



# CASE STUDY: The History of Water Supply on the Central Coast

## 12. Social and Environmental Considerations in the decision to build Mangrove Creek Dam

Just as important as the geophysical criteria, were the potential environmental and social impacts of the proposed dam. Examine the summary of the Environmental Assessment below together with the data in Appendices 6 and 7.

**Extracts from the preliminary Environmental Assessment for the Mangrove Creek Dam catchment reported in 1975**

Existing Environment	
<i>"Only 22.4% of the total area is suitable for agricultural clearing (i.e. area with slopes less than 20%) although much less than this has been cleared due to the relative inaccessibility of the terrain and the presence of infertile soils. Agricultural and grazing land use in the full ... catchment area is restricted to the plateau regions .... and along the limited Mangrove Creek alluvial flats .... The dam site itself is in heavily timbered steep sandstone country."</i>	
Environmental Impact	
a.	<i>"Uncontrolled spill from the dam would be infrequent ... After construction ... only minimum riparian releases would be made downstream of the dam.... As a result of the reduction in streamflow, there could be some marginal affect on the salinity of the tidal section of Mangrove Creek above its junction with the Hawkesbury River..."</i>
b.	<i>"Approximately 980 hectares of freehold land would be affected by water storage. This land is of minor importance for use in agriculture or grazing. 830 hectares of MacPherson State Forest would be affected.... 22x 10<sup>6</sup> tonnes of coal could not be mined, if mining were prohibited under stored water. This ... represents about 3% of the total coal reserves in the ... catchment"</i>
c.	<i>"The major effect [on flora] would be the area of vegetation to be cleared and flooded by the dam. As far as is known, there are no rare or endangered species in the area.... It is considered that there would only be minor effects on terrestrial vegetation down stream... The filling of the storage area would reduce the area available for terrestrial [fauna] but in its place would create additional aquatic environments and an assured supply of water for the wildlife... a detailed terrestrial fauna survey has not yet been undertaken ... [this was subsequently carried out and reported in 1977, see Appendix 7]"</i>
d.	<i>"It might be considered that the replacement of the generally undeveloped valley by such a lake with deep clear water would add to the scenic qualities of the area. However, any aesthetic appeal would be diminished at times when the top water line receded .... The catchment controls [for water quality purposes] would place restrictions on use of the catchment area ... water based recreation would not be permitted on the water stored ... The National Parks and Wildlife expects that a number of aboriginal sites would be found in the catchment area."</i>
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<div>Plate 11: Aerial view of catchment (Wyong Council)</div> <div>Plate 12: Dam wall (Wyong Council)</div>	

Source: "Potential Scheme Components" Volume 3 of Report 1 of "Report on Investigations for Water Supply to the Gosford-Wyong Region", January 1975, Department of Public Works N.S.W. pp. 9-11.

### QUESTION:

Considering the statements in this general Environmental Assessment, what additional detailed investigations do you think might have been required to give confidence that the construction of a dam in this locality would not cause unreasonable bad social or environmental impacts?