

7.25 Lorne Land System

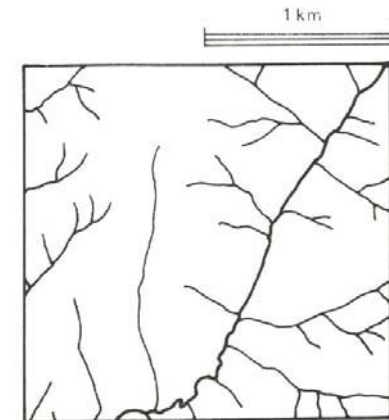
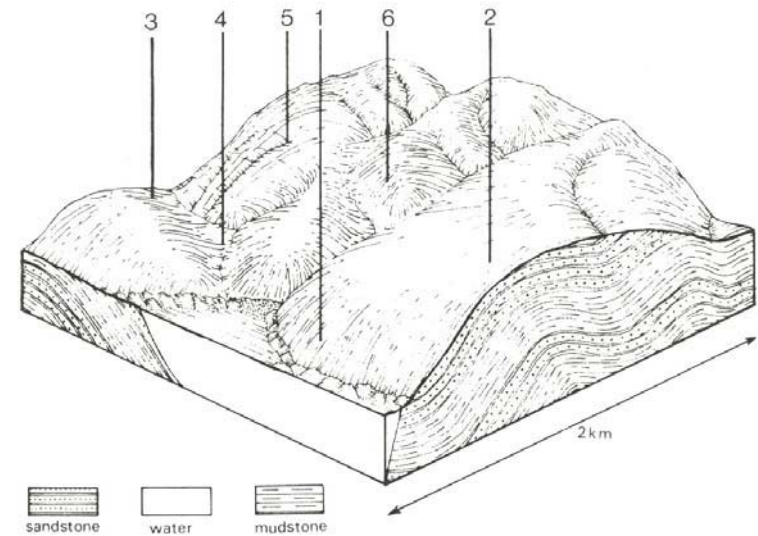
From Cinema Point to Moonlight Head, much of the coastline consists of steep slopes, coastal cliffs and rocky shore platforms. These coastal margins of the Range have a milder maritime climate than those areas further inland, and receive a lower rainfall. Inland from the coast the topography consists of steeply dissected spurs and ridges with cliffs and waterfalls.

The steepest slopes have shallow stony soils with areas of rock outcrop. Most slopes, however, have moderately deep duplex soils. On inland slopes with a southerly aspect, no strong profile differentiation has occurred and profiles are gradational. Tall open forests, with understorey species such as *Bedfordia salicina*, *Olearia* spp. and *Pomaderris* spp., occupy these sites. On the duplex soils the trees are lower with a more open understorey.

Large tracts of this land system have been cleared and dairy farming is a major land use. The steep slopes and deep valleys create severe management problems. The coastal areas between Cinema Point and Apollo Bay have been popular for residential development. Landslips are very common and sheet erosion has been widespread.



Siting of roads, fences and access tracks in this rugged terrain creates many problems, and management is difficult



LORNE

Area: 220 km²

	Component and its proportion of land system					
	1 7%	2 8%	3 35%	4 5%	5 35%	6 10%
CLIMATE Rainfall, mm Temperature, 0°C Seasonal growth limitations	Annual: 850 – 1,200, lowest January (45), highest August (120) Annual: 13, lowest July (9), highest February (17) Temperature: less than 10°C (av.) July Precipitation: less than potential evapotranspiration mid November – mid March					
GEOLOGY Age, lithology	Lower Cretaceous feldspathic sandstone and mudstone					
TOPOGRAPHY Landscape Elevation, m Local relief, m Drainage pattern Drainage density, km/km ² Land form Land form element	Deeply dissected hills of the Otway Range 0 – 400 150 Dendritic with some radial areas 4.0					
Slope (and range), % Slope shape	Steep lower slope 60 (30-75) Linear	Coastal cliff Upper gentler slope 30 (15-45) Convex	North- and west-facing slopes, upper slope 45 (5-55) Linear	Lower slop, drainage line 20 (1-35) Concave	Hill South- and east-facing slopes 45 (5-65) Linear	Steepest slope 60 (20-70) Linear
NATIVE VEGETATION Structure Dominant species	Open scrub <i>Casuarina stricta</i> , <i>Cassinia aculeata</i> , <i>E. obliqua</i> , <i>Alyxia buxifolia</i> , <i>Leucopogon parviflorus</i>	Woodland <i>E. obliqua</i> , <i>E. globulus</i> , <i>E. radiata</i>	Open forest <i>E. obliqua</i> , <i>E. sideroxylon</i> , <i>E. radiata</i> , <i>E. cypellocarpa</i> , <i>E. globulus</i>	Tall open forest <i>E. ovata</i> , <i>E. globulus</i> , <i>E. cypellocarpa</i> , <i>Acacia melanoxylon</i>	Tall open forest <i>E. cypellocarpa</i> , <i>E. globulus</i> , <i>E. obliqua</i> , <i>E. ovata</i>	Woodland <i>E. radiata</i> , <i>E. sideroxylon</i> , <i>E. cypellocarpa</i> occasionally <i>E. viminalis</i> , <i>E. globulus</i>
SOIL Parent material Description Surface texture Permeability Depth, m	Colluvium Stony brown gradational soils Fine sandy loam Very high 0.3	In-situ weathered rock Brown duplex soils Fine sandy clay loam Moderate 0.9	In-situ weathered rock Brown duplex soils Fine sandy clay loam Moderate 0.9	Alluvium Brown gradational soils, weak structure Silty loam High >2	In-situ weathered rock Brown gradational soils Fine sandy clay loam High 0.9	Colluvium Stony brown gradational soils Fine sandy loam Very high 0.5
LAND USE	Uncleared areas: Hardwood forestry for sawlogs, posts and poles; softwood plantations; nature conservation; active and passive recreation; landscape conservation; water supply. Minor cleared areas: Dairy farming and beef cattle grazing on mainly unimproved pastures; residential.					
SOIL DETERIORATION HAZARD Critical land features, processes, forms	Native vegetation is sensitive to salt pruning and disturbance. Dispersible soils on steep slopes are prone to sheet erosion. Marine undercutting and saturation of soils lead to landslips.	Native vegetation is sensitive to disturbance and to salt pruning. Dispersible soils on moderate slopes are prone to sheet erosion. Periodic saturation of dispersible clay subsoils leads to landslips and slumping of road batters.	Dry aspect, steep slopes and weakly structured surfaces lead to sheet erosion. Clay subsoils on steep slopes subject to periodic saturation are prone to landslips.	Weakly structured soils receiving run-off are prone to scour gully, siltation, flooding, and compaction of surface structure.	Steep slopes and weakly structured surfaces lead to sheet erosion. Clay subsoils on steep slopes subject to periodic saturation are prone to landslips.	Stony shallow soils of weak structure, and low water-holding capacity on steep slopes are prone to sheet erosion and landslips.