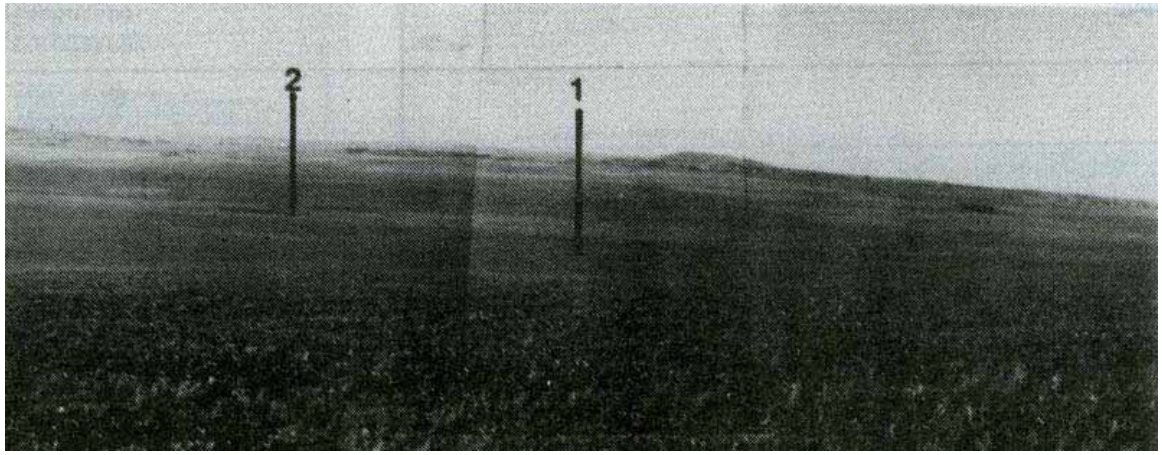
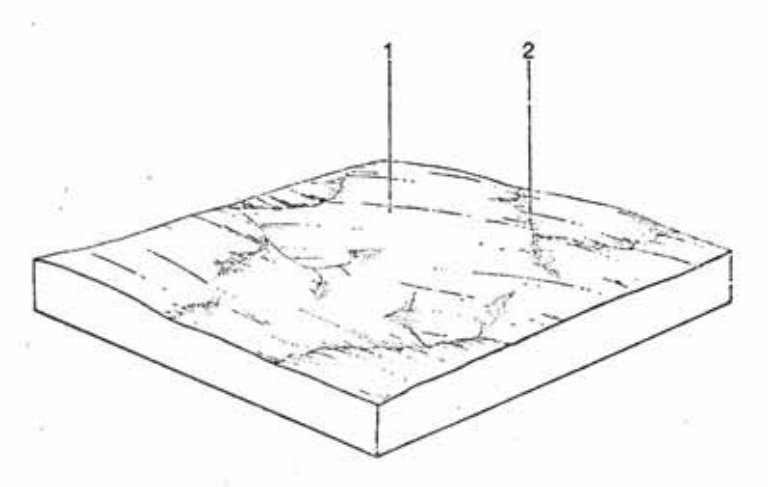
6.14 Marnong Land System

This small land system is adjacent to Darraweit Guim land system from which it is separated by gentle topography. It covers 18.1 km2 or 0.7% of the survey area.

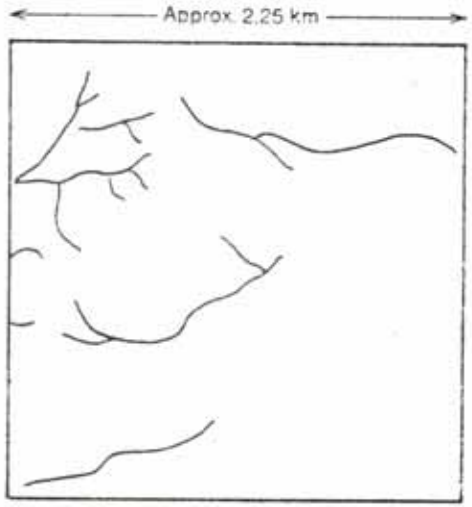
Grazing in the main land use and most of the land system has been cleared for this purpose.

The soils are not very variable. The main soil is a yellow duplex which has a light textured, non-structured topsoil overlying a well-structured clay, often with gravel at the junction of the two. The clay subsoil is very dispersible and is the cause of the severe gully and tunnel erosion which is occurring. Plantings to increase water loss from the soil and maintenance of the protective topsoil are the best ways of limiting erosion in this highly susceptible area.





Schematic Block Diagram



Drainage Pattern

COMPONENT Proportion %	1 90	2 10
CLIMATE Rainfall (av.) Temperature (av.) Seasonal growth limitations	Annual: 640-710 mm (monthly range: October 70 mm – January 40 mm) Annual: 13^{0}C (monthly range: January 10-0-C – July 7^{0}C) Temperature: less than 10^{0}C June – August Precipitation: less than potential evapotranspiration November - March	
GEOLOGY Age, rock	Silurian massive mudstone interbedded with sandstone	
TOPOGRAPHY Landscape Elevation (range) m Local relief (av.) m Drainage pattern Drainage density km/km^2 Land form Slope (av.) %, slope shape	Undulating plains 270 – 400 2 Dendritic 1.5 Slope 3; Straight	Drainage line 2; Straight
NATIVE VEGETATION Structure Dominant species	Open woodland *E. radiata, E. rubida, E. obliqua*	*E. viminalis, E. ovata*
SOIL Parent Material Description Factual Key Surface Texture Permeability Depth (av.) m	In situ weathered rock Yellow sodic duplex soils, coarse structure Dy 2.31 Sandy loam Moderate – High 2.0	Dark brown gradational soils. Yellow sodic duplex soils, coarse structure Gn, Dy 2.31 Clay loam – Sandy clay loam Moderate 2.0
LAND USE	Grazing, some cropping (cereal)	
SOIL DETERIORATION HAZARD Critical land features Processes Forms	Dispersibility, hard setting surfaces Overland flow, subsurface flow, movement of salts Sheet and tunnel erosion	Dispersibility, hard setting surfaces, high watertable Subsurface flow, overland flow, periodic waterlogging Gully erosion, accumulation of salts