Project Name: **SOIL STRUCTURE & MANAGEMENT**
Project Code: **SSM** **Site ID:** **SSM16** **Observation ID:** **1**
Agency Name: **CSIRO Division of Soils (ACT)**

Site Information

Desc. By: B. Murphy
Date Desc.: 14/02/91
Map Ref.: Sheet No. : 8532 1:50000
Northing/Long.: 6348300 AMG zone: 55
Easting/Lat.: 619100 Datum: AGD66
Locality:
Elevation: 370 metres
Rainfall: No Data
Runoff: Slow
Drainage: Moderately well drained

Geology

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

Land Form

Rel/Slope Class: No Data
Morph. Type: Lower-slope
Elem. Type: Footslope
Slope: 2 %
Pattern Type: Rises
Relief: No Data
Slope Category: No Data
Aspect: 135 degrees

Surface Soil Condition (dry): Loose

Erosion:

Soil Classification

Australian Soil Classification:
Eutrophic Red Dermosol
ASC Confidence:
Confidence level not specified
Mapping Unit: N/A
Principal Profile Form: Gn3.12
Great Soil Group: Red earth

Site Disturbance: Extensive clearing, for example poisoning, ringbarking

Vegetation:

Surface Coarse Fragments: 0-2%, fine gravelly, 2-6mm, subangular, ; No surface coarse fragments

Profile Morphology

O	0 - 0.01 m	Organic Layer; ;
A11	0.01 - 0.03 m	Yellowish red (5YR3/6-Moist); ; Clay loam; Moderate grade of structure, <2 mm, Granular; 50-100 mm, Prismatic; Earthy fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Dry; Weak consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, faint; Many, very fine (0-
A12	0.03 - 0.11 m	Dark reddish brown (2.5YR3/4-Moist); ; Silty clay loam; Weak grade of structure, 10-20 mm, Subangular blocky; 50-100 mm, Lenticular; Earthy fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Dry; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Many, very fine (0-1mm) roots; Gradual change to -
B21	0.13 - 0.23 m	Dark reddish brown (2.5YR3/4-Moist); ; Silty clay loam; Strong grade of structure, 20-50 mm, Subangular blocky; 100-200 mm, Columnar; Smooth-ped fabric; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Many, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual change to -
B22	0.23 - 0.33 m	Dark reddish brown (2.5YR3/4-Moist); ; Medium clay; Strong grade of structure, 100-200 mm, Prismatic; 50-100 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Dry; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Common, very fine (0-1mm) roots;

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B22	0.33 - 0.51 m	Red (2.5YR4/6-Moist); ; Medium clay; Strong grade of structure, 100-200 mm, Prismatic; 50-100 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Dry; Firm consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, 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;
B23	0.51 - 0.71 m	Red (2.5YR4/6-Moist); ; Medium clay; Strong grade of structure, 100-200 mm, Prismatic; 50-100 mm, Angular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Dry; Firm consistence; Moderately plastic; Normal plasticity; Slightly sticky; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; 0-2%, fine gravelly, 2-6mm, subangular, 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;
B23	0.71 - 0.91 m	Red (2.5YR4/6-Moist); ; Strong grade of structure, 50-100 mm, Prismatic; 20-50 mm, Subangular blocky; Smooth-ped fabric; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Fine, (0 - 5) mm crack; Firm consistence; Many cutans, >50% of ped faces or walls coated; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations;Few, very fine (0-1mm) roots;

Morphological Notes

B21	Some peds smaller (2-5 mm) also polyhedral peds.
B22	Some peds smaller (2-5 mm) also polyhedral peds.
B22	Some peds smaller (2-5 mm) also polyhedral peds.
B23	Some peds 5-10mm also polyhedral

Observation Notes

Site Notes

TELESCOPE PASTURE PARKES

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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							%
0.01 - 0.03	5.88B	0.95A	11.78J	4.59	2.15	0.03		15.95I		0.19
0.02 - 0.095										
0.03 - 0.06	5.29B	0.511A	1.25J	0.52	0.32	0.01		2.14I		0.47
0.06 - 0.11	5.4B	0.209A	8.92J	2.9	2.27	0.04		14.53I		0.28
0.11 - 0.23	5.86B	0.068A	9.34J	3.76	1.72	0.03		13.15I		0.23
0.21 - 0.295										
0.23 - 0.33	5.98B	0.048A	9.73J	4.23	1.31	0.05		12.9I		0.39
0.71 - 0.81	6.38B	0.044A	9.43J	6.03	0.59	0.1		16.46I		0.61

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			%		
0.01 - 0.03		6.42C									25	22
0.02 - 0.095							1.30					
0.03 - 0.06		2.62C									27	27
0.06 - 0.11		1.57C									25	30
0.11 - 0.23		0.92C									23	41
0.21 - 0.295							1.25					
0.23 - 0.33		0.85C									19	47
0.71 - 0.81		0.29C									10	63

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
0.01 - 0.03									
0.02 - 0.095									
0.03 - 0.06									
0.06 - 0.11									
0.11 - 0.23									
0.21 - 0.295			0.47F	0.45I			0.26D	0.22G	
0.23 - 0.33									
0.71 - 0.81									

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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
P3B3VLd06	0.6 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate
P3B3VLd15	15 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate
P3B3VLd3	3 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate
P3B3VLd5	5 BAR Moisture m3/m3 - 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