

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM3 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	B. Murphy	Locality:	
Date Desc.:	17/01/91	Elevation:	390 metres
Map Ref.:	Sheet No. : 8630 1:50000	Rainfall:	No Data
Northing/Long.:	6257600 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	657700 Datum: AGD66	Drainage:	Moderately well drained

Geology

ExposureType:	Soil pit	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	gco	Substrate Material:	Granodiorite

Land Form

Rel/Slope Class:	No Data	Pattern Type:	Low hills
Morph. Type:	No Data	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	5 %	Aspect:	90 degrees

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Hypercalcic Red Chromosol		Principal Profile Form:	Dy2.42
ASC Confidence:		Great Soil Group:	Non-calcic brown soil
Confidence level not specified			

Site Disturbance:

Vegetation:

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

Profile Morphology

O1	0 - 0.02 m	Organic Layer; ;
A11	0.02 - 0.07 m	Brown (7.5YR4/3-Moist); ; Coarse sandy loam (Fibric); Weak grade of structure, 20-50 mm, Subangular blocky; 50-100 mm, Lenticular; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Moderately moist; Very weak consistence; Non-plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Abundant, very fine (0-1mm) roots; Common, fine (1-2mm) roots; Abrupt, Smooth change to -
A12	0.07 - 0.2 m	Reddish brown (5YR4/4-Moist); Light brown (7.5YR6/4-Dry); ; Coarse sandy loam; Weak grade of structure, 20-50 mm, Subangular blocky; 50-100 mm; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Dry; Weak consistence; Non-plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Smooth change to -
A21	0.2 - 0.25 m	Reddish brown (5YR5/4-Moist); ; Coarse sandy loam; Weak grade of structure, 20-50 mm; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Dry; Weak consistence; Non-plastic; Normal plasticity; Non-sticky; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to -
A21	0.25 - 0.32 m	Reddish brown (5YR5/4-Moist); ; Coarse sandy loam; Weak grade of structure, 20-50 mm; Sandy (grains prominent) fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Dry; Firm consistence; Non-plastic; Normal plasticity; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules, strong, segregations; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Gradual, Smooth change to -

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A23	0.32 - 0.37 m	Yellowish red (5YR5/6-Moist); ; Coarse sandy loam; Moderate grade of structure; Sandy (grains prominent) fabric; Many (>5 per 100mm ²) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm ²) Fine (1-2mm) macropores, Few (<1 per 100mm ²) Medium (2-5mm) macropores, Dry; Firm consistence; Non-plastic; Normal plasticity; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Nodules, strong, segregations; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Clear, Smooth change to -
B21	0.37 - 0.64 m	Red (2.5YR5/6-Moist); Substrate influence, 10R46, 0-2% , Faint; Medium sandy clay; Moderate grade of structure; Rough-ped fabric; Dry; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Soft segregations, strong, segregations; Diffuse, Smooth change to -
B22	0.64 - 0.78 m	Yellowish red (5YR5/6-Moist); ; Medium sandy clay; Moderate grade of structure; Rough-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Dry; Strong consistence; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Common (10 - 20 %), Ferromanganiferous, Coarse (6 - 20 mm), Soft segregations, weak, segregations; Gradual, Smooth change to -
	0.78 - 0.99 m	Strong brown (7.5YR5/6-Moist); Substrate influence, 2.5YR46; Medium sandy clay; Moderate grade of structure; Rough-ped fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Strong consistence; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, Quartz, coarse fragments; 2-10%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated; Common (10 - 20 %), Ferromanganiferous, Coarse (6 - 20 mm), Soft segregations, weak, segregations;

Morphological Notes

B22 Ped coatings also mangan.

Observation Notes

Woodlot of Kurrajong trees. Planted about 1940. Soil physical measurements done on A1-O1 removed.

Site Notes

COWRA SCS RESEARCH STATION

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[illegible]

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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/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
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