

7.13 *Ida Land System (Ia)*

Ida land system occurs on a prominent ridge of Devonian sandstones and siltstones to the east of McIvor Creek between Heathcote and Tooborac.

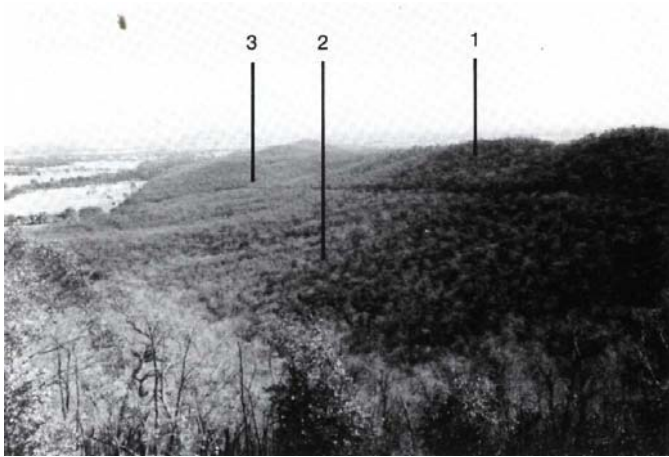
On the slopes, the soils vary from uniform stony loams on the steepest slopes and drainage depression to red or yellow sodic duplex soils. On some of the gentler slopes the A₂ horizon contains rounded quartz gravel, indicating a contribution from former fluvial deposits.

The native vegetation remains on the steeper slopes, consisting of shrubby woodland-open forest of *E. polyanthemos*, *E. macrorhyncha* and *E. goniocalyx*. On the gentler lower slopes *E. microcarpa* and *E. melliodora* predominate, with some *E. goniocalyx*. *E. camaldulensis* is restricted to the lower drainage depressions.

The area is sensitive to sheet, rill and gully erosion, and compaction of the sandy loam topsoils. These problems are controlled on the steeper slopes by the retention of the native vegetation. This vegetation also provides for scenic values, flora and fauna conservation, low-intensity forestry and protection of the more productive lowlands against erosion and rising saline groundwaters.



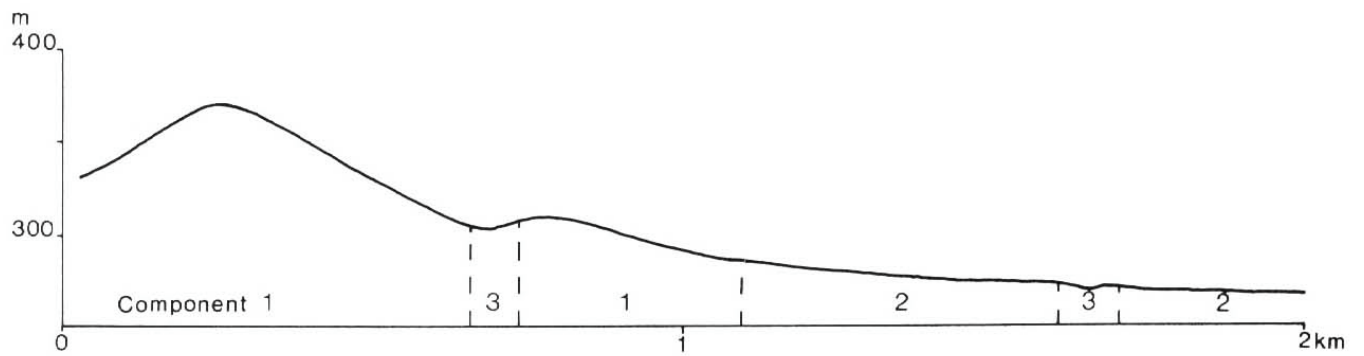
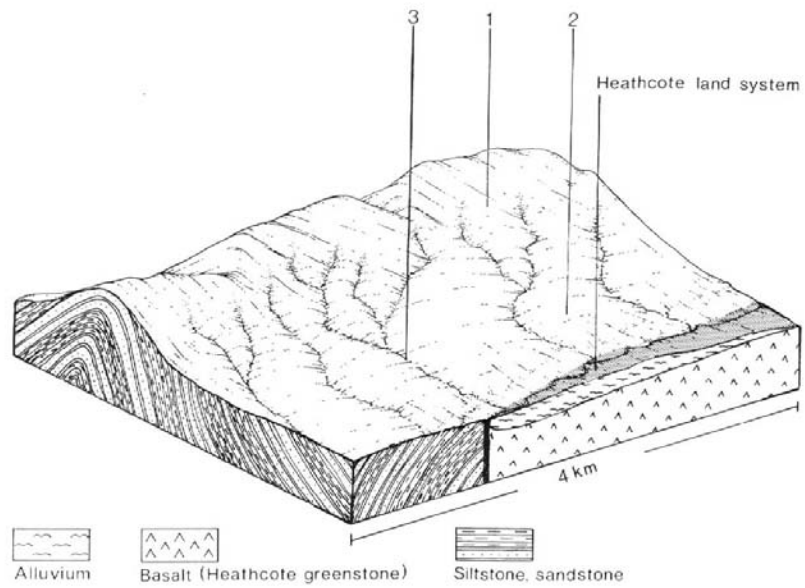
The timbered ridge of the Ida land system



Looking north along the eastern catchment boundary from the fire-control lookout tower on Mt Ida (elevation 451 m).



The Ida land system forms a clear catchment boundary between the Campaspe and Goulburn Rivers.



IDA LAND SYSTEM (Ia)
Area 28 km² 0.7% of catchment

CLIMATE Rainfall, mean (mm) Temperature, mean (°C) Seasonal growth limitations	Annual, 550-700; lowest January (30-35), highest June or August (60-65) Annual, 14; lowest July (8), highest February (22) Temperature less than 10°C (av.): May – August Rainfall less than potential evapotranspiration: October – early April		
GEOLOGY Age, rock type	Devonian, sandstone and siltstone		
PHYSIOGRAPHY Landform pattern Elevation range (m) Relative relief (m) Drainage pattern Channel spacing	Rolling hills forming prominent ridges 270-500 100 Dendritic Moderate		
LAND COMPONENT Number Percentage of land system	1 70	2 25	3 5
PHYSIOGRAPHY Landform element Slope; modal, range (%) Site drainage	Crest and steep slope 35, 0-45 Excessively drained	Less steep lower slope 5, 1-13 Somewhat excessively drained	Drainage depression 3, 1-6 Well drained
SOIL Parent material Description Classification Surface texture Depth to hardpan or bedrock (m) Nutrient status Available water capacity Permeability Exposed rock/stone (%) Sampled site number	Sandstone, siltstone and colluvium Red or yellow duplex soils, often with large stones in the surface horizon Dr2.41, D72.11, minor Um (crests) Fine sandy loam 0.1-1.0 Very low Low to moderate; very low (crests) Moderate to rapid 0-90 1068	Sandstone, siltstone and colluvium Mottled yellow duplex soils with bleached A ₂ horizons, which often contain large quantities of stone Dy3.41, Dy3.42, Dy3.21, minor Gn3.84, Dr2.41 Fine sandy loam, loam 0.5-2.0 Low surface, moderate subsoil Low surface, moderate subsoil Moderate surface, slow subsoil 0-5 1117	Alluvium and colluvium Upper areas; shallow stony loams. Lower areas: mottled yellow duplex soils with bleached A ₂ horizons. Um (stony), Dy3.4, Uc1.11 over Dy Loamy fine sand, fine sandy loam 0.3-2.0 Low Low to moderate Moderate to rapid surface, slow for duplex soils 0 1069
NATIVE VEGETATION Structure Characteristic species (+ indicates predominant species)	Woodland I/open forest I <i>E. macrorhyncha</i> +, <i>E. polyanthemus</i> +, <i>E. goniocalyx</i> +	Woodland II/open forest II <i>E. microcarpa</i> +, <i>E. melliodora</i>	Woodland II/open forest II Lower areas: <i>E. camaldulensis</i> +, <i>E. melliodora</i> Upper areas: <i>E. goniocalyx</i>
PRESENT LAND USE	Flora reserve, scenic reserve	Flora and scenic reserves; grazing of sheep on native pastures	Flora and scenic reserves; grazing of sheep on native pastures
OBSERVED SOIL DETERIORATION	Sheet erosion common, especially in cleared areas	Sheet erosion common, especially in cleared areas	Gully erosion common in lower areas

SUSCEPTIBILITY OF LAND TO PROCESSES OF SOIL DETERIORATION – Ida

Compt.	Process	Susceptibility	Critical land factors	Off-site effects	Comments
1	Sheet & rill erosion	High	<ul style="list-style-type: none"> steep slopes hydrophobic topsoil 	<ul style="list-style-type: none"> sedimentation increased run-on 	-
	Wind erosion	Low to moderate	<ul style="list-style-type: none"> weakly structured loamy topsoil exposed topographic position 	<ul style="list-style-type: none"> - 	Hazard limited by the large number of stones in the topsoil
	Compaction of topsoil	Low to moderate	<ul style="list-style-type: none"> loamy texture low organic matter content 	<ul style="list-style-type: none"> increased run-on 	Hazard limited by the large number of stones in the topsoil
	Leaching of nutrients	Moderate	<ul style="list-style-type: none"> weak soil structure moderate soil permeability low cation exchange capacity 	<ul style="list-style-type: none"> - 	Accession of soluble salts, particularly NaCl, to the groundwaters
2	Sheet & rill erosion	Moderate	<ul style="list-style-type: none"> moderate slopes hydrophobic topsoil 	<ul style="list-style-type: none"> sedimentation increased run-on 	-
	Compaction of topsoil	Moderate	<ul style="list-style-type: none"> sodic subsoils loamy textures low organic matter content weak soil structure 	<ul style="list-style-type: none"> increased run-on 	-
3	Gully erosion	Moderate	<ul style="list-style-type: none"> channelised run-on minor accumulation of alluvium 	<ul style="list-style-type: none"> sedimentation water turbidity 	Gully erosion is limited by shallow alluvium of rock bars
	Compaction of topsoil	Moderate	<ul style="list-style-type: none"> loamy texture weak soil structure often moist 	<ul style="list-style-type: none"> increased run-on 	-



The steep rocky slopes have minimal land deterioration, provided the native tree cover is retained.