

28 January 2015

**NSW Planning Assessment Commission Determination Report
Watermark Coal Project, Gunnedah LGA**

1. BACKGROUND

The applicant, Shenhua Watermark Coal Pty Limited (Shenhua) is proposing to develop the Watermark Coal Project, a new open cut coal mine located three kilometres to the west of the village of Breeza and 25 kilometres south-east of Gunnedah on the slopes above the black soils of the Liverpool Plains of NSW.

The project has been assessed by the Department of Planning and Environment as a State Significant Development. At the request of the Minister for Planning, the project has also been the subject of a Review and a Public Hearing by the Planning Assessment Commission. Following further consideration by the applicant and the Department, on 10 November 2014 the project was referred to the Planning Assessment Commission for determination.

2. PROJECT APPLICATION

The applicant is seeking to develop a new open cut coal mine in the area surrounding Mt Watermark on the Liverpool Plains. Extracted coal is proposed to be processed in an on-site coal handling and preparation plant (CHPP) before being transported to the Port of Newcastle for export via a new rail spur from the Werris Creek – Moree Rail Line.

The proposal is to extract 268 million tonnes (Mt) of run-of-mine (ROM) coal, to produce approximately 159 Mt of product coal over 30 years. The product coal comprises of 133 Mt of metallurgical (semi-soft coking) coal (low ash content of 10%) and 26 Mt of thermal coal (high ash content of 18%). The annual production rate will be up to 10 Mt per annum. The coal will be extracted using truck and shovel method, with cast blasting.

The project as outlined in the Environmental Impact Statement (EIS) proposes:

- To extract semi-soft coking and thermal coal from three open cut pits (the Eastern Mining Area, Southern Mining Area and the Western Mining Area);
- Construction and operation of a range of infrastructure to support the mine including a CHPP;
- Transporting product coal to the Port of Newcastle for export via a new rail loop, rail spur and related infrastructure;
- Progressively rehabilitating the site; and
- Establishing and maintaining biodiversity offset areas and conservation areas to address biodiversity and heritage impacts.

The applicant has suggested that the mine design includes a number of measures to avoid and/or minimise key environmental impacts, including:

- Avoiding disturbance of the black soil plains, with a minimum buffer of 150m provided to any alluvial black soils;
- Avoiding disturbance of the Upper Namoi alluvial aquifers, with a minimum of 900m horizontal buffer provided to the highly productive Gunnedah Formation;
- Avoiding disturbance of Mt Watermark and Breeza State Forest;

- Minimising final voids, with two of the three mining pits backfilled and the residual void located at the furthestmost distance away from the black soils and the Gunnedah Formation; and
- Reducing impacts on biodiversity, Aboriginal sites and agricultural land, and reducing noise and dust impacts, through mine plan adjustments and other measures.

3. EARLIER PAC REVIEW

The Department of Planning and Environment referred the project to the NSW Planning Assessment Commission for review on 13 May 2014. Terms of Reference for the review (issued by the Minister for Planning on 15 November 2013) required the Commission to assess the merits of the project and hold a public hearing. The Commission was directed to pay particular attention to:

- Impacts of the project on strategic agricultural land, as identified in the *New England North West Strategic Regional Land Use Plan*, including the impacts on existing agricultural land use in the areas surrounding the project;
- Water resource impacts of the project, including direct and indirect impacts on the Upper Namoi alluvial aquifer and downstream surface water resources;
- Health and amenity impacts of the project, with a specific focus on whether all reasonable and feasible noise and dust mitigation measures are being employed to avoid and/or minimise these impacts; and
- Long term land use impacts of the project and the suitability and feasibility of the proposed rehabilitation strategy, including the final landform, final void and the proposed rehabilitation of agricultural land.

During the review, the Commission held a public hearing and other meetings and inspections. The Commission also engaged an independent groundwater specialist to provide expert advice on the potential water impacts of the project. After careful consideration of the issues, the PAC's Review Report was completed in August 2014. The PAC's Review Report found that the protection of the black soil plains was critically important. It went on to conclude that as this mine is proposed to be located on the hills above the plains, it is approvable, subject to further water modelling to corroborate the predicted level of impact on water. The Review PAC also made 25 recommendations regarding the proposal.

The applicant responded to the PAC's Review Report in October 2014; outlining its position to each of the 25 recommendations and providing updated water modelling. The applicant concluded that while it supports many of the PAC's recommendations, *"some of the PAC's recommendations are inconsistent with current Government policy with no precedents for these recommendations being applied (when compared to other contemporary planning approvals granted for comparable open cut coal mines in NSW)."*

The Department subsequently completed an addendum report which also responds to the PAC's recommendations. The Department recommends that the project should be approved, subject to a number of conditions. The Commission has given careful consideration to the PAC Review recommendations and the applicant's and the Department's responses in this determination.

4. DELEGATION TO THE COMMISSION

On 10 November 2014, this State Significant Development (SSD 4975) was referred to the Planning Assessment Commission (the Commission) for determination with the above addendum report to be read in conjunction with the Secretary's Assessment Report for the project of May 2014.

For this determination, Ms Lynelle Briggs AO, Chair of the Planning Assessment Commission, constituted the Commission for this project together with Mr Joe Woodward PSM and Ms Jan Murrell. Ms Briggs chaired the Commission.

Given the critical importance of the groundwater resource in this region the Commission considered that a peer review of the latest modelling results was warranted to ensure this issue is adequately understood, prior to determination of the project.

5. DEPARTMENT'S ASSESSMENT AND ADDENDUM REPORT

The Department's Assessment Report (the Assessment Report) outlined a number of topics that the Department considered including:

- Water resources;
- Noise, blasting and air quality;
- Greenhouse gas emissions;
- Biodiversity;
- Heritage;
- Visual amenity;
- Traffic and transport; and
- Socio-economics.

The Department concluded that the project had been designed in a manner that achieved *"a reasonable balance between maximising the recovery of a recognised coal resource of State significance and minimising the potential impacts on surrounding land users and the environment as far as is practicable, particularly through:*

- *Avoiding disturbance of the black soil plains;*
- *Avoiding disturbance of the Upper Namoi alluvial aquifers;*
- *Avoiding disturbance of Mt Watermark and Breeza State Forest;*
- *Minimising final voids, with 2 of the 3 mining pits backfilled and the residual void located distant from the black soils and alluvial soils; and*
- *Reducing impacts on biodiversity, Aboriginal sites and agricultural land, and reducing noise and dust impacts."*

The Department's Addendum Report provides the Department's consideration and response to the findings and recommendations of the PAC's Review Report. The key issues considered in the addendum report included:

- Agriculture;
- Water;
- Air, Noise and Blasting;
- Long Term Land Use, Rehabilitation, Landform and Final Void; and
- Other issues.

The Department responded to each of the PAC's 25 recommendations in turn, and provided consideration of each one. Of the 25 PAC recommendations the Department was:

- Supportive or largely supportive of 14 recommendations;
- Unsupportive of 7 recommendations; and
- Commented that 2 recommendations were requests to change NSW Government policies, which were outside the remit of the PAC and the assessment of this project.

The Department's addendum report recommends that the project has merit and should be granted consent subject to a number of strict conditions. The conditions that the Department has recommended include measures to reduce the impact to: the groundwater aquifers;

Aboriginal cultural heritage; noise and air quality; and provide mitigation measures to minimise impacts to the local koala population.

6. COMMISSION'S MEETINGS AND INSPECTIONS

6.1. Briefing from the Department of Planning and Environment

The Commission was briefed by the Department on 4 December 2014. The briefing focused on the recommendations made in the PAC Review Report, and the Department's reasons for deviating from some of the recommendations. The Department also briefed the Commission on the Government's new *Voluntary Land Acquisition and Mitigation Policy*, which was available in draft form at the time. A summary of the discussion is attached in Appendix 3.

6.2. Site visit and briefing from the Applicant

The Commission met with the applicant on 10 December 2014, for a site inspection and a briefing. During the site inspection, the applicant and their consultants showed the Commission aspects of the three mining pits and the infrastructure area. The briefing by the Shenhua Group included: an introduction to the project; the applicant's response to the Review and PAC's Recommendations, including the requested additional Groundwater Modelling; and the applicant's view that the project is in the public interest. A summary of the discussion is attached in Appendix 3.

6.3. Public Meeting

The Commission decided to hold a public meeting to provide the community with a final opportunity to comment, prior to determining the application, given the changes that had been made to the project since the PAC's review and Public Hearing. The public meeting was held on Wednesday 10 December 2014, continuing on Thursday 11 December 2014 at the Gunnedah Services and Bowling Club, Gunnedah. A total of 58 speakers presented to the Commission. A list of speakers is in Appendix 1. All those seeking to address the Commission were heard.

The majority of the speakers were opposed to the mine, due to concerns regarding the uncertainty of any potential impacts from the mine on the aquifers, which are a critical water source for agricultural enterprises in the Liverpool Plains region. Other issues raised included the potential impacts to the black soil plains, the region generally and the local koala population; along with the suitability of the biodiversity offset package and noise and air quality concerns. Those supporting the project highlighted the economic benefits that a diversified economy would bring to the community, along with employment prospects. A summary of the topics raised at the public meeting are provided in Appendix 2.

6.4. Other inspections

While in the area on 10 December 2014, the Commission independently visited areas adjacent to the Watermark site, including the village of Breeza.

During the Public Meeting, the Commission was invited to view the agricultural context of the location with the farming community (as the PAC Review panel had done) and also to visit the grinding grooves with some members of the Aboriginal community.

The PAC review panel had undertaken a comprehensive visit with the NSW Land and Water Commissioner, because its terms of reference specifically directed the review to consider the surrounding agricultural land uses. In light of this background, this current Commission with different members considered it was important to properly understand this regional context and agreed to the request from six interest groups to inspect the region more broadly, particularly in relation to agriculture.

The significance of the two grinding groove sites proposed to be relocated was raised at the public meeting. As this Commission had not seen the grinding grooves sites, it agreed it was also important to understand these significant sites and to hear stories of the significance of the sites from representatives of the Aboriginal community. Consequently, the Commission also agreed to the offer of the local Aboriginal groups to visit the two sites with them.

Both inspections took place on 12 January 2015. A summary of these two visits is provided in Appendix 4.

6.5. Follow up meeting with the Department of Planning and Environment, the NSW Office of Water, and Independent groundwater experts

The Commission met with representatives of the Department, NSW Office of Water (NOW), Dr Col Mackie (an independent groundwater expert engaged by the Commission) and Dr Frans Kalf (an independent groundwater expert engaged by the Department of Planning and Environment). Both independent experts had reviewed the applicant's groundwater modelling and agreed the initial modelling was flawed. The discussion focused on the updated modelling, the conclusions of the modelling and whether or not the modelling predications are realistic and reliable. Both independent experts and the NSW Office of Water agreed the latest modelling was appropriate and confirmed the proposal would have relatively small impacts on groundwater — well within the accepted range provided in the Aquifer Interference Policy. In addition to the discussion on the groundwater modelling, the Commissioners also discussed some of the other issues raised at the public meeting. A summary of the meeting is provided in Appendix 3.

7. COMMISSION'S CONSIDERATION

7.1. Land Use and Water Resources

The Gunnedah region is a significant area for agricultural production with a combination of intensive irrigated cropping on the Liverpool Plains and dry land cropping and grazing on the slopes and hills surrounding the plains. The water for irrigation and stock and domestic use is sourced from both surface water and groundwater systems; the groundwater systems are the dominant source of water for the Liverpool Plains.

The impacts of the proposed mine on both the agricultural industry of the region, and the uncertainty surrounding the impacts to the groundwater systems, were the key issues raised during the public meeting. These are considered separately below.

7.1.1. Agricultural Land Use

As outlined in the PAC Review Report, the soils of the Liverpool Plains are rare and highly productive, and as a result agricultural activities have occurred in this region for generations. The review noted that even early European explorers recorded the richness of the soils.

A number of presenters at the public meeting emphasised the rarity and richness of the soils of the Liverpool Plains, and advised the Commission of the key attributes which contribute to the uniqueness and high production rates of these soils. These include:

- Being mildly alkaline;
- Having a high cation exchange capacity;
- Being rich in plant nutrients – especially phosphorous;
- Being moisture reactive clay, which swells when wet and shrinks when dry; and
- Having high water holding capacity.

The local climate is also very favourable to agriculture. These attributes allow the production rate of the region to be up to 40 per cent above the national average production rate for all farming regions of Australia.

The PAC Review report considered this issue in detail noting the richness of the soils of the Liverpool Plains is corroborated in the Strategic Regional Land Use Plans and also by the Office of Agriculture, Sustainability and Food Security and Land and Water Commissioner. Ultimately the review found the mine's location in the hills above the plains meant that this proposal should not jeopardise the productivity of the black soil plains – except in so far as land acquired due to noise and dust impacts would need to be retained in production and water resources be protected.

The Commission notes as did the Review PAC that while the exploration licence covers large areas of the black soil plains, the NSW Government has gone some ways to protect the black soil plains, through conditions to the applicant's exploration licence. The Commission agrees that mining should be prohibited on the black soil plains.

The agricultural history of the Liverpool Plains is long and proud, as outlined by a number of speakers and their families at the public meeting. These families have been in the region farming for generations, and suggested that they have developed sustainable agricultural practices that will ensure these agribusinesses can continue on the plains for generations to come. A number of the next generation of farmers presented to the Commission regarding their concerns for their farming future, if the proposal were to be approved. The next generation of farmers are concerned that the accomplishments of previous generations in developing these sustainable agricultural practices will be lost if the soils and groundwater aquifers are irreversibly damaged.

The speakers advised that successful agribusinesses are well established on the Liverpool Plains, and these will remain so, long after the proposed 30 year life of the mine, so long as the soils and aquifers that are essential to the agricultural industry remain intact. The speakers also contended that mining and agriculture are not compatible on the Liverpool Plains, due to the uncertainty and unknowns relating to the impacts particularly to the highly valued aquifers. Further they argued that some current and future investment in agricultural infrastructure is on hold because of uncertainty about whether the mine will be approved and, if so, whether it will have material impacts on their agricultural businesses.

Having visited the area (as described elsewhere in this report) the Commission agrees with the recommendation of the Review PAC; that the black soil plains need absolute protection from mining.

In relation to this application, the Commission notes that the proposed mine is located in the hills above the black soil plains and would not disturb the black soils of the Liverpool Plains. The Commission notes that the site's red soils are of a lower quality and productivity than the black soils. The area of the Biophysical Strategic Agricultural Land (BSAL) to be impacted is small in the regional context, and will be re-established as part of the mine's rehabilitation and final land use plans. The Commission is satisfied that, with the protection of the water systems of the region, the mine would not cause significant impacts to the region's important agricultural sector.

7.1.2. Groundwater Resources

The Liverpool Plains is part of the Namoi catchment. The main river within the catchment is the Namoi River, which flows in a westerly direction and joins the Barwon River near Walgett. The significant tributaries of the Namoi River include the Macdonald River, Peel River, Cockburn River and the Manilla River. A number of smaller tributaries flow into the Namoi River, including the Mooki River, Cocks Creek and Maules Creek. The Mooki River flows close to the eastern boundary of the project site.

In addition to the surface waters of the Namoi catchment, as outlined above, groundwater aquifers are a key source of water for the region. There are a number of aquifers within the Namoi catchment of importance to the project area. These are:

- Upper Namoi alluvial aquifer; and
- Permian 'hard rock' aquifers associated with deeper bedrock strata including coal seams, weathered rock, sandstones, fracture zones and volcanics.

The key groundwater resource of the area is the Upper Namoi alluvial aquifer, which is comprised of two major formations, being:

- The Narrabri Formation – the uppermost unit typically comprising of a clay dominated aquitard. Average yield is 50 L/s and the quality is brackish to saline, with total dissolved solids (TDS) >10,000 mg/L, which is not suitable for beef cattle production; and
- The Gunnedah Formation – the underlying alluvials composed of thick beds of porous sand and gravel separated by clays. The aquifer is characterised by high permeability of variable yield (ranging from 5 L/s to >50 L/s). Water quality is significantly better than that of the Narrabri Formation, and is typically fresh to slightly brackish (approximately 1,200 mg/L to 3,000 mg/L) in areas west of the Mooki River.

Concern that the proposed mine could impact on the water resources, in particular the groundwater, was one of the key issues raised at the public meeting. The Commission understands that the groundwater aquifers of the area are the significant water resource for the region, providing water for irrigated agriculture and stock and domestic use.

Some of the speakers submitted at the public meeting, that the drawdown is likely to be far greater than the applicant's predictions. The speakers noted the difference to the predictions of BHP's proposed Carroona coal mine; where the predicted drawdowns to the aquifers are said to reach a maximum of up to 180m. The Commission notes that BHP's proposed Carroona coal mine is an underground mine to the south of the Watermark site. That proposal is entirely different to this open cut mine in the hills/permian hard rock above the black soil plains.

The Commission was informed during the aerial tour of the plains, that the modelling of the Werris Creek mine predicted minimal impacts to groundwater, however the bore that the Werris Creek community use for emergency town water supply has run dry. It was contended that this was as a result of the mine.

The local community are concerned that the proposed mine may cause reductions in available water from the groundwater system. Some speakers stated that the farmers of the region have already made substantial reductions in groundwater use, as part of the NSW Government's water sharing plans. The reduction in allocations of up to 68 per cent has already been required to ensure extraction of groundwater in the region is sustainable, securing the long term viability of the aquifer and the agricultural practices that depend on the aquifer.

A number of speakers requested that the regulatory authorities should consider the precautionary principle, when there are uncertainties surrounding the predicted impacts. The speakers raised concern that with more large mines in the area, there is a greater risk of cumulative impact to the aquifers, water resources in general and the soils of the Liverpool Plains.

In view of the significance of the groundwater resource of the region, considerable effort and focus on the potential impacts of the project has been given to this issue. Both the

Department and the Review PAC requested independent reviews of the groundwater modelling.

The Department commissioned Dr Frans Kalf of Kalf & Associates, to conduct an independent review of the groundwater impact assessments and groundwater-related issues which were raised in the submissions. The Review PAC sought independent expert advice from Dr Col Mackie of Mackie Environmental Research Pty. Ltd. Dr Mackie recommended to the Review PAC that further modelling be conducted, which included modelling of a number of different scenarios. This was a key recommendation adopted in the Review of the project.

The additional modelling has since been conducted; and the results conclude, according to the applicant, that the updated modelling confirmed what was initially predicted in the modelling; which was that the drawdown at four privately owned bores, to the south of the disturbance area, would be up to 1.4m. This is below the *Aquifer Interference Policy* trigger of 2m. The applicant states that there would be no reduction in the quantity of water able to be extracted from these bores.

Given the importance of the issue, both the Department and the Commission requested their respective independent experts review the updated groundwater modelling undertaken by the applicant's consultants.

Dr Kalf's review concluded *"that the results of the modelling indicate that the drawdown associated with the project would be within the 'minimal impact consideration' trigger in the NSW Aquifer Interference Policy."* Dr Kalf provided the Department with a number of additional recommended conditions, as part of his review. These recommendations are outlined below:

- *"The monitoring program for the project include observation bores both in and near the vicinity of the open cut voids and more distant bores on the edges of the alluvial flats;*
- *Modelling predictions be reviewed and validated every 3 years during mining, and monitoring continued for at least 10 years after mining ceases; and*
- *Monitoring is undertaken within the eastern and southern mining area following completion of backfilling (to monitor groundwater recovery and salinity)."*

The Commission acknowledges the importance of the groundwater for the region. In considering the issues the Commission held a follow up meeting with the Department, NOW and with Dr Kalf and Dr Mackie. A summary of this meeting is provided in Appendix 3. All are now agreed, and assured the Commission the impacts have now been modelled correctly and that the impacts are predicted to be small and acceptable. Both independent groundwater experts and the Office of Water noted that the low predicted impacts are consistent with expectations given the site's location in the hills above the plains and outside the alluvium.

It has been agreed that the pseudo soil model is the preferred model to predict groundwater impacts. Both Dr Mackie and Dr Kalf agreed that scenario 3 is the best representation of the worst case scenario for this project. It was contended by speakers at the public meeting that, given the uncertainty associated with the groundwater impacts, the precautionary principle should be applied. The Commission noted Dr Mackie's conclusion regarding scenario 3, and that the predicted impacts in scenario 3 are less than the trigger in the NSW Aquifer Interference Policy. Given that the results of the modelling are reasonable and agreed to by the experts and relevant Government agencies, the Commission considers that the precautionary principle has been addressed.

Nonetheless, it was agreed at the meeting that the recommended conditions should be strengthened to include additional monitoring to verify that the actual impacts to the groundwater system are consistent with the model predictions. It was concluded that monitoring bores and piezometers should be installed close to the mining areas and further afield to monitor the groundwater drawdown and recharge, including after the mining pits are back-filled. This will provide the information required to monitor impacts and provide mitigation measures for any unexpected impacts.

The Department has modified its recommended conditions of consent following the meeting. Conditions 23, 25 and 26 of Schedule 3 have been amended as follows.

Condition 23 has been updated to:

"The Applicant shall provide a compensatory water supply to any landowner of privately-owned land whose water supply is adversely and directly impacted to a greater extent than the minimal impact considerations in the NSW Aquifer Interference Policy as a result of the development, in consultation with NOW, and to the satisfaction of the Secretary."

Condition 25 has been amended to:

"The Applicant shall comply with the performance measures in Table 11 to the satisfaction of the Secretary irrespective of any other measures being implemented by the Applicant to provide compensatory water supply in accordance with condition 23 above –"

Table 11, of Condition 25 has been further amended to reflect the updated modelling, instead of the EIS groundwater modelling. A note to Table 11 states:

"The predictions in the Response to the PAC Review Report shall prevail to the extent of any inconsistency with the EIS. Groundwater modelling Scenarios 3, 6, 7 and 11 in the PAC Review Report are considered relevant for prediction purposes."

Condition 26 (iv) of Schedule 3, the Groundwater Management Plan has amended to include:

"groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts based on the water management performance measures in Table 11 and the minimal impact considerations in the NSW Aquifer Interference Policy, for the following: - "

Dr Mackie provided a comprehensive report on his findings. Dr Mackie's advice is appended to this report, see Appendix 5. Dr Mackie concluded that the maximum drawdowns in the water table are represented by scenario 3, and are below the 2m drawdown permitted by the *Aquifer Interference Policy*. Dr Mackie concludes that *"these relatively low drawdown impacts are considered to be acceptable and manageable."* Dr Mackie continues that *"the modelled drawdowns generated by scenario 3, underpin any trigger-action-response plan. Re-assessment of impacts associated with the proposed southern pit, should be undertaken at least 5 years prior to the entry at that pit. If model re-calibration indicates the potential for adverse impacts at this time, then pit design may need to consider reduced penetration of the water table."* The Commission accepts Dr Mackie's findings and conclusions, and has included a new condition (Condition 27 of Schedule 3) regarding the re-assessment of impacts at least 5 years prior to the commencement of mining the southern pit.

The Commission is now satisfied that the groundwater impacts have been comprehensively assessed by a range of independent experts both prior to and following the release of the PAC's Review Report and recommendations. The Commission acknowledges that there will

always be some uncertainties in groundwater modelling predictions; however it considers there is sufficient evidence that the impact on private groundwater bores would be within the minimal impact consideration of the NSW Aquifer Interference Policy and there are compensatory measures in the unlikely event that there is a greater impact than that predicted. The Commission agrees with the amended conditions recommended by the Department in relation to groundwater protection.

7.2. Aboriginal Cultural Heritage

The project site is within the Kamilaroi Country, the traditional homelands of the Gomeroi People. As part of the EIS an archaeological assessment was conducted, which identified a total of 55 Aboriginal sites within the project boundary; of these two sites are of high significance, one being an artefact scatter and the other a grinding groove site, in the western mining area. One other grinding groove site was assessed, by the applicant's consultant, to be of moderate significance, this is the grinding groove within the eastern mining area.

The Department in its Assessment Report states that:

"the Department and OEH are satisfied that Shenhua has explored and identified reasonable and feasible measures to minimise the project's impacts on Aboriginal heritage values as far as practicable, and that the project's residual impacts are unlikely to have a significant impact on the Aboriginal heritage values of the region."

The proposed management measures for these two grinding groove sites are not unanimously supported by the local Aboriginal groups. The Commission was advised that these sites are *"the legacy of our great warrior community, a culturally important industrial community, a wonderful men's site, a site which has seen repeated use over many generations of Gomeroi people"* (Gomeroi Tradition Custodians).

At the public meeting a number of speakers, both indigenous and non-indigenous, expressed their concerns regarding the impacts to Aboriginal cultural heritage by the proposal. The Gomeroi Tradition Custodians and the Red Chief Local Aboriginal Land Council formally invited the Commission to visit the grinding groove sites. In response to this request the Commission returned to the project site to see the two grinding groove sites. The Commission visited both grinding grooves in the proposed eastern and western mining areas. The Commission was advised that these sites are sacred men's sites; and are connected with their warrior past. To provide the Commission with the opportunity to understand the significance of the sites, the men of the Aboriginal community provided a concession to the Commissioners and female members of the Aboriginal community to be allowed onto the site. The Aboriginal community explained to the Commission the significance of these sites, and the importance of retaining these sites in-situ for future generations.

The two sites are distinct, as they were used for differing purposes: the western site to sharpen weapons, including spears and knives; while the eastern site was used to sharpen axes. The Aboriginal community expressed their great concern regarding the destruction of these sacred sites, as only a small portion of the project area has been thoroughly assessed archaeologically and culturally. They shared stories highlighting the importance of the sites.

The view of those members of the Aboriginal community present at the inspection was that these significant sites need to be protected in perpetuity in-situ. The Aboriginal community implored the Commission to protect these sites in-situ. The Commission acknowledges the significance of these sites, and has considered this issue at length, noting that when the artefacts are removed from the land they lose their connection and importance. These sites need to remain on country.

According to the applicant's Geotechnical and Geomorphology Investigation of Grinding Groove Sites (Appendix Q of EIS), the two impacted grinding groove sites, could plausibly be relocated from the current locations, through manual excavation. The details of the salvage methodologies are to be developed in consultation with the Registered Aboriginal Parties and will be outlined in the Aboriginal Cultural Heritage Management Plan. The Commission understands that the grinding groove rocks are proposed to be relocated to the Watermark Gully Aboriginal Cultural Heritage Conservation Area; however the relocation site will be determined in consultation with the Registered Aboriginal Parties.

The Commission notes that the above report on the grinding groove sites, states that the smaller grinding groove rock site will be able to be relatively easily relocated intact, however the larger rock site is proposed to be reduced in size. The Commission is not satisfied with this, and does not consider this to be suitable. The Commission recognises the significance of these grinding grooves, and considers that these must be relocated as a whole, and reducing them in size for ease or financial reasons should not be considered.

Connect for Effect Pty Ltd. was engaged by the applicant to undertake the *Aboriginal Cultural Heritage Values Assessment* (Appendix P of the EIS). The Commission was advised by the Aboriginal community during the visit to the grinding grooves, that this report was endorsed by the Aboriginal community. The Commission notes that this report provides details on the concerns, mitigation options, protection measures and recommendations for Aboriginal cultural heritage.

The Connect for Effect report covers a number of mitigation measures that were discussed by the Senior Elders and Elders groups, which included (Section 4.3.3.5 Individual Interviews and Consultations p/97):

- *“Senior Elders stated that they want to see the artefacts found during any salvage program placed back on Country, not just locked up. The Senior Elders and Elders stressed that there is a need to protect the artefacts and cultural features;*
- *It was noted that ‘the community wants to know the history however many have not seen their culture as they were barred from their land for over 200 years’;*
- *It was also suggested that another possibility for the care and control of artefacts could be to put the artefacts in the LALCs;*
- *One Elder explained with so many mines in the region, strategies on care and control for all artefacts located could be determined by the Senior Elders and Elders in consultation with the RAPs;*
- *One Senior Elder with close association to the Breeza area suggested providing the Aboriginal community with some land on which the artefacts found during the survey could be stored. All representatives agreed;*
- *Establishing a museum was suggested as this would also provide some people with jobs. General discussion agreed that the artefacts need special conditions including the use of humidifiers and this can be costly and time consuming to manage;*
- *All Senior Elders and Elders strongly identified the desire to see mining companies working together. A Keeping Place or Cultural Centre purpose built building was identified as an option. Comments were made and the Senior Elders and Elders agreed that this strategy to be successful needed the partnership and collaboration of all companies in the areas and all these companies should be required to contribute to the build and operation of a keeping place; and*
- *The Senior Elders and Elders identified the need for a long term vision.”*

The Commission further notes that the Senior Elders and Elders group met with Connect for Effect on 25 September 2012 during the comment period for the draft archaeological and

geotechnical reports. The meeting took place at the Shenhua office in Gunnedah, and a number of recommendations were proposed particularly in relation to the grinding grooves, scarred trees and salvage approaches. These recommendations included (p/99):

- *"The need for an active role of Senior Elders in relation to cultural advice and ceremony;*
- *The need to ensure grinding grooves, scarred trees and salvaged artefacts are kept together and close to Country;*
- *Concern potential impact of blasting to grinding grooves and burials;*
- *Concerns were expressed relating to the geotechnical works and the impact on the integrity of the grinding grooves;*
- *Consideration of highly sensitive cultural areas and their protection;*
- *Further information relating to depth of overburden and pit; potential and likely impact to water basin; outcomes of grinding groove geotechnical assessment; and*
- *Access to land and infrastructure in order to provide generational teaching, Elder sharing place and development care for country programs (i.e. nursery rehabilitation/nesting box creation; programs to assist habitat-ethnobotanical flora and support for totemic animals and fauna (including koala and porcupine (echidna))."*

The Connect for Effect report goes on further and states:

"Senior Elders and Elders asserted that they do not support the mining activities which if approved is likely to adversely impact on cultural heritage sites and landscape features as culturally all artefacts should not be disturbed. However the Senior Elders and Elders stated that they would like to see careful management of cultural artefacts should the mine be approved."

Some additional comments made by the Senior Elders and Elders Group include (p/99-100):

- *"Elders expressed strongly that if the Aboriginal community could choose, they would want all cultural and archaeological sites to be protected and not impacted. Elders also stated that if the Project is not approved, sites should not be impacted;*
- *Elders stated that if the Project is approved, that they want cultural heritage places and sites to be managed in the best way possible. It was stressed that this should be about minimising the damage that would be done and not about the cost;*
- *To identify what would be best management, Elders requested examples of what worked and what did not on other projects, along with pictures (such as scarred trees and grinding grooves being moved);*
- *Elders state that continuing discussion on how to best manage cultural heritage places and sites within the Project area should inform the ACHMP, and should be included within it;*
- *The Elders stressed that they wanted to be involved in all cultural heritage discussions and management; and*
- *Elders stated that protected cultural heritage areas need to be protected in perpetuity – not just for the life of the Project."*

The Commission acknowledges the concerns and deep hurt that the Aboriginal community expressed during the visit to the grinding groove sites, and wishes to thank the community for sharing their knowledge of their history and their concerns for these sites. The Commission notes that the location of the two sites, being within the central parts of the eastern and western mining pits, makes preserving these in-situ impractical if the mine goes ahead. It is not evident how the mine could be altered or redesigned to avoid the two sites.

The Commission accepts the significance and importance of these two sites and agrees they should not be destroyed. While not ideal, the Commission considers that the excavation and relocation of these two sites should be permitted as it will protect the rock grooves in perpetuity and therefore, on balance it would not be in the broader public interest to prohibit the mining. In moving the sites however, it will be essential to ensure that these sites are protected in perpetuity, remain on Country and accessible to the Aboriginal community so it can pass on knowledge and culture to future generations.

The Commission therefore recommends that the grinding grooves rock sites be relocated to a site suitable for their protection, in consultation with the local Aboriginal community. The Commission further recommends that these rock formations (*better descriptor taken condition*) be relocated intact, and not reduced in size to assist in the relocation process. Following a meeting with the Commission on 21 January 2015, the Department amended Condition 42(e) of Schedule 3, to reflect the outcomes of this meeting. The Commission has recommended a number of changes to Condition 42 of Schedule 3 (Heritage Management Plan), that require the applicant to protect these significant artefacts, during the relocation process, the life of the mine and in perpetuity. Condition 42 now states:

"The Applicant shall prepare and implement a Heritage Management Plan for the development to the satisfaction of the Secretary. This plan must:

(e) include the following for the management of Aboriginal Heritage:

- *... A detailed geotechnical assessment of the two grinding groove sites within the project disturbance area (ie. WM-GG1-11 and WM-GG3-12) that includes recommendations for minimising the impacts on these sites during the proposed relocation process;...*
- *A description of the measures that would be implemented for:*
 - o *... relocating and minimising the damage to the two grinding groove sites within the project disturbance area (ie. WM-GG1-11 and WM-GG3-12) in accordance with any recommendations from the detailed geotechnical assessment (see above), and protecting all the grinding groove sites, including the site outside the project disturbance area (ie. WM-GG2-11) from blasting and project-related impacts;..."*

7.3. Koala Population and habitat

Koalas occur in the region and on the project site, although the koala population estimates vary widely. The applicant estimates the koala population to be between 8,613 and 16,893 individuals in the Gunnedah LGA. The Australian Koala Foundation (AKF) disputes this estimate, as they estimate the koala population for the Gunnedah LGA to be in the range of 800 – 1,300 individuals. The population has reduced significantly, as a result of droughts and heatwaves, with the estimated reduction of up to 70% since 2009.

The applicant has developed a Koala Plan of Management (KPoM), which outlines the works that will be undertaken to manage the impacts to the local population of koalas. The KPoM sets out the impact reduction measures for avoiding, minimising and mitigating impacts to the local koala population. These measures as provided in the KPoM include:

- *"Avoid – to the extent possible, the Project has been designed to avoid or minimise impacts to the Koala by avoiding areas of high quality habitat where feasible;*
- *Mitigate – where certain impacts are unavoidable through design changes, mitigation measures have been introduced to ameliorate the impacts to the Koala such as vertebrate pest management, road design standards and drought protection; and*
- *Compensate – the residual impacts of the Project, following the implementation of mitigation measures, have been compensated to offset what would otherwise be a net loss of Koala habitat. This includes the development of an offsets package which includes land within and immediately adjacent to the Project Boundary, namely: Mt*

Watermark Offset Area and Mooki River Offset Area. An offsite offset area near Barraba is also proposed as part of the offsets package for the Project."

The KPoM states that in order to mitigate impacts to the koalas, the animals will be encouraged to naturally move away from habitat that is being cleared. If the animals do not naturally move, then a translocation plan will be implemented. AKF declared categorically, at the public meeting, that translocation of individuals does not work. AKF provided examples of the mortality rates of other translocation projects, including:

- Mt Eccles (in Victoria) had a 80-100% mortality rate;
- French Island (in Victoria) had a 90% mortality rate;
- Kangaroo Island (in South Australia) had a 30% mortality rate; and
- Gold Coast hinterland (in Queensland) had a 30-50% mortality rate.

AKF also disputed the mapping that the applicant provided of the classification of koala habitat within the project area. *"The AKF has mapped vegetation across the site, and our maps show high quality habitat at the impact point of the mine, and lower quality habitat at potential release and offset sites. Shenhua's mapping seems to hold the reverse position, which is puzzling."* The Commission notes that the areas mapped as koala habitat by both the applicant and the AKF are consistent. However, the Commission further notes that the vegetation sources used by both the applicant's consultant and AKF are different; and these sources have different classification schemes used for the habitat.

The Review PAC considered that the koala population and impacts to the population was a significant issue. The issue is discussed in the Review report. Four specific recommendations were made, relating to:

- The establishment of koala feed and shelter trees as soon as possible, noting that it can take up to 10 years for these trees to reach maturity;
- The establishment of Koala Technical Working Group, to oversee the management of koala issues associated with the project;
- Publicly reporting of information relating to koala management, monitoring, incidents and advice of the Koala Technical Working Group; and
- Avoidance measures to reduce the potential for koala road and rail collisions, including speed limits, fencing and underpass measures, and a shuttle bus service for employees.

The Commission notes that a Koala Technical Working Group will be established, as recommended, and the public reporting of information relating to koala management, monitoring, incidents and advice of the Koala Technical Working Group are now in the amended recommended conditions of consent.

In relation to the shuttle bus service, the applicant has indicated it will be provided during the early construction stages of the project, from the work camp to the mine site. After construction the applicant proposes to discontinue the shuttle bus service, indicating that mine workers will not be travelling from one area, so a bus service would not be practical. The Commission considers it is reasonable to expect that many of the workers will live in one of the region's towns and that a shuttle bus from either Gunnedah or Tamworth may be used, if the route and scheduling are sensibly developed. Consequently the Commission has added a condition requiring the shuttle bus service established during construction to transition to the mine workforce, and be provided for at least 1 year. The Commission acknowledges that it would be wasteful to continue the service if, despite the applicant's best efforts, the bus is not used, consequently the conditions provide that the service can be discontinued if agreed by the Secretary of the Department of Planning and Environment, after 1 year of operating.

The Commission notes that both feed and shelter trees are critical to the survival of the koala, and that mature trees are essential. The Commission agrees with the Review PAC's Recommendation 21: *"The Commission recommends that monitoring of the Koala should be ongoing and planting of koala feed and shelter trees should be progressed as soon as possible."* The sooner the planting of feed and shelter trees commence and become established, the better it will be for the koala population.

The Department advised that the PAC Review Recommendation 18 that koala feed trees be planted prior to determination is not legally enforceable. The Commission agrees with the intent of the Review recommendation and considers this can be achieved by requiring planting of feed trees within a short time after approval. The Commission in discussions with the Department has included a condition of consent (Condition 32 of Schedule 3) that the applicant shall prepare an Interim Koala Habitat Plan, within 1 month of the date of the consent. The applicant then must commence the planting of koala feed and shelter trees within 2 months of the approval of the Interim Koala Habitat Plan. The planting and establishment of the feed and shelter trees, shall be carried out in consultation with the Koala Technical Working Group and the amended condition also provides for the AKF to be a member on the Working Group. The applicant shall also maintain existing mature feed and shelter trees on site to provide sufficient habitat for this threatened species.

7.4. Biodiversity

The Department assessed the biodiversity impacts of the project, noting that the site is largely comprised of low diversity grassland and pasture, due to the long history of farming. Nonetheless, the assessment found that 789 ha of Endangered Ecological Communities (EEC) would be cleared during the life of the mine. The majority of this comprises communities commonly known as Box Gum Woodland, as well as derived native grassland (DNG) which, if left undisturbed and/or actively managed, would likely regenerate back to Box Gum Woodland over time.

The applicant has developed an offset strategy to compensate for the loss of the 789 ha of EEC and 148 ha of other native woodland communities, and the impacts to threatened fauna species. The offset strategy includes four on-site offset areas, and two off-site areas (located near Barraba and Tambar Springs).

Warrumbungle Shire Council expressed concern that it was not consulted during negotiations regarding the securing of three properties near Tambar Springs, in the Warrumbungle Local Government Area, as part of the applicant's offset obligations. The Council commented that the total area of the three properties purchased (being Mt Erin, Glendowda and Currajong) is approximately 4,100 ha. As part of the offset package proposed by the applicant 3,581 ha will be biodiversity offsets, while 514 ha will remain for agricultural activities.

Warrumbungle Shire Council stated the implications of the purchase of land for offsets, would lead to a direct loss of agricultural productivity and economic benefit for the local community, and the loss of rate base by approximately \$20,000 for the 2014/15 financial year. Council stated that they were concerned that the applicant could be in the process of acquiring further properties within the local government area. This will have further financial implications for the Council, and additional social implications for the community as a whole, with the loss of jobs and families from the community. Further Council expressed the view that offsets *"should not be on agriculturally productive lands, they should be secured on degraded land of environmental value so that there is a valuable environmental gain through rehabilitation"*.

The Commission notes the concerns of the Warrumbungle Shire Council and the comment that offsets should not be on agriculturally productive lands. The Commission also notes that

OEH is satisfied that the applicant has adequately calculated the offsets required through the *Biodiversity Offsets Policy for Major Projects* BioBanking assessment process.

The Commission acknowledges that the location of offset sites is important, and that it is desirable for these offset sites to be located within the local area close to the area of disturbance, to provide interconnecting habitat. However, the Commission notes that Offset Area 6 was reduced in size following the EIS, due to the impact on 696ha of biophysical strategic agricultural land. To compensate for this loss of offset, the properties near Tambar Springs were purchased.

It was raised by a number of speakers at the public meeting that the offsets provided are less than “like-for-like” and are therefore unsatisfactory as offsets, including the offsets being provided as koala habitat, which is considered in Section 7.3 above.

The Commission agrees that “like-for-like” should be the first option where offsetting may be required but also acknowledges this is not always possible and the Government’s *Biodiversity Offsets Policy for Major Projects* does provide other mechanisms for offsetting impacts when “like-for-like” offsets are not accessible, including supplementary measures and mine site rehabilitation.

The Commission notes that while concerns have been raised regarding the location of the offset areas off-site; at the same time OEH, the Commonwealth Department of Environment (DOE) and the Department are largely satisfied with the offsets proposed by the applicant. The Commission further notes that the Department has accepted DOE’s conclusions that the offsets provided for the Grey Box EEC are just under the offset requirements, and the Department has recommended conditions requiring the applicant to enhance the offset strategy for this community. The Commission agrees with the Department’s recommendation condition for the Grey Box EEC.

The Commission accepts that not all impacts can be offset, however given that OEH, DOE and the Department are satisfied with the biodiversity offset package, the Commission accepts that the biodiversity offset package adequately addresses the impacts of the proposed mine .

7.5. Noise and Air Quality

The issues associated with noise and air quality were raised by a number of speakers at the public meeting. The key concern raised was that both the Department and the applicant had disregarded the Review PAC’s Recommendation regarding noise and air quality criteria and the mitigation measures that the Review PAC had recommended. The Review PAC had provided their recommendations in the absence of any definitive Government Policy. Since the release of PAC’s Review Report, the Government has introduced the *Voluntary Land Acquisition and Mitigation Policy* (the Acquisition Policy).

This Acquisition Policy was initially released in draft on the 7 November 2014. On 20 November 2014 the Commission was advised of an updated version of the draft Acquisition Policy, which was placed on exhibition from 18 November to 2 December 2014. In light of the changes to the Acquisition Policy, the Commission was provided with a revised set of recommended conditions for this project on the 8 December 2014. The Commission notes that the Acquisition Policy was gazetted on Friday 19 December 2014. Given that the Acquisition Policy has been gazetted, the Commission has applied mitigation and acquisition criteria in accordance with the Acquisition Policy. Some properties that were initially included for mitigation have been removed following implementation of the new policy.

It was raised at the public meeting that the residents of Breeza, who are largely dependent on rainwater for drinking, will be impacted by deposited coal dust. They state that they were

impacted by dust and soot from the Coonabarabran fires in 2012, which were more than 100km away. These residents are requesting that the Commission compels the applicant to install first flush roof water drainage systems on all the properties in Breeza.

The Commission notes that one of the air quality mitigation measures available to owners of impacted residences is first flush roof water systems. However, the Commission notes that none of the Breeza properties are predicted to be impacted by dust levels that would trigger the mitigation requirement. The Commission acknowledges the policy provides options for a lower number of properties than was recommended in the PAC Review Report (see Tables 1 and 2 below), but that the review recommendations were made in the absence of a policy on the issue. Now that the Acquisition Policy has been made by the NSW Government, the Commission has applied the Government's policy.

Table 1: Land subject to acquisition upon request

Acquisition Bases	Property ID – Department's Assessment Report	Property ID – PAC Review Recommendations	Property ID – Department's Addendum Report
Noise & Air	26, 27, 28, 32, 62, 103, 125	26W, 27, 28, 32, 60, 61, 62W, 103, 125	26W, 27, 28, 32, 62, 103, 125
Noise	20, 61, 65	20, 32W, 62E, 65N	20, 61, 65N
Air	60	25, 62, 103, 115, 116	60

Table 2: Land subject to additional noise and/or air quality mitigation upon request

Mitigation Bases	Residence ID – Department's Assessment Report	Residence ID – PAC Review Recommendations	Residence ID – Department's Addendum Report
Noise & Air	25b, 32c, 60, 62a, 62b, 103, 125	25, 26W, 27, 28, 32, 60, 61, 62, 103, 115, 125	25b, 32c, 60, 62a, 62b, 103, 125
Noise	32b, 35, 39, 40, 41, 43	16W, 22, 24, 25E, 31, 35, 39, 40, 41, 42, 43, 44, 99, 104, 114, 116, 119	32b, 39, 41
Air	-	-	-

The Commission has considered the noise and air quality impacts and current Government policies, including the Acquisition Policy. The Commission is satisfied that the noise and air quality impacts have either been designed out, or where the impacts would exceed the levels specified in the policy, they would be mitigated and managed through the recommended conditions provided by the Department in accordance with the NSW Government's Policy (except where the Department says that the applicant has agreed to the extension of acquisition rights, which were requested by the Department).

7.6. Blasting

The issue of blasting impacts to the Breeza cemetery and other Aboriginal burial sites was raised at the public meeting.

The Commission notes that the predicted vibration level at the Breeza cemetery is 0.9mm/sec, which is below the structural damage criteria of 2mm/sec, set out in Condition 6 of Schedule 3. The Commission is satisfied that there should be negligible impact to the Breeza cemetery. Concern was also raised about other Aboriginal burial sites around the region, however no details of any known sites have been provided to the Commission.

Condition 42 of Schedule 3 outlines what information should be included within the Heritage Management Plan, which includes managing the discovery of human remains.

7.7. Social and Economic

The Commission heard differing views regarding the social and economic impacts of the project. A number of local businesses and the Councils generally supported the proposal suggesting that it would bring more employment and population growth opportunities to the region. The need for a diverse economy was highlighted with stories of the impacts of drought on the agricultural sector in the 1990s which in turn led to a decline in Gunnedah's population, township and business community at that time. On the other hand many objectors raised concerns that the mine could impact on the viability of the agricultural sector, and the division of the community due to the uncertainty of the mine. The Commission also heard concerns and criticisms regarding the economic analysis by the applicant.

The Commission notes the varying opinions on the economic assessment undertaken, and that given the current economic climate, some of the values within the economic assessment are likely to be an overestimation. The Commission has reviewed the submissions on the pros and cons of the socio-economic issues. The Commission accepts that the investment and profit predictions are largely a financial matter for the applicant. However, in the context of the wider public interest, the economic costs and benefits to the broader community need to be considered. While the Commission agrees with many of the submissions that the predicted public benefits (local, regional, taxes, royalties) are most likely overestimates, after careful consideration, the Commission is satisfied the project would still generate significant employment, royalties and other economic benefits to the broader community. In balancing all of the issues, the Commission has given particular consideration to how the environmental impacts could be managed to ensure the sustainability and growth of the agricultural sector.

7.8. Other Issues

A number of other issues were also raised at the public meeting. The Commission understands that these are issues that are of concern to the local community, and that a number of the issues are raised at many public meetings, relating to mining projects.

Floodplain definition

The community raised concerns about the definition of the floodplain that was used for this project. They cited the Exploration Licence for the project that prohibited mining within the floodplain. One of the conditions of the Exploration Licence that provide the protection of the floodplain states that *"completely prohibits longwall mining underneath the deep alluvial irrigation aquifers and the floodplain and open cut mining anywhere on the floodplain"*. However the term floodplain was not defined in the Exploration Licence, so a definition was developed by the Division of Resources and Energy (DRE – within the Department of Trade & Investment, Regional Infrastructure & Services) for the purposes of the Exploration Licence, which is:

"A floodplain is an area of low-lying nearly flat plain adjacent to a river, formed mainly of river sediment and subject to regular flooding."

The Commission understands that this definition was developed to provide protection to the black soils of the Liverpool Plains. This definition is a narrower definition to the one that is under the Water Management Act 2000, which is the basis for the water sharing plans. There is no prohibition of mining within the broader definition of floodplains under this Act.

The Commission understand the concerns raised by the community, and the confusion with having a different definition for the floodplain. The Commission recognises that the definition used by DRE is fit for purpose, for providing protection to the black soils of the Liverpool

Plains. The Commission agrees with the Department and NOW that the definition provided as part of the Exploration Licence is suitable for this project.

Cumulative impacts

The community raised that the assessment of this project should include the cumulative impacts of other projects in the area, in particular BHP's proposed Carroona Coal project. The Commission acknowledges the community's concern about the project only assessment, and that the broader cumulative impact assessment that was requested has not occurred. The Commission is satisfied that the impacts from this project can be avoided or managed satisfactorily and given that this location is relatively free of other large mining projects it will be important for any future proposed developments to include an assessment of the cumulative impacts that might occur with interaction with this mine.

Department's recommended conditions

In regard to the Condition 12 of Schedule 2, the Commission understands the concerns held by the community, that amendments to management plans or strategies could be carried out by the applicant, without consultation. This has been raised previously on other mining projects and the Commission has amended this condition in light of community concerns. The Commission has amended this condition to ensure that only minor revisions are allowed to be updated by the applicant without the need for consultation with other agencies. Any revisions that are not minor will require the applicant to consult with all relevant government agencies. Condition 12 now reads:

"With the approval of the Secretary, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary, the Applicant may prepare minor revision to any strategy, plan or program without undertaking consultation with all parties under the applicable condition of this consent.

Notes:

- *While any strategy, plan or program may be submitted on a progressive basis, the Applicant will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times.*
- *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program."*

Impact from blasting on burials

Concerns regarding any potential impacts from blasting on the Breeza cemetery and other Aboriginal burial sites around the region were raised at the public meeting. The impact of blasting on the Breeza cemetery is addressed in Section 7.5 Noise and Blasting. The Commission understands that there are standard requirements under NSW legislation that address the procedures for disturbing burials.

The Commission considers that the Department's assessment report and addendum report, together with the Review PAC's report adequately address the other issues relating to the proposal.

8. COMMISSION'S FINDINGS AND DETERMINATION

The Commission has carefully considered the proposal from Shenhua Watermark Coal Pty Limited, including the Department's assessment report, the PAC Review Report, the Department's addendum report and the relevant considerations under Section 79C of the *Environmental Planning and Assessment Act 1979*. The Commission also heard from the applicant, the Department, other Government agencies, independent groundwater experts, the local Aboriginal community, members of the farming community, other interest groups and members of the public, during its various briefings, meetings, inspections and the public meeting.

The Commission recognises the importance of the fertile black soils plains and the associated water resources of the Liverpool Plains for agricultural production. The Commission notes that the proposed mine is located on the hills and slopes adjacent to the black soils. After seeking expert advice on the potential groundwater impacts, and as the proposal does not intrude onto the black soil plains, the Commission is satisfied that this mine would not preclude the continuation of significant agricultural production occurring on the black soil plains.

Nonetheless, the Commission emphasises that approval of this application in no way provides any form of endorsement of any proposal on any other part of the applicant's exploration licence area. The Commission considers that it will be important for the Government to undertake some more detailed work to identify and protect those highly valuable, fertile black soil plains where mining should be prohibited, as ongoing uncertainty for the surrounding community does impact on its capacity to plan and invest for the future.

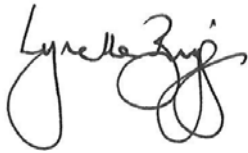
The Commission has sought expert advice on the groundwater modelling, which has led to the amendments and inclusion of additional conditions, to provide additional protection to the critical groundwater resource of the Liverpool Plains.

The Commission has given serious consideration to the impacts on Aboriginal cultural heritage and has strengthened some of those conditions. The conditions now require that Heritage Conservation Areas are protected in perpetuity, and that grinding groove formations are relocated intact to the chosen site.

In relation to koalas, the Review Report made several recommendations to assist with the protection of this iconic species. These have now largely been incorporated into the conditions of consent and the Commission is satisfied the specific requirements for a Koala Plan of Management and Working Group will ensure that koalas are given the best chance of survival both in any translocation programs and through the establishment of additional habitat (albeit in the long term).

The Commission finds that the noise and air quality issues would be managed within the Government's new policy guidelines, except where the applicant has agreed to a more generous option for the landowner (suggested by the Department).

Accordingly, and in the context of current NSW policy and the Department of Planning and Environment's assessment of the merits of the project, the Commission has determined to accept the recommendation that approval be given to this application. Consequently consent is granted, subject to conditions, as amended by the Commission.

A handwritten signature in black ink, appearing to read 'Lynelle Briggs'.

Lynelle Briggs AO
Chair of the Commission

A handwritten signature in black ink, appearing to read 'Joe Woodward'.

Joe Woodward PSM
Member of the Commission

A handwritten signature in blue ink, appearing to read 'Jan Murrell'.

Jan Murrell
Member of the Commission

Appendix 1 List of Speakers

PLANNING ASSESSMENT COMMISSION MEETING WATERMARK COAL PROJECT

Date & Time: Wednesday 10 December 2014, 2pm & Thursday 11 December 2014, 9am

Place: Gunnedah Services and Bowling Club, 313 Conadilly Street, Gunnedah

List of Speakers

Wednesday, 10 December 2014

1. Liu Xiang, Chairman Shenhua Watermark Coal
2. Cr Ian Lobsey OAM, Liverpool Plains Shire Council
3. Georgina Woods – Lock the Gate Alliance
4. Felix Nankivell
5. Rosemary Nankivell – SOS Liverpool Plains
6. Prue Green
7. Susan Lyle
8. Paul Nankivell
9. Don Ewing
10. Nigel Herring
11. Andrew Pursehouse
12. Graeme Norman
13. Sarah Hubbard
14. Cr Owen Hasler – Gunnedah Shire Council
15. James Farquhar
16. Bill Wilmott
17. Zac Wilmott, Alexander Norman, Claudia White & Sarah Reardon
18. Anna & Hugh Pursehouse
19. John Lemon
20. Rick Young
21. Marie Wilson – Breeza Progress Association
22. David Walker

Thursday, 11 December 2014

23. Marilyn Carter
24. Robert Monteath
25. Andrew Beatty
26. Peter Wills
27. Colleen Fuller
28. Tim Duddy – Caroon Coal Action Group
29. Toni Comber – Red Chief Local Aboriginal Land Council

30. Mitchum Neave – Traditional Owner of the Surrounding Areas of Breeza
31. Tanya Mitcham
32. Uncle Neville Sampson, Deslee Matthews, Tania Matthews, Antionette Esquires, Jarrod Talbott, Dakota Ley, Hayley Lye & Tory Lye – Gomeroi Traditional Custodians
33. Alia Slamet – Warrumbungle Shire Council
34. Angela Martin
35. Chris Van Os
36. Jon-Marie Baker – Namoi Water
37. Fiona Simson – NSW Farmers
38. Daryl Young
39. Jenny Farquhar
40. Deborah Tabart OAM – Australian Koala Foundation
41. Mark McKenzie – NSW Irrigators Council
42. Xavier Martin
43. Hannah Murray
44. Hugh Price – Namoi Community Network
45. Rod Carr – Cotton Australia
46. Patricia Duddy
47. Tom Bailey
48. Sue Cudmore
49. Kate Davidson
50. Tony Windsor & John Clements – Pottinger District Council of NSW Farmers
51. Tim Senior – Doctors for Environment Australia
52. Sharon Veale
53. Brian Pepper
54. Sue Wilmott
55. Harry Carter
56. Juanita Hamparsum
57. Tim Buckley – Institute for Energy Economics & Financial Analysis
58. Nicola Chirlian

Appendix 2

Summary of issues presented at the public meeting

In support of the proposal:

- The impacts are considered acceptable i.e. no impact on black soils and no unacceptable impact on water aquifers;
- Mine will provide benefits the local community from diversity of industries, increased employment and increased community services;
- Shenhua has a good environmental record in China, particularly in rehabilitation; and
- Mining has a long history in Gunnedah, back to the 1800s, therefore mining and farming can coexist as they have in the past.

In objection to the proposal:

- Risk of impacts are considered unacceptable i.e. the impacts on aquifers and drawdown of surrounding bores, impact to the black soils of the Liverpool Plains, the final void will be left with saline water, which will have a long term impact on the surrounding aquifers, impact on koalas, koala numbers are overestimated, the offset areas are of lower quality and translocation causes high mortality rate;
- The Liverpool Plains will be agriculturally productive for generations to come, compared to the 30 year timeframe of the mine, which will cause greater damage to the land during the mining timeframe, however, farmers are reluctant to invest in future agricultural infrastructure because of concerns regarding mining impacts on water and soil. The proposed mine is not compatible with adjacent agriculture. The concern that large areas of high quality agricultural land is in foreign ownership;
- Shenhua has a poor environmental record in China;
- Divides the community and disrupts social networks;
- Mining Exploration Licence should never have been issued, this mine will be the start of more mining in the region, leading to problems like those seen in the Hunter Valley, China is moving away from its reliance on coal;
- Several PAC Review recommended conditions were not accepted by the applicant or the Department, including the staged approval which would be preferable;
- Project should be refused based on the precautionary principle due to the risk of serious and irreversible impact on aquifers and agriculture;
- Economic benefits to the community have been grossly overstated and cost impacts understated, including the potential health impacts and costs, as no health risk assessment has been carried out;
- Aboriginal cultural heritage will be destroyed and impacted upon i.e. the two grinding groove sites, and blasting may impact on Aboriginal burial sites and the Breeza cemetery.

Other comment or recommendations:

- Final void should be backfilled;
- Compliance is poor and conditions are not enforced by the Government, the conditions need strengthening and should include provisions for bushfire management, the conditions should not allow the applicant to self-monitor, the conditions should include first flush facility for Breeza residents;
- Object to merit appeal rights being extinguished by the process;
- Questions about potential conflicts of interest and expertise of PAC; and
- There was no consultation with Warrumbungle Shire Council prior to purchasing biodiversity offset areas resulting in financial liabilities for council, and leading to more quality agricultural land being tied up for no agricultural purposes. The land purchased is remote from the impact site.

Appendix 3 Records of Commission Meetings

Notes of meeting with the Department of Planning and Environment – 4 December 2014

Meeting note taken by: Naomi Cleaves	Date: Thursday, 4 December 2014	Time: 9:00am
Project: Watermark Coal Project – SSD 4975		
Meeting place: PAC office		
Attendees: PAC Members: Ms Lynelle Briggs AO, Mr Joe Woodward PSM, & Ms Jan Murrell PAC Secretariat: Naomi Cleaves Mr Mike Young – Manager Mining Projects (DPE) Mr David Kitto – Executive Director Resources Assessment (DPE)		
The purpose of the meeting: To brief the Commission on the project and to discuss the Department's Addendum Report and the PAC's recommendations		
A summary of the key issues discussed are provided below. <u>Broad Policy Issues</u> - Government has spent 3 years looking into prohibiting mining on the black soil plains. The Government's decision was not to prohibit mining - Policy now in place regarding acquisition of land where dust and/or noise impacts are over a certain level - Industrial Noise Policy (INP) is being reviewed next year – this will go out for consultation and is likely to go to Cabinet - NEPM standards for air quality are being reviewed – the PM₁₀ annual average is likely to be decreased to 25 µg/m³ and there is likely to be a reporting standard for PM_{2.5} <u>Specific Recommendations</u> - PAC recommended changes to the air quality conditions – the Department did not accept these for 2 reasons: - Exceedances are of the short term nature, which can be managed through best practice mitigation measures - Department of Health is focused on the long term exposure to fine dust particles, rather than the short term exposure - EPA's dust stop program is in place with covers haulage roads; dumping sites (for both coal and overburden); management of operations to minimise dust in adverse conditions (wind); and minimising surface disturbance through progressive and temporary rehabilitation - The recommended conditions may have required the applicant to buy large sways of fertile agricultural land, which may not be in the public interest - The short term dust criteria is assessed as project specific impacts, while all other criteria are cumulative impacts <u>Rehabilitation and Final Voids</u> 2005 was the first time that conditions could be included in consent relating to rehabilitation and final voids, prior to this it was not included as the Mining Act trumped the Planning Act - Department is developing Mine Design Guidelines (as part of the Integrated Mining Policy) which will require applicants to provide up front more information regarding the mine plan, rehabilitation, location		

of overburden emplacement areas, and final voids – this guideline will require 70% of the mine design and a simple risk assessment upfront

- IESC is developing a research paper on final voids – the findings are that it should be assessed on a case by case basis, as there are a number of variables to consider

Water

- Science says that there should be minimal impact on the groundwater from the mine – if the mine were to be on the black soil plains, then the result is likely to be different
- Commonwealth Department of Environment has stated that they have no residual concerns on the water issue

General discussion

The Department gave a brief overview of the history of mining in the Liverpool Plains – in the early 2000's two large exploration licences were granted, one to Shenhua for Watermark, the other to BHP for Caroona. The SRLUPs did not prohibit mining in the agricultural land, but required merit based assessment of the mines.

Documents tabled at meeting/to be provided: NIL

Meeting closed: 10:30am

Notes of meeting with the Applicant – 10 December 2014

Meeting note taken by: Naomi Cleaves	Date: Wednesday, 10 December 2014	Time: 10:45am
Project: Watermark Coal Project – SSD 4975		
Meeting place: Shenhua Watermark's Gunnedah Office		
Attendees: PAC Members: Ms Lynelle Briggs AO, Mr Joe Woodward PSM, & Ms Jan Murrell PAC Secretariat: Naomi Cleaves Mr Liu Xiang – Chairman, Shenhua Watermark Coal Mr Wang Ningbo – CEO, Shenhua Watermark Coal Mr Patrick Liu – Assistant General Manager, Shenhua Watermark Coal Paul Jackson – Project Manager, Shenhua Watermark Coal Mark Howes – Environmental Manager, Shenhua Watermark Coal Gerry McDonald – HR Manager, Shenhua Watermark Coal Debbie Watson – Community Liaison Officer, Shenhua Watermark Coal Zongfu Jiao – Senior Geology Manager, Shenhua Watermark Coal Guigang Chen – Senior Coal Preparation Manager, Shenhua Watermark Coal Li Gen – Senior Mechanical and Electrical Manager, Shenhua Watermark Coal Shao Liang – Mining Engineer, Shenhua Watermark Coal James Bailey – Director, Hansen Bailey James Tomlin – Director/Principle Hydrogeologist, AGE Clayton Richards – SLR Katrina Wolf – Senior Project Manager/Ecologist, Cumberland		
The purpose of the meeting: To get a briefing from the applicant about the project, and their response to the PAC Review Report and recommendations.		
A summary of the key issues discussed is provided below. <u>PAC Recommendations</u> - The applicant is supportive or satisfied with 13 of the recommendations including Recommendation 5 to undertake additional groundwater modelling - The applicant is unsupportive of 10 of the recommendations including: - Recommendations 9, 10, 11, 12 and 16 - all relate to noise and dust conditions – there is now a policy in place to cover the issues raised in the PAC's recommendations - Recommendations 8 and 19 relate to the staged approval of the mining areas - Recommendation 3 relating to the agricultural productivity – the applicant is a mining company, not an agricultural company, the agricultural land that has been bought up is being leased back to farmers, the applicant believes that there needs to be flexibility in the use of the agricultural land - Recommendation 4 – the independent party to resolve agricultural impact disputes – there are already mechanisms in place to deal with disputes with regards to agricultural impacts, therefore this is duplicating an existing mechanism - Recommendation 24 – the use of a shuttle bus to reduce the number of koala incidents – this will be in place during construction, but would be impracticable during operation, as staff would likely be living in a number of regional locations 2 of the recommendations require a change of government policy and should not be considered as part of this determination - Recommendations 1 and 2, relate to the Exploration License, which covers a large area of the Liverpool Plains. The applicant agrees with the Department that requesting that the EL area that is located over the Liverpool Plains be revoked, is outside the remit of the PAC		

Conflict between mining and agriculture

- A number of organisations (including NSW Farmers, Breeza Progress Association and the Caroon Coal Action Group) have concerns that mining and agriculture cannot co-exist, and that mining will have detrimental impacts on the groundwater and surface water and will therefore be detrimental to the agricultural industry of the Liverpool Plains
- These organisations are concerned that this will become the next Hunter Valley. The co-existence of mining and agriculture has not worked in the Hunter Valley and it will not work on the Liverpool Plains

Rehabilitation and Biodiversity

- These issues are top priority for the applicant, they want to be the leader in these fields
- They are minimising the impacts through design

Koalas

- Minimising the impacts on koalas through trial plantings now for future rehabilitation
- The mine will not get a credit for the mine rehabilitation areas, this will be a bonus for the region
- Design of the mine is to firstly avoid, then manage on site, and then a stage translocation of any impacted koalas

Project is in the public interest

- The economic benefits to the community
- Social benefits from VPAs with 3 separate Councils
- Community fund has provided \$5 million over the past 5 years
- The mine is providing inter-generational local employment opportunities

Documents tabled at meeting/to be provided: Presentation of the Project and response to PAC Recommendations, and reference presentation for the site visit.

Meeting closed: 12:00pm

**Notes of meeting with the Department of Planning and Environment, NOW and Consultants
– 21 January 2015**

Meeting note taken by Naomi Cleaves	Date: Wednesday, 21 January 2015	Time: 9:30am
Project: Watermark Coal Project		
Meeting place: PAC Office		
Attendees: PAC Members: Ms Lynelle Briggs AO, Ms Jan Murrell, & Mr Joe Woodward PSM PAC Secretariat: Naomi Cleaves & Megan Webb Department of Planning & Environment: Marcus Ray; Mike Young; Phil Jones & Jeff Parnell NSW Office of Water: Mitchell Isaacs Dr Col Mackie – Mackie Environmental Research Pty Ltd engaged by PAC Dr Frans Kalf – Kalf & Associates engaged by the Department of Planning & Environment		
The purpose of the meeting: To discuss the groundwater modelling including the predicted results, possible ways forward; floodplain definition and different definitions; Aboriginal cultural heritage; adverse meteorological conditions; koala habitat		
A summary of the topics discussed provided below. <u>Groundwater Modelling</u> <u>Dr Mackie</u> Provided a brief overview of groundwater models and the development of these, for different purposes, including mining. Dr Mackie provided a brief overview of his previous review of the model, as requested by the Review PAC; this included his concerns regarding the choice of model and unconventional use of parameters. As part of Dr Mackie's review he requested that the applicant undertake additional modelling, without the recharge component (as this would be close to the worst case scenario). The updated modelling consisted of four models that are suitable for analysis being Scenario 3, 6, 7 and 11 (Dr Kalf independently assessed the additional requested modelling and agrees that these four models are relevant). It was noted that the proposed pits are in hard rock, which is elevated to the plains. Having thoroughly tested the models, Dr Mackie's findings are that: • Eastern pit drawdown: is likely to be very small • Southern pit drawdown: likely to impact the closest private bore, though the drawdown is predicted to be less than 2m, and is within the Aquifer Interference Policy limits) • Western pit drawdown: is likely to be very small • Very little water will be entering the mine from the groundwater, far less than predicted in the EIS and the pits are likely to be dry pits (water will need to be sourced from elsewhere, for dust control etc.) - o Comfortable with the predicted drawdowns, and the limited impact that is predicted. Dr Mackie advised he would be recommending: • Monitoring of the impacts on the groundwater • Install piezometers in and around the eastern pit to monitor the impact of drawdown and recharge of the system • Have 17 years of monitoring data before mining within the southern pit <u>Dr Kalf</u> • The latest corrected models (Scenarios 3, 6, 7 and 11) show less impacts than the EIS predictions • The southern pit is the one pit that could have an impact on groundwater, however the predictions are less than the Aquifer Interference Policy limits		

- Bores along the Gunnedah Formation are not going to be impacted from the mine pits
- The Gunnedah Formation does not continue right up close to the mining area, the shallower Narrabri Formation is closer to the mining area

NSW Office of Water

- NOW are greatly concerned with the security of the aquifer as a resource
- It is one of the best monitored aquifers in the State
- NOW are satisfied that the risk to the aquifer is low

Discussion points

- Conditions, triggers and compensation options that are provided within the Groundwater Management Plan, what are these and can these be more prescriptive to provide greater clarity and certainty as to what impacts trigger responses, and what these responses are likely to be
- The conditions should set out the performance outcomes that are required in the management plans
- Discussion around if, in the unlikely circumstance, the predictions are found to be incorrect and the drawdown is greater than anticipated – what measures can be undertaken by the mine to stop/reduce or reverse the impact?
 - o Once the drawdown is occurring, it would take a long time to recover. Early monitoring would pick up changes that are not expected, and modifications at this point would minimise the impacts
 - o Compensation for loss of the resource can include a supplementary water supply, deepening existing or sinking new bores, and/or financial compensation

Conclusion

Scenarios 3, 6, 7 and 11 were accepted by all to be appropriate, relevant and provide sufficient certainty of the water impacts of the mine. The drawdown that is predicted is within the Aquifer Interference Policy limits. Detailed monitoring during the early stages of the mining (in the eastern pit) will provide additional information for modelling validation before the mine commences mining in the southern pit, where the impact is predicted to be the greatest, but still substantially less than the 2m allowed by the Aquifer Interference Policy.

Floodplain Definition

- The discussion was around the contention raised by the community about the different definitions of a floodplain, and why the DRE definition was used for this mine
- DRE in the EL stipulated that the mining should not be allowed on the black soils of the floodplain. However no definition of floodplain was provided, so for clarity DRE developed a definition that was fit for purpose for the EL
- The definition of floodplain under the Water Management Act 2000 is broader, and aspects of the mine would be included in this definition of floodplain
- DPE have assessed the flooding issues both for Watermark Gully and the eastern pit, with the construction of a levee to protect the eastern pit
- The impact on flood waters due to the levee is predicted to be minor (in the order of 50mm in height), even during the Probable Maximum Flood (which is larger than the 100yr ARI flood)

Aboriginal Cultural Heritage

- Commission had visited the grinding grooves and agreed that these are significant sites
- Note that the applicant says that they can relocate the slabs as a whole, except some may need to be reduced in size, which is not acceptable
- Discussion around the comment that the grinding groove in the eastern pit, is sustained by an aquifer, and if it was relocated it would dry out and break apart
 - o The studies reviewed by the groundwater consultants are at a larger scale but do not show any aquifer in the area

Adverse meteorological conditions - conditions of consent

- Discussion around the conditions that are provided and when exemptions apply, noting the issue of exemptions has been raised by the community, the Court and the PAC on other projects
- The Industrial Noise Policy is under review, which should resolve the concerns
- The Government's approach is to protect 90% of people 90% of the time
- Comparison of noise should be like conditions with like conditions

- EPA (who sets the standard condition for DPE approvals) provided DPE with a letter stating that these are standard conditions and should not be changed
- DPE will discuss this further with EPA, and provide that information to the Commission

Koala

- Discussion around the habitat mapping differences and establishment lag time for habitat, condition that habitat plantings should commence within 2 months of approving the Interim Koala Habitat Plan (which is to be approved within 1 month of granting consent)
- Discussion around including the Australia Koala Foundation on the Koala Technical Working Group, agreement that AKF should be included as one of the groups included in the working group
- Research from Victoria has found that temporarily fencing the translocation site increases the survival rate, by preventing the koalas from attempting to return to their home site
- Question regarding Table 13 the koala habitat areas, and no inclusion of the Barraba Offset Area, when in the applicant's Koala Plan of Management includes that the Barraba Offset Area could be part of the proposed offset package – need to clarify if this offset area will be part of any translocation process

Documents to be provided: Clarification on the definition of floodplain as used in the EL, and what area of the southern pit is included in the Water Management Act 200 definition of a floodplain

Updated draft recommended conditions, referring to groundwater modelling, and koalas

Meeting closed at 11:30am

Appendix 4 Record of other Inspections

Notes of Aerial Tour with Caroon Coal Action Group – 12 January 2015

Meeting note taken by: Naomi Cleaves	Date: Monday, 12 January 2015	Time: 11:00am
Project: Watermark Coal Project – SSD 4975		
Location: Aerial tour – helicopter from Tamworth to Breeza Station		
Attendees: PAC Members: Ms Lynelle Briggs AO, Ms Jan Murrell, & Mr Joe Woodward PSM PAC Secretariat: Naomi Cleaves Caroon Coal Action Group: Tim Duddy – in helicopter Andrew, Cindy and Anna Pursehouse; and John and Susan Lyle – at Breeza Station		
The purpose of the meeting: To get an understanding of context site surrounds and the agriculture and topography of Liverpool Plains		
<u>A summary of the tour is provided below.</u> The flight commenced at Tamworth regional airport, and flew across the Mooki Catchment. Key aspect of the floodplain that were pointed out included: • Breeza hill; • Mt Watermark; • Caroon hill; • Breeza 'choke', a narrowing of the floodplain through which the Mooki River flows – the Breeza 'choke' is 5.2 km wide; • Lake Goran – a large ephemeral lake – when dry it is agricultural land; and • Numerous channels that flow into the Mooki River upstream of the Breeza choke. Other aspects that were highlighted during the aerial tour: • Difference between the red soils of the slopes around the Liverpool Plains, and the black soils of the Liverpool Plains; • The location of the proposed Caroon Coal mine (BHP's proposed underground coal mine); and • The Werris Creek mine, to give an appreciation of the scale of the Watermark proposal. The aerial tour ended at Breeza Station, which is the Pursehouse family farm. The Pursehouses showed the Commissioners photos of the Breeza choke during the 2000 flood event; which caused significant damage to the Werris Creek – Moree Rail Line.		
Documents tabled at meeting: Aerial photograph of the catchment, with key locations marked		
Meeting closed: 12:00pm		

Notes of visit to the grinding grooves with representatives of the Aboriginal community – 12 January 2015

Meeting note taken by: Naomi Cleaves	Date: Tuesday, 13 January 2015	Time: 12:30pm
Project: Watermark Coal Project		
Location: Watermark project site, grinding grooves		
Attendees: PAC Members: Ms Lynelle Briggs AO, Ms Jan Murrell, & Mr Joe Woodward PSM PAC Secretariat: Naomi Cleaves Aboriginal Community: Steve Talbott; Veronica (Dolly) Talbott; Mervyn Leslie; David Horton; Clifford Matthews; Uncle Kenneth Conlan; Mitchem Neave; Roger Matthews; Michael Stair; Terry Matthews; Uncle Cyril Sampson; Uncle Neville Sampson; Brian Sampson; Aunty Jean Hands; Leonard Talbott; Uncle Lloyd Matthews; Tanya Matthews; Deslee Matthews; Natasha Talbott; Wayne Matthews The Commission was escorted by Paul Jackson and other representatives for the applicant, including Shenhua employees and some consultants, who drove the vehicles to the sites. The Shenhua representatives and their consultants did not proceed with the Commissioners or the Aboriginal community to the grinding grooves, and they were not involved with the discussions at the grinding grooves.		
The purpose of the meeting: To inspect the grinding groove sites (in the proposed western and eastern pit areas) with those representatives of the local Aboriginal community who invited the Commission to see them.		
<u>A summary of the site viewing is provided below.</u> The Commissioners visited the western site first, and then visited the eastern site. The two sites are sacred men's business sites. <u>Western site:</u> • This site is larger, with in the order of 120 – 140 individual grinding grooves, scattered over a number of rocks; • This site was used for sharpening weapons, being spears and knives; and • This site had a permanent waterhole nearby, which was important in sharpening their weapons. <u>Eastern site:</u> • The grooves at this site are deeper, as this site was used to sharpen axes, hence the deeper grooves; and • Aquifer beneath this site, which keeps the rock moist and the grooves intact. The Aboriginal community invited the Commission to listen to the concerns of the Aboriginal people.		
Documents provided: A presentation regarding the community's concerns regarding this project, was provided to the Commission after the site inspection.		
Meeting closed: 3:00pm		

