GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7687/1
Permit Holder:	Shire of Broome
Duration of Permit:	25 November 2017 – 25 November 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 upgrades.

2. **Land on which clearing is to be done**
   Lot 544 on Deposited Plan 73704, Roebuck
   Lot 539 on Deposited Plan 73704, Roebuck
   Lot 538 on Deposited Plan 73704, Roebuck
   Lot 1502 on Deposited Plan 75036, Roebuck

3. **Area of Clearing**
   The Permit Holder must not clear more than 3.85 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7687/1.

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) Immediately prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna specialist* to undertake clearance surveys using transects spaced at a maximum 100 metres on average within the areas cross-hatched yellow on attached Plan 7687/1 for the greater bilby (*Macrotis lagotis*).
   (b) Immediately prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna specialist* to relocate any greater bilby found under condition 7(a) of this permit, in accordance with a fauna licence pursuant to Regulation 15 of the *Wildlife Conservation Regulations 1970*.
   (c) Where any greater bilby is identified and relocated under condition 7(a) and 7(b) of this Permit, the Permit Holder shall include the following in a report submitted to the Department of Water and Environmental Regulation:
      (i) the gender of each greater bilby captured under condition 7(a);
      (ii) the location of any greater bilby captured 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, time, vegetation type and weather conditions at each location where a greater bilby is captured under condition 7(c)(ii);
      (iv) the gender of each greater bilby relocated under condition 7(b);
      (v) the location of any greater bilby, as listed in condition 7(b), relocated 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;
      (vi) the date, time, vegetation type and weather conditions at each location where a greater bilby is relocated under condition 7(c)(v);
      (vii) the name of the fauna specialist that relocated the greater bilby under condition 7(b); and
      (viii) a copy of the fauna licence authorising the relocation of the greater bilby under condition 7(b).

DEFINITIONS

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

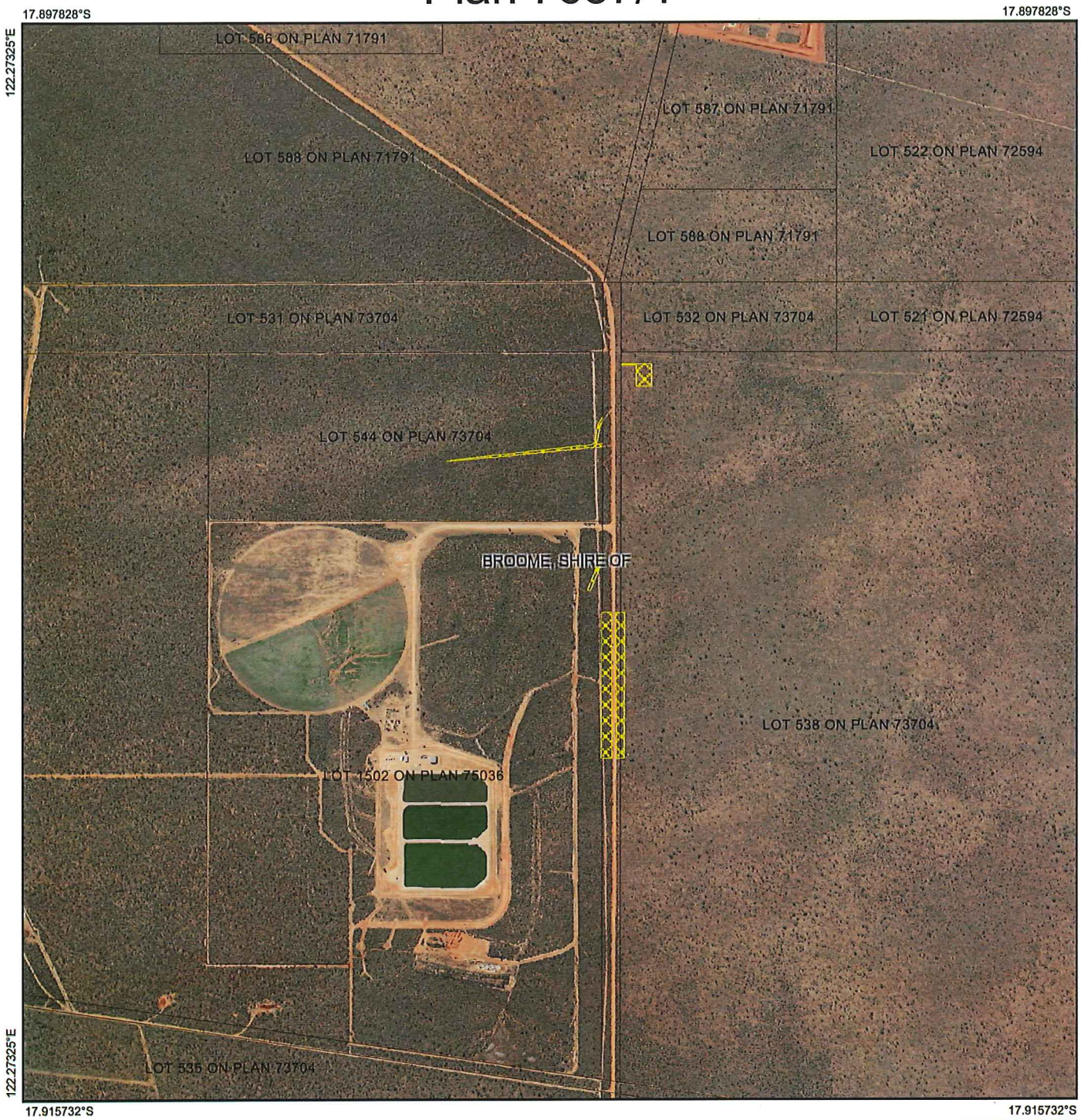
fauna specialist: means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable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

Emma Bramwell
A/ MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

26 October 2017

Plan 7687/1



Legend

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

N

0 1km

1:18,209

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

E BRAMWELL ..... Date 26/10/17

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

GOVERNMENT OF WESTERN AUSTRALIA

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7687/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Broome

1.3. Property details

Property: LOT 544 ON PLAN 73704, ROEBUCK
LOT 539 ON PLAN 73704, ROEBUCK
LOT 538 ON PLAN 73704, ROEBUCK
LOT 1502 ON PLAN 75036, ROEBUCK

Colloquial name:
Local Government Authority: BROOME, SHIRE OF
DER Region: North West
DPaW District: WEST KIMBERLEY
LCDC:
Localities: ROEBUCK

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.85		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 26 October 2017
Reasons for Decision: The clearing permit application was received on 1 June 2017 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O 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 Delegated Officer determined that the proposed clearing may impact on the threatened fauna greater bilby (*Macrotis lagotis*). To mitigate potential impacts to this species, a condition has been placed on the permit to conduct clearance surveys and relocation of individuals immediately prior to clearing. 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).

Clearing Description The application is to clear up to 3.85 hectares of native vegetation within Lot 544 on Plan 73704, Lot 539 on Plan 73704, Lot 538 on Plan 73704 and Lot 1502 on Plan 75036, Roebuck, for the purpose of road upgrades.

Vegetation Condition Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).
To
Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

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

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

The application is for the clearing 3.85 hectares of native vegetation within Lot 544 on Plan 73704, Lot 539 on Plan 73704, Lot 538 on Plan 73704 and Lot 1502 on Plan 75036, Roebuck, for the purpose of road upgrades.

The local area considered in the assessment of this application is defined as a 40 kilometre radius measured from the perimeter of the application area.

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

According to available databases, 14 priority flora have been recorded within the local area. A likelihood of occurrence assessment determined that five of these species are likely occur within the application area based on habitat requirements. Given the narrow, linear shape and extent 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 or to have a significant impact on a local or regional population.

A discussed in Principle (b), the application area provides suitable habitat for the threatened fauna greater bilby (*Macrotis lagotis*). The Department of Biodiversity, Conservation and Attractions (DBCA) advised that this species has been recorded in the direct vicinity of the proposed clearing within the previous two years (DBCA, 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 (PECs) are mapped within the application area. The application area occurs within 850 metres of the mapped PEC 'Relict dune system dominated by extensive stands of Minyjuru (Mangarr) *Sersalisia* (formerly *Pouteria*) *sericea*', however given the distance the proposed clearing is not likely to impact this PEC.

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 extent 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 biodiversity.

Methodology

References:
DBCA (2017)
DER (2017)

GIS Datasets:
SAC Bio Datasets – accessed September 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 (DBCA, 2007-). Noting the habitat type present, seven conservation significant fauna species may occur within the application area, including the greater bilby, grey falcon (*Falco hypoleucos*), golden bandicoot (*Isoodon auratus* subsp. *auratus*), great desert skink (*Liopholis kintorei*), northern brush-tailed possum (*Trichosurus vulpecula* subsp. *arnhemensis*), peregrine falcon (*Falco peregrinus*) and the spectacled hare-wallaby (*Lagorchestes conspicillatus* subsp. *leichatdti*).

The greater bilby (listed as vulnerable under the *Wildlife Conservation Act 1950* and Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*) largely occupies three major vegetation types, being open tussock grassland on uplands and hills, mulga woodland or shrubland growing on ridges and rises, and hummock grassland in plains and alluvial areas (Department of the Environment and Energy, 2016).

A targeted survey conducted by 360 Environmental within the application area in April 2017 did not identify any greater bilby tracks, scats, burrows or individuals (360 Environmental, 2017).

DBCA advised that the greater bilby has been recorded in the direct vicinity of the proposed clearing works within the previous two years, including by sightings of individuals and active burrows within the road verge and spoil heaps of the new industrial area on Crab Creek, and that the location of these records are within close proximity (less than three kilometres) to the application area (DBCA, 2017). DBCA advised that it is therefore possible that proposed clearing works could impact on Greater Bilby individuals (DBCA, 2017). DBCA recommended that greater bilby individuals should be relocated if clearing is to take place (DBCA, 2017).

The application area is situated in relatively close proximity to Roebuck Bay which provides a significant habitat for migratory birds. Although 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, the application area is not likely to provide significant habitat for these species.

DBCA advised that the vegetation communities present within the application area are likely to be representative of the surrounding region, with no rare or unique communities or habitat restricted to the application area (DBCA, 2017). On this basis, the application area is not likely to comprise significant habitat for other indigenous fauna species.

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

Methodology References:
360 Environmental (2017)
DBCA (2007-)
DBCA (2017)
Department of Environment and Conservation (2012)
Keighery (1994)

(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**
According to available databases, one rare flora species has been recorded within the local area. The closest record of rare flora is located approximately 7.5 kilometres south west of the application area.

As discussed under Principle (b), DBCA advised that there are no rare or unique habitats within the application area (DBCA, 2017). On this basis, noting the narrow, linear shape and extent of the application area in the context of the extent of surrounding vegetation, the application area is unlikely to include, or be necessary for the continued existence of, rare flora.

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

Methodology References:
DBCA (2017)

GIS Datasets:
SAC Bio Datasets – accessed September 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, two threatened ecological communities (TEC) have been recorded within the local area. The closest is the vulnerable 'Roebuck Bay Mudflats' mapped approximately four 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.

As discussed under Principle (b), DBCA advised that there are no rare or unique communities within the application area (DBCA, 2017). On this basis, noting the narrow, linear shape and extent of the application area in the context of the extent of surrounding vegetation, the application area is unlikely to comprise the whole, or part of, or be necessary for the maintenance of a TEC.

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

Methodology References:
DBCA (2017)

GIS Datasets:
SAC Bio Datasets – accessed September 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 at 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).

As indicated in Table 1, the Dampierland bioregion, the Shire of Broome and the mapped Beard vegetation association retain greater than 30 per cent of their pre-European extents.

The local area retains approximately 98.5 per cent native vegetation cover (302,420 hectares). The proposed clearing of 3.85 hectares represents 0.0012 per cent of native vegetation within the local area.

Given the above, the application area is unlikely to be a significant remnant of native vegetation in an extensively cleared area. As such, the proposed clearing is not likely to be at variance to this Principle.

Table 1: Vegetation extent statistics

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DBCA Managed Lands (%)
IBRA Bioregion*				
Dampierland	4,372,944	4,353,381	99.55	0.69
Local Government Authority*				
Shire of Broome	5,469,337	5,436,103	99.39	2.49
Beard vegetation association in Bioregion*				
750	1,223,884	1,218,427	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

According to available databases no wetlands or watercourses are mapped within the application area. The closest mapped watercourse or wetland is an area subject to inundation, located approximately three kilometres west from the application area.

No vegetation associated with watercourses or wetlands were observed within 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 that majority of the application area consists of a narrow linear shape 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 on the Department's website 1 June 2017 for a 21 day public submission period. No public submissions have been received in relation to this application.

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

The application area is zoned Commercial/Business, Infrastructure/Public Uses and agricultural purposes under the town planning scheme.

Methodology

GIS Databases:
Aboriginal Sites of Significance
Town Planning Scheme Zones

4. References

360 Environmental Pty Ltd (2017) Targeted Bilby Survey – Crab Creek Road, Broome. Report for Shire of Broome in relation to clearing permit applications CPS 7441/1 and CPS 7687/1 (DWER ref. A1418847 and A1547798).

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed September 2017.

Department of Biodiversity, Conservation and Attractions (DBCA) (2017) Regional Advice Received in relation to Clearing Permit Application CPS 7687/1 (DWER Ref:A1544357).

Department of Environmental Regulation (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

Department of the Environment and Energy (2016). *Macrotis lagotis* in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat

Government of Western Australia (2016). 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. 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: Melbourne.

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.