**Project Name:** LSG
**Project Code:** LSG **Site ID:** CP88 **Observation ID:** 1
**Agency Name:** CSIRO Division of Soils (ACT)

## Site Information

| | | | |
|---|---|---|---|
| **Desc. By:** | J.R. Sleeman | **Locality:** | Gundarro Pdk. 7 |
| **Date Desc.:** | 01/04/77 | **Elevation:** | 650 metres |
| **Map Ref.:** | Sheet No. : S1 55-16 1:250000 | **Rainfall:** | 640 |
| **Northing/Long.:** | 149.1 | **Runoff:** | Slow |
| **Easting/Lat.:** | -35.2 | **Drainage:** | Poorly drained |

## Geology

| | | | |
|---|---|---|---|
| **ExposureType:** | Undisturbed soil core | **Conf. Sub. is Parent. Mat.:** | No Data |
| **Geol. Ref.:** | No Data | **Substrate Material:** | Undisturbed soil core, Non-porous, dense, Shale |

## Land Form

| | | | |
|---|---|---|---|
| **Rel/Slope Class:** | Gently undulating plains <9m 1-3% | **Pattern Type:** | Alluvial plain |
| **Morph. Type:** | Flat | **Relief:** | No Data |
| **Elem. Type:** | Valley flat | **Slope Category:** | Very gently sloped |
| **Slope:** | 2 % | **Aspect:** | 0 degrees |

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

**Erosion:**

## Soil Classification

**Australian Soil Classification:**
Eutrophic Mesonatric Red Sodosol
**ASC Confidence:**
All necessary analytical data are available.

**Mapping Unit:** N/A
**Principal Profile Form:** Dy2.42
**Great Soil Group:** Solodic soil

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

**Vegetation:** Low Strata - Sod grass, , . *Species includes - None recorded

**Surface Coarse Fragments:** 2-10%, fine gravelly, 2-6mm, , Shale

## Profile Morphology

| | | |
|---|---|---|
| A1 | 0 - 0.1 m | Brown (10YR5/3-Moist); Light grey (10YR7/2-Dry); ; Silty loam; Massive grade of structure; Sandy (grains prominent) fabric; Dry; Very weak consistence; 2-10%, medium gravelly, 6-20mm, dispersed, Shale, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), ; Field pH 5.6 (pH meter); Diffuse change to - |
| | 0.1 - 0.18 m | Brown (10YR5/3-Moist); Light grey (10YR7/2-Dry); ; Silty loam; Massive grade of structure; Sandy (grains prominent) fabric; Very weak consistence; 2-10%, medium gravelly, 6-20mm, dispersed, Shale, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), ; Field pH 6.3 (pH meter); Clear change to - |
| A2 | 0.18 - 0.3 m | Pale brown (10YR6/3-Moist); White (10YR8/2-Dry); ; Silty loam; Massive grade of structure; Smooth-ped fabric; Dry; Firm consistence; 2-10%, medium gravelly, 6-20mm, dispersed, Shale, coarse fragments; Few (2 - 10 %), Ferromanganiferous, Fine (0 - 2 mm), ; Field pH 7.1 (pH meter); Abrupt change to - |
| B21 | 0.3 - 0.4 m | Yellowish brown (10YR5/4-Moist); ; Medium clay; Strong grade of structure, 20-50 mm, Angular blocky; Smooth-ped fabric; Dry; Very strong consistence; 0-2%, medium gravelly, 6-20mm, dispersed, Shale, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), ; Field pH 7.2 (pH meter); |
| B22 | 0.4 - 0.6 m | Yellowish brown (10YR5/4-Moist); ; Medium clay; Massive grade of structure; Smooth-ped fabric; Dry; Very strong consistence; 0-2%, medium gravelly, 6-20mm, dispersed, Shale, coarse fragments; Very few (0 - 2 %), Ferromanganiferous, Fine (0 - 2 mm), ; Field pH 7.6 (pH meter); Gradual change to - |
| 2B2 | 0.6 - 0.8 m | Greyish brown (10YR5/2-Moist); , 10YR58, 20-50% , Distinct; , 2.5Y64, 20-50% , Distinct; Medium clay; Massive grade of structure; Smooth-ped fabric; Dry; Very strong consistence; 10-20%, coarse gravelly, 20-60mm, dispersed, Shale, coarse fragments; Common (10 - 20 %), Ferromanganiferous, Medium (2 -6 mm), ; Field pH 7.9 (pH meter); |
| 2B2 | 0.8 - 1 m | Grey (10YR5/1-Moist); , 10YR56, 20-50% , Distinct; , 20-50% , Distinct; Medium clay; Massive grade of structure; Dry; Very strong consistence; 10-20%, coarse gravelly, 20-60mm, dispersed, Shale, coarse fragments; Common (10 - 20 %), Ferromanganiferous, Medium (2 -6 mm), ; Field pH 7.7 (pH meter); |

## Morphological Notes

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**Observation Notes**

DARK TUBULES 30-40CM:COLLUVIUM/ALLUVIUM FROM CANBERRA GROUP - (SHALES):LAYERS RE NUMBERED 21/10/92

**Site Notes**

GINNINDERRA

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## Laboratory Test Results:

| Depth | pH | 1:5 EC | Exchangeable Cations Ca | Mg | K | Na | Exchangeable Acidity | CEC | ECEC | ESP |
|---|---|---|---|---|---|---|---|---|---|---|
| m | | dS/m | | | | Cmol (+)/kg | | | | % |
| 0 - 0.1 | 5.6A | 0.08A | 2K | 0.51 | 0.3 | 0.29 | 8.5B | 12.2J | | 2.38 |
| 0.1 - 0.18 | 6.3A | 0.06A | 2.6K | 0.29 | 0.09 | 0.46 | 4.1B | 7.6J | | 6.05 |
| 0.18 - 0.3 | 7.1A | 0.06A | 3K | 0.49 | 0.1 | 0.52 | 1.9B | 6.1J | | 8.52 |
| 0.3 - 0.4 | 7.2A | 0.45A | 15.3K | 3.8 | 0.48 | 3.4 | 6B | 29J | | 11.72 |
| 0.4 - 0.6 | 7.6A | 1A | 16.3K | 5.2 | 0.51 | 4.8 | 5.8B | 32.6J | | 14.72 |
| 0.6 - 0.8 | 7.9A | 0.93A | 11.7K | 4.7 | 0.39 | 4.5 | 1B | 22.3J | | 20.18 |
| 0.8 - 1 | 7.7A | 1.2A | 9.1K | 4.5 | 0.33 | 4.7 | 0.6B | 19.1J | | 24.61 |

| Depth | CaCO3 | Organic C | Avail. P | Total P | Total N | Total K | Bulk Density | Particle Size Analysis GV | CS | FS | Silt | Clay |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| m | % | % | mg/kg | % | % | % | Mg/m3 | | | % | | |
| 0 - 0.1 | | 2.12D | | | 0.189B | | | 6 | 3D | 46 | 31 | 15 |
| 0.1 - 0.18 | | 0.81D | | | 0.081B | | | 8 | 4D | 47 | 34 | 14 |
| 0.18 - 0.3 | | 0.35D | | | 0.044B | | | 9 | 4D | 46 | 33 | 15 |
| 0.3 - 0.4 | | 0.56D | | | 0.065B | | | 2 | 1D | 20 | 17 | 60 |
| 0.4 - 0.6 | | 0.35D | | | | | | 1 | 1D | 17 | 17 | 64 |
| 0.6 - 0.8 | 0.08A | 0.2D | | | | | | 1 | 2D | 31 | 23 | 43 |
| 0.8 - 1 | 0.08A | 0.16D | | | | | | 5 | 3D | 34 | 23 | 38 |

| Depth | COLE | Gravimetric/Volumetric Water Contents Sat. | 0.05 Bar | 0.1 Bar | 0.5 Bar | 1 Bar | 5 Bar | 15 Bar | K sat | K unsat |
|---|---|---|---|---|---|---|---|---|---|---|
| m | | | | | g/g - m3/m3 | | | | mm/h | mm/h |
| 0 - 0.1 | | | | | | | | | | |
| 0.1 - 0.18 | | | | | | | | | | |
| 0.18 - 0.3 | | | | | | | | | | |
| 0.3 - 0.4 | | | | | | | | | | |
| 0.4 - 0.6 | | | | | | | | | | |
| 0.6 - 0.8 | | | | | | | | | | |
| 0.8 - 1 | | | | | | | | | | |

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**Laboratory Analyses Completed for this profile**

| | |
|---|---|
| 13C1_FE | Citrate/dithionite-extractable iron, aluminium, Manganese and Silicon |
| 15_NR_CA | Exch. basic cations (Ca++) - meq per 100g of soil - Not recorded |
| 15_NR_CEC | CEC - meq per 100g of soil - Not recorded |
| 15_NR_K | Exch. basic cations (K++) - meq per 100g of soil - Not recorded |
| 15_NR_MG | Exch. basic cations (Mg++) - meq per 100g of soil - Not recorded |
| 15_NR_NA | Exch. basic cations (Na++) - meq per 100g of soil - Not recorded |
| 15G_C_AL1 | Exchangeable aluminium - meq per 100g of soil - Aluminium By difference of C and A or B |
| 19A1 | Carbonates - rapid titration |
| 2A1 | Air-dry moisture content |
| 3A1 | EC of 1:5 soil/water extract |
| 4A1 | pH of 1:5 soil/water suspension |
| 5A2 | Chloride - 1:5 soil/water extract, automated colour |
| 6A1_UC | Organic carbon (%) - Uncorrected Walkley and Black method |
| 7_NR | Total nitrogen (%) - Not recorded |
| P10_GRAV | Gravel (%) |
| P10_PB_C | Clay (%) - Plummet balance |
| P10_PB_CS | Coarse sand (%) - Plummet balance |
| P10_PB_FS | Fine sand (%) - Plummet balance |
| P10_PB_Z | Silt (%) - Plummet balance |