SANDY LOAM OVER RED CLAY

General Description: *Sandy loam with a pale coloured A2 layer over a well structured red clay, calcareous with depth*

Landform: Gently undulating rises.

Substrate: Veneer of calcified clay over calcrete.

Vegetation: Euc. cneorifolia / Euc. diversifolia.

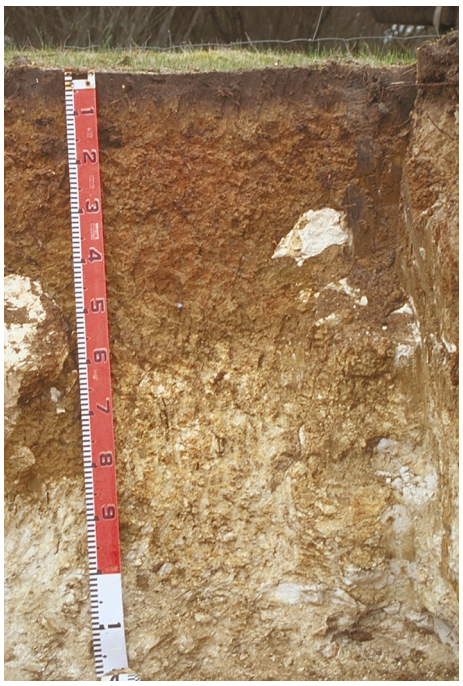
Type Site:

Site No.:	CK019	1:50,000 mapsheet:	6426-4 (Kingscote)
Hundred:	Haines	Easting:	745950
Section:	233	Northing:	6033200
Sampling date:	25/5/95	Annual rainfall:	540 mm average

Crest of rise, 1.5% slope. Firm surface with 2-10% calcrete (60-200 mm).

Soil Description:

Depth (cm)	*Description*
0-9	Very dark greyish brown soft massive fine sandy loam. Abrupt to:
9-14	Pale brown loose loamy fine sand.
14-25	Yellowish red hard medium heavy clay with strong coarse angular blocky structure. Clear to:
25-45	Yellowish red and olive brown hard medium heavy clay with moderate coarse angular blocky structure. Clear to:
45-60	Light olive brown very hard medium heavy clay with weak coarse prismatic structure. Clear to:
60-110	Pale yellow and dark brown firm highly calcareous light medium clay with more than 50% fine carbonate segregations and 10-20% calcrete fragments. Clear to:
110-130	Calcrete.



Classification: Mottled, Hypercalcic, Red Chromosol; medium, slightly gravelly, loamy / clayey, deep

Summary of Properties

Drainage: Moderately well drained. Subsoil clay perches water, saturating the upper profile for up to a week following heavy or prolonged rainfall.

Fertility: Inherent fertility is moderate, as indicated by the exchangeable cation data. Surface nutrient retention capacity relies on organic matter. Concentrations of all tested elements are adequate at the sampling site.

pH: Neutral to slightly acidic at the surface, alkaline in the lower subsoil.

Rooting depth: 110 cm in pit.

Barriers to root growth:

Physical: Clayey subsoil restricts root growth to some extent. Calcrete at 110 cm effectively prevents deeper root growth.

Chemical: High subsoil aluminium levels, and possibly subsoil trace element deficiencies prevent optimal root growth.

Waterholding capacity: Approximately 110-120 mm in the rootzone.

Seedling emergence: Satisfactory, provided that surface condition is maintained.

Workability: Firm surface is easily worked.

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H_2O	pH $CaCl_2$	CO_3 %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	Avail. K mg/kg	SO_4 mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)			CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP	Ext Al mg/kg	React Fe mg/kg
											Cu	Mn	Zn		Ca	Mg	Na	K			
Paddock	6.7	6.0	<1	0.13	1.0	2.2	36	260	7.8	1.6	0.69	14	1.5	5.8	5.69	1.00	0.20	0.68	3.4	<1	1000
											*1.1	-	*1.7								
0-9	6.4	5.6	<1	0.09	0.5	2.3	8	220	6.5	1.2	-	-	-	9.9	7.26	1.36	0.24	0.50	2.4	<1	723
9-14	6.2	5.4	0	0.09	0.6	1.3	3	160	7.9	1.2	-	-	-	9.1	6.90	1.41	0.27	0.43	3.0	<1	641
14-25	6.7	6.0	1	0.13	0.4	1.1	2	540	4.8	1.4	-	-	-	29.5	21.6	4.58	0.78	1.71	2.6	1.9	980
25-45	7.0	6.2	2	0.13	0.4	0.7	2	610	4.5	0.9	-	-	-	34.7	24.9	4.35	0.94	1.98	2.7	32	1237
45-60	8.0	7.4	5	0.30	0.4	0.5	2	660	5.4	0.2	-	-	-	40.5	32.9	3.74	1.05	2.16	2.6	8.0	908
60-110	8.5	7.8	6	0.33	1.1	0.6	2	330	12	0.3	-	-	-	23.2	20.3	2.52	1.36	0.85	5.9	1.0	552
110-130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Paddock sample bulked from cores (0-10 cm) taken around the pit.
* EDTA trace element analyses for paddock sample.
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