

Stratford Extension Project Environmental Impact Statement Submission

MidCoast Water (MCW) is a County Council responsible for the reticulated water supply and sewerage systems in the Greater Taree, Great Lakes and Gloucester local government areas. MCW operates the Manning District Water Supply Scheme which draws water from the Manning River catchment downstream of the proposed development. It is a major regional water supply system servicing the population of over 75,000 people.

The main focus of this submission is therefore the potential of the project to impact on the downstream waterways during the project duration and in the longer term. MCW was included in the consultation process during the preliminary design stage for the Gloucester Coal extension project, including participation in the planning focus meeting providing input to the Director-General's requirements for the project environmental assessment. In particular we were supporting a 'zero discharge' principle of contained water for the project's water management.

In addition, the initial briefing meeting with Gloucester Coal was held on 12 December 2011 in time to consider MCW input into the Environmental Impact Statement (EIS) preparation process. The following issues were discussed/raised:

- Site water balance results to be presented in EIS need to demonstrate how "zero discharge" objective can be achieved
- Baseline data to be presented in EIS including stream flow, water quality, groundwater levels and quality
- Increased turbidity in upper catchments of Manning river and consideration of cumulative impacts from different projects
- Clarification that proposal is contained exclusively within the Avon River catchment

The follow up briefing meeting with Gloucester Coal and consultants preparing the surface and groundwater assessment was conducted on 8 March 2012. The meeting focused again on water related issues including surface water, site water balance and groundwater assessment.

The project water management approach was presented and the details discussed in particular:

- Minimise disturbance/mine water catchments
- Installation of up-catchment diversions
- Progressive rehabilitation
- Operating contained water storages with freeboard for storm runoff storage
- Dust suppression on haul roads and active emplacement areas



- Irrigation within contained catchments
- Operational risk- disruption to mining

Site water balance model was presented by Gilbert & Associates. A 13 Year Model Stimulation including 123 Realisation Periods based on regional climatic data records 1889-2011 was found to be comprehensive enough to demonstrate the site water balance.

The objective of zero contained water storage overflow was achieved by the presented model. In particular MCW supported Gloucester Coal accepting operational risk of disruption to mining if design capacity of the water management system would be exceeded by storing excess water in active open pits if required.

Groundwater assessment was discussed with presentation of the conceptional and numerical Groundwater Model developed by Heritage Computing as well as cumulative impacts from other mining and CSG projects in the area.

After review of the full EIS document on public exhibition MCW has the following comments:

Project Final Landform

Once mining operations cease, the Stratford East Open Cut, Avon North Open Cut and the Roseville West Pit Extension remain. A water and salt balance model has been developed for each of the final voids to predict the long-term behaviour of the final void water bodies. It predicts high and ever increasing salinity and hundreds of years to reach equilibrium of the water level. The voids are up to 180m deep, totalling 138 ha in area and will become groundwater sinks filling with water and evaporating causing constant increase in salinity.

The alternative to post-mining water management has to be considered, such as filling of the voids with waste rock material instead of storing it above the ground level.

If however, the final void management cannot be changed, the specific monitoring strategy for long term monitoring has to be developed. All monitoring proposed in the EIS refers to the timeframe defined as 'over the life of the project'. A post mining monitoring regime has to be developed in details to cover long term monitoring of impacts on water.

Up-catchment Diversions

Up-catchment diversions to re-direct runoff from undisturbed areas around the open pits aim to limit the capture of surface runoff from undisturbed areas. An existing diversion located east of the mining complex is re-directing runoff from a 1.28 square kilometres area off the hills to the headwaters of a 'small unnamed tributary of Avondale Creek' that runs near south-east corner of MLA2. This existing diversion



has increased the catchment area of the creek compared to the pre-mining conditions by 318% (p.3. Attachment BB). A further increase of the creek catchment which would represent an increase of 84% of already increased catchment area is proposed.

Fluvial Systems Pty Ltd has recommended on-going monitoring of the tributary with the long profile survey conducted every 2 years and an adaptive management approach. More pro-active management should be implemented as erosion and permanent damage to the creek bed is likely if not inevitable. This will result in a negative water quality impact downstream of the diversion.

Surface Water Monitoring

Gloucester Coal monitors surface water quality within and surrounding the Stratford Mining Complex and downstream by predominantly manual sampling from both streams and water storages. The monitoring shows that there are already significant water quality issues in the Avon River catchment associated with the various land uses including mining.

The proposed manual sampling regime with once a year reporting is inadequate to gain confidence that our water supply downstream of the development is adequately protected. The proposed monitoring program has to be supplemented by the on-line basic parameters measurements including conductivity, turbidity and pH at critical points for water quality management. The on-line instruments should be installed at least at the Avon River sampling sites W1 upstream and W2 downstream of Avondale Creek confluence with results available in real time to MCW and other downstream users.

