

Upper Hunter Mining Dialogue

2019 Forum Report

19 November 2019

Singleton Civic Centre, Singleton NSW



Figure 1: Forum participants visiting an industry procurement-themed information stall

Introduction

About the forum

On 19 November 2019, around 160 participants from a diverse range of backgrounds came together at the Singleton Civic Centre to discuss issues of importance to the Upper Hunter community and learn more about various projects and initiatives being undertaken by industry, local and state government, and community partners.

This was the eighth annual gathering for the Upper Hunter Mining Dialogue (the Dialogue) since the first event was held in December 2012. The 2019 Forum concludes a busy year for the Dialogue and was a chance for all of the many individuals and groups involved in the Dialogue to keep track of the progress of the many Dialogue projects and to consider broad issues such as how the Dialogue is managed, whether it is making good progress and the issues it should be tackling.

It is important that the Dialogue remains relevant and continues to evolve to meet community expectations. As the Dialogue was established to address cumulative impacts of mining across the region, we are committed to working together with a diverse group of stakeholders across various sectors in the community on meaningful projects that deliver outcomes for local communities.

As a result of the discussion sessions at the 2018 Forum, the Dialogue's Working Groups and Steering Committees endorsed a variety of projects for the Dialogue to focus on delivering throughout 2019, which provided the basis for the morning's presentations. Participants were able to review the progress of the throughout 2019, as well as have their say on emerging issues and potential projects for consideration by the Dialogue's Committees and Working Groups in 2020.

Following the success of the 2018 Forum, this year's Forum once again included a networking session in which participants could freely engage with a range of stallholders that are directly involved in key Dialogue projects or other initiatives underway that relate to the Upper Hunter.

About this report

This report captures the written feedback from the afternoon workshop session. The discussion points have been transcribed verbatim however some small additions and/or amendments have been made to the written feedback where it is necessary to assist the reader (grammar and spelling corrections, expansion of acronyms etc.). The Dialogue's various Working Groups and Committees will then review all feedback received and discuss key themes further to determine which suggestions are to be actioned or explored.

Next steps

Valuable feedback provided attendees on the Dialogue was provided during the Forum's discussion session. The Joint Advisory Steering Committee and Industry Steering Committee, together with the various working groups will consider the feedback in this report during their first meetings in 2019. Where actions are relevant to particular working groups, these will be assigned for their review and discussion.

Thank you

The Upper Hunter Mining Dialogue and its industry members would like to thank everyone

who participated in the forum and the Dialogue's various Joint Working Groups and the Joint Advisory Steering Committee throughout the year. The Dialogue could not exist and achieve the results we have without the contributions and buy-in from such community members. We thank you for your continued involvement and engagement.

The Dialogue wishes to extend a special thanks to:

- Our guest presenters Stephen Wills (Department of Planning, Industry and Environment) and Damon Roddis (ERM Australia Pacific) for their informative and interesting presentations;
- All companies, organisations and individuals that hosted an information stall;
- Our business chamber and local government partners;
- Members of local community groups, CCC's and interested individual representatives;
- Our industry partners (including all site personnel involved with the Dialogue, as well as procurement and environment personnel in attendance at the Forum) from all Upper Hunter operations including Bengalla Mining Company, BHP, The Bloomfield Group, Glencore, Malabar Coal, Mount Pleasant Operation, Muswellbrook Coal Company, Peabody Energy, Thiess, and Yancoal;
- Our outgoing Chair David O'Brien for his contributions to the Dialogue since its inception;
- Our new Chair Sarah Withell for her oversight of this year's Forum;
- Our Forum facilitator, Dianne Sneddon for continuing to facilitating the day;
- Singleton Civic Centre, Singleton Council's Councillors and other staff for hosting the forum's guests; and
- Our Dialogue Committee and Working Group members across local and state government, community and environmental groups, the business sector and interested individuals for their continued commitment and efforts to help the Dialogue continue.



Figure 2: 2019 Forum participants listening to Stephen Wills (Department of Planning, Industry & Environment)

Forum Program

The full program for the 2019 Forum has been included below:

Tuesday 19 November 2019		
8:30am	FORUM OPEN	
8:30am	Arrival and networking	Coffee and tea available
9:00am MORNING PRESENTATION SESSION		
9:00am	Welcome from Facilitator	Di Sneddon, Facilitator
9:05am	Overview of the 2019 Forum	Sarah Withell, Chair, Upper Hunter Mining Dialogue
9:15am	Update on NSW Government Projects and Activities in the Upper Hunter	Stephen Wills, Executive Director, Division of Resources and Geoscience, NSW Department of Planning, Industry and Environment
9:30am	Dialogue: 2019 Year In Review	Sarah Withell, Chair, Upper Hunter Mining Dialogue James Barben, Secretariat, Upper Hunter Mining Dialogue
9:45am	Upper Hunter Air Quality Monitoring Data Analysis Project: A Timeline of Upper Hunter Air Quality	Damon Roddis, Principal – Air Quality, ERM-Australia Pacific Pty Ltd
10:00am INFORMATION AND NETWORKING SESSION (MORNING TEA INCLUDED)		
	Forum participants may visit a range of stalls to discuss and gather information on various Dialogue projects and activities, as well as those from our stakeholders, across the following themes:	
90 mins	<ul style="list-style-type: none"> • Local Procurement and Economic and Social Development - Engage with industry personnel, local government and local business chamber representatives and learn about procurement and economic development opportunities. • Environmental Management - Engage with industry personnel and NSW government representatives on key environmental issues such as Air Quality, Emissions and Health; Rehabilitation and Land Management; Water Quality and Stewardship; and Long-Term Land Use Planning and Economic Diversification. • Stakeholder Engagement and Communications - Learn more about what the Dialogue is doing via community engagement projects such as the School Mine Tours Program and Virtual Reality Video Content. 	
11:30am DISCUSSION AND FEEDBACK SESSION		
11:30am	In-table discussions - We want to hear from Forum participants on what the Dialogue is doing well, and where there are opportunities to improve. Discussions will rotate around the themes listed above and we strongly encourage you to have your say.	
12:30pm	Feedback from table discussions - Your feedback will help shape the Dialogue's priorities in 2020. All feedback will be considered and discussed by our Working Groups and Committees at their next meeting.	
1:00pm	Summary of Forum Outcomes	Di Sneddon, Facilitator
1:05pm	Forum Closing Remarks	Sarah Withell, Chair, Upper Hunter Mining Dialogue
1:10 pm BBQ NETWORKING LUNCH		
2:30pm	FORUM CLOSE	

For more information visit: miningdialogue.com.au



Figure 3: Forum participants visiting an industry environment-themed information stall

Presentations

Sarah Withell (Dialogue Chair) welcomed all attendees and thanked them for their interest and participation in the Dialogue's Forum, as this is the most important event in the yearly Dialogue calendar. Sarah Withell was appointed the Chair of the Dialogue in August 2019 and played a critical role in the oversight of the 2019 Forum and the key projects that the Dialogue has been undertaking over the past several years through her role as a member of the Joint Advisory Steering Committee. Please see this news article for more information: <http://www.nswmining.com.au/menu/media/news/2019/august/sarah-withell-announced-as-dialogue-chair>

Ms. Withell welcomed all attendees and acknowledged the challenging year for both community and industry alike. Ms. Withell noted that the focus of the Dialogue in 2019 assisted industry in managing environmental issues (e.g. reducing water use and increasing reuse and recycling; managing air quality impacts; and rehabilitating disturbed mining land).



Figure 4: Upper Hunter Mining Dialogue Chair, Sarah Withell

Ms. Withell assumed the role of Chair following on from David O'Brien who resigned after three and a half years in the position. During Mr. O'Brien's tenure as Chair, the Dialogue has seen significant improvements in project delivery, a more logical realignment with the Dialogue's priorities and an invigorated attendance from our Working Group stakeholders. We thank Mr. O'Brien for his contributions.

James Barben (Dialogue Secretariat) provided an overview of the Dialogue's key activities and projects in 2019, with the goal of demonstrating the Dialogue's progress on the actions arising from the 2018 Forum Discussion Sessions.

Mr. Barben provided an overview of the Dialogue's 2019 Priorities. In addition to the Dialogue's annual environmental reporting projects and ongoing community engagement activities such as the School Mines Tour Program, these projects included:

- Emissions & Health:
 - Analysis of UH Air Quality Monitoring Network Data
- Land Management, Rehabilitation & Final Land Use:

- Pilot Pathway for Post-Mining Land Use
- Buffer Land Figures in Annual Rehabilitation Reporting Project
- Publishing a Beneficial Reuse of Voids project summary document
- Water Quality and Stewardship:
 - Seeking Contextual Information from Industry Regarding Water Stewardship initiatives
- Economic Development, Mining & Business:
 - Dialogue Procurement Information Hub
 - Mining procurement business events
- Stakeholder Engagement & Communications:
 - Continuing RDA Hunter STEM proposal discussions
 - Continued community engagement
 - Continued rollout of School Mine Tours Program



Figure 5: Upper Hunter Mining Dialogue Secretariat, James Barben

Mr. Barben reported on the Dialogue's annual projects (i.e. the Water Accounting Framework and the Rehabilitation Principles and Commitments) as well as some supplementary projects to improve the information already provided. For the first time, industry members were asked to provide an annual water use statement, similar to their rehabilitation statement. Further, industry was also surveyed on their total amount of buffer land and how it is used. This land was primarily classified as agricultural uses (90%) or other/vacant land that may not be suitable for use (8%).

Mr. Barben advised participants on the Dialogue's successful procurement business events held in August and September 2019. With a combined attendance of 250 people across the Muswellbrook and Singleton events, this has highlighted the valuable opportunities for industry to engage directly with local suppliers to improve their understanding of how to do business with mining. Thanks to all the mining companies who participated in the events, as well as the Muswellbrook Chamber of Commerce & Industry and Singleton Business Chamber teams for their support of the Dialogue's economic projects.



Figure 6: Forum participants experiencing the Dialogue's Virtual Reality Video Resources

Mr. Barben updated members on the Dialogue's newly launched Procurement Information Hub, a dedicated page on the Dialogue website to outline key procurement details for most Upper Hunter mining companies. The intent of this resource is to improve supplier awareness of how to engage with the mining sector and what to expect when preparing for a tender or procurement opportunity, and includes a full list of requirements for each company, as well as an example of a generic procurement process. Please visit: nswmining.com.au/dialogue/procurement for more information.

Mr. Barben provided an update on the School Mine Tours Program, which has now been operational for over two years. The Program offers local years 5 and 9 school students an opportunity to visit a nearby mine to learn more about the mining process, both in terms of benefits and impacts. This program is supported by Virtual Reality education modules, developed with UNSW, to facilitate in-classroom learning. The Dialogue is also liaising with RDA Hunter regarding integration of the Tours into STEM programs for Hunter schools.

Since the tours officially commenced in 2018, a total of 1300 students have attended a school tour in the past two years. 18 schools are involved in the program, with nearly 40 tours undertaken to date across 12 Upper Hunter sites.

Finally, Mr. Barben discussed the Dialogue's community engagement work, noting that the Dialogue in 2019 has successfully:

- Attended 10 Community events
- Completed 133 Stakeholder surveys
- Interacted with 565 Community stakeholders
- Attended 15 of 17 Community Consultative Committee (CCC) Presentations; and
- Undertaken 324 Virtual Reality demonstrations.



Figure 7: Damon Roddis, ERM Australia Pacific

Damon Roddis, Principal – Air Quality from ERM Australia Pacific provided an initial summary of a data analysis project that the Upper Hunter Mining Dialogue is currently undertaking.

ERM has been engaged to provide an analysis of Upper Hunter Air Quality Monitoring Network Data with the task of determining two key questions.

1. Has the air quality in the Upper Hunter Valley changed since monitoring began?;
2. Is the air quality in the Upper Hunter Valley measured at the monitoring stations different from air quality measured at other locations in NSW?

Given the networking data dates back to 2010 and now includes 14 locations, this analysis will provide some useful factual information for the Upper Hunter community.

A draft report is due in January 2020, with a peer review to be undertaken by CSIRO.



Figure 8: 2019 Forum participants

Stephen Wills, Executive Director, Division of Resources and Geoscience, for the NSW Department of Planning, Industry and Environment presented to Forum attendees on the NSW Government Projects and Activities in the Upper Hunter.

Mr. Wills updated participants on the recent government restructure, and strategic planning in the Upper Hunter, including the Upper Hunter Roadmap, Upper Hunter Economic Diversification Working Group, the Hunter Regional Water Strategy, and the NSW Minerals Strategy.

Copies of the presentations are available to view here:

<http://www.nswmining.com.au/dialogue/events>

Discussion sessions

Following the morning's networking and information session, participants were encouraged to join a short discussion session based around the Dialogue's key themes, including:

- Economic and Social Development
- Stakeholder Communications and Engagement
- Air Quality, Emissions and Health
- Rehabilitation and Land Use
- Water Quality and Stewardship

The Dialogue sought to reframe the key questions asked of participants in 2019 to delve deeper into what the real issues are, and to provide this feedback to the Working Groups for further analysis and discussions in the early 2020 Working Group meetings. The two key questions provided to participants for discussion included:

- 1. What are we doing well in this theme? What should we keep the same? -** Participants were invited to consider any past or current projects, activities or initiatives that have provided positive outcomes for the Upper Hunter. These could be Dialogue or industry projects, or look further afield at local or state government, business, or community initiatives.
- 2. What are some opportunities for improvement? -** What can industry do better in terms of this theme? Spend some time discussing any ideas that may address issues in this theme. Focus on 2 or 3 ideas or suggestions identified by your group and discuss in as much detail as possible about issues related to that theme - we want to get to the core of the issue.

Each participant was able to join two tables throughout the discussion session, with 30 minutes allocated to each discussion. Following the discussion session, a Table Facilitator was provided a 5-minute window to report back to the forum on their key items of feedback. The high level of involvement and honest feedback from Forum participants in the discussion sessions will enable vigorous discussion and a fresh perspective on the Dialogue's key issues and actions for the Dialogue to consider throughout 2020.



Figure 9: 2019 Forum participants engaging in the afternoon discussion session

Discussion Session Summaries

1. Economic and Social Development

Table 1

Doing well
<ul style="list-style-type: none"> ● Working Group projects are making good progress, including procurement hub ● Local Buying Programs are working well on a local scale e.g. Austmine/Bengalla, BHP/C-Res. ● 'We Live Here' local investment card - Program is working well for MSC and UHSC, with Singleton looking at exploring a similar program. ● Overall, improved dialogue between stakeholders and mines, and between mines themselves (e.g. alerting cross-sites when The Chaser visited the region) ● Local MCCI engagement including connections to the NSW Business Chamber eg 'make it cheaper' initiatives (cheaper power supply).
Opportunities for improvement
<ul style="list-style-type: none"> ● Transparency and documented plans/outcomes for the Upper Hunter Economic Diversification Project - Who is leading it? What is its purpose? Is it relevant? Is it successful? There is no outward reporting and perhaps the Dialogue Secretariat could assist in sharing their work. ● Address skills shortages in the Upper Hunter and long-term decline in apprentices of all tradespeople, these jobs are in demand however there's a gap in the pipeline. <ul style="list-style-type: none"> ○ The Dialogue could work with industry to determine who needs apprentices, trainees or graduates in specific areas, and promote these needs to community, schools, tafe, universities. ○ Link the career pathways to futuristic jobs that appeal to the youth (e.g. autonomy, mechatronics) ○ Support non-mining trades e.g. MACH Energy supporting town-based trades ● Why is the industry not attracting quality applicants? What can the Dialogue do to improve image and showcase what careers the industry can provide? Dialogue to raise the profile of mining and make it attractive as an employment option. ● Continue to get good, positive stories out there from our industry (to combat anti-mining sentiment). ● Better engagement with local education providers regarding apprentice recruitment. ● Publicity of what's being done/what opportunities are available. ● Improve our image however we can. Mining industry is being demonised, particularly coal. ● Better articulate the broad range of careers available in the industry. ● Understand the industry needs for skills and the projection and communicate to government and education providers, understand the collective needs of industry. ● Look at ways and means of retaining skills e.g. 'bonded' strategy for teachers so that there is a reasonable return on training investment.

Table 2

Doing well

- 2018 Forum discussion sessions have led to some tangible outcomes - good to demonstrate that feedback has provided some positive results.
- Chamber events - well received, content fit for purpose, opportunity to connect with speakers was valuable.
- Information Hub idea is liked, though most are yet to have a chance to review.
- Local procurement - engagement and policy
- Plans for economic diversification and economic development.
- Keep the same - continue chamber events, prioritise Hunter Coal Festival, school tours are very positive.

Opportunities for improvement

- Expand engagement into the NSWICC
- Information Hub - determine how to improve resources and actuate engagement in the long-term, and consider linking to other existing hubs.
- Chamber events - can we expand these into longer more detailed workshops that delve into the procurement process.
- Look at declining volunteers and seek to re engage
- Meet the Miner/Buyer Programs/Initiatives
- Promotion of innovation
- Capacity building for relationship development skills of local businesses.
- Important to maintain flexibility around payment terms and open discussions between commercial partners.
- Consider how the Dialogue can facilitate progress in terms of social development - research and understanding social issues in the region, with HRFC - explore opportunities and identify initiatives.
- Better coordination of social investment activities/investment.
- Need to promote plans for economic development/diversification to raise awareness.
- Issue of CCC participation consultation fatigue - Question the effectiveness of CCC.

Table 3

Doing well

- Local groups and organisations benefit from funds/grants and tend to spend money locally.
- More communication occurring by individual mines, UHMD; the lunches that gave information on procurement processes of mines.

Opportunities for improvement

- Standards - Universal approach to doing things - Each mine thinks they're unique. Consider developing some sort of standardisation aid/tool for mining, similar to building white cards, to help identify standard level of skills and training that is completed across all sites. Need one regulatory body that identifies standards for equipment and inductions that are universally accepted.
- Smaller companies are interested in supplying to mines but may struggle with paperwork (i.e. the procedures and attachments required to accompany tender applications) - Consider developing a proforma template seeking consistent generic

information for local companies to complete and attach to the tender for jobs/supply of product automatically without having to do each time.

- Standardisation - Electrical/hire services complain that they have equipment that meets the required Australian standard, yet receive conflicting advice at different sites as to how their products need to be labelled or coloured onsite - any opportunity to get some agreement across operations.
- Drive in/Drive out (DIDO) workforce issues.
- Need to better communicate the spend of mines in local economies.
- Mining staff are encouraged to participate in community events and in turn a chance to explain what contribution the mines have to the local economy (community cluster; mines provide skill set, community groups need).
- Mining shifts may not be conducive to participation by mine workers in local economies (e.g. work/life balance).
- Encourage mine staff to form sporting teams etc to bolster local comps.
- Mines work 24/7, while local suppliers tend to do 9-5, 5 days a week; this mismatch can have impacts on delivering service expected (e.g. breakdowns).
- Invest in small business development - Business lunches good; need to have themes for lunches.
- Certainty and consistency helps local companies to grow to better support mines (can employ more staff).
- Legislation is different (in terms of different awards) for small companies to mines, which means different pay rates on weekends etc.
- Companies say staff going on to mine sites can feel 'stuffed around' when they need to go onsite e.g. inductions.
- Mines can randomly change procedures for lock out procedures; inductions and so on, which adds time to a project, but is not productive 'billable' time. If the company knew to allow 1 hr, 2 hrs for staff to enter and leave a site each day they can build this into the original tender. These unknowns can cause a lot of staff overtime for local companies.
- Scope of work need to be accurate for quoting as variations are huge.
- Quarterly training for spatial services (e.g. electrical) means it's hard for local companies to be flexible with work force. Either need more regular training or Generic Induction of all mines offered by TAFE or similar so contractors have staff trained up for all sites. Don't need each mine to do generic training.
- Overheads for new staff are large...reluctance to engage untested/unskilled people who may decide they don't like the job after a couple of weeks.



Figure 10: 2019 Forum participants engaging in the afternoon discussion session

2. Stakeholder Communication and Engagement

Table 4

Doing well
<ul style="list-style-type: none"> ● School tours are expanding ● Positive VR experience ● Procurement activities - making industry accessible through events/info hub, worked well because it was face to face, felt better relationships with local business and understanding building about capacity. ● Partnership with local chambers ● Presentation from the Dialogue secretariat to CCC meetings.
Opportunities for improvement
<ul style="list-style-type: none"> ● Keep up face to face and proactive engagement with stakeholders (CCC meetings, councils and key groups) on a regular basis. ● Undertake an evaluation of the school mine tours - build on this platform for next year. What do the students and teachers think? ● Seek student feedback on post-mining land use of mine sites, consider hosting a competition with school or university students. ● Keep engagement flexible - (not just online, but physical) ● Involvement of community in committees/Dialogue ● Keep website updated and find ways to keep people going back ● Ensure the local community knows about the Dialogue - improve distribution of newsletters at markets or public libraries to promote the procurement information hub. ● Help the broader community know what the school tours are about - leverage off parents, siblings etc.

- Greater broader community engagement.
- Purpose - resource it more (i.e. Social media engagement).
- Use other forums, organisations, platforms to promote the Dialogue's work online - connect to other info hubs (chambers/council) etc.
- Connect to the curriculum (i.e. STEM subjects)
- Build on initial relationship from the tour (i.e. go into classroom before/after).
- Syllabus drawn out connect with tour - learning in class and the tour make it something unique to the Hunter.
- Using upcoming appropriate events (e.g. Tocal Days, EPA Forums, Coal Festival) - value proposition to community and vice versa.
- Revitalisation of the name/re-brand
- Website - user interface - buried info - connection/navigation issues.
- Video over newsletter? (i.e. kids speaking after a tour).
- Information - simplify wording, improve accessibility for all, what's the key message?
- Helping the community understand what tours are about (neutrality and learning).
- Another program around careers.
- Communications particularly on air quality and water (i.e. making sure broader community accesses presentations).
- Expansion to broader region (difference between local and city kids) - digital package for city schools, VR technology, shared video.
- Engage with the Department of Education for a balanced view.
- Messaging on mineral use.

Table 5

Doing well
<ul style="list-style-type: none"> ● School tours - great initiatives ● Virtual reality - Great tool to educate the general population. ● Annual Forum - useful, having Chambers involved is a plus. ● Keep procurement focus - positive feedback about chamber events
Opportunities for improvement
<ul style="list-style-type: none"> ● School tours - broaden to Sydney and Newcastle schools, or to exploration projects, including education on all mining careers e.g. geology. ● Virtual reality - could it be broadened out? ● Target cities in addition to rural areas. ● Newsletters - distribution? Do they go to government departments? Local libraries? Could they be an insert in the @theCoalface magazine? ● Website and facebook page - stats on visits? Likes/shares? How frequent are the posts? ● Lower Hunter ● Annual Forum - could you have one part of it open to the broader public vs. just representative level? Keep developing it. How to get more community reps? How can business chambers capture their members' views and bring back to Dialogue? ● Chambers incorporate UHMD Comms tools and channels - reach out in advance of Forum. ● Opportunity for Chambers etc to feed into Annual Forum Agenda? ● Need better understanding of the process of UHMD Committees incl. Frequency of meetings, focus of committees/working groups, and how stakeholders can present their work to the Committees/WG's or at the Annual Forum.

- Reverse the process - get the community to present to mines vs. mining presenting to the community
- Procurement events - ability to interact with mining company procurement teams, discuss how to overcome barriers to access, do we include Chamber events for other than local? Can we open the group up to the general community?
- Could the UHMD also highlight other contributions from the mining industry?
- Proactive correspondence vs. relying on groups to seek out info on the website, facebook etc.
- Surveys - UH Research Foundation Survey an option?
- Good to ensure people understand that the Dialogue doesn't take sides.
- Leverage other comms channels (e.g. new government portal)
- Annual Forum - How to input into Forum? How to engage in between Forum events? Is the Annual Forum inclusive enough? How useful is it for the people in the room?

3. Air Quality Emissions & Health

Table 6

Doing well
<ul style="list-style-type: none"> ● Data analysis - keep doing this
Opportunities for improvement
<ul style="list-style-type: none"> ● Data analysis - work to develop it into an app with 24 hr basis. ● Other people felt the results didn't reflect what they were experiencing. ● Gap between expectations and what mines are legally allowed to do within scope of operations. ● Confusion over what mines can do on a solo basis vs what impacts industry cumulatively feeds into. - each mine is regulated individually - what is each doing to manage cumulative impacts? ● Are mines managing short term spikes in AQ? Are we measuring these relative to 24 hour criteria? ● Cumulative impact? Is the future underground? Away from agricultural land? Away from water resources? ● SSHEG ● Only 50% of the community will ever accept what the Dialogue has to say. ● Programme to seek best-practice given challenges from Doctors for Healthy Environment ● Need to have a relationship with health practitioners to share the information the Dialogue has, and to also better understand their concerns. ● This is about how we need to plan 'localities'? Moving forward - how do we get on the front foot? ● Focus on training employees ● Independent reporting of UHAQMN analysis ● Can mines do more to control dust? Children are affected disproportionately. ● Billboard of measured data. Develop an app. ● Cumulative impact on Bulga (35% coal dust), need to look at the composition of dust.

- Management of cumulative impact.
- Dust reports for the Upper Hunter daily.
- More reaction to short term spikes in dust measurements. From regulators and miners relative to 24 hr criteria.
- Examine human health impacts
What has the Office of Environment, Energy and Science got that they can share.
- Imbalance of rehabilitation -



Figure 11: Forum participants visiting a procurement-themed information stall

Table 7

Doing well
<ul style="list-style-type: none"> • ERM Air Quality project presentation - looking at broader regional perspective • Monitoring Network data - health warnings • Use of calendar plot to simplify viewing of data • Being able to break down data into hourly trends • Identification of drought impacting Air Quality
Opportunities for improvement
<ul style="list-style-type: none"> • Continue to engage with community (CCC) on air quality analysis and results from publicly available data. • How do we get air quality data out to broader communities and stakeholders? • What is the exact correlation between increase in PM10 and 2.5 on health? How can we communicate and monitor this? • Enhancement of existing forecasting methods/emission factors. • Everyone should be doing what they can to reduce emissions. • Different locations/zones have different impacts. • Do we need to plan for water cart usage/dust suppression based on potential for water restrictions?

- How can we better manage available info in the community to allow health professionals to help the community?
- How to better get info available to the community?
- Doctors view/insights to med and with Dialogue (Coal Services)

4. Rehabilitation & Final Land Use

Table 8

Doing well
<ul style="list-style-type: none"> ● Transparency is good ● Examples of visual mine rehabilitation ● GIS Portal - developed in prototype stage, ready for industry input, awaiting implementation - will ultimately be an improvement for government, industry and the community by improving education. ● Struggle to talk about what we're doing well. ● Rehab fact sheet - good to put this information together ● VR - good example of rehab, need to be real
Opportunities for improvement
<ul style="list-style-type: none"> ● Clear and concise communication ● Improve social media (facebook, twitter) ● More access sites for community to access rehabilitation. ● Detailed definition of the term 'rehabilitation' - seeded as opposed to mature rehabilitation ● Develop 'community' narrative. ● GIS Portal - industry to engage/input ● LEP flexibility ● Case studies on final land use. ● More communication/engagement from UHMD on final land use. ● Rehab fact sheet - need to change the methodology for communicating rehabilitation to improve understanding. ● Approved final land use/diversification - improve flexibility - if this system isn't improved, we'll miss opportunities.

Table 9

Doing well
<ul style="list-style-type: none"> ● Pasture rehab for cattle grazing. Keep cattle grazing study going. ● Use of biosolids ● Studies on what species grow well, i.e. correct pastures for final land use. ● Sharing of information between sites.
Opportunities for improvement

- Investing intensive use opportunities of rehab land i.e. cropping.
- Open up areas for increased grazing, especially during drought.
- Area of new disturbance continues to be higher than areas rehabilitated.
- Old rehab may be an issue to provide beneficial land use.
- Review synoptic plan - investigate a 'logical land use' - land use map.
- Indigenous contribution for land use planning and land management.



Figure 12: Forum participants visiting a procurement-themed information stall

Table 10

Doing well
<ul style="list-style-type: none"> ● Grazing trial - good practical demonstration of rehab working - community reacting well to this. ● Rehab portal - regulator source of rehab information
Opportunities for improvement
<ul style="list-style-type: none"> ● More information from rehabilitation grazing ● Voids - minimise size, less runoff to other areas ● Balance between disturbance/rehabilitation - people want to see disturbed land out there being rehabilitated. ● Dust generation from active dump areas ● Dust models not accurately estimating contributions from truck dumping - potential for watering. ● Shape of mining dumps - not natural looking - more sites should look to newer style geofluv shaping, e.g. at Rix's Creek new geofluv design. Do a news piece on the types of rehab that people are moving towards across the Upper Hunter - who in the region is adopting new landform methodologies e.g. Geofluv (BHP, Bloomfield, Mangoola). ● Sharing information and communication between different mines, and from mines

to the government/stakeholders.

- Beneficial uses of voids - bring on beneficial use.
- Employment opportunities in rehab i.e. work for dole.
- Communication (non-technical) of different landform types and different design and erosion models. Differences in views about not sharing enough info and doing well highlight differences in exposure/knowledge of rehab matters.
- Flexibility in final land use over life of approval.

5. Water Quality and Stewardship

Table 11

Doing well
<ul style="list-style-type: none"> ● Water Accounting Framework - getting done, is consistent, identify water efficiency projects, innovation, efficiency and water recycling. ● Tailings storage - reclaim water, FLOC, press bed filters
Opportunities for improvement
<ul style="list-style-type: none"> ● More consistent statewide reporting of water use. ● Tailings storage - water treatment case study (small project team) ● Water sharing scheme? - pit voids/fea, ease pressure on current supplies, unused pits ● Other sectors - utilising runoff, identify water quality needs e.g. mining vs. potable vs. treated. ● Grants/schemes ● Rainwater tanks - high area roof/catchments ● Pumped hydro from voids ● Capture more water in storage ● Identify capture areas better ● Within legislation ● Mixing of water qualities ● Evaporation. Loss minimisation. ● Water table impacts (draw down). ● Drinking water/tank water impacts. ● Impacts from air quality.

Conclusion

The Dialogue's Forum provides an opportunity each year to bring together a diverse range of participants involved in the Dialogue to review the progress of projects and the Dialogue more broadly. This helps the Dialogue continue to evolve to meet the expectations of the community and promote coexistence with mining in the region.

Given the significant direction provided by 2018 Forum participants on the projects and activities the Dialogue sought to undertake in 2019, there is a wealth of inspiration from this Forum's discussion session for the Working Groups and Committees to determine future priorities and projects as we move into 2020 and beyond.

Key environmental issues regarding air quality, water and land management remain high on the list of priorities and the Dialogue will continue progressing with economic and social issues, as well as improving our communications with the Upper Hunter communities through various initiatives in 2020. We look forward to reporting how we have tracked at the next Forum, to be held in Muswellbrook.



Figure 13: 2019 Forum participants