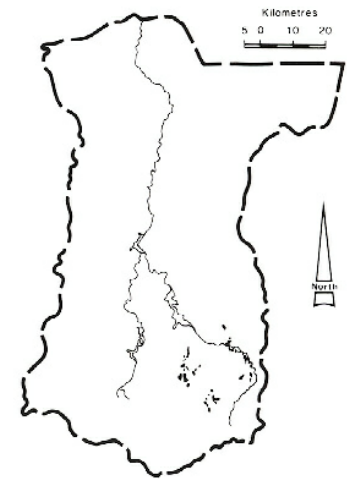


2.16 PdB PLAINS – Dissected remnants, BASALTIC

Numerous dissected remnants of narrow lava flows occur along the Loddon River between Guildford and Glenlyon, to the south of Newstead and near Daylesford. Individually they are small, typically less than 1 km²; however, they often occur as a string of almost interconnected hills, separated where stream incision or erosion has cut through the lava flow. Some of the remnants retain some features of the original lava flow and are flat-topped, whereas others, where dissection had been more severe, survive as small rounded hills. A few occurrences include the volcanoes from which the lava emanated – for example Mount Consultation and Heaghney's Hill. See figure for cross-sections of the typical remnants.

The original lava flows covered gold-bearing river and stream gravels, and some of the remnants were mined to obtain these buried gravels during the gold-mining days of the late nineteenth and early twentieth centuries. Like the landforms, the soils are extremely variable, with slope, topographic position, degree of dissection and climate having a major influence on soil type and distribution. In general the soils are red to brown, shallow and stony, uniform or gradational loams. They increase in redness with increasing rainfall to the south. The vegetation has generally been cleared, and land use is restricted to grazing, although minor cropping occurs where soil depth and area permit.



A cleared remnant of the narrow basaltic plain which once extended along the Loddon River valley between Glenlyon and Guildford.

Geology Qvn – Quaternary olivine basalt

Rainfall 550-850 mm per annum

Slope Extremely variable: 0-5% on plain remnants; 5-50% on scarps and side slopes

Dominant landform element (95%) Slope, broad crest, plain scarp, scarp footslope

Minor landform elements (5%) Volcanic cone, drainage depression

Soils Dominant: Um, Gn3.12. Uniform or gradational loamy soils, ranging in colour from brown in drier northern areas to red in the south; they are typically shallow (especially on the steeper slopes and scarps), acidic to neutral throughout and well structured; fragments of basaltic stone are common throughout the profile; occasional deeper gradational soils they may be cropped occur on gentler slopes in some southern areas

Minor: Db2.42. Brown duplex soils on some lava remnants in the Vaughan – Glenluce area; the sandy topsoils are derived from adjacent Tertiary gravel cappings, and overlying the basalt-derived brown or yellowish-brown clays

Uf, Ug. Dark brown uniform cracking clays, often with a self-mulching surface, on gentler slopes and crests of some of the remnants in the north near Vaughan

Native vegetation Almost totally cleared, except for isolated specimens of *E. microcarpa* on the northern areas, and *E. melliodora* and *E. viminalis* to the south

Stone-rock outcrop Extremely variable: 0-5% on gentle slopes, up to 50% near the scarps

Pans Nil or not observed

Land use Mainly grazing; some minor cropping on gentler slopes where soil depth is greater

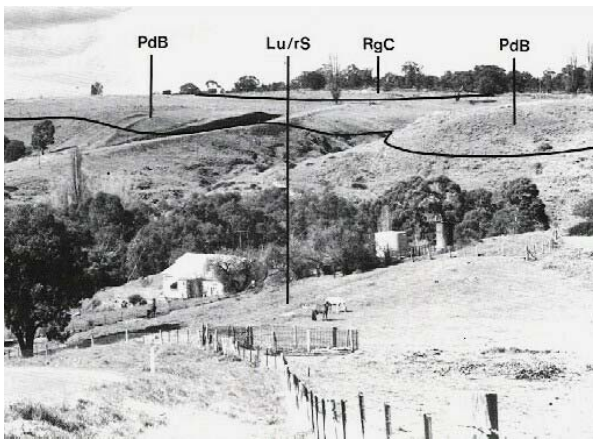
Observed land deterioration The landscape is generally stable, despite minor sheet or rill erosion and landslipping on the steeper slopes and scarps

Susceptibility to land deterioration

Sheet and rill erosion (low to moderate)

Compaction (low)

Landslipping (low to moderate – scarps)



This photograph shows a basaltic plain remnant (PdB) near Vaughan.



The basaltic remnants are usually bounded by scarps, characteristically with rocky, and often precipitous, upper slopes and gentler lower slopes.

