



Department of Primary Industries

OUT13/6876

- 2 APR 2013

Mr Matthew Riley
Mining and Industry Projects
NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Matthew.Riley@planning.nsw.gov.au

Dear Mr Riley,

**Cobbora Coal Project (MP10_0001)
Comment on the Response to Submissions and Preferred Project Report**

I refer to your email dated 14 February 2013 to the Department of Primary Industries in respect to the above matter.

Comment by Crown Lands

Crown Lands advises that the proponent has addressed the issue of Crown lands located within the project area and is aware of the requirements for use upon project approval including the closure of Crown roads and the occupation of Crown land parcels, and that the proponent has no objections to the conditions that would be required by Crown Lands.

For further information please contact Anna Shaw, Area Manager Central West (Orange office) on 6391 4331, or at: anna.shaw@lands.nsw.gov.au.

Comment by Fisheries NSW

Fisheries NSW note that earlier recommended conditions (included in the Department of primary Industries letter dated 22 November 2012 have been accepted and as such have no further issues.

For further information please contact David Ward, Fisheries Conservation Manager (Tamworth office) on 6763 1255, or at: david.ward@dpi.nsw.gov.au.

Comment by NSW Office of Water

The NSW Office of Water advises the following key comments, and the detailed advices and recommended conditions, should the application be approved, in Attachment A:

- (i) Peak water demand has increased from 3656ML/a in the original Environmental Assessment (EA) to 4340ML/a in the Preferred Project Report (PPR). It is understood the increase is mainly due to an increase in predicted dust suppression requirements and is to be supplied by the original proposed water sources. In Year 20 of the mine life the EA predicts there is a low probability that water entitlements will not be adequate for a very dry year. In this event alternative sources of water such as acquiring water entitlements on the permanent water trading market or acquiring water allocation on the temporary trading market will need to be used, or greater efficiencies achieved, or if necessary, the scale of activity reduced to match available water supply.

- (ii) Groundwater inflows into the mine workings have increased for each year in the PPR with a maximum of 2802ML/a in Yr 2028 compared to 1755ML/a in 2031 in the original EA.
- (iii) The proponent has made adequate arrangements to date in regards to obtaining surface water entitlements for operational requirements. Further acquisitions will be required to account for the maximum predicted groundwater take prior to commencement of operations. The NSW Office of Water advises there is sufficient market depth within the relevant water source.
- (iv) Assessment of predicted groundwater impacts has been assessed against the minimal impact considerations of the NSW Aquifer Interference Policy (2012). This indicates the water quality impacts are acceptable. However make good provisions are required for impacts to groundwater pressure and the groundwater table.
- (v) The EA has predicted impacts to semi-permanent pools due to groundwater drawdown. Some of these are to be mitigated via predicted additional flows to the surface water system and/or compensatory flows via on-site water storages. These mitigating measures and the proposed aquatic monitoring strategy require detailed development prior to commencement of activities.
- (vi) The proposed modifications to the Woolandra West Dams requires further clarification in terms of proposed works during construction, mine operation and post mine life. Further conceptual detail is necessary to understand the scale of works, potential impacts, licensing implications and long term proposed functioning of the local surface water system.
- (vii) It is recognised the updated flood modelling has confirmed no impacts to lands not owned by the proponent and the impacts where evident can be mitigated through levee construction and specific erosion control measures.
- (viii) The proposed site water management plan is a critical aspect of the ongoing monitoring and management of impacts to surface water and groundwater. The NSW Office of Water requests consultation in preparation of this document in terms of monitoring, metering and mitigation/contingency protocols, and the establishment of an approach for comparison of predicted impacts against actual impacts.

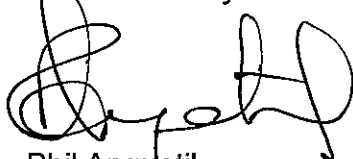
For further information please contact Tim Baker, A/Manager Major Projects, Mines & Assessments (Dubbo office) on 6841 7403, or at: Tim.Baker@water.nsw.gov.au.

Comment by Office of Agricultural Sustainability & Food Security

In accordance with arrangements in respect to mining proposals that affect agricultural land, the Office of Agricultural Sustainability & Food Security has responded directly to your Department by letter dated 18 March, 2013.

For further information please contact Liz Rogers, Project Manager (Orange office) on 6391 3642, or at: liz.rogers@dpi.nsw.gov.au.

Yours sincerely



Phil Anquetil
Executive Director Business Services

Attachment A

Cobbora Coal Project (MP10_0001) Response to Submissions and Preferred Project Reports

Additional comment by NSW Office of Water

1. Surface Water Assessment

- The maximum reduction in Talbragar River flows has increased from 280ML/a in the original EA to 480ML/a at end of mining in the PPR. This represents 0.9% of annual flow in the Talbragar River.
- Updated flood modelling provided in the PPR has confirmed no impacts to lands not in ownership by the proponent provided appropriate mitigating measures are applied. Implementation of these measures which include levees will require consultation with the NSW Office of Water due to the requirement for approvals under Part 8 of the *Water Act 1912*.
- The main flooding impacts identified in the PPR include:
 - increased flooding of Flyblowers Ck near the current Spring Ridge Rd and Golden Highway watercourse crossings.
 - localised increases in flooding on the project site adjacent to Laheys Ck and the lower reaches of Blackheath Ck. Impacts on Sandy Ck are restricted to near the junction of Laheys Ck.
 - localised flooding and increased velocities are predicted around proposed structures within the channel and floodplain. These structures will require mitigation measures to either reduce velocities or provide erosion protection to ensure channel and floodplain stability.
- The proposal requires a number of significant watercourse crossings and watercourse diversions. The NSW Office of Water recommends these activities be designed and constructed in accordance with the *Guidelines for Controlled Activities on Waterfront Land* (July 2012).
- The maximum imported water requirement for a 10th percentile dry rainfall year is 3240ML/a in Year 20. This requirement is within the proponents licensed entitlement of 3311 unit shares held within the Macquarie-Cudgegong Regulated Water Source. In Year 20 the EA has predicted a low probability that entitlements will not be adequate for a very dry year. In this event alternative water sources or greater efficiencies will need to be used or if necessary, the scale of activity reduced to match available water supply.
- The surface water assessment has assumed the runoff to the existing Woolandra dams will be returned to Laheys Ck. The exact staging and design has not been confirmed in the EA. This reinstatement of flows is proposed to offset the reduction in area from the void in mining area B proposed at completion of mining.
- Key aspects of the downstream flow impacts include the following:
 - a reduction in yield to the Sandy Ck system in dry years of up to 6%, but an increase in median and wet years.
 - releases from the mine will result in an increase in downstream flows in wet years.
 - groundwater drawdown is predicted to have impacts from Year 4 onwards on groundwater fed pools in Sandy Ck and Laheys Ck. The groundwater levels are predicted to fully recover within 50 years post mining. The impacts at 2 of the 4 semi-permanent pools identified are predicted to be mitigated via periods of increased flows due to the mining operation. Alternative mitigating measures have been considered for the other 2 pools.
- Baseline water quality assessment identified exceedances of the ANZECC Guideline triggers for a number of parameters. The proponent has therefore developed customised water quality trigger levels. The Office of Water recognises in situations where no surface runoff was available to establish baseline conditions that groundwater has been used as a surrogate. Due to the potential for this data to not accurately reflect the surface water conditions it is recommended these be revised as actual monitoring data is obtained.

- The PPR has reduced the proposed 100th percentile for Total Dissolved Solids (TDS) in sedimentation dams from 1400mg/L in the original EA to 650mg/L. This will consequently reduce the potential impact of salt loads and salt concentration on the downstream environment, however the overall project has a maximum predicted increase of 5% to the baseline concentrations of TDS in the Talbragar River.

2. Groundwater Assessment

The predictive numerical groundwater model has been re-run for the PPR with updated mine design, hydraulic conductivities for backfilled spoil and increased model outputs to 100 years after the planned succession of mining activities. Key outcomes of the revised modelling include:

- The modelled drawdown depth has increased at mining area B from a maximum of 85m in the original EA to 90m in the PPR.
- The 1m drawdown contour extent has increased from 5 to 5.5km to the south of mining area A and B and increased from 4 to 6km in the west. Drawdown to the north and east has also increased from 3 to 4km.
- The maximum mine inflow rates have increased from 1775ML/a in 2031 in the original EA to 2802ML/a in 2028 in the PPR. The mine inflows are associated with induced surface water take via Talbragar River losses of up to 469ML/a and enhanced pit recharge of 330ML/a. The enhanced pit recharge is due to changes in topography and soil conditions with resultant increases in infiltration. The proponent will need to hold sufficient licensed entitlement for the maximum net groundwater take predicted at 2202ML/a at the commencement of mining in addition to licensed entitlement for the induced surface water take.
- Continued drawdown is predicted to occur 100 years after mining due to evaporative losses from the void lake in mining area B and from shallow subsurface flows. Equilibrium is predicted at this point as evaporation from the void is balanced by inflows from groundwater rainfall and surface runoff. The long term groundwater inflows to the pit at equilibrium is predicted to be 270ML/a.
- The void lake in mining area B is predicted to be a groundwater sink hence water is not predicted to migrate from the void and impact the water quality of Sandy Creek or the beneficial use of groundwater outside the mining area.
- Narran Springs, a high priority groundwater dependent ecosystem listed in the *Water Sharing Plan for the Murray Darling Basin Porous Rock Groundwater Sources*, is located 5.25km west of the mining area and is not expected to be under hydraulic influences from the project activities.

3. Aquifer Interference Policy

The predicted groundwater impacts of the project have been assessed against the criteria for Less Productive Groundwater sources (porous and fractured rock) in the Aquifer Interference Policy (2012). Based on this review the impacts to water quality are within the level 1 minimal impact considerations which are deemed acceptable. The water table impacts and water pressure impacts however are within the level 2 minimal impact considerations which triggers the requirement for make good provisions. These have been committed to by the proponent. Key points of the assessment against the Aquifer Interference Policy include:

- The revised groundwater modelling predicts that 13 groundwater bores will experience drawdown greater than 2m during operations. Ten of these are owned by the proponent and the maximum drawdowns predicted in the 3 private bores are 2.2m, 2.4m and 5.1m. The proponent has committed to make good provisions to the private bores.
- The depressurisation of the coal seams is modelled to predict impacts to groundwater pressures up to 6km west of mining area B. The relevant groundwater bores impacted by the depressurisation have been detailed in the previous point. These will need to be mitigated via make good provisions.
- The increased connectivity and subsequent mixing of groundwater near the mining area is not predicted to degrade the measured water quality conditions or beneficial use of groundwater outside the immediate mining area. Water that becomes hyper saline is not expected to migrate from the void lake. A comprehensive monitoring network to confirm the extent of predicted impacts to water quality is recommended.

4. Water Licensing

- The proponent will be required to ensure it holds sufficient licensed entitlement for the following proposed water take activities for the project:
 - the maximum predicted groundwater take for the mine life at the commencement of mining. This needs to be held in the Gunnedah-Oxley Basin water source of the *Water Sharing Plan for the Murray Darling Basin Porous Rock Groundwater Sources*.
 - the maximum predicted take from surface water sources due to aquifer interference. The two key points of take include the reduction of flows in the Talbragar River and the reduced local runoff due to enhanced recharge. This needs to be held in the Lower Talbragar Water Source of the *Water Sharing Plan for the Macquarie-Bogan Unregulated and Alluvial Water Sources*.
- The proposal to modify the Woolandra dams will require an amendment and potential cancelling of the existing licence held under the *Water Management Act 2000*. The exact procedure for these licence changes requires the proponent to consult with the NSW Office of Water and provide further detail with regard to the proposed dam modifications, staging and final designs.
- The proposed levees, embankments and emplacements that have been identified to impact on flood flows will require licensing under Part 8 of the *Water Act 1912*.
- Additional monitoring bores will require licensing under Part 5 of the *Water Act 1912*.
- As the proposed raw water dam is to capture surface runoff from a clean catchment this will require accounting for licensed volume under the Maximum Harvestable Rights Dam Capacity and/or licensed entitlement.
- The proposed dry detention basin will require consideration for licensing under the *Water Act 1912*.
- The proponent should liaise with the Office of Water to determine specific licensing and approval requirements.

5. Monitoring

- The Office of Water supports the proponent's commitment to ongoing modelling and groundwater monitoring during and after the life of the mine. This is critical to validate modelling predictions and impacts, and to inform license requirements.
- The Office of Water supports the proponent's commitment of additional monitoring bores located downgradient of the backfilled spoil material to monitor potential discharge from acid forming spoil. Further monitoring installations at the Narran Springs groundwater dependent ecosystem are also supported.
- The Office of Water supports the proposed Aquatic Monitoring Strategy (AMS) designed to assess the impacts on the quantity and quality of water in the persistent pools of Laheys Creek and Sandy Creek and the associated ecological community. The selection of key parameters and triggers for mitigating measures will be required. The proposal in the PPR for the AMS to utilise adaptive management principles is supported and it is requested the NSW Office of Water be consulted in development of the Aquatic Management Strategy.
- The Office of Water supports the proponent's commitment to surface water monitoring in terms of (i) monitoring potential impacts to water quality within surface water storages and the surface water system, and (ii) accurate metering of water take, distribution and storage for the project.

6. Recommended Conditions of Approval

The NSW Office of Water requests the following conditions be included in any determination issued for the Cobbora Coal Project:

1. The proponent is to have adequate water supply authorities to all stages of the mining development, and if necessary, reduce the scale of its activity to match its water supply.
2. The proponent shall prepare a Construction Environmental Management Plan in consultation with and to the satisfaction of the NSW Office of Water prior to commencement of activities.

3. The proponent shall prepare an Operations Environmental Management Plan in consultation with and to the satisfaction of the NSW Office of Water prior to commencement of activities.
4. The proponent must obtain relevant approvals and licences under the *Water Act 1912* and *Water Management Act 2000* prior to commencement of activities.
5. The proponent is to take measures to offset impacts to third party bores that exceed the level 1 minimal impact considerations for water table and water pressure as defined by the NSW Aquifer Interference Policy.

End Attachment A