

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM17 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	B. Murphy	Locality:	
Date Desc.:	04/02/91	Elevation:	350 metres
Map Ref.:	Sheet No. : 8532 1:50000	Rainfall:	No Data
Northing/Long.:	6348400 AMG zone: 55	Runoff:	Moderately rapid
Easting/Lat.:	615000 Datum: AGD66	Drainage:	Moderately well drained

Geology

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

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:	225 degrees

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Hypercalcic Red Dermosol		Principal Profile Form:	Gn2.13
ASC Confidence:		Great Soil Group:	Red earth
Confidence level not specified			

Site Disturbance: Cultivation. Rainfed

Vegetation:

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

Profile Morphology

O1	0 - 0.01 m	Organic Layer; ;
O2	0.01 - 0.03 m	Organic Layer; ;
A11	0.03 - 0.11 m	Dark reddish brown (2.5YR3/3-Moist); ; Fine sandy loam; Weak grade of structure, 5-10 mm, Polyhedral; 50-100 mm, Lenticular; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; 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; Loose consistence; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Many, very fine (0-1mm) roots; Clear change to -
A12	0.11 - 0.23 m	Dark reddish brown (2.5YR3/3-Moist); Yellowish red (5YR5/6-Dry); ; Clay loam; Weak grade of structure, 5-10 mm, Polyhedral; 50-100 mm, Lenticular; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Dry; Very weak 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; Clear change to -
AB	0.23 - 0.35 m	Reddish brown (2.5YR4/4-Moist); ; Light clay; Weak grade of structure, 20-50 mm, Subangular blocky; 50-100 mm, Columnar; Earthy fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 100mm2) Medium (2-5mm) macropores, Few (<1 per 100mm2) Coarse (>5mm) 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, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Few, medium (2-5mm) roots; Few, coarse (>5mm) roots;

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B21	0.38 - 0.53 m	Yellowish red (5YR4/8-Moist); ; Medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; 50-100 mm, Columnar; Rough-ped fabric; Very coarse, (20 - 50) mm crack; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Medium (2-5mm) macropores, Few (<1 per 100mm ²) Fine (1-2mm) macropores, Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Dry; Very weak consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse change to -
B21	0.53 - 0.73 m	Yellowish red (5YR4/8-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Prismatic; 100-200 mm, Angular blocky; Rough-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; Common cutans, 10-50% of ped faces or walls coated, distinct; Few, very fine (0-1mm) roots; Diffuse change to -
B22	0.73 - 0.93 m	Red (2.5YR5/8-Moist); ; Medium clay; Strong grade of structure, 50-100 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; Weak consistence; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; 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; Few, very fine (0-1mm)
	0.93 - 1.13 m	Yellowish red (5YR5/8-Moist); Substrate influence, 2-10% , Faint; Strong grade of structure, 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; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Weak 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; Few, fine (1-2mm) roots;

Morphological Notes

B21 some peds smaler (5-10 mm) also polyhedral peds.

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

Large rock fragments present subangular 50-100mm looks fine intermediate some
peds smaller(5-10mm) also polyhedral

Observation Notes

Site Notes

JELBART WOODLAND - PINES

Observation ID: 1

Depth m	COLE	Gravimetric/Volumetric Water Contents							K sat mm/h	K unsat mm/h
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar		
		g/g - m ³ /m ³								
0.03 - 0.05										
0.04 - 0.115										
0.05 - 0.08										
0.08 - 0.13										
0.13 - 0.23										
0.24 - 0.315							0.16D	0.13G		
0.25 - 0.35										
0.38 - 0.53										
0.73 - 0.83										

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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