



## **Bulga Complex CCC Meeting**

3 December 2010

Bulga Coal Administration Meeting Room

Present: Ned Stephenson (NS), Ralph Northey (RN), Stephen Shoesmith (SS), Stewart Mitchell (SM), Bruce Russell (BR), Nathan Lane (NL), Sarah Roberts (SR), Teegan Hayward (TH), Paul Amidy (PA)

Apologies: Helen Sharrock, Michael Lloyd

Chairperson: Godfrey Adamthwaite (GA); Alison Howlett (AH)

Meeting opened: 9.15am

Meeting closed: 12.15pm

Declaration of Pecuniary Interest: Nil

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### **1. Previous minutes**

BR: Noted the minutes from the last meeting were not accurate. His comments in section 4.3 and 5.1 were not recorded correctly; they were not words he would have used.

RN: Clarified action 1.6, the gas pipeline that RN was to follow up referred to the Macquarie Generation pipeline.

The minutes were moved as being correct, other than what was brought forward, by SM and seconded by RN.

### **Actions arising from the last meeting – Beltana**

### **2. Report on the heritage status of the shed beside the Conservation Area**

NS: Provided a summary from Heritage Advisor, Lillian Cullen regarding the heritage status of the hay shed near the Conservation Area.

- It is recommended that the hay barn be retained in the landscape for as long as possible. The structure is not considered to be of great age or significance. This hay barn is considered to be in a dilapidated condition.
- The whole area will be fenced off for safety reasons.

SM: Asked why the shed was left off the list of Bulga Complex heritage items, and were we going to include it.

NS: Yes we will include it on our register and fence the area as suggested by Lillian Cullen. **ACTION**

### 3. Review of undermining Charlton Road

- NS Provided an overview of mining under Charlton Road
- Started impacting the road at the end of June.
  - New longwall, new equipment and new processes meant that the rate of mining was slower than previous mining under the road.
  - Management of traffic and subsidence monitoring was done in accordance with the approved road safety management plans.
  - The road dropped around 2.6 metres which was around 85% of our predictions.
  - There was one community complaint regarding the speed restrictions in the subsided part of the road.
- GA Asked what was the maximum cracking
- NS A single crack didn't get much wider than 6 centimetres. 24 hour monitoring with crews running 2 weeks before and after for 24 hours a day to monitor cracks. 60 days in total. We have worked with Energy Australia and installed rollers on the powerlines so the lines could move.
- BR Asked where is the creek crossing the road that has to run backwards?
- RN Referred to the picture in the PowerPoint presentation and noted this is one of two places where the drainage runs through the chain pillar on longwall 1.
- SM Asked if there has been a 2.6 metre drop, how that is naturally going to flow.
- NS The area is a natural slope. We are going to lower a channel through Ted McInerney's property, which we have a civil engineering design for. We did this previously during mining of South Bulga where a channel was cut through Ted and Muriel Bird's property. The design will be sympathetic to the landform so Ted can graze the land as well. Ted and sister and nephew have been a part of how we can do this best.
- GA Asked what angle was the longwall panel under the road.
- NS About 30 degrees.
- BR: Asked which creek it was.
- RN: It's an eroded drainage line, with a dam at the end of it and it drains from around Fordwich Road onto Ted's property.
- SM: Asked if it drains into the main watercourse from Cobcroft Road.
- NS No, it drains from Broke Road. This can be discussed in further detail after the meeting.
- SM: Asked if subsidence affected Ted's house.
- NS: The main impact was his shed, and his gutters wouldn't drain properly. His gutters were fixed and his tank replaced. His back door jammed and a front window needed adjusting. The subsidence was much further away from his house this time.
- SM: Asked if the predictions of 300 mm beside his house were correct.
- RN: Said it was in that order.
- NS: The biggest impact was his boundary fence which we replaced to Ted's specifications.

### 4. Broke Road Subsidence

- NS Provided an overview of Broke Road Subsidence
- Falls under same management plan as Charlton Road. Anticipating 30 days of subsidence which is less than time taken to manage the undermining of Charlton Road.
  - Predictions remain conservative, repairs and monitoring will be done according to approved plan.
  - Installed continuous survey monitoring, ancillary to existing monitoring. It is an automated system so we can start gauging the rate of subsidence.

- To date, the highest rate of subsidence is 26mm in an hour. This information is useful for us to manage the road, for example, if there is a high rate of subsidence, we need more people and machinery. If it is a slow rate, we don't need as many people and machinery.

GA: Asked what is the depth of cover

NS: Where it impacts the road, depth of cover about 140 metres, and goes down to 280-300 metres at Charlton Road. Seam height varies between 2.2 - 2.8 metres. We are getting around 85% cumulative subsidence. All of our plans for roads, pipelines, and infrastructure are based on the conservative value of 100% subsidence.

SM: What is the maximum depth of seam you can mine by longwall method?

NL: 3.6 metres is the maximum thickness our longwall can cut.

## 5. Blakefield North Modification to current Development Consent

NS: Gave an overview of the modification required for Blakefield North

- Currently mining in the Blakefield South area, and finishing longwall panel 14 of Whybrow seam in March next year.
- Currently have a development consent for 4 seams (Whybrow, Blakefield, Glen Munro and Woodlands Hill).
- The main changes in the modification are: no highwall access; increased gas drainage infrastructure; new ventilation shaft; and increased power generation capacity.

AH: Have you heard from Mark from AGL CCC, about a shared piezometer? Professor Willgoose is concerned about a spike in the data.

RN: No, have not heard from them. We will investigate the spike in data. **ACTION**

SM: Where does the gas come from post mining?

NS: Goaf drainage. The gas comes from the strata which collapses behind the longwall (including coal seams). If the gas doesn't come out, it reports to where the employees are working.

RN: Our gas drainage is about providing a safe workplace. It is a by-product which we can utilise to produce power.

## 6. Alluvial Aquifer Protection

RN: Gave an overview of protecting the alluvial aquifers

- One of the most significant environmental aspects is the protection of the alluvial aquifers. All underground longwalls stand off the alluvial limit by the predicted angle of draw plus 40m, as established in consultation with the regulators and hydrogeological experts.
- Water balance is monitored each month to measure actual versus predicted groundwater inflows. If actual inflows exceed predicted, an investigation is initiated.
- Mid panel review by a competent hydrogeologist is undertaken for each longwall.
- All mid panel reviews to date have concluded that there has been no measurable impact on the alluvial aquifer water levels and that the groundwater inflows are consistent with predictions. These reviews are included in an appendix to the AEMR.
- There is inferred leakage from Monkey Place Creek and Wollombi Brook; however the rates are predicted to remain at negligible levels due to the very low vertical permeability prevailing in interburden strata.

BR: Asked when the flood was on (June 2007), did you see any increase in water flowing into the underground?

- RN: We didn't see any additional water with the underground operations associated with flooding. The interburden is low permeability. The coal seam water is brackish and only of value for dust suppression and washing coal.
- SM: 400ML imported into mine workings, is not insignificant. Would that water find its way into the river system assuming there was no mining activity?
- RN: Over geological time, it does. It's not like there is 400ML that is not going to the Brook. What it will do is induce more recharge to the overlying strata. Where we subside, we will get more recharge. The groundwater model predicts that the annual loss from the alluvial aquifer is 18 ML/year. Reducing the saline discharge from the coal seams reduces the salinity in the Wollombi Brook.
- RN: Explained the 400ML comes from the coal seam. RN offered to talk about it further as the information is quite technical.

## **7. Gas pipeline**

- RN: Gave an update on the Macquarie Generation pipeline project
- According to Macquarie Generation, the pipeline has been approved. Everybody whose property will be impacted by the pipeline has been consulted.
  - The routes are on the Department of Planning website.
  - Xstrata Coal doesn't have a plan to supply gas to Macquarie Generation. We will produce power, and still flare. Excess power could be supplied to Mac Gen, but there is no commercial arrangement with them at the moment.
- SM: Macquarie Generation were anticipating taking gas from Xstrata Coal.
- RN: Their pipeline wasn't just for us. There may be other mines that could tap into the pipeline.
- SM: The pipeline is going through 16 small properties in Bulga, and they haven't negotiated with property owners. The pipeline will devalue properties.

## **Presentation from Bulga Coal**

- PA: Introduced himself to the CCC. Paul has replaced Mel Hawthorne.

## **8. Complaints and Incidents November 2010**

- PA: Explained the complaints and incidents for 2010
- Complaints have been predominantly about noise, compliance has been demonstrated from real time data, perception is considered to be the main issue
  - 31 complaints so far about noise and dust.
  - Category 2 incident was non-compliance during attended noise monitoring, despite inversions present throughout the particular evening no inversion was registered at the time of the monitoring, Department of Planning were notified with no further action requested.
- SR: Noise means different things to different people. Certain people are more sensitive to noise than others.
- RN: 2 residents have made the majority of the complaints.
- PA: We need to provide more proactive consultation about noise.
- It was noted there was an error on the presentation slide regarding number of complaints.

## **9. Community**

- RN: Gave an overview of community sponsorships and projects.
- AH: Asked if the Teaching Place had been put on hold for any reason

RN Not investigating any other sites, still going ahead with Redbournberry site as per the Steering Committee.

## 10. Rehabilitation

PA: Gave an overview of rehabilitation at Bulga Coal

- Not overly successful in the past, have made a concerted effort to improve rehabilitation in recent years
- Changing focus from quarter 3 and 4 to prepare for seeding in quarter 2 and 3
- Looking at future opportunities like the Whybrow spoils, and looking into temporary rehabilitation on those slopes. Also looking into aerial seeding to provide vegetation.

BR: Asked how much rehabilitation ready to start today? Predictions are for a very wet December.

SR: Asked why we were one of the last mines to change our sequence to winter / spring.

RN: We rehabilitate as soon as the area becomes available, and that is a function of the mine plan and mining.

BR: Said that we should rehabilitate when the opportunity is there.

SR: Community members want to know the amount disturbed per year, and the amount of rehabilitation in a 3 year plan. Please include it in future presentations in excel. **ACTION**

AH: We would like to take a motion forward that the community expresses concern and disappointment about the way rehabilitation is undertaken at the mine and want it noted. It is also noted that PA has told the Committee that Bulga has an unsuccessful history of rehabilitation and is making an effort to improve.

## 11. Noise Management

PA: Gave an overview of noise management at Bulga Coal

- May 2010 DA modification outcomes based noise criteria
- 29 new attenuated trucks on site, remaining 1 by Christmas
- Noise bunds being installed on exposed haul roads
- Real time noise monitoring network installed
- Monitoring results used to modify the operations to manage noise impacts

PA: The monitor at Bulga is 15-20 metres of a dam, picking up levels of 50dB due to frogs. If we determine that it is mining noise, we modify where we are working. We have been working with monitor suppliers to get a user friendly website.

SM: Asked how far the monitor is from Putty Road at Bulga

PA: About 200-300m from Putty Road.

PA: Noted that noise from the Bulga monitor is also coming from the north (Mt Thorley and Wambo)

AH: Said the community is concerned with cumulative impact.

RN: We have modified our development consent which now includes a cumulative impact acquisition criteria. PA: Directional monitors work out where the noise is coming from. We will look into swapping the Bulga monitor with the Milbrodale monitor which is directional. We are also hoping to work with Mt Thorley to compare their data near the bridge to improve cumulative noise in the area.

BR: If the frogs are louder than the mine, what does it pick up?

RN: Frogs are a higher frequency than mine noise. Microphone picks up entire spectrum; we use analysis to get the sub 630 hertz noise which is the mine noise.

## 12. 2009 Noise Monitoring Results

RN: Gave an overview of the 2009 noise monitoring results

- After community noise complaints, 8 monitors were installed in 8 locations in the community, recording 24 hours a day.
- The presentation figure shows the 90th percentile LAeq result for the 8 monitored locations. The monitoring was undertaken prior to the purchase of all of the new attenuated haul trucks.
- Report can be passed on, quite lengthy, and will be good to use as a comparison.

SR: The key word is average. Understands we are within our consent conditions, however realistically the community cop highs and lows and in between.

AH: Is there talk about an integrated modelling response with Mt Thorley Warkworth.

There is a discussion about which families have compensation agreements regarding mine impacts. RN noted two residents have agreements in place for noise. If the noise goes outside the criteria, we have to negotiate.

SM: Asked why don't you go for more elevated locations for the noise monitors? The top of the hill near the homestead would be away from frogs and the road. Is there is a reason as to why you don't select elevated locatons?

RN: The real time noise monitors were placed in the most exposed places taking into account weather, windrows. RN will look at relocating the Mt Leonard noise monitor further up the hill.

### **ACTION**

## 13. Blast Management

RN: Provided a summary of the blast fume report:

- 15 blasts were monitored between April and end of June 2010. The blasts monitored were selected as they were expected to have a higher risk of fume generation as a result of being wet or difficult blast design. 13 of these blasts had visible fume in varying degrees. Fume concentrations were monitored with two ODALOG 6000 gas monitors per blast, positioned at different distances downwind of the blast within the 500m clearance zone.
- Analysis of the collected data indicated that none of the workforce or community were exposed to fume gas levels above the occupational exposure levels or DECCW criteria.
- Recent trials of a high grade blast product showed it can reduce the potential of the generation of an orange fume cloud. This product is being used in difficult blasting conditions.

AH: Do you use waste oil?

RN: It is my understanding that we use diesel. SS confirmed with the Blasting Coordinator that we do not use waste oil

BR: Read from previous meetings: *Is there any waste oils in the drill holes?* RN: *we use diesel.*

Br: Asked if there is no way we can stop that black brown cloud?

RN: There are ways of mitigating it.

SR: Asked if we had shared the data with any other Xstrata mines. This report is a positive thing. Other CCC's have blast fume as an issue

RN: There is a mountain of research that can be used; however we have done a trial here with real results. We are using an improved product that reduces the potential for blast fume.

- BR: Reported that a lady got caught between the signage when the blast went off.
- RN: Said that he had not heard about this. The road crew do a sweep up and down the road.
- BR: Said he would give RN her name and details, and for RN to contact BR after he had spoken to her. **ACTION**
- RN: An electronic noticeboard will be placed at Broke and Charlton Road advising of blasting, and it may become an additional traffic control point.
- SM: Congratulated RN on blast fume investigation.

#### **14. Dust Management**

- RN: Gave an overview of dust management at Bulga Coal
- Dust monitoring network established
  - Use mitigation measures such as water carts and dust suppression sprays
  - Proposed aerial seeding project
  - Reviewing potential for in-pit irrigation
  - Reviewing real time dust monitoring
- BR: Asked what monitor is at the mushroom farm and who contaminates it
- RN: We are moving that monitor closer to the operation, where we have power.
- BR: Asked if it is the only monitor that picks up artificial dust.
- RN: All monitors receive dust from all sources (roads, agricultural activities and the like) not just the mine.
- SM: Bulga Complex contributes to the cumulative figures that Mt Thorley Warkworth give out. The last figures weren't provided from this mine.
- RN: They need to ask for it. There was an incident in 2009 where there was a power outage, if the power goes out, the sample is not available.
- AH: A dialogue between the two operations would be really good.

#### **15. Water Management**

- RN: Gave an overview of water management and erosion and sediment control at Bulga Coal
- Recent focus on erosions sediment control across the site
  - Developing an integrated water management system
  - Constructing a 3,000ML dam that is designed to reduce our demand on water from the Hunter River
  - Annual raw water consumption for the complex is approximately 1500ML

#### **16. X-Rail**

- RN: Gave an update of Xstrata's X-Rail project

#### **17. Xstrata Coal Community Survey**

- NS: Gave an overview of the results of the 2009 Xstrata Coal NSW Community Survey.

## 18. GENERAL BUSINESS:

SM: Asked about the bank of lights on the Bulga Thorley boundary, and if they could be fixed  
**ACTION**

BR: Discussed an issue he bought up 12 months ago. There are noxious weeds between the railway and Broke Rd. RN promised the noxious weed program would deal with it. The lantana is in flower. BR would like them fixed. **ACTION**

There was discussion about the air quality monitoring network. **Meeting was closed at 12.15pm.**

### Actions from this meeting

Item	Raised by	Action	Responsibility	Item No.
1	SM	Include hay shed at the Conservation Area on the Bulga Complex heritage register	NS	2
2	AH	Investigate spike in data from the piezometre that AGL has access to	RN	5
3	SR	Include a 3 year rehabilitation report in future presentations that show amount disturbed and amount rehabilitated in table format	PA	10
4	SM	Look into relocating Mt Lennard (Bulga) real time noise monitor further up the hill towards the homestead	PA	12
5	BR	RN to contact community member who was reportedly caught between the signage during a blast, and report back to BR	RN	13
6	BR	Spray the lantana and weeds between the railway line and Broke Road	SS	18