

**Project Name:** WAGGA WAGGA SOIL LANDSCAPES  
**Project Code:** 1000448      **Site ID:** WW22      **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> 188 metres
<b>Map Ref.:</b> Sheet No. : 8327 1:25000	<b>Rainfall:</b> No Data
<b>Northing/Long.:</b> 6114075 AMG zone: 55	<b>Runoff:</b> Moderately rapid
<b>Easting/Lat.:</b> 519450 Datum: AGD66	<b>Drainage:</b> Imperfectly drained

#### Geology

<b>ExposureType:</b> No Data	<b>Conf. Sub. is Parent. Mat.:</b> No Data
<b>Geol. Ref.:</b> Sgc	<b>Substrate Material:</b> Clay

#### Land Form

<b>Rel/Slope Class:</b> No Data	<b>Pattern Type:</b> Low hills
<b>Morph. Type:</b> Flat	<b>Relief:</b> No Data
<b>Elem. Type:</b> Valley flat	<b>Slope Category:</b> No Data
<b>Slope:</b> 2 %	<b>Aspect:</b> 135 degrees

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

**Erosion:** Stable, Minor (gully)

#### Soil Classification

<b>Australian Soil Classification:</b> N/A	<b>Mapping Unit:</b> N/A
<b>ASC Confidence:</b> Confidence level not specified	<b>Principal Profile Form:</b> Um1.41
	<b>Great Soil Group:</b> Alluvial soil

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

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A	0 - 0.1 m	Very dark brown (10YR2/3-Moist); Mottles, 0-2% , Distinct; Silty clay loam; Weak grade of structure, 50-100 mm, Subangular blocky; Smooth-ped fabric; Common (1-5 per 100mm2) Fine (1-2mm) macropores, Moist; Moderately plastic; Slightly sticky; Very few (0 - 2 %), Ferruginous, Fine (0 - 2 mm), Root linings, weak, segregations; Few (2 - 10 %), Ferromanganiferous, Medium (2 - 6 mm), Soft segregations, weak, segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Soft segregations, weak, segregations; Field pH 8 (Raupach); Many, fine (1-2mm) roots; Clear, Smooth change to -
C1	0.1 - 0.3 m	Brown (7.5YR5/3-Moist); Mottles, 10-20% , Distinct; Silty clay loam; Massive grade of structure; Earthy fabric; Few (<1 per 100mm2) Fine (1-2mm) macropores, Wet; Moderately plastic; Slightly sticky; Few (2 - 10 %), Ferruginous, Fine (0 - 2 mm), Root linings, weak, segregations; Few (2 - 10 %), Ferromanganiferous, Medium (2 - 6 mm), Soft segregations, weak, segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Soft segregations, weak, segregations; Field pH 9 (Raupach); Common, fine (1-2mm) roots; Abrupt, Smooth change to -
C2	0.3 - 0.38 m	Brown (7.5YR4/3-Moist); ; Loamy coarse sand; Single grain grade of structure; Sandy (grains prominent) fabric; Wet; Non-plastic; Non-sticky; 2-10%, fine gravelly, 2-6mm, subrounded, dispersed, Quartz, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Medium (2 - 6 mm), Nodules, strong, segregations; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules, strong, segregations; Field pH 9.5 (Raupach); Few, fine (1-2mm) roots; Abrupt, Smooth change to -
C3	0.38 - 0.9 m	Yellowish brown (10YR5/4-Moist); Mottles, 20-50% , Faint; Medium heavy clay; Moderate grade of structure, <2 mm, Granular; 100-200 mm, Lenticular; Rough-ped fabric; Moist; Very plastic; Very sticky; Very few (0 - 2 %), Ferromanganiferous, Medium (2 - 6 mm), Soft segregations, weak, segregations; Field pH 7 (Raupach);

#### Morphological Notes

C2	Alluvial
C3	No water in this clay

#### Observation Notes

Layer 3 - Coarse sand - is a saturated aquifer.	Pit to 40cm, auger to 90cm.	Pit to 90cm
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10M WEST OF CREEK

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Na	Exchangeable Acidity	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Cmol (+)/kg				%
0 - 0.1	6B	0.86A	10.2J	5.9	0.9	0.9	0L	16.5I		5.45
0.38 - 0.9	6.2B	0.72A	10.7J	7.9	1.2	1.6	0L	20.1I		7.96

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle GV	Size CS	FS	Analysis	
m	%	%	mg/kg	%	%	%	Mg/m3			%	Silt	Clay
0 - 0.1		2.87A	1D					4	6F	46	28	16
0.38 - 0.9		0.23A	0D						11F	22	15	52

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	
			g/g - m3/m3						mm/h
0 - 0.1				0.57B				0.15B	
0.38 - 0.9				0.57B				0.23B	

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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