Project Name: Soils of the Lower Macquarie Valley, New South Wales Project Code: Site ID: Observation ID: 1 Macquarie 546 Agency Name: CSIRO Division of Soils (ACT)

Site Information	<u>n</u>				
Desc. By:	N.J. McKenzie	Locality:			
Date Desc.:	10/12/85	Elevation:	No Data		
Map Ref.:	Sheet No. : 8434 1:10000	Rainfall:	No Data		
	6483433 AMG zone: 55	Runoff:	Slow		
Easting/Lat.:	584200 Datum: AGD66	Drainage:	Moderate	ly well di	rained
<u>Geology</u>					
ExposureType:	Soil pit	Conf. Sub. is Pare		No Data	
Geol. Ref.:	No Data	Substrate Material	:	No Data	а
Land Form					
Rel/Slope Class:	No Data	Pattern Type:	No Data		
Morph. Type:	Flat	Relief:	No Data		
Elem. Type:	No Data	Slope Category:	No Data		
Slope:	%	Aspect:	No Data		
Surface Soil Co	ondition (dry): Firm				
Erosion:					
Soil Classificat	ion				
Australian Soil C		Маррі	ng Unit:		MACQUARIE
		Маррі	ng Unit:		ALLUVIUM
Australian Soil C		Маррі	ng Unit:		
Australian Soil C			ng Unit: pal Profile	Form:	ALLUVIUM
Australian Soil C	lassification:	Princij	0		ALLUVIUM LEVEE DE
Australian Soil C N/A	lassification:	Princij	pal Profile		ALLUVIUM LEVEE DE Uf1.13
Australian Soil C N/A ASC Confidence Confidence level I	lassification:	Princij Great	oal Profile Soil Group):	ALLUVIUM LEVEE DE Uf1.13
Australian Soil C N/A ASC Confidence Confidence level Site Disturbance	lassification: :: not specified	Princij Great	oal Profile Soil Group):	ALLUVIUM LEVEE DE Uf1.13
Australian Soil C N/A ASC Confidence Confidence level I	lassification: :: not specified	Princi Great tive or improved, but	oal Profile Soil Group): /ated	ALLUVIUM LEVEE DE Uf1.13 N/A
Australian Soil C N/A ASC Confidence Confidence level Site Disturbanc Vegetation:	lassification: :: not specified : <u>e:</u> Complete clearing. Pasture, na Tall Strata - Tussock grass, 0.5	Princi Great tive or improved, but	oal Profile Soil Group): /ated	ALLUVIUM LEVEE DE Uf1.13 N/A
Australian Soil C N/A ASC Confidence Confidence level Site Disturbanc Vegetation: Surface Coarse	lassification: :: not specified :e: Complete clearing. Pasture, na Tall Strata - Tussock grass, 0.5 :e Fragments:	Princi Great tive or improved, but	oal Profile Soil Group): /ated	ALLUVIUM LEVEE DE Uf1.13 N/A
Australian Soil C N/A ASC Confidence Confidence level Site Disturbanc Vegetation: Surface Coarse Profile Morphol	lassification: :: not specified :e: Complete clearing. Pasture, na Tall Strata - Tussock grass, 0.5 :e Fragments: logy	Princip Great tive or improved, but 51-1m, Mid-dense. *S	pal Profile Soil Group never cultiv pecies incli	o: vated udes - No	ALLUVIUM LEVEE DE Uf1.13 N/A
Australian Soil C N/A ASC Confidence Confidence level Site Disturbanc Vegetation: Surface Coarse	lassification: :: not specified :e: Complete clearing. Pasture, na Tall Strata - Tussock grass, 0.{ : Fragments: logy Brown (7.5YR4/3-Moist); ; 1	Princip Great tive or improved, but 51-1m, Mid-dense. *S Medium clay; Weak g	pal Profile Soil Group never cultiv pecies inclu	o: vated udes - No ucture, 10	ALLUVIUM LEVEE DE Uf1.13 N/A one Recorded
Australian Soil C N/A ASC Confidence Confidence level Site Disturbanc Vegetation: Surface Coarse Profile Morphol	lassification: not specified <u>se:</u> Complete clearing. Pasture, na Tall Strata - Tussock grass, 0.6 <u>Fragments:</u> logy Brown (7.5YR4/3-Moist); ; 1 blocky; Earthy fabric; Many	Princip Great tive or improved, but 51-1m, Mid-dense. *S Medium clay; Weak g (>5 per 100mm2) Ve	pal Profile Soil Group never cultiv pecies inclu rade of stru try fine (0.0	vated udes - Ne ucture, 10 75-1mm	ALLUVIUM LEVEE DE Uf1.13 N/A one Recorded 0-20 mm, Subangular) macropores, Many (>5 per
Australian Soil C N/A ASC Confidence Confidence level Site Disturbanc Vegetation: Surface Coarse Profile Morphol	lassification: :: not specified : <u>e:</u> Complete clearing. Pasture, na Tall Strata - Tussock grass, 0.8 <u>e Fragments:</u> logy Brown (7.5YR4/3-Moist); ; 1 blocky; Earthy fabric; Many 100mm2) Fine (1-2mm) ma	Princip Great tive or improved, but 51-1m, Mid-dense. *S Medium clay; Weak g (>5 per 100mm2) Ve acropores, Common (pal Profile Soil Group never cultiv pecies inclu rade of stru try fine (0.0 1-5 per 0.0	vated udes - Ne ucture, 10 75-1mm 1m2) Me	ALLUVIUM LEVEE DE Uf1.13 N/A one Recorded 0-20 mm, Subangular) macropores, Many (>5 per edium (2-5mm) macropores,
Australian Soil C N/A ASC Confidence Confidence level Site Disturbanc Vegetation: Surface Coarse Profile Morphol	lassification: not specified <u>se:</u> Complete clearing. Pasture, na Tall Strata - Tussock grass, 0.6 <u>Fragments:</u> logy Brown (7.5YR4/3-Moist); ; 1 blocky; Earthy fabric; Many	Princip Great tive or improved, but 51-1m, Mid-dense. *S Medium clay; Weak g (>5 per 100mm2) Ve acropores, Common (eld pH 7 (Raupach); f	pal Profile Soil Group never cultiv pecies inclu rade of stru ery fine (0.0 1-5 per 0.0 Many, very	2: vated udes - No ucture, 10 75-1mm 1m2) Me fine (0-1	ALLUVIUM LEVEE DE Uf1.13 N/A one Recorded 0-20 mm, Subangular) macropores, Many (>5 per edium (2-5mm) macropores, mm) roots; Many, fine (1-

- 2A Dark brown (7.5YR3/3-Moist); ; Silty clay; Moderate grade of structure, 20-50 mm, Angular 0.3 - 0.4 m blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Many (>5 per 100mm2) Fine (1-2mm) macropores, Few (<1 per 0.01m2) Medium (2-5mm) macropores, Moderately moist; Firm consistence; Field pH 7.5 (Raupach); Many, very fine (0-1mm) roots; Many, fine (1-2mm) roots; Many, medium (2-5mm) roots; Gradual, Irregular change to -
- Brown (7.5YR4/2-Moist); ; Heavy clay; Strong grade of structure, 50-100 mm, Angular blocky; 2B21 0.4 - 0.95 m Rough-ped fabric; Medium, (5 - 10) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 7 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots; Diffuse, Smooth change to -
- 2B22 0.95 - 1.35 m Greyish brown (10YR5/2-Moist); ; Heavy clay; Moderate grade of structure; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Wet; Very firm consistence; Field pH 8 (Raupach); Few, very fine (0-1mm) roots; Few, fine (1-2mm) roots;

Morphological Notes

A fairly tricky layered soil. The soil is very heterogeneous at about 30-40cm. The underneath soil is a cracking clay that has 'eaten' a fair amount of the upper alluvial layer.

Observation Notes

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Ellengerah Soil Profile Class Site Notes

Project Name:	Soils of the Low	/er Macqua	rie Valley, New	South Wales	
Project Code: Agency Name:	Macquarie CSIRO Division	Site ID: of Soils (A	546 CT)	Observation ID:	1
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Laboratory Test Results:

Depth	рН	1:5 EC	E) Ca	kchangeable (Mg	Cations K	Exchangeable Na Acidity	CEC	ECEC	ESP
m		dS/m	ou	ing	ĸ	Cmol (+)/kg			%
0.1 - 0.15 0.3 - 0.35	7.1A 7.6A	0.059A 0.054A	9.3E	4.4	0.9	0.2		14.8D	
0.7 - 0.75 1.3 - 1.35	7.6A 8.5A	0.047A 0.075A	11.1E	8.5	0.5	1.3		21.4D	

Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk	Pa	article	Size A	nalysi	s
m	%	C %	P mg/kg	P %	N %	K %	Density Mg/m3	GV	cs	FS %	Silt	Clay
0.1 - 0.15 0.3 - 0.35							1.43 1.31		0.5A	19.4	43.8	3 36.2
0.7 - 0.75 1.3 - 1.35							1.41 1.54		2.5A	17.4	28.5	5 51.6

Depth	COLE	c	Gravimetric/Volumetric Water Contents				K sat	K unsat	
m		Sat. 0.05 E		0.5 Bar g - m3/m3	1 Bar	5 Bar	15 Bar	mm/h	mm/h
0.1 - 0.15 0.3 - 0.35 0.7 - 0.75 1.3 - 1.35	0.03A 0.03A 0.103A 0.059A		0.18G 0.2G 0.28G 0.22G				0.17D 0.18D 0.2D 0.21D		

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Laboratory Analyses Completed for this profile

15C1_CA	Exchangeable bases (Ca2+,Mg2+,Na+,K+) - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_K	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_MG	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15C1_NA	Exchangeable bases and CEC - alcoholic 1M ammonium chloride at pH 8.5, pretreatment for soluble salts
15J_BASES	Sum of Bases
3A1	EC of 1:5 soil/water extract
4A1	pH of 1:5 soil/water suspension
P10_CF_C	Clay (%) - Coventry and Fett pipette method
P10_CF_CS	Coarse sand (%) - Coventry and Fett pipette method
P10_CF_FS	Fine sand (%) - Coventry and Fett pipette method
P10_CF_Z	Silt (%) - Coventry and Fett pipette method
P3A1	Bulk density - g/cm3
P3B1GV_15	15 BAR Moisture g/g - Gravimetric of ground sample (<2mm) using pressure plate
P3B4GV_01	0.1 BAR Moisture g/g - Gravimetric of soil clods (Soil Survey Staff,1967)
P5_COLE	Coefficient of Linear Extensibility (Grossman et al. 1968)