Brigalow with melonholes

Landform	Higher lying level plains, and mid slopes and crests of broad low rises.
Woody vegetation	Brigalow, black tea tree belah open forest.
Expected pasture composition	*Brigalow pastures*. ** Denotes non-native "Expected Pasture Composition" species*.
Preferred	Brigalow grass, Queensland bluegrass, silky browntop.
Intermediate	Native millet, spring grass, umbrella canegrass, slender chloris.
Non-preferred	Wiregrasses (e.g. dark), tall chloris.
Legumes	Woolly glycine, rhynchosia.
Suitable sown pastures	Creeping blue grass, Rhodes grass, green panic, buffel grass, Angleton grass, Bambatsi panic, Caatinga stylo, Desmanthus.
Introduced weeds	
Soil	Generally deep (>150 cm) brown and grey medium to heavy clays, weakly to strongly gilgaied.
Description	***Surface:*** Self-mulching and cracking; ***Surface texture:*** light to medium heavy clay; ***Subsoil texture:*** medium heavy to heavy clay.
Features	Variable gilgai microrelief.
Water availability	Moderate to high PAWC.
Drainage	Poor
Rooting depth	Effective rooting depth 40–60 cm.
Fertility	Moderate to high; moderate to high nitrogen, low to moderate phosphorus, high potassium.

Salinity

Highly saline below 50–60 cm on mounds; moderate in depressions.

Sodicity

Non-sodic at the surface. Sodic to strongly sodic below 30–50 cm.

pH

Slightly to moderately alkaline (pH 7.0–8.0) at surface; increasing alkalinity at depth (pH 9.0).

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 – 707 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	4630 - 4710	30%	2.1
	11 TBA 27 FPC	3040 - 3080	30%	3.2

Enterprise

Fattening

Land use and management recommendations

- Suitable for grazing of native and improved pastures, some short term only cropping.
- Use of minimum tillage and maintenance of effective ground cover (>50%) 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 is recommended not more frequently than every 6 years to control regrowth (brigalow, black tea tree) and to enhance preferred pasture species.

Land use limitations

- Waterlogging, uneven wetness, restricted trafficability and tillage caused by gilgai microrelief. Narrow moisture range for successful cultivation.
- Sodic subsoil impedes internal drainage and restricts crop development.
- Possibility of salinity outbreaks in drainage lines.
- Low erosion hazard due to moderate erodibility and moderate slopes.

Conservation features and related management

- As there are very few areas of this land type remaining they are of high value. It is an ecosystem where the higher drier parts of the melonholes are heavily grazed and depressions, which become water-logged in the wet, provide for a unique and very specific suite of plants.
- In its natural state this land type offers limited grazing value but a high ecological value.
- Brigalow melonholes can be prolific breeding sites for frogs and are an attractant for species such as the vulnerable ornamental snake that feeds almost exclusively on frogs.
- These areas are very readily degraded because of their uneven wetness and plant composition.
- The ideal scenario for conservation would be to fence these unique areas off from grazing.

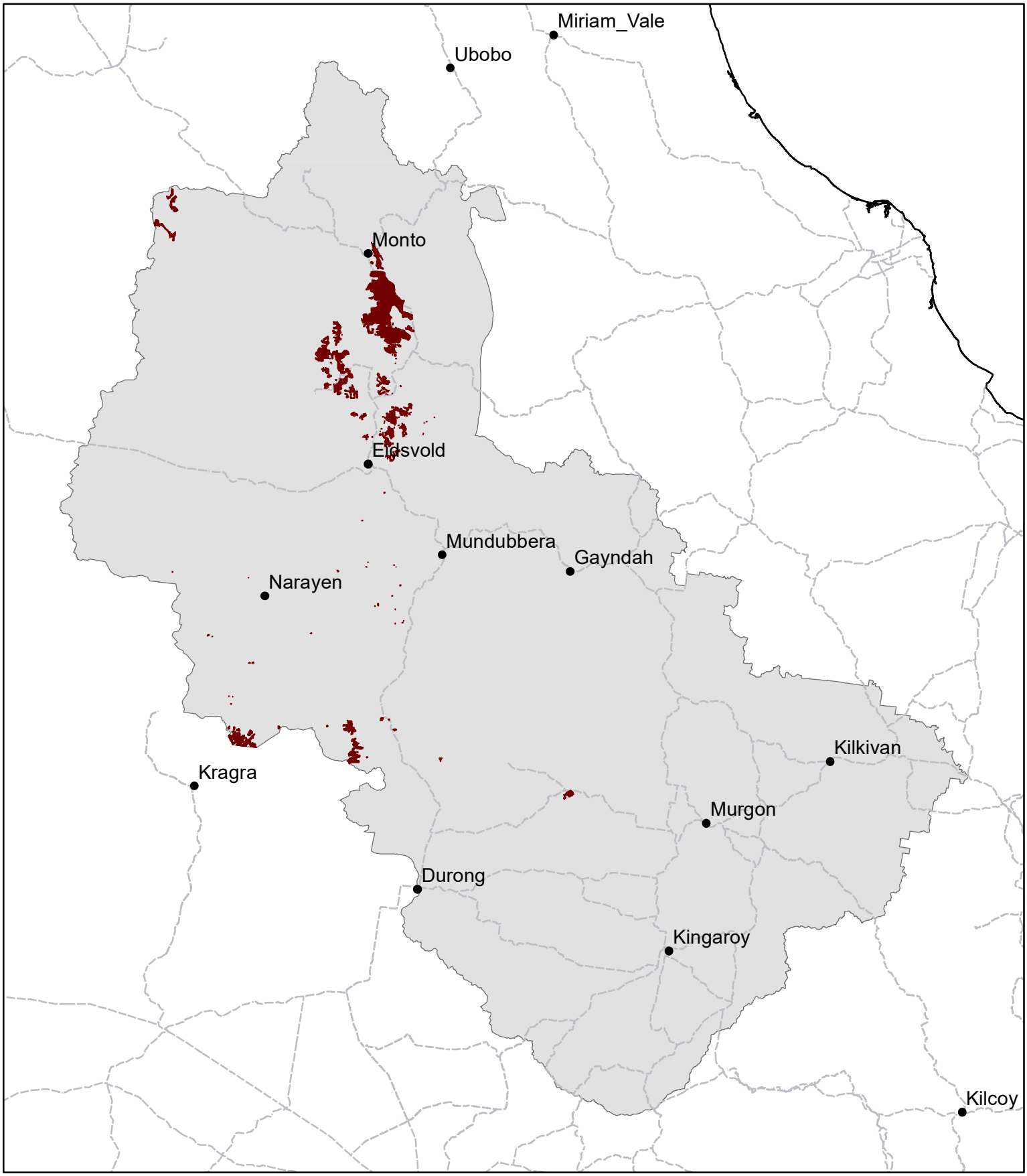
Regional Ecosystems

11.9.5.

Land resource area

Relict Alluvial Plains.

IB08 Brigalow with melonholes



Area of land type in region: 1%
Median rainfall (region): 529 – 1018 mm
Average rainfall (region): 560 – 1070 mm
Area of land type with FPC: 10%
Median FPC: 27%
Median TBA: 11 m2/ha

Queensland Government