

6.26 Sunbury Land System

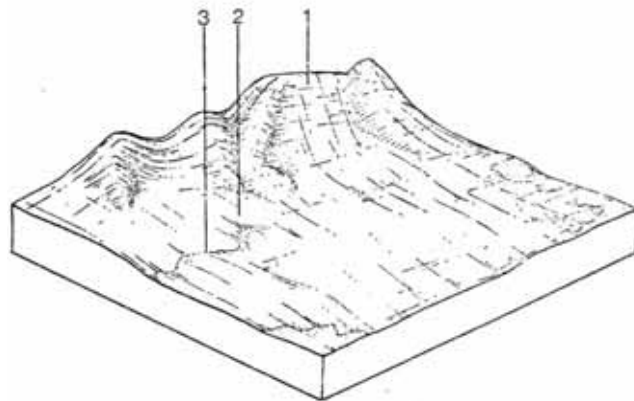
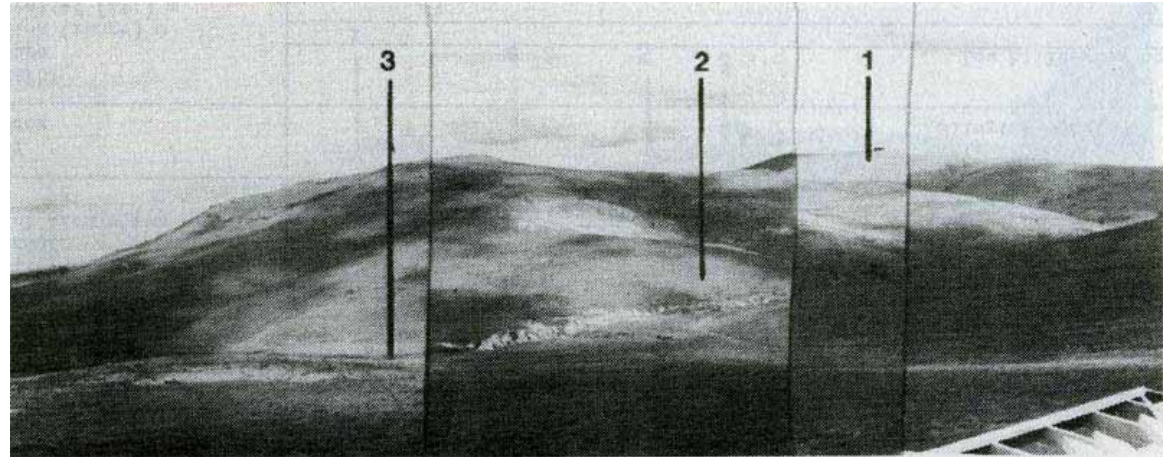
It occurs in five areas covering a total of 81.5 km² or 3.2% of the study area.

This land system comprises low hills occurring on Ordovician sediments. In places it seems that basalt once covered the underlying sediments but this has now eroded away.

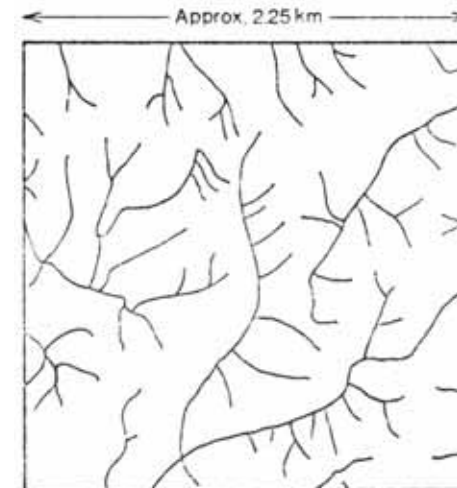
Most of the original vegetation has been cleared but a few native trees have been left. These are Yellow Gum and Yellow Box on the crests and slopes and Manna Gum, River Red Gum and Grey Box in the wetter areas.

The predominant soil is the mottled yellow, brown sodic duplex soil mainly found on the slopes. It has a non-structured, light textured, brown topsoil overlying a well-structured, mottled, heavy subsoil. The crests have a similar soil which is shallower and more gradational; the swales have either the mottled yellow, brown sodic duplex soil or a black clay, which may have basaltic influence.

The subsoils have dispersible clays so that there is a high erosion hazard, particularly in the lower areas where there is more water in the subsoil.



Schematic Block Diagram



Drainage Pattern

COMPONENT	1	2	3
Proportion %	45	50	5
CLIMATE Rainfall (av.) Temperature (av.) Seasonal growth limitations	Annual: 580-640 mm (monthly range: 65 mm – July 40 mm) Annual: 13°C (monthly range: February 20°C – July 7°C) Temperature: less than 10°C May - September Precipitation less than potential evapotranspiration November – March		
GEOLOGY Age, rock	Ordovician thinly bedded shale and sandstone		Alluvium
TOPOGRAPHY Landscape Elevation (range) m Local relief (av.) m Drainage pattern Drainage density km/km ² Land form Slope (av.) %, slope shape	Low hills 180-410 Dendritic 3.6 Slope Crest 9; Convex		
		Slope 12; Straight	Drainage line 3; Concave
NATIVE VEGETATION Structure Dominant species	<i>E. leucoxydon</i>	Woodland <i>E. leucoxydon</i> , <i>E. melliodora</i>	<i>E. viminalis</i> , <i>E. camaldulensis</i> , <i>E. microcarpa</i>
SOIL Parent Material Description	In situ weathered rock		Alluvium
	Shallow, stony gradational soils	Mottled yellow, brown sodic duplex soils, coarse structure	Mottled yellow, brown sodic duplex soils, coarse structure. Grey calcareous sodic and/or clayey soils, uniform texture, coarse structure
Factual Key	Gn 4.55	Db 1.12	Db 2.12, Ug 6.1
Surface Texture	Gravelly loam	Gravelly loam	Clay loam – Clay
Permeability	High	Moderate	Low
Depth (av.) m	0.4	0.8	1.5
LAND USE	Grazing, occasional cropping (cereal)		
SOIL DETERIORATION HAZARD Critical land features	Hard setting surfaces, slope gradient	Slope gradient, dispersibility, hard setting surfaces	Dispersibility, high watertable, hard setting surfaces
Processes	Overland flow, movement of salts	Overland flow, movement of salts	Overland flow, subsurface flow, periodic waterlogging
Forms	Sheet erosion	Sheet and tunnel erosion	Gully and tunnel erosion, accumulation of salts