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BALFOUR

Steep ridges of siliceous Precambrian material constitute the areas of Balfour land system. It includes the Norfolk Range which is described by Macphail *et al* (1975). An equally extensive area occurs in the south-east, associated with the Murchison River and the upper tributaries of the Mackintosh River. A large body lies west of Renison Bell in the Pieman River.

Balfour land system is predominantly covered by shallow, sandy organic soils, but brownish yellow clay soils have developed on areas of mudstone. The sporadic occurrence of krasnozems *(op cit)* is due, no doubt, to the presence of basaltic parent material.

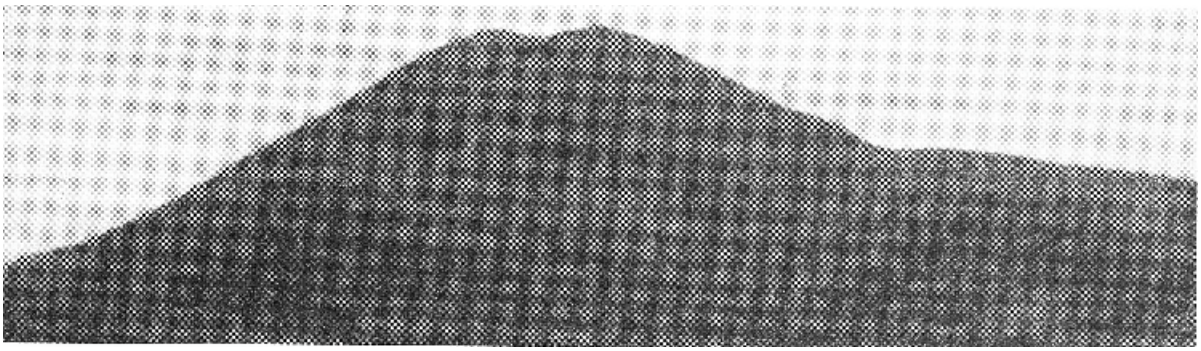
Most of the area is covered by a closed heath comprising stunted forms of Smithton peppermint, manuka and *Leptospermum nitidum*, while *Sprengelia incarnata* and *Lepidosperma concavum* are prominent in the ground flora. A closed scrub exists in the swales, where Smithton peppermint is associated with honeysuckle, *Leptospermum nitidum* and *Melaleuca squarrosa*, while button grass and *Calorophus lateriflorus* constitute a lower stratum.

A forest occurs in the deep protected valleys. Stringybark and Smithton peppermint are the dominant species here, with an understorey of myrtle, leatherwood, horizontal and *Bauera rubioides.* A forest is also present on the patches of mudstone, where Smithton peppermint and swamp gum are dominant and the understorey species are manuka, *Monotoca glauca*, cutting grass and ferns. The vegetation has been described and the role of fire as a powerful factor determining the constitution of the plant communities and vegetation pattern throughout the area has been emphasised *(op cit).*

The system mainly serves as an area of nature conservation although recreation is another important land use.

A high soil erosion hazard exists over most of the system. Active sheet and rill erosion round Balfour is the result of past mining operations.

Organic soils overlying quartzite country rock and supporting a heath vegetation typically found on the peaks and steep slopes



The Norfolk Range from near Balfour

LAND SYSTEM

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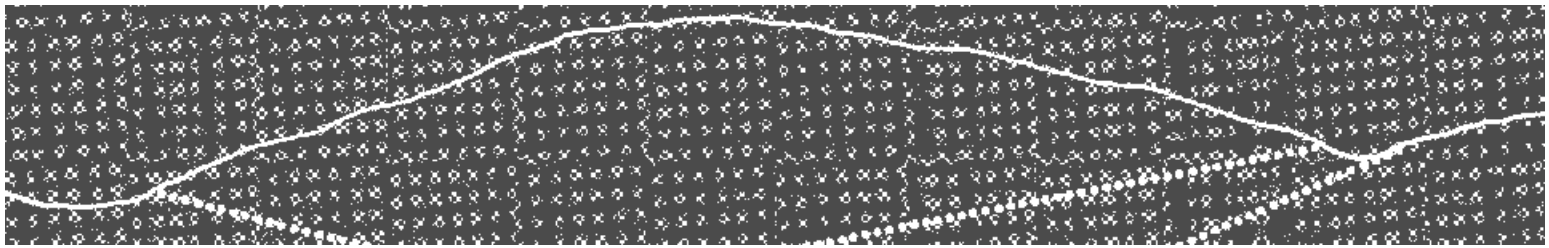
Balfour



COMPONENT	1	2	3	4
PROPORTION %	10	75	5	10
CLIMATE	Average Annual Rainfall 2 000-2 500 mm			
GEOLOGY	Precambrian sandstones, quartzites, conglomerate, mudstone			
TOPOGRAPHY Land form	Steep mountainous ridges			
Position	Swales	Peaks, steep slopes	Drainage lines	Areas of mudstone
Average Sideslope °	7	18	5	10
NATIVE VEGETATION Structure	Closed scrub	Closed heath	Open forest	
Association	Smithton peppermint, honeysuckle, *Leptospermum nitidum, Mela leuca squarrosa,* Button grass, *Calorophus latenflorus*	Smithton peppermint, manuka, *Sprengelia incarnata, Leptosper mum nitidum, Lepidosperma con cavum*	Stringybark, Smithton peppermint, leatherwood, myrtle, horizontal, *Bauera rubioides,* hard water fern	Smithton peppermint swamp gum, manuka, *Monotoca glauca,* cutting grass, hard water fern, scrambling coral fern
SOIL	Dark grey (10 YR 4/1) sand soil, uniform texture, siliceous gravel	Black sandy peat organic soil	Very dark grey (10 YR 3/1) peaty sand soil, uniform texture	Brownish yellow (10 YR 6/6) gradational soil
	pan			
Surface Texture	Peat	Sandy peat	Peaty sand	Peat
Permeability		High		Moderate
Average Depth m	0 3	0 5		>1 8
PRESENT LAND USE	Nature conservation, recreation			
HAZARDS	High rill erosion	High gully erosion		Moderate sheet erosion