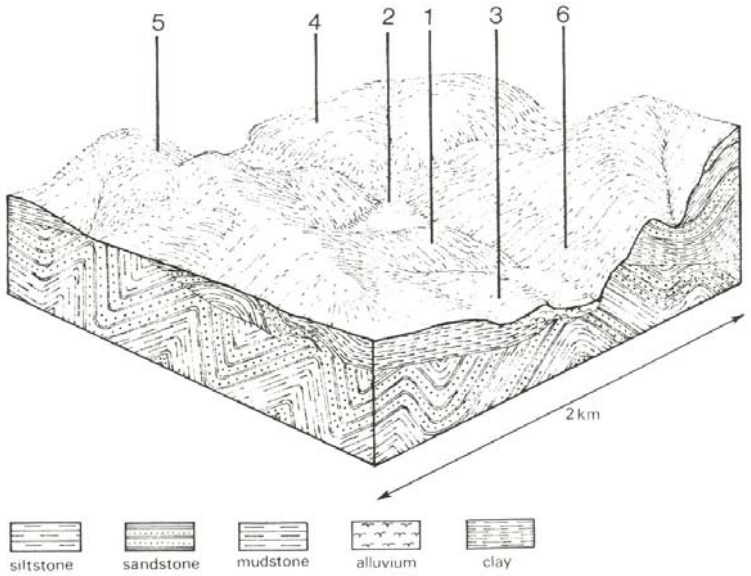
7.26 Moggs Creek Land System

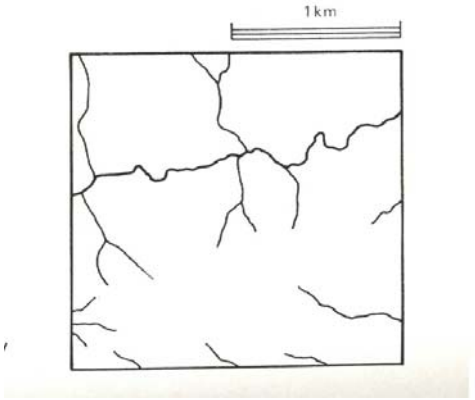
The terrain inland from Eastern View and Aireys Inlet consists of spurs and ridges with steep slopes and deep valleys. The outcropping Tertiary sediments are partly unconsolidated, but many beds are composed of quartzitic sandstones and siltstone. The lower parts of the landscape often possess outcrops of Cretaceous sediments.

Open forests of *Eucalyptus obliqua, E. sideroxylon* and *E. radiata* occur over most of the landscape on duplex soils. The drier north- and west-facing slopes and steep slopes carry woodlands on shallow stony soils. The Cretaceous outcrops can be recognized by the increase in understorey cover and the occurrence of species such as *Acacia mucronata* and *Cassinia longifolia*.

Some selective logging of these hills is undertaken, but the main use is for recreation such as bushwalking and picnicking. The steep slopes are popular with trail-bike-riders, and this often results in severe damage to the vegetation and soils.

The valley of Painkalac Creek remains virtually uncleared, and is popular with bushwalkers and picnickers from nearby coastal resorts.





MOGGS CREEK Area: 74 km^2	Component and its proportion of land system					
	1 30%	2 20%	3 7%	4 25%	5 8%	6 10%
CLIMATE						
Rainfall, mm	**Annual**: 800 – 1,050, lowest January (40), highest August (110)					
Temperature, 0^{o}C	**Annual**: 13, lowest July (8), highest February (17)					
Seasonal growth limitations	**Temperature**: less than 10^{o}C (av.) mid June – mid August **Precipitation**: less than potential evapotranspiration mid November – mid March					
GEOLOGY						
Age, lithology	Paleocene unconsolidated clay, silt and sand; some silica cemented quartz sandstone and siltstone					Lower Cretaceous sandstone and mudstone
TOPOGRAPHY						
Landscape	Deeply dissected hills					
Elevation, m	0- 240					
Local relief, m	100					
Drainage pattern	Dendritic					
Drainage density, km/km^2	2.1					
Land form	Hill	Valley floor	Hill			
Land form element	Crest, north and west slopes	Lower slope, fan	Alluvial terrace	South and east slopes	Steep north slope	Steep lower slope
Slope (and range), %	18 (6-45)	7 (1-14)	1 (0-2)	18 (10-40)	55 (40-65)	45 (30-60)
Slope shape	Convex	Concave	Linear	Convex	Linear	Linear
NATIVE VEGETATION						
Structure	Woodland	Open forest	Open forest	Open forest	Low woodland	Open forest
Dominant species	*E. radiata, E. obliqua, E. baxteri, E. sideroxylon*	*E. sideroxylon, E. cypellocarpa, E. obliqua, E. baxteri*	*E. obliqua, E. ovata, E. sideroxylon*	*E. obliqua, E. cypellocarpa*	*E. nitida, E. obliqua, Casuarina littoralis*	*E. obliqua, E. radiata, E. sideroxylon*
SOIL						
Parent material	Clay, silt and sand	Alluvial clay, silt and sand	Alluvial clay, silt and sand	Clay, silt and sand	Mainly quartzitic sandstone and siltstone	Feldspathic sandstone and mudstone
Description	Red-yellow duplex soils	Yellow gradational soils, weak structure	Yellow-brown sodic duplex soils, coarse structure	Red-yellow duplex soils	Stony yellow gradational soils	Brown duplex soils
Surface texture	Fine sandy loam	Sandy loam	Fine sandy loam	Fine sandy loam	Gravelly sandy loam	Loam
Permeability	Moderate	High	Low	Moderate	Very high	Moderate
Depth, m	>2	>2	>2	>2	0.7	0.9
LAND USE	**Uncleared areas:** Nature conservation; hardwood forestry; active and passive recreation. **Cleared areas:** Residential; active recreation					
SOIL DETERIORATION HAZARD Critical land features, processes, forms	Weakly structured surface soils on steep slopes are prone to sheet erosion and compaction. Clay subsoils on steep slopes are prone to landslips.	Weakly structured soils receiving surface run-off from adjacent areas are prone to scour gullying, siltation and flooding.	Weak surface structure is prone to compaction leading to reduced permeability and increased overland flow.	Weakly structured surface soils on steep slopes are prone to sheet erosion and compaction. Clay subsoils on steep slopes are prone to landslips.	Stony shallow soils with weak structure and low water-holding capacity on dry steep slopes are prone to sheet erosion and landslides.	Steep slopes and weakly structured surfaces lead to sheet erosion. Clay subsoils on steep slopes subject to periodic saturation are prone to landslips.