

November 1st 2010

Environmental Planning Officer
Regional Projects
NSW Department of Planning
GPO Box 39
Sydney NSW 2001

Attention: Kane Winwood

Dear Kane,

Re: Review of Dargues Reef Gold Project, Major Project Application No. 10_0054

Southern Rivers Catchment Management Authority (Southern Rivers CMA) does not support the project as currently proposed in the Environmental Assessment, as submitted by the proponent, Cortona Resources Limited. A range of additional risk mitigation and environment protection measures are recommended to be incorporated into the proposal. These are outlined below.

The Southern Rivers Catchment Action Plan (CAP) sets the direction for natural resource management in the region to 2016. The Catchment Targets within the CAP work toward meeting Statewide Targets set by the Natural Resources Commission, which in turn work toward the achievement of the NSW Government's State Plan. The Southern Rivers Catchment Action Plan may be found at:

<http://www.southern.cma.nsw.gov.au/publications.php#Catchment%20Action%20Plan>

The issues in the Environmental Assessment (EA) that need to be addressed to provide consistency with the CAP are:

- The EA does not adequately address the impacts on the Tableland Basalt Forest Endangered Ecological Community (EEC) (2-76). If the groundcover disturbance and the vegetation impacts were assessed under the Native Vegetation Act 2003 (NVA), it is likely that the project would be refused on the basis that the vegetation community (Ribbon Gum Narrow Leaf Peppermint Grassy Open Forest) is considered an overcleared vegetation community under the NVA.
- The EA does not adequately address the removal and disturbance of bushrock as defined under the Threatened Species Conservation Act 1995 (2-78)
- The project proposes to offset groundwater losses into the mine void with surface water captured in harvestable right farm dams and augmented with water drawn from old mines (4-22, 4-23). This presents a number of issues of concern. The first is the loss of normal surface water flows into Majors Creek through the construction of eight new farm dams (in addition to the 14 existing farm dams on the property). The second is the quality of water from the two sources that will be released during periods of low flow. Given the analysis of water samples from the old mines stated in 3-32 of the EA, this represents a real risk to downstream water quality and the users of this water. In the event that the project is approved, Southern Rivers CMA recommends that the eight new harvestable right dams be removed and the dam sites rehabilitated to return natural surface flows to Majors Creek at completion of the project. Southern Rivers CMA is also concerned by the potential long-term loss of groundwater to Majors and Spring Creek beyond the working life of the mine. There is no indication in the EA that groundwater flows will be returned to the pre-mine conditions or that these losses can be mitigated in any way post-mining.

- The EA does not address climate change. Southern Rivers CMA would apply a precautionary approach to water use from Majors Creek, as stream flows are already diminishing. An appropriate management response would be to disallow further groundwater licensing on Majors and Springs Creek, unless appropriate flow, surface and groundwater modelling indicates that the proposed water use is proved feasible.
- The MUSIC modelling does not provide an accurate assessment of the catchment hydrogeology. Default, one off figures have been used with minimal monitoring. In addition, the historic data used is often for periods of high rainfall in the region. In fractured rock geology, high quality monitored data is required to model the predictability of the hydrogeology. Currently there are no thresholds set within the modelling, or any details on how the proponent will carry out contingency planning once those thresholds have been reached.
- Risk of groundwater contamination from the tailings dam. The EA requires further detail to address surface and groundwater contamination mitigation and contingency planning. It is noted that section 6-7 of the Soil and Land Capability Assessment report states that tailing structures should be lined to make them effectively impermeable. However no detail on how this would be achieved is provided.
- Risk of downstream surface water contamination from the tailings dam in the event of the design parameters for the structure being exceeded. The EA needs to have a contingency plan for dealing with an Average Recurrence Interval in excess of 1 in 100 year given that it is wholly reliant on a single tailings dam.
- The Upper Deua catchment has been largely stressed over the last decade, with lowered water tables and poor environmental flow. At the very upper reaches of a major river (Deua/Moruya), Majors and Spring Creeks are part of a historically mined and degraded system. Further stress on the catchment must be mitigated for and adequately addressed.
- In addition to the recommendations for soil management provided in section 8-1 of the Soil and Land Capability Assessment report, Southern Rivers CMA advocates the use of recycled organics in covering mounds of stripped topsoil and subsoil to achieve the 70% vegetation cover within 10 days of formation. This is deemed necessary due to the weak structure of the topsoil and the dispersible characteristics of the subsoil. The recycled organics should be used in accordance with *Best Management Practice Guidelines for the Beneficial Use of Recycled Organics in Land Rehabilitation and Catchment Management (DECC/DPI/HNCMA 2006)*
- In addition to the recommendations for soil management provided in section 8.5 of the Soil and Land Capability Specialist Report, Southern Rivers CMA advocates the use of recycled organics in site rehabilitation. The recycled organics should be used in accordance with *BMPs* (as stated in the above point).
- The Southern Rivers CMA follows the principles of "Ask First: A guide to respecting Indigenous heritage places and values" produced by the Australian Heritage Commission and DECCW Aboriginal Cultural Heritage Consultation process documentation. Within 4-114, the proponent should demonstrate that the community have a full understanding of the impacts of the mine and the recorded Aboriginal sites. Southern Rivers CMA supports the recommendations by the Aboriginal Community (4.6.7). In addition, the consultation process needs to be continued in a group forum, so issues can be raised with everyone present. Otherwise the perception in community that issues can be played off against different groups will persist. This is also consistent with the Southern Rivers CMA Aboriginal Cultural Heritage Policy which advocates inclusive, open and fair consultation.
- The Southern Rivers CMA has reservations about the backfilling of stopes with tailings/concrete mix because of the uncertainty of contamination risk of groundwater. Southern Rivers CMA recommends further testing of the tailings and the proposed tailing backfill mix prior to any backfilling operations.
- Any erosion control works, weed removal or land rehabilitation work proposed on Majors Creek should be in consultation with the Majors Creek Landcare Group, the Aboriginal community and the Southern Rivers CMA.
- The Araluen Valley has experienced periods of extreme drought and lowering of water tables. Further testing is required to ensure that the surface and groundwater needs of the mine do not impact on the current water users and the Landcare efforts to improve water quality within the catchment.

Property Vegetation Plans (PVPs) (2.15.5)

The proposed Biodiversity Strategy designates an area of land set aside in perpetuity for conservation values (i.e. a Property Vegetation Plan – PVP). Figure 2.10 of the EA indicates a 'biodiversity area' which is focused on the area of activity.

A Conservation PVP in perpetuity can only place on title areas that are to be 'maintained and improved', not areas that would be adversely impacted. The 'maintain and improve' outcomes assessment underpinning the Native Vegetation Act would preference a Conservation PVP over the remainder of vegetated areas of the entire property (grassland and woodland), not just within the proposed 'Biodiversity area'. The Conservation PVP area would be managed to improve the quality of habitat. As a minimum, the area would be fenced to exclude stock, with weed and feral animal control programs implemented and possible replanting in certain areas of the property. An indicative offset ratio of 1:20 would be appropriate for the impacts in question.

It is noted that the EA identifies that a PVP would be entered into within 12 months of receipt of project approval (4-56). Southern Rivers CMA recommends that the Conservation PVP is finalised prior to the commencement of the construction phase of the project.

I have attached the following information sheets for your information:

- Info Sheet 3: How do I get a Property Vegetation Plan
- Info Sheet 8: How does the PVP Developer Work?

Southern Rivers PVP Consents Officer, Sky Kidd is available in Braidwood on 0457 532 504 or email Sky.Kidd@cma.nsw.gov.au to provide information and undertake a PVP assessment as part of the Biodiversity Strategy.

If you would like to discuss the implementation of erosion control structures, sediment dams and site rehabilitation, then please do not hesitate to contact Frank Exon, Catchment Officer (Sustainable Landuse) on 0427 783 736 or email Frank.Exon@cma.nsw.gov.au

If you require further clarification of any of these issues please do not hesitate to contact Sky Kidd on the contact details above.

Yours sincerely,



Kerry Richardson
A/General Manager