Project Name: FLI
Project Code: FLI **Site ID:** H64 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (TAS)

Site Information

Desc. By:	K.D. Nicholls	**Locality:**	15.8km ENE of Lughrata 10.2km SE of Wingaroo:
Date Desc.:	22/04/53	**Elevation:**	8 metres
Map Ref.:	Sheet No. : 8518 1:100000	**Rainfall:**	730
Northing/Long.:	148.1	**Runoff:**	No runoff
Easting/Lat.:	-39.9166666666667	**Drainage:**	Poorly drained

Geology

ExposureType:	Soil pit	**Conf. Sub. is Parent. Mat.:**	No Data
Geol. Ref.:	No Data	**Substrate Material:**	Calcareous sand

Land Form

Rel/Slope Class:	Level plain <9m <1%	**Pattern Type:**	Chenier plain
Morph. Type:	Flat	**Relief:**	No Data
Elem. Type:	Lagoon	**Slope Category:**	Level
Slope:	0 %	**Aspect:**	0 degrees

Surface Soil Condition (dry): Surface crust

Erosion:

Soil Classification

Australian Soil Classification:
Calcareous Sodosolic Oxyaquic Hydrosol
ASC Confidence:
All necessary analytical data are available.

Mapping Unit: N/A
Principal Profile Form: Gc1.12
Great Soil Group: Calcareous sand

Site Disturbance: No effective disturbance. Natural

Vegetation: Low Strata - Forb, 0.26-0.5m, Sparse. *Species includes - None recorded
Tall Strata - Tree, 1.01-3m, Isolated plants. *Species includes - None Recorded

Surface Coarse Fragments:

Profile Morphology

	0 - 0.006 m	White (10YR8/1-Moist); ; Common
A1	0.006 - 0.05 m	Greyish brown (10YR5/2-Moist); ; Sandy loam; Massive grade of structure; Moist; Very weak consistence; Common
A1/A2	0.05 - 0.09 m	Light brownish grey (10YR6/2-Moist); ; Sand; Single grain grade of structure; Moist; Very weak consistence;
A2/B1	0.09 - 0.13 m	Light brownish grey (10YR6/2-Moist); ; Sand; Single grain grade of structure; Moist; Very weak consistence;
B1	0.13 - 0.15 m	Greyish brown (10YR5/2-Moist); , 10YR62; Loamy sand; Massive grade of structure; Moist; Very weak consistence;
B2	0.16 - 0.22 m	Greyish brown (10YR5/2-Moist); , 2.5Y72; Sandy medium clay; Massive grade of structure; Moist; Moderately plastic; Normal plasticity; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Soft segregations;
B2	0.22 - 0.28 m	Light grey (2.5Y7/2-Moist); ; Heavy clay; Massive grade of structure; Moist; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, , Soft segregations;
B2/B3	0.28 - 0.38 m	Light grey (2.5Y7/2-Moist); , 10YR62; Heavy clay; Massive grade of structure; Moist; 0-2%, Gravel, coarse fragments; Very many (50 - 100 %), Calcareous, , Soft segregations;
B3	0.38 - 0.63 m	Light brownish grey (10YR6/2-Moist); ; Massive grade of structure; 20-50%, Shells, coarse fragments; Other pans, Moderately cemented, Massive;
B3	0.63 - 0.89 m	Light brownish grey (10YR6/2-Moist); ; Massive grade of structure; 20-50%, Shells, coarse fragments; Other pans, Moderately cemented, Massive;
B3	0.89 - 0.99 m	Light grey (2.5Y7/2-Moist); ; Massive grade of structure; Calcrete, Strongly cemented, Massive;
C	1.02 - 1.24 m	Light bluish grey (5B7/1-Moist); , 10YR62; Sand; Single grain grade of structure; Wet; Loose consistence; 0-2%, Shells, coarse fragments;

Morphological Notes

Observation Notes

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38-89CM MARL (<90% SHELLS+OYSTERS):89-99CM HARD LIMESTONE+FINE SHELLS:CA INCRUSTED SURFACE:>99CM
H2S SMELL: MEMANA SERIES:

Site Notes

MEMANA

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
			Ca	Mg	K	Na	Acidity			
m		dS/m	Cmol (+)/kg							%
0 - 0.006	8.3A									
0.006 - 0.05	8.6A		4.2H	3.5	0.31	1.9			9.9B	
0.05 - 0.09	9A									
0.09 - 0.13	9.5A							3.5C		
0.13 - 0.15	9.6A									
0.16 - 0.22	9.1A									
0.22 - 0.28	9A		7.6H	6.9	1.1	6.5			22.1B	
0.28 - 0.38	9A									
0.38 - 0.63	9.2A									
0.63 - 0.89	9.3A									
1.02 - 1.24	9.3A									

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis				
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.006	30.5A											
0.006 - 0.05	18.8A	1.37D			0.109A			0	23B	47	3	4
0.05 - 0.09	4.7A	0.56D		0.002D	0.022A							
0.09 - 0.13	0.25A	0.32D										
0.13 - 0.15	0.31A	0.36D			0.024A							
0.16 - 0.22	0.35A	0.7D										
0.22 - 0.28	1.86A							1	24B	45	3	26
0.28 - 0.38	29.1A											
0.38 - 0.63	53.7A											
0.63 - 0.89	52.1A											
1.02 - 1.24	25.8A							2	25B	43	1	3

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
m		g/g - m3/m3							mm/h	mm/h
0 - 0.006										
0.006 - 0.05										
0.05 - 0.09										
0.09 - 0.13										
0.13 - 0.15										
0.16 - 0.22										
0.22 - 0.28										
0.28 - 0.38										
0.38 - 0.63										
0.63 - 0.89										
1.02 - 1.24										

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Laboratory Analyses Completed for this profile

15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
15E1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble
15E1_K	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_MG	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15E1_NA	Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts
15J_H	Sum of Ex. cations + Ex. acidity - Sum of basic exch. cations and exch. (Hydrogen)
19A1	Carbonates - rapid titration
2_LOI	Loss on Ignition (%)
2A1	Air-dry moisture content
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
6A1_UC	Organic carbon (%) - Uncorrected Walkley and Black method
7A2	Total nitrogen - semimicro Kjeldahl , automated colour
9A_HCL	Total element - P(%) - By boiling HCl
P10_GRAV	Gravel (%)
P10A1_C	Clay (%) - Pipette
P10A1_CS	Coarse sand (%) - Pipette
P10A1_FS	Fine sand (%) - Pipette
P10A1_Z	Silt (%) - Pipette