



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5382/2
Permit Holder:	Shire of Murchison
Duration of Permit:	29 March 2013 – 29 March 2023

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of gravel extraction

2. Land on which clearing is to be done

Lot 8 on Deposited Plan 220398 (Murchison 6630)

3. Area of Clearing

The Permit Holder must not clear more than 5.67 hectares of native vegetation within the combined areas hatched yellow on attached Plan 5382/2a and Plan 5382/2b.

4. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 29 March 2018.

5. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

6. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

7. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

8. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

9. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) at an *optimal time* following clearing authorised under this Permit, *revegetate* and *rehabilitate* the areas that are no longer required for the purpose for which they were cleared under this Permit.
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) ripping the pit floor and contour batters within the extraction site; and
 - (iv) laying the vegetative material and topsoil retained under condition 9(a) on the cleared areas
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 9(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 9(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 9(c)(ii) of this permit, the Permit Holder shall repeat condition 9(c)(i) and 9(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 11(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 9(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 9(c)(ii).

PART III - RECORD KEEPING AND REPORTING

10. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 9 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
 - (v) a copy of the environmental specialist's report.

11. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 10 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 29 December 2022, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

local provenance means native vegetation seeds and propagating material from natural sources within 30 kilometres of the area cleared.

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

optimal time means the period from April to May for undertaking *direct seeding*, and the period from May to June for undertaking *planting*;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

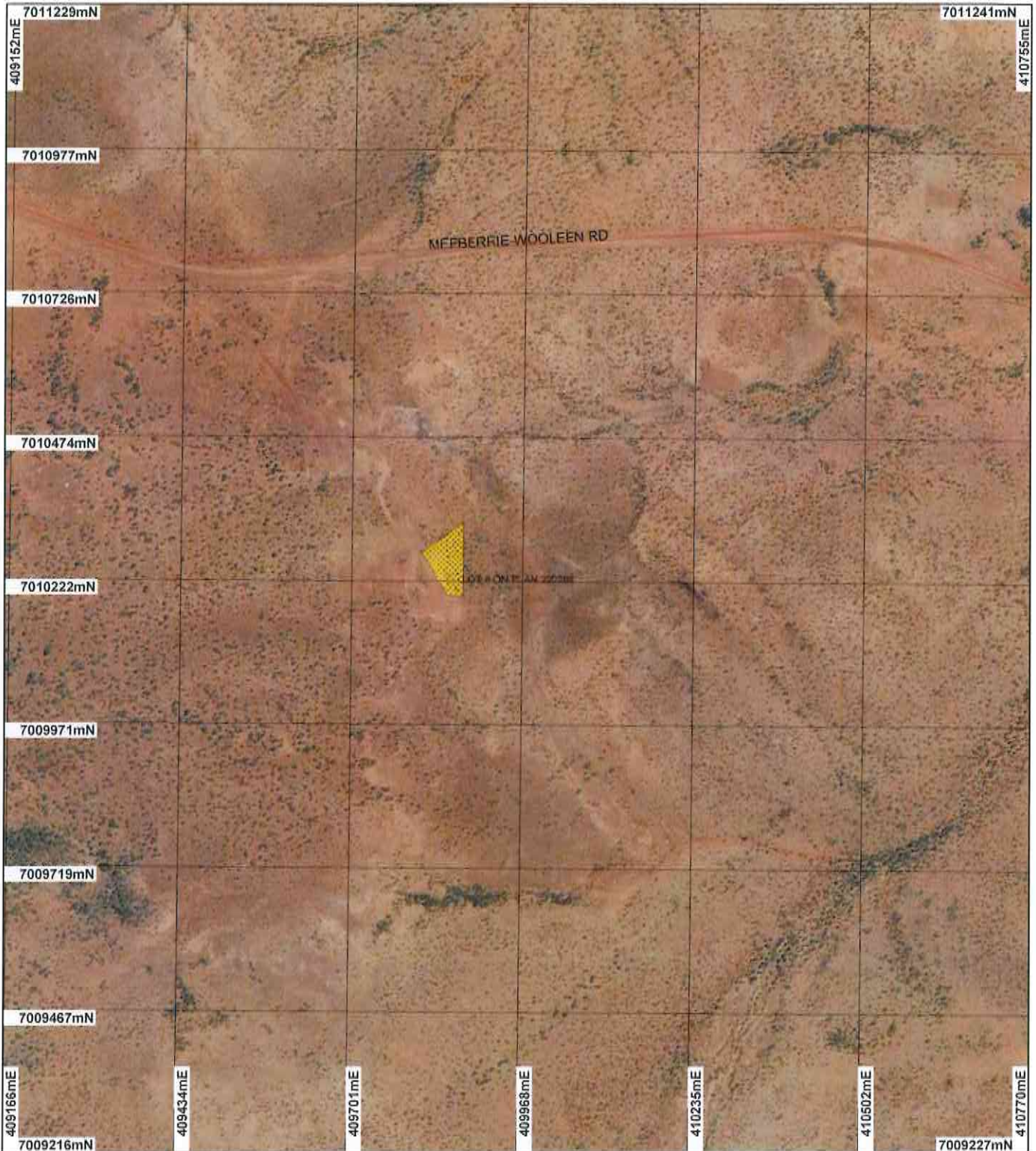
B. Walker

Belinda Walker
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH





*Officer delegated under Section 20
of the Environmental Protection Act 1986*

18 July 2013

Plan 5382/2a



LEGEND

-  Road Centrelines
-  Cadastre for labelling
-  Clearing Instruments
-  Areas Approved to Clear

Murgoo 80cm Orthomosaic -
Landgate 2006



0 250 m

Scale 1:9100

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

B. Walker Date *12/1/13*
B Walker

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

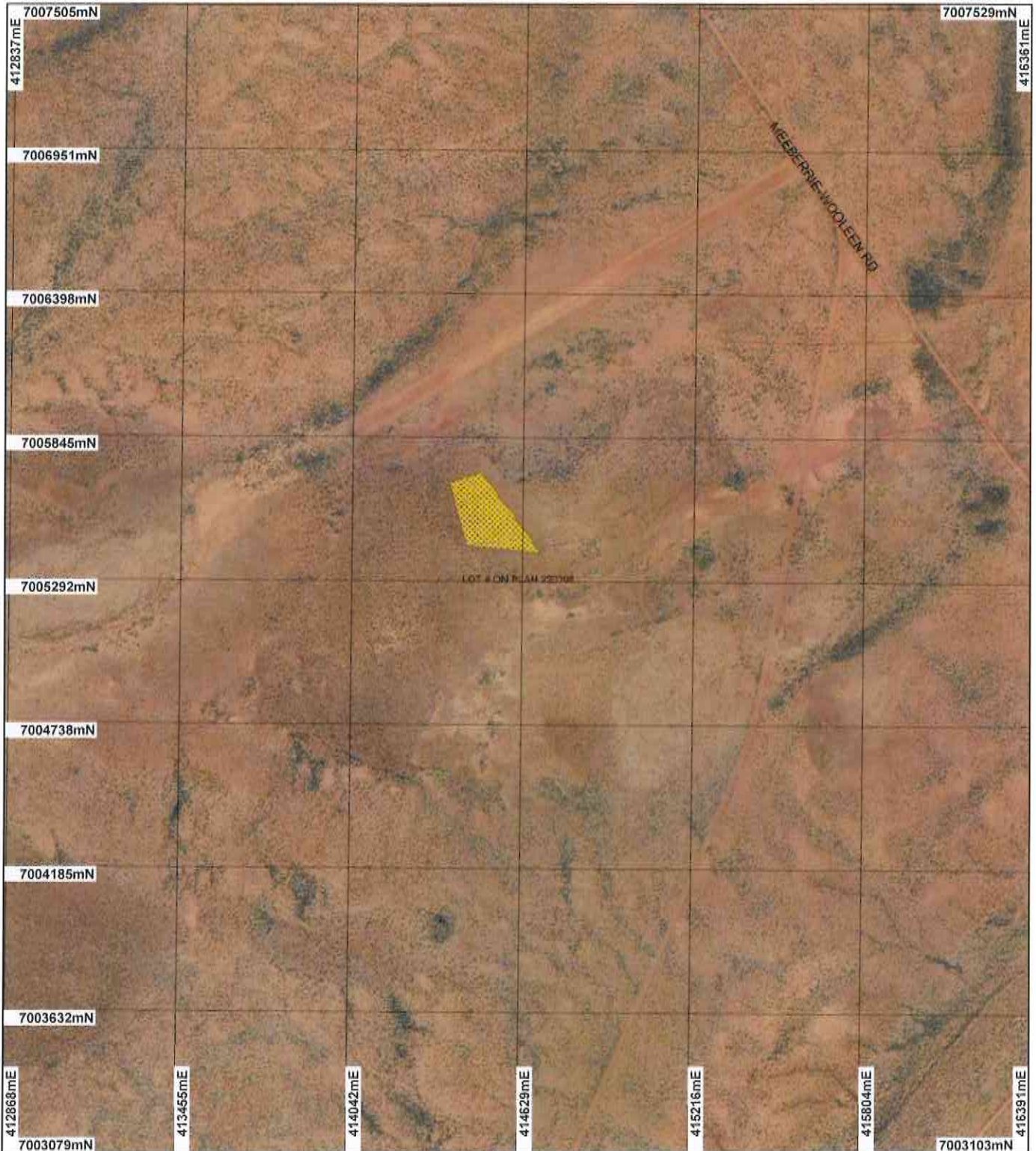
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia
Department of Environment Regulation

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Plan 5382/2b



LEGEND

- Road Centrelines
- Cadastre for labelling
- Clearing Instruments
- Areas Approved to Clear

Murgoo 80cm Orthomosaic -
Landgate 2006



0 500 m

Scale 1:20000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

B. Walker Date *18/7/12*
B Walker

Officer with delegated authority under Section 20 of the Environmental Protection Act 1988

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia
Department of Environment Regulation

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Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.: 5382/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Murchison

1.3. Property details

Property: LOT 8 ON PLAN 220398 (MURCHISON 6630)
Local Government Area: Shire of Murchison
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5.67		Mechanical Removal	Extractive Industry

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 18 July 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
Mapped Beard vegetation association 18 is described as low woodland; mulga (<i>Acacia aneura</i>) (Shepherd et al 2001).	The application has been amended to reduce to the area of clearing from 81.8 hectares to 5.67 hectares of native vegetation within Lot 8 on Plan 220398, Murchison.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The vegetation condition was determined by aerial imagery (Murgoo 80cm Orthomosaic - Landgate 2006) and photographs supplied by the applicant.

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 application has been amended to reduce the area of clearing from 81.8 hectares to 5.67 hectares of native vegetation within Lot 8 on Plan 220398, Murchison.

Five priority flora species have been recorded within the local area (20 kilometre radius). Suitable habitat for two Priority 3 flora species and one Priority 2 flora species recorded in the local area may occur within the application area. The remaining two priority flora species are not found on soil types within the application area. In addition another Priority 3 flora species, not recorded within the local area (20 kilometre radius), has been identified as possibly occurring within the application area.

The first Priority 3 flora species is a prostrate ephemeral herb that has been recorded on a number of different habitat types including flood plains and mid-slope of laterised banded ironstone and siltstone or quartz. The second Priority 3 flora species has been found at some locations on laterite banded ironstone. The Priority 2 species has a range of only 90 kilometres. It has been found growing on rock ridges of quartz or banded ironstone. A Priority 3 species has been recorded in association with one of the locations of this Priority 2 species.

Given the purpose of clearing is for a gravel pit there is the potential for four priority species to occur in the area under application on the basis they have been recorded previously in lateritic substrates. Therefore there is still a risk of disturbance to priority flora, however the risk has been reduced with the significantly reduced application area that has been previously disturbed.

Two fauna species classified as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within a 20 kilometre radius of the application area, being the Western Spiny-tailed Skink (*Egernia stokesii* subsp. *badia*) and Black-flanked Rock-wallaby (*Petrogale lateralis* subsp. *lateralis*) (DEC 2007-). The fauna habitat within the application area is well represented elsewhere within the local and regional area and no significant impacts to habitat for fauna indigenous to Western Australia is expected.

Two Priority Ecological Communities (PEC's) have been recorded within the local area (20 kilometre radius). Meeberrie Calcreta (P1) and New Forest (P1) are located approximately 7.1 kilometres north west and 3.9 kilometres south west from the proposed clearing area respectively. Given the distance from the proposed clearing it is not likely to have an impact on the two PEC's.

Given the majority of the application area has been previously disturbed and in a degraded (Keighery 1994) condition. The vegetation proposed to be cleared is not considered to comprise a high biological diversity. Therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology References:
- DEC (2007-)

GIS data:
- SAC Biodata set accessed 24 December 2012

(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**
Two fauna species classified as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within a 20 kilometre radius of the application area, being the Western Spiny-tailed Skink (*Egernia stokesii* subsp. *badia*) and Black-flanked Rock-wallaby (*Petrogale lateralis* subsp. *lateralis*) (DEC 2007-).

The fauna habitat within the areas proposed to be cleared is well represented elsewhere within the local and regional area. The proposed clearing will not sever any ecological linkages necessary for the maintenance of fauna.

Given the above, the vegetation under application is not likely to be significant habitat for these fauna species.

Methodology References:
- DEC (2007-)

GIS data:
- SAC Biodata set accessed 24 December 2012

(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**
Rare flora has not been recorded within the local area (20 kilometre radius). The closest recorded occurrence of rare flora is 121 kilometres east of the application area.

Given the distance to the closest record of rare flora, the vegetation proposed to be cleared is not likely to include or be necessary for the continued existence of rare flora.

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

Methodology GIS data:
- SAC Biodata set accessed 24 December 2012

(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**
The closest threatened ecological community (TEC) is 'Moonagin System' located approximately 215 kilometres south of the application area.

Given the distance to the closest TEC the vegetation proposed to be cleared is not likely to be necessary for the maintenance of this TEC.

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

Methodology GIS data:
 - SAC Biodata set accessed 24 Decemer 2012

(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 area under application is located within the Murchison Interim Biogeographic Region of Australia (IBRA) bioregion. This IBRA bioregion has approximately 100 percent of its Pre European vegetation extent remaining (Government of Western Australia 2013).
 The vegetation under application is mapped as Beard Vegetation Associations 18, which has approximately 100 percent of its Pre European extent remaining in the Murchison bioregion (Government of Western Australia 2013).
 Digital imagery (Murgoo 80cm Orthomosaic - Landgate 2006) indicates that the local area (20 kilometre radius) surrounding the area under application retains approximately 95 percent vegetation cover.
 Given the vegetation representation within the local area the vegetation under application is not considered to be significant as a remnant in an extensively cleared landscape.
 Therefore, the clearing as proposed is not likely at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion* Murchison	28,120,587	28,044,823	100	8
Shire* Shire of Murchison	4,504,598	4,503,861	100	8
Beard Vegetation Association in Bioregion* 18	12,403,172	12,363,252	100	5

* Government of Western Australia (2013)

Methodology References:
 - Government of Western Australia (2013)
 GIS Databases:
 - Pre-European vegetation
 - Murgoo 80cm Orthomosaic - Landgate 2006

(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 likely to be at variance to this Principle**
 No watercourse or wetlands are located within the areas under application. A minor watercourse is located approximately 100 metres north of the application area. The closest major watercourse is 'Murchison River' which is located approximately 4.4 kilometres north of the application area.
 Wooleen Lake (ANCA Wetland) is located approximately 3.4 kilometres west of the application area.
 Given the distance to the closest watercourse the vegetation proposed to be cleared is not likely to be growing in association with a watercourse or wetland. Therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Databases:
 - ANCA, Wetlands
 - Hydrology, linear

(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**
 Two soil types have been recorded within the areas under application:
 Soil type Oc47 is described as: Alluvial flats that are frequently saline and flank river courses. Chief soils are hard alkaline and hard neutral red soils. There are some extensive areas of saline red soils (Northcote et al

1960 - 1968).

Soil type BE2 is described as: Generally undulating terrain on granites with rocky granitic hills, bosses and tors, some breakaways, and a surface stone mantle. Chief soils seem to be shallow earthy loams underlain by a red-brown hardpan. Associated are shallow soils both underlain by a red-brown hardpan; some soils underlain by a red-brown hardpan; and shallow soils on the hills (no hardpan). The red-brown hardpan is often exposed in eroded sites (Northcote et al 1960 - 1968).

Given the nature of the soil within the application area it is unlikely that appreciable land degradation in the form of water or wind erosion will occur.

The application is not likely to be at variance to this principle.

Methodology References:
-Northcote et al (1960-1968)

GIS Databases:
- Soils, statewide

(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 nature reserve is Toolonga Nature Reserve located approximately 69 kilometres north west of the application area. A former leasehold proposed for conservation is located adjacent to this nature reserve located approximately 22 kilometres north west of the application area.

Given this distance to these areas, it is unlikely that the clearing as proposed will have a significant impact on the environmental values of these areas.

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

Methodology 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 is not likely to be at variance to this Principle**
No watercourse or wetlands are located within the areas under application. A minor watercourse is located approximately 100 metres north of the application area. The closest major watercourse is 'Murchison River' which is located approximately 4.4 kilometres north of the application area.

Wooleen Lake (ANCA Wetland) is located approximately 3.4 kilometres west of the application area.

Groundwater salinity is mapped between 1000 - 7000 mg/L which is considered to be brackish to saline.

Given the distance to the closest watercourse and that the majority of the application area has been previously disturbed the clearing as proposed is not likely to cause deterioration in the quality of surface or underground water. Therefore the clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Databases:
- ANCA, Wetlands
- Hydrology, 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**
The areas proposed to be cleared occur on extensive flat and gently sloping plains with hard red soils and shallow earthy loams and generally undulating terrain on granites with rocky granitic hills, bosses and tors (Northcote et al, 1960- 68) in an area of low annual rainfall (approximately 300 millimetres).

Given the low topography and low rainfall the proposed clearing is not likely to cause or increase the incidence or intensity of flooding and therefore is not likely to be at variance to this Principle.

Methodology References:
-Northcote et al (1960-1968)

GIS Databases:

- Rainfall, Mean Annual
- Soils, statewide

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

Comments

The application has been amended to reduce to the area of clearing from 81.8 hectares to 5.67 hectares of native vegetation within Lot 8 on Plan 220398, Murchison.

On 7 March 2013 Clearing Permit CPS 5382/1 was granted to the Shire of Murchison for the clearing of 81.8 hectares of native vegetation within Lot 8 on Plan 220398, Murchison with a flora condition placed on the permit requiring a targeted priority flora survey to be undertaken prior to clearing commencing.

On the 25 March 2013 the Shire of Murchison notified DEC it had reduced the application area to approximately 6 hectares. The reduction of the application area has negated the need for a condition requiring a flora survey placed on the permit.

The Department of Regional Development and Lands (2013) has advised it has no objection to the proposed activity and therefore consent to it provided that:

- there is no adverse effect to pastoral operations, pastoral infrastructure or rangeland condition and any damage to such be made good.
- no additional structures are erected and
- all licences and permits required under the Mining Act 1978, Environmental Protection Act 1986 and any other applicable legislation is obtained from the relevant authorities.

The application area is located within the Gascoyne Groundwater Area proclaimed under the Rights in Water and Irrigation Act 1914. The Department of Water (DoW 2013) advised if the Shire of Murchison wish to use groundwater for dust suppression, screening or other activities associated with gravel extraction, licensing by DoW is required. It is possible for the shire to take surface water from the Murchison River or its tributaries without the need for a licence because the river is not within a proclaimed surface water area.

A Native Title claim exists over the area under application. The Wajarri Yamatji Native Title Claimants and their representative body have been notified of the clearing application.

No Aboriginal Sites of Significance have been recorded within the application area.

Methodology

GIS Databases:

- Aboriginal Sites of Significance
- Department of Regional Development and Lands (2013)
- RIWI Act, groundwater areas

4. References

- DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed 24 December 2012
- Department of Regional Development and Lands (2013) Authorisation to undertake gravel extraction within Lot 8 on Plan 220398. Western Australia. DEC Ref: A605461)
- DoW (2013) Advice for Clearing Permit CPS 5382/1 - Shire of Murchison. Department of Water. Western Australia. (DEC Ref: A593525)
- Government of Western Australia. (2013). 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. 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.
- 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.

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)