



A. GENERAL DESCRIPTION :

Narrow to moderately wide floodplains associated with Sunday Creek, Dry Creek and other major creeks excluding King Parrot Creek. The deep soils associated with these floodplains are characterised by a number of distinct layers which represent different periods of flooding and deposition. These layers are very similar to each other and are dark greyish brown silty loams with a high fine sand content. Pale and grey distinct mottles are present in the subsoil. The terrace is prone to flooding and impeded drainage as indicated by the oxidised root channels in the top soil. Occasionally the mapped unit may also contain the higher terrace Qa3 which has not been delineated because it is too narrow to map.

SITE CHARACTERISTICS :

Parent Material Age:	Quaternary	Depth to Seas. Watertable:	> 2.0 m
Parent Material Lithology:	Alluvium	Flooding Risk:	Very high
Landform Pattern:	Floodplain	Drainage:	Imperfectly drained
Landform Element:	Plain	Rock Outcrop:	0 %
Slope a) common:	< 1%	Depth to Hard Rock:	> 1.4 m
Slope b) range:	0 - 1%	Present Land Use:	Grazing
Potential Recharge to Groundwater:	Low		
Major Vegetation Species:	River Red Gum, Yellow Box, Kangaroo Grass, Wallaby Grass		

LAND DEGRADATION :

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

B. SOIL PROFILE

PROFILE DESCRIPTION

A1	0-50mm	Dark greyish-brown (10YR4/2) silty loam with fine sand, strong granular structure, peds 2-5mm, rough fabric, moderately weak consistence, a few oxidised root channels, pH 4.5. Abrupt transition to:
A2	50-170mm	Brown (10YR5/3) silty loam with fine sand, common faint fine pale mottles, weak platy structure, peds 20-50mm, rough fabric, moderately firm consistence, a few oxidised root channels, pH 4.6. Clear transition to:
2A	170-300mm	Very dark grey (10YR3/1) silty loam with fine sand, common faint fine pale mottles, weak platy structure, peds 10-20mm, rough fabric, moderately firm consistence, a few oxidised root channels, pH 4.7. Gradual transition to:
3A	300-450mm	Very dark greyish-brown (10YR3/2) silty loam with fine sand, common fine distinct pale mottles, weak platy structure, peds 20-50mm, rough fabric, moderately firm consistence, a few oxidised root channels, pH 4.7, gradual transition to:

- 4A** 450-1200mm Very dark greyish-brown (10YR3/2) silty loam with fine sand, many medium distinct grey and pale mottles, weak platy structure, peds 20-50mm, rough fabric, common oxidised root channels, pH5.3, gradual transition to:
- 4B** 1200-1400+mm Brown (10YR5/3) silty loam with fine sand, many medium distinct orange and pale mottles, weak platy structure, peds 20-50mm, rough fabric, moderately firm consistence, a few oxidised root channels, pH 6.8.

CLASSIFICATION

Factual Key (Northcote):	Um 4
Australian Soil Classification:	Sodic, Eutrophic, Black Kandosol; thin, non-gravelly, silty/silty, very 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
1A1	4.5**	<1	VL	L	D	S	S	H	L
1A2	4.6	2.0	VL	L	D	S	S	H	L
2A	4.7	<1	VL	L	D	D	S	H	L
3A	4.7	<1	VL	L	D	D	S	M	M
4A	5.3	2.4	VL	L	D	D	S	VL	M
4B	6.8	< 1	VL	L	D	D	S	VL	H

VL : Very low L : Low M : Moderate H : High VH : Very High D : Deficient S : Satisfactory
 T : Toxic * see appendix D for analytical results ** : Strongly acidic N.A. : Not Available

SOIL PROFILE CHARACTERISTICS:

Permeability :	Moderate (average 176mm/day, range 7-312 mm/day)
Available Water Capacity:	Very high (285 mmH ₂ O)
Linear Shrinkage (B horizon):	Very low (4%)

C. LAND CAPABILITY ASSESSMENT

Land Use	Class	Major Limiting Feature(s)/Land Use
Agriculture	C ₃ T ₁ S ₃	Climate, moderately dispersible top soil, moderate susceptibility to wind erosion
Effluent Disposal (septic tanks)	5	Very high risk of flooding
Farm Dams	5	Very low suitability subsoil
Secondary Roads	5	Very high flooding risk
Rural Residential	5	Effluent disposal, farm dams, secondary roads
Small Farms	5	Effluent disposal, farm dams, secondary roads