MAP No. 7

LAND SYSTEMS

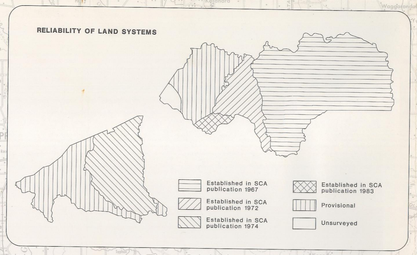
North Eastern Area (Benalla–Upper Murray) Review

1:250 000

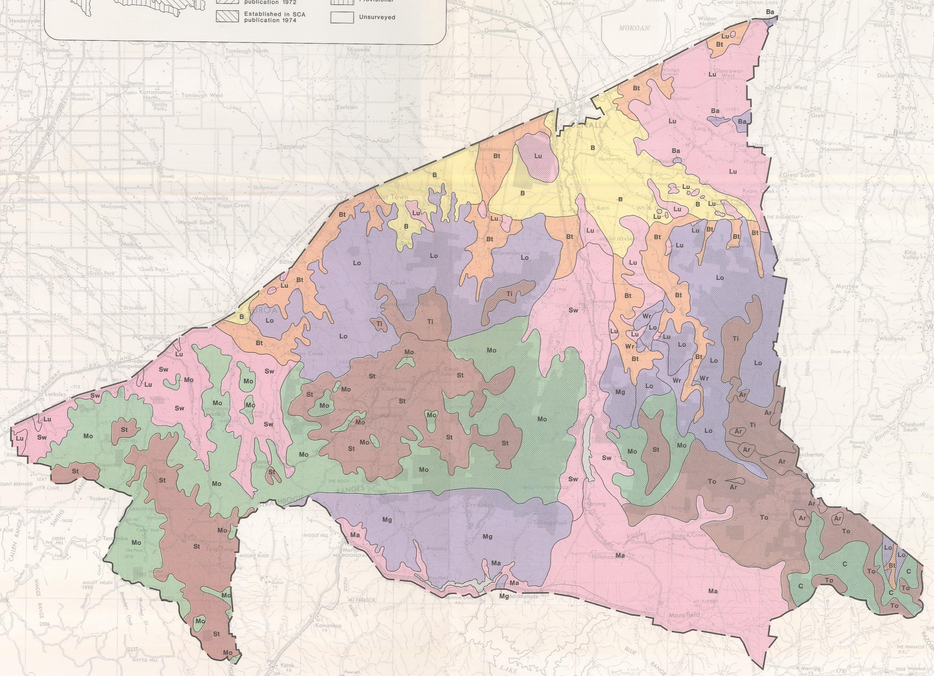
0 5 10 20 30 40 KILOMETRES

Land Conservation Council
Victoria

RELIABILITY OF LAND SYSTEMS



- Established in SCA publication 1967
- Established in SCA publication 1972
- Established in SCA publication 1974
- Established in SCA publication 1983
- Provisional
- Unsurveyed



Landform	Land System	Geomorphology & Geology	Soils	Native Vegetation
Mountains	Mo Moonee Moonee	Dissected slopes of high relief on Upper Devonian Granite. Elevation 240 to 1000 m.	Red duplex soils: friable brown gradational soils: red gradational soils: and weakly structured subsoils).	Narrow-leaf peppermint open forest III; broad-leaf peppermint open forest III; broad-leaf peppermint-red stringybark; long-leaf box; red box open forest I and II; some messmate open forest III and IV; heaths and moorland.
	C Cashelsbong	Deeply dissected slopes on Lower Carboniferous sediments. Elevation 600 to 1500 m.	Friable brown gradational soils; weakly bleached friable brown gradational soils; undifferentiated stony soils on ridges and steep westerly slopes.	Narrow-leaf peppermint open forest III; broad-leaf peppermint-candlebark open forest II; narrow-leaf peppermint open forest III; alpine ash open forest IV; snowgum open forest I and II; broad-leaf peppermint-red stringybark open forest I.
	Tw Tawonga-Wermaning	Steep to very steep ridge and r-spur complex on Ordovician sediments and gneiss. Elevation 400 - 900 m.	Friable red and friable brown gradational soils; friable brown gradational soils.	Narrow-leaf peppermint open forest III; broad-leaf peppermint-candlebark open forest II; alpine ash open forest IV.
	Tb Tawonga-Barrandella	Steep to very steep ridge and spur complex on Ordovician sediments and granite. Elevation 305 - 760 m.	Weakly bleached red gradational soils; massive red and brown gradational soils; undifferentiated stony loams.	Broad-leaf peppermite candlebark open forest II; narrow-leaf peppermint open forest III; long-leaf box open forest II.
	Pa Pinnacles	Steep to very steep slopes with inter- ridge basins and small plateaux on Devonian granite. Elevation 600 - 1100 m.	Red gradational soils; weakly bleached gradational soils; massive red soils on less-steep slopes; friable red and brown gradational soils; red and brown soils at lower elevations.	Open forest III of narrow- leaf peppermint with candlebark and some broad-leaf peppermint in the higher or wetter areas; broad-leaf box, red box, peppermint open forest I and II.
	BN Benambra	Steep to very steep slopes on Devonian granite, and Ordovician schist and sediments. Elevation 260 - 1220 m.	Weakly bleached; massive gradational soils grading into friable brown gradational soils and friable red gradational soils; red gradational soils.	Red stringybark- long- leaf box open forest I and II; some broad- leaf peppermint open forest III; narrow- leaf peppermint open forest III.
	BU Burrowa	Steep to very steep slopes with small plateaux on Devonian rhyolite, and Devonian and Ordovician shale. Elevation 710 - 1100 m.	Weakly bleached massive gradational soils; undifferentiated stony loams; friable red gradational soils.	Red stringybark- long- leaf box open forest I and II; broad-leaf peppermint open forest II; narrow- leaf peppermint open forest III.
Plateaux & Scarps	St Strathbogie	Rolling to hilly plateaux on Devonian granite. Elevation 450 - 900 m.	Red duplex soils: weakly bleached friable gradational soils; friable red gradational soils; friable brown weakly structured subsoils.	Messmate stringybark open forest III and IV; narrow- leaf peppermint open forest III; some swamp gum open forest II.
	Ti Tiger Hill	Undulating plateaux on Devonian volcanics. Elevation 800 - 900 m.	Friable brown gradational soils; some friable red gradational soils; some weakly structured subsoils.	Messmate stringybark open forest III and narrow- leaf peppermint open forest III; some swamp gum open forest II.
	To Tolmie	Rolling plateaux on Lower Carboniferous sediments. Elevation 600 - 1100 m.	Mainly red and yellow duplex soils; some weakly bleached friable gradational soils and undifferentiated stony loams.	Broad- leaf peppermint- candlebark open forest II and narrow- leaved peppermint open forest III; some messmate stringybark open forest and swamp gum open forest II.
	Ar Archerton	Rolling plateaux with scarps on Tertiary basalt. Elevation 760 - 1100 m.	Friable red gradational soils (with well structured subsoils).	Narrow- leaf peppermint open forest III; some red stringybark open forest III.
	Sy Stanley	Plateaux with rolling fans and some steep slopes on Ordovician shales and sediments. Elevation 700 - 900 m.	Red- brown gradational soils; weakly bleached red-brown gradational soils.	Open forest III of narrow- leaf peppermint with candlebark and some blue gum; open forest II and long- leaf box on dry sites.
	BB Big Ben	Rolling plateaux on deeply- weathered Ordovician grades and schist. Elevation 800 - 1100 m.	Friable red gradational soils; friable brown gradational soils; some stony loams.	Open forest II and III of narrow- leaf peppermint and candlebark; some messmate, candlebark gum and blue gum; open forest III on areas of open forest II of stringybark; open forest II of willow gum.
	K Koetong	Rolling plateaux and steep to very steep slopes on Devonian granite. Elevation 600 - 900 m.	Friable red gradational soils dominant, with weakly bleached massive gradational soils on plateau slopes and in drainage lines.	Narrow- leaf peppermint open forest III and broad- leaf peppermint open forest II; some swamp gum open forest II.

LEGEND

Landform	Land System	Geomorphology & Geology	Soils	Native Vegetation
Steep Hills & Hills	Mg Moormigag	Slopes with high relief on Devonian granite and gneiss. Elevation 200 - 900 m.	Weakly bleached friable gradational soils; friable red gradational soils (with weakly structured subsoils); stony loams on steep slopes; gradational soils; red and yellow duplex soils.	Red stringybark- long leaf box; red box open forest I and II; broad-leaf peppermint open forest II; some narrow- leaf peppermint open forest III.
	Lo Loombah	Broad ridges, slopes and foothills on Upper Devonian sediments. Elevation 300 - 550 m.	Friable yellow and brown gradational soils, friable red gradational soils; weakly structured subsoils weakly bleached gradational soils on broad ridges; yellow duplex soils on slopes and foothills.	Red stringybark- long leaf box; red box open forest I and II; broad- leaf peppermint- red stringybark open forest II; narrow- leaf peppermint open forest III.
	Wr Wrightley	Steep hills with small areas of rolling plateaux on Cambrian greenstones and oberts. Elevation 300 - 700 m.	Friable red gradational soils with weak-structured subsoils; weakly bleached gradational soils; massive red and brown stony loams on some steep slopes.	Long- leaf box- yellow box open forest II in the north; mainly gum narrow- leaf peppermint- candlebark and broad-leaf peppermint- red stringybark open forest II in the south.
	Bn Bowman	Hilly with steep slopes off broad ridges and occasional steep slopes on plateau surfaces in northern parts; on Ordovician sediments. Elevation 200 - 900 m.	Red duplex soils on gentle slopes; weakly bleached friable gradational soils on steep ridgetopors and yellow duplex soils in poorly drained lower slopes.	Open forest II of Blakely's red gum- yellow box- peppermint forest I and III of narrow-leaf peppermint and broad- leaf peppermint.
	Be Barambogie	Predominantly hilly with steep slopes in the northwest; small areas of rolling plateaux and broad basins, on Devonian granite. Elevation 750 - 1750 m.	Coarse- sandy loams and pale weakly bleached soils; weakly bleached soils with steep slopes and yellow and yellow duplex soils on low- angle slopes; weathered rock is close and shallow below 1 m.	Generally open forest I and woodland I of Blakely's red gum- yellow box- peppermint on the lower soils; open forest II of long- leaf box on the more stoney soils with higher rainfall.
	L Leneva	Steep slopes and residual hills with some rolling to hilly plateaux and flat-topped ridges, on Ordovician sediments. Elevation 400 - 600 m.	Red duplex soils on the less-steep upper slopes, weakly bleached gradational soils and yellow duplex soils on lower slopes on stoney outcrops; yellow duplex soils in depressions.	Open forest I and II of long leaf box and some Blakely's red gum.
	BE Bethanga	Steep to very steep higher slopes and hills on lower elevations on Devonian grades and granite. Elevation 300 - 760 m.	Weakly bleached; massive gradational soils; yellow duplex soils on less- steep slopes.	Red stringybark- long- leaf box open forest I and II; broad-leaf peppermint open forest II and narrow- leaf peppermint open forest III.
	A Adjie	Steep to very steep slopes with some hilly ridges and higher elevations on Devonian granite and some metamorphics, and Ordovician sediments. Elevation 460 - 1100 m.	Weakly bleached; massive gradational soils on steeper slopes and red and yellow soils on less- steep country.	Red stringybark- long- leaf box- open forest I and II; broad-leaf peppermint open forest II; some messmate stringybark open forest III at higher elevations.
Low Hills & Plains	Sw Swanpool	Rolling hills of low relief on Devonian granite and valley floors and floors on Quaternary alluvium.	Yellow duplex soils; weakly bleached friable and also massive gradational soils.	Red stringybark- long- leaf box; red box open forest I and II; red gum open forest II.
	Ma Mansfield	Plains, cuestas and flat-topped ridges on Lower Carboniferous sediments and Quaternary alluvium.	Gilgaied, yellow duplex soils; weakly bleached friable and also massive gradational soils; weakly bleached soils and gilgaied soils on more dissected landscapes.	Red gum open forest II.
	Lu Lurg	Undulating to rolling hills on Palaeozoic sediments.	Undifferentiated stony loams on rolling hills; yellow duplex soils on weakly structured subsoils; weakly bleached friable and massive gradational soils.	Grey box open forest II; red gum- yellow box open forest I and II; some box- spotted gum open forest I and II; some red gum open forest II.
	Ch Chiltern	Rolling to hilly with short steep slopes on Ordovician shales, ridges and small areas of valley bottoms, on Ordovician sediments, some metamorphosed	Red duplex soils on convex slopes and ridges; yellow in depressions; weakly bleached gradational soils predominate on steeply- sloping land.	Open forest II of grey box and yellow box; some red box, long leaf box, Blakely's red gum and broad- leaf peppermint on crests of the ridges and red gum in depressions.
	Yh Yackandandah	Dissected elevated terraces, residual hills and rolling to hilly country on Tertiary sands, gravels and schist.	Red duplex soils; friable red gradational soils; some weakly bleached gradational soils.	Open forest II of broad-leaf peppermint; long- leaf box- peppermint; some red gum- wattle- finger; open forest II of red gum on flats.

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Fans & Terraces	Bt Benalla (fans & terraces)	Gentle outwash fans and mid-valley slopes, terraces, flats and swamps on Quaternary alluvium.	Yellow duplex soils (some with gilgai); weakly bleached gradational soils; red and brown soils; some with weakly structured subsoils.	Red gum open forest II and grey box open forest II.
	Md Myrtleford	Undulating high terraces; rolling to hilly valley slopes with fans and some residual hills, on Quaternary alluvium and Quaternary alluvium and colluvium.	Red- brown gradational soils; red duplex soils; weakly bleached yellow- brown gradational soils.	Woodland and open forest II of Blakely's red gum grading into long- leaf box open forest II.
	Db Dederang	Rolling to hilly residual hills and ridges with some fans, fans and terraces on Ordovician grades and schist, colluvium and Quaternary alluvium.	Red and yellow duplex soils; some weakly bleached yellow gradational soils.	Woodland II of Blakely's red gum- yellow box- peppermint; forest II of Blakely's red gum with red box, but but, and red stringybark on drier sites; and of narrow- leaf and broad- leaf peppermint in the south.
	Tc Twists Creek	Undulating fans on valley floors; some low hills and narrow valleys; Quaternary alluvium derived from Ordovician sediments.	Friable red gradational soils; weakly bleached red and brown gradational soils; red duplex soils.	Open forest II of broad- leaf peppermint and long- leaf box; some red gum; open forest III of narrow- leaf peppermint.
	BR Barmigarra	Rolling to steep hills with undulating to rolling dissected fans and terraces; some alluvial grass. Devonian granite and Quaternary alluvium.	Weakly bleached, massive gradational soils on hills with some yellow duplex soils; yellow soils in locally mottled areas and red duplex soils on the terraces and fans.	Broad- leaf peppermint open forest I and II; some red gum; peppermint open forest III; narrow- leaf stringybark; long- leaf box open forest II; swamp gum open forest II.
Alluvial Floodplains & Terraces	Mu Murray	Alluvial flats along the Murray, Kiewa and Ovens Rivers with gently sloping dissected fans and terraces and some low rolling hills on various Quaternary alluvial parent materials.	Yellow- brown gradational soils; alluvial brown loams and weakly bleached gradational soils; some red soils on fans and higher terraces; undifferentiated sandy loams on the lower terraces; some gradational soils on flanking sloeper slopes.	Mainly woodland II and open forest II of red gum, open forest II of long- leaf box and red stringybark on drier terraces.
	B Benalla (alluvial)	Plain and broad valleys along the Broken River and major streams on Quaternary alluvium.	Red gradational soils and weakly bleached gradational soils; some red and brown soils; yellow duplex soils with gilgai; brown and grey alluvial loams.	Red gum open forest II; woodland II of grey box and red gum.

- Study area boundary
- Rural City of Wodonga boundary
- Indicates the approximate location of a boundary where change from one system to another is gradual.
- Public land

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