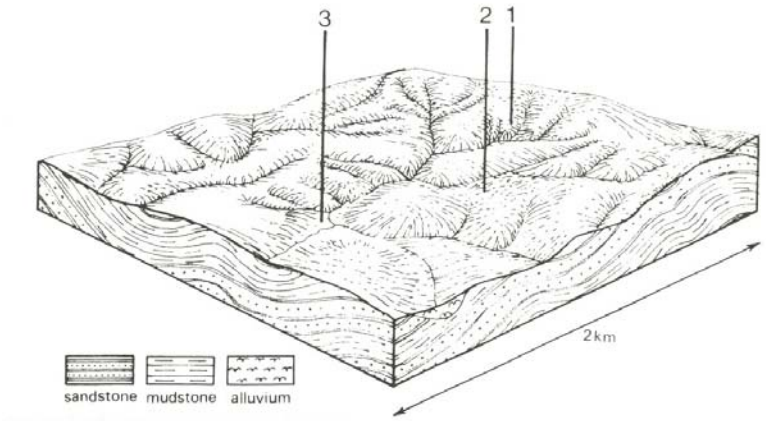
7.7 Beech Forest Land System

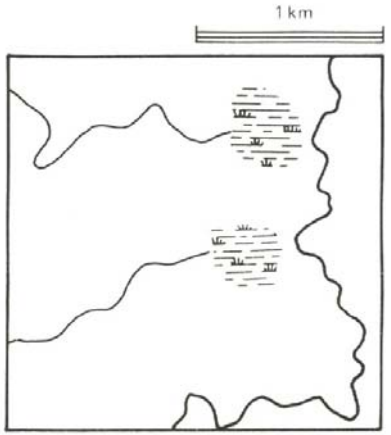
Along the crest of the wetter parts of the Otway Range lies a rolling plain with rounded hills and shallow valleys. This area has one of the highest annual rainfalls in Victoria, averaging almost 2,000 mm at Weeaproinah.

Prior to settlement late last century, tall open forests of *Eucalyptus regnans* and associated species dominated the landscapes, but now most areas have been cleared for agriculture. Some stands of timber do remain and other areas are being regenerated to form climax communities of E. regnans. Agricultural uses are dairying, beef cattle grazing and cropping. The cool climate, remoteness and freely drained soils make the area suitable for seed-potato production.

The perennial nature of many of the creeks and drainage lines gives the areas high water catchment values. Conflict also arises between is high scenic appeal as a rural landscape and the conversion of farmland to softwood plantations.

The rolling hills of the Beech Forest land system comprise an agricultural landscape of high scenic value.





BEECH FOREST Area: 141 km^2	Component and its proportion of land system		
	1 5%	2 85%	3 10%
CLIMATE Rainfall, mm Temperature, 0^{o}C Seasonal growth limitations	**Annual**: 1,550 – 1,950, lowest January (80), highest August (210) **Annual**: 10, lowest July (6), highest February (15) **Temperature:** less than 10^{o}C (av.) May - October **Precipitation**: less than potential evapotranspiration late December – early February		
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 Slope (and range), % Slope shape	 Slope 12 (2-15) Convex	Rolling hills along the crest of the Otway Range 340 – 560 45 Dendritic with some trellis and radial areas 5.8 Hill Crest and slope 12 (1-20) Convex	 Lower slope, drainage line 5 (1-8) Concave
NATIVE VEGETATION Structure Dominant species	Tall open forest *E. regnans, E. obliqua, Acacia melanoxylon*	Tall open forest *E. regnans, E. obliqua, Acacia melanoxylon*	Tall closed forest *Nothofagus cunninghamii, Acacia melanoxylon, E. regnans*
SOIL Parent material Description Surface texture Permeability Depth, m	 Deeply weathered in-situ rock Brown friable gradational soils Loam High 2.0	 In-situ weathered rock Brown gradational soils Clay loam Moderate 1.6	 Alluvium and colluvium Dark brown gradational soils Loam High >2
LAND USE	**Cleared areas:** Dairy farming; beef cattle grazing; row crops (seed potatoes); water supply **Uncleared areas:** Softwood forestry; hardwood forestry for sawlogs and pulpwood; nature conservation; passive recreation; water supply		
SOIL DETERIORATION HAZARD Critical land features, processes, forms	High rainfall, high permeability and leaching plus loss of organic matter and soil structure upon disturbance lead to nutrient decline and soil compaction. Steeper slopes may be subsequently prone to sheet erosion.	High rainfall and moderate permeability lead to leaching of nutrients and losses in organic matter and soil structure. Steeper slopes are subsequently prone to sheet erosion. Clay subsoils on steeper slopes are subject to frequent saturation and are prone to landslips.	High seasonal water tables and run-off from surrounding slopes lead to waterlogging and soil compaction.