

WET HIGHLY LEACHED SAND

General Description: *Thick bleached sand with an organically darkened surface over a weakly coherent dark coloured sandy subsoil with a watertable*

Landform: Gently undulating sand plain.

Substrate: Windblown sand.

Vegetation:



Type Site:	Site No.:	SE012	1:50,000 mapsheet:	7022-2 (Gambier)
	Hundred:	Gambier	Easting:	490650
	Section:	42	Northing:	5821550
	Sampling date:	10/02/9193	Annual rainfall:	745 mm average

Crest of dune, 1% slope. Soft surface with no stones. Watertable at 155 cm.

Soil Description:

Depth (cm)	Description
0-15	Very dark grey loose water repellent loamy sand. Diffuse to:
15-40	Brown soft single grain fine sand. Diffuse to:
40-67	Brown soft single grain fine sand. Diffuse to:
67-95	Very pale brown soft single grain fine sand. Clear to:
95-121	Dark yellowish brown and dark reddish brown soft single grain loamy fine sand with 2-10% soft iron-organic segregations. Diffuse to:
121-150	Yellowish brown soft single grain loamy fine sand. Diffuse to:
150-155	Pale brown loose wet sand. Watertable at 155 cm.



Classification: Fragic, Humosesquic, Semiaquic Podsol; thick, non-gravelly, sandy / sandy, deep



Summary of Properties

- Drainage:** Imperfectly drained. Watertable at 155 cm impedes deep drainage, so the soil may remain wet for several weeks at a time.
- Fertility:** Inherent fertility is very low as indicated by the exchangeable cation data. Most nutrient retention capacity is attributable to organic matter. All measured nutrient elements are adequately supplied, but subsoil reserves and retention capacity are low.
- pH:** Acidic throughout.
- Rooting depth:** 150 cm in pit, but most growth is in the top 15 cm.
- Barriers to root growth:**
- Physical:** There are no barriers to root growth, although the iron-organic rich layer can form a pan, effectively blocking deeper root growth.
 - Chemical:** There are no chemical barriers, but low nutrient status / retention capacity in the subsurface layers restricts growth.
- Waterholding capacity:** Approximately 60 mm in the rootzone.
- Seedling emergence:** Fair, due to water repellence which can reduce establishment.
- Workability:** Soft 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	SO ₄ 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	5.8	5.4	0	0.07	0.60	1.7	23	110	-	0.4	0.3	32	5.1	2.3	8.7	4.46	0.68	0.01	0.23	na
0-15	5.7	5.3	0	0.11	0.97	1.4	30	78	-	0.4	0.4	32	3.5	2.2	6.9	3.70	0.60	<0.01	0.07	na
15-40	5.3	4.7	0	0.03	0.20	0.35	32	55	-	0.2	0.1	52	0.4	0.2	3.0	0.80	0.18	<0.01	0.05	na
40-67	5.8	5.1	0	0.02	0.09	0.29	21	47	-	0.2	0.1	19	0.1	0.1	2.9	0.65	0.13	0.07	0.08	na
67-95	5.8	5.3	0	0.02	0.09	0.12	7.5	39	-	0.1	<0.1	12	<0.1	0.1	2.0	0.37	0.09	0.06	0.02	na
95-121	5.8	5.2	0	0.03	0.10	0.29	6.0	70	-	0.2	<0.1	20	<0.1	0.2	4.3	0.85	0.29	0.08	0.10	na
121-150	5.9	5.5	0	0.03	0.11	0.14	5.8	31	-	0.2	<0.1	8	<0.1	<0.1	2.5	0.40	0.21	0.09	0.07	na
150+	6.4	5.9	0	0.02	0.13	<0.02	5.5	47	-	<0.1	<0.1	5	<0.1	0.2	1.2	0.19	0.13	0.08	0.04	na

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: [DEWNR Soil and Land Program](#)

