

Chairperson,  
Planning Assessment Commission.

I am a retiree and father of four residing in [REDACTED], south-west Sydney. I am a member of the Western Sydney Environment Network which I joined because of my concern at the expansion of mining within our residential and water catchment areas. My eyes were opened to the irresponsibility of mining companies around twenty years ago when I took my sons paddling up the Cataract River. I was shocked to see methane bubbling up through the river bed and warning signs on the bank prohibiting lighting matches and fires. Obviously these reckless practises continue today.

I oppose the Russell Vale Colliery Underground Expansion Project and support the objections previously made by the Sydney Catchment Authority and the Office of Environment and Heritage in regard to these mining operations. I voiced my objection at the previous PAC hearing in February this year and I gather little has changed with regard to the proposed expansion apart from a dubious Independent Risk Assessment Report.

I maintain the Underground Expansion Project will have destructive subsidence-impacts on 14 upland swamps, endangered species inhabiting these swamps, disrupt local and regional surface and ground water systems including the Cataract Creek, Cataract River and Belambi Creek catchments. I have reached that conclusion based on the recommendations of the Australian Government's Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mines and its review of the Independent Risk Assessment Report. This damage will be irreversible and cannot be mitigated which is acknowledged by the proponent though they claim only 12 upland swamps are at risk.

The Department of Planning and Environment, through an Independent Assessment Panel, have commissioned an Integrated Risk Assessment report of the Underground Expansion Project. This report's conclusions have been identified as questionable by the Office of Environment and Heritage because the author's of the report are not independent and appear to be the consultants previously employed by the proponent to prepare the Environmental Assessment and the Response to Submissions for this project.

The Integrated Risk Assessment report acknowledges there are 29 risks to water quantity and quality, such as:

- groundwater depressurisation leading to seepage from Cataract

Reservoir;

- reduced baseflow to streams due to depressurisation of the regional aquifer;
- fracturing of deeper strata associated with the Corrimal Fault and/or Dyke 8 leading to increased groundwater flowing into the mine; and
- surface cracking leading to redirection of surface flow to groundwater systems.

This report downplays the quantum and likelihood of these risks eventuating ranking them as low risk. Water modelling by WRM, the proponent's own consultant, predicts the proposed expansion project may result in average baseflow losses of up to 7.3 ML per day

The Office of Environment and Heritage and the Independent Expert Scientific Committee disagree with the ranking from the Integrated Risk Assessment report ranking it as high. The Office of Environment and Heritage also challenge the baseflow loss prediction citing predictions by Strata Control Technologies, the risk assessment's own subsidence engineer, Coffey 2013 who identifies a "serious risk" of baseflow loss to Cataract Creek at a conservative rate of 11.7 ML per day or "6% of the average water volume generated by Lake Cataract between 2006 and 2012."

I also note that Water NSW states that maximum baseflow loss is predicted to occur some 50 to 100 years after mining and persist for centuries whereas the figures above only relate to baseflow loss up to 2020 when the mining project concludes.

These figures become even more significant when you consider the planned urban expansion of Greater Sydney. In particular, the Macarthur region which obtains all its water from Cataract and Cordeaux dams. The Macarthur region in 2011 had a population of 254,000 equating to a daily demand for water of 75.4 ML per day (assuming average consumption 297L/person/day). Using Coffey 2013's figures this is equivalent to 39% of the average water volume generated by Lake Cataract.

The Macarthur region consists of the Wollondilly Shire, Campbelltown and Camden. These local government areas contain some of the targeted growth areas identified by the NSW Government including Leppington, Willowvale, Elderslie, Gregory Hills, Oran Park, Appin and Wilton. The population of the Macarthur region is expected to increase by 143,000 from the 2011 figure to 397,000 in 2026. This will mean that in 11 years the daily demand for water

from the Macarthur Region will be 117.9 ML per day or 60% of the average water volume generated by Lake Cataract. This demand will continue to escalate as the baseflow losses increase towards their peak and the catchment's drought events become more frequent, more intense and longer with climate change.

It is clear from the predicted population growth we can not afford to risk any further reduction in water volume from the Cataract Dam water catchment if we are going to sustain the planned development of the Macarthur region. The Russell Vale Colliery Underground Expansion Project presents an unacceptable risk to the long term development and sustainability of the Macarthur and Greater Sydney region.

