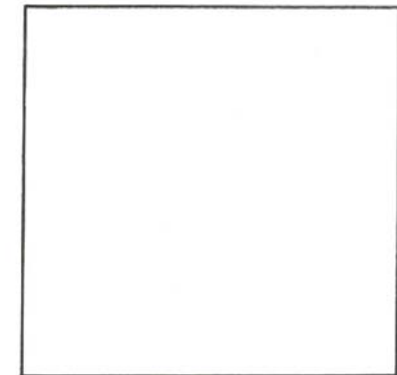
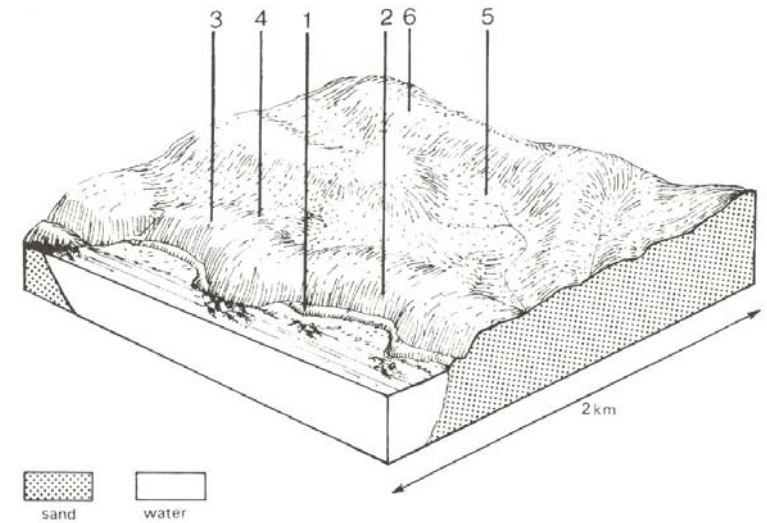


7.11 Cape Otway Land System

In the vicinity of Cape Otway and extending discontinuously to the west is an elevated plain of coastal dunes. The coastal margins of the plain are generally fronted by 100 m cliffs of calcarenite with possibly small primary dunes at the base of the cliffs. Behind the cliffs, the plain has an irregular dune topography that may extend several kilometres inland. The demarcation to other land systems is very sharp and easily defined.

Woodlands of *Eucalyptus viminalis* with open grassy understoreys used to cover most areas, although shrubs resistant to salt- and salt-laden winds formerly colonized the coastal localities. Most areas have been cleared for grazing, but the establishment of improved pastures present difficulties. Overgrazing has resulted in severe wind erosion in some areas, and reclamation is difficult and expensive.



Large parts of the Cape Otway land system have been cleared and provide rough grazing for cattle on native grasses.

CAPE OTWAY

Area: 36 km²

	Component and its proportion of land system					
	1 6%	2 4%	3 20%	4 20%	5 10%	6 40%
CLIMATE Rainfall, mm Temperature, 0°C Seasonal growth limitations	Annual: 900 – 1,100, lowest January (45), highest July (105) Annual: 14, lowest July (10), highest February (18) Temperature: less than 10°C (av.) July Precipitation: less than potential evapotranspiration late November - February					
GEOLOGY Age, lithology	Recent sand and shell grit on a calcarenite basement					
TOPOGRAPHY Landscape Elevation, m Local relief, m Drainage pattern Drainage density, km/km ² Land form Land form element Slope (and range), % Slope shape	Elevated longitudinal coastal dunes at and to the west of Cape Otway 0 – 155 15 Mainly absent; some dendritic areas 0.7					
	Foredune - 20 (15-40) Convex	Cliff - 65 (50-100) Linear	Windward slopes 25 (5-50) Convex	Longitudinal dune Leeward slopes 20 (5-50) Convex	Interdune corridor - 3 (0-9) Concave	Inland dune - 25 (3-60) Concave
NATIVE VEGETATION Structure Dominant species	Tussock grassland <i>Spinifex hirsutus</i> , <i>Scirpus nodosus</i> , <i>Calocephalus brownii</i>	Open scrub <i>Casuarina stricta</i> , <i>Casuarina longifolia</i> , <i>Alyxia buxifolia</i>	Open scrub <i>Alyxia buxifolia</i> , <i>Leucopogon parviflorus</i> , <i>Cassinia longifolia</i> , <i>Acacia verticillata</i> , <i>Leptospermum juniperinum</i> , <i>Helichrysum paralium</i>	Woodland <i>Casuarina stricta</i> , <i>E. viminalis</i> , <i>Leucopogon parviflorus</i>	Open forest <i>E. obliqua</i> <i>E. viminalis</i>	Woodland <i>E. viminalis</i>
SOIL Parent material Description Surface texture Permeability Depth, m	Coarse sand, shell grit Yellow calcareous sand soils, uniform texture Coarse sand Very high >2	Calcarenite, aeolian sand Yellow calcareous sand soils, uniform texture Coarse sand Very high 0.3	Sand with calcarenite basement Brown calcareous sand soils, uniform texture Loamy sand Very high >2	Sand with calcarenite basement Brown calcareous sand soils, uniform texture Loamy sand Very high >2	Sand with calcarenite basement Red-yellow calcareous sand soils, uniform texture Loamy sand Very high >2	Sand with calcarenite basement Red-yellow calcareous sand soils, uniform texture Loamy sand Very high 1.9
LAND USE	Cleared areas: Beef cattle grazing on unimproved pastures; mining of calcarenite; residential; active recreation. Uncleared areas: Forest grazing of beef cattle; active and passive recreation; nature conservation; landscape conservation.					
SOIL DETERIORATION HAZARD Critical land features, processes, forms	Dune inherently unstable due to cyclical marine erosion. Low fertility, low water-holding capacity and vegetation sensitive to disturbance lead to wind erosion and leaching of nutrients.	Weakly structured sand soils of low water-holding capacity on steep slopes with vegetation sensitive to disturbance and salt pruning are prone to sheet erosion by wind and water.	Weakly structured sand soils with low water-holding capacities, subjected to strong on-shore winds are prone to wind erosion. Low inherent fertility, high alkalinity and rapid leaching lead to nutrient decline.	Weakly structured sand soils with low water-holding capacities are prone to wind erosion. Low inherent fertility, high alkalinity and rapid leaching lead to nutrient decline.	Low inherent fertility and high permeability lead to nutrient decline.	Weakly structured sand soils with low water-holding capacities are prone to wind erosion. Low inherent fertility and high permeability lead to nutrient decline.