

582421

Liawenee Moor

Tertiary basalts underlie the undulating plains of Liawenee Moor which extend west from the south western shores of the Great Lake to the swampy ground around the upper reaches of the Ouse River. In addition this land system covers an area of land in the Little Pine Lagoon region. Situated above 1, 000 m with little topographic protection Liawenee Moor is exposed to severe weather conditions which is reflected in the treeless landscape.

Stony, dark red gradational soils dominate on the rocky hills while uniform, stony, dark reddish brown soils are common on crests. They grade into stony brown gradational soils on mid slopes with swamps supporting organic soils. Stony, gravelly, brown mineral horizons underlie these peats, and may reach a depth of more than 1. 00m. Uniform mottled clay profiles characteristically occur on lower slopes while a second group of uniform soils with loamy sand textures occur on alluvial plains around the Ouse River. These deep fluviially derived "soils" are highly permeable and may reach depths of over 1. 50 m. Boulders of dolerite from surrounding hills have influenced soil development in the Skittleball Plain area where yellowish brown soils are locally abundant.

The low wind pruned vegetation mosaic in this land system is indicative of the severe weather which may be expected in this bleak region. There are extensive tracts of *Poa tussock* grassland. The presence of dense *Olearia algida* and *Helichrysum hookeri* heaths are probably a result of frequent rangeland burning over the last 150 years (Jackson pers. comm.). Swamps are commonly inhabited by sedgeland and bolster plant communities. Rocky ridges are usually dominated by *Eucalyptus coccifera*, *E. gunnii* and *E. pauciflora* woodland. improved pasture of Canadian clover (and other species) has been established quite successfully on parts of Skittleball Plain. scattered patches of Kentucky bluegrass were planted on Liawenee Moor during last century and these are still evident today.

Land use includes grazing and recreational pursuits such as fishing and hunting. Frequent burning has resulted in extensive sheet erosion on Liawenee Moor which is comparable to the most degraded land on the central Plateau. A high incidence of intense frosts makes re-establishment of vegetation difficult, as seedlings are uprooted from the soil by frost heave. This can only be minimised or halted if a protective blanket of vegetation is maintained. Failing this sheet erosion becomes established and soil is removed by wind and water. A widespread rocky horizon immediately below the top soil has effectively halted further erosion, but not before the loss of 10 - 30 cm of this most productive resource. As a result the carrying capacity of the land is reduced, runoff is increased, and water retention capabilities of the soil are minimized.

LAND-SYSTEM

Liawenee Moor

582421

Area (ha):
8024



COMPONENT	1	2	3	4	5	6
PROPORTION(%)	5	15	10	30	35	5
RAINFALL (mm)	Approximate Annual Rainfall: 1000-1250					
GEOLOGY	Tertiary basalt with minor outcrops of Jurassic dolerite					
TOPOGRAPHY	Undulating plains with occasional (Dolerite) ridges					
Position	Alluvial Flats	Lower Slopes	Swamps/Watercourses	Broad Mid Slopes	Upper Slopes/crests	Rocky Hills
Typical Elevation (m)	0-1	1-5	0-1	3-5	1-5	7-10
NATIVE		Tussock Grassland/		Tussock Grassland/		Woodland/Open Heath
Structure	Open	Open Heath	Sedgeland/Open	Open Heath	Tussock	Tussock Grassland
Floristic Association (See Appendix 1 for common names)	Richea acerosa Epacris gunnii Helichrysum hookeri Lissanthe montana Epacris petrophila Restio australis	Poa sp. Richea acerosa Helichrysum hookeri Epacris petrophila Oleria algida	Restio australis Richea scoparia Epacris petrophila Astelia alpina Abrotanella forsterioides Pterygopappus lawrencii Poa sp.	Boa sp. Helichrysum hookeri Richea acerosa Pultenaea fasciculata Hakea epiglottis Grevillea australis	Boa sp. Epacris gunnii Helichrysum hookeri Grevillea australis	Eucalyptus coccif era E. gunnii E. pauciflora Helichrysum hookeri Grevillea australis Olearia algida
SOIL						
Surface(A)Tex	Loam	Light Clay	Peat	Loam	Clay Loam	Loam
B Horizon(subs oil) Colour (vet)	Very dark greyish brown (10 YR 3/2) loam. Uniform.	Light olive grey (5 Y 6/2) yellowish brown (10 YR 5/6)	Stony, gravelly, brown (10 YR 5/3) light clay.	Stony, gravelly, strong brown (7. 5 YR 4/6) clay loam. Gradational.	Stony, dark reddish brown (5 YR 3/3) clay loam. Uniform.	Stony, dark red (2. 5 YR 3/6) clay loam. Gradational.
Permeability	High	Moderate- Low		High -	High-Moderate	High
Typical Depth(A)Horiz	>1. 50	>0. 80	>0. 80	>0. 55	0. 65	0. 75
Depth(A)Horiz	0. 50	0. 30	0. 25	0. 20	0. 20	0. 05
LAND USE	Grazing, hydro-electric power generation					
HAZARDS	High sheet erosion					