

Response to the University of NSW – Consulting NewSouth Global report

The NewSouth Global report in many ways confirms previous responses forwarded to minister Turnbull in an email from Les Baker (1/5/07) and a report from Poyry (24/4/07) in relation to water use and effluent disposal. The issue is also addressed comprehensively in s4.5 of Gunns Response to Submissions under the EPBC Act of July 2007.

This paper further responds to the specifics of the report with subjects addressed in the generic groups; reduction or elimination of ocean discharged effluent and minimisation of water usage.

Minimisation of Water usage

The water source for the mill is derived from the South Esk river system which falls under the management jurisdiction of Hydro Tasmania. The South Esk terminates in Lake Trevallyn where Gunns will source water for the mill. The South Esk system has a large catchment encompassing the Meander, Macquarie and South Esk river systems. The Macquarie system is largely fed by water from the Great Lakes system after power generation through the Poatina station and transport of water through the Cressy irrigation system. In all instances there is extensive agricultural use of water in these systems mostly during summer months where water use is regulated with a licensing system to accommodate environmental flows.

At the termination point of the South Esk system water joins the North Esk river to form the Tamar river in Launceston city by outflow from Lake Trevallyn through Cataract Gorge and the Trevallyn hydro power station. In terms of volume the Trevallyn power station historical annual usage has been approx. 1,700 gl and Gunns requirements will be 26gl or 1.4% of this volume. Alternatively the pulp mill volume represents approx. 1% of the average 2,600gl inflow to lake Trevallyn. In relative terms the pulp mill usage is not great and there is ample left for others to purchase either before it enters the Tamar or after.

Any notion of recycling pulp mill effluent for the sake of water conservation therefore needs to be examined in terms of the regions water requirements, the practicalities and costs of recycling. The NewSouth Global report confirms the technical difficulties associated with further internal closure of the mill process systems and identifies issues associated with reuse of effluent from the waste water treatment plant (WWTP) which will now be examined.

Elimination of Ocean discharged Effluent

The NewSouth Global report examines a number of scenarios where ocean discharged effluent could be eliminated. These can be divided into two categories; irrigation of saline effluent and reuse of desalinated effluent.

Irrigation of Saline Effluent

While the NewSouth Global report suggests this could be possible it does not adequately examine the social, economic and environmental implications. Gunns has previously referred to a requirement to source up to 4,000 ha of land for irrigation of mill effluent and the necessity to store about 13 gl of effluent during winter months when soils can be saturated. From the company's experience in purchasing land it would take a number of years to source this amount of land in the region of the mill and even then it would be fragmented and dispersed throughout a wide region of intensive agricultural settlement. The potential impacts and perceptions from effluent odour and contamination of ground water often used for drinking can not be under estimated.

There remains some conjecture about the salinity level of the effluent and its suitability for crops suggesting that only non food crops would be acceptable such as trees. This should be examined in the context of impact on neighbours. It is considered that even irrigation of saline effluent on tree crops would result in a non commercial outcome with the impact this would have on tree health.

The paper does not examine the costs of effluent reticulation and irrigation which would be considerable. The cost of purchasing land alone would amount to at least \$24m. It is however not necessarily the costs that eliminate this option, it is the social and environmental issues.

Reuse of Desalinated Effluent

The paper goes into detail about how effluent could be treated to further improve it's quality so that it could be used for irrigation and other uses. It is agreed that if the effluent could be treated to A grade reuse standards it could then be used for agriculture or other purposes.

The NewSouth Global report describes a number of options (3-5) for reverse osmosis desalination. The first two of these (3 & 4) which involve discharge of a waste brine to the aquatic environment should be eliminated because they do not identify any improved environmental outcome.

Option 5 which suggests the salty brine can be further processed and dehydrated for disposal to landfill is subject to significant technical risk and cannot be considered as AMT. The paper refers to pilot trials of similar technology with the proposed Gippsland facility which has discounted the desalination option for technical reasons.

While there are technical possibilities that one day may bring desalination and disposal of brine to technical reality there are no references and on that basis it is considered very risky. The world's pulp industry has researched this subject extensively and has developed the optimum solution to date which is reduction in effluent toxicity to the point where it has insignificant impact to aquatic environments. For proponents to enter an investment of this magnitude with considerable exposure to technical risk as advocated in the paper would be untenable.

Summary

It is considered the NewSouth Global report confirms much of the Gunns analysis of issues previously provided to DEW.

The potential for minimisation of water usage in the mill and / or the elimination of ocean discharged effluent are contemplated in the NewSouth Global report, with no demonstrated viable solutions. To subject a large industrial complex such as the Bell Bay pulp mill to this level of technical risk would be untenable. It is therefore not considered warranted to further investigate the possibilities suggested in this report at this time.