

Hunter, Central & Lower North Coast
Vegetation Classification & Mapping Project

Soil Landscape and Facet Mapping
Sub-project



This report was commissioned and coordinated by
the Hunter & Central Coast Regional Environmental Management Strategy
(HCCREMS) Team
at Hunter Council's Environment Division

&

is an output of Stage II of a joint regional vegetation mapping program of both
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FOREWORD

This report has been compiled from various information sources associated with the “Soil Landscape and Facet Mapping Project” – a component of the joint Regional Vegetation Mapping Program undertaken by Hunter Councils Environment Division and the Hunter Central Rivers Catchment Management Authority. The document includes the Technical Report supplied by the primary Soils Consultant, Mr Robert Banks; Geolandscape Categories used for classifying the soil landscape types produced by Dave Thomas (DECC); Soil Landscape Profile Reports produced from the SALIS (Soil and Land Information System) database; and comments on initial data checking provided by Mr Casey Murphy of the (DECC).

SECTION I: TECHNICAL REPORT

1. Introduction

I. Background

This report has been prepared by Soils Futures Pty Ltd – a consultancy engaged by Hunter Councils to provide Soil Landscape coverage, and Soil Landscape Facet descriptions at 1:100 000 Scale for the Region which they represent (Figure 1). Soil Landscape Facets are a breakdown of individual soil mapping units by gross soil type, which can then be used for modeling the Soil Landscape qualities and limitations. In this case the facet mapping was required by Hunter Councils and the Hunter Central Rivers Catchment Management Authority Inc. to model vegetation distributions.

II. Project Description

Soil Landscape Maps are the primary means by which point data, collected from field observations, soil profiles and laboratory analysis of soil samples are able to be extended geographically to provide a spatially continuous indication of the typical soil characteristics within each Soil Landscape Unit. However, extant mapping for the region suffers a number of limitations that precludes use for guiding region-wide vegetation modelling in their current form.

Maps available for the Hunter, Central and Lower Mid-north Coast region are currently at two scales; 1:100,000 (100K) and 1:250,000 (250K). Mapping at the latter (smaller) scale is of inadequate accuracy and covers the Singleton 250K sheet and a small portion of the Dubbo 250K sheet. In addition, the nomenclature and polygons for particular landscape units are inconsistent between maps. The Consultant's task was to redress these deficiencies by improving the accuracy of the smaller scale mapping, bringing it to the same scale as the other 100K map sheets, and resolving the map edge and nomenclature inconsistencies.

Soil characteristics within each Soil Landscape Unit are not consistent, but vary markedly in response to the terrain's topography. These variations can be mapped by subdividing Soil Landscape Units into soil facets by taking account of topographic factors like slope, position on slope, length of slope, proximity to drainage lines, etc. The Department of Environment and Climate Change has developed a computer model by which these divisions can be determined, provided that expert soil advice guides the assignment of particular soil facet classes (in each Soil Landscape Unit) to particular topographic situations. This information is to be provided via "Facet Division Files" populated by the Consultant and used by DECC to guide the facet modelling process.

The Facet Division Files also contain the necessary soil attribute data for each soil facet that is needed to generate the abiotic predictor variables used in Hunter Councils/HCCREMS vegetation community modelling. Some parameters will also be needed for hydrologic modelling and erosion hazard management. All of these data were provided by the Consultant, with the exception of the K-factor and related data, which were provided by DECC.

Study Region

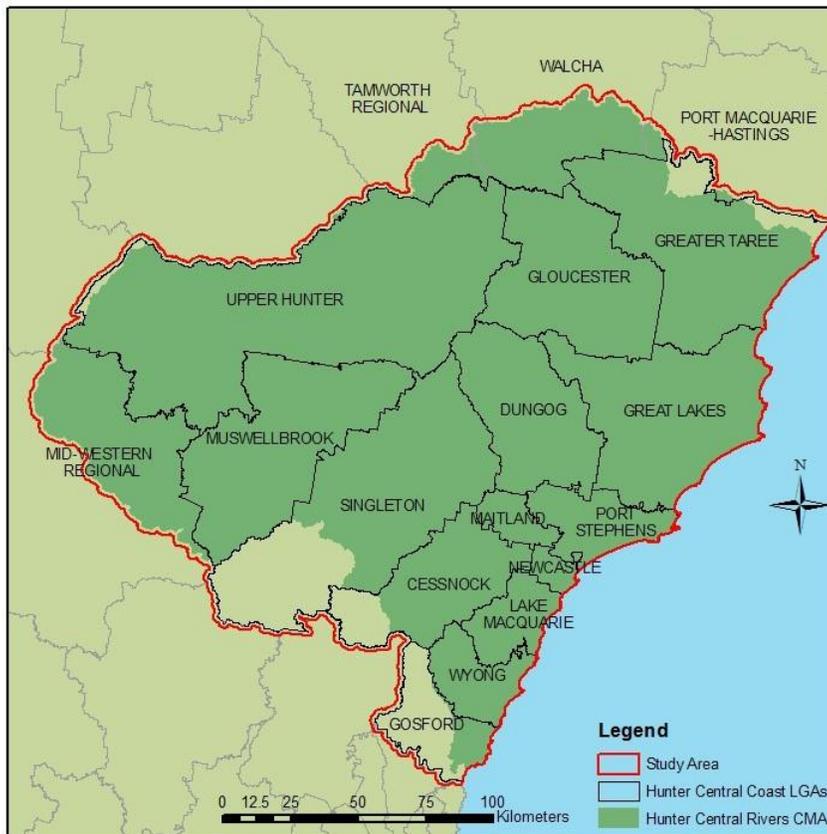


Figure 1: Study Region

III. Project Objectives

The main objectives of this project were to:

1. Fill in gaps in the dataset for Soil Landscapes of the Hunter, Central and Lower North Coast region of NSW, so that the region has continuous and seamless 1:100 000 scale Soil Landscape coverage. This involved re-mapping areas covered by current published 1:250 000 mapping for the Singleton and Dubbo 1:250 000 map sheets, and creating new coverage for the Ellerston, Nundle, Yarowitch and Cowarral 1:100 000 sheets. Completed coverage was submitted in ESRI format to Hunter Councils Inc.

2. Provide basic descriptions of the Soil Landscapes as created through the merging of existing Soil and Land Attribute Module (SLAM) databases, and to describe any new landscapes for the region. An updated SLAM database in Microsoft Access format was provided to Hunter Councils Inc.
3. Provide facet divisions for each Soil Landscape, describing how soil type and associated plant available water holding capacity varied in response to the topography of the landscape. The Facet Division File (recorded in an excel spreadsheet) and associated Soil Landscape map were submitted to the NSW Department of Environment, Conservation and Climate Change (DECC) for disaggregation and spatial representation of facets. The draft modelled facets are to be submitted by DECC to Hunter Councils Inc.

IV. Existing Soil Landscape Information

Much of the survey area has already been Soil Landscape mapped by the NSW Department of Environment and Climate Change (NSW DNR, 2003) and its predecessor agencies. Soil Landscape maps and reports which were used to create soil data coverage for the Hunter Central and Lower North Coast region are listed in Table 1 below.

Table 1: Sources of Soil Landscape Mapping Information for the study region

Soil landscape Sheet/ other soil information	Publication status at time of project	Reference
Blackville 1:100 000 Sheet	Published	R.G. Banks 1998
Bulahdelah 1:100 000 Sheet	Draft	C.L Murphy (Draft)
Camden Haven 1:100 000 Sheet	Draft	Eddie, M (Draft)
Dorrigo 1:100 000 Sheet	Published	H.B. Milford 1996
Dubbo 1:250 000 Sheet	Published	J.W Lawrie and BW Murphy 1998
Dungog 1:100 000 Sheet	Published	L.E. Henderson 2000
Murrurundi 1:100 000 Sheet	Published	S.K McInnes-Clarke 2002
Newcastle 1:100 000 Sheet	Published	L.E. Henderson 1995
Port Stephens 1:100 000 Sheet	Published	C.L. Murphy 1995
Singleton 1:250 000 Sheet	Published	M. Kovac and J.W Lawrie 1990
St Albans 1:100 000 Sheet	Published	S.K McInnes 1997
Upper Manning 1:100 000 Sheet	Draft	Davies, M (Draft)
Wingham 1:100 000 Sheet	Draft	Eddie, M (Draft)

Hawkesbury Nepean Soil Landscapes	Published	DECC 2008
Soil and Regolith Attributes for CRA/RFA Model Resolution	Published	NSW DUAP 1999

2. Methods

I. Existing Soil Landscape Mapping Data Processing

Existing 1:100 000 Soil Landscape mapping which was in draft or published form was obtained from DECC and edge matched so that a seamless coverage of Soil Landscapes was obtained for these areas.

II. Base Data for new Soil Landscape Mapping and re-mapping older 1:250 000 Sheet coverage

To create Soil Landscape coverage for the whole study region at 1:100 000 scale, a good natural resource mapping base was required. Geolandscape mapping undertaken by Mr. David Thomas (DECC, Unpublished Data) was provided by DECC for coverage of the Hunter River Catchment (which does not include all of the area covered by the study region). These polygon data is a based on intensive Aerial Photograph Interpretation (API), and show areas of land down to 1–2 Ha in area describing the Hunter Catchment in terms of Slope, Terrain, Geology and broad rainfall categories. Section II shows the categories which were used for this mapping.

Geolandscape maps were manipulated using Arcview Software, and like areas amalgamated into Soil Landscapes. Generally Soil Landscapes were created using Soil Landscape definitions from existing published or draft Soil Landscape reports (See Table 1). This was most easily achieved where a consistent geology and topographical sequence continued onto the new mapping area from existing Soil Landscape maps such as the southern edge of the basaltic Merriwa Plateau, which extended from the published Blackville and Murrurundi 1:100 000 Sheets.

Existing published or in press information for 1:100 000 Scale Soil Landscapes was used as much as possible as a model for Soil Landscape creation in the areas formerly covered only by 1:250 000 Soil Landscapes. This did not work well for the central part of the Singleton 1:250 000 Sheet area and therefore existing 1:250 000 Soil Landscapes were used to describe the area, but with much more intensive boundary definition being applied.

Some areas of the study region, which were outside of the Hunter River catchment, did not have Geolandscape mapping, but had Soil Regolith Mapping (Planning NSW, 1998) which is essentially broad Soil Landscape mapping (equivalent to 1:250 000 Soil Landscapes). Where Soil Regolith mapping was available, it was used as a basis for creating Soil Landscapes which fitted with surrounding Soil Landscape data.

Some Soil Landscapes in the previously unmapped areas of the study region were difficult to define using Soil Regolith Mapping or DECC Geolandscapes alone. In particular, Soil Landscapes on Serpentine and Limestone were not adequately defined. NSW DPI (2005) Geological Mapping was used to locate the areas of Serpentine and Limestone in the new mapping areas and polygons created using the geological units. These polygons were adjusted so that they fitted with adjacent Soil Landscape data, and so that they matched the terrain and obvious outcrops underneath as shown in SPOT satellite imagery.

III. Field Soil Survey

The area covered by the Ellerston, Nundle, Yarrowitch and Cowarral 1:100 000 Sheets, within the study region, had very little in the way of existing soil profile information, as well as being an area of Soil Landscapes which were classified only using remote means (such as Geolandscapes, Soil Regolith Mapping, Geological Mapping).

A field soil survey was conducted over a ten day period, to check Soil Landscapes created for this area, and to gather new soil profile descriptions for these landscapes. Soil Landscape boundaries were amended in the field, and soil profiles described using NSW Soil Data Cards which were loaded into the NSW Soil and Land Information System (SALIS: a DECC database) for storage, retrieval and future manipulation. A total of 67 new soil profiles were described, photographed and sampled during this exercise and several hundred soil observations made in the field. This information is now permanently stored and freely available from SALIS. Soil reports for each of the newly described profiles are included in Section IV.

Soil samples from this survey have been retained by SoilFutures Consulting and will be delivered to DECC's Soil Storage facility in Scone.

IV. Creation of Seamless Soil Landscapes

Soil Landscapes created for this project were merged with existing 1:100 000 Soil Landscapes so that a seamless Soil Landscape Map was created for the whole region. A breakdown of the components of the new seamless Soil Landscape map is given in Figure 2 below.

V. Creation of Soil Landscape Facets

Soil Landscape Facets, or sub landscapes were created for each Soil Landscape in the region. Some facets had already been described in existing SLAM databases. Where possible these existing facet concepts were used.

Most of the Soil Landscape coverage had no facet description so facets were created by overlaying all soil profile data onto both new and existing Soil Landscapes. The overlay was used to give an indication of likely soil distributions within a Soil Landscape.

This soil profile distribution was recorded in a Facet Division File, a Microsoft Excel Spreadsheet. The spreadsheet recorded the following: Soil Landscape Code, Soil Landscape Name, Soil Landscape Facet Code, % coverage of Soil Landscape, Facet Number, Organizational Factor (generally Site Morphology), Facet Value (Generally position in a toposequence), Great Soil Group (as per Stace et al, 1968), Type Profile Number, Soil Fertility Ranking, Soil Depth, Estimated Rooting Depth (where soil was thought to be deeper than the described soil profile or where roots could penetrate into fractured bedrock), Plant Available Water Capacity (PAWC), and Soil Profile Drainage.

Fertility classes for each Great Soil Group were described numerically using the guidelines from Charman (1978). Plant Available Water Capacity (PAWC) for each type soil profile was calculated using soil textures for each layer of a profile and the PAWC values for each texture given in Salter & Williams 1967, 1969; Gracen & Williams 1983; and Hazelton & Murphy (1992), factoring in the effect of coarse fragments, and adding the total value of PAWC per layer for the whole profile. Soil profile drainage was allocated using the six class system provided by The National Committee on Soil and Terrain (2009).

The Facet Division File has been delivered to DECC so that facets can be generated spatially and used by Hunter Councils Inc. for future vegetation modeling.

VI. Data Assurance and Quality

As much as was possible, Soil Landscapes were created to meet the DECC standards for 1:100 000 Reconnaissance Soil Landscape Mapping (DECC, 2003). Interim Soil Landscape maps were circulated to DECC throughout the project, so that gross errors could be quickly corrected. David Thomas and Casey Murphy of DECC were involved both with oversight of the mapping and creation of rules to make Soil Landscapes in areas with complex landscapes. Due to time limitations, a full field edit was not conducted on this information. Comments provided by Casey Murphy, based on initial checking of data outputs undertaken by Casey Murphy and Dave Thomas, have been included in section III below (C. Murphy 2009, pers. comm., 3 August).

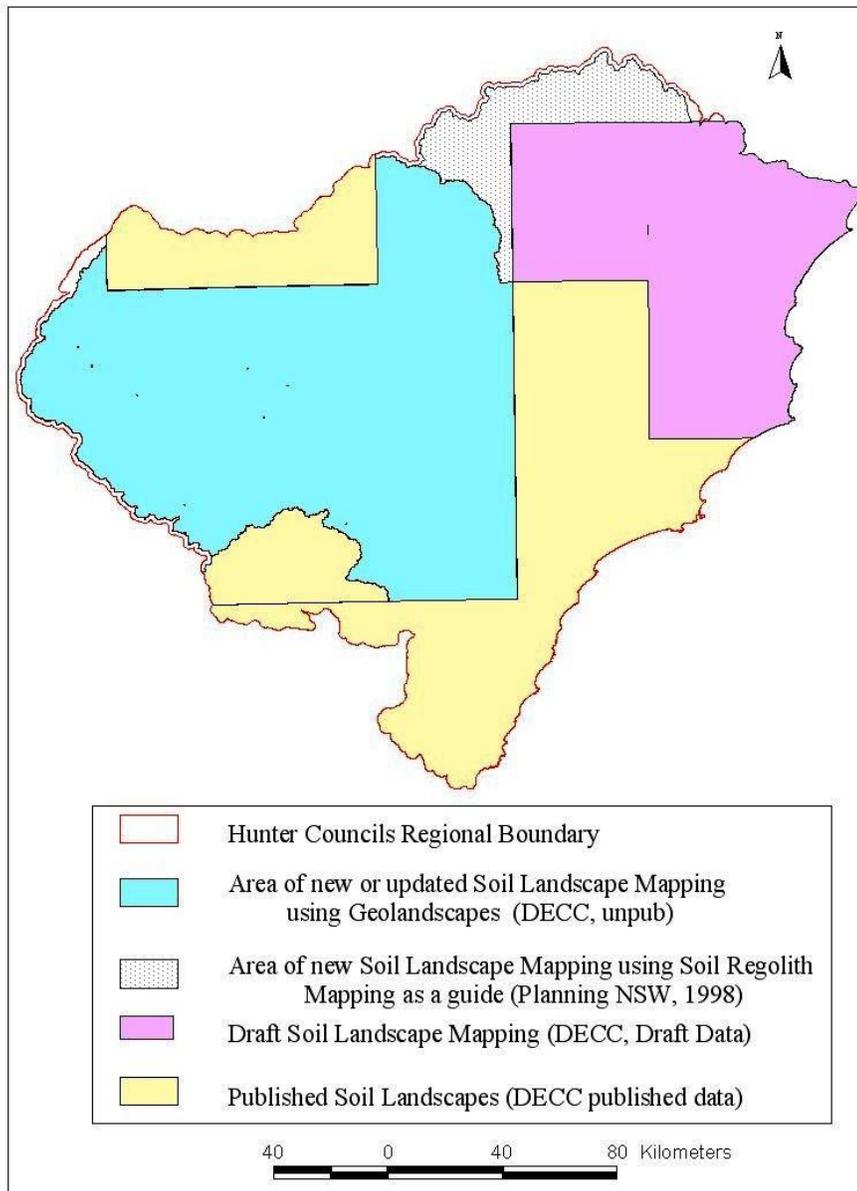


Figure 2: Soil Landscape Data Sources for Hunter Councils Region Soil Landscape Mapping

3. Concluding Remarks

Soil Landscape mapping at 1:100 000 scale is now available in at least draft Reconnaissance quality (DNR, 2003) for the whole Hunter Central and Lower North Coast region. The creation of Soil Landscape Facets based on this mapping gives a firm foundation on which to base future modelling of environmental parameters such as vegetation distribution or soil and landscape qualities and limitations.

The provision of this mapping also raises the opportunity for DECC to develop this information into published Soil Landscape maps and reports with appropriate quality assurance and editing in the future.

4. Acknowledgments

SoilFutures Consulting Pty Ltd wishes to acknowledge the important contribution of the following DECC staff to this project; Mr Andrew Murrel, for his provision of SLAM databases, and his time to merge successive databases to form the database for the Hunter Councils Region; Mr Mark Young, for his efforts to provide up to date Soil Landscape maps, and cope with various issues of version control along the way; Humphrey Milford of SALIS (DECC), for patiently answering repeated requests for soil data during the many dozens of iterations required to find soil profile data for Soil Landscapes, and then process it into PAWC data; Casey Murphy, David Thomas, Sally McInnes-Clarke and Michael Eddie for their local knowledge and data contributions to the project, as well as multiple useful edits along the way.

5. References

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SECTION II: GEOLANDSCAPE CATEGORIES USED FOR CLASSIFICATION OF SOIL LANDSCAPES

I SLOPECLASSES:

- A (0-2%)
- B (2-10%)
- C (10-33%)
- D (> 33%)
- XX (disturbed).

II TERRAINCLASSES:

- hillcrest (01)
- sideslope (02)
- footslope (03)
- escarpment (04)
- structural bench (05)
- rock sideslope (06)
- cliff (11)
- plateau (13)
- low relief ridge tops below steeper slopes (15)
- undulating low hills (16)
- flood plain (20)
- terrace (21)
- drainage plain or depression (22)
- dune (24)
- alluvial fan (31)
- incised drainage channel (40)
- stream channel (41)
- main river channel to top of high bank (includes all stream structures) (47)
- swamp (50)
- lake (51)
- dune (62)
- disturbed(XX)

III GEOLOGYCLASSES:

- A Quaternary Alluvium
- B Tertiary Basalt
- C Carboniferous Sediments

D Disturbed land
E Estuarine Sediments
I Igneous intrusions
J Jurassic sediments
M Relict sediments
O Organic Sediments
P Permian Sediments
T Triassic Sediments
U Coastal sand deposits
V Jurassic-Triassic volcanics
W Water

SECTION III: DATA CHECKING COMMENTS

Hardcopy outputs of the soil landscape and facet maps were reviewed over a day by Casey Murphy and Dave Thomas (NSW DECC). Overall the outputs were considered to be a good start to producing an accurate coverage of soil landscapes across the Hunter. Where DECC's slope/terrain/rainfall/geological mapping (1:25,000 scale) was used by the consultant to define the soil landscapes across most of the Dubbo/Singleton 1:250 000 sheet areas this has led to a great improvement on the definition of soil landscapes. However a number of issues were identified through this initial review process including;

1. A lot of the mapping involved grouping up DECC's multi-attribute mapping (slope terrain codes with geology in Singleton/Dubbo sheets areas) and allocating them a soil landscape code. However, a number of cases were identified in which the wrong landscape tag or the incorrect grouping of codes have been used to define a landscape.
2. The use of rainfall to break up soil landscapes has led to a number of odd soil landscape boundaries. These can be seen as a number of arcs on the coverage.
3. Some of the original DECC multi-attribute mapping did not split rolling from steep country, nor distinguished between foothills and footslopes and needs remapping of some areas.

SECTION IV: NEW SOIL LANDSCAPE PROFILE REPORTS



Soil Profile Report

Site location

Approximately 500m South East of 'Uloola'

Profile details

Hunter CCC REMS (1005203), Profile 66, recorded by Robert Banks on 03 Mar 2009

Map reference

AMG grid reference 335355E, 6485874N, AMG Zone 56; MGA grid reference 335459E, 6486063N, MGA Zone 56; GDA Latitude -31.74909, GDA Longitude 151.26284; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of terrace plain; slope is 52% (measured), elevation is 602 m

Geology

conglomerate substrate (Dcpgx), with alluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is rapidly drained, run-on is high, runoff is high

Land use

limited clearing, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, severe stable sheet erosion

Site condition

ground cover is 50%

Soil type

Haplic ? Red Dermosol; medium, slightly gravelly, clayey, clayey, very deep, sufficient data available (ASC); Euchrozem (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 50%

Layer 1, A1 horizon, 0 - 0.2 m

dark reddish brown (5YR 3/3) light medium clay with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments are few (2-10%), coarse gravel (20-60 mm), cobbles (60-200 mm), stones (200-600 mm), as parent material; field pH is 7.5; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.81 m

reddish brown (dull reddish brown) (5YR 4/4) sandy clay with strong pedality (polyhedral, 5 - 10 mm), smooth-faced peds; coarse fragments are common (10-20%), coarse gravel (20-60 mm), cobbles (60-200 mm), stones (200-600 mm), as parent material; field pH is 7.5; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B22 horizon, 0.81 - 1.2 m

reddish brown (dull reddish brown) (5YR 4/4) light clay with strong pedality (sub-angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), coarse gravel (20-60 mm), cobbles (60-200 mm), stones (200-600 mm), as parent material; field pH is 7; no layer notes recorded; soil continues...

Substrate

conglomerate substrate (Dcpgx)



Soil Profile Report

Site location

N of Nowedol

Profile details

Hunter CCC REMS (1005203), Profile 1, recorded by Robert Banks on 23 Feb 2009

Map reference

AMG grid reference 375687E, 6529440N, AMG Zone 56; MGA grid reference 375791E, 6529629N, MGA Zone 56; GDA Latitude -31.36121, GDA Longitude 151.69402; Yarrowitch (9235) 1:100,000 map sheet

Terrain

upper slope; part of hillslope; local relief is very high (> 300 m), slope is 40% (measured), elevation is 1270 m

Geology

strong basalt (slightly weathered rock) substrate (Tv) and parent material; 10% - 20% rock outcrop

Vegetation

vegetation community is wet sclerophyll forest

Hydrology

profile is well drained, run-on is low, runoff is high

Land use

no effective disturbance, used for timber/scrub/unused, with logged native forest, hardwood plantation in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 100%

Soil type

Melacic ? Red Ferrosol; medium, gravelly, clay loamy, clayey, very deep, sufficient data available (ASC); Krasnozem (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.3 m

black (5YR 2.5/1) clay loam with strong pedality (polyhedral, 2 - 5 mm), rough-faced peds; coarse fragments are common (10-20%), cobbles (60-200 mm), as parent material; field pH is 5.5; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, AB horizon, 0.3 - 0.6 m

yellowish red (reddish brown) (5YR 4/6) light clay with strong pedality (polyhedral, 2 - 5 mm), rough-faced peds; coarse fragments are common (10-20%), cobbles (60-200 mm), as parent material; field pH is 5; no layer notes recorded; diffuse (>100 mm) boundary to...

Layer 3, B horizon, 0.6 - 1.3 m

yellowish red (bright reddish brown) (5YR 5/8) light clay with strong pedality (polyhedral, 2 - 5 mm), rough-faced peds; coarse fragments are abundant (50-90%), boulders (> 600 mm), as parent material; field pH is 5; no layer notes recorded; layer continues...

Substrate

strong basalt (slightly weathered rock) substrate (Tv)



Soil Profile Report

Site location

N of Nowendol

Profile details

Hunter CCC REMS (1005203), Profile 2, recorded by Robert Banks on 23 Feb 2009

Map reference

AMG grid reference 375562E, 6527708N, AMG Zone 56; MGA grid reference 375666E, 6527897N, MGA Zone 56; GDA Latitude -31.37682, GDA Longitude 151.69249; Yarrowitch (9235) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; local relief is high (90-300 m), slope is 15% (measured), elevation is 1163 m

Geology

weak basalt (structured saprolite) substrate (Tv) and parent material

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is well drained, run-on is low, runoff is high

Land use

no effective disturbance, used for timber/scrub/unused, with hardwood plantation,volun./native pasture,improved pasture in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 100%

Soil type

Haplic ? Red Ferrosol; medium, slightly gravelly, clayey, clayey, very deep, sufficient data available (ASC); Krasnozem (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.2 m

dark reddish brown (5YR 3/3) light clay with strong pedality (polyhedral, 5 - 10 mm), smooth-faced peds; coarse fragments are common (10-20%), as parent material; field pH is 6; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.55 m

dark reddish brown (5YR 3/4) light medium clay with strong pedality (polyhedral, 5 - 10 mm), smooth-faced peds; coarse fragments are ; as parent material; field pH is 6; no layer notes recorded; no boundary details recorded...

Layer 3, C horizon, 0.55 - 2 m

reddish brown (dull reddish brown) (5YR 4/4) coarse sandy clay with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; layer notes are C horizon very soil like.; directly overlies bedrock

Substrate

weak basalt (structured saprolite) substrate (Tv)



Soil Profile Report

Site location

N of Nowendol

Profile details

Hunter CCC REMS (1005203), Profile 3, recorded by Robert Banks on 23 Feb 2009

Map reference

AMG grid reference 375173E, 6523035N, AMG Zone 56; MGA grid reference 375277E, 6523224N, MGA Zone 56; GDA Latitude -31.41893, GDA Longitude 151.68782; Yarrowitch (9235) 1:100,000 map sheet

Terrain

depositional waning lower slope; part of swamp; slope is 3% (measured), elevation is 990 m

Geology

schist/phyllite substrate (dcso), with organic material parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

free water below soil surface at 1 m depth, profile is very poorly drained, run-on is very high, runoff is low

Land use

cleared, used for timber/scrub/unused, with volun./native pasture, improved pasture in general area

Erosion

erosion hazard is not recorded, no erosion recorded

Site condition

ground cover is 100%

Soil type

Melanic Dermosolic Redoxic Hydrosol; thick, non gravelly, clayey, clayey, very deep, sufficient data available (ASC); Humic Gley (GSG)

Profile Notes

Spring site.

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.3 m

black (7.5YR 2.5/1) light clay with strong pedality (polyhedral, 5 - 10 mm), rough-faced peds; coarse fragments not recorded; field pH is 6; AgNO3 result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2g horizon, 0.3 - 0.74 m

brownish yellow (bright yellowish brown) (10YR 6/6) light clay with strong pedality (prismatic, 5 - 10 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; AgNO3 result is no precipitate; no layer notes recorded; layer continues...

Substrate

schist/phyllite substrate (dcso)



Soil Profile Report

Site location

N of Nowendol

Profile details

Hunter CCC REMS (1005203), Profile 4, recorded by Robert Banks on 23 Feb 2009

Map reference

AMG grid reference 376271E, 6520770N, AMG Zone 56; MGA grid reference 376375E, 6520959N, MGA Zone 56; GDA Latitude -31.43948, GDA Longitude 151.69908; Yarrowitch (9235) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; local relief is low (30-90 m), slope is 11% (measured), elevation is 953 m

Geology

schist/phyllite substrate (dcso), with colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is moderate, runoff is high

Land use

not recorded

Erosion

erosion hazard is not recorded, no erosion recorded

Site condition

ground cover is 60%

Soil type

Melacic ? Red Kurosol; medium, non gravelly, clay loamy, clayey, deep, sufficient data available (ASC); Red Podzolic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.2 m

dark reddish brown (5YR 3/2) clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.7 m

red (reddish brown) (2.5YR 4/8) light medium clay with strong pedality (angular blocky, 10 - 20 mm), smooth-faced peds; coarse fragments not recorded; field pH is 5.5; no layer notes recorded; no boundary details recorded...



Soil Profile Report

Site location

Ruby's Knob Rd

Profile details

Hunter CCC REMS (1005203), Profile 5, recorded by Robert Banks on 24 Feb 2009

Map reference

AMG grid reference 356005E, 6515115N, AMG Zone 56; MGA grid reference 356109E, 6515304N, MGA Zone 56; GDA Latitude -31.48814, GDA Longitude 151.48506; Nundle (9135) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; local relief is low (30-90 m), slope is 9% (measured), elevation is 1220 m

Geology

adamellite substrate (mdhi) and parent material; 2% - 10% rock outcrop

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is well drained, run-on is low, runoff is moderate

Land use

limited clearing, used for logged native forest, with logged native forest in general area

Erosion

erosion hazard is not recorded, no erosion recorded

Site condition

surface condition not recorded

Soil type

Melacic ? Red Kurosol; medium, non gravelly, clay loamy, clayey, deep, sufficient data available (ASC); Red Podzolic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.2 m

dusky red (dark reddish brown) (2.5YR 3/2) coarse sandy clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 5.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.8 m

red (reddish brown) (2.5YR 4/8) light medium clay with moderate pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 5.5; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

adamellite substrate (mdhi)



Soil Profile Report

Site location

Ruby's Knob Rd on Left slope

Profile details

Hunter CCC REMS (1005203), Profile 6, recorded by Robert Banks on 24 Feb 2009

Map reference

AMG grid reference 355945E, 6515796N, AMG Zone 56; MGA grid reference 356049E, 6515985N, MGA Zone 56; GDA Latitude -31.48199, GDA Longitude 151.48453; Nundle (9135) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; local relief is low (30-90 m), slope is 13% (measured), elevation is 1203 m

Geology

adamellite substrate (mdhi) and parent material

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is mod. well drained, run-on is low, runoff is moderate

Land use

limited clearing, used for logged native forest, with logged native forest in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 80%

Soil type

Melacic ? Red Kurosol; medium, non gravelly, clay loamy, clayey, deep, sufficient data available (ASC); Red Podzolic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.2 m

very dark grey (brownish black) (5YR 3/1) fine sandy clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 5.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 1 m

red (reddish brown) (2.5YR 4/8) light clay with weak pedality (angular blocky, 5 - 10 mm), smooth-faced peds; coarse fragments not recorded; field pH is 5.5; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

adamellite substrate (mdhi)



Soil Profile Report

Site location

Ruby's Knob Road - Crest

Profile details

Hunter CCC REMS (1005203), Profile 7, recorded by Robert Banks on 24 Feb 2009

Map reference

AMG grid reference 355785E, 6515738N, AMG Zone 56; MGA grid reference 355889E, 6515927N, MGA Zone 56; GDA Latitude -31.48249, GDA Longitude 151.48284; Nundle (9135) 1:100,000 map sheet

Terrain

crest; part of hillcrest; local relief is very high (> 300 m), slope is 5% (measured), elevation is 1226 m

Geology

moderately strong adamellite (mod. weathered rock) substrate (mdmd) and parent material; > 50% rock outcrop

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is mod. well drained, run-on is low, runoff is high

Land use

cleared, used for logged native forest, with logged native forest in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 100%

Soil type

Melacic ? Red Kurosol; medium, moderately gravelly, clay loamy, clayey, moderate, sufficient data available (ASC); Red Podzolic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

many (20-50%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.2 m

dark brown (brownish black) (7.5YR 3/2) coarse sandy clay loam with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2 horizon, 0.2 - 0.4 m

brown (7.5YR 4/3) coarse sandy clay loam with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 5.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, B horizon, 0.4 - 0.7 m

reddish brown (dull reddish brown) (5YR 4/4) light clay with weak pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 5.5; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong adamellite (mod. weathered rock) substrate (mdmd)



Soil Profile Report

Site location

W of Sergent Gap (Timor Caves)

Profile details

Hunter CCC REMS (1005203), Profile 8, recorded by Robert Banks on 24 Feb 2009

Map reference

AMG grid reference 323706E, 6492256N, AMG Zone 56; MGA grid reference 323810E, 6492445N, MGA Zone 56; GDA Latitude -31.6898, GDA Longitude 151.14105; Ellerston (9134) 1:100,000 map sheet

Terrain

waning lower slope; part of hillslope; local relief is high (90-300 m), slope is 9% (measured), elevation is 618 m

Geology

moderately strong siltstone/mudstone (mod. weathered rock) substrate (dety), with colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is very high, runoff is high

Land use

limited clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion, moderate partly stabilised gully erosion (1.5-3.0 m deep)

Site condition

ground cover is 85%

Soil type

? ? Brown Sodosol; medium, moderately gravelly, clay loamy, clayey, deep, no data available but sufficient knowledge (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

many (20-50%) surface gravels, ground cover is 85%

Layer 1, A1 horizon, 0 - 0.15 m

dark reddish brown (5YR 3/2) clay loam with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2e horizon, 0.15 - 0.3 m

brown (7.5YR 4/3) silty clay loam with massive structure, earthy fabric; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, B2 horizon, 0.3 - 0.8 m

strong brown (brown) (7.5YR 4/6) medium clay with strong pedality (angular blocky, 10 - 20 mm), smooth-faced peds; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...



Soil Profile Report

Site location

W of Timor Caves

Profile details

Hunter CCC REMS (1005203), Profile 9, recorded by Robert Banks on 24 Feb 2009

Map reference

AMG grid reference 322365E, 6492000N, AMG Zone 56; MGA grid reference 322469E, 6492189N, MGA Zone 56; GDA Latitude -31.6919, GDA Longitude 151.12686; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; slope is 33% (measured), elevation is 555 m

Geology

limestone parent material; > 50% rock outcrop

Vegetation

vegetation community is woodland shrub u'storey

Hydrology

profile is rapidly drained, run-on is moderate, runoff is moderate

Land use

no effective disturbance, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 85%

Soil type

Basic Lithic Leptic Rudosol, very gravelly, clay loamy, very shallow, all required data available (ASC); Lithosol (GSG)

Profile Notes

Soil map code given as Hunter Limestone.

Profile Addendum

none recorded

Soil description

Surface

abundant (50-90%) surface gravels, ground cover is 85%

Layer 1, A1 horizon, 0 - 0.14 m

brown (7.5YR 4/3) clay loam with strong pedality (crumb, 1 - 2 mm), smooth-faced peds; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 7.5; no layer notes recorded; directly overlies bedrock

Substrate

substrate not recorded



Soil Profile Report

Site location

Crawney Pass Rd

Profile details

Hunter CCC REMS (1005203), Profile 10, recorded by Robert Banks on 24 Feb 2009

Map reference

AMG grid reference 319337E, 6492762N, AMG Zone 56; MGA grid reference 319441E, 6492951N, MGA Zone 56; GDA Latitude -31.68456, GDA Longitude 151.09507; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; slope is 18% (measured), elevation is 506 m

Geology

siltstone/mudstone substrate (dety), with siltstone/mudstone,limestone parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is rapidly drained, run-on is high, runoff is high

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 100%

Soil type

Haplic ? Red Chromosol; thick, non gravelly, clay loamy, clayey, very deep, sufficient data available (ASC); Red-brown Earth (GSG)

Profile Notes

Soil map code: Hunter limestone

Profile Addendum

none recorded

Soil description

Surface

very few (< 2%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.3 m

brown (7.5YR 4/3) clay loam with moderate pedality (polyhedral, 1 - 2 mm), smooth-faced peds; coarse fragments are very few (< 2%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.3 - 1.5 m

yellowish red (reddish brown) (5YR 4/6) medium heavy clay with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 8; no layer notes recorded; soil continues...

Substrate

siltstone/mudstone substrate (dety)



Soil Profile Report

Site location

Upper Crawny Pass Rd near Glen Dhy

Profile details

Hunter CCC REMS (1005203), Profile 11, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 316194E, 6497888N, AMG Zone 56; MGA grid reference 316298E, 6498077N, MGA Zone 56; GDA Latitude -31.63784, GDA Longitude 151.06289; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; slope is 17% (measured), elevation is 585 m

Geology

siltstone/mudstone substrate (dety) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is moderate, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 100%

Soil type

? ? Brown Sodosol; medium, slightly gravelly, silty, clayey, deep, sufficient data available (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

brown (7.5YR 4/4) silty clay loam with massive structure, earthy fabric; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, A2e horizon, 0.1 - 0.75 m

dark yellowish brown (brown) (10YR 4/6) silty clay loam with massive structure, earthy fabric; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 3, B2 horizon, 0.75 - 1.11 m

strong brown (brown) (7.5YR 4/6) medium clay with strong pedality (angular blocky, 5 - 10 mm), smooth-faced peds; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

siltstone/mudstone substrate (dety)



Soil Profile Report

Site location

2km S Timor Caves Rd

Profile details

Hunter CCC REMS (1005203), Profile 12, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 320366E, 6489711N, AMG Zone 56; MGA grid reference 320470E, 6489900N, MGA Zone 56; GDA Latitude -31.71223, GDA Longitude 151.10536; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of footslope; slope is 10% (measured), elevation is 486 m

Geology

colluvium substrate (dety) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is moderate, runoff is low

Land use

limited clearing, used for volun./native pasture, with timber/scrub/unused, volun./native pasture in general area

Erosion

slight erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 80%

Soil type

Vertic ? Brown Sodosol; medium, slightly gravelly, silty, clayey, giant, sufficient data available (ASC); Solodic Soil (GSG)

Profile Notes

Geology map codes provided: dety and dcpgx

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.2 m

dark brown (7.5YR 3/3) silty loam with massive structure, earthy fabric; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 5.5; AgNO₃ result is no precipitate; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 2, A2 horizon, 0.2 - 0.4 m

dark greyish brown (greyish yellow brown) (10YR 4/2) silty loam with massive structure, earthy fabric; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 5; AgNO₃ result is no precipitate; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 3, B2 horizon, 0.4 - 1.4 m

dark yellowish brown (brown) (10YR 4/4) light clay with strong pedality (angular blocky, 10 - 20 mm), smooth-faced peds; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 4, 2B2 horizon, 1.4 - 6 m

yellowish red (reddish brown) (5YR 4/6) medium clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; few (2% - 10%) calcareous ; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 8; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

colluvium substrate (dety)



Soil Profile Report

Site location

S Branch Rd 100m S Bridge white

Profile details

Hunter CCC REMS (1005203), Profile 13, recorded by Robert Banks on 20 Feb 2009

Map reference

AMG grid reference 319652E, 6487103N, AMG Zone 56; MGA grid reference 319756E, 6487292N, MGA Zone 56; GDA Latitude -31.73564, GDA Longitude 151.09735; Ellerston (9134) 1:100,000 map sheet

Terrain

crest; part of terrace plain; slope is 11% (measured), elevation is 453 m

Geology

weak conglomerate (highly weathered rock) substrate (dpgm), with alluvium parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is mod. well drained, run-on is moderate, runoff is low

Land use

not recorded

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 70%

Soil type

Haplic Epipedal Red Vertosol, moderately gravelly, fine, very fine, deep, sufficient data available (ASC); Red Clay (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 70%

Layer 1, A1 horizon, 0 - 0.2 m

dark brown (7.5YR 3/3) light clay with strong pedality (polyhedral, < 1 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.65 m

yellowish red (reddish brown) (5YR 4/6) medium heavy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 8; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, C horizon, 0.65 - 1.05 m

dark yellowish brown (brown) (10YR 4/4) heavy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; directly overlies bedrock

Substrate

weak conglomerate (highly weathered rock) substrate (dpgm)



Soil Profile Report

Site location

N of Timor Gap Rd

Profile details

Hunter CCC REMS (1005203), Profile 14, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 318985E, 6486566N, AMG Zone 56; MGA grid reference 319089E, 6486755N, MGA Zone 56; GDA Latitude -31.74037, GDA Longitude 151.09021; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; slope is 12% (measured), elevation is 470 m

Geology

weak siltstone/mudstone (mod. weathered rock) substrate (dpqm) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is high, runoff is moderate

Land use

cleared, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

surface condition not recorded

Soil type

? ? Brown Sodosol; thin, non gravelly, loamy, clayey, deep, sufficient data available (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

dark brown (brownish black) (7.5YR 3/2) silty loam with massive structure, earthy fabric; coarse fragments are very few (< 2%), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, A2e horizon, 0.1 - 0.3 m

brown (dull yellowish brown) (10YR 5/3) silty loam with massive structure, earthy fabric; coarse fragments are very few (< 2%), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 3, B2 horizon, 0.3 - 1.2 m

dark yellowish brown (brown) (10YR 4/6) medium clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are few (2-10%), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

weak siltstone/mudstone (mod. weathered rock) substrate (dpgm)



Soil Profile Report

Site location

1km W of Kiloran

Profile details

Hunter CCC REMS (1005203), Profile 15, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 312514E, 6482678N, AMG Zone 56; MGA grid reference 312618E, 6482867N, MGA Zone 56; GDA Latitude -31.77439, GDA Longitude 151.02119; Ellerston (9134) 1:100,000 map sheet

Terrain

waning lower slope; part of hillslope; local relief is high (90-300 m), slope is 31% (measured), elevation is 471 m

Geology

sandstone-quartz substrate (tl), with colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is high, runoff is high

Land use

no effective disturbance, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, minor stable sheet erosion

Site condition

surface condition not recorded

Soil type

Melanic-Vertic ? Brown Dermosol; medium, slightly gravelly, clay loamy, clayey, deep, sufficient data available (ASC)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, surface condition not recorded

Layer 1, A1 horizon, 0 - 0.2 m

dark brown (brownish black) (7.5YR 3/2) clay loam sandy with massive structure, earthy fabric; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.7 m

brown (7.5YR 4/4) sandy clay with moderate pedality (sub-angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B22 horizon, 0.7 - 1.4 m

strong brown (brown) (7.5YR 4/6) sandy clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as substrate; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

sandstone-quartz substrate (tl)



Soil Profile Report

Site location

Approximately 200m NW Kiloran

Profile details

Hunter CCC REMS (1005203), Profile 16, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 313120E, 6482548N, AMG Zone 56; MGA grid reference 313224E, 6482737N, MGA Zone 56; GDA Latitude -31.77566, GDA Longitude 151.02756; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; slope is 35% (measured), elevation is 452 m

Geology

not recorded

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is moderate, runoff is high

Land use

no effective disturbance, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 100%

Soil type

Vertic ? Red Sodosol; medium, non gravelly, silty, clayey, very deep, sufficient data available (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.2 m

reddish brown (dull reddish brown) (5YR 4/3) silty clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 7; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, A2e horizon, 0.2 - 0.85 m

reddish brown (dull reddish brown) (5YR 4/4) silty clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 7; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, B2 horizon, 0.85 - 2 m

(reddish brown) (5YR 4/8) light medium clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 7; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

substrate not recorded



Soil Profile Report

Site location

Approximately 1km East of Kiloran

Profile details

Hunter CCC REMS (1005203), Profile 17, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 313735E, 6482706N, AMG Zone 56; MGA grid reference 313839E, 6482895N, MGA Zone 56; GDA Latitude -31.77433, GDA Longitude 151.03408; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; local relief is low (30-90 m), slope is 5% (measured), elevation is 446 m

Geology

weak sandstone-lithic (highly weathered rock) substrate (Dcpgf) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is imperfectly drained, run-on is low, runoff is moderate

Land use

no effective disturbance, limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 80%

Soil type

Vertic ? Brown Sodosol; medium, non gravelly, clay loamy, clayey, moderate, sufficient data available (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.2 m

dark yellowish brown (brown) (10YR 4/4) sandy clay with moderate pedality (polyhedral, 5 - 10 mm), smooth-faced peds; coarse fragments are very few (< 2%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2 horizon, 0.2 - 0.4 m

dark yellowish brown (brown) (10YR 4/4) clay loam sandy with weak pedality (polyhedral, 5 - 10 mm), smooth-faced peds; coarse fragments are very few (< 2%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, B2 horizon, 0.4 - 0.7 m

strong brown (brown) (7.5YR 4/6) sandy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; directly overlies bedrock

Substrate

weak sandstone-lithic (highly weathered rock) substrate (Dcpgf)



Soil Profile Report

Site location

1.5km SW of 'Timor'

Profile details

Hunter CCC REMS (1005203), Profile 18, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 314116E, 6483007N, AMG Zone 56; MGA grid reference 314220E, 6483196N, MGA Zone 56; GDA Latitude -31.77168, GDA Longitude 151.03816; Ellerston (9134) 1:100,000 map sheet

Terrain

ridge; part of hillslope; slope is 15% (measured), elevation is 484 m

Geology

weak siltstone/mudstone (structured saprolite) substrate (Dcpgt) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is low, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 70%

Soil type

Endocalcareous Self-mulching Red Vertosol, non gravelly, medium fine, medium fine, moderate, sufficient data available (ASC); Red Clay (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.05 m

dusky red (dark reddish brown) (2.5YR 3/2) medium heavy clay with strong pedality (polyhedral, < 1 mm), smooth-faced peds; coarse fragments not recorded; field pH is 7; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, B2 horizon, 0.05 - 0.5 m

dusky red (dark reddish brown) (2.5YR 3/2) medium heavy clay with strong pedality (prismatic, 10 - 20 mm), smooth-faced peds; coarse fragments not recorded; field pH is 8; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, C horizon, 0.5 - 0.75 m

weak red (greyish red) (2.5YR 4/2) medium heavy clay with moderate pedality (angular blocky, 10 - 20 mm), rough-faced peds; common (10% - 20%) calcareous; coarse fragments not recorded; field pH is 9; AgNO₃ result is light precipitate; layer notes are Structure halfway between soil and bedrock.; directly overlies bedrock

Substrate

weak siltstone/mudstone (structured saprolite) substrate (Dcpgt)



Soil Profile Report

Site location

1.5km SW of 'Timor'

Profile details

Hunter CCC REMS (1005203), Profile 19, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 314387E, 6483540N, AMG Zone 56; MGA grid reference 314491E, 6483729N, MGA Zone 56; GDA Latitude -31.76692, GDA Longitude 151.04112; Ellerston (9134) 1:100,000 map sheet

Terrain

ridge; part of hillslope; local relief is high (90-300 m), slope is 26% (measured), elevation is 555 m

Geology

sandstone-lithic substrate (DEpgt) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is moderate, runoff is high

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

high erosion hazard, severe stable sheet erosion

Site condition

ground cover is 90%

Soil type

Haplic ? Brown Dermosol; medium, non gravelly, clayey, clayey, moderate, sufficient data available (ASC)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.2 m

brown (7.5YR 4/3) light medium clay with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.5 m

brown (7.5YR 4/4) light clay with moderate pedality (angular blocky, 10 - 20 mm), smooth-faced peds; coarse fragments not recorded; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; directly overlies bedrock

Substrate

sandstone-lithic substrate (DEpgt)



Soil Profile Report

Site location

Approximately 1.5km W Whissonsett

Profile details

Hunter CCC REMS (1005203), Profile 20, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 315773E, 6483378N, AMG Zone 56; MGA grid reference 315877E, 6483567N, MGA Zone 56; GDA Latitude -31.76861, GDA Longitude 151.05572; Ellerston (9134) 1:100,000 map sheet

Terrain

crest; part of hillcrest; slope is 7% (measured), elevation is 463 m

Geology

siltstone/mudstone substrate (Dcpgt) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is low, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

moderate erosion hazard, no erosion recorded

Site condition

surface condition not recorded

Soil type

? ? Brown Sodosol; thin, gravelly, clay loamy, clayey, moderate, no data available but sufficient knowledge (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, surface condition not recorded

Layer 1, A1 horizon, 0 - 0.05 m

brown (7.5YR 4/3) silty clay loam; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 2, A2e horizon, 0.05 - 0.3 m

brown (7.5YR 4/4) silty loam; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 3, B2 horizon, 0.3 - 0.6 m

strong brown (brown) (7.5YR 4/6) light medium sapric peat with moderate pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 4, BC horizon, 0.6 - 0.9 m

dark yellowish brown (brown) (10YR 4/6) medium sapric peat with moderate pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7.5; no layer notes recorded; directly overlies bedrock

Substrate

siltstone/mudstone substrate (Dcpgt)



Soil Profile Report

Site location

Approximately 1.5km W of Whissonsett

Profile details

Hunter CCC REMS (1005203), Profile 21, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 315758E, 6483386N, AMG Zone 56; MGA grid reference 315862E, 6483575N, MGA Zone 56; GDA Latitude -31.76853, GDA Longitude 151.05557; Ellerston (9134) 1:100,000 map sheet

Terrain

crest; part of hillcrest; slope is 7% (measured), elevation is 467 m

Geology

siltstone/mudstone substrate (DCpgt) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is low, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

moderate erosion hazard, no erosion recorded

Site condition

surface condition not recorded

Soil type

Lithic Leptic Rudosol, moderately gravelly, silty, very shallow, all required data available (ASC); Lithosol (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, surface condition not recorded

Layer 1, A horizon, 0 - 0.05 m

dark brown (7.5YR 3/4) silty clay loam with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7; no layer notes recorded; directly overlies bedrock

Substrate

siltstone/mudstone substrate (DCpgt)



Soil Profile Report

Site location

Approximately 1km NW Whissonsett

Profile details

Hunter CCC REMS (1005203), Profile 22, recorded by Robert Banks on 26 Feb 2009

Map reference

AMG grid reference 317066E, 6482878N, AMG Zone 56; MGA grid reference 317170E, 6483067N, MGA Zone 56; GDA Latitude -31.77332, GDA Longitude 151.06928; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; slope is 13% (measured), elevation is 423 m

Geology

weak conglomerate (structured saprolite) substrate (DCpgd) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is low, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 60%

Soil type

Haplic ? Red Chromosol; medium, slightly gravelly, clay loamy, clayey, very deep, sufficient data available (ASC); Non-calcic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 60%

Layer 1, A1 horizon, 0 - 0.2 m

reddish brown (dull reddish brown) (5YR 4/4) heavy clay loam with strong pedality (polyhedral), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 5.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 1 m

dark red (dark reddish brown) (2.5YR 3/6) medium clay with strong pedality (angular blocky), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; diffuse (>100 mm) boundary to...

Layer 3, B22 horizon, 1 - 1.6 m

red (reddish brown) (2.5YR 4/6) medium clay with strong pedality (angular blocky), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; directly overlies bedrock

Substrate

weak conglomerate (structured saprolite) substrate (DCpgd)



Soil Profile Report

Site location

20m South of Whissonsett bridge

Profile details

Hunter CCC REMS (1005203), Profile 23, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 318044E, 6482594N, AMG Zone 56; MGA grid reference 318148E, 6482783N, MGA Zone 56; GDA Latitude -31.77604, GDA Longitude 151.07955; Ellerston (9134) 1:100,000 map sheet

Terrain

flat; part of terrace flat; slope is 2% (measured), elevation is 409 m

Geology

siltstone/mudstone substrate (Qa), with alluvium parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is mod. well drained, run-on is high, runoff is low

Land use

occasional cultivation, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 100%

Soil type

Haplic ? Brown Dermosol; thick, moderately gravelly, clayey, clayey, very deep, sufficient data available (ASC); Chernozem (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

many (20-50%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.3 m

brown (7.5YR 4/4) sandy clay with moderate pedality (sub-angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 2, 2A1 horizon, 0.3 - 0.45 m

dark brown (brownish black) (7.5YR 3/2) clay loam with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 3, 2B2 horizon, 0.45 - 0.7 m

dark reddish brown (5YR 3/3) medium heavy clay with strong pedality (angular blocky, 10 - 20 mm), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 4, 3B2 horizon, 0.7 - 1.4 m

reddish brown (dull reddish brown) (5YR 4/4) medium clay with strong pedality (sub-angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

siltstone/mudstone substrate (Qa)



Soil Profile Report

Site location

Approximately 1km South Whissonsett

Profile details

Hunter CCC REMS (1005203), Profile 24, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 318162E, 6481853N, AMG Zone 56; MGA grid reference 318266E, 6482042N, MGA Zone 56; GDA Latitude -31.78274, GDA Longitude 151.08065; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; slope is 7% (measured), elevation is 436 m

Geology

weak siltstone/mudstone (highly weathered rock) substrate (Dcpgg) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is high, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 60%

Soil type

Vertic ? Brown Sodosol; medium, non gravelly, clay loamy, clayey, deep, no data available but sufficient knowledge (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.11 m

brown (greyish brown) (7.5YR 4/2) silty loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 2, A2e horizon, 0.11 - 0.3 m

brown (dull yellowish brown) (10YR 4/3) silty loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 3, B1 horizon, 0.3 - 0.8 m

dark yellowish brown (brown) (10YR 4/4) medium clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 4, B2 horizon, 0.8 - 1.2 m

dark yellowish brown (brown) (10YR 4/6) light medium clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 7; AgNO₃ result is no precipitate; no layer notes recorded; directly overlies bedrock

Substrate

weak siltstone/mudstone (highly weathered rock) substrate (Dcpgg)



Soil Profile Report

Site location

1km N of Balarang

Profile details

Hunter CCC REMS (1005203), Profile 25, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 318795E, 6481255N, AMG Zone 56; MGA grid reference 318899E, 6481444N, MGA Zone 56; GDA Latitude -31.78823, GDA Longitude 151.08722; Ellerston (9134) 1:100,000 map sheet

Terrain

crest; part of hillcrest; local relief is low (30-90 m), slope is 2% (measured), elevation is 438 m

Geology

weak siltstone/mudstone (mod. weathered rock) substrate (Dcpgg)

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is imperfectly drained, run-on is low, runoff is moderate

Land use

extensive clearing, used for volun./native pasture, with improved pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 60%

Soil type

Haplic ? Red Chromosol; medium, non gravelly, clay loamy, clayey, shallow, sufficient data available (ASC); Non-calciic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

dark reddish brown (5YR 3/2) clay loam with strong pedality (polyhedral, 1 - 2 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.1 - 0.43 m

yellowish red (reddish brown) (5YR 4/6) medium clay with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6.5; no layer notes recorded; directly overlies bedrock

Substrate

weak siltstone/mudstone (mod. weathered rock) substrate (Dcpgg)



Soil Profile Report

Site location

500m E of 'Balarang'

Profile details

Hunter CCC REMS (1005203), Profile 26, recorded by Robert Banks on 20 Feb 2009

Map reference

AMG grid reference 318929E, 6480180N, AMG Zone 56; MGA grid reference 319033E, 6480369N, MGA Zone 56; GDA Latitude -31.79795, GDA Longitude 151.08844; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; slope is 10% (measured), elevation is 436 m

Geology

siltstone/mudstone substrate (Dcpgg) and parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is mod. well drained, run-on is moderate, runoff is moderate

Land use

extensive clearing, used for improved pasture, with cropping in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 80%

Soil type

? ? Red Sodosol; medium, non gravelly, clay loamy, clayey, deep, no data available but sufficient knowledge (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

dark yellowish brown (10YR 3/6) sandy clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2e horizon, 0.1 - 0.3 m

yellowish brown (10YR 5/8) silty loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 5; AgNO₃ result is no precipitate; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 3, B2 horizon, 0.3 - 0.65 m

yellowish red (reddish brown) (5YR 4/6) medium clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 4, B22 horizon, 0.65 - 1 m

strong brown (bright brown) (7.5YR 5/8) medium clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

siltstone/mudstone substrate (Dcpgg)



Soil Profile Report

Site location

Approximately 0.5km East of Isismede

Profile details

Hunter CCC REMS (1005203), Profile 27, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 320133E, 6474992N, AMG Zone 56; MGA grid reference 320237E, 6475182N, MGA Zone 56; GDA Latitude -31.84491, GDA Longitude 151.10019; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of gully; local relief is low (30-90 m), slope is 12% (measured), elevation is 490 m

Geology

siltstone/mudstone,sandstone-lithic substrate (DCpgg), with alluvium,colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is high, runoff is high

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

moderate erosion hazard, stable gully erosion (1.5-3.0 m deep), moderate scald erosion

Site condition

ground cover is 50%

Soil type

Melanic Regolithic Chernic Tenosol; thick, slightly gravelly, loamy, clay loamy, deep, sufficient data available (ASC); Alluvial Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

very few (< 2%) surface gravels, ground cover is 50%

Layer 1, A1 horizon, 0 - 0.3 m

very dark grey (brownish black) (7.5YR 3/1) coarse sandy loam with moderate pedality (polyhedral, 1 - 2 mm), rough-faced peds; coarse fragments are few (2-10%), fine gravel (2-6 mm), gravel (6-20 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2 horizon, 0.3 - 0.7 m

dark yellowish brown (brown) (10YR 4/4) coarse sandy clay loam with massive structure, earthy fabric; coarse fragments are few (2-10%), fine gravel (2-6 mm), gravel (6-20 mm), as parent material; field pH is 6.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, D horizon, 0.7 - 1.2 m

dark yellowish brown (brown) (10YR 4/4) coarse clay loam sandy with massive structure, earthy fabric; coarse fragments are common (10-20%), fine gravel (2-6 mm), gravel (6-20 mm), as parent material; field pH is 7; AgNO₃ result is no precipitate; no layer notes recorded; layer continues...

Substrate

siltstone/mudstone,sandstone-lithic substrate (DCpgg)



Soil Profile Report

Site location

Scald near Teatree Creek

Profile details

Hunter CCC REMS (1005203), Profile 28, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 318646E, 6472546N, AMG Zone 56; MGA grid reference 318750E, 6472736N, MGA Zone 56; GDA Latitude -31.86673, GDA Longitude 151.08403; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of footslope; slope is 8% (measured), elevation is 368 m

Geology

shale,siltstone/mudstone,sandstone-lithic substrate (DCpgt), with alluvium,colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is moderate, runoff is high

Land use

extensive clearing, used for volun./native pasture, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, moderate partly stabilised gully erosion (<1.5 m deep)

Site condition

ground cover is 30%

Soil type

? ? Red Sodosol; medium, non gravelly, silty, clayey, very deep, sufficient data available (ASC); Red Podzolic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

brown (7.5YR 4/4) silty clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 2, A2e horizon, 0.1 - 0.3 m

strong brown (brown) (7.5YR 4/6) silty loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 3, B2 horizon, 0.3 - 0.6 m

yellowish red (reddish brown) (5YR 4/6) medium clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 4, B22 horizon, 0.6 - 0.9 m

strong brown (brown) (7.5YR 4/6) medium heavy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 7; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

shale,siltstone/mudstone,sandstone-lithic substrate (DCpgt)



Soil Profile Report

Site location

Sawpit Creek

Profile details

Hunter CCC REMS (1005203), Profile 29, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 318234E, 6470432N, AMG Zone 56; MGA grid reference 318338E, 6470622N, MGA Zone 56; GDA Latitude -31.88572, GDA Longitude 151.07928; Ellerston (9134) 1:100,000 map sheet

Terrain

ridge; part of hillslope; local relief is high (90-300 m), slope is 8% (measured), elevation is 350 m

Geology

weak sandstone-quartz, sandstone-lithic (highly weathered rock) substrate (DCp_{gf}) and parent material; 2% - 10% rock outcrop

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is low, runoff is high

Land use

extensive clearing, used for volun./native pasture, with logged native forest in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 50%

Soil type

Haplic ? Brown Chromosol; medium, gravelly, silty, clayey, shallow, no data available but sufficient knowledge (ASC); Non-calci_c Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 50%

Layer 1, A1 horizon, 0 - 0.1 m

dark brown (brownish black) (7.5YR 3/2) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, B2 horizon, 0.1 - 0.4 m

strong brown (brown) (7.5YR 4/6) light clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 7; no layer notes recorded; directly overlies bedrock

Substrate

weak sandstone-quartz, sandstone-lithic (highly weathered rock) substrate (DCpgf)



Soil Profile Report

Site location

0.5km E of "Ayr"

Profile details

Hunter CCC REMS (1005203), Profile 30, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 315719E, 6466042N, AMG Zone 56; MGA grid reference 315823E, 6466232N, MGA Zone 56; GDA Latitude -31.9249, GDA Longitude 151.05187; Ellerston (9134) 1:100,000 map sheet

Terrain

upper slope; part of hillslope; slope is 30% (measured), elevation is 374 m

Geology

moderately strong sandstone-lithic (mod. weathered rock) substrate (Cw) and parent material; 2% - 10% rock outcrop

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is moderate, runoff is high

Land use

extensive clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 60%

Soil type

Haplic ? Red Dermosol; thin, slightly gravelly, clay loamy, clayey, very shallow, no data available but sufficient knowledge (ASC); Non-calciic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 60%

Layer 1, A1 horizon, 0 - 0.05 m

reddish brown (dull reddish brown) (5YR 4/3) clay loam with massive structure, earthy fabric; coarse fragments are few (2-10%), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, B2 horizon, 0.05 - 0.25 m

reddish brown (dull reddish brown) (5YR 4/4) sandy clay with strong pedality (angular blocky), rough-faced peds; coarse fragments are few (2-10%), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong sandstone-lithic (mod. weathered rock) substrate (Cw)



Soil Profile Report

Site location

'Polblue Swamp'

Profile details

Hunter CCC REMS (1005203), Profile 31, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 351371E, 6463053N, AMG Zone 56; MGA grid reference 351475E, 6463243N, MGA Zone 56; GDA Latitude -31.95708, GDA Longitude 151.42838; Ellerston (9134) 1:100,000 map sheet

Terrain

open depression; part of swamp; local relief is low (30-90 m), slope is 0% (measured), elevation is 1451 m

Geology

basalt substrate (Qa), with organic material parent material

Vegetation

vegetation community is swamp complex

Hydrology

free water below soil surface at 0.01 m depth, profile is very poorly drained, run-on is moderate, runoff is none

Land use

natural disturbance, used for other, with National/State Parks in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 100%

Soil type

Regolithic Acidic Hemic Organosol, , all required data available (ASC); Acid Peat Soil (GSG)

Profile Notes

Site morphology given as: flat and open depression.

Local relief given as low (9-30m) and very low (30-90m).

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, O2 horizon, 0 - 0.6 m

black (5YR 2.5/1) hemic peat with massive structure, earthy fabric; coarse fragments not recorded; field pH is 5.5; no layer notes recorded; soil continues...

Substrate

basalt substrate (Qa)



Soil Profile Report

Site location

NR Horse Swamp on Granite Hill

Profile details

Hunter CCC REMS (1005203), Profile 32, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 346910E, 6464487N, AMG Zone 56; MGA grid reference 347014E, 6464677N, MGA Zone 56; GDA Latitude -31.94356, GDA Longitude 151.38142; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; local relief is very high (> 300 m), slope is 5% (measured), elevation is 1432 m

Geology

moderately strong granite (highly weathered rock) substrate (Pnb) and parent material

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is mod. well drained, run-on is moderate, runoff is moderate

Land use

limited clearing, used for National/State Parks, with National/State Parks in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 100%

Soil type

Melacic ? Red Kandosol; thick, slightly gravelly, clay loamy, clayey, moderate, sufficient data available (ASC); Red Earth (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.3 m

black (5YR 2.5/1) sandy clay loam with massive structure, earthy fabric; coarse fragments are few (2-10%), stones (200-600 mm), as parent material; field pH is 5.5; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, AB horizon, 0.3 - 0.6 m

reddish brown (dull reddish brown) (5YR 4/4) clay loam sandy with massive structure, earthy fabric; coarse fragments are few (2-10%), stones (200-600 mm), as parent material; field pH is 5.5; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B2 horizon, 0.6 - 0.85 m

yellowish red (bright reddish brown) (5YR 5/8) sandy clay with massive structure, earthy fabric; coarse fragments are few (2-10%), stones (200-600 mm), as parent material; field pH is 5.5; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong granite (highly weathered rock) substrate (Pnb)



Soil Profile Report

Site location

S Calgoolie - 20m E of Dingo Gate

Profile details

Hunter CCC REMS (1005203), Profile 33, recorded by Robert Banks on 27 Feb 2009

Map reference

AMG grid reference 343696E, 6465592N, AMG Zone 56; MGA grid reference 343800E, 6465782N, MGA Zone 56; GDA Latitude -31.93315, GDA Longitude 151.34761; Ellerston (9134) 1:100,000 map sheet

Terrain

crest; part of hillcrest; slope is 10% (measured), elevation is 1323 m

Geology

weak basalt (structured saprolite) substrate (Tv) and parent material

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is imperfectly drained, run-on is low, runoff is low

Land use

limited clearing, used for National/State Parks, with National/State Parks in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 60%

Soil type

Melacic ? Red Ferrosol; thick, non gravelly, clay loamy, clayey, deep, sufficient data available (ASC); Krasnozem (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 60%

Layer 1, A1 horizon, 0 - 0.2 m

black (7.5YR 2.5/1) clay loam with strong pedality, smooth-faced peds; coarse fragments are very few (< 2%), cobbles (60-200 mm), as parent material; field pH is 5.5; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, AB horizon, 0.2 - 0.45 m

dark reddish brown (5YR 3/3) light clay with strong pedality, smooth-faced peds; coarse fragments are very few (< 2%), cobbles (60-200 mm), as parent material; field pH is 5.5; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B2 horizon, 0.45 - 2.3 m

dark reddish brown (5YR 3/4) light medium clay with strong pedality, smooth-faced peds; coarse fragments are very few (< 2%), cobbles (60-200 mm), as parent material; field pH is 5; AgNO₃ result is no precipitate; no layer notes recorded; directly overlies bedrock

Substrate

weak basalt (structured saprolite) substrate (Tv)



Soil Profile Report

Site location

Bottom of Landslip-Moonan-Gloucester Rd

Profile details

Hunter CCC REMS (1005203), Profile 34, recorded by Robert Banks on 28 Feb 2009

Map reference

AMG grid reference 340320E, 6467369N, AMG Zone 56; MGA grid reference 340424E, 6467559N, MGA Zone 56; GDA Latitude -31.91666, GDA Longitude 151.3122; Ellerston (9134) 1:100,000 map sheet

Terrain

minimal upper slope; part of talus; local relief is very high (> 300 m), slope is 40% (measured), elevation is 977 m

Geology

basalt substrate (Tv), with basalt, colluvium parent material; < 2% rock outcrop

Vegetation

vegetation community is woodland shrub u'storey

Hydrology

profile is mod. well drained, run-on is high, runoff is moderate

Land use

extensive clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate stable sheet erosion, evident stable mass movement

Site condition

ground cover is 100%

Soil type

Melanic ? Brown Dermosol; thick, gravelly, clayey, clayey, very deep, sufficient data available (ASC); Chocolate Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.2 m

very dark grey (brownish black) (7.5YR 3/1) medium clay with strong pedality (polyhedral, 1 - 2 mm), smooth-faced peds; coarse fragments are common (10-20%), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.5 m

brown (7.5YR 4/4) medium heavy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, B22 horizon, 0.5 - 1 m

strong brown (brown) (7.5YR 4/6) medium heavy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), cobbles (60-200 mm), as parent material; field pH is 7.5; no layer notes recorded; soil continues...

Substrate

basalt substrate (Tv)



Soil Profile Report

Site location

Gully 1.5km N of 'Tiverton'

Profile details

Hunter CCC REMS (1005203), Profile 35, recorded by Robert Banks on 28 Feb 2009

Map reference

AMG grid reference 338663E, 6466608N, AMG Zone 56; MGA grid reference 338767E, 6466798N, MGA Zone 56; GDA Latitude -31.92329, GDA Longitude 151.29455; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; slope is 42% (measured), elevation is 768 m

Geology

moderately strong basalt, colluvium (mod. weathered rock) substrate (Cla), with siltstone/mudstone parent material

Vegetation

vegetation community is wet sclerophyll forest

Hydrology

profile is mod. well drained, run-on is high, runoff is high

Land use

limited clearing, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

slight erosion hazard, minor stable sheet erosion, evident stable mass movement

Site condition

ground cover is 50%

Soil type

Haplic ? Red Dermosol; thick, gravelly, silty, clayey, deep, no data available but sufficient knowledge (ASC); Non-calciic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 50%

Layer 1, A1 horizon, 0 - 0.3 m

dark reddish brown (5YR 3/3) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 7.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2 horizon, 0.3 - 0.71 m

reddish brown (dull reddish brown) (5YR 4/4) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as substrate; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, B2 horizon, 0.71 - 1.3 m

reddish brown (dull reddish brown) (5YR 4/4) silty clay with moderate pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as substrate; field pH is 6.5; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong basalt, colluvium (mod. weathered rock) substrate (Cla)



Soil Profile Report

Site location

1km N of Tiverton - exposed ridge

Profile details

Hunter CCC REMS (1005203), Profile 36, recorded by Robert Banks on 28 Feb 2009

Map reference

AMG grid reference 338496E, 6466541N, AMG Zone 56; MGA grid reference 338600E, 6466731N, MGA Zone 56; GDA Latitude -31.92387, GDA Longitude 151.29278; Ellerston (9134) 1:100,000 map sheet

Terrain

ridge; part of hillcrest; local relief is very high (> 300 m), slope is 20% (measured), elevation is 762 m

Geology

moderately strong siltstone/mudstone (mod. weathered rock) substrate (Cla) and parent material

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is mod. well drained, run-on is high, runoff is high

Land use

limited clearing, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 80%

Soil type

Melanic ? Brown Chromosol; thick, gravelly, clay loamy, clayey, very deep, sufficient data available (ASC); Non-calciic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.35 m

dark brown (brownish black) (7.5YR 3/2) clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.35 - 0.5 m

strong brown (brown) (7.5YR 4/6) light clay with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong siltstone/mudstone (mod. weathered rock) substrate (Cla)



Soil Profile Report

Site location

N of Tiverton

Profile details

Hunter CCC REMS (1005203), Profile 37, recorded by Robert Banks on 28 Feb 2009

Map reference

AMG grid reference 338133E, 6466210N, AMG Zone 56; MGA grid reference 338237E, 6466400N, MGA Zone 56; GDA Latitude -31.9268, GDA Longitude 151.28888; Ellerston (9134) 1:100,000 map sheet

Terrain

waxing mid-slope; part of hillslope; local relief is very high (> 300 m), slope is 32% (measured), elevation is 674 m

Geology

moderately strong siltstone/mudstone (mod. weathered rock) substrate (Cla), with siltstone/mudstone, colluvium parent material; 2% - 10% rock outcrop

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is high, runoff is high

Land use

limited clearing, used for volun./native pasture, with timber/scrub/unused in general area

Erosion

slight erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 60%

Soil type

Haplic ? Brown Kandosol; medium, moderately gravelly, clay loamy, silty, shallow, no data available but sufficient knowledge (ASC); Brown Earth (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 60%

Layer 1, A1 horizon, 0 - 0.25 m

dark brown (7.5YR 3/3) clay loam with massive structure, earthy fabric; coarse fragments are many (20-50%), as parent material; field pH is 6.5; no layer notes recorded; clear (20-50 mm) smooth boundary to...

Layer 2, B2 horizon, 0.25 - 0.35 m

brown (7.5YR 4/4) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), as parent material; field pH is 6.5; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong siltstone/mudstone (mod. weathered rock) substrate (Cla)



Soil Profile Report

Site location

200m NW of 'Tiverton'

Profile details

Hunter CCC REMS (1005203), Profile 38, recorded by Robert Banks on 28 Feb 2009

Map reference

AMG grid reference 337686E, 6466045N, AMG Zone 56; MGA grid reference 337790E, 6466235N, MGA Zone 56; GDA Latitude -31.92823, GDA Longitude 151.28413; Ellerston (9134) 1:100,000 map sheet

Terrain

ridge; part of hillcrest; slope is 10% (measured), elevation is 635 m

Geology

siltstone/mudstone substrate (Cla) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is moderate, runoff is high

Land use

extensive clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 80%

Soil type

Basic Lithic Leptic Rudosol, gravelly, silty, shallow, all required data available (ASC); Lithosol (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

very few (< 2%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.1 m

dark brown (7.5YR 3/3) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2 horizon, 0.1 - 0.3 m

strong brown (brown) (7.5YR 4/6) silty loam with massive structure, earthy fabric; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

siltstone/mudstone substrate (Cla)



Soil Profile Report

Site location

100m East Tiverton

Profile details

Hunter CCC REMS (1005203), Profile 39, recorded by Robert Banks on 28 Feb 2009

Map reference

AMG grid reference 338520E, 6464328N, AMG Zone 56; MGA grid reference 338624E, 6464518N, MGA Zone 56; GDA Latitude -31.94383, GDA Longitude 151.29266; Ellerston (9134) 1:100,000 map sheet

Terrain

alluvial lower slope; part of plain; slope is 0% (measured), elevation is 483 m

Geology

alluvium substrate (Qa) and parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is high, runoff is low

Land use

cleared, used for volun./native pasture

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 90%

Soil type

Submelanic Regolithic Black-Orthic Tenosol; medium, very gravelly, clay loamy, clay loamy, very deep, all required data available (ASC); Alluvial Soil (GSG)

Profile Notes

Site given as timber/scrub/unused and volun./native pasture.

Profile Addendum

none recorded

Soil description

Surface

many (20-50%) surface gravels, ground cover is 90%

Layer 1, A1 horizon, 0 - 0.1 m

very dark grey (brownish black) (5YR 3/1) clay loam sandy with massive structure, earthy fabric; coarse fragments are abundant (50-90%), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.1 - 0.7 m

black (5YR 2.5/1) sandy clay loam with massive structure, earthy fabric; coarse fragments are abundant (50-90%), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; soil continues...

Substrate

alluvium substrate (Qa)



Soil Profile Report

Site location

2km S of Gundy Mountain

Profile details

Hunter CCC REMS (1005203), Profile 40, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 315537E, 6458296N, AMG Zone 56; MGA grid reference 315641E, 6458486N, MGA Zone 56; GDA Latitude -31.99472, GDA Longitude 151.04847; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; local relief is very low (9-30 m), slope is 17% (measured), elevation is 300 m

Geology

sandstone-lithic substrate (ci), with colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is high, runoff is moderate

Land use

natural disturbance, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 40%

Soil type

Vertic ? Red Sodosol; thick, gravelly, silty, clayey, very deep, no data available but sufficient knowledge (ASC); Soloth (Solod) (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 40%

Layer 1, A1 horizon, 0 - 0.2 m

reddish brown (dull reddish brown) (5YR 4/3) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2e horizon, 0.2 - 0.45 m

reddish brown (dull reddish brown) (5YR 4/4) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, B2 horizon, 0.45 - 1.05 m

red (reddish brown) (2.5YR 4/6) medium heavy clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 7.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 4, B22 horizon, 1.05 - 1.65 m

reddish brown (dull reddish brown) (2.5YR 4/4) medium clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 7.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 5, 2B2 horizon, 1.65 - 2.1 m

yellowish red (reddish brown) (5YR 4/6) light medium clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are very abundant (> 90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; no layer notes recorded; soil continues...

Substrate

sandstone-lithic substrate (ci)



Soil Profile Report

Site location

South of Gundy Mountain

Profile details

Hunter CCC REMS (1005203), Profile 41, recorded by Robert Banks on 01 Jan 3001

Map reference

AMG grid reference 317853E, 6458277N, AMG Zone 56; MGA grid reference 317957E, 6458467N, MGA Zone 56; GDA Latitude -31.99526, GDA Longitude 151.07297; Ellerston (9134) 1:100,000 map sheet

Terrain

minimal lower slope; part of hillslope; slope is 9% (measured), elevation is 374 m

Geology

moderately strong siltstone/mudstone,sandstone-lithic (mod. weathered rock) substrate (Ci), with siltstone/mudstone parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is moderate, runoff is moderate

Land use

limited clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 80%

Soil type

Haplic ? Red Chromosol; medium, slightly gravelly, silty, clayey, moderate, sufficient data available (ASC); Non-calciic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.15 m

reddish brown (dull reddish brown) (5YR 4/4) silty clay loam with massive structure, earthy fabric; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, B2 horizon, 0.15 - 0.5 m

yellowish red (reddish brown) (5YR 4/6) light medium clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong siltstone/mudstone, sandstone-lithic (mod. weathered rock) substrate (Ci)



Soil Profile Report

Site location

50m N Stewarts Brook Bridge

Profile details

Hunter CCC REMS (1005203), Profile 42, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 324073E, 6460223N, AMG Zone 56; MGA grid reference 324177E, 6460413N, MGA Zone 56; GDA Latitude -31.9787, GDA Longitude 151.13913; Ellerston (9134) 1:100,000 map sheet

Terrain

upper slope; part of terrace flat; slope is 15% (measured), elevation is 317 m

Geology

siltstone/mudstone substrate (Cw), with alluvium parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is well drained, run-on is low, runoff is moderate

Land use

extensive clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

moderate erosion hazard, moderate partly stabilised sheet erosion

Site condition

ground cover is 10%

Soil type

Haplic Epipedal Brown Vertosol, non gravelly, very fine, medium fine, deep, sufficient data available (ASC);
Brown Clay (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

brown (7.5YR 4/3) medium clay with strong pedality (angular blocky, 5 - 10 mm), smooth-faced peds; coarse fragments not recorded; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.1 - 0.6 m

brown (7.5YR 4/4) light clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 7; AgNO₃ result is light precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B22 horizon, 0.6 - 1.3 m

dark brown (7.5YR 3/4) sandy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; directly overlies bedrock

Substrate

siltstone/mudstone substrate (Cw)



Soil Profile Report

Site location

20m South Razorback Bridge

Profile details

Hunter CCC REMS (1005203), Profile 43, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 324334E, 6461064N, AMG Zone 56; MGA grid reference 324438E, 6461254N, MGA Zone 56; GDA Latitude -31.97116, GDA Longitude 151.14205; Ellerston (9134) 1:100,000 map sheet

Terrain

flat; part of terrace flat; slope is 1% (measured), elevation is 325 m

Geology

siltstone/mudstone substrate (DCpgt), with alluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is low, runoff is low

Land use

extensive clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 100%

Soil type

Epicalcareous Epipedal Brown Vertosol, non gravelly, fine, medium fine, very deep, all required data available (ASC); Brown Clay (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

reddish brown (dull reddish brown) (5YR 4/4) light clay with strong pedality (angular blocky, 5 - 10 mm), smooth-faced peds; coarse fragments not recorded; field pH is 7.5; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, B1 horizon, 0.1 - 0.6 m

strong brown (brown) (7.5YR 4/6) light medium clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 8; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B2 horizon, 0.6 - 1.3 m

strong brown (brown) (7.5YR 4/6) light medium clay with strong pedality (prismatic, 50 - 100 mm), smooth-faced peds; coarse fragments not recorded; field pH is 8.5; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 4, B2k horizon, 1.3 - 2 m

brown (7.5YR 4/4) light medium clay with strong pedality (lenticular, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 8.5; AgNO₃ result is no precipitate; layer notes are Underlain by 4m of rounded gravels then mudstone exposed in creek.; directly overlies bedrock

Substrate

siltstone/mudstone substrate (DCpgt)



Soil Profile Report

Site location

Quarry 'Challis cutting'

Profile details

Hunter CCC REMS (1005203), Profile 44, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 329382E, 6464705N, AMG Zone 56; MGA grid reference 329486E, 6464895N, MGA Zone 56; GDA Latitude -31.93909, GDA Longitude 151.19609; Ellerston (9134) 1:100,000 map sheet

Terrain

open depression; part of hillslope; slope is 40% (measured), elevation is 422 m

Geology

weak siltstone/mudstone (highly weathered rock) substrate (Dcx) and parent material; < 2% rock outcrop

Vegetation

vegetation community is woodland shrub u'storey

Hydrology

profile is rapidly drained, run-on is high, runoff is high

Land use

limited clearing, used for quarry/mining, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, moderate partly stabilised sheet erosion

Site condition

ground cover is 20%

Soil type

Basic Paralithic Leptic Rudosol, gravelly, clay loamy, very shallow, all required data available (ASC); Lithosol (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 20%

Layer 1, A1 horizon, 0 - 0.1 m

brown (7.5YR 4/4) coarse sandy clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6.5; AgNO₃ result is no precipitate; no layer notes recorded; directly overlies bedrock

Substrate

weak siltstone/mudstone (highly weathered rock) substrate (Dcx)



Soil Profile Report

Site location

Rex Collison Bridge 'Moonan'

Profile details

Hunter CCC REMS (1005203), Profile 45, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 333251E, 6466277N, AMG Zone 56; MGA grid reference 333355E, 6466467N, MGA Zone 56; GDA Latitude -31.92549, GDA Longitude 151.23727; Ellerston (9134) 1:100,000 map sheet

Terrain

flat; part of bank; slope is 0% (measured), elevation is 418 m

Geology

alluvium substrate (Qa) and parent material

Vegetation

vegetation community is rainforest

Hydrology

profile is imperfectly drained, run-on is low, runoff is moderate

Land use

no effective disturbance, used for timber/scrub/unused, with urban in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 30%

Soil type

Melanic ? Black Dermosol; medium, non gravelly, silty, silty, very deep, sufficient data available (ASC); Chernozem (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.2 m

black (7.5YR 2.5/1) silty clay loam with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; layer notes are Highly organic; diffuse (>100 mm) boundary to...

Layer 2, horizon not recorded, 0.2 - 2.3 m

very dark grey (brownish black) (7.5YR 3/1) silty clay loam with strong pedality (polyhedral, 5 - 10 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6.5; layer notes are Highly organic; layer continues...

Substrate

alluvium substrate (Qa)



Soil Profile Report

Site location

Uphill from 'Ellerson' Camp draft fields

Profile details

Hunter CCC REMS (1005203), Profile 46, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 338791E, 6475784N, AMG Zone 56; MGA grid reference 338895E, 6475973N, MGA Zone 56; GDA Latitude -31.84057, GDA Longitude 151.29743; Ellerston (9134) 1:100,000 map sheet

Terrain

upper slope; part of hillslope; slope is 15% (measured), elevation is 510 m

Geology

strong siltstone/mudstone (mod. weathered rock) substrate (Dcx) and parent material; 10% - 20% rock outcrop

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is high, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 80%

Soil type

? ? Brown Sodosol; medium, non gravelly, clay loamy, clayey, very deep, no data available but sufficient knowledge (ASC); Soloth (Solod) (GSG)

Profile Notes

Unusual bulloah trees present.

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

brown (7.5YR 4/4) sandy clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 7; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2e horizon, 0.1 - 0.2 m

strong brown (brown) (7.5YR 4/6) silty loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 3, B1 horizon, 0.2 - 0.55 m

strong brown (brown) (7.5YR 4/6) light clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 4, B2 horizon, 0.55 - 1 m

yellowish red (reddish brown) (5YR 4/6) light medium clay with strong pedality (angular blocky, 50 - 100 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; no layer notes recorded; soil continues...

Substrate

strong siltstone/mudstone (mod. weathered rock) substrate (Dcx)



Soil Profile Report

Site location

2.5km NE of Macs Lookout

Profile details

Hunter CCC REMS (1005203), Profile 47, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 350003E, 6491370N, AMG Zone 56; MGA grid reference 350107E, 6491559N, MGA Zone 56; GDA Latitude -31.70153, GDA Longitude 151.41827; Ellerston (9134) 1:100,000 map sheet

Terrain

crest; part of hillcrest; slope is 5% (measured), elevation is 702 m

Geology

strong marble (slightly weathered rock) substrate (Dctsl) and parent material; 2% - 10% rock outcrop

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is low, runoff is moderate

Land use

limited clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 60%

Soil type

Haplic Supracalcic Red Chromosol; medium, gravelly, clay loamy, clayey, moderate, sufficient data available (ASC); Terra Rossa Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 60%

Layer 1, A1 horizon, 0 - 0.1 m

dark reddish brown (2.5YR 3/4) heavy clay loam with strong pedality (polyhedral, 1 - 2 mm), smooth-faced peds; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.1 - 0.6 m

red (bright reddish brown) (2.5YR 5/8) light clay with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 8; no layer notes recorded; directly overlies bedrock

Substrate

strong marble (slightly weathered rock) substrate (Dctsl)



Soil Profile Report

Site location

Macs look out 2km SE

Profile details

Hunter CCC REMS (1005203), Profile 48, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 349766E, 6491153N, AMG Zone 56; MGA grid reference 349870E, 6491342N, MGA Zone 56; GDA Latitude -31.70346, GDA Longitude 151.41574; Ellerston (9134) 1:100,000 map sheet

Terrain

crest; part of hillcrest; local relief is very high (> 300 m), slope is 16% (measured), elevation is 692 m

Geology

metamorphic substrate (Detsl) and parent material

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is well drained, run-on is moderate, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 50%

Soil type

Haplic ? Red Dermosol; medium, very gravelly, clay loamy, clayey, moderate, sufficient data available (ASC); Non-calciic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

dark reddish brown (5YR 3/3) clay loam with strong pedality (polyhedral, 1 - 2 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 5.5; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, B2 horizon, 0.1 - 0.6 m

dark red (dark reddish brown) (2.5YR 3/6) light clay with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

metamorphic substrate (Detsl)



Soil Profile Report

Site location

NR Hunters Vale

Profile details

Hunter CCC REMS (1005203), Profile 49, recorded by Robert Banks on 10 Mar 2009

Map reference

AMG grid reference 346755E, 6484805N, AMG Zone 56; MGA grid reference 346859E, 6484994N, MGA Zone 56; GDA Latitude -31.76031, GDA Longitude 151.38298; Ellerston (9134) 1:100,000 map sheet

Terrain

upper slope; part of hillslope; slope is 17% (measured), elevation is 696 m

Geology

metamorphic substrate (Dcx) and parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is well drained, run-on is high, runoff is high

Land use

extensive clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate partly stabilised sheet erosion

Site condition

ground cover is 80%

Soil type

Haplic ? Red Chromosol; thin, gravelly, clay loamy, clayey, shallow, sufficient data available (ASC); Non-calcic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.1 m

yellowish red (reddish brown) (5YR 4/6) clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, B2 horizon, 0.1 - 0.3 m

red (reddish brown) (2.5YR 4/6) medium clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 7; no layer notes recorded; directly overlies bedrock

Substrate

metamorphic substrate (Dcx)



Soil Profile Report

Site location

Approximately 200m N 'Hunter Vale'

Profile details

Hunter CCC REMS (1005203), Profile 50, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 346126E, 6483613N, AMG Zone 56; MGA grid reference 346230E, 6483802N, MGA Zone 56; GDA Latitude -31.77098, GDA Longitude 151.37616; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of fan; slope is 12% (measured), elevation is 628 m

Geology

metamorphic substrate (Dcx), with colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is low, runoff is moderate

Land use

limited clearing, used for volun./native pasture, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, no erosion recorded

Site condition

ground cover is 80%

Soil type

? ? Brown Sodosol; medium, moderately gravelly, silty, clayey, very deep, no data available but sufficient knowledge (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.15 m

dark brown (brownish black) (7.5YR 3/2) silty clay loam with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, A2e horizon, 0.15 - 0.4 m

strong brown (bright brown) (7.5YR 5/6) silty loam with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 7; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 3, B2 horizon, 0.4 - 0.6 m

strong brown (bright brown) (7.5YR 5/8) medium clay; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 7; no layer notes recorded; clear (20-50 mm) boundary to...

Substrate

metamorphic substrate (Dcx)



Soil Profile Report

Site location

2km NE of 'Ellerston'

Profile details

Hunter CCC REMS (1005203), Profile 51, recorded by Robert Banks on 01 Mar 2009

Map reference

AMG grid reference 342829E, 6480495N, AMG Zone 56; MGA grid reference 342933E, 6480684N, MGA Zone 56; GDA Latitude -31.79865, GDA Longitude 151.34085; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of terrace plain; local relief is extremely low (< 9m), slope is 8% (measured), elevation is 559 m

Geology

metamorphic substrate (Qa), with alluvium parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is mod. well drained, run-on is low, runoff is moderate

Land use

extensive clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 80%

Soil type

Melacic ? Brown Dermosol; medium, moderately gravelly, clay loamy, clayey, shallow, sufficient data available (ASC); Chernozem (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

many (20-50%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.2 m

dark reddish brown (5YR 3/2) clay loam with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments are many (20-50%), coarse gravel (20-60 mm), cobbles (60-200 mm), stones (200-600 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.45 m

strong brown (bright brown) (7.5YR 5/6) light clay with moderate pedality (polyhedral, 10 - 20 mm), smooth-faced peds; coarse fragments are abundant (50-90%), coarse gravel (20-60 mm), cobbles (60-200 mm), stones (200-600 mm), as parent material; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

metamorphic substrate (Qa)



Soil Profile Report

Site location

Serpentinite band 'Barry Station'

Profile details

Hunter CCC REMS (1005203), Profile 52, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 339778E, 6504581N, AMG Zone 56; MGA grid reference 339882E, 6504770N, MGA Zone 56; GDA Latitude -31.58101, GDA Longitude 151.31257; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; local relief is high (90-300 m), slope is 20% (measured), elevation is 608 m

Geology

moderately strong serpentinite (highly weathered rock) substrate (Ps), with serpentinite, colluvium parent material; 10% - 20% rock outcrop

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is rapidly drained, run-on is high, runoff is high

Land use

extensive clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

high erosion hazard, severe partly stabilised sheet erosion, moderate partly stabilised sheet erosion, minor active gully erosion (<1.5 m deep)

Site condition

ground cover is 50%

Soil type

Haplic ? Red Dermosol; thin, moderately gravelly, clay loamy, clay loamy, deep, sufficient data available (ASC); Chocolate Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 50%

Layer 1, A1 horizon, 0 - 0.1 m

dark reddish brown (5YR 3/2) light clay loam with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; abrupt (5-20 mm) smooth boundary to...

Layer 2, B2 horizon, 0.1 - 0.6 m

reddish brown (dull reddish brown) (5YR 4/4) heavy clay loam with strong pedality (polyhedral, 2 - 5 mm), smooth-faced peds; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong serpentinite (highly weathered rock) substrate (Ps)



Soil Profile Report

Site location

Contact Oriole Barry Station

Profile details

Hunter CCC REMS (1005203), Profile 53, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 339333E, 6504338N, AMG Zone 56; MGA grid reference 339437E, 6504527N, MGA Zone 56; GDA Latitude -31.58314, GDA Longitude 151.30784; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; slope is 24% (measured), elevation is 628 m

Geology

metamorphic substrate (U2) and parent material

Vegetation

vegetation community is woodland shrub u'storey

Hydrology

profile is well drained, run-on is high, runoff is moderate

Land use

limited clearing, used for volun./native pasture, with timber/scrub/unused in general area

Erosion

slight erosion hazard, no erosion recorded

Site condition

ground cover is 80%

Soil type

? ? Brown Sodosol; medium, gravelly, silty, clayey, very deep, sufficient data available (ASC); Soloth (Solod) (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.15 m

dark brown (7.5YR 3/3) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, A2e horizon, 0.15 - 0.3 m

brown (7.5YR 4/4) silty loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 3, B2 horizon, 0.3 - 0.7 m

strong brown (brown) (7.5YR 4/6) light clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; soil continues...

Substrate

metamorphic substrate (U2)



Soil Profile Report

Site location

Approximately 200m North Meerschaum Creek

Profile details

Hunter CCC REMS (1005203), Profile 54, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 331707E, 6503815N, AMG Zone 56; MGA grid reference 331811E, 6504004N, MGA Zone 56; GDA Latitude -31.58676, GDA Longitude 151.22741; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; local relief is high (90-300 m), slope is 45% (measured), elevation is 663 m

Geology

metamorphic substrate (U2), with jasper,metamorphic,colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is rapidly drained, run-on is high, runoff is high

Land use

limited clearing, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, severe partly stabilised sheet erosion

Site condition

ground cover is 60%

Soil type

Melanic ? Red Kandosol; medium, very gravelly, clay loamy, clayey, very deep, sufficient data available (ASC); Red Earth (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

many (20-50%) surface gravels, ground cover is 60%

Layer 1, A1 horizon, 0 - 0.2 m

dark brown (brownish black) (7.5YR 3/2) clay loam with massive structure, earthy fabric; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, A2 horizon, 0.2 - 0.4 m

dark reddish brown (5YR 3/3) clay loam sandy with massive structure, earthy fabric; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B2w horizon, 0.4 - 2 m

reddish brown (dull reddish brown) (5YR 4/4) sandy clay with massive structure, earthy fabric; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; soil continues...

Substrate

metamorphic substrate (U2)



Soil Profile Report

Site location

Quarry on Barry station

Profile details

Hunter CCC REMS (1005203), Profile 55, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 336756E, 6504546N, AMG Zone 56; MGA grid reference 336860E, 6504735N, MGA Zone 56; GDA Latitude -31.5809, GDA Longitude 151.28073; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; slope is 43% (measured), elevation is 640 m

Geology

jasper,metamorphic substrate (U2), with colluvium parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is well drained, run-on is high, runoff is high

Land use

rained cultivation, used for quarry/mining, with volun./native pasture in general area

Erosion

moderate erosion hazard, severe partly stabilised sheet erosion

Site condition

ground cover is 20%

Soil type

Haplic ? Red Kandosol; medium, moderately gravelly, clay loamy, clay loamy, very deep, sufficient data available (ASC); Red Earth (GSG)

Profile Notes

30cm layer recent fill on top of first layer.

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 20%

Layer 1, A1 horizon, 0 - 0.2 m

dark brown (7.5YR 3/3) sandy clay loam with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 2 m

dark reddish brown (5YR 3/4) clay loam sandy with massive structure, earthy fabric; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; soil continues...

Substrate

jasper, metamorphic substrate (U2)



Soil Profile Report

Site location

North side 'Barry Station'

Profile details

Hunter CCC REMS (1005203), Profile 56, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 336079E, 6504774N, AMG Zone 56; MGA grid reference 336183E, 6504963N, MGA Zone 56; GDA Latitude -31.57875, GDA Longitude 151.27363; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; slope is 30% (measured), elevation is 660 m

Geology

metamorphic substrate (U2) and parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is rapidly drained, run-on is high, runoff is high

Land use

cleared, used for volun./native pasture, with volun./native pasture in general area

Erosion

moderate erosion hazard, severe partly stabilised sheet erosion

Site condition

ground cover is 30%

Soil type

Basic Lithic Leptic Rudosol, very gravelly, clay loamy, very shallow, all required data available (ASC); Lithosol (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

many (20-50%) surface gravels, ground cover is 30%

Layer 1, A1 horizon, 0 - 0.05 m

dark yellowish brown (brown) (10YR 4/4) clay loam sandy with massive structure, earthy fabric; coarse fragments are abundant (50-90%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

metamorphic substrate (U2)



Soil Profile Report

Site location

Hungerford Gully 'Barry Station'

Profile details

Hunter CCC REMS (1005203), Profile 57, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 334688E, 6505495N, AMG Zone 56; MGA grid reference 334792E, 6505684N, MGA Zone 56; GDA Latitude -31.57204, GDA Longitude 151.2591; Ellerston (9134) 1:100,000 map sheet

Terrain

upper slope; part of hillslope; slope is 20% (measured), elevation is 739 m

Geology

moderately strong siltstone/mudstone (mod. weathered rock, highly weathered rock) substrate (Per) and parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is mod. well drained, run-on is moderate, runoff is moderate

Land use

cleared, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 90%

Soil type

Mottled ? Red Chromosol; medium, slightly gravelly, clay loamy, clayey, very deep, sufficient data available (ASC); Non-calciic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 90%

Layer 1, A1 horizon, 0 - 0.2 m

dark reddish brown (5YR 3/3) clay loam with massive structure, earthy fabric; coarse fragments are few (2-10%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B2 horizon, 0.2 - 0.6 m

reddish brown (dull reddish brown) (2.5YR 4/4) medium heavy clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, 2B2 horizon, 0.6 - 1.4 m

strong brown (bright brown) (7.5YR 5/8) medium clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6.5; no layer notes recorded; soil continues...

Substrate

moderately strong siltstone/mudstone (mod. weathered rock, highly weathered rock) substrate (Per)



Soil Profile Report

Site location

500m North 'Gulf Gully'

Profile details

Hunter CCC REMS (1005203), Profile 58, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 334270E, 6506195N, AMG Zone 56; MGA grid reference 334374E, 6506384N, MGA Zone 56; GDA Latitude -31.56567, GDA Longitude 151.25482; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; slope is 47% (measured), elevation is 833 m

Geology

conglomerate substrate (Per), with colluvium parent material

Vegetation

vegetation community is dry sclerophyll forest

Hydrology

profile is rapidly drained, run-on is high, runoff is high

Land use

no effective disturbance, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

moderate erosion hazard, minor stable sheet erosion, evident stable mass movement

Site condition

ground cover is 100%

Soil type

Melanic ? Red Dermosol; thick, gravelly, clay loamy, clayey, very deep, sufficient data available (ASC); Red Earth (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.4 m

dark reddish brown (5YR 3/3) clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), fine gravel (2-6 mm), gravel (6-20 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, AB horizon, 0.4 - 1.4 m

red (reddish brown) (2.5YR 4/6) clay loam sandy with massive structure, earthy fabric; coarse fragments are common (10-20%), fine gravel (2-6 mm), gravel (6-20 mm), as parent material; field pH is 6; no layer notes recorded; diffuse (>100 mm) boundary to...

Layer 3, B2 horizon, 1.4 - 3 m

dark red (dark reddish brown) (2.5YR 3/6) medium clay with moderate pedality (angular blocky), smooth-faced peds; coarse fragments are common (10-20%), fine gravel (2-6 mm), gravel (6-20 mm), as parent material; field pH is 6; no layer notes recorded; soil continues...

Substrate

conglomerate substrate (Per)



Soil Profile Report

Site location

500m S of Mooney

Profile details

Hunter CCC REMS (1005203), Profile 59, recorded by Robert Banks on 22 Mar 2009

Map reference

AMG grid reference 330187E, 6491211N, AMG Zone 56; MGA grid reference 330291E, 6491400N, MGA Zone 56; GDA Latitude -31.7002, GDA Longitude 151.20922; Ellerston (9134) 1:100,000 map sheet

Terrain

mid-slope; part of hillslope; local relief is high (90-300 m), slope is 12% (measured), elevation is 736 m

Geology

siltstone/mudstone, metamorphic substrate (Dcpgx), with metamorphic parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is mod. well drained, run-on is moderate, runoff is high

Land use

cleared, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 100%

Soil type

Basic Lithic Leptic Tenosol; medium, gravelly, silty, silty, shallow, sufficient data available (ASC); Lithosol (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 100%

Layer 1, A1 horizon, 0 - 0.1 m

brown (7.5YR 4/3) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, A2e horizon, 0.1 - 0.45 m

strong brown (bright brown) (7.5YR 5/6) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), gravel (6-20 mm), coarse gravel (20-60 mm), as parent material; field pH is 6; no layer notes recorded; directly overlies bedrock

Substrate

siltstone/mudstone, metamorphic substrate (Dcpgx)



Soil Profile Report

Site location

1km South 'Limberlost'

Profile details

Hunter CCC REMS (1005203), Profile 60, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 331323E, 6489106N, AMG Zone 56; MGA grid reference 331427E, 6489295N, MGA Zone 56; GDA Latitude -31.71935, GDA Longitude 151.22084; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; slope is 17% (measured), elevation is 677 m

Geology

metamorphic substrate (DCp gx), with siltstone/mudstone parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is mod. well drained, run-on is moderate, runoff is moderate

Land use

cleared, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 60%

Soil type

Melanic ? Brown Sodosol; medium, non gravelly, silty, clayey, deep, sufficient data available (ASC); Soloth (Solod) (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.2 m

dark reddish brown (5YR 3/2) silty clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 5.5; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, A2e horizon, 0.2 - 0.5 m

light brownish grey (greyish yellow brown) (10YR 6/2) silty loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 7; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 3, B2 horizon, 0.5 - 0.75 m

dark yellowish brown (brown) (10YR 4/6) light medium clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6.5; no layer notes recorded; soil continues...

Substrate

metamorphic substrate (DCpgx)



Soil Profile Report

Site location

Approximately 1km NW 'Oakleigh'

Profile details

Hunter CCC REMS (1005203), Profile 61, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 332435E, 6488133N, AMG Zone 56; MGA grid reference 332539E, 6488322N, MGA Zone 56; GDA Latitude -31.72829, GDA Longitude 151.23241; Ellerston (9134) 1:100,000 map sheet

Terrain

flat; part of plain; slope is 0% (measured), elevation is 658 m

Geology

alluvium substrate (Dcpgx) and parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is imperfectly drained, run-on is low, runoff is low

Land use

cleared, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, minor sheet erosion, evident partly stabilised streambank erosion

Site condition

surface condition not recorded

Soil type

Endocalcareous Self-mulching Black Vertosol, non gravelly, very fine, very fine, very deep, sufficient data available (ASC); Black Earth (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

black (7.5YR 2.5/1) medium clay with strong pedality (polyhedral, 1 - 2 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 2, B2 horizon, 0.1 - 0.8 m

black (7.5YR 2.5/1) medium heavy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B2k horizon, 0.8 - 1.5 m

dark brown (brownish black) (7.5YR 3/2) heavy clay with strong pedality (prismatic, 20 - 50 mm), smooth-faced peds; few (2% - 10%) calcareous ; coarse fragments not recorded; field pH is 8.5; AgNO₃ result is light precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 4, 2B2 horizon, 1.5 - 2.2 m

dark brown (7.5YR 3/3) medium heavy clay with strong pedality (lenticular, 10 - 20 mm), smooth-faced peds; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

alluvium substrate (Dcpgx)



Soil Profile Report

Site location

Approximately 3km SW 'Moonan Gap' Sergeants Gap Rd

Profile details

Hunter CCC REMS (1005203), Profile 62, recorded by Robert Banks on 02 Mar 2009

Map reference

AMG grid reference 328701E, 6491826N, AMG Zone 56; MGA grid reference 328805E, 6492015N, MGA Zone 56; GDA Latitude -31.69443, GDA Longitude 151.19366; Ellerston (9134) 1:100,000 map sheet

Terrain

waning lower slope; part of hillslope; local relief is high (90-300 m), slope is 20% (measured), elevation is 765 m

Geology

siltstone/mudstone substrate (Dcpgx) and parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is well drained, run-on is high, runoff is high

Land use

cleared, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate stable sheet erosion

Site condition

ground cover is 80%

Soil type

Melanic ? Brown Sodosol; thick, non gravelly, silty, clayey, very deep, sufficient data available (ASC); Soloth (Solod) (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.3 m

very dark greyish brown (brownish black) (10YR 3/2) silty clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, A2e horizon, 0.3 - 0.6 m

light yellowish brown (dull yellow) (2.5Y 6/3) silty loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; no layer notes recorded; sharp (<5 mm) boundary to...

Layer 3, B2 horizon, 0.6 - 1.5 m

dark yellowish brown (brown) (10YR 4/6) medium clay with strong pedality (prismatic), smooth-faced peds; coarse fragments not recorded; field pH is 6; no layer notes recorded; soil continues...

Substrate

siltstone/mudstone substrate (Dcpgx)



Soil Profile Report

Site location

West of 'Ellerston'

Profile details

Hunter CCC REMS (1005203), Profile 63, recorded by Robert Banks on 03 Mar 2009

Map reference

AMG grid reference 338933E, 6479250N, AMG Zone 56; MGA grid reference 339037E, 6479439N, MGA Zone 56; GDA Latitude -31.80933, GDA Longitude 151.2995; Ellerston (9134) 1:100,000 map sheet

Terrain

waning lower slope; part of fan; local relief is high (90-300 m), slope is 7% (measured), elevation is 535 m

Geology

siltstone/mudstone substrate (Dcx), with alluvium, colluvium parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is mod. well drained, run-on is high, runoff is low

Land use

limited clearing, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate partly stabilised sheet erosion, severe stable gully erosion (>3.0 m deep)

Site condition

ground cover is 80%

Soil type

? ? Red Sodosol; thick, gravelly, silty, clayey, very deep, sufficient data available (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 80%

Layer 1, A1 horizon, 0 - 0.6 m

strong brown (brown) (7.5YR 4/6) silty clay loam with massive structure, earthy fabric; coarse fragments are common (10-20%), as parent material; field pH is 5.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, A2e horizon, 0.6 - 0.85 m

strong brown (bright brown) (7.5YR 5/6) silty loam with massive structure, earthy fabric; coarse fragments are common (10-20%), as parent material; field pH is 5.5; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 3, B2 horizon, 0.85 - 1.7 m

yellowish red (bright reddish brown) (5YR 5/8) light medium clay with strong pedality (columnar, 50 - 100 mm), smooth-faced peds; coarse fragments are common (10-20%), as parent material; field pH is 6.5; no layer notes recorded; soil continues...

Substrate

siltstone/mudstone substrate (Dcx)



Soil Profile Report

Site location

West of 'Ellerston'

Profile details

Hunter CCC REMS (1005203), Profile 64, recorded by Robert Banks on 03 Mar 2009

Map reference

AMG grid reference 338758E, 6481044N, AMG Zone 56; MGA grid reference 338862E, 6481233N, MGA Zone 56; GDA Latitude -31.79313, GDA Longitude 151.29795; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of footslope; slope is 13% (measured), elevation is 547 m

Geology

siltstone/mudstone substrate (Dcx), with colluvium parent material

Vegetation

vegetation community is grassland/herbland

Hydrology

profile is well drained, run-on is moderate, runoff is high

Land use

cleared, used for volun./native pasture, with volun./native pasture in general area

Erosion

slight erosion hazard, moderate partly stabilised gully erosion (1.5-3.0 m deep)

Site condition

ground cover is 10%

Soil type

Supracalcic ? Brown Sodosol; medium, non gravelly, silty, clayey, very deep, sufficient data available (ASC); Solodic Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

no coarse fragments recorded

Layer 1, A1 horizon, 0 - 0.1 m

brown (greyish brown) (7.5YR 4/2) silty clay loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 2, A2e horizon, 0.1 - 0.3 m

brown (dull yellowish brown) (10YR 4/3) silty loam with massive structure, earthy fabric; coarse fragments not recorded; field pH is 6; AgNO₃ result is no precipitate; no layer notes recorded; abrupt (5-20 mm) boundary to...

Layer 3, B1 horizon, 0.3 - 0.85 m

dark yellowish brown (brown) (10YR 4/4) light medium clay with strong pedality, smooth-faced peds; coarse fragments not recorded; field pH is 6.5; AgNO₃ result is no precipitate; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 4, B2 horizon, 0.85 - 1.5 m

strong brown (bright brown) (7.5YR 5/6) medium clay with strong pedality, smooth-faced peds; few (2% - 10%) calcareous ; coarse fragments not recorded; field pH is 8.5; AgNO₃ result is no precipitate; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 5, 2B2k horizon, 1.5 - 2.1 m

strong brown (bright brown) (7.5YR 5/8) medium clay with strong pedality, smooth-faced peds; many (20% - 50%) calcareous and very few (< 2%) manganiferous ; coarse fragments not recorded; field pH is 8.5; AgNO₃ result is no precipitate; no layer notes recorded; soil continues...

Substrate

siltstone/mudstone substrate (Dcx)



Soil Profile Report

Site location

Approximately North of 'Ellerston', Approximately 1km SE of 'Uloola'

Profile details

Hunter CCC REMS (1005203), Profile 65, recorded by Robert Banks on 03 Mar 2009

Map reference

AMG grid reference 335811E, 6485500N, AMG Zone 56; MGA grid reference 335915E, 6485689N, MGA Zone 56; GDA Latitude -31.75252, GDA Longitude 151.26759; Ellerston (9134) 1:100,000 map sheet

Terrain

waxing upper slope; part of hillslope; local relief is low (30-90 m), slope is 30% (measured), elevation is 609 m

Geology

moderately strong sandstone-lithic (mod. weathered rock) substrate (DCp_{gx}) and parent material; 2% - 10% rock outcrop

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is rapidly drained, run-on is low, runoff is very high

Land use

limited clearing, used for timber/scrub/unused, with volun./native pasture in general area

Erosion

slight erosion hazard, minor stable sheet erosion

Site condition

ground cover is 95%

Soil type

Basic Paralithic Leptic Rudosol, moderately gravelly, clay loamy, very shallow, all required data available (ASC); Lithosol (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

common (10-20%) surface gravels, ground cover is 95%

Layer 1, A1 horizon, 0 - 0.2 m

brown (7.5YR 4/4) clay loam sandy with massive structure, earthy fabric; coarse fragments are many (20-50%), gravel (6-20 mm), coarse gravel (20-60 mm), cobbles (60-200 mm), as parent material; field pH is 6.5; no layer notes recorded; directly overlies bedrock

Substrate

moderately strong sandstone-lithic (mod. weathered rock) substrate (DCpgx)



Soil Profile Report

Site location

'Uloola Station'

Profile details

Hunter CCC REMS (1005203), Profile 67, recorded by Robert Banks on 03 Mar 2009

Map reference

AMG grid reference 334733E, 6486304N, AMG Zone 56; MGA grid reference 334837E, 6486493N, MGA Zone 56; GDA Latitude -31.74512, GDA Longitude 151.25634; Ellerston (9134) 1:100,000 map sheet

Terrain

lower slope; part of hillslope; slope is 27% (measured), elevation is 611 m

Geology

sandstone-lithic substrate (Dcpgx), with graywacke, colluvium parent material

Vegetation

vegetation community is woodland grass u'storey

Hydrology

profile is well drained, run-on is high, runoff is moderate

Land use

limited clearing, used for timber/scrub/unused, with timber/scrub/unused in general area

Erosion

slight erosion hazard, moderate partly stabilised sheet erosion

Site condition

ground cover is 60%

Soil type

Haplic ? Red Chromosol; medium, slightly gravelly, clay loamy, clayey, very deep, sufficient data available (ASC); Non-calcic Brown Soil (GSG)

Profile Notes

none recorded

Profile Addendum

none recorded

Soil description

Surface

few (2-10%) surface gravels, ground cover is 60%

Layer 1, A1 horizon, 0 - 0.15 m

dark reddish brown (5YR 3/3) clay loam with massive structure, earthy fabric; coarse fragments are few (2-10%), coarse gravel (20-60 mm), cobbles (60-200 mm), stones (200-600 mm), as parent material; field pH is 6; no layer notes recorded; clear (20-50 mm) boundary to...

Layer 2, B1 horizon, 0.15 - 0.6 m

reddish brown (dull reddish brown) (5YR 4/4) medium heavy clay with strong pedality (angular blocky, 20 - 50 mm), smooth-faced peds; coarse fragments are few (2-10%), coarse gravel (20-60 mm), cobbles (60-200 mm), stones (200-600 mm), as parent material; field pH is 6; no layer notes recorded; gradual (50-100 mm) boundary to...

Layer 3, B2 horizon, 0.6 - 1.2 m

red (reddish brown) (2.5YR 4/6) heavy clay with strong pedality (prismatic, 50 - 100 mm), smooth-faced peds; coarse fragments are few (2-10%), coarse gravel (20-60 mm), cobbles (60-200 mm), stones (200-600 mm), as parent material; field pH is 6; no layer notes recorded; soil continues...

Substrate

sandstone-lithic substrate (Dcpgx)