wi	WINGECARRIBEE	Swamp

Landscape—low lying alluvial plains and closed depressions (swamps) on Quaternary alluvium. Relief <10 m. Slopes <3%. Extensively cleared with scattered stands of tall open-forest and areas of closed-sedgeland.

Soils—deep (>150 cm) Acid Peats (0) occur in swamps. Gleyed Podzolic Soils (Dg4.51) occur on flats.

Limitations—run-on, waterlogging, permanently high watertables, high organic matter, low wet bearing strength.

LOCATION

Low lying alluvial plains and closed depressions (swamps) on alluvium on the Moss Vale Tableland. Examples include Wingecarribee Swamp and Wildes Meadow Swamp.

LANDSCAPE

Geology

Quaternary alluvium and Tertiary gravels

Topography

Low lying alluvial plains and closed depressions (swamps). Local relief <10 m. Slopes <3%. Broad swamp lowlands <5 km wide in valley bottoms.

Vegetation

Extensively cleared with scattered stands of tall open-forest including swamp gum and mountain grey gum (*Eucalyptus cypellocarpa*). Closed-sedgeland including common reed (*Phragmites australis*), sedge (*Calorophus minor*), cord-rush (*Restio* sp.), bare twig-rush (*Baumea juncea*), tassel rope-rush and bullrushes (*Typha* sp.) (Pidgeon 1938).

Land Use

Part of this area has been disturbed and drained. An area within Wingecarribee Swamp has been mined for gravels.

Existing Erosion

Erosion is absent. Swamps are almost entirely depositional sites, being very effective sediment traps.

Included Soil Landscape

Small areas of Disturbed Terrain **(xx)** occur.

SOILS

Dominant Soil Materials

wi1—Greasy spongy black organic peat (topsoil)

Colour	black (10YR 1.7/1)
Texture	loam to silty loam
Structure	moderately pedal, 2–5 mm platy peds
Fabric	sandy
pH	4.0
Stones	nil
Roots	abundant, in-ped

wi2—Black organic clay loam (topsoil)

Colour	black (7.5YR 2/1)
Texture	clay loam to silty clay loam
Structure	massive to weakly pedal, 2–5 mm crumb peds
Fabric	earthy/rough-faced peds
pH	5.5
Stones	nil
Roots	abundant, in-ped

wi3—Waterlogged dark brown medium clay (subsoil)

Colour	dark brown (7.5YR 3/3) yellow mottling (70%) at depth
Texture	medium to heavy clay
Structure	apedal massive
Fabric	dense
pH	6.0
Stones	nil
Roots	nil

Occurrence and Relationships

Swamps. Up to 35 cm greasy spongy black organic peat **(wi1)** overlies >100 cm waterlogged dark brown medium clay **(wi3).** Boundary is gradual [Acid Peats (0)]. Total soil depth is >150 cm.

Flats. Up to 30 cm black organic clay loam **(wi2)** overlies >100 cm **wi3.** Boundary is sharp [Gleyed Podzolic Soils (Dg4.51)]. Total soil depth is >150 cm.

LIMITATIONS TO DEVELOPMENT

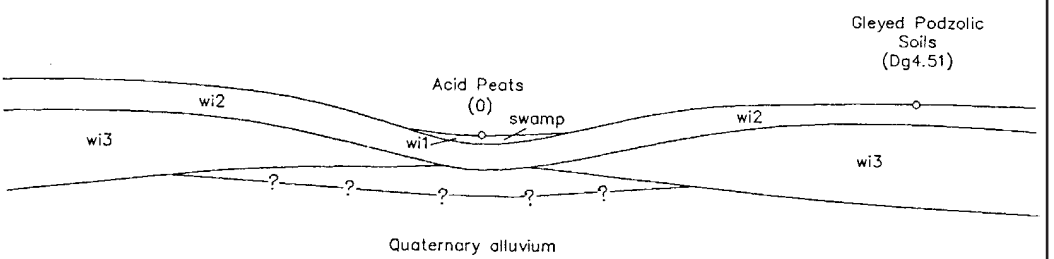
Soil Limitations

wi2 High organic matter
Low wet bearing strength
Sodicity
Salinity

wi3 Low permeability
Low wet bearing strength
Sodicity
Low fertility

Fertility

The general fertility is moderate to very low. The peaty topsoil **(wi1)** and organic clay loam **(wi2)** have moderate fertility. They are both high in organic matter and have high CEC. The subsoil material **(wi3)** has low fertility and is often permanently waterlogged.



■ *Schematic cross-section of Wingecarribee soil landscape illustrating the occurrence and relationship of the dominant soil materials.*

Erodibility

All soil materials have low erodibility.

Erosion Hazard

Erosion hazard for this soil landscape for non-concentrated flows is slight. The calculated soil loss for the first 12 months of urban development ranges up to 5 t/ha for topsoils and 5 t/ha for exposed subsoils. The erosion hazard for concentrated flows is moderate to high.

Surface Movement Potential

Slight to moderate reactivity would occur with peat.

Landscape Limitations

Waterlogging
Permanently high watertable
Run-on

Urban Capability

Generally high to severe limitations for urban development.

Rural Capability

Generally high to severe limitations for regular cultivation and grazing in swampy areas. Low to moderate limitations for regular cultivation and grazing in better drained areas.