Project Name: Soil Studies in the Lower Namoi Valley

Project Code: EDGEROI Site ID: ed212 Observation ID: 1

Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By: D. McGarry Locality: stock route, on flank of Bald Hill

Date Desc.: Elevation: 10/06/86 218 metres Sheet No.: 8837 N 1:50000 Map Ref.: Rainfall: No Data Northing/Long.: 6669600 AMG zone: 55 Runoff: No Data 758200 Datum: AGD66 No Data Easting/Lat.: Drainage:

<u>Geology</u>

ExposureType: Undisturbed soil core Conf. Sub. is Parent. Mat.: No Data Substrate Material: No Data

Land Form

| Rel/Slope Class: No Data | Pattern Type: No Data | Morph. Type: No Data | Relief: No Data | Elem. Type: No Data | Slope Category: No Data | Slope: % | Aspect: No Data | No Data | Slope: No Da

Surface Soil Condition (dry):

Erosion:

Soil Classification

Australian Soil Classification:Mapping Unit:N/AN/APrincipal Profile Form:Ug5.15ASC Confidence:Great Soil Group:Grey clay

Confidence level not specified

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

Very dark greyish brown (10YR3/2-Moist); Very dark greyish brown (10YR3/2-Dry); ; Medium clay; Weak grade of structure, 5-10 mm, Subangular blocky; Rough-ped fabric; Medium, (5 - 10) mm crack; Few (<1 per 0.01m2) Coarse (>5mm) macropores, Moderately moist; Very strong consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Quartz, coarse fragments; Field pH

6.8 (pH meter); Common, fine (1-2mm) roots; Abrupt, Irregular change to -

A12 0.07 - 0.25 m Very dark greyish brown (10YR3/2-Moist); ; Medium clay; Weak grade of structure, 20-50 mm,

Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m2) Coarse (>5mm) macropores, Moderately moist; Strong consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Quartz, coarse fragments; Field pH 7.3 (pH meter); Common, fine (1-2mm) roots;

A13 0.25 - 0.7 m Very dark greyish brown (10YR3/2-Moist); ; Medium clay; Weak grade of structure, 20-50 mm,

Lenticular; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Strong consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 8.7

(pH meter); Few, very fine (0-1mm) roots; Clear, Wavy change to -

B2 0.7 - 1.05 m Very dark greyish brown (10YR3/2-Moist); ; Light medium clay; Moderate grade of structure,

20-50 mm, Lenticular; Weak grade of structure, 10-20 mm, Subangular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, coarse gravelly, 20-60mm, subangular, Basalt, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth

2B2 1.05 - 2.2 m Brown (7.5YR4/4-Moist); , 5YR46, 2-10% , 5-15mm, Distinct; , N20, 0-2% , 0-5mm, Prominent;

Light medium clay; Strong grade of structure, 20-50 mm, Lenticular; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 0.01m2)

Medium (2-5mm) macropores, Moderately moist; Firm consistence; Few (2 - 10 %),

Argillaceous, Medium (2 -6 mm), Tubules; Very few (0 - 2 %), Argillaceous, Medium (2 -6 mm), Tubules; Very few (0 - 2 %), Gypseous, Medium (2 -6 mm), Crystals; Field pH 8.5 (pH meter);

Gradual, Smooth change to -

2C 2.2 - 2.75 m Brown (7.5YR4/4-Moist); , 5YR46, 10-20% , 30-mm, Prominent; , N80, 10-20% , 30-mm,

Prominent; Light medium clay; Strong grade of structure, 10-20 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 20-50%, coarse gravelly, 20-60mm, subangular, Basalt, coarse fragments; Very few (0 - 2 %), Gypseous, Medium (2 -6 mm), Crystals; Field pH 7.5 (pH

meter);

Morphological Notes

Project Name: Project Code: Agency Name:

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Observation Notes
Parent Rock: , , Nandewar Volcanics

Site Notes

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Project Name: Project Code: Agency Name:

Laboratory Test Results:

		_	_							
Depth	рН	1:5 EC	Ca Ex	changeable			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (-	Acidity +)/kg			%
0 - 0.02	6.97A			8.280001	1.64	0.46				
0 - 0.07	7.51A		29.26B	11.92	1.45	0.72				
0.1 - 0.2	7.75A		33.22B	12.56	0.64	1.38				
0.3 - 0.4	9.1A		34.55B	12.85	0.39	4.21				
0.7 - 0.8	8.63A	0.704A	31.95B	14.53	0.4	8.28000				
1.2 - 1.3	7.85A	3.63A	30.05B	15.14	0.58	8.58				
2.5 - 2.6	7.87A			9.219999	0.29	6.61				
					**					
Depth	CaCO3	Organic	Avail.	Total	Tota	al Tota	ıl Bulk	Particle	Size	Analysis
-		c	Р	Р	N	K	Density	GV CS	FS	Silt Clay
m	%	%	mg/kg	%	%	%	Mg/m3		%	
0 - 0.02	<0.1B	2.28C								16.8 45.6
0 - 0.02	<0.1B		9.1J							17.5 53.5
0.1 - 0.2	<0.1B	_	2.7J							17.6 55.3
0.1 - 0.2	0.1B	0.91C	2.73 <1J							17.7 54.7
0.3 - 0.4	0.1B	0.91C	7J							18 59.4
1.2 - 1.3	1.8B	0.8C 0.2C	10J							15.3 64.1
_	_									22.1 65.5
2.5 - 2.6	<0.1B	0.04C	11.5J	l						22.1 00.5
Depth	COLE Gravimetric/Volumetric Water Contents K sat K uns									K unsat
		Sat.	0.05 Bar		0.5 Bar			Bar		
m				g/	g - m3/ı	m3		mr	n/h	mm/h

0 - 0.02 0 - 0.07 0.1 - 0.2 0.3 - 0.4 0.7 - 0.8 1.2 - 1.3 2.5 - 2.6

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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 Exchangeable bases- 1M ammonium chloride at pH 7.0, pretreatment for soluble salts 15A2_MG 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 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

6B3 Total organic carbon - high frequency induction furnace, infrared

7B1 Water soluble nitrate - automated colour

9B1 Bicarbonate-extractable phosphorus - manual colour

P10_CF_C Clay (%) - Coventry and Fett pipette method Silt (%) - Coventry and Fett pipette method