

General Description:

For this study the 'moderate slope' category of 10 - 32% has been divided into an upper (20 - 32%) and a lower (10 - 20%) sub-category. This upper moderate slope occurs throughout the study area and a high risk of land degradation is associated with any form of clearing or soil disturbance. The very high potential recharge to the groundwater system emphasises the delicate ecological balance that exists in this region. Clearing the trees from this land unit to increase productivity may cause lower productivity in another area because of a rising, saline, groundwater table.

Site No. 127 and 135

Parent material		Depth to seasonal			
Age:	Devonian	watertable:	> 5 m		
Lithology:	Sandstones and siltstones	Potential recharge			
Landform		to groundwater:	Very high		
Pattern:	Steep hills	Flooding risk:	Nil		
Element:	Upper moderate slopes	Drainage:	Rapidly drained		
Slope		Depth to hardrock:	1.5 m		
Common:	27%	Rock outcrop:	0%		
Range:	20 - 32%	Annual rainfall:	940 mm		
Native vegetation:	e vegetation: Broad-leaf and Narrow-leaf Peppermint, Red Stringybark, Messmate				
Present land use:	Nature conservation, logging - hardwood and softwoods, cleared for grazing of native and introduced pastures				

Land degradation:

Degradation	Water erosion		Wind progion	Salting	Acidification
process	Sheet/rill	Gully	willd crosion	Satting	Actumenton
Susceptibility	High	Moderate	Moderate	Low	High
Incidence	Low	Low	Nil	Nil	Moderate

Soil profile characteristics:

Permeability	(measured - average, range): (estimated):	6000 (300 - 9000) mm/day -		
Available water capacity:		190 mm H ₂ O		
Linear Shrinkage (B horizon):		10%		

Soil profile description:

Land Unit symbol: Dsc1

- A11 0 8 cm Dark reddish brown (5YR3/2) silty loam, weak subangular blocky structure, peds 7 mm, rough fabric, moderately firm consistence slightly moist, few angular ironstone gravel fragments, high organic matter, pH 5.5. Clear transition to:
- A12 8 40 cm Dark reddish brown (5YR3/3) silty loam, weak subangular blocky structure, peds 15 mm, rough fabric, moderately firm consistence slightly moist, high organic matter, pH 5.5. Gradual transition to:
- B21t 40 88 cm Reddish brown (5YR4/4) silty clay loam, weak subangular blocky structure, peds 15 mm, rough fabric, moderately weak consistence slightly moist, few angular ironstone gravel framents, pH 5.5. Gradual transition to:
- B22 88 145⁺ cm Reddish brown (2.5YR4/4) silty clay, moderate subangular blocky structure, ped 3 mm, smooth fabric, moderately firm consistence slightly moist, few angular ironstone gravel fragments, pH 5.5.

Soil classification:

Factual Key (Northcote, 1979):	Gn 3.11 - 3/1/040
Australian Soil Classification (Isbell, 1992):	Humose, Dystrophic, Red, Dermosol; thin, slightly
	gravelly, silty/clayey, very deep
Unified Soil Group:	ML

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

Horizon	рН	Gravel %	E.C. (salts)	Nutrient status	Р	K	Al	Organic matter	Dispersibility
A11	5.5	5	VL	L	D	S	Т	Н	L
A12	5.5	2	VL	VL	D	S	Т	Н	L
B21t	5.4 **	2	VL	VL	D	М	Т	М	L
B22	5.5	5	VL	VL	D	М	Т	L	L
VL: Very Lo	ow L	: Low	M	Moderate	H	High		VH: Very H	igh
B21t B22 VL: Very Lo D: Deficient	5.4 ** 5.5 ow L t S	5 .: Low : Satisfactor	vL VL M:	VL VL Moderate Toxic	D D H	M M High A: Not Ava	T T ailable	L VH: Very H ** Acidic	L L

Land capability ratings and limitations for specific land uses:

Land use	Rating	Major limiting factor(s)
Agriculture	$C_3T_4S_4$	Steep slopes, high susceptibility to 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, excessive permeability may result in the contamination of groundwater
Farm dams	5	Very steep slopes, excessive permeability, low suitability of subsoil, shallow soils, high dispersibility to subsoil, high susceptibility to slope failure
Residential - rural	5	Very low capability for farm dams and a low capability for slab foundations, effluent disposal and secondary roads
- urban	4	Low capability for slab foundations and secondary roads
Scenic value	2 & 3	-
Secondary roads	4	Steep slopes, high susceptibility to slope failure, low suitability of subsoil