BLEACHED SILICEOUS SAND

General Description: Thick to very thick bleached loose sand with an organically darkened

surface and a yellow or brown sandy subsoil overlying more clayey

material at variable depth.

Landform: Slopes and crests of

undulating dunefields

Substrate: Massive sandy loam to sandy

clay loam, probably the subsoil of a buried sandy texture contrast soil

Vegetation: Euc. baxteri scrub

Type Site: Site No.: SE007 1:50,000 mapsheet: 6925-1 (Keith)

Hundred:ArchibaldEasting:435650Section:13Northing:6012450

Sampling date: 04/08/1992 Annual rainfall: 480 mm average

Dune slope, loose surface. 20% slope, southerly aspect.

Soil Description:

Depth (cm) Description

0-15 Loose grey sand (recent drift). Clear to:

15-30 Loose dark grey sand. Clear to:

30-115 Bleached loose sand. Gradual to:

Yellow and white speckled loose sand.

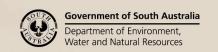
Sharp to:

185-200 Orange and yellow massive firm light

sandy clay loam (B horizon of a buried

soil)

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





Summary of Properties

Drainage: Rapidly drained. The profile is never saturated.

Fertility: Natural fertility is very low, due to the low clay content. Any capacity to store

nutrients is provided by organic matter. In sandy soils, more than 1% organic carbon is needed. The pit site is in an area fenced off from the main paddock, so nutrient levels are very low (refer values for phosphorus, potassium, sulphur and boron). The calcium: magnesium is satisfactory, but absolute values are low, so these elements,

along with trace elements are also likely to be deficient.

pH: Acidic at the surface, neutral with depth.

Rooting depth: 150 cm in pit.

Barriers to root growth:

Physical: No physical barriers.

Chemical: Lack of nutrients and low storage capacity are the main chemical limitations to root

growth.

Waterholding capacity: Approximately 100 mm in rootzone.

Seedling emergence: Good to fair depending on water repellence which can be severe in some seasons. The

upper three layers are repellent.

Workability: Good.

Erosion Potential:

Water: Low.

Wind: High due to the low fertility, water repellent sandy surface, and exposed position on

sand dune.

Laboratory Data

Depth cm	pH H ₂ O	pH CaC1 ₂	CO ₃ %	EC1:5 dS/m	ECe dS/m	Org.C %	Avail. P mg/kg	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	6.6	6.2	0	0.05	0.18	1.00	12	103	-	0.6	0.5	34	3.1	2.3	5.1	4.31	0.51	0.30	0.23	5.9
0-15	6.1	5.9	0	0.05	0.27	0.67	14	102	-	0.6	0.4	18	2.2	2.2	3.6	2.63	0.43	0.25	0.10	6.9
15-30	6.1	5.7	0	0.08	0.53	0.48	9	137	-	0.5	0.7	33	3.5	1.4	3.3	3.36	0.40	0.21	0.10	6.4
30-115	6.7	6.6	0	0.04	0.16	0.42	<5	93	-	0.1	< 0.1	19	0.1	0.1	1.6	0.55	0.18	0.35	0.11	na
115-185	6.8	6.5	0	0.04	0.08	0.31	<5	49	-	0.2	<0.1	8	< 0.1	0.1	1.5	0.65	0.27	0.42	0.13	na
185-200	7.4	6.8	0	0.08	0.23	0.11	<5	139	-	0.7	0.4	16	0.3	0.1	9.6	4.79	2.99	0.48	0.39	5.1

Note: Paddock sample bulked from 20 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>



