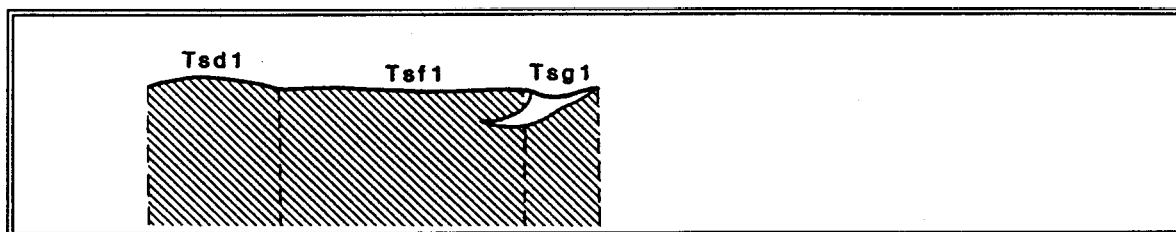


<b>Map Unit:</b>	Tertiary sediments, very gentle slope, gentle crest, drainage depression	<b>Map Unit Symbol:</b>	Tsf1, Tsd1, Tsg1
		<b>% of Study Area:</b>	0.9, 0.01, 0.1



#### General Description:

The Tertiary sediment soils in the Leichardt area are distinguished by their vivid red colour. They are red duplex with dark red loam top soils and red medium to heavy clay subsoils. Yellow mottles and calcium carbonate nodules are common at depth. Ironstone gravel occurs throughout. Because of the very gentle topography of the unit, the soils do not vary significantly between the crests, slopes and drainage lines. This description covers all three units.

#### Site characteristics:

<b>Parent material age:</b>	Tertiary	<b>Depth seasonal watertable:</b>	> 2m
<b>Lithology:</b>	Sediments	<b>Potential recharge to groundwater:</b>	Low
<b>Landform Pattern:</b>	Gently undulating rises	<b>Flooding risk:</b>	Nil
<b>Element:</b>	slope, drainage depression crest	<b>Drainage:</b>	Moderately well drained
<b>Slope common range:</b>	1% 0 - 3%	<b>Depth to hardrock:</b>	> 1.5m
<b>Rock outcrop:</b>	0%		

**Major vegetation:** Grey Box, Buloke, Hedge Wattle, Wallaby Grass, introduced grasses Present land use

**Present land use:** Grazing, cropping

<b>Land degradation:</b>	<b>Water erosion</b>		<b>Wind erosion</b>	<b>Salting</b>	<b>Acidification</b>
	<b>Sheet/rill</b>	<b>Gully</b>			
Susceptibility	Moderate	Moderate	Low	Low	Low
Incidence	Moderate	Low	Low	Low	Low

#### Soil profile characteristics:

Permeability (measured - average, range): (estimated):	5, 4 - 6 mm/day
Available water capacity:	265 mm H <sub>2</sub> O
Linear shrinkage (B horizon):	11.4 %

**Soil profile description:**

- A1 0-18 cm Brownish black (7.5YR3/2) loam, moderate structure, subangular blocky peds 10-20mm, smooth fabric, moderately weak consistence, a few organic segregations, a few medium sized rounded ferruginous gravel nodules, pH 7.1. Clear transition to
- B21 18-35 cm Dark reddish brown (2.5YR3/4) medium clay, moderate structure, subangular blocky peds 10-20mm, smooth fabric, moderately weak consistence, less than 2% organic segregations, less than 2% medium sized rounded ferruginous gravel fragments, pH 7.6. Gradual transition to
- B22 35-81 cm Reddish brown (5YR4/6) heavy clay, strong structure, subangular blocky peds 5-10mm, smooth fabric, moderately weak consistence, less than 2% organic segregations, pH8.6. Clear transition to
- B23 81-146 cm Reddish brown (5YR4/6) medium heavy clay, common distinct coarse orange mottles, strong structure, subangular blocky peds 5-10mm, smooth fabric, moderately weak consistence, a few calcareous segregations, common conglomerates of calcium carbonate and ferruginous fine to medium gravel fragments, pH 9.2. Clear transition to
- B24 146 + cm Brown (10YR4/6) medium heavy clay, common distinct coarse red mottles, strong structure, angular blocky peds 5-10mm, smooth fabric, moderately firm consistence, common ferruginous segregations, a few medium sized rounded ferruginous gravel nodules, pH9.3.

**Soil classification:**

**Factual Key (Northcote):** Dr 2.13  
**Australian Soil Classification:** Sodic, Calcic, Red, Chromosol; very deep, medium, loamy, non-gravelly  
**Unified Soil Group:** CL

**Interpretation of soil analyses\***

Horizon	pH	Gravel %	E.C. (salts)	Nutrient status	P	K	Al	Organic matter	Dispersibility
A <sub>1</sub>	7.1	18.1	VL	M	D	S	S	M	M
B <sub>21</sub>	7.6	3.9	VL	H	D	S	S	L	M
B <sub>22</sub>	8.6	1.5	VL	H	D	S	S	VL	M
B <sub>23</sub>	9.2	28.3	L	H	D	S	S	VL	M
B <sub>24</sub>	9.3	6.4	L	H	D	S	S	VL	M

VL : Very Low; L : Low; M : Moderate; H : High;  
 VH : V e r y High; D : Deficient; S : Satisfactory; T : Toxic; \*\*: Acid \* See Appendix 4 for analytical results

## Land capability assessment

Land use	Class	Major limiting feature(s)/landuse
Agriculture (CTS values)	C <sub>3</sub> T <sub>1</sub> S <sub>3</sub>	Moderately susceptible to sheet/rill and gully erosion, moderately dispersible top soil, moderate gravel content, climate
Effluent disposal (septic tanks)	5	Very slow permeability
Farm dams (earthen)	3	Moderately shallow depth to bedrock/hardpan, moderate suitability of subsoil, moderate depth to seasonal watertable
Building foundations * slab	3	Moderate drainage
* stumps/footings	3	Moderate drainage
Secondary roads	3	Moderate drainage, Universal Soil Group
Urban residential	3	Secondary roads < building foundations
Rural residential	5	Effluent disposal.