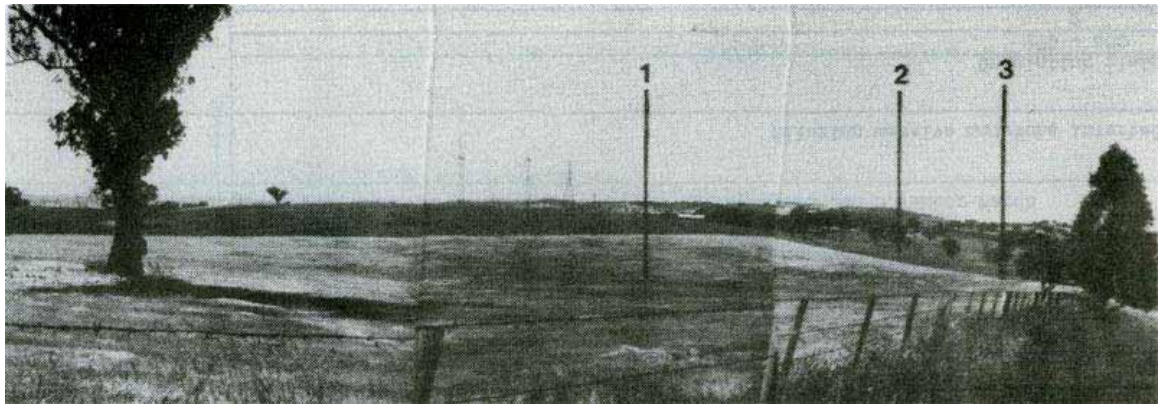
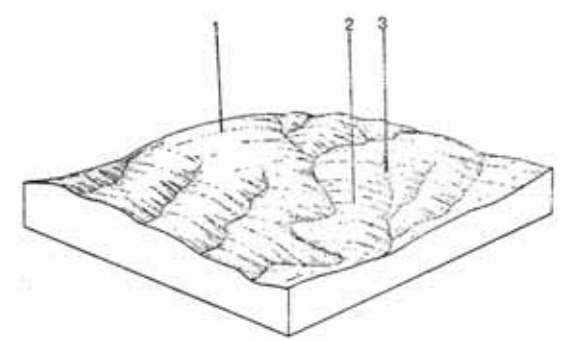
6.15 Mernda Land System

This land system is situated mainly along the Plenty River at the transition between the basalt plains to the west and Palaeozic sediments to the east. It covers 51.6 km^2 or 2.0% of the survey area.

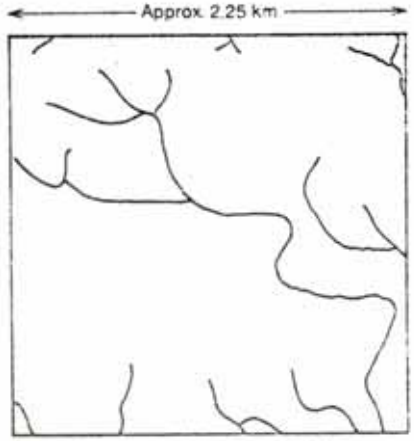
Most of the native vegetation has been cleared for agriculture but a few trees, principally Narrow-leaf Peppermint, Candlebark, River Red Gum and Swamp Gum still remain.

The major soil is a brown duplex with a non-structured loamy topsoil overlying a mottled yellow, heavy textured and well-structured subsoil. In some depressions, a similar but gradational soil may be found. The topsoil of both the duplex and gradational soils usually contains gravel, sometimes this forms a concentrated layer at the base of the topsoil





Schematic Block Diagram



Drainage Pattern

COMPONENT	1	2	3
Proportion %	8	90	2
CLIMATE			
Rainfall (av.)	Annual: 620 – 750 mm (monthly range: October 70 mm – February 45 mm)		
Temperature (av.)	Annual: 15^{0}C (monthly range: January 20^{0}C – July 9^{0}C)		
Seasonal growth limitations	Temperature: less than 10^{0}C July Precipitation: less than potential evapotranspiration November - March		
GEOLOGY			
Age, rock	Silurian sandstone, mudstone and shale		Alluvium
TOPOGRAPHY			
Landscape		Low hills	
Elevation (range) m		150 – 220	
Local relief (av.) m		30	
Drainage pattern		Dendritic	
Drainage density km/km^2		2.0	
Land form	Crest and upper slope	Mid and lower slope	Drainage line
Slope (av.) %, slope shape	5; Convex	3; Straight	2; Straight
NATIVE VEGETATION			
Structure		Woodland (?)	
Dominant species	*E. goniocalyx, E. melliodora, E. camaldulensis*	*E. camaldulensis*	*E. camaldulensis, E. ovata*
SOIL			
Parent Material	In situ weathered rock		Alluvium
Description	Mottled yellow, brown sodic duplex soils, coarse structure		
Factual Key	Dy 3.31		
Surface Texture	Clay loam		
Permeability	Low		
Depth (av.) m	1.0	2.0	
LAND USE	Grazing, occasional cropping		
SOIL DETERIORATION HAZARD			
Critical land features	Hard setting surfaces, dispersibility	Hard setting surfaces, dispersibility	High watertable hard setting surfaces, dispersibility
Processes	Movement of salts, overland flow	Movement of salts, overland flow	Overland flow, periodic waterlogging
Forms	Sheet erosion	Sheet erosion	Gully erosion, accumulation of salts