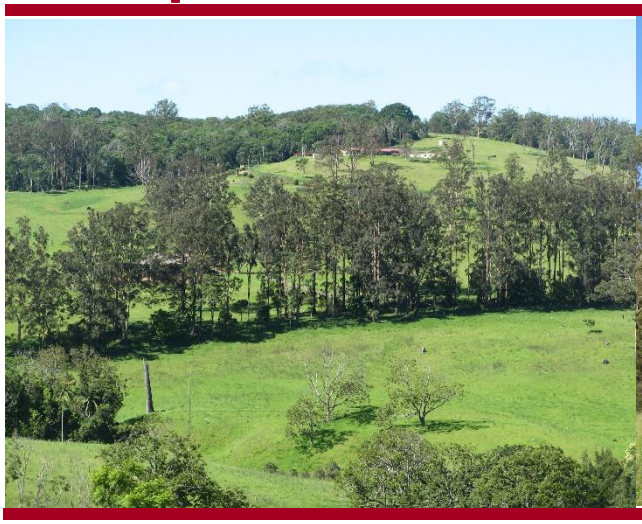
Tall open forests on basalt



Landform	Mainly on plateaus, but also occurs undulating rises to rolling low hills (slopes 3–40%).
Woody vegetation	Flooded (rose) gum, Sydney blue gum, tallowwood, brush box with small areas of rainforest. Blue Mountains ash, stringybark, grey gum and white mahogany may also occur.
Expected pasture composition	** Denotes non-native "Expected Pasture Composition" species.*
Preferred	Kangaroo grass, forest bluegrass, Queensland bluegrass, black speargrass, tambookie grass, scentedtop, kikuyu*, paspalum*, panics*.
Intermediate	Pitted bluegrass, umbrella grass, spring grass, native panic, liverseed grass, native sorghum.
Non-preferred	Wiregrasses, blady grass, slender chloris. slender bamboo grass, native rat's tail grass.
Legumes	Glycine pea, woolly glycine, rhynchosia, creeping tick trefoil.
Annual grasses	Small burr grass.
Suitable sown pastures	Rhodes grass, creeping bluegrass, kikuyu, digit grass, panics, paspalum, white clover, lucerne, glycine, siratro, leucaena, vigna, wynn cassia.
Introduced weeds	Lantana, privet, wild tobacco tree, bracken fern, giant rat's tail grass, fireweed.
Soil	Deep, red, strongly structured clays that are friable and highly permeable (ferrosols - krasnozems). Occurrences also on shallow, dark friable clay loams and clays over weathered parent rock (rudosols, dermosols - shallow clays/prairie soils).
Description	***Surface*:** Loose to self-mulching, occasionally hard-setting; ***Surface texture:*** clay loam to light or medium clay; ***Subsoil texture:*** medium to heavy clay.
Features	Deep soils (often >5 m), with varying amounts of ironstone gravel and rock fragments throughout profile. Shallower clay soils have bedrock at 0.3–0.8 m.
Water availability	High, PAWC 150–200 mm in root zone in krasnozems; low 50–100 mm in shallow clay soils.
Rooting depth	Effective rooting depth < 0.8 m (shallow clays) to >1.5 m (krasnozems).
Fertility	Nitrogen-medium to high; Phosphorus - very low to low (krasnozems) to medium to high (shallow clays); Potassium-medium to high; zinc and copper-medium.
Salinity	Low to very low.
Sodicity	Non-sodic
pH	Soil surface strongly acid (5.5) in krasnozems to slightly acid (6.5) in shallow clays; subsoil can be very strongly acid (4.8) to medium acid (6.0) in krasnozems or strongly alkaline (8.5) in shallow clays.

Long-term carrying capacity information (A condition)

Based on fully watered area for 1AE = 450 kg animal consuming 8kg DM/day				
Median annual rainfall 785 – 909 mm				
Pasture type	Median tree cover (TBA m2/ha) (FPC %)	Median annual pasture growth (DM kg/ha)	Safe annual utilisation pasture growth (%)	Long term carrying capacity (ha/AE)
Native species	29 TBA 64 FPC		30%	
Sown pastures	29 TBA 64 FPC		30%	

Enterprise

Growing and fattening.

Land use and management recommendations

- Suitable for grazing of improved pastures, dryland and irrigated cropping, dairying and timber plantations.
- Do not cultivate on slopes greater than 10–15%.
- Rotate intensively cultivated crops with broadacre field crops and legumes to improve soil structure and fertility. Periods under pasture rotation are recommended to enhance long-term soil stability and soil organic matter content. Adopt practices such as minimum tillage, stubble mulching, and weed control to maintain soil structure and reduce erosion on sloping lands.
- Maintain maximum surface cover to maintain soil structure and reduce erosion. Avoid trafficking and cultivation when wet to reduce soil compaction. For cropping areas, undertake routine soil tests to monitor nutrient levels and match fertiliser and organic inputs to maintain productivity and soil health. Strongly acid soils may require applications of lime to improve nutrient availability & structure.
- For pastures maintain high levels of effective groundcover (>90%) at all times of the year and routinely spell pastures to allow desirable species to recover & seed.
- To maintain ecological values & help control weeds burn with low-moderate intensity fire every 4 – 8 years for grassy understorey. Aim for longer intervals, 7-20 years, for shrubby understorey. It is essential that wildfires are not sole source of fire and that there is adequate disturbance to maintain structure.

Land use limitations

- Surface structure becomes cloddy and hard-setting under cultivation; plough pans may develop. Fertility is variable and declines rapidly under development.
- Effective rooting depth can be limited by very strongly acid soils. Shallow soils often stony and <0.5 m above weathered bedrock.
- Highly erodible on cultivated slopes >3% (krasnozems). Prairie soils are moderate to high erosion risk, particularly on steeper slopes.
- Steeper slopes in some upland areas may be at-risk from landslips

Conservation features and related management

- These are tall wet sclerophyll forests and have been important sources of timber in the past.
- They are associated with high rainfall on elevated and fertile sites and form important corridors across the landscape with closely associated rainforest communities.
- These forests are rich in biodiversity; have outstanding fauna value, especially for arboreal hollow dwellers and a diverse variety of fauna that use the many associated springs.
- Some regional ecosystems such as 12.5.6 have been cleared for agriculture, resulting in being classified as Endangered.
- These tall wet sclerophyll forests provide habitat for koalas and a number of plants listed under the Nature Conservation Act.

Regional Ecosystems

12.5.6, 12.5.6a, 12.5.6b, 12.8.1, 12.8.11, 12.8.12, 12.8.14, 12.8.15, 12.8.19, 12.8.1a, 12.8.2, 12.8.8, 12.8.8a, 12.8.9.

Land resource area

Red volcanics, 2a, Basaltic uplands 2b (Noble, 1996).

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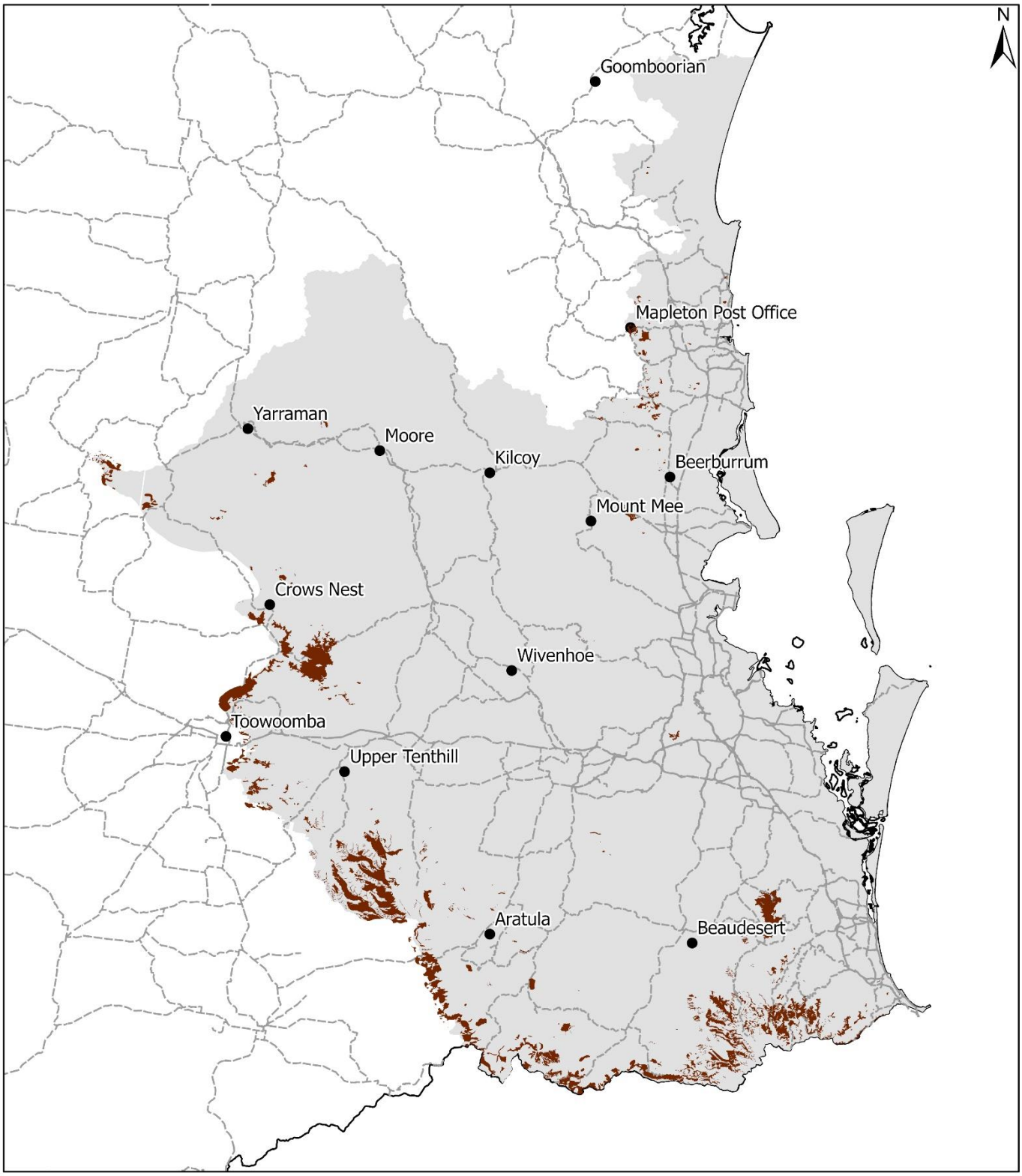

Area of land type in region: 3%
Median rainfall (region): 752–1672 mm
Average rainfall (region): 763–1766 mm
Area of land type with FPC: 32%
Median FPC: 49%
Median TBA: 21 m2/ha