

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM9 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	B. Murphy	Locality:	
Date Desc.:	31/01/91	Elevation:	410 metres
Map Ref.:	Sheet No. : 8632 1:50000	Rainfall:	No Data
Northing/Long.:	6386950 AMG zone: 55	Runoff:	Slow
Easting/Lat.:	668600 Datum: AGD66	Drainage:	Moderately well drained

Geology

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

Land Form

Rel/Slope Class:	No Data	Pattern Type:	Low hills
Morph. Type:	Lower-slope	Relief:	No Data
Elem. Type:	Hillslope	Slope Category:	No Data
Slope:	2 %	Aspect:	45 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:		Mapping Unit:	N/A
Hypercalcic Red Dermosol		Principal Profile Form:	Dy2.82
ASC Confidence:		Great Soil Group:	Yellow earth
Confidence level not specified			

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

Vegetation:

Surface Coarse Fragments: 0-2%, fine gravelly, 2-6mm, subangular,

Profile Morphology

A1	0 - 0.08 m	Reddish brown (5YR4/4-Moist); ; Sandy loam; Weak grade of structure, 20-50 mm, Subangular blocky; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 100mm ²) Fine (1-2mm) macropores, Few (<1 per 100mm ²) Medium (2-5mm) macropores, Dry; Very weak consistence; Slightly plastic; Normal plasticity; Slightly sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules, strong, segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules, strong, segregations; Common, very fine (0-1mm) roots; Clear change to -
A2	0.08 - 0.14 m	Reddish brown (5YR5/4-Moist); Light reddish brown (5YR6/4-Dry); ; Sandy loam; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 100mm ²) Fine (1-2mm) macropores, Moderately moist; Weak consistence; Slightly plastic; Normal plasticity; Slightly sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules, strong, segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules, strong, segregations; Common, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear change to -
B11	0.14 - 0.25 m	Red (2.5YR5/6-Moist); ; Silty clay loam; Weak grade of structure, 20-50 mm, Subangular blocky; 50-100 mm, Columnar; Earthy fabric; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 100mm ²) Fine (1-2mm) macropores, Few (<1 per 100mm ²) Medium (2-5mm) macropores, Few (<1 per 100mm ²) Coarse (>5mm) macropores, Moderately moist; Weak consistence; Moderately plastic; Normal plasticity; Moderately sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules, strong, segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules, strong, segregations; Few, very fine (0-1mm) roots;
B11	0.25 - 0.37 m	Red (2.5YR5/6-Moist); ; Silty light medium clay; Weak grade of structure, 20-50 mm, Subangular blocky; 50-100 mm, Columnar; Earthy fabric; Moderately moist; Weak consistence; Moderately plastic; Normal plasticity; Moderately sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules, strong, segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules, strong, segregations; Few, very fine (0-1mm) roots; Clear change to -

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM9 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

B21	0.37 - 0.6 m	Red (2.5YR5/6-Moist); ; Medium clay; Strong grade of structure, 50-100 mm, Prismatic; 50-100 mm, Subangular blocky; Smooth-ped fabric; Dry; Very firm consistence; Moderately plastic; Normal plasticity; Moderately sticky; 0-2%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Common cutans, 10-50% of ped faces or walls coated, distinct; Few (2 - 10 %), Ferromanganiferous, Medium (2 -6 mm), Nodules, strong, segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules, strong, segregations; Gradual change to -
B22	0.6 - 0.85 m	Yellowish red (5YR5/6-Moist); Substrate influence, 2-10% , Distinct; Substrate influence, 2-10% , Faint; Medium heavy clay; Moderate grade of structure, 50-100 mm, Prismatic; 50-100 mm, Subangular blocky; Rough-ped fabric; Dry; Firm consistence; Moderately plastic; Normal plasticity; Moderately sticky; 10-20%, fine gravelly, 2-6mm, subangular, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated, distinct; Many (20 - 50 %), Ferromanganiferous, Fine (0 - 2 mm), Soft segregations, strong, segregations; Many (20 - 50 %), Ferromanganiferous, Medium (2 -6 mm), Soft segregations, strong, segregations; Many (20 - 50 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules, strong, segregations; Many (20 - 50 %), Ferromanganiferous, Medium (2 -6 mm), Nodules, strong, segregations; Soil matrix is Slightly calcareous;

Morphological Notes

B22 Reaction to CO3 at bottom of layer

Observation Notes

10 in spacing for sowing

Site Notes

WALMER TROUNCE WINDMILL

Observation ID: 1

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.02	5.21B	0.152A	3.98J	1.45	1.52	0.01		7.36I	0.14
0.01 - 0.085									
0.02 - 0.05	4.73B	0.126A	3.79J	1.21	1.02	0.01		6.8I	0.15
0.05 - 0.1	4.5B	0.106A	3.69J	1.09	0.91	0.01		7.18I	0.14
0.1 - 0.15	4.86B	0.068A	3.9J	1.4	0.64	0.02		6.3I	0.32
0.15 - 0.25	5.28B	0.047A	4.74J	1.62	0.6	0.03		7.34I	0.41
0.21 - 0.285									
0.25 - 0.35	5.53B	0.029A	5.5J	2.14	0.53	0.01		9.42I	0.11
0.37 - 0.6									
0.7 - 0.8	6.52B	0.041A	8.8J	2.9	0.43	0.05		11.1I	0.45

[illegible][illegible]

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM9 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

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
P3B3VLd06	0.6 BAR Moisture m3/m3 - Volumetric using undisturbed 48mm diameter and 15mm height core on pressure plate
P3B3VLd1	1 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