

SHALLOW SANDY LOAM OVER CALCRETE

General Description: *Sandy loam to sandy clay loam with variable calcareous rubble, over rubbly calcrete at shallow depth*

Landform: Flat to gently undulating plain.

Substrate: Calcreted lagoonal limestone (Bungunnia Limestone equivalent).

Vegetation: *Melaleuca acuminata* and *Eucalyptus foecunda* mallee scrub

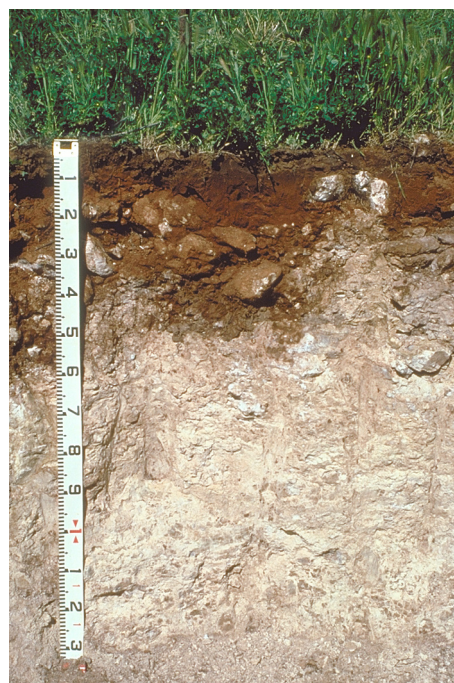


Type Site:	Site No.:	MM070	1:50,000 mapsheet:	6827-3 (Moorlands)
	Hundred:	Roby	Easting:	384700
	Section:	36	Northing:	6085900
	Sampling date:	1992	Annual rainfall:	380 mm average

Flat, firm surface, 10-20% calcrete stone (60-200 mm).

Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-8	Reddish brown friable massive sandy loam. Clear to:
8-18	Reddish brown friable massive sandy clay loam. Clear to:
18-48	90% calcrete fragments (60-200 mm) in a yellowish brown very highly calcareous sandy clay loam matrix. Sharp to:
48-85	Calcreted limestone. Clear to:
85-130	Very pale brown very highly calcareous massive sandy clay loam with 20-50% calcrete fragments and 10-20% limestone fragments.



Classification: Haplic, Petrocalcic, Red Kandosol; medium, gravelly, loamy / clay loamy, shallow



Summary of Properties

- Drainage:** Well drained. Soil never remains saturated for more than a few days.
- Fertility:** Inherent fertility is moderately low, as indicated by the exchangeable cation data. Regular phosphorus applications are essential (levels are adequate at sampling site), and zinc and copper are occasionally required. Manganese may be needed on cereals. Organic carbon levels are good.
- pH:** Neutral at the surface, alkaline with depth.
- Rooting depth:** 48 cm in pit, but few roots below 18 cm.
- Barriers to root growth:**
- Physical:** The calcrete prevents significant root development.
 - Chemical:** No chemical barriers above the calcrete.
- Waterholding capacity:** 15 mm in rootzone.
- Seedling emergence:** Slight limitation due to stoniness.
- Workability:** Firm surface is easily worked, but stones interfere with and abrade equipment.
- Erosion Potential:**
- Water:** Low.
 - Wind:** Low.

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	7.0	<1	0.13	0.72	1.3	27	340	1.7	-	-	-	-	8.4	6.92	0.81	0.09	0.75	1.1
0-8	6.8	6.4	1	0.08	0.52	1.4	24	380	1.6	-	-	-	-	9.2	9.39	0.96	0.10	0.66	1.1
8-18	7.4	7.0	<1	0.09	0.38	0.58	7.5	270	1.2	-	-	-	-	7.8	6.31	0.67	0.19	0.51	2.4
18-48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48-85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85-130	8.7	8.1	51	0.43	3.57	0.13	<2.0	230	0.7	-	-	-	-	5.7	4.24	1.66	0.59	0.43	10.4

- 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.

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

