

**Project Name:** WAGGA WAGGA SOIL LANDSCAPES  
**Project Code:** 1000448 **Site ID:** WW222 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (ACT)

**Site Information**

<b>Desc. By:</b>	Chen, XY	<b>Locality:</b>	
<b>Date Desc.:</b>	15/07/93	<b>Elevation:</b>	202 metres
<b>Map Ref.:</b>	Sheet No. : 8327 1:25000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6106675 AMG zone: 55	<b>Runoff:</b>	Very slow
<b>Easting/Lat.:</b>	518175 Datum: AGD66	<b>Drainage:</b>	Imperfectly drained

**Geology**

<b>ExposureType:</b>	No Data	<b>Conf. Sub. is Parent. Mat.:</b>	Probable
<b>Geol. Ref.:</b>	Czg	<b>Substrate Material:</b>	Sand

**Land Form**

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	Stagnant alluvial plain
<b>Morph. Type:</b>	Flat	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Plain	<b>Slope Category:</b>	No Data
<b>Slope:</b>	1 %	<b>Aspect:</b>	180 degrees

**Surface Soil Condition (dry):** Hardsetting

**Erosion:**

**Soil Classification**

<b>Australian Soil Classification:</b>		<b>Mapping Unit:</b>	N/A
Haplic Red Chromosol Thick Gravelly Loamy		<b>Principal Profile Form:</b>	Dr2.12
<b>ASC Confidence:</b>		<b>Great Soil Group:</b>	Non-calcic brown soil
Confidence level not specified			

**Site Disturbance:** Complete clearing. Pasture, native or improved, but never cultivated

**Vegetation:**

**Surface Coarse Fragments:**

**Profile Morphology**

A	0 - 0.18 m	Dark reddish brown (5YR3/3-Moist); ; Clay loam; Weak grade of structure, 5-10 mm, Subangular blocky; Earthy fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Slightly plastic; Moderately sticky; Field pH 6 (Raupach); Many, fine (1-2mm) roots; Gradual change to -
B2	0.18 - 0.6 m	Red (2.5YR4/6-Moist); ; Light clay; Moderate grade of structure, 5-10 mm, Polyhedral; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Few (<1 per 100mm2) Fine (1-2mm) macropores, Dry; Moderately plastic; Very sticky; 0-2%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), Nodules, strong, segregations;Very few (0 - 2 %), Ferromanganiferous, Medium (2 -6 mm), Nodules, strong, segregations;Field pH 7 (Raupach); Few, fine (1-2mm) roots; Diffuse change to -
B3	0.6 - 0.7 m	Yellowish red (5YR3/6-Moist); ; Light clay; Weak grade of structure, 2-5 mm, Polyhedral; Rough-ped fabric; Dry; Moderately plastic; Very sticky; Field pH 7 (Raupach);

**Morphological Notes**

B3 Very compact, difficult for augering.

**Observation Notes**

Pit to 30cm, auger to 70cm.

**Site Notes**

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**Laboratory Test Results:**

Depth	pH	1:5 EC	Ca	Exchangeable Mg	Cations K	Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m				Cmol (+)/kg				%
0 - 0.18	6B	0.1A	9.1J	2.9	1.1	0.2	0L	12I		1.67
0.18 - 0.6	6.1B	0.03A	12.7J	7.6	1.9	0.3	0L	17.8I		1.69
0.6 - 0.7	6.3B	0.04A	12.2J	7.6	2.7	0.4	0L	22.4I		1.79

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	Analysis FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.18		2.22A	2D					2	19F	54	8	17
0.18 - 0.6		0.29A	0D						10F	21	1	68
0.6 - 0.7		0.22A	0D						7F	23	2	68

Depth	COLE	Gravimetric/Volumetric Water Contents							K sat	K unsat
m		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	mm/h	mm/h
				g/g - m3/m3						
0 - 0.18				0.32B				0.13B		
0.18 - 0.6				0.59B				0.3B		
0.6 - 0.7				0.59B				0.3B		

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**Laboratory Analyses Completed for this profile**

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
15F2	Exchangeable aluminium by 0.01m (AgTU)+
15F3	CEC by 0.01M silver-thiourea (AgTU)+
3A1	EC of 1:5 soil/water extract
4B1	pH of 1:5 soil/0.01M calcium chloride extract - direct
6A1	Organic carbon - Walkley and Black
9E	Available P (mg/kg) - Bray P
9J2	Phosphate sorption curve - automated colour
P10_GRAV	Gravel (%)
P10_HYD_C	Clay (%) - Hydrometer Method
P10_HYD_CS	Coarse Sand (%) - Hydrometer Method
P10_HYD_FS	Fine Sand (%) - Hydrometer Method
P10_HYD_Z	Silt (%) - Hydrometer Method
P3B_GV_01	0.1 BAR Moisture g/g - Gravimetric using suction plate
P3B_GV_15	15 BAR Moisture g/g - Gravimetric using pressure plate