

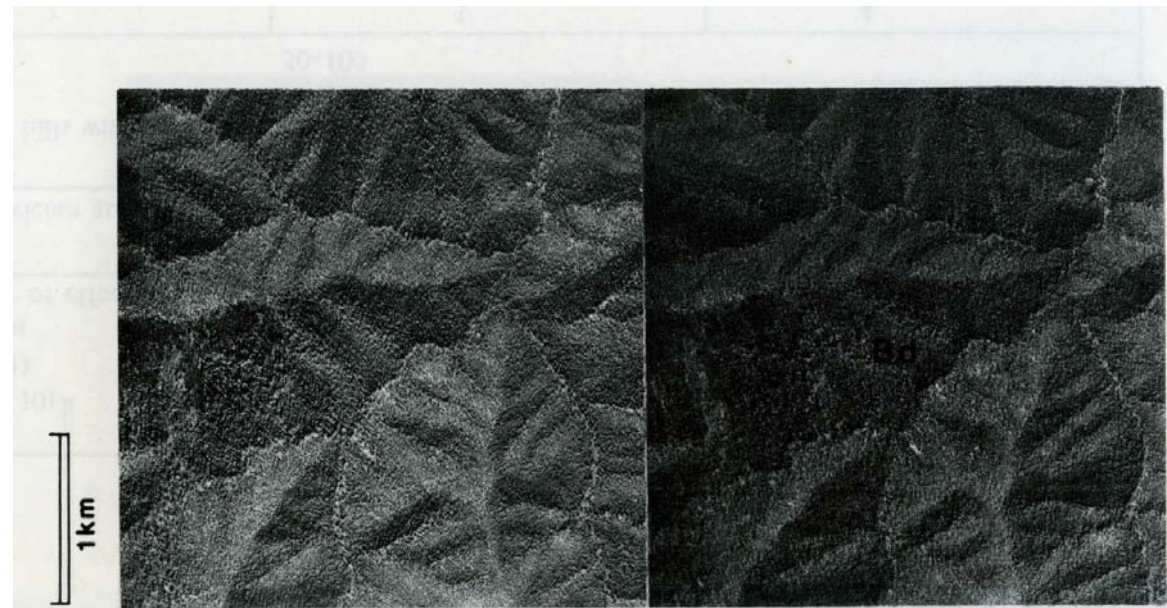
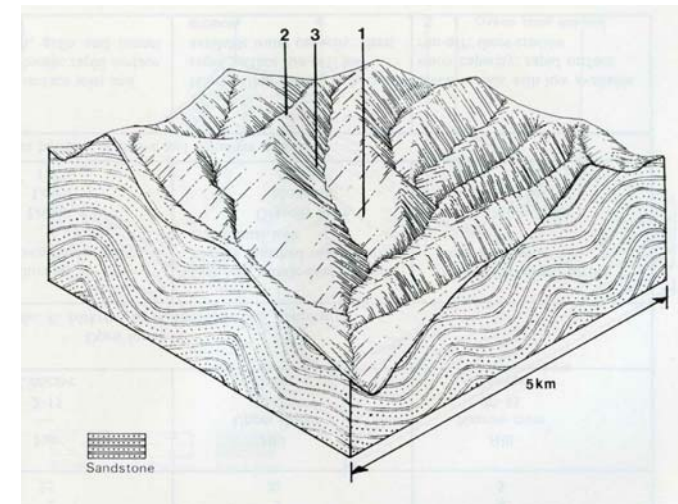
## 7.2 Buckland land system

The Buckland land system consists of the high mountains on Ordovician sedimentary rocks in the south of the study area. Steep mountain slopes form narrow ridges and spurs and narrow valleys. Local relief of the order of 300 m is typical. Small permanent streams are common. It receives a high annual rainfall, with localised rain-shadows. Climate is relatively mild in summer but cold in winter, with regular but non-persistent snow on the higher parts.

The most widespread soils are friable brown gradational soils. Shallower and more stony forms occur on the drier, exposed aspects.

Open forest of *Eucalyptus radiata*, *E. rubida* and *E. dives* dominates the vegetation, but pure stands of *E. delegatensis* occur on moist sheltered sites. The upper slopes carry open forest to woodland of *E. dalrympleana* and *E. pauciflora*. Some of the *E. delegatensis* forests have been felled for saw-logs.

Although the soils are relatively stable, erosion may occur on disturbed and compacted areas such as roads and log landings. The soils have high infiltration rates and high permeability, so surface run-off seldom occurs. However, these characteristics, together with the high rainfall, results in a high potential for leaching of plant nutrients.



**BUCKLAND LAND SYSTEM** Area 372 sq km

<b>CLIMATE</b> Rainfall, mean (mm) Temperature, mean (°C) Seasonal growth limitations	Annual 1250 – 1500; lowest January (70-100); highest July – August (150-170); winter snow above 1100 m Annual 8-12; lowest July (1-5); highest January (14-18) Temperature – less than 10°C (av): lowest areas May - October, highest areas April - November Precipitation – months less than 50% frequency of effective rain: nil		
<b>GEOLOGY</b> Age, lithology	Ordovician greywacke, sandstone, siltstone, shale, mudstone		
<b>PHYSIOGRAPHY</b> Landscape Elevation range (m) Relative relief (m)	Mountains 800-1400 300		
<b>LAND COMPONENT</b> Percentage of land system	1 50	2 20	3 30
<b>PHYSIOGRAPHY</b> Land form Position on land form Slope range (%) Slope shape	Mountain slope Slope below about 1000 m 10-40 Linear-concave	Mountain slope Slope above 10-40 Linear-convex	Mountain slope  10-40 Linear
<b>NATIVE VEGETATION</b> Structure Dominant species	Open forest III <i>E. radiata, E. rubida, E. dives</i>	Open forest II to woodland <i>E. dalrympleana, E. pauciflora</i>	Open forest IV <i>E. delegatensis</i>
<b>SOIL</b> Parent material  Description Surface texture Permeability Depth (m)	Colluvial mantle over <i>in situ</i> weathered bedrock Friable brown gradational soils Loam High 1.5	Colluvial mantle over <i>in situ</i> weathered bedrock Friable brown gradational soils Gravelly loam High 0.7	Colluvial mantle over <i>in situ</i> weathered bedrock Friable brown gradational soils Loam High 2.0
<b>LAND USE</b>	Uncleared; timber production, forest grazing		
<b>SOIL DETERIORATION HAZARD</b> Critical land features, processes, forms	High permeability, low chemical fertility, with much of the plant nutrient reserve in the soil concentrated in the surface few centimeters; high rainfall could lead to nutrient decline if the natural nutrient cycling is altered.		