



Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.: 6057/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: R. F. Dunnet Pty Ltd

1.3. Property details

Property: LOT 1 ON DIAGRAM 48271 (SCOTT RIVER EAST 6275)
Local Government Area: Shire of Nannup
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
36		Mechanical Removal	Grazing & Pasture

1.5. Decision on application

Decision on Permit Application: Refuse
Decision Date: 20 November 2014

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
The vegetation under application is mapped as: Beard vegetation association 27 is described as low woodland, Melaleuca sp. (Shepherd et al. 2001). Mattiske vegetation complex Sd (Mattiske and Havel, 1998), described as low woodland, paperbark (Melaleuca sp.) (Mattiske and Havel, 1998).	To clear 36 hectares of native vegetation within Lot 1 on Diagram 48271, Scott River, for agriculture.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994).	The condition of the vegetation under application was ascertained through a Department of Environment Regulation site inspection undertaken in September 2013 (DER, 2013). Given the extent of revegetation since first cleared and adequate time in-between disturbances, the application area was likely to be in a good (Keighery, 1994) condition prior to clearing.

3. Assessment of application against clearing principles

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

Comments **Proposal is at variance to this Principle**
The application is to clear up to 36 hectares of native vegetation within Lot 1 on Diagram 48271, Scott River, for agriculture. The application area was first cleared in 2002. While the remainder of the property was converted to agriculture, the application area was left to regenerate. Landsat imagery identified that the application area was again cleared in 2012 (DER, 2013; R Dunnet, 2014). Given the extent of revegetation since first cleared and adequate time in-between disturbances, the application area was likely to be in a good (Keighery, 1994) condition prior to clearing.

The application area is mapped as Mattiske vegetation complex Sd which is described as an open forest and low woodland of Eucalyptus marginata subsp. marginata - Corymbia calophylla - Agonis flexuosa with some Eucalyptus patens and Banksia spp. on low dunes to low woodland of Melaleuca preissiana-Banksia littoralis on inter-dune depressions (Mattiske and Havel, 1998). A Department of Environment Regulation site inspection undertaken 18 September 2013 recorded Melaleuca preissiana, Xanthorrhoea preissii, Drosera menziesii, Burchardia multiflora and stunted Eucalyptus marginata with a sedgeland of Restionaceae - Cyperaceae spp. Sumpland areas contained standing pools of water and wetland sedges whilst the palusplain areas were waterlogged (DER, 2013).

The application area falls on the Scott Coastal Plain which was identified as an area holding national estate significance due to its high species richness, unusually high diversity of vegetation complexes, a concentration of rare restricted and threatened communities, its narrowly endemic plants, relict plants, plants with disjunct populations and wetlands of national importance (Government of Western Australia, 2001). A significant amount of native vegetation has been cleared on the Scott Coastal Plain including the majority of the wetland vegetation types which have been converted to agricultural purposes (Government of Western Australia, 2001).

The Environmental Protection Authority (2000) stated that given the high level of species richness, rarity and endemism contributing to the high level of significance of vegetation, the water quality of the Hardy Inlet and the link between clearing and nutrients entering the waterway, there should be no further reduction in the extent of native vegetation within the catchment of the Scott River.

The South West Regional Ecological Linkage Report (Shaun Molloy et al, 2009) classifies the area under application as 3b as it is connected to ecological linkages with less than a 1000 metre gap between remnants of vegetation. Although a distance of 1000 metres appears to be a threshold level, above which the value of a remnant as an ecological linkage is greatly reduced (Shaun Molloy et al, 2009), revegetation and management activities have a moderate to good potential for ameliorating impacts to an ecological linkage with a gap of less than 1000 metres (Shaun Molloy et al, 2009). The application area may therefore, facilitate the movement of large fauna species through a highly cleared landscape.

The application area is mapped as Matiske vegetation complex Sd which is known to support occurrences of the 'Scott River Ironstone Association' threatened ecological community (TEC) (Commonwealth of Australia, 2001a). The Department of Parks and Wildlife (2014) advise that the area under application may have contained TEC vegetation and historical aerial imagery shows a patch of reddish soil within the application area consistent with ironstone geology. Given this the area under application may support TEC vegetation.

Given the mapped and observed vegetation type, the application area may provide habitat for the five rare flora species recorded from within the local area (10 kilometre radius). This includes a species that was previously recorded within the property for which the applicant was granted a licence to take in 1988 under the Wildlife Conservation Act 1950. Thirty eight priority flora species have been recorded within the local area. This is consistent with the location of the application area within the environmentally significant Scott Coastal Plain. The Department of Parks and Wildlife (2014) advise that priority flora were highly likely to be present within the application area pre clearing, listing 11 species with the highest probability. Despite the current condition of the vegetation, the application area forms potential habitat for numerous priority and rare flora species.

Five terrestrial and three avian fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within 20 kilometres of the application area. As the mapped vegetation type is consistent with the habitat preferences for these species, the application area may form habitat for these.

Given the above, the application is at variance to this clearing Principle.

Methodology

References:

Commonwealth of Australia (2001a)
Department of Parks and Wildlife (2014)
DER (2013)
Environmental Protection Authority (2000)
Government of Western Australia (2001)
Keighery (1994)
Matiske and Havel (1998)
R Dunnet (2014)
Shaun Molloy et al (2009)

GIS databases:

- Hydrography, linear
- Pre-European vegetation
- SAC Biodatasets (Accessed July 2013)
- SWERL

(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

Proposal is at variance to this Principle

The application area is mapped as Matiske vegetation complex Sd which is described as an open forest and low woodland of *Eucalyptus marginata* subsp. *marginata* - *Corymbia calophylla* - *Agonis flexuosa* with some *Eucalyptus patens* and *Banksia* spp. on low dunes to low woodland of *Melaleuca preissiana*-*Banksia littoralis* on inter-dune depressions (Matiske and Havel, 1998). A Department of Environment Regulation site inspection undertaken 18 September 2013 recorded *Melaleuca preissiana*, *Xanthorrhoea preissii*, *Drosera menziesii*, *Burchardia multiflora* and stunted *Eucalyptus marginata* with a sedgeland of *Restionaceae* - *Cyperaceae* spp. Mapped sumpland areas contained standing pools of water and wetland sedges whilst the palusplain areas were water logged (DER, 2013).

The South West Regional Ecological Linkage Report (Shaun Molloy et al, 2009) classifies the area under application as 3b as it is connected to ecological linkages with less than a 1000 metre gap between remnants of vegetation. Although a distance of 1000 metres appears to be a threshold level, above which the value of a remnant as an ecological linkage is greatly reduced (Shaun Molloy et al, 2009), revegetation and management activities have a moderate to good potential for ameliorating impacts to an ecological linkage with a gap of less than 1000 metres (Shaun Molloy et al, 2009). The application area may therefore, facilitate the movement of large fauna through a highly cleared landscape.

Five terrestrial and three avian fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 (WC Act) have been recorded within the 20 kilometres of the application area. These include *Bettongia penicillata* subsp. *ogilbyi* (woylie), *Calyptorhynchus banksii* subsp. *naso* (Forest red-tailed black-cockatoo), *Calyptorhynchus baudinii* (Baudin's cockatoo), *Dasyurus geoffroii* (chuditch), *Setonix brachyurus* (quokka), *Leipoa ocellata* (malleefowl) and *Pseudocheirus occidentalis* (Western ringtail possum) (DEC, 2007-).

Forest red-tailed and Baudin's cockatoo's are listed as rare or likely to become extinct under the WC Act. Black cockatoos nest in large hollows of eucalyptus trees and forage on the seeds, nuts and flowers of a large variety of plants including *Eucalyptus* and *Banksia* species (Shah, 2006). As the mapped vegetation type contains foraging species, the application area may contain habitat significant for black cockatoos.

The Western ringtail possum is listed as rare or likely to become extinct under the WC Act and vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). This species is restricted to the South West of Western Australia with *Agonis flexuosa* forming a core habitat requirement (DotE, 2013). As the application area falls within the restricted distribution of this species and *A. flexuosa* is known to occur within the mapped vegetation type, the application area may contain habitat for the species.

Chuditch and quokka's are listed as rare or likely to become extinct under the WC Act and vulnerable under the EPBC Act. The woylie is listed as rare or likely to become extinct under the WC Act and endangered under the EPBC Act. As all three species have been recorded within the local area, the application area is consistent with their habitat requirements and they are highly mobile, the application area may form habitat for these species (DEC, 2012; DEC, 2013; Yeatman and Groom, 2012).

Malleefowl and brush tailed phascogale are listed as rare or likely to become extinct under the WC Act, vulnerable under the EPBC Act and have been recorded within the local area. As they generally utilise dry sclerophyll forests (DotE, 2013a), the application area is unlikely to form habitat for these species.

Galaxiella nigrostriata (black-stripe minnow) is listed as Priority 3 by Parks and Wildlife and has been recorded within the local area. This species inhabits ephemeral watercourses between Northcliffe and Esperance, aestivating in summer. Given its habitat preferences the application area may form habitat for this species (Galeotti et al, 2014).

Isoodon obesulus fusciventer (quenda) is listed as priority 5 by Parks and Wildlife and has been recorded from the local area. This species prefers dense often swampy vegetation, feeding within adjacent forest and woodland. Given this the application area is likely to form habitat for the species (DEC, 2012a). *Elapognathus minor* (short-nosed snake) is listed as Priority 2 by Parks and Wildlife and has been recorded within the local area. As little is known in regards to its habitat preferences, the application area may constitute habitat for the species.

Hydromys chrysogaster (water-rat) and *Westralunio carteri* (Carter's freshwater mussel) are listed as priority 4 by Parks and Wildlife. The habitat preferences for these species are present within the application area, therefore it may form habitat for these species (DEC, 2012b; Murdoch University, 2012).

Given the above, the proposed clearing is at variance to this clearing Principle.

Methodology

References:

DEC (2007-)
DEC (2012)
DEC (2012a)
DEC (2012b)
DER (2013)
DotE (2013)
DotE (2013a)
Galeotti et al (2014)
Murdoch University (2012)
Mattiske and Havel (1998)
Shaun Molloy et al (2009)
Shah (2006)
Yeatman and Groom (2012)

GIS Datasets:

- Carnaby's cockatoo feeding habitat
- Pre-European vegetation
- SWERL

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

Comments Proposal may be at variance to this Principle

The application area is mapped as Matiske vegetation complex Sd which is known to support rare and priority flora (Parks and Wildlife, 2014). A Department of Environment Regulation site inspection undertaken 18 September 2013 recorded standing pools of water and sedge land vegetation within the application area (DER, 2013). This vegetation type is suitable for the five rare flora species recorded within the local area (10 kilometre radius).

The application area falls on the Scott Coastal Plain which was identified as an area holding national estate significance due to its high species richness, unusually high diversity of vegetation complexes, a concentration of rare restricted and threatened communities, its narrowly endemic plants, relict plants, plants with disjunct populations and wetlands of national importance (Government of Western Australia, 2001).

Given the above, the application area contains suitable habitat for rare flora and may be at variance to this clearing principle.

Methodology

Reference:

- DER (2013)
- Government of Western Australia (2001)
- Parks and Wildlife (2014)

GIS Datasets:

- Pre European Vegetation
- SAC Biodatasets (accessed June 2014)

(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 Proposal may be at variance to this Principle

The Scott River Ironstone Association (SRIA) threatened ecological community (TEC) is described as a low to tall seasonally inundated shrubland or heathland, occurring on patches of shallow soils over massive ironstone formations of the Scott Coastal Plain in south-west Western Australia (DotE, 2013b). It is listed as endangered under the Environment Protection and Biodiversity Conservation Act 1999.

The application area is mapped as Matiske vegetation complex Sd which is known to support occurrences of SRIA (Government of Western Australia, 2001). The Department of Parks and Wildlife (Parks and Wildlife, 2014) has advised that the vegetation under application may have contained a form of SRIA and historical aerial imagery shows a patch of reddish soil consistent with Ironstone geology within the application area. Given this the area under application may support TEC vegetation if left to regenerate.

Parks and Wildlife (2014) also advised that there is an unmapped occurrence of SRIA approximately 3.5 kilometres west of the application area. Further mapped records fall approximately seven kilometres to the west and nine kilometres to the east.

The South West Regional Ecological Linkage Report (Shaun Molloy et al, 2009) classifies the area under application as 3b as it is connected to ecological linkages with less than a 1000 metre gap between remnants of vegetation. Although a distance of 1000 metres appears to be a threshold level, above which the value of a remnant as an ecological linkage is greatly reduced (Shaun Molloy et al, 2009). Revegetation and management activities have a moderate to good potential for ameliorating impacts to an ecological linkage with a gap of less than 1000 metres (Shaun Molloy et al, 2009). The application area may therefore, facilitate the movement of representative SRIA species through a highly cleared landscape.

Department of the Environment's (DotE) (2013b) conservation advice for this TEC lists land clearing and grazing as major threats. It also lists the priority recovery and threat abatement actions which include:

- Avoid clearance of native vegetation within the ecological community and its surrounds,
- Avoid any changes to hydrology that may result in changes to the natural hydrological regime of patches of the community, groundwater water table levels and subsequent increase or decrease in run-off, salinity, or pollution,
- Minimise disruptions to the local landscape that would influence the pattern of winter rain inundation, such as smoothing out depressions or creating banks/levees to store water,
- Ensure that development activities minimise direct impacts to the ecological community and indirect effects on its ecological function,

- Ensure that networks of patches of the community that serve as refuge or linkages for wildlife and their habitat are maintained across the landscape, and
- Ensure that an appropriate management regime that is not detrimental to the ecological community, is in place where stock access patches of the ecological community.

Clearing 36 hectares of native vegetation for agricultural purposes will impact the hydrology of the area and adversely impact on TEC representative vegetation within the area.

Given the above, the application may be at variance to this clearing principle.

Methodology

References:

Commissioner of Soil and Land Conservation (2014)
 DotE (2013b)
 Government of Western Australia (2001)
 Shaun Molloy et al (2009)
 Parks and Wildlife (2014)

GIS Datasets:

- Pre European Vegetation
- SAC Biodatasets (accessed June 2014)
- SWERL

(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

Proposal may be at variance to this Principle

The area under application is located within the Warren Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 79 percent of its Pre European vegetation extent remaining (Government of Western Australia, 2013).

The area under application is mapped as Mattiske Vegetation Complex Scott Sd. This vegetation association retains approximately 46 percent pre-European vegetation (Mattiske and Havel, 1998).

Digital imagery (Leeuwin 50cm Orthomosaic - Landgate 2004) indicates that the local area (10 kilometre radius) retains approximately 50 percent vegetation.

The application area is mapped as Beard Vegetation Association 27. This vegetation association retains approximately 74 percent pre-European extent in the Warren bioregion (Government of Western Australia, 2013). Vegetation statistics for association 27 however, include remnants from 100 kilometres east that are not representative of the Scott Coastal Plain. Within the local area, approximately 80 - 90 percent of the vegetation association has been cleared.

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).

The application area falls on the Scott Coastal Plain which was identified as an area holding national estate significance due to its high species richness, unusually high diversity of vegetation complexes, a concentration of rare restricted and threatened communities, its narrowly endemic plants, relict plants, plants with disjunct populations and wetlands of national importance (Government of Western Australia, 2001). A significant amount of native vegetation has been cleared on the Scott Coastal Plain including a majority of the wetland vegetation types which have been converted to agricultural purposes.

The Environmental Protection Authority (2000) stated that given the high level of species richness, rarity and endemism contributing to the high level of significance of vegetation, the water quality of the hardy inlet and the link between clearing and nutrients entering the waterway; there should be no further reduction in the extent of native vegetation within the catchment of the Scott River.

The Scott Coastal Plain is considered to be highly diverse containing numerous priority and rare flora species.

Although the vegetation under application does not fall within a mapped highly cleared vegetation community, the vegetation north of the Scott River has been highly cleared for agriculture. Given its position in close proximity to the Scott River and the highly significant value of remnant vegetation in the local area, the application may be at variance to this clearing principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion Warren	833,985	663,202	79	84
Shire Shire of Nannup	305,253	256,538	84	91
Beard Vegetation Association within Bioregion*				
27	70,203	52,295	74	89
Mattiske Vegetation Association**				
Sd	37,716	17,362	46	29

Methodology

References:
 Commonwealth of Australia (2001)
 Environmental Protection Authority (2000)
 Government of Western Australia (2001)
 * Government of Western Australia (2013)
 Keighery (1994)
 ** Mattiske and Havel (1998)

GIS Datasets:

- Leeuwin 50cm Orthomosaic - Landgate 2004
- 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

Proposal is at variance to this Principle

The application area falls approximately two kilometres from the main channel of the Scott River and within 500 metres of one of its tributaries. The application area is mapped as part of an extensive palusplain wetland (seasonally waterlogged flat) and portions are classified as a sump land (seasonally inundated basin).

A site inspection of the application area recorded wetland vegetation and areas inundated by water (DER, 2013).

Given the above, the application is at variance to this principle.

Methodology

References:
 DER (2013)

GIS Datasets:

- Geomorphic Wetlands Augusta to Walpole
- Hydrography, linear

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

Comments

Proposal is seriously at variance to this Principle

The application area falls approximately two kilometres from the main channel of the Scott River, within 500 metres of one of its tributaries and is mapped as a palusplain wetland (seasonally waterlogged flat). A Department of Environment Regulation (2013) site inspection recorded areas inundated by water.

A site inspection of the application area undertaken by the Department of Agriculture and Food (Commissioner of Soil and Land Conservation, 2014) identified two soil complexes consisting of poorly drained flats and sandy rises with wet to semi-wet soils. The area under application generally occupies the lower slope position in the landscape and is situated near the 1200 millimetre isohyet.

Due to its position within the landscape and identified soil types, clearing native vegetation as described in this application is not likely to cause land degradation in the form of salinisation or wind erosion. The risk of water erosion is also low due to the present slope of the land and intended land use (Commissioner of Soil and Land Conservation, 2014).

The Commissioner of Soil and Land Conservation (2014) also advised that the risk of water logging within the application area is very high and drainage from the property flows southward towards the Scott River. As the identified soil types have a low phosphorus holding ability, there is an increased risk of eutrophication especially when the soils become waterlogged.

The Scott River is estimated to contribute approximately 60 percent of the phosphorus delivered into the Hardy Inlet. Following intensification of agriculture on the Scott Coastal Plain in the mid 1990's phosphorus concentrations within the Inlet have risen markedly and algal blooms have become a regular occurrence (Commissioner of Soil and Land Conservation, 2014).

The Commissioner of Soil and Land Conservation (2014) advised "Given the combination of low-medium PRI (phosphorus retention index) soils and inherent waterlogging, I conclude that the proposed clearing for agricultural purposes is likely to cause appreciable land degradation and is likely to be seriously at variance with principle (g)".

In response to the water quality changes identified following intensification of agriculture, a management strategy for the Scott Coastal Plain was developed (Government of Western Australia, 2001). The water management aims of this management plan include protecting the biodiversity of wetlands, protecting native vegetation to maintain the water quality of the Scott River and minimising the off-site effects to agreed environmentally acceptable levels.

The Scott Coastal Plain strategy was reviewed by the Environmental Protection Authority (2000). It was noted that given the high level of species richness, rarity and endemism contributing to the high level of significance of vegetation, the water quality of the Hardy Inlet and the link between clearing and nutrients entering the waterway; there should be no further reduction in the extent of native vegetation within the catchment of the Scott River.

Given the above, the application is seriously at variance to this clearing Principle.

Methodology

References:

Commissioner of Soil and Land Conservation (2014)
DER (2013)
Environmental Protection Authority (2000)
Government of Western Australia (2001)

GIS Datasets:

- Augusta-Walpole Wetlands
- Hydrography linear

(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

Proposal may be at variance to this Principle

Gingilup Swamps Nature Reserve falls approximately 2.3 kilometres, along the Scott River, to the south of the application area. Pagett Nature Reserve (A class) falls approximately 4.2 kilometres to the north of the application area. This reserve adjoins the South Blackwood State Forest and Blackwood River National Park.

The Commissioner of Soil and Land Conservation (2014) has advised that the risk of waterlogging within the application area is very high and drainage from the property flows southward towards the Scott River. As the identified soil types have a low phosphorus holding ability, there is an increased risk of eutrophication especially when the soils become waterlogged. As Gingilup Swamps Nature Reserve falls directly south of the application area along the Scott River, the identified land degradation risk could affect its environmental values.

A significant amount of native vegetation has been cleared on the Scott Coastal Plain including the majority of the wetland vegetation types which have been converted to agricultural purposes.

The South West Regional Ecological Linkage Report (Shaun Molloy et al, 2009) classifies the area under application as 3b as it is connected to ecological linkages with less than a 1000 metre gap between remnants of vegetation. Although a distance of 1000 metres appears to be a threshold level, above which the value of a remnant as an ecological linkage is greatly reduced, revegetation and management activities have a moderate to good potential for ameliorating impacts to an ecological linkage with a gap of less than 1000 metres (Shaun Molloy et al, 2009). The application area may therefore, facilitate the movement of large fauna species between nature reserves within a highly cleared landscape.

Given the above, the application may be at variance to this clearing principle.

Methodology **References**
Commissioner of Soil and Land Conservation (2014)
Shaun Molloy et al (2009)

GIS Datasets:
- DEC Tenure
- SAC biodatasets

(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 **Proposal is seriously at variance to this Principle**

The application area is mapped within a palusplain wetland, approximately 2 kilometres north of the Scott River and 500 meters west of one of its tributaries.

The application area falls within the area covered by the "Scott Coastal Plain - a Strategy for a Sustainable Future", (Government of Western Australia, 2001). The water management aims of this management plan include protecting the biodiversity of wetlands, protecting native vegetation to maintain the water quality of the Scott River and minimising the off-site effects to agreed environmentally acceptable levels.

Eutrophication is the process by which a body of water acquires a high concentration of nutrients, especially phosphates and nitrates. These promote excessive plant growth. As this plant material decomposes, the oxygen within the water is depleted, causing the death of other organisms.

The Commissioner of Soil and Land Conservation (2014) conducted a site inspection of the application area and advised that the risk of waterlogging within the application area is very high and drainage from the property flows southward towards the Scott River. As the identified soil types have a low phosphorus holding ability, there is an increased risk of eutrophication especially when the soils become waterlogged.

The Scott River is estimated to contribute approximately 60 percent of the phosphorus delivered into the Hardy Inlet. Following intensification of agriculture on the Scott Coastal Plain in the mid 1990's, phosphorus concentrations within the inlet have risen markedly and algal blooms have become a regular occurrence (Commissioner of Soil and Land Conservation, 2014).

Given the above, clearing the vegetation under application for agricultural purposes is likely to impact the quality of the Scott River and Hardy Inlet and is seriously at variance to this clearing principle.

Methodology **References:**
Commissioner of Soil and Land Conservation (2014)
Government of Western Australia (2001)

GIS Database:
- Hydrography, 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 **Proposal is not likely to be at variance to this Principle**

The application area is mapped within a palusplain wetland, approximately two kilometres north of the Scott River and 500 meters west of one of its tributaries. A Department of Environment Regulation (2013) site inspection recorded area's inundated by water. The Commissioner of Soil and Land Conservation (2014) has advised that the risk of waterlogging within the property is high.

Although, the proposed clearing is likely to cause waterlogging it is not likely to cause or exacerbate flooding.

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

Methodology **References:**
Commissioner of Soil and Land Conservation (2014)
DER (2013)

GIS DataSets:
- Hydrography, linear
- Topographic Contours, Statewide

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments The application is to clear up to 36 hectares of native vegetation within Lot 1 on Diagram 48271, Scott River, for agriculture. The application area was first cleared in 2002 and while the remainder of the property was converted to agricultural uses the area subject to this application was left. The application area was again cleared in 2012 and identified using landsat imagery (DER, 2013).

The Shire of Nannup (2014) has advised that it has no comments or objections in relation to the clearing permit application.

The application area is zoned general agriculture under the Local Town Planning Scheme Zone.

No submissions from the public have been received.

No Aboriginal sites of significance have been mapped within the application area.

The area under application to clear is located within the agricultural area as defined by EPA Position Statement No. 2. The Environmental Protection Authority does not support any further reduction in native vegetation through clearing for agriculture within this area (EPA, 2000a).

In response to the water quality changes identified following intensification of agriculture on the Scott Coastal Plain, a management strategy was developed (Government of Western Australia, 2001). The water management aims of this management plan include protecting the biodiversity of wetlands, protecting native vegetation to maintain the water quality of the Scott River and minimising the off-site effects to agreed environmentally acceptable levels.

The Scott Coastal Plain strategy was reviewed by the Environmental Protection Authority (2000). It was noted that given the high level of species richness, rarity and endemism contributing to the high level of significance of vegetation, the water quality of the hardy inlet and the link between clearing and nutrients entering the waterway; there should be no further reduction in the extent of native vegetation within the catchment of the Scott River.

Methodology References:
DER (2013)
EPA (2000)
EPA (2000a)
Government of Western Australia (2001)
Keighery (1994)
Shire of Nannup (2014)

GIS DataSets:
- Aboriginal sites of significance
- Town Planning Scheme Zone

4. References

- Commissioner of Soil and Land Conservation (2014); Land Degradation Advice and Assessment Report for clearing permit application CPS 6057/1 received 10/6/2014; Department of Agriculture and Food Western Australia (DER Ref A767577 and A767576).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2012) Chuditch (*Dasyurus geoffroii*) Recovery Plan. Wildlife Management Program No. 54. Department of Environment and Conservation, Perth, Western Australia.
- DEC (2012a) Fauna profiles: Quenda *Isoodon obesulus*. Department of Environment and Conservation 8 February 2012.
- DEC (2012b) Fauna profiles: Water Rat (*Rakali*) *Hydromys chrysogaster*. Department of Environment and Conservation 8 February 2012.
- DEC (2013) Quokka *Setonix brachyurus* Recovery Plan. Wildlife Management Program No. 56. Department of Environment and Conservation, Perth, WA. DER (2013) Department of Environment regulation Site Inspection undertaken September 2013. Department of Environment Regulation, Western Australia.
- DER (2013) Department of Environment regulation Site Inspection undertaken September 2013. Department of Environment Regulation, Western Australia.
- DoT (2013) Approved Conservation Advice for *Pseudocheirus occidentalis* (western ringtail possum). Commonwealth of Western Australia. 17 December 2013.
- DoT (2013a) National Recovery Plan for Malleefowl *Leipoa ocellata*. Benshemesh 2007.
- DoT (2013b) Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (s266B) Approved Conservation advice for Scott River Ironstone Association. Department of the Environment 2013.
- EPA (2000) Bulletin 991, Scott Coastal Plain - a Strategy for a Sustainable Future. September 2000.
- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, Western Australia.

- Galeotti, D, Castalanelli, M, Groth, D, McCullough, C and Lund, M (2014) Geneotypic and Morphological Variation between *Galaxiella nigrostriata* (Galaxiidae) Populations: Implications for Conservation. Marine and Freshwater Research, CSIRO, 7 May 2014.
- Government of Western Australia (2001) Bulletins 4513: Scott Coastal Plain a strategy for a sustainable future. Department of Agriculture and Food. June 2001.
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