

Project Name: SOIL STRUCTURE & MANAGEMENT
Project Code: SSM **Site ID:** SSM6 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (ACT)

Site Information

Desc. By:	B. Murphy	Locality:	
Date Desc.:	30/01/91	Elevation:	350 metres
Map Ref.:	Sheet No. : 8632 1:50000	Rainfall:	No Data
Northing/Long.:	6399600 AMG zone: 55	Runoff:	Rapid
Easting/Lat.:	673300 Datum: AGD66	Drainage:	Moderately well drained

Geology

ExposureType:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	Probable
Geol. Ref.:	Cza	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:	5 %	Aspect:	315 degrees

Surface Soil Condition (dry): Hardsetting

Erosion: Not apparent (wind); Moderate (sheet) No rill erosion (rill) Partial, Moderate (gully)

Soil Classification

Australian Soil Classification:	Mapping Unit:	N/A
Hypercalcic Red Dermosol	Principal Profile Form:	Dr2.13
ASC Confidence:	Great Soil Group:	Red-brown earth
Confidence level not specified		

Site Disturbance: Cultivation. Rainfed

Vegetation:

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

Profile Morphology

A11	0 - 0.02 m	Yellowish red (5YR4/6-Moist); ; Fine sandy loam; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Common (1-5 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 100mm ²) Fine (1-2mm) macropores, Dry; Very weak consistence; Non-plastic; Normal plasticity; Non-sticky; 2-10%, fine gravelly, 2-6mm, subangular platy, dispersed, coarse fragments; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Smooth change to -
A2	0.02 - 0.1 m	Yellowish red (5YR4/6-Moist); Light reddish brown (5YR6/4-Dry); ; Fine sandy loam; Weak grade of structure, 10-20 mm, Subangular blocky; 50-100 mm, Prismatic; Earthy fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; 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, Dry; Very weak consistence; Non-plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subangular platy, dispersed, coarse fragments; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Smooth change to -
B1	0.1 - 0.16 m	Yellowish red (5YR4/6-Moist); ; Medium sandy clay loam; Massive grade of structure, 10-20 mm, Platy; Earthy fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; 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; Firm consistence; Slightly plastic; Normal plasticity; Non-sticky; 0-2%, fine gravelly, 2-6mm, subangular platy, dispersed, coarse fragments; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Clear, Smooth change to -
B21	0.16 - 0.28 m	Yellowish red (5YR4/6-Moist); ; Fine sandy light clay; Moderate grade of structure, 50-100 mm, Subangular blocky; 50-100 mm, Angular blocky; Rough-ped fabric; Coarse, (10 - 20) mm crack; Medium, (5 - 10) mm crack; Fine, (0 - 5) 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 firm consistence; Moderately plastic; Normal plasticity; Slightly sticky; 0-2%, fine gravelly, 2-6mm, subangular platy, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Smooth change to -

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| B22 | 0.28 - 0.47 m | Red (2.5YR4/6-Moist); ; Fine sandy medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; 50-100 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; 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; Strong consistence; Moderately plastic; Normal plasticity; Slightly sticky; 0-2%, fine gravelly, 2-6mm, subangular platy, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Smooth change to - |
| B23 | 0.47 - 0.67 m | Red (2.5YR5/6-Moist); ; Fine sandy medium clay; Moderate grade of structure, 50-100 mm, Subangular blocky; 50-100 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; 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; Strong consistence; Moderately plastic; Normal plasticity; Slightly sticky; 0-2%, fine gravelly, 2-6mm, angular, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Gradual, Smooth |
| B23 | 0.67 - 0.85 m | Red (2.5YR5/6-Moist); ; Fine sandy medium clay; Moderate grade of structure; Rough-ped fabric; Fine, (0 - 5) mm crack; Medium, (5 - 10) mm crack; Few (<1 per 100mm ²) Very fine (0.075-1mm) macropores, Few (<1 per 100mm ²) Fine (1-2mm) macropores, Dry; Strong consistence; Moderately plastic; Normal plasticity; Slightly sticky; 0-2%, fine gravelly, 2-6mm, angular, dispersed, coarse fragments; Few cutans, <10% of ped faces or walls coated, faint; Few, very fine (0-1mm) roots; |

Morphological Notes

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|-----|----------------------------------------------------|
| B1 | Very obvious pan, platy and solid |
| B23 | Lower horizon strongly reacts to CaCO ₃ |

Observation Notes

Site Notes

SUNTOP WELLINGTON WATERWAY

Observation ID: 1

[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/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