

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM20 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	B. Murphy	Locality:	
Date Desc.:	26/02/91	Elevation:	270 metres
Map Ref.:	Sheet No. : 8430 1:50000	Rainfall:	No Data
Northing/Long.:	6249900 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	582300 Datum: AGD66	Drainage:	Well drained

Geology

ExposureType:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	QrOs	Substrate Material:	Unconsolidated material (unidentified)

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:	3 %	Aspect:	90 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Mottled-Mesonatric Red Sodosol		Principal Profile Form:	Dr3.43
ASC Confidence:		Great Soil Group:	Red-brown earth
Confidence level not specified			

Site Disturbance: Cultivation. Rainfed

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.05 m	Dark reddish brown (5YR3/3-Moist); ; Fine sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky; Earthy fabric; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Fine, (0 - 5) mm crack; Many (>5 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Very weak consistence; Non-plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Many, very fine (0-1mm) roots; Clear change to -
A21	0.05 - 0.1 m	Reddish brown (5YR4/4-Moist); Light reddish brown (5YR6/4-Dry); Biological mixing, 0-2% , Distinct; Fine sandy loam; Weak grade of structure, 5-10 mm, Platy; Earthy fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Firm consistence; Non-plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Cultivation pan; Common, very fine (0-1mm) roots; Clear change to -
A22	0.1 - 0.3 m	Yellowish red (5YR5/8-Moist); Pink (5YR7/4-Dry); Substrate influence, 10YR6/4, 20-50% , Faint; Biological mixing, 0-2% , Distinct; Loamy fine sand; Single grain grade of structure; Sandy (grains prominent) fabric; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Loose consistence; Non-plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Common, very fine (0-1mm) roots; Sharp change to -
B21	0.3 - 0.4 m	Yellowish red (5YR4/6-Moist); Substrate influence, 0-2% , Faint; Biological mixing, 0-2% , Distinct; Fine sandy medium clay; Strong grade of structure, 50-100 mm, Prismatic; 50-100 mm, Subangular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Moderately moist; 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, subrounded, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots;

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B22	0.4 - 0.6 m	Yellowish red (5YR4/6-Moist); Substrate influence, 0-2% , Faint; Biological mixing, 0-2% , Distinct; Fine sandy medium clay; Strong grade of structure, 50-100 mm, Prismatic; 50-100 mm, Subangular blocky; Smooth-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Moderately moist; 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, subrounded, dispersed, coarse fragments; Many cutans, >50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Gradual change to -
B23k	0.6 - 0.9 m	Light yellowish brown (10YR6/4-Moist); Substrate influence, 5YR46, 20-50% , Distinct; Fine sandy clay loam; Moderate grade of structure, 50-100 mm, Subangular blocky; 50-100 mm, Angular blocky; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Moderately moist; Weak consistence; Slightly plastic; Normal plasticity; Slightly sticky; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Few (2 - 10 %), Calcareous, Coarse (6 - 20 mm), Nodules, strong, segregations; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Soft segregations, weak, segregations;

Morphological Notes

B23k Ped coatings also mangan.

Observation Notes

*** Site process also alluvial

Site Notes

PHILLIPS PINES PADDOCK STUBBLE-PASTURE

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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
P3B3VLd06	0.6 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