DEEP BLEACHED SILICEOUS SAND

General Description: Very thick bleached sand over a brown slightly more clayey subsoil, calcareous with depth

Landform: Gently undulating dunefields

Substrate: Windblown Molineaux

Sand, with minor fine carbonate accumulations

Vegetation: Mallee



393450 6103300

380 mm average

Type Site: Site No.: MM014 1:50,000 mapsheet: 6827-1 (Karoonda)

Easting:

Northing:

Annual rainfall:

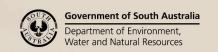
Hundred: Hooper Section: 66 Sampling date: 07/10/1991

Low sandhill. Loose surface, no stone

Soil Description:

Depth (cm)	Description
0-9	Dark grey brown loose sand. Clear to:
9-52	Very pale brown (bleached) loose sand. Diffuse to:
52-74	Reddish yellow and pale brown loose sand. Sharp to:
74-93	Yellowish red soft loamy sand with 20-50% lamellae of light sandy clay loam. Abrupt to:
93-111	Reddish yellow soft loamy sand with minor lamellae (as above). Diffuse to:
111-129	Reddish yellow soft sand. Sharp to:
129-136	Light brown highly calcareous sandy loam. Sharp to:
136-179	Very pale brown highly calcareous loamy sand. Abrupt to:
179-195	Reddish yellow moderately calcareous sandy loam.

Classification: Calcareous, Argic, Bleached-Orthic Tenosol; thin, non-gravelly, sandy / sandy, deep





Summary of Properties

Drainage: Rapidly drained. The soil never remains saturated for more than a couple of hours.

Fertility: Inherent fertility is very low, according to the exchangeable cation data. Low clay and

organic matter contents limit nutrient retention capacity. Phosphorus, nitrogen, copper

and zinc deficiencies are likely.

pH: Neutral at the surface, alkaline with depth.

Rooting depth: 52 cm in pit.

Barriers to root growth:

Physical: No physical barriers.

Chemical: No chemical barriers other than low nutrient status and retention capacity.

Waterholding capacity: 30 mm in rootzone.

Seedling emergence: Satisfactory, although reduced in dry seasons by water repellence.

Workability: Good.

Erosion Potential:

Water: Low.

Wind: Moderate to moderately high.

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	P	Avail. K mg/kg	Boron mg/kg	Trace Elements mg/kg (DTPA)				CEC	Exchangeable Cations cmol(+)/kg				ESP
										Cu	Fe	Mn	Zn	(+)/kg	Ca	Mg	Na	K	
Paddock	7.0	6.3	<1	0.05	0.38	0.6	10	130	< 0.50	<0.05	10	2.7	0.13	3.1	2.79	0.57	0.20	0.39	6.5
0-9	6.9	6.4	<1	0.05	0.44	0.6	12	77	< 0.50	< 0.56	8.9	3.0	0.14	3.3	3.30	0.65	0.16	0.14	4.8
9-30	7.1	6.5	<1	0.02	0.16	0.1	3	71	< 0.50	<0.05	6.3	0.51	< 0.06	1.9	1.47	0.36	0.14	0.12	na
30-52	7.5	6.8	1	0.02	0.12	<0.1	<2	81	< 0.50	<0.05	3.5	0.13	< 0.06	1.6	1.27	0.34	0.16	0.13	na
52-74	7.7	7.0	2	0.02	0.13	<0.1	2	77	< 0.50	< 0.05	3.3	0.14	< 0.06	1.8	1.43	0.40	0.16	0.13	na
74-93	8.1	7.2	2	0.03	0.27	<0.1	<2	78	< 0.50	< 0.05	5.8	0.14	< 0.06	6.2	4.17	2.00	0.23	0.18	3.7
93-129	8.4	7.4	5	0.02	0.17	< 0.1	<2	84	< 0.50	< 0.05	3.0	0.45	< 0.06	3.4	2.62	1.44	0.21	0.16	6.2
129-136	9.1	8.1	4	0.07	0.30	0.1	<2	97	0.54	0.10	3.4	0.27	< 0.06	4.4	4.26	1.40	0.20	0.21	4.5
136-179	9.3	8.3	4	0.07	0.27	<0.1	<2	87	0.69	0.06	2.4	0.38	< 0.06	3.4	3.77	1.15	0.19	0.22	5.6
179-195	9.3	8.3	1	0.09	0.28	<0.1	<2	210	1.1	0.09	2.8	0.39	< 0.06	5.1	4.23	2.02	0.32	0.48	6.3

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: <u>DEWNR Soil and Land Program</u>



