fry	FRANKLIN	Residual



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Landscape— Gently undulating pediplain on Silurian sedimentary and volcanic rocks in the northern ACT. Slopes 2 - 5%, local relief <10 m, elevation 590 - 650 m. Extensive cleared woodland to open-forest.

Soils— Deep (100 - 150 cm), imperfectly drained Sodic Yellow Chromosols (Yellow Podzolic Soils) and moderately deep to deep, poorly drained Brown Dermosols (Alluvial Soils).

Qualities and limitations— localised non-cohesive soils, localised foundation hazard, localised recharge zone, localised discharge zone, localised high run-on, localised poor drainage, localised permanently high watertables, widespread seasonal waterlogging, localised flood hazard.

LOCATION AND SIGNIFICANCE

Gently undulating plain of the Canberra Lowlands in the far north of the ACT, consisting of one large occurrence extending from Gungahlin to Gundaroo Road. Previously mapped by Jenkins (2000). Type location is approximately 1 km north of Wells Station Homestead (MGA grid reference 696300E, 6102850N, grid zone 55).

Variants

None.

Included landscapes

Small areas of Williamsdale (wiw) soil landscape has been included along the margins. As this soil landscape has transitional soil boundaries with Williamsdale (wiw), some overlap is inevitable. Isolated pockets of Williamsdale soil landscape also occur on small rises, areas of higher relief within the Franklin (fry) soil landscape.

LANDSCAPE

Landform

Gently undulating plain with local relief <10 m and elevation ranging from 590 - 650 m. Slopes are typically long (>300 m) and gently inclined (2 - 5%). Up to 10% surface gravels of parent material and an inefficient and partly interrupted drainage network. Streams are disproportionally small relative to their valleys. This is probably due to the process of 'pedimentation' as defined by van Dijk (1959). Simply put, this process involves the destruction and levelling of older land surfaces to a new base level by escarpment retreat.

Geology

Silurian sedimentary and volcanic rocks of the Canberra Block. Most of the underlying bedrock belongs to the Canberra Formation, which consists of mudstone and siltstone with minor sandstone and limestone. Volcanoclastic sediments and volcanic rocks such as ignimbrite become more common towards the top of the formation.

Source: Abell 1991.

Vegetation

Extensive cleared woodland (savanna) to open-forest (dry sclerophyll). Little or no understorey remains other than improved pasture. The few remaining trees are large mature Eucalyptus blakelyi (Blakely's red gum) and E.melliodora (yellow box).

Land use

Sheep and cattle grazing on improved pasture. At the time of writing, the southern portion of the landscape unit was undergoing intensive urban development as part of the Gungahlin development.

Land degradation

Little or no land degradation.

Erosion hazard

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

SOILS

Soil variation and distribution

Soils are generally texture-contrast on the low rises. Fluvial processes have formed the soils of drainage lines with a significant in situ and colluvial component. Deep (100 - 150 cm), imperfectly drained Sodic Yellow Chromosols (Yellow Podzolic Soils) occur on the undulating plain and moderately deep to deep, poorly drained Brown Dermosol (Alluvial Soils) occur in drainage lines.

QUALITIES AND LIMITATIONS

Land capability

Urban Capability	C (E)	**Soil Regolith Class**	R3 (R4, R2)

Limitations to land use

Grazing	slight to moderate	**Cultivation**	moderate to high
Urban	moderate		

Landscape

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

Soils

Shallow soils	not observed	**Complex soils**	not observed
Poor moisture availability	not observed	**Non-cohesive soils**	localised

Hydrology

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

Erosion

Wind erosion hazard	not observed	**Wave erosion hazard**	not observed
Gully erosion hazard	not observed	**Sheet erosion hazard**	not observed
Streambank erosion hazard	not observed		

Salinity

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

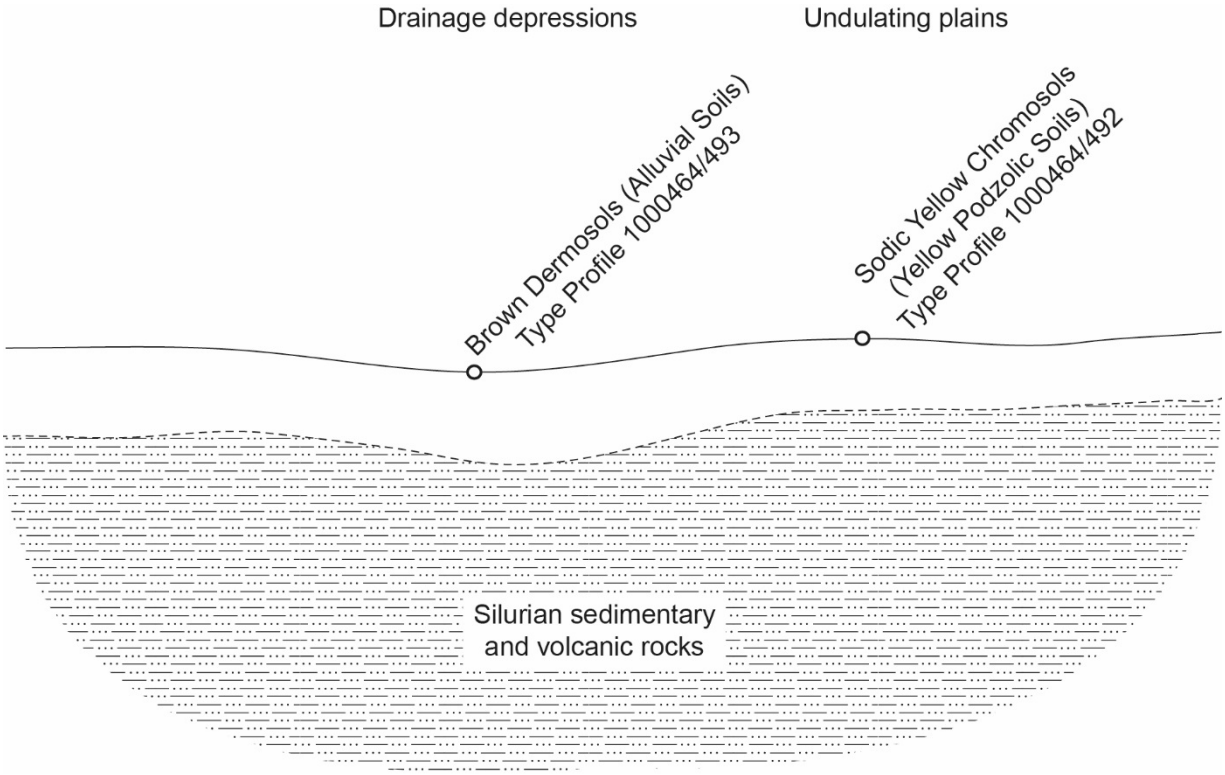
FACETS

fry(1)— Undulating plains

Soils	Moderately deep (100 - 150 cm), imperfectly drained Sodic Yellow Chromosols (Yellow Podzolic Soils).
Type Profile(s)	Yellow Chromosol (Yellow Podzolic Soil): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 492 (Master Type Profile)
HGL Reference	Typically corresponds with: HGL 7 (Gungahlin) MA 2/3, MA 4 and MA 5.

fry(2)— Drainage depressions

Soils	Moderately deep to deep (>100 cm), poorly drained Brown Dermosols (Alluvial Soils) in drainage lines.
Type Profile(s)	Brown Dermosol (Alluvial Soil): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 493 (Master Type Profile)
HGL Reference	Typically corresponds with: HGL 7 (Gungahlin) MA 9/10.



Schematic cross-section of the Franklin (fry) 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 map and report, Department of Land and Water Conservation, Sydney

van Dijk, 1959. "Soil features in relation to soil layering in the Canberra district", CSIRO Aust. Soil Publ. No. 13

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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