Project Name: NC
Project Code: NC **Site ID:** C449 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (NSW)

Site Information

Desc. By: P.H. Walker
Locality: Willawarrin:crossing Armidale Road and Mungay Creek cutting east side
Date Desc.: 30/11/60
Elevation: 60 metres
Map Ref.: Sheet No. : 9436 1:100000
Rainfall: 1200
Northing/Long.: 152.616666666667
Runoff: No Data
Easting/Lat.: -30.9333333333333
Drainage: Well drained

Geology

ExposureType: Existing vertical exposure
Conf. Sub. is Parent. Mat.: No Data
Geol. Ref.: No Data
Substrate Material: Porous, Unconsolidated material (unidentified)

Land Form

Rel/Slope Class: Undulating rises 9-30m 3-10%
Pattern Type: Terrace (alluvial)
Morph. Type: Simple-slope
Relief: No Data
Elem. Type: Bench
Slope Category: Very gently sloped
Slope: 1 %
Aspect: 90 degrees

Surface Soil Condition (dry): Firm

Erosion:

Soil Classification

Australian Soil Classification:
Haplic Magnesic Red Kandosol
ASC Confidence:
All necessary analytical data are available.
Mapping Unit: N/A
Principal Profile Form: N/A
Great Soil Group: Red podzolic soil

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

Vegetation:

Mid Strata - Heath shrub, , Isolated clumps. *Species includes - Lantana camara
Tall Strata - Tree, , Mid-dense. *Species includes - Eucalyptus species

Surface Coarse Fragments:

Profile Morphology

A1	0 - 0.13 m	Brown (7.5YR4/2-Moist); ; Silty clay loam (Heavy); Moderate grade of structure, 20-50 mm, Subangular blocky; Dry; Firm consistence; Field pH 5.9 (pH meter); Many
A2	0.13 - 0.3 m	Reddish brown (5YR4/3-Moist); ; Silty clay loam; Massive grade of structure; Dry; Very firm consistence; Field pH 6.1 (pH meter); Many
B1	0.3 - 0.53 m	Strong brown (7.5YR4/6-Moist); , 5YR44, 2-10% ; , 2-10% ; Light clay (Light); Moderate grade of structure, 10-20 mm, Angular blocky; Dry; Very firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.8 (pH meter); Common
B2	0.53 - 0.76 m	Reddish brown (5YR4/4-Moist); , 2.5YR44, 2-10% ; , 2-10% ; Light clay; Moderate grade of structure, 5-10 mm, Angular blocky; Dry; Very firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.6 (pH meter); Common
B2	0.76 - 1.02 m	Brown (7.5YR4/4-Moist); , 2.5YR44, 2-10% ; , 5YR44, 2-10% ; Light clay; Massive grade of structure; Moderately moist; Very firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Field pH 5.5 (pH meter); Common
B2C	1.02 - 1.5 m	Very pale brown (10YR7/3-Moist); , 5YR56, 2-10% ; , 5Y82, 2-10% ; Clay loam (Heavy); Massive grade of structure; Moderately moist; Firm consistence; Few cutans, <10% of ped faces or walls coated, distinct; Very few (0 - 2 %), Manganiferous, , Soft segregations; Field pH 5.3 (pH meter);
D	1.5 - 2.13 m	Grey (10YR6/1-Moist); , 7.5YR58, 20-50% ; , 20-50% ; Light clay; Massive grade of structure; Moderately moist; Very firm consistence; Few cutans, <10% of ped faces or walls coated, distinct;

Morphological Notes

Observation Notes

ALLUVIUM:K3 SOIL OVERLAIN BY 35CM K0 (CONTERPORARY MATERIAL):K0 NOT DESCRIBED:WORM ACTIVITY TO 1M:

Site Notes

KEMPSEY

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Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations				Exchangeable Acidity	CEC	ECEC	ESP
			Ca	Mg	K	Na				
m		dS/m	Cmol (+)/kg							%
0 - 0.13	5.9A	0.036A	2.7K	4.1	0.18	0.51		17J		3.00
0.13 - 0.3	6.1A	0.027A								
0.3 - 0.53	5.8A	0.027A								
0.53 - 0.76	5.6A	0.033A	0.3K	3.5	0.13	0.36		10J		3.60
0.76 - 1.02	5.5A	0.033A								
1.02 - 1.5	5.3A	0.054A								

Depth	CaCO3	Organic C	Avail. P	Total P	Total N	Total K	Bulk Density	Particle Size Analysis			
								GV	CS	FS	Silt	Clay
m	%	%	mg/kg	%	%	%	Mg/m3			%		
0 - 0.13		2.6F			0.236B				1D	21	49	28
0.13 - 0.3		2F			0.178B							
0.3 - 0.53									1D	21	39	38
0.53 - 0.76					0.079B				2D	23	32	41
0.76 - 1.02									5D	30	29	37
1.02 - 1.5									4D	32	32	31

Depth	COLE	Gravimetric/Volumetric Water Contents						K sat	K unsat
		Sat.	0.05 Bar	0.1 Bar	0.5 Bar	1 Bar	5 Bar	15 Bar	
m		g/g - m3/m3						mm/h	mm/h
0 - 0.13									
0.13 - 0.3									
0.3 - 0.53									
0.53 - 0.76									
0.76 - 1.02									
1.02 - 1.5									

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Laboratory Analyses Completed for this profile

15_NR_CA	Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded
15_NR_CEC	CEC - meq per 100g of soil - Not recorded
15_NR_K	Exch. basic cations (K++) - meq per 100g of soil - Not recorded
15_NR_MG	Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded
15_NR_NA	Exch. basic cations (Na++) - meq per 100g of soil - Not recorded
2_LOI	Loss on Ignition (%)
2A1	Air-dry moisture content
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
5A2	Chloride - 1:5 soil/water extract, automated colour
6_DC	Organic carbon (%) - Dry combustion
7_NR	Total nitrogen (%) - Not recorded
P10_PB_C	Clay (%) - Plummet balance
P10_PB_CS	Coarse sand (%) - Plummet balance
P10_PB_FS	Fine sand (%) - Plummet balance
P10_PB_Z	Silt (%) - Plummet balance