

Dargo land system (Do)

Area: 380 sq. km (1.9%)

The plutonic and related gneissic rocks of the Dargo land system have been deeply weathered and eroded to levels below the surrounding, resistant, metamorphic or sedimentary rocks.

The deep weathering may have occurred as long ago as the Mesozoic. The surrounding, resistant aureoles have restricted incision by the outflowing streams and this has allowed storage of colluvium on the lower slopes and of alluvium in valley floors. The larger occurrences of which are mapped in Walnut land system. Topography is hilly to gently undulating.

The coarsely-crystalline plutonic rocks weather relatively easily to form soil. The texture of which depends on the mineral composition and the degree of weathering of the parent rock. The granitic rocks, which are highest in quartz and potassium feldspars, produce coarse-textured soils, whereas those highest in sodium-calcium feldspars form more clayey soils. Most soils have clay subsoils with a well-developed, blocky structure and a red colour indicating good drainage and the presence of iron oxides. On some slopes deep, light-yellowish-brown, rather sandy soils occur on lag deposits containing abundant, partially-weathered, feldspar grains. Most soils are mildly acidic to neutral.

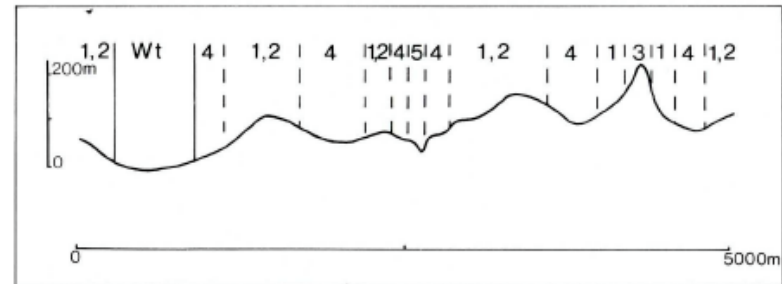
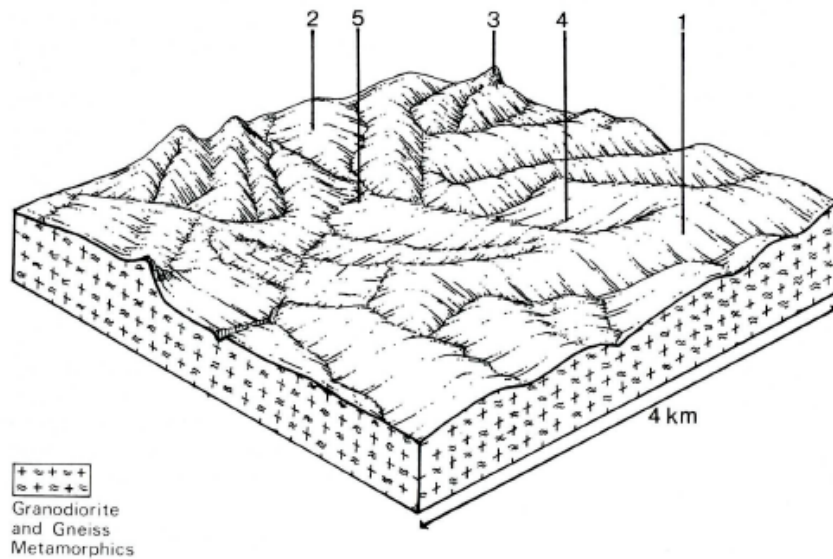
There is a reported instance of soil salinity, however it is unlikely to be a significant hazard in the land system. Erosion is more of a hazard here.

The native vegetation, now largely cleared, appears to be mainly grassy forest II.

Rounded hills and undulating footslopes, mostly cleared for grazing.



CLIMATE Rainfall, mean (mm) Temperature, mean (°C) Seasonal growth limitations	Annual 600 - 900; lowest July (40 - 70), highest October (60 - 90) Annual 12 - 14; lowest July (8 - 10), highest February (19-21) Temperature <10°C (av.): May - September Rainfall < potential evapotranspiration: November – March
GEOLOGY Age, lithology	Palaeozoic granites, granodiorites, diorites and related coarsely crystalline gneissic metamorphics; deeply weathered
PHYSIOGRAPHY Landscape Elevation range (m) Relative relief (m) Drainage pattern Drainage density (km/km ²)	Rounded hills and undulating footslopes 160 - 750 80 - 180 Dendritic 4 – 6
PRESENT LAND USE	Mostly cleared: mainly grazing by cattle and sheep on improved and native pastures Minor proportion uncleared: hardwood forestry (minor products); apiculture



LAND COMPONENT Percentage of land system Diagnostic features	1 40 Moderately steep slopes	2 30 Gentler slopes on broad ridge crests and spurs	3 5 Steeper rocky slopes and peaks	4 15 Drainage depressions deposits	5 10 Valley flats
PHYSIOGRAPHY Slope %, typical and (range) Slope shape	15 - 20, (10 - 40) Convex or concave	8 - 12, (0 - 20) Convex or concave	Variable, (20 - 50) Straight	5, (0 - 10) Concave	2, (0 - 3) Straight or concave
SOIL Parent material Description Classification Surface texture Surface consistence Depth (m) Nutrient status Available soil water capacity Perviousness to water Drainage Exposed stone (%) Sampled profile number	<p>Granite, granodiorite, diorite and gneiss</p> <p>Mainly black or brown sandy loam topsoil grading into reddish brown, brown or mottled yellowish brown blocky clay subsoil; some deep light yellowish brown uniform loamy sand on crests</p> <p>Mainly Reel Podzolic Soils: some Brown or Yellow Podzolic Soils: some Brown Earths Dr4.22, Dr2.21, Dr2.22, Db2.21, Dy3.21, Dy2.42, Gn2.11, Gn2.15, Gn3.14, Uc4.11</p> <p>Sandy loam, but varying from loamy sand to sandy clay loam</p> <p>Hard when dry. friable to firm when moist</p> <p>Commonly 0.7 - 1.2 Moderate Low to moderate Slow to moderate Mainly good Up to 10, mostly 0</p> <p>45, 46</p>		<p>Similar to components 1 and 2 but probably more uniform loamy sand, often stony; rock outcrop common</p> <p>-</p>	<p>Colluvium</p> <p>Black clay loam or clay grading into dark yellowish brown to grey mottled clay loam or clay</p> <p>Wiesenboden, Black Earths Um5.52, Ug5.1</p> <p>Clay loam to clay</p> <p>Firm to very firm when moist >2.0 Moderate Moderate Slow Poor to somewhat poor 0</p> <p>-</p>	<p>Alluvium</p> <p>Little differentiated dark greyish brown sandy loam and mottled greyish brown sandy clay loam grading into clay at depth</p> <p>Alluvial Soils. Wiesenboden Uc1.21, Uc1.23, Uc5.21, Gn4.72</p> <p>Sandy loam to sandy clay loam</p> <p>Loose to slightly hard when dry >2.0 Low to moderate Low to moderate Moderate to rapid Poor to good 0</p> <p>-</p>
NATIVE VEGETATION Structure of vegetation and characteristic species of dominant stratum (+ Predominant species)	<p>Grassy open forest II: Mostly mixed forests with composition and predominant species variable — including <i>E. albens</i> (in east), <i>E. bridgesiana</i>, <i>E. dives</i>, <i>E. goniocalyx</i>, <i>E. globulus</i>, <i>E. globoidea</i> (lower elevations), <i>E. macrorhynch</i>, <i>E. rubida</i>, <i>E. stellulata</i></p>		<p>Limited data — probably open forest I, II with species similar to components 1 and 2</p>	<p>Mainly grassy open forest II: <i>E. viminalis</i>+, <i>E. radiata</i></p> <p>Occasionally woodland II: <i>E. goniocalyx</i></p>	<p>Grassy open forest II: <i>E. melliodora</i>+ (higher better drained terraces): <i>E. ovata</i>+ with or without <i>E. stellulata</i> (lower poorer drained terraces)</p>

Disturbance	Affected process and trend	Primary resultant deterioration			Casual activities	Primary off-site process
		Form	Susceptibility of components	Incidence with components		
Alteration of vegetation: — reduction in leaf area, rooting depth and/or perennality	Reduced transpiration, resulting in increased deep percolation	Nutrient loss	Not determined	Not determined	Removal of trees	Increased movement of water to groundwater; increased base-flow of streams
Increased exposure of surface soil	Increased overland flow and soil detachment	Sheet and rill erosion	1,2,4; moderate 3; high	Uncommon	Clearing, logging, burning, overgrazing, road and dam building and other earth-moving activities, rabbit burrowing, trafficking by stock and vehicles.	Increased flash flows and sediment load.
	Increased wind velocity over soil and increased detachment of soil	Wind erosion	3: low	Uncommon; locally severe on exposed slopes, especially at high elevations	Clearing, logging, burning, overgrazing, road and dam building and other earth-moving activities, rabbit burrowing, trafficking by stock and vehicles.	-
Increased physical pressure on soil	Increased compaction	Structure decline	1,2,5: low - moderate 3; low 4; moderate	Uncommon, local occurrences	Increased trafficking overgrazing, export of organic matter	-
	With Reduced infiltration	Sheet and rill erosion	1,2,4; moderate 3: high	Uncommon	As for sheet and rill erosion above	Increased flash flows
Increased soil disruption	Increased soil break-up	Gully erosion	1,2,4; moderate 3,5; high	Uncommon; locally severe in components 4 and 5	As for wind, sheet and rill erosion above	Increased sediment load
	Increased loss of topsoil cohesion	Wind erosion	3; low	Uncommon; locally severe on exposed slopes, especially at high elevations	As for wind, sheet and rill erosion above	Increased sediment load
Comments: -						