

## THICK SAND OVER SANDY CLAY

**General Description:** *Thick bleached sand over a coarsely structured red or brown clay*

**Landform:** Very gently undulating plain.

**Substrate:** Indurated sandy clay loam (Tertiary Parilla Sand equivalent).

**Vegetation:** Mallee / Banksia scrub



<b>Type Site:</b>	Site No.:	MM063	1:50,000 mapsheet:	7026-4 (Bainton)
	Hundred:	Day	Easting:	476000
	Section:	27	Northing:	6069950
	Sampling date:	26/8/1992	Annual rainfall:	375 mm average

Flat, loose surface, no stones.

### Soil Description:

Depth (cm)	Description
0-10	Very dark greyish brown loose single grain sand. Abrupt to:
10-50	Very pale brown (bleached) loose single grain sand with 2-10% ironstone nodules. Sharp to:
50-80	Yellowish red and orange hard sandy clay with coarse columnar structure. Diffuse to:
80-150	Red and yellowish brown hard massive heavy sandy clay loam. Diffuse to:
150-190	Red and yellowish brown hard massive sandy clay loam. Sharp to:
190-200	Sandstone.



**Classification:** Bleached-Sodic, Eutrophic, Red Chromosol; thick, non-gravelly, sandy / clayey, very deep



## Summary of Properties

- Drainage:** Rapidly to well drained. Soil never remains wet for more than a day or so following heavy or prolonged rainfall.
- Fertility:** Inherent fertility is low, as indicated by the exchangeable cation data. Sandy surface has very little nutrient retention capacity due to low clay and organic matter contents, but clayey subsoil has moderate capacity, and prevents leaching losses. Phosphorus and nitrogen are deficient at the sampling site, as is copper, and zinc levels are marginal.
- pH:** Neutral at the surface, alkaline with depth.
- Rooting depth:** 80 cm in pit.
- Barriers to root growth:**
- Physical:** The coarsely structured clayey subsoil restricts root proliferation to some extent.
  - Chemical:** Low nutrient status / retention capacity is the main reason for poor root growth.
- Waterholding capacity:** 75 mm in rootzone.
- Seedling emergence:** Reduced by water repellence in dry seasons.
- Workability:** Loose / soft surface is easily worked.
- Erosion Potential:**
- Water:** Low.
  - Wind:** Moderate.

## Laboratory Data

Depth cm	pH H <sub>2</sub> O	pH CaCl <sub>2</sub>	CO <sub>3</sub> %	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	6.7	6.3	1	0.02	0.23	0.6	5	63	<0.40	<0.05	17	2.9	0.48	2.7	2.60	0.48	0.06	0.14	na
0-10	6.6	6.3	<1	0.02	0.21	0.4	5	52	<0.40	<0.05	17	2.7	0.1	2.2	1.93	0.36	0.07	0.08	na
10-50	7.3	7.2	<1	0.02	0.1	<0.1	<2	<40	<0.40	<0.05	5.7	0.12	0.08	1.3	0.83	0.14	0.06	0.09	na
50-80	7.5	6.7	<1	0.03	0.23	0.1	<2	120	0.59	<0.05	10	0.09	0.08	10.6	5.66	3.94	0.24	0.32	2.3
80-120	7.6	6.7	<1	0.03	0.25	<0.1	<2	65	0.76	<0.05	5.6	0.12	0.12	6.6	3.16	2.76	0.28	0.19	4.2
120-150	7.7	6.8	<1	0.03	0.25	<0.1	<2	63	0.41	<0.05	4.9	0.07	0.14	6.3	2.83	3.12	0.38	0.17	6.0
150-190	8.1	7.1	<1	0.04	0.36	<0.1	<2	53	<0.40	<0.05	4.1	0.12	<0.06	5.8	2.39	2.99	0.40	0.14	6.9

- 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.

**Further information:** [DEWNR Soil and Land Program](#)

