Project Name: Regional

Project Code: REG Site ID: T362 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: M.G. Cannon Locality: Date Desc.: 24/11/83 Elevation:

Geology

ExposureType: Undisturbed soil core Conf. Sub. is Parent. Mat.: No Data

Geol. Ref.: QA Substrate Material: Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Gently undulating plains <9m Pattern Type: Rises

1-3%

Morph. Type:FlatRelief:No DataElem. Type:FanSlope Category:Gently inclinedSlope:2 %Aspect:No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:Mapping Unit:N/AMelacic Magnesic Yellow KandosolPrincipal Profile Form:Gn2.21ASC Confidence:Great Soil Group:Yellow earth

All necessary analytical data are available.

<u>Site Disturbance:</u> No effective disturbance other than grazing by hoofed animals

Vegetation:

B21

0.9 - 1 m

Mid Strata - Tree, 6.01-12m, Isolated clumps. *Species includes - Casuarina littoralis Tall Strata - Tree, 12.01-20m, Closed or dense. *Species includes - None Recorded

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

<u>Profile</u>	<u> Morphology</u>	
A11	0 - 0.1 m	Black (10YR2/1-Moist); Black (10YR2/1-Dry); Mottles, 0-0%; Mottles, 0-0%; Sandy clay loam (Fibric); Massive grade of structure; Earthy fabric; Very weak consistence;
A12	0.1 - 0.2 m	Very dark grey (10YR3/1-Moist); Very dark greyish brown (10YR3/2-Dry); Mottles, 0-0%; Mottles, 0-0%; Sandy clay loam; Massive grade of structure; Earthy fabric; Very weak consistence; Diffuse, Broken change to -
A12	0.2 - 0.3 m	Very dark grey (10YR3/1-Moist); Very dark greyish brown (10YR3/2-Dry); Mottles, 0-0%; Mottles, 0-0%; Sandy clay loam; Massive grade of structure; Earthy fabric; Very weak consistence; Diffuse, Broken change to -
А3	0.3 - 0.45 m	Dark yellowish brown (10YR4/4-Moist); Mottles, 10YR68, 10-20%, 5-15mm, Faint; Mottles, 10-20%, 5-15mm, Faint; Sandy clay loam; Massive grade of structure; Earthy fabric; Weak consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Clear change to -
B1	0.45 - 0.55 m	Dark yellowish brown (10YR4/4-Moist); Mottles, 10YR68, 10-20%, 5-15mm, Faint; Mottles, 10-20%, 5-15mm, Faint; Clay loam, coarse sandy; Massive grade of structure; Earthy fabric; Weak consistence; 10-20%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Gradual, Irregular change to -
B21	0.55 - 0.6 m	Yellow (10YR7/8-Moist); Mottles, 0-0%; Mottles, 0-0%; Sandy medium clay; Massive grade of structure; Earthy fabric; Weak consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;
B21	0.6 - 0.9 m	Yellow (10YR7/8-Moist); Mottles, 0-0%; Mottles, 0-0%; Sandy medium clay; Massive grade of structure; Earthy fabric; Weak consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;

Yellow (10YR7/8-Moist); Mottles, 0-0%; Mottles, 0-0%; Sandy medium clay; Massive grade of

structure; Earthy fabric; Weak consistence; 20-50%, fine gravelly, 2-6mm, subangular,

dispersed, Quartz, coarse fragments; Diffuse, Broken change to -

Project	t Name: t Code: y Name:	Regional REG Site ID: T362 Observation ID: 1 CSIRO Division of Soils (QLD)
B22	1 - 1.2 m	Yellow (10YR7/8-Moist); Mottles, 2.5YR48, 10-20%, 5-15mm, Prominent; Mottles, 10-20%, 5-15mm, Prominent; Sandy medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;
B22	1.2 - 1.4 m	Yellow (10YR7/8-Moist); Mottles, 2.5YR48, 10-20%, 5-15mm, Prominent; Mottles, 10-20%, 5-15mm, Prominent; Sandy medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Diffuse, Broken change to -
BC	1.4 - 1.5 m	Red (2.5YR4/8-Moist); Mottles, 10YR78, 10-20%, 5-15mm, Distinct; Mottles, 10-20%, 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;
BC	1.5 - 1.8 m	Red (2.5YR4/8-Moist); Mottles, 10YR78, 10-20%, 5-15mm, Distinct; Mottles, 10-20%, 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;
ВС	1.8 - 2 m	Red (2.5YR4/8-Moist); Mottles, 10YR78, 10-20%, 5-15mm, Distinct; Mottles, 10-20%, 5-15mm, Distinct; Sandy medium clay; Massive grade of structure; Earthy fabric; Firm consistence; 20-50%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments;

Morphological Notes
Observation Notes
Site Notes

T362 Observation ID: 1

Project Name: Project Code: Agency Name: Regional
REG Site ID: T36
CSIRO Division of Soils (QLD)

Laboratory Test Results:

<u>Laboratory</u>	Test Re	esults:											
Depth	рН	1:5 EC	Ex Ca		le Cations			hangeable	CEC	EC	CEC	E	SP
m		dS/m	Ca	wg	Mg K			Na Acidity Cmol (+)/kg					6
0 - 0.1	5.4A	0.009A	0.16H	0.24	<0.02	0.02	2	2.9F	3A 17.10		3.3F		.67 .12
0.1 - 0.2	4.8A	0.027A	١										
0.2 - 0.3	5.1A	0.016A	√<0.02H	0.06	<0.02	<0.02	2	1.9F	1.8A 9.5C		2F		
0.3 - 0.45	5.2A	0.016A	١										
0.45 - 0.55	5.3A	0.01A											
0.55 - 0.6	5.3A	0.009A	١										
0.6 - 0.9	5.5A	0.009A	√<0.02H	0.45	<0.02	0.04	+	0.26F	1.7A 2.3C	-).8F		.35 .74
0.9 - 1	5.5A	0.008A											
1 - 1.2	5.6A	0.007A											
1.2 - 1.4	5.4A	0.01A											
1.4 - 1.5	5.4A	0.011A	١										
1.5 - 1.8	5.3A	0.012A	√<0.02H	0.85	<0.02	0.03	3	0.1F	2.2A 2.6C		1F	1.36 1.15	
1.8 - 2	5.4A	0.011A											
Depth	CaCO3	Organic	Avail.			ı T	otal	Bulk		ticle Si		Analysis	
m	%	C %	P mg/kg	P 9 %	N %		K %	Density Mg/m3	GV		FS %	Silt (Slay
0 - 0.1 0.1 - 0.2		5.45C	7B 4B		A 0.	28A	0.15A		3 6	56A 47A	12 17	6 6	26 30
0.2 - 0.3 0.3 - 0.45		2.88C	3B 2B	0.012	2A 0.	12A	0.06A		8 11	46A 48A	16 15	5 5	33 32
0.45 - 0.55 0.55 - 0.6			2B 2B						15 15	46A 43A	16 16	4 4	34 37
0.6 - 0.9 0.9 - 1		0.24C	2B				0.06A		15 20	47A 38A	14 13	2	37 46
1 - 1.2		0.11C							24	40A	12	3	45
1.2 - 1.4		0.110							24	43A	9	3	45 45
1.4 - 1.5									21	40A	8	2	50
1.5 - 1.8		0.1C	4B	0.015	. ^		0.05A		19	36A	8	2	55
1.8 - 2		0.10	40	0.010	Ж		0.05A		22	32A	8	3	57
Depth COLE Gravimetric/Volumetric Water Conte							Conten	its		K sat		K unsat	
m	Sat.	0.05 Bar	⁷ 0.1 Bar 0.5 Bar 1 Bar 5 Bar g/g - m3/m3				5 Bar	15 Bar	mm/h	mm/h m			
•••				•	, ,								
0 - 0.1													
0.1 - 0.2													

0.1 - 0.2 0.2 - 0.3 0.3 - 0.45 0.45 - 0.55 0.55 - 0.6 0.6 - 0.9 0.9 - 1 1 - 1.2 1.2 - 1.4 1.4 - 1.5

Project Name: Project Code: Agency Name:

Regional
REG Site ID: T36
CSIRO Division of Soils (QLD) T362 Observation ID: 1

1.5 - 1.8 1.8 - 2

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Laboratory Analyses Completed for this profile

10A1 Total sulfur - X-ray fluorescence
12_HF_CU Total element - Cu(mg/kg) - HF/HClO4 Digest
12_HF_FE Total element - Fe(%) - HF/HClO4 Digest
12_HF_MN Total element - Mn(mg/kg) - HF/HClO4 Digest

12_HF_MN Total element - Mn(mg/kg) - HF/HClO4 Digest 12_HF_ZN Total element - Zn(mg/kg) - HF/HClO4 Digest

13C1_FE Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
15A2_CEC Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts

15E1_CA

Exchangeable bases (Ca2+,Mg2+,Na+,K+) by compulsive exchange, no pretreatment for soluble 5E1_K

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

Exchangeable bases, CEC and AEC by compulsive exchange, no pretreatment for soluble salts

titration to pH 8.4

15J1 Effective CEC

17A1 Total potassium - X-ray fluorescence

3A1 EC of 1:5 soil/water extract 4A1 pH of 1:5 soil/water suspension

6B3 Total organic carbon - high frequency induction furnace, infrared

7A2 Total nitrogen - semimicro Kjeldahl , automated colour

9A1 Total phosphorus - X-ray fluorescence

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

9H1 Phosphate retention

P10_CF_C
P10_CF_CS
Clay (%) - Coventry and Fett pipette method
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 (%)