



1. Application details

1.1. Permit application details

Permit application No.: 2286/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Clover Cattle Co. Pty Ltd & Liveringa Pastoral Co.

1.3. Property details

Property: LOT 30 ON PLAN 207410 (CAMBALLIN 6728)
 LOT 30 ON PLAN 207410 (CAMBALLIN 6728)
 LOT 30 ON PLAN 207410 (CAMBALLIN 6728)
 Local Government Area: Shire Of Derby-West Kimberley
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2425		Mechanical Removal	Grazing & Pasture

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 706: Grasslands, tall bunch grass savanna, Mitchell & ribbon/blue grass. (Hopkins et al., 2001; Shepherd, 2006)	Applied area was part of the Camballin Irrigation Scheme in the 1960's to 1980's which involved the area being cleared in preparation for cropping to rice. For the past 28 years the land has been used as pasture for cattle grazing. In addition approxiamtely 1400ha of the applied area was burnt in the hot season of 2007. The proposal is to clear approximately 2425ha of native vegetation in good condition to remove the native increaser species <i>Eremophila longifolia</i> and to seed native pasture species in the applied area for the purpose of improved pasture for cattle grazing. Clearing of approximately 2425 ha of native vegetation for the purpose of Grazing and Pasture some of which has been recently burnt.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation condition determined by Department of Environment and Conservation Officer (Kimberley Region) during a site inspection on 10th May 2008. (DEC, 2008)
Beard Vegetation Association 706: Grasslands, tall bunch grass savanna, Mitchell & ribbon/blue grass. (Hopkins et al., 2001; Shepherd, 2006)		Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation condition determined by Department of Environment and Conservation Officer (Kimberley Region) during a site inspection on 10th May 2008. (DEC, 2008)

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 may be at variance to this Principle

The proposal is for the clearing of 2425 hectares for the purpose of grazing and pasture. The vegetation under application is mapped as Beard Vegetation Association 706, grasslands; tall bunch grass savanna Mitchell and ribbon/blue grass, which ranges in condition from degraded to good (Keighery, 1994; Regional Advice, 2008).

There are three records of priority fauna species within a 10 km radius of the proposed clearing, including the Prince Regent Hardyhead (P2), Freshwater Sawfish (P3) and Flock Bronzewing (P4). As the applied area is in close proximity to Uralla Creek the clearing as proposed may impact on habitat for these fauna species.

The applicant has advised that they will maintain a minimum 100m buffer between the clearing and Uralla Creek (Liveringa, 2008)

The application area is within the Camballin Floodplain (Register of National Estate) which is significant as water bird habitat. Native Emu Bush (*Eremophila longifolia*) has invaded the area under application which affects the suitability of this area as a habitat for some waders and water birds. (Australian Heritage Database, 2008)

There are no rare or priority flora within the local area (10km radius).

The applied area is also designated as an Environmentally Sensitive Area due to the significance of the area as part of the Camballin Floodplain.

The clearing as proposed may be at variance to this principle given that the area under application forms part of a significant diverse floodplain.

Conditions will be placed on this permit to mitigate the potential for clearing and the planting of native pasture species to impact on nearby watercourses.

Methodology

References:

Australian Heritage Database (2008)

Keighery (1994)

Regional Advice (2008)

DoW (2006)

GIS Database:

Pre European Vegetation - DA 01/01

SAC Biodatasets - accessed 11 June 08

Hydrography linear - DOW 13/7/06

Hydrography linear (hierarchy) - DoW 13/7/06

Declared Rare and Priority Flora List - CALM 13/08/03

Environmentally Sensitive Areas (ESA) - DEC 30/05/05

Register of National Estate - Environment Australia, Australian and world heritage division 12 June 08

(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 may be at variance to this Principle

There are three records of priority fauna species within a 10 km radius of the proposed clearing, including the Prince Regent Hardyhead (P2), Freshwater Sawfish (P3) and Flock Bronzewing (P4).

The Flock Bronzewing (*Phaps histrionica*) is known to occur in open Mitchell grass and *Triodia* hummock grasslands, grassy woodlands and recently burnt areas, roadsides and agricultural land (Higgins and Davies, 1996). The area under application is likely to provide habitat for this bird as the vegetation type is mostly grassland and approximately half of the applied area was recently burnt.

The Freshwater Sawfish (*Pristis microdon*) and Prince Regent Hardyhead (*Craterocephalus lentiginosus*) have been recorded within Uralla creek which borders the eastern side of the application area (Thorburn et al, 2003; Morgan et al, 2002).

The applicant has advised that they will maintain a minimum 100m buffer between the clearing and Uralla Creek (Liveringa, 2008).

The area under application is part of the Camballin Floodplain, identified on the Register of National Estate and Environmentally Sensitive Area for its natural significance. As the area under application has been invaded by Native Emu Bush (*Eremophila longifolia*) the significance of the applied area as migratory bird habitat is diminished (Australian Heritage Database, 2008).

In addition the area under application has a history of disturbance as a result of the Camballin Irrigation Scheme and recent fire events.

Given the extent of native vegetation within the local area the vegetation under application is not likely to be significant habitat for terrestrial fauna native. As the applied area is in close proximity to Uralla Creek the clearing as proposed may impact on the habitat of aquatic fauna such as the Prince Regent Hardyhead and Freshwater Sawfish.

Therefore the clearing as proposed may be at variance to this principle.

A condition preventing clearing within 200m (DOW, 2006) of Uralla Creek will be placed on the permit to mitigate the potential for clearing to impact on aquatic fauna habitat.

Methodology **References:**
Australian Heritage Database (2008)
DOW (2006)
Keighery (1994)
Livering (2008)
Higgins & Davies (1996)
Thorburn et al. (2003)
Morgan et al. (2002)

GIS Database:
Pre European Vegetation - DA 01/01
SAC Biodatasets - accessed 11 June 08
Hydrography linear - DOW 13/7/06
Hydrography linear (hierarchy) - DoW 13/7/06

(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**
A desktop survey did not identify any records of known rare flora within the local area (50km radius).

The clearing as proposed is therefore not likely to be at variance with this principle.

Methodology GIS Database:
Pre European Vegetation - DA 01/01
SAC Biodatasets - accessed 19 November 08
Declared Rare and Priority Flora List - CALM 13/08/03

(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**
A desktop survey did not identify any known records of Threatened Ecological Communities within the local area (50km radius).

The clearing as proposed is therefore not likely to be at variance with this principle.

Methodology GIS Database:
Pre European Vegetation - DA 01/01
SAC Biodatasets - accessed 19 November 08

(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 vegetation under application is mapped as Beard Vegetation Association 706, grasslands; tall bunch grass savanna Mitchell and ribbon/blue grass, and ranges in condition from degraded to good (Keighery, 1994; Regional Advice, 2008).

There is approximately 99.5% of the pre-European extent of Beard Vegetation Association 706 (Hopkins et al., 2001) remaining. This indicates that vegetation type is highly represented in the natural environment (Shepherd et al., 2001) and that the clearing is only likely to reduce the vegetation representation of this community by approximately 0.9%.

Given the high vegetation representation the local area is not considered to be an extensively cleared landscape and therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology References:
Keighery (1994)
Regional Advice (2008)
Hopkins et al. (2001)
Shepherd et al. (2001)

GIS Database:
Pre European Vegetation - DA 01/01

(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 at variance to this Principle**
The application area is bordered to the eastern side by Uralla creek, a major tributary into the Fitzroy River (approximately 8km south). The applicant has advised that they intend to maintain a minimum 100m buffer between the clearing and Uralla Creek (Liveringa, 2008)

The application area is also within the Camballin Floodplain (Le Livre Swamp System) (ANCA, 1996) which is also on the Register of National estate and designated as an Environmentally Sensitive area.

The clearing as proposed is at variance to this principle as it includes native vegetation growing in association with the Camballin Floodplain (wetland) and Uralla Creek.

A condition preventing clearing within 200m (DOW, 2006) of Uralla Creek will be placed on the permit to mitigate the potential for clearing to impact on aquatic fauna habitat.

Methodology References:
DOW (2006)
Keighery (1994)
Liveringa (2008)
Regional Advice (2008)
ANCA (1996)

GIS Database:
Pre European Vegetation - DA 01/01
Hydrography linear - DOW 13/7/06
Hydrography linear (hierarchy) - DoW 13/7/06
ANCA wetlands - Environment Australia 26/3/99
Register of National Estate - Environment Australia, Australian and world heritage division 12 June 08

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

Comments **Proposal is not likely to be at variance to this Principle**
The soils within the application area are mapped as CC49: Active flood-plains with extensive back plains, many channels, and some broad low ridges: chief soils are grey and brown clays (Northcote et al., 2001).

The application area is within the Camballin Floodplain and thus is seasonally inundated; clearing of native vegetation (2425ha) may decrease the ability of the land to drain water from the surface of the land (chiefly clay soils) however this is not expected to be appreciable.

The risk of salinity and acid sulphate soils has not currently been mapped over the applied area however the Department of Food and Agriculture WA (DAFWA) advised that the water onsite has low total soluble salts content (100ms/m) and therefore they do not expect a significant build up of salt in the soil. (DAFWA, 2008)

DAFWA assessed the possible land degradation impacts of the proposed clearing and found that there is not likely to be significant soil degradations risks associated with this clearing (DAFWA, 2008).

Therefore the clearing as proposed is not likely to result in appreciable land degradation and therefore is not likely to be at variance to this principle.

Methodology References:
Keighery (1994)
Northcote et al. (2001)
DAFWA (2008)

GIS Database:

Pre European Vegetation - DA 01/01
Hydrography linear - DOW 13/7/06
Hydrography linear (hierarchy) - DoW 13/7/06
ANCA wetlands - Environment Australia 26/3/99
Soils, Statewide DA 11/99
Register of National Estate - Environment Australia, Australian and world heritage division 12 June 08

(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 may be at variance to this Principle

The area under application is within the Camballin Floodplain conservation area, placed on the Register of National Estate for its significance as migratory waterbird habitat.

The Native Emu Bush (*Eremophila longifolia*) has established in the area under application and thus the value of the applied area as waterbird habitat has diminished.

In addition the clearing as proposed is in close proximity to Uralla Creek (ANCA, 1196), a major tributary to the Fitzroy River.

Taking into account that the applied area is large (2425 ha) the clearing as proposed may impact on the diminished environmental values of the Camballin Floodplain as well as the values of Uralla Creek.

Therefore the clearing as proposed may be at variance to this principle.

A condition preventing clearing within 200m (DOW, 2006) of Uralla Creek will be placed on the permit to mitigate the potential for clearing to impact on aquatic fauna habitat.

Methodology GIS Database:
Pre European Vegetation - DA 01/01
Hydrography linear - DOW 13/7/06
Hydrography linear (hierarchy) - DoW 13/7/06
ANCA wetlands - Environment Australia 26/3/99
Register of National Estate - Environment Australia, Australian and world heritage division 12 June 08

(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 area under application is within the Fitzroy River and Tributaries sub catchment and is zoned under the Rights In Water Irrigation Act (1914) as a groundwater area (Canning Kimberley) and Irrigation District (Camballin District).

The applied area is in close proximity to Uralla Creek and is wholly within the Camballin Floodplain.

Given the nature of the proposal, clearing for re-establishment of native pasture species, the impacts of clearing on water resources is only likely to be short term.

Thus clearing as proposed is not likely to be at variance to this principle as the impact of clearing is not likely to persist long enough to cause deterioration in the quality of surface or groundwater.

Methodology References:
DAFWA (2008)
Keighery (1994)
Liveringa (2008)
Regional Advice (2008)
Northcote et al. (2001)

GIS Database:
Hydrographic catchments, catchments DoW 01/06/07
Hydrographic catchments, subcatchments DoW 01/06/07
RIWI Act, Groundwater Areas DoW 13/07/06
RIWI Act, Irrigation Districts DoW 13/07/06
Soils, Statewide DA 11/99
Pre European Vegetation DA 01/01
Hydrography linear DOW 13/7/06
Hydrography linear (hierarchy) DoW 13/7/06
ANCA wetlands Environment Australia 26/3/99

(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

The soils within the application area are mapped as chiefly grey and brown clays (Northcote et al., 2001).

The application area is within the Camballin Floodplain and thus is seasonally inundated; clearing of native vegetation of over 2425 ha is likely to decrease the ability of the land to drain water from the surface of the soils (chiefly clay) however as the purpose for clearing is to re-establish native pasture species (Liveringa, 2008) the impact of clearing is only likely to be short term.

Given the nature of the proposal, clearing is not likely to be at variance to this principle as the impacts of clearing are only expected to persist over a short period of time.

Methodology

References:

Liveringa (2008)
Northcote et al. (2001)

GIS Database:

Soils, Statewide DA 11/99
Hydrography linear - DOW 13/7/06
Hydrography linear (hierarchy) - DoW 13/7/06
ANCA wetlands - Environment Australia 26/3/99
Register of National Estate - Environment Australia, Australian and world heritage division 12 June 08

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

Comments

There are three Aboriginal Sites of Significance within the application area for the Liveringa Peoples and one Aboriginal Site of Significance for the Nyapinyarta peoples.

A public submission was received which raised a number of issues with the proposed clearing. These issues have been addressed under the clearing principles is appropriate. Trim Ref DOC46546.

Additional information provided by the applicant has advised that a buffer of a minimum of 100m will be maintained around Uralla Creek.

In addition, the applicant indicates that they intend to plant native pasture species only and do not intend to clear the road reserve and remnant timber stand areas included in the applied area (Liveringa, 2008).

Methodology

References:

Liveringa (2008)

GIS Database:

Cadastral - Landgate Dec 07
Native Title Claims - LA 2/5/07
Aboriginal Site of Significance DIA 26/04/2007

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s510 of the Environmental Protection Act 1986, and the proposed clearing is at variance to principles (f) and (h), may be at variance to principles (a) and (b) and is not likely to be at variance to principle (g), (i) and (j).

5. References

- ANCA 1996, A Directory of Important Wetlands in Australia, 2nd ed, Australian Nature Conservation Agency
Australian Heritage Database (2008) Camballin Floodplain, Fitzroy River Rd, Camballin, Wa, Australia, Place Details of Register of National Estate place, viewed electronically via www.environment.gov.au last accessed on the 18 June 2008
DAFWA (2008) Land Degradation Assessment Report. Produced by Department of Food and Agriculture Western Australia as Advice to Assessing Officer, Department of Environment and Conservation Trim Ref DOC47315
DEC (2008) Site Inspection Report for Clearing Permit Application CPS 2286/1, Lot 30 on Plan 207410, Camballin. Site inspection undertaken 10/05/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC68366).
Department of Water (2006) Water Quality Protection Note 6: Vegetation Buffers to Sensitive Water
Department of Water (2006) Water Quality Protection Note: Vegetation Buffers to Sensitive Water
Higgins, P. J. and Davies, S. J. J. F. (eds) 1996. Handbook of Australian, New Zealand and Antarctic Birds. Vol. 3. Snipe to Pigeons. Oxford University Press, Melbourne In. Taxon Summary: Flock Bronzewing. Species Profile and Threats

Database, viewed electronically from www.environment.gov.au on 11 June 2008.

- 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.
- Liveringa (2008) Advice to assessing officer from applicant regarding proposed clearing, unpublished document DOC57245.
- Morgan, D., Allen, M., Bedford, P. and Horstman, M., (2002) Report to the Natural Heritage Trust: Inland fish fauna of the Fitzroy River Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Regional Advice (2008) Advice to Assessing Officer, Department of Environment and Conservation Trim Ref DOC53334 and DOC53447
- Shepherd, D.P. (2007). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- 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.
- Site Photos (2008) Site Inspection Photos. Unpublished, Department of Environment and Conservation Trim Ref DOC55013
- Thorburn, D.C., Peverell, S., Stevens, J.D., Last, P.R. and Rowland, A.J., (2003) Report to the Natural Heritage Trust: Status of Freshwater and Estuarine Elasmobranchs in Northern Australia ISBN: 0642 5533 78.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
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 DEC)

