



## 1. Application details

### 1.1. Permit application details

Permit application No.: 4864/1

Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Nathaniel MW and Matthew PW James

### 1.3. Property details

Property: LOT 23 ON PLAN 238318 (KOOKYNIE 6431)

Local Government Area: Shire of Menzies

Colloquial name:

### 1.4. Application

|                    |           |                    |                     |
|--------------------|-----------|--------------------|---------------------|
| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
| 100                |           | Mechanical Removal | Horticulture        |

### 1.5. Decision on application

Decision on Permit Application: Refuse

Decision Date: 2 May 2013

## 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<br>Association: 18 - Low<br>woodland; mulga ( <i>Acacia<br/>aneura</i> ) (Shepherd et al.<br>2001). | The application is to clear 100 hectares of native<br>vegetation for the purpose of pivot irrigation.<br><br>The vegetation under application consists<br>predominately of Mulga and Eucalyptus low<br>woodlands (Woolibar 2011). | Very Good: Vegetation<br>structure altered;<br>obvious signs of<br>disturbance (Keighery<br>1994) | Vegetation description and<br>condition were determined through<br>aerial imagery and supporting<br>documentation provided by the<br>applicant (Woolibar 2011). |

## 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**

This application proposes to clear up to 100 hectares of native vegetation within Lot 23 on Deposited Plan 238318, Kookynie, for the purpose of pivot irrigation.

The local area (30 kilometre radius) is well vegetated, with approximately 90 percent vegetation cover. The application area is unlikely to represent an area of higher biodiversity value when compared to representative vegetation in a local and regional context.

Two priority flora species have been recorded within the local area (30 kilometre radius). The closest records of the priority 1 and priority 4 species are located approximately 20 kilometres north east and 15 kilometres east, respectively. Both records occur on the same vegetation type as the application area, but on different soil types. Given the distance from the application area and that both species have been recorded on a different soil type, it is unlikely these species would be found within the application area.

No priority ecological communities have been recorded within the local area (30 kilometre radius).

Given the above, the proposed clearing is not likely to be at variance to this principle.

**Methodology** GIS Databases:  
- Boyce 1.4m Orthomosaic - Landgate 2003  
- SAC Biodatasets  
- Soils, Statewide

**(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**

There are two fauna species of conservation significance recorded within a 40 kilometre radius; Peregrine Falcon (*Falco peregrinus* subsp. *Macropus*) and Bush Stone-curlew (*Burhinus grallarius*) (DEC 2007-). The applicant has advised a number of fauna species could potentially occur within the application area. These include Malleefowl (*Leipoa ocellata*), Slender-billed Thornbill (*Acanthiza iredalei*) and Peregrine Falcon (*Falco peregrinus*) (Woolibar 2011)

The applicant has advised there is no known evidence of Malleefowl activity within the application area. The application area may provide habitat for the Peregrine Falcon and the Slender-billed Thornbill however it is unlikely both species would inhabit the application area exclusively (Woolibar 2011).

The majority of fauna habitats within the area proposed to be cleared are well represented elsewhere within the local and regional area. The loss of habitat for fauna indigenous to Western Australia as a result of the proposed clearing is not considered to be significant. The proposed clearing will not remove ecological linkages that are necessary for the maintenance of fauna.

Given the above, the proposed clearing is not likely to be at variance to this principle.

**Methodology** References:  
DEC 2007-  
Woolibar 2011

**(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 mapped records of rare flora located within the local area (30 kilometre radius).

Given the above, the proposed clearing is not likely to be at variance to this principle.

**Methodology** GIS Databases:  
- SAC Biodatasets

**(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 records of threatened ecological communities within the local area (30 kilometre radius).

Therefore, the proposed clearing is not likely to be at variance to this principle.

**Methodology** GIS Databases:  
- SAC Biodatasets

**(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 at variance to this Principle**

Aerial photography indicates the local area (30 kilometre radius) is approximately 90 percent vegetated.

The IBRA Bioregion (Murchison) and the local government agency (Shire of Menzies) both retain approximately 100 percent of their pre-European extents (Government of Western Australia 2011).

The vegetation under application is mapped as Beard Vegetation Associations 18 which has approximately 100 per cent of their Pre European extent remaining in the Murchison bioregion (Government of Western Australia 2011).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

Given the above, the proposed clearing is not at variance to this principle

|  | Pre-European<br>(ha) | Current Extent<br>(ha) | Remaining<br>(%) | Extent in DEC Managed Lands<br>(%) |
|--|----------------------|------------------------|------------------|------------------------------------|
| IBRA Bioregion*<br>Murchison                     | 28,120,587           | 28,120,587             | 100              | 8                                  |
| Shire*<br>Shire of Menzies                       | 12,417,934           | 12,416,768             | 100              | 27                                 |
| Beard Vegetation Association in Bioregion*<br>18 | 12,403,172           | 12,403,172             | 100              | 5                                  |

\* Government of Western Australia 2011

**Methodology** References:  
Commonwealth of Australia 2001  
Government of Western Australia 2011  
GIS Databases:  
- Boyce 1.4m Orthomosaic - Landgate 2003  
- NLWRA, Current extent of Native Vegetation  
- Pre-European Vegetation  
- SAC Biodatasets

**(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**  
There are no wetlands or watercourses mapped within the application area. However, the applicant has advised 'there are ephemeral creeks that drain indirectly to Lake Marmion and Lake Rebecca on a regional scale' (Woolibar 2011).  
  
Given the above, the proposed clearing is at variance to this principle.

**Methodology** References:  
Woolibar 2011  
GIS Databases:  
- Hydrography, linear

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

**Comments** **Proposal may be at variance to this Principle**  
The application area has been mapped as soil type Uc1, which Northcote et al. (1960-1968) describes as steep hilly to hilly dissected lateritic plateau with steep valley side slopes; chief soils are hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils, with conspicuous but relatively smaller areas of red earths.  
  
The Department of Agriculture and Food Western Australia (DAFWA 2012) advised the site is likely to have deep red earth soils supporting Mulga shrubland. In its undisturbed state, the site would not be prone to accelerated soil erosion. However, once the protective vegetation is removed to enable the development to occur, the application area would have a moderate erosion risk during overland flow following major rainfall events. DAFWA (2012) recommended that the site be fenced to ensure that ground cover is maintained on the pivot site after each harvest and to encourage revegetation with mulga and other species if the site is abandoned at some future date.  
  
The applicant has advised minimisation of land degradation will be achieved by applying best practice clearing and rehabilitation methods. Management strategies to achieve this include utilising existing tracks, firebreaks, fence lines or pipeline/power corridors for access wherever possible, confining vehicle movements to clearly defined tracks, conducting clearing activities during periods of low winds, stockpiling vegetation for use in rehabilitation, seeding of irrigation crop directly after clearing to reduce the possibility of wind and water erosion of topsoil, locating tracks to minimise erosion of watercourse beds and slopes and minimising amount of heavy vehicle movement on tracks to limit soil compaction (Woolibar 2011).  
  
Given the above, the proposed clearing may be at variance to this principle.

**Methodology** References:  
DAFWA 2011  
Woolibar 2011  
Northcote et al 1960-1968

**(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 closest recorded conservation area is Goongarrie National Park (A Class) which is located approximately 28 kilometres south of the area under application.

Approximately 100 percent of the vegetation within the Murchison bioregion remains uncleared (Shepherd et al. 2001). Therefore, it is unlikely the application area provides an important buffer or ecological linkage to Goongarrie National Park.

Given the above, the clearing as proposed is not likely to be at variance to this principle.

**Methodology** References:  
Shepherd et al. 2001  
GIS Databases:  
-DEC Tenure

**(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 may be at variance to this Principle**

The groundwater salinity within the application area is approximately 1000 - 3000 milligrams per litre of Total Dissolved Solids (TDS). This level of groundwater salinity is considered to be brackish to moderately saline. Given the application area is surrounded by remnant vegetation, the clearing is unlikely to significantly increase groundwater salinity.

The purpose of the proposed clearing is for pivot irrigation. The applicant has advised the groundwater will be extracted using the existing Bobs Bore (Woolibar 2011).

Clearing of vegetation along ephemeral creeks may cause increased sedimentation and runoff. The applicant has advised all irrigation and incidental rainwater will be directed into the crop area and no drainage erosion is expected beyond this localised area (Woolibar 2011).

Given the above, the clearing as proposed may be at variance to this principle

**Methodology** References:  
Woolibar 2011  
GIS Databases:  
- Groundwater Salinity, Statewide  
- Hydrography, Linear

**(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**

There are no permanent waterways that will be affected by the proposed clearing however, there are ephemeral creeks occurring within the application area. The proposed clearing is not expected to increase the incidence or intensity of flooding within the local area.

Given the above, the proposed clearing is not likely to be at variance to this principle

**Methodology** GIS Databases:  
-Hydrography, linear

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

**Comments**

The application area is located within the Goldfields Groundwater Area covered by the Rights in Water and Irrigation Act 1914.

The Department of Water (2012) has advised that an application for a Licence to Take Water has not been lodged for Lot 23 on Plan 238318, Kookynie.

The property under application is currently under sale.

The Department of Regional Development and Lands (2012) advised that they have no objection to the clearing permit and are currently progressing an application for a diversification permit application to grow irrigated sorghum, maize, lucern and oats over the area subject to the native vegetation clearing permit application. The Department of Agriculture and Food (2010) have listed these species as permitted non indigenous plant species

and as being suitable for irrigated production. These species are considered to be lowest risk to the environment and should be suitable for most circumstances.

The applicant has advised that cleared land will be rehabilitated once irrigation activities within the application area have ceased (Woolibar 2011).

One submission (2012) was received regarding this application. The submission raised concerns about water use and priority and threatened flora. The potential presence of priority and threatened flora have been discussed in principle (a) and (c). The issue of water use is not related to the clearing of native vegetation and therefore has not been discussed in this assessment

|                    |   |
|--------------------|---|
| <b>Methodology</b> | <b>References</b>                                 |
|                    | Department of Agriculture and Food 2010           |
|                    | Department of Regional Development and Lands 2012 |
|                    | Department of Water 2012                          |
|                    | Submission 2012                                   |
|                    | Woolibar 2011                                     |
|                    | GIS Databases                                     |
|                    | - RIWI Act, Groundwater Water Areas               |

#### 4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DAFWA (2012) Advice for application for Clearing Permit CPS 4864/1 - Lot 23 on Deposited Plan 238318, Edjudina Location 23, Kookynie. Department of Agriculture and Food. Western Australia (DEC Ref: A490869)
- DEC (2007 - ) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 29 March 2012.
- Department of Agriculture and Food (2010) Non indigenous plant species lists for Western Australian rangelands.
- Department of Water (2012) Advice for Clearing Permit Application CPS 4864/1 - Lot 23 on Plan 238318, Kookynie. Western Australia (DEC Ref: A496151)
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, 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.
- RDL (2012) Advice for Clearing Permit application CPS 4864/1 - Lot 23 on Deposited Plan 238318, Kookynie. Department of Regional Development and Lands. Western Australia (DEC Ref: A494292)
- 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.
- Submission (2012) Submission received for CPS 4864/1 - Lot 23 on Deposited Plan 238318, Kookynie. Western Australia. (DEC Ref:A491505)
- Woolibar (2011) Area Permit Application Menangina Station -Assessment of Clearing Principles (2011). Western Australia. (DEC Ref: A471888)

#### 5. 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)                    |