Project Name: SAM
Project Code: SAM **Site ID:** B421 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	C.H. Thompson	**Locality:**	Paddock 12.
Date Desc.:	22/12/59	**Elevation:**	59 metres
Map Ref.:	Sheet No. : 9343 1:100000	**Rainfall:**	1016
Northing/Long.:	152.883333333333	**Runoff:**	Moderately rapid
Easting/Lat.:	-27.3666666666667	**Drainage:**	Imperfectly drained

Geology

ExposureType:	Soil pit	**Conf. Sub. is Parent. Mat.:**	No Data
Geol. Ref.:	Pzb	**Substrate Material:**	Auger boring, 1.4 m deep,Mudstone

Land Form

Rel/Slope Class:	No Data	**Pattern Type:**	Low hills
Morph. Type:	Mid-slope	**Relief:**	30 metres
Elem. Type:	Hillslope	**Slope Category:**	No Data
Slope:	5.25 %	**Aspect:**	No Data

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:
Melanic Mesotrophic Brown Chromosol
ASC Confidence:
All necessary analytical data are available.

Mapping Unit: N/A
Principal Profile Form: Gn2.81
Great Soil Group: Yellow earth

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments: No surface coarse fragments

Profile Morphology

A11	0 - 0.15 m	Very dark greyish brown (10YR3/2-Moist); ; Sandy loam; Moderate grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Very weak consistence; 0-2%, Quartz, coarse fragments; Field pH 5.9 (pH meter); Abundant, fine (1-2mm) roots; Gradual change to -
A12	0.15 - 0.25 m	Very dark greyish brown (10YR3/2-Moist); ; Sandy loam; Weak grade of structure, 10-20 mm, Angular blocky; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Very weak consistence; 0-2%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Field pH 5.8 (pH meter); Many, fine (1-2mm) roots; Gradual change to -
B1	0.25 - 0.43 m	Yellowish brown (10YR5/6-Moist); ; Sandy clay loam; Massive grade of structure; Many (>5 per 100mm2) Fine (1-2mm) macropores, Moist; Very weak consistence; 0-2%, coarse gravelly, 20-60mm, Quartz, coarse fragments; Field pH 5.5 (pH meter); Common, fine (1-2mm) roots; Gradual change to -
B21	0.46 - 0.81 m	Yellowish brown (10YR5/4-Moist); ; Clay loam, sandy; Massive grade of structure; Very fine (0.075-1mm) macropores, Wet; Slightly plastic; Normal plasticity; 0-2%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Field pH 5.5 (pH meter); Few, fine (1-2mm) roots; Gradual change to -
B21	0.86 - 1.14 m	Yellowish brown (10YR5/8-Moist); , 10YR58; Clay loam, sandy; Massive grade of structure; Very fine (0.075-1mm) macropores, Wet; Slightly plastic; Normal plasticity; 0-2%, medium gravelly, 6-20mm, Substrate material, coarse fragments; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Nodules; Field pH 5.5 (pH meter); Few, fine (1-2mm) roots; Diffuse change to -
B22	1.14 - 1.4 m	Yellowish brown (10YR5/8-Moist); , 2.5Y71, 10-20% , 5-15mm, Distinct; , 2.5YR48, 10-20% , 5-15mm, Distinct; Light medium clay; Massive grade of structure; Wet; Slightly plastic; Normal plasticity; 0-2%, coarse gravelly, 20-60mm, Substrate material, coarse fragments; Field pH 5.5 (pH meter); Diffuse change to -
D	1.4 - 1.55 m	(N7/0-Moist); , 10YR46, 20-50% , 5-15mm, Prominent; , 10YR68, 20-50% , 5-15mm, Prominent; Heavy clay; Massive grade of structure; Wet; Very plastic; Normal plasticity; 0-2%, Quartz, coarse fragments; Field pH 5.6 (pH meter); Diffuse change to -
D	1.55 - 1.98 m	(N6/0-Moist); , 7.5YR55, 10-20% , 15-30mm, Prominent; , 10-20% , 15-30mm, Prominent; Heavy clay; Massive grade of structure; Wet; Very plastic; Normal plasticity; 0-2%, coarse gravelly, 20-60mm, Quartz, coarse fragments; Field pH 5.4 (pH meter);

Morphological Notes

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Observation Notes
FREE WATER (GRAVITATIONAL) AT 155CM.
Site Notes
SAMFORD WEST

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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 - 0.15	5.9A	0.027A	1.5B	0.41	0.16	0.08	3.3D			
0.15 - 0.25	5.8A	0.027A	1B	0.4	0.1	0.02	2.6D			
0.25 - 0.43	5.5A	0.027A	0.8B	0.48	0.04	0.1	2.6D			
0.46 - 0.81	5.5A	0.027A	0.4B	1.8	0.04	0.08	4.2D			
0.86 - 1.14	5.5A	0.027A	0B	1.7	0.06	0.14	4.4D			
1.14 - 1.4	5.5A	0.027A	0.2B	4.6	0.04	0.28	4.2D			
1.4 - 1.55	5.6A	0.027A								
1.55 - 1.98	5.4A	0.027A								

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 - 0.15		1.22A	8A	0.02A	0.07B			0	40C	43	7	9
0.15 - 0.25		0.697A						0	35C	45	11	10
0.25 - 0.43		0.407A	2A	0.01A	0.03B			2	33C	42	9	17
0.46 - 0.81		0.291A	4A					0	27C	34	10	31
0.86 - 1.14		0.116A		0.01A	0.02B			0	27C	36	7	29
1.14 - 1.4								0	29C	32	7	33
1.4 - 1.55								0	23C	32	6	41
1.55 - 1.98								0	23C	30	6	41

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 - 0.15										
0.15 - 0.25										
0.25 - 0.43										
0.46 - 0.81										
0.86 - 1.14										
1.14 - 1.4										
1.4 - 1.55										
1.55 - 1.98										

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Laboratory Analyses Completed for this profile

15_NR_H	Hydrogen Cation - meq per 100g of soil - Not recorded
15A2_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_K	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_MG	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
15A2_NA	Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
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	Organic carbon - Walkley and Black
7_NR	Total nitrogen (%) - Not recorded
9A1	Total phosphorus - X-ray fluorescence
9B_9C	Available P (mg/kg) - Bicarbonate P - 0.5M NaHCO3 extractable
P10_GRAV	Gravel (%)
P10_NR_C	Clay (%) - Not recorded
P10_NR_CS	Coarse sand (%) - Not recorded
P10_NR_FS	Fine sand (%) - Not recorded
P10_NR_Z	Silt (%) - Not recorded