GOVERNMENT OF
WESTERN AUSTRALIA

# CLEARING PERMIT

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

**PERMIT DETAILS**
Area Permit Number: 7434/1
File Number: 2011/006853-1
Duration of Permit: From 24 June 2017 to 24 June 2019

**PERMIT HOLDER**
Shire of Kalamunda

**LAND ON WHICH CLEARING IS TO BE DONE**
Lot 581 on Deposited Plan 71883 (Crown Reserve 26127), Lesmurdie

**AUTHORISED ACTIVITY**
The Permit Holder shall not clear more than 1.53 hectares of native vegetation within the area hatched yellow on attached Plan 7434/1.

**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; and
   (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

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

Mathew Gannaway
MANAGER
CLEARING REGULATION

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

30 May 2017

# Plan 7434/1


## Legend

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

N

0 100m

1:1,785

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

..... Date 30/05/2017

Matthew Gannaway

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

GOVERNMENT OF WESTERN AUSTRALIA

Government of **Western Australia**
Department of **Environment Regulation**

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

**Permit application No.:** 7434/1
**Permit type:** Area Permit

### 1.2. Applicant details

**Applicant's name:** Shire of Kalamunda

### 1.3. Property details

**Property:** Lot 581 on Deposited Plan 71883, Lesmurdie
**Colloquial name:**
**Local Government Authority:** Kalamunda, Shire of
**DER Region:** Greater Swan
**DPaW District:** Perth Hills

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| 1.53 | | Mechanical Removal | Recreation |

### 1.5. Decision on application

**Decision on Permit Application:** Grant
**Decision Date:** 30 May 2017
**Reasons for Decision:** The clearing permit application was received on 29 December 2016 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing may be at variance to Principle (h) and not likely to be at variance to the remaining clearing principles.

Through assessment it has been determined that the proposed clearing may impact the environmental values of Mundy Regional Park through the direct clearing of native vegetation and possibly the introduction or spread of weeds and dieback. Weed and dieback management measures will help mitigate impacts to this regional park.

The Delegated Officer determined that given Mundy Regional Park has been previously impacted by recreation activities, the relatively small application area, and that the local area retains approximately 60 per cent native vegetation cover, the 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 | Clearing Description | Vegetation Condition | Comment |
|---|---|---|---|
| Beard Vegetation Association 3 is described as medium forest; jarrah-marri (Shepherd et al., 2001).<br><br>Mattiske vegetation complex 'Dwellingup' consists of Open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* on lateritic uplands in subhumid and semiarid zones (Mattiske and Havel, 1998).<br><br>Heddle vegetation | The application proposes to clear 1.53 hectares of native vegetation within Lot 581 on Deposited Plan 71883 (Ray Owen Reserve), Lesmurdie, for the purpose of constructing a carpark. | Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994)<br><br>To<br><br>Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994). | The condition and description of the application was determined by a site inspection undertaken by Department of Environment Regulation (DER) officers (DER, 2017) and a vegetation and fauna survey undertaken by Eco Logical Australia Pty Ltd (Eco Logical Australia Pty Ltd, 2016).<br><br>One vegetation community was described within the application area comprising *Corymbia calophylla* and *Eucalyptus marginata* woodland. The condition of the vegetation across the study area was mostly very good to excellent (Keighery, 1994) condition with some areas in good (Keighery, 1994) condition (Eco Logical Australia Pty Ltd, |

complex 'Dwellingup Complex In Medium\To High Rainfall' consists of open forest of *Eucalyptus marginata* (Jarrah) - *Corymbia calophylla* (Marri) (Heddle et al., 1980).

2016).

The application area consists of *Corymbia calophylla* and *Eucalyptus marginata* woodland with *Banksia sessilis* dominant in the midstorey, some *Allocasuarina* sp. were also identified within the midstorey. The understorey consisted of *Xanthorrhoea* sp. and other native shrubs. Some areas were dominated by weeds (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 is not likely to be at variance to this Principle**

The applicant proposes to clear 1.53 hectares of native vegetation within Lot 581 on Deposited Plan 71883 (Ray Owen Reserve), Lesmurdie, for the purpose of constructing a carpark.

One vegetation community was described within the application area comprising *Corymbia calophylla* and *Eucalyptus marginata* woodland. The condition of the vegetation across the study area was mostly very good to excellent (Keighery, 1994) condition with some areas in good (Keighery, 1994) condition (Eco Logical Australia Pty Ltd, 2016).

According to available databases, 20 rare flora and 69 priority flora have been recorded within the local area (10 kilometre radius). A flora, vegetation and fauna survey undertaken in October 2015 and March 2016 within Lot 581 did not identify any rare or priority flora within the application area. Eighty-seven individuals of a Priority 3 flora species were identified within Lot 581, however no individuals of this species were identified within the application area. The Department of Parks and Wildlife (Parks and Wildlife) has advised that they do not have any records of declared rare flora or priority flora at the site. Given the condition and type of vegetation, it is assumed that there is a low likelihood of rare flora on the site, thus the findings of the flora survey are supported (Parks and Wildlife, 2017).

Nine fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* (WC Act) have been recorded within the local area (Parks and Wildlife, 2007-). As assessed under Principle (b), the application area may provide suitable foraging, potential breeding and potential roosting habitat for the forest red-tailed clack-cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's Cockatoo (*Calyptorhynchus baudinii*) and Carnaby's Cockatoo (*Calyptorhynchus latirostris*). Suitable habitat for the quenda also occurs within the application area. The local area retains approximately 60 per cent native vegetation and the mapped vegetation complexes retain over 67 per cent native vegetation cover. Suitable habitat to support these species in better or similar condition is located within the local area and no loss of significant habitat for these species is expected (Parks and Wildlife, 2017).

The proposed clearing is located adjacent to remnant native vegetation within Mundy Regional Park. The proposed clearing may impact this vegetation through the spread of weeds and dieback. Weed and dieback management practices will help mitigate this risk.

The application area contains vegetation in very good (Keighery, 1994) condition and contains foraging habitat and potential breeding and roosting habitat for the conservation significant black cockatoo species. However, the local area is highly vegetated with 60 per cent native vegetation remaining in the local area and the proposed clearing is not likely to impact upon any rare or priority flora and threatened or priority ecological communities. Therefore, the application area is not likely to comprise a high biological diversity.

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

**Methodology**

References:
Eco Logical Australia Pty Ltd (2016)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2017)

GIS Datasets:
SAC Bio Databases – 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 is not likely to be at variance to this Principle**

Nine fauna species listed as rare or likely to become extinct under the WC Act have been recorded within the local area (Parks and Wildlife, 2007-). Suitable habitat may be located within the application area for Chuditch (*Dasyurus geoffroii*) and Quokka (*Setonix brachyurus*). The application area provides suitable habitat for quenda (*Isoodon obesulus fusciventer*) listed as a priority species under the WC Act and forest red-tailed clack-

cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's Cockatoo (*Calyptorhynchus baudinii*), and Carnaby's Cockatoo (*Calyptorhynchus latirostris*) (collectively known as black cockatoos). Carnaby's cockatoo is listed as endangered and Baudin's cockatoo and forest red-tailed cockatoo are listed as vulnerable under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). These species nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012).

A fauna habitat study identified 51 potential breeding trees with a diameter at breast height (DBH) of more than 50 centimetres within Lot 581, with 14 containing hollows (Eco Logical Australia Pty Ltd, 2016). Within the application area, 16 mature or dead potential breeding jarrah or marri trees were identified, with seven trees containing hollows. No black cockatoo breeding activities were identified within the application area. It is also noted that several potential breeding hollows were occupied by feral honey bee hives (Eco Logical Australia Pty Ltd, 2016) The identified potential breeding trees may also provide suitable roosting habitat for the black cockatoos. However, no known black cockatoo roost sites are known to occur with Lot 581(Eco Logical Australia Pty Ltd, 2016).

Black cockatoos have a preference for foraging habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as *Banksia* sp., *Hakea* sp. and *Grevillea* sp. (Commonwealth of Australia, 2012).

A fauna habitat study within Lot 581 identified that the application area provides high value foraging habitat for black cockatoos (Eco Logical Australia Pty Ltd, 2016). Foraging species included *Banksia sessilis*, jarrah and marri which were recorded within the application area. Forest red-tailed black cockatoos were observed foraging on marri trees within the south eastern section of Lot 581, outside the application area. Evidence of black cockatoo foraging was identified within the application area (Eco Logical Australia Pty Ltd, 2016).

Parks and Wildlife advised that the application area falls within the buffer of a known breeding, roosting and feeding habitat area for black cockatoos. The foraging habitat in this portion of Ray Owen Reserve is considered to be of low value, with no records of breeding or roosting. Areas of good quality foraging habitat are located nearby to support these species (Parks and Wildlife, 2017).

Parks and Wildlife advised that Ray Owen Reserve is known to provide habitat for quenda (Parks and Wildlife, 2017). A fauna habitat survey undertaken within Lot 581 identified a quenda digging within the study area, outside of the application area. Quality habitat is also found close by. Should the site be cleared of vegetation it is encouraged that this be done in a way that is sensitive to the needs of this species (Parks and Wildlife, 2017).

The chuditch currently inhabits most kinds of wooded habitat within its current range including eucalypt forest. In jarrah forest, chuditch populations occur in both moist, densely vegetated, steeply sloping forest and drier, open, gently sloping forest (Department of the Environment and Energy, 2016). A site inspection undertaken by DER officers did not identify suitable habitat for this species (DER, 2017).

One record of the Numbat and Quokka has been recorded within the local area. Noting the limited historical records found within the local area, the vegetation is unlikely to provide significant habitat for these species.

The application area may provide suitable foraging, potential breeding and potential roosting habitat for the black cockatoo species. Suitable habitat for the quenda also occurs within the application area. The local area retains approximately 60 per cent native vegetation and the mapped vegetation complexes retain over 67 per cent native vegetation cover. Suitable habitat in better or similar condition is located elsewhere within the local area and no loss of significant habitat for these species is expected.

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

**Methodology**

References:
Commonwealth (2012)
Department of the Environment and Energy (2016)
DER (2017)
Eco Logical Australia Pty Ltd (2016)
Parks and Wildlife (2007-)
Parks and Wildlife (2017)

GIS Datasets:
SAC Bio Databases – 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**

According to available databases, 20 rare flora species have been recorded within the local area (10 kilometre radius), the closest being located approximately 900 metres from the application area. This species is found on sand and sandy clay soils, often over laterite, on flat or gently sloping sites in the foothills of the Darling Scarp. It usually inhabits *Banksia* and eucalypt woodlands over heath, often with *Isopogon drummondii*, *Hakea conchifolia* and many *Lambertia multiflora* (Brown et al., 1998).

A flora, vegetation and fauna survey undertaken in October 2015 and March 2016 within Lot 581 did not identify any rare flora within the application area (Eco Logical Australia Pty Ltd, 2016).

Parks and Wildlife has advised that they do not have any records of declared rare flora or priority flora at the site. Given the condition and type of vegetation, it is assumed that there is a low likelihood of rare flora on the site, thus the findings of the flora survey are supported (Parks and Wildlife, 2017).

Given the above, the application area is not likely 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:
Brown et al. (1998)
Eco Logical Australia Pty Ltd (2016)
Parks and Wildlife (2017)

GIS Databases:
SAC Bio Databases – 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, there are no threatened ecological communities (TEC) recorded within the local area.

A flora, vegetation and fauna survey undertaken in October 2015 and March 2016 within Lot 581 did not identify any TECs within the application area (Eco Logical Australia Pty Ltd, 2016).

Parks and Wildlife has advised that the vegetation type and aerial photographs also do not indicate any likelihood of a TEC occurring at this site, therefore the finding of the vegetation survey area supported (Parks and Wildlife, 2017).

The application area is not likely to comprise or be necessary for the maintenance of a TEC. Therefore, the proposed clearing is not likely to be at variance to this Principle.

**Methodology**

Reference:
Eco Logical Australia Pty Ltd (2016)
Parks and Wildlife (2017)

GIS Databases:
SAC Bio Databases – 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 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 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The local area (10 kilometre radius) retains approximately 60 per cent native vegetation. The application area is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and within the Shire of Kalamunda, which retain approximately 54 per cent and 72 per cent respectively of their pre-European vegetation extents (Government of Western Australia, 2016).

The application area is mapped as Beard vegetation association 3 and Mattiske complexes 'Dwellingup' and 'Dwellingup Complex In Medium To High Rainfall' of which retain 67, 83 and 82 per cent of their pre-European vegetation extents within the Jarrah Forest IBRA bioregion respectively (Government of Western Australia, 2016; Parks and Wildlife, 2015). Given the vegetation representations outlined above, the application is not likely to be considered to be located within an extensively cleared area.

While the proposed clearing occurs within 'Mundy Regional Park', the application area is not likely to comprise a high biological diversity, priority or rare flora, threatened and priority ecological communities or contain significant habitat for fauna. Therefore the proposed clearing is not likely to be considered a significant remnant.

Given the above, 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** | | | | |
| Jarrah Forest | 4 506 660 | 2 416 018 | 54 | 70 |
| **Local government authority** | | | | |
| Shire of Kalamunda | 32 395 | 23 374 | 72 | 86 |
| **Beard Vegetation Association in Bioregion*** | | | | |
| 3 | 2 390 591 | 1 607 400 | 67 | 81 |
| **Mattiske Complex Associations in Bioregion**** | | | | |
| Dwellingup | 86 128 | 71 242 | 83 | 83 |
| **Heddle Complex Associations in Bioregion**** | | | | |
| Dwellingup Complex In Medium To High Rainfall | 83 659 | 68 868 | 82 | 85 |

**Methodology**

References:
Commonwealth of Australia (2001)
*Government of Western Australia (2016)
** Parks and Wildlife (2015)

GIS Databases:
Mattiske Vegetation Complexes
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 likely to be at variance to this Principle**

No watercourses or wetlands are located within the application area. The closest watercourse is located approximately 1.3 kilometres from the application area. A resource enhancement wetland is located approximately 600 metres from the application area.

A site inspection undertaken within the application area did not identify any riparian vegetation (DER, 2017).

Given the above, the application area is not considered to be growing in association with a watercourse or wetland. The proposed clearing is not likely to be at variance to this Principle.

**Methodology**

GIS Databases:
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 is not likely to be at variance to this Principle**

The application area is mapped as soil type "Mw31', which is described as deeply incised, steep scarp and valley side slopes of the Darling scarp and its more deeply incised tributary valleys: chief soils of the steep scarp and valley side slopes, on which massive rock outcrops are a feature, seem to be acid red earths on the colluvial slope deposits (Northcote et al., 1960-68).

Given the mapped soil type and that the end land use is for the purpose of a car park the application area is not likely to be prone to wind erosion. No watercourses are located within the vicinity of the application area and the topography is relatively flat, therefore the proposed clearing is not likely to cause appreciable land degradation in the form of water erosion.

As assessed under Principle (i), the proposed clearing is not likely to cause appreciable land degradation in form of salinity.

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:
Groundwater Salinity Statewide
Soils, statewide
Topographic Countours, 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 may be at varinace to this Principle**

The application area occurs within Mundy Regional Park. Mundy Regional park is approximately 16.5 hectares in size. The regional park has been previously impacted by recreational facilities including buildings, ovals and carparks with approximately 6.2 hectares of native vegetation remaining within the regional park. The proposed clearing is likely to directly impact the Mundy Regional Park through the direct removal of native vegetation. Given Mundy Regional Park has been highly impacted by previous recreation activities the proposed clearing is not likely to have a significant impact on this conservation area. Parks and Wildlife also advised that the Department has no specific objections to this application (Parks and Wildlife, 2017).

The proposed clearing may indirectly impact this conservation area through the spread of weeds and dieback. Weed and dieback management practices will help mitigate this risk.

No significant ecological linkages will be disrupted by the proposed clearing as the local area is extensively vegetated (as assessed under Principle (e)).

As the proposed clearing may impact on the environmental values of Mundy Regional Park, the proposed clearing may be at variance to this Principle.

**Methodology**

References:
Parks and Wildlife (2017)

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 likely to be at variance to this Principle**

No watercourses or wetlands are located within the application area. The closest watercourse is located approximately 1.3 kilometres from the application area. A resource enhancement wetland is located approximately 600 metres from the application area.

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

Ground water salinity is mapped between 500 – 1000 total dissolved solids milligrams per litres (measured as Total Dissolved Solids). This level of groundwater salinity is considered to be marginal. Given the low salinity levels and that the local area retains approximately 60 per cent native vegetation, the proposed clearing of 1.53 hectares of native vegetation is not likely to cause deterioration in the quality of underground water.

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

**Methodology**

GIS Databases:
Parks and Wildlife, Tenure

**(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**

As discussed under Principle (g), the application area is mapped as soil type 'Mw31'. Given the soil type present and that no watercourses or wetlands occur within the application area, the proposed clearing of 1.53 hectares is not likely to cause or exacerbate the incidence or intensity of flooding.

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

**Methodology**

GIS Databases:
Soils, statewide

## Planning instruments and other relevant matters.

**Comments**

The application area occurs within Mundy Regional Park. Parks and Wildlife advised that although they have no specific objection to this application it should be noted that Parks and Wildlife does not typically support the clearing of native vegetation within regional parks, given they are areas that are reserved for parks and recreation (Parks and Wildlife, 2017).

No Aboriginal Sites of Significance are located within the application area.

The application was advertised in *The West Australian* newspaper and on the Department of Environment Regulation's website on 6 February 2017. No submissions have been received in relation to this application.

**Methodology**

References:
Parks and Wildlife (2017)

GIS Databases:
Aboriginal Sites of Significance
CALM Regional Parks

## 4. References


Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

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

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Eco Logical Australia Pty Ltd (2016) Ray Owen Reserve flora, vegetation and fauna survey. Prepared for the Shire of Kalamunda (DER Ref: A1351096-97 and A1351099)

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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.

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