Mixed open forests on duplex and loam

Landform	Undulating to steep hills.
Woody vegetation	Grassy open forest of narrow-leaved ironbark / grey ironbark and silver-leaved ironbark with and bloodwoods (pink, brown, Clarkson's and variable-barked). Spotted gum, gum-topped box, Moreton Bay ash, grey gum, white mahogany may also occur. An understorey of bulloak and wattles may be present.
Expected pasture composition	** Denotes non-native "Expected Pasture Composition" species.*
Preferred	Black speargrass, barbwire grass, kangaroo grass, tambookie grass, Rhodes grass*, creeping bluegrass*.
Intermediate	Pitted bluegrass, couch grass*, bottlewasher grasses, lovegrasses.
Non-preferred	Wiregrasses, reedgrass, slender chloris.
Legumes	Emu foot, woolly glycine, rhynchosia, creeping tick trefoil.
Annual grasses	Small burr grass.
Suitable sown pastures	Rhodes grass, creeping bluegrass, Shrubby stylo, fine stem stylo, Wynn cassia.
Introduced weeds	
Soil	Texture contrast soils of brown to dark grey loamy sands overlaying red, brown or yellow clay.
Description	***Surface*:** Sandy or loamy, loose to hard-setting; ***Surface texture:*** sandy clay loam or loamy sand to clay loam; ***Subsoil texture:*** light to heavy clay.
Features	Usually a prominent bleached zone above hard clay subsoil. Strongly sodic and dispersible, with dominance of magnesium in subsoil increasing tendency for dispersion. Sometimes mottled (yellow or grey). Sometimes contains lime.
Water availability	Very low to low, PAWC <50–100 mm in root zone.
Rooting depth	Effective rooting depth <0.4 m (solodics) to <1.5 m (podzolics).
Fertility	Low to medium, can be variable (loamy solodics) nitrogen; very low to low, can be variable (loamy solodics) phosphorus; variable, very low to high potassium; low to medium zinc; low to high copper.
Salinity	Very low at surface; high at depth.
Sodicity	Non-sodic at surface; strongly sodic at depth (solodics).

pH

Soil surface very strongly acid (4.5) or strongly acid (5.4) to slightly acid (6.5); subsoils very strongly acid (5.0) to medium acid (6.0) (soloths, podzolics), or moderately alkaline (8.0) to strongly alkaline (9.0) (solodics).

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 – 1372 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	3030 - 3720	25%	3.1 - 3.9
	15 TBA 36 FPC	1200- 2100	25%	5.6 – 9.7

Enterprise

Breeding.

Land use and management recommendations

- Suitable for grazing of native and improved pastures.
- Timber reserves.
- Maintain maximum surface cover at all times.
- Oversowing of legumes should be done with minimal soil disturbance (e.g. strip cultivation).
- Maintain as much timber cover as possible, especially on steeper slopes and ridges.
- Burn every 2–3 years to help control weeds and regrowth (ironbarks, wattles, red ash).

Land use limitations

- Plant growth limited by tough clay subsoil and hard setting surfaces.
- Rooting depth limited by hard, and saline or acid, subsoils.
- Hard clay subsoils impede drainage and are prone to water logging in wet periods.
- Very susceptible to sheet, tunnel and gullying erosion.
- Generally very low nutrient status, particularly nitrogen and phosphorus.

Conservation features and related management

- This woodland is an important wildlife habitat with a surprisingly wide range of fauna. Larger marsupials such as wallabies often use this habitat. Numerous tree hollows are home to possums and gliders. The rough fissured bark provides good reptile habitat for skinks and geckoes.
- A good grass cover protects slopes and hillsides from erosion and provides habitat for ground fauna such as button-quail.
- Mosaic burning for regeneration and retention of microhabitats is critical for maintaining species richness. Burning every three years in winter or just prior to summer rains is an optimum regime. To maintain a diversity of habitat for wildlife it is better to burn patches rather than large areas, although selective overgrazing in the burnt areas needs to be managed.
- Retention of mature trees is necessary, as only long-lived trees will form hollows.
- Conservation management should aim to retain remnant patches especially where these offer connectivity values.

Regional Ecosystems

12.11.14, 12.11.27, 12.5.1c, 12.5.1g, 12.5.3, 12.5.3a, 12.9-10.12, 12.9-10.17, 12.9-10.17c, 12.9-10.17e, 12.9-10.25, 12.9-10.26, 12.9-10.27, 12.9-10-28, 12.9-10.4, 12.9-10.4a, 12.9-10.5, 12.9-10.5a, 12.9-10.5d, 12.9-10.7.

Land resource area

Forest Walloons, 6a; Helidon Forest, 7b; Marburg Forest, 7a (Noble, 1996).

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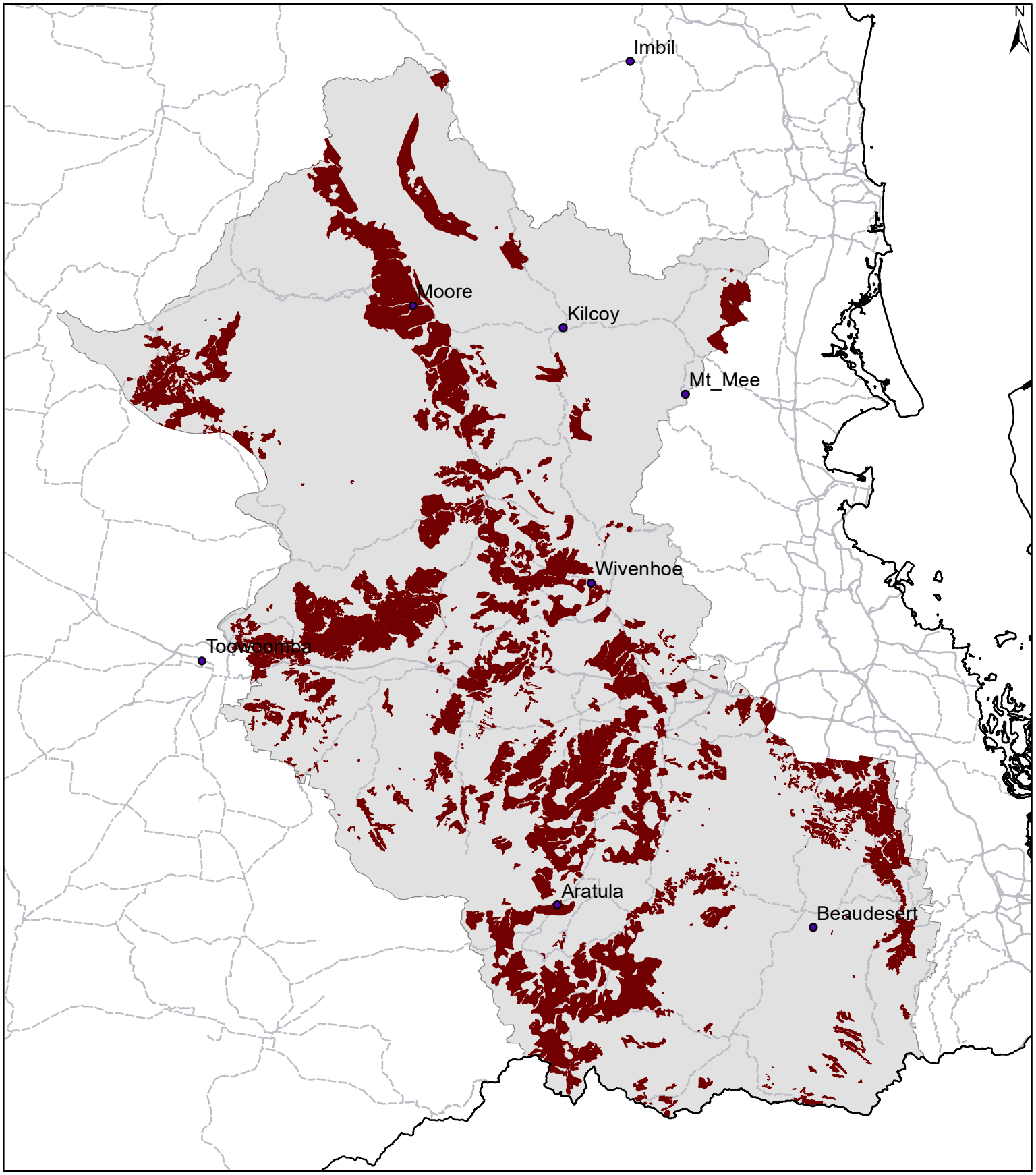

Area of land type in region: 17%
Median rainfall (region): 632 – 1372 mm
Average rainfall (region): 637 – 1536 mm
Area of land type with FPC: 9%
Median FPC: 36%
Median TBA: 15 m2/ha

Queensland Government