

THICK BLEACHED SAND OVER SANDY LOAM

General Description: *Thick to very thick sand over a red or brown sandy loam, usually calcareous with depth*

Landform: Plains with scattered depressions and stony rises, and limited areas of irregular sandhills.

Substrate: Medium textured Tertiary sediments (Parilla Sand equivalent).

Vegetation: Mallee.



Type Site: Site No.: MM140

1:50,000 sheet: 6928 - 2 (Nobah)
Annual rainfall: 300 mm
Landform: Dune slope, 4%
Surface: Loose with no stones

Hundred: Mindarie
Sampling date: 22/02/99

Soil Description:

Depth (cm)	Description
0-7	Brown loose loamy sand. Clear to:
7-65	Light brown (bleached) soft sand. Clear to:
65-77	Brown friable massive sandy loam. Abrupt to:
77-145	Yellowish red soft massive sandy loam. Clear to:
145-165	Yellowish red slightly calcareous friable fine sandy clay loam with moderate fine angular blocky structure.



Classification: Bleached, Eutrophic, Red Kandosol; thin, non-gravelly, sandy / loamy, deep

Summary of Properties

Drainage	Well drained. Soil never remains saturated for more than a few days.
Fertility	Inherent fertility is low, as indicated by the exchangeable cation data. Nutrient retention capacity is low due to low clay and organic matter content. Regular phosphorus applications are essential. Nitrogen levels depend on cropping history and legume status of pastures. Occasional zinc and copper deficiencies are likely. Concentrations of both are marginal at the sampling site. Phosphorus levels are low.
pH	Neutral at the surface, alkaline with depth.
Rooting depth	Not recorded. Estimate 77 cm in pit.
Barriers to root growth	
Physical:	There are no barriers.
Chemical:	There are no chemical barriers - root growth is restricted by low nutrient status and retention capacity.
Water holding capacity	Approximately 60 mm in the estimated root zone.
Seedling emergence:	Satisfactory, although water repellence may be a problem in dry seasons.
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	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	
Paddock	6.8	6.7	-	0.06	0.9	0.44	7	136	-	0.8	0.2	-	1.6	0.4	3.0	2.0	0.51	< 0.1	0.22	na
0-7	7.2	7.4	-	0.06	0.9	0.37	10	112	-	1.0	0.1	-	1.9	1.0	3.2	1.9	0.61	< 0.1	0.28	na
7-65	7.4	7.4	-	0.03	0.4	0.10	1	50	-	0.6	0.3	-	0.2	0.1	1.9	1.5	0.35	< 0.1	0.09	na
65-77	7.5	7.1	-	0.03	0.4	0.07	1	80	-	0.7	0.3	-	0.1	0.1	4.3	1.8	1.0	< 0.1	0.18	2.3
77-145	8.6	8.0	-	0.10	1.4	0.07	1	129	-	1.1	0.2	-	0.1	0.1	5.1	1.8	2.0	< 0.1	0.27	2.0
145-165	9.5	8.5	-	0.30	2.9	0.11	1	453	-	6.6	0.5	-	0.4	0.2	12.5	3.4	6.7	2.8	1.3	22.4

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.