



## 1. Application details

### 1.1. Permit application details

Permit application No.: 588/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Moola Bulla Pastoral Co

### 1.3. Property details

Property: PART LOT 120 ON PLAN 220202 ( MUELLER RANGES )  
LOT 71 ON PLAN 220202 ( MUELLER RANGES )  
Local Government Area: Shire Of Halls Creek  
Colloquial name: Bulara Lot 120 and Luman Lot 71 - Halls Creek

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
735		Mechanical Removal	Cropping

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation association 837: Grasslands, short bunch grass savanna low tree; snappy gum over arid short grass on plains;	The area proposed for clearing is a large open, flat 'blacksoil' plain with very few trees and very sparse shrubs of <i>Carissa lanceolata</i> . Despite being historically grazed, the area is otherwise undisturbed (DoE Site Visit, 2005).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	This information was collated from a site visit by Brian Lloyd of the PLB with species verification by Andrew Craig, DAWA. A site visit was also conducted by Susie Williams and Sarah Greenwood (DoE) and Paul Novelty and Noel Wilson (DAWA).
Beard vegetation association 840: Grasslands, tall bunch grass savanna, ribbon/blue grass;	There was discussion of potential historical pasture seeding due to some distinctive even lateral vegetation patterning (B. Lloyd, Pastoral Lands Board pers. comm., 2005, Aerial photographs), however this appears to be a result of lateral water flows due to the very gentle even incline of the landscape. The vegetation community is comprised primarily of <i>Astrebala pectinata</i> , <i>Aristida latifolia</i> , <i>Dichanthium fecundum</i> , and <i>Eulalia aurea</i> (DoE Site Visit, 2005). These are all native pasture species common on blacksoil plains in the East Kimberley (A. Craig and P. Novelty DAWA pers. comm., 2005).		
Beard vegetation association 870: Grasslands, tall bunch grass savanna low tree; snappy gum over ribbon grass.			

## 3. Assessment of application against clearing principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

#### Proposal is not likely to be at variance to this Principle

The site proposed for clearing comprises a typical black soil Mitchell grass plain found on the Fossil land system (DoE Site visit, 2005; CSIRO, 1964). The vegetation represents a typical suite of species found commonly in this vegetation community and was in fair-good condition despite the area having been quite

heavily grazed by cattle (DAWA, 2005). This vegetation type does not represent particularly outstanding biodiversity in comparison with surrounding vegetation, however, it exhibits a good range of species typifying the community type, with no evidence of exotic species (Site Visit, 2005). There are black soil plains remaining in the region, although being productive pasture types and desirable for cattle grazing, the blacksoil plains in the region have generally been heavily utilised (grazed) by the pastoral industry so it may represent an important vegetation community type. The EPA has identified blacksoil areas as worthy of representative conservation in the broader region, more specifically in relation to the Ord Stage 2 development (EPA, 2000). Given the amount of this community type remaining in the region it is unlikely that this proposal is at variance to this principle.

**Methodology** DoE Site Visit, 2005  
General Report on the Lands of the West Kimberley Area, WA, CSIRO, 1964  
EPA Bulletin 988, 2000  
DAWA Advice, 2005

**(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.**

**Comments Proposal is not likely to be at variance to this Principle**

The blacksoil plains are a known refuge for the long-tailed Planigale (*Planigale ingrami*) as it is known to shelter in the deep cracks of the cracking clay plains and in seasonally flooded grasslands (Menkhorst and Knight, 2001; T. Handasyde, pers. comm., 2005). However this species is not protected and is not geographically restricted, so is unlikely to be at risk from this proposal.

There are 6 threatened species and 6 migratory species known to occur within the region of the proposed clearing (DEH Environmental Reporting Tool, 2005).

*Cacatua leadbeateri* (Major Mitchell's Cockatoo, S4) has been recorded approximately 26 kilometres from the notified area. This species is sporadically distributed through arid and semi-arid Australia and may occur in sparsely timbered grasslands and shrublands and rocky outcrops. It is not likely to occur within the notified area (CALM, 2005).

*Cryptagama aurita* (Gravel Dragon, P1) has been recorded approximately 42 kilometres from the notified area. This reptile has only been collected from a few locations in arid north-eastern Western Australia. Not much is known about its biology, however this record is associated with a stony hillside. It is not likely to occur within the notified area (CALM, 2005).

It is likely that other fauna such as birds, small mammals, small reptiles and invertebrates, will utilise the habitat available within the notified area.

None of the listed species are restricted to this habitat type, or dependent on this vegetation community type alone and therefore it is unlikely that this proposed clearing is at variance to this principle.

**Methodology** Menkhorst and Knight, (2001) Field guide to the Mammals of Australia  
Department of Environment and Heritage, Environmental Reporting Tool, 2005 (TRIM ref KND769).  
T. Handasyde, pers. comm. (2005)  
CALM Advice, 2005

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments Proposal is not likely to be at variance to this Principle**

There are no Declared rare or Priority flora present at the site or in the near vicinity (GIS Database).

A total of 5 Priority flora have been recorded in the local area.

- *Goodenia lunata* (P1) is described on CALM's FloraBase website as a slender, erect or ascending perennial herb to 0.25 metres high, with yellow flowers in July. The nearest record is located approximately 25.6 kilometres from the notified area. It is not known what soil type this species utilises, but the proximity of this record suggests that it is unlikely that this species occurs within the notified area (CALM, 2005).

- *Paspalidium retiglume* (P2) is described on CALM's FloraBase website as a tufted annual, grass-like or herb between 0.1-0.5 metres high, with flowers in April, growing in clay. The nearest record is located approximately 8.3 kilometres from the notified area. The soil type within the notified area is described in the proponent's application as 'The Black Flats' (implying that black cracking clays are present), and there is a possibility that the notified area contains habitat suitable for this species (CALM, 2005).

- *Fimbristylis sieberiana* (P3) is described on CALM's FloraBase website as a shortly rhizomatous, tufted perennial grass-like or herb (sedge) between 0.25-0.6 metres high, with brown flowers between May and June, growing in mud and skeletal soil pockets associated with pool edges and sandstone cliffs. The nearest record is located approximately 47.9 kilometres from the notified area (CALM, 2005). This species is found in a

different habitat to the black cracking clays of the site so it is very unlikely this would occur on site.

- *Goodenia crenata* (P3) is described on CALM's FloraBase website as a prostrate, rosetted herb to 0.1 metre high, with yellow flowers between May and July, growing in fine red earth and red clay associated with flat sandplains and sandstone outcrops. The nearest record is located approximately 20.8 kilometres from the notified area. The soil type within the notified area is described in the proponent's application as 'The Black Flats' (implying that black clay is present), therefore it is unlikely that this species occurs within the notified area (CALM, 2005).

*Trachymene dusenii* (P3) is described on CALM's FloraBase website as an erect perennial herb between 0.6-1 metre high, with white and yellow flowers between May and July. The nearest record is located approximately 17.8 kilometres from the notified area (CALM Advice, 2005). This species has been found on rocky ridges and on coarse skeletal soils on hills (Florabase, 2005), so it is very unlikely this species would be found on site.

*Paspalidium retiglume* is the only priority species that has any likelihood of being found on site and thus a targeted search for this should be carried out prior to any clearing activity.

This proposal is not likely to be at variance to this Principle.

**Methodology** GIS Database: Declared Rare and Priority Flora List - CALM 01/07/05  
CALM Advice, 2005  
Florabase, 2005

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
There are no listed threatened ecological communities within, or in the vicinity of the proposed area for clearing.

**Methodology** GIS Database: Threatened Ecological Communities - CALM 12/4/05  
CALM Advice, 2005

**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment, 2002).

reserves/CALM-	Pre-European area (ha) *	Current extent (ha) *	Remaining %*	Conservation Status**	% in managed land
IBRA Bioregion					
Central Kimberley	7, 700, 436	~ 7, 700, 436	~100%	Least concern	15.17
Shire of Halls Creek	No information available				
Beard vegetation associations					
837	182, 774	~ 182, 774	~100%	Least concern	0.0
870	11, 639	~ 11, 639	~100%	Least concern	0.0
840	39, 471	~ 39, 471	~100%	Least concern	0.0

\* Shepherd et al. (2001)

\*\* Department of Natural Resources and Environment (2002)

Vegetation complexes within this application are above 30% representation. The vegetation of the site is a component of Beard Vegetation Associations 837, 840 and 870 (Hopkins et al, 2001), for all of which there is ~100% of the pre-European extent still remaining (Shepherd et al, 2001). The vegetation type is therefore of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment, 2002).

Blacksoil plains are considered one of the most productive pasture types in the region and have therefore been historically well utilised (grazed) by the pastoral industry. Although this community type is relatively resilient to disturbance, it has been extensively disturbed due to its pastoral value and therefore the value of the remnant percentage is dependent on its condition. It is not known to what extent pastoral landuses have modified these vegetation communities since European settlement and it is likely that the diversity is somewhat different to that present, prior to selective grazing (CALM, 2005).

Despite the value of this community type, it is unlikely that the proposal is at variance to this principle due to the large areas that remain uncleared.

**Methodology** Hopkins et al (2001)  
Shepherd et al (2001)  
Department of Natural Resources and Environment (2002)  
GIS Database: Pre-European Extent - DA 01/01  
CALM Advice, 2005

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal is not at variance to this Principle**

The site proposed for clearing is not associated with a wetland or watercourse and there are no visible drainage lines.

**Methodology** GIS Databases:  
- Hydrography, linear - DOE 1/2/04  
- ANCA Wetlands - CALM 08/01

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments Proposal is at variance to this Principle**

The removal of 735ha of reasonable condition Mitchell grasslands to cultivate non-native species (to be rain-fed) is considered a risky proposition given the unreliable rainfall in the area (DAWA, 2005). The original proposal indicated the forage crop will be planted in October/November after the first rains end, then harvested in February, so it appears that planting dry is proposed. There is some likelihood that the entire planting could fail, leaving a denuded soil surface (DAWA, 2005). The failure of the proposed pasture could lead to serious wind and water erosion of soil and the Department of Agriculture has expressed serious concerns with the viability of the proposal.

The proposal is likely to be at variance to this principle for soil erosion and seriously at variance to this principle in the form of loss of native vegetation (DAWA, 2005).

**Methodology** DAWA Advice, 2005

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments Proposal is not likely to be at variance to this Principle**

The nearest conservation reserve is the World Heritage Listed and CALM managed reserve Purnululu National Park, located about 84km to the north-east of the proposed clearing. Therefore the proposed clearing is unlikely to be at variance to this principle.

**Methodology** GIS Database: CALM Managed Lands and Waters - 1/06/04  
CALM Advice, 2005

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

**Comments Proposal is not likely to be at variance to this Principle**

The proposed clearing area is not in a Public Drinking Water Source Area and is unlikely to cause a major input to the recharge of groundwater. If the proposal to cultivate a rain-fed crop fails, there is a possibility that water erosion of the soil might lead to increased sedimentation of nearby waterways, but this is unlikely to have serious adverse impacts as the topography of the site is very gentle and the nearest waterway is over 4km away.

**Methodology** GIS Databases:  
-Public Drinking Water Source Areas (PDWSA's) - DOE 29/11/04  
-Hydrographic Catchments - Catchments - DOE 3/4/03  
-Hydrography, linear - DOE 1/2/04  
-Groundwater Subareas - WRC 10/10/00

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments Proposal is not likely to be at variance to this Principle**

Flooding can occur seasonally throughout the wet season in this region (December to March), where flood height and duration can be lengthy and extreme. Clearing vegetation at this site is not likely to exacerbate these naturally occurring flood events.

**Planning instrument, Native Title, Previous EPA decision or other matter.**

**Comments**

This proposal was submitted to the Pastoral Lands Board as a Pastoral Diversification permit in October 2004. At this time the DAWA provided a recommendation (letter dated 20 January, 2005) to refuse this proposal due to concerns about the viability of the proposed pasture production (DoE TRIM ref: KNI1070). DAWA's primary concern was that the proposition to clear 735ha of productive pastures in fair to good condition and attempting to replace it with non-native species, relying on rainfall for irrigation was very risky given the low and irregular rainfall regime in the area. These concerns have been reiterated via advice sought from the DAWA as a referral to this clearing permit and DoE should comply with this advice by refusing the grant of a permit.

A submission has been received expressing concern that there is no management plan provided by the applicant to deal with surface water run-off, weed control, nutrient monitoring or heritage issues. The DoE acknowledges these concerns and has decided to refuse the grant of this permit.

A submission has been received questioning the sense of the proposal to remove a productive suite of native fodder grasses to be replaced with non-native species that might have the potential for weediness, or in fact crop failure. The DoE recognises that this submission reflects the concerns raised by the DAWA and thereby refuses the grant of the permit.

The area under application is covered by a Native Title Claim by the Ngarrawanji People (WC96\_75). The activity under application is an alternative land use to that authorised under the Pastoral Lease so therefore the granting of a clearing permit could constitute a future act under the Native Title Act 1993. The native title claimants have been informed of this application by the DoE yet no response was provided by the specified date.

The proposed clearing occurs in an area that is covered by the following Registered Indigenous Heritage Sites - Karinyariyanuwat (ID 12572) and Kiri (ID 12561). It is the proponent's responsibility to comply with the Aboriginal Heritage Act 1972 and ensure that no Sites of Aboriginal Significance are damaged by clearing activities.

The proponent has indicated that the proposed cultivation of Sorghum crops will be irrigated purely by rainfall and therefore a water licence under the Rights and Water Irrigation Act 1914 will not be required.

**Methodology** No other EP licences are required for the intended land use.  
 GIS Database:  
 -Native Title Claims - DLI 19/12/04  
 -Aboriginal Sites of Significance - DIA 04/07/02  
 DAWA Advice to Pastoral Lands Board KNI1070

**4. Assessor's recommendations**

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Cropping	Mechanical Removal	735	Refuse	<p>Assessable criteria have been assessed and other planning instruments, matters of interest and submissions have been considered and the assessing officer recommends this clearing permit be refused.</p> <p>The Department of Agriculture WA has expressed serious concerns about the viability of the proposal, in response to the referral from DoE for this clearing permit and also in response to a referral from DPI PLB for a pastoral diversification permit. CALM has also indicated that they would need to see a contingency plan for replanting native species in the event that the cropping enterprise was to fail.</p> <p>The Assessing officer recommends that this application to clear 735ha be refused on the basis that it is at variance to Principle (g). The proposal is at variance in terms of potential soil erosion and seriously at variance in terms of loss of native vegetation.</p>

**5. References**

Botha N (2005) Site Photographs. DoE Reference: DoE TRIM ref KNI923  
 CALM (2001) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions, Central Kimberley  
 CALM Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref IN24767.  
 CSIRO (1964) General Report of the Lands of the West Kimberley Area, WA, Land Research Series No. 9  
 DAWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref KNI1070.  
 Department of Environment and Heritage (2005), Environmental Reporting Tool, www.deh.gov.au, DoE TRIM ref KND769

Department of Environment WA (2005), Site Visit Report, DoE TRIM ref KND768  
 Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales ; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.  
 Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.  
 Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.  
 Menkhorst and Knight (2001), A Field Guide to the Mammals of Australia, Oxford University Press  
 Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

## 6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DoE)