

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed189 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	D. McGarry	Locality:	I.O.(Ian) Falkiner, Murrumbilla
Date Desc.:	10/06/86	Elevation:	302 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6653200 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	777000 Datum: AGD66	Drainage:	No Data

Geology

ExposureType:	Undisturbed soil core	Conf. Sub. is Parent. Mat.:	No Data
Geol. Ref.:	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:	Hillslope	Slope Category:	Gently inclined
Slope:	4 %	Aspect:	350 degrees

Surface Soil Condition (dry): Hardsetting

Erosion:

Soil Classification

Australian Soil Classification:	N/A	Mapping Unit:	N/A
ASC Confidence:	Confidence level not specified	Principal Profile Form:	Dy4.8
		Great Soil Group:	Soloth

Site Disturbance:

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); ; Loamy sand; Weak grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 5 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.3 m	Dark brown (7.5YR3/2-Moist); ; Loamy sand; Massive grade of structure; Earthy fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 4.5 (pH meter); Common, fine (1-2mm) roots; Clear, Smooth change to -
A13	0.3 - 0.35 m	Light brown (7.5YR6/4-Moist); , 7.5YR42, 0-2% , 0-5mm, Faint; Sand; Weak grade of structure, 20-50 mm, Angular blocky; Rough-ped fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 5.8 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
A2	0.35 - 0.45 m	Light brownish grey (10YR6/2-Moist); , 10YR73, 2-10% , 5-15mm, Distinct; Fine sand; Weak grade of structure, 10-20 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 6 (pH meter); Sharp, Smooth change to -
B21	0.45 - 0.63 m	Greyish brown (10YR5/2-Moist); , 10YR41, 10-20% , 0-5mm, Prominent; , 5YR46, 2-10% , 15-30mm, Distinct; Clayey sand; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 6.5 (pH meter);
B22	0.63 - 1 m	Brown (10YR5/3-Moist); , 10YR41, 2-10% , 0-5mm, Distinct; , 5YR34, 0-2% , 0-5mm, Distinct; Clayey sand; Massive grade of structure; Earthy fabric; Many (>5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Very few (0 - 2 %), Ferruginous, Medium (2 -6 mm), Nodules; Field pH 8 (pH meter);
B23	1 - 2.4 m	Strong brown (7.5YR5/6-Moist); , 10YR62, 2-10% , 5-15mm, Prominent; , 5YR21, 0-2% , 0-5mm, Distinct; Light clay; Massive grade of structure; Rough-ped fabric; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8.5 (pH meter); Few, fine (1-2mm) roots; Clear, Smooth change to -
C	2.4 - 2.82 m	Strong brown (7.5YR5/6-Moist); , 7.5YR72, 2-10% , 5-15mm, Distinct; Clayey sand; Massive grade of structure; Sandy (grains prominent) fabric; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Rigid consistence; Field pH 8.5 (pH meter);

Morphological Notes

A11 Colour 2 189.04 is of small patches of clean sand in A2. 189.05 is top of B2. 120-130

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Observation Notes

Parent Rock: alluvial sediment, sandstone, Pilliga Sandstone

Site Notes

Surface soil quite similar to site 172,i.e. soft and powdery, but only 1mm deep at the most. Composed mainly of sand grains, with a hard layer beneath. The hard surface crust shows through in many places. Note A2.

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Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na Cmol (+)/kg	Acidity		%
0 - 0.02	5.27A	0.027A	0.3B	0.2	0.22	0.04			
0 - 0.1	5.03A	0.104A	0.34B	0.34	0.3	0.1			
0.1 - 0.2	4.83A	0.07A	<0.1B	0.24	0.14	0.17			
0.3 - 0.38	6.04A	0.023A	<0.1B	0.26	0.04	0.16			
0.38 - 0.45	5.62A	0.023A	<0.1B	0.3	0.04	0.19			
0.45 - 0.55	6.49A	0.038A	<0.1B	3.06	0.14	1.57			
0.7 - 0.8	7.57A	0.079A	<0.1B	4.6	0.33	2.01			
1.2 - 1.3	8.12A	0.16A	<0.1B	4.43	0.38	2.31			
2.5 - 2.6	8.57A	0.078A	<0.1B	1.94	0.19	1.27			

[illegible]

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Laboratory Analyses Completed for this profile

15A2_CA	Exchangeable bases (Ca ²⁺ ,Mg ²⁺ ,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
P10_CF_Z	Silt (%) - Coventry and Fett pipette method