

Gum-topped box and blue gum on mixed alluvium



Landform	Alluvial plains, gently undulating levees and terraces, high river terraces and narrow drainage flats (0–6% slopes).
Woody vegetation	Grassy open forest to woodland of gum-topped box and Queensland blue gum. Swamp mahogany, Moreton Bay ash, grey ironbark / narrow-leaved ironbark may also be present. <i>* Denotes non-native “Expected Pasture Composition” species.</i>
Expected pasture composition	
Preferred	Forest bluegrass, barbwire grass, black speargrass, kangaroo grass, Rhodes grass*, creeping bluegrass*.
Intermediate	Pitted bluegrass, tambookie grass, umbrella grass, couch grass*, bottlewasher grasses, curly windmill grass.
Non-preferred	Wiregrasses, slender chloris.
Legumes	Emu-foot, creeping tick trefoil, woolly glycine.
Annual grasses	Small burr grass.
Suitable sown pastures	Rhodes grass, creeping bluegrass, pangola, lotononis, Wynn cassia, siratro, white clover.
Introduced weeds	Lantana, camphor laurel, castor oil plant.
Soil	Deep dark brown to dark grey cracking clays (coarse structured clays), or loamy sand to clay loam (prairie soils), texture contrast soils (soloths). Usually gilgai development is present, and a thick bleached zone occurs above the hard clays in duplex soils.
Description	Surface: Cracking and often self-mulching, or hard-setting; Surface texture: loamy sand to clay loam to medium clay; Subsoil texture: light to heavy clays.
Features	Hard-setting. Highly saline and strongly sodic subsoils. If strongly acid, chemical toxicities (aluminium, magnesium) may increase the dispersion tendency.
Water availability	High (cracking clays) to very low (soloths); PAWC >150 mm or <50 mm in root zone.
Rooting depth	Effective rooting depth <0.6 m to >1.2 m on alluvial loams.

Fertility Low to medium nitrogen; very low to low (soloths), medium (coarse clays), to high (loams) phosphorus; variable (soloths), low to medium (coarse clays), very high (loams) potassium; medium zinc; and low to medium (loams, soloths) copper.

Salinity Very low to low at surface; medium to high salinity at depths >50 cm (coarse clays).

Sodicity Non-sodic; strongly sodic at depths >50 cm (coarse clays, soloths).

pH Soil surface very strongly acid (4.5) to slightly acid (6.5) (coarse clays, soloths) to mildly alkaline (7.7) (alluvial loams); coarse clays may be either moderate (8.0) (loams) to strongly alkaline (8.5) or extremely acid (4.2) to medium acid (6.0) (soloths).

Long-term carrying capacity information (A condition)

Based on fully watered area for 1AE = 450 kg animal consuming 8kg DM/day				
Median annual rainfall 744– 909 mm				
Pasture type	Median tree cover (TBA m ² /ha (FPC %))	Median annual pasture growth (DM kg/ha)	Safe annual utilisation pasture growth (%)	LTCC (ha/AE)
Native species	0 TBA/FPC	3420 - 3670	30%	2.7 – 2.8
	16 TBA 39 FPC	920 - 1150	30%	8.5 – 11

**Enterprise
Land use and management recommendations**

- Breeding**
- Suitable for grazing of native and improved pastures, timber reserves, softwood plantations.
 - Not suitable for irrigation; duplex soils are not suitable for agricultural development.
 - In better drained areas short-term forage crops may be grown.
 - Adopt practices such as minimum tillage, stubble mulching, and weed control to maintain soil structure and reduce erosion. Include cover crops in crop rotations and retain crop residues.
 - Maintain adequate surface cover at all times.
 - Maintain timber growth on steeper slopes and ridges.
 - Burn every 4–6 years to control thick regrowth (ironbarks, gum-topped box, wattles) if restricting grass cover.

Land use limitations

- Poor to very poor drainage causes frequent water logging after rain, particularly in soils with high clay content, with some areas seasonally inundated.
- Effective rooting depth reduced by poor drainage, high subsoil salinity and sodicity.
- Moderate to high risk of sheet and gully erosion on cracking clays on sloping sites. Texture contrast soils very susceptible to sheet, tunnel, and gulying erosion.
- Plant growth limited by very tough, poorly structured subsoil and hard setting surfaces of duplex soils. Saline seeps may occur in lower slope positions.

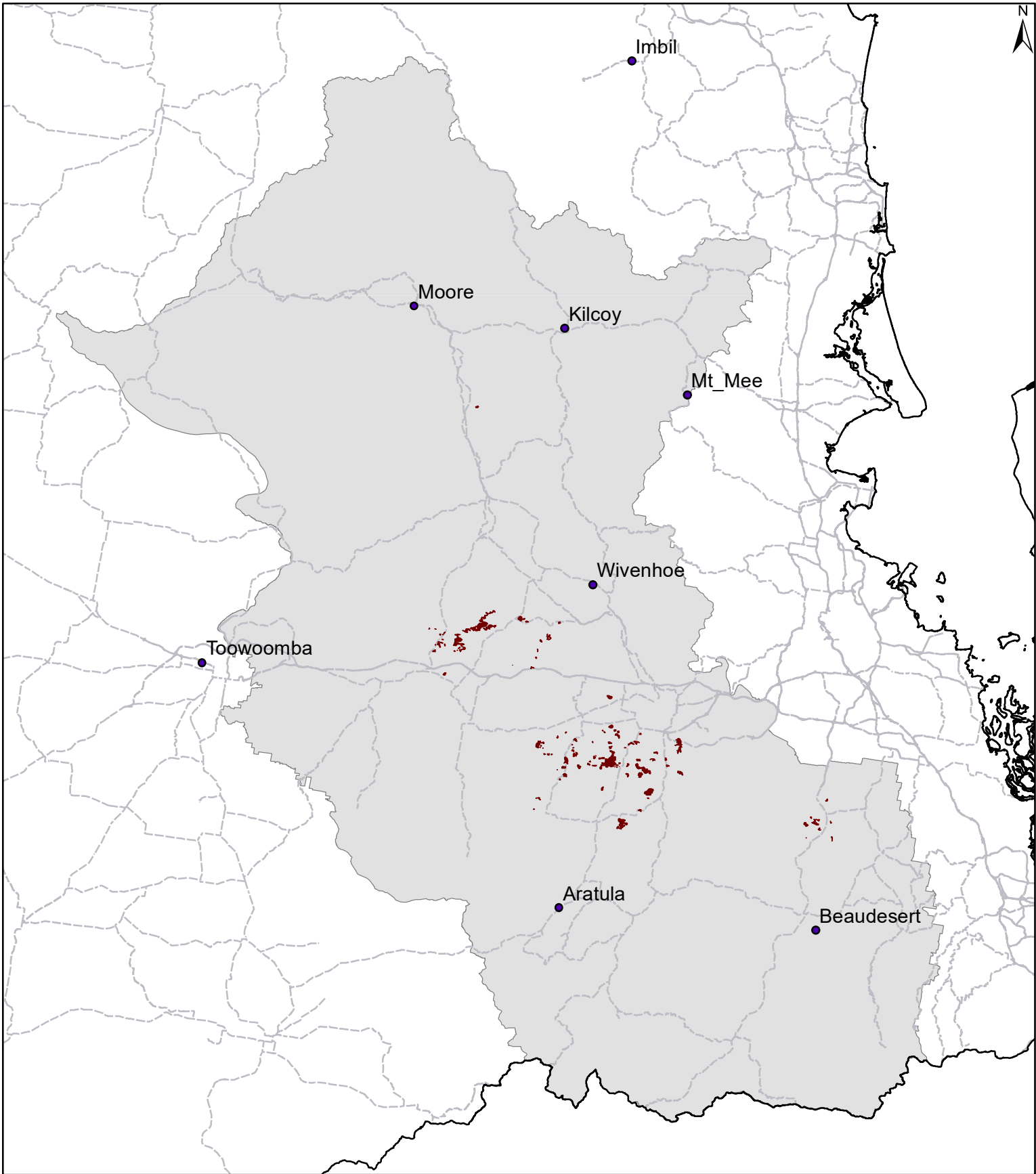
Conservation features and related management

- These remnant woodlands provide important habitat for gliders, possums, koalas, tree creepers, speckled warblers, powerful owls and ground foraging birds.
- Also these woodlands provide important corridors that both resident and dispersing fauna use to move through the landscape.
- Frequent fires reduce the shrubby understorey, but variable fire regimes encourage mosaics.
- Heavy grazing reduces fuel loads and exposes the soil surface to erosion.

**Regional Ecosystems
Land resource area**

12.3.3a, 12.9-10.11.
Mixed alluvial plains, 1c (Noble, 1996).

MO03 Gum-topped box and blue gum on mixed alluvium



Area of land type in region: 0.2%
Median rainfall (region): 632 – 1372 mm
Average rainfall (region): 637 – 1536 mm
Area of land type with FPC: 0.1%
Median FPC: 39%
Median TBA: 16 m²/ha



**Queensland
Government**