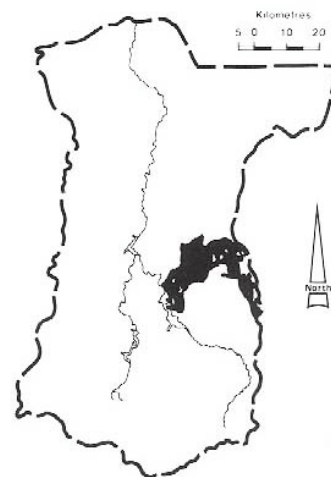


### 2.34 R/LuG RISES to LOW HILLS – undulating, GRANITIC

An extensive area of undulating low hills on granitic rocks occurs to the north of Castlemaine and Maldon on the Harcourt granitic batholith. Rock outcrop in general is low, but can be abundant on crests and steeper slopes. Most of the area has been cleared for agriculture, although numerous native trees have been retained on private properties, resulting in an appealing park-like scenery. A feature of the unit is a siliceous hardpan between the soil and relatively fresh rock. Lateral movement of water above the hardpan is noticeable after prolonged rains. The highly weathered clay subsoils contain appreciable soluble salts, and seepage waters often saline. Yellow duplex soils with sandy topsoils predominate throughout, although the soils of the drainage depressions are frequently overlain by a recent wash of sandy alluvium.



**Geology** Dg1, Dg2, Dg3, Dgd – Devonian granite, granodiorite

**Rainfall** 450-650 mm per annum

**Slope** Average 5%; range 1-15%

**Dominant landform element** (85%) Crest – rock-free, slope

**Minor landform elements** (15%) Sharp rocky crest and upper slopes, drainage depressions

**Soils** Dominant: Dy3.41, Dy3.22, dy3.21. Mottled yellow duplex soils occur in all landscape positions, typically with a hard-setting coarse sandy loam topsoil, a bleached sandy A<sub>2</sub> and a yellow, yellow-brown or reddish mottled clay from about 30 to 40 cm; the surface horizons are apedal or weakly structured, and the structured subsoils acidic to neutral

Minor: Uc2.1, Uc2. Uniform sandy soils occasionally occur, especially on the steeper, rocky crests, and as surface wash layers burying older soils in drainage depressions

Db2.42. Brown or reddish brown variants of the yellow duplex soils on some slopes, especially near Cairn Curran Reservoir west of Maldon

**Native vegetation** The remaining trees indicate that originally *E. microcarpa* and *E. leucoxylo*n were predominant throughout, with *E. goniocalyx* a common species on the steeper, rockier slopes and crests – probably as a woodland II to open forest II; *E. melliodora* also grows on lower slopes, and *E. camaldulensis* both on slopes and in depressions in the east, but restricted to depressions in the west of this mapping unit

**Stone-rock outcrop** Average 1%; although as much as 10% on occasional crests

**Pans** A siliceous hardpan – a common feature of the unit – is commonly exposed in road cutting, especially in the eastern areas; it occurs between the soil and the relatively unweathered bedrock, ranging the up to a metre in thickness and influences tree root distribution, with roots often travelling horizontally after reaching the restrictive layer, which can result in exposed trees blowing over in storms because of poor root anchorage

**Land use** Grazing on improved, or less commonly native, pastures is the major land use, small areas of apple orchards rely on irrigation water from the Coliban channel system in the east, and cropping, and scarping for granitic sands are minor land uses

**Observed land deterioration** Salting or saline seeps often occur on the lower slopes and near depressions adjacent to the metamorphosed sedimentary areas, with notable examples to the east of Cairn Curran Reservoir; gully erosion is also common in many depression and the sandy topsoils are readily eroded by wind when left unprotected

**Susceptibility to land deterioration**

Wind erosion (moderate to high)

Salting (moderate – adjacent to sedimentary areas)

Gully erosion (moderate)

Sheet erosion (low to moderate)



*A silicified hardpan, indicated by an arrow on the photography, is common beneath the soil profile.*

*Grazing is the predominant land use.*

