

Project Name: Regional
Project Code: REG **Site ID:** T398 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	M.D. Laffan	Locality:	Near Woodlands Caravan Park Atherton:
Date Desc.:	11/10/84	Elevation:	No Data
Map Ref.:	Sheet No. : 7963 1:100000	Rainfall:	1400
Northing/Long.:	145.469444444444	Runoff:	No Data
Easting/Lat.:	-17.3	Drainage:	Imperfectly drained

Geology

ExposureType:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	PH	Substrate Material:	Undisturbed soil core, Unconsolidated material (unidentified)

Land Form

Rel/Slope Class:	Undulating plains <9m 3-10%	Pattern Type:	No Data
Morph. Type:	No Data	Relief:	No Data
Elem. Type:	Fan	Slope Category:	No Data
Slope:	10 %	Aspect:	No Data

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Magnesian Dermosolic Redoxic Hydrosol		Principal Profile Form:	Db2.21
ASC Confidence:		Great Soil Group:	Red podzolic soil
All necessary analytical data are available.			

Site Disturbance: Limited clearing, for example selective logging

Vegetation:

Tall Strata - Tree, 12.01-20m, Sparse. *Species includes - None Recorded

Surface Coarse Fragments: 2-10%, coarse gravelly, 20-60mm, subangular, Sand

Profile Morphology

A11	0 - 0.1 m	Very dark greyish brown (10YR3/2-Moist); ; Fine sandy clay loam; Moderate grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Field pH 5.8 (pH meter); Common, fine (1-2mm) roots; Gradual, Smooth change to -
A12	0.1 - 0.2 m	Dark brown (10YR3/3-Moist); ; Fine sandy clay loam (Heavy); Moderate grade of structure, 5-10 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Field pH 5.8 (pH meter); Common, fine (1-2mm) roots; Clear, Smooth change to -
A2	0.2 - 0.3 m	Yellowish brown (10YR5/6-Moist); ; Fine sandy medium clay; Weak grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Moderately moist; Weak consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Field pH 5.5 (pH meter); Common, fine (1-2mm) roots; Clear, Wavy change to -
B1	0.3 - 0.4 m	Brown (7.5YR4/4-Moist); , 2.5YR46, 10-20% , 0-5mm, Distinct; , 10-20% , 0-5mm, Distinct; Sandy light clay; Moderate grade of structure, 20-50 mm, Prismatic; Smooth-ped fabric; Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Field pH 5.5 (pH meter); Few, very fine (0-1mm) roots; Clear, Wavy change to -
B2	0.4 - 0.6 m	Brown (7.5YR4/4-Moist); , 2.5YR46, 20-50% , 5-15mm, Prominent; , 20-50% , 5-15mm, Prominent; Silty light clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B1g	0.6 - 0.75 m	Yellowish brown (10YR5/4-Moist); , 2.5YR46, 20-50% , 5-15mm, Prominent; , 20-50% , 5-15mm, Prominent; Silty medium clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 2-5 mm, Polyhedral; Smooth-ped fabric; Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Wavy change to -

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B2g	0.75 - 0.9 m	Light grey (10YR7/1-Moist); , 2.5YR46, 20-50% , 5-15mm, Prominent; , 20-50% , 5-15mm, Prominent; Silty medium clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Wavy change to -
B3g	0.9 - 1.2 m	Light grey (10YR7/1-Moist); , 10YR58, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Medium heavy clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 5.8 (pH meter); Few, very fine (0-1mm) roots;
B3g	1.2 - 1.5 m	Light grey (10YR7/1-Moist); , 10YR58, 2-10% , 0-5mm, Distinct; , 2-10% , 0-5mm, Distinct; Medium heavy clay; Strong grade of structure, 20-50 mm, Prismatic; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Moderately moist; Very firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, Sand, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, prominent; Field pH 5.8 (pH meter); Few, very fine (0-1mm) roots;
R	1.5 - 1.6 m	Rock

Morphological Notes

R Rhyolite bedrock:

Observation Notes

PARENT MATERIAL ALLUVIUM FROM RHYOLITE OVERLYING RHYOLITE BEDROCK AT 1.5M:

Site Notes

ATHERTON

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Laboratory Test Results:

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol	(+)/kg			%
0 - 0.1	4.1D 5.4A	0.026A	0.41H	0.76	0.28	0.08	1.59F	2.8A 7C	3.1F	2.86 1.14
0.1 - 0.2	5.4A	0.017A								
0.2 - 0.3	4.1D 5.4A	0.014A	0.05H	0.69	0.17	0.08	2.57F	2.7A 11C	3.6F	2.96 0.73
0.3 - 0.4	5.8A	0.008A								
0.4 - 0.6	4.1D 6A	0.01A	<0.02H	2.69	0.16	0.2	2.53F	6.1A 8C	5.6F	3.28 2.50
0.6 - 0.75	6.1A	0.01A								
0.75 - 0.9	4.1D 6.1A	0.011A	<0.02H	3.56	0.17	0.21	1.4F	4.9A 6C	5.4F	4.29 3.50
0.9 - 1.2	6.1A	0.014A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle		Size	Analysis	
								GV	CS		FS	Silt
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.1		1.53C	5B	0.01A	0.08A	0.88A		1	33A	22	27	18
0.1 - 0.2		1.24C										
0.2 - 0.3		0.78C	3B		0.06A			12	30A	20	25	25
0.3 - 0.4												
0.4 - 0.6				0.017A		0.61A		0	10A	11	21	58
0.6 - 0.75								1	12A	13	32	44
0.75 - 0.9		0.1C		0.004A		0.74A		0	11A	13	38	37
0.9 - 1.2								2	11A	13	37	39

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 - 0.1										
0.1 - 0.2										
0.2 - 0.3										
0.3 - 0.4										
0.4 - 0.6										
0.6 - 0.75										
0.75 - 0.9										
0.9 - 1.2										

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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/HClO ₄ Digest
12_HF_FE	Total element - Fe(%) - HF/HClO ₄ Digest
12_HF_MN	Total element - Mn(mg/kg) - HF/HClO ₄ Digest
12_HF_ZN	Total element - Zn(mg/kg) - HF/HClO ₄ 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
15D1_CEC	CEC - 1M ammonium acetate at pH 7.0, pretreatment for soluble salts; manual leach
15E1_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,Na ⁺ ,K ⁺) by compulsive exchange, no pretreatment for soluble salts
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
15J1	Effective CEC
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
4C1	pH of 1:5 soil/1M potassium chloride extract - direct
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 H ₂ SO ₄ (BSES)
P10_CF_C	Clay (%) - Coventry and Fett pipette method
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 (%)