

Project Name: Soil Studies in the Lower Namoi Valley
Project Code: EDGEROI **Site ID:** ed236 **Observation ID:** 1
Agency Name: CSIRO Division of Soils (QLD)

Site Information

| | | | |
|------------------------|----------------------------|-------------------|-------------------------------|
| Desc. By: | D. McGarry | Locality: | stock route, north of Oakvale |
| Date Desc.: | 01/11/85 | Elevation: | 283 metres |
| Map Ref.: | Sheet No. : 8837_N 1:50000 | Rainfall: | No Data |
| Northing/Long.: | 6668400 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: | Fan | Slope Category: | Very gently sloped |
| Slope: | 0 % | Aspect: | No Data |

Surface Soil Condition (dry): Self-mulching, Trampled

Erosion:

Soil Classification

| | | | |
|--|--------------------------------|--------------------------------|-----------|
| Australian Soil Classification: | N/A | Mapping Unit: | N/A |
| ASC Confidence: | Confidence level not specified | Principal Profile Form: | Ug5.16 |
| | | Great Soil Group: | Grey clay |

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

Vegetation:

Surface Coarse Fragments:

Profile Morphology

| | | |
|------|---------------|--|
| A11 | 0 - 0.1 m | Black (10YR2/1-Moist); Black (10YR2/1-Dry); ; Light clay; Weak grade of structure, 20-50 mm, Subangular blocky; Moderate grade of structure, 2-5 mm, Granular; Smooth-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Weak consistence; Field pH 7 (pH meter); Many, fine (1-2mm) roots; |
| A12 | 0.1 - 0.2 m | Very dark grey (10YR3/1-Moist); ; Light medium clay; Moderate grade of structure, 20-50 mm, Subangular blocky; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, rounded, Quartz, coarse fragments; Field pH 7 (pH meter); Common, very fine (0-1mm) roots; |
| A13 | 0.2 - 0.27 m | Very dark grey (10YR3/1-Moist); ; Light medium clay; Strong grade of structure, 50-100 mm, Subangular blocky; Weak grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, fine gravelly, 2-6mm, subrounded, Quartz, coarse fragments; Field pH 8.5 (pH meter); Common, very fine (0-1mm) roots; Diffuse, Smooth change to - |
| A14 | 0.27 - 0.55 m | Very dark grey (10YR3/1-Moist); ; Medium clay; Weak grade of structure, 50-100 mm, Prismatic; Moderate grade of structure, 20-50 mm, Subangular blocky; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Firm consistence; 0-2%, medium gravelly, 6-20mm, rounded, Quartz, coarse fragments; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; |
| A15k | 0.55 - 1.05 m | Very dark greyish brown (10YR3/2-Moist); ; Medium clay; Weak grade of structure, 50-100 mm, Prismatic; Smooth-ped fabric; Rough-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Fine (1-2mm) macropores, Moderately moist; Very strong consistence; 0-2%, fine gravelly, 2-6mm, subangular, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 8.5 (pH meter); Few, very fine (0-1mm) roots; Diffuse, Smooth change to - |
| B2 | 1.05 - 1.6 m | Brown (7.5YR4/2-Moist); ; Light medium clay; Massive grade of structure; Moderate grade of structure, 2-5 mm, Cast; Earthy fabric; Smooth-ped fabric; Fine, (0 - 5) mm crack; Few (<1 per 100mm2) Very fine (0.075-1mm) macropores, Moderately moist; Strong consistence; 0-2%, cobbly, 60-200mm, rounded, Quartz, coarse fragments; Few (2 - 10 %), Calcareous, Medium (2 -6 mm), Nodules; Field pH 7 (pH meter); Gradual, Tongued change to - |

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C 1.6 - 2.7 m Brown (7.5YR5/4-Moist); , 7.5YR42, 10-20% , 30-mm, Prominent; Sand; Weak grade of structure, 100-200 mm, Platy; Massive grade of structure; Rough-ped fabric; Fine, (0 - 5) mm crack; Common (1-5 per 100mm²) Very fine (0.075-1mm) macropores, Moderately moist; Few cutans, <10% of ped faces or walls coated; Few (2 - 10 %), Argillaceous, Very coarse (20 - 60 mm), Veins; Field pH 7 (pH meter);

Morphological Notes

A11 The soil surface to 12-15mm is like the remainder except pedality is moderate 2-5mm granular and coarse fragments are 0-2% 2-6mm subrounded quartz. 30% of the exposed face is fine sand (<0.5mm). This layer is too thin to sample so is included in 236.01. There is no sample from 20-30cm, described by mistake. At 30-40cm there is carbonate effervescence in the fine earth and at 38cm, a waterborne pebble. Slickensides start at 65cm. The fizz at 30-40cm might support burial but no other evidence of burial was seen. There is no fizz in the fine earth below 40cm but the carbonate nodules are more frequent here. At 250-260cm clay cutans are associated with earthy veins; we discarded infill materials for the lab. sample

A12

A13

A14 ; this (at 250- 260cm) has 10YR8/2 <2% unidentified 2-6mm laminae; segregations also seem to be associated with faunal passages. NOTE: the chemical results from the laboratory are mismatched with the layer descriptions as a consequence of t

A15k here being no sample to match the third layer described. Thus chemistry. layer_id's have to be re-numbered each time lab data is entered ["update chemistry set layer_id where layer_id = ed23606"(etc) -> ed23607(etc) back to 23603 -> 23604].

B2 Hence 23603 on the printout will not have analytical data. If this is not so on your printout, then the necessary correction has not been done and your printout is wrong. Field texture of 23603 is estimated.

Observation Notes

Parent Rock: , , fifth (eroded) fan

Site Notes

No surface cracks evident. Very slight slope to south. Slight gilgai features. Fine self mulching, not trampled.

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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 | 7.03A | 0.136A | 18.33B | 6.66 | 1.31 | 0.17 | | | |
| 0 - 0.1 | 6.8A | 0.117A | 17.62B | 6.71 | 0.79 | 0.35 | | | |
| 0.1 - 0.2 | 7.4A | 0.083A | 21.26B | 8.99 | 0.17 | 0.62 | | | |
| 0.2 - 0.3 | | | | | | | | | |
| 0.3 - 0.4 | 8.82A | 0.178A | 22.28B | 11.88 | <0.01 | 1.61 | | | |
| 0.7 - 0.8 | 8.79A | 0.479A | 21.72B | 14.7 | <0.01 | 4.03 | | | |
| 1.2 - 1.3 | 8.48A | 0.837A | 20.56B | 14.73 | <0.01 | 4.48 | | | |
| 2.5 - 2.6 | 7.56A | 0.449A | 15.32B | 12.26 | <0.01 | 5.07 | | | |

[illegible][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 |