



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6194/1
Permit Holder:	HBJ Minerals Pty Ltd
Duration of Permit:	1 November 2014 – 1 November 2024

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 purposes of mineral exploration, mineral production and mining infrastructure.

2. Land on which clearing is to be done

Lot 41 on Deposited Plan 226320, Bulong.

3. Area of Clearing

The Permit Holder must not clear more than 200 hectares of native vegetation within the area hatched yellow on attached Plan 6194/1.

4. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 1 November 2019.

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.

PART II – MANAGEMENT CONDITIONS

6. Weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- 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 within 12 months following the completion of works authorised under this Permit, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by:
 - (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) laying the vegetative material and topsoil retained under condition 7(a) on the cleared area(s).
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 7(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 7(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 7(c)(ii) of this permit, the Permit Holder shall repeat condition 7(c)(i) and 7(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 7(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 7(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 7(c)(ii).

PART III - RECORD KEEPING AND REPORTING

8. Records to 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 or decimal degrees;
 - (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 7 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.

9. 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 8 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 1 August 2024, the Permit Holder must provide to the CEO a written report of records required under condition 8 of this Permit where these records have not already been provided under condition 9(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 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, or who is approved by the CEO as a suitable environmental specialist.

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion 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;

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

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.

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

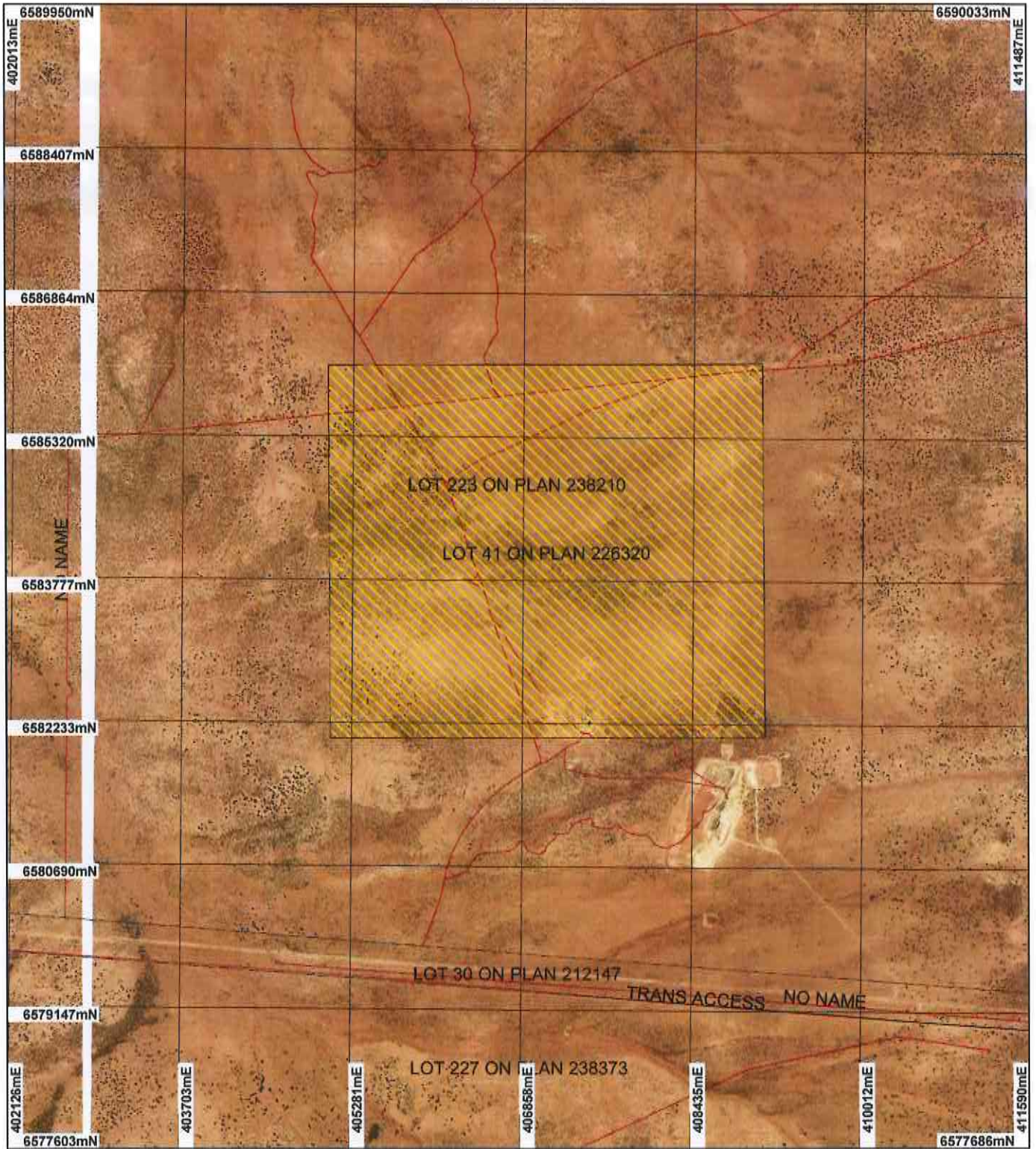


Jane Clarkson
A/SENIOR MANAGER
CLEARING REGULATION

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

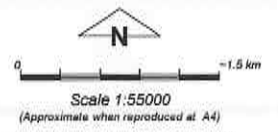
2 October 2014

Plan 6194/1



LEGEND

- Road Centrelines - Landgate 2003
- Cadastre for labelling
- Clearing Instruments
- Areas Approved to Clear - Kurnalpi 1.4m Orthomosaic - Landgate 2003



Geocentric Datum Australia 1994
 Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Jane Clarkson Date 2/10/14
 Jane Clarkson

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

WA Crown Copyright 2002

* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6194/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: HBJ Minerals Pty Ltd

1.3. Property details

Property: LOT 41 ON PLAN 226320 (BULONG 6431)
Local Government Area: Shire of Kalgoorlie-Boulder

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
200		Mechanical Removal	Mineral Production

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 2 October 2014

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
The vegetation under application is mapped as Beard vegetation association 506 which is described as succulent steppe with woodland, salmon gum and bluebush (Shepherd et al, 2001).	To clear 200 hectares of native vegetation within Lot 41 on deposited plan 226320, Bulong for mineral exploration, production and mining infrastructure.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994). To Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994).	The condition of the vegetation under application was determined via a flora and vegetation survey undertaken by Native Vegetation Solutions (2013).

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 is to clear 200 hectares of native vegetation within Lot 41 on plan 226320, Bulong for mineral exploration, production and mining infrastructure.

The vegetation within the application area has been described as 'Maireana sedifolia open shrubland, Maireana sedifolia and Senna artemisioides subsp. filifolia open shrubland, Acacia sp. narrow phyllode shrubland and Casuarina pauper and Eucalyptus griffithsii woodland' (Native Vegetation Solutions 2013).

The local area surrounding the application area retains approximately 99 percent native vegetation. The mapped Beard vegetation association and IBRA bioregion retain greater than 97 percent native vegetation. The application area is bounded by extensive native vegetation. Weed hygiene management is likely to limit the impact of the clearing on the surrounding vegetation.

The application area is not likely to contain a high degree of fauna diversity or contain significant habitat for conservation significant fauna.

A level one flora and vegetation survey has been conducted over the application area (Native vegetation Solutions 2013). No conservation significant flora, priority ecological communities or threatened ecological communities were identified. The flora diversity within the application area was recorded to be similar to that of the local area.

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

Methodology References:
Native Vegetation Solutions (2013)

GIS Datasets:
- SacBiodataSets - accessed September 2014

(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**

Three fauna species of conservation significance have been recorded within the local area (20 kilometre radius) (DEC, 2007-); *Leipoa ocellata* (malleefowl), *Morelia spilota* subsp. *imbricata* (Carpet Python) and *Amytornis textilis* subsp. *textilis* (Thick-billed Grasswren).

The vegetation within the application area has been described as 'Maireana sedifolia open shrubland, Maireana sedifolia and Senna artemisioides subsp. filifolia open shrubland, Acacia sp. narrow phyllode shrubland and Casuarina pauper and Eucalyptus griffithsii woodland' (Native Vegetation Solutions 2013). The mean annual rainfall within the application area is mapped as 300 millimetres.

The local area surrounding the application area retains approximately 99 percent native vegetation. The mapped Beard vegetation association and IBRA bioregion retain greater than 97 percent native vegetation. The application area is bounded by extensive native vegetation.

Malleefowl are listed as vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 and Wildlife Conservation Act 1950 (WC Act). The national recovery plans for the species (Benshemesh 2007) defines a centre of population density within the wheatbelt of Western Australia with populations sparser in areas with low or highly variable winter rainfall. Given the distance of the proposed clearing to the wheatbelt region of Western Australia (approximately 300 kilometres), low rainfall and amount of vegetation within the local area, the application area is not likely to contain significant habitat for this species.

The Carpet python is listed as specially protected under the WC Act 1994 and occurs in the south-west of Western Australia, from Northampton south to Albany and eastwards to Kalgoorlie. Given the large distribution of the species and extent of vegetation surrounding the application area, clearing the vegetation under application is not likely to have a significant impact on this species.

The thick-billed grass wren is listed as priority 4 by the Department of Parks and Wildlife. Priority 4 species are defined as species that have been adequately surveyed and are not in need of special attention but could be if current circumstances change. Given this and the extent of vegetation within the local area, clearing the vegetation under application is not likely to have a significant impact on this species.

Given the extent of vegetation adjoining the application area, it is not likely to be significant in the movement of fauna across the landscape.

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

Methodology References:
Benshemesh (2007)
DEC (2007-)
Native Vegetation Solutions (2013)

(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**

No rare flora species have been recorded within the local area (20 kilometre radius). A level one flora and vegetation survey has been conducted over the application area (Native vegetation Solutions 2013). No conservation significant flora was identified.

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

Methodology Reference:
Native vegetation Solutions (2013)

GIS Databases:
- SAC Biodatsets - accessed September 2014

(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 at variance to this Principle

No threatened ecological communities (TEC) have been mapped within the local area (20 kilometre radius). A flora and vegetation survey has been conducted over the application area (Native vegetation Solutions 2013). No vegetation association consistent with a TEC was identified.

Given the above, the application is not at variance to this principle.

Methodology Reference:
Native vegetation Solutions (2013)

GIS Databases:
- SAC Biodatasets - accessed September 2014

(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

The area under application is located within the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion retains approximately 97 percent of its pre-European vegetation extent (Government of Western Australia, 2013).

The vegetation under application is mapped as Beard vegetation association 506 of which there is approximately 99 percent pre-European extent remaining within the Coolgardie bioregion (Government of Western Australia, 2013).

The area under application is located within the City of Kalgoorlie-Boulder, within which there is approximately 99 percent pre-European extent remaining (Government of Western Australia, 2013).

The local area (20 kilometre radius) retains approximately 99 percent native vegetation.

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). All mapped vegetation associations retain significantly above this level.

Given the extent of vegetation in the local area and as no underrepresented vegetation association are present, the proposed clearing is not at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion Coolgardie	12,912,204	12,648,491	97	16
Shire City of Kalgoorlie-Boulder*	9,543,261	9,526,651	99	4
Beard Vegetation Association in Bioregion 506*	98,187	98,050	99	12

Methodology References:
Commonwealth of Australia (2001)
*Government of Western Australia (2013)

GIS Databases:
- SacBiodataSets - accessed September 2014

(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

A minor non-perennial watercourse has been mapped within the application area. This watercourse is ephemeral and does not connect to any other watercourses via surface water. No wetlands have been mapped within the application area.

A flora survey of the application area (Native vegetation Solutions 2013) did not reveal any vegetation associations consistent with a watercourse or wetland.

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

Methodology References:
Native vegetation Solutions (2013)

GIS Datasets:
- Hydrography 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**

The soil within the application area is described as gently undulating valley plains and pediments, some outcrop of basic rock. Chief soils are alkaline red earths with limestone or limestone nodules at shallow depth (Northcote et al. 1960 - 1968).

As the only watercourse present within the application area is ephemeral, the risk of water erosion and waterlogging causing land degradation is low. Given the amount of vegetation present within the local area (99 percent vegetated) clearing the vegetation under application is not likely to increase the salinity risk.

Clearing the vegetation under application has the potential to cause land degradation through wind erosion. As the site will be managed as an active mine, this potential degradation is not likely to be appreciable. Revegetating cleared areas that are no longer required for the purpose for which they were cleared is likely to mitigate the residual risk.

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

Methodology References:
Northcote et. al. (1960-68)

GIS Datasets:
- Hydrography linear
- Topographic contours

(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 conservation reserves to the application area are the C class Majestic timber reserve and Randell timber reserve, located within approximately 800 meters and 13 kilometres respectively.

The local area surrounding the application area retains approximately 99 percent native vegetation. The mapped Beard vegetation association and IBRA bioregion retain greater than 97 percent native vegetation. The application area is bounded by extensive native vegetation.

Given the amount of vegetation within the local area, the vegetation under application is not likely to be significant in the movement of fauna through the landscape and the proposed clearing is not likely to increase the spread of weeds into these reserves.

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

Methodology GIS Datasets:
- DEC Tenure
- SacBiodataSets - accessed September 2014

(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**

A minor non-perennial watercourse has been mapped within the application area. This watercourse is ephemeral and does not connect to any other watercourses via surface water. No wetlands have been mapped within the application area. A flora survey of the application area (Native vegetation Solutions 2013) did not reveal any vegetation associations consistent with a watercourse or wetland. Given this, the application is not likely to affect the quality of surface water.

Given the amount of vegetation present within the local area (99 percent vegetated) clearing the vegetation under application is not likely to increase the salinity risk and clearing the vegetation is not likely to affect the quality of ground water.

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

Methodology GIS Databases:
- Groundwater Salinity Statewide
- Topographic Contours, 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

A minor non-perennial watercourse has been mapped within the application area. This watercourse is ephemeral and does not connect to any other watercourses via surface water. No wetlands have been mapped within the application area.

The mean annual rainfall within the application area is mapped as 300 millimetres. The potential evapotranspiration rate is mapped as 1200 millimetres per year.

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

Methodology GIS Datasets:
- Hydrography linear
- Mean Annual Rainfall
- Evapotranspiration potential

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

Comments

The City of Kalgoorlie-Boulder has been notified of the proposed clearing. No response has been received to date.

No aboriginal sites of significance have been mapped within the application area.

The application area is zoned 'Rural' under the town planning scheme zone.

4. References

- Benshemesh, J. (2007). National Recovery Plan for Malleefowl. Department for Environment and Heritage, South Australia.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC(2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed August 2014.
- 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.