WET SALINE CLAY LOAM

General Description: *Dark clay loam grading to a grey clay, highly saline throughout, with a watertable within a metre*

Landform: Low lying salinized plain with shallow watertable.

Substrate: Clayey lacustrine sediments (St. Kilda Formation).

Vegetation: Samphire.

Type Site:

Site No.:	MM111	1:50,000 mapsheet:	6827-3 (Moorlands)
Hundred:	Coolinong	Easting:	370050
Section:	14	Northing:	6082850
Sampling date:	31/03/1993	Annual rainfall:	385 mm average

Samphire swamp. Surface crusts when dry, but is commonly waterlogged. No stones.

Soil Description:

Depth (cm)	*Description*
0-10	Very dark grey hard silty clay loam with weak granular structure. Abrupt to:
10-25	Black very hard medium clay with strong coarse angular blocky structure. Clear to:
25-65	Olive grey soft (wet) massive medium clay. Gradual to:
65-90	Olive soft (wet) massive medium clay.
90-	Watertable (74,000 mg/l)

Classification: Dermosolic, Salic Hydrosol; medium, non-gravelly, clay loamy / clayey, moderate

Summary of Properties

Drainage: Imperfectly to poorly drained. Soil may remain wet for several months, depending on rainfall and depth to watertable.

Fertility: Inherent fertility is high, as indicated by the exchangeable cation data. The soil has high nutrient retention capacity and nutrient status.

pH: Mildly to moderately alkaline throughout.

Rooting depth: 65 cm in pit (samphire).

Barriers to root growth:

Physical: The hard clayey subsoil prevents uniform root growth.

Chemical: Extreme salinity, sodicity and boron concentrations prevent root growth of non halophytes.

Waterholding capacity: 95 mm in rootzone of samphire.

Seedling emergence: Severe limitation due to salinity.

Workability: Poor. Boggy and non traversable when wet, shatters when dry..

Erosion Potential:

Water: Low.

Wind: Low.

Laboratory Data

Depth cm	pH H_2O	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	7.1	6.9	1	11.40	67.6	2.4	9.3	1300	11	2.4	34	140	3.0	27.0	14.58	6.71	10.30	3.64	38.2
0-10	7.4	7.3	1	19.10	121.9	2.9	145	1400	14	2.1	21	66	3.5	24.4	4.27	8.60	12.80	3.42	52.5
10-25	7.7	7.6	3	10.51	58.5	1.0	55	1700	32	2.6	25	26	0.35	38.7	6.48	9.14	22.95	4.83	59.3
25-65	7.9	7.9	2	11.50	73.5	0.3	57	1300	29	1.8	20	5.2	0.19	29.2	5.40	8.45	17.95	2.98	61.5
65-90	7.8	7.8	<1	15.10	79.3	0.2	20	1200	24	2.5	19	3.8	0.07	24.2	6.12	7.22	15.00	2.49	62.0

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: DEWNR Soil and Land Program