

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM117 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By: G.M. Bowman	Locality:
Date Desc.: 13/02/93	Elevation: 250 metres
Map Ref.: Sheet No. : 8328 1:100000	Rainfall: No Data
Northing/Long.: 6163800 AMG zone: 55	Runoff: Very slow
Easting/Lat.: 523500 Datum: AGD66	Drainage: No Data

Geology

ExposureType: No Data	Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: Qza	Substrate Material: No Data

Land Form

Rel/Slope Class: No Data	Pattern Type: Low hills
Morph. Type: Lower-slope	Relief: No Data
Elem. Type: Footslope	Slope Category: No Data
Slope: 1 %	Aspect: 0 degrees

Surface Soil Condition (dry): Loose, Surface crust

Erosion:

Soil Classification

Australian Soil Classification:	Mapping Unit: N/A
Eutrophic Red Chromosol	Principal Profile Form: Dr2.12
ASC Confidence:	Great Soil Group: Non-calcic brown soil
Confidence level not specified	

Site Disturbance: Cultivation. Rainfed

Vegetation:

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

Profile Morphology

Ap	0 - 0.12 m	Brown (7.5YR4/4-Moist); ; Fine sandy loam; Weak grade of structure, 2-5 mm, Granular; , Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Coarse, (10 - 20) mm crack; Few (<1 per 100mm2) Medium (2-5mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Loose consistence; Non-plastic; Slightly sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Field pH 6 (Raupach); Common, fine (1-2mm) roots; Few, medium (2-5mm) roots; Sharp, Smooth change to -
B21	0.12 - 0.22 m	Dark reddish brown (5YR3/4-Moist); ; Light clay; Moderate grade of structure, 50-100 mm, Platy; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Dry; Strong consistence; Moderately plastic; Moderately sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Cultivation pan, Uncemented, Continuous, Platy; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
B22	0.22 - 0.4 m	Dark reddish brown (5YR3/4-Moist); ; Light clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Dry; Weak consistence; Moderately plastic; Moderately sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Gradual, Smooth change to -
B23	0.4 - 0.7 m	Dark red (2.5YR3/6-Moist); ; Light medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Medium (2-5mm) macropores, Dry; Very firm consistence; Moderately plastic; Moderately sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 - 6 mm), Soft segregations, weak, segregations; Field pH 7 (Raupach); Gradual, Smooth change to -
2B1	0.7 - 0.9 m	Dark red (2.5YR3/6-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Dry; Firm consistence; Moderately plastic; Moderately sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Clear, Smooth change

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2B2 0.9 - 1 m Yellowish red (5YR4/6-Moist); Substrate influence, 7.5YR32, 2-10% , Faint; Mottles, 10YR54, 2-10% , Faint; Medium heavy clay; Strong grade of structure, 10-20 mm, Polyhedral; Smooth-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Dry; Strong consistence; Moderately plastic; Moderately sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Nodules, strong, segregations;Field pH 7 (Raupach);

Morphological Notes

Observation Notes

Site Notes

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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
MIN_EC	Exchange Capacity - Minerology
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P3A1	Bulk density - g/cm ³
P3B3VLc001	0.01 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLc003	0.03 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLc005	0.05 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLc01	0.1 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLc03	0.3 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLcSAT	Saturated Moisture m ³ /m ³ - Volumetric using undisturbed 98mm diameter core on suction plate
P3B3VLd06	0.6 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate
P3B3VLd1	1 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate
P3B3VLd15	15 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate
P3B3VLd3	3 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate
P3B3VLd5	5 BAR Moisture m ³ /m ³ - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure 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
XRD_C_An	Anatase - X-Ray Diffraction
XRD_C_Hm	Hematite - X-Ray Diffraction
XRD_C_Il	Illite - X-Ray Diffraction
XRD_C_Is	Interstratified clay minerals - X-Ray Diffraction
XRD_C_Ka	Kaolin - X-Ray Diffraction
XRD_C_Qz	Quartz - X-Ray Diffraction