SAND OVER FRIABLE SANDY CLAY LOAM

General Description: *Thick bleached sand overlying a friable brown, yellow and red sandy clay loam, calcareous with depth*

Landform: Undulating rises in relict coastal dune - corridor systems.

Substrate: Calcreted calcarenite.

Vegetation: Pink gum.

Type Site:

Site No.:	SE043	1:50,000 mapsheet:	6925-1 (Keith)
Hundred:	Stirling	Easting:	446550
Section:	380	Northing:	6007300
Sampling date:	08/11/1995	Annual rainfall:	485 mm average

Lower slope of undulating rise, 3% slope. Soft surface.

Soil Description:

Depth (cm)	*Description*
0-13	Soft dark grey loamy sand. Abrupt to:
13-30	Soft brown light loamy sand. Sharp to:
30-45	Soft bleached sand. Sharp to:
45-70	Firm orange and brown sandy clay loam with weak coarse columnar breaking to weak polyhedral structure. Abrupt to:
70-110	Firm orange and yellow sandy clay loam with weak polyhedral structure and 10-20% calcrete fragments.

Classification: Bleached, Hypocalcic, Yellow Chromosol; thick, non-gravelly, sandy / clay loamy, deep.

Summary of Properties

Drainage: Rapidly drained. The soil is unlikely to remain wet for more than a few hours.

Fertility: Natural fertility is low due to the low clay content of the surface. The CEC values indicate that surface soil fertility is mainly due to its favourable organic matter levels. Data indicate that phosphorus, potassium and sulphur levels are adequate, but magnesium and calcium deficiencies are possible.

pH: Slightly acidic in the surface, slightly alkaline in the deep subsoil.

Rooting depth: 110 cm, but few roots below 70 cm.

Barriers to root growth:

Physical: None apparent.

Chemical: None apparent.

Waterholding capacity: Approximately 100 mm in rootzone (moderate).

Seedling emergence: Fair to good depending on degree of water repellence (strong at sampling site).

Workability: Good.

Erosion Potential:

Water: Moderately low.

Wind: Moderate, due to sandy water repellent surface.

Laboratory Data

Depth cm	pH H_2O	pH $CaC1_2$	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
											Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
0-13	6.4	5.4	0	0.07	0.49	1.3	34	304	10	0.5	-	-	-	-	4.4	2.93	0.71	0.09	0.59	na
13-30	6.6	5.9	0	0.04	0.22	0.5	35	131	10	0.4	-	-	-	-	3.0	2.43	0.59	0.02	0.23	na
30-45	6.4	5.6	0	0.02	0.13	0.1	22	61	6	0.1	-	-	-	-	1.4	0.77	0.36	0.02	0.08	na
45-70	7.0	6.1	0	0.05	0.19	0.3	10	187	9	1.0	-	-	-	-	8.2	6.17	1.67	0.14	0.59	1.7
70-110	7.4	6.7	0	0.09	0.72	0.2	<4	162	25	0.9	-	-	-	-	10.5	7.70	1.89	0.16	0.37	1.5

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