GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8060/1
Permit Holder:	Shire of Mount Marshall
Duration of Permit:	10 January 2019 – 10 January 2024

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
Widening of an existing airstrip

2. Land on which clearing is to be done
Beacon-Bencubbin Road Reserve (PIN 11679069)
Faulkner Road Reserve (PIN: 11679068)
Lot 4230 on Plan 184786 (Crown Reserve 37600)
Lot 4231 on Plan 184786 (Crown Reserve 21070), Beacon.

3. Area of Clearing
The Permit Holder shall not clear more than 4.55 hectares of native vegetation within the area hatched yellow on attached Plan 8060/1.

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:
(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. 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*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(b) ensure that no known *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.

8. Records to be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this Permit:

(a) 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;
(b) the date that the area was cleared;
(c) the size of the area cleared (in hectares);
(d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 6 of this Permit; and
(e) actions taken to minimise the risk of the introduction and spread of *weeds* in accordance with condition 7 of this Permit.

9. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 8 of this Permit, when requested by the *CEO*.

DEFINITIONS

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

CEO: means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

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 Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned.

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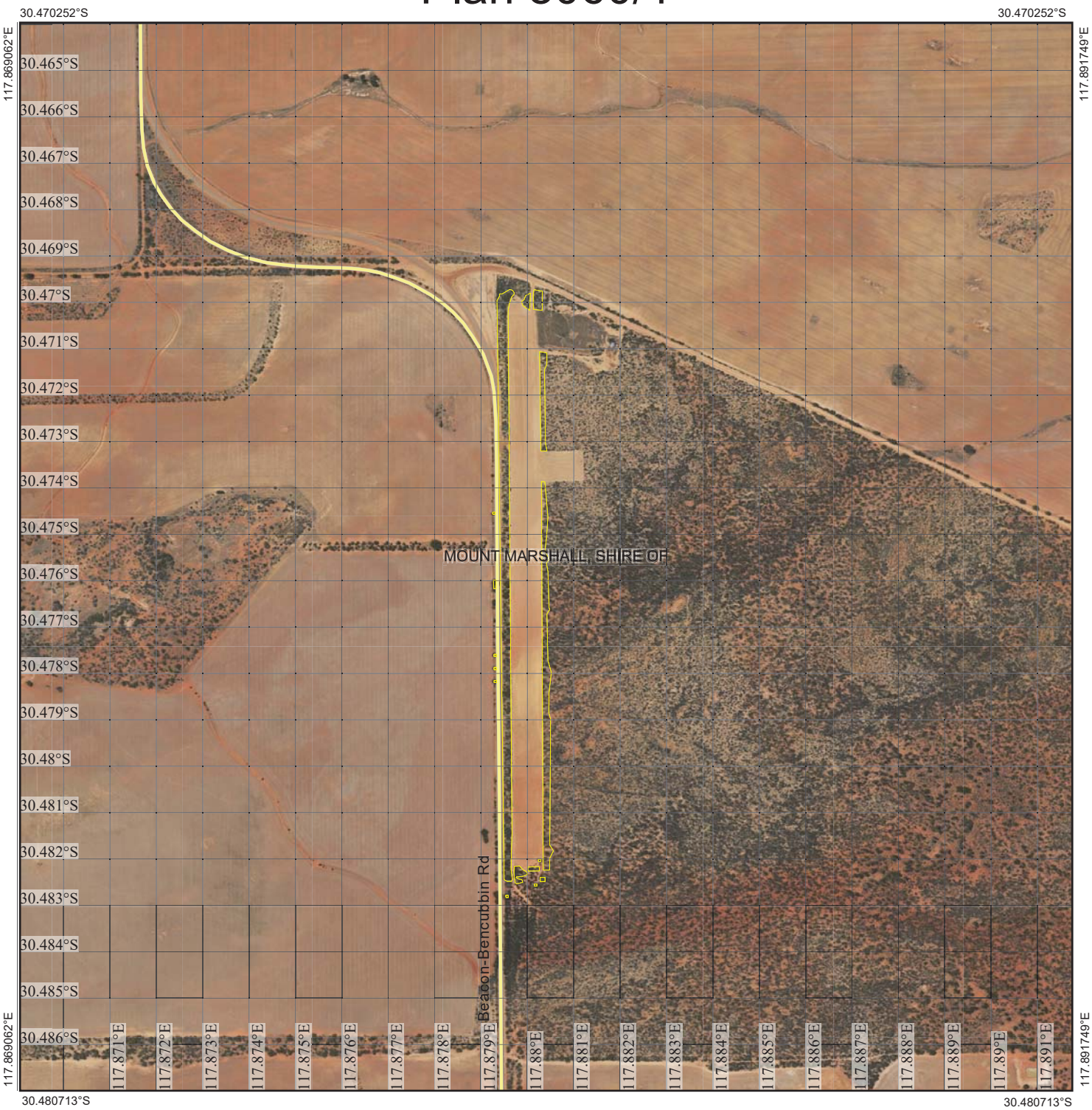
Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

11 December 2018

Plan 8060/1



Legend

- Roads - Main Road
- Imagery
- Clearing Instruments Activities
- Transport/Railway Stations
- Local Government Authority

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(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

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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.: CPS 8060/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Mount Marshall

1.3. Property details

Property: Lot 4230 on Plan 184786
Lot 4231 on Plan 184786
Beacon-Bencubbin Road Reserve (PIN 11679069)
Faulkner Road Reserve (PIN 11679068)
Local Government Authority: SHIRE OF MOUNT MARSHALL
Localities: BEACON

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
4.55 hectares		Mechanical Removal	Airstrip upgrades

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 11 December 2018
Reasons for Decision: The clearing permit application was received on 20 December 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*. It has been concluded that the proposed clearing not likely to be at variance to any of the clearing principles.

The Delegated Officer took into account the applicant's actions to avoid and minimise impacts. The Delegated Officer determined that the proposed clearing may increase the risk of introduction or spread of weeds into adjacent vegetation, including adjacent conservation areas. In granting a clearing permit subject to conditions, the Delegated Officer determined that the proposed clearing is not likely to have any unacceptable environmental impacts.

2. Site Information

Clearing Description: The application is for the proposed clearing of 4.55 hectares of native vegetation for the purpose of widening of an existing airstrip.

Vegetation Description: The vegetation within the application area is mapped as the following Beard vegetation association:

- Jibberding_141: Medium woodland; York gum, salmon gum & gimlet (Shepherd et al., 2001).

During a site inspection by DWER Environmental Officers on 24 July 2018 (DWER, 2018), vegetation within the application area was observed to be Acacia shrubland with scattered Eucalyptus species.

Vegetation Condition: The vegetation within the application area is considered to comprise the following condition ratings:

- Excellent: Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species; to
- Degraded: Basic vegetation structure severely impacted by disturbance (Keighery, 1994).

Soils/Landform Type: The application area is mapped as the following subsystems (Schoknecht et al, 2004):

- Kwolyin, Kwelkan Subsystem: Undulating granitic low hills, in the central Zone of Ancient Drainage, with bare rock, deep sandy duplex (grey and red), shallow sand (red and yellow/brown) and red loamy duplex. York gum-jam woodland.
- Kwolyin, Nembudding Subsystem (10% of application area – northwestern portion): Rises and low hills, in the northern Zone of Ancient Drainage, with alkaline red loamy duplex (mostly shallow) and yellow sandy earth. Mallee scrub and woodland.

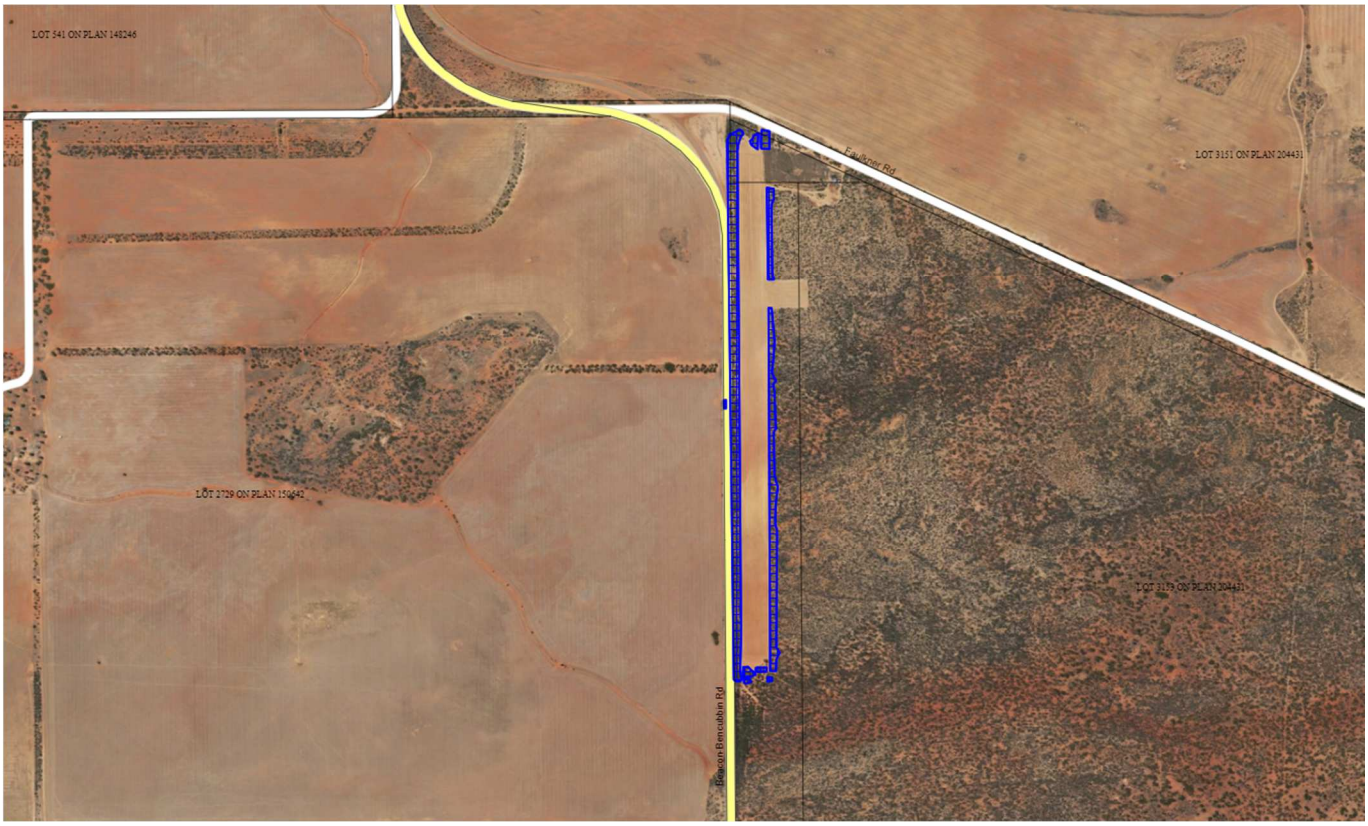
Soils within the application area are mapped as (Northcote et al., 1960-68):

- Gently undulating to rolling terrain with some ridges and uneven slopes and with the variable presence of lateritic mesas and buttes; some granitic rock outcrops: chief soils are hard alkaline red soils with variable areas of (Dy).

A flora and vegetation survey undertaken within the application area undertaken in October 2018 (Santaleuca 2018) described the soils as granitic sandy loams.

Comments: The local area is defined as 20 kilometre radius measured from the perimeter of the application area. Vegetation condition was determined by the flora and vegetation survey (Santaleuca, 2018). According to available aerial imagery, the local area retains approximately 18 per cent pre-European native vegetation cover.

Figure 1: Application area:



3. Minimisation and mitigation measures

The applicant has selected the option that will result in the least amount of native vegetation being cleared to provide the required clearance for the airstrip.

4. Assessment of application against clearing principles

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

Proposed clearing not likely to be at variance to this Principle

As outlined in Section 2, the application area is comprised of open mallee/*Acacia acuminata* woodland in 'Excellent' to 'Degraded' condition.

As assessed under principle (b), the application area may contain suitable habitat for malleefowl (*Leipoa ocellata*) but is unlikely to contain significant habitat for fauna.

Five rare flora species and nine priority species have been recorded in the local area. No conservation significant flora were recorded during the flora and vegetation survey undertaken (Santaleuca, 2018). Rare flora are discussed under principle (c).

Part of the application area is mapped as the priority 3 ecological community 'Eucalyptus woodlands of the Western Australian Wheatbelt' (listed as critically endangered under the EPBC Act), however, the application area is not likely to be representative of this ecological community. TECs are discussed further under principle (d).

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

According to available databases, five fauna species of conservation significance have been recorded within the local area (DBCA, 2007-):

- Chuditch (*Dasyurus geoffroii*; listed as rare or likely to become extinct under the WC Act and as endangered under the EPBC Act);
- Malleefowl (*Leipoa ocellata*; listed as rare or likely to become extinct under the WC Act and as vulnerable under the EPBC Act);
- Bilby (*Macrotis lagotis*; listed as rare or likely to become extinct under the WC Act and as vulnerable under the EPBC Act);

- Shield-backed trapdoor spider (*Idiosoma nigrum*; listed as rare or likely to become extinct under the WC Act);
- Tree-stem trapdoor spider (*Aganippe castellum*; listed as Priority 4 under the WC Act).

Malleefowl are found in arid and semi-arid areas dominated by mallee eucalypts on sandy soils and are most commonly seen in reserves and private property within and around the Wheatbelt region. A sandy substrate and abundance of leaf litter are required for successful construction of nest mounds (Parks and Wildlife, 2016). The application area and the adjacent nature reserve may contain suitable habitat for this species and there are previous records of malleefowl occurring in the nature reserve and the surrounding area. Due to the location adjacent to the airstrip, the application area is unlikely to provide significant habitat for this species. No malleefowl mounds were observed during a site inspection undertaken by DWER Environmental Officers.

The bilby previously existed across most of the arid and semi-arid areas of mainland Australia but is now largely restricted to the Gibson, Little Sandy and Great Sandy Deserts, and parts of the Pilbara, Dampierland, Central Kimberley and Ord-Victoria Plains bioregions (DBCA 2017a). The previous occurrence in the local area is a historical record from 1959.

The chuditch was once relatively abundant across most of the country are now largely restricted to the south-west of Western Australia, with small numbers in the Midwest, Wheatbelt and South Coast Regions (DBCA, 2017b) and the application area is not likely to comprise significant habitat for this species.

The shield-backed trapdoor spider is primarily terrestrial burrowing spiders which occasionally make tubular silk nests on tree trunks, and typically inhabits clay soils of *Eucalyptus* spp. woodlands and *Acacia* spp. vegetation, and relies heavily on leaf-litter and twigs to build its burrow (DSEWPaC, 2013). Noting the soil type within the application area, it is unlikely that this species occurs within the application area.

The tree-stem trapdoor spider prefers habitat in flood-prone depressions and flats which support myrtaceous shrub communities, and in particular those areas supporting broombush (*Melaleuca uncinata*) and sheoaks (such as *Allocasuarina acutivalvis*) in sandy loam soils. (DEC, 2008) Noting the vegetation type within the application area, it is unlikely that this species occurs within the application area.

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

(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 databases, five rare flora species and nine priority species have been recorded in the local area.

There are no records of conservation significant flora within the application area or in the adjacent nature reserve. The nearest recorded occurrence of conservation significant flora is 3000 metres from the application area. No conservation significant flora species were recorded during the flora and vegetation survey (Santaleuca, 2018).

Given the above, the application area 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 databases, several occurrences of the priority 3 ecological community 'Eucalyptus woodlands of the Western Australian Wheatbelt' (listed as critically endangered under the EPBC Act) have been recorded within the local area. Part of the application area is mapped as this PEC.

The Approved Conservation Advice for the Eucalypt Woodlands of the Western Australian Wheatbelt specifies a number of criteria for vegetation to be considered representative of this community). Woodlands dominated by mallee forms or vegetation with a very sparse Eucalypt tree canopy are not part of the ecological community (TSSC, 2015). As observed during a site inspection by DWER Environmental Officers, the majority of the application area was dominated by *Acacia acuminata* and *Acacia acuaria.* Part of the application area on the west side (approximately 100 metres by 14 metres) of the existing airstrip consists of Eucalypt species however this is too small to be considered part of the TEC (Santaleuca, 2018).

Given the above, the application area is not likely to comprise the whole or a part of a TEC and is therefore 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 per cent 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 mapped Beard vegetation association within the bioregion retains approximately 30 per cent of the pre-European extent.

Given the above, the application area is not likely to be a significant as a remnant of native vegetation in an area that has been extensively cleared. The proposed clearing is not likely to be at variance to this principle.

Table 1: Vegetation Statistics (Government of Western Australia, 2018)

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Current Extent in DBCA Managed Lands (ha)	(%)
IBRA Bioregion					
Avon Wheatbelt	9,517,109.95	1,761,226.55	18.51	174,960.72	1.84
Local Government Authority*					
Shire of Mount Marshall	1,018,436.00	639,690.06	62.81	300,548.90	46.98
Beard Vegetation Association in Bioregion					
141	250,614.98	77,320.43	30.85	1,134.13	1.47

(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

According to available databases, there are no mapped wetlands or watercourses within the application area. There was no evidence of watercourses or riparian vegetation during a site inspection undertaken by DWER Environmental Officers.

Noting 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

As outlined in Section 2, the soils within the application area are mapped as Oc35: Gently undulating to rolling terrain with some ridges and uneven slopes and with the variable presence of lateritic mesas and buttes; some granitic rock outcrops: chief soils are hard alkaline red soils with variable areas of (Dy) soils. (Northcote et al., 1960-68).

The majority of the application area is within two soil sub-systems:

- Kwolyin, Kwelkan Subsystem (90% of the application area): Undulating granitic low hills, in the central Zone of Ancient Drainage, with bare rock, deep sandy duplex (grey and red), shallow sand (red and yellow/brown) and red loamy duplex. York gum-jam woodland.
- Kwolyin, Nembudding Subsystem (10% of application area – northern portion): Rises and low hills, in the northern Zone of Ancient Drainage, with alkaline red loamy duplex (mostly shallow) and yellow sandy earth. Mallee scrub and woodland.

According to available databases, the application area has an average annual rainfall of 400 millimetres, and groundwater salinity (total disolved solids) mapped as 14,000 to 35,000 miligrams per litre.

As indicated in Table 2, land degradation risk mapping indicates that the proposed clearing generally has a low likelihood of causing appreciable land degradation in the forms of water erosion, waterlogging, phosphorus export and salinity. The soils within the application area generally have a moderate risk of wind erosion and sub-surface acidification, however noting the linear nature of the application area, and the extent of adjacent vegetation, the proposed clearing is not likely to cause appreciable wind erosion or sub-surface acidification.

Given the above, the proposed clearing is not likely to cause appreciable land degredation. The proposed clearing is not likely to be at variance to this principle.

Table 2: Land degradation risk categories (DPIRD, 2018)

Risk categories	Kwolyin Kwelkan subsystem (90% of the application area)	Kwolyin Nembudding subsystem (10% of the application area)
Wind erosion	10-30% of the map unit has a high to extreme wind erosion risk	10-30% of the map unit has a high to extreme wind erosion risk
Water erosion	<3% of the map unit has a high to extreme water erosion risk	3-10% of the map unit has a high to extreme water erosion risk
Salinity	3-10% of the map unit has a moderate to high salinity risk or is presently saline	3-10% of the map unit has a moderate to high salinity risk or is presently saline
Subsurface Acidification	10-30% of the map unit has a high subsurface acidification risk	10-30% of the map unit has a high subsurface acidification risk
Flood risk	<3% of the map unit has a moderate to high flood risk	<3% of the map unit has a moderate to high flood risk
Water logging	<3% of the map unit has a moderate to very high waterlogging risk	3-10% of the map unit has a moderate to very high waterlogging risk

Phosphorus export risk	<3 per cent of the map unit has a high to extreme phosphorus loss risk	3-10 per cent of the map unit has a high to extreme phosphorus loss 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.

Proposed clearing not likely to be at variance to this Principle

According to available databases, the nearest conservation areas is an unnamed nature reserve adjacent to the application area. The proposed clearing may introduce weeds into adjacent vegetation, however, given the relatively narrow strip of the application area, the proposed clearing is unlikely to have any significant impact on the nature reserve. Potential impacts to the adjacent nature reserve may be minimised by the implementation of weed management practices.

Other conservation areas in the local area include North Beacon Nature Reserve, six kilometres from the application area and Marindo Nature Reserve 11 kilometres from the application area. Noting the separation distances between these conservation areas and the application area and the extent of the proposed clearing, the proposed clearing is not likely to have a direct impact on the environmental values of these conservation areas.

Given 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

As assessed under principle (f), there are no watercourses or mapped wetlands within the application area. As assessed under principle (g), groundwater salinity (total disolved solids) is mapped as 14,000-35,000 miligrams per litre and the salinity risk is low.

Noting the above, the extent of the adjacent vegetation and the size of the application area, the proposed clearing is not likely to cause deterioration in the quality of surface or underground water. The proposed clearing 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

As assessed under principle (f), there are no watercourses and mapped wetlands within the application area. As assessed under principle (g), the application area has an average rainfall is 600-700 millimetres per year, and the proposed clearing has a low likelihood of causing flooding. The sandy soils, elevation and drainage pathways indicate that major rainfall will flow to local creeks, or alternatively infiltrate to groundwater.

Noting the above, the extent of the proposed clearing and the size of the project footprint, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding. The proposed clearing is not likely to be at variance to this principle.

Planning instruments and other relevant matters.

The original application for 3.2 hectares was accepted by DWER on 15 June 2018 and advertised for a 21 day period. No public submissions were received. On 4 July 2018, the application area was revised, increasing the application area to 4.55 hectares and removing a portion in the adjacent nature reserve. The revised application area was re-advertised on the 13 July for a 14 day submission period. No public submissions were received.

No registered Aboriginal sites of significance have been 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 April 2018.

Department of Biodiversity, Conservation and Attractions (DBCA) (2017a). Fauna Profile - Bilby *Macrotis lagotis*. Available from http://www.dbca.wa.gov.au/

Department of Biodiversity, Conservation and Attractions (DBCA) (2017b) Fauna Profile - Chuditch *Dasyurus geoffroii*. Available from:https://www.dpaw.wa.gov.au/images/documents/plants-animals/animals/animal_profiles/chuditch_fauna_profile.pdf.

Department of Environment and Conservation (DEC) (2008) Tree-stem trapdoor spider (*Aganippe castellum*) Conservation Plan 2008-2013 Prepared on behalf of the Avon Catchment Council.

Department of Parks and Wildlife (Parks and Wildlife) (2016) Fauna Profiles - Malleefowl *Leipoa ocellata*. Department of Parks and Wildlife, Perth, WA. Available from: https://www.dpaw.wa.gov.au/images/documents/plants-animals/animals/animal_profiles/Malleefowl_profile.pdf

Department of Primary Industries and Regional Development (2018). NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed 24 April 2018).

Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) (2013). Approved Conservation Advice for *Idiosoma nigrum* (shield-back trapdoor spider). Canberra: Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/66798-conservation-advice.pdf.

Department of Water and Environmental Regulation (2018). Site Inspection Report CPS 8060/1 Shire of Mount Marshall.

Government of Western Australia. (2018). 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions. Available from: https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics.

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.

Santaleuca Consulting (2018) Flora Survey Beacon Airport. Prepared for the Shire of Mount Marshall

Schoknecht, N., Tille, P. and Purdie, B. (2004) Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs' Resource Management Technical Report No. 280. Department of Agriculture.

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.

Threatened Species Scientific Committee (2015) Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Approved Conservation Advice (including listing advice) for the Eucalypt Woodlands of the Western Australian Wheatbelt.

GIS Databases:

- Aboriginal Sites of Significance
- DAFWA Heritage
- DBCA Estate
- DEC Covenant
- Groundwater salinity
- Hydrography, linear
- National Trust WA Covenant
- Remnant vegetation
- SAC bio datasets (accessed April 2018)
- Soils, Statewide
- Topographic contours
- Wetlands