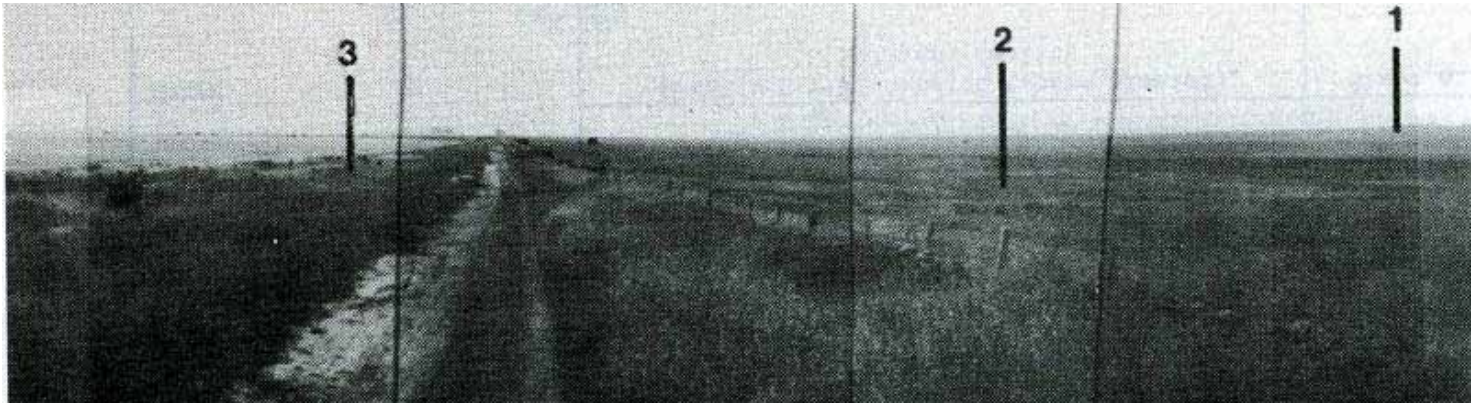
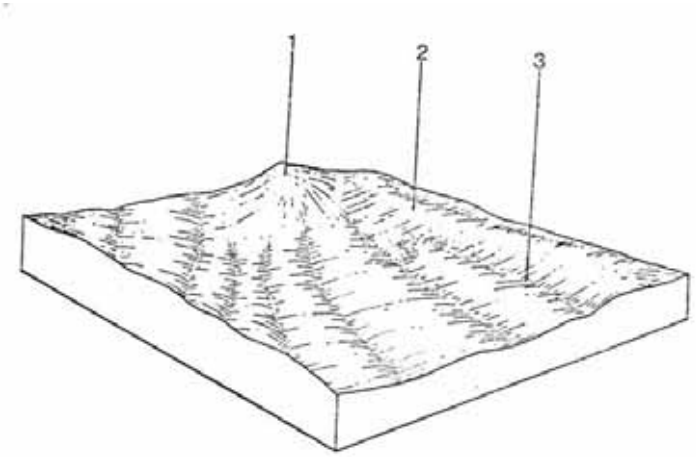
6.3 Cottrell Land System



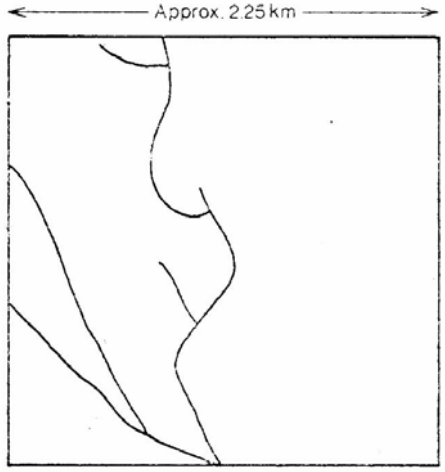
This is a very small land system on the south-west boundary occupying only 7.8 km^2 0.3% of the survey area.

This land system is on the lower slopes of the Mt. Cottrell - Mt Atkinson shield and hence has a higher elevation than the surrounding a areas on basalt.

Cultivation is not possible because both the red gradational and red sodic duplex soils of the slopes are too stony. The mottled yellow, grey sodic duplex soil is usually found in depressions and is often waterlogged.



Schematic Block Diagram



Drainage Pattern

COMPONENT	1	2	3
Proportion %	10	85	5
CLIMATE Rainfall (av.) Temperature (av.) Seasonal growth limitations	Annual: 460-480 mm (monthly range: October 85 mm – August 35 mm) Annual: 14^{o}C (monthly range: February 20^{0}C – July 9^{0}C) Temperature: less than 10^{0}C June – March Precipitation: less than potential evapotranspiration October – April		
GEOLOGY Age, rock	Pleistocene basalt		
TOPOGRAPHY Landscape	Long gentle slope		
Elevation (range) m	60-210		
Local relief (av.) m	90		
Drainage pattern	Dendritic		
Drainage density km/km^2	1.3		
Land form	Cone	Slope	Drainage Line
Slope (av.) %, slope shape	11; Convex	3, Straight	1; Concave
NATIVE VEGETATION Structure	Grassland		
Dominant species	Intermediate: possibly Stipa spp., Danthonia spp., Themeda spp.		
SOIL Parent Material			Alluvium
Description	Shallow stony red gradational soils	Red calcareous sodic duplex soils, coarse structure	Yellow-brown calcareous sodic duplex soils, coarse structure. Mottled yellow, grey sodic duplex soils, coarse structure
Factual Key	Gn 3.11	Db 1.13	Dd 2.11, Db 2.32
Surface Texture	Loam	Loam – Clay loam	Loam – Clay loam
Permeability	High	Low	Low
Depth (av.) m	0.3	1.0	1.5
LAND USE	Grazing, occasional cropping (cereal)		
SOIL DETERIORATION HAZARD Critical land features	Slope gradient	Hard setting surfaces	Seasonal high watertable, hard setting surface
Processes	Overland flow, leaching	Overland flow	Periodic waterlogging, overland flow
Forms	Rill and sheet erosion nutrient decline	Sheet erosion, surface compaction	Surface compaction, sheet erosion