

**Project Name:** Soil Studies in the Lower Namoi Valley  
**Project Code:** EDGEROI **Site ID:** ed341 **Observation ID:** 1  
**Agency Name:** CSIRO Division of Soils (QLD)

#### Site Information

<b>Desc. By:</b>	W.T. Ward	<b>Locality:</b>	I.O.(Ian) Falkiner, Murrumbilla
<b>Date Desc.:</b>	13/03/87	<b>Elevation:</b>	314 metres
<b>Map Ref.:</b>	Sheet No. : 8837_N 1:50000	<b>Rainfall:</b>	No Data
<b>Northing/Long.:</b>	6655250 AMG zone: 55	<b>Runoff:</b>	No Data
<b>Easting/Lat.:</b>	780600 Datum: AGD66	<b>Drainage:</b>	No Data

#### Geology

<b>ExposureType:</b>	Undisturbed soil core	<b>Conf. Sub. is Parent. Mat.:</b>	No Data
<b>Geol. Ref.:</b>	No Data	<b>Substrate Material:</b>	No Data

#### Land Form

<b>Rel/Slope Class:</b>	No Data	<b>Pattern Type:</b>	No Data
<b>Morph. Type:</b>	No Data	<b>Relief:</b>	No Data
<b>Elem. Type:</b>	Pediment	<b>Slope Category:</b>	No Data
<b>Slope:</b>	%	<b>Aspect:</b>	5 degrees

**Surface Soil Condition (dry):** Surface crust

#### Erosion:

#### Soil Classification

<b>Australian Soil Classification:</b>	N/A	<b>Mapping Unit:</b>	N/A
<b>ASC Confidence:</b>	Confidence level not specified	<b>Principal Profile Form:</b>	N/A
		<b>Great Soil Group:</b>	Solodic soil

#### Site Disturbance:

#### Vegetation:

#### Surface Coarse Fragments:

#### Profile Morphology

A11	0 - 0.1 m	Dark brown (7.5YR3/2-Moist); Brown (7.5YR4/2-Dry); ; Light medium clay; Moderate grade of structure, 5-10 mm, Angular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; 0-2%, medium gravelly, 6-20mm, subrounded, Quartz, coarse fragments; Field pH 6.2 (pH meter); Few, very fine (0-1mm) roots;
A12	0.1 - 0.2 m	Dark brown (7.5YR3/2-Moist); ; Light medium clay; Moderate grade of structure, 5-10 mm, Angular 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%, medium gravelly, 6-20mm, subrounded, Silcrete, coarse fragments; Field pH 6.5 (pH meter); Few, very fine (0-1mm) roots; Gradual, Smooth change to -
B21	0.2 - 0.55 m	Reddish brown (5YR4/3-Moist); , 7.5YR32, 20-50% , 5-15mm, Prominent; , 5YR43, 0-2% , 0-5mm, Faint; 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 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Very strong consistence; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots;
B22	0.55 - 1 m	Dark reddish brown (5YR3/3-Moist); , 7.5YR32, 20-50% , 5-15mm, Prominent; Light medium clay; Moderate grade of structure, 50-100 mm, Lenticular; Weak 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; Very strong consistence; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots;
B23	1 - 1.7 m	Dark reddish brown (5YR3/3-Moist); , 7.5YR32, 0-2% , 5-15mm, Distinct; Light medium clay; Moderate 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; Strong consistence; Very few (0 - 2 %), Calcareous, Coarse (6 - 20 mm), Nodules; Field pH 9 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to -
C	1.7 - 2.1 m	Yellowish red (5YR4/6-Moist); , 2.5Y62, 10-20% , 5-15mm, Prominent; Light clay; Weak grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Strong consistence; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Soft segregations; Field pH 9 (pH meter); Abrupt, Smooth change to -

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|----|---------------|---|
| D1 | 2.1 - 2.64 m  | Strong brown (7.5YR5/8-Moist); , 2.5Y64, 2-10% , 5-15mm, Distinct; Light clay; Weak grade of structure, 5-10 mm, Angular blocky; Smooth-ped fabric; Fine, (0 - 5) mm crack; Moderately moist; Very firm consistence; 20-50%, coarse gravelly, 20-60mm, subangular, Consolidated rock (unidentified), coarse fragments; Few (2 - 10 %), Calcareous, Very coarse (20 - 60 mm), Nodules; Field pH 9 (pH meter); Abrupt, Smooth change to - |
| D2 | 2.64 - 3.66 m | Light brown (7.5YR6/4-Moist); ; Fine sandy clay loam; Massive grade of structure; Earthy fabric; Moderately moist; Very firm consistence; Field pH 8.7 (pH meter);  |

**Morphological Notes**

- |     |  |
|-----|--|
| A11 | B22 could be B2k, diffuse break at about 60cm. Inwashed sand continues to 60cm. Traces of wedge structure only, at 120-130. Piece of basalt at 155cm. A 10cm thick band of subangular gravel, various, occurs at 170-180 above a layer with gravel and stone (including ironstone plates and basalt) which continues to 264. Igneous rock seemingly in place below the gravel bed. Core finishes in relatively hard but fragmented basalt. Broken fragments of platy ironstone from Purlawaugh contact occur in gravels to 264 and similar iron-cemented basalt occurs in the Garawilla volcanics at 330cm. More-or-less uniform texture throughout solum but a little lighter and sandier at top (to 20 cm). Field pH for sample 8 estimated from lab pH. |
| A12 |  |
| B21 |  |
| B22 |  |

**Observation Notes**

Parent Rock: colluvial sediment, from sandstone, clay and basalt, with lime, basalt colluvium, thick, with basalt

**Site Notes**

Site 341 is ca 350m NNW of 340 on light brown weak crusting clay.



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**Laboratory Analyses Completed for this profile**

15A2_CA	Exchangeable bases (Ca <sup>2+</sup> ,Mg <sup>2+</sup> ,Na <sup>+</sup> ,K <sup>+</sup> ) - 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