

7.27 Yeungroon land system

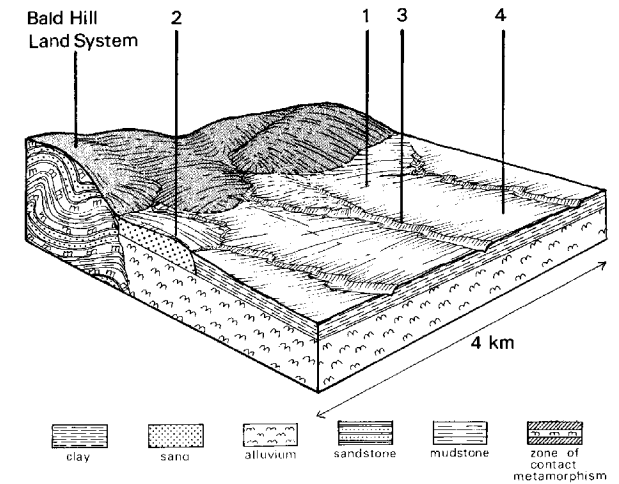
Alluvial aprons with a cover of calcareous aeolian deposits extend gently away from metamorphic aureoles in the north.

The deep, well-drained and relatively fertile soils have been extensively cleared of their woodlands and are used for cropping and grazing.

Gullies have developed in most of the drainage lines, where the soils are particularly dispersible and prone to slaking. Sheet erosion is also widespread. Small areas of soil salting at lower sites indicate that the accession of waters and salts to groundwaters and the leaching of nutrients have increased. Salting and nutrient decline are subtle forms of deterioration, but they emphasise the need for careful management of a sensitive, relatively productive area.



*A small reserve of grey box (*Eucalyptus microcarpa*) and yellow gum (*E. leucoxyton*) represents the original vegetation on this gently sloping alluvial apron.*



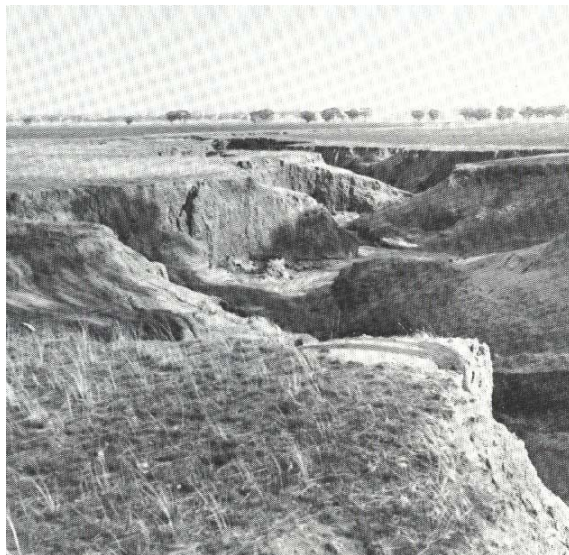
Contour banks prevent the build-up of overland water flow down the gentle slopes, thereby reducing sheet erosion.

YEUNGROON LAND SYSTEM Area 173 sq. km

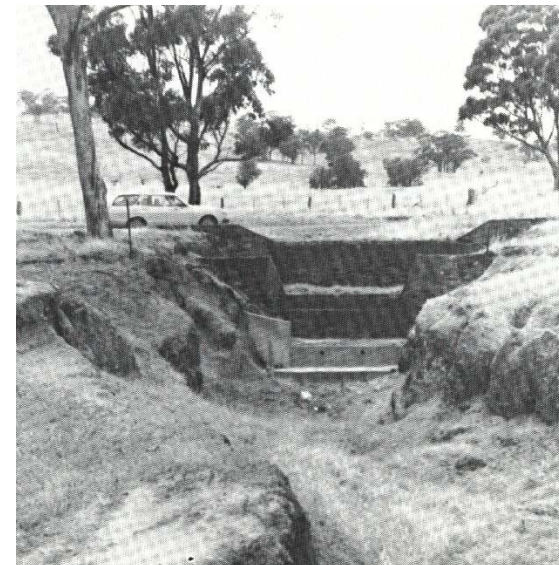
CLIMATE Rainfall (mm) Temperature (°C) Seasonal growth limitations	Annual, 400-425; lowest January (20), highest July (49) Annual, 15; lowest July (8), highest February (22) Temperature: less than 10° C (av.) June-August Rainfall: less than potential evapotranspiration September- April			
GEOLOGY Age, lithology	Quaternary aeolian deposits overlying alluvium			
PHYSIOGRAPHY Elevation range (m) Relative relief (m) Drainage pattern Drainage density (km/ sq. km) Land form	120-260 5 Parallel 0.7 Alluvial apron			
LAND COMPONENT Percentage of land system	1 40%	2 5%	3 5%	4 50%
PHYSIOGRAPHY Position on land form Slope (typical) and range (%) Slope shape	Upper slope 3,2-6 Linear	Small fan 2,1-3 Convex	Drainage floor 1,1-2 Concave	Lower slope 1,1-2 Linear
NATIVE VEGETATION Structure Dominant species	Woodland <i>E. microcarpa</i> <i>E. leucoxyton</i> <i>Casuarina luehmannii</i>	Woodland <i>E. microcarpa</i>	Woodland <i>E. microcarpa</i>	Open woodland <i>E. microcarpa</i> <i>Casuarina luehmannii</i>
SOIL 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	Site 927 Calcareous aeolian deposits Red calcareous sodic duplex soils Dr 2.43 – 2/1/041 Sandy loam Slightly hard >2 Moderate throughout Low surface, moderate subsoil Moderate	Alluvium Red duplex soils Dr 2.41 - 2/1/020 Fine sandy loam Moderately hard >2 Low surface, moderate subsoil Moderate Well drained	Calcareous aeolian deposits Red calcareous sodic duplex soils Dr 2.43 - 2/1/040 Fine sandy loam Slightly hard >2 Moderate throughout Low surface, moderate subsoil Moderate Well drained	Calcareous aeolian deposits Red calcareous sodic duplex soils Dr 2.43 – 2/1/040 Fine sandy loam Slightly hard >2 Moderate throughout Low surface, moderate subsoil Moderate Well drained
PRESENT LAND USE	Cropping, grazing	Cropping, grazing	Cropping, grazing	Cropping, grazing

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



Deep gullies are the result of increased run-off from adjacent cleared hills.



Gully-head structures are necessary - to protect roads and other services.