

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM7 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	B. Murphy	Locality:	
Date Desc.:	31/01/91	Elevation:	345 metres
Map Ref.:	Sheet No. : 8632 1:50000	Rainfall:	No Data
Northing/Long.:	6398700 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	671600 Datum: AGD66	Drainage:	Moderately well drained

Geology

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

Land Form

Rel/Slope Class:	No Data	Pattern Type:	Rises
Morph. Type:	Mid-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	5 %	Aspect:	315 degrees

Surface Soil Condition (dry): Hardsetting, Firm

Erosion: Not apparent (wind); Partial, Moderate (sheet)
Partial, Moderate (gully)

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: Extensive clearing, for example poisoning, ringbarking, Cultivation. Rainfed,

Vegetation:

Surface Coarse Fragments: 2-10%, fine gravelly, 2-6mm, subangular, ; No surface coarse fragments

Profile Morphology

O1	0 - 0.05 m	Organic Layer; ;
A11	0.05 - 0.07 m	Reddish brown (5YR4/4-Moist); ; Coarse sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky; 50-100 mm, Prismatic; Earthy fabric; Fine, (0 - 5) 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, Dry; Very weak consistence; Non-plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Smooth change to -
A12	0.07 - 0.15 m	Reddish brown (5YR4/4-Moist); Light brown (7.5YR6/4-Dry); ; Coarse sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky; 50-100 mm, Prismatic; Earthy fabric; Fine, (0 - 5) 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, Dry; Very weak consistence; Non-plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Sharp, Irregular change to -
B21	0.15 - 0.27 m	Yellowish red (5YR4/6-Moist); ; Medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; 50-100 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Moderately plastic; Normal plasticity; Moderately sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B22	0.27 - 0.56 m	Strong brown (7.5YR4/6-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Prismatic; 50-100 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Moderately moist; Firm consistence; Moderately plastic; Normal plasticity; Moderately sticky; 2-10%, medium gravelly, 6-20mm, angular, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Wavy change to -

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B23 0.56 - 0.81 m Yellowish brown (10YR5/4-Moist); Substrate influence; Substrate influence; Coarse sandy medium clay; Strong grade of structure, 50-100 mm, Prismatic; 50-100 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Dry; Strong consistence; Moderately plastic; Normal plasticity; Moderately sticky; 2-10%, coarse gravelly, 20-60mm, angular, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots;

Morphological Notes

Observation Notes

Site Notes

SUNTOP WELLINGTON SHED

Observation ID: 1

Laboratory Test Results:

Depth m	pH	1:5 EC dS/m	Ca	Exchangeable Mg	Cations K	Na Cmol (+)/kg	Exchangeable Acidity	CEC	ECEC	ESP %
0.05 - 0.07	5.62B	0.118A	2.5J	1.53	0.76	0.02		5.39I		0.37
0.06 - 0.135										
0.07 - 0.1	4.98B	0.061A	2.2J	1.34	0.63	0.01		4.69I		0.21
0.1 - 0.15	4.89B	0.059A	2.15J	1.24	0.4	0.02		4.65I		0.43
0.15 - 0.25	5.83B	0.043A	8.67J	6.59	0.38	0.16		15.34I		1.04
0.75 - 0.85	6.7B	0.063A	14.22J	12.95	0.53	0.61		25.85I		2.36

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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