

6.7 Footscray Land System

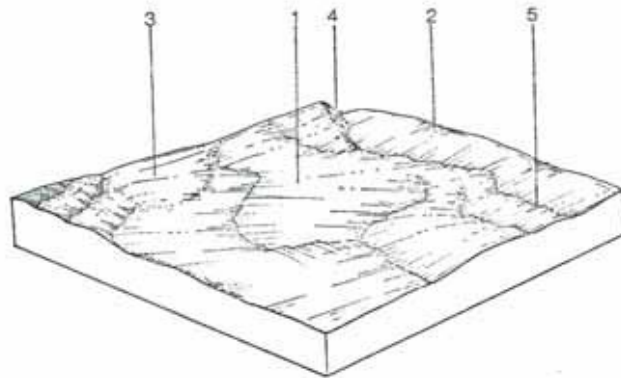
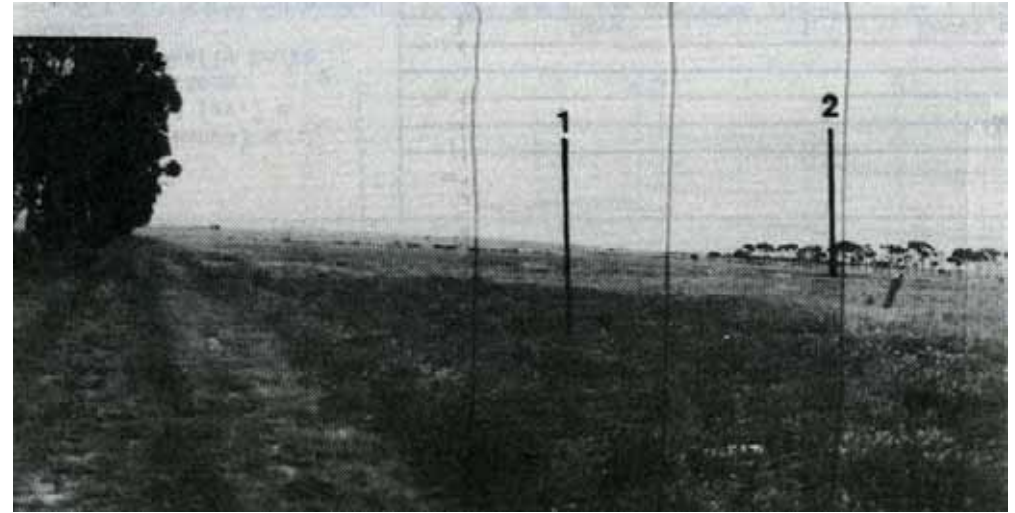
This land system, which occurs in the south-west covers 133 km² or 5.1% of the study area.

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.

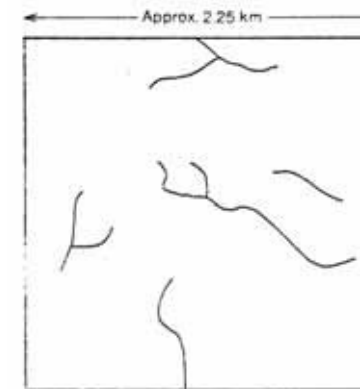
Grey calcareous sodic clay soil with uniform texture and coarse structure is formed over most of the landscape with the exception of the depressions, which have black clay soils. The grey clay usually has a relatively high concentration of lime; lime leached from these soils is often found in crevices 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 %	70	5	10	10	5
CLIMATE Rainfall (av.) Temperature (av.) Seasonal growth limitations	Annual: 560-620 mm (monthly range: October 60 mm - July 35 mm) Annual: 14°C (monthly range January 20°C - July 9°C) Temperature: less than 10°C July Precipitation: less than potential evapotranspiration November - March.				
GEOLOGY Age, rock	Pleistocene basalt (Wash from granitic or Silurian sedimentary rock in places) Basalt, granite and Silurian rock.				
TOPOGRAPHY Landscape Elevation (range) m Local relief (av.) m Drainage pattern Drainage density km/km ² Land form	Broad plain 90 - 250 20 Dendritic 1.0 Slope plain Swale Stony plain Steep slope, sometimes rocky Drainage line				
Slope (av.) %, slope shape	2 ; straight	1 ; straight	2 ; convex	18; convex	2 ; straight
NATIVE VEGETATION Structure Dominant species	Grassland Indeterminate; probably included <i>Stipa</i> spp., <i>Danthonia</i> spp. <i>Themeda australis</i> , <i>Poa australis</i> and numerous composite species <i>E. camaldulensis</i>				
SOIL Parent material	In situ weathered rock				
Description	Grey calcareous sodic clay soils, uniform texture, coarse structure	Black clay soils, uniform texture, coarse structure	Grey calcareous sodic clay soils, uniform texture, coarse structure	Variable Variable, usually shallow soils	Alluvium Variable. Black clay soils, uniform texture, coarse structure
Factual key	Ug 5.32	Ug 5.12	Ug 5.32	Variable	Ug 5.12
Surface texture	Light clay	Clay	Light clay	Variable	Clay
Permeability	Low	Very low	Low	Variable	Low
Depth (av.) m	1.5	2.0	0.3	Variable	1.5
LAND USE	Grazing, occasional cropping (cereal)				
SOIL DETERIORATION HAZARD Critical land features	Coarse structure, slowly permeable subsoils	Seasonal high water-table, low permeability, dispersibility	Coarse structure, slowly permeable subsoils	Slope gradient	High water-table, low permeability
Processes	Overland flow, periodic waterlogging	Overland flow, periodic waterlogging	Overland flow, periodic waterlogging	Overland flow,	Overland flow, periodic waterlogging
Forms	Surface compaction, sheet erosion	Surface compaction,	Surface compaction,	Sheet and rill erosion	Stream-bank erosion, surface compaction