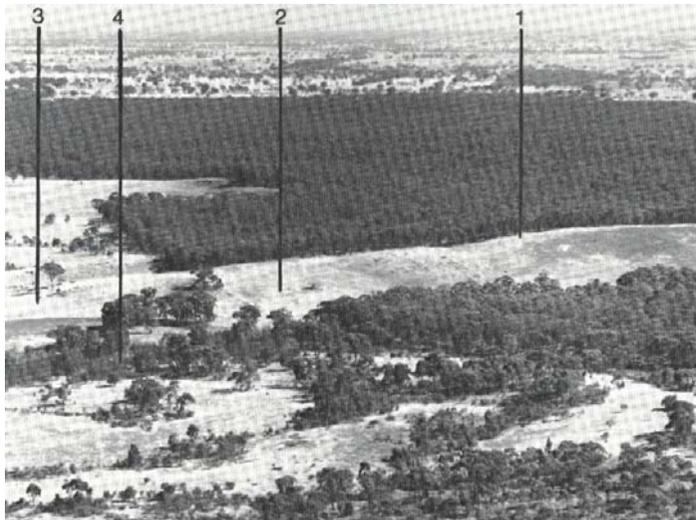


## 7.12 Glenmona land system

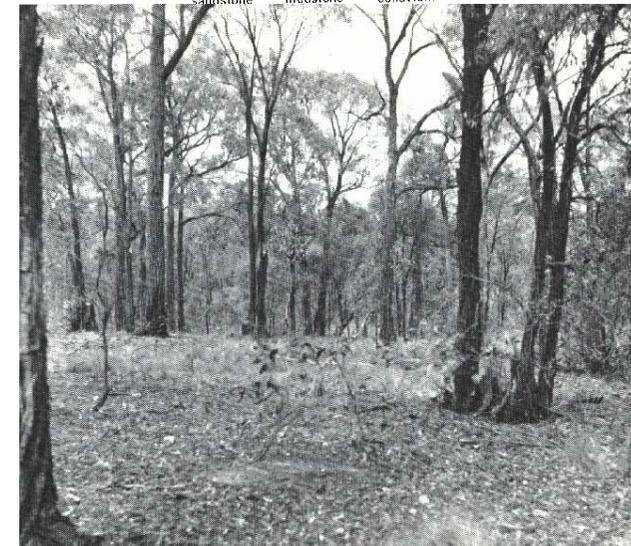
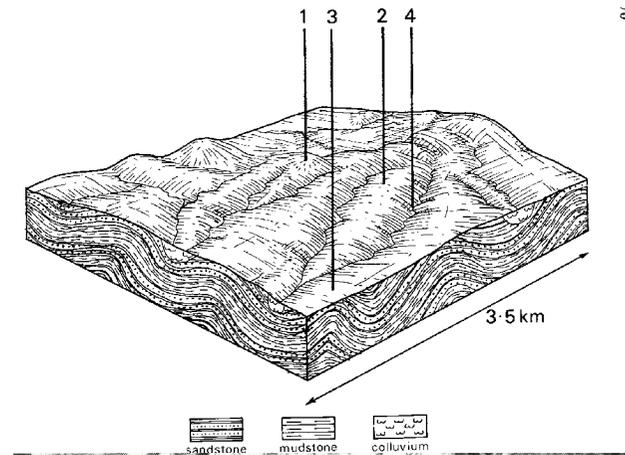
Gentle hills on Ordovician sandstones and mudstones between Amphitheatre and St Arnaud originally supported woodlands in which *Eucalyptus leucoxydon* and *E. microcarpa* predominated on red sodic duplex soils. Some large stands of *E sideroxydon* remain on gentler crests, and these are unique to the Glenmona and Wehla. land systems.

Most of the land has been cleared for grazing and cropping. The uncleared areas generally have a low agricultural potential and the timber is selectively logged.

All soils have hard-setting surfaces and ground cover is usually sparse. Sheet erosion is widespread, particularly on the steeper slopes. Other common forms of deterioration are gully erosion in the drainage lines and soil salting on the lower slopes and in the drainage lines. Increased movement of water and salts to the groundwaters has occurred, with consequent salinity problems lower in the landscape.



*Red ironbark (E sideroxydon) forests are a characteristic feature of this land system.*



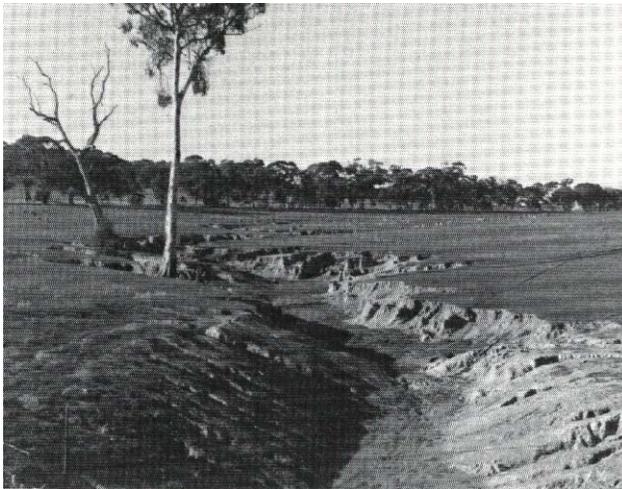
*Most of the forest areas have been selectively*

**GLENMON A LAND SYSTEM Area 192 sq. km**

<b>CLIMATE</b> Rainfall (mm) Temperature (°C) Seasonal growth limitations	Annual, 500-600; lowest January (24), highest June (83) Annual, 14; lowest July (8), highest February (20) Temperature: less than 10 <sup>0</sup> C (av.) June-August Rainfall: less than potential evapotranspiration September-April			
<b>GEOLOGY</b> Age, lithology	Ordovician sandstone and mudstone, Quaternary alluvium			
<b>PHYSIOGRAPHY</b> Elevation range (m) Relative relief (m) Drainage pattern Drainage density (km/ sq. km) Land form	220-260 10 Dendritic 1.2 Gentle hill			
<b>LAND COMPONENT</b>	1	2	3	4
Percentage of land system	10%	3Wo	55%	5%
<b>PHYSIOGRAPHY</b> Position on land form Slope (typical) and range (%) Slope shape	Relatively steep crest 12, 10-15 Convex	Gentle crest 8, 6-10 Convex	Middle slope 4, 2-5 Linear	Drainage floor 1, 0-1 Concave
<b>NATIVE VEGETATION</b> Structure Dominant species	Open forest  <i>E. polyanthemus</i> <i>E. macrorhyncha</i> <i>E. sideroxylon</i>	Open forest  <i>E. sideroxylon</i> <i>E. microcarpa</i>	Open forest  <i>E. leucoxylon</i> <i>E. microcarpa</i>	Open forest  <i>E. leucoxylon</i> <i>E. melliodora</i> <i>E. microcarpa</i> <i>E. camaldulensis</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	Site910 Sandstone and mudstone Shallow stony red gradational soils Gn 4.11-3/1/006 Stony loam Slightly hard 0.1-0.5 Very low throughout Low throughout Moderate-rapid Well drained Slight Low Nil	Site 906 Sandstone and mudstone Red sodic duplex soils Dr 3.41-3/1/014 Stony loam Moderately hard 0-5-1 Low surface, moderate subsoil Low surface, moderate subsoil Moderate Well drained Slight Moderate Low	Site 911 Sandstone and mudstone Red sodic duplex soils, coarse structure Dr 2.42-2/1/010 Loam Moderately hard 1-1.5 Moderate throughout Low surface, moderate subsoil Moderate Well drained Nil Moderate Moderate	Site 912 Alluvium Yellow sodic duplex soils Dy 3.41-2/1/017 Sandy loam Moderately hard >2 Moderate throughout Low surface, moderate subsoil Slow-moderate Moderately-well drained Nil Low low
<b>PRESENT LAND USE</b>	Forestry, grazing	Forestry, grazing	Grazing, cropping	Grazing

**Land deterioration hazards - Glenmona 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	2,3	Reduced transpiration, increased leaching	Nutrient decline	Low	Increased movement of water and salts to groundwaters
Reduced soil surface cover	1,2	Increased soil detachment	Sheet erosion	High	Increased flash flows and sediment loads
	3	Increased soil detachment	Sheet erosion	Moderate	Increased flash flows and sediment loads
Cultivation, increased trafficking, trampling	1	Increased soil Compaction	Structure decline	Low	Increased flash flows and sediment loads
	2,3,4	Increased soil compaction	Structure decline	Moderate	Increased flash flows and sediment loads
Increased soil disruption and run-on	4	Increased subsoil detachment	Gully erosion	High	Increased flash flows and sediment loads
Raised water table	3,4	Increased evaporation	Soil salting	Moderate	Increased salinity of surface waters



*Active gully erosion indicates that the area is being managed beyond its capabilities, while overgrazing in forested areas results in extensive sheet erosion.*