WET SALINE CLAY LOAM

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

Landform: Low lying salinized plain with shallow water table.

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

Vegetation: Samphire.

Type Site: Site No.: MM111

1:50,000 sheet:	6827-3 (Moorlands)	Hundred:	Coolinong
Annual rainfall:	380 mm	Sampling date:	31/3/93
Landform:	Samphire swamp		
Surface:	Crusting 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-	Water table (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 water table.

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.

Water holding capacity 95 mm in root zone 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 $CaC1_2$	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.