

Narrow-leaved ironbark and bulloak on sodic duplex soils



Landform	Gently undulating plains and rises on sandstone.
Woody vegetation	Narrow-leaved ironbark, bulloak, gum-topped box, cypress pine on deeper soils, rusty gum and poplar box open forest with shrubby understorey of wattles and false sandalwood.
Expected pasture composition	* Denotes non-native "Expected Pasture Composition" species
Preferred	Black speargrass, forest bluegrass, golden beard grass, barbwire grass and kangaroo grass.
Intermediate	Pitted bluegrass, lovegrasses (e.g. purple, dainty), tall chloris, curly windmill grass, hairy panic and fairy grass.
Non-preferred	Purple wiregrass, dark wiregrass, Jericho wiregrass, many-headed wiregrass, small burrgrass, five-minute grass, rough speargrass and green couch.
Common forbs and legumes	Rhynchosia pea, woolly glycine, native indigo and native sensitive plant. Non-preferred species include common fringe-rush and mulga fern.
Suitable sown pastures	Rhodes grass (Katambora types), digit grass and buffel in western areas.
Introduced weeds	Lantana, African boxthorn, harissia cactus, tree pear, tiger pear, lippia, mother-of-millions, African lovegrass and giant rat's tail grass.
Soil	Texture contrast soil with thin (<15 cm) to thick (>30 cm) surface of bleached sands to loams over mottled, grey or yellow sandy clays (sodosol).
Description	Surface: Massive or loose; Surface texture: loamy sand to sandy clay loam; Subsoil texture: sandy clay to medium clay.
Water availability	Low to moderate; plant available water capacity (PAWC) <50 mm in root zone.
Rooting depth	Effective rooting depth generally 10 – 30 cm, occasionally to 60 cm.
Fertility	Low to moderate organic carbon and nitrogen, very low phosphorus, very low to low zinc.
Salinity	Very low to low at the surface, high to extremely saline subsoils.

Sodicity
pH

Non-sodic to sodic at surface; sodic to strongly sodic subsoils.

Weakly acidic or acidic at the surface; neutral, strongly acidic or strongly alkaline subsoils.

Long-term carrying capacity information (A condition)

Based on fully watered area for 1AE = 450 kg animal consuming 8kg DM/day				
Median annual rainfall 580 – 666 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	3060 - 3750	20%	3.9 – 4.8
	11 TBA 28 FPC	1420 - 2060	20%	7.1 – 10
Sown			25%	

Enterprise

Breeding.

Land use and management recommendations

- This soil is best left in its native state. Suitable for grazing native pastures.
- Limited suitability for grazing on improved pastures in deeper surface soils and where there is adequate water.
- Maintaining effective ground cover and conservative stocking practices (spelling pastures, flexible stocking rates) are important to minimise the risk of sheet, and rill erosion.
- Minimise surface disturbance to reduce high erosion risk of soil surface.
- Appropriate location of tracks, fencing, watering points and firebreaks can limit the development of gullies.
- An active regrowth control program (e.g. selective chemical, burning every 3 – 5 years) may be required to maintain productivity levels.
- Narrow-leaved ironbark and cypress pine may be useful farm and millable timber.
- Good bee and nature conservation country, if not cleared.

Land use limitations

- Inherently infertile and fragile soils, though generally more productive than the stony ridges with hard setting, shallow soils.
- Timber thinning may be counter-productive in these areas.
- Sodic and saline subsoils limit effective rooting depth, available moisture and suitability for improved pastures.
- Texture contrast soils with sodic subsoils at less than 30 cm are susceptible to land degradation and limit clearing and cultivation practices.

Conservation features and related management

- These land types provide extensive habitat for insectivorous and nectivorous birds and mammals. Bullock seeds are an important food source for the vulnerable glossy black cockatoo.
- Habitat for threatened plant species including *Acacia handonis* and *Acacia argyrotricha*.

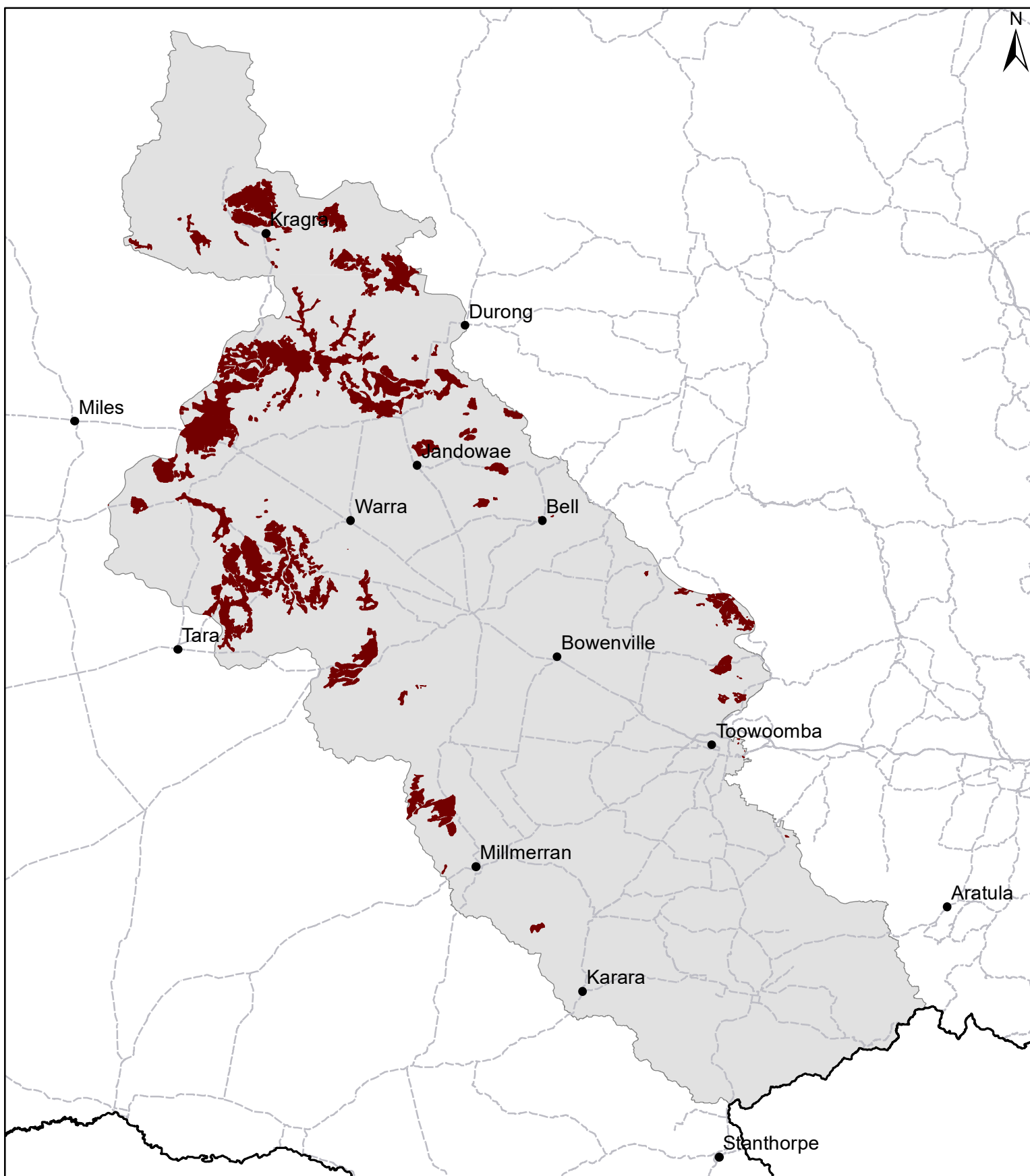
Regional Ecosystems

11.10.9, 11.5.1, 11.5.1a, 11.5.20, 11.9.9, 12.9-10.7

Land units; Agricultural management unit; Soil associations

Central Darling Downs Land Management Manual: 9b, 10a, 10b, 12a (*Allan, Binkey, Braemar, Channing, Cutthroat, Flinton, Hanmer, Werenga*); Understanding and Managing Soils in the Murilla, Tara and Chinchilla Shires: 2b, 7a, 7b, 7c, 9a, 9b (*Binkey, Braemar, Channing, Cutthroat, Highmount, Werenga*); Understanding and Managing Soils in the Stanthorpe – Rosenthal Region: Undulating sandstone rises (*Allan, Bonnie Doon, Dalveen, Hanmer Maxland*); Land Inventory and Technical Guide Eastern Downs Area: (*Allan, Ridge, Goombungee, Hendon, Morgan*); Description and Management of the Soils of the Eastern Darling Downs Queensland (*AMU 1, AMU 2, AMU 4, AMU 5, AMU 7, AMU 9, AMU 12, AMU 14*).

DD11 Narrow-leaved ironbark and bulloak duplex soils



Area of land type in region: 6%
Median rainfall (region): 580 – 909 mm
Average rainfall (region): 585 – 927 mm
Area of land type with FPC: 74%
Median FPC: 28%
Median TBA: 11 m²/ha



Queensland
Government