

# **WATER ISSUES AND THE MOGO CHARCOAL PLANT**

By Emmett O'Loughlin - December 2001

The proposed charcoal plant near Mogo raises a number of matters of environmental concern. Water is one of these, and the plant's possible impact on water is one of the most serious and long lasting. Several water-related issues are involved.

The main water issues involve unavoidable contamination of adjoining wetlands, the security of water supplies to the plant and the potential adverse impacts that can occur in the water catchments where the "waste" wood is sourced. Other water-related issues exist, for example the link to endangered fauna or flora in the wetlands, and the water supply pipeline which crosses a SEPP 14 wetland.

## **Contamination of Wetlands**

Water runoff from the plant site flows into the wetlands of Longvale Swamp to the southeast. Longvale connects into Candlagan Creek and its wetlands. Both wetlands are classified as SEPP14 Coastal Wetlands, that is, the NSW Coastal Policy has defined them as needing protection and preservation. Maps showing the location of all SEPP14 wetlands in the Eurobodalla Shire are held by ESC. The danger is that contaminants from the charcoal plant site will be washed into the wetlands, and significantly reduce their value as ecosystems for wildlife and vegetation. The popular and safe swimming area in Candlagan Creek at Mossy Point could also become contaminated.

Uncontrolled runoff from the site in wet periods can be expected to carry with it sediments, turbidity, leachates, oils and a variety of other contaminants associated with activities at the plant. All these can enter the wetlands through surface runoff if the water storage dam is already full, and some can enter the wetlands via the groundwater. The key questions to be answered are whether the site is designed to contain all stormwater runoff, and whether water released from the dam (controlled or otherwise) will be of sufficiently high quality to have no environmental impacts on the wetlands and creeks.

Water issues in Chapters 10 and 11 of the EIS, with more information in Appendix K. The EIS says that pollutants from the so-called dirty areas (17.5 hectares) could be washed off by rainfall and contaminate the wetlands. The project hopes to capture these pollutants in a small runoff pond, using the assumption that the first 13 mm of runoff contains all these pollutants.

- This design, the so-called "first flush" idea, is known to be incorrect, and an Industry Report published in 1997 explains why these "first flush" runoff ponds are not effective for removing contaminants from stormwater runoff.

In relation to the large dam proposed for the site, the water balance calculations make incorrect use of the Department of Housing's Manual for Stormwater Management, in particular, the incorrect value of the (volumetric) runoff coefficient. Also, the

calculations based on monthly rainfall data are inappropriate for predicting the behavior of this dam and the 17.5 hectare catchment that feeds into it.

There are two consequences:

- The EIS underestimates the overflows of contaminated waters into the SEPP14 wetlands and Candlagan Creek.
- It underestimates the amount of water that needs to come from the Council's potable water supply, especially in dry years (see below).

Apart from chemical contaminants, the main enemy of wetland health is turbid water. Turbidity can smother aquatic plants and juvenile fish in the wetlands, lagoons and estuaries that receive the turbid water, and change their habitat and aesthetic values significantly. Clay from disturbed soil and trafficked surfaces causes turbidity in water, and it can not be removed unless a chemical flocculation plant is installed to treat the stormwater. This is clearly not possible unless all stormwater from the dirty areas is intercepted.

#### *A Matter of Concern*

The Minister for Urban Affairs and Planning has considerable discretion to include or remove an area of wetland from SEPP14 classification, with no provision for public participation or comment. This same minister is responsible for giving consent for the development.

### **Security of Water Supply for the Plant**

Water supply for the charcoal plant (55 megalitres per year) must come from somewhere. The EIS states that this will come from stormwater collected on the site, supplemented by town water in dry periods. Calculations for water balance given in the EIS overestimate the amount of stormwater that can be collected, so the need for town water is understated.

The security of water supply to the charcoal plant during drought is therefore questionable. In this case, continued operation of the plant will place demands on potable water from the Deep Creek Dam, at a time when water use restrictions are in force. The EIS should be expected to address and answer this question in detail. It does not.

The EIS states that water may be sourced from the existing Tomakin sewage treatment plant, where treated effluent is readily available (372 megalitres, including flows from Mogo, in 1997). However, this water already contains contaminants, the nature of which are well documented in ESC studies. If this water is used at the plant as "process water", mingled with stormwater collected at the site and stored in the process water dam, then the water quality of any releases from the dam will be questionable. Such releases are inevitable, and the consequences for water quality in the wetlands and Candlagan Creek may be serious.

### **Water Quality from Forests**

Water impacts in the forests where intensified activities due to the salvage of “waste” wood can also be severe. These impacts, particularly on water quality, have bothered State Forests since the Eden woodchipping operation started, and have been the drivers of many studies and improvements made to their operational codes of practice since then. However, salvaging of waste wood is a new operation that will intensify the disturbance caused by conventional logging. We know nothing about the impacts of this extra activity, at least in a scientific sense, on water quality. The water catchment areas that will be affected include major estuaries across the shire. Again, the impacts may be highly detrimental to fisheries and other water-based industries that rely on clean and healthy water environments. It is unclear whether the Regional Forest Agreement rules out this issue as a matter for possible objection.

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