

**Minutes:** Minutes of the 21<sup>th</sup> Meeting of the Maules Creek Coal Community Consultative Committee  
Held at the Boggabri Golf Club, Gunnedah Road, Boggabri NSW 2382

**Wednesday 16 May 2018**

**Members Present:** Darren Swain (DS) – WHC, Peter Wilkinson (PWi) – WHC, Scott Mitchell (SM) – WHC, Cr Robert Kneale (RK) - Narrabri Council, Cath Collyer (CC) – Community, Libby Laird (LL) - Community, Carolyn Nancarrow (CN) – Community, Anna Christie (AC) – Environmental Representative (Alternative)

**Guests:** Lindsay Fulloon (LF) – EPA, Megan Prowse (MP) – NSW EPA, Larry Clark (LC) – EPA, Rebecca Scrivener (RS)

**Observers:** Kirsten Gollogly (KG) – WHC

**Independent Chair:** David Ross (DR)

**Independent Secretary:** Debbie Corlet (DC)

<b>Agenda Items</b>	<b>Who to Present</b>
1. Apologies	DR
2. Declaration of pecuniary or other interests	DR
3. Confirmation of the minutes of the previous meetings a. Discussion on minutes for 1 November 2017	DR
4. Business arising from the previous minutes a. Action list distributed	DR
5. Correspondence	ALL
6. Overview of Activities: a. Progress at the mine b. Monitoring and environmental performance c. Community complaints and response to complaints d. Information provided to the community and any feedback e. Biodiversity Audit Presentation	PWi, DS, SM
7. General Business	ALL
8. Next Meeting – 15 August 2018	ALL

Agenda Item	Discussion	Action/By Whom
	<p><b>Welcome by David Ross</b> – DR welcomed everyone to the meeting. He reminded the group about continuing with listening <i>deeply</i> to try and understand each other better.</p> <p>LL - I have an issue with water and trying to communicate about the correct spelling of Oakleigh Crossing. Variations of Oaky, Oakey, Oakley etc is exhausting and annoying. Oakleigh Crossing is the correct spelling.</p> <p>LL – As community reps we bring questions to this meeting that people ask us to bring. These questions impact the community and I believe they weren’t answered.</p> <p>DR –At the last meeting, to progress it (issue about water), we put it as an action on Robert, Jack and Scott – action for further information from the Environmental Monitoring Report. Out of that through time better information, the impact of the operations of the mine on the creek etc.</p> <p>SM – Looking at the name and the convention of those crossings. Robert – did some investigating naming conventions and history. We provided the summary presentation and stepped through the history of the EA and what assessments were done at the crossing and Maules Creek. We communicated what we found.</p> <p>RK – I went back to the Council’s GIS section – creeks and crossings and local government and went back to Council to try and identify. We couldn’t identify Oakleigh Crossing. It has been frustrating to identify Oaky, Oakey or Oakleigh and we still couldn’t identify the correct spelling at the end of the day.</p> <p>AC – Why don’t you go to the author for validation? Why don’t you tell us who the author is? Why do you refuse?</p>	
1.	<p><b>Apologies</b> – Steve Eather, Jack Warnock, Simone Moodie, Kerri Clarke.</p>	
2.	<p><b>Declaration of pecuniary or other interests</b> – DR advised he is paid a fee to chair these meetings as is DC for typing the Minutes.</p>	
3.	<p><b>Confirmation of the minutes of the previous meetings (14 February 2018)</b> – RK moved that the minutes be approved; seconded by CC.</p>	
4.	<p><b>Business arising from the previous minutes</b></p> <p>Actions from previous meeting have been closed with WHC providing CCC members with responses prior to meeting.</p>	
5.	<p><b>Correspondence</b></p> <p>No correspondence tabled.</p>	
6.	<p><b>Company reports and overview of activities by DS</b></p>	

Agenda Item	Discussion	Action/By Whom
	<p><b>Company Report &amp; Overview of Activities</b></p> <p><b>Employment</b></p> <ul style="list-style-type: none"> <li>Continued focus on local, indigenous and female employment. Almost 90% employees live locally.</li> </ul> <p><b>Approvals</b></p> <ul style="list-style-type: none"> <li>Sound Power Level (SWL) modification – under DPE assessment. Independent Biodiversity Audit approved by DPE &amp; available on the WHC website. Consultation on the revised draft Social Impact Management Plan (SIMP) planned for early June. SIMP will be provided for review and comment to CCC, councils and Aboriginal stakeholders.</li> </ul> <p><b>Environmental Management</b></p> <ul style="list-style-type: none"> <li>Annual rolling average for TEOM 1 is 9.7ug/m3 at 31 March 2018 (criteria 30ug/m3). Dust suppressant application continued use across the operation.</li> <li>Regulatory agency visits during (now completed) clearing program. Feral animal control &amp; weed spraying ongoing. Fire break maintenance and scheduled ecological burning completed.</li> </ul> <p><b>Water Questions</b></p> <p>DS noted that the following questions were received from CN. Responses provided:</p> <p><b>Q1. Has Whitehaven Coal leased its 3000 ML High Security Namoi River License (Lic13050) that was purchased to provide most of the mines water requirements to another water user within the Namoi River Management Zone and if so, how long ago?</b></p> <p>No however each year water that has not been used by MCC is then temporary transferred as general security water licence to other users including cotton irrigators.</p> <p><b>Q2. When was this license (13050) last actively used by the Maules Creek mine?</b></p> <p>16 May 2018</p> <p><b>Q3. What is the annual water requirement for the mine in ML, including all substantial uses such as dust suppression and the coal wash plant?</b></p> <p>As per the Annual Reviews &amp; presented at previous CCC meeting: 2016 -947ML pumped from Namoi River and &lt;10ML pit inflows. 2017 -1860ML pumped from Namoi River and &lt;10ML pit inflows</p> <p><b>Q4. Is there a compliant and/or working water meter on the large pit pump that is currently being used to de-water the pit under approval of the mines 300 ML Porous Rock License (Lic 29588)?</b></p> <p>Yes</p> <p><b>Q5. How much water has been extracted from the pit in the last six months / twelve-month period?</b></p> <p>Groundwater pumped out of the pit was estimated to be less than 10ML for CY 2017.</p> <p><b>Q6. If the 3000ML Namoi River license (13050) has been inactive, how much water has been extracted from the pit since this license inactivity?</b></p> <p>Not applicable.</p>	

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	<p>DS and SM also presented on groundwater monitoring and WHC health contributions to local areas.</p> <p><b>Community</b></p> <ul style="list-style-type: none"> <li>• Complaints details noted in previously emailed Environmental Monitoring Report and on the website.</li> <li>• An array of sponsorships and donations have been made within the north west region. Donations are targeted at Health, Education and Community Enhancement. Ongoing VPA payments to Narrabri shire Council. CY 2018 \$1M for Narrabri Airport Upgrade (Apr – not Q1) and \$198,045.21 total Q1 monthly payments.</li> </ul> <p><b>Looking Forward</b></p> <ul style="list-style-type: none"> <li>• Continued production targeting 13Mtpa within 3 years. FY18 production target is 11Mtpa ROM (Run of Mine).</li> <li>• CY18 production target is 12Mtpa ROM. Continued focus on local recruitment.</li> </ul> <p><b>Questions from the Community</b></p> <p>A discussion was held regarding a vehicle collision incident that happened on site. Members of the CCC noted that it isn't just one accident that has occurred.</p> <p>PWi – Overall, we have a good safety record – April wasn't a good month for us, but we'll maintain a good safety record.</p> <p>CC – What's the process here as it was a rather drastic accident. What groups investigate it? Is it external?</p> <p>PWi – We investigate and DPE Mines Inspectors also investigate.</p> <p>CC – Do you then look at the overall scheme and make any changes to the structure of communication.</p> <p>PWi – Yes, we do. That one was reportable (to the regulator). It's all in the Act.</p> <p>AC – What about the digger that fell in the pit?</p> <p>PW – No digger fell in the pit.</p> <p>AC – Workers do live in the community. Maybe this is not something to report. What triggers a disclosure?</p> <p>PW – You can find it. It's all in the Act.</p> <p>LL – Talking about employment – How many automated vehicles currently in use?</p> <p>PWi – None in use now. We have considered new automated trucks. Still thinking about it – but haven't set a firm date for it. We met with Gunnedah and Narrabri Councils and discussed looking at it as a project. That technology is developing rapidly over in WA – there are several operations very successfully using automated vehicles.</p> <p>AC – Independent Environment Audit – was Guy Williams accompanied on his surveying of offsets.</p> <p>SM – Andrew (Wright) was with him.</p>	

Agenda Item	Discussion	Action/By Whom
	<p>AC expressed concern that not enough time had been allocated to undertake the survey.</p> <p>AC – I don't see how he could have done a proper assessment. In other words, it would take a long time to get to them and assess them. This compares very poorly against Boggabri Coal IB Auditor. We also had to work with them on this process. Their Auditor spent three days looking at less offsets that were closer together.</p> <p>SM – All comments were addressed by the audit and the DPE. I'm sure they provided comment.</p> <p>DS – Back to slides: 2018 clearing campaign finished in Mid-March.</p> <p>DR – August meeting will present on the Biodiversity Management Plan.</p> <p>PWi – We did receive an official caution from DPE re Equipment Sound Power Level. Have put in a modification and are still waiting for a response. Environmental compliance – we are achieving an environmental compliance but there are more efficient ways. Noise level of fixed plant is below the level of the trucks.</p> <p>LL – Is this about sound power and what pieces of equipment?  PW – Fixed plant, transfer station, train load out... half a dozen pieces.</p> <p>LL – Are you talking about the fixed plant sound power data in the 2016 or 17 Annual Review?  PW – 2016. There is a list of pieces of equipment that are higher than predicted in the EA.</p> <p>AC – Is this the one you screened last year?  PWi – We screened a lot last year.</p> <p>AC – It isn't the trucks.  SM – It relates to the sound power level that is described in the EA – very descriptive – in the back of our annual reviews – reported figures against the criteria. Has been considerable work to address those sound levels.</p> <p>AC – That has never been independently validated. Since the mandatory auditor – he indicated he was relying on the data that wasn't included in his scope.  SM – We responded to both the EPA and Planning out of the Audit – the Department also acknowledged in this official caution with improving sound – modifications in.</p> <p>PWi – We are receiving expert advice and it is reducing the truck noise.</p>	<p>ACTION 1 – How</p>

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	<p>LL – The Document – The Disturbance Limits Approach Report is not on the website – is the Report to be found? DS – It is on the website now.</p> <p>DS – (Back to Slides – Water) – Licence 13050 last actively used today. Currently in use. All the water we import comes from the river licences.</p> <p>CC – (re water) So you’ve pumped out every year? PWi – Yes, we have every year. Prediction 200 megalitres per year. 2016 and 2017 were less than 10 megalitres. We have recently pumped water into the pit. We keep in touch with the Water Authority – they requested we store water in the pit.</p> <p>AC – What about seepage going into the pit? Has that increased? PWi – It has been very low. Little as we’ve gone deeper.</p> <p>AC – River licence or bore licence? DS – River licence but not out of bores.</p> <p>CN – What zone is that coming out of? DS – Namoi River licence.</p> <p>DS – Anybody can own a water licence. There might be some in Sydney. They aren’t attached to the land.</p> <p>AC – However, you own water licences at the offsets, which are integral to the mine operation. You have licences at the surrounding offsets. Aren’t they in Zone 11? SM – There might be some offsets that have water licences.</p> <p>AC – All those properties around the mine – this is not including that. How many bore licences might that be? DS – Stock and domestic.</p> <p>AC – (In relation to water authority’s requirements) Have to release more often. 100 megs out – releasing the water as often. They’ve asked you to take 300 out for example to store on site. Is that the gist of it? PWi – Keepit Dam release water on less occasions. For each release you need to store more.</p> <p>AC – Does the pump in your pit have a metre on it? SM – It is manually read?</p>	<p>many licences do MCC have</p> <p>ACTION 2 – DS to talk to AC</p> <p>ACTION 3 – MCC to identify amount of water extracted in last quarter.</p> <p>ACTION 4 – Use current names for Sites Red 12 or 1A.</p>

Agenda Item	Discussion	Action/By Whom
	<p>LL – What kind of metre – flow or telemetry? SM – Flow.</p> <p>LL – Was it State Water that asked you to store more water in your pit. PWi – They advised us that they would have less releases. So, we need to store more water. LL – How much water are you storing? PWi – 700 ML, not exact. See page in 2016/17 – a little bit of an increase as having gone deeper. Our 3,000 ML licence is enough for us in a dry year.</p> <p>AC – Trying to reconcile the numbers (on the bore monitoring map shown). I think people are starting to get mixed up – the changing names of bores – reconcile the old documents that have different names – consolidated or renamed and making it difficult for everyone concerned.</p> <p><b>Slides on Dust</b> AC – Filters – how often are they removed and measured. SM – Does a run every 6-days.</p> <p>AC – How do you choose which day? DS – Does it automatically every 6 days. SM – Think that’s the standard (throughout the mines).</p> <p>CC – Dust – MC2 dust – what’s location is that? SM – Up near Maules Creek – near the hall.</p> <p><b>Slides on Tonnage – Going to 11 million tonnes</b> SM – The Annual Review is still with DPE. LL – Where is the Annual Review, we normally get it at this meeting? When was it submitted? SM – Submitted mid-March. LL – Isn’t this unusual? Last year it was signed off mid-February. It was dated January.</p> <p><b><u>EPA Presentation by Larry Clark</u></b></p> <p>LF – Introduced LC to further discuss what noise monitoring is. LC – We are a specialist unit for EPA, assisting regional offices with complaint and noise issues throughout NSW. Noise impacts people differently so we try to qualify those with objective measures. Objectives are set for industry that not everybody will find acceptable. Reason is to balance the economic with people’s amenity.</p>	

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	<p>If we take regulatory action against somebody – how likely is it that our result will be challenged. We need to be very careful with what we do. We could be successfully challenged where there is not any harm and if exceedance is so small that most people can't hear that difference.</p> <p>When we do our monitoring – the equipment is precise. Person is trained and qualified to use it. Resource commitment though to have someone sitting there as we can't have someone there all the time. We've moved therefore to using unattended monitoring methods first – equipment now has massive amounts of memory which enables 24/7 audio recording and data logging. Data is then graphed. Within a few minutes of looking at the graph – we can look at it and see any issues and hone-in to see if we need to listen to the audio to determine whether the data is reflecting mine noise or other sources.</p> <p>CC – With the noise monitoring and the modelling – when you are doing your modelling say a new mine coming on board – why is there a difference in the shape and size and direction in the noise contours?  LC – Isopleths not noise contours. They are affected, for example, by barriers or the countryside – hills. The terrain with different types of vegetation can have an effect. Attenuated by the forest and not by the water. Wind as well to push out in other directions.</p> <p>CC – Inversions, cold conditions can influence the noise?  PW<sub>i</sub> – Studies have shown strong inversions are less than 10% G level.</p> <p>LC - Normal atmosphere temperatures drop as you go up. Sound will travel through it in a straight line. Under inversion conditions this relationship is reversed – noise is then refracted which reduces the usual rate of attenuation with horizontal distance. During the day, the inversion disappears, and the refraction stops and the site can seem quieter.</p> <p>AC – That's important issue for Maules Creek – we believe the model hasn't been validated to those areas – refracting off the hills. I would call it bouncing off the hills.  LL – Under the consent conditions G Class does apply. Your study is saying that these noise conditions don't apply because the conditions say you can have the G Class removed.</p> <p>LC – At other sites you might have conditions which switch off the noise limits when inversion strength exceeds certain criteria. This isn't the case at Maules Creek – the Planning Assessment Commission applied the limits under all inversions for the MCCM.</p> <p>CC – So does that mean a lower hum that continually goes – they find that highly annoying from machinery.  LC – Most studies show it varies – if it goes up and down. It could be. People are very readily reactive to a new noise level. Then suddenly there is a new one – then people tend to notice it.</p>	<p>ACTION 5 – AC to let WHC know exactly what she wants for better reporting of noise</p>

Agenda Item	Discussion	Action/By Whom
	<p>LF – Governments decide where appropriate noise limits should be set. Must be able to account for the noise – better hearing than others for different frequencies. Never going to be possible to satisfy everyone.</p> <p>AC – Now the standard is? Where is it written?</p> <p>LF – Look at how default levels are set – not substantially changing other than for day time where it will increase 35db to 40 for new developments only. Maules Creek will continue to be regulated under the old Industrial Noise Policy – so nothing will change unless the project is modified to an extent that requires its noise emissions to be reassessed.</p> <p>AC – Outstanding issue the form of reporting under the new system? With a new system back in November got the first noise report using the new system and no one understood it. What are the readings / the levels / the frequencies? We’re asking for guidance for reporting.</p> <p>LF – We spoke about this – There’s 2 different sources – 1 is the report that you receive at CCC meetings, the other is the reporting of licence monitoring data on the licensee’s website. The EPA has no jurisdiction over the form of reporting to the CCCs. If the CCC wants more detail – you need to talk to WHC and / or DPE about that. The licence monitoring data publication requirements are established in legislation and cannot be varied outside the legislative review and parliamentary process.</p> <p>AC – How are we going to negotiate this – this better reporting of the noise?</p> <p>LF – Studies played noise at a high frequency and a low frequency – which one was most annoying – most said the high frequency. This was done in a room. Unbalanced if low frequency.</p> <p>PWi – Write it down as to exactly what you want. We’ll give it proper consideration.</p> <p>CC – Noise monitoring is not only Maules Creek.</p>	
7.	<p><b>General Business</b></p> <p>CN – There was a young fellow at WHC who didn’t get through. It would be helpful if the program doesn’t want them for whatever reason – they still get feedback – they could do courses.</p> <p>CC – Tarrawonga CCC raised issue for Maules Creek – with staff parking on Stock Road (along the golf club end), Gunnedah and an issue with the buses. Quite often blocking drive ways.</p> <p>LL – Is it true that your conditions require the original MC mine water model to be recalibrated in 2017 and every 3 years</p>	<p>ACTION 6 – DS to request Contractor &amp; WHC give feedback to unsuccessful applicants.</p> <p>ACTION 7 – MCC to investigate the staff</p>

Agenda Item	Discussion	Action/By Whom
	<p>after this? SM – Yes.</p> <p>LL – So, the water report that you provided the community in Sept 2017 was done using recalibrated model? SM – No.</p> <p>AC – So, was the water report that you provided the community in Sept 2017 was done using recalibrated model? SM – No, that was a site water balance.</p> <p>SM – It’s an extensive exercise. PW<sub>i</sub> – It’s actual data not modelled data.</p> <p>PW<sub>i</sub> – Recalibrated model suggests the EA model overestimated seepage into pit. Latest model says less than 2 Megalitres per year from Zone 11. I haven't seen much water seepage in pit.</p> <p>CC – Are you in Zone 11. PW<sub>i</sub> – No Zone 11 is to the north. The mine is in the porous rock zone. Prediction of 1 or 2 megalitres per year from Zone 11.</p> <p>CC – Southern side – in your footprint – do you fall into Zone 4 as well? PW<sub>i</sub> – We’re not really in those zones.</p> <p>AC – On the Water Management Plan – still dated 2014. Do you have a more recent version? SM – Not approved yet.</p> <p>AC – It hasn’t been approved? It is now 2018 – 4 years and a new calibration and still don’t have a current plan. We are wondering when we’ll have an updated Water Management Plan.</p> <p>AC – We’ve been informed some major earthworks at Willeroi offset – we’d like to know what they are. DS – Nothing that we’re aware off. Willeroi is not Maules Creek but WHC.</p> <p>AC – Offset for which mine. KG – Offset of other mines. Willeroi is a combined offset. Not for MCCM. Rocglen, Sunnyside. Evidence of historical activity that is being managed.</p> <p>AC – Made reference to a question asked by a shareholder at the WHC AGM; Shareholders at the Whitehaven AGM, 27</p>	<p>parking on Stock Road</p>

Agenda Item	Discussion	Action/By Whom
	<p>October 2017 report that Mr Flynn repeated the claims that there are no complaints. The EPA has now refuted Mr Flynn’s statements, which were false and misleading. Namely, “Why was the risk category of Maules Creek mine escalated this year? And does this new state of affairs impact on forecast liabilities especially regarding any facts disclosed for negotiation of new financing agreements in August?” AC noted that Paul Flynn’s response was that WHC would challenge the EPA on this, believing that the 2 matters on which that classification turned on were largely be administrative matters not actually risk in terms of environmental outcomes. These had to do with a lot of complaints from a landowner nearby to the mine, which resulted in the EPA suggesting that WHC undertake an audit <i>“just to prove to everybody that its actually not as bad as this gentleman seems to be making out”</i>. It was WHC’s view that the motivation including the initiation of that audit was to deal with a serial complainant who had no basis other than a commercial one.</p> <p>DR – Are you seeking a response from Maules Creek. AC – No. It was said by the CEO and I wanted people to hear what was said.</p> <p>LL – When residents heard of this exchange their response was – I wonder if he was talking about me. What were the four issues that put MCCM at a Level 3 risk rating?</p> <p>LF – Penalty notice for dust omissions, official caution, mandatory Environmental Audit and will have to get back on the other one.</p> <p>PWi – Will take it on notice. MP – The EPA have responded.</p> <p>PWi – Our dust is lower than anyone else’s and our noise is compliant.</p> <p>DS handed all CCC members with a hard copy of the WHC presentation.</p>	
8.	<b>Next meeting date to be agreed</b> - Next meeting Wednesday 15 August 2018 at 2:00pm.	

Meeting Closed:

4:50pm

Page No	Action No	Description	Date Raised
6	1	How many licences do MCC have?	16 May 2018
6	2	DS to talk to AC	16 May 2018
6	3	MCC to identify amount of water extracted in last quarter	16 May 2018
6	4	Use current names for Sites Red 12 or 1A	16 May 2018
8	5	AC to let MCC know exactly what she wants for better reporting of noise	16 May 2018
8	6	DS to request Contractor & WHC give feedback to unsuccessful applicants	16 May 2018
8	7	MCC to investigate the staff parking on Stock Road	16 May 2018

## Maules Creek Coal Mine Community Consultative Committee Meeting #21

### Environmental Monitoring Report For the Q1 period, January-March 2018

#### Attended Noise Monitoring

Attended noise monitoring was undertaken at six locations on the 29-30 January; 13-15 February; and 14-15 March 2018 by an independent acoustic consultant. The measured noise level (LA<sub>eq 15 minute</sub>) attributed to Maules Creek Coal Mine (MCCM) and applicable criteria for each location are shown in the tables below.

#### **LA<sub>eq, 15minute</sub> GENERATED BY MCCM AGAINST OPERATIONAL EVENING AND NIGHT NOISE CRITERIA – JANUARY TO MARCH 2018.**

**Table 1 - January Noise Monitoring**

		Time	Wind Speed m/s	Rainfall mm	Criterion dB <sup>3</sup>	Criterion Applies <sup>1</sup>	MCC LA <sub>eq</sub> dB <sup>2,3</sup>	Exceedance dB <sup>3,4</sup>
NM1	30/01/2018	20:30	0.5	0	35	Yes	<25	Nil
NM1	30/01/2018	20:45	1.1	0	35	Yes	<25	Nil
NM1	29/01/2018	23:15	4.2	0	35	No	NM	NA
NM1	29/01/2018	23:30	3.7	0	35	No	NM	NA
NM2	29/01/2018	21:00	4.5	0	39	No	<30	NA
NM2	29/01/2018	21:15	4.9	0	39	No	<30	NA
NM2	30/01/2018	22:30	0.2	0	39	Yes	33	Nil
NM2	30/01/2018	22:45	0.3	0	39	Yes	32	Nil
NM3	29/01/2018	19:30	3.5	0	35	No	IA	NA
NM3	29/01/2018	19:45	4	0	35	No	IA	NA
NM3	31/01/2018	0:00	0.6	0	35	Yes	NM	Nil
NM3	31/01/2018	0:15	0.7	0	35	Yes	NM	Nil
NM4	30/01/2018	21:15	0.7	0	NA	Yes	30	Nil
NM4	30/01/2018	21:30	0.4	0	NA	Yes	30	Nil
NM4	29/01/2018	23:59	3.7	0	NA	No	NM	NA
NM4	30/01/2018	0:15	3	0	NA	Yes	NM	Nil
NM5	30/01/2018	19:45	1	0	35	Yes	IA	Nil
NM5	30/01/2018	20:01	1	0	35	Yes	IA	Nil
NM5	29/01/2018	22:32	4.6	0	35	No	IA	NA
NM5	29/01/2018	22:48	4.6	0	35	No	IA	NA
NM6	29/01/2018	20:15	3	0	35	Yes	IA	Nil
NM6	29/01/2018	20:30	3	0	35	Yes	IA	Nil
NM6	30/01/2018	23:12	0.6	0	35	Yes	NM	Nil
NM6	30/01/2018	23:27	0.7	0	35	Yes	NM	Nil

**Table 2 - February Noise Monitoring**

		Time	Wind Speed m/s	Rainfall mm	Criterion dB <sup>3</sup>	Criterion Applies <sup>1</sup>	MCC LAeq dB <sup>2,3</sup>	Exceedance dB <sup>3,4</sup>
NM1	14/02/2018	20:15	1.4	0	35	Yes	22	Nil
NM1	14/02/2018	20:30	0.9	0	35	Yes	21	Nil
NM1	13/02/2018	22:45	0.4	0	35	Yes	31	Nil
NM1	13/02/2018	23:00	0.7	0	35	Yes	27	Nil
NM2	13/02/2018	20:45	3.3	0	39	No	<20	NA
NM2	13/02/2018	21:00	3.2	0	39	No	IA	NA
NM2	14/02/2018	22:15	1.9	0	39	Yes	21	Nil
NM2	14/02/2018	22:30	1	0	39	Yes	23	Nil
NM3	13/02/2018	19:15	4.2	0	35	No	IA	NA
NM3	13/02/2018	19:30	2.6	0	35	Yes	IA	Nil
NM3	14/02/2018	23:45	0.5	0	35	Yes	IA	Nil
NM3	15/02/2018	0:00	0.6	0	35	Yes	IA	Nil
NM4	14/02/2018	21:00	1.5	0	NA	Yes	21	NA
NM4	14/02/2018	21:15	1.6	0	NA	Yes	23	NA
NM4	13/02/2018	22:00	2.3	0	NA	Yes	22	NA
NM4	13/02/2018	22:15	0.6	0	NA	Yes	22	NA
NM5	14/02/2018	19:30	2.7	0	35	Yes	24	Nil
NM5	14/02/2018	19:45	2.3	0	35	Yes	21	Nil
NM5	13/02/2018	23:30	0.6	0	35	Yes	23	Nil
NM5	13/02/2018	23:45	0.7	0	35	Yes	25	Nil
NM6	13/02/2018	20:00	3.5	0	35	No	IA	NA
NM6	13/02/2018	20:15	3	0	35	Yes	IA	Nil
NM6	14/02/2018	23:00	1.3	0	35	Yes	NM	Nil
NM6	14/02/2018	23:15	0.9	0	35	Yes	NM	Nil

**Table 3 - March Noise Monitoring<sup>5</sup>**

		Time	Wind Speed m/s	Rainfall mm	Criterion dB <sup>3</sup>	Criterion Applies <sup>1</sup>	MCC LAeq dB <sup>2,3</sup>	Exceedance dB <sup>3,4</sup>
NM1	14/03/2018	22:28	0.4	0	35	Yes	IA	Nil
NM2	14/03/2018	23:17	0.5	0	39	Yes	IA	Nil
NM3	15/03/2018	0:09	2.6	0	35	Yes	IA	Nil
NM4	14/03/2018	22:53	0.4	0	35	Yes	IA	Nil
NM5	14/03/2018	22:00	0.5	0	35	Yes	IA	Nil
NM6	14/03/2018	23:43	1.4	0	35	Yes	IA	Nil

- (1). Noise emission limits do not apply during periods of rainfall or winds greater than 3 metres per second (at a height of 10 metres);
  - (2). Estimated or measured LAeq,15minute attributed to MCCC;
  - (3). NA in exceedance column means criterion is not applicable, either due to atmospheric conditions outside those specified in project approval or due to property acquisition by MCC; and
  - (4). Bold results indicate exceedance of criterion.
  - (5). EPL20221 variation approved amending monitoring conditions during March
- IA – Inaudible NM – Not measurable

One measurement during February was within 5 dB of the relevant criterion where meteorological conditions resulted in criteria applying (in accordance with the project approval). The measurement was assessed against the low frequency modification factors in accordance with the EPA's Noise Policy for Industry, and was determined to have remained compliant.

The Maules Creek Coal (MCC) EPL 20221 also has a '1 Minute - Night' criteria (LA1) that applies from 10pm to 7am Monday to Saturday & 10pm to 8am Sundays and Public Holidays. The results for the LA1 monitoring are shown below. The results show that mine operations did not exceed the applicable LA1 criteria during attended noise monitoring in Q1 2018.

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**LA1, 1minute GENERATED BY MCC AGAINST OPERATIONAL EVENING NOISE CRITERIA – JANUARY TO MARCH 2018.**

**Table 4 - January Noise Monitoring – Night**

	L <sub>A1</sub> (1min)	January		Rainfall	Criterion	Criterion	MCC L <sub>A1(1min)</sub>	Exceedance
		Time	Wind Speed					
			m/s	mm	dB <sup>3</sup>	Applies <sup>1</sup>	dB <sup>2,3</sup>	dB <sup>3,4</sup>
NM1	29/01/2018	23:15	4.2	0	45	No	NM	NA
NM1	29/01/2018	23:30	3.7	0	45	No	NM	NA
NM2	30/01/2018	22:30	0.2	0	45	Yes	36	Nil
NM2	30/01/2018	22:45	0.3	0	45	Yes	36	Nil
NM3	31/01/2018	0:00	0.6	0	45	Yes	NM	Nil
NM3	31/01/2018	0:15	0.7	0	45	Yes	NM	Nil
NM4	29/01/2018	23:59	3.7	0	NA	No	NM	NA
NM4	30/01/2018	0:15	3	0	NA	Yes	NM	Nil
NM5	29/01/2018	22:32	4.6	0	45	No	IA	NA
NM5	29/01/2018	22:48	4.6	0	45	No	IA	NA
NM6	30/01/2018	23:12	0.6	0	45	Yes	NM	Nil
NM6	30/01/2018	23:27	0.7	0	45	Yes	NM	Nil

**Table 5 - February Noise Monitoring – Night**

	L <sub>A1</sub> (1min)	February		Rainfall	Criterion	Criterion	MCC L <sub>A1(1min)</sub>	Exceedance
		Time	Wind Speed					
			m/s	mm	dB <sup>3</sup>	Applies <sup>1</sup>	dB <sup>2,3</sup>	dB <sup>3,4</sup>
NM1	13/02/2018	22:45	0.4	0	45	Yes	36	Nil
NM1	13/02/2018	23:00	0.7	0	45	Yes	35	Nil
NM2	14/02/2018	22:15	1.9	0	45	Yes	25	Nil
NM2	14/02/2018	22:30	1	0	45	Yes	27	Nil
NM3	14/02/2018	23:45	0.5	0	45	Yes	IA	Nil
NM3	15/02/2018	0:00	0.6	0	45	Yes	IA	Nil
NM4	13/02/2018	22:00	2.3	0	NA	Yes	28	NA
NM4	13/02/2018	22:15	0.6	0	NA	Yes	27	NA
NM5	13/02/2018	23:30	0.6	0	45	Yes	27	Nil
NM5	13/02/2018	23:45	0.7	0	45	Yes	31	Nil
NM6	14/02/2018	23:00	1.3	0	45	Yes	NM	Nil
NM6	14/02/2018	23:15	0.9	0	45	Yes	NM	Nil

**Table 6 - March Noise Monitoring – Night**

	L <sub>A1</sub> (1min)	March		Rainfall	Criterion	Criterion	MCC L <sub>A1(1min)</sub>	Exceedance
		Time	Wind Speed					
			m/s	mm	dB <sup>3</sup>	Applies <sup>1</sup>	dB <sup>2,3</sup>	dB <sup>3,4</sup>
NM1	14/03/2018	22:28	0.4	0	45	Yes	IA	Nil
NM2	14/03/2018	23:17	0.5	0	45	Yes	IA	Nil
NM3	15/03/2018	0:09	2.6	0	45	Yes	IA	Nil
NM4	14/03/2018	22:53	0.4	0	45	Yes	IA	Nil
NM5	14/03/2018	22:00	0.5	0	45	Yes	IA	Nil
NM6	14/03/2018	23:43	1.4	0	45	Yes	IA	Nil

Notes:

- Noise emission limits do not apply during periods of rainfall or wind speeds greater than 3 metres per second (at 10 metres);
- Estimated or measured LAeq,15minute attributed to MCCM;
- Estimated or measured LA1,1minute attributed to MCCM;
- NA in exceedance column means atmospheric conditions outside those specified in Project Approval and criterion is not applicable.

IA – Inaudible NM – Not measurable

**Wind Direction during Attended Monitoring**

Wind direction data is collected from the MCCM Automated Weather Station (AWS). Wind data for the duration of the attended monitoring assessment, recorded at the MCCM AWS is presented in the table below.

**Table 7 - Prevailing Wind Direction**

Monitoring Date	Prevailing Wind Direction
29/30 January	ENE
30/31 January	SSW, SSE
13 February	SW
14/15 February	SSW,SW
14/15 March	E

**Blast Monitoring**

There have been 31 blasts at MCCM during Q1 2018. All blast monitoring results recorded within the reporting period have been within the applicable overpressure and ground vibration limits specified in the respective approvals.

**Table 8 - Blast Results Summary Quarter 1 2018**

Parameter	Units	Frequency	Number	Average	Max	100% Limit	Exceedance (Yes / No)
Noise	dB <small>(Lin Peak)</small>	All	31	91.4	107.5	120	No
Vibration	mm/s		31	0.24	1.11	10	No

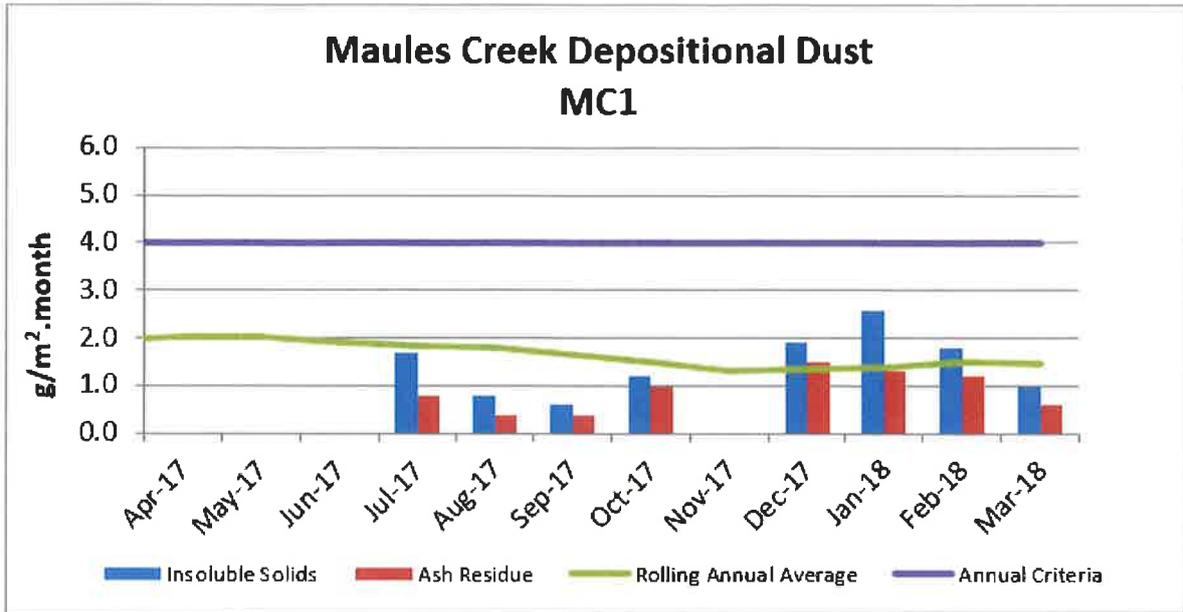
**Air Quality**

**Total Depositional Dust**

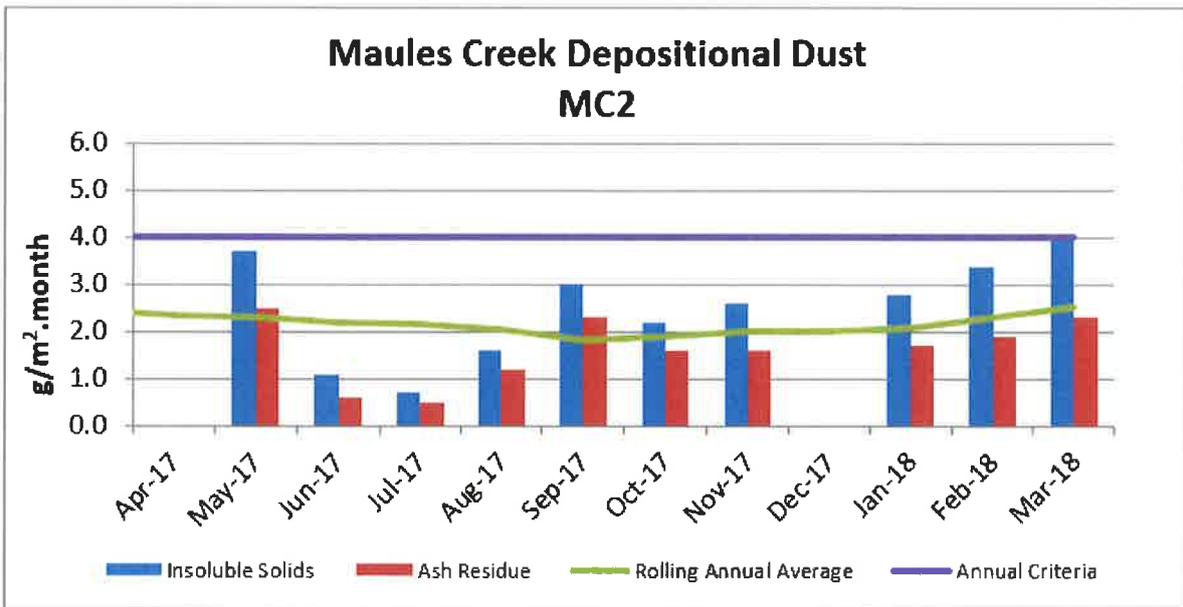
The monthly rolling annual average remains below the relevant Project Approval criteria of 4gm/m<sup>2</sup>/month for the respective monitoring points, as shown on the graphs below. It is noted at point MC3 an elevated result was recorded in July 2017. Following investigation, this result is inconsistent with historical monitoring results for both MC3 and other monitoring locations closer to the operation and therefore unlikely to be attributable to MCCM.

**Deposited Dust Monitoring Figures (MC1 – MC4)**

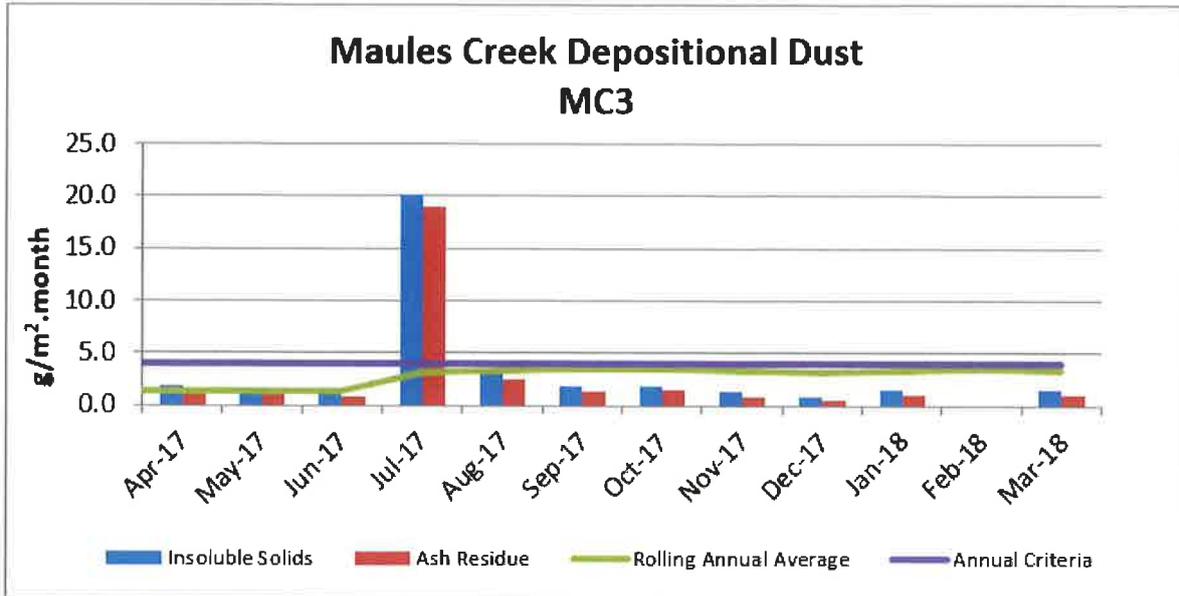
Please refer to the following page.



\* Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated material (insect larvae, bird droppings, vegetation etc.).

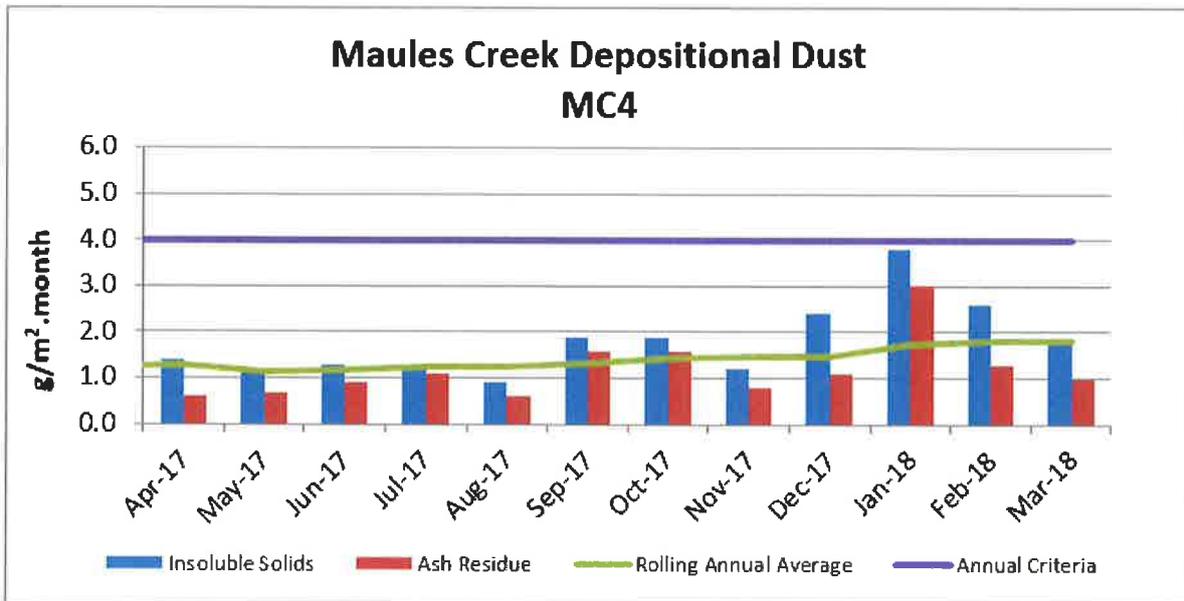


\* Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated material (insect larvae, bird droppings, vegetation etc.).



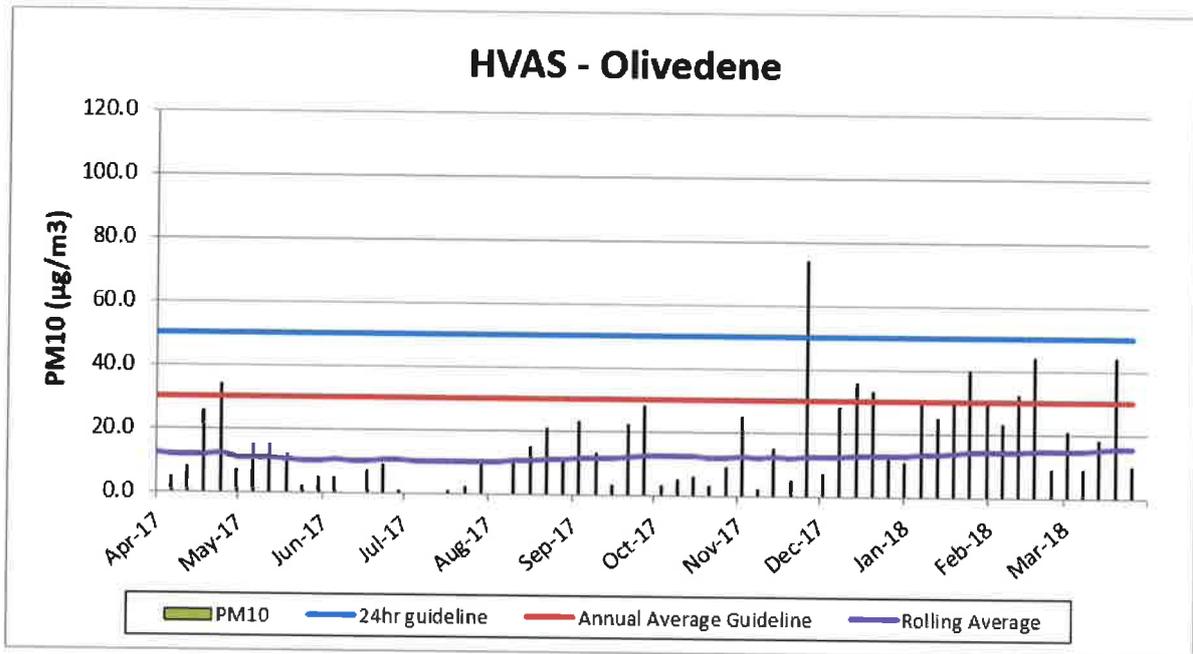
# Investigation notes the result is inconsistent with historical monitoring results at both MC3 and other air quality monitoring locations closer to the operation and unlikely to be attributable to MCCM.

\* Blank cells indicate sample periods where the sample has been contaminated and excluded from the results tables due to contaminated material (insect larvae, bird droppings, vegetation etc.).



### High Volume Air Sampling (HVAS)

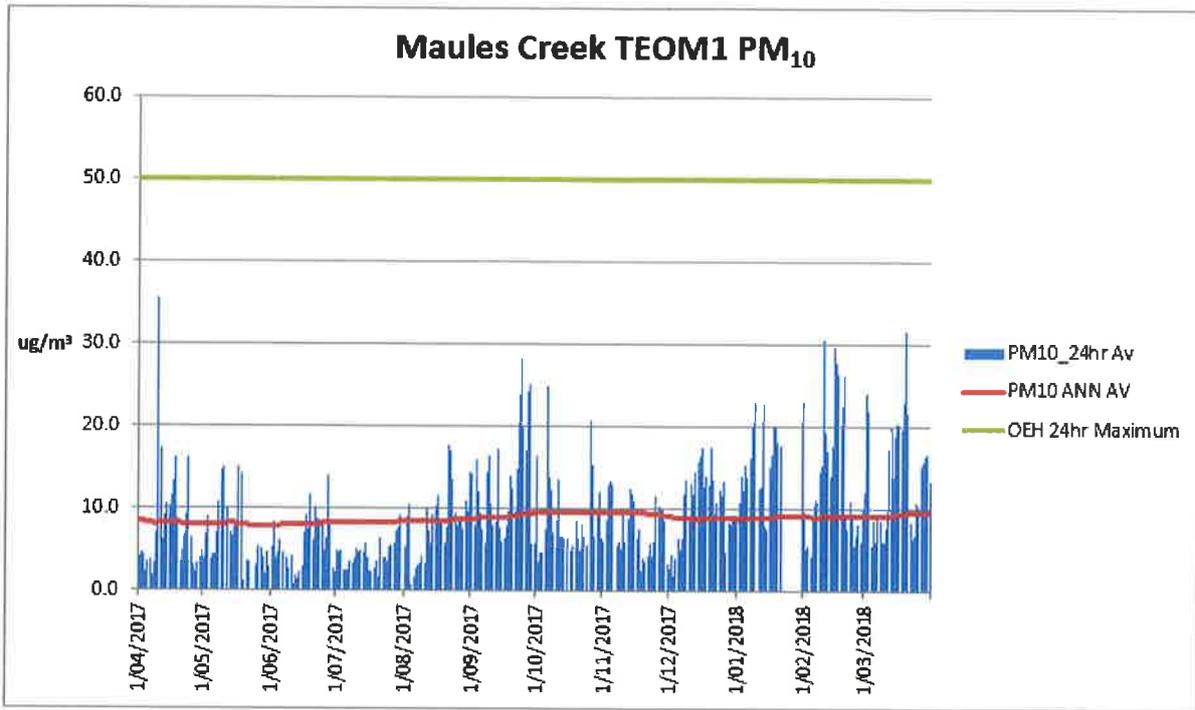
The HVAS monitor is located on the property 'Olivedene,' a mine owned property on Therribri Road. HVAS PM<sub>10</sub> Rolling Annual Average during Q1 2018 remained well below the Annual Average Guideline 30 µg/m<sup>3</sup>.



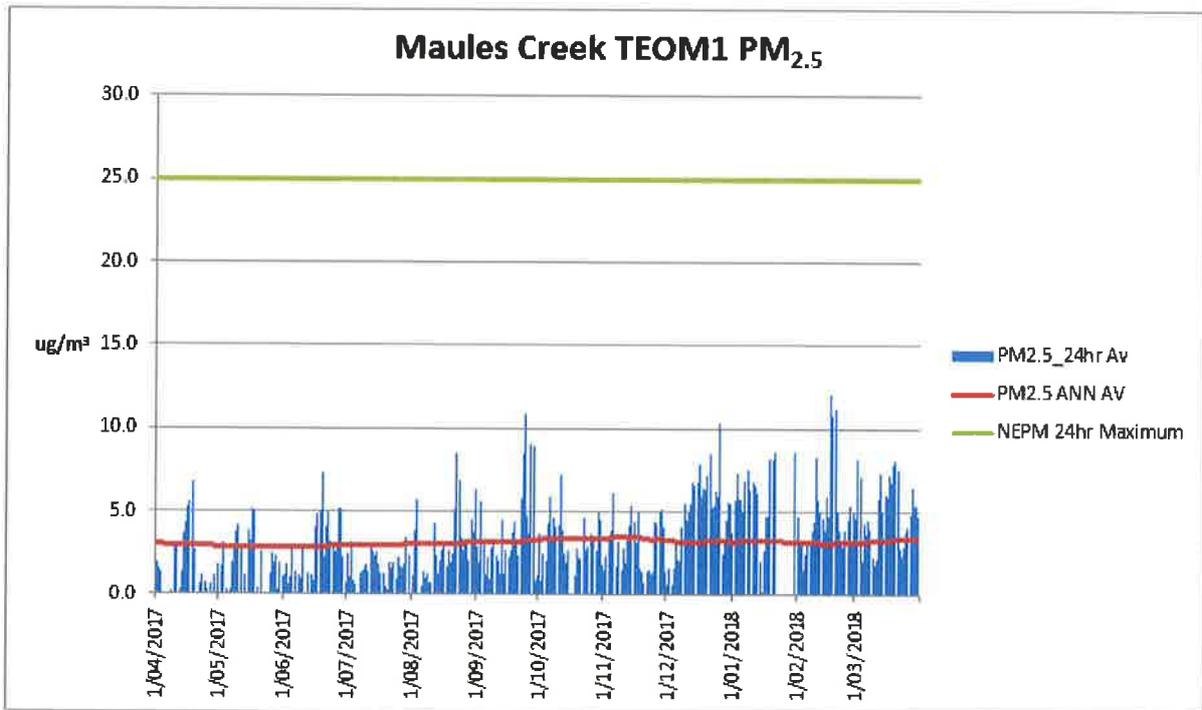
### TEOM - PM<sub>10</sub> Results

The annual average for PM<sub>10</sub> results at the Maules Creek Coal TEOM remain below the Project Approval annual average criteria of 30µg/m<sup>3</sup> (at 31 March 2018) as shown in the following figure. The PM<sub>10</sub> average results have remained below this criteria since the TEOM was commissioned in November 2011.

**TEOM Result Figures – Particulate Matter PM<sub>10</sub>µg/m<sup>3</sup> and PM<sub>2.5</sub>µg/m<sup>3</sup>**



\* Blank columns indicate sample periods where there was either power outage, maintenance or other related causes.

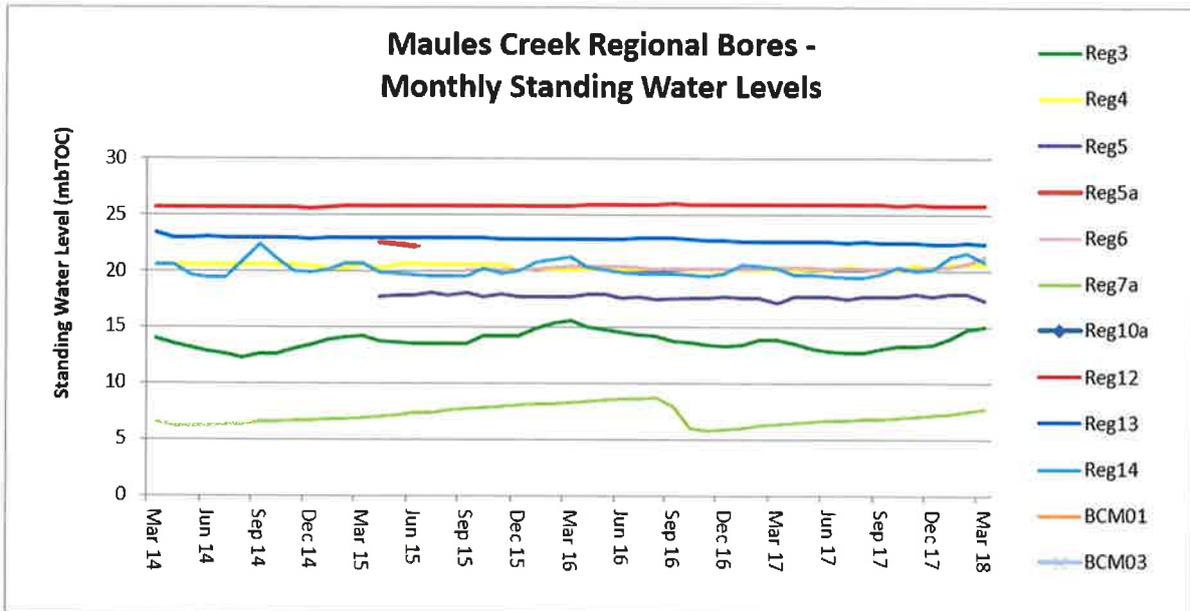


\* Blank columns indicate sample periods where there was either power outage, maintenance or other related causes.

**Water Monitoring**

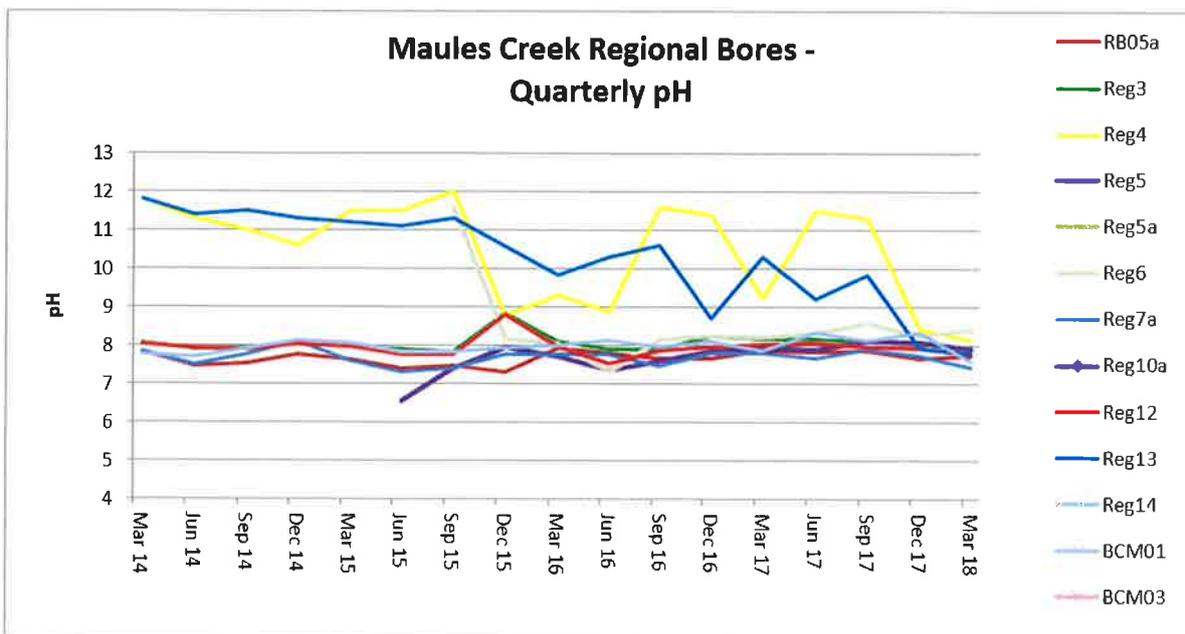
**Groundwater**

Groundwater monitoring results in open standpipe piezometers show levels to be currently stable. The Regional bores were installed between Q4, 2013 and Q1, 2014. BCM01, BCM03, Reg10 are shallow bores which have remained dry since construction in 2013.



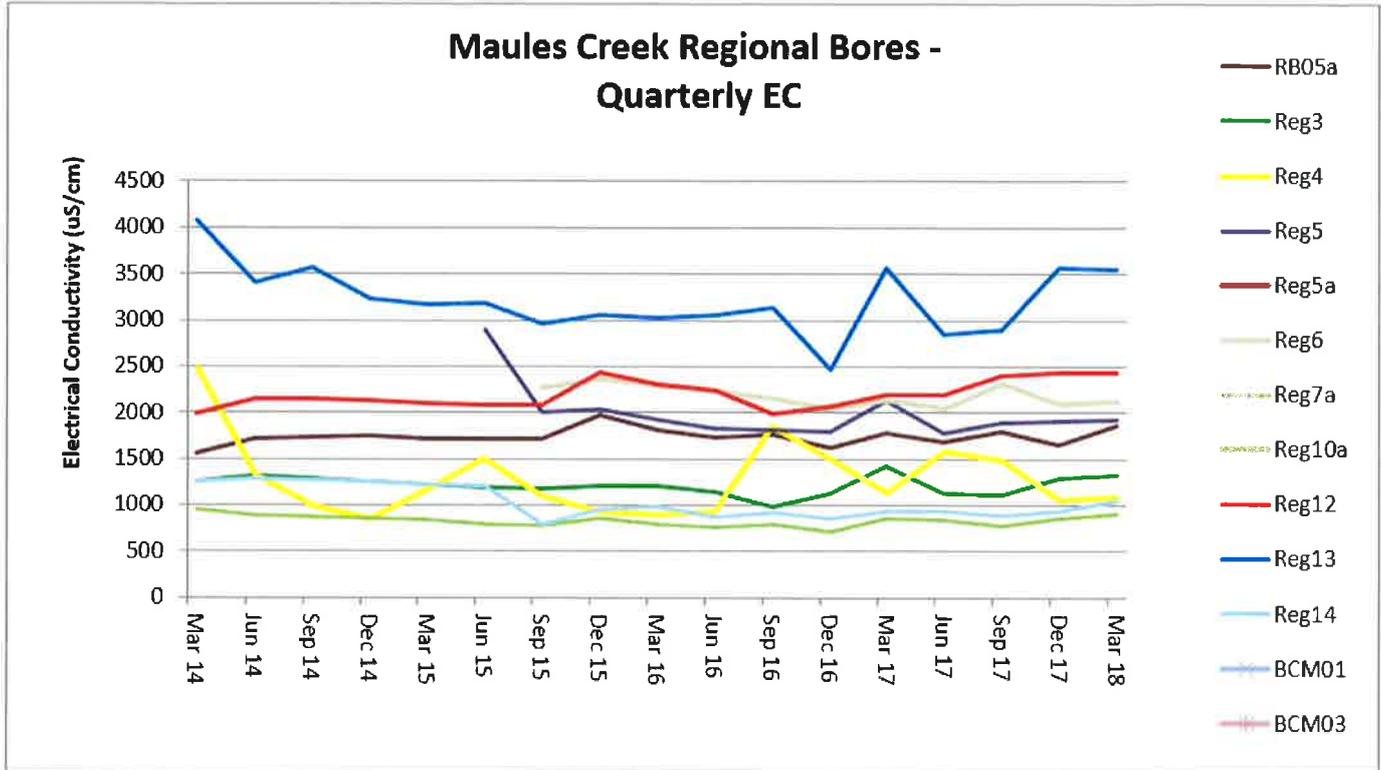
**Acidity / Alkalinity (pH)**

Baseline groundwater conditions are still being established, however, 2 bores (Reg4 and Reg13) show elevated pH levels (above pH 8.5) this has been determined to be as a result of low recharge volumes within these bores since installation.



**Electrical Conductivity**

Laboratory Electrical Conductivity (EC) levels are all within historic groundwater EC range of 500 $\mu$ S/cm to 2,500 $\mu$ S/cm, with the exception of monitoring bore Reg13 which has a historic groundwater EC range of 2,500 $\mu$ S/cm to 4,100 $\mu$ S/cm.



**Wet Weather Discharge Sampling**

Between 1<sup>st</sup> January and 31<sup>st</sup> March 2018, Maules Creek Coal AWS recorded 107.8mm of rainfall. There were no rainfall events that exceeded the 38.4mm value over a consecutive 5 day period during Q1 2018. There were no wet weather discharge events during Q1 2018 and therefore conditions L2.4 and L2.5 of EPL20221 were not triggered for this quarter.

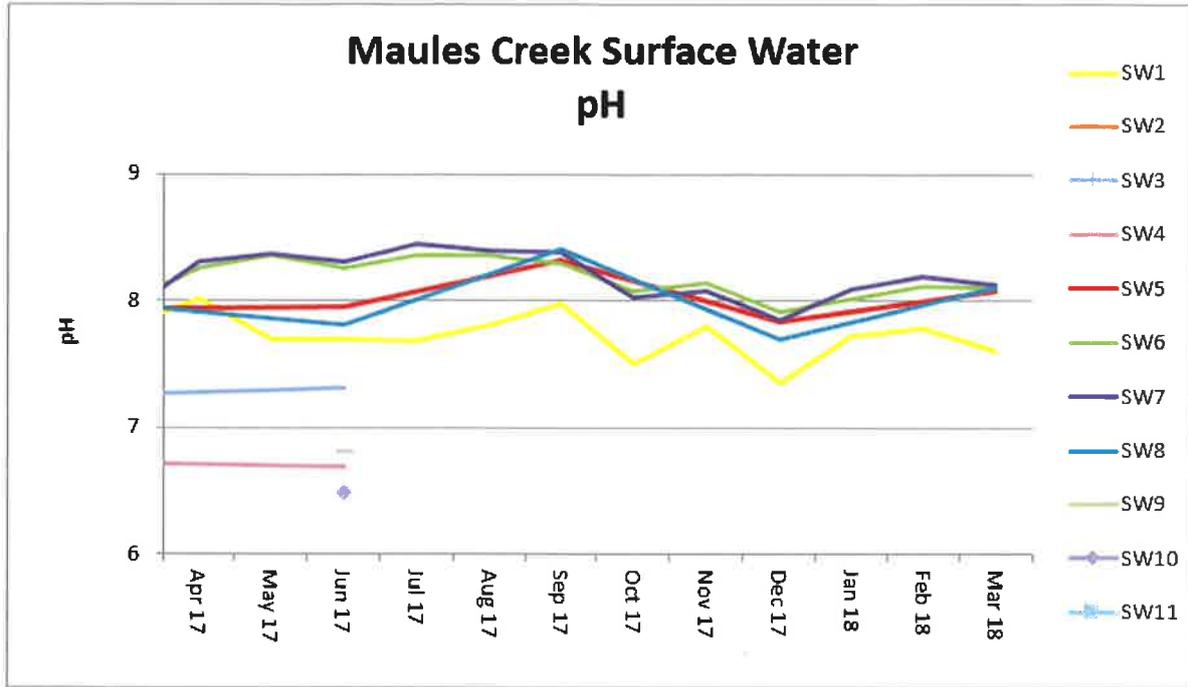
*Note: As per wording of condition L2.5 of EPL20221, 38.4mm equates to the 5 day 90 percentile rainfall for the Gunnedah region.*

**Surface Water – Creeks and Rivers**

Routine surface water monitoring is conducted in surrounding creeks and rivers on a monthly basis. Results for parameters including pH, EC and Total Suspended Solids (TSS) are shown in the tables and figures below.

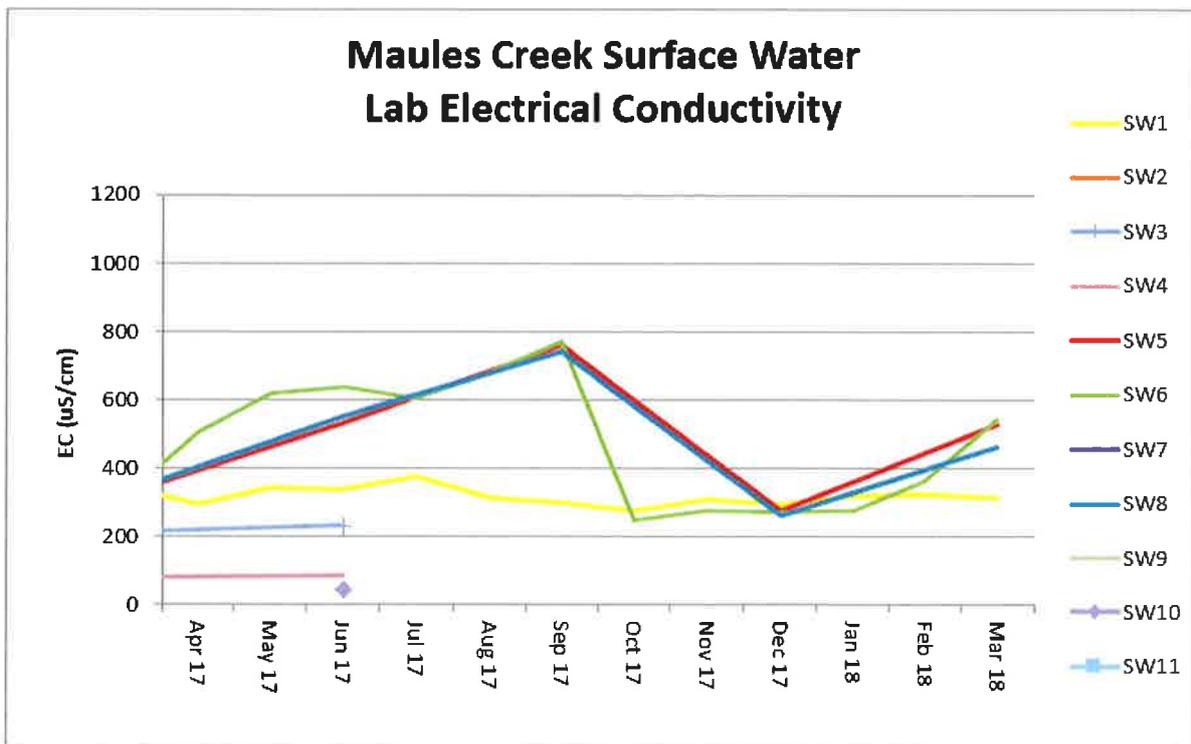
**Acidity / Alkalinity (pH)**

Monitoring results for pH in creeks and rivers surrounding MCCM are all trending within the ANZECC acceptable range for Irrigation, Ecosystem Health and Recreation.



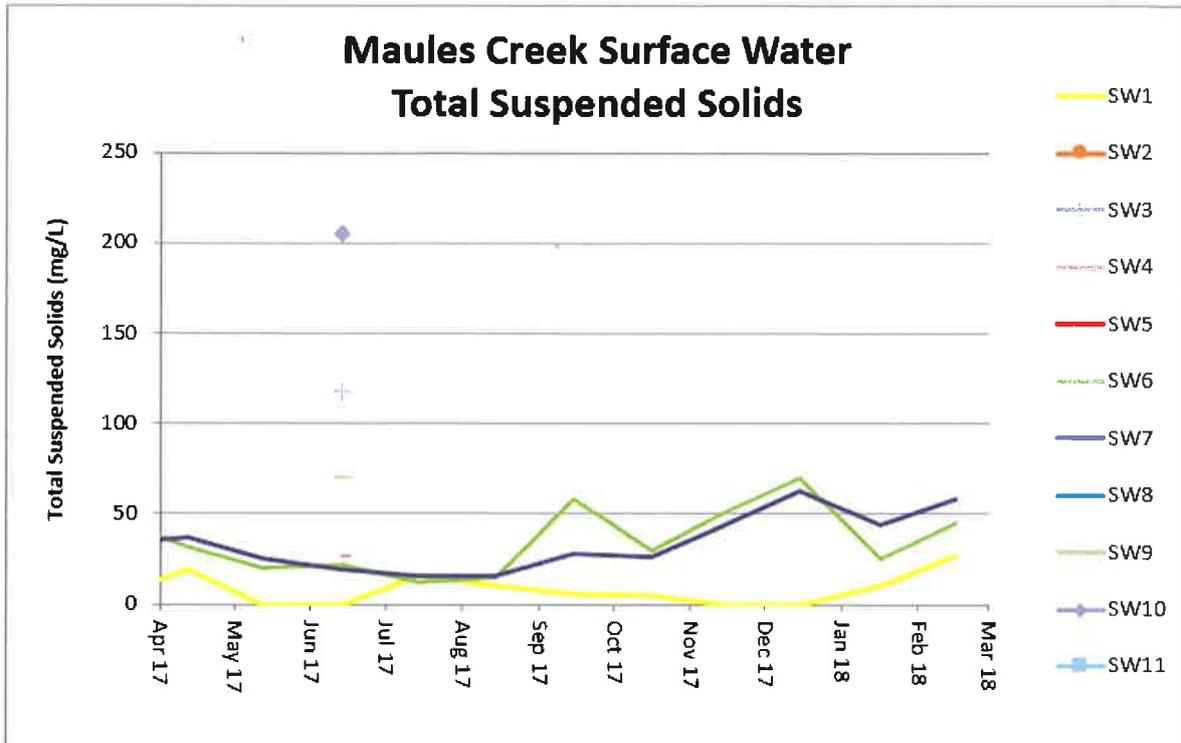
#### Electrical Conductivity

Surface water EC trends have remained consistent with SW5, SW6, SW7 and SW8 all historically variable. SW5, SW6, SW7 and SW8 are points along the Namoi River which is subject to regulated and variable flow regimes.



**Total Suspended Solids (TSS)**

Surface water TSS trends have remained generally consistent with historical results. SW5, SW6, SW7 and SW8 are historically variable as they are located along the Namoi River which is subject to regulated and variable flow regimes. A rainfall event in June 2017 enabled sampling at sites along Back Creek which is ephemeral and generally dry.



**Rehabilitation**

Bulk shaping of the lower benches on the northern dump has started in preparation for rehabilitation. Gypsum has been applied to areas as part of the 2018 topsoil stripping program.

**Feral Animal Management**

During the most recent routine Whitehaven Offset Area Feral Animal Control program, the results included 58 pigs with 16 from the Maules Creek area; and 79 foxes controlled.

**Weed Management**

Weed spraying had targeted Prickly Pear and Tiger Pear during the recent dry spell however will refocus on the revegetation areas now the season has turned including the control of broadleaf weeds and grasses in the areas to be planted and seeded during 2018.

**Community Complaints**

14 complaints were received during Q1 2018. Please refer to the Community Complaints Register published on the Whitehaven Coal Maules Creek website.