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FOUNTAINDALE

Depositional



**Landscape**—rolling low hills with long sideslopes on Budgong Sandstone in the Jamberoo Valley. Relief 40–80 m. Slopes <20%. Extensively cleared with scattered stands of tall open-forest and closed-forest.

**Soils**—moderately deep (50–100 cm) Brown Podzolic Soils (Db3.21, Db2.11) and Yellow Podzolic Soils (Dy3.21, Dy2.11) occur.

**Limitations**—run-on, water erosion hazard (localised), mass movement hazard (localised), hardsetting, stoniness, sodicity, moderate shrink-swell potential (subsoil).

## LOCATION

Rolling low hills with long moderately inclined slopes on volcanic sandstone in Jamberoo Valley on the lower slopes of the Illawarra Escarpment. Examples include lower reaches along Fountaindale Road, Jerrara Creek Road and Swamp Road.

## LANDSCAPE

### Geology

Budgong Sandstone—red brown and grey volcanic lithic sandstone.

### Topography

Rolling low hills. Relief 40–80 m. Slopes <20%. Broad convex crests with long moderately inclined slopes. Narrow to moderately incised drainage lines opening into broad drainage plains <150 m wide. Terracettes and slumping occur on steeper slopes. Scattered rock outcrops are evident, especially in drainage lines.

### Vegetation

Extensively cleared with scattered remnant stands of tall open-forest and closed-forest. Common species in tall open-forest include blackbutt (*Eucalyptus pilularis*) and turpentine (*Syncarpia glomulifera*). Forest red gum (*Eucalyptus tereticornis*) grows in poorly drained areas. Common species in closed-forest include cabbage tree palm (*Livistona australis*), red ash (*Alphitonia excelsa*), port jackson fig (*Ficus rubiginosa*), cheese tree (*Glochidion ferdinandi*), moreton bay fig (*Ficus macrophylla*), native cherry (*Exocarpos cupressiformis*), ribbonwood (*Euroschinus falcata*) and white euodia (*Euodia micrococca*).

### Land Use

Grazing of cattle on improved pastures and hobby farms.

**Existing Erosion**

Terracettes on steeper slopes. Moderate to severe stream bank erosion. Subject to sheet and gully erosion where not well grassed.

**Included Soil Landscape**

Small areas of Bombo (**bo**) soil landscape occur.

**SOILS****Dominant Soil Materials****fo1 – Hardsetting weakly pedal brownish black sandy loam (topsoil)**

**Colour** brownish black (5YR 3/1)  
**Texture** sandy loam  
**Structure** weakly pedal, <2 mm crumb peds  
**Fabric** rough-faced, porous  
**pH** 6.0  
**Stones** 2–10% 2–6 mm angular, dispersed  
**Roots** abundant, ex-ped

**fo2 – Weakly pedal greyish brown sandy clay loam (subsoil)**

**Colour** greyish brown (7.5YR 3/2)  
**Texture** sandy clay loam  
**Structure** weakly pedal, <2 mm crumb peds  
**Fabric** rough-faced, porous  
**pH** 5.5  
**Stones** 2–10% 2–6 mm angular, dispersed  
**Roots** few, ex-ped

**fo3 – Brown light medium clay (subsoil)**

**Colour** brown (7.5YR 4/3) to dull orange (7.5YR 7/3)

**Texture** light medium clay  
**Structure** weakly to moderately pedal, 2–5 mm crumb to polyhedral peds  
**Fabric** rough-faced, porous  
**pH** 4.0  
**Stones** <2% 2–6 mm angular, dispersed  
**Roots** few, ex-ped

**fo4 – Mottled brown medium clay (subsoil)**

**Colour** brown (7.5YR 4/6) with orange and red mottles (50%)

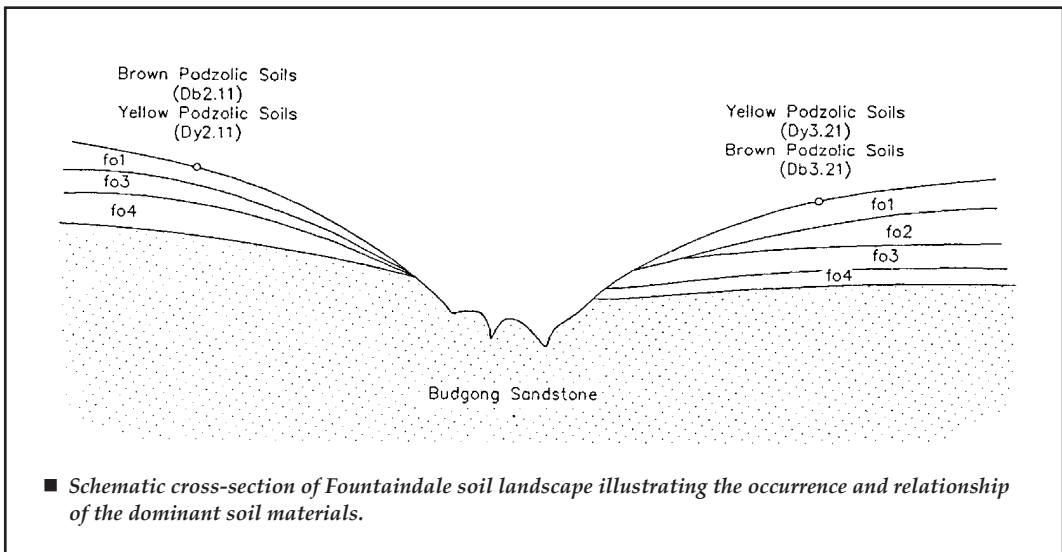
**Texture** medium clay  
**Structure** moderately to strongly pedal, 5–10 mm crumb to polyhedral peds  
**Fabric** rough-faced, porous  
**pH** 4.0  
**Stones** nil  
**Roots** nil

**Occurrence and Relationships**

The soils of this landscape are generally uniform with minor variations in total soil depth.

Up to 10 cm hardsetting brownish black sandy loam (**fo1**) overlies <15 cm greyish brown sandy clay (**fo2**), which overlies either <40 cm brown light medium clay (**fo3**) or <40 cm brown medium clay with mottles (**fo4**). Boundaries are clear to gradual [Brown Podzolic Soils (Db3.21), Yellow Podzolic Soils (Dy3.21)]. Total depth is <100 cm.

Occasionally **fo2** is absent [Brown Podzolic Soils (Db2.11), Yellow Podzolic Soils (Dy2.11)]. Total depth is <100 cm.



## LIMITATIONS TO DEVELOPMENT

### Soil Limitations

- fo1** Hardsetting  
High organic matter  
Shrink-swell potential (localised)  
Low wet bearing strength
- fo2** Stoniness
- fo3** Stoniness  
Strongly acid  
Shrink-swell potential (localised)  
Low available water-holding capacity
- fo4** Low permeability  
Low wet bearing strength  
Sodicity  
Strongly acid  
Low available water-holding capacity  
Shrink-swell potential

### Fertility

General fertility is moderate to high. The soils are generally deep, well structured and freely drained with permeable clay subsoils. Soil materials are moderately to slightly acid with high CEC.

### Erodibility

The erodibility of the topsoil (**fo1**) is high and for the subsoils (**fo2** to **fo4**) is moderate.

### Erosion Hazard

Erosion hazard for this soil landscape for non-concentrated flows is extreme. The calculated soil loss for the first 12 months of urban development ranges up to 1 000 t/ha for topsoils and 1 000 t/ha for exposed subsoils. The erosion hazard for concentrated flows is moderate.

### Surface Movement Potential

The topsoil (**fo1**) is slightly reactive and the subsoils **fo3** and **fo4** are moderately to highly reactive. **fo2** is non-reactive.

### Landscape Limitations

Mass movement hazard (localised)  
Water erosion hazard (localised)  
Rock outcrop (localised)  
Run-on

### Urban Capability

Generally low limitations for urban development. High to severe limitations on steep slopes.

### Rural Capability

Generally low to moderate limitations for regular cultivation and grazing. High to severe limitations for cultivation (localised) on steep slopes.