

BLEACHED SILICEOUS SAND

General Description: *Very thick bleached sand, organically darkened at the surface, over a brown or yellow slightly more clayey subsoil*

Landform: Flat to very gently undulating plain with frequent low sandhills, isolated stony rises and swamps in depressions

Substrate: Windblown Molineaux Sand.

Vegetation: Mallee heath



Type Site: Site No.: MM103

1:50,000 sheet:	6826-2 (Culburra)	Hundred:	Richards
Annual rainfall:	485 mm	Sampling date:	10/03/93
Landform:	Sandhill on gently undulating plain		
Surface:	Soft with no stones		

Soil Description:

Depth (cm)	Description
0-13	Dark greyish brown loose sand. Clear to:
13-22	Brown loose sand. Gradual to:
22-40	Very pale brown (bleached) loose sand. Diffuse to:
40-70	Very pale brown (bleached) loose sand. Clear to:
70-110	Very pale brown loose sand with lamellae of orange hard sandy clay loam. Sharp to:
110-165	Orange friable sandy loam with lamellae of yellowish red hard massive sandy clay. Diffuse to:
165-220	Yellow soft sand with lamellae of brownish yellow friable massive light sandy clay loam.



Classification: Basic, Argic, Bleached-Orthic Tenosol; medium, non-gravelly, sandy / sandy, very deep

Summary of Properties

Drainage	Rapidly drained. The soil never remains wet for more than a few hours.
Fertility	Inherent fertility is very low, as indicated by the exchangeable cation data. Phosphorus, nitrogen, copper and zinc deficiencies can be expected. Manganese is required by lupins. Concentrations of all tested elements are satisfactory at the sampling site (No N test). Organic carbon concentrations are low.
pH	Neutral to slightly acidic at the surface, neutral at depth.
Rooting depth	100 cm (lucerne) in pit.
Barriers to root growth	
Physical:	No physical barriers.
Chemical:	No chemical barriers. Low nutrient retention capacity is the main reason for lack of root penetration.
Water holding capacity	60 mm in root zone.
Seedling emergence:	Satisfactory, but usually reduced by water repellence in dry years.
Workability:	Soft / loose surface is easily worked.
Erosion Potential	
Water:	Low.
Wind:	Moderately high.

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	6.7	6.1	<1	0.07	0.59	0.7	15	120	0.42	0.23	-	2.1	0.81	5.5	3.47	0.56	0.07	0.40	1.3
0-13	6.5	5.8	<1	0.07	0.64	0.7	17	140	0.39	0.16	-	2.0	0.68	3.7	2.92	0.54	0.07	0.43	1.9
13-22	6.3	5.6	<1	0.03	0.27	0.2	12	<40	0.13	0.063	-	0.22	0.07	1.9	1.46	0.25	0.07	0.21	na
22-40	6.4	5.8	<1	0.02	0.22	<0.1	8	<40	<0.02	<0.05	-	0.08	<0.06	1.1	0.69	0.16	0.06	0.15	na
40-70	6.6	6.2	<1	0.02	0.28	<0.1	7	43	<0.02	<0.05	-	0.07	<0.06	1.0	0.64	0.16	0.07	0.17	na
70-110	7.0	6.5	<1	0.03	0.31	<0.1	11	110	0.07	<0.05	-	<0.06	<0.06	1.9	1.21	0.32	0.09	0.31	na
110-165	7.1	6.5	<1	0.08	0.91	<0.1	<2	240	0.52	<0.05	-	0.16	<0.06	7.8	4.52	2.25	0.20	0.76	2.6
165-220	7.4	6.7	2	0.04	0.48	<0.1	<2	110	0.15	<0.05	-	0.31	<0.06	5.2	2.71	1.32	0.13	0.32	2.5

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.