

## VAST–2 - Site-based recording of use and land management and their effects on native vegetation over time

**Citation:** Thackway, R (2012). Taroom Shire, Potters Flat, site 2, Queensland. Ver. 1. VAST–2: tracking the transformation of vegetated landscapes. Australian Centre for Ecological Analysis and Synthesis, University of Queensland, Brisbane.

### 1. Name of site/area

Taroom Shire, Potters Flat, site 2 – unfenced regrowth blocks

### 2. Last modified (version no.1)

July 2013

### 3. Location of site

**State:** QLD

**IBRAv7 Classification:**

**Co-ordinates:** 26 09' 47.56"S, 149 35' 0.45"E

### 4. Area of site

n/a

### 5. Brief description of the natural undisturbed ecosystem of the site/area

### 6. Current purpose (2010) of the site/area

Maintain/promote tree shelter belts for cattle

### 7. Reference or benchmark vegetation description: pre-clearing or pre-European community

Brigalow, *Acacia harpophylla*, mixed community associated with overstorey several species, including *Eucalyptus coolabah*, *E. cambageana*, *Casuarina cristata*, and a range of understorey species. Grassy woodlands and open forests.

Source description: Sarah Butler (PhD)

### 8. Brief history of the site/area

1860	Area used for sheep grazing by shepherds
1870	Permanent fences established.
1875	Start of continuous or set stocking with sheep.



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1880	Incursion of Prickly pear started.
1904-29	Continuous grazing with sheep
1929–1932	Gradual increase in cattle numbers decline in sheep
1930-35	Land clearance via ringbarking
1932-1970	Almost continuous grazing with cattle – relatively low stock numbers
1935	Prickly pear had been destroyed.
1940-1955	Re-clearing brigalow regrowth with axes and fallen timber burnt
1956-60	Brigalow regrowth left unchecked
1960-62	Brigalow regrowth pulled mechanically and burnt
1962-70	Regrowth commenced restabilising without treatment or control
1970	Area/s designated as blocks to be left as shelter belts for cattle.
1970	Commenced managing areas surrounding the site regrowth (i.e. shelter belt) mechanically
1971-2010	Areas surrounding the site regularly and intensively managed with ploughing, fertilising the pasture and cropping
1971-2010	Site almost continually used as shelter belt for cattle – high use

### 9. Proximity to large area of intact and largely intact and unmodified remnant

### 10. Sources of data and information used to complete description of use and management and their effects on native vegetation over time

- A Nix H.A. (1994) *The Brigalow*. pp. 198–233 In *Australian Environmental History: Essays and Cases* (Ed. S. Dovers) Oxford University Press, Melbourne.
- B Butler, S. (2013) Exotic pasture grass invasion of fragmented ecosystem: a Brigalow case study. Unpublished PhD thesis, University of Queensland. field data for the property (Potters Flat)
- C Inferred by Richard Thackway
- D Seabrook L., McAlpine C. and Fensham R. (2006) Cattle, crops and clearing: Regional drivers of landscape change in the Brigalow Belt, Queensland, Australia, 1840–2004. *Landscape and Urban Planning* 78(4): 373-385.
- E Johnson R.W. (1968) Brigalow clearing and the control of regrowth. *Tropical Grasslands* 2:115-118
- F Anderson E.R. (1984) The native woody weed problem following Brigalow development pp.183-192 In *The Brigalow Belt of Australia* (Ed. A. Bailey). Published for the Royal Society of Queensland by the Queensland Department of Primary Industries, Brisbane (DPI Conference & Workshop Series QC84003).



## VAST–2 - Site-based recording of use and land management and their effects on native vegetation over time

### Description of use and management and their effects on native vegetation over time

Approx. Year	Source	Land use (ALUM <sup>1</sup> )	List of LU <sup>2</sup> and LMP <sup>3</sup>	Source LMP	Observed effects and consequences on ecological function and native vegetation structure, composition and regeneration	Source Effects
1788	C	Managed resource protection 1.2.0	Indigenous land management	A	Regenerative capacity maintained. Land surface soft, spongy, absorbent nature	C
1840s	A	Managed resource protection 1.2.0	Indigenous land management		Regenerative capacity maintained. Land surface soft, spongy, absorbent nature. grassy woodlands and open forests	A
1844	A	Managed resource protection 1.2.0			... clear grassy country, but having sandy rotten ground so bad that frequently without a break., our bullocks and horses were sinking above their fetlocks at every step	A
1844	A	Managed resource protection 1.2.0	First traverses by explorers Gilbert 1844, Leichhardt (1847)	A		
1860	A	Grazing native vegetation 2.1.0	Sheep grazing with shepherds. Sheep kept on unfenced properties often over 100,000 ha in size	A		
1860s	A	Grazing native vegetation 2.1.0	After the 1860s majority of indigenous people played little part in landscape change (French 1989, Land Administration Commission, 1968; Nix, 1994).	A		
1860	A	Grazing native vegetation 2.1.0	Most land was claimed by pastoralists – sheep wool production	A		
1870	D	Grazing native vegetation 2.1.0	Permanent fences established	D		
1875	B	Grazing native vegetation 2.1.0	Start of continuous or set stocking with sheep Decline in sheep numbers probably due to overgrazing	D	Palatable grassed overgrazed	D

<sup>1</sup> ALUM = Australian Land Use and Management classification

<sup>2</sup> LU = Land use

<sup>3</sup> LMP = Land or vegetation Management Practice



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1880	A	Grazing native vegetation 2.1.0	Incursion of Prickly pear started, spreading through scrubs the southern half.	A	Soils had become compacted, broad drainage floors were cut with gullies, soft native grasses were replaced with harsh, wiry native grasses, waterholes and lagoons were lost to silting, woody shrubs and trees were encroaching in the grassy woodlands and open forests, and exotic /weeds were invading. Prickly pear rapidly became dominant strata	A
1885	A	Grazing native vegetation 2.1.0	Attempts to control spread of Prickly pear	A	Prickly pear observed as the dominant strata Spread of Prickly pear did cause some apprehension but it would be fair to say that initial concerns were muted because the invasion was very largely confined to Brigalow and related scrubs that had limited grazing value anyway.	A
1897	D	Grazing native vegetation 2.1.0	Federation drought started	D		
1902	D	Grazing native vegetation 2.1.0	Federation drought ended - effectively halved livestock numbers (Queensland Government, 1902)	D		
1901	A	Grazing native vegetation 2.1.0	Living with Prickly pear	A	Prickly pear the dominant strata Gradual deterioration of the country caused by stock which has transformed the land from its original soft, spongy, absorbent nature to a hard clayey, smooth surface (more especially on the ridges) which, instead of absorbing the rain, runs it off in a sheet as fast as it falls, carrying with it the surface mould, seeds of all kinds of plants, sheep manure, sand etc., to enrich the lower lying country and plant it with pine, box and other noxious shrubs. Soil surface changed from its original soft, spongy, absorbent nature to a hard clayey, smooth surface (more especially on the ridges) Surface run off and little infiltration a major problem. Erosion and gullyng	A
1904-1935	B	Grazing native vegetation 2.1.0	Continuous grazing with cattle. Cattle grazing after Potters Flat surveyed by first owner or Potters flat after property surveyed and sold	D		



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1930–1932	D	Grazing native vegetation 2.1.0	Cattle grazing. Land clearance through ringbarking increased during the Great Depression of 1929–1932. One man could ringbark approximately 1 ha/day, ( <a href="#">Land Administration Commission, 1968</a> ).	D		
1930	C	Grazing native vegetation 2.1.	Visual impacts of Cactoblastis moth on Prickly pear first observed	C		
1932	D	Grazing native vegetation 2.1.0	Gradual increase in cattle numbers ( <a href="#">Land Administration Commission, 1968</a> )	D		
1934	D	Grazing native vegetation 2.1.0	Massive death of Prickly pear caused by Cactoblastis moth. Prickly pear destroyed	D		
1930	B	Grazing native vegetation 2.1.0	Cattle grazing. Eucalypts ring barked along water courses	D		
1935	D	Grazing native vegetation 2.1.0	Commenced manual land clearance started using ringbarking with an axe – to open up understorey and promote growth of native grasses for cattle grazing Cattle grazing –continuous or set stocking	D	Cover of large trees dramatically reduced. Stimulated a moderate Brigalow sucker regrowth problem.	C
1935	A	Grazing native vegetation 2.1.0	Cattle grazing. Prickly pear had been destroyed.	A		
1938	B	Grazing native vegetation 2.1.0	Cattle grazing. Re purchased by great grandfather and cattle grazing commenced	B		
By 1940s	D	Grazing native vegetation 2.1.0	Cattle grazing. Vegetation clearance using ringbarking had focused on alluvial open eucalypt woodlands ( <a href="#">Seabrook et al (2006)</a> )	A		
~1940	C	Grazing native vegetation 2.1.0	Continued manual land clearance started using ringbarking with an axe – to open up understorey and promote growth of native grasses for cattle grazing Fire Cattle grazing –continuous or set stocking	C	Sucker density of 1235-2470 /ha will seriously retard pasture production within 5 years of clearing	E
~1950	C	Grazing native vegetation 2.1.0	Continued manual land clearance started using ringbarking with an axe – to open up understorey and promote growth of native grasses for cattle grazing. Fire to remove fallen timber. Cattle grazing – continuous or set stocking	C	Numerous woody weeds (invasive native species) observed in regrowth e.g. Brigalow, Cassia spp, Terminalia, Eremophila, Heterodendrum, Eucalyptus,	F
1958	D	Grazing native vegetation 2.1.0	Ceased using periodic ringbarking to thin trees to promote pasture for cattle pasture	C	Death of mature trees ring barked along water courses i.e. alluvial open eucalypt woodlands	D



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1960	B	Grazing native vegetation 2.1.0	Brigalow pulled – creating paddocks seen today with shelter belts	B		
	A	Grazing native vegetation 2.1.0	Pulled Brigalow windrowed	A		
	A	Grazing native vegetation 2.1.0	Grass fuel allowed to develop	A		
	A	Grazing native vegetation 2.1.0	Intense fire used to burn paddock	A		
	A	Grazing native vegetation 2.1.0	Fire used to burn piles brigalow	A		
	A	Grazing native vegetation 2.1.0	Soil prepared for planting Buffel grass	A		
	A	Grazing native vegetation 2.1.0	Exotic pasture established– Buffel grass	A		
	A	Grazing native vegetation 2.1.0	Cattle lightly grazed on Buffel grass pasture until fully established	A		
1962	A	Grazing modified pastures 3.2.0	Poor establishment of the Buffel grass pasture. Restabilising regrowth not treated or controlled.	C	Brigalow regrowth commenced restabilising	C
1968	C	Grazing modified pastures 3.2.0	Regrowth commenced restabilising without treatment or control. Cattle grazing and shelter. Pasture abandoned to regrowth.	C		
1970	C	Grazing native vegetation 2.1.0	Areas designated as blocks to be left as shelter belts for cattle. Surrounding areas of brigalow regrowth mechanically cleared and intensively managed. Cattle grazing and shelter. Patch 33, 34, 35, 36, 39, 40, 41, 43, created	C		
1971-2010	B	Grazing native vegetation 2.1.0	Cattle grazing and shelter. Shelter belts not fenced out.	B	Cattle shelter in shelter belts, Concentration of dung. Trampling, Soil compaction, Buffel grass invasion	C
2010	B	Grazing native vegetation 2.1.0	Cattle grazing and shelter. Shelter belts not fenced out.	B	Cattle shelter in shelter belts, Concentration of dung. Trampling, Soil compaction, Buffel grass invasion	C

### 11. Data Use and Accuracy Disclaimer

These data are compiled to the best of our knowledge and ability. The information contained in this document is subject to revision. The user accepts all risks and responsibility for loss, damages, costs and other consequences (direct or indirect) resulting directly or indirectly from using this information.

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## VAST-2 - Site-based recording of use and land management and their effects on native vegetation over time

### Attachment 1

Reliability standards used to compile historic and contemporary site-based chronologies.

Reliability level standards	Spatial precision (Scale)	Temporal precision (Year of observation)	Attribute accuracy (Land use, land management practices, effects on condition)
<b>HIGH</b> "Definite"	Reliable direct quantitative data. Examples: Site, plot and transect based records. <b>Code: 1</b>	Reliable direct quantitative data. Examples: Day-month-year, season-year and year. <b>Code: 4</b>	Reliable direct quantitative data. Examples: Inventory and counts, recorded observations from field survey and monitoring, farm records <b>Code: 7</b>
<b>MEDIUM</b> "Probable"	Direct (with qualifications) or strong indirect data. Examples: Land unit and soil-landscape reports. <b>Code: 2</b>	Direct (with qualifications) or strong indirect data. Examples: Mid 1850s <b>Code: 5</b>	Direct (with qualifications) or strong indirect data. Examples: Reconnaissance surveys, medium and moderate resolution remote sensing, regional mapping <b>Code: 8</b>
<b>LOW</b> "Possible"	Limited qualitative and possibly contradictory observations. More data needed. Examples: Land system, sub-bioregion and bioregion reports. <b>Code: 3</b>	Limited qualitative and possibly contradictory observations. More data needed. Examples: Early 1800s and first half of 19 <sup>th</sup> century. <b>Code: 6</b>	Limited qualitative and possibly contradictory observations. More data needed. Examples: Generalised descriptions and narratives, census-based surveys <b>Code: 9</b>

