Project Name:	Soils of the L	ower Macqu	arie Valley,	New South Wales	
Project Code:	Macquarie	Site ID:	349	Observation ID:	1
Agency Name:	CSIRO Divisio	on of Soils (A	ACT)		

Site	Inform	nation
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formation	<u>n</u>					
By:	N.J. McKenzie	Locality:				
		Runoff:		N		
/Lat.:	591700 Datum: AGD66	Drainage:				
<u>av</u>						
ireType:	Soil pit					
	No Data	Substrate Materia	l:	No Data	а	
	No Data					
)	%	Aspect:	No Data			
e Soil Co	ndition (dry): Cracking, Firm					
<u>n:</u>						
assificati	<u>ion</u>					
ian Soil Cl	lassification:	Маррі	na Unit:		MACQUARIE	
		- -	J		ALLUVIUM	
					BACKPLAI	
		Princi	pal Profile	Form:	Ug5.15	
onfidence	:	Great	Soil Group	p:	N/A	
	•					
	:e: Complete clearing. Pasture, n	ative or improved, but	never culti	vated		
ation:						
	Toll Strata Tuccock grace 0	26 0 Em Sparso *Sp	ocios inclu	doc No	no Pocordod	
e Coarse	Tall Strata - Tussock grass, 0.	.26-0.5m, Sparse. *Sp	ecies inclu	des - Nor	ne Recorded	
	Fragments:	.26-0.5m, Sparse. *Sp	ecies inclu	des - Nor	ne Recorded	
Morphol	e Fragments:					
	• Fragments: logy Very dark greyish brown (10YR3/2-Moist); ; Ligh	nt clay; Moo	derate gra	ade of structure, 10-20 mm,	
Morphol	• Fragments: logy Very dark greyish brown (Subangular blocky; Com per 0.01m2) Medium (2-5r	10YR3/2-Moist); ; Ligh mon (1-5 per 100mm2 nm) macropores, Mois	nt clay; Moo) Very fine st; Firm cor	derate gra (0.075-1)	ade of structure, 10-20 mm, mm) macropores, Few (<1 ; Field pH 6 (Raupach); Man	ıy,
Morphol	• Fragments: logy Very dark greyish brown (Subangular blocky; Com	10YR3/2-Moist); ; Ligh mon (1-5 per 100mm2 nm) macropores, Mois	nt clay; Moo) Very fine st; Firm cor	derate gra (0.075-1)	ade of structure, 10-20 mm, mm) macropores, Few (<1 ; Field pH 6 (Raupach); Man	ıy,
Morphol	• Fragments: logy Very dark greyish brown (Subangular blocky; Com per 0.01m2) Medium (2-5r very fine (0-1mm) roots; l	10YR3/2-Moist); ; Ligh mon (1-5 per 100mm2 mm) macropores, Mois Many, fine (1-2mm) ro	nt clay; Moo) Very fine st; Firm cor ots; Clear,	derate gra (0.075-1) nsistence Irregular	ade of structure, 10-20mm, mm) macropores, Few (<1 ; Field pH 6 (Raupach); Man change to -	ıy,
• Morphol 0 - 0.1 m	 <u>Fragments:</u> <u>logy</u> Very dark greyish brown (Subangular blocky; Comi per 0.01m2) Medium (2-5r very fine (0-1mm) roots; I Very dark grey (10YR3/1-1 10-20 mm, Angular blocky) 	10YR3/2-Moist); ; Ligh mon (1-5 per 100mm2 mm) macropores, Mois Many, fine (1-2mm) ro Moist); Grey (10YR6/1 r; Fine, (0 - 5) mm crad	nt clay; Moo) Very fine st; Firm cor ots; Clear, -Dry); ; Lig ck; Commo	derate gra (0.075-1) nsistence Irregular ht clay; S n (1-5 pe	ade of structure, 10-20mm, mm) macropores, Few (<1 ; Field pH 6 (Raupach); Man change to - Strong grade of structure, er 100mm2) Very fine (0.075-	
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• Morphol 0 - 0.1 m	 Fragments: Very dark greyish brown (Subangular blocky; Comper 0.01m2) Medium (2-5rvery fine (0-1mm) roots; 1 Wery dark grey (10YR3/1-110-20 mm, Angular blocky, 1mm) macropores, Moderor walls coated; Field pH 7 	10YR3/2-Moist); ; Ligh mon (1-5 per 100mm2 mm) macropores, Mois Many, fine (1-2mm) ro Moist); Grey (10YR6/1 r; Fine, (0 - 5) mm crac ately moist; Very firm 7 (Raupach); Commor	nt clay; Moo) Very fine st; Firm cor ots; Clear, -Dry); ; Lig ck; Commo consistenc	derate gra (0.075-1) nsistence Irregular ht clay; S n (1-5 pe e; Many o	ade of structure, 10-20 mm, mm) macropores, Few (<1 ; Field pH 6 (Raupach); Man change to - Strong grade of structure, er 100mm2) Very fine (0.075- cutans, >50% of ped faces	
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Morphol 0 - 0.1 m 0.1 - 0.45 0.45 - 0.8	 Fragments: Very dark greyish brown (Subangular blocky; Comp per 0.01m2) Medium (2-5r very fine (0-1mm) roots; I Wery dark grey (10YR3/1-1 10-20 mm, Angular blocky 1mm) macropores, Moder or walls coated; Field pH 7 2mm) roots; Diffuse, Smort Wery dark grey (10YR3/1-1 Subangular blocky; Fine, (macropores, Moderately n walls coated; Field pH 8 (F roots; Gradual, Smooth ch Brown (10YR4/3-Moist); ; blocky; Common (1-5 per Medium (2-5mm) macropor ped faces or walls coated; 	10YR3/2-Moist); ; Ligh mon (1-5 per 100mm2 mm) macropores, Mois Many, fine (1-2mm) ro Moist); Grey (10YR6/1 r; Fine, (0 - 5) mm crac ately moist; Very firm of 7 (Raupach); Common oth change to - Moist); ; Medium heav (0 - 5) mm crack; Few noist; Very firm consis Raupach); Common, v hange to - Medium clay; Strong g 100mm2) Very fine (0 ores, Moderately moist Field pH 8 (Raupach)	nt clay; Moc) Very fine st; Firm cor ots; Clear, -Dry); ; Lig ck; Commo consistenc o, very fine y clay; Strc (<1 per 10 tence; Man ery fine (0- grade of str .075-1mm) t; Very firm y; Few, very	derate gra (0.075-1) hsistence Irregular ht clay; S on (1-5 pe e; Many o (0-1mm) ong grade 0mm2) V oy cutans 1mm) roo consiste y fine (0-1	ade of structure, 10-20 mm, mm) macropores, Few (<1 ; Field pH 6 (Raupach); Many change to - Strong grade of structure, er 100mm2) Very fine (0.075- cutans, >50% of ped faces roots; Common, fine (1- e of structure, 10-20 mm, fery fine (0.075-1mm) , >50% of ped faces or ots; Common, fine (1-2mm) 0-50 mm, Subangular ores, Few (<1 per 0.01m2) nce; Many cutans, >50% of 1mm) roots;	
Morphol 0 - 0.1 m 0.1 - 0.45 0.45 - 0.8	 Fragments: Very dark greyish brown (Subangular blocky; Comp per 0.01m2) Medium (2-5r very fine (0-1mm) roots; I Wery dark grey (10YR3/1-1 10-20 mm, Angular blocky 1mm) macropores, Moder or walls coated; Field pH 7 2mm) roots; Diffuse, Smort Wery dark grey (10YR3/1-1 Subangular blocky; Fine, (macropores, Moderately n walls coated; Field pH 8 (F roots; Gradual, Smooth ch Brown (10YR4/3-Moist); ; blocky; Common (1-5 per Medium (2-5mm) macropor ped faces or walls coated; 	10YR3/2-Moist); ; Ligh mon (1-5 per 100mm2 mm) macropores, Mois Many, fine (1-2mm) ro Moist); Grey (10YR6/1 r; Fine, (0 - 5) mm crac ately moist; Very firm oth change to - Moist); ; Medium heav (0 - 5) mm crack; Few noist; Very firm consis Raupach); Common, v nange to - Medium clay; Strong (100mm2) Very fine (0 ores, Moderately moist Field pH 8 (Raupach) nated by what seems s partially rotted)."red l	nt clay; Moc) Very fine st; Firm cor ots; Clear, -Dry); ; Lig ck; Commo consistence n, very fine y clay; Strc (<1 per 10 tence; Man ery fine (0- grade of str .075-1mm) t; Very firm y; Few, very to be forme brick" (see	derate gra (0.075-1) hisistence Irregular ht clay; S on (1-5 pe e; Many o (0-1mm) ong grade 0mm2) V by cutans 1mm) roo cucture, 2 macropo consiste y fine (0-1	ade of structure, 10-20 mm, mm) macropores, Few (<1 ; Field pH 6 (Raupach); Many change to - Strong grade of structure, er 100mm2) Very fine (0.075- cutans, >50% of ped faces roots; Common, fine (1- e of structure, 10-20 mm, ery fine (0.075-1mm) , >50% of ped faces or ots; Common, fine (1-2mm) 0-50 mm, Subangular ores, Few (<1 per 0.01m2) nce; Many cutans, >50% of 1mm) roots; robably uprooted es) has been	
	esc.: f.: g/Long.: //Lat.: <u>av</u> reType: ef.: <u>form</u> pe Class: Type: <u>ype:</u> <u>ype:</u> <u>assificat</u> ian Soil C onfidence ence level 1	bsc.: 06/11/85 off.: Sheet No.: 8434 1:10000 ig/Long.: 6474350 AMG zone: 55 //Lat.: 591700 Datum: AGD66 dY IneType: Soil pit ef.: No Data Sorm pe Class: No Data Sorm pe Class: No Data Sold pit ef.: No Data % e Soil Condition (dry): Cracking, Firm n: assification ian Soil Classification: onfidence: ence level not specified sturbance: Complete clearing. Pasture, n	assc.: 06/11/85 Elevation: if.: Sheet No.: 8434 1:10000 Rainfall: ig/Long.: 6474350 AMG zone: 55 Runoff: i/Lat.: 591700 Datum: AGD66 Drainage: i/Lat.: No Data Substrate Materia i/Somm Filat Relief: i/Ype: No Data Slope Category: % Aspect: Aspect: e Soil Condition (dry): Cracking, Firm n: assification Mappi ian Soil Classification: Mappi onfidence: Great ance level not specified Sturbance: St	asc.: 06/11/85 Elevation: No Data if.: Sheet No.: 8434 1:10000 Rainfall: No Data ig/Long.: 6474350 AMG zone: 55 Runoff: Very slow ig/Lat.: 591700 Datum: AGD66 Drainage: Poorly dr atter 591700 Datum: AGD66 Drainage: Poorly dr atter Soil pit Conf. Sub. is Parent. Mat.: Substrate Material: form Pettern Type: No Data Substrate Material: form Pettern Type: No Data Pattern Type: No Data fype: No Data Pattern Type: No Data fype: No Data Slope Category: No Data % Aspect: No Data Aspect: No Data % Cracking, Firm In: assification Mapping Unit: ian Soil Classification: Mapping Unit: Principal Profile onfidence: Great Soil Group Great Soil Group acce level not specified Sturbance: Complete clearing. Pasture, native or improved, but never culti	bsc.: 06/11/85 Elevation: No Data ff.: Sheet No.: 8434 1:10000 Rainfall: No Data ig/Long.: 6474350 AMG zone: 55 Runoff: Very slow ig/Lat.: 591700 Datum: AGD66 Drainage: Poorly drained att: No Data Conf. Sub. is Parent. Mat.: No Data form Pattern Type: No Data Substrate Material: No Data Type: Flat Relief: No Data Aspect: No Data % Aspect: No Data Aspect: No Data model Gradking, Firm Mapping Unit: Principal Profile Form: onfidence: Great Soil Group: Great Soil	bsc:: 06/11/85 Elevation:: No Data ff:: Sheet No.: 8434 1:10000 Rainfall: No Data g/Long:: 6474350 AMG zone: 55 Runoff: Very slow y/Lat.: 591700 Datum: AGD66 Drainage: Poorly drained AV

Observation Notes Ellengerah Soil Profile Class Site Notes

Project Name:	Soils of the Low	ver Macqua	arie Valley, New	South Wales	
Project Code: Agency Name:	Macquarie CSIRO Division	Site ID: of Soils (A	349 (CT)	Observation ID:	1

Laboratory Test Results:

Depth	рН	1:5 EC		hangeable Mq	Cations K	E: Na	xchangeable Acidity	CEC	EC	EC I	ESP
m		dS/m	Ga	INIG	ĸ	Cmol (+)/					%
0.1 - 0.15 0.3 - 0.35	6.8A 7.8A	0.039A 0.03A	7.6E	3.8	1	0.1			12.	5D	
0.7 - 0.75 1.3 - 1.35	8.4A 8.5A	0.051A 0.047A		7.8	0.5	0.3			22.4	4D	
Depth	CaCO3	Organic	Avail.	Total	Total	Total	Bulk			e Analysis	
m	%	C %	P mg/kg	P %	N %	K %	Density Mg/m3	GV	CS FS %		Clay
0.1 - 0.15 0.3 - 0.35							1.31 1.51		7.2A	25.1 30.6	37.1
0.7 - 0.75 1.3 - 1.35							1.64 1.57		7.4A	22.7 24.9	45
Depth	COLE		Grav	/imetric/Vc	olumetric V	later Conte	ents		K sat	K unsa	•
m		Sat.		0.1 Bar	0.5 Bar g - m3/m3	1 Bar		5 Bar	mm/h	mm/h	
0.1 - 0.15 0.3 - 0.35 0.7 - 0.75 1.3 - 1.35	0.052/ 0.061/ 0.062/ 0.066/	A A		0.28G 0.22G 0.2G 0.19G			().14D).14D).16D).15D			

Project Name:Soils of the Lower Macquarie Valley, New South WalesProject Code:MacquarieSite ID: 349Observation ID: 1Agency Name:CSIRO Division of Soils (ACT)

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)