

Duralie Coal CCC Meeting

Presentation –
Company Report &
Overview of Activities

August 2016

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Environment & Community Superintendent

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1. Progress at the Mine

Mining 2nd Quarter 2016

- Waste BCM 2,188,000 BCM
- Coal tonnes 418,000 tonnes

- Mining in Clareval & Weismantel continued.

2. Environmental Projects/Activities

Management Area	Project	Status
Reporting	<ul style="list-style-type: none"> Annual Review 2016 NPI & NGER reporting Commonwealth Approval Giant barred Frog Report 2016 	<ul style="list-style-type: none"> Currently being prepared and due for submission August 2016. Currently being prepared and due for submission September 2016. Report completed and will be submitted to Commonwealth Department of the Environment.
Regulator	<ul style="list-style-type: none"> DRE Annual Inspection EPA diesel emissions workshop 	<ul style="list-style-type: none"> Site visit conducted in May 2016 and acceptance of 2015 Annual Review. EPA held a workshop on the proposed diesel exhaust emissions pollution reduction program.
Environmental Management Plans	<ul style="list-style-type: none"> EMP review's following approval of Project Modification 2014. 	<ul style="list-style-type: none"> The Water Management Plan has had further revision and now waiting on DP&E approval.
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"> Reporting on revegetation trials. Planning for works in 2016/17, with approximately 300 hectares and offset land to be revegetated with native vegetation communities. Nest box installations and monitoring is planned for September 2016. Wild dog control is planned for spring 2016.
Blast	<ul style="list-style-type: none"> Routine blasting 	<ul style="list-style-type: none"> One blast in June exceeded 115dB(L) during the quarter. Total remains below 5% for the reporting period (commenced 4-Sep-15).
Bushfire Management	<ul style="list-style-type: none"> Bushfire Management 	<ul style="list-style-type: none"> Attended Gloucester bushfire management committee meeting in May 2016. DCPL are waiting on RFS to confirm hazard reduction burn dates which are planned in the next month.

2. Environmental Projects/Activities – cont.

Management Area	Project	Status
Noise	<ul style="list-style-type: none"> Routine Monitoring Real-Time Noise Management Noise consultant 	<ul style="list-style-type: none"> Routine quarterly monitoring of operations and train noise scheduled in August 2016. Reports will be 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. DCPL are proposing to transition to a new noise monitoring consultant.
Surface Water	<ul style="list-style-type: none"> Routine monitoring Erosion & sediment control Irrigation Monitoring 	<ul style="list-style-type: none"> Generally dry conditions leading up to heavy rainfall in June 2016. Rainfall event surface water monitoring completed. Sediment control works have been completed near the northern limit of Weismantel. The Annual Irrigation Area Monitoring was undertaken in June 2016. The results will be reported in the Annual Review.
Groundwater	<ul style="list-style-type: none"> Routine monitor 	<ul style="list-style-type: none"> Routine monitoring completed and generally consistent with modelled results.
Rehabilitation	<ul style="list-style-type: none"> General waste dumps Annual monitoring Topsoil management 	<ul style="list-style-type: none"> Establishment of rehabilitation on the waste emplacement near the power-line corridor. Annual Landscape Function Analysis monitoring was undertaken in May 2016. The results will be reported in the Annual Review. An annual topsoil balance has been completed in July 2016. The results indicate sufficient topsoil to complete full site rehabilitation.
Flora	<ul style="list-style-type: none"> Weeds Program GPG bio-control fungus trials. 	<ul style="list-style-type: none"> Weeds spraying is scheduled to recommence in Sep/Oct 2016 on Mining Leases, Offset areas and Yancoal property. DPI visited Duralie during June 2016 in preparation for the GPG fungus trial program on Yancoal land. The trial will commence in Spring 2016. Community updates will be provided during the program.
Community	<ul style="list-style-type: none"> Community Support Program GLC Soil Field Day 	<ul style="list-style-type: none"> Community Support Program 2016 presentation was held in June at the Gloucester Country Club. A total of \$50,000 in grants was distributed between 18 community groups. The program has granted over \$450,000 since commencing in 2010. A soils field day was held at the Williams property presented by David Hardwick providing information on healthy soils.

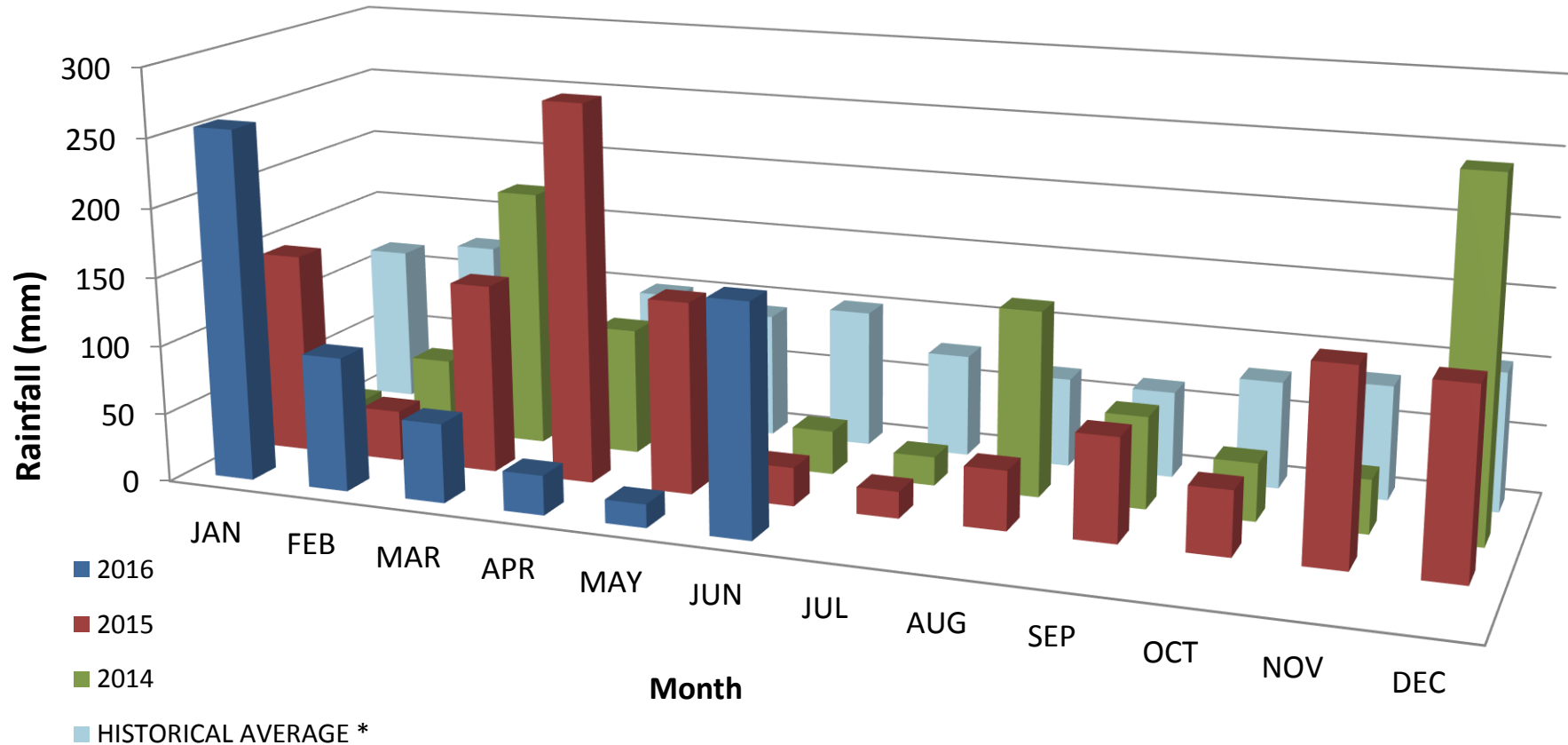
3. Environmental Monitoring Performance

1. Rainfall
2. Surface Water
 - a) pH
 - b) Electrical Conductivity
 - c) Total Suspended Solids
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

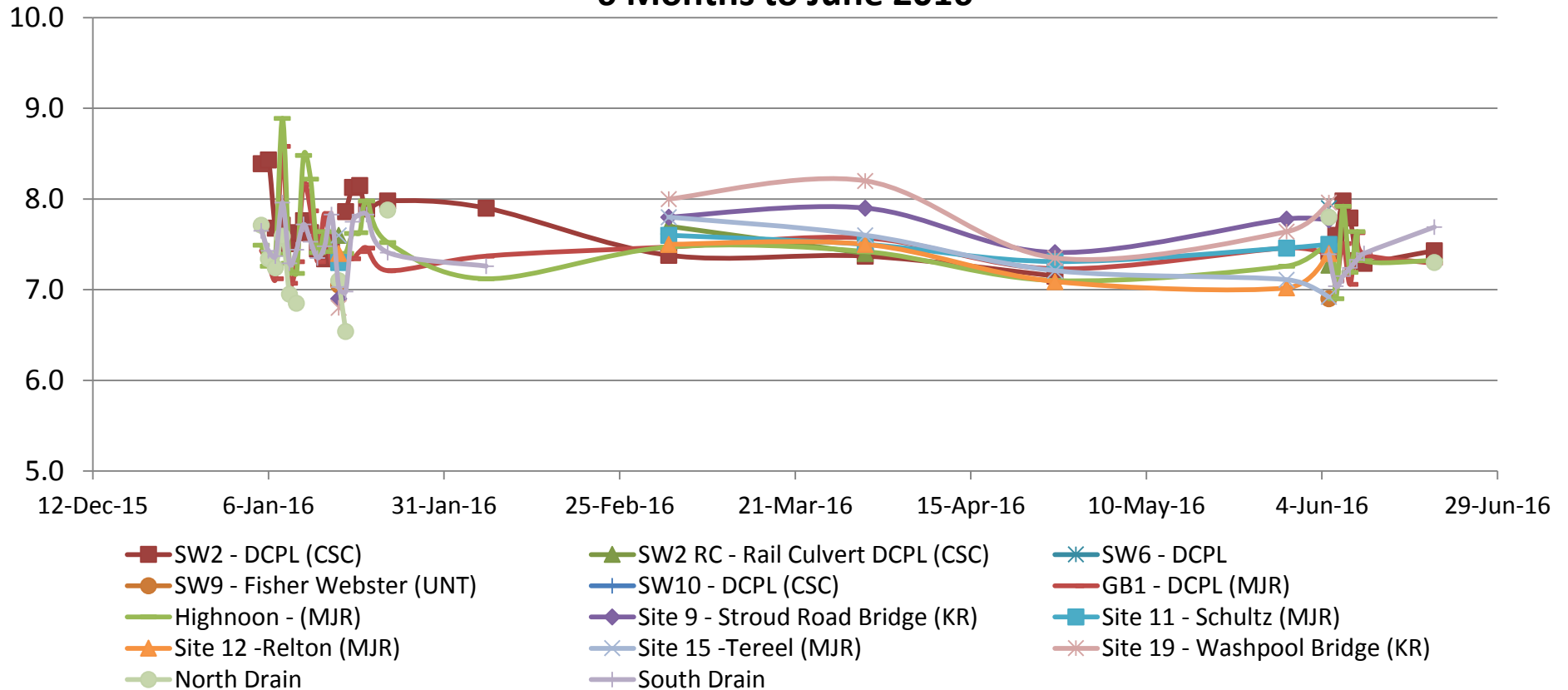


- Above average rainfall in January 2016.
- Dry March and May 2016.
- Heavy rainfall in June 2016



Surface Water - pH

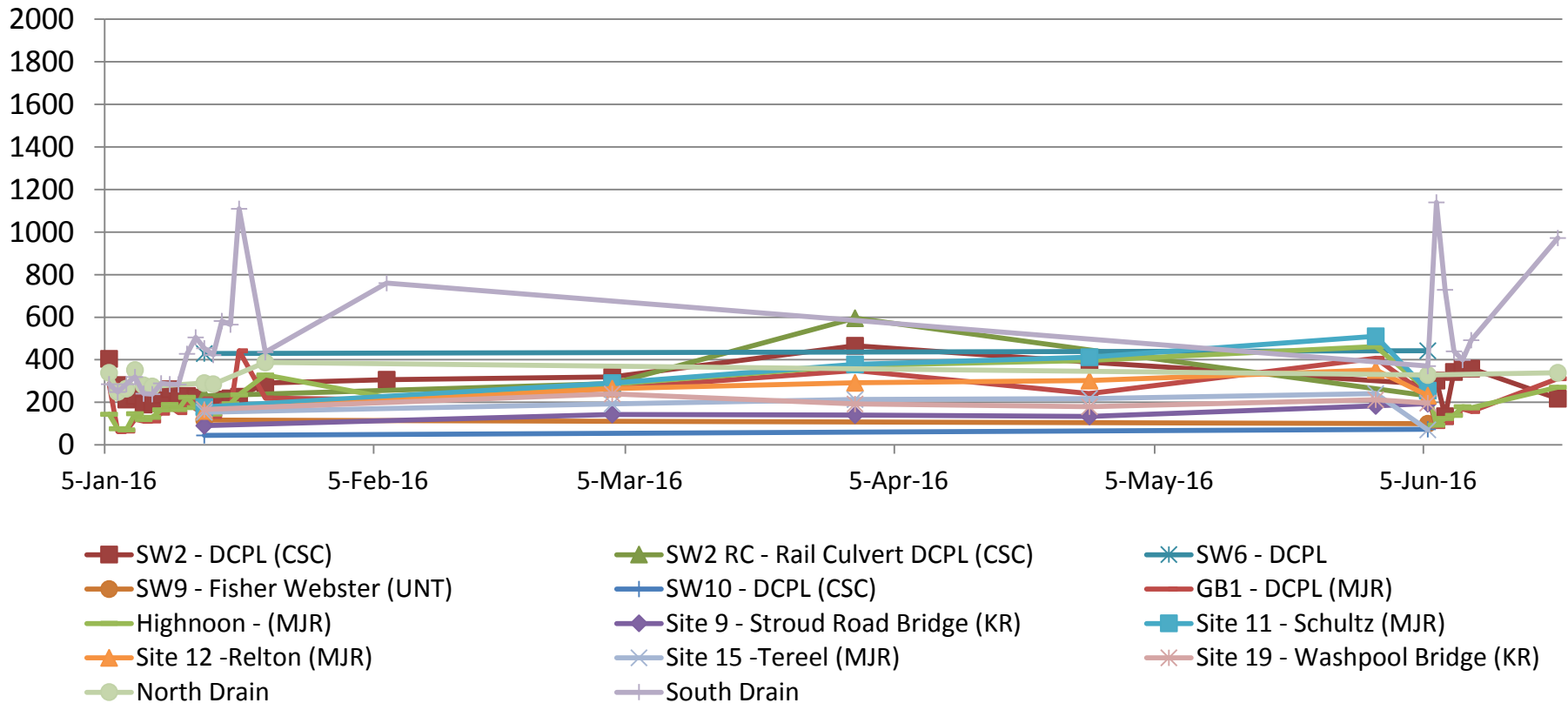
Duralie Surface Water Monitoring - pH 6 Months to June 2016



- All sites generally within DEP water quality performance indicators. No obvious trending towards performance indicators.
- Generally near neutral.
- Gaps indicate no flow

Surface Water – Electrical Conductivity

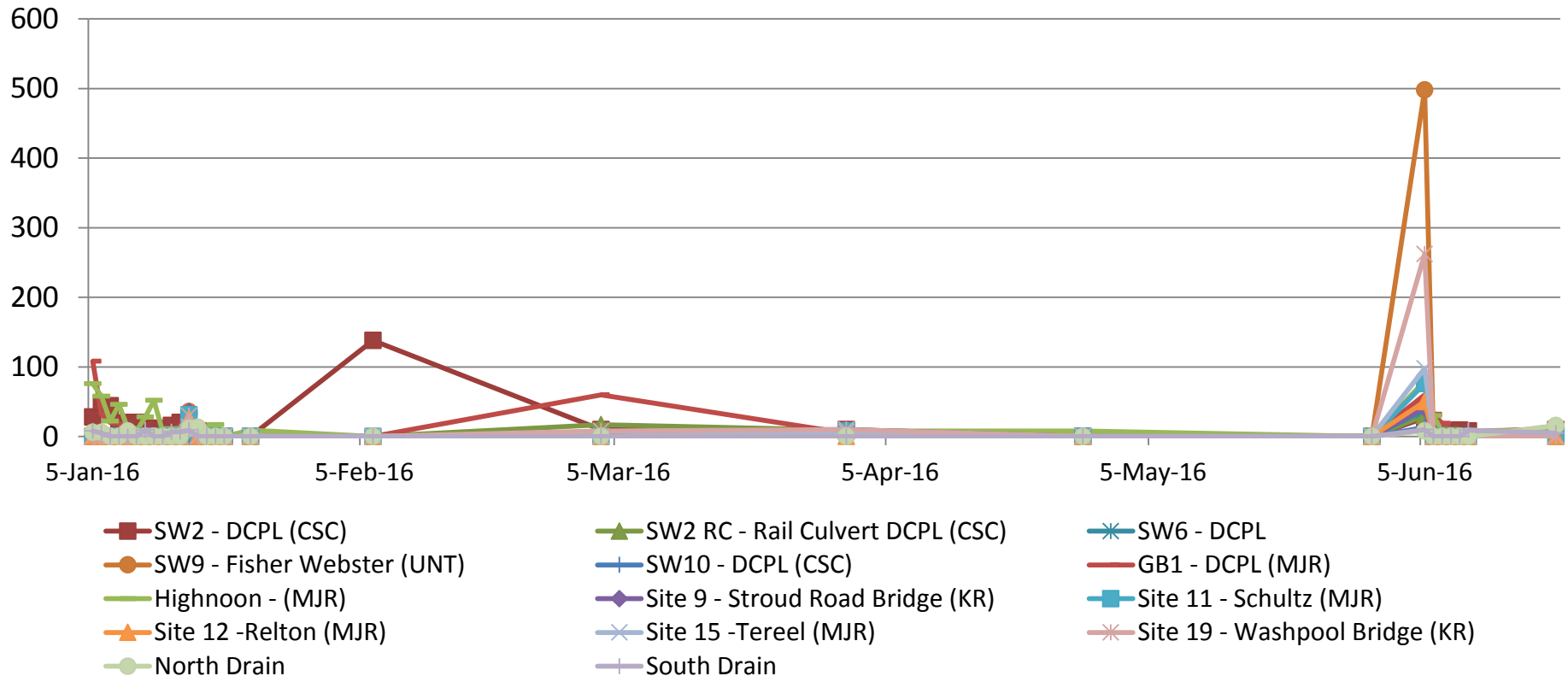
Duralie Surface Water Monitoring - EC ($\mu\text{S}/\text{cm}$)
6 Months to June 2016



- 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.

Surface Water – Total Suspended Solids

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

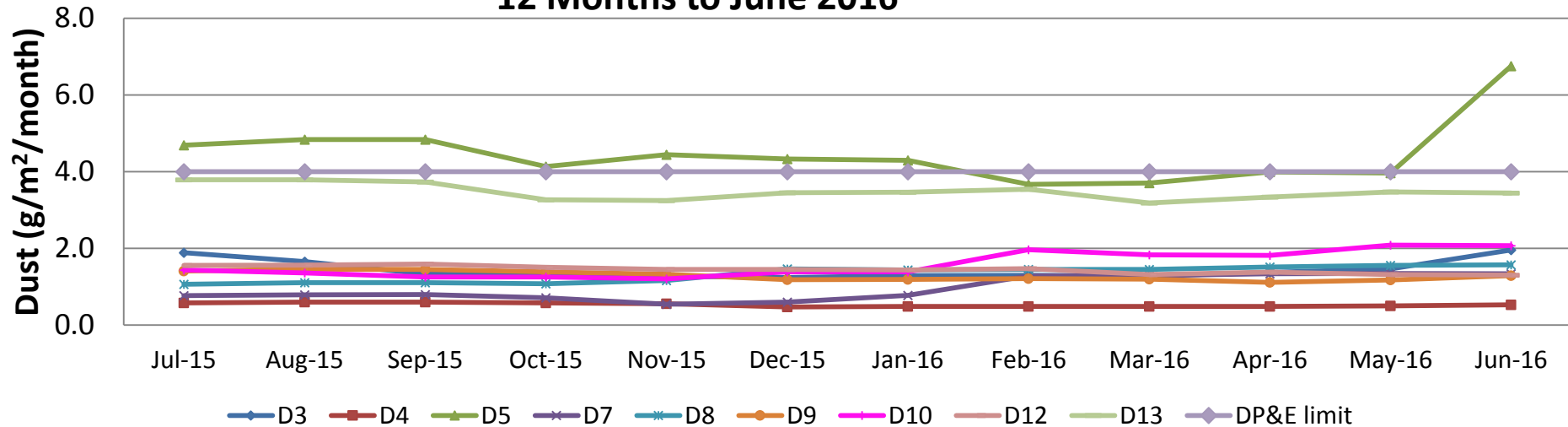


- All sites returned generally low TSS results. All sites generally within DEP water quality performance indicators
- Anomalous result recorded at SW9 on 5 June 2016. Results upstream and downstream on MJR indicate no elevated TSS levels. Follow-up monitoring during July 2016 indicated indicates no ongoing high TSS results.
- Gaps indicate no flow.



Air Quality – Dust Deposition

**Duralie Dust Deposition - Annual Rolling Average
12 Months to June 2016**



- Apr-16** D5 - Heavy - 30% Dirt, 0% Coal, 20% Vegetation, 10% Insects and 40% Polysaccharide slime.
- May-16** D13 - Medium - 40% Dirt 0% Coal 20% Vegetation 10% Insects 30% Polysaccharide Slime
- Jun-16** D3 - Very High - 10% Dirt 0% Coal 20% Vegetation 20% Insects 50% Polysaccharide Slime.
D5 - Very Heavy - 40% Dirt 0% Coal 20% Vegetation 20% Insects 20% 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 algaecide solution.

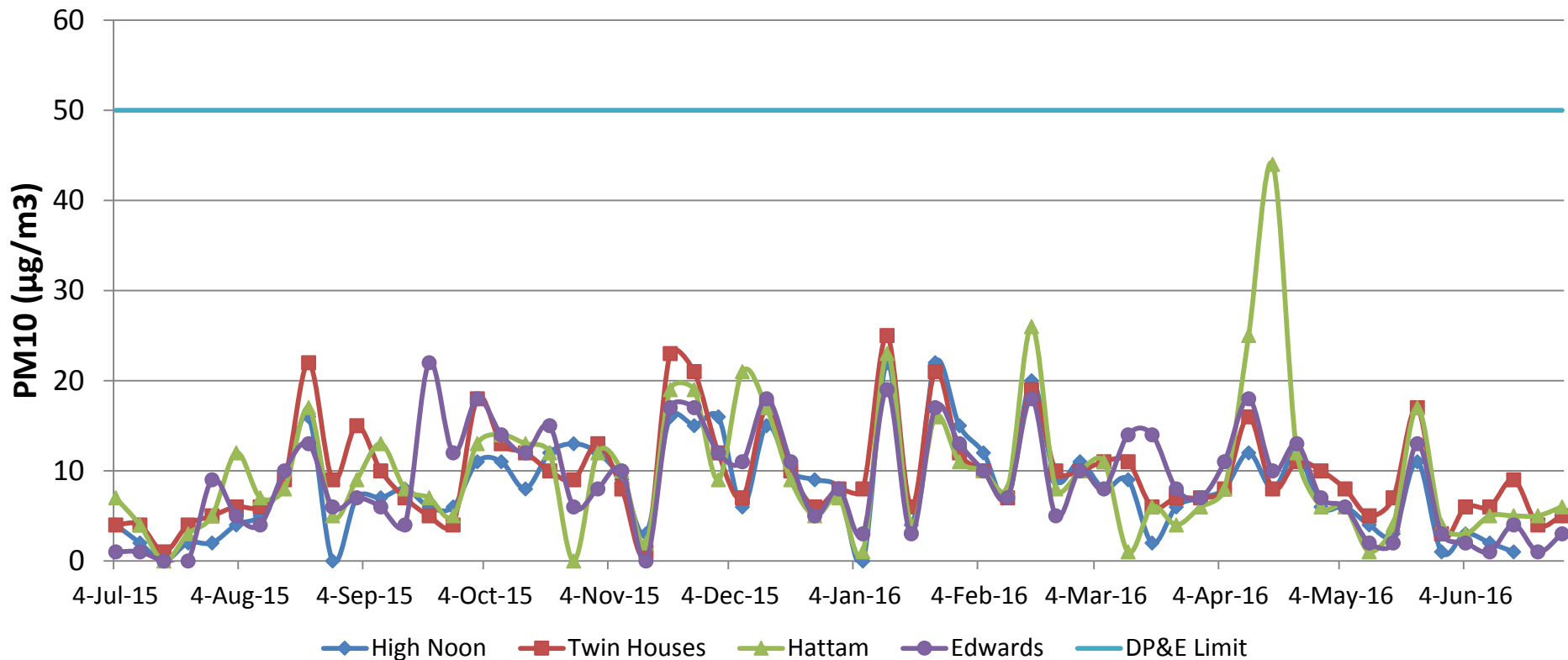
Contamination: Gelatinous material such as bird droppings

- High levels 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.



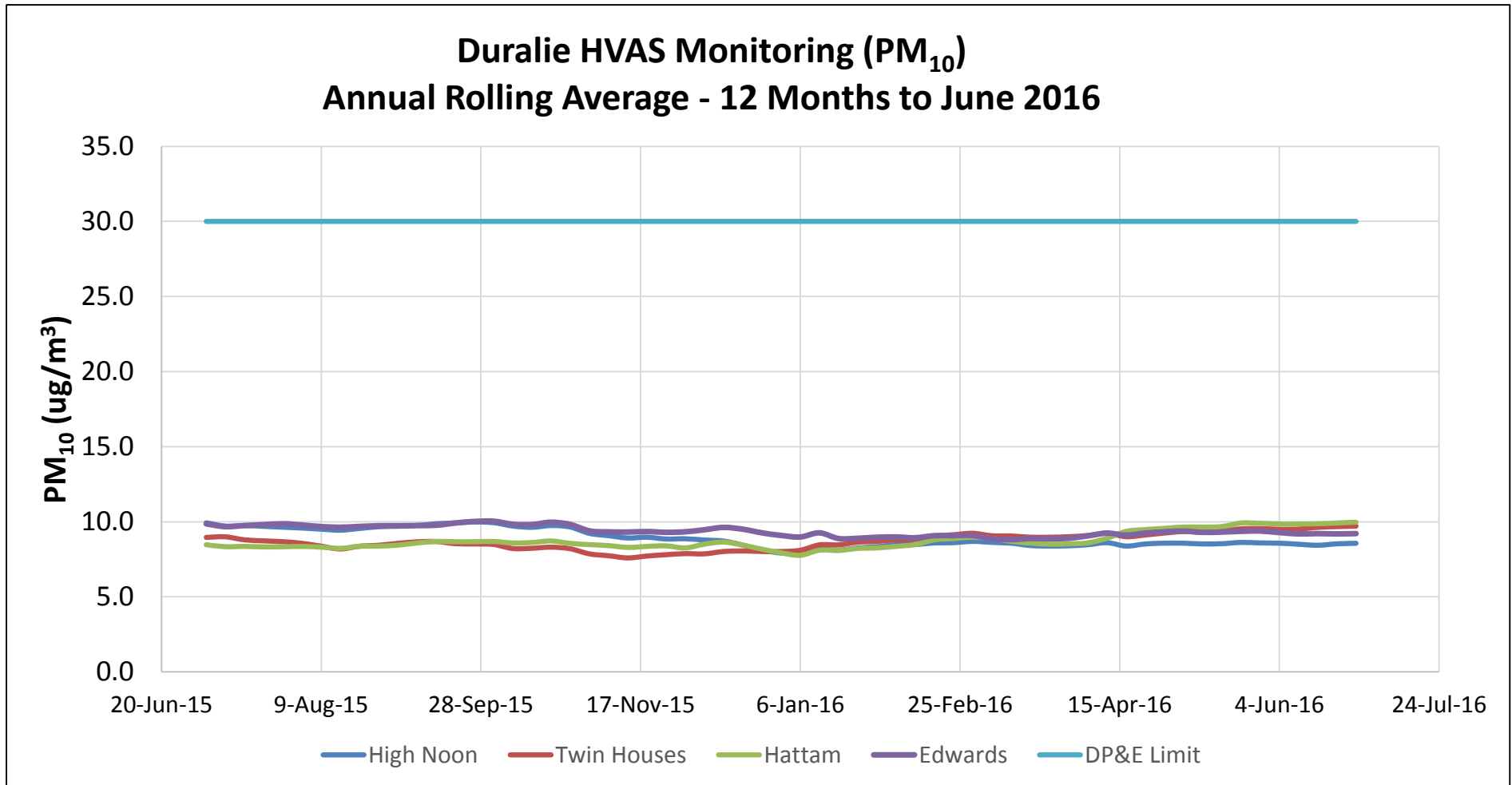
Air Quality – High Volume Air Sampler

Duralie HVAS Monitoring (PM10) 12 Months to June 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 17 April 2016.
- 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.
- Flat trend over previous 12 months.

Blasting

Location	Date	Time	Schultz (AB1)		Fisher-Webster (AAAB3)		Moylan (AAAB4)		Weismantel Inn		Overpressure Site Exceedance	Overpressure "Cumulative Exceedance"	Monitored Blasts ¹	Fume Rating
			24hr	mm/s	dBL	mm/s	dBL	mm/s	dBL	mm/s	dBL	%		
Clareval Block 2	18-Apr-16	12:34:00	0.26	87.2	0.45	105.6	0.6	104.3	1.76		5.0%	2	40	Nil
Weismantel Strip 16	19-Apr-16	16:49:00	<0.22	<110.0	0.3	113.9	<0.22	<110.0	0.77		4.9%	2	41	Nil
Clareval Block 7	23-Apr-16	9:52:00	<0.22	<110.0	0.36	108.6	0.37	105.5	0.73		4.8%	2	42	Nil
Weismantel Strip 16	27-Apr-16	16:37:00	<0.22	<110.0	0.27	104.8	0.33	108.1	1.15		4.7%	2	43	Nil
Weismantel Strip 16	28-Apr-16	16:31:00	<0.22	<110.0	0.27	106.4	<0.22	<110.0	0.74		4.5%	2	44	Nil
Weismantel Strip 16	03-May-16	12:45:00	<0.22	<110.0	<0.22	<110.0	<0.22	<110.0	0.8		4.4%	2	45	Nil
Clareval Block 6	05-May-16	12:34:00	<0.22	<110.0	0.3	104.5	0.51	109.2	1.55		4.3%	2	46	Nil
Weismantel Strip 16	10-May-16	13:02:00	<0.22	<110.0	0.53	107.5	<0.22	<110.0	0.87		4.3%	2	47	Nil
Weismantel Strip 16	17-May-16	12:40:00	<0.22	<110.0	0.58	108.6	<0.22	<110.0	0.87		4.2%	2	48	Nil
Weismantel Strip 16	20-May-16	12:34:00	<0.22	<110.0	0.47	112.1	<0.22	<110.0	0.89		4.1%	2	49	Nil
Weismantel Strip 16	25-May-16	12:43:00	<0.22	<110.0	0.41	112.0	0.4	108.1	1.04		4.0%	2	50	Nil
Weismantel Strip 16	27-May-16	12:42:00	<0.22	<110.0	0.37	109.1	0.4	108.1	1.03		3.9%	2	51	Nil
Clareval Block 7	04-Jun-16	16:45:00	<0.22	<110.0	0.51	100.6	0.42	109.4	0.82		3.8%	2	52	Nil
Weismantel Strip 16	10-Jun-16	16:37:00	<0.22	<110.0	0.58	117.5	<0.22	<110.0	1.48		5.7%	3	53	Nil
Weismantel Strip 16	15-Jun-16	12:48:00	<0.22	<110.0	0.34	105.6	<0.22	<110.0	0.63		5.6%	3	54	2B
Weismantel Strip 16	20-Jun-16	12:38:00	<0.22	<110.0	0.5	109.6	<0.22	<110.0	1.02		5.5%	3	55	Nil
Weismantel Strip 16	22-Jun-16	16:49:00	<0.22	<110.0	0.33	107.5	<0.22	<110.0	0.76		5.4%	3	56	Nil
Weismantel Strip 16	23-Jun-16	10:52:00	<0.22	<110.0	0.3	106.6	0.41	104.0	1.43		5.3%	3	57	Nil
Weismantel Strip 16	28-Jun-16	13:18:00	<0.22	<110.0	0.41	113.7	0.57	105.5	1.25		5.2%	3	58	Nil
Clareval Block 6	05-Jul-16	12:37:00	<0.22	<110.0	0.32	109.1	0.49	111.9	1.4		5.1%	3	59	1A
Clareval Block 6	08-Jul-16	12:36:00	<0.22	<110.0	0.25	91.9	<0.22	<110.0	<0.22		5.0%	3	60	Nil
Clareval Block 6	13-Jul-16	12:49:00	<0.22	<110.0	0.31	107.7	0.64	106.8	1.63		4.9%	3	61	Nil
Weismantel Strip 16	15-Jul-16	16:33:00	<0.22	<110.0	0.27	112.6	<0.22	<110.0	1.00		4.8%	3	62	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 3 blasts have exceeded 115dB(L)
- Reporting period re-started 04-Sep-2015.

4. Community Complaints

Duralie Complaint Summary

Period: 1/4/2016 - 30/6/2016

Total No. of Complaints: 4 (3 noise, 1 blast, 0 air quality, 0 other)

Total No. of Complainants: 4

Date/Time Complaint	Complainant Location	Method of Complaint	Nature of Complaint	Investigation/Outcome
13/04/2016 9:38hrs	Approx. 3.4km NNE of blast	Community hotline	Blasting and vibration	Complaint: "Big explosion and buildings shaking" DCPL representative called complainant at 10:30am. Complainant advised the blast was very loud and had shaken the house and shed. DCPL representative advised the results from the nearby blast monitor were below trigger levels. The complainant then stated her husband was at the neighbouring property where the monitor is located and confirmed the blast noise and vibration was minimal. DCPL advised this was useful information and would be provided to the Blast Engineer to investigate potential causes and factor into future blasting in this location. Blast designs continue to consider options for reducing vibration and overpressure.
4/05/2016 16:00hrs	4.5km NE of noise source	Direct to mobile	Evaporative fan noise	Call direct to mobile. Complainant advised they had hardly heard the evaporative fans since last year but this morning they were loud up to 10:30am. DCPL representative and complainant discussed evaporative fan run times leading into winter and that four fans had been removed from the waste dump. DCPL advised this morning a strong temperature inversion was present which may have contributed to the noise. Evaporative fan run hours will be reduced during the winter months and avoid times with strong inversions. DCPL will ensure evaporative fan controls continue to be implemented.
12/05/2016 0:10hrs	Wards River	Community hotline	Mine noise	Complainant stated there was a constant droning of mine noise during the night. DCPL representative returned call on 13/5/16. The complainant advised the mine noise was being heard during the night and mornings over the last few weeks. DCPL advised the recent noise monitoring has recorded low levels particularly in Wards River and complaints have been low. However DCPL also advised the operations had recently move to the north end of Weismantel and back to surface level which may have increased noise emissions, additionally the recent cooler nights and temperature inversion may enhance noise affectation, DCPL advised monitoring would continue near the residence and operations would be advised to consider noise mitigation measures leading into the cooler months. The complainant stated there appreciation for the return call and commented on the improved shuttle noise since the old trains used several years ago.
14/05/2016 00:20hrs	Wards River	EPA hotline	Mine noise	Complaint: "Rumbling noise from machinery continuing all day from Duralie Mine, and still present at 00:20 on 14/5/16." EPA requested a response to the above enquiry. An email was sent to the EPA on 18/5/2016 with comments on current operations, real-time noise monitoring data, weather conditions and the pro-active measures and controls implemented at Duralie Coal. No further action was required by the EPA.

5. Community Support Program 2016

The Stratford Coal Community Support Program 2016 presentation was held in June at the Gloucester Country Club. A total of \$50,000 in grants was distributed between 18 community organisations for a diverse range of projects across education, health, environment, infrastructure, arts, leisure and cultural heritage. The program has granted over \$450,000 since commencing in 2010.

The community groups to receive grants in 2016 are:

- Dymocks Children's Charities Ltd for Gloucester School Public Library Regeneration Project
- Gloucester Country Club for Stratford Coal Super Sevens Golf Competition
- Dungog Arts Society for Annual Art Exhibition major prize
- Rotary Club of Gloucester for Outdoor Fitness Trail – stage 3
- Gangat Rural Fire Brigade for purchasing training equipment
- Stroud Rodeo Association for 2016 Stroud Rodeo and campdraft
- United Wild Dog Alliance – Mid North Coast for wild dog eradication
- Dungog Agricultural and Horticultural Association for cool room in kiosk for Dungog Showground
- Gloucester RSL Sub Branch for safe seating for RSL services
- Gloucester Mountain Man Triathlon Incorporated for the Mountain Man Tri Challenge
- Worimi First People Aboriginal Corporation for NAIDOC Day 2016 and Gloucester Public School Brekkie Club
- Gloucester Chamber of Commerce for Chill Out Festival 2016
- Stroud Show Association Inc. for 2016 Stroud Show
- Gloucester Thunderbolts Swimming Club Inc. for storage reels for lane ropes
- Stroud Road Community Hall and Progress Association for Stroud Road Spring 'Bash 'n Bang'
- Gloucester District Historical Society for construction of archive and research centre – solar power system
- Rotary Club of Dungog for Dungog Pedalfest 2016
- Midcoast Science and Engineering Challenge and Discovery Day