

THICK BLEACHED SAND OVER SANDY CLAY LOAM

General Description: *Thick bleached sand over a red or brown weakly structured sandy clay loam*

Landform: Undulating dunefields.

Substrate: Windblown calcareous sandy loam (mixed Woorinen Formation and Molineaux Sand).

Vegetation: Mallee / heath



Type Site: Site No.: MM074

1:50,000 sheet:	6827-3 (Moorlands)	Hundred:	Roby
Annual rainfall:	425 mm	Sampling date:	1992
Landform:	Flat between sandhills		
Surface:	Soft with no stones		

Soil Description:

Depth (cm)	Description
0-15	Very dark grey loose single grain sand. Clear to:
15-30	Brown loose single grain sand. Diffuse to:
30-80	Very pale brown (bleached) single grain sand. Sharp to:
80-90	Yellowish red firm sandy clay loam with weak coarse columnar structure. Gradual to:
90-110	Yellowish red friable massive light sandy clay loam. Diffuse to:
110-140	Yellowish brown fine massive light sandy loam. Diffuse to:
140-210	Very pale brown fine highly calcareous sandy loam.



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

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. Phosphorus and nitrogen deficiencies are commonplace, although P levels at sampling site are adequate. Copper and zinc deficiencies can be expected, but levels are high at sampling site. Manganese may be needed for lupins. Organic carbon levels are good.
pH	Neutral at the surface, alkaline with depth.
Rooting depth	90 cm in pit.
Barriers to root growth	
Physical:	No physical barriers
Chemical:	No chemical barriers, but low nutrient status / retention capacity restricts root growth.
Water holding capacity	65 mm in root zone.
Seedling emergence:	Can be reduced by water repellence in dry years.
Workability:	Soft / loose surface is easily worked.
Erosion Potential	
Water:	Low.
Wind:	Moderate.

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	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	7.3	6.7	<1	0.05	0.43	0.8	17	85	<0.4	0.74	16	2.7	1	3.0	2.86	0.40	0.07	0.22	na
0-15	7.0	6.6	<1	0.03	0.32	0.7	18	92	<0.4	1	15	2.1	0.73	2.8	3.76	0.41	0.05	0.25	na
15-30	6.8	6.4	<1	0.02	0.19	0.2	9	69	<0.4	0.08	14	0.79	<0.06	1.6	1.21	0.21	0.05	0.14	na
30-80	7.5	7.2	<1	0.02	0.2	<0.1	4	51	<0.4	<0.05	4.1	0.22	0.11	1.3	0.76	0.13	0.05	0.13	na
80-90	7.9	7.2	<1	0.04	0.4	0.1	6	140	<0.4	0.06	7.0	0.17	<0.06	8.2	6.14	1.65	0.20	0.44	2.4
90-110	8.1	7.4	1	0.03	0.25	<0.1	<2	130	0.76	0.46	6.6	0.17	1	7.6	5.64	1.93	0.21	0.38	2.8
110-140	8.1	7.4	<1	0.03	0.44	<0.1	<2	78	<0.4	0.52	10	0.21	0.89	4.1	3.32	1.22	0.11	0.24	2.7
140-210	9.2	8.0	5	0.06	0.37	<0.1	<2	52	<0.4	0.05	2.6	0.15	0.06	2.0	2.32	0.58	0.08	0.12	na

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.