

wm

WILDES MEADOW

Erosional



Landscape—gently undulating rises grading to low hills on Wianamatta Group—Bringelly Shale. Local relief >40 m. Slopes 10–20%. Extensively cleared with stands of tall open-forest.

Soils—moderately deep (50–100 cm) Xanthozems (Gn3.71) occur on crests and upper slopes. Yellow Podzolic Soils (Dy5.11) and Yellow Earths (Gn2.81) occur on mid and lower slopes.

Limitations—surface movement potential, water erosion hazard, mass movement hazard (localised), seasonal waterlogging (localised), high available water-holding capacity (topsoil), strongly acid, sodicity, high organic matter (topsoil).

Topography

Gently undulating rises grading to low hills. Local relief <40 m. Slopes ranging from 10–20% with localised steeper slopes 20–35%. Crests and ridges are broad and convex. The slopes are moderately inclined with steep narrow concave drainage lines. Minor terracetting occurs on steeper slopes.

Vegetation

Extensively cleared with remnant stands of tall open-forest. Common species include white stringybark (*Eucalyptus globoidea*), red bloodwood (*Eucalyptus gummifera*), scribbly gum (*Eucalyptus racemosa/haemastoma*) (hybrid), narrow-leaved peppermint (*Eucalyptus radiata*) and mountain spotted gum (*Eucalyptus mannifera*).

Land Use

Beef and dairy cattle grazing on improved pastures are the principal agricultural industries. Villages include Wildes Meadow and Mount Murray.

Existing Erosion

Moderate to severe rill erosion is common on cleared slopes and batters. Minor terracetting occurs on steeper slopes.

Included Soil Landscapes

Small areas of Robertson (**ro**) and Maddens Plains (**md**) soil landscapes occur.

LOCATION

Gently undulating rises to low hills on mudstones and siltstones on the Moss Vale Tableland. Examples include Wildes Meadow, Glenquarry and Mount Murray.

LANDSCAPE

Geology

Wianamatta Group—Bringelly Shale—mid grey and dark grey mudstones with interbedded lithic sandstones.

SOILS**Dominant Soil Materials****wm1—Loose dark brown loam fine sandy (topsoil)**

Colour	dark brown (10YR 3/3)
Texture	loam fine sandy
Structure	apedal single-grained to weakly pedal <5 mm crumb peds
Fabric	sandy
pH	4.0
Stones	nil
Roots	common

wm2—Brown silt loam (topsoil)

Colour	brown (7.5YR 3/3)
Texture	silt loam
Structure	apedal massive
Fabric	earthy
pH	4.5
Stones	nil
Roots	common

wm3—Brown sandy clay (subsoil)

Colour	brown (7.5YR 4/6) to dull yellowish brown (10YR 5/4)
Texture	sandy clay to light clay
Structure	weak to moderately pedal, 10–20 mm crumb to polyhedral peds
Fabric	smooth-faced, dense
pH	4.5–5.5
Stones	nil
Roots	few, ex-ped

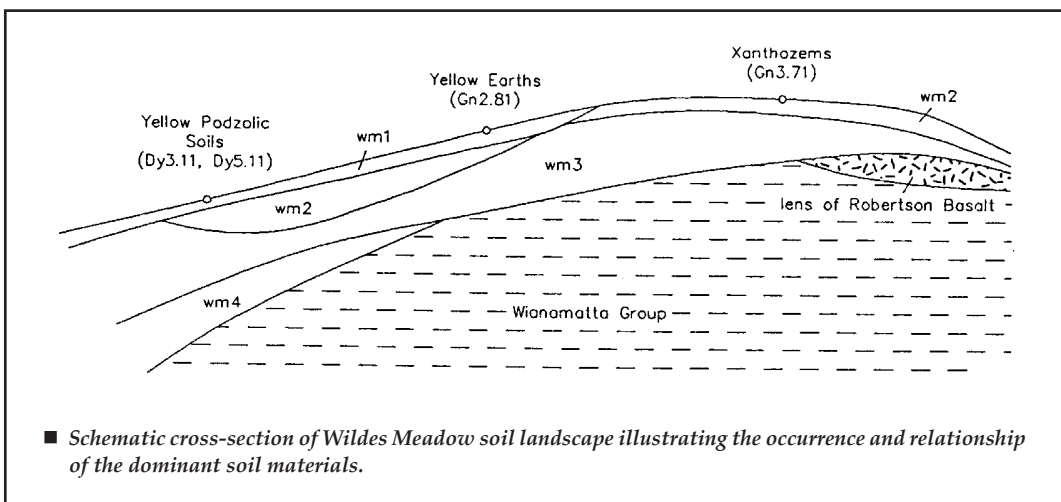
wm4—Mottled orange medium clay (subsoil)

Colour	orange (7.5YR 6/8) to bright yellowish brown (10YR 6/8) mottled grey, yellow and red (50%) at depth >100 cm
Texture	medium to heavy clay
Structure	strongly pedal, 10–20 mm sub-angular blocky
Fabric	rough-faced, porous
pH	3.5–4.5
Stones	nil
Roots	nil

Occurrence and Relationships

Crests and upper slopes. Up to 5 cm brown silt loam (**wm2**) overlies <40 cm brown sandy clay (**wm3**). Boundary is gradual [Xanthozems (Gn3.71)]. Total depth is <50 cm.

Midslopes and lower slopes. Up to 5 cm loose dark brown loamy sand (**wm1**) or <5 cm **wm2** overlies >100 cm mottled orange medium clay (**wm4**). Boundaries are sharp [Yellow Podzolic Soils (Dy3.11)]. Total depth is >100 cm. Occasionally there are localised occurrences of <5 cm **wm1** overlying <15 cm **wm3** which overlies >80 cm **wm4**. Boundaries are clear or gradual [Yellow Podzolic Soils (Dy5.11), Yellow Earths (Gn2.81)]. Total depth is >100 cm.



LIMITATIONS TO DEVELOPMENT

Soil Limitations

- wm1** Very high available water-holding capacity
Strongly acid
High organic matter
- wm2** Strongly acid
Sodicity
- wm3** Low permeability
Low wet bearing strength
Strongly acid
Sodicity
- wm4** Low permeability
Strongly acid
Low wet bearing strength
Sodicity

Fertility

General fertility is low. The topsoils (**wm1** and **wm2**) are loose and well drained on upper and midslopes but have poorly drained subsoils (**wm3** and **wm4**). The soils are strongly acid and have low CEC.

Erodibility

Erodibility of the topsoils **wm1** and **wm2** is low, especially **wm1** which is composed of coarse sand grains. The erodibility of the subsoils **wm3** and **wm4** is high, especially **wm3** which is highly dispersible.

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 300 t/ha for topsoils and 270 t/ha for exposed subsoils. The erosion hazard for concentrated flows is high.

Surface Movement Potential

Slightly reactive in areas of deep clayey soils. There are isolated areas of moderately reactive soils throughout the landscape.

Landscape Limitations

Steep slopes (localised)
Mass movement hazard (localised)
Seasonal waterlogging (localised)
Surface movement potential
Run-on (localised)
Water erosion hazard

Urban Capability

Generally high to severe limitations for urban development.

Rural Capability

Generally high to severe limitations for regular cultivation and grazing