

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed173 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

Desc. By:	G.M. Roberts	Locality:	stock route, near Murrumbilla gate
Date Desc.:	25/07/85	Elevation:	309 metres
Map Ref.:	Sheet No. : 8837_N 1:50000	Rainfall:	No Data
Northing/Long.:	6655400 AMG zone: 55	Runoff:	No Data
Easting/Lat.:	781300 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:	Pediment	Slope Category:	Very gently sloped
Slope:	1 %	Aspect:	340 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:	Dy5.43
		Great Soil Group:	Solodic soil

Site Disturbance: Complete clearing. Pasture, native or improved, cultivated at some stage

Vegetation:

Surface Coarse Fragments:

Profile Morphology

A11	0 - 0.1 m	Brown (7.5YR4/4-Moist); Brown (7.5YR4/4-Dry); ; Sandy loam; Weak grade of structure, <2 mm, Granular; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Field pH 6.5 (pH meter); Common, fine (1-2mm) roots;
A12	0.1 - 0.25 m	Brown (7.5YR4/4-Moist); ; Loamy sand; Weak grade of structure, 10-20 mm, Subangular blocky; Sandy (grains prominent) fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Field pH 6 (pH meter); Few, fine (1-2mm) roots;
A2	0.25 - 0.4 m	Brown (7.5YR4/4-Moist); , 5YR34, 2-10% , 15-30mm, Distinct; , N30, 2-10% , 15-30mm, Prominent; Loamy sand; Massive grade of structure; Sandy (grains prominent) fabric; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; 2-10%, coarse gravelly, 20-60mm, rounded, Ironstone, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Coarse (6 - 20 mm), Nodules; Field pH 7.5 (pH meter); Few, very fine (0-1mm) roots; Abrupt, Smooth change to -
B21	0.4 - 1 m	Yellowish brown (10YR5/6-Moist); , 5YR56, 10-20% , 15-30mm, Distinct; , 10YR62, 0-2% , 5-15mm, Distinct; Light clay; Strong grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 20-50 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Field pH 8 (pH meter); Few, very fine (0-1mm) roots;
B22	1 - 2.16 m	Brownish yellow (10YR6/6-Moist); , 5YR56, 2-10% , 15-30mm, Distinct; , 10YR21, 10-20% , 5-15mm, Distinct; Light clay; Strong grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 10-20 mm, Angular blocky; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Veins; Common (10 - 20 %), Manganiferous, Coarse (6 - 20 mm), Veins; Very few (0 - 2 %), Calcareous, Fine (0 - 2 mm), Nodules; Field pH 8.7 (pH meter); Few, very fine (0-1mm) roots; Clear, Smooth change to -
B23	2.16 - 2.9 m	Brownish yellow (10YR6/6-Moist); , 2.5YR46, 2-10% , 15-30mm, Distinct; , 10YR21, 10-20% , 5-15mm, Distinct; Fine sandy light clay; Strong grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Ferruginous, Coarse (6 - 20 mm), Veins; Common (10 - 20 %), Manganiferous, Coarse (6 - 20 mm), Veins; Field pH 8.5 (pH meter);

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B24 2.9 - 3.67 m Brownish yellow (10YR6/6-Moist); , 2.5YR46, 2-10% , 15-30mm, Distinct; , 10YR21, 0-2% , 5-15mm, Distinct; Fine sandy light clay; Moderate grade of structure, 100-200 mm, Prismatic; Moderate grade of structure, 5-10 mm, Angular blocky; Earthy fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm²) Very fine (0.075-1mm) macropores, Moderately moist; Very firm consistence; Few (2 - 10 %), Ferruginous, Medium (2 -6 mm), Veins; Very few (0 - 2 %), Manganiferous, Medium (2 -6 mm), Veins; Field pH 8.3 (pH meter);

Morphological Notes

A11 30-40 colour 2 an organic stain. Concretions in 30-40 include 5YR5/8. Some fine manganese occurs in 173.04 according to GMR, but is not in significant visible amounts. Mn stains become obvious at 90cm. Few mn/fe segregations also evident in

A12 upper part of B. Carbonate continues to about 200cm but not into reddish zone. The lower part of the B2 is differentiated by its reddish colour. Depth 173.07 should have been 350-360. Note conflict of calling site 173.03 an A2n without a h

A2 orizon break from A12.

Observation Notes

Parent Rock: colluvial sediment, sandstone, Pilliga Sandstone, weathered

Site Notes

Topography r1 to r2. Handshear: soft patches give 1.8. Handpen: soft parts give 1.6. The soft patches are small, adjoin grass clumps, and are sandy. Soil grades to red so we take an extra metre.

Observation ID: 1

Project Code: EDCERO1 **Site ID:** 3a
Agency Name: CSIRO Division of Soils (QLD)

Laboratory Test Results:

Depth	pH	1:5 EC	Exchangeable Cations			Exchangeable	CEC	ECEC	ESP
m		dS/m	Ca	Mg	K	Na	Acidity		%
						Cmol (+)/kg			
0 - 0.02	6.36A	0.047A	2.85B	1.27	0.63	0.41			
0 - 0.1	7.22A	0.038A	2.04B	0.78	0.66	<0.01			
0.1 - 0.2	5.5A	0.047A	1.02B	0.62	0.25	<0.01			
0.3 - 0.4	6.23A	0.016A	0.53B	0.69	0.06	0.86			
0.7 - 0.8	7.56A	0.119A	4.07B	6.35	0.61	1.73			
1.2 - 1.3	8.26A	0.224A	6.64B	8.83	0.83	2.74			
2.5 - 2.6	8.27A	0.301A	4.93B	6.9	0.64	2.76			
3.2 - 3.3	8.25A	0.239A	3.04B	6.17	0.45	2.22			

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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