

# Mixed open forests on duplex and loam



|                                     |   |
|-------------------------------------|---|
| <b>Landform</b>                     | Widespread occurrence on mid, lower and upper slopes and crests of low basalt rises and stony knolls; upper slope positions on relict alluvial plains; mid and lower slopes of undulating plains and low hills, and mid to upper slopes of broad rises. |
| <b>Woody vegetation</b>             | Open forest or woodland of gum-topped box, silver-leaved ironbark, narrow-leaved ironbark, with occasional Queensland blue gum, broad-leaved apple, pink bloodwood and spotted gum. Scattered occurrences of rusty gum, and wattle and dogwood.         |
| <b>Expected pasture composition</b> | <i>Southern black speargrass pastures.</i><br>* Denotes non-native "Expected Pasture Composition" species.  |
| Preferred                           | Black speargrass, Queensland bluegrass, kangaroo grass, hooky grass, leafy panic.   |
| Intermediate                        | Slender chloris, slender rat's tail grass.  |
| Non-preferred                       | Wiregrasses (e.g. dark), purple lovegrass, reedgrass.   |
| Legumes                             | Woolly glycine, glycine pea.  |
| <b>Suitable sown pastures</b>       | Rhodes grass, creeping bluegrass, shrubby stylo.  |
| <b>Introduced weeds</b>             |   |
| <b>Soil</b>                         | Yellow or brown texture contrast soils (solodics), deep red clay loams (euchrozem) or deep or shallow dark clays (black earths).  |
| Description                         | <b>Surface:</b> Crusting to hard-setting or weakly self-mulching; <b>Surface texture:</b> sandy clay loam, clay loam or light medium clay; <b>Subsoil texture:</b> light to medium to heavy clay.   |
| Features                            | Bleached subsoils and concretionary carbonate below 70 cm common (solodics). Gravel may occur throughout profile (euchrozems, black earths).  |
| Water availability                  | Low to moderate (solodic), moderate (black earth, euchrozem) PAWC.  |
| Drainage                            | Poor or imperfect (solodic) to moderately well or well (black earth, euchrozem) drained.  |
| Rooting depth                       | 20–35 cm (solodic), 30 cm (black earth) and >100 cm (black earth, euchrozem)  |
| Fertility                           | Medium. Low to moderate nitrogen; moderate to high phosphorus; low to moderate to very high potassium.  |

Salinity

Very low (black earths, euchrozem); low to moderate to high below 60 cm (solodics).

Sodicity

Non-sodic (black earths, euchrozem) to sodic to strongly sodic subsoil (solodic).

pH

Acid (pH 5.4) to slightly acid (pH 5.9–6.9) surface; neutral or alkaline (pH 9.0) at depth.

**Long-term carrying capacity information (A condition)**

| Based on fully watered area for 1AE = 450 kg animal consuming 8kg DM/day |  |  |   |                 |
|--|--|--|---|-----------------|
| Median annual rainfall 629 – 754 mm                                      |  |  |   |                 |
| Pasture type   | Median tree cover<br>(TBA m <sup>2</sup> /ha)<br>(FPC %) | Median annual pasture growth<br>(DM kg/ha) | Safe annual utilisation pasture growth<br>(%) | LTCC<br>(ha/AE) |
| Native species   | 0 TBA/FPC  | 3570 - 3710                                | 30%   | 2.6 – 2.7       |
|  | 11 TBA<br>27 FPC   | 1200 - 2070                                | 30%   | 4.7 – 8.1       |

**Enterprise**

Breeding and fattening.

**Land use and management recommendations**

- Suitable for grazing of native and improved pastures and cropping in some areas.
- Use of minimum tillage and maintenance of effective ground cover (>70%) and conservative stocking practices (spelling pastures, flexible stocking rates) are important to retain organic matter, maintain soil structure, reduce runoff and minimise risk of erosion.
- Retain timber on ridges, in drainage lines and at changes of slope at base of hills to lower watertable and control salinity.
- Burning every three years in winter or just prior to summer rains is an optimum regime to control regrowth (ironbarks, wattles) and to enhance preferred pasture species.

**Land use limitations**

- Low PAWC will restrict dryland crop growth. Poor drainage in subsoils due to sodicity.
- Surface sealing, hard-setting surfaces, narrow moisture range all affect crop establishment. Surface structure breaks down with continual cultivation (euchrozems).
- High to very high erosion hazard, subject to scalding and gully erosion (solodics).
- Moderate erosion hazard (black earths, euchrozems).

**Conservation features and related management**

- This woodland provides habitat for larger marsupials (e.g. wallabies); tree hollows for possums and gliders; rough fissured bark for skinks and geckoes; grass cover for ground fauna such as button-quail.
- Mosaic burning of patches for regeneration and retention of microhabitats is critical for maintaining species richness.
- Selective overgrazing in the burnt areas needs to be managed.
- Conservation management should aim to retain larger older trees with hollows and remnant patches especially where these offer connectivity values.

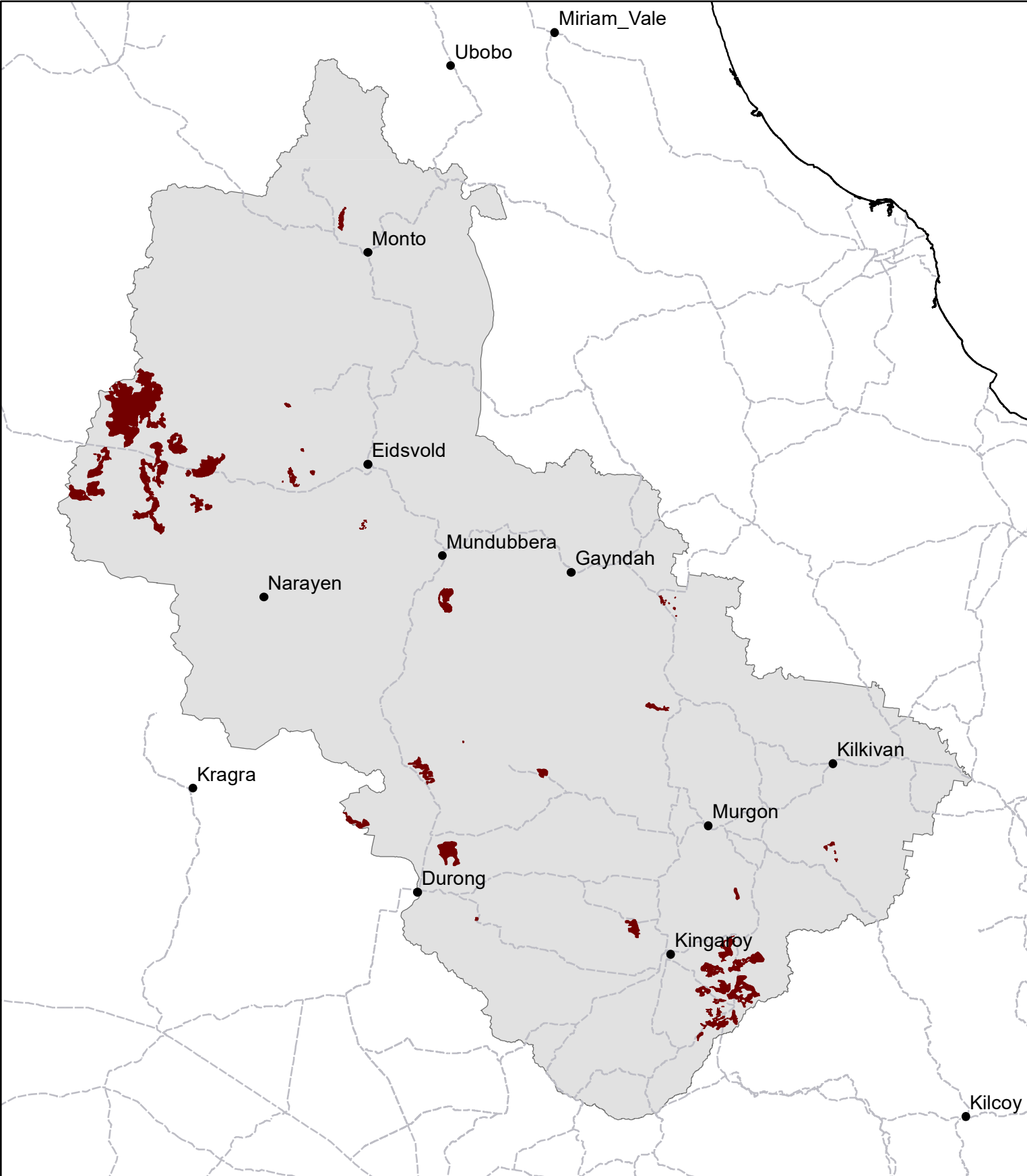
**Regional Ecosystems**

11.5.1, 11.5.2.

**Land resource area**

Basalt Rises; Volcanic Uplands; Terraces; Relict Alluvial Plains; Red Tablelands.

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Area of land type in region: 2%  
Median rainfall (region): 529 – 1018 mm  
Average rainfall (region): 560 – 1070 mm  
Area of land type with FPC: 71%  
Median FPC: 27%  
Median TBA: 11 m2/ha