Project Name: Regional

Project Code: REG Site ID: T214 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: Date Desc.: Locality: Opposite El Arish Golf Club: G.G. Murtha

Elevation: 14/11/73 20 metres

Sheet No.: 8162 1:100000 Map Ref.: Rainfall:

Northing/Long.: 146 Runoff: No runoff Easting/Lat.: -17.8166666666667 Drainage: Well drained

Geology

ExposureType: Undisturbed soil core Conf. Sub. is Parent. Mat.:

Geol. Ref.: **Substrate Material:** Undisturbed soil core, Unconsolidated QΑ

Great Soil Group:

material (unidentified)

No suitable group

Land Form

Rel/Slope Class: Level plain <9m <1% Pattern Type: Alluvial plain Morph. Type: Elem. Type: Flat Relief: 0 metres Plain Slope Category: Level Aspect: 0 % No Data Slope:

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification: Mapping Unit: N/A Acidic Dystrophic Brown Dermosol **Principal Profile Form:** Gn3.71

ASC Confidence: All necessary analytical data are available.

Site Disturbance: No effective disturbance. Natural

<u>Surface Coarse Fragments:</u> No surface coarse fragments

Profile Morphology

Vegetation:

A1	0 - 0.1 m	Brown (10YR4/3-Moist); ; Clay loam (Heavy); Moderate grade of structure, 5-10 mm, Cast; Roughped fabric; Moist; Weak consistence; Many, fine (1-2mm) roots; Gradual change to -
B1	0.1 - 0.2 m	Yellowish brown (10YR5/4-Moist); ; Light clay; Weak grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Moist; Weak consistence; Many, fine (1-2mm) roots;
B21	0.2 - 0.3 m	Yellowish brown (10YR5/6-Moist); ; Light medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moist; Weak consistence;
B22	0.3 - 0.45 m	Yellowish brown (10YR5/6-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moist; Weak consistence;
B22	0.45 - 0.6 m	Yellowish brown (10YR5/6-Moist); ; Medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moist; Weak consistence; Diffuse change to -
ВС	0.6 - 0.9 m	Yellowish brown (10YR5/6-Moist); ; Medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moist; Weak consistence;
С	0.9 - 1.2 m	Yellowish brown (10YR5/6-Moist); , 10YR62, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint; Sandy medium clay; Massive grade of structure; Earthy fabric; Moist; Weak consistence;
С	1.26 - 1.5 m	Light brownish grey (10YR6/2-Moist); , 10YR54, 2-10% , 5-15mm, Faint; , 2-10% , 5-15mm, Faint; Sandy clay loam; Massive grade of structure; Earthy fabric; Moist; Weak consistence; Clear change to -
D	1.6 - 1.8 m	Grey (10YR5/1-Moist); , 10YR44, 10-20% , 5-15mm, Distinct; , 10-20% , 5-15mm, Distinct; Medium heavy clay; Weak grade of structure, 20-50 mm, Prismatic; 20-50 mm, Angular blocky; Smooth-ped fabric; Moist; Very firm consistence;

Morphological Notes

Observation Notes

Site Notes

EL ARISH

Project Name: Project Code: Agency Name: Regional REG Site ID: T214 CSIRO Division of Soils (QLD) Observation ID: 1

Laboratory Test Results	t Results:
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<u>Laboratory Test Results:</u>													
Depth	рН	1:5 EC Exchangeable Ca Mg		Cations K	ns Exchangeable Na Acidity			CEC		ECEC		ESP	
m		dS/m Cmol (+)/kg											%
0 04	4.04	0.054	0.411	0.0	0.00	0.0	0	4.05	0.54		0.05		
0 - 0.1 0.1 - 0.2	4.8A 4.8A	<0.05A <0.05A	0.4H 0.04H	0.6 0.2	0.23 0.08	0.03 0.01		1.3F 1.1F			2.6F 1.4F	0.86 0.42	
0.1 - 0.2	4.6A 4.9A	<0.05A	0.0411	0.2	0.06	0.0	1	1.11	2.4		1.46	,	J.4Z
0.3 - 0.45	4.8A	<0.05A	0.02H	0.22	0.02	<0.0	1	1.1F	2.6A		1.4F		
0.45 - 0.6	4.8A	<0.05A	0.02	V	0.02	10.0	•						
0.6 - 0.9	4.8A	<0.05A	0.04H	0.12	0.04	<0.0	1	1.2F	2.6A		1.4F		
0.9 - 1.2	5A	<0.05A											
1.26 - 1.5	5A	<0.05A											
1.6 - 1.8	5A	<0.05A											
Depth	CaCO3	Organic	Avail.	Total	Total		Total	Bulk	Pa	rticle	Size	Analysis	S
		С	P	Р	N		K	Density	G۷	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%		%	Mg/m3			%		
0 - 0.1		2.85D	17B	0.033A	0.3	28A	2.68A		0	21A	17	24	38
0.1 - 0.2		1.34D	7B	0.0007		14A	2.00/ (Ő	19A	16		42
0.2 - 0.3			. –		-	A80							
0.3 - 0.45		0.52D	2B	0.02A	0.0	06A	2.8A		0	17A	18	26	42
0.45 - 0.6													
0.6 - 0.9				0.02A			3.14A		10	31A	17	21	31
0.9 - 1.2													
1.26 - 1.5 1.6 - 1.8													
1.0 - 1.0													
Donth	Depth COLE Gravimetric/Volumetric Water Contents K sat K unsat												
Бериі	Depth COLE Gravimetric/Volumetric Water Conte Sat. 0.05 Bar 0.1 Bar 0.5 Bar 1 Bar								Bar	IV 30	11	K ulisa	
m			0.00		g/g - m3/m3					mm/	'h	mm/h	
0 - 0.1													
0.1 - 0.2													

0.1 - 0.2 0.2 - 0.3 0.3 - 0.45 0.45 - 0.6 0.6 - 0.9 0.9 - 1.2 1.26 - 1.5

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Laboratory Analyses Completed for this profile

10A1 Total sulfur - X-ray fluorescence

Total element - Cu(mg/kg) - HF/HClO4 Digest 12_HF_CU 12_HF_ZN 15A2_CEC Total element - Zn(mg/kg) - HF/HClO4 Digest

Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts

Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble 15E1_CA 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 15G_C Exchange acidity (hydrogen and aluminium) - meq per 100g of soil - By 1M KCl exch. acidity by

titration to pH 8.4

Effective CEC 15J1

17A1 Total potassium - X-ray fluorescence

2A1 Air-dry moisture content 3A1 EC of 1:5 soil/water extract 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 Total nitrogen - semimicro Kjeldahl , automated colour 7A2

9A1 Total phosphorus - X-ray fluorescence

Available P (mg/kg) - Acid P - 0.005M H2SO4 (BSES) Exchange Capacity - Minerology 9G_BSES

MIN_EC Clay (%) - Coventry and Fett pipette method

P10_CF_C P10_CF_CS Coarse sand (%) - Coventry and Fett pipette method P10_CF_FS Fine sand (%) - Coventry and Fett pipette method P10_CF_Z Silt (%) - Coventry and Fett pipette method

P10_GRAV Gravel (%)

XRD_C_Ch2 Chloritized 2:1 minerals - X-Ray Diffraction

XRD_C_Gb XRD_C_II Gibbsite - X-Ray Diffraction Illite - X-Ray Diffraction

XRD_C_K2O K2O - X-Ray Diffraction or Clay Fraction (air dry)

XRD_C_Ka Kaolin - X-Ray Diffraction