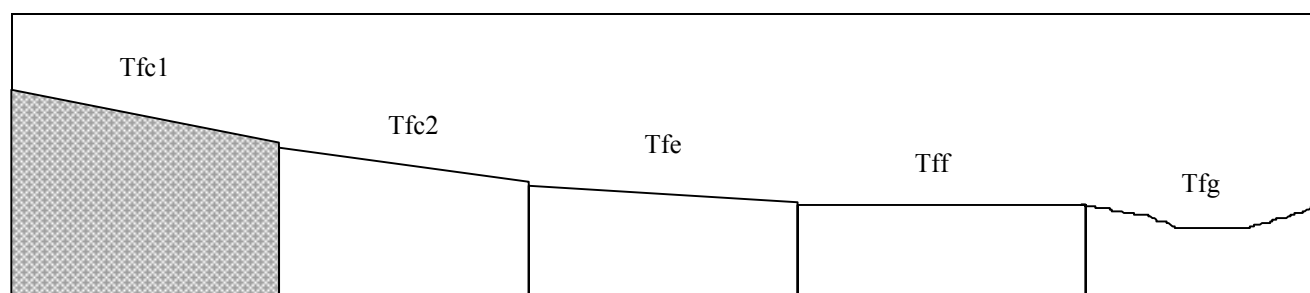


<b>Land Unit:</b> Tertiary fan, upper moderate slopes	<b>Land Unit symbol:</b> Tfc1
	<b>% of study area:</b> 5.6



### General Description:

This land unit occurs on the steep, outwash slopes extending out from the Black, Blue and Cathedral Ranges into the Acheron River valley. The low fertility and acid topsoils limit agricultural production and the high potential recharge to groundwaters provides a warning against disposing of effluents that contain high levels of nutrients, heavy metals or toxic substances. A dense groundcover normally stabilises the topsoil however there is a moderate-high erosion risk once that protective cover is removed.

### Site characteristics:

**Site No.** 82

Parent material		Depth to seasonal watertable:	> 5 m
Age:	Tertiary	Potential recharge to groundwater:	High
Lithology:	Colluvium	Flooding risk:	Nil
Landform		Drainage:	Well drained
Pattern:	Rolling rises	Depth to hardrock:	1.2 m
Element:	Upper slopes	Rock outcrop:	0%
Slope		Annual rainfall:	1090 mm
Common:	20%		
Range:	20 - 30%		
Native vegetation:	Broad-leaf and Narrow-leaf Peppermint, Silver Wattle, Common Cassinia		
Present land use:	Partly cleared; native and improved pastures for sheep and cattle production, areas of native vegetation remain on private land		

### Land degradation:

Degradation process	Water erosion		Wind erosion	Salting	Acidification
	Sheet/rill	Gully			
Susceptibility	Moderate	High	Low	Low	High
Incidence	Low	Low	Nil	Nil	Moderate

### Soil profile characteristics:

Permeability	(measured - average, range):	5000 (3500 - 7500) mm/day
	(estimated):	-
Available water capacity:	215 mm H <sub>2</sub> O	
Linear Shrinkage (B horizon):	10%	

**Soil profile description:****Land Unit symbol:** Tfc1

- A1 0 - 7 cm Light brown (7.5YR6/4) fine sandy loam, weak subangular blocky structure, peds 8 mm, rough fabric, moderately weak consistence - moist, 2% organic segregations, medium gravel fragments are common, high organic matter, pH 4.7. Clear transition to:
- A2 7 - 35 cm Reddish yellow (7.5YR6/6) loam fine sandy, apedal massive (structure), earthy fabric moderately weak consistence - moist, 2% organic segregations, subangular coarse gravel fragments are common, low organic matter, pH 5.1. Abrupt transition to:
- B21t 35 - 65 cm Reddish yellow (5YR6/6) medium clay, fine faint red-brown mottles are common, moderate subangular blocky structure, peds 12 mm, smooth fabric, moderately firm consistence - moist, many subangular coarse gravel fragments, pH 5.8. Gradual transition to:
- B22 65 - 120 cm Very pale brown (10YR8/2) silty clay, fine distinct red brown mottles are common, moderate angular blocky structure, peds 25 mm, smooth fabric, moderately firm consistence - moist, many subangular coarse gravel fragments, pH 5.3. Clear transition to C horizon.

**Soil classification:**

Factual Key (Northcote, 1979):

Dy 3.21 - 2/2/035

Australian Soil Classification (Isbell, 1992):

Mottled, Dystrophic, Red, Chromosol; thin, gravelly loamy/clayey, deep

Unified Soil Group:

MH

**Interpretation of soil analyses:** (see Appendix 2 for analytical results)

Horizon	pH	Gravel %	E.C. (salts)	Nutrient status	P	K	Al	Organic matter	Dispersibility
A1	4.7 **	13	VL	VL	D	S	T	H	L
A2	5.1 **	7	VL	VL	D	S	T	L	L
B21t	5.8	15	VL	VL	D	D	T	VL	L
B22	5.3 **	20	VL	VL	D	D	T	VL	L

VL: Very Low

L: Low

M: Moderate

H: High

VH: Very High

D: Deficient

S: Satisfactory

T: Toxic

NA: Not Available

\*\* Acidic

**Land capability ratings and limitations for specific land uses:**

Land use	Rating	Major limiting factor(s)
Agriculture	C <sub>3</sub> T <sub>4</sub> S <sub>4</sub>	Steep slopes, high susceptibility to sheet/rill and wind erosion
Building foundations		
- slab	4	Steep slopes, high susceptibility to slope failure
- stumps/footings	4	Steep slopes, high susceptibility to slope failure
Effluent disposal (septic tanks)	4	Steep slopes
Farm dams	5	Very low suitability of subsoil, excessive permeability, steep slopes, shallow soils, high susceptibility to slope failure
Residential - rural	5	Very low capability for farm dams, low capability for slab foundations, effluent disposal and secondary roads
- urban	4	Low capability for secondary roads
Scenic value	3 & 4	Low Scenic Quality
Secondary roads	4	Steep slopes, high susceptibility to slope failure