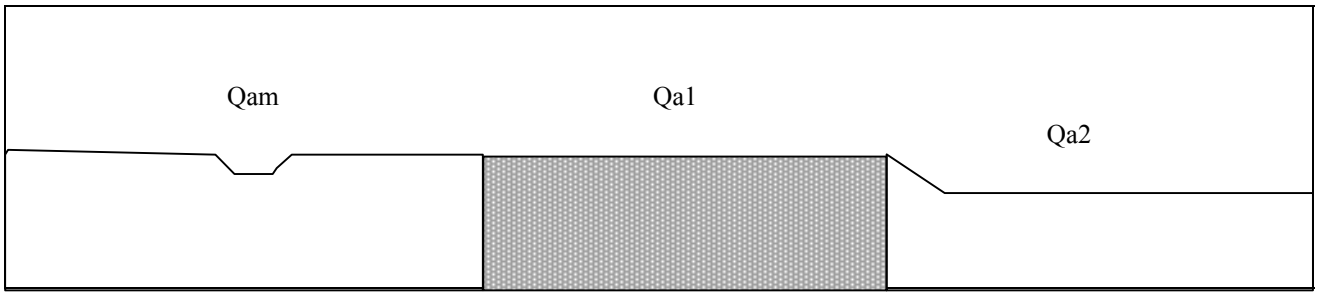
Land Unit: Quaternary alluvium, upper terrace	**Land Unit symbol:** Qa1
	% of study area: 4.7



General Description:

Areas of this land unit occur adjacent to the Acheron River from Buxton to north of Taggerty. The once-flat alluvial terrace has been dissected by the tributaries of the Acheron River to form a gently undulating plain. Provided land management practices maintain a high level of organic matter in the topsoil and topdress regularly with lime, productivity should remain high without any deterioration of the land or the adjacent water resource.

Site characteristics: **Site No.** 41

Parent material		Depth to seasonal watertable:	1.5 m
Age:	Quaternary	Potential recharge to groundwater:	Low
Lithology:	Alluvium	Flooding risk:	Low
Landform		Drainage:	Imperfectly drained
Pattern:	Gently undulating plain	Depth to hardrock:	> 5 m
Element:	Crest	Rock outcrop:	0%
Slope		Annual rainfall:	940 mm
Common:	1%		
Range:	0 - 2%		
Native vegetation:	Narrow-leaf Peppermint, Manna Gum		
Present land use:	Cleared, occasional cropping for corn and summer fodder crops but generally grazing of improved pastures		

Land degradation:

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

Soil profile characteristics:

Permeability	(measured - average, range):	220 (150 - 320) mm/day
	(estimated):	-
Available water capacity:		250 mm H_2O
Linear Shrinkage (B horizon):		Low (est.)

Soil profile description:

Land Unit symbol: Qa1

A11 0 - 10 cm Brown (10YR4/3) silty loam, weak subangular blocky structure, peds 4 mm, rough fabric, very firm consistence - dry, high organic matter, pH 4.9. Clear transition to:

A12 10 - 31 cm Yellowish brown (10YR5/4) silty loam, moderate subangular blocky structure, peds 15 mm, smooth fabric, moderately firm consistence - slightly moist, very few ironstone gravel fragments, pH 5.4. Clear transition to:

B21t 31 - 98 cm Yellowish brown (10YR5/6) silty clay loam, strong subangular blocky structure, peds 15 mm, moderately firm consistence - slightly moist, very few ironstone gravel fragments, pH 5.6. Gradual transition to:

BC 98 - 150^{+}cm Light yellowish brown (10YR6/4) silty loam, many coarse distinct orange/brown mottles, moderate subangular blocky structure, peds 3 mm, smooth fabric, moderately firm consistence - slightly moist, many ironstone/sandstone gravel fragments, pH 6.0.

Soil classification:

Factual Key (Northcote, 1979): Um 6.34 - 3/2/032

Australian Soil Classification (Isbell, 1992): Mottled, Mesotrophic, Brown; Dermosol; thick, non-gravelly, silty/silty, moderate

Unified Soil Group: CL

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

Horizon	pH	Gravel %	E.C. (salts)	Nutrient status	P	K	Al	Organic matter	Dispersibility
A11	4.9 **	1	VL	L	D	S	T	H	H
A12	5.4 **	1	VL	L	D	D	T	L	H
B21t	5.6	1	VL	L	D	D	S	VL	L
BC	6.0	25	VL	VL	D	D	S	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	$C_3T_2S_4$	High dispersibility of topsoil, high susceptibility to sheet/rill and wind erosion
Building foundations - slab - stumps/footings	 4 4	Imperfect drainage
Effluent disposal (septic tanks)	4	Imperfect drainage
Farm dams	5	Depth to seasonal water table < 2 metres, low suitability of subsoil, high permeability
Residential - rural - urban	5 4	Very low capability for farm dams; low capability for building foundations, effluent disposal and secondary roads Low capability for building foundations and secondary roads
Scenic value	3 & 4	Low Scenic Quality
Secondary roads	4	Imperfect drainage