



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

### PERMIT DETAILS

Area Permit Number: 5743/2  
File Number: DER2013/000382-1  
Duration of Permit: From 1 August 2015 to 1 August 2020

### PERMIT HOLDER

Eastern Metropolitan Regional Council

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 12 on Deposited Plan 26468, Gidgegannup

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 13.9 hectares of native vegetation within the area cross-hatched yellow on attached Plan 5743/2.

### CONDITIONS

#### 1. Dieback and 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* and *dieback*:

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

#### 2. Offsets – conservation covenant

Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall:

- (a) give a conservation covenant under section 30B of the *Soil and Land Conservation Act 1945* setting aside the *covenant area* for the protection and management of vegetation in perpetuity; and
- (b) provide to the CEO a copy of the executed conservation covenant no later than 30 June 2016.

#### 3. Offset - weed management

The Permit Holder shall:

- (a) prior to 31 January 2016, prepare a Weed Management Plan to the satisfaction of the CEO, outlining the actions the Permit Holder will take at least once in each 12 month period for the term of this Permit to remove or kill weeds within the *covenant area*; and
- (b) implement and adhere to the Weed Management Plan.

#### 4. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
  - (i) the 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;
  - (ii) the date that the area was cleared; and
  - (iii) the size of the area cleared (in hectares).

- (b) In relation to the activities done pursuant to condition 3:
  - (i) a description of the weed management undertaken; and
  - (ii) a copy of each weed management monitoring report.

#### 5. Reporting

- (a) The Permit Holder must provide to the CEO on or before 1 July of each year, a written report:
  - (i) of records required under condition 4 of this Permit; and
  - (ii) concerning activities done by the Permit Holder under this Permit between 1 July to 30 June of the preceding financial year.
- (b) If no clearing authorised under this Permit was undertaken between 1 July to 30 June of the preceding financial year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 1 July of each year.
- (c) Prior to 1 May 2020 the Permit Holder must provide to the CEO a written report of records required under condition 5 of this Permit where these records have not already been provided under condition 5(a) of this Permit.

#### DEFINITIONS

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

**Covenant area** means the area of land cross-hatched red on attached Plan 5743/2

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

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

**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;

**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*

19 November 2015

# Plan 5743/2

31.829222°S

31.829222°S

116.099097°E

116.123156°E



31.840609°S

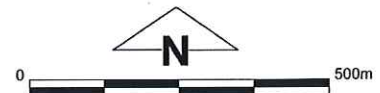
31.840609°S

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116.123156°E

## Legend

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



1:12,063

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

*J Clarkson* Date *19/11/15*  
J Clarkson

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



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WESTERN AUSTRALIA  
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## 1. Application details

### 1.1. Permit application details

Permit application No.: 5743/2  
Permit type: Area Permit

### 1.2. Applicant details

Applicant's name: Eastern Metropolitan Regional Council

### 1.3. Property details

Property: LOT 12 ON PLAN 26468, GIDGEGANNUP  
Colloquial name:  
Local Government Authority: SWAN, CITY OF  
DER Region: Greater Swan  
DPaW District: PERTH HILLS  
LCDC:  
Localities: RED HILL and GIDGEGANNUP

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
13.9		Mechanical Removal	Geotechnical investigations

### 1.5. Decision on application

Decision on Permit: Granted  
Application:  
Decision Date: 19 November 2015

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Mapped Beard vegetation association 3 is described as: Medium jarrah-marri (Shepherd et al 2001).  Mattiske vegetation complex 'D2' is described as open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on lateritic uplands in subhumid and semiarid zones (Mattiske and Havel 1998).	Clearing of 13.9 hectares of native vegetation within Lot 12 on Plan 26468, Toodyay, for the purpose of geotechnical investigations.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994).  To  Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994).	The area under application consists predominately of Jarrah (Eucalyptus marginata), Marri (Corymbia calophylla), Banksia sessilis and Sheoak. The area contains very little midstorey and no understorey (DER 2013).  Helena Holdings WA (2010) identified that the condition of the remnant bushland within the application area varied from good to degraded (Keighery 1994). The impacts of past logging, animal grazing and middle storey shrub deaths due to senescence were evident within the application area (DER 2013).  The vegetation condition and description was determined from a site inspection (DER 2013), fauna assessment undertaken by Bamford Consulting Ecologists (2010) and flora and vegetation assessment undertaken by Helena Holdings WA (2010).

## 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 amended application is to clear 13.9 hectares of native vegetation within Lot 12 on Plan 26468, Toodyay

for the purpose of geotechnical investigations.

A Flora and Vegetation Assessment conducted within Lot 12 on 27 October 2010, including the area under application, recorded a total of 39 native taxa from a diverse range of 18 Families (Helena Holdings WA 2010). Helena Holdings WA (2010) identified that the condition of the remnant bushland within the application area varied from good to degraded (Keighery 1994) and consisted of forest of *Corymbia calophylla* (Marri), *Eucalyptus marginata* (Jarrah) and *Allocasuarina fraseriana* (she oak) over thicket of *Banksia sessilis* var. *sessilis* over occasional shrubs and herbs. The impacts of past logging, animal grazing and middle storey shrub deaths due to senescence were evident within the application area (Helena Holding WA 2010).

Twenty seven priority flora species have been recorded within the local area (ten kilometre radius). A Flora and Vegetation Assessment conducted within Lot 12 did not identify any priority flora species occurring within the application area (Helena Holdings WA 2010).

Seven fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (ten kilometre radius), including: *Calyptorhynchus banksii* subsp. *naso* (forest red-tailed black cockatoo), *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo), *Dasyurus geoffroyi* (chuditch) and *Phascogale tapoatafa* subsp. *tapoatafa* (southern brush-tailed phascogale) (Parks and Wildlife 2007-). The vegetation proposed to be cleared is foraging habitat and possible breeding habitat for black cockatoo species. Given the lack of understorey present within the area under application the vegetation proposed to be cleared is not likely to provide significant habitat for ground dwelling fauna.

Given the condition of the vegetation and impacts of historic logging and grazing, it is not likely to contain a high biological diversity.

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

#### Methodology

#### References:

- Helena Holdings WA (2010)
  - Parks and Wildlife (2007-)
  - Keighery (1994)
- GIS Database:
- SAC Bio Datasets September 2015

#### **(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 is at variance to this Principle**

Seven fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (five kilometre radius) including: *Calyptorhynchus banksii* subsp. *naso* (forest red-tailed black cockatoo), *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo), *Dasyurus geoffroyi* (chuditch) and *Phascogale tapoatafa* subsp. *tapoatafa* (southern brush-tailed phascogale) (Parks and Wildlife 2007-).

Bamford Consulting Ecologists (2010) undertook a fauna assessment of the vegetation located within Lot 12 including the area under application. Bamford Consulting Ecologists (2010) identified a number of conservation significant species that may occur within the application area including: carpet python (*Morelia spilota imbricata*), fork-tailed swift (*Apus pacificus*), forest red-tailed black cockatoo, Baudin's cockatoo, Carnaby's Cockatoo, peregrine falcon (*Falco peregrinus*), rainbow bee-eater (*Merops ornatus*), chuditch and southern brush-tailed phascogale.

Bamford Consulting Ecologists (2010) advised that the application area may be too degraded for ground dwelling fauna and given the lack of substantial understorey it is not likely to be significant habitat for these species. Bamford Consulting Ecologists (2010) advised that the peregrine falcon and rainbow bee-eater may utilise the area under application but their habitat is widespread and therefore the vegetation within the application area is not likely to be significant habitat for these species.

A black cockatoo assessment was undertaken on 7 April 2014 by Bamford Consulting Ecologists (2014). This assessment identified that the application area contained several species of value as foraging habitat for black cockatoos including Marri, Jarrah, Parrot Bush and Sheoak with scattered Bull Banksia and Snottygobble. Very old signs of forest red-tailed black cockatoo feeding on marri were identified within the vegetation under application. In addition, Baudin's cockatoo was recorded during the fauna survey, with evidence of foraging observed throughout the application area (Bamford Consulting Ecologists 2010).

Approximately nine trees with Diameter at Breast Height (DBH) of greater than 50 centimetres were recorded within the area under application (Bamford Consulting 2014). During the black cockatoo assessment no active nests were found. One potential suitable hollow was identified within Lot 12, the remaining trees identified have the potential to develop suitable breeding hollows in the future (Bamford Consulting Ecologists 2014). Only a limited number of quadrats were undertaken within the application area and therefore the number of potential black cockatoo breeding trees is expected to be larger than the nine trees identified (Bamford Consulting Ecologists 2014).

Carnaby's cockatoo is listed as endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). Carnaby's cockatoo was once abundant in Western Australia. Since the late 1940s the species has suffered a 30 per cent contraction in range, a 50 per cent decline in population, and between 1968 and 1990 disappeared from more than a third of its breeding range (Saunders 1990; Johnstone and Storr 1998; Saunders and Ingram 1998; Garnett et al. 2011).

Basic ecological theory, expert opinion and recent evidence suggests that the foraging habitat on the Swan Coastal Plain is just sufficient to support the current population of Carnaby's cockatoo. Therefore any reduction in the amount of food source will result in a reduction in the carrying capacity of the region and therefore a decline in the population of Carnaby's cockatoo.

Given the above, the clearing of 13.9 hectares of native vegetation is likely to have an impact on significant habitat for the forest red-tailed black cockatoo, Baudin's cockatoo and Carnaby's Cockatoo.

Therefore, the clearing as proposed is at variance to this principle.

To address the environmental impacts identified in this assessment the applicant has provided an offset package which consists of retaining in perpetuity 52.5 hectares of native vegetation in good (Keighery 1994) condition, which contains foraging and potential breeding habitat for the black cockatoo species.

**Methodology**

**References:**

- Bamford Consulting Ecologists (2010)
  - Bamford Consulting Ecologists (2014)
  - Garnett et al (2011)
  - Johnstone and Storr (1998)
  - Keighery (1994)
  - Parks and Wildlife (2007-)
  - Saunders (1990)
  - Saunders and Ingram (1998)
- GIS Database:  
-Sac Biodata sets - accessed September 2015

**(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**

Six species of rare flora has been recorded within the local area (ten kilometre radius).

Four out of the six rare flora species are found on granite slopes or granite outcrops (Brown et al. 1998; Western Australian Herbarium 1998-). Suitable habitat for these species is not located within the area under application.

One species is found in low heath on hilltops, slopes and in gullies (Brown et al. 1998). Suitable habitat for this species is not located within the area under application.

One species is found in open heathland and banksia woodland, usually in yellow sandy loam over laterite (Brown et al. 1998). Suitable habitat for this species is not located within the area under application.

A Flora and Vegetation Assessment conducted within Lot 12, including the area under application, on 27 October 2009 did not identify any rare flora species within the application area (Helena Holdings Pty Ltd 2010).

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

**Methodology**

**References:**

- Brown et al (1998)
  - Helena Holdings WA (2010)
  - Western Australian Herbarium (1998-)
- GIS Database:  
-Sac Biodata sets - accessed September 2015

**(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**

Four Threatened Ecological Communities (TEC) have been recorded within the local area of the area under application (ten kilometre radius). These are Eucalyptus calophylla - Xanthorrhoea preissii woodlands and shrublands, Swan Coastal Plain, Shrublands and woodlands of the eastern side of the Swan Coastal Plain, Eucalyptus calophylla - Kingia australis woodlands on heavy soils, Swan Coastal Plain and Banksia attenuata and/or Eucalyptus marginata woodlands of the eastern side of the Swan Coastal Plain. The closest recording of a TEC to the application area is Eucalyptus calophylla - Xanthorrhoea preissii woodlands and shrublands

occurring 5 kilometres east of the application area.

A flora and vegetation survey undertaken by Helena Holdings WA Pty Ltd (2010) did not identify any TECs within the area under application.

The vegetation proposed to be cleared is in a degraded to good (Keighery 1994) condition. The impacts of past logging, animal grazing and middle storey shrub deaths due to senescence are evident within the application area. The area contains very little midstorey and no understorey (DER 2013).

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

**Methodology**

**References:**

- DER (2013)
  - Helena Holdings WA (2010)
  - Keighery (1994)
- GIS Database:**
- Sac Biodata sets - accessed September 2015

**(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 area under application is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 54 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2014).

The vegetation under application is mapped as Beard Vegetation Association 3, Mattiske Vegetation Complex 'D2' and Heddle Vegetation Complex 'Dwellingup Complex In Medium to High Rainfall', which have approximately 67, 83 and 82 per cent of their Pre-European extent remaining, respectively (Government of Western Australia 2014 Parks and Wildlife 2015).

The National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia, 2001).

Digital imagery indicates that the local area (ten kilometre radius) surrounding the area under application retains approximately 45 per cent vegetation cover.

The application area contains foraging and possible breeding habitat for protected fauna therefore the vegetation proposed to be cleared is considered to be a significant remnant. However, given that the local area (ten kilometre radius) retains approximately 45 per cent vegetation cover, the area under application is not considered to be located within an extensively cleared area.

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

	Current Extent (ha)	Remaining Extent in Parks and Wildlife Managed Lands (ha)	(%)	(%)
IBRA Bioregion*				
Jarrah Forest	4,506,660	2,425,551	54	69
Shire*				
City of Swan	104,436	44,924	43	28
Beard Vegetation Association*				
3	2,390,591	1,613,658	67	80
Heddle Vegetation Complex **				
Dwellingup Complex In Medium\				
To High Rainfall	86,128	71,243	83	68
Mattiske Vegetation Complex **				
D2	83,659	68,868	82	67

**Methodology**

**References:**

- \*Government of Western Australia (2014)
  - Commonwealth of Australia (2001)
  - \*\*Parks and Wildlife (2015)
- GIS Databases:**
- Heddle Vegetation
  - IBRA Australia
  - Local Government Authority
  - Mattiske (1998)

- Pre-European 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 at variance to this Principle**

No wetlands are located within five kilometres of the application area. The closest minor watercourse is located approximately 400 metres north of the application area.

The closest major watercourse is 'Susannah Brook' located approximately 1.4 kilometres north of the application area.

A Flora and Vegetation Assessment undertaken by Helena Holdings WA (2010) did not identify any riparian vegetation on site and given the distance to the closest watercourse the vegetation proposed to be cleared is not growing in association with a watercourse or wetland.

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

**Methodology**

References:

-Helena Holdings WA (2010)

GIS Databases:

- Geomorphic Wetlands, Swan Coastal Plain

- Hydrology, linear

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

**Comments Proposed clearing may be at variance to this Principle**

The chief soils mapped within application area are ironstone gravels with sandy and earthy matrices; the soils blanket the slopes and ridges extending down into the upper ends of the minor valleys (Northcote et al 1960-1968). Given the presence of gravel in the soil, the proposed clearing is not likely to cause wind erosion.

Land degradation mapping on the Department of Agriculture and Food WA's website indicates that the majority of the area under application falls within the following category for water erosion risk '50-70 per cent of map unit has a high to extreme water erosion risk' (DAFWA 2015). However, the proposed clearing is not likely to cause appreciable land degradation in the form of water erosion given its position in the landscape and the distance to the nearest watercourse.

The majority of the area under application is mapped as a low risk of salinity. Given this low risk and the highly vegetated local area (10 kilometre radius) the proposed clearing is not likely to contribute to an increase in salinity.

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

**Methodology**

References:

- Northcote et al. (1960-1968)

- DAFWA (2015)

GIS Databases:

- Soils, statewide

- Salinity risk

**(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 may be at variance to this Principle**

John Forrest National Park is located approximately 490 metres south west of the area under application.

The vegetation located within the area under application contains habitat for the forest red-tailed black-cockatoo, Baudin's cockatoo and Carnaby's cockatoo which are specially protected under the Environment Protection and Biodiversity Conservation Act 1999 and Wildlife Conservation Act 1950. The vegetation may act as a stepping stone for avifauna moving between conservation areas and remnant vegetation within the local area (ten kilometre radius). The clearing of 13.9 hectares of native vegetation may decrease the capacity for fauna dispersal between these areas.

Given the above the clearing as proposed may be at variance to this principle.

**Methodology**

GIS Databases:

- 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 at variance to this Principle**

No wetlands are located within five kilometres of the application area. The closest minor watercourse is located approximately 400 metres north of the application area. The closest major watercourse is 'Susannah Brook' located approximately 1.4 kilometres north of the application area.

Given the distance to the closest watercourse the clearing as proposed is not likely to cause deterioration in the quality of surface water.

Groundwater salinity is mapped between 500 – 1000 milligrams/Litre total dissolved solids which is considered to be 'marginal'. Given this and the highly vegetated local area (ten kilometre radius), the clearing of 13.9 hectares of vegetation within the application is not likely to cause deterioration in the quality of underground water.

Given the above the clearing as proposed is not at variance to this principle.

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

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

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

No wetlands are located within five kilometres of the application area. The closest minor watercourse is located approximately 400 metres north of the application area. The closest major watercourse is 'Susannah Brook' located approximately 1.4 kilometres north of the application area.

The chief soils mapped within application area are ironstone gravels with sandy and earthy matrices; the soils blanket the slopes and ridges extending down into the upper ends of the minor valleys (Northcote et al 1960-1968).

Land degradation mapping on the Department of Agriculture and Food WA's website indicates that the majority of the area under application falls within the following category for flooding; '3 per cent of map unit has a high to moderate flooding risk' (DAFWA 2015).

Given this, the soils present within the application area, distance to watercourses and position in the landscape, the proposed clearing is not expected to cause or exacerbate the incidence or intensity of flooding. Therefore, the clearing as proposed is not at variance to this principle.

**Methodology** References:  
- Northcote et al. (1960-1968)  
- DAFWA (2015)  
GIS Databases:  
- Soils, statewide

## Planning instruments and other relevant matters.

**Comments** The amended application is to clear 13.9 hectares of native vegetation within Lot 12 on Plan 26468, Toodyay for the purpose of geotechnical investigations. The original permit area was 3.4 hectares. The applicant also applied to amend condition 2 of Permit 5743/1 to remove the requirement of providing a conservation covenant over the offset area prior to clearing and to amended the offset area from 13.9 hectares to 52.5 hectares.

A conservation covenant under the Soil and Land Conservation Act 1945 is required to be in place over the offset site prior to clearing and therefore condition 2 cannot be amended.

The Western Australia Planning Commission (2013) has granted the applicant Approval to Commence Development within Lot 12 on Deposited Plan 26468 for excavation and expansion of landfill.

The proposal has been referred to the Commonwealth Department of Environment and on the 29 October 2014 it was determined that the proposal to clear native vegetation for geotechnical investigations and to construct waste disposal storage cells was a controlled action to be assessed by preliminary documentation under the Environmental Protection and Biodiversity Conservation Act 1999. This assessment of this proposal is currently ongoing and has recently been advertised for public comment.

The applicant has advised that geotechnical investigations are required prior to obtaining a works approval for waste disposals cells.

The application area is mapped within an Aboriginal Site of Significance 'Darling Range'. It is the proponent's responsibility to comply with the Aboriginal Heritage Act 1972 and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

The application area is zoned as 'Special Use' under the local Town Planning Scheme

To address the environmental impacts identified in this assessment the applicant has provided an offset package which consists of retaining in perpetuity 52.5 hectares of native vegetation in good (Keighery 1994) condition which contains foraging and potential breeding habitat for the black cockatoo species.

**Methodology** References:  
-Western Australia Planning Commission (2013)  
GIS Databases:  
- Aboriginal Sites of Significance  
- Town Planning Scheme Zones

## 4. References

- Bamford Consulting Ecologists (2010) Red Hill Waste Management Facility Lot 12 (Site 2) Toodyay Rd, Fauna Assessment. Western Australia. (DER Ref: A687583)
- Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
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- Garnett, S., Szabo, J. and Dutson, G. (2011). The Action Plan for Australian Birds 2010. CSIRO Publishing, Melbourne, Victoria.
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- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
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- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, Perth.
- Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>.
- Parks and Wildlife (2015) 2015 South West Forest and Swan Coastal Plain Vegetation Complex Statistics: a report prepared for the Department of Environment Regulation. Current as of March 2015. Department of Parks and Wildlife, Perth, Western Australia.

- Saunders, D.A. (1990). Problems of survival in an extensively cultivated landscape: the case of Carnaby's cockatoo *Calyptorhynchus funereus latirostris*. *Biological Conservation*. 54: 277-290.
- Saunders, D.A. and Ingram, J.A. (1998). Twenty-eight years of monitoring a breeding population of Carnaby's cockatoo. *Pacific Conservation Biology*. 4: 261-270.
- 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.
- Western Australian Herbarium (1998-) *FloraBase - The Western Australian Flora*. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed September 2013).
- Western Australia Planning Commission (2013) Approval to Commence Development for Lot 12 on Deposited Plan 26468. Western Australia (DER Ref: A687582)