



Mining and Energy Division

Review of Environmental Assessment

Awaba Colliery Mining Project

Reference No: 10-0038

Submission

Construction Forestry Mining and Energy

Union (Mining and Energy Division)

Northern District Branch

November, 2010

On 3 March 2010, Centennial Newstan Pty Ltd a wholly owned subsidiary of Centennial Coal Company Ltd (Centennial) applied to the Minister for the Department of Planning seeking approval to allow ongoing and extended underground mining and associated surface operations. This Awaba Colliery Mining Project is sought under section Part 3A of the EP&A Act.

The Director General made the Environmental Assessment publicly available on the 5 October 2010, at the DoP Information Centre Sydney, Lake Macquarie City Council Offices, and Nature Conservation Council Newtown.

The Union is pleased to take the opportunity to comment on the Awaba Colliery Mining Project proposal and related activities Environmental Assessment.

The Mining and Energy Division is a Division of the CFMEU under the Federal Workplace Relations Act 1996, with over 120,000 members, one of the largest in Australia. The Division covers several industries including the coal industry, coal ports, metalliferous mining industries, electrical power generation, oil and gas and the Nation's small coking industry.

The Northern District Branch of the CFMEU Mining and Energy Division, being the branch that on behalf of the organisation which is making the submission is the principal Union representing coal miners in the Northern District Coalfields of New South Wales. The Awaba Colliery with its site located on the western side of Lake Macquarie is wholly within the State's Northern District Coalfields.

The Union is familiar with the Awaba Colliery site and engaged the services of an Environmental Consultant with extensive experience in local government and environmental assessments on coal mining related projects.

After reviewing all the material and taking advice, the Union supports on balance the Awaba Colliery Mining Project, Application Reference No. DA 10-0038.

Project Overview

No significant changes to existing coal handling are proposed by the Project. Minimal changes are proposed to existing surface operations, with a proposed new surface disturbance relating to increased Pollution Control Dam capacity. All existing surface and underground infrastructure at Awaba Colliery, including previous surrounding workings will continue to be relied upon.

Awaba Colliery is seeking an approval from the Minister of Planning to:

- Continue bord and pillar development and pillar extraction by continuous miners within the 'Main South' Area;
- Extend bord and pillar development and pillar extraction by continuous miners into the 'East B' Area;
- Produce, handle and distribute up to 880 000 tonnes of Run of Mine coal per annum using existing surface facilities;
- Continue the use of existing ancillary surface facilities;
- Expand the existing Pollution Control Dam;
- Continue the delivery of coal to the Newstan Colliery and/or the Eraring Power Station using the existing private haul road/transport facilities.

The proposed East B Area contains a proportion of coal that extends beyond the existing footprint of mining at Awaba Colliery and includes areas of both existing workings and areas requiring new workings to be developed. Subsequently areas of new workings are lateral extensions to the mines footprint which will require new development approval. The East B area is located to the east of the Main South Stage 2 Area. The overlying surface in the East B Area is predominantly bush land on crown land, leased to Centennial Newstan and contains no significant surface infrastructure.

Consultation

A Stakeholder Engagement Plan (SEP) was specifically developed by the proponent for the Project. This included ongoing consultation with local and state government authorities, neighbouring landholders, Aboriginal groups and other relevant stakeholders.

According to Centennial the purpose of the SEP was to provide a consistent management framework to identify and consult with stakeholders with an interest in the Project and to ensure appropriate monitoring and reporting of community initiated enquiries.

A Social Impact Assessment was developed to:

- Identify the perceived impacts and concerns of the community and stakeholders and how the perceived impacts are considered and assessed within the EA;
- Provide assessment of any potential socio economic impacts from the Project; and
- Identify and develop mitigation measures where necessary.

According to Centennial the consultation process for the Project has allowed the Awaba Colliery to effectively maintain and continue to develop trust through ongoing engagement and communication; contribute to good working relationships by proactively anticipating and addressing concerns about the Project.

Mine Subsidence

Prior to the development of the current mining method, historical mine workings at Awaba Colliery beyond the Application Area experienced a number of subsidence events characterised by rapid floor heave in working panels and resulting in surface subsidence.

As a result of difficulties experienced, a new mine plan was formulated which minimises the potential for significant subsidence events to occur.

The current mine design at the Awaba Colliery is based on exploiting the spanning capabilities of the strong Teralba Conglomerate roof.

The development of the current mine design allows the Awaba Colliery to conservatively exclude secondary extraction from potentially sensitive areas.

A subsidence assessment for the Project was prepared by Seedsman Geotechnics Pty Ltd (2010).

In general subsidence levels of approximately 100mm are predicted above the pillars with an additional 100mm above extraction panels. The predicted maximum subsidence is 200mm and the associated tilts and strains will not be measurable with standard survey tools according to consultants Seedsman 2010.

The layout for secondary extraction within Main South Area uses a staggered pattern so as to not extract under haul roads, power lines and other infrastructure on the surface.

The predicted maximum vertical subsidence is approximately 200 mm, extending up to 20 mm level within a 45° angle of draw developed over a width of approximately 200 metres.

The layout of East B Area lies to the east of the South Headings Mains and differs from recent mining at Awaba in that it requires development of additional first workings prior to extraction. There is no secondary extraction of pillars at depths of cover less than 25 metres and the width of extraction panels will vary between 46 to 85 metres.

The prediction of subsidence for this area is a function of the sag of conglomerate and the compression of the pillar system. The 20mm subsidence limit is predicted to be within 50m of the end of the extraction panels.

The mining method proposed for the Project has been successfully at the Awaba Colliery since mid 2007. The proposed mine layout is based on the application of a well established rock mechanic principles that are applied conservatively. Pillar extraction is conducted only after a number of engineering and administrative controls are applied.

The Union considers the unlikely possibility of the worst case 'plug failure' scenario occurring has been managed by Centennial using a proven mining method and designing the layout in accordance with the preventive hierarchy of management controls.

Water Management

Surface water management at Awaba Colliery includes both the management of natural watercourses within the Project mining areas, and the management of catchment run off to the pit top surface facilities. Surface waters in the Pollution Control Dam consist of runoff from the contributing catchment that reports to the existing surface water storages including the Pollution Control Dam, in-seam coal storage bin and maturation pond.

The existing water management system and any potential environmental impacts associated with the management of this system have been considered in the Broad Brush Risk Assessment undertaken for the Project. The water management system requiring further investigation, assessment or additional controls, included the following:

- Potential environmental impacts for the long-term groundwater management through the potential filling of underground workings over time;
- Potential for rainfall events to exceed the capacity of existing water management system and cause unintended discharges.

As a result of the identification of these potential risks a water management assessment for the project was undertaken.

There were no potential impacts upon the clean water management system identified for the Project. As there is no significant change proposed to the surface infrastructure within the pit top area.

The capacity of the existing Pollution Control Dam (PCD) has been determined to be limited; as such discharges can occur during what is considered to be reasonably regular rainfall events. Accordingly the proposed Project involves the expansion of

the PCD. The proposed expansion of the PCD would result in a decrease in discharge through Licensed Discharge Point 009, during higher rainfall.

While no changes are proposed for existing quarry, the function of this facility is to provide material for on-site remedial works.

The review of water quality being discharged through LDP009 located at the spillway of the PCD indicated that the majority of results were within the limits provided by EPL443. Stony Creek is well vegetated and stable which indicates that the impact of Awaba Colliery on Stony Creek is negligible.

Awaba Colliery does not harvest any clean catchment runoff nor does it extract water from any of the watercourses within the lease area. Further the conservative mine design to protect the surface includes buffer zones around 2nd order and higher creeks and provides a minimum design depth of cover in extraction areas to prevent potential impact.

Recent changes to mine water management, resulting in fewer discharges from the existing LDO005 (recently temporarily decommissioned) will further assist to reduce the number of discharges from the Awaba Colliery into Stony Creek.

It is noted that the reduction in discharges from LDP005 will result in an increase in discharges through the 10 South de-watering bore. In addition the water management assessment indicated that the pumping capacity of the 10 South de-watering bore would need to be increased in order to maintain a safe water level within the underground workings. It was assessed that the contributions from 10 South to the Eraring Ash Dam were minor, and that the water quality from the de-watering of underground workings was generally in accordance with the existing Eraring Power Station EPL.

As there is no regional aquifer located above the Great Northern Seam, and mine design has incorporated barriers left around 2nd and 3rd order streams, there were no potential impacts upon the Project site aquifers identified for the Project. In addition, and any Ground Dependent Eco Systems present relying upon the alluvial aquifers

will also not be impacted upon in the predicted subsidence scenario due to the mine design and planned barriers.

It was assessed that the impacts from the Project upon groundwater users would be minimal. A search indicated that groundwater usage in the area by local landholders is limited and that the hydrogeological model did not estimate loss of groundwater from surrounding aquifers.

Aboriginal Heritage

An Aboriginal heritage assessment for the Project was undertaken by RPS Harper Somers O'Sullivan. This assessment considered the potential for Aboriginal archaeological site to occur, the location of any registered sites within the Study Area, and the implications for the Project with regard to any existing or potential archaeological material located in the Study Area.

There are limited construction activities and surface disturbance proposed for the Project, mainly relating to the expansion of the PCD and quarry operations. The PCD area was inspected on 16 April 2010 by RPS archaeologist Tessa Boer-Mah, as well as members of the Aboriginal community. The PCD inspection revealed that the area was already highly disturbed and no Aboriginal material was identified.

The western portion of the continued bord and pillar extraction within the 'Main South Area' was surveyed on 4 and 13 October 2009 by RPS archaeologist Lisa Campbell, with Aboriginal stakeholders. No Aboriginal site requiring AHIMS registration was identified.

The south western portion of this area was surveyed on 12 and 13 September, 2005 by ERM in consultation with local Aboriginal stakeholder groups. No Aboriginal sites or areas of archaeological sensitivity were identified.

The northern portion of East B was surveyed on 7 and 13 October 2009 by RPS archaeologist Lisa Campbell, with Aboriginal stakeholders. No Aboriginal sites requiring AHIMS registration were identified.

The southern portion of this area was surveyed on 16 April 2010 by RPS Senior Archaeologist Tessa Boer-Mah, with Aboriginal stakeholders. Again no Aboriginal sites requiring AHIMS registration were identified.

The existing private haul/transport road site was inspected with no Aboriginal sites or areas of archaeological sensitivity identified.

It is noted that there have been a number of surveys conducted within the Application Area with no Aboriginal sites identified. However there are some areas of moderate and high sensitivity. Awaba Colliery has a number of existing and proposed mitigation measures in place in order to manage any potential impact upon Aboriginal sites.

European Heritage

A European heritage assessment for the Project was undertaken by RPS Harper Somers O'Sullivan. The European heritage within the Application Area has been identified and inspected in numerous reports completed since 1993.

The Awaba Colliery buildings comprise offices, bathhouse, lamp room, boiler house, coal loader/screen, workshops and drift portals. The drift portals bear the name of the mine as opened in 1948.

The buildings in the pit top area associated with Awaba State Mine (AW-07) have been identified in a previous heritage study as having very high local heritage significance in terms of representing extractive industries in the area. It was assessed as having high significance on a regional level and moderate in terms of state significance. AW-07 area appears in the Draft City of Lake Macquarie heritage map.

The statement of significance identifies the Wangi Power Station was the first coalfields sited power station in NSW. Thus the pit top buildings of Awaba share their significance with Wangi Power Station.

There are no proposed changes to historic pit top buildings or infrastructure in the Pollution Control Dam area and therefore there is no risk of impact to non-indigenous heritage associated with the Project.

The continued bord and pillar continuous mining in the Main South area may cause some deformation of the rail line and possibly affect two power poles. The rail line RT-03 is significant for its representation of extractive industries in the Lake Macquarie LGA. If deformation of the rail line occurs as a result of mining, this would not detract from the significance of the item, but form part of the life-history of the rail easement. Potential impacts posed by the Project are not considered detrimental to this heritage item.

No identified non-indigenous sites were located within the extended bord and pillar continuous mining in East B area. Subsidence will not impact on known heritage sites.

No non-indigenous items or places were identified within the haul road. Activities in this area of the Application will not impact on non-indigenous heritage.

The assessment of European heritage has drawn upon previous surveys and assessments within the Application Area to identify and assess the potential impacts from the Project. Awaba Colliery has a number of existing and proposed mitigation measures in place in order to manage any potential impact upon European heritage sites.

The Union considers there are no European heritage constraints for the Project.

Noise

A Noise Impact Assessment was undertaken by Heggies Pty Ltd for the Project.

The results of the noise impact assessment indicate that operational noise levels are predicted to meet the project specific noise criteria at all considered residential

locations under all modelled scenarios. Therefore there are no consequences for potential noise impacts for the Project.

There were no potential cumulative noise impacts identified for the Project, again there are no consequences.

The results of the sleep disturbance analysis indicate that noise levels are predicted to meet the most stringent recommended sleep disturbance noise goal. Therefore there are no consequences for potential sleep disturbance impacts for the Project.

There are no potential construction noise impacts identified for the Project, as well as no potential vibration impacts.

Noise emission levels have been predicted assuming that the existing noise management and mitigation measures are and will continue to be implemented. As noise impacts from the Project were deemed negligible by the noise impact assessment, no additional noise management or mitigation measures are considered.

Air Quality

An Air Quality Impact Assessment was undertaken by Heggies Pty Ltd for the Project.

The Air Quality Impact Assessment conducted by Heggies modelled dust deposition levels, Total Suspended Particulates, PM₁₀ and underground ventilation emissions for the Project. The study indicated that the Project would comply with the relevant criteria as follows:

- Dust deposition levels are predicted to be below the Project air quality criteria at all surrounding dwellings;
- Cumulative annual average TSP concentrations are predicted to be below the Project air quality goal at all surrounding dwellings;
- Cumulative annual average PM₁₀ concentrations are predicted to be below the Project air quality goal at all surrounding dwellings;

- Cumulative maximum 24 hour PM₁₀ concentrations attributable to the Project are predicted to be below the Project air quality goals at all surrounding dwellings, excluding periods of region pollution events; and
- Nitrogen dioxide and carbon monoxide emission levels were negligible (<0.1 µg/m³ at all nearest sensitive receivers).

The study undertaken by Heggies indicates that current mitigation measures being implemented by Awaba Colliery appear adequate. Whilst the Union recommends these measures continue to be employed at the site in the future, there is no requirement for further mitigation strategies.

Greenhouse Gas

The potential for the Project to result in a significant increase in greenhouse gas emissions and associated impacts was considered by the proponents Broad Brush Risk Assessment to be a low risk.

It is noted that the Awaba Colliery has limited capacity to reduce Scope 3 GHG emissions.

Awaba is currently implementing a number of measures to minimise to the greatest extent practicable GHG emissions from Awaba Colliery through the following strategies:

- Maximising energy efficiency as a key consideration in the development of the mine plan;
- Utilising ventilation modelling to identify opportunities to reduce ventilation flow thus energy used by main fan as the production areas become closer to the mine pit bottom and ventilation circuit resistance is lowered;
- Implementing cost effective measures to improve energy efficiency;
- Regular maintenance of plant and equipment to minimise fuel consumption; and
- Consideration of energy efficiency in plant and equipment selection phase.

Ecology

In order to assess the potential for ecological impacts by subsidence, vegetation communities were classified and mapped within the Application Area and in particular across all 3 areas which contain active mining areas. The location of any threatened species of flora and fauna observed during field work were recorded.

Given that there would be no habitat clearing and that the only impact would be surface deformation up to a maximum predicted of 200mm, no fauna trapping or targeted field searches for fauna were conducted.

The three main vegetation communities, Coastal Foothills Spotted Gum – Ironbark Forest, Coastal Plains Smooth-barked Apple Woodland and Coastal Plains Scribbly Gum Woodland are hardy, dry sclerophyll vegetation and a small change in the surface would have no impact on their viability.

The Smooth-barked Apple and Scribbly Gum are preferred habitat for *Tetratheca juncea* and it is quite possible that the species is present in this habitat in addition to the recorded locations. *Grevillea parviflora* subsp. *Parviflora* can be found in a variety of habitats and could also be present elsewhere to the recorded locations. Both species are hardy and the small expected surface deviation would not threaten any local population with extinction.

The threatened fauna species likely to be using the subject site are highly mobile and would not be impacted on by small surface changes that would not result in significant habitat changes.

Overall the Union considers there are no significant impacts identified on vegetation communities, threatened flora and fauna, or to the connectivity of habitats. Therefore there are no expected consequences from the Project based on these findings.

Other Environmental Issues for Consideration

Traffic and Transport

No additional traffic will be generated by the Project.

Interaction of coal haulage with traffic using public roads will be avoided by the continued use of existing private haulage roads, utilised to transport coal to Newstan Colliery to the north or Eraring Power Station to the South.

Wilton Road and the Awaba Colliery access road intersection has adequate capacity to cope with the existing and projected traffic levels.

Waste Management

The Project will not generate any new waste materials or additional waste volumes on an annual basis, and all waste streams will continue to be managed in accordance with current waste management strategies successfully employed at the site.

Soil and Land Capability

The only potential impacts upon soil are related to erosion and sediment control during minor surface disturbance, primarily associated with the expansion of the Pollution Control Dam. Monitoring and Mitigation strategies currently employed at the site are deemed appropriate to address any impacts associated with sediment or erosion control.

Hazards Management

Of the hazards assessed (including hazardous materials, asbestos, spontaneous combustion, bushfire and public safety) the proposed Project is not expected to result in an increase in environmental or safety risk.

Socio Economic Benefits

It is acknowledged that Awaba Colliery is a well established underground mine operating for over sixty years , providing continued employment for approximately 100 personnel.

While the Project does not involve any significant change to employment, and only a slight increase in the coal production rate, it has been anticipated that the operations will extend the mine life over a period of approximately five years or more.

The Project has been assessed using a risk-based approach to appropriately identify and assess environmental aspects relevant to the Project. According to the proponent emphasis has been placed on anticipation and prevention of potential environmental and social impacts, with management strategies, mitigation measures and monitoring activities identified to keep potential impacts to a minimum.

In Summation

The Project will not significantly alter the nature of existing operations undertaken at the site, nor will it require significant modification to the existing infrastructure which supports the mining operation.

Based on comparative analysis of the key elements detailed in the Awaba Colliery Statement of Environmental Effects, it is considered the Project activities to build on the attributes of existing project approval. An appropriate risk assessment has been undertaken to identify any potential environmental impacts associated with the proposed Project. This risk assessment identified that there will be minimal environmental impacts associated with the proposed activities and that these can be avoided, further mitigated or controlled through the implementation of existing environmental management procedures or additional procedures that have been identified for these particular activities.

The Union on balance supports the Awaba Coal Project, Reference No: 10-0038.



Grahame Kelly

DISTRICT SECRETARY