

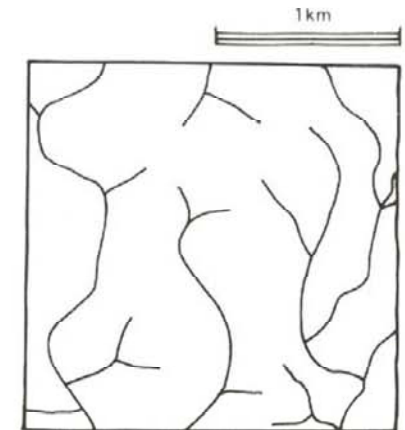
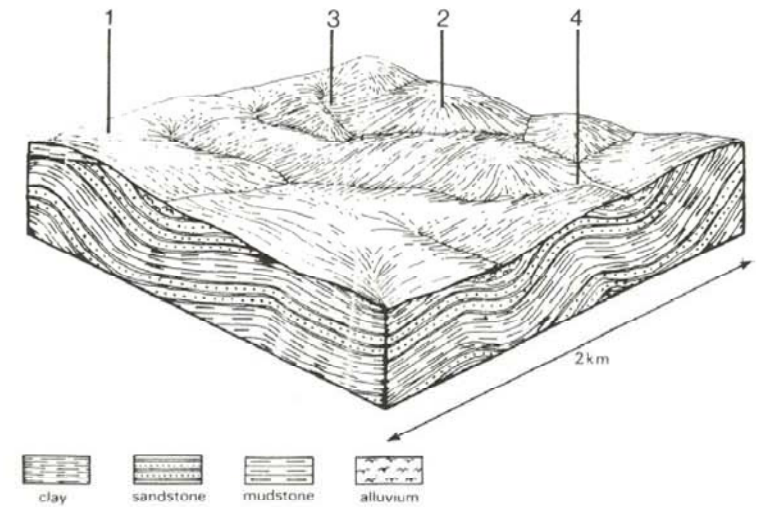
### 7.5 Barrabool Land System

Rolling hills with fertile soils to the west of Geelong lie mainly to the north of the present study area, but a small section forms the northern part of the catchment of Thompson Creek. These hills are on Lower Cretaceous sandstones and mudstones similar to those outcropping extensively in the Otway Range, but the landscape is more subdued and the rainfall is significantly lower.

The original structure and species composition of the native vegetation are difficult to determine. The area has been extensively cleared for cropping and grazing and subdivided into somewhat smaller paddocks than the less fertile areas to the south. From the presence of isolated trees, *Eucalyptus globulus* and *E. cypellocarpa* formed part of the original vegetative community, and it is probable that *E. radiata* was also common.



*These rolling hills have been extensively cleared, and only single trees remain as indicators of the former native vegetation.*



**BARRABOOL**Area: 17 km<sup>2</sup>**Component and its proportion of land systems**

	1 10%	2 60%	3 25%	4 5%
<b>CLIMATE</b> Rainfall, mm Temperature, 0°C Seasonal growth limitations	<b>Annual:</b> 650, lowest January (30), highest September (60) <b>Annual:</b> 14, lowest July (9), highest February (19) <b>Temperature:</b> less than 10°C (av.) June - August <b>Precipitation:</b> less than potential evapotranspiration and October – early April			
<b>GEOLOGY</b> Age, lithology	Tertiary and Quaternary clay, silt and sand cappings	Lower Cretaceous feldspathic sandstone and mudstone		
<b>TOPOGRAPHY</b> Landscape Elevation, m Local relief, m Drainage pattern Drainage density, km/km <sup>2</sup> Land form Land form element Slope (and range), % Slope shape	Rolling Hills 100 -170 25 Dendritic 3.1 Hill Crest, upper slope 4 (1-5) Convex Crest, slope 11 (1-15) Convex Lower slope 8 (2-10) Linear Valley Floor - 2 (10-4) Concave			
<b>NATIVE VEGETATION</b> Structure Dominant species	Woodland <i>E. ovata, E. viminalis</i>	Open forest <i>E. globulus, E. cypellocarpa</i>	Open forest <i>E. globulus, E. cypellocarpa</i>	Open forest <i>E. viminalis, E. cypellocarpa</i>
<b>SOIL</b> Parent material Description Surface texture Permeability Depth, m	Clay, silt and sand  (Variable soils) Sandy loam High to moderate >2	In-situ weathered sandstone and mudstone  Brown duplex soils Loam Moderate 1.0	Colluvial weathered sandstone, mudstone  Brown duplex soils Fine sandy clay loam Moderate 1.4	Alluvial silt, clay, sand, sandstone, mudstone Grey gradational soils Clay loam Low >2
<b>LAND USE</b>	Dairy farming; cropping; beef and cattle grazing.			
<b>SOIL DETERIORATION HAZARD</b> Critical land features, processes, forms	Low inherent fertility and high permeability lead to nutrient decline.	Steeper slopes are prone to sheet erosion.	Steeper slopes are prone to sheet erosion.	Run-off from adjacent hills may result in gully erosion. High seasonal water table leads to waterlogging and soil compaction.