

APPENDIX IV – Minor Components of Land Systems

Anglesea

1. Outcrops of Tertiary limestone with red calcareous gradational soil occur at Aireys Inlet. They are severely affected by the coastal environment as in component 1, but the soils are gradational and permeability is high. On the more sheltered sites these areas are similar to the steeper slopes of the Bellbrae land system.
2. The estuarine swamps at Anglesea have small areas of saline soils supporting communities of *Arthrocnemum arbusculum*, which are similar to the swamps found in Connearre land system.
3. Some of the recent gully infills and depositional fans in the lower parts of the landscape have yellow gradational soils with weak structure. Open forests of *Eucalyptus baxteri*, *E. sideroxylon* and *E. obliqua* are encountered. The subsoils have high values for sodium on the exchange complex.

Barwon River

Soils in the northern parts are strongly influenced by alluvium derived from basalt. They have higher calcium carbonate levels reflected by higher pH values, and are more heavily textured in the subsoil. Permeabilities are lower.

Beech Forest

Remnants of Tertiary sediments are occasionally found on high parts of the landscape. Examples occur at Lavers Hill, Wyelangta and Weeaproinah. White sand soils of uniform texture are found at Lavers Hill, and similar light-textured soils at the other sites.

Bunker Hill

Tertiary olivine basalt with brown gradational soils and open forests of *Eucalyptus obliqua* and *E. ovata* are encountered on the northern slopes of Bunker Hill. The soils are somewhat heavier-textured than those found on Cretaceous sediments, and permeabilities are lower.

Deepdene

On some of the steeper slopes below lateritic plateau remnants, indurated ironstone layers outcrop at the surface. Stony red gradational soils are found at these sites.

Gellibrand River

1. The most poorly drained sites are those furthest from the major stream channels and have grey gradational soils with strong gleying. The vegetation is a closed scrub of *Melaleuca squarrosa*, *Leptospermum juniperinum* and, in some areas, *L. lanigerum*.
2. Free water surfaces may locally cover a significant part of the landscape. The lakes and swamps at the mouths of the Aire, Gellibrand and Barham Rivers provide a range of saline and fresh-water habitats.

Hordern Vale

1. To the east of Cape Otway, coastal erosion has exposed beds of Lower Cretaceous sediments below the Tertiary sediments. Brown duplex soils occur on steep slopes, and the vegetation is an open forest of *Eucalyptus globulus*, *E. obliqua* and *E. baxteri*.
2. Surrounding the low woodlands of *E. kitsoniana* and in some other localities, grey sand soils with structured clay underlays are frequently found. The drainage is often impeded and the vegetation is usually a closed scrub of *Melaleuca squarrosa* and *Leptospermum juniperinum*.

Kawarren

1. Tertiary olivine basalt with stony red gradational soils and open forest of *Eucalyptus obliqua* and *E. viminalis* is found at the Kawarren East State School, and on the sides of 'basalt hill' at Gellibrand. The crest of 'basalt hill' have heavy-textured brown gradational soils with *E. ovata*.
2. Some of the better-drained valley floors, such as Ten Mile Creek, have brown gradational soils with weak structures support tall open forests of *E. obliqua* and *E. viminalis*.

Lorne

1. Remnant hill cappings of Tertiary sediments exist at Lorne, Cape Patton, Skenes Creek, and south of Peters Hill along Ironbark Spur. The soils on these sediments are usually yellow gradational soils with weak structures, or grey sand soils with hardpans. The vegetation is commonly a woodland of *Eucalyptus obliqua*, *E. radiata* and *E. nitida*.
2. At the mouths of the Erskins, Cumberland, Wye and Kennett Rivers, and Skenes Creek, aeolian deposits of calcareous dune sand are found. Soils are yellow calcareous sand soils of uniform texture, which formerly supported tussock grasslands of *Spinifex hirsutus*, *Scirpus nodosus* and *Calocephalus brownii*. Many areas have become unstable due to trampling and destruction of native vegetation, and restabilization has been effected by hand-planting *Ammophila arenaria*.

Mount Sabine

Remnant hill cappings of Tertiary sediments are found at Benwerrin and just south of Boonah. Yellow gradational soils with weak structures contain quartz gravel and support woodlands of *Eucalyptus obliqua*, *E. nitida* and *E. radiata*.

Pennyroyal

1. Near Bamba, broad gentle crests overlie laterite. Mottled yellow and red duplex soils with ironstone occur on the indurated ironstone layers, overlying mottled clays.
2. On the highest parts of the landscape to the east of Bamba, high proportions of quartz gravel occur in the parent material, and stony yellow gradational soils have developed. Open forests of *Eucalyptus obliqua* and *E. radiata* and *E. viminalis* occupy these sites.
3. The northern margins of the land system often have grey sand soils of uniform texture developed on deep deposits of quartz sand. These areas carry woodland of *E. viminalis*, usually with *Pteridium esculentum* in the understorey.

Rivernook

1. Inland from Moonlight Head, yellow gradational soils with weak structures are common on moderate to steep slopes. The native vegetation is dependent on exposure to coastal winds, but areas carry *Eucalyptus baxteri*.
2. Near Apollo Bay, grey sand soils with structured clay underlays are found on many parts of the landscape and usually support low woodlands of *E. obliqua* with *Leptospermum juniperinum* and *Melaleuca squarrosa* in the understorey.

Tomahawk Creek

The northern side of Tomahawk Creek has alluvial terraces with coarsely structured yellow-brown gradational soils. Open forests of *Eucalyptus ovata* and *E. radiata* occur on these areas.

Wonga

Tertiary sediments with high proportions of quartz gravel are occasionally found. Woodland of *Eucalyptus baxteri* and *E. radiata* grows on stony yellow gradational soils.