

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM21 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	B. Murphy	Locality:	
Date Desc.:	26/02/91	Elevation:	250 metres
Map Ref.:	Sheet No. : 8430 1:50000	Rainfall:	No Data
Northing/Long.:	6249900 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	579700 Datum: AGD66	Drainage:	Well drained

Geology

ExposureType:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	Qa	Substrate Material:	Quartz

Land Form

Rel/Slope Class:	No Data	Pattern Type:	Rises
Morph. Type:	Lower-slope	Relief:	No Data
Elem. Type:	Footslope	Slope Category:	No Data
Slope:	1 %	Aspect:	45 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Mesonatric Red Sodosol	Principal Profile Form:	Dr2.43
ASC Confidence:	Great Soil Group:	Red-brown earth
Confidence level not specified		

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments: 0-2%, fine gravelly, 2-6mm, rounded, Quartz

Profile Morphology

A1	0 - 0.1 m	Reddish brown (5YR4/4-Moist); ; Loam; Weak grade of structure, 20-50 mm, Subangular blocky; 50-100 mm, Columnar; Earthy fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Fine (1-2mm) macropores, Common (1-5 per 100mm ²) Medium (2-5mm) macropores, Dry; Weak consistence; 0-2%, fine gravelly, 2-6mm, rounded, dispersed, Quartz, coarse fragments; Many, very fine (0-1mm) roots; Clear change to -
A2	0.1 - 0.25 m	Yellowish red (5YR4/6-Moist); Reddish yellow (7.5YR6/6-Dry); Biological mixing, 0-2% , Distinct; Fine sandy loam; Weak grade of structure, 20-50 mm, Subangular blocky; 50-100 mm, Columnar; Earthy fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 100mm ²) Fine (1-2mm) macropores, Common (1-5 per 100mm ²) Medium (2-5mm) macropores, Dry; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, dispersed, Quartz, coarse fragments; 0-2%, medium gravelly, 6-20mm, subrounded, dispersed, coarse fragments; Common, very fine (0-1mm) roots; Clear change to -
B21	0.25 - 0.35 m	Red (2.5YR4/6-Moist); Substrate influence, 0-2% , Faint; Light medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; 50-100 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Dry; Strong consistence; 0-2%, fine gravelly, 2-6mm, rounded, dispersed, Quartz, coarse fragments; 0-2%, fine gravelly, 2-6mm, rounded, dispersed, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots;
B21	0.35 - 0.55 m	Red (2.5YR4/6-Moist); Substrate influence, 0-2% , Faint; Medium clay; Strong grade of structure, 50-100 mm, Angular blocky; 100-200 mm, Columnar; Smooth-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Medium (2-5mm) macropores, Dry; Very firm consistence; 0-2%, subangular, dispersed, Quartz, coarse fragments; 0-2%, rounded, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Root linings, weak, segregations; Few, very fine (0-1mm) roots; Gradual change to -

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B22	0.55 - 0.7 m	Yellowish red (5YR5/6-Moist); Substrate influence, 0-2% , Faint; Medium clay; Strong grade of structure, 50-100 mm, Prismatic; 100-200 mm, Columnar; Smooth-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Dry; Very firm consistence; 0-2%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; 0-2%, medium gravelly, 6-20mm, rounded, dispersed, Quartz, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Very few (0 - 2 %), Manganiferous, Fine (0 - 2 mm), Root linings, weak, segregations; Few, very fine (0-1mm) roots; Gradual change to -
B31	0.7 - 0.9 m	Strong brown (7.5YR5/6-Moist); Substrate influence, 2-10% , Distinct; Substrate influence, 2-10% , Faint; Fine sandy light clay; Moderate grade of structure, 50-100 mm, Prismatic; 50-100 mm, Columnar; Rough-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Moist; Firm consistence; 2-10%, fine gravelly, 2-6mm, angular, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Few (2 - 10 %), Manganiferous, Medium (2 -6 mm), Nodules, strong, segregations;

Morphological Notes

B31 Ped coatings also mangan.

Observation Notes

Site Notes

CLUMP OF TREES STUBBLE ROBINSON

Observation ID: 1

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity			%
							(+)/kg			
0 - 0.02	4.89B	0.105A	2.6J	1.5	1.33	0.12		4.8I		2.50
0.01 - 0.085										
0.02 - 0.05	4.57B	0.109A	2.6J	1.5	0.87	0.1		5I		2.00
0.05 - 0.1	4.38B	0.077A	3J	1.6	0.6	0.1		4.7I		2.13
0.1 - 0.25	4.51B	0.034A	1.9J	1.5	0.22	0.15		3.6I		4.17
0.25 - 0.35	5.05B	0.073A	2J	3.92	0.3	0.95		5.29I		17.96
0.26 - 0.335										
0.7 - 0.8	6.65B	0.198A	3.68J	9.05	0.61	2.49		12.29I		20.26

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Laboratory Analyses Completed for this profile

13A1_AL	Oxalate-extractable aluminium
13A1_FE	Oxalate-extractable iron
13A1_MN	Oxalate-extractable manganese
13A1_SI	Oxalate-extractable silicon
13C1_AL	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_FE	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_MN	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
13C1_SI	Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon
14H1_CA	Soluble bases/SE (Ca,Mg,K,Na)
14H1_K	Soluble bases/SE (Ca,Mg,K,Na)
14H1_MG	Soluble bases/SE (Ca,Mg,K,Na)
14H1_NA	Soluble bases/SE (Ca,Mg,K,Na)
15F1_CA	Exchangeable bases by 0.01M silver-thiourea (AgTU)+, no pretreatment for soluble salts
15F1_K	Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts
15F1_MG	Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts
15F1_NA	Exchangeable bases by 0.01m (AgTU)+, no pretreatment for soluble salts
15F3	CEC by 0.01M silver-thiourea (AgTU)+
15N1	Exchangeable sodium percentage (ESP)
3A1	EC of 1:5 soil/water extract
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
6B3	Total organic carbon - high frequency induction furnace, infrared
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P3A1	Bulk density - g/cm3
P3B3VLc001	0.01 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLc003	0.03 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLc005	0.05 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLc01	0.1 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLc03	0.3 BAR Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLcSAT	Saturated Moisture m3/m3 - Volumetric using undisturbed 98mm diameter core on suction plate
P6_LP	Dispersion Index (Loveday and Pyle, 1973)
PWS1-2mm	1000-2000 micron fraction (%) - Wet Sieving after chemical dispersion
PWS20-63	20-63 micron fraction (%) - Wet Sieving after chemical dispersion
PWS212-425	212-425 micron fraction (%) - Wet Sieving after chemical dispersion
PWS425-1mm	425-1000 micron fraction (%) - Wet Sieving after chemical dispersion
PWS63-212	63-212 micron fraction (%) - Wet Sieving after chemical dispersion