



**Landscape**— Gently undulating floodplain on Quaternary alluvium in the Canberra Lowlands. Slopes generally <3%, local relief <10 m, elevation 540 - 680 m. Many imperfectly drained areas. Extensively cleared riparian woodland.

**Soils**— Deep (>100 cm), poorly drained Stratic Rudosols (Alluvial Soils) on floodplains, with deep (>100 cm), imperfectly drained Sodic Brown Chromosols (Brown and Yellow Podzolic Soils) on margins.

**Qualities and limitations**— widespread non-cohesive soils, widespread foundation hazard, widespread complex terrain, localised wind erosion hazard, widespread gully erosion hazard, widespread high run-on, localised poor drainage, widespread permanent waterlogging, widespread seasonal waterlogging, widespread flood hazard.

## LOCATION AND SIGNIFICANCE

Level to gently sloping alluvial flats of the Canberra Lowlands. Drainage lines are inefficient relative to other parts of the ACT. Includes parts of Ginninderra Creek, Gooromon Creek, McLaughlins Creek and ACT water courses. This soil landscape was first mapped by Jenkins (2000). Type location is south of the Wells Station Road culvert over Sullivans Creek (MGA grid reference 695800E, 6100500N, grid zone 55).

### Variants

None.

### Included landscapes

Small rises of Williamsdale (wiw) soil landscape that are too small to map at the scale of this map sheet are included within Ginninderra Creek (gcv) soil landscape.

## LANDSCAPE

### Landform

Gently undulating floodplain with local relief <10 m and elevation between 540 - 680 m. Slopes are generally <3%, but are greater at the margins of the unit. This depositional system is the result of the inefficient drainage network that occurs over much of the Canberra Lowlands. Many imperfectly-drained areas occur throughout this landscape.

### Geology

Quaternary alluvium, consisting of gravel, sand, loam and clay. Bedrock is often >2 m below the soil surface.

Source: Abell 1991.

### Vegetation

Riparian woodland with areas of scrub, sedges and grassland, that has been extensively cleared for grazing and urban activities. *Juncus* spp. (rushes) and *Carex* spp. (sedges) occur in seepage areas and other places that are continually wet.

Grassland includes *Poa labillardieri* (snow grass), which is widespread and common on alluvial flats. In drier areas, *Themeda australis* (kangaroo grass) tends to be dominant.

### Land use

Ginninderra Creek has been extensively altered as part of Canberra's urban expansion. Both Belconnen and, more recently, Gungahlin town centres have seen extensive urbanisation. Artificial lakes and wetlands have been created for the town centres. In non-urban areas, grazing of cattle is the main landuse.

### Land degradation

Gully erosion is common and widespread.

### Erosion hazard

Land use	Non-concentrated flows	Concentrated flows	Wind
grazing	high	very high	slight

## SOILS

### Soil variation and distribution

Deep (>100 cm), poorly drained Stratic Rudosols (Alluvial Soils) on floodplain elements. Deep (>100 cm), imperfectly drained Sodic Brown Chromosols (Brown and Yellow Podzolic Soils) on margins of the unit.

## QUALITIES AND LIMITATIONS

### Land capability

Urban Capability	E	Soil Regolith Class	R2 (R3)
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### Limitations to land use

Grazing	slight	Cultivation	moderate
Urban	high to extreme		

### Landscape

Steep slopes	not observed	Mass movement hazard	not observed
Rock outcrop	not observed	Rockfall hazard	not observed
Foundation hazard	widespread	Complex terrain	widespread
Productive arable land	not observed		

### Soils

Shallow soils	not observed	Complex soils	not observed
Poor moisture availability	not observed	Non-cohesive soils	widespread

### Hydrology

High run-on	widespread	Poor drainage	localised
Permanently high watertables	not observed	Permanent waterlogging	widespread
Seasonal waterlogging	widespread	Flood hazard	widespread

### Erosion

Wind erosion hazard	localised	Wave erosion hazard	not observed
Gully erosion hazard	widespread	Sheet erosion hazard	not observed
Streambank erosion hazard	not observed		

### Salinity

Recharge zone	not observed	Discharge zone	not observed
Salinity hazard	not observed	Seepage scalds	not observed
Salt stores	low		

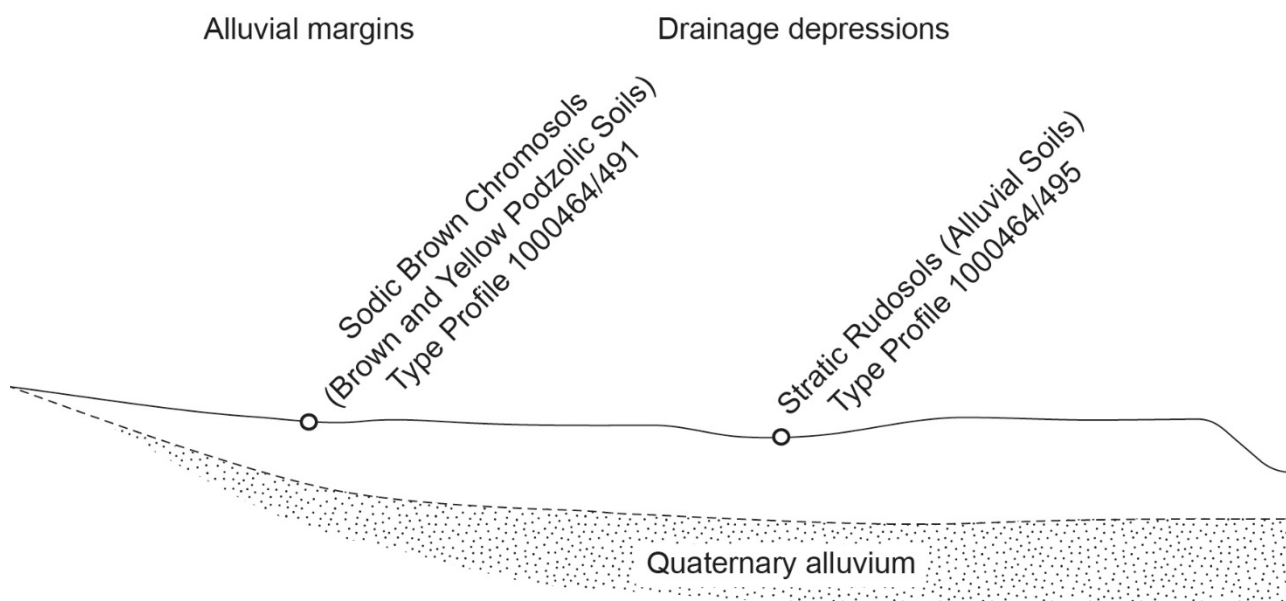
## FACETS

### gcv(1)— Alluvial margins

<b>Soils</b>	Deep (>100 cm), imperfectly drained Sodic Brown Chromosols (Brown and Yellow Podzolic Soils).
<b>Type Profile(s)</b>	Brown Chromosol (Brown Podzolic Soil): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 491 (Normal Profile)
<b>HGL Reference</b>	Typically corresponds with: HGL 14 (Majura Road) MA 5, HGL 11 (Kambah Pools) MA 3/5, HGL 13 (Lanyon) MA 5, HGL 8 (Hall) 4/5, HGL 7 (Gungahlin) MA 5 and HGL 24 (Symonston) MA 5.

### gcv(2)— Drainage depressions

<b>Soils</b>	Deep (>100 cm), poorly drained Stratic Rudosols (Alluvial Soils).
<b>Type Profile(s)</b>	Stratic Rudosol (Alluvial Soil): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 495 (Normal Profile)
<b>HGL Reference</b>	Typically corresponds with: HGL 23 (Sullivans Creek) MA 9/10, HGL 22 (South Canberra) MA 9/10, HGL 7 (Gungahlin) MA 9/10, HGL 14 (Majura Road) MA 9/10, HGL 11 (Kambah Pools) MA 9/10, HGL 13 (Lanyon) MA 9/10 and HGL 24 (Symonston) M 9/10.



*Schematic cross-section of the Ginniderra Creek (gcv) soil landscape, showing facets and soil types*

## REFERENCES

- Abell, R.S. 1991. "Geology of the Canberra 1:100,000 Sheet area" Bureau of Mineral Resources, Bulletin 233.
- Jenkins, B. R., 2000. Soil Landscapes of the Canberra 1:100 000 sheet, Department of Land and Water Conservation, Sydney.

## NOTES

- (1) This report describes reconnaissance soil landscape information mapped at 1:100,000 scale and does not negate the need for site assessment at a scale suitable to the land use or development under consideration.
- (2) 'Not observed' means unlikely to be found. 'Localised' means observed to a level considered significant for land management. 'Widespread' means prevalent and significant over most of the landscape. 'None recorded' means no

occurrence has been recorded. 'Not assessed' means no result has been recorded for this attribute and it may or may not be present in the soil landscape.

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