

Duralie Coal CCC Meeting

Presentation -
Company Report &
Overview of Activities

February 2016

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Environment & Community Coordinator



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1. Progress at the Mine

Mining 4th Quarter 2015

- Waste BCM 1,954,000 BCM
- Coal tonnes 454,000 tonnes
- Mining in Clareval pit only.
- Weismantel mining expected to recommence in February 2016. Tree clearing has been completed.

2. Environmental Projects/Activities

Management Area	Project	Status
Reporting	<ul style="list-style-type: none"> 2015 Implementation of the Biodiversity Management Plan Report 	<ul style="list-style-type: none"> Report completed and submitted to Commonwealth Department of the Environment.
Regulator	<ul style="list-style-type: none"> Site Visits 	<ul style="list-style-type: none"> No site visits
Environmental Management Plans	<ul style="list-style-type: none"> EMP review's following approval of Project Modification. Pollution Incident Response Management Plan (PIRMP) Mining Operations Plan amendment. 	<ul style="list-style-type: none"> Giant Barred Frog Management Plan approved by DP&E and DotE. Biodiversity Offset Management Plan approved by DP&E. Rehabilitation Management Plan approved by DRE. Water Management Plan still with DP&E. Noise MP recently submitted. Blast MP currently being finalised. PIRMP annual review completed and available on website. Submitted to EPA. The DCM Mining Operations Plan was amended in Dec 2015 to bring forward mining in Weismantel. The amended MOP was approved by DRE in January 2016.
Air Quality	<ul style="list-style-type: none"> Real-time dust management 	<ul style="list-style-type: none"> No verified alarms received during the quarter. Routine monitoring.
Biodiversity	<ul style="list-style-type: none"> Year 3 offset area deliverables 	<ul style="list-style-type: none"> Works continuing on Year 3 deliverables. New works since last CCC include: <ul style="list-style-type: none"> Nest box monitoring ongoing; Plans continued for re-vegetation trials in select areas. The works scheduled during Spring 2015 were postponed until March 2016. Weed spraying recommenced in January 2016. Removal of privet has been undertaken along sections of Mammy Johnsons River.
Blast	<ul style="list-style-type: none"> Routine blasting 	<ul style="list-style-type: none"> No exceedances of licence criteria during the quarter. Total remains below 5% for the reporting period (commenced 4-Sep-15). Annual calibrations of blast monitors.
Bushfire Management	<ul style="list-style-type: none"> Bushfire Management 	<ul style="list-style-type: none"> DCPL has developed a hazard reduction burn plan with assistance from the RFS for areas around ML's and the biodiversity offset. Controlled burn were delayed by the RFS and are now planned during Autumn and Winter 2016.

2. Environmental Projects/Activities – cont.

Management Area	Project	Status
Noise	<ul style="list-style-type: none"> Routine Monitoring Real-Time Noise Management Sound Power Testing 	<ul style="list-style-type: none"> Routine quarterly monitoring of operations and train noise completed in January 2016. No non-compliances. Reports available on the Duralie Coal website. Real-time noise monitoring profiles continue to be monitored and generally indicate no exceedence of the performance criteria due to mining operations. No noise alarms received during the quarter. Sound power testing of new dozers and drills has been completed.
Surface Water	<ul style="list-style-type: none"> Routine monitoring Erosion & sediment control 	<ul style="list-style-type: none"> Several major rainfall events during the quarter and all monitoring was completed. Erosion and sediment control works undertaken in Weismantel prior to tree clearing.
Groundwater	<ul style="list-style-type: none"> Alluvial Aquifers Investigation 	<ul style="list-style-type: none"> Investigation of alluvial aquifer interface has been completed and a monitoring program design has been included in the revised Groundwater Management Plan.
Giant Barred Frog	<ul style="list-style-type: none"> Annual monitoring 	<ul style="list-style-type: none"> 5 years of baseline monitoring completed. The approved GBFMP requires further monitoring following commencement of the expanded irrigation areas. This is not planned to occur in the remaining mine life.
Rehabilitation	<ul style="list-style-type: none"> General waste dumps Native grass seed Annual monitoring 	<ul style="list-style-type: none"> Preparations for rehabilitation of approx. 10ha on the waste emplacement near the power-line corridor has continued. Works to be finalised in March 2016. Work on improving the species diversity in the rehabilitation seed mix to include native grass seed. Repair works planned for existing sections of rehabilitation from actions out of LFA.
Flora	<ul style="list-style-type: none"> Weismantel Tree Clearing Weeds Program GPG fungus trials 	<ul style="list-style-type: none"> Tree clearing has been undertaken in Weismantel Strip 16 & 17 in advance of mining. Habitat tree surveys completed and ecologist present on site for tree clearing. Weeds spraying has been undertaken on the Mining Lease from October to January. Further discussion with DPI to trial GPG bio-control on Yancoal land. DPI will provide an updated proposal for the program.
Community	<ul style="list-style-type: none"> Community Support Program Community Education Fund 	<ul style="list-style-type: none"> Review of Community Support Program structure for 2016 has been undertaken. Community Education Fund 2016 was advertised and applications have now closed. Presentation of successful applicants is expected in March 2015.

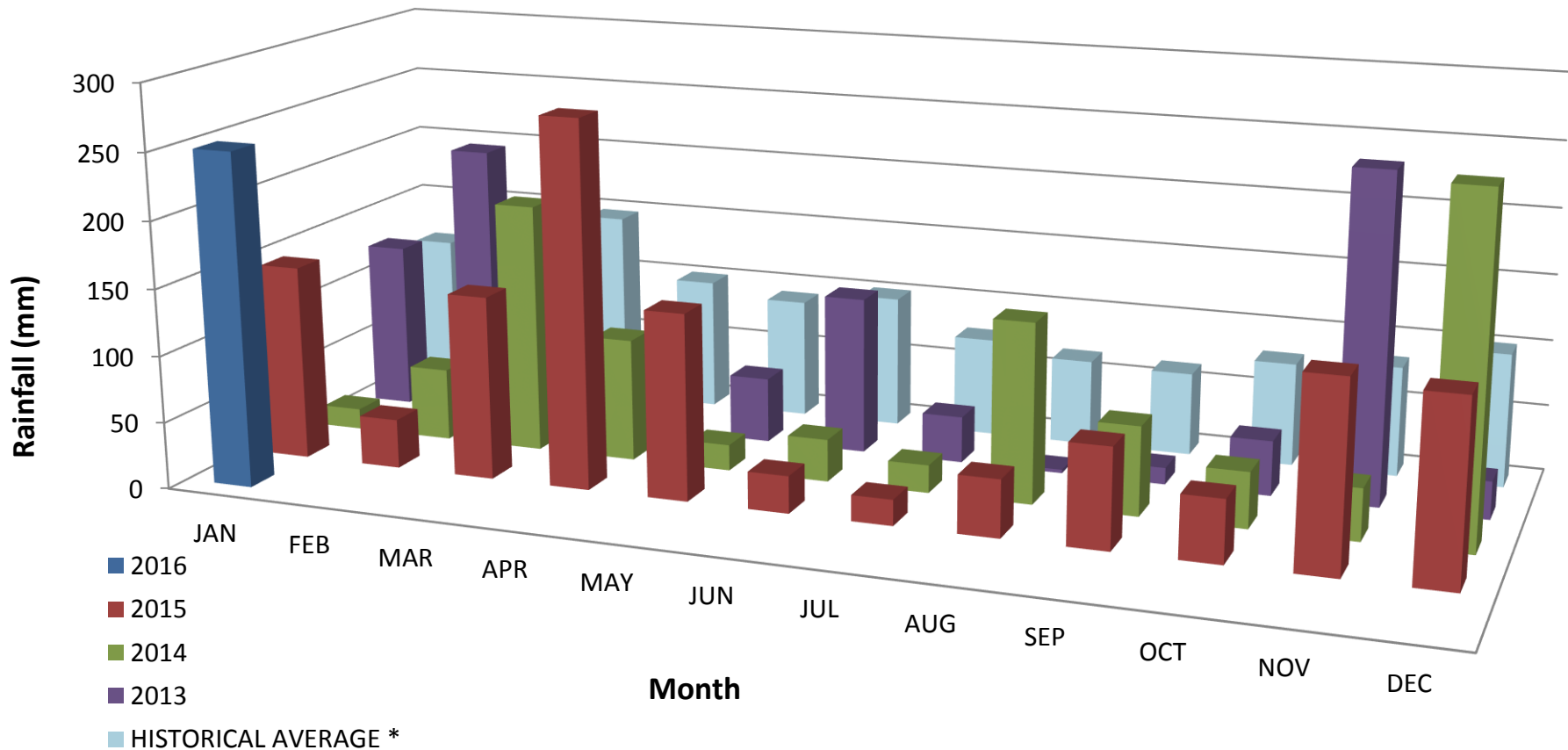
3. Environmental Monitoring Performance

1. Rainfall
2. Surface Water
 - a) Total Suspended Solids
 - b) pH
 - c) Electrical Conductivity
3. Air Quality
 - a) Dust Deposition
 - b) High Volume Air Sampler
 - c) High Volume Air Sampler-Rolling Average
4. Blasting



Rainfall

Duralie Mine Site - Monthly Rainfall

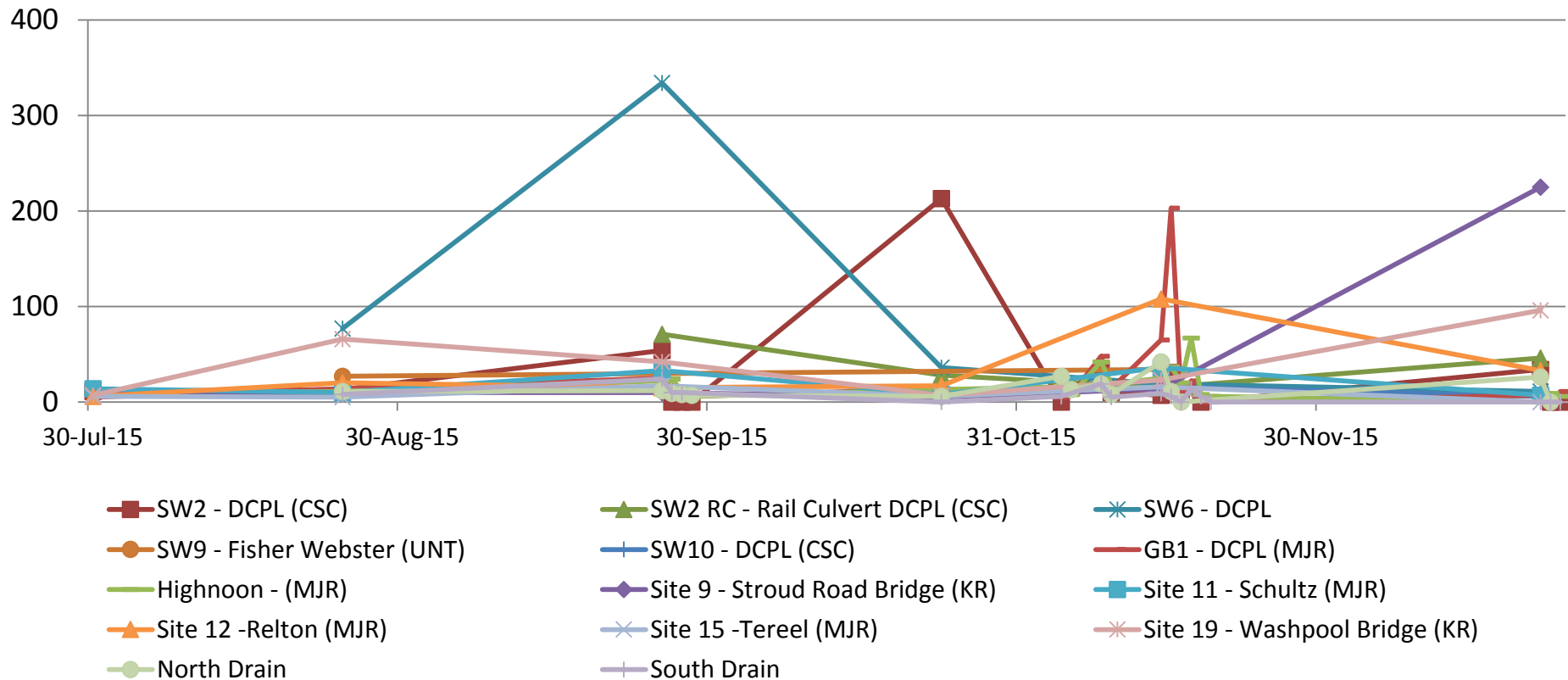


- Above average rainfall in November and December 2015.
- Dry winter and early spring
- 2015 Annual Total Rainfall 1225mm



Surface Water – Total Suspended Solids

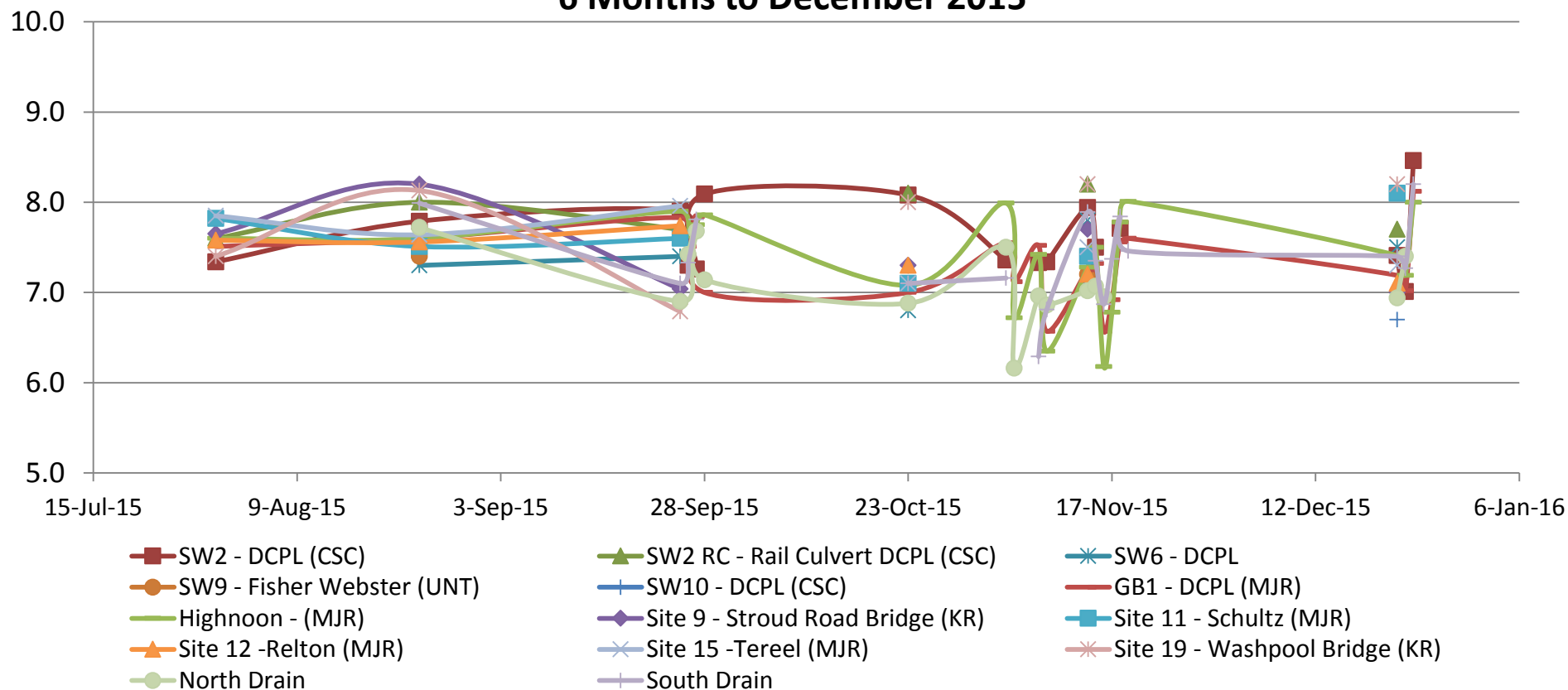
**Duralie Surface Water Monitoring - TSS (mg/L)
6 Months to December 2015**



- All sites returned generally low TSS. Elevated results recorded at SW6, SW2, GB1 and SW9 on various dates. Elevated results are both upstream and downstream with no observable trend. Generally following heavy rainfall.
- Gaps indicate no flow. All sites generally within DEP water quality performance indicators

Surface Water - pH

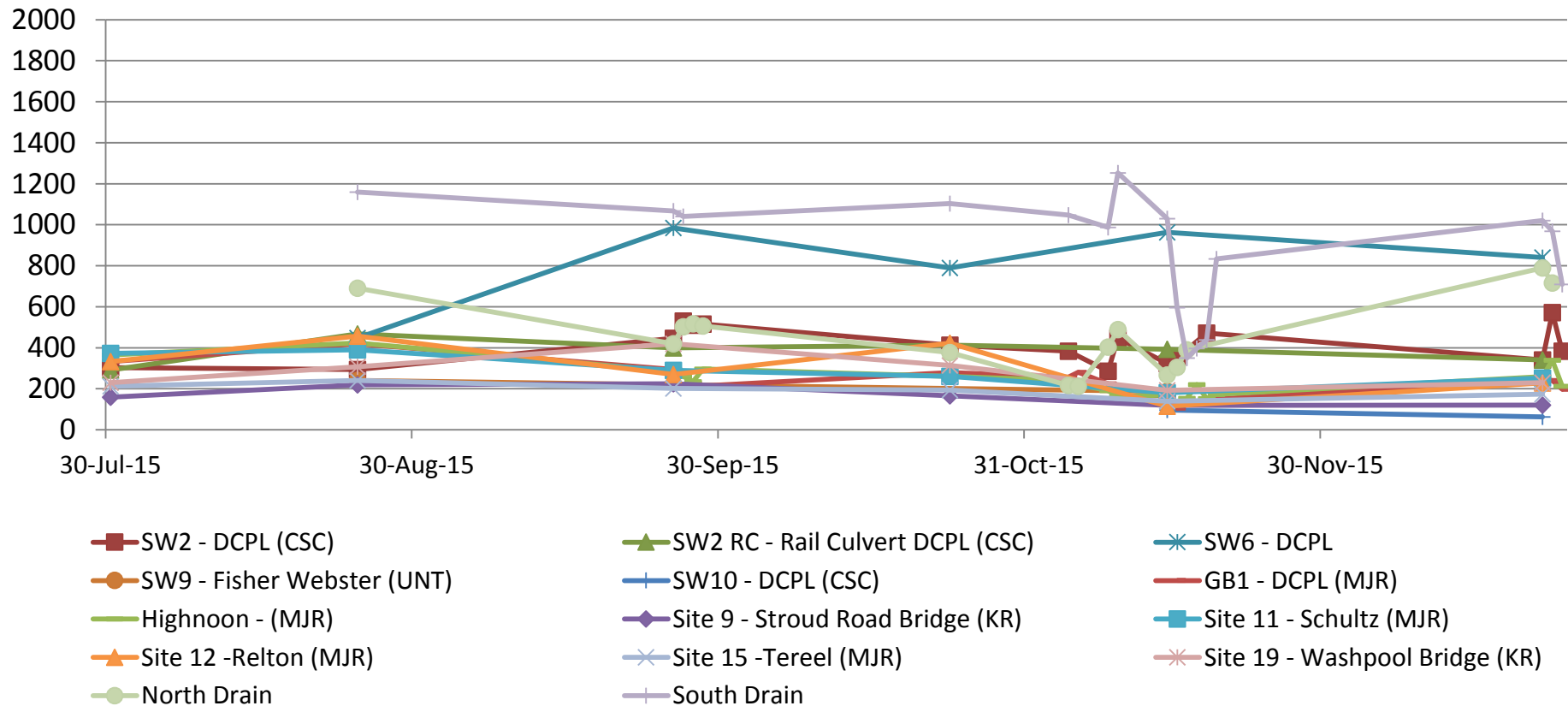
**Duralie Surface Water Monitoring - pH
6 Months to December 2015**



- All sites generally within DEP water quality performance indicators. No obvious trending towards performance indicators.
- Anomalous readings in November possibly due to incorrect probe calibration. Consistent trend up and down stream.
- Gaps indicate no flow

Surface Water – Electrical Conductivity

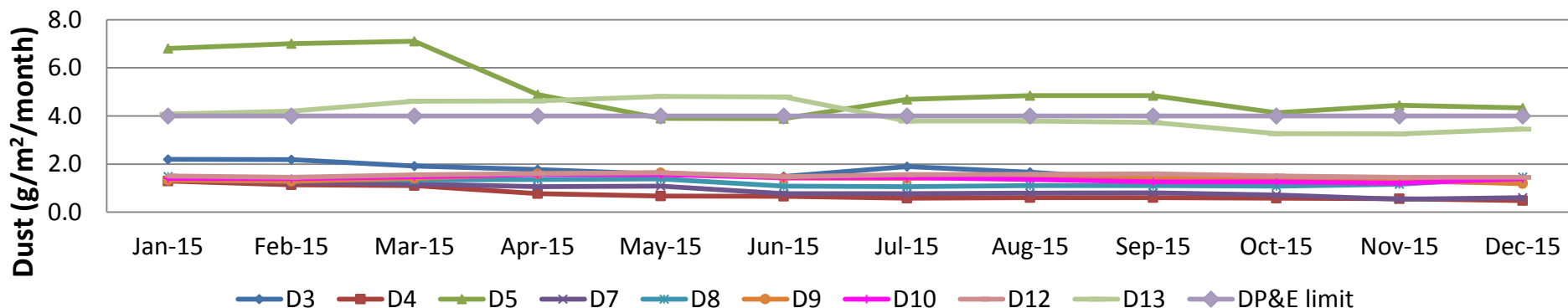
Duralie Surface Water Monitoring - EC ($\mu\text{S}/\text{cm}$) 6 Months to December 2015



- Gaps indicate no flow. All sites generally within DEP water quality performance indicators.
- Highest EC levels recorded in the South Drain as the flow receded. When EC level is above 1326 $\mu\text{S}/\text{cm}$ in the South Drain flow is diverted to the Main Water Dam.

Air Quality – Dust Deposition

Duralie Dust Deposition - Annual Rolling Average 12 Months to December 2015



- Nov-14** D5 – 5.6 - 50% minerals, 0% coal, 10% veg, 20% insects, 20% other contamination
- Feb-15** D5- Heavy - 50% Dirt, 0% Coal, 0% Vegetation, 10% Insects, 40% Polysaccharide slime
- Mar-15** D13 - 20% Dirt 0% Coal 10% Vegetation, 30% Insects, 40% Polysaccharide slime.
- Jun-15** D5 - Heavy 40% Dirt, 0% Coal, 10% Vegetation, 10% Insects, 40% Polysaccharide Slime
- Jul-15** D3 Very heavy - 20% Dirt, 0% Coal, 10% Vegetation, 10% Insects, 60% Polysaccharide Slime. D5 -Very heavy - 40% Dirt, 0% Coal, 0% Vegetation, 0% Insects, 60% Polysaccharide Slime. D13-Very heavy - 30% Dirt, 0% Coal, 0% Vegetation, 30% Insects, 40% Polysaccharide Slime.
- Sep-15** D13 -Medium - 50% Dirt, 10% Coal, 10% Vegetation, 10% Insects and 20% Polysaccharide Slime.
- Nov-15** D5 - Very heavy - 40% Dirt, 0% Coal, 10% Vegetation, 10% Insects and 40% Polysaccharide slime.
- Dec-15** D8- Medium. 30% Dirt, 0% coal, 0% vegetation, 10% insects, 60% polysaccharide slime. D10- Heavy. 40% dirt, 0% coal, 0% vegetation, 0% insects, 60% 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.

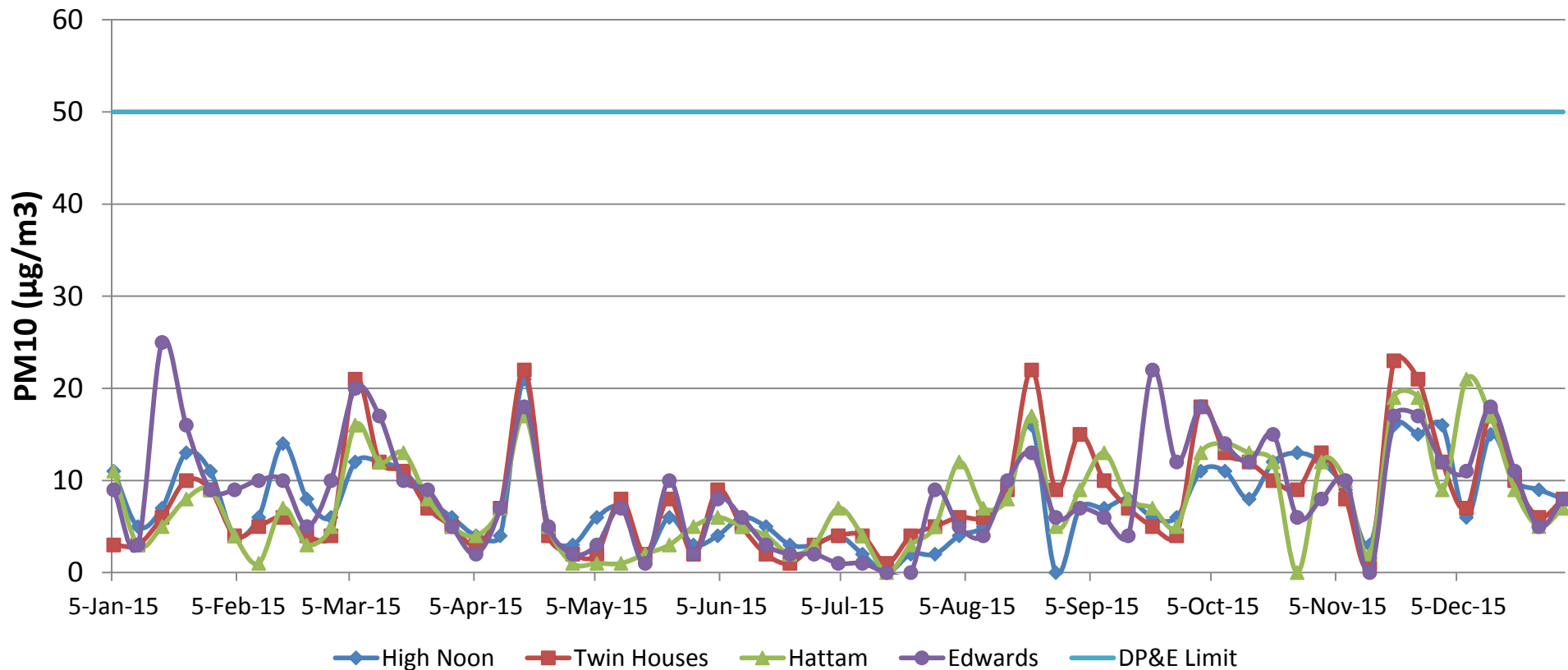
Contamination: Gelatinous material such as bird droppings

- Significant increase in D5 and D13 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.



Air Quality – High Volume Air Sampler

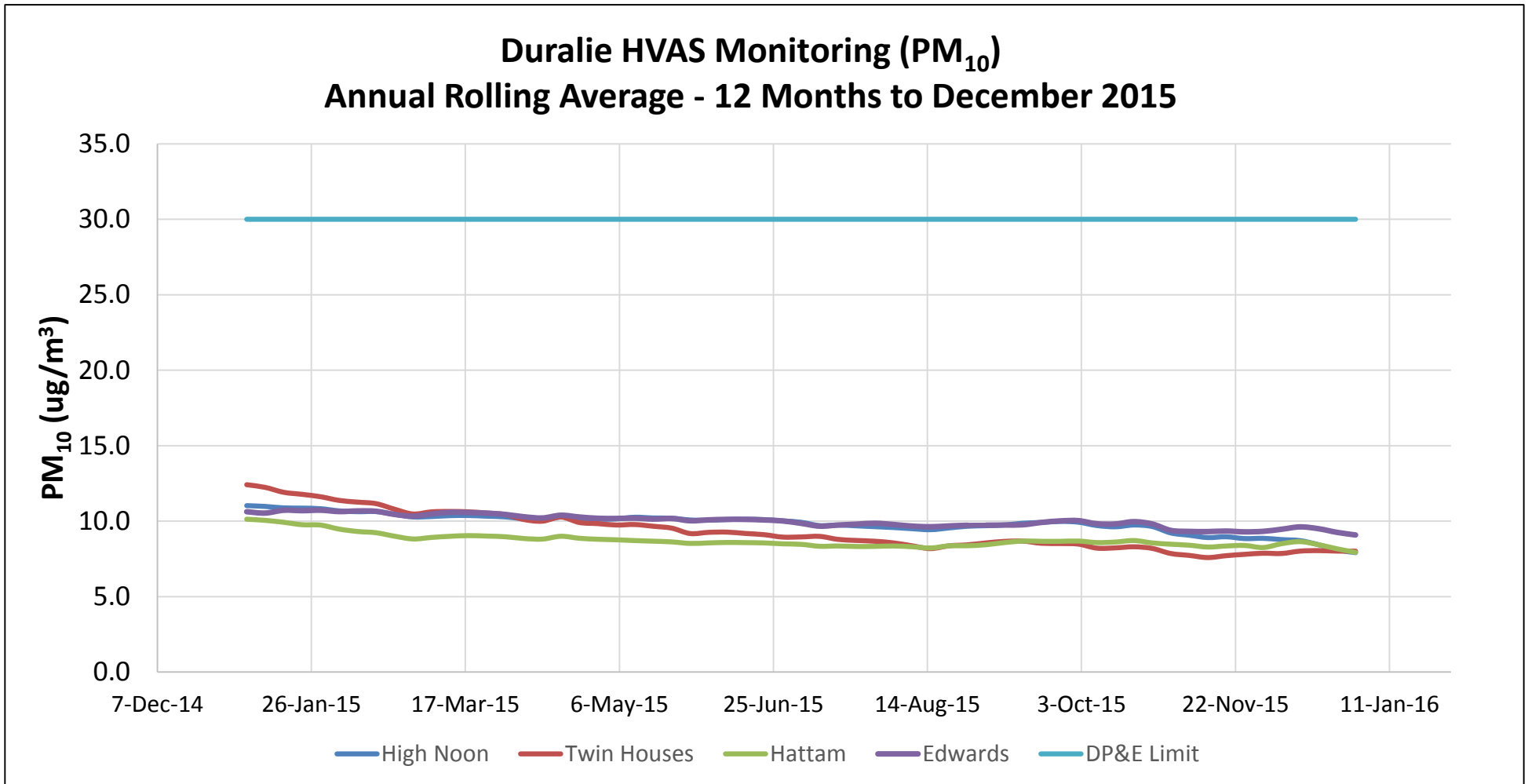
Duralie HVAS Monitoring (PM10) 12 Months to December 2015



- All sites below DP&E limit. Typically low results during winter and higher during spring.
- HVAS results provide more reliable data compared to dust deposition results and should be referred to when interpreting dust emissions.



Air Quality – HVAS Rolling Average



- All site averages well below DP&E Limit.
- Slight downward trend during 2015.

Blasting

Date	Time	Schultz (AB1)		Fisher-Webster (AAAB3)		Moylan (AAAB4)		Weismantel Inn		Overpressure Site Exceedance ¹	Overpressure "Cumulative Exceedance" ¹	Ground Vibration Site Exceedance ¹	Ground Vibration "Cumulative Exceedance" ¹	Monitored Blasts ¹	Fume Rating
		mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	dBL	%		%			
02-Oct-15	13:07:00	0.31	90.2	0.32	89	0.38	102.1	1.05	111.1	0.0%	0	0.0%	0	6	2B
12-Oct-15	16:45:00	0.27	90.2	0.35	89	0.41	99.8	0.94	109.8	0.0%	0	0.0%	0	7	Nil
16-Oct-15	12:37:00	0.31	90.2	0.41	89	0.58	107	2.34	114.9	0.0%	0	0.0%	0	8	Nil
21-Oct-15	12:32:00	<0.22	<110.0	<0.22	<110.0	0.25	100.4	0.41	106.9	0.0%	0	0.0%	0	9	2B
30-Oct-15	12:37:00	<0.22	<110.0	<0.22	<110.0	0.28	98	1.29	103.4	0.0%	0	0.0%	0	10	Nil
05-Nov-15	12:40:00	<0.22	<110.0	0.42	108.2	0.65	108.6	3.52	113.5	0.0%	0	0.0%	0	11	1B
11-Nov-15	12:37:00	0.43	85.4	0.35	106.8	0.84	108.8	1.26	116.7	0.0%	0	0.0%	0	12	Nil
19-Nov-15	12:40:00	<0.22	<110.0	0.27	108.6	0.32	105.3	1.27	109.6	0.0%	0	0.0%	0	13	Nil
28-Nov-15	12:38:00	<0.22	<110.0	<0.22	<110.0	0.56	108.8	1.33	110.8	0.0%	0	0.0%	0	14	Nil
01-Dec-15		<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.0%	0	0.0%	0	15	Nil
09-Dec-15	12:41:00	0.30	90.3	0.26	102.6	0.48	108.8	1.07	112.2	0.0%	0	0.0%	0	16	Nil
16-Dec-15	11:52:00	<0.22	<110.0	<0.22	<110.0	0.29	107.2	0.48	115.7	0.0%	0	0.0%	0	17	Nil
18-Dec-15	16:37:00	<0.22	<110.0	<0.22	<110.0	0.28	108.1	0.84	111.1	0.0%	0	0.0%	0	18	Nil
11-Jan-16	12:41:00	0.24	84.5	0.52	108.4	0.95	109.4	2.51	115.3	0.0%	0	0.0%	0	19	Nil
21-Jan-16	12:44:00	<0.22	<110.0	0.38	101.4	0.46	107.7	0.76	107.8	0.0%	0	0.0%	0	20	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.
- During 2015/16 reporting period no blasts have exceeded 115dB(L)
- Reporting period re-started 04-Sep-2015.



4. Community Complaints

Duralie Complaint Summary

Period: 1/10/2015 - 31/12/2015

Period: 3 Months

Total No. of Complaints: 2 (2 noise, 0 blast, 0 other)

Total No. of Complainants: 2

Date/Time of Complaint	Complainant Location	Method of Complaint	Nature of Complaint	Investigation/Outcome
21/10/2015 00:23hrs	Approx. 5km SE of mine	Community hotline	Evaporative fan noise	Complaint: Evaporative fan noise well after midnight. Remains part of an ongoing investigation and response. Offer to meet with complainant remains open.
18/12/2015 22:00hrs	Approx 1.5km W of mining operation	Community hotline	Noise	No call back requested. Operations inspected, no abnormal or noise enhancing activities. Ensure general noise mitigation measures are being implemented.

