

1 Introduction

The Bet Bet targeted area is located in Central Victoria, is 30 km south-west from Maryborough, and occupies the south-west corner of the Loddon catchment bordering the Avoca catchment (Figure 1). The project area is bounded to the west by the Ben More and Ben Major ranges, to the south by the Great Dividing Range and to the east by a sedimentary ridge and an elevated basalt plain. The Bet Bet targeted area covers approximately 9000 ha. The major town centre in the area is the township of Lexton. The Bet Bet and Burnbank creeks are the two main tributaries that drain surface water and groundwater from the Bet Bet sub-catchment. Groundwater and salinity processes are mostly influenced by local groundwater flow systems.

The Bet Bet salinity project was initiated in 2000 supported by investment under the National Action Plan for Salinity and Water Quality (NAP). The project area was initially selected on the basis of its extensive land salinity issues and its important contribution to salt loads in the Bet Bet Creek and Loddon River system (SKM 2003).

This report gives an up-to-date interpretation of groundwater levels and hydrograph trends observed in the groundwater monitoring network that lies solely within the Bet Bet targeted area. There is special reference in this report to the installation of new groundwater monitoring bores. As part of the Loddon Targeted Salinity Project, five new monitoring bores were installed to fill gaps in the existing groundwater monitoring network. The new bores have been positioned to provide transects across the targeted area and to complement the monitoring of existing and new remediation works.

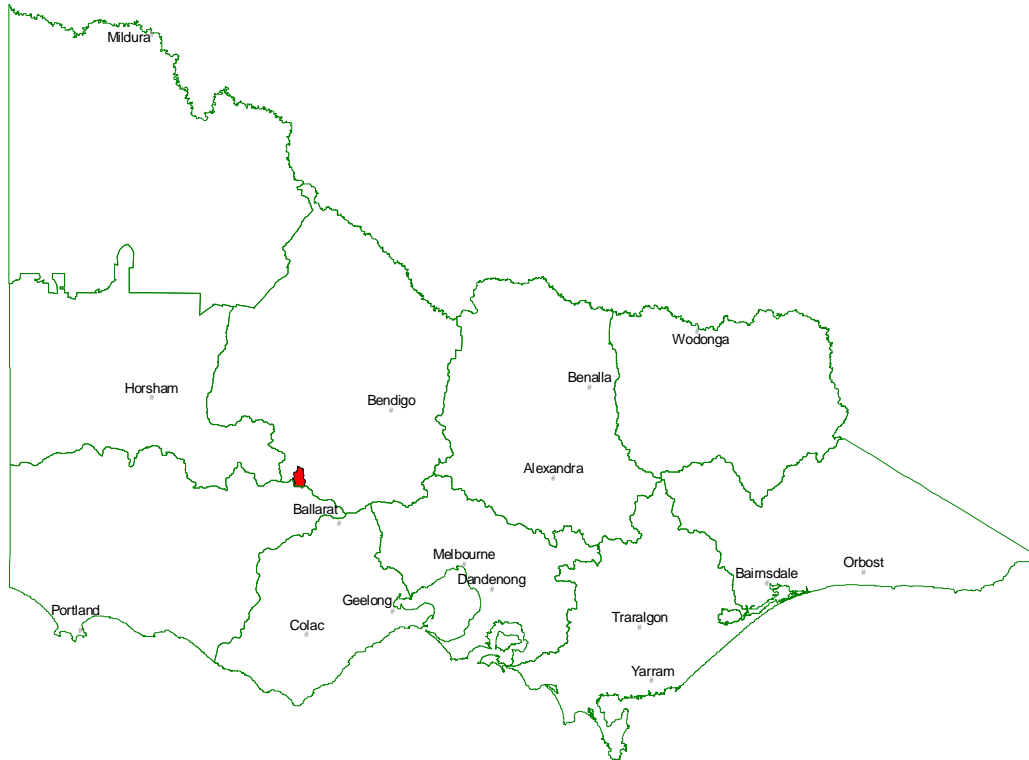
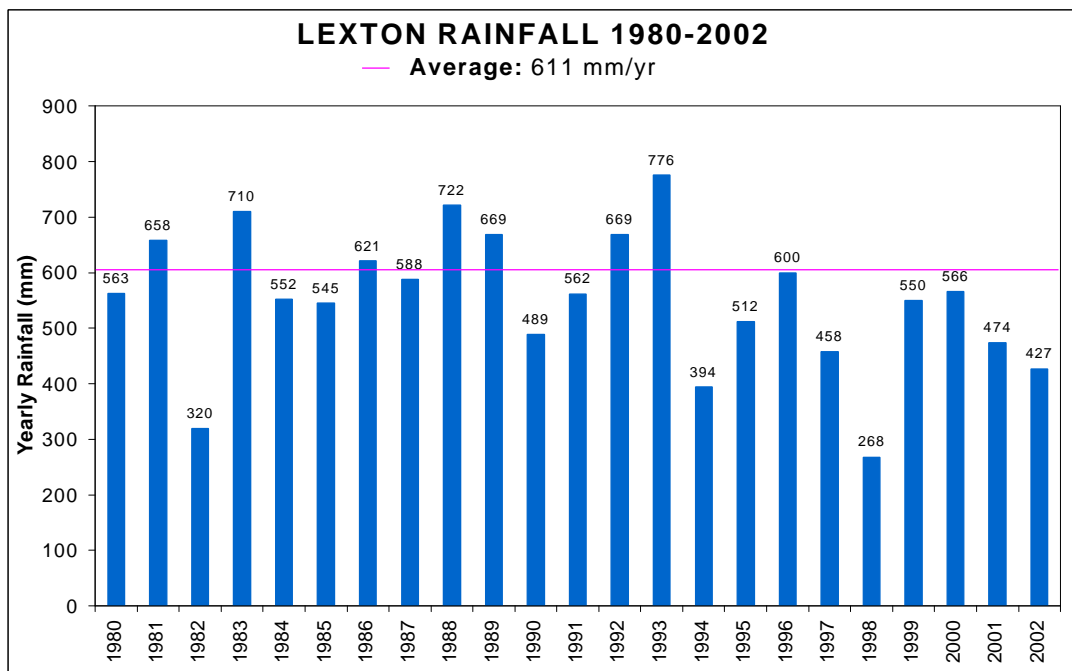


Figure 1 Location map of the Bet Bet targeted area

Climate

Climatic variation has a significant effect on the groundwater levels and groundwater trends in the Bet Bet targeted area. To determine an accurate analysis of groundwater behaviour, groundwater trends are compared to the annual rainfall to determine whether there is an obvious correlation between the two. Data from the Lexton rainfall station shows that for the past nine years the average yearly rainfall has been below average (Figure 2).

Figure 2 Chart showing Lexton rainfall for the past 22 years



The average yearly Class A pan evaporation measured at Lexton rainfall station is 1402 mm, more than double the annual rainfall for Lexton.