

**CLAY LOAM OVER RED CLAY**

(Clayey red brown earth)

**General Description:** *Clay loam abruptly overlying a well structured red clay, calcareous with depth*

**Landform:** Very gently undulating plains.

**Substrate:** Tertiary clay (Hindmarsh Clay equivalent).

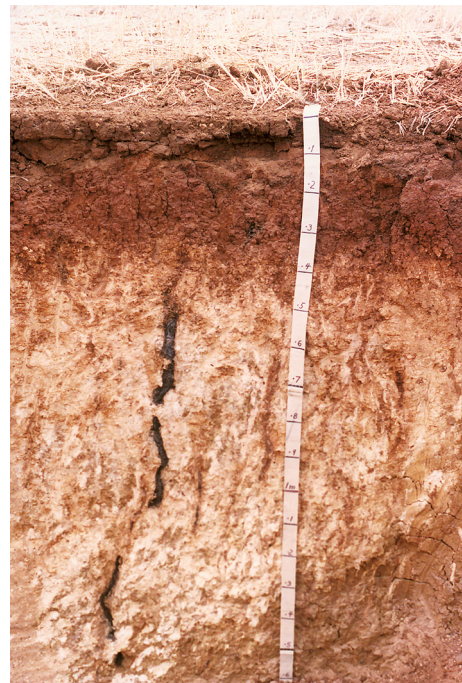
**Vegetation:**

<b>Type Site:</b>	Site No.:	EL037	1:50,000 mapsheet:	6029-4 (Yeelanna)
	Hundred:	Shannon	Easting:	567750
	Section:	104	Northing:	6222950
	Sampling date:	16/03/1989	Annual rainfall:	425 mm average

Flat. Firm surface with no stones.

**Soil Description:**

<i>Depth (cm)</i>	<i>Description</i>
0-5	Dark reddish brown moderately calcareous clay loam with weak subangular blocky structure. Abrupt to:
5-12	Yellowish red massive slightly calcareous clay loam. Abrupt to:
12-30	Dark red slightly calcareous medium clay with subangular blocky structure. Clear to:
30-45	Orange very highly calcareous light medium clay with weak subangular blocky structure. Clear to:
45-80	Orange very highly calcareous massive light medium clay. Diffuse to:
80-130	Orange very highly calcareous massive light medium clay. Gradual to:
130-170	Yellowish brown highly calcareous medium heavy clay with coarse lenticular structure (Hindmarsh Clay equivalent).



**Classification:** Sodic, Hypercalcic, Red Chromosol; medium, non-gravelly, clay loamy / clayey, deep



## Summary of Properties

<b>Drainage:</b>	Well drained. Soil rarely remains wet for more than a few days.
<b>Fertility:</b>	Inherent fertility is high, as indicated by the exchangeable cation data. High clay content provides nutrient retention capacity. High calcium saturation and surface carbonate may indicate recent lime application. There are no deficiencies of measured nutrients. Organic carbon levels are slightly low.
<b>pH:</b>	Alkaline at the surface, strongly alkaline with depth.
<b>Rooting depth:</b>	Not recorded. Estimate 80 cm in pit.
<b>Barriers to root growth:</b>	
<b>Physical:</b>	There are no physical barriers to root growth.
<b>Chemical:</b>	High pH from 80 cm restricts deeper root growth.
<b>Waterholding capacity:</b>	Approximately 130 mm in potential rootzone.
<b>Seedling emergence:</b>	Satisfactory.
<b>Workability:</b>	Firm surface is easily worked, although stickiness may be a problem if too wet.
<b>Erosion Potential:</b>	
<b>Water:</b>	Low.
<b>Wind:</b>	Low.

## Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO <sub>4</sub> mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
0-5	8.0	7.4	4	0.32	2.12	1.3	46.0	-	-	3.59	1.99	8.1	5.40	0.62	44.6	37.1	5.12	0.20	2.24	1
5-12	8.0	7.3	1	0.22	1.35	1.4	7.7	-	-	2.29	0.32	7.6	1.88	0.12	22.7	18.2	3.20	0.18	1.11	1
12-30	8.1	7.3	1	0.20	.94	0.25	8.5	-	-	4.32	0.19	16.4	0.41	0.09	48.3	37.4	8.63	0.75	1.52	2
30-45	8.6	8.0	26	0.26	1.23	0.23	5.5	-	-	5.27	0.19	14.4	1.63	0.06	46.5	36.9	7.56	0.77	1.23	2
45-80	9.2	8.1	31	0.36	2.13	<0.1	4.0	-	-	5.07	0.29	7.3	0.98	0.08	48.2	39.0	7.30	0.69	1.26	1
80-130	9.6	8.3	37	0.54	4.34	<0.1	3.1	-	-	4.81	0.18	2.8	0.97	0.04	45.3	34.4	8.38	0.92	1.60	2
130-170	9.2	8.2	8	0.95	4.85	<0.1	3.1	-	-	25.80	0.45	6.9	0.95	0.08	48.7	30.7	11.6	3.58	2.73	7

**Note:** CEC (cation exchange capacity) is a measure of the soil's capacity to store and release major nutrient elements. ESP (exchangeable sodium percentage) is derived by dividing the exchangeable sodium value by the CEC

**Further information:** [DEWNR Soil and Land Program](#)

