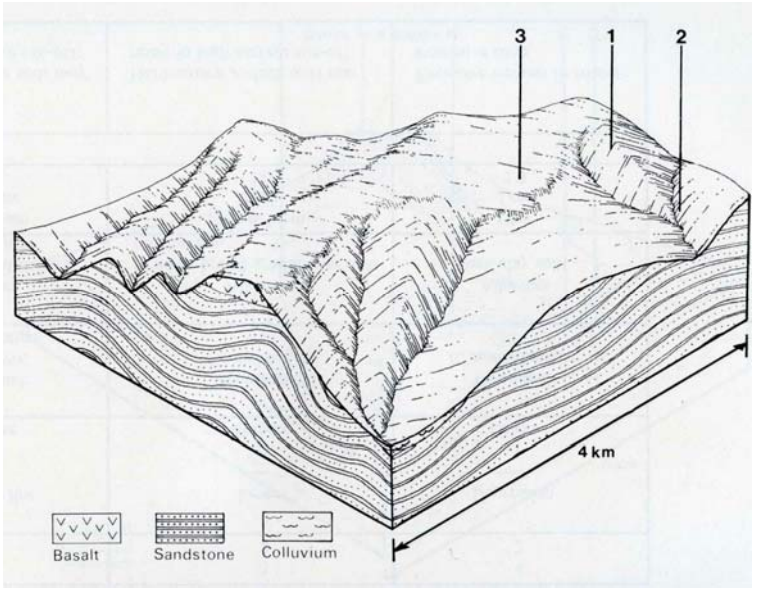
7.16 Myrrhee land system

The Myrrhee land system consists of the hilly divides with broad ridge-tops and small plateaux between the Fifteen Mile and Boggy Creeks and the King River valley in the north-west of the study area. Predominantly formed on Ordovician sedimentary rocks, it contains areas on Carboniferous sedimentary rocks in the north-west. Characteristically, Tertiary basalt cappings extend along the main ridge of each area. Annual rainfall ranges from moderate to high, with very occasional falls of winter snow. Summers are warm to hot and winters cool to cold. Severe frosts may be common on the plateaux.

Soils on the basalt are red gradational soils and those on non-basaltic parent materials are reddish brown gradational soils with rough ped fabric and weakly bleached reddish brown gradational soils. Weakly bleached yellowish brown gradational soils occur in poorly drained areas.

The vegetation on the basaltic areas appears to have been open forest to woodland of *Eucalyptus goniocalyx*, *E. polyanthemos* and *E. melliodora*. Elsewhere *E. macrorhyncha* is co-dominant.

The steep slopes are prone to mass-movement erosion, and extensive surface run-off from steep areas with poor pasture leads to gully erosion lower in the land system and in the adjoining Myrtleford land system.



MYRRHEE LAND SYSTEM Area 47 sq km

CLIMATE			
Rainfall, mean (mm)	Annual 850-1100; lowest January (50-60), highest (120-130)		
Temperature, mean (^{o}C)	Annual 12-14; lowest July (6-7.5), highest January (19-21)		
Seasonal growth limitations	Temperature – less than 10^{o}C (av): lowest areas June-August, highest areas June-September Precipitation – months less than 50% frequency of effective rain: January – February		
GEOLOGY			
Age, lithology	Ordovician greywacke, sandstone, siltstone, shale, mudstone with Tertiary basalt capping		
PHYSIOGRAPHY			
Landscape	Hills with broad crests or plateaux		
Elevation range (m)	300-630		
Relative relief (m)	150		
LAND COMPONENT	1	2	3
Percentage of land system	55	15	30
PHYSIOGRAPHY			
Land form	Hill	Valley	Plateau
Position on land form	-	-	-
Slope range (%)	10-25	5-12	5-12
Slope shape	Convex	Concave	Convex
NATIVE VEGETATION			
Structure	Open forest II	Open forest II	Open forest II to woodland
Dominant species	*E. macrorhyncha, E. polyanthemos, E. goniocalyx, E. melliodora*	*E. macrorhyncha, E. polyanthemos, E. goniocalyx, E. melliodora*	*E. goniocalyx*
SOIL			
Parent material	Colluvial mantle over bedrock	Colluvial-alluvial mantle over bedrock	*In situ* weathered basalt
Description	Weakly bleached reddish brown gradational soils	Weakly bleached yellowish brown gradational soils	Red gradational soils on basalt
Surface texture	Loam	Loam	Clay loam
Permeability	High	Moderate	High
Depth (m)	1.5	1.5	>2.0
LAND USE	Mostly uncleared areas; unused, rough grazing Cleared areas; grazing, cattle and sheep		Cereal-cropping, potatoes and grazing
SOIL DETERIORATION HAZARD			
Critical land features, processes, forms	Hard-setting surface soils may result in high surface run-off if protective ground cover is depleted; sheet erosion; mass movement from slopes below basaltic areas	Hard-setting surface soils may result in high surface run-off if protective ground cover is depleted; wetness in winter; gully erosion	Highly fertile soils; thistles flourish in non-cropped areas