Projec	t Code:	Soil Studies in the Lower N EDGEROI Site ID: CSIRO Division of Soils (Q	ed355 C	Observation	ID: 1	I				
Date Desc.:25/08Map Ref.:SheeNorthing/Long.:66534		V.T. Ward 5/08/87 heet No. : 8837_N 1:50000 653400 AMG zone: 55 80700 Datum: AGD66	Locality: Elevation: Rainfall: Runoff: Drainage:	stock route, at T 340 metres No Data No Data No Data No Data		elve Mile Hill				
<u>Geolo</u> Exposi Geol. R	ureType: U	Indisturbed soil core Io Data	Conf. Sub. is Pare Substrate Materia		lo Data lo Data					
Morph. Elem. 1 Slope:	pe Class: N Type: N Type: P	lo Data lo Data Pediment %	Pattern Type: Relief: Slope Category: Aspect:	No Data No Data No Data No Data						
Erosio		dition (dry):								
	lassificatio	<u>n</u>								
Austral N/A ASC C Confide <u>Site Di</u> Vegeta	lian Soil Clas confidence: ence level not isturbance: ation:	sification: t specified	Princ	ing Unit: ipal Profile Fo Soil Group:	orm:	N/A Dy5.2 Solodic soil				
-	<u>e Coarse F</u> Morpholog									
A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Dark greyish brown (10YR4/2-Dry); ; Loamy sand; Weak grac of structure, 5-10 mm, Subangular blocky; Single grain grade of structure; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderate moist; Very weak consistence; Field pH 5 (pH meter); Few, very fine (0-1mm) roots;								
A12	0.1 - 0.16 m	5mm, Distinct; Loamy sand grade of structure; Sandy (0.075-1mm) macropores, I	Dark greyish brown (10YR4/2-Moist); , 2.5YR36, 0-2%, 0-5mm, Distinct; , 10YR73, 0-2%, 0- 5mm, Distinct; Loamy sand; Weak grade of structure, 10-20 mm, Subangular blocky; Single gr grade of structure; Sandy (grains prominent) fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; Field pH 5.5 (pH meter); Few, fine (1-2mm) roots; Gradual, Smooth change to -							
A21	0.16 - 0.55	structure, 20-50 mm, Subar prominent) fabric; Few (<1 Very weak consistence; 0-2	Pale brown (10YR6/3-Moist); , 5YR54, 0-2% , 5-15mm, Distinct; Loamy sand; Weak grade of structure, 20-50 mm, Subangular blocky; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very weak consistence; 0-2%, fine gravelly, 2-6mm, angular, Quartz, coarse fragments; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;							
A22	0.55 - 1.05	Massive grade of structure; Few (<1 per 100mm2) Very Very few (0 - 2 %), Ferrugir	Light brownish grey (10YR6/2-Moist); , 7.5YR56, 10-20% , 15-30mm, Prominent; Clayey sand; Massive grade of structure; Single grain grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; Very few (0 - 2 %), Ferruginous-organic, Medium (2 -6 mm), Nodules; Field pH 6 (pH meter); Few, very fine (0-1mm) roots;							
B21	1.05 - 1.9 m	grade of structure, 100-200 Rough-ped fabric; Fine, (0 macropores, Moderately mo subrounded, Quartz, coarse	Strong brown (7.5YR5/6-Moist); , 10YR72, 10-20% , 15-30mm, Prominent; Clayey sand; Strong grade of structure, 100-200 mm, Prismatic; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Very few (0 - 2%), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 6 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -							
C1	1.9 - 3.05 m	mm, Prominent; Light clay; Smooth-ped fabric; Fine, (0 macropores, Moderately mo subangular, Quartz, coarse	Reddish yellow (7.5YR6/6-Moist); , 7.5YR52, 0-2% , 0-5mm, Distinct; , 10YR61, 20-50% , 30- mm, Prominent; Light clay; Massive grade of structure; Sandy (grains prominent) fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 5 (pH meter);							

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C2	3.05 - 4 m	Strong brown (7.5YR5/6-Moist); , 10YR61, 20-50% , 30-mm, Prominent; , 7.5YR52, 0-2% , 0- 5mm, Faint; Clayey sand; Massive grade of structure; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; 50-90%, medium gravelly, 6-20mm, angular tabular, Sandstone, coarse fragments; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 4.5 (pH meter); Diffuse, Smooth change to -							
R1	4 - 5.05 m	Rock							
R2	5.05 - 6.05 m	Rock							
D	6.05 - 7.3 m	Yellowish red (5YR4/6-Moist); , 10YR72, 20-50% , 30-mm, Prominent; , 7.5YR62, 0-2% , 5- 15mm, Faint; Clayey sand; Single grain grade of structure; Massive grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, subangular, Quartz, coarse fragments; Field pH 4.5 (pH meter);							
Morphological Notes									
A11		The mottles at 10-20 are fine rusty stains adjoining roots. Surface pedality is very weak. The A1 grades to a sandy coherent massive A2 with strong brown stains. The B2 has pale grey (10YR7/2) stains mostly in fissures between prisms. There							
A12		is much white sand (bleached by percolating water) in fissures from 150 to 170, and I wonder if the soil so far is a new soil in a prior ? thickened A horizon and if there is a							

- A21 break at 170 to a prior B horizon. However the B2 at 120-130 c A21 ontinues to this level. The picked-down core is a little misleading as it exposes a prism face. Note sandy fabric with biscuity fracture at 250-260. The red colours at 450-460 are surrounded by yellow brown and then grey. This level also ha A22 s some cutans. Quartz gravel at 610 marks bottom of pedisediment. The core then
- enters soft sands. 350-360 is very clayey sand. PS (after levelling quarry face in relation to this site): The 7.5YR5/6 colours at 120-130cm are possibly the re ddish patches on the quarry face. However, true palaeosol reds were not encountered in this core above -4m. The Purlawaugh contact is difficult to identify. It is possibly at 310cm where there are ferruginous fragments and a change in colou
- C1 r form (from brown mottled concretionary to brown stained); or at 400cm where texture and red-weathering changes from clayey sand to sand with clay. I think the soil was originally a solodic on pedisediment over Purlawaugh and the top has b

#### **Observation Notes**

Parent Rock: colluvial sediment, from sandstone, non-calcareous, clay colluvium, weathered

### Site Notes

A thin band of quartz gravel at 610cm marks bottom of pedisediment, at about the level where a similar band is seen in the quarry bank nearby, but the core then enters soft sand, not mud, which I think must occupy a channel in the Purlawaug

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Project Code:	EDGEROI	Site ID:	ed355	Observation ID:			
Agency Name:	CSIRO Divisio						

# Laboratory Test Results:

рН	1:5 EC		•		Na	Exchangeable	CEC		ECEC	;	ESP
	dS/m	Ga	Mg	N							%
5.07A	8.199999E 02A	E-0.12B	2.71	0.48	0.03						
5.14A	0.042A	<0.1B	1.34	0.42	<0.01						
5.7A	0.013A	<0.1B	<0.1	0.46	0.02						
5.99A	0.017A	<0.1B	0.77	0.74	0.09						
6.27A	0.021A	<0.1B	0.78	0.79	0.28						
4.98A	0.088A	<0.1B	2.99	0.96	1.34						
4.64A	0.12A	<0.1B	1.9	0.59	0.67						
4.76A	0.084A	<0.1B	0.53	0.3	0.4						
4.14A	0.171A	<0.1B	1.01	0.29	0.57						
4.42A	0.101A	<0.1B	1.27	0.02	0.75						
CaCO3	Organic	Avail.	Total	Total	Tot	al Bulk	Pa	article	Size	Analysi	is
	~	<b>D</b>	n	N	K	Density	GV	CS	FS	Silt	Clay
	5.07A 5.14A 5.7A 5.99A 6.27A 4.98A 4.64A 4.76A 4.14A 4.14A	dS/m 5.07A 8.1999999E 02A 5.14A 0.042A 5.7A 0.013A 5.99A 0.017A 6.27A 0.021A 4.98A 0.088A 4.64A 0.12A 4.76A 0.084A 4.14A 0.171A 4.42A 0.101A CaCO3 Organic	Ca dS/m           5.07A         8.1999999E-0.12B 02A           5.14A         0.042A         <0.1B	Ca         Mg           dS/m         35.07A         8.1999999E-0.12B         2.71           5.14A         0.042A         <0.1B	Ca         Mg         K           dS/m         5.07A         8.1999999E-0.12B         2.71         0.48           5.07A         8.1999999E-0.12B         2.71         0.48           5.14A         0.042A         <0.1B	Ca         Mg         K         Na Cmol 4           dS/m         Cmol 4           5.07A         8.1999999E-0.12B         2.71         0.48         0.03           5.14A         0.042A         <0.1B	Ca         Mg         K         Na         Acidity Cmol (+)/kg           5.07A         8.199999E-0.12B         2.71         0.48         0.03           5.07A         8.199999E-0.12B         2.71         0.48         0.03           5.14A         0.042A         <0.1B	Ca         Mg         K         Na         Acidity Cmol (+)/kg           5.07A         8.199999E-0.12B         2.71         0.48         0.03           5.14A         0.042A         <0.1B	Ca         Mg         K         Na         Acidity Cmol (+)/kg           5.07A         8.199999E-0.12B         2.71         0.48         0.03           5.14A         0.042A         <0.1B	Ca         Mg         K         Na         Acidity Cmol (+)/kg           5.07A         8.199999E-0.12B         2.71         0.48         0.03           5.14A         0.042A         <0.1B	Ca         Mg         K         Na         Acidity Cmol (+)/kg           5.07A         8.199999E-0.12B         2.71         0.48         0.03           5.14A         0.042A         <0.1B

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	С	Р	Р	N	K	Density	GV	CS	FS	Silt	Clay
%	%	mg/kg	%	%	%	Mg/m3			%		
<0.1B	1.66C	23.8J									
<0.1B	0.97C	6.3J									
<0.1B	0.24C	1.7J									
<0.1B	0.09C	2.9J									
<0.1B	0.08C	11.2J									
<0.1B	0.07C	8.8J									
<0.1B	0.06C	7J									
<0.1B	0.03C	1.1J									
<0.1B	0.07C	16.5J									
<0.1B	0.07C	14.6J									
COLE		Gravi	metric/Volu	umetric Wat	er Cont	ents		Ks	at	K unsa	at
	Sat.	0.05 Bar			l Bar	5 Bar 1	5 Bar				
			g/g	- m3/m3				mm	/h	mm/h	1
	<0.1B <0.1B <0.1B <0.1B <0.1B <0.1B <0.1B <0.1B <0.1B <0.1B	%       %         <0.1B	%         %         mg/kg           <0.1B	%         %         mg/kg         %           <0.1B	%         %         mg/kg         %         %           <0.1B	%         %         mg/kg         %         %           <0.1B	%         %         mg/kg         %         %         Mg/m3           <0.1B	%         %         mg/kg         %         %         Mg/m3           <0.1B	%       %       mg/kg       %       %       Mg/m3         <0.1B	%       %       mg/kg       %       %       Mg/m3       %         <0.1B	%         %         mg/kg         %         %         Mg/m3         %           <0.1B

2.5 - 2.6 3.5 - 3.6 4.5 - 4.6 5.5 - 5.6 6.5 - 6.6

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Observation ID: 1

# Laboratory Analyses Completed for this profile

- 15A2\_CA Exchangeable bases (Ca2+,Mg2+,Na+,K+) - 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
- 15A2\_K 15A2\_MG Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
- 15A2\_NA Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts
- 19B1 Carbonates - manometric
- EC of 1:5 soil/water extract 3A1
- 4A1 pH of 1:5 soil/water suspension
- 5A2 Chloride - 1:5 soil/water extract, automated colour
- Total organic carbon high frequency induction furnace, infrared Water soluble nitrate automated colour 6B3
- 7B1
- 9B1 Bicarbonate-extractable phosphorus - manual colour