



1. Application details

1.1. Permit application details

Permit application No.: 7090/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mr Kevin John Mantach
Mrs Joanne Lee Mantach

1.3. Property details

Property: LOT 1692 ON PLAN 208474, WEST RIVER
Local Government Authority: RAVENSTHORPE, SHIRE OF
DER Region: SOUTH COAST
DPaW District: ALBANY
Localities: WEST RIVER

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Refuse
Decision Date: 7 November 2016
Reasons for Decision: The applicant has applied to clear 325 hectares of native vegetation for the purpose of cropping and pasture. This application was received on 23 May 2016.

The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the *Environmental Protection Act 1986*, and it has been concluded that the proposed clearing is seriously at variance to principle (g), is at variance to principles (e), (f) and (i), may be at variance to principles (a), (b), (c) and (h) and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer determined that the proposed clearing is seriously at variance to principle (g), given the potential for off-site salinity. Under section 51O(3) of the EP Act, the CEO may make a decision that is seriously at variance with the clearing principles if, and only if, in the CEO's opinion there is a good reason for doing so.

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Mapped Beard vegetation association 519 is described as shrublands; mallee scrub, <i>Eucalyptus eremophila</i> (Shepherd et al., 2001).	The clearing of 325 hectares of native vegetation within Lot 1692 on Deposited Plan 208474, West River, for the purpose of cropping and pasture.	Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994). To	The condition and description of the vegetation was determined by a site inspection undertaken by Department of Environment Regulation officers (DER, 2015). The vegetation under application is comprised of:
Mapped Beard vegetation association 940 is described as mosaic: shrublands; mallee scrub, black marlock/shrublands; tallerack mallee-heath (Shepherd et al., 2001).		Completely Degraded: No longer intact; completely / almost completely without native species (Keighery, 1994).	<ul style="list-style-type: none"> • areas with minimal native species; • areas with a thick, species rich understorey and scattered mallee overstorey; • areas of thicket understorey; and • areas of mallee thicket with minimal understorey (DER, 2015).

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 may be at variance to this Principle

The applicant proposes to clear 325 hectares of native vegetation on Lot 1692 on Deposited Plan 208474, West River, for the purpose of cropping and pasture. The application area is located within the area previously applied for in application CPS 6765/1 (refused).

According to available aerial imagery, the local area (defined as a 10 kilometre radius around the application area) retains approximately 20 per cent native vegetation cover, and is considered to be extensively cleared.

The application area contains predominantly a scattered mallee overstorey with a thick, species rich understorey and areas of mallee thicket with minimal understorey, which is in very good (Keighery, 1994) to completely degraded (Keighery, 1994) condition (DER, 2015), and includes several minor non-perennial watercourses.

One of the mapped vegetation associations retains approximately 17 per cent of its pre-European extent within the Mallee Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (Government of Western Australia, 2015), which is less than the 30 per cent national objectives target (Commonwealth of Australia, 2001). Large-sized remnants within extensively cleared landscapes, such as the application area, represent significant habitat resources for flora and fauna within a highly fragmented local landscape. The application area is within 'Strategic Zone B' of a macro habitat corridor defined in the Western Australian South Coast Macro Corridor Network (Wilkins et al., 2006). Vegetation within Strategic Zone B "potentially provide good nodes of habitat which are within 1 km of vegetation within Strategic Zone A" (Wilkins et al., 2006).

Fifteen fauna species of conservation significance have been recorded within 20 kilometres of the application area (Parks and Wildlife, 2007-). Based on the vegetation types present, the application area may provide suitable habitat for five species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* (WC Act) (Parks and Wildlife, 2016), one species listed under an international migratory birds agreement, one species listed as other specially protected fauna, and four species listed as priority fauna.

The application area may contain suitable habitat for four flora species listed as declared rare flora under the WC Act and as vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Parks and Wildlife, 2016). Given the similarities between the preferred habitats of these species and the mapped vegetation and soil types found within the application area, it is considered that the application area may contain suitable habitat for rare flora.

Thirteen priority flora species have been recorded in the local area from the same mapped vegetation and soil types as found within the application area. Given that the application area includes vegetation in good (Keighery, 1994) or better condition, it is considered that the application area may contain suitable habitat for priority flora (Parks and Wildlife, 2016).

The threatened ecological community (TEC) 'Proteaceae dominated kwongan shrublands of the southeast coastal floristic province of Western Australia' is mapped within the local area. This TEC is listed as endangered under the EPBC Act. The Department of Parks and Wildlife advised that the application area is not likely to comprise this TEC (Parks and Wildlife, 2016).

According to available databases, there are no known priority ecological communities mapped within the application area.

On the basis of the application area containing vegetation in a good (Keighery, 1994) or better condition, suitable habitat for conservation significant fauna, and suitable habitat for rare and priority flora, and being located within a mapped macro habitat corridor and an extensively cleared local area, it is considered that the application area is likely to comprise a high level of biodiversity.

A Department of Environment Regulation (DER) Delegated Officer wrote to the applicant, advising (among other things) that the application area comprises significant habitat for indigenous fauna including six threatened species and other species of conservation significance, and is located within a macro habitat corridor. In response the applicant provided the following information relevant to this Principle:

- Rabbit populations would decline and hopefully be eradicated (through excavation of warrens and humane eradication as part of farm management practice) if access were granted to clear the application area.
- The application area has previously been cleared, and has regrown mainly with *Oxylobium tetragonophyllum* (brother-brother poison plant). This is not known to be foraging habitat of Carnaby's cockatoo, and evidence of Carnaby's cockatoo has not been seen within the property within the last 40 years. The application area does not contain tree species listed as black cockatoo breeding habitat and lacks the preferred selection of foraging plants listed in the Department of Sustainability, Environment, Water, Population and Communities' referral guidelines for black cockatoos.
- The mapping of 'Strategic Zone B' of the macro corridor habitat contains insufficient detail to determine whether the property is within the Strategic Zone.

- The vegetation description in the Preliminary Assessment Report is inconsistent with the vegetation within the application area, but rather reflects that of the previous application area (CPS 6765/1). The vegetation description needs to be confirmed as it is incorrect and misinforming, and could have an effect on the 'Strategic Zone B' of the macro corridor habitat.
- Gullies would be rehabilitated to an overall width of 60 metres, which will link 507 hectares of natural vegetation at the western side of the application area to the north-eastern side of the application area. This would assist in reducing soil erosion and provide an access corridor for local fauna, and would link with creekline vegetation on a neighbouring property to the south of the application area.

Taking into account the applicant's additional advice, in particular in respect to previous clearing and the composition of the regrowth vegetation and the proposed management measures to maintain connectivity, it is considered that the application area may comprise a high level of biological diversity on a local or regional scale

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

Targeted surveys undertaken at appropriate times by suitably-qualified persons would determine whether the proposed clearing is likely to impact on any conservation significant species or communities, and to guide appropriate management measures to mitigate impacts. Surveys may be recommended if all other environmental impacts likely to result from the proposed clearing can be addressed.

Methodology

References:

Commonwealth of Australia (2001)
 DER (2015)
 Government of Western Australia (2015)
 Keighery (1994)
 Parks and Wildlife (2007-)
 Parks and Wildlife (2016)
 TSSC (2008a)
 TSSC (2008b)
 TSSC (2008c)
 Wilkins et al. (2006)

GIS Databases:

- SAC bio datasets accessed December 2015
 - NLWRA, Current Extent of Native Vegetation

(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 may be at variance to this Principle

The application area contains predominantly a scattered mallee overstorey with a thick, species rich understorey and areas of mallee thicket with minimal understorey, which is in very good (Keighery, 1994) to completely degraded (Keighery, 1994) condition (DER, 2015), and includes several minor non-perennial watercourses. The vegetation changes in condition, density, and structure throughout the application area (DER, 2015).

The application area is within 'Strategic Zone B' of a macro habitat corridor defined in the Western Australian South Coast Macro Corridor Network (Wilkins et al., 2006). Vegetation within Strategic Zone B "potentially provide good nodes of habitat which are within 1 km of vegetation within Strategic Zone A" (Wilkins et al., 2006). The Department of Parks and Wildlife advised that the extent of the proposed clearing will impact on landscape connectivity functionality (Parks and Wildlife, 2016).

Fifteen fauna species of conservation significance have been recorded within 20 kilometres of the application area (Parks and Wildlife, 2007-). Based on the vegetation types present, the application area may provide suitable habitat for the threatened fauna Carnaby's cockatoo (*Calyptorhynchus latirostris*), numbat (*Myrmecobius fasciatus*), malleefowl (*Leipoa ocellata*), chuditch (*Dasyurus geoffroii*), western heath mouse (*Pseudomys shortridgei*) and red-tailed phascogale (*Phascogale calura*) listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* (Parks and Wildlife, 2016), the rainbow bee-eater (*Merops ornatus*) listed under an international migratory birds agreement, the peregrine falcon (*Falco peregrinus*) listed as other specially protected fauna, and for the priority fauna western rosella (*Platycercus icterotis* subsp. *xanthogenys*, P4), western mouse (*Pseudomys occidentalis*, P4), western whipbird (*Psophodes nigrogularis* subsp. *oberon*, P4) and tammar wallaby (*Macropus eugenii* subsp. *derbianus*, P5).

Carnaby's cockatoo was once abundant in Western Australia; however since the late 1940s the species has suffered a 30 per cent contraction in range, a 50 per cent decline in population and, between 1968 and 1990, disappeared from more than a third of its breeding range (Saunders, 1990; Saunders and Ingram, 1998; Shah, 2006; Garnett et al, 2011).

The Carnaby's cockatoo recovery plan (Parks and Wildlife, 2013) summarises habitat critical to the survival for this species as:

- The eucalypt woodlands that provides nest hollows used for breeding, together with nearby vegetation that provides feeding, roosting and watering habitat that supports successful breeding;
- Woodland sites known to have supported breeding in the past and which could be used in the future, provided adequate nearby food and/or water resources are available or are re-established; and
- In the non-breeding season the vegetation that provides food resources as well as the sites for nearby watering and night roosting that enable the cockatoos to effectively utilise the available food resources.

The recovery plan also states "Success in breeding is dependent on the quality and proximity of feeding habitat within 12 kilometres of nesting sites. Along with the trees that provide nest hollows, the protection, management and increase of this feeding habitat that supports the breeding of Carnaby's cockatoo is a critical requirement for the conservation of the species" (Parks and Wildlife, 2013).

Carnaby's cockatoo forages on the seeds, nuts and flowers of a large variety of plants including proteaceous and *Eucalyptus* species, *Allocasuarina* species, *Corymbia calophylla*, and a range of introduced species (Valentine and Stock, 2008). Noting the mapped vegetation types found within the application area, it is considered that the application area contains foraging habitat for this species.

Carnaby's cockatoo breeding habitat is described as trees of species known to support breeding within the range of Carnaby's cockatoo, which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 millimetres (Commonwealth of Australia, 2012). For Carnaby's cockatoos the entrance to hollows must have a minimum diameter of at least 100 millimetres to be suitable (DEC, 2010). No trees with significant hollows were identified within the application area during a site inspection (DER, 2015), however noting the proximity of confirmed nesting sites at Cocanarup Timber Reserve located six kilometres from the application area it is considered that the application area is likely to be used by this species for roosting.

In respect to a previous application (CPS 6765/1) within which the application area is located, the applicant advised that in 42 years of living in the district they have not observed black cockatoos, and that the 2015 Cockey Count did not record roosting sites or sightings of breeding pairs within the district.

The malleefowl occurs in shrublands and low woodlands that are dominated by mallee vegetation (DotE, 2015a). The significant decline in malleefowl numbers has resulted from a number of threats, including loss of vegetation due to clearing for agricultural purposes, fox predation, and the degradation of habitat by fire (DotE, 2015a). Malleefowl require a sandy substrate and abundance of leaf litter to build mounds for roosting purposes (DotE, 2015a). Noting the mapped vegetation types found within the application area, it is considered that the application area is likely to contain suitable habitat for this species.

In respect to a previous application (CPS 6765/1) within which the application area is located, the applicant acknowledged that a population of malleefowl occurs within the district, and advised that they have not found evidence of malleefowl activity on the property.

The rainbow bee-eater and peregrine falcon are highly mobile avian species with large home ranges. Noting this, it is considered that the application area is unlikely to comprise significant habitat for these species.

The chuditch occur in woodlands, mallee shrublands, and heaths at the southern range extent (DEC, 2012). The heath mouse occurs in mallee scrub over heath and mixed scrub (DotE, 2015b). Noting the mapped vegetation types found within the application area, it is considered that the application area contains suitable habitat for these species.

On the basis of the application area being located within a corridor classified as regionally significant for the movement of indigenous fauna, including vegetation in good or better condition (Keighery, 1994) and a variety of habitats, and containing suitable habitat for conservation significant fauna species, it is considered that the application area comprises significant habitat for indigenous fauna.

A Department of Environment Regulation (DER) Delegated Officer wrote to the applicant, advising (among other things) that the application area comprises significant habitat for indigenous fauna including six threatened species and other species of conservation significance, and is located within a macro habitat corridor. In response the applicant provided the following information relevant to this Principle:

- The application area has previously been cleared, and has regrown mainly with *Oxylobium tetragonophyllum* (brother-brother poison plant). This is not known to be foraging habitat of Carnaby's cockatoo, and evidence of Carnaby's cockatoo has not been seen within the property within the last 40 years. The application area does not contain tree species listed as black cockatoo breeding habitat and lacks the preferred selection of foraging plants listed in the Department of Sustainability, Environment, Water, Population and Communities' referral guidelines for black cockatoos.
- The mapping of 'Strategic Zone B' of the macro corridor habitat contains insufficient detail to determine whether the property is within the Strategic Zone.
- Gullies would be rehabilitated to an overall width of 60 metres, which will link 507 hectares of natural vegetation at the western side of the application area to the north-eastern side of the application area, which would assist in reducing soil erosion and provide an access corridor for local fauna, and would link with creekline vegetation on a neighbouring property to the south of the application area.

Taking into account the applicant's additional advice, in particular in respect to Carnaby's cockatoo and the proposed management measures to maintain connectivity, it is considered that the application area may comprise significant habitat for indigenous fauna.

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

A targeted fauna survey undertaken by a suitably-qualified person would determine whether the proposed clearing is likely to impact on the malleefowl. Surveys may be recommended if all other environmental impacts likely to result from the proposed clearing can be addressed.

Methodology **References:**
Commonwealth of Australia (2012)
DEC (2010)
DEC (2012)
DER (2015)
DotE (2015a)
DotE (2015b)
Garnett et al. (2011)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2013)
Parks and Wildlife (2016)
Saunders (1990)
Saunders and Ingram (1998)
Shah (2006)
Valentine and Stock (2008)
Wilkins et al. (2006)

GIS Databases:
- Carnaby cockatoo confirmed breeding sites
- SAC bio datasets accessed December 2015

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

Comments Proposed clearing may be at variance to this Principle

The application area contains predominantly a scattered mallee overstorey with a thick, species rich understorey and areas of mallee thicket with minimal understorey, which is in very good (Keighery, 1994) to completely degraded (Keighery, 1994) condition (DER, 2015), and includes several minor non-perennial watercourses. The vegetation changes in condition, density, and structure throughout the application area (DER, 2015).

The application area may contain suitable habitat for four flora species listed as declared rare flora under the *Wildlife Conservation Act 1950* and as vulnerable under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (Parks and Wildlife, 2016).

According to available databases, one rare flora species has been recorded approximately five kilometres from the application area. The Department of Parks and Wildlife (2016) advised that the application area may contain suitable habitat for a further three rare flora species based on similarities of preferred habitat with the application area.

The first rare flora species occurs in heath on moist sandy soil (DEC, 2008), and has been recorded from the same mapped vegetation and soil types as found within the application area. The second rare flora species occurs in tall open woodlands of mallee and karri or in low open woodland with flat-topped yate over *Acacia* shrubland on plains of sandy clay loam (TSSC, 2008a). The third rare flora species prefers disturbed sites associated with *Eucalyptus* woodlands with tall shrubs or mallee woodlands (TSSC, 2008b). The fourth rare flora species occurs in open heath and sedges on seasonally wet sandy clay soils (TSSC, 2008c).

On the basis of similarities between the preferred habitats of these rare flora species and the mapped vegetation and soil types found within the application area, it is considered that the application area may contain suitable habitat for rare flora.

A Department of Environment Regulation (DER) Delegated Officer wrote to the applicant, advising (among other things) that the application area may contain rare and priority flora species. In response the applicant provided the following information relevant to this Principle:

- The application area has previously been cleared, and has regrown mainly with *Oxylobium tetragonophyllum* (brother-brother poison plant). ...
- The vegetation description in the Preliminary Assessment Report is inconsistent with the vegetation within the application area, but rather reflects that of the previous application area (CPS 6765/1). The vegetation description needs to be confirmed as it is incorrect and misinforming, and could have an effect on the 'Strategic Zone B' of the macro corridor habitat.

Taking into account the applicant's additional advice, and noting the similarities between the preferred habitats of the rare flora species and the habitats within the application area, it is considered that the application area may contain suitable habitat for rare flora.

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

A targeted flora survey undertaken by a suitably-qualified botanist would determine whether the proposed clearing is likely to impact on rare flora. Surveys may be recommended only if all other environmental impacts likely to result from the proposed clearing can be addressed.

Methodology References:
DEC (2008)
Parks and Wildlife (2016)
TSSC (2008a)
TSSC (2008b)
TSSC (2008c)

GIS Databases:
- SAC bio datasets accessed December 2015

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

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

The threatened ecological community (TEC) 'Proteaceae dominated kwongkan shrublands of the southeast coastal floristic province of Western Australia' is mapped within the local area (10 kilometre radius). This TEC is listed as endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. This TEC is dominated by flowering shrub species from the Proteaceae family, sometimes with a mallee woodland canopy (TSSC, 2014).

In respect to a previous application (CPS 6765/1) within which the application area is located, the applicant advised that based on information provided by the Department of the Environment, the property is not located within the areas of current or pre-European distribution of this TEC.

The Department of Parks and Wildlife advised that the application area is not likely to comprise this TEC (Parks and Wildlife, 2016).

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

Methodology References:
Parks and Wildlife (2016)
TSSC (2014)

GIS Databases:
- SAC bio datasets accessed December 2015

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposed clearing is at variance to this Principle

The application area is located within the Mallee Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 56.5 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2015).

The application area is located within the Shire of Ravensthorpe, which retains approximately 61.6 per cent native vegetation cover (Government of Western Australia, 2015).

The application area is mapped as Beard vegetation associations 519 and 940, which have approximately 59.4 and 17.4 per cent, respectively, of their pre-European extents remaining within the Mallee IBRA bioregion (Government of Western Australia, 2015). In respect to Beard vegetation association 940, the current extent is 145 hectares within the bioregion of which approximately 27.5 hectares occurs within the application area, and the proposed clearing would reduce this extent to approximately 14.1 per cent of the pre-European extent.

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). One of the mapped vegetation associations has less than the 30 per cent threshold remaining.

According to available aerial imagery, the local area (10 kilometre radius) retains approximately 20 per cent native vegetation cover, and is considered to be extensively cleared.

On the basis of the application area containing vegetation in a good (Keighery, 1994) of better condition, a highly cleared vegetation association, suitable habitat for conservation significant fauna, and suitable habitat for rare and priority flora, and being located within a mapped macro habitat corridor, it is considered that the application area is likely to be a significant remnant.

A Department of Environment Regulation (DER) Delegated Officer wrote to the applicant, advising (among other things) that the application area is located within a macro habitat corridor and is a significant remnant in an extensively cleared area. In response the applicant provided the following information relevant to this Principle:

- The mapping of 'Strategic Zone B' of the macro corridor habitat contains insufficient detail to determine whether the property is within the Strategic Zone.
- The vegetation description in the Preliminary Assessment Report is inconsistent with the vegetation within the application area, but rather reflects that of the previous application area (CPS 6765/1). The vegetation description needs to be confirmed as it is incorrect and misinforming, and could have an effect on the 'Strategic Zone B' of the macro corridor habitat.
- Gullies would be rehabilitated to an overall width of 60 metres, which will link 507 hectares of natural vegetation at the western side of the application area to the north-eastern side of the application area, which would assist in reducing soil erosion and provide an access corridor for local fauna, and would link with creekline vegetation on a neighbouring property to the south of the application area.

Taking into account the applicant's additional advice, in particular in respect to previous clearing and the composition of the regrowth vegetation and the proposed management measures to maintain connectivity, and noting that the application area includes a highly cleared vegetation association, it is considered that the application area is likely to be a significant remnant in an extensively cleared area.

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

	Pre-European (%)	Current Extent (%)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Mallee	7,395,894	4,180,977	56.5	18
Shire*				
Shire of Ravensthorpe	982,194	605,474	61.6	20
Beard Vegetation Association in Bioregion*				
519	2,100,314	1,248,661	59.4	10.8
940	832	145	17.4	0

Methodology References:
 Commonwealth of Australia (2001)
 *Government of Western Australia (2015)
 Keighery (1994)

GIS Databases:
 - SAC bio datasets accessed December 2015
 - NLWRA, Current Extent of Native 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 at variance to this Principle

Several minor non-perennial watercourses are mapped within the application area. No major watercourses occur within close proximity to the application area. During a site inspection, vegetation growing in association with a creek was observed (DER, 2015). Available aerial imagery indicates that the application area is within 100 metres of a defined waterway, and is likely to include minor waterways.

A land degradation assessment report referred to in advice received from the Commissioner of Soil and Land Conservation (CSLC, 2016a) indicates that the application area is well drained with defined waterways.

In respect to a previous application (CPS 6765/1) within which the application area is located, the applicant referred to 40.6 hectares of waterways on the property that were previously cleared, and advised that buffers to waterways would be retained (and fenced and rehabilitated) to prevent soil erosion and salinity. In respect to the current application, the applicant advised that there may be gullies within the application area that will not be cleared. It is noted that the applicant has not specified a minimum buffer width, consistent with Department of Water guidance.

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

Methodology References:
 CSLC (2015)
 DER (2015)

 GIS Databases:
 - Hydrography, linear
 - Hydrography, hierarchy

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

Comments **Proposed clearing is seriously at variance to this Principle**

Available aerial imagery indicates that the application area is within 100 metres of a defined waterway, and is likely to include minor waterways. In respect to a previous application (CPS 6765/1) within which the application area is located, the applicant referred to 40.6 hectares of waterways on the property that were previously cleared, and advised that buffers to waterways would be retained (and fenced and rehabilitated) to prevent soil erosion and salinity. In respect to the current application, the applicant advised that there may be gullies within the application area that will not be cleared. It is noted that the applicant has not specified a minimum buffer width, consistent with Department of Water guidance.

A land degradation assessment report referred to in advice received from the Commissioner of Soil and Land Conservation (CSLC) indicates that the application area is mapped as two soil landscape map units (CSLC, 2016a):

- the majority of the application area is mapped as Upper Fitzgerald 5 subsystem map unit 243 Uf_5, described as head water rises, with long moderately inclined converging slopes on colluvium and minor alluvium on granitic, granodioritic and dolerite bedrock, with soils a mix of deep and shallow gravelly and sandy duplex soils and hard setting, non-cracking grey clays; and
- the north-west corner of the application area is mapped as Upper Fitzgerald 7 subsystem map unit 243 Uf_7, described as very gently undulating upland plain on colluvium over deeply weathered granite, with soils of shallow sandy and loamy duplex soils with minor hard setting, non-cracking grey clays.

The CSLC advised that the map unit 243 Uf_5 lies on the mid and upper slope position (CSLC, 2016a). The CSLC advised that the land capability ratings for the application area are moderate for cropping and grazing (CSLC, 2016a). The land degradation report referred to in the CSLC's advice indicates that the risk of wind and water erosion causing land degradation as a result of the proposed clearing is low, and that the proposed clearing could lead to eutrophication especially if the land became waterlogged, however the area is well drained with defined waterways and no significant change is expected as a result of the proposed clearing (CSLC, 2016a).

The CSLC advised that the likelihood of land degradation in the form of off-site salinity occurring as a result of the proposed clearing is high, consistent with LandMonitor salinity risk ratings and supported by groundwater monitoring bore data in the vicinity of the application area (CSLC, 2016a). The land degradation report referred to in the CSLC's advice states that no salinity was observed on site, however salinity is occurring in the tributaries of the West River, and that significant change is expected if large areas are cleared (CSLC, 2016a).

On the basis of the above, it is considered that the proposed clearing is highly likely to cause appreciable land degradation in the form of salinity.

A Department of Environment Regulation (DER) Delegated Officer wrote to the applicant, advising (among other things) that the application area comprises significant habitat for indigenous fauna including six threatened species and other species of conservation significance, and is located within a macro habitat corridor. In response the applicant provided the following information relevant to this Principle:

- Salinity of the groundwater and the groundwater levels are understood to have increased as indicated by bore readings and data gathered by the Department of Agriculture and Food WA. Everything viably possible will be done to reduce the negative impacts of the proposed clearing, including fencing and rehabilitating waterways/gullies in the application area. One major gully is excluded from the application area; a second east-west gully will also be fenced/rehabilitated (reducing the extent of proposed clearing to 318.68 hectares). Consistent with Department of Water guidance, a 30 metre buffer zone either side of the gully would be retained. If the clearing is approved modern farming techniques (direct seeding rather than disc ploughs) would be used to avoid exacerbating soil erosion problems. Following discussion with South East Agronomy Services, lime would be added to the areas of hard clay soils which would make them more pliable and reduce surface water runoff. Contour banks could also be applied to help reduce water erosion.
- Gullies would be rehabilitated to an overall width of 60 metres ... which would assist in reducing soil erosion ...
- It is not in a farmer's, landholder's or human's best interests to see the land degraded or the natural flora and fauna depleted to non-existence. A decision on the application should take into account the reduced application area and the increased amount of land to be rehabilitated creating corridors on the property.

Additional advice was sought from the CSLC in respect to the adequacy of the applicant's proposed management measures for avoiding the potential for land degradation in the form of salinity (CSLC, 2016b):

The report confirms our earlier advice about the likelihood of land degradation in the form of salinity occurring if the CPS 7090 application area is cleared.

The proposed retention and replanting in certain areas will not effectively address the hydrological imbalance that will result from the extensive clearing proposed.

The effects of increased ground water recharge after clearing and development on salinity are likely to be manifest on and off site and over the medium to long term.

Taking into account the applicant's response and the CSLC's additional advice, it is considered that the proposed clearing is highly likely to cause appreciable land degradation in the form of salinity.

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

Methodology References:
CSLC (2016a)
CSLC (2016b)

GIS Databases:
- Hydrography, linear
- Hydrography, hierarchy

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments Proposed clearing may be at variance to this Principle

Fitzgerald River National Park is located approximately 10 kilometres south of the application area. Three nature reserves and a timber reserve are located within 10 kilometres of the application area. The Cocanarup Timber Reserve (8,000 hectares) is a confirmed Carnaby's cockatoo breeding area and a numbat translocation area, located approximately six kilometres from the application area. The application area is positioned approximately midway between an unnamed nature reserve and Fitzgerald River National Park, and is connected to these areas by continuous (but narrow) corridors of vegetation. The application area is likely to facilitate fauna movement between other large remnants of vegetation in the landscape.

The application area is within 'Strategic Zone B' of a macro habitat corridor defined in the Western Australian South Coast Macro Corridor Network (Wilkins et al., 2006). Vegetation within Strategic Zone B "potentially provide good nodes of habitat which are within 1 km of vegetation within Strategic Zone A" (Wilkins et al., 2006). The Department of Parks and Wildlife advised that the extent of the proposed clearing will impact on landscape connectivity functionality (Parks and Wildlife, 2016).

Whilst the proposed clearing is unlikely to sever fauna corridors, the removal of a large area of vegetation within a highly cleared local area (20 per cent vegetation remaining) will contribute towards further landscape fragmentation and decrease the effectiveness of the remaining fauna corridors.

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

Methodology References:
Parks and Wildlife (2016)
Wilkins et al. (2006)

GIS Databases:
- DPaW Tenure
- NLWRA, Current Extent of Native Vegetation
- SAC bio datasets accessed December 2015

(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 at variance to this Principle

Several minor non perennial watercourses are mapped within the application area. No major watercourses occur within close proximity to the application area. Available aerial imagery indicates that the application area is within 100 metres of a defined waterway, and is likely to include minor waterways. The proposed clearing may cause a short term increase in sedimentation of the watercourses during rainfall, however this is likely to be minimal.

In respect to a previous application (CPS 6765/1) within which the application area is located, the applicant referred to 40.6 hectares of waterways on the property that were previously cleared, and advised that buffers to waterways would be retained (and fenced and rehabilitated) to prevent soil erosion and salinity. In respect to the current application, the applicant advised that there may be gullies within the application area that will not be cleared. It is noted that the applicant has not specified a minimum buffer width, consistent with Department of Water guidance.

The Commissioner of Soil and Land Conservation (CSLC) advised that the map unit 243 Uf_5 lies on the mid and upper slope position (CSLC, 2016a). A land degradation assessment report referred to in the CSLC's advice indicates that the application area is well drained with defined waterways. The land degradation assessment report indicates that the majority of the application area is mapped as Upper Fitzgerald 5 subsystem map unit 243 Uf_5, described as a mix of deep and shallow duplexes and grey clays. The land degradation assessment report indicates that the risk of wind and water erosion causing land degradation as a result of the proposed clearing is low and significant waterlogging is unlikely.

The CSLC advised that the likelihood of land degradation in the form of off-site salinity occurring as a result of the proposed clearing is high (CSLC, 2016a). The land degradation assessment report referred to in the CSLC's advice indicates that while no salinity was observed on site, the extent of the proposed clearing is likely to significantly increase salinity and water table levels, both locally within the application area and downslope in the tributaries of the West River. On this basis, it is considered that the proposed clearing is likely to cause deterioration in the quality of underground water.

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

Methodology References:
CSLC (2016a)

GIS Databases:
- Hydrography, linear
- Hydrography, hierachy

(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

According to available databases, the average annual rainfall of the local area (10 kilometre radius) is 400 millimetres.

Several minor non-perennial watercourses are mapped within the application area. No major watercourses occur within close proximity to the application area. Available aerial imagery indicates that the application area is within 100 metres of a defined waterway, and is likely to include minor waterways.

In respect to a previous application (CPS 6765/1) within which the application area is located, the applicant referred to 40.6 hectares of waterways on the property that were previously cleared, and advised that buffers to waterways would be retained (and fenced and rehabilitated) to prevent soil erosion and salinity. In respect to the current application, the applicant advised that there may be gullies within the application area that will not be cleared. It is noted that the applicant has not specified a minimum buffer width, consistent with Department of Water guidance.

The Commissioner of Soil and Land Conservation (CSLC) advised that the map unit 243 Uf_5 lies on the mid and upper slope position (CSLC, 2016a). A land degradation assessment report referred to in the CSLC's advice indicates that the application area is well drained with defined waterways. The land degradation assessment report indicates that the proposed clearing is unlikely to significantly increase surface runoff which would contribute to stream flows, and that the risk of flooding causing land degradation (which may affect the volume of surface water runoff) is low.

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

Methodology References:
CSLC (2016a)

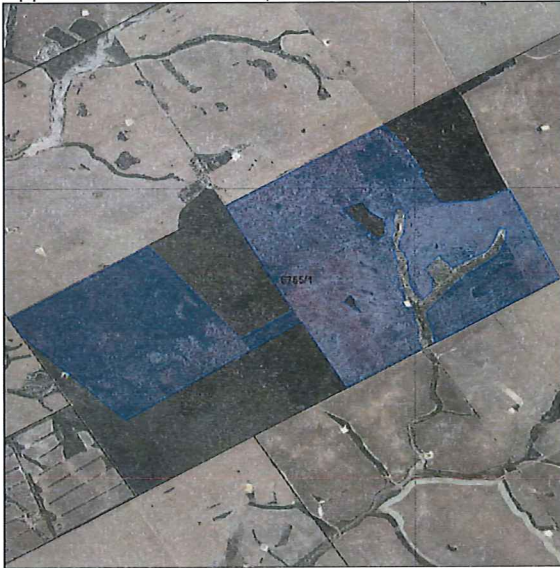
GIS Databases:
- Hydrography, linear
- Hydrography, hierachy

Planning instruments and other relevant matters.

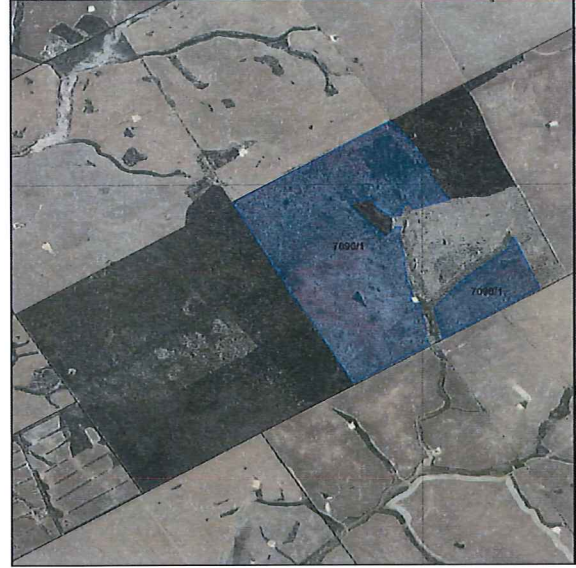
Comments The applicant previously applied to clear 630 hectares of native vegetation on Lot 1692 on Deposited Plan 208474, West River, for the purpose of cropping and pasture (CPS 6765/1). Assessment of CPS 6765/1 determined that the proposed clearing will cause appreciable land degradation in the form of salinity and subsequent deterioration in the quality of surface water and groundwater, will impact on native vegetation that comprises a high level of biological diversity, habitats for conservation significant fauna and is significant as a remnant in an extensively cleared landscape, and may impact on rare and priority flora. A Delegated Officer of the Department of Environment Regulation (DER) refused the application on 18th April 2016.

The current application is to clear 325 hectares of native vegetation on Lot 1692 for the same purpose as for the previous application (CPS 6765/1). The current application overlaps the area previously applied for in the previous application (CPS 6765/1), as indicated in the imagery below:

Application CPS 6765/1 (630 hectares)



Application CPS 7090/1 (325 hectares)



The application area is zoned 'General Agriculture' under the Shire of Ravensthorpe Town Planning Scheme No. 5.

The application area is located within the agricultural area defined in Environmental Protection Authority's Position Statement No. 2 (EPA, 2000). Position Statement No. 2 states that significant clearing of native vegetation has already occurred on agricultural land, leading to a reduction in biodiversity and increase in land salinisation (EPA, 2000). Position Statement No. 2 states that there is a general presumption against clearing within this area for agricultural purposes, however in exceptional circumstances the EPA would consider supporting clearing for agriculture within this region if:

- there are alternative mechanisms for protecting biodiversity;
- the area to be cleared is relatively small, depending on the scale at which biodiversity changes over the area, including extent of vegetation in the surrounding area and recognising that values will vary for different ecosystems;
- the proponent demonstrates that the elements set out in Section 4.3 of this Position Statement are being met. This will require extensive local and regional biodiversity work; and/or
- land degradation, including aquatic environments and threatening processes, such as dieback, salinisation or disruption of catchment processes, on-site and off-site would not be exacerbated (EPA, 2000).

According to available databases, no Aboriginal sites of significance occur within the application area.

The application was advertised in *The West Australian* newspaper on 10 June 2016. One submission was received in response to the advertisement, objecting to the proposed clearing on the basis that the application area is located within the mapped extent of the Commonwealth-listed threatened ecological community 'Proteaceae dominated kwongan shrublands of the southeast coastal floristic province of Western Australia' and a highly cleared landscape, and contains high biodiversity values and habitat for fauna including species of conservation significance (Submission, 2016).

Although this application is for a smaller area than for the previous application (CPS 6765/1), assessment of the application has identified that the proposed clearing is likely to have a number of significant environmental impacts.

On 10 August 2016 a Delegated Officer wrote to the applicant, advising of the significant environmental impacts identified during the assessment of the application (the proposed clearing is highly likely to cause off-site salinity, the application area comprises significant habitat for indigenous fauna including six threatened species and other species of conservation significance, the application area is located within a macro habitat corridor and is a significant remnant in an extensively cleared area). The applicant was also advised that the application area may contain rare and priority flora species. The applicant was advised that it is unlikely that a clearing permit will be granted, and was invited to provide additional information demonstrating ability to avoid or minimise the impacts identified.

The applicant provided a response in a letter dated 15 August 2016 (DER ref. A1153016). In summary, the applicant advised:

- Rabbit populations would decline and hopefully be eradicated (through excavation of warrens and humane eradication as part of farm management practice) if access were granted to clear the application area.
- Salinity of the groundwater and the groundwater levels are understood to have increased as indicated by bore readings and data gathered by the Department of Agriculture and Food WA. Everything viably possible will be done to reduce the negative impacts of the proposed clearing, including fencing and rehabilitating waterways/gullies in the application area. One major gully is excluded from the application area; a second east-west gully will also be fenced/rehabilitated (reducing the extent of proposed clearing to 318.68 hectares). Consistent with Department of Water guidance, a 30 metre buffer zone either side of the gully would be retained. If the clearing is approved modern farming techniques (direct seeding rather than disc ploughs) would be used to avoid exacerbating soil erosion problems. Following discussion with South East Agronomy Services, lime would be added to the areas of hard clay soils which would make them more pliable and reduce surface water runoff. Contour banks could also be applied to help reduce water erosion.
- The application area has previously been cleared, and has regrown mainly with *Oxylobium tetragonophyllum* (brother-brother poison plant). This is not known to be foraging habitat of Carnaby's cockatoo, and evidence of Carnaby's cockatoo has not been seen within the property within the last 40 years. The application area does not contain tree species listed as black cockatoo breeding habitat and lacks the preferred selection of foraging plants listed in the Department of Sustainability, Environment, Water, Population and Communities' referral guidelines for black cockatoos.
- The mapping of 'Strategic Zone B' of the macro corridor habitat contains insufficient detail to determine whether the property is within the Strategic Zone.
- The vegetation description in the Preliminary Assessment Report is inconsistent with the vegetation within the application area, but rather reflects that of the previous application area (CPS 6765/1). The vegetation description needs to be confirmed as it is incorrect and misinforming, and could have an effect on the 'Strategic Zone B' of the macro corridor habitat.
- Gullies would be rehabilitated to an overall width of 60 metres, which will link 507 hectares of natural vegetation at the western side of the application area to the north-eastern side of the application area, which would assist in reducing soil erosion and provide an access corridor for local fauna, and would link with creekline vegetation on a neighbouring property to the south of the application area.
- It is not in a farmer's, landholder's or human's best interests to see the land degraded or the natural flora and fauna depleted to non-existence. A decision on the application should take into account the reduced application area and the increased amount of land to be rehabilitated creating corridors on the property.

Additional advice was sought from the Commissioner of Soil and Land Conservation (CSLC) in respect to the adequacy of the applicant's proposed management measures for avoiding the potential for land degradation in the form of salinity (DER ref. A1154653). The CSLC's additional advice was received on 16 September 2016 and is considered under Principle (g) (CSLC, 2016b).

On 22 September 2016 a Delegated Officer wrote to the applicant advising that their submission had been considered and further advice sought from the Commissioner of Soil and Land Conservation regarding the proposed management measures. While the review of the submission altered the level of variances to principles (a) and (b) to "may be at variance", the Delegated Officer remained of the view that principle (g) was seriously at variance. Under section 51O(3) of the EP Act, the CEO may make a decision that is seriously at variance with the clearing principles if, and only if, in the CEO's opinion there is a good reason for doing so.

The Delegated Officer advised the applicant of the intent to refuse the application in 30 days and provided an opportunity for the applicant to provide a further submission (DER ref. A1169616).

At the date of this decision, no further submission was received from the applicant.

Methodology References:
CSLC (2016b)
EPA (2000)
Submission (2016)

GIS Databases:
- Aboriginal Sites Register System
- Town Planning Scheme Zones

4. References

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