

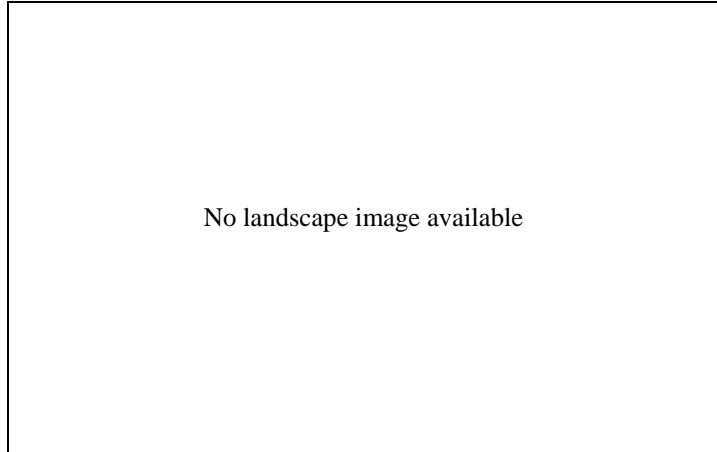
CLAY LOAM OVER RED CLAY (Clayey red brown earth)

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:



Type Site: Site No.: EL037

1:50,000 sheet:	6029-4 (Yeelanna)	Hundred:	Shannon
Annual rainfall:	410 mm	Sampling date:	16/03/89
Landform:	Flat		
Surface:	Firm with no stones		

Soil Description:

Depth (cm)	Description
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

Drainage	Well drained. Soil rarely remains wet for more than a few days.
Fertility	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.
pH	Alkaline at the surface, strongly alkaline with depth.
Rooting depth	Not recorded. Estimate 80 cm in pit.
Barriers to root growth	
Physical:	There are no physical barriers to root growth.
Chemical:	High pH from 80 cm restricts deeper root growth.
Water holding capacity	Approximately 130 mm in potential root zone.
Seedling emergence:	Satisfactory.
Workability:	Firm surface is easily worked, although stickiness may be a problem if too wet.
Erosion Potential	
Water:	Low.
Wind:	Low.

Laboratory Data

Depth cm	pH H ₂ O	pH CaCl ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO ₄ -S 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