

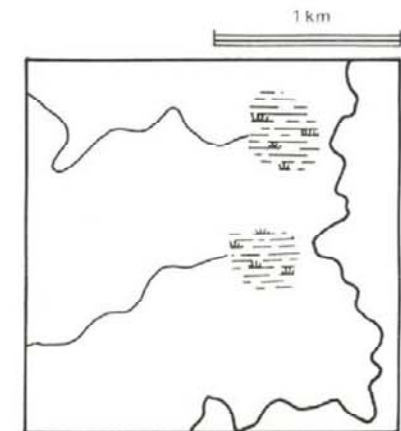
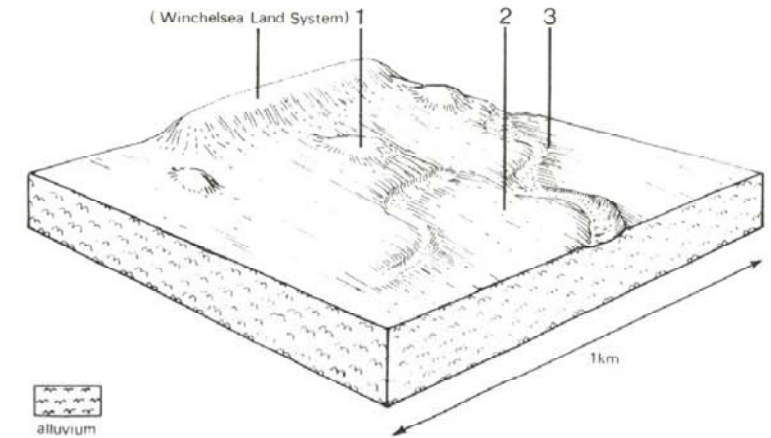
7.6 Barwon River Land System

The flood-plains of the Barwon River and its tributaries extend from the foothills of the northern side of the Range to the basalt plains near Winchelsea and encompass a comparatively wide climatic variation. The vegetation reflects these changes, with tall open forests of *Eucalyptus viminalis* and *E. ovata* occurring in the south and woodlands of *E. camaldulensis* dominating in the north. The soils also show a gradual transition from acid, freely drained profiles to heavier neutral soils as the influence of basalt-derived alluvium increases towards the north.

Flooding and siltation are common on these plains. Waterlogging of soils is a problem, particularly on low-lying areas such as cut-off meanders and infilled swamps. Gully erosion and stream-bank erosion are also common.



Gully erosion and stream-bank erosion are particularly common on these alluvial plains, where streams emerge from the foothills of the Otway Range.



BARWON RIVER

Area: 115 km²

	Component and its proportion of land system		
	1 5%	2 85%	3 10%
CLIMATE Rainfall, mm Temperature, 0°C Seasonal growth limitations	Annual: 600 – 1,000, lowest January (30), highest August (80) Annual: 13, lowest July (8), highest February (9) Temperature: less than 10°C (av.) June – August (Also September in higher-rainfall areas) Precipitation: less than potential evapotranspiration October – April in lower-rainfall areas November – March in higher-rainfall areas		
GEOLOGY Age, lithology	Recent alluvium – sand, silt, clay and gravel		
TOPOGRAPHY Landscape Elevation, m Local relief, m Drainage pattern Drainage density, km/km ² Land form Land form element Slope (and range), % Slope shape	Alluvial flood plain of the Barwon River and its tributaries with numerous cut-off meanders 90 - 150 3 Deranged with major meandering channel 1.6 Plain Rise Plain Streambank, infilled meanders 4 (1-6) 1 (0-2) 2 (1-8) Convex Straight Convex		
NATIVE VEGETATION Structure Dominant species	Woodland <i>E. ovata, E. viminalis, Acacia melanoxylon, in north E. camaldulensis</i>		
SOIL Parent material Description Surface texture Permeability Depth, m	Sandy alluvium Brown sandy loam soils, uniform texture Fine sandy loam Very high >2	Clayey alluvium Grey gradational soils Fine sandy clay loam Moderate >2	Sandy alluvium Brown sandy loam soils, uniform texture Fine sandy loam Very high >2
LAND USE	Dairy farming; cropping; sheep and beef cattle grazing.		
SOIL DETERIORATION HAZARD Critical land features, processes, forms	High permeability and leaching lead to nutrient decline.	High seasonal water table leads to waterlogging, soil compaction and salting. Dispersible clay subsoils are prone to gully and tunnel erosion. High discharge rates along some watercourses lead to flooding and siltation.	High discharge rates and weakly structured soils lead to streambank erosion and siltation. High seasonal water tables lead to waterlogging.