

LAND RESOURCES OF THE PROPOSED WARRAI DAMSITE CATCHMENT AREA

Edition 1/09 - June 2009

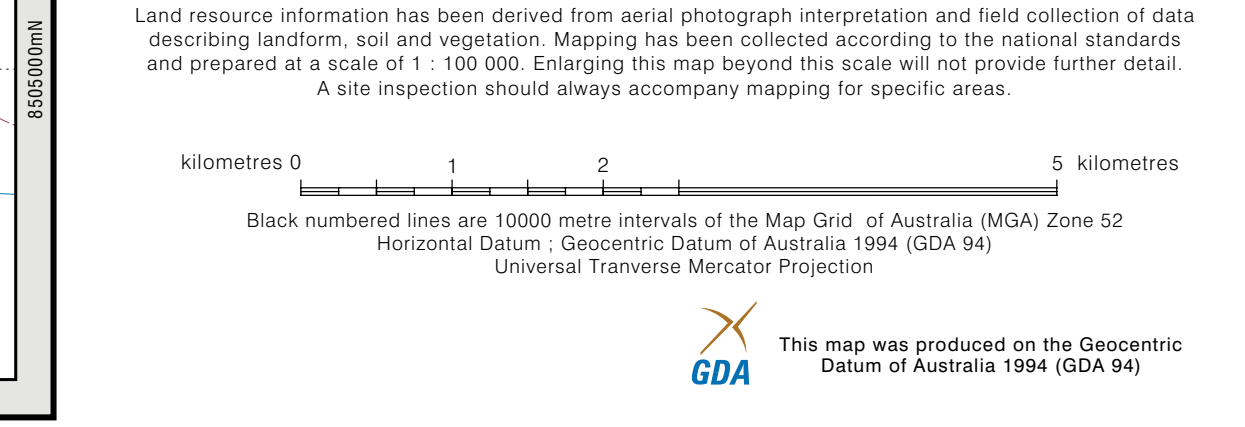
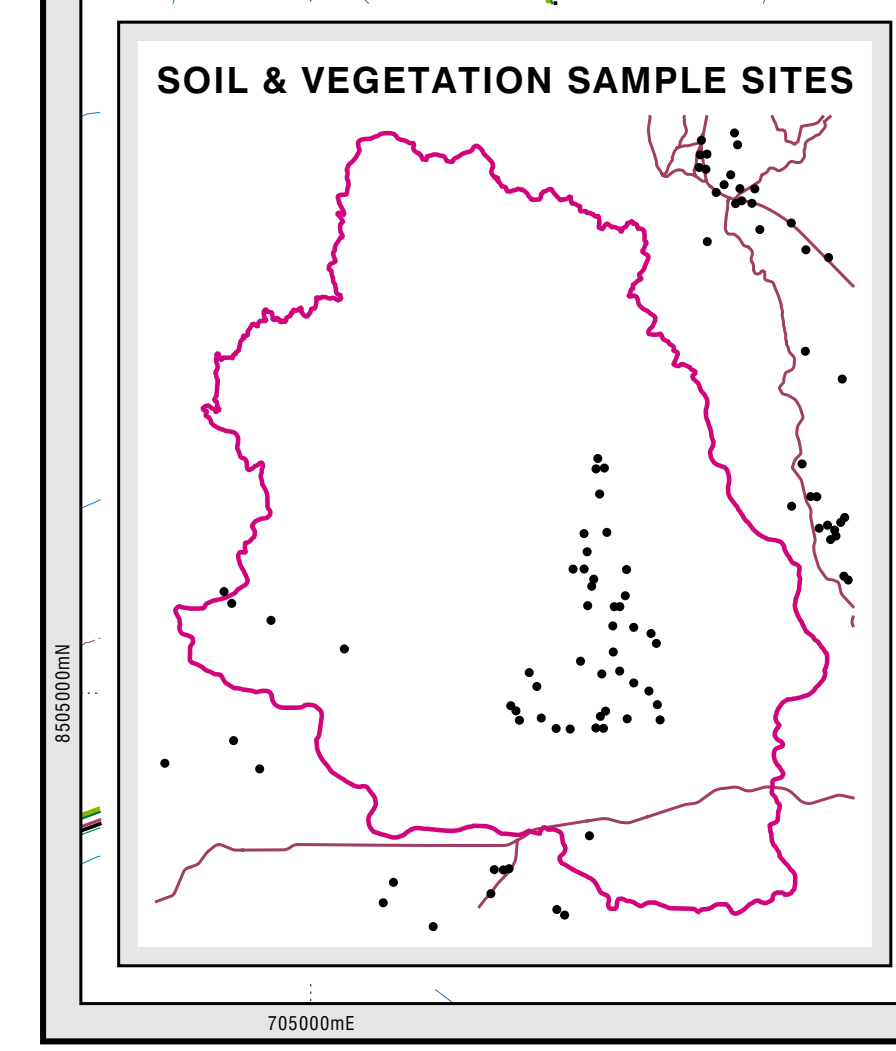
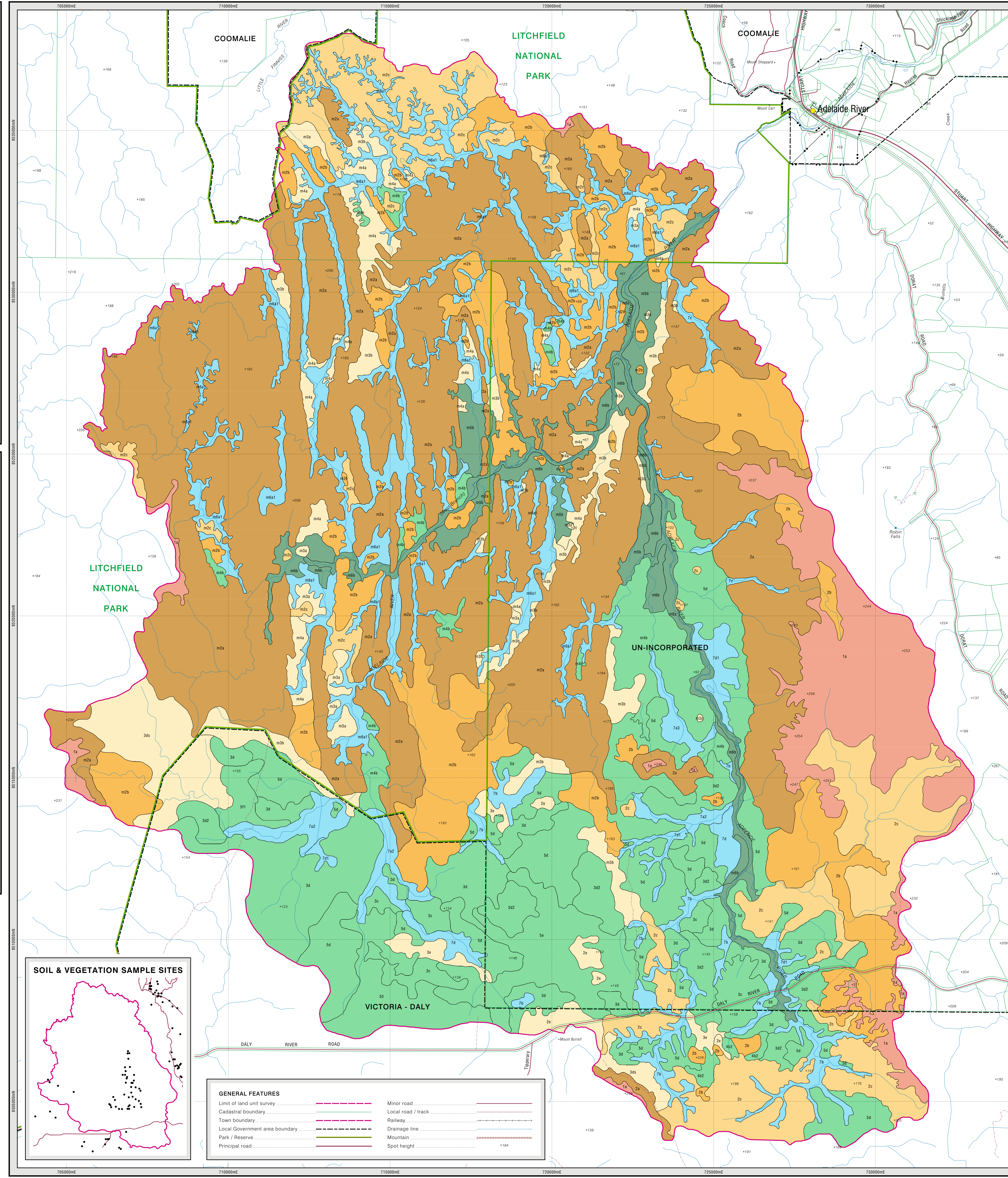
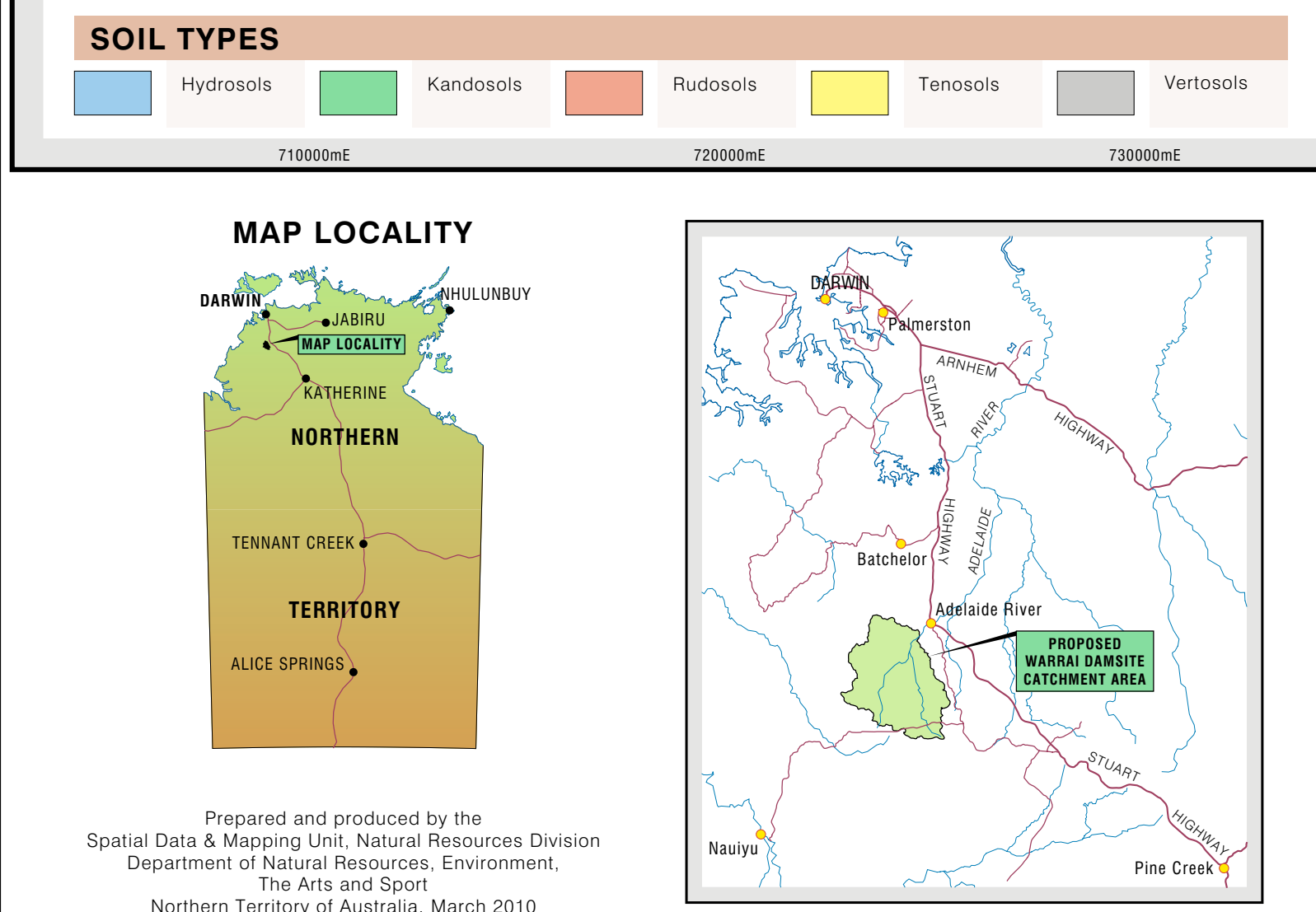
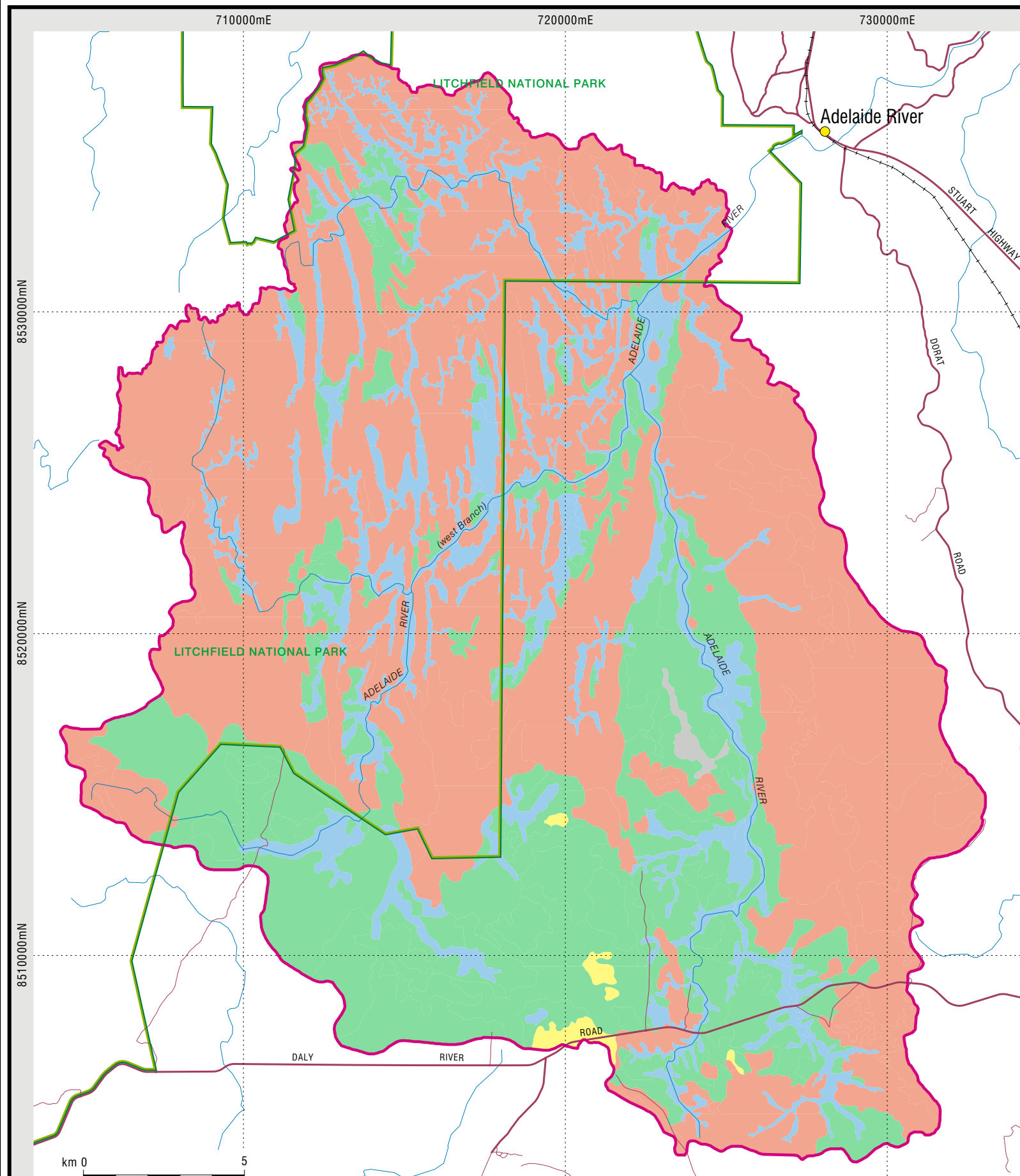
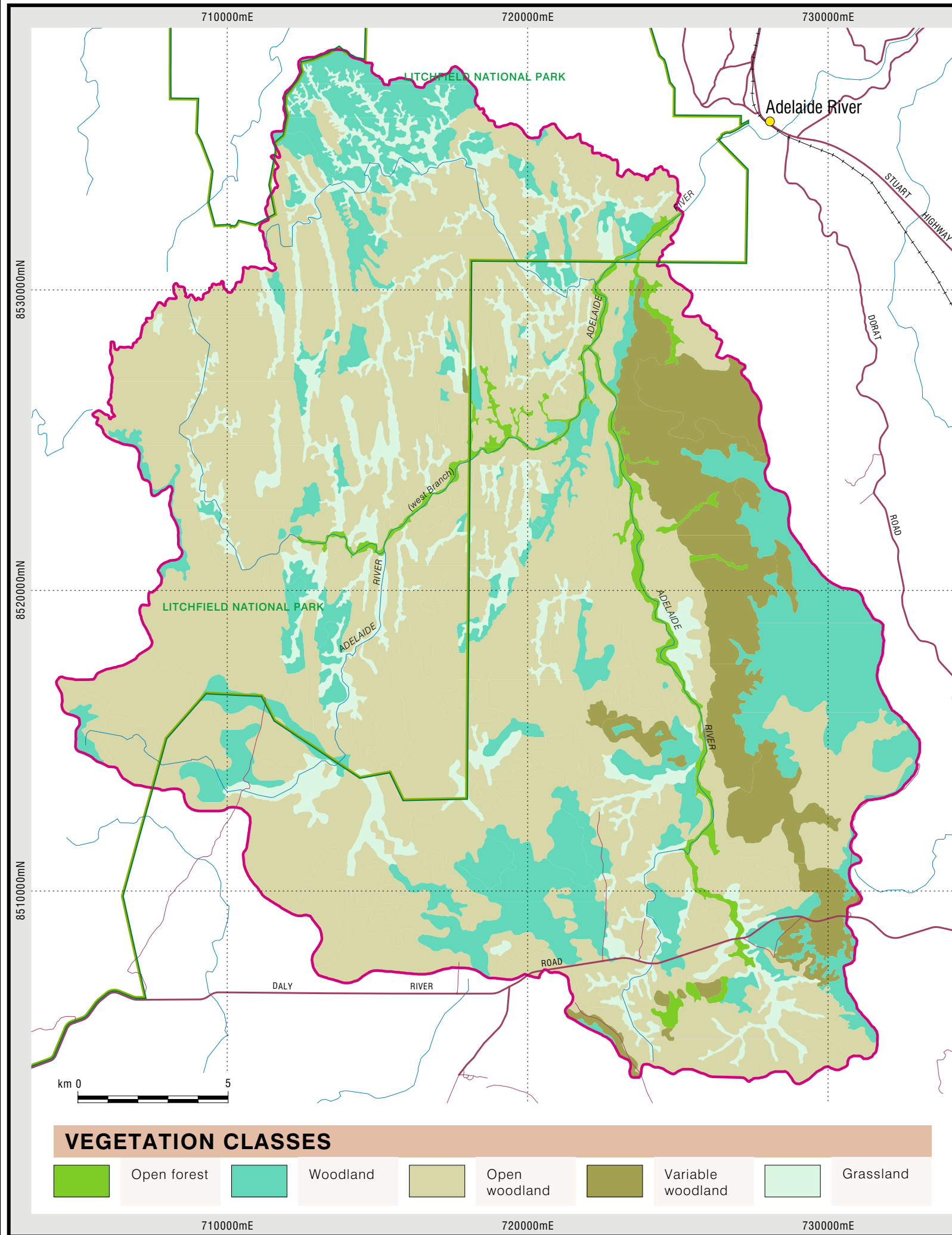
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LAND UNIT DESCRIPTIONS

- PLATEAUX**
- 1a** High level plateau; flat to sloping (slopes <10%). Lithosols. Eucalyptus miniata, Eucalyptus tetrodonta and Corymbia bleesneri woodland to open forest.
- HILLS**
- 2a** Hills and rises; generally slopes greater than 40%; boulder strewn slopes and rocky crests. Very shallow, stony and gravelly lithosols. Eucalyptus spp. open woodland to woodland (variable communities).
 - m2a** Hills and rises; high hills and strike ridges up to 100m in height; slopes >30%; abundant outcrop of Burrell Creek siltstone and greywacke. Very shallow, stony and gravelly lithosols. Eucalyptus tectifica, Corymbia confertiflora and Erythrophium chlorostachys low open woodland.
- LOW HILLS**
- 2b** Hills and rises; generally slopes 15-40%; boulder-strewn slopes and rocky crests. Very shallow, stony and gravelly lithosols. Eucalyptus spp. open woodland to woodland (variable communities).
 - m2b** Hills and rises; hills and strike ridges between 5 and 25m in height; slopes 15-40%; abundant outcrop of Burrell Creek siltstone and greywacke. Very shallow, stony and gravelly lithosols. Eucalyptus tectifica, Corymbia confertiflora and Erythrophium chlorostachys low open woodland.
 - m2c** Hills and rises; hills and strike ridges between 5 and 25m in height; slopes 15-40%; abundant outcrop of Burrell Creek siltstone and greywacke. Very shallow, stony and gravelly lithosols. Eucalyptus tectifica, Corymbia confertiflora and Erythrophium chlorostachys low open woodland.
- RISES**
- 2c** Low erosional slopes and rises; hilly terrain with slopes 5-15%; rock and boulder strewn. Shallow, stony and gravelly lithosols. Eucalyptus tectifica and Erythrophium chlorostachys mixed spp. open woodland.
 - m2c** Low erosional slopes and rises; footslopes of m2a and m2b; slopes generally 5-15% with scattered outcrop of Burrell Creek siltstone and greywacke. Very shallow, stony and gravelly lithosols. Eucalyptus tectifica, Corymbia confertiflora, Corymbia foelscheana and Erythrophium chlorostachys low woodland.
- LOW RISES**
- 2e** Low erosional slopes; gently undulating crests and upper slopes, (slopes <5%). Shallow gravelly sands. Eucalyptus tetrodonta and Eucalyptus tectifica open woodland with *Sehima nervosum* and *Themeda triandra* tussock grassland.
 - 3ds** Gently undulating slopes; sloping terrain (slopes <5%). Loamy red earths (Tipperra & Tindali), small inclusions of gravelly yellow earths, *Corymbia foelscheana* mixed spp. open woodland to woodland; minor *Eucalyptus miniata* mixed spp. woodland.
 - 3e** Heads of drainage systems and distinct breaks of slope; undulating terrain with slopes up to 5%. Loamy red earths (Emu), yellow earths (Elizabeth and Elliott) both often shallow & gravelly. Eucalyptus tectifica, *Corymbia grandifolia* and *Corymbia confertiflora* low open woodland with *Themeda triandra*, *Eragrostis* sp. and *Sorghum* spp. tussock grassland.
 - m3a** Low erosional slopes and rises; low erosional rises, rounded crests and upper slopes, slopes <5%; occasional outcrop. Gravelly yellow brown and yellow lithosols (Burrell). Overlying weathered siltstone and greywacke. *Corymbia confertiflora*, *Eucalyptus tectifica*, *Erythrophium chlorostachys* and *Xanthostemon paradoxus* mixed spp. low woodland with *Themeda triandra*, *Eriacina* sp. and *Heteropogon triticeus* tussock grassland.
 - m3b** Erosional slopes commonly below m3a, also below m2b & m2c; slopes less than 5%, extensive surface gravels. Gravelly yellow brown and yellow lithosols (Burrell). *Corymbia confertiflora*, *Eucalyptus tectifica*, *Erythrophium chlorostachys* and *Xanthostemon paradoxus* mixed spp. low woodland with *Themeda triandra*, *Eriacina* sp. and *Heteropogon triticeus* tussock grassland.
 - m4a** Colluvial slopes below m3a & m3b; slopes less than 5%. Shallow to moderately deep yellow earths (Batten), *Eucalyptus tetrodonta* and *Erythrophium chlorostachys* mixed spp. low woodland with a *Sorghum* sp. and *Chrysopogon* sp. tussock grassland.
- PLAINS**
- 3c** Gently undulating plains; flat to gently sloping (slopes <2%) with scattered limestone outcrop; Loamy red earths (Tipperra & Tindali), deep, with minor outcrop; or shallow and gravelly surface stone and gravel. *Corymbia foelscheana* mixed spp. low open woodland to woodland.
 - 3d** Gently undulating plains; flat to gently sloping (slopes <2%) with indistinct drainage floors. Loamy red earths (Tipperra & Tindali), small inclusions of gravelly yellow earths, *Corymbia foelscheana* mixed spp. open woodland to woodland; minor *Eucalyptus miniata* mixed spp. woodland.
 - 3d2** Lower slopes and drainage floors; undulating with short and variable slopes. Loamy red earths (Emu), frequently shallow, sometimes gravelly, often associated with gravelly yellow earths. *Corymbia foelscheana*, *Eucalyptus tectifica* and *Corymbia confertiflora* woodland on slopes. *Eucalyptus miniata* woodland forest on drainage floors; with *Panicum* sp., *Eragrostis* sp., *Themeda triandra*, *Sehima nervosum* and *Sorghum* spp. tussock grassland.
 - 4b2** Gently undulating plains; lower slopes and floors in gently undulating terrain; slopes up to 3%; occasional sandstone outcrop. Deep sandy red earths (Venn), *Eucalyptus tetrodonta* and *Eucalyptus miniata* open forest with *Themeda triandra*, *Alloctropis semialata*, *Eragrostis* sp. and *Sorghum* spp. tussock grassland.
 - 5d** Gently undulating plains; undulating terrain; slopes generally less than 3%; extensive surface gravels. Typically shallow, gravelly or deep yellow earths (Elliott, Eiong and Elizabeth) occasional loamy red earths (Tipperra), *Corymbia grandifolia*, *Eucalyptus tectifica*, *Corymbia foelscheana* open woodland with *Themeda triandra* tussock grassland; minor *Eucalyptus miniata*, *Eucalyptus tetrodonta* and *Corymbia polycaarpa* woodland.
 - 5e** Gently undulating plains; generally flat (slopes <1%). Moderately deep to deep gravelly and non-gravelly yellow earths (Elizabeth and Elliott), *Corymbia foelscheana*, *Corymbia grandifolia* and *Eucalyptus tectifica* woodland with *Sehima nervosum*, *Themeda triandra* and *Eragrostis* sp. tussock grassland.
 - 5f1** Gently undulating plains with intense drainage pattern; undulating terrain; slopes less than 4%; occasional rock outcrop. Yellow earths with gravel, frequently shallow (Elliott), *Corymbia foelscheana*, *Eucalyptus tectifica*, *Corymbia grandifolia* and *Corymbia confertiflora* low woodland with *Sorghum plumosum*, *Themeda triandra*, *Sehima nervosum* and *Sorghum* spp. tussock grassland.
 - m4b** Colluvial slopes below m3a & m3b and above alluvial areas; slopes less than 2%. Moderately deep to deep yellow earths (Batten). *Corymbia foelscheana* open woodland.
- ALLUVIAL PLAINS**
- m5b** Alluvial plains; negligible slopes. Solonchaks and solonchaks (Bundey & Ringwood), minor yellow earths (Tortilla), *Corymbia grandifolia*, *Corymbia polycaarpa*, *Corymbia bella*, and *Livistona humilis* mixed spp. open woodland to woodland.
 - m6a** Alluvials of major rivers and creeks associated with narrow levees; channels incised up to 6m. Deep red and yellow earths (Heaton and Tortilla). Mixed spp. non-Eucalypt open forest on river and creek banks. *Eucalyptus miniata*, *Corymbia confertiflora* and *Corymbia bella* open woodland to open forest with a *Panicum midsandense* and *Eragrostis* sp. mixed spp. tussock grassland on levees.
 - m6b** Active levees associated with rivers and major creeks; slopes generally <1%. Deep red and yellow earths (Heaton), less frequently deep yellow earths (Tortilla), *Eucalyptus miniata*, *Corymbia confertiflora*, *Corymbia bella* and *Erythrophium chlorostachys* open woodland to open forest with a *Panicum midsandense*, *Eragrostis* sp., *Eriacina* sp. and *Themeda triandra* tussock grassland.
- DRAINAGE SYSTEMS**
- 7a2** Slightly elevated back plains and drainage floors. Grey and brown clays, frequently with CaCO3 concretions at depth (Coolibah). *Bothriochloa baillii*, *Dichanthum* sp., *Panicum trachybachis* and *Paspalum* sp. tussock grassland.
 - 7a3** Flat plains with large number of perennial springs; occurrences of limestone outcrop. Grey, brown and red clays, very strongly gigaied in areas (Banyan, Coolibah and Cununurra). *Terminalia platytera*, *Melaleuca viridiflora* and *Corymbia bella* open woodland with *Panicum midsandense* and *Panicum trachybachis* tussock grassland.
 - 7b** Drainage floors or high level plains; drainage lines, occasionally channelled, slopes rarely exceed 1%. Yellow earths and minor solonchaks (Elizabeth and Bundey). *Themeda triandra*, *Eragrostis* sp. and *Panicum midsandense* tussock grassland; minor *Corymbia bella* and *Corymbia polycaarpa* open woodland.
 - 7c** Drainage floors and alluvial plains; ill-defined depositional drainage lines in close association with plateau sideslopes. Sandy alluvium. Mixed spp. non-Eucalypt open forest.
 - 7d** Broad drainage flats or seasonally ponded plains; slight slopes. Loamy red earths with alluvial and colluvial surface horizons (Tipperra). *Corymbia foelscheana*, *Corymbia polycaarpa* and *Corymbia bella* woodland with *Panicum midsandense* tussock grassland.
 - 7d1** Broad drainage flats or temporarily ponded plains; very slight slopes. Earths (Elliott). *Heteropogon contortus*, *Themeda triandra*, *Eragrostis* sp. and *Sehima nervosum* tussock grassland to *Corymbia bella* and *Erythrophium chlorostachys* open woodland.
 - m6a1** Drainage lines and floors in rugged terrain (m2a, m2b, m2c), normally <200m wide. Moderately deep yellow earths (Tortilla) upper reaches, solonchaks (Bundey) lower reaches. *Eriacina burkittii*, *Panicum trachybachis*, *Themeda triandra* and *Eragrostis* sp. tussock grassland to *Corymbia polycaarpa*, *Corymbia bella*, *Corymbia grandifolia*, *Melaleuca viridiflora* and *Livistona* sp. open woodland.



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