6.13 Maribyrnong Land System

This occurs in the south-west and occupies 168.8 \mbox{km}^2 or 6.5% of the survey area.

The topography is generally of undulating plains with slopes of 0-3%. The stony areas only have very gentle slopes and therefore are dissimilar to the stony rises of the Wollert land system. These plains are naturally treeless.



The soils are .variable and the different soils are not consistently found in the same locations. The complete explanation for their distribution is unknown. Generally a red calcareous sodic duplex soil is found on the plains. Typically this soil has a thin loam, clay loam or light clay A horizon which overlies a well-structured dark red-brown clay that grades into a heavy well-structured deep grey clay. This grey clay often has veins of lime.

In the stony areas, the soil is shallower and usually either a stony red gradational or duplex soil, often with visible lime just above the basalt. Black heavy clays have also been formed in these areas though mostly they occur along drainage lines or in slight depressions where the soil is deeper.

Occasionally, grey calcareous sodic clay soil, similar to that below the red calcareous sodic duplex soil, will occur in localized pockets mixed with the other soil types.



Schematic Block Diagram



COMPONENT Proportion %	1	2 35	3	4
CLIMATE Rainfall (av.) Temperature (av.) Seasonal growth limitations	Annual: 500-660 mm (monthly range: October 50 mm – August 30 mm) Annual: 13 ⁰ C (monthly range: January 19 ⁰ C – July 8 ⁰ C) Temperature: less than 10 ⁰ C July Precipitation: less than potential evapotranspiration November - March			
GEOLOGY Age, rock	Pleistocene basalt			
TOPOGRAPHY Landscape Elevation (range) m Local relief (av.) m Drainage pattern Drainage density km/km ²	Undulating plains with volcanic cones 110-240 40 Dendritic 0.8			
Land form Slope (av.) %, slope shape	Slope plain 1; Straight	Stony slope plain 1; Straight	Cone 27; Convex	Drainage line 1; Concave
NATIVE VEGETATION Structure Dominant species	Grassland Indeterminate: probably <i>Stipa</i> spp., <i>Danthonia</i> spp.			
SOIL Parent Material Description	Red calcareous sodic duplex soils, coarse structure	In situ wea Shallow stony red-brown gradational soils. Stony red	thered rock Variable. Stony red gradational soils	Black clay soils, uniform texture, coarse structure
Factual Key Surface Texture Permeability Depth (av.) m	Dr 2.12, Db 1.13 Loam Low 1.5	duplex soils Gn 3.11, Dr 2.12 Loam – Clay loam Moderate 0.5	Gn 4.11 Clay loam High 1.0	Ug 5.12 Clay Low 1.0
LAND USE	Grazing, occasional cropping (cereal)			
SOIL DETERIORATION HAZARD Critical land features	Hard setting surfaces, slowly permeable subsoils	Hard setting surfaces, slowly permeable subsoils	Slope gradient	Seasonal high watertable
Processes Forms	Overland flow, periodic waterlogging Surface compaction, sheet erosion	Overland flow, periodic waterlogging Surface compaction, sheet erosion	Overland flow, leaching Rill and sheet erosion, nutrient decline	Periodic waterlogging, overland flow Surface compaction