6.20 Mt. William Land System

This land system occurs on the Cambrian sediments which outcrop east of Lancefield in a north-south direction. It covers 51.7 km^2 or 2.0% of the survey area.

Most of the native vegetation has been cleared: only pockets of open forest or woodland remain.



The soils of the crests and steeper slopes are shallow stony gradational soils with a weakly structured topsoil grading into a heavier clay, well-structured subsoil. The red duplex soils of the slopes have a subsoil which is characterized by heavy texture and strong structure.

The hazard of land slips in this land system is high. They occur readily in areas where a heavy clay subsoil rests on parent material. However, before slippage can occur the subsoil has to contain enough water to sufficiently lubricate the slip surface - the amount of crater needed decreased with an increase in slope. Therefore slope, vegetation cover, which influences the amount of water reaching the subsoil and position in the landscape, which also affects water availability are also important factors.



Schematic Block Diagram



Drainage Pattern

COMPONENT	1	2	3
Proportion %	30	65	5
CLIMATE Rainfall (av.) Temperature (av.) Seasonal growth limitations	Annual: 620-750 mm (monthly range: August 84 mm – January 37 mm) Annual: 11 ^o C (monthly range: January 17 ^o C – July 6 ^o C) Temperature: less than 10 ^o C May - September Precipitation less than potential evapotranspiration November – March		
GEOLOGY			
Age, rock	Cambrian black shale, sandstone, chert and ash		
TOPOGRAPHY Landscape Elevation (range) m Local relief (av.) m Drainage pattern Drainage density km/km ²	Ridge north-south trend 420-550 200 Sub-parallel 2.6		
Land form	Crest	Slope	Drainage line
Slope (av.) %, slope shape	7; Convex	21; Straight	5; Straight
NATIVE VEGETATION Structure Dominant species	E. obliqua, E. goniocalyx, E. viminalis, E. dives, E. radiata	Open forest E. radiata, E. rubida, E. ovata, E. dives, E. goniocalvy	E. ovata, E. rubida, E. camaldulensis, E. viminalis
SOIL Parent Material		In situ weathered rock	
Description	Red gradational soils, fine structure	Mottled yellow, brown gradational soils, fine structure. Red duplex soils	Mottled yellow, brown gradational soils
Factual Key	Gn 2	Gn 2, Dr 3.51	Gn 2
Surface Texture	Gravelly Clay Loam	Sandy Clay Loam	Loam
Permeability	Moderate	Moderate	Low
Depth (av.) m	0.5	1.0	1.5
LAND USE	Grazing		Some cropping
SOIL DETERIORATION HAZARD Critical land features Processes	Slope gradient Overland flow, leaching	Slope gradient Subsurface flow, overland flow	High watertable, dispersibility Overland flow, periodic waterlogging
Forms	Sheet erosion, nutrient decline	Landslips	Gully erosion, surface compaction