BLEACHED SAND OVER SANDY CLAY LOAM

General Description: *Thick bleached sand over a brown sandy clay loam*

Landform: Gently undulating plains.

Substrate: Tertiary sandy clay (Parilla Sand equivalent)

Vegetation: Mallee

Type Site: Site No.: MM042

1:50,000 sheet:	6927-2 (Parrakie)	Hundred:	Allenby
Annual rainfall:	400 mm	Sampling date:	29/11/91
Landform:	Crest of low sandhill		
Surface:	Loose with no stones		

Soil Description:

Depth (cm)	*Description*
0-11	Brown loose sand. Abrupt to:
11-42	Bleached loose sand. Clear to:
42-66	Yellowish brown massive light sandy clay loam with minor fine carbonate segregations and tongues of bleached loose sand. Clear to:
66-93	Yellowish brown and yellowish red massive sandy clay loam with minor fine carbonate segregations. Abrupt to:
93-125	Yellowish red and brownish yellow massive sandy clay loam with minor fine carbonate segregations. Sharp to:
125-205	Red and brownish yellow massive sandy clay with minor fine carbonate segregations. Diffuse to:
205-215	Yellowish red and yellowish brown massive sandy clay.

Classification: Bleached, Hypocalcic, Brown Kandosol; thick, non-gravelly, sandy / clay loamy, moderate

Summary of Properties

Drainage Rapidly drained. Soil never remains saturated for more than a few hours.

Fertility Inherent fertility is low as indicated by the exchangeable cation data, and low clay and organic matter contents. Phosphorus, nitrogen, zinc and copper deficiencies are likely. At the sampling site, potassium is also deficient. Manganese may be needed for lupins.

pH Slightly acidic at the surface, alkaline with depth.

Rooting depth 66 cm in pit, but few roots below 42 cm.

Barriers to root growth

Physical: No physical barriers.

Chemical: No barriers, but low nutrient status and retention capacity limit root depth.

Water holding capacity 25 mm.

Seedling emergence: Usually reduced by water repellence.

Workability: Soft to loose surface is easily worked.

Erosion Potential

Water: Low.

Wind: Moderate to moderately high.

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	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC cmol (+)/kg	Exchangeable Cations cmol(+)/kg				ESP
										Cu	Fe	Mn	Zn		Ca	Mg	Na	K	
Paddock	6.5	6.5	<0.1	0.07	0.40	0.29	12	63	0.5	0.05	12	1.5	0.31	2.0	1.37	0.44	0.15	0.11	na
0-11	6.3	6.2	<0.1	0.05	0.25	0.24	14	31	1.0	0.05	10	0.97	0.27	1.5	1.27	0.27	0.06	0.10	na
11-42	6.2	6.2	<0.1	0.04	0.22	0.06	8.6	16	0.1	0.06	7.6	0.11	0.08	0.9	0.56	0.14	0.03	0.08	na
42-66	8.6	7.3	<0.1	0.12	0.28	0.10	3.9	160	0.8	0.07	13	0.03	0.06	7.7	4.79	2.07	0.12	0.42	1.6
66-93	7.7	6.8	<0.1	0.05	0.27	0.05	0.93	140	1.0	0.06	7.0	0.02	0.05	5.5	3.00	2.22	0.15	0.33	2.7
93-125	8.2	7.1	<0.1	0.09	0.36	0.07	0.40	210	3.4	0.06	6.5	0.05	0.05	8.3	3.90	3.72	0.32	0.55	3.9
125-205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
205-215	8.6	7.0	<0.1	0.10	0.79	0.05	0.23	240	7.3	0.14	7.8	0.15	0.04	10.8	3.15	5.53	1.50	0.60	13.9

Note: Paddock sample bulked from cores (0-10 cm) taken around the pit.

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.