

**AGENDA**  
**Upper Hunter Mining Dialogue**

**Joint Working Group Emissions and Health Meeting**

**UHMD Resource Centre**  
**Upstairs of the Town Square Shopping Centre**  
**Suite 1, 159 John Street, Singleton NSW 2330**

Tuesday 27 June 2017, 2:00 pm to 4:00 pm

Local dial in: 02 8319 9443

Organizer code: 40077000 / Participant code: 32827868

1.	Welcome and apologies	
2.	Minutes and actions arising of the previous meeting	
3.	Synoptic Plan Workshop and Review Update	<b>Attachment 1</b>
4.	School Mine Tours Program Update	
5.	Upper Hunter Air Quality Monitoring Network Update: <ul style="list-style-type: none"> <li>a. UHAQMN Five-Yearly Review</li> <li>b. UHAQMN Summer 2016/17 Results</li> </ul>	
6.	Upper Hunter Air Quality Education Fact Sheet	<b>Attachments 2a and 2b</b>
7.	Update on communication initiatives	
8.	Update on current projects: <ul style="list-style-type: none"> <li>a. Dialogue projects</li> <li>b. Government/other initiatives</li> </ul>	
9.	Other business	
10.	Next Meeting / Meeting Close	

**UHMD Joint Working Group - Emissions and Health  
27 June 2017**

Agenda Item 2

**MINUTES AND ACTIONS ARISING FROM PREVIOUS MEETING**

**DRAFT MINUTES**

**NSW Minerals Council  
UHMD – Joint Working Group – Emissions & Health  
UMHD Resource Centre, Singleton Town Square Shopping Centre, Singleton**

**Wednesday 15 March 2017: 2.00 pm - 4.00 pm**

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**Present:**

John Hindmarsh	The Bloomfield Group (Chair)
Matt Parkinson	Bayswater Power Station
Sarah Withell	BHP Billiton
Julie Thomas	Muswellbrook Coal Company Limited
Wendy Bowman	NSW Mine Watch
Doug Fenton	Rio Tinto
Melinda Hale	Singleton Council
Neville Hodgkinson	Singleton Shire Healthy Environment Group
Julie McNaughton	Yancoal
Bob Mackie	The Resource
Greg Sullivan	NSW Minerals Council
Craig Milton	NSW Minerals Council
Kari Dahlgren	PhD Candidate (observer)

**Guests:**

Emma Coombs	NSW Environment Protection Authority
Mitch Bennett	NSW Environment Protection Authority

**Apology:**

John Watson	Glencore
Peter Jaeger	Peabody Energy
Benjamin Harrison	Department of Planning and Environment
John Drinan	Singleton Shire Healthy Environment Group
Karen Marler	NSW Environment Protection Authority

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**1. Welcome and Apologies**

The Chair welcomed all members and noted apologies. The Chair acknowledged that Dr Drinan was now an apology at what was to be his last JWG meeting and relayed a farewell message that Dr Drinan had prepared. The JWG acknowledged Dr Drinan for his contributions to the Dialogue over many years.

**2. Minutes from previous meeting**

The minutes from the previous meeting were accepted. Mr Milton provided an overview of actions.

**3. Presentation - Emma Coombs and Mitch Bennett (EPA) - Adverse Weather Investigation Project**

Ms Coombs and Mr Bennett provided an update on the project that was discussed at the previous JWG meeting regarding the development of a forecasting program that is currently being tested and analysed, with the new program to be trialed in Spring 2017.

The EPA is working to determine if the changes in results on days with similar conditions is due to industry modifying their actions through utilising forecasts. Comprehensive historical data will enable EPA to see trends as they emerge. Further, the EPA is now looking at the differences between Merriwa and Singleton.

The Working Group discussed that many of the region's worst days come about from a specific set of conditions arising from an overnight change, a north westerly moving down the valley meeting a southerly moving the air up again.

The EPA advised that they would be looking to incorporate some daily production information from sites into this trial, such as tonnes of coal moved.

**ACTION:**

- **UHMD secretariat to locate the final report of the Adverse Weather Investigation project and distribute amongst Working Group members.**

#### **4. Upper Hunter Air Quality Monitoring Network Update**

The EPA advised that the OEH is undertaking a review of the UHAQMN and is keen to hear from Working Group members if there's any suggestions or concerns they would like to raise. EPA advised to contact them via email.

The Chair advised that OEH will also be looking at the data collected. Given the cost of operating the network is borne by industry, this provides a good opportunity for the review to determine whether so many monitors are needed in a cluster if they provide the same results.

Mr Hodgkinson advised that the position of monitors was originally criticised by many members and that most monitors do not measure the more harmful PM2.5 particles. Mr Bennett advised that there are 3 monitors across the region that measure PM2.5 and didn't think that more monitoring devices would tell us anything more than what we already know. Mr Bennett further advised that this consultation is currently being discussed with OEH on proposed changes and that industry would be consulted throughout this process.

#### **5. Clean Air for NSW**

Mr Milton advised the working group that NSWMC had provided a submission to this consultation. Overall, 120 submission have been received, with EPA advising these have now been made public.

#### **6. Upper Hunter Air Quality Education Fact Sheet**

Mr Milton advised that there was concern that inaccurate information about air quality in the Upper Hunter was being provided in schools across the region and there was a need for an updated fact sheet on air quality to be produced to provide students with accurate information, given that local councils receive regular requests for this information.

The EPA representatives advised that they would be happy to provide support to the UHMD secretariat in revising this information as they have all relevant information on their website. However, it is not packaged in a way that is easily accessible or understood for the intended student audience.

Ms Hale advised that it is important to give this a local view and that it would serve well as a Dialogue project. There are a number of contributors to air quality in the region, not just from the coal industry, and it would be beneficial to provide information to students for where they can visit to retrieve the relevant information. Ms Hale advised that from the council requests she has received appear to already link air quality with dust in the air which is attributable to mining activity.

**ACTIONS:**

- **UHMD secretariat to prepare a draft air quality information sheet, in conjunction with the EPA, and distribute amongst Committee for review.**

## **7. UHMD 2017 Structure**

Mr Sullivan provided an update on the structural changes to the Dialogue, noting the disbandment of the Executive Oversight Committee and the joint meeting structure of the Land Management and Water working groups for the remainder of 2017.

## **8. Community Perceptions Survey**

Mr Milton provided an overview of the survey and key points for consideration, encouraging members to review the report and consider how to improve engagement with the wider community.

## **9. School Bus Tour Update**

Mr Mackie provided an update on the school bus tours project and advised that a working group is being established to oversee the organisation of the 2017 rollout of the project, encouraging members to nominate appropriate personnel to form this group.

## **10. Forum Review**

Mr Milton provided an overview of the Forum noting that participants surveyed were generally positive towards the 2016 event. Mr Milton provided a number of suggestions for working group members to consider as we plan the 2017 event.

One of the key outcomes for the 2016 forum was the commitment from the Department of Planning to host a community workshop in 2017. An update on this workshop was provided at the Land Management and Water JWG meeting, but members recommended it remain on this working group's agenda as an update moving forward.

### **ACTION:**

- **UHMD Secretariat to include Synoptic Plan workshop and review on future JWG meeting agendas.**

## **11. Communications Update**

Mr Mackie provided an update on the UHMD's communications activities, noting that Ian Kirkwood's tour of the region for multiple Newcastle Herald articles provided a valuable opportunity to increase Mr Kirkwood's knowledge of industry practices.

## **12. Update on current projects**

Mr Milton provided a brief update on other projects and advised that progress is being made on the Mine Dust and You fact sheet which should provide an update for the next Working Group meeting.

## **13. Other business**

Mr Milton advised members on the proposed non-road diesel PRS, with the EPA representatives noting that this work is still progressing.

Ms Hale advised the Working Group that the EPA have funded a joint 'wood smoke reduction' campaign with Muswellbrook and Singleton Councils worth \$4,000.

Ms Hale further advised that Bruce Devonport would no longer sit as a representative on Dialogue matters and that the UHMD secretariat contact Maryanne Crawford to invite to future meetings.

### **ACTION:**

- **UHMD secretariat to invite Maryanne Crawford to future Dialogue meetings in place of Mr Devonport.**

## **14. Meeting Close**

Meeting closed at 3:40 pm

**Action items arising from 15 March 2017 meeting  
UHMD Joint Working Group - Emissions and Health**

<b>Task</b>	<b>Responsibility</b>	<b>Status</b>
<b>Presentation - Emma Coombs and Mitch Bennett (EPA) - Adverse Weather Investigation Project Update</b>		
UHMD secretariat to locate the final report of the Adverse Weather Investigation project and distribute amongst Working Group members.	UHMD secretariat	<b>In progress - Report yet to be released</b>
<b>Upper Hunter Air Quality Education Fact Sheet</b>		
UHMD secretariat to prepare a draft air quality information sheet, in conjunction with the EPA, and distribute amongst Committee for review.	UHMD secretariat	<b>Completed (to be provided at June 2017 meeting)</b>
<b>2016 Forum Review</b>		
UHMD Secretariat to include Synoptic Plan workshop and review on future JWG meeting agendas.	UHMD secretariat	<b>Completed</b>
<b>Other business</b>		
UHMD secretariat to invite Maryann Crawford to future Dialogue meetings in place of Mr Devonport.	UHMD secretariat	<b>Completed</b>

**FOR INFORMATION/DISCUSSION**

**UHMD Joint Working Group - Emissions and Health**  
**27 June 2017**

Agenda Item 3

**SYNOPTIC PLAN WORKSHOP AND REVIEW UPDATE**

**Issue**

The Upper Hunter Mining Dialogue has been calling for a refresh of the Synoptic Plan since 2011. The Synoptic Plan Workshop in Singleton on 2 June began what is anticipated to be a two-year review project.

**Background**

At the 2016 Upper Hunter Mining Dialogue (UHMD) Annual Forum, a panel discussion session at the 2016 UHMD Annual Forum addressed the issue of beneficial use of voids in a post mining landscape. Panellists identified the need for a refresh to the synoptic plan and further research to identify future voids and what benefits could be derived from them. There was strong support among forum participants for a refresh of the 1999 Synoptic Plan.

As a result of the Forum, DPE agreed to host a community workshop in early 2017 in the Upper Hunter to determine how best to progress a final land use strategy (Synoptic Plan) update. The UHMD Secretariat assisted in the establishment of a committee consisting of DRG, DPE, DPC, University of Newcastle, and industry to discuss preparations for the event.

The UHMD Secretariat prepared a brief Synoptic Plan timeline prior to the Workshop that tracks the development of the Plan review from the initial release of the *Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of NSW in 1999* to the decision to host the workshops at 2016 UHMD Annual Forum, detailing various meetings and discussions between stakeholders that have occurred since the release of the plan. This Synoptic Plan timeline document has been attached (**Attachment 1**) for reference, and was circulated to all workshop attendees, in addition to two early UHMD workshop documents, to ensure there is a level of common understanding of the background to the workshop.

The workshop was held on Friday 2 June 2017 at the Singleton Diggers Club. There was a mix of representatives from community and interest groups, industry, local government, academia and departmental representatives spread across each table to ensure the discussion was balanced and respectful, which provided a number of valuable considerations for the DPC to work with.

DPC have advised they will prepare a report summarising the proceedings at the workshop and in due course will advise how Government intends to move forward with the review.

**Recommendation:**

That the Joint Working Group note that the Synoptic Plan Workshop has been held and discuss the review process moving forward to ensure that the review of the Synoptic Plan appropriately engages all key stakeholders and delivers outcomes that provide certainty for the Upper Hunter communities.

**FOR INFORMATION/DISCUSSION**

## HISTORY OF THE SYNOPTIC PLAN



### August 1999 - Synoptic plan released

The *Synoptic Plan: integrated landscapes for coal mine rehabilitation in the Hunter Valley of NSW* was released and prepared for the then NSW Department of Mineral Resources by Architects Planners Landscape Consultants.

### July 2011 - Upper Hunter Mining Dialogue Workshop (Singleton, NSW)

Updating the Synoptic Plan for the Upper Hunter was the top priority idea for actions identified by the community at the first Upper Hunter Mining Dialogue (UHMD) workshop.

Workshop participants were invited to vote on their preferred priorities in response to the question "What could we start together today that could make the most difference to the future of this issue?". Several Synoptic Plan-related actions tallied a combined 49 votes. These actions included:

- Urgent development of a new synoptic plan incorporating the following elements (28 votes):
  - Strong community and industry input;
  - Include land classes; and
  - Ensure plan is a living document.
- Synoptic Plan should link to site closure plans and rehabilitation completion criteria reviewed regularly. (15 votes)
- Stakeholders and industry to advocate to government to revise the synoptic plan for the Hunter Valley.

The Workshop highlighted that those who would go on to become long-term UHMD participants seemed to recognise the separate issues of land use planning and the Synoptic Plan are not the same.

### September 2011 - NSWMC response to the UHMD Workshop

NSWMC subsequently responded to the workshop's top ten ideas for action and identified the next steps required in the development of the action. As a result of the Workshop, four actions were identified:

1. The Synoptic Plan should be a tool under the strategic regional land use plans.
2. The Synoptic Plan should be revised and that should be pursued by:
  - a. Stakeholder and industry meetings to discuss who should lead/fund its place in the strategic regional land use plan
  - b. Advocacy to government.
3. Revise the 1999 Synoptic Plan:
  - a. This should be expedited
  - b. Use the existing 1999 document, 'don't reinvent'
  - c. Consider strategic planning outcomes
  - d. Identify issues not already identified in the 1999 Plan
  - e. Should be led by the Department of Planning and Infrastructure and should be developed alongside the Strategic Regional Land Use Plan.
  - f. The deadline for the completion of the synoptic plan is 31 December 2012 or when the land use plan is completed, whichever comes first
  - g. Industry should adhere to recommendations of the synoptic plan.
4. Develop a consolidated map of all mines in the Hunter Valley and what industry is doing (rehabilitation, disturbance, offsets etc.) and future approved plans. The Rehabilitation and Land Management Working Group will consider.

NSWMC proposed to organise a Land Use Planning Workshop with interested stakeholders, industry, the Department of Planning and Environment (DPE) and the Department of Trade and Investment, Regional Services and Infrastructure to begin the development of a new Synoptic Plan.

## November 2011 - Land Use Planning Workshop

The Land Use Planning Workshop was intended to consider the role of the synoptic plan and how it should be developed, including how the synoptic plan fits with the strategic regional land use plan (SRLUP) that the Government was preparing for the Hunter Valley region in 2011. The Workshop highlighted that members were primarily focused on the synoptic plan and did not provide any feedback on land use planning (this was happening concurrently with the SRLUP). Participants were asked to provide feedback on a number of questions including:

- **What is the synoptic plan?** - Participants discussed the purpose of a synoptic plan and advised that it should provide a master framework for landscape level decision-making and set the standards from which individual mine plans can be established. Participants also discussed the scope of the plan, advising that it should include planning constraints and requirements and the interconnectivity, consider the cumulative impact of mining.
- **What can the plan deliver?** - Participants advised that the Plan can deliver a reference document that talks to the strategic regional land use plan. Further, the Plan could be a live document that is regularly updated and whose performance can be measured and reported.
- **What can the plan not deliver?** - Participants advised that Synoptic Plan cannot be specific to mining and extractive industries and there are restrictions on the capability of rehabilitated land and what it may be used for post-mining.
- **What are the benefits?** - Participants saw the benefits of a synoptic plan as having an integrated approach and a clear vision of end outcomes with the capacity to inform regulatory instruments, boundaries and objectives. Participants felt the synoptic plan needs to be part of the wider strategic land use plan.
- **What are the outcomes?** - Participants advised the outcomes of a synoptic plan would facilitate better coordination and public communication, as well as greater alignment of mine rehabilitation and lease management with broader regional land use objectives through strategic land use plans.
- **How should the plan be developed?** - Participants discussed how who should take leadership and decision making responsibilities of the plan, with the Department of Premier and Cabinet identified as the appropriate leader for a whole of government approach. Industry and community were also recognised as key stakeholders. Participants felt an independent Chair should oversee the Plan, alongside a Steering Committee. Funds to develop the plan could be shared by industry and government, or raised by a special levy and will require ongoing funding to ensure regular updates can be undertaken.
- **What additional inputs might be needed to inform the study?** - With regards to biophysical and triple bottom line economic analysis, participants advised that the study should incorporate vegetation and biodiversity data; population trends and changes; economic and feasibility analysis of post mining land uses; and attempt to understand restoration objectives and limitations. With respect to review of research, participants advised the study should include risk assessments for types of land uses proposed; understand carbon credit policy, water, transport, infrastructure and electricity transmission planning; assessment of cumulative impacts; and analysis of existing consent conditions and final voids.
- **What are the best avenues for involving the broader community in the plan development?** - Participants believed it is best to engage with community from the very beginning, that they should set the values up front, and they be asked at what steps they want to be involved in. All forms of community input should be utilized (i.e. websites, social media, newspapers, shows, radio) to generate as much community interest in plan development as possible. Participants advised that the best way to educate the community was through case studies, fact sheets and showcasing mines and rehabilitation work. Participants felt it was important to empower the community to own the plan, as this would encourage active involvement in setting outcomes and governance of plan development.
- **What are some of the practical issues in delivering and maintaining the Plan?** - Participants felt both a hardcopy and online would be best and that a fact sheet should be produced for the community outlining the key principles and components of the plan. Participants queried who would own the data and overarching plan and process, and encouraged one department only to take the lead. In terms of updating the plan, participants agreed that a regular update was needed, but that it should be a living document that is capable of periodic updating when required and that it could incorporate a principle of reporting frequently, but reviewing infrequently. Participants noted the success of the Upper Hunter Air Quality Monitoring Network as an example of what the Plan's presentation of data could be based on.

### **December 2011 - NSWMC follow-up work from the 2011 Workshop**

There was general agreement that a group consisting of government, industry and community groups needed to steer the development of an updated synoptic plan for the Upper Hunter. The 2011 end of year report noted that a framework for the development of the plan would be prepared and made available for consultation.

NSWMC intended to draft the initial plan for the development and seek Government commitment to take responsibility for this. The development of the Plan was discussed with staff for the then Minister of Resources, but received a lukewarm reception. NSWMC considered driving this internally through industry by engaging and paying consultants to undertake the development of the Plan with stakeholders, which was ultimately undertaken later in the process.

### **September 2012 - Strategic Land Use Plan for the Upper Hunter**

In September 2012, the Government committed DPE to update the Synoptic Plan for the Upper Hunter, however there was no clear plan to undertake the work and no one within the Department owned the action.

### **December 2012 - UHMD workshops held to determine projects**

In 2012, workshops were held in each of the key UHMD subject areas and projects chosen. The projects chosen for the Land Management area were Grazing Trials, Establishment of Biodiversity Reference Sites and Rehabilitation Principles and Reporting. The synoptic plan was considered to be in the hands of the government.

### **May 2013 - Division of Resources and Energy commit to development of the Synoptic Plan**

Although it was not initially supported as an UHMD Land Management Joint Working Group (JWG) project in the industry workshop, the UHMD Land Management Industry Working Group (IWG) agreed that driving the development of the Synoptic Plan should be a proposed new project for the JWG Land Management.

Members of the IWG along with NSWMC, met with DPE to discuss the development of the Plan on 9 May 2013. The DPE was sent a draft NSWMC plan to update the Synoptic Plan. The Division of Resources and Energy (DRE) subsequently agreed to engage consultants to develop a scope for the development of the plan. NSWMC advised the IWG that no progress had been made to date as of mid-July 2013.

At the JWG meeting on 21 May 2013, NSWMC advised members that DRE were undertaking the updating of the Synoptic Plan and were considering how to broadly consult with the all stakeholders in developing the plan. NSWMC confirmed that we would continue to advocate for broad community involvement in the development of the plan as per the feedback from workshop participants at the 2011 workshop.

### **November 2013 - DRE distributes a scope to NSWMC**

DRE delivered a document to NSWMC outlining a scope that sought quotes for suitable consultants to carry out the first phase of the Synoptic Plan Project. The brief outlines that there will be several phases to the Synoptic Plan Project:

- Phase 1 – Reference Group Consultation
- Phase 2 – Broader Community Consultation / Establish Steering Committee
- Phase 3 – Develop Synoptic Plan

The key objectives of Phase 1 of this project were to:

Write a discussion paper outlining the purpose of a Synoptic Plan

Facilitate a workshop of stakeholders encouraging participation and information sharing, and managing diverse views to achieve a clear view of project requirements

Prepare a project brief for Phase 2. (continued next page)

The Scope for Phase 1 involved two parts, with phase 1 (a) to be completed by 19 December 2013, and phase 1 (b) to be completed by 19 February 2014. NSWMC provided feedback to the DRE scope.

### **December 2016 - DPE commits to hosting a community workshop at the UHMD Forum**

A panel discussion session at the 2016 UHMD Annual Forum addressed the issue of beneficial use of voids in a post mining landscape. Panellists identified the need for a refresh to the synoptic plan and further research to identify future voids and what benefits could be derived from them. There was strong support among forum participants for a refresh of the Synoptic Plan. As a result of the Forum, DPE agreed to host a community workshop in the Upper Hunter to determine how best to progress a final land use strategy (Synoptic Plan) update in early 2017.

**UHMD Joint Working Group - Emissions and Health**  
**27 June 2017**

Agenda Item 4

**SCHOOL MINE TOURS PROGRAM**

**Issue**

The UHMD is making significant progress in developing the School Mine Tours Program.

**Background**

Planning is well underway for the School Mine Tours Program which aims to systematically expose Year 5 and Year 9 students from across the Upper Hunter to an educational experience related to mining as part of their school studies. Under this program, every student in the Singleton/Muswellbrook catchment would tour a mine and its rehabilitation works twice during their 12 years of schooling.

A 10-person working group, led by Rae O'Brien (Glencore), is developing consistent messaging and educational material which will be integrated with the school syllabus. The working group is made up of industry representatives, educators and community members. Key features of the materials the project group is working on include:

- Messaging will be unbiased and explain both the impacts of mining and how its products are used in day to day life. Development of messaging is viewed as vital by the working group as the material will be delivered through a combination of "pre-tour material" and via site personnel "tour-guides" across multiple mine sites.
- Tour design and material will be integrated with the NSW syllabus and designed for use by teachers in the classroom.
- Production of virtual reality tours using 3D headsets and videos are also planned to enhance the "live" experience offered by the mine tours. Once developed the virtual reality headsets and videos could be used as a means to deliver the Dialogue's overall message to not only schools but also the general community.

All Dialogue industry partners earlier agreed to take part in the tours. In order to further planning, the individual mine sites to be used for the tours need to be identified by industry partners and guides from each site nominated so they can be trained. It is crucial that the working group receives details on sites' capabilities to further progress planning – matching schools with sites, training guides, timing, etc. Sites will be surveyed shortly. A survey for industry participants has been prepared and distributed to operators.

All 20 schools in the area have been contacted and all but two have expressed an interest in principle in participating. More than half the schools have now confirmed their involvement and provided student and class numbers. At this stage about 660 students have been confirmed. This number will likely rise as more schools confirm their involvement, as Muswellbrook High School has recently done, reversing an earlier decision to decline participating. It is estimated that each industry partner would likely be required to host 2 or 3 tours per year.

A second pilot tour of 20 Singleton High School students has recently been undertaken, and a verbal update will be provided at the meeting. The overall program is scheduled to commence in September. The bulk of the tours are likely to occur in Spring and Autumn to ensure conditions are optimal for students.

A media plan to promote the tours program is being developed and will include:

- **News Media** - Media releases will be provided to local media outlets – print and radio. A major article will be prepared for publishing covering the June trial tour. There has been some interest from local radio to interview students who participate in a tour distributed as each school tours a site during the program.
- **Social media** - It is proposed to develop a Facebook page for the program. To minimise risk of

inappropriate comments, the page would have to be non-interactive and not allow comments. Schools to be encouraged to promote their tours on their own Facebook pages.

- **Websites** - Promote program on industry partners, Dialogue/NSWMC, local media websites

NSWMC is considering a proposal from the University of New South Wales' Virtual Reality Development team. The proposal relates to the acquisition of 3D imagery at an operating mine site and is estimated to take 3 weeks of filming. There are some logistical issues which will need to be addressed including organising site access and determining the best filming schedule as Spring may provide better footage of the rehabilitation vegetation rather than Winter.

**Recommendation:**

The Joint Working Group note the progress made by this project, and provide any suggestions to enhance the project to the UHMD secretariat for consideration.

**FOR INFORMATION/DISCUSSION**

**UHMD Joint Working Group - Emissions and Health**  
**27 June 2017**

Agenda Item 5

**UPPER HUNTER AIR QUALITY MONITORING NETWORK (UHAQMN) UPDATE**

**A. UHAQMN FIVE-YEAR REVIEW FINDINGS**

A five-yearly review of the UHAQMN is currently being undertaken. A review report was prepared by the Office of Environment and Heritage which asked a number of focus questions.

The review found that the four key objectives of the UHAQMN are being met, including:

- To provide government, industry and the community with reliable and up-to-date information on air quality in the Muswellbrook, Singleton and Upper Hunter Shire local government areas;
- To enable the air quality in those areas to be assessed against relevant air pollution standards;
- To facilitate the identification of sources of air pollution in those areas; and
- To facilitate the development and implementation of strategies to improve air quality in those areas.

In terms of efficiency and cost effectiveness, the review found that “Overall the UHAQMN is considered to be efficient and cost effective in providing reliable and accurate air quality monitoring data that can be available in near-real time to the EPA, OEH, community, industry and other stakeholders.” The external audit recommended that the Muswellbrook NW monitoring station be moved from the current location as data suggests this location is measuring similar sources of particulate matter as Muswellbrook (Central).

The audit suggested a smaller community monitoring location such as Denman that is located close to mines would improve overall network coverage. The audit also recommended that consideration should be given to reviewing and developing a mechanism where industry can apply to decommission monitoring locations that overlap with UHAQMN locations.

A number of suggestions were provided in the review report to improve the monitoring locations, including the installation of rain gauges at key monitoring sites to further build on the meteorological data and knowledge in the region, investigating the potential for additional PM<sub>2.5</sub> monitors to be installed; and better reporting on the changes and sources in the region through industry annual reporting.

Feedback on this review process closed on Monday 19 June 2017. Once the feedback received has been considered, an additional update to stakeholders will be provided by OEH.

**B. UHAQMN SUMMER 2016/27 RESULTS**

The latest air quality reports from the NSW Environment Protection Authority (EPA) and the Office of Environment and Heritage (OEH) have recently been published. The reports cover from December 1, 2016, to February 28, 2017.

The results show that air quality in Newcastle and the Upper Hunter was generally good. The results show that levels of nitrogen dioxide, ammonia and PM<sub>2.5</sub><sup>\*</sup>, or fine particulate matter, were below national benchmarks. One sulfur dioxide spike was recorded in Muswellbrook on December 23.

Newcastle had 27 days during that period where daily average levels of PM<sub>10</sub><sup>\*</sup> particulate matter were above the benchmark, a figure comparable to those recorded during the two previous summers.

The Upper Hunter recorded 12 days where the average levels of PM<sub>10</sub> were above benchmark concentrations – the most days recorded above the benchmark compared to the previous four years. The next highest number of days were in summer 2013–14 (nine days) and 2012–13 (six days).

High particle levels in the Upper Hunter could be attributed to a particularly hot summer period and the influence of dry windy conditions on bushfires, controlled burning and dust generation.

On December 23, 2016, at Muswellbrook, the hourly sulfur dioxide concentration peaked at 21 parts per hundred million (pphm) for an hour, exceeding the 20 pphm national benchmark, likely to be due to electricity generation.

The summer air quality report results were presented to the EPA's Upper Hunter Air Quality Advisory Committee and Newcastle Community Consultative Committee on the Environment in May.

The full summer air quality reports are available on the OEH website:

<http://www.environment.nsw.gov.au/resources/aqms/aqmn-upperhunter-summer-170234.pdf>

**FOR INFORMATION/DISCUSSION**

**UHMD Joint Working Group - Emissions and Health  
27 June 2017**

Agenda Item 6

**UPPER HUNTER AIR QUALITY FACT SHEETS**

**Issue:**

There is a lack of information specific to Upper Hunter air quality that is packaged in an easily accessible fact-sheet based format to provide the community with the necessary information.

**Background:**

At the previous Joint Working Group - Emissions and Health meeting in March 2017, Working Group members supported the Dialogue producing a fact sheet outlining the air quality in the Upper Hunter for use across the network, should any queries emerge from students and other interested parties regarding the air quality in the region.

A NSW Minerals Council Fact Sheet on Air Quality was last produced in 2015 and contains the right format of fact-based information that the Working group was seeking, however this was aimed at NSW more generally, rather than specifically for the Upper Hunter.

Emma Coombs and Mitch Bennett from the EPA advised that they would be willing to provide assistance in reviewing the fact sheet where possible by providing relevant EPA data. The UHMD secretariat is still seeking their participation.

Members will find attached the original 2015 NSWMC Fact Sheet (Attachment 2a) and the Draft Upper Hunter Air Quality Fact Sheet (Attachment 2b) included for review. Members are encouraged to provide guidance to the UHMD secretariat to ensure this is a practical and relevant resource for community use.

**Recommendation:**

That Joint Working Group members review the Draft Upper Hunter Air Quality Fact Sheet to provide feedback on the document, and advise of any updated data that might be available to ensure the fact sheet is supported by recent and relevant data and information.

**FOR INFORMATION/DISCUSSION**

# FACT SHEET

## Air Quality

April 2015



NSW mining takes the issue of air quality very seriously. The health of our mining employees is our biggest priority. In NSW the majority of our mining employees also live in the communities near where mining takes place – so community concerns are our concerns.

It's important to understand the facts about air quality issues in mining regions and what is being done to ensure acceptable air quality across our mining communities.

### The Facts on Air Quality



**Australia has some of the strictest air quality standards in the world** – The Australian national air quality standards for particulates are among the strictest in the world and are likely to be strengthened following a review of the national air quality standards that is underway. As a result, Australia's air quality is excellent by international standards.



**Air quality in the Lower Hunter is good** – A report prepared by the Office of Environment and Heritage in 2012 concluded that "Overall air quality in the Lower Hunter is as good – or better than – air quality in Sydney and the Illawarra." In its 2014 review of the Port Waratah Coal Services T4 project the Planning Assessment Commission stated "Some speakers at the public hearing suggested Newcastle's air quality is relatively poor. The air quality monitoring data does not support this view."



**The Lower Hunter has met national air quality standards 9 of the last 10 years** – In the Lower Hunter, national air quality standards for PM10 – particles 10 microns and less in size – have been met for 9 of the last 10 years. 2009 was the only year when they were exceeded, when dust storms affected air quality throughout the State (Source: OEH data).



**Coal train dust is not a significant source of air pollution** – The independent Planning Assessment Commission, in its 2014 review of the Port Waratah Coal Services T4 project, concluded "There is little or no evidence that uncovered wagons contribute significantly to particulate air quality in the Newcastle area and there is no justification for recommending that wagons be covered."



**Woodheaters are the largest source of fine particulate pollution in the Upper Hunter** – The Upper Hunter Valley Particle Characterisation Study conducted by CSIRO showed that dust from sources such as mining and agriculture contributed an average of 11-12% of PM2.5 – the fine particulates less than 2.5 microns which are of greatest health concern. Wood smoke contributed 30% of PM2.5 in Muswellbrook.



**There are many contributors to coarse particulate pollution in the Upper Hunter** – While woodheaters are the largest source of fine particle pollution (PM2.5), there are also many contributors to coarse particle pollution, or PM10. Singleton is the only large population centre in the Upper Hunter that has exceeded national air quality standards for PM10 since the first full year of air quality monitoring began in 2011, exceeding standards in 2012 and 2013. In its review of the 2013 data, the Office of Environment and Heritage stated "Smoke from bushfires contributed to high pollution on a number of days during January, October and November", indicating that sources unrelated to mining contribute to air quality standards being exceeded.

## Actions to Improve Air Quality

**1. Improvements to coal train dust management** – Following the initiation of industry-led research into coal train dust management in 2014, the coal industry has committed to implement a series of operational improvements to coal train dust management throughout the Hunter Valley Coal Chain. The improvements include reviewing and strengthening coal train dust management plans, avoiding overfilling and spillage of coal during loading, developing procedures to clean up coal deposited on the outside of wagons, and reviewing wagon door maintenance procedures.

These are measures that have been identified through research and public feedback as reducing potential dust emissions from coal trains. Further information can be found at: <http://www.nswmining.com.au/environment/rail-corridor-air-quality>

**2. Reductions in dust emissions from mines** – Following the NSW EPA's introduction of legally binding Pollution Reduction Programs on coal mines throughout the State in 2013, all coal mines are now controlling at least 80% of dust emissions from dirt haul roads, with some achieving more than 90% control. Dirt haul roads are the largest potential source of dust emissions from mining operations.

All coal mines have also implemented systems to better manage their operations during adverse weather conditions, such as when it is dry and windy, and research has been conducted into reducing dust emissions when moving soil and rock waste, known as overburden.

**3. Ongoing air quality monitoring through the Upper Hunter Air Quality Monitoring Network (UHAQMN)** – The UHAQMN is funded by the coal and power generation industries and is run independently by the Office of Environment and Heritage. The network includes fourteen air quality monitoring stations that provide publicly available, real-time information about air quality across the region, helping to inform air quality management strategies. Monitoring results are available on the air quality page at [www.environment.nsw.gov.au/](http://www.environment.nsw.gov.au/).

**4. New air quality research in the Lower Hunter** – The EPA has commissioned two further particle studies in the Newcastle region, which will help identify the major sources of particulates in the region. The work will build on studies in Newcastle previously undertaken by ANSTO that have shown automobiles (27%), secondary sources (23%), smoke (20%) and sea salt spray (16%) are the major sources of PM2.5. Industry and soil together make up 14%, of which coal dust is a proportion along with industrial facilities and agriculture.

**5. Ongoing community engagement through the Upper Hunter Mining Dialogue (UHMD)** – The NSW Minerals Council started the UHMD in 2010 to engage with the community to address the cumulative impacts of mining in the region. Emissions & Health is a priority area for the UHMD and a working group comprising industry, community, government, and interest group representatives has been formed to help develop and implement projects in this area. Projects to date include:

- A weather forecasting tool to allow operations to anticipate adverse weather conditions and take steps to prepare their operations to minimise dust;
- A communications strategy to ensure regular information sharing between government, industry and the community about air quality, health issues, which has included 5 public information sessions.

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**UPDATE ON COMMUNICATIONS INITIATIVES**

**Issue**

The Upper Hunter Mining Dialogue has been actively focussing on its key communications strategies so far in 2017 with a number of community engagement events attended and media engagement opportunities either completed or in the final stages of planning. Key activities for 2017 include:

**Media plans:**

- As earlier reported, the Dialogue arranged for ABC TV Landline and Lateline journalist Ginny Stein to record a segment on the UHMD Grazing Trial. Two stories have now been broadcast – one on Lateline and focusing on collaboration between agriculture and mining through the use of Mt Arthur rehabilitated land for grazing and one for Landline with a more indepth look at the results of the grazing trials.
- The Dialogue also arranged for the Singleton Argus to report an article for the final weigh in of cattle in the Grazing Trial which occurred in early June.
- Radio 2NM's Stephen Cenatiempo has agreed in principle to air regular updates on UHMD activities.
- A separate media plan for the School Mine Tours Program is being developed. Refer to **Agenda item 4** for further information.

**Recent Media:**

- Published media has primarily appeared in industry magazine @thecoalface in recent months. The Dialogue has featured with stories on the UHMD Annual Forum results (February) Community Engagement Program (March) and the retirement of Dr John Drinan and resulting vacancy for a community representative on the Joint Advisory Steering Committee (April-May) and Di Sneddon's appointment to the JASC (May-June). An update on the Synoptic Plan Workshop appeared in the June-July edition.
- The vacant position on the JASC was advertised, asking the community for nominations, in the Singleton Argus and Muswellbrook Chronicle.
- An article announcing Di Sneddon was submitted to Fairfax and appeared in the Hunter Valley News.

**Recent Events:**

The Dialogue was on display at the Cessnock Show (February 24-25), Tom Farrell Institute Rehab Conference (March 30) and Upper Hunter Show (March 31 – April 1). The Dialogue interacted with 78 people at the three events and collected a further 35 community surveys.

The Dialogue also attended the Tocal Field Days on May 5 – 7 and collected 70 surveys through interaction with 152 people which brings the total number of surveys gathered at events in the past year to 288. As evident in the numbers, despite being outside our immediate catchment in the Upper Hunter, Tocal is a valuable event for the Dialogue to spread its message; from the surveys collected 25% of the respondents identified as living or working in the Upper Hunter which would also apply to the people we interacted with but did not fill out a survey. The nature of the event – with its many information and educational displays – also leads to greater depth of interaction with people who are very interested and, generally, positive about the Dialogue's work and messaging. The interaction/conversations generally take 10/20 minutes per person – occasionally lasting almost an hour.

**The Dialogue is also scheduled to attend:**

<b>Upcoming Community Event</b>	<b>Date</b>
NSWMC HSEC Conference	August 14-16
Broke Village Fair	September 10
Singleton Show	September 22-23

**Media Links:**

- ABC Landline video:  
<http://www.abc.net.au/tv/programs/landline/old-site/content/2017/s4683881.htm>
- ABC Lateline video: <http://www.abc.net.au/lateline/content/2016/s4679918.htm>
- ABC Landline article:  
<http://www.abc.net.au/news/2017-06-11/cattle-thrive-on-retired-mining-sites-in-new-trial/8604456>

**FOR INFORMATION / DISCUSSION**

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**UPDATE ON CURRENT PROJECTS**

**Dialogue projects:**

***Weather Forecasting Project***

This project is underway and additional filming will recommence shortly. A copy of the video will be circulated for comment amongst Dialogue members once finalised.

***Community Air Quality Forecast Alert / Dust Risk Forecasting Project***

At the March 2017 JWG Emissions and Health meeting Emma Coombs and Mitch Bennett from the EPA spoke about the Adverse Weather Investigation project that the Office of Environment are working with, noting that it was due to be released shortly.

The UHMD secretariat has been advised that the EPA have approved OEH's publication of the Upper Hunter Dust Risk Forecasting Scheme Development report, and we will be making the report publically available once it has cleared the OEH publications approval process and stakeholders will be notified of the release.

EPA has indicated that they still intend to begin a trial on the collection of data in Spring 2017 across Upper Hunter sites that will seek to gather information on the overburden moved, coal produced and data from upwind and downwind monitoring locations to work these into their modelling.

At the quarterly EPA and NSWMC meeting, the NSWMC advised of the industry trials using WeatherZone forecasts. NSWMC queried the EPA on whether there would be any data or reporting protocols under this trial. EPA advised that it is likely to be a licence condition to gather more data on an ongoing basis. EPA will liaise with industry to discuss what will be required once this is finalised.

***Upper Hunter Air Quality Fact Sheet***

A revised fact sheet is provided for review at **Agenda item 6**.

***Update of Mine Dust and You Fact Sheet***

NSWMC has engaged Pacific Environment to recommend updates to the NSW Health Fact Sheet Mine Dust and You in light of new evidence regarding the health impacts of particulate matter and the new national health standards for particulate matter. Industry input was also sought in preparing the update. A final version of the reviewed fact sheet has recently been prepared. NSWMC will engage with NSW Health and the EPA on the recommended updates.

**Government projects:**

***Clean Air for NSW Summit Update***

The NSW Environment Protection Authority (EPA) in conjunction with the NSW Office of Environment and Heritage has announced the upcoming NSW Clean Air Summit.

The Summit will be held on Tuesday 27 June in Sydney, the same day as this meeting. JWG - Emissions and Health Chair John Watson, will be presenting on behalf of industry and there is quite a

large focus on coal mining and complementary industries.

The Clean Air Summit follows the release of the Clean Air for NSW Consultation Paper for public comment from October 2016 to January 2017. A copy of the NSWMC submission, as well as the consultation paper and other submissions received are available on the EPA website at:

<http://www.epa.nsw.gov.au/air/clean-air-nsw.htm>.

The Summit will discuss key issues raised in the consultation paper and stakeholder submissions, and provide an opportunity for further stakeholder input to the development of the Clean Air for NSW strategy, which includes actions to improve air quality results across the state over the next ten years.

### ***Chief Scientist's recommendations on coal train dust***

The EPA has advised that there has been no comments from the Minister for Environment and Heritage regarding the Chief Scientists' recommendation on coal train dust. The EPA has also advised that the Chief Scientist is currently focused on providing support and funding for the Smart Sensors Monitoring Project, a University of New South Wales-led project.

### ***Load based licensing***

The EPA sought public feedback on an issues paper for the LBL review between 31 October and 23 December 2016. Fifty-two submissions have been received and have been published on the EPA website:

<http://www.epa.nsw.gov.au/licensing/lbl/lblreview.htm>

The EPA have advised they will prepare a proposal paper for further public consultation that takes into account the comments and views received on the issues paper. This proposal paper would set out any recommended changes to improve the LBL scheme and would also include a cost-benefit analysis and an assessment of the likely financial impacts on licensees. The release of this proposal date is tentatively set as mid-2017.

## **FOR INFORMATION / DISCUSSION**

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**OTHER BUSINESS**

**Upper Hunter Voids Research Project**

Dayjil Fincham from Hydro and Electric Consulting (HEC) is undertaking a masters research project through the University of Queensland. The research project is examining voids in the Upper Hunter.

Ms Fincham is well known to many industry members of the Dialogue given her involvement with the UHMD Water Accounting Framework project and modelling and analysis for industry projects. Ms Fincham recently presented to the Joint Advisory Steering Committee noting that she is keen to engage with the Dialogue.

Ms Fincham recently attended the Synoptic Plan Workshop held in Singleton on 2 June 2017 as a researcher, and discussed her research proposal with numerous Dialogue members and other community representatives, which has further helped provide her with a sense of the Dialogue's involvement in the Synoptic Plan review process.

Ms Fincham is kindly asking Working Group members to complete a short questionnaire to be returned to the HMD secretariat or Ms Fincham directly. The questionnaires will be distributed at the JWG meeting.

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**NEXT MEETING / MEETING CLOSE**

The next meeting for the JWG - Emissions and Health is currently scheduled for Wednesday 11 October 2017 from 2:00 pm to 4:00 pm.

Members are encouraged to RSVP and advise whether this date is suitable.

**FOR INFORMATION / DISCUSSION**