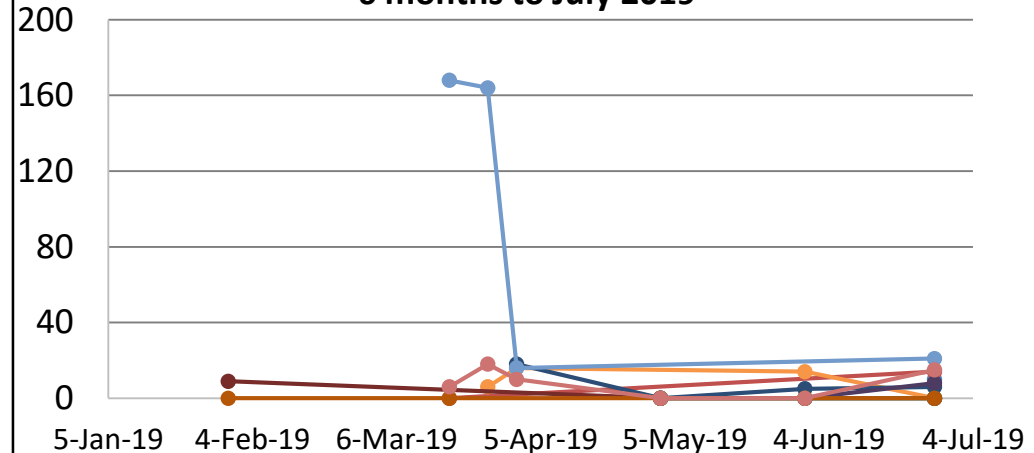
**Duralie Surface Water Monitoring - pH
6 months to July 2019**



**Duralie Surface Water Monitoring - EC ($\mu\text{S}/\text{cm}$)
6 months to July 2019**



**Duralie Surface Water Monitoring - TSS (mg/L)
6 months to July 2019**



3e. Rehabilitation Management

Management Area	Project	Status
Rehabilitated Waste emplacements	<ul style="list-style-type: none">• Rehabilitation Works• Rehabilitation maintenance	<ul style="list-style-type: none">• Rehabilitation of 55ha was completed during 2018, including topsoil spreading, ground preparation and seeding. Approximately 15 hectares of native vegetation and 40 hectares of pasture rehabilitation was planted.• During July 2019 the pasture areas planted in 2018 were slashed to increase soil organic matter and aid pasture establishment..



Photo: Rehabilitation on the Weismantel waste emplacement completed in 2018, taken Jan 2019.



Photo: Rehabilitation on the Weismantel waste emplacement completed in 2018, taken Jan 2019.

3e. Rehabilitation Management

Management Area	Project	Status
Rehabilitation Planning	<ul style="list-style-type: none">• Waste emplacements• Auxiliary Dam 1 Decommissioning	<ul style="list-style-type: none">• Approximately 25 hectares of waste emplacement will be rehabilitated in 2019 starting in September.• The works will involve minor bulk shaping followed by ground preparation and seeding.• Decommissioning and rehabilitation of AD1 is proposed to commence in October 2019.• Clay will be recovered and used for clay lining in the Coal Shaft Creek Reconstruction.
Rehabilitation Monitoring	<ul style="list-style-type: none">• Vegetation Monitoring - Ecosystem Function Analysis	<ul style="list-style-type: none">• Rehabilitation monitoring was undertaken during May 2019. The final report is currently being prepared and a summary will be included in the Duralie Annual Review.



Photo: Bulk shaping partially completed on the Weismantel, Jan 2019.

3f. Biodiversity Management

Management Area	Project	Status
BMP	<ul style="list-style-type: none"> Biodiversity Management Plan revision 	<ul style="list-style-type: none"> A revision of the Biodiversity Management Plan has been prepared following the first 5 years of implementation. A summary of the biodiversity offset works completed and the changes to the BMP is included in the Annual Biodiversity Report.
Biodiversity Offset	<ul style="list-style-type: none"> Revegetation works 	<ul style="list-style-type: none"> An additional 15,000 tubestock are currently being grown to make up for the short fall in 2018. Planting of the tubestock was postponed in May 2019 and will now be undertaken in September 2019 in the offset areas.



Photo: Tubestock planted in 2018 in the Duralie offset area, Jun 2019.

Photo: Preparation of tubestock for planting in 2019.



3f. Biodiversity Management

Management Area	Project	Status
Flora/Fauna	<ul style="list-style-type: none"> Nest Box Program 	<ul style="list-style-type: none"> Annual monitoring of nest boxes is scheduled to be undertaken in September 2019. A summary of the nest box progress will be included in the next Annual Review. The program now includes 211 nest boxes.
Pest Control	<ul style="list-style-type: none"> Wild Dog control program 	<ul style="list-style-type: none"> Wild dog and fox trapping was recommenced in May 2019 covering all Stratford Coal owned properties including biodiversity offsets and Mining Leases.
Access & Livestock	<ul style="list-style-type: none"> Signage Fencing 	<ul style="list-style-type: none"> Additional signage installation for the Duralie Offset Area has been completed. Work has commenced to replace and install boundary fencing for the biodiversity offset areas to exclude livestock in locations where fencing is in disrepair.
Bushfire Management	<ul style="list-style-type: none"> Bushfire Management 	<ul style="list-style-type: none"> Slashing of all access tracks and fire breaks was completed in January 2019 and again in July 2019.



Photo: Squirrel Glider observed during the 2018 monitoring program, Sep 2018.

3g. Mine Closure Planning

Note: *Refer to Duralie Mining Operations Plan & Rehabilitation Management Plan Table 14 Mine Closure Planning Schedule.
*Further detail on mine closure planning progress is included in the Annual Review 2018.

Management Area	Project	Status
Mine Closure Planning General	<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.
Rehabilitated Landforms	<ul style="list-style-type: none"> Landform design and stability 	<ul style="list-style-type: none"> DCPL have continued to prepare the detailed final landform designs for the waste emplacement areas. Preparation of a geotechnical assessment and specifications for the final void design have continued to ensure the long-term void is safe and stable.
Final Voids	<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"> Groundwater Model 	<ul style="list-style-type: none"> Post-mining groundwater model verification has commenced to incorporate final void design. This work is undertaken in conjunction with the final void water balance.
Rehabilitation Resources	<ul style="list-style-type: none"> Topsoil Resources 	<ul style="list-style-type: none"> A topsoil stockpile update will be undertaken in July 2019 to ensure adequate topsoil is available for rehabilitation. The use of topsoil continues to be tracked.
Water Management	<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. DCPL has engaged an independent dams engineer to assist with preparing plans for the decommissioning of the prescribed dams Auxiliary Dam 1 has been dewatered and decommissioning and rehabilitation will commence in Oct 2019. Preparations have commenced for pumping mine water to the Clareval void.
Coal Shaft Creek	<ul style="list-style-type: none"> CSC reconstruction 	<ul style="list-style-type: none"> Re-construction of the lower reaches of Coal Shaft Creek is required following the completion of mining activities. A conceptual Coal Shaft Creek Reconstruction Plan was prepared in 2012. A consultant has been engaged to prepared the detailed design for the reconstruction of Coal Shaft Creek. Removal of the ROM coal stockpile in the CSC corridor has been completed. Bulk shaping of the final creek landform has commenced.
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.

4. Community Complaints

Duralie Complaint Summary

Period: 1/01/2019 - 30/06/2019

Period: 6 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

5. Community Programs

Management Area	Project	Status
Support Programs	Stratford Coal Community Support Program	<ul style="list-style-type: none"> • SCPL received a very good response from many community organisations in 2019. • A presentation for the recipients of the 2019 Stratford Coal Community Support Program was held at the Bucketts Way Motel on 9 April 2019. • Since 2010, Stratford Coal has granted over \$552,000 to local community groups. • In 2019, over \$85,000 was shared across 22 local community organisations for projects in the areas of education, health, environment, infrastructure, arts, leisure and cultural heritage.
	Stratford Coal Education Support Fund	<ul style="list-style-type: none"> • A great response to the Education Support Program for 2019 was received again with a strong round of applicants. • The fund is now in its 23rd year and has contributed a total of over \$730,000 including \$29,000 in 2019. • A presentation for the 2019 recipients of the Education Support Program was held at the Bucketts Way Motel on 13 March 2019. • Support was provided to assist with the costs of education and training for university students, TAFE, apprenticeships and school based traineeships.



Photo: Stratford Coal Education Support Fund presentation night, 13 March 2019.

5. Community Programs

Management Area	Project	Status
Community Engagement	Chatham High School Clontarf Academy Site Visit & Tree Planting Day	<ul style="list-style-type: none">During May 2019 the Chatham High School Clontarf Academy was hosted by Stratford Coal for a tour of the operations. The students then took part in the bush regeneration works in the biodiversity offset area planting over 500 tree seedlings.



Photo: Chatham High School visit to the Stratford Coal Mine, 14 May 2019.



5. Community Programs

Management Area	Project	Status
Community Engagement	Stratford Coal Family Day	<ul style="list-style-type: none"> • Stratford Coal hosted an open day on 25 May 2018 for the family and friends of employees. • The day involved mine site tours, preparation plant tours, mining equipment displays, other active displays and information. • Approximately 500 people attended over the course of the open day. • Stratford Coal is very thankful for the support provided by local community groups: <ul style="list-style-type: none"> • Gloucester Rotary Club, MidCoast Rural Fire Service, Stroud Community Lodge, Gloucester High School, Gloucester RSL, Gloucester Masonic Lodge



Photo: Stratford Coal Family Day, 25 May 2019.