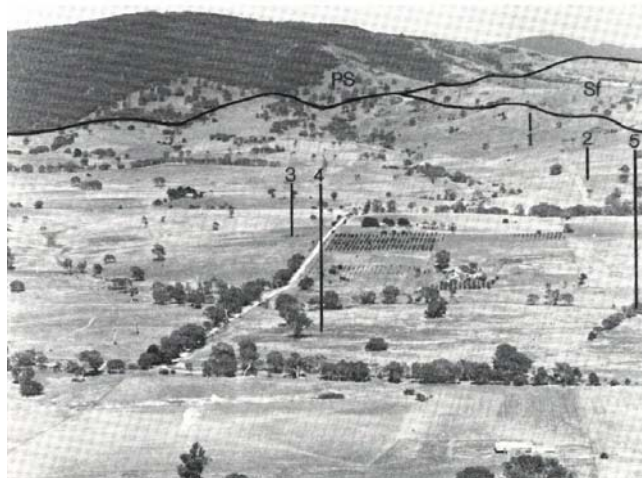
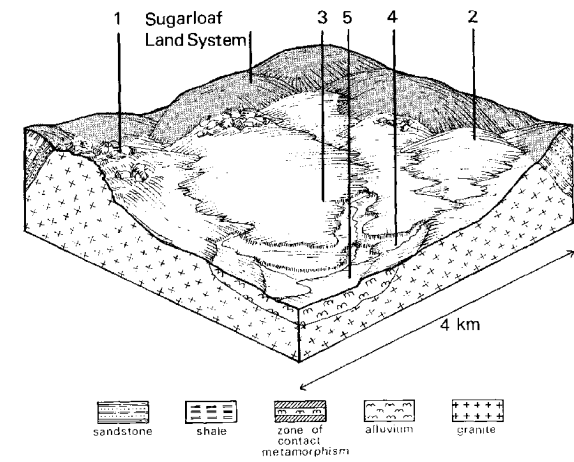


## 7.1 Amphitheatre land system

To the south of Amphitheatre a gently dissected area on granitic rocks is enclosed by a metamorphic aureole.

Yellowish brown duplex soils on gentle slopes predominate, characterised by remnants of *Eucalyptus camaldulensis* woodlands. Most of the area has been cleared and is used for grazing with occasional cropping on the more stable lower slopes.

The most serious hazard of deterioration is sheet erosion of the sandy topsoils. Siliceous hardpans present in the gentle granitic areas to the north have not been noted in this landscape. The moderately to rapidly pervious soils of the slopes appear to directly overlie weathered granite, and increased moisture contents following clearing would promote increased movement of water and salts to the water table. Although the alluvial flats become seasonally waterlogged and flooded, there are no obvious signs of salting within the land system.



*Cropping and grazing are the main forms of land use.*



*The granitic hills of this gentle landscape are encircled by a steep metamorphic aureole. The forested Pyrene Range is in the background.*

**AMPHITHEATRE LAND SYSTEM Area 26 sq. km**

<b>CLIMATE</b> Rainfall (mm) Temperature (°C) Seasonal growth limitations	Annual, 600-625; lowest January (32), highest August (70) Annual, 14; lowest July (8), highest February (20) Temperature: less than 10°C (av.) June-August Rainfall: less than potential evapotranspiration September-April				
<b>GEOLOGY</b> Age, lithology	Ordovician granite and granodiorite, Quaternary alluvium				
<b>PHYSIOGRAPHY</b> Elevation range (m) Relative relief (m) Drainage pattern Drainage density (km/sq. km) Land form	320-440 10 Dendritic 1.6 Gentle hill				
<b>LAND COMPONENT</b> Percentage of land system	1 10%	2 20%	3 60%	4 5%	5 5%
<b>PHYSIOGRAPHY</b> Position on land form Slope (typical) and range (%) Slope shape	Steeper crest 15, 10-25 Convex	Gentle crest 7, 3-10 Convex	Middle slope 3, 1-5 Convex	Alluvial terrace 1, 0-1 Linear	Drainage floor 1, 0-1 Linear
<b>NATIVE VEGETATION</b> Structure Dominant species	Open forest <i>E. rubida</i> <i>E. melliodora</i>	Open forest <i>E. rubida</i> <i>E. melliodora</i>	Woodland <i>E. rubida</i> <i>E. camaldulensis</i>	Open forest <i>E. camaldulensis</i> <i>E. melliodora</i>	Open forest <i>E. camaldulensis</i> <i>E. melliodora</i>
<b>SOIL</b> Parent material Description  Classification Surface texture Surface consistence (dry) Depth (m) Nutrient status  Available soil water capacity  Perviousness to water Drainage Exposed stone Dispersibility Slaking tendency	Granite, granodiorite Uniformly textured coarse sandy loam soils Uc 5.11-1/0/040 Coarse sandy loam Soft 0.1-0.5 Very low throughout  Very low throughout  Rapid Excessively drained Abundant (rock) Nil Nil	Granite, granodiorite Mottled duplex soils  Dy 3.41-2/0/035 Sandy loam Soft 0.5-1 Very low throughout  Low topsoil, moderate subsoil Moderate-rapid Well drained Nil Low High	Site 905 Granite, granodiorite Yellow sodic duplex soils  Dy 3.42-2/1/045 Sandy loam Slightly hard 1.5-2 Low topsoil, moderate subsoil Low topsoil, moderate subsoil Slow Somewhat poorly drained Nil Low Moderate	Site 903 Granite, granodiorite Yellow sodic duplex soils  Dy 3.32-2/1/040 Fine sandy loam Slightly hard >2 Low topsoil, moderate subsoil Low topsoil, moderate subsoil Slow Poorly drained Nil Low Low	Quaternary alluvium Dark duplex soils  Dd 2.21-2/1/030 Fine sandy loam Slightly hard >2 Moderate throughout  Moderate throughout  Moderate Poorly drained Nil Low Low
<b>PRESENT LAND USE</b>	Grazing	Grazing	Grazing, cropping	Grazing, cropping	Grazing

**Land deterioration hazards - Amphitheatre land system**

Disturbance	Component	Affected process and trend	Primary resultant deterioration		Primary resultant off-site process
			Form	Susceptibility	
Altered vegetation -reduced leaf area, rooting depth, perenniality	1,2	Reduced transpiration	Nutrient decline	Low	Accumulation of salts and water in groundwaters
	1	Increased site wetness	Landslips	Moderate	Accumulation of salts and water in groundwaters
Reduced soil surface cover	1	Increased soil detachment	Sheet erosion	High	Increased flash flows and sediment loads
	2,3	Increased soil detachment	Sheet erosion	Moderate	Increased flash flows and sediment loads
Cultivation, increased trafficking, trampling	3,4,5	Increased soil compaction	Structure decline	Low	Increased flash flows and sediment loads
Increased soil disruption and run-on	3,5	Increased subsoil detachment	Gully erosion	Moderate	Increased flash flows and sediment loads
Increased run-on and seepage	5		Waterlogging and flooding	Moderate	-
Raised water table	4	Increased evaporation	Soil salting	Low	Increased salinity of surface waters



*Increased flash flows undermine stream banks and threaten fences, roads and other services*



*The droughty granitic soils are susceptible to sheet erosion should the native pastures be overgrazed*