



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7441/1
Permit Holder:	Shire of Broome
Duration of Permit:	29 April 2017 – 29 April 2022

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 road upgrade.

2. Land on which clearing is to be done

Lot 594 on Deposited Plan 71791 and Lot 593 on Deposited Plan 73704, Roebuck

3. Area of Clearing

The Permit Holder must not clear more than 2.4 hectares of native vegetation within the area hatched yellow on attached Plan 7441/1.

4. 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.

5. 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.

PART II – MANAGEMENT CONDITIONS

6. 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:

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

7. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the Permit holder shall engage a *fauna specialist* to conduct a *fauna survey* of the Permit Area to identify burrows being utilised by the greater bilby (*Macrotis lagotis*).
- (b) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall provide the results of the fauna survey in a report to the CEO.
- (c) The fauna survey report must include the following;
 - (i) the location of burrows being utilised 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; and
 - (ii) the location of any greater bilby individuals, if identified, 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; and
 - (iii) the number of greater bilby individuals identified; and
 - (iv) the methodology, used to survey the Permit Area; and
 - (v) a description of the bilby burrows identified.
- (d) where burrows are identified under condition 7(a) of this Permit, the Permit Holder shall ensure that no clearing within 10 metres of a bilby burrow occurs, unless first approved by the CEO.

Definitions

fauna specialist: means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Wildlife Conservation Act 1950*.

fauna survey: means a field-based investigation, including a review of established literature, of the biodiversity of fauna and/or fauna habitat of the Permit Area. Where conservation significant fauna are identified in the Permit Area, the survey should also include sufficient surrounding areas to place the Permit Area into local context.

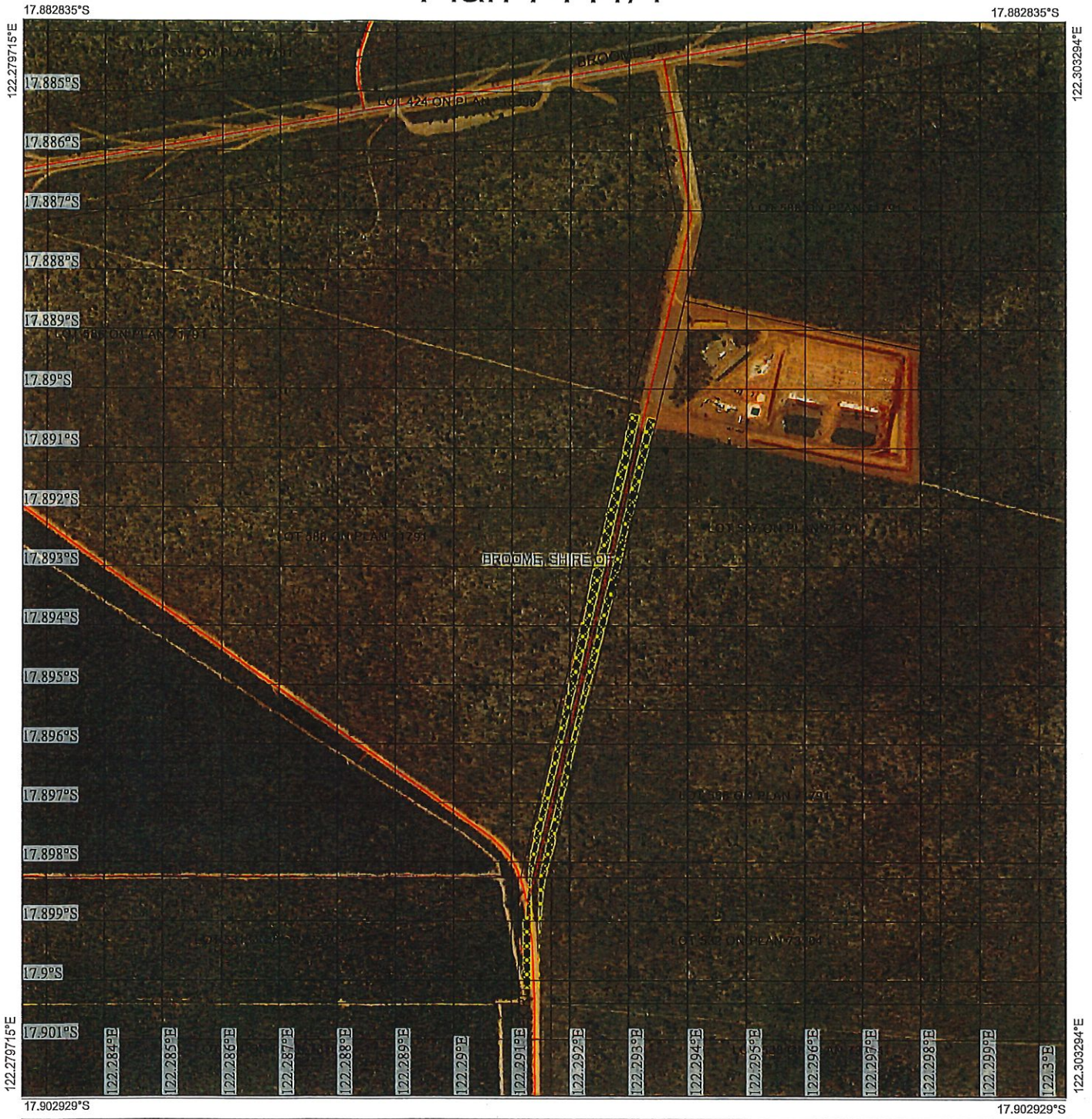


Mathew Gannaway
MANAGER
CLEARING REGULATION

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

28 March 2017

Plan 7441/1



Legend

-  Roads
-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority



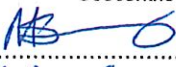
0  500m

1:10,000

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

 Date 28/03/2017
 Matthew Gannaway

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



GOVERNMENT OF
 WESTERN AUSTRALIA
 WA Crown Copyright 2017



1. Application details

1.1. Permit application details

Permit application No.: 7441/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Broome

1.3. Property details

Property: Lot 594 on Deposited Plan 71791, Roebuck
Lot 593 on Deposited Plan 73704, Roebuck
Local Government Authority: Shire of Broome
DER Region: North West
DPaW District: West Kimberly
Localities: Roebuck

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.4		Mechanical Removal	Road Construction or Upgrade

1.5. Decision on application

Decision on Permit: Grant

Decision Date: 28 March 2017

Reasons for Decision: The clearing permit application was received on 12 January 2017 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 510 of the *Environmental Protection Act 1986*, and it has been concluded that the proposed clearing may be at variance to Principle (b) and is not likely to be at variance to the remaining clearing Principles.

The applicant has amended the proposed clearing area from 10.11 hectares to 2.4 hectares. Through assessment it was determined that the proposed clearing may impact on the greater bilby (*Macrotis lagotis*). To mitigate potential impacts to the greater bilby, a condition has been placed on the permit that requires the applicant to undertake a fauna survey to identify burrows being utilised by the greater bilby within the proposed clearing area.

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is unlikely to lead to an unacceptable risk to the environment.

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The application area is mapped as: Beard vegetation association 750 described as Shrublands, pindan; *Acacia tumida* shrubland with grey box and cabbage gum medium woodland over ribbon grass and curley spinifex (Shepherd et al., 2001).

A site inspection described the vegetation as mixed *Acacia* species thicket over tussock grasses (mainly *Cymbopogon* sp. and *Sorghum* sp.) and numerous herbs with occasional emergent *Corymbia* sp., with a small section of open woodland comprised *Corymbia* sp. over mixed *Acacia* species scrub over mixed herbs and tussock grasses.

Clearing Description

The application is for the clearing of 2.4 hectares of native vegetation within Lot 594 on Deposited Plan 71791 and Lot 593 on Deposited Plan 73704, Roebuck, for the purpose of upgrading Crab Creek Road.

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

To:

Excellent: Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species (Keighery, 1994).

Comment

The condition of the vegetation within the application area was determined by a site inspection undertaken by the Department of Environment Regulation (DER), on 22 February 2017 (DER, 2017).

3. Assessment of application against clearing principles

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

Comments

Proposed clearing may be at variance to this Principle

The application is for the clearing of 2.4 hectares of native vegetation within Lot 594 on Deposited Plan 71791 and Lot 593 on Deposited Plan 73704, Roebuck, for the purpose of upgrading Crab Creek Road.

Vegetation types throughout the application area ranges from mixed *Acacia* species thicket over tussock grasses (mainly *Cymbopogon* sp. and *Sorghum* sp.) and numerous herbs with occasional emergent *Corymbia* species. A small section of the application area is an open woodland comprised *Corymbia* sp. over mixed *Acacia* species scrub over mixed herbs and tussock grasses. The variation in vegetation type appeared to be a reflection of time since fire (DER, 2017).

The application area ranges from degraded to excellent (Keighery, 1994) condition. The degraded areas are limited to the culverts, old access road and the northern extent of the application area that surround an existing laydown area and water pipe infrastructure area. The remaining areas were considered to be in a very good to excellent condition with minimal disturbance when removed from the edge of the road bank (DER, 2017).

Eight priority flora species have been recorded within the local area (40 kilometre radius), with a further three priority species recorded within a larger survey area encompassing the application area. A likelihood of occurrence assessment determined that five of the species may occur within the application area based on habitat requirements. Given the narrow linear shape and the small size of the application area in the context of the extent of surrounding vegetation, the proposed clearing is not likely to impact on the conservation status of these species.

As discussed in principle (b), the application area provides suitable habitat for the greater bilby (Department of Parks and Wildlife [Parks and Wildlife], 2017). The application area is also situated within close proximity to significant roosting habitat for migratory birds and may therefore also provide habitat for these species.

No known priority ecological communities (PEC's) are mapped within the application area, however the application area occurs within 350 metres of the mapped PEC Relict dune system dominated by extensive stands of Minyjuru (Mangarr) *Sersalisia* (formerly *Pouteria*) *sericea*. Given that no clearing will occur within the boundaries of this PEC the proposed clearing is not likely to impact on the conservation status of this community.

The local area retains approximately 98.5 per cent native vegetation cover (302,422 hectares). The proposed clearing of 2.4 hectares represents 0.0008 percent of native vegetation within the local area.

Given the application area contains suitable habitat for conservation significant flora and fauna the proposed clearing may be at variance to this Principle; however given the narrow, linear shape and the small size of the application area in the context of the extent of surrounding vegetation, the proposed clearing is not likely to result in a significant impact to conservation significant flora.

A targeted survey would be required to confirm whether the application area is used for burrows by the greater bilby.

Methodology

References:

DER (2017)
Keighery (1994)
Parks and Wildlife (2017)

GIS Datasets:

- SAC Bio Datasets - accessed March 2017

(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

Proposed clearing may be at variance to this Principle

There are 34 conservation significant species known to occur within the local area (Parks and Wildlife, 2007-). A field survey of a larger area incorporating a portion of the application area identified the habitat type in the application area as Pindan Woodland (GHD, 2010). Given the habitat type identified, seven conservation significant species have the potential to be in the application area, these being, the greater bilby (*Macrotis lagotis*), grey falcon (*Falco hypoleucos*), golden bandicoot (*Isodon auratus* subsp. *auratus*), great desert skink (*Liopholis kintorei*), northern brushtailed possum (*Trichosurus vulpecula* subsp. *arnhemensis*), peregrine falcon (*Falco peregrinus*) and the spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichtdti*). A further two priority 4 fauna species, the bush stone curlew (*Burhinus grallarius*) and australian bustard (*Ardeotis australis*) were recorded during the field survey (GHD, 2010).

The application area provides suitable habitat for the greater bilby, which includes mulga scrub and hummock grasslands growing on sand plains (Department of Environment and Conservation, 2012). Parks and Wildlife advised the greater bilby has been recorded in the direct vicinity of the application area within the previous two years, including sightings of individuals and burrows within the application area (Parks and Wildlife, 2017). On

this basis it is considered that the proposed clearing may impact on individuals of this species.

Parks and Wildlife advised that "given the vegetation communities present within the application area are likely to be representative of the surrounding region, with no rare or unique fauna habitats restricted to the application area, the proposal is unlikely to notably impact further fauna species" (Parks and Wildlife, 2017).

The application area is situated in relatively close proximity to Roebuck Bay which provides a significant habitat for migratory birds. A field survey of a larger area incorporating a portion of the application area, recorded six fauna species listed as Migratory and/or Marine under the *Environment Protection and Biodiversity Conservation Act 1999* including the whistling kite (*Haliastur sphenurus*), black-faced cuckoo-shrike (*Coracina novaehollandiae melanops*), pallid cuckoo (*Cuculus pallidus*), magpie goose (*Anseranas semipalmata*), rainbow bee-eater (*Merops ornatus*) and the strawnecked ibis (*Threskiornis spinicollis*) (GHD, 2010).

Although many of the abovementioned bird species have extended home ranges, the application area includes vegetation in excellent (Keighery, 1994) condition, and may provide habitat for these species. Given the extent of vegetation remaining within the local area (98.5 per cent pre-European vegetation remaining within the local area), the vegetation within the application area is not likely to provide significant habitat for these bird species.

Given the proposal may impact upon greater bilby individuals, the proposed clearing may be at variance to this Principle.

A targeted survey prior to clearing would be required to identify burrows being utilised by the greater bilby, whereby no clearing is to occur within 10m of a greater bilby burrow without prior approval. This will assist in determining the significance of the native vegetation as habitat for indigenous fauna.

Methodology References:
Department of Environment and Conservation (2012)
GHD (2010)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2017)

GIS Datasets:
- SAC Bio Datasets – accessed March 2017

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

Comments Proposed clearing is not likely to be at variance to this Principle

One rare flora species has been recorded within the local area. The closest recorded rare flora occurrence within the local area is located approximately 7.5 kilometres south west of the application area. Although potential habitat for this species exists within the application area, no rare flora species were observed during a targeted flora survey within a larger survey area encompassing a portion of the application area (GHD, 2010).

Given the above, the vegetation within the application area is unlikely to include, or be necessary for the continued existence of, rare flora and the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
GHD (2010)

GIS Datasets:
- SAC Bio Datasets – accessed March 2017

(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 Proposed clearing is not likely to be at variance to this Principle

According to available databases, the closest threatened ecological community (TEC) within the local area is the Vulnerable Roebuck Bay Mudflats mapped approximately 3.5 kilometres south west of the application area. The vegetation within the application area is not consistent with this community, and given the distance to this TEC, the proposed clearing will not impact on this community.

There were no TEC's identified during a survey of a larger area encompassing a portion of the application area (GHD, 2010).

Given the above, the vegetation within the application area is unlikely to comprise the whole, or part of, or be necessary for the maintenance of a TEC. The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
GHD (2010)

GIS Datasets:
- SAC Bio Datasets – accessed March 2017

(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 Proposed clearing is not likely to be variance to this Principle

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).

The application area is located within the Dampierland Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 99 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2016).

The application area is located within the Shire of Broome, within which there is approximately 99 per cent pre-European vegetation extent remaining (Government of Western Australia, 2016).

The local area retains approximately 98.5 per cent native vegetation cover (302,422 hectares). The proposed clearing of 2.4 hectares represents 0.0008 percent of native vegetation within the local area.

Given the extent of native vegetation within the local area, and that the mapped vegetation type retains more than the national objective and target extents, it is unlikely that the native vegetation within the application area is significant as a remnant of native vegetation in an extensively cleared area. As such, the proposed clearing is not likely to be at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion* - Dampierland	4,372,944	4,353,381	99.55	0.69
Shire* - Shire of Broome	5,469,337	5,436,103	99.39	2.49
Beard vegetation association in Bioregion*				
750	1223884	1218427	99.55	2.34

Methodology References:
Commonwealth of Australia (2001)
Government of Western Australia (2016)

GIS Datasets:
- Imagery
- Pre-European Vegetation
- Remnant vegetation

(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 Proposed clearing is not likely to be at variance to this Principle

No wetlands or watercourses are mapped within the application area. The closest mapped watercourse or wetland is an area subject to inundation, located approximately five kilometres west from the application area.

No vegetation associated with watercourses or wetlands were observed throughout the application area (DER, 2017).

Given the distance to the closest watercourse or wetland, the vegetation within the application area is not considered to be growing in, or in association with, a wetland or watercourse and the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
DER (2017)

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 Proposed clearing is not likely to be at variance to this Principle

The soils within the application area have been mapped by Northcote et al (1960-68) as

- Pindan country with gently undulating sand plains with small rocky sandstone residuals and no external drainage. Chief soils comprise red earthy sands, with associated hummocks of siliceous sands; and
- Sand plain with longitudinal sand dunes and some active drainage-ways: chief soils are red earthy sands, with dunes and hummocks of red sands.

Sand plains are highly susceptible to wind erosion, however given the narrow linear shape of the application

area; it is not likely that the proposed clearing will result in wind erosion causing appreciable land degradation.

Sandy soils typically have high infiltration rates; therefore water erosion resulting from the proposed clearing is unlikely, particularly given linearity of the application area and distance to nearest hydrological features.

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

Methodology References:
Northcote et al (1960-68)

GIS Datasets:
- 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 **Proposed clearing is not likely to be at variance to this Principle**

The closest conservation area to the application area is the Roebuck Bay Ramsar site located approximately eight kilometres south east.

Given the distance to this area, and linearity of the application area, the proposed clearing will not impact on this conservation area.

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

Methodology GIS Datasets:
- Parks and Wildlife 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 **Proposed clearing is not likely to be at variance to this Principle**

As discussed in Principle (f), no wetlands or watercourses are mapped within the application area. Given the distance to the closest watercourse or wetland, the proposed clearing is unlikely to cause deterioration in the quality of surface water.

Groundwater salinity mapped within the application area is less than 500 milligrams per litre (fresh). Given the low salinity levels within the application area and that the local area is highly vegetated the clearing is not likely to cause deterioration in the quality of groundwater.

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

Methodology GIS Databases:
- Hydrology, linear
- Groundwater, salinity

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

Comments **Proposed clearing is not likely to be at variance to this Principle**

Given the narrow linear shape of the application area and distance to hydrological features, the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding. Neither of the soil types within the application area (discussed in Principle (g)) are susceptible to flooding following the clearing of native vegetation.

Given the above and considering that the application area is surrounded by extensive areas of vegetation, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Datasets:
- Hydrography, linear
- Soils, statewide

Planning instruments and other relevant matters.

Comments The application was advertised in *The West Australian* newspaper on 6 February 2017 for a 21 day public submission period. No submissions have been received in relation to this application.

The application area was amended from 10.111 hectares to 2.4 hectares of native vegetation within Lot 594 on Deposited Plan 71791 and Lot 593 on Deposited Plan 73704, Roebuck, for the purpose of upgrading Crab Creek Road. The amendment was received on 27 March 2017.

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

4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Environment Conservation (2012) Fauna Profiles. Bilby (*Macrotis lagotis*).
- DER (2017) Site Inspection Report for Clearing Permit Application CPS 7441/1. Site inspection undertaken 22 February 2017. Department of Environment Regulation, Western Australia DER Ref: A1397956
- GHD (2010) Preliminary Environmental Impact Assessment and Biological Survey. Report for Broome Road Industrial Area.
- Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed 20/03/2017
- Parks and Wildlife (2017) Advice received regarding Clearing Permit Application CPS 7441/1. Department of Parks and Wildlife. Western Australia. DER Ref: A1397849
- Government of Western Australia (2015) 2015 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2015. WA Department of Parks and Wildlife, 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
- 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.