

MAP UNIT SYMBOL: **Ssh** MAP UNIT: **Silurian sediments, drainage depression**
 Area: 9570 ha



A. GENERAL DESCRIPTION

The drainage lines on the sedimentary hills often extend to the crests, therefore the slope range is quite broad. The flood risk is low on the gentler sloping depressions, which may be as low as 3%. Although the soils are variable, there are two major soil types. On the steeper slopes, the uniform silty clays predominate, whereas on the gentler slopes, gradational soils with a lighter topsoil and heavier clays are common. The incidence of gully erosion is high due to the highly dispersive subsoil.

SITE CHARACTERISTICS

Parent Material Age:	Silurian/Ordovician	Depth to Seas. Watertable:	2-5 m
Parent Material Lithology:	Sedimentary	Flooding Risk:	High
Landform Pattern:	Rolling hills	Drainage:	Moderately well drained
Landform Element:	Drainage depression	Rock Outcrop:	0-2%
Slope a) common:	17%	Depth to Hard Rock:	>2.0 m
Slope b) range:	3-32%	Present Land Use:	Grazing

Potential Recharge to Groundwater: Low-Nil

Major Native Vegetation Species: Broad-leaved Peppermint, Long-leaved Box, Blackwood, Manna Gum, Kangaroo grass, Rushes, Red Stringybark, River Red Gum, Silver Wattle

LAND DEGRADATION

Land Degradation	Water Erosion		Wind Erosion	Mass Movement	Salting	Acidification
	sheet/rill	gully				
Susceptibility	High	High	High	High	High	Moderate
Incidence	Moderate	High	Low	Nil	High	Not available

B. SOIL PROFILE

PROFILE DESCRIPTION

A1	0-20 mm	Dark brown (10YR3/3) silty clay loam, weak subangular blocky structure, peds 2-5 mm, rough fabric, very weak consistence, a few fine subangular sedimentary gravel fragments, pH 5.5. Abrupt transition to:
A2	20-160 mm	Brown (10YR5/3) silty clay, weak subangular blocky structure, peds 10-20 mm, rough fabric, moderately firm consistence, pH 5.0. Clear transitions to:
B21	160-300 mm	Very dark greyish brown (10YR3/2) silty clay, moderate subangular blocky structure, peds 10-20 mm, rough fabric, moderately weak consistence, less than 2% fine subangular sedimentary gravel fragments, pH 5.0. Gradual transition to:
B22	300-402 mm	Very dark greyish brown (10YR3/2) silty clay, moderate subangular blocky structure, peds 5-10 mm, rough fabric, moderately weak consistence, pH 5.5. Gradual transition to:

B23	402-510 mm	Brown (10YR5/3) silty clay, fine faint orange mottles are common, moderate subangular blocky structure, peds 10-20 mm, rough fabric, moderately weak consistence, less than 2% fine subangular sedimentary gravel fragments, pH 6.0. Clear transition to:
B24	510-760 mm	Brown (10YR5/3) silty clay, fine faint orange mottles are common, moderate subangular blocky structure, peds 10-20 mm, rough fabric, moderately weak consistence, fine subangular sedimentary gravel fragments are common, pH 6.0. Gradual transition to:
B25	760-965 mm	Grey (10YR5/1) silty clay, coarse prominent orange mottles are common, moderate subangular blocky structure, peds 10-20 mm, smooth fabric, moderately weak consistence, less than 2% fine subangular sedimentary gravel fragments, pH 6.0. Gradual transition to:
B3	965-1330 mm+	Grey (10YR5/1) silty clay, many medium prominent orange and yellow mottles, strong subangular blocky structure, peds 10-20 mm, smooth fabric, moderately firm consistence, a few fine subangular sedimentary gravel fragments, pH 6.5.

CLASSIFICATION

Factual Key: Uf4.3, Gn4.51 (major).

Australian Soil Classification: Mottled, Mesotrophic, Brown Dermosol; Thin, non-gravelly, silty/clayey, deep
Unified Soil Group: ML

INTERPRETATION OF LABORATORY ANALYSIS*

Horizon	pH (CaCl ₂)	% Gravel	E.C. (salts)	Nutrient Status	P	K	Al	Organic matter	Dispersibility
A1	4.7	2.0	VL	M	S	S	S	H	L
A2	4.4**	<1	VL	L	D	S	T	H	L
B21	4.4**	1.5	VL	L	D	S	T	H	L
B22	4.4**	<1	VL	VL	D	S	T	H	M
B23	4.4**	1.4	VL	VL	D	S	T	H	M
B24	4.4**	12.3	VL	VL	D	S	S	M	M
B25	4.6	1.4	VL	L	D	S	S	L	H
B3	4.9	8.9	VL	L	D	D	S	VL	H

VL: Very Low L: Low M: Moderate H: High VH: Very High D: Deficient S: Satisfactory
T: Potentially Toxic NA: Not Available * see appendix D for analytical results ** Strongly Acidic

SOIL PROFILE CHARACTERISTICS:

Permeability: Slow (average 30 mm/day range 5-60 mm/day)

Available Water Capacity: Very high (266 mm H₂O)

Linear Shrinkage (B horizon): Low (7%)

C. LAND CAPABILITY ASSESSMENT

Land Use	Class	Major Limiting Feature(s)/Land Use
Agriculture	C ₂ T ₄ S ₄	Slope, susceptibility to sheet, rill and gully erosion
Effluent Disposal (septic tanks)	5	Flood risk
Farm Dams	3	Suitability of subsoil, depth to seasonal watertable, depth to hardrock
Building Foundations slab stumps/footings	5 5	Flood risk Flood risk