

## DEEP BLEACHED SAND

**General Description:** *Very thick bleached sand with a more clayey subsoil deeper than 80 cm*

**Landform:** Undulating dunefield.

**Substrate:** Calcarenite (Bridgewater Formation).

**Vegetation:**



**Type Site:** Site No.: SE037

1:50,000 sheet: 7024-4 (Keppoch)  
Annual rainfall: 570 mm  
Landform: Upper slope of dune  
Surface: Loose with no stones

Hundred: Glenroy  
Sampling date: 15/09/95

### Soil Description:

<i>Depth (cm)</i>	<i>Description</i>
0-20	Very dark greyish brown loose single grain fine sand. Clear to:
20-50	Yellowish brown with inclusions of dark greyish brown loose single grain fine sand. Diffuse to:
50-102	Yellowish brown soft single grain fine sand with strong brown clayey lamellae. Sharp to:
102-125	Strong brown friable massive clayey sand. Clear to:
125-160	Strong brown and red friable massive light sandy clay loam. Clear to:
160-170	Strong brown and brownish yellow friable massive moderately calcareous sandy clay loam. Sharp to:
170-171	More than 90% calcrete fragments (600-2000 mm).



**Classification:** Bleached-Sodic, Hypocalcic, Brown Kandosol; very thick, non gravelly, sandy / clay loamy, very deep

## Summary of Properties

<b>Drainage</b>	Well drained. The soil rarely remains wet for more than a day or so.
<b>Fertility</b>	Inherent fertility is low, as indicated by the exchangeable cation data. There is little surface clay to retain nutrients, and organic matter levels are also low. Phosphorus, potassium, calcium and magnesium concentrations are all low.
<b>pH</b>	Neutral at the surface, alkaline with depth.
<b>Rooting depth</b>	170 cm in pit.
<b>Barriers to root growth</b>	
<b>Physical:</b>	There are no physical barriers to root growth, apart from the calcrete rubble layer which at 170 cm will not significantly affect agricultural or horticultural crops.
<b>Chemical:</b>	There are no chemical barriers, but low nutrient status and retention capacity restrict root depth and density.
<b>Water holding capacity</b>	Approximately 140 mm in the potential root zone.
<b>Seedling emergence:</b>	Satisfactory, except where water repellent.
<b>Workability:</b>	The loose surface is easily worked.
<b>Erosion Potential</b>	
<b>Water:</b>	Low.
<b>Wind:</b>	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	SO <sub>4</sub> -S 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	
Row	6.9	6.4	0	0.03	0.22	0.6	15	66	6	0.2	6.5	14	2.6	1.9	2.5	2.63	0.52	<0.1	<0.1	na
0-20	7.0	6.6	0	0.03	0.20	0.6	17	96	6	0.3	-	-	-	-	2.5	2.89	0.59	<0.1	<0.1	na
20-50	7.3	6.5	0	0.02	0.11	0.1	10	82	4	0.1	-	-	-	-	1.2	0.95	0.18	<0.1	<0.1	na
50-90	7.9	7.2	0	0.02	0.12	0.1	12	91	4	0.1	-	-	-	-	1.0	0.88	0.21	<0.1	<0.1	na
90-102	8.6	7.9	0	0.03	0.19	0.1	<4	75	5	0.1	-	-	-	-	1.2	1.08	0.28	<0.1	<0.1	na
102-125	8.7	7.6	0	0.06	0.40	0.1	<4	165	8	0.6	-	-	-	-	5.3	3.64	1.22	0.43	0.25	8.1
125-160	8.3	7.7	0.1	0.16	0.86	0.1	<4	181	12	1.4	-	-	-	-	7.8	4.80	1.90	0.66	0.36	8.5
160-170	8.1	7.2	<0.1	0.09	0.64	0.1	<4	187	8	1.6	-	-	-	-	6.8	4.32	1.68	0.51	0.33	7.5

**Note:** Row sample bulked from 20 cores (0-10 cm) taken from along rows near 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.