hsz	HOSKINSTOWN	Vestigial

Landscape— Undulating low hills on Silurian volcanics and sedimentary units in the far NE ACT. Slopes 2 - 10%, local relief 30 -90 m, elevation 700 - 900 m. Extensively cleared open-forest, woodland and grassland.

Soils— Very shallow (<25 cm), well-drained Leptic Rudosols (Tenosols), moderately deep to deep (50 - 150 cm), imperfectly to well-drained Red and Brown Kandosols and Kurosols (Red and Yellow Earths and Red Podzolic Soils), moderately deep (50 - 100 cm), imperfectly to poorly drained Yellow Chromosols (Yellow Podzolic Soils and Solodic Soils) and Yellow Kandosols (Yellow Earths) and bleached Brown Dermosols and Sodosols (Alluvial Soils and Solodic Soils).

Qualities and limitations— localised shallow soils, localised complex soils, widespread poor moisture availability, localised non-cohesive soils, widespread foundation hazard, localised recharge zone, widespread discharge zone, localised salinity hazard, widespread wind erosion hazard, widespread gully erosion hazard, widespread sheet erosion hazard, localised high run-on, localised poor drainage, localised permanent waterlogging, widespread seasonal waterlogging.

LOCATION AND SIGNIFICANCE

Undulating low hills and rises on volcanic and terrestrial sediments of the Cullarin Upland, occurring within the ACT as several small areas on its far eastern border in the headwaters of Dairy Station Creek. The landscape includes the cleared areas of the properties, 'Felled Timber' and 'Thullande'. This soil landscape occurs more extensively outside the ACT on the Canberra 1:100 000 sheet (Jenkins 2000). Type location is Dairy Farmers Creek catchment on the 'Felled Timber' property (MGA grid reference 717000E, 6089700N, grid zone 55).

Variants

None.

Included landscapes

None.

LANDSCAPE

Landform

Undulating low hills and rises on highly erodible sediments on the Cullarin Upland. Local relief is 10 - 30m, Short, linear, gently inclined footslopes averaging 5% gradient, with local relief between 10 - 30 m and elevation ranging between 770 - 850 m. Highly degraded and erodible soils with serious sheet and gully erosion evident.

Geology

Silurian volcanics and sedimentary units of the Carwoola and Captains Flat Formations. Included in this grouping are proximal quartz turbidites of sandstone, shale and siltstone, acid and basic volcanics, and tuffs. The degree to which bedrock is fractured varies dependant on the lithology, but in general, it is less than for the metasediments of the Cullarin Upland.

Source: DMR 2002.

Vegetation

Extensively cleared open-forest (dry sclerophyll forest), woodland and grassland. Upper storey species present include Eucalyptus mannifera (brittle gum), E. rossii (scribbly gum), E. rubida (candlebark) and E. bridgesiana (apple box). Exocarpos cupressiformis (wild cherry) and Acacia dealbata (silver wattle) occur throughout. Grasses present include Poa sieberana (snow grass), Themeda australis (kangaroo grass) and Danthonia spp. (wallaby grasses). Stipa bigeniculata (spear grass) occurs in more heavily grazed areas.

E. dives (broad-leaved peppermint) and E.mannifera (brittle gum) form an open-forest association on steeper drier sites. There are a number of understorey shrubs such as Daviesia leptophylla (slender bitter pea) and Pultenaea microphylla (spreading bush pea). In more open areas, grasses including Joycea pallida (red anther wallaby grass) tend to dominate the understorey. Where this association merges with savanna woodland, E.polyanthemos (red box) may also be present.

E. bridgesiana (apple box) and E. rubida (candlebark) occur as woodland along creek lines with an understorey of A. dealbata (silver wattle), Poa labillardieri (snow grass) and herbs such as Acaena novae-zelandiae (bidgee widgee burr) and Stellaria pungens (prickly starwort) (Taws 1998).

This landscape contains areas of grassland. Rehwinkel (1997) identified this grassland as having a very high diversity of native plant species (70 herbaceous species). The presence or absence of indicator species is used to assess the quality of the grassland. Rehwinkel (1997) identifies a number of indicator species for the Turallo grasslands and concludes that it is an area “of high conservation value.” Indicator species identified were Arthropodium fimbriatum (vanilla lily), Bulbinopsis bulbosa (bulbine lily), Calocephalus citreus (lemon beauty-heads), Calotis anthemoides (cut-leaved burr-daisy), Calotis scabiosifolia integrifolia (rough burr-daisy), Diuris lanceolata (golden moths orchid), Eryngium rostratum (blue devil), Helichrysum rutidolepis (pale everlasting), Leucochrysum albicans (hoary sunray), Microtis spp. (orchids), Pterostylis spp. (greenhoods), Thelymitra pauciflora (slender sun orchid) and Velleia paradoxa (spur velleia). Woody shrubs shrubs found amongst the grassland include Daviesia genistifolia (broom bitter pea), Hovea heterophylla (hovea), Melichrus urceolatus (urn heath), Pimelea glauca (smooth rice flower) (Rehwinkel 1997).

Land use

Extensively cleared and replaced by native and some improved pastures for beef and sheep production. A small area is contained within the Kowen Pine Forest.

Land degradation

Extensive sheet erosion occurs on slopes. Extensive gully erosion (<3 m deep) occurs on in all drainage lines. Soil conservation works of unknown age are evident and erosion has stabilised in places however gullies and sheet erosion continues to be active throughout the landscape. Seepage scalds are locally common on mid and lower slopes. Localised salinity on lower slopes.

Erosion hazard

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

SOILS

Soil variation and distribution

Soils tend to be stony, with strong texture-contrast on slopes. Very shallow (<25 cm) well-drained Leptic Rudosols (Tenosols) occur on crests, with moderately deep to deep (50 - 150 cm), imperfectly to well-drained Red and Brown Kandosols and Kurosols (Red and Yellow Earths and Red Podzolic Soils) on upper and midslopes. Moderately deep (50 - 100 cm), imperfectly to poorly drained Yellow Chromosols (Yellow Podzolic Soils and Solodic Soils) and Yellow Kandosols (Yellow Earths) occur on lower slopes, and bleached Brown Dermosols and Sodosols (Alluvial Soils and Solodic Soils) are found in drainage lines.

Most ot the soil degradation can be related back to the highly sodic and fragile nature of the subsoils on lower slopes and in drainage lines.

QUALITIES AND LIMITATIONS

Land capability

Urban Capability	C (D)	**Soil Regolith Class**	R4 (R3)

Limitations to land use

Grazing	high	**Cultivation**	high to very high
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**	not observed
Productive arable land	not observed		
Soils			
Shallow soils	localised	**Complex soils**	localised
Poor moisture availability	widespread	**Non-cohesive soils**	localised
Hydrology			
High run-on	localised	**Poor drainage**	localised
Permanently high watertables	not observed	**Permanent waterlogging**	localised
Seasonal waterlogging	widespread	**Flood hazard**	not observed
Erosion			
Wind erosion hazard	widespread	**Wave erosion hazard**	not observed
Gully erosion hazard	widespread	**Sheet erosion hazard**	widespread
Streambank erosion hazard	not observed		
Salinity			
Recharge zone	localised	**Discharge zone**	widespread
Salinity hazard	localised	**Seepage scalds**	localised
Salt stores	moderate		

FACETS

hsz(1)— Upper and midslopes

Soils	Moderately deep to deep (50 - 150 cm), imperfectly to well-drained Red and Brown Kandosols and Kurosols (Red and Yellow Earths and Red Podzolic Soils).
Type Profile(s)	Red Kurosol (Red Podzolic Soil): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 471 (Master Type Profile) Red Kandosol (Red Earth): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 67 (Master Type Profile) Brown Kandosol (Yellow Earth): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 83 (Associated Type Profile)
HGL Reference	Typically corresponds with: HGL 9 (Hoskinstown) MA 2.

hsz(2)— Lower slopes

Soils	Moderately deep (50 - 100 cm), imperfectly to poorly drained Yellow Chromosols (Yellow Podzolic Soils and Solodic Soils) and Yellow Kandosols (Yellow Earths).
Type Profile(s)	Yellow Chromosol (Yellow Podzolic Soil): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 84 (Master Type Profile)
HGL Reference	Typically corresponds with: HGL 9 (Hoskinstown) MA 3/5.

hsz(3)— Open depressions

Soils	Deep (>100 cm), imperfectly drained bleached Brown Dermosols and Sodosols (Alluvial soils and Solodic Soils).
Type Profile(s)	Brown Dermosol (Alluvial Soil): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 485 (Master Type Profile)

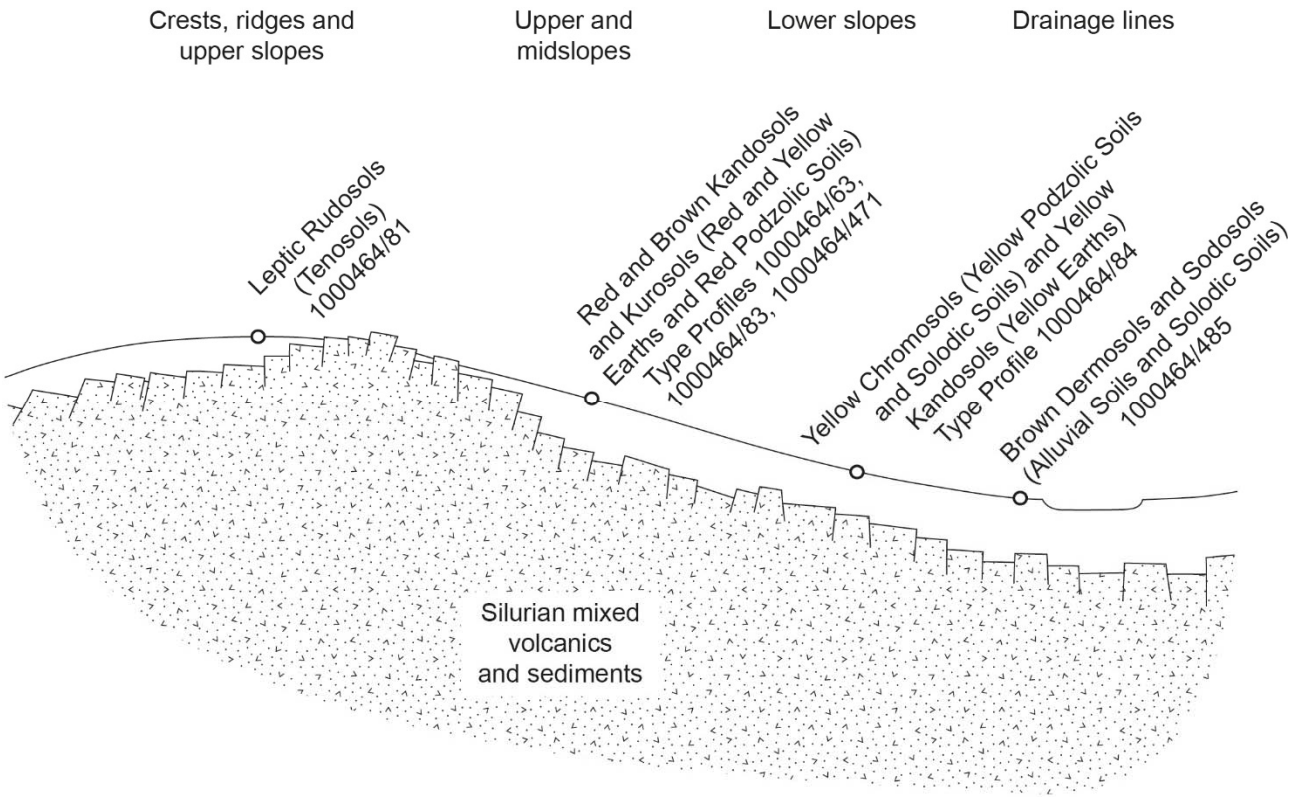
HGL Reference Typically corresponds with: HGL 9 (Hoskinstown) MA 9/10.

hsz(4)— Crests, ridges and upper slopes

Soils Very shallow (<25 cm), well-drained Leptic Rudosols (Tenosols).

Type Profile(s) Leptic Rudosol (Lithosol): Soil Landscapes of the Canberra 1:100 000 Sheet (1000464) profile 81 (Master Type Profile)

HGL Reference Typically corresponds with: HGL 9 (Hoskinstown) MA 1.



Schematic cross-section of the Hoskinstown (hsz) soil landscape, showing facets and soil types

REFERENCES

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Taws, N. 1998. "The Bushlands of Mt Foxlow - Harrisons Peak: A preliminary ecological assessment", Unpublished Report to the Save the bush Grants Scheme and the Stoney Creek Landcare Group, Queanbeyan, NSW

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.