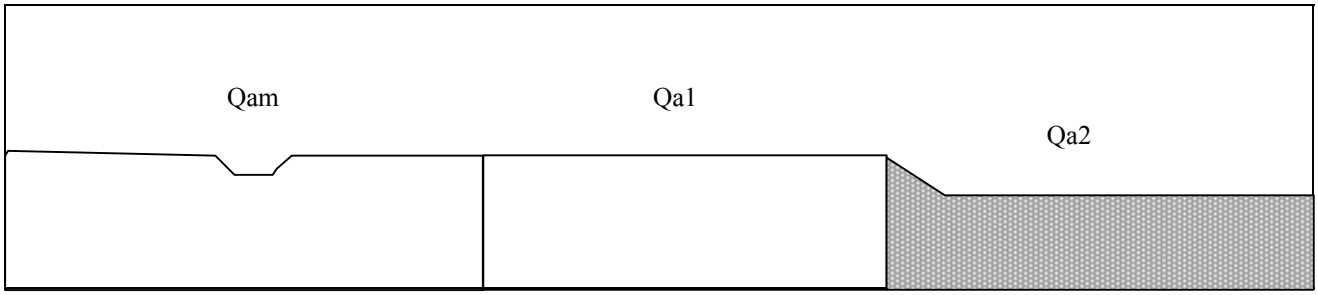
Land Unit: Quaternary alluvium, present flood plain	**Land Unit symbol:** Qa2
	% of study area: 4.5



General Description:

This land unit represents the current flood plain of the Acheron River. The soils are extremely variable, consisting mostly of uniform sandy loam profiles. They are extremely permeable but also, are highly susceptible to flooding. It is strongly advised that these soils are not used for any form of effluent disposal because of the high risk of contaminating the waters of subsurface aquifers and the Acheron River.

Site characteristics: **Site No.** 139

Parent material		Depth to seasonal watertable:	0 m
Age:	Quaternary	Potential recharge to groundwater:	Low
Lithology:	Alluvium	Flooding risk:	Very high
Landform		Drainage:	Well drained
Pattern:	Gently undulating plain	Depth to hardrock:	> 5 m
Element:	Lower terrace	Rock outcrop:	0%
Slope		Annual rainfall:	940 mm
Common:	1%		
Range:	0 - 1%		
Native vegetation:	River Red Gum, Blackwood		
Present land use:	Native and introduced pastures for the grazing of sheep and cattle (small areas for market garden produce)		

Land degradation:

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

Soil profile characteristics:

Permeability	(measured - average, range):	2200 (1200 - 3300) mm/day
	(estimated):	-
Available water capacity:		280 mm H_2O
Linear Shrinkage (B horizon):		5%

Soil profile description:

Land Unit symbol: Qa2

A 0 - 27 cm Dark yellowish brown (10YR3/4) fine sandy loam, weak subangular blocky structure, peds 25 mm moderately weak consistence - slightly moist, high organic matter, pH 5.4. Diffuse transition to:

B2 27 - 59 cm Dark yellowish brown (10YR3/6) fine sandy clay loam, weak subangular blocky structure, peds 15 mm, rough fabric, pH 5.7. Diffuse transition to:

B3 59 - 94 cm Yellowish brown (10YR5/6) fine sandy loam, apedal loose (structure), sandy fabric, loose consistence - moist, pH 5.8. Gradual transition to:

C 94 - 150 cm Yellowish brown (10YR5/4) fine sandy loam, apedal loose (structure), sandy fabric, loose consistence - wet, pH 6.1.

Soil classification:

Factual Key (Northcote, 1979):	Uc 6.14 - 2/1/027
Australian Soil Classification (Isbell, 1992):	Haplic, Eutrophic, Brown, Kandosol; moderate, non-gravelly, loamy/clay loam
Unified Soil Group:	SM

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

Horizon	pH	Gravel %	E.C. (salts)	Nutrient status	P	K	Al	Organic matter	Dispersibility
A	5.4 **	< 1	VL	VL	S	S	S	H	L
B2	5.7	1	VL	VL	S	S	S	L	L
B3	5.8	1	VL	VL	D	S	T	VL	L
C	6.1	1	VL	VL	D	M	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	$C_3T_1S_5$	Depth to seasonal water table < 1 metre, seasonal overland water flow, high susceptibility to wind erosion
Building foundations - slab - stumps/footings	 5 5	Depth to seasonal water table < 1 metre, highly susceptible to flooding
Effluent disposal (septic tanks)	5	Depth to seasonal water table < 1 metre, highly susceptible to flooding, excessive permeability may contaminate adjacent streams
Farm dams	5	Very low suitability of subsoil, depth to seasonal water table < 2 metres, excessive permeability
Residential - rural - urban	5 5	Very low capability for building foundations, effluent disposal, farm dams and secondary roads Very low capability for building foundations and secondary roads
Scenic value	1 & 2	-
Secondary roads	5	Depth to seasonal water table < 0.5 metres highly susceptible to flooding