7.20 Macedon land system (Mn)

Mount Macedon is a notable prominence, rising some 400 m above the surrounding terrain on the southern boundary of the catchment. A large proportion of the area is private land, and some housing development has occurred even on the steeper forested slopes. The lower slopes have been cleared for agriculture. The area has a high recreational potential due to its natural beauty, proximity to Melbourne and mild summer climate.

Soils on the upper slopes tend to be red and well-structured but frequently stony or shallow. Duplex soils, often with massive A horizons, predominate on the lower slopes.

Tall open forests of *E. obliqua*, and less commonly *E. radiata*, occur on the mid to upper slopes, with *E. viminalis* and *E. ovata* predominating on the lower slopes and in lower drainage depressions. *E. viminalis* prefers the more protected aspects and *E. delegatensis* occurs as isolated specimens on protected upper slopes. The understorey tends to be open and grassy on the exposed northerly and western slopes; however, a dense layer of low trees, shrubs and ferns occurs beneath the eucalypt canopy in the more protected drainage depressions.

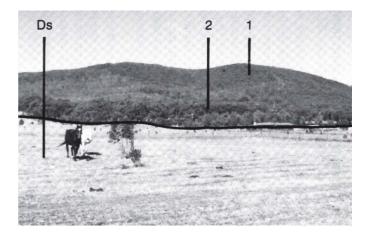
The relatively high rainfall and mild climate promote plant growth, and serious erosion occurs only during short periods after bushfires or disturbance such as small-scale clearing. Areas with permeable soils are susceptible to leaching of nutrients.





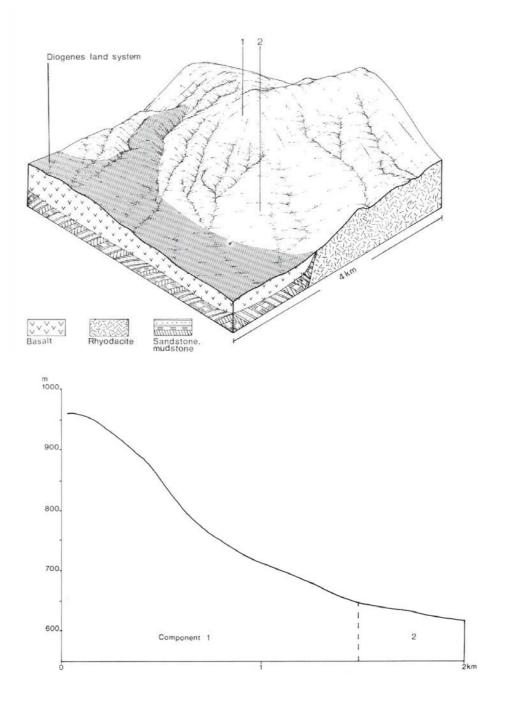
The familiar outline of the Mount Macedon land mass.





An open forest III of E. obliqua, E. radiata and E. viminalis

Some areas on the moderately steep lower slopes have been cleared and use for hobby farms.



MACEDON LAND SYSTEM (Mn) Area 12 km² 0.3% of catchment

Rainfall, mean (mm) Annual, 850-900; lowest January (45-50), highest June (85-90) Temperature, mean (°C) Annual, 9; lowest July (4), highest January (16) Seasonal growth limitations Temperature loss than 10°C (av.): April-September Reinfall less than potential evapotranspiration: November-February GEOLOGY Devonian, rhyodacite Age, rock type Devonian, rhyodacite PIIYSIOGRAPHY Rolling mountains Landform pattern Rolling mountains Elevation range (m) 600-980 Relative relief (m) 300 Drainage pattern Radial Channel spacing Moderate LAND COMPONENT 1 2 Number 80 20 PIYSIOGRAPHY Landform clement Steep mid to upper slope and crest Moderately steep lower slope Slope; modal, range Steep mid to upper slope and crest Moderately steep lower slope Notled vellowish forow no rown duples, or less Classification Red gradational soils, usually with stones throughout Mottely clowish forow no rown duples, or less Classification Gn4.11, Gn3.14, Gn3.14 Db2.41, Gn3.04, Dy3.21; minor Dr2.41, Dr2.21 Silly loam 0.5							
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	DETERIORATION						

SUSCEPTIBILITY OF LAND TO PROCESSES OF SOIL DETERIORATION – Macedon

Compt.	Process	Susceptibility	Critical land factors	Off-site effects	Comments
1	sheet and rill erosion	moderate	steep slopes	 sedimentation increased run- on 	moderate to high soil permeability reduces overland water flow and reduces the erosion hazard
	leaching of nutrients compaction of topsoil	moderate moderate to high	 moderate-high soil permeability loamy texture topsoil often moist high organic matter content 	 increased run- on 	- high levels of organic matter provide some resistance to compaction
2	sheet and rill erosion	moderate	 moderate slopes clayey subsoils of lower permeability 	 sedimentation increased run- on 	erosive overland water flow occurs when the permeable topsoil is saturated; erosion hazard increases after fin
	leaching of nutrients (topsoil)	low to moderate	moderate topsoil permeability	• -	-
	compaction of topsoil	moderate	 loamy texture topsoil often moist high organic matter content 	increased run- on	-



Bushfires reduce all ground cover to fine ash, which is highly susceptible to sheet erosion.