



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7722/1
Permit Holder:	Shire of Bridgetown -Greenbushes
Duration of Permit:	From 7 July 2018 to 7 July 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 expanding the Bridgetown waste management facility.

2. Land on which clearing is to be done

Lot 903 on Deposited Plan 189961, Bridgetown

3. Area of Clearing

The Permit Holder must not clear more than 2.62 hectares within the area hatched yellow on attached Plan 7722/1.

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 and reduce the impacts and extent of 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.

7. Dieback and weed management

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* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared; and
- (b) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

8. Fauna management

- (a) Prior to undertaking clearing authorised under this Permit, the area shall be inspected by a *fauna specialist* who shall identify *habitat tree(s)* suitable to be utilised by the below fauna species:
 - (i) Carnaby's cockatoo (*Calyptorhynchus latirostris*);
 - (ii) Baudin's cockatoo (*Calyptorhynchus baudinii*); and
 - (iii) forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*).
- (b) Prior to clearing, any *habitat/habitat tree(s)* identified by condition 8(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 8(a).
- (c) Where fauna are identified in relation to condition 8(b) of this Permit, the Permit Holder shall ensure that no clearing of the identified *habitat tree(s)* occurs until such time that the fauna listed in condition 8(a) are no longer utilising the *habitat tree(s)*, and that the CEO is notified.

PART III - RECORD KEEPING AND REPORTING

9. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) 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;
 - (ii) the date that the area was cleared; and
 - (iii) the size of the area cleared (in hectares);
- (b) Actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 6 of the Permit;
- (c) Actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 7 of the Permit; and
- (d) Actions taken in accordance with condition 8 of this permit.

11. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 10 of this Permit, when requested by the *CEO*.

DEFINITIONS

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

dieback means the effect of *Phytophthora* species on native vegetation;

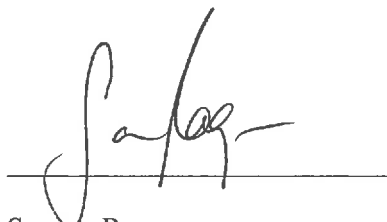
fauna specialist: means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable 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;

habitat tree/s: means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater; and

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 Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

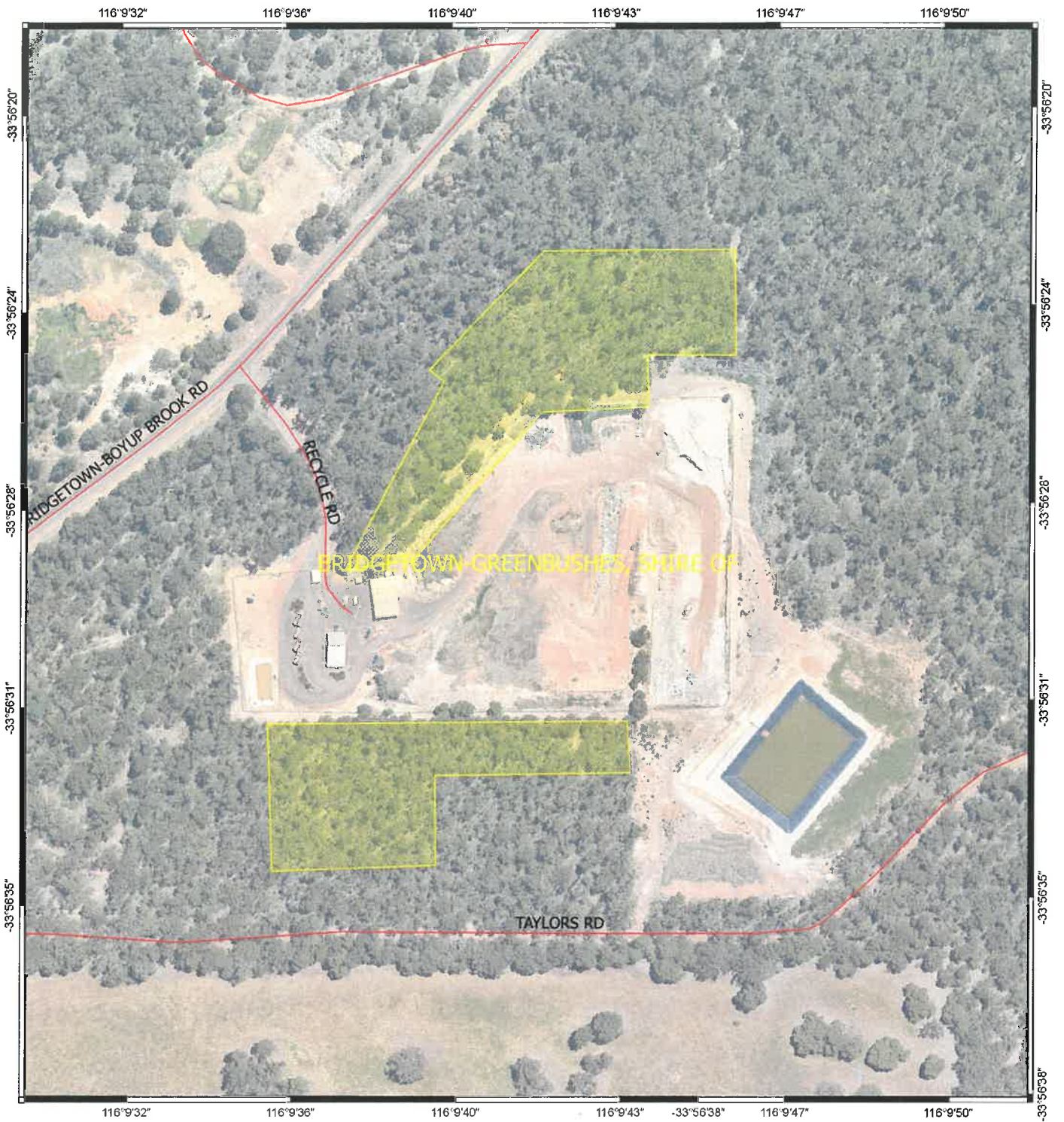


Samara Rogers
A/MANAGER
CLEARING REGULATION

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

8 June 2018

Plan 7722/1



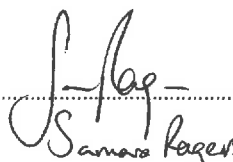
Legend

 Areas approved to clear

 roads

 lga

Virtual Mosaic - WA Now

 Date 8/16/2018

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



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MGA 94
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GOVERNMENT OF
WESTERN AUSTRALIA



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7722/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Bridgetown -Greenbushes
Application received date: 8 August 2018

1.3. Property details

Property: LOT 903 ON PLAN 189961, BRIDGETOWN
Local Government Authority: BRIDGETOWN-GREENBUSHES, SHIRE OF

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.62	-	Mechanical Removal	Waste disposal/management

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 8 June 2018
Reasons for Decision:

The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O 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 will impact up to 2.62 hectares of black cockatoo foraging habitat and potential black cockatoo nesting and roosting habitat.

After consideration of the above, the Delegated Officer determined that given the extent of native vegetation within the local area, impacts to black cockatoos can be adequately managed through a fauna management condition.

The Delegated Officer noted that the proposed clearing may impact on the environmental values of adjacent vegetation through the introduction or spread of weeds and dieback. Weed and dieback management measures will help to mitigate this risk.

In determining to grant a clearing permit subject to a fauna management condition and dieback and weed management conditions, the Delegated Officer determined that the proposed clearing is not likely to lead to an unacceptable risk to the environment.

2. Site Information

Clearing Description The application is to clear 2.62 hectares of native vegetation within Lot 903 on Deposited Plan 189961, Bridgetown, for the purpose of expanding the existing waste disposal site.

The application is for the purpose of installing a new liquid waste facility in the northern application area, and inert stockpiles within the southern area.

Vegetation Description The application area is mapped as the South West Forests - Vegetation complex 'HR Complex', which is described as tall Open Forest to Open Forest of *Eucalyptus marginata subsp. marginata-Corymbia calophylla* on lateritic uplands in perhumid and humid zones (Government of Western Australia, 2018).

A site inspection of the application area conducted by Department of Water and Environmental Regulation (DWER) officers on the 31 October 2017, described the vegetation as a Tall Open Forest of *Eucalyptus marginata - Corymbia calophylla* over *Banksia grandis* and *Hibbertia* species with significant stands of *Hardenbergia comptoniana*. Healthy populations of annual herbs were present at the time of inspection (DWER, 2017).

The application area shows signs of edge effects from the adjacent waste disposal site such as an increase in weed species and rubbish (DWER, 2017).

Vegetation Condition Good to Very Good (Keighery, 1994).

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

Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

The condition of the vegetation was determined through the DWER site inspection (DWER, 2017).

Comment

The local area is defined as a 10 kilometre radius measured from the perimeter of the application area.



Figure 1: Area applied to clear.

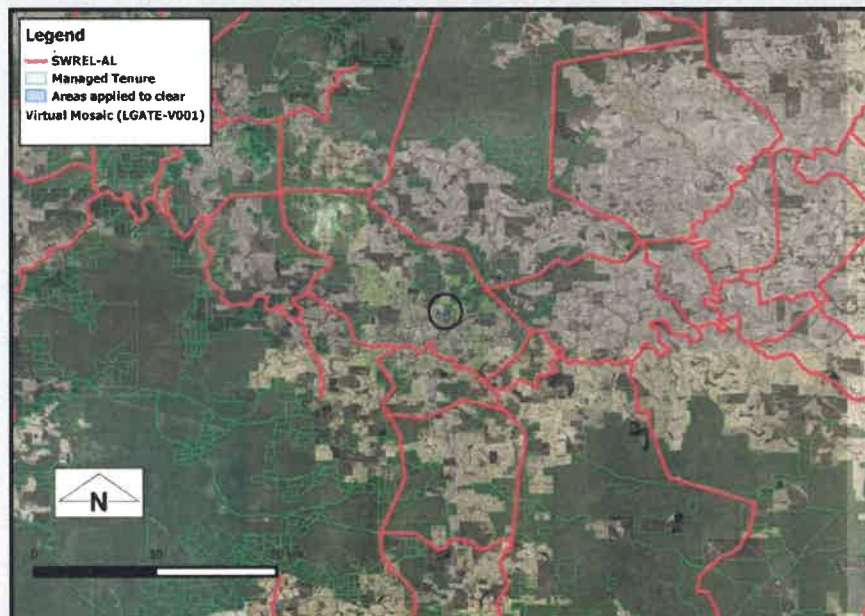


Figure 2: Area applied to clear in relation to Department of Parks and Wildlife (DBCA) managed land and mapped South West Ecological Linkage (Molloy et. al., 2009).

3. Assessment of application against clearing principles

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

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

As assessed within section 2, the application area is described as a Tall Open *Eucalyptus marginata*, *Corymbia calophylla* forest with a varied understorey including significant populations of annual herbs.

The local area retains approximately 32.5 per cent native vegetation with the majority located within land managed by DBCA (Figure 2), being, Hester State Forest, Hester Conservation Park and Yornup State Forest.

There are no records of rare flora, threatened ecological communities (TEC's) or priority ecological communities in the local area. The Department of Biodiversity, Conservation and Attractions (DBCA) advised that the application area is unlikely to support any flora and/or vegetation that is currently considered threatened (DBCA, 2017).

Five priority flora species have been recorded within the local area, with the closest approximately 4.3 kilometres south of the application area. As the habitat preferences for these species are not present within the application area (Western Australian herbarium, 1998-), the application area is unlikely to support these species.

As discussed under Principle (b), the application area contains 2.8 hectares of threatened black cockatoo foraging habitat and potential black cockatoo nesting and roosting habitat. Given the extent of adjoining vegetation and reserved vegetation within the local area, impacts to black cockatoos are likely to be adequately managed through appropriate fauna management conditions.

The proposed clearing may impact upon adjacent native vegetation in a good (Keighery, 1994) condition, by increasing edge effects such as increased light and the spread of weeds and dieback. Weed and dieback management are likely to minimise this risk.

Noting the application area comprises foraging and potential breeding habitat for Black cockatoos, given the extent of adjoining vegetation and reserved vegetation within the local area, and that the application area is not likely to comprise of rare or priority flora or threatened ecological communities, the application area is not likely to contain a high level of biological diversity.

The proposed clearing is not likely to be at variance to this Principle.

(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.

Proposed clearing may be at variance to this Principle

The application area occurs within the area assessed within the South West Regional Ecological Linkage Report (SWREL)(Molloy et al, 2007). The application area is classified as 1A under this report as it is connected to a main axis line through unbroken native vegetation (Figure 1). Given this classification, the application area is likely to support high fauna diversity within the local area. Although connected to the linkage through unbroken vegetation, as the main axis line for the linkage occurs four kilometres from the application area, the application area does not adjoin further native vegetation and adjoins current disturbance; the proposed clearing is not likely impact on the movement of fauna through the landscape.

Six fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* have been recorded within the local area and have the potential to occur within the application area (DBCA, 2007-):

- forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*);
- Baudin's cockatoo (*Calyptorhynchus baudinii*);
- Carnaby's cockatoo (*Calyptorhynchus latirostris*), listed as rare or likely to become extinct under the Wildlife Conservation Act, 1950 (WC Act); listed as 'endangered' under the EP WC Act;
- Chuditch (*Dasyurus geoffroii*);
- Numbat (*Myrmecobius fasciatus*); and
- Western Ringtail Possum (*Pseudocheirus occidentalis*).

Black cockatoo's nest in large hollows of Eucalyptus trees and forage on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (Banksia, Hakea, Grevillea), Eucalyptus, Corymbia and a range of introduced species (DBCA, 2013; Valentine and Stock, 2008).

The Carnaby's cockatoo recovery plan states, "Success in breeding is dependent on the quality and proximity of feeding habitat within 12 kilometres of nesting sites. Along with the trees that provide nest hollows, the protection, management and increase of this feeding habitat that supports the breeding of Carnaby's cockatoo is a critical requirement for the conservation of the species" (DBCA, 2013). There are no confirmed Carnaby's cockatoo breeding or roosting locations within the local area.

A DWER site inspection identified (DWER, 2017):

- Large trees of an appropriate age and size that may contain or develop potential breeding hollows for black cockatoos;
- Tree hollows suitable for black cockatoos within the application area; and
- No direct observations of the presence of black cockatoo's were observed while on site however the vegetation was considered to be suitable foraging habitat.

DBCA also advised that the application area is likely to provide foraging, roosting and breeding habitat for black cockatoo species.

Given the vegetation identified within the application area (refer to Section 2), the advice received from DBCA and the observation of hollows and feeding habitat on site, the application area is likely to contain foraging and potential breeding habitat for Black cockatoos.

It is noted that the property under application adjoins DBCA managed conservation estate, the local area has a high percentage of remnant native vegetation (a majority of which occurs within conservation estate) and that the application area is located adjacent to significant disturbance (an existing waste disposal site). Given the significant remnant native vegetation within the local area, unless the site is actively being used by Black cockatoos for breeding, the vegetation within the application area is not likely to comprise significant habitat for black cockatoos. Fauna management practices requiring all potential hollows to be checked for fauna prior to clearing would aid in mitigating direct impacts to the three black cockatoo species.

Chuditch populations occur in varying densities in jarrah forests and woodlands in the south west corner of Western Australia, and in woodlands, mallee shrublands and heaths along the south coast, east to the Ravensthorpe area (Department of Environment and Conservation, 2012). While the vegetation in the application area is likely to contain potential habitat for this species, based on the extent of native vegetation cover within the local area, lack of large fallen trees forming den sites and as the movement of fauna through the landscape will not be affected, the application area is not likely to comprise significant habitat for this species.

Within the South Coast, the western ringtail possum is found in coastal heath, jarrah/marri woodland and forest, myrtaceous heaths and shrublands with *Agonis flexuosa* (peppermint willow) forming a key habitat requirement. As the application area does not contain *Agonis flexuosa* and based on the extent of native vegetation cover within the local area, although suitable habitat is present, the species is not likely to be significantly impacted by the proposed clearing.

One record of the numbat is present within the local area, 7.8 kilometres south of the application area. The application occurs approximately 17 kilometres north east from conservation estate containing one of two original source populations of the species. There is estimated to be less than 1,000 mature numbats in the wild across all source and reintroduction sites (Department of Parks and Wildlife, 2015), given this, its requirement for a large home range, its timid cryptic nature and as the clearing is adjacent to disturbance associated with the current waste site, they are not likely to be impacted by the proposed clearing.

As the property under application will retain approximately 27 hectares of vegetation post clearing, the application area occurs adjacent to existing disturbance (waste disposal site) and will not affect the movement of fauna through the landscape, the proposed clearing is not likely to comprise significant habitat for non-conservation significant fauna.

Noting the application area contains foraging habitat for black cockatoos and potential breeding habitat, given the higher quality remnant vegetation in the local area the application area is not considered to be significant habitat. Therefore the proposed clearing may be at variance to this Principle.

Conditioning a clearing permit to ensure that Black cockatoos are not present at the time of clearing is likely to minimise the risk to the three black cockatoo species.

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

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

According to available datasets, there are no rare flora recorded within the local area (10 kilometre radius). DBCA has advised that the application area is not likely to support any flora and/or vegetation that is currently considered threatened.

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

(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.

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

According to available datasets, there are no threatened ecological communities (TEC) recorded within the application area or within in the local area. Vegetation consistent with a TEC was not identified during the site inspection undertaken by DWER officers (DWER, 2017) and DBCA advised that the application area is not likely to support vegetation that is currently considered threatened.

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

(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.

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 native vegetation extents within the Interbiogeographic bioregion (IBRA), Shire and mapped South West Forest Vegetation complex retain above the 30 per cent threshold (53.5 to 73.7 per cent respectively) (Government of Western Australia, 2017; Government of Western Australia, 2018). The local area retains 32.5 per cent native vegetation. The area surrounding the local area is highly vegetated (Figure 2).

As assessed under Principle (b), the application area forms part of a regional ecological linkage and comprises of foraging and potential nesting habitat for black cockatoos. Given the surrounding high quality remnant vegetation the application area is not considered a significant remnant.

Given the above, 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 Parks and Wildlife Managed Lands (%)
IBRA Bioregion* Jarrah Forest	4,506,660.3	2,416,018.1	53.6	69.2
Shire* Shire of Bridgetown-Greenbushes	133,759.7	71,563.2	53.5	85.1
South West Vegetation Complex ** Hester (HR)	32,249.6	23,763.74	73.7	67.1
Local Area 10 kilometre radius	32,417.5	10,531.1	32.5	-

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

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

No watercourses or wetlands have been mapped within the application area. A site inspection undertaken by DWER officers did not identify riparian vegetation within the application area (DWER, 2017).

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

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

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

The application area is mapped within the Hester Land System, which is described as ridges and hill crests on laterite and gneiss, with sandy gravels, loamy gravels and loamy earths supporting Jarrah-marri forest with some wandoo (Department of Primary Industries and Regional Development, 2017)(DPIRD, 2017).

As assessed under Principle (f), no watercourses or wetlands are present within the application area. Considering this and the land degradation risk identified within Table 2, the proposed clearing is not likely to cause land degradation through water erosion, increased salinity, waterlogging or phosphorus export. The mapped land unit however, has been mapped with a high risk of wind erosion.

As identified within Principle (a), the application area is surrounded by native vegetation, given this and as the area is proposed to be maintained as a waste facility, the proposed clearing is not likely to cause or exacerbate wind erosion.

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

Table 2: Land degradation risk categories (DPIRD, 2017).

Risk categories	
Wind erosion	73% of map unit has a high wind erosion risk
Water erosion	74% of map unit has a very low to moderate risk or not rated
Salinity	100% of map unit has nil or partial risk or not rated
Water logging	100% of map unit has nil or partial risk or not rated
Phosphorus export risk	68% of map unit has a low to moderate risk or is not rated

(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.

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

The application area is mapped approximately 135 metres south of Hester Conservation Park and Hester State Forest. The application area is contiguous with the vegetation of both Hester Conservation Park and Hester State Forest.

The vegetation within Lot 903 forms part of a linkage for fauna moving from the application area to Hester Conservation Park, Hester State Forest and vegetation remnants south of the application area. As remnant native vegetation surrounds the application area, the proposed clearing will not sever this link and approximately 27 hectares of vegetation will remain on the property post clearing.

A 100 metre vegetated buffer exists between the application area and conservation estate, which reduces the risk of introducing or spreading dieback and weeds into conservation areas.

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

(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.

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

No watercourses or wetlands have been mapped within the application area. The nearest mapped water course is a minor, non-perennial watercourse originating approximately 200 metres east of the application area. Groundwater salinity within the application area is mapped as 500 - 1000 total dissolved solids (milligrams per litres). This level of groundwater salinity is considered to be marginal.

As assessed within Principle (g), the mapped land unit has a low risk of water erosion, salinisation, waterlogging or phosphorus export. The application area is surrounded by native vegetation and large reserves occur in close proximity to the application area (figure 2).

Given the above, the proposed clearing is not likely to impact on the quality of surface water or groundwater and is not likely to be at variance to this Principle.

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

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

No watercourses or wetlands occur within the application area, and the mapped soils are well drained (DPIRD, 2017).

Given the size of the application area, the topography of the site and soils type, the proposed clearing is not likely to exacerbate the incidence or intensity of flooding.

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

4. Planning instruments and other relevant matters

There have been three clearing permits previously granted to the applicant for waste disposal development on this property. CPS 5233/1 to clear 2.6 hectares was granted in July 2015, CPS 4307/1, to clear 0.4 hectares, was granted in May 2011 and CPS 878/1, to clear 0.87 hectares, was granted in December 2005. Each of these permits has since expired.

A Part V, Division 3 licence amendment for the Shire of Bridgetown-Greenbushes Licence L6818/1997/11 has been granted by the Industry Licencing section of DWER. The licence amendment correlates to the application area.

The application was advertised online on 30 August 2017 for a 21 day submission period. No submissions have been received in relation to this application.

There are no Aboriginal sites of significance mapped within the application area.

5. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Biodiversity Conservation and Attractions (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed January 2018.
- Department of Biodiversity Conservation and Attractions (2013) Carnaby's cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia.
- Department of Biodiversity, Conservation and Attractions (2017) Regional advice for Clearing Permit Application CPS 7722/1. South West Region. Western Australia (DWER Ref: A1548955).
- Department of Environment and Conservation (2012) Chuditch (*Dasyurus geoffroii*) Recovery Plan. Wildlife Management Program No. 54. Department of Environment and Conservation, Perth, Western Australia.
- Department of Parks and Wildlife (2015). Numbat (*Myrmecobius fasciatus*) Recovery Plan. Wildlife Management Program No. 60. Prepared by J.A. Friend and M.J. Page, Department of Parks and Wildlife, Perth, WA.
- Department of Primary Industry and Regional Development (2017) NRInfo Digital Mapping. Department of Primary Industry and Regional Development. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (accessed December 2017).
- Department of Water and Environmental Regulation (2017) Site Inspection Report for Clearing Permit Application CPS 7722/1. Site inspection undertaken 31 October 2017. Department of Water and Environmental Regulation, Western Australia (DWER Ref: A1554819)
- *Government of Western Australia (2017) 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. WA Department of Parks and Wildlife, Perth.
- **Government of Western Australia (2018) 2017 South West Vegetation Complex Statistics. Current as of December 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.
- Valentine, L.E. and Stock, W. (2008) Food Resources of Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) in the Gnaragara Sustainability Strategy Study Area. Edith Cowan University and Department of Environment and Conservation. December 2008.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/> (Accessed January 2018).