

6.7 Footscray Land System

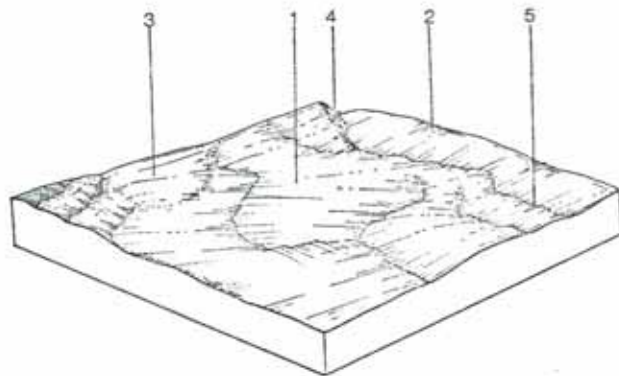
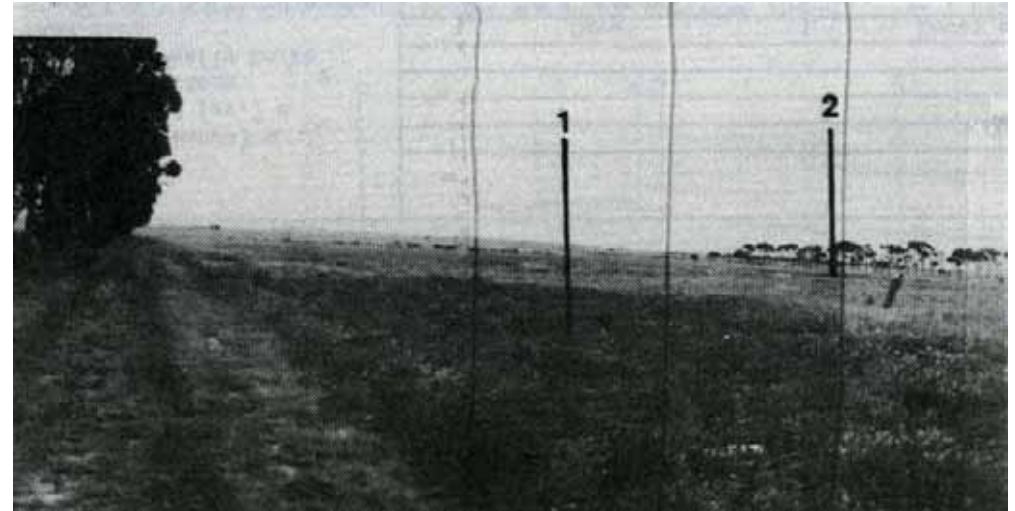
This land system, which occurs in the south-west covers 133 km² or 5.1% of the study area.

The boundary east of Sunbury follows a low scarp in a north-easterly direction. The landscape is one of undulating plains with gentle slopes of 0-3%. These naturally treeless plains are now covered mainly by introduced grasses and also large areas of thistle (*Cynara cardunailus*). The only stony areas are those where the basalt bedrock has been exposed by creek down cutting.

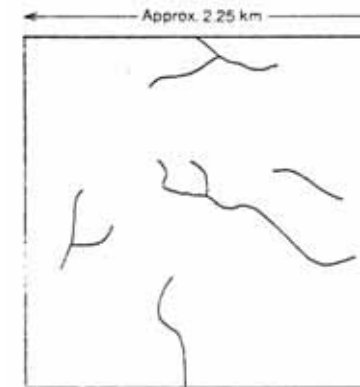
Grey calcareous sodic clay soil with uniform texture and coarse structure is formed over most of the landscape with the exception of the depressions, which have black clay soils. They grey clay usually has a relatively high concentration of lime; lime leached from these soils is often found in crevices between the rocks. Black clay soils are sometimes found mixed with the grey clays on the slopes, e.g. at Oaklands Junction.

In places there is a wash from other higher land systems over the grey clay, giving the impression of an A horizon. In the Bulla district, this wash contains a great amount of granitic quartz. In some of these wash areas, trees have been found growing, possibly due to the lighter textured topsoil.

The heavy clay soils which are prone to waterlogging restrict the use that can be made of them. Their high shrink/swell capacity should be taken into account in building and other construction works.



Schematic Block Diagram



Drainage Pattern

COMPONENT	1	2	3	4	5
Proportion %	50	23	9	13	5
CLIMATE Rainfall (av.) Temperature (av.) Seasonal growth limitations	Annual: 620 – 750 mm (monthly range: September 80 mm – February 40 mm) Annual: 13°C (monthly range: February 21°C – July 9°) Temperature: less than 10°C June – August Precipitation: less than potential evapotranspiration December – March				
GEOLOGY Age, rock	Silurian sandstone, mudstone and shale				
TOPOGRAPHY Landscape Elevation (range) m Local relief (av.) m Drainage pattern Drainage density km/km ² Land form Slope (av.) %, slope shape	Hills 100 – 300 45 Dendritic 4.6 Crest 14; convex Lower slope 11; straight Upper swale 5; concave Lower swale 5; concave Drainage line 3; straight				
NATIVE VEGETATION Structure Dominant species	E. goniocalyx, E. melliodora, E. radiata, E. macrorhyncha	E. rubida	Open forest E. rubida, E. melliodora	E. rubida, E. melliodora	E. ovata, E. viminalis
SOIL Parent Material Description Factual Key Surface Texture Permeability Depth (av.) m	Shallow stony brown gradational soils Gn 3.11 Gravelly clay loam High 0.5	Yellow sodic duplex soils, coarse structure Dy 3.32 Gravelly loam Low 1.0	In situ weathered rock Mottled yellow, brown gradational soils Gn 4.8 Clay loam Low 2.0	Mottled grey, yellow duplex soils Dy 5.22 Clay loam Low 2.0	Mottled grey, yellow gradational soil (variable) Gn Fine sandy loam Moderate 2.0
LAND USE	Grazing				
SOIL DETERIORATION HAZARD Critical land features Processes Forms	Slope gradient, hard setting surfaces Overland flow Sheet erosion	Slope gradient, hard setting surfaces Overland flow, movement of salts Sheet erosion	Hard setting surfaces, dispersibility, periodic watertable Overland flow, subsurface flow, seasonal waterlogging Gully erosion, surface compaction	Dispersibility, hard setting surfaces, periodic high watertable Overland flow, subsurface flow, seasonal waterlogging Gully erosion, salting, surface compaction	Dispersibility, hard setting surfaces, periodic high watertable Overland flow, seasonal waterlogging Gully erosion, salting, surface compaction