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.: 7665/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Northam
Application receved date: 27 June 2017

1.3. Property details

Property: O'Neill Road Reserve - (PIN's 11518429, 11506958, 11518431, 11518418, 11518419, 11518432, 11518430 and 11518433), Southern Brook
Lot 10262 on Deposited Plan 255247, Southern Brook
Lot 2267 on Deposited Plan 255237, Southern Brook
Lot 803 on Deposited Plan 302221, Southern Brook
Local Government Authority: Northam, Shire of
Localities: Southern Brook

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
5		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application: Refused
Decision Date: 21 January 2019
Reasons for Decision:

The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing is at variance to principles (e) and (f), may be at variance to principle (b), (h) and is not likely to be at variance to the remaining principles.

The Delegated Officer determined that the vegetation within the application area comprises of a significant remnant of native vegetation in an area that has been extensively cleared; vegetation associated with a watercourse; and may comprise of significant habitat for fauna.

On 29 November 2017, a Delegated Officer of the Department of Water and Environmental Regulation (DWER) wrote to the applicant, outlining the above mentioned environmental impacts and advising that, in order to address the potential impacts, further avoidance and minimisation was required and an offset for the remaining significant residual impacts. The applicant reduced the application from five hectares to 2.34 hectares, and then further reduced the area to 0.82 hectares, but no further avoidance measures or offsets were provided.

The Delegated Officer noted that the 0.82 hectares of native vegetation comprises Beard vegetation associations 694 and 1049 of which both retain 7 per cent of their pre-European vegetation extents within the Avon Wheatbelt IBRA bioregion. While acknowledging the reduction in the application area, the Delegated Officer still considered that the remaining clearing would impact upon native vegetation which is significant as a remnant in an extensively cleared area.

The Delegated Officer considered that an offset may be suitable to counterbalance for residual environmental impacts of clearing a significant remnant in a highly cleared landscape. The Delegated Officer considered that without the provision of an appropriate offset, the proposed clearing of 0.82 hectares is likely to result in an unacceptable environmental impact.

On 26 November 2018, the Delegated Officer wrote to the applicant and provided 21 days written notice of the intent to refuse to grant a clearing permit. No response from the applicant was received.

In making the decision to refuse to grant the clearing permit, the Delegated Officer had regard to the environmental values of the native vegetation outlined under principles (b), (e) and (f), and planning instruments and other relevant matters outlined in this report.

2. Site Information

Clearing Description

The application is to clear 5 hectares of native vegetation within the abovementioned localities for the purpose of road widening and maintenance.

Vegetation Description

Two Beard vegetation associations are mapped within the application area (Shepherd et al., 2017):

- Beard vegetation association 694 is described as 'shrublands; scrub-heath on yellow sandplain *Banksia-Xylomelum* alliance in the Geraldton Sandplain and Avon-Wheatbelt Regions; and
- Beard vegetation association 1049 is described as medium woodland; wandoo, York gum, salmon gum, morrel and gimlet.

Vegetation Condition

Completely Degraded: No longer intact; completely/almost completely without native species (Keighery,1994)

To

Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment

The vegetation description and condition was determined through a site inspection undertaken by Department of Water and Environmental Regulation (DWER) Officer's (DWER, 2017).

The application area is in a degraded to completely degraded (Keighery, 1994) condition and predominantly consists of scattered *Eucalyptus* sp. over weeds. There were stretches of road reserve with only weed species present.

Some mid-storey and understorey species were present in patches including *Allocasuarina* sp. and *Acacia* sp.

3. Minimisation and mitigation measures

To address the identified environmental impacts, on 23 November 2017 the applicant reduced the amount of native vegetation to be cleared from 5 hectares to 3.2 hectares.

On 6 December 2017, the applicant further reduced the application area down to 0.82 hectares.

4. Assessment of application against clearing principles

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

Comments

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

The application is for the proposed clearing of 5 hectares of native vegetation within Lot 803 on Deposited Plan 302221, Lot 10262 on Deposited Plan 255247, Lot 2267 on Deposited Plan 255237 and O'Neill Road reserve (PIN's 11518429, 11506958, 11518431, 11518418, 11518419, 11518432, 11518430 and 11518433), Southern Brook, for the purpose of road widening and maintenance.

According to available databases one threatened flora and two priority flora species have been recorded within the local area (10 kilometre radius). As assessed under principle (c), suitable habitat for threatened flora is not likely to be located within the application area. The two priority flora identified within the local area *Acacia campylophylla (*Priority 3) and *Eremaea blackwelliana* (Priority 4) were not identified during a site inspection undertaken by DWER and Department of Biodiversity, Conservation and Attractions (DBCA) (DWER, 2017 and DBCA, 2017).

Site inspections undertaken by DWER and DBCA identified three individuals of *Acacia lirellata* subsp. *lirellata* (Priority 3). This species is known from a range of 270 kilometres, however, there is a disjunct between the Central Wheatbelt populations and populations east of Watheroo National Park. DBCA advised that any impacts to this species has the potential to be significant with respect to its conservation (DBCA, 2017). A flora management condition requiring the applicant to avoid the three individuals of *Acacia lirellata* subsp. *Lirellata* would mitigate impacts to this species.

As assessed in principle (b), the application area provides foraging and potential breeding habitat for the conservation significant Carnaby's cockatoo (*Calyptorhynchus latirostris*). However, given the completely degraded to degraded (Keighery, 1994) condition of the application area and that no suitable breeding hollows were identified within the application area (DWER, 2017), the proposed clearing is not likely to have an impact on significant habitat for this species.

As assessed under principle (d), the application area is located approximately 15 metres from the threatened ecological community (TEC), 'Eucalypt woodlands of the Western Australian Wheatbelt' which is listed as critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and as a priority 3 ecological community by DBCA. Noting the condition of the vegetation within the application area, the application area does not meet the condition thresholds required to be representative of this TEC.

The proposed clearing is located adjacent to remnant native vegetation, the proposed clearing may impact upon this vegetation through the spread of weeds and dieback. Weed and dieback management practices will mitigate this risk.

Given the above, the application area is not likely to comprise a high biological diversity and the proposed clearing is not likely to be at variance to this principle.

A condition to avoid clearing priority flora within the application area will mitigate impacts to priority flora species.

Methodology

References:
DBCA (2017)
DWER (2017)
Keighery (1994)

GIS Datasets:
SAC Biodata sets accessed November 2017

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposed clearing may be at variance to this Principle

One fauna species listed as rare or likely to become extinct under the *Biodiversity Conservation Act 2018* (BC Act) within the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*, has been recorded within the local area (10 kilometre radius), being Chuditch (*Dasyurus geoffroii)* (DBCA, 2007-). The Carnaby's cockatoo is also listed as rare or likely to become extinct under the BC Act and has been given the status of endangered under the EPBC Act and is also known to occur within the local area (Commonwealth of Australia, 2012).

The Carnaby's cockatoo species forage on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (*Banksia*, *Hakea* and *Grevillea*), as well as *Allocasuarina* and *Eucalyptus* species, *Corymbia calophylla* and a range of introduced species (Valentine and Stock, 2008). The application area contains suitable foraging habitat for Carnaby's cockatoo, largely in the form of scattered *Eucalyptus* sp. (DWER, 2017).

According to available databases the closest known breeding area is located approximately 26 kilometres north west of the application area. To be suitable as a black cockatoo breeding site, trees require a suitable nest hollow or be of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, a suitable DBH is 500 millimetres (Commonwealth of Australia, 2012). A site inspection undertaken within the application area identified a number of large trees that have the potential to develop suitable breeding hollows for black cockatoos. Small hollows were observed in some trees however, they were not of size or shape to be suitable for breeding by the Carnaby's cockatoo (DWER, 2017).

Noting the largely scattered occurrence of suitable foraging habitat and the completely degraded to degraded (Keighery, 1994) condition of the application area, the application area is not likely to comprise of significant foraging habitat for Carnaby's cockatoo. The proposed clearing will involve clearing approximately 1 -2 metres of vegetation either side of the road. The road reserve currently retains approximately 6 – 7 metres of vegetation either side and therefore suitable foraging and potential breeding habitat will remain within the road reserve.

The Chuditch currently inhabit most kinds of wooded habitat within its current range including eucalypt forest (especially jarrah, dry woodland and mallee shrublands). In jarrah forest, chuditch populations occur in both moist, densely vegetated, steeply sloping forest and drier, open, gently sloping forest (Department of the Environment and Energy, 2017). Given the completely degraded to degraded (Keighery, 1994) condition of the application area, significant habitat for this species is not likely to be impacted by the proposed clearing.

The local area has been extensively cleared (refer to Principle (e)). The vegetation located within the application area is likely to function as an ecological linkage between areas of remnant vegetation in the local area, and is likely to facilitate landscape connectivity and contribute to fauna dispersal between larger isolated bushland fragments in an extensively cleared landscape. While it is noted that the vegetation proposed to be cleared is in a completely degraded to degraded (Keighery, 1994) condition, given the highly cleared landscape it is considered that the application area may be critical for the survival of fauna species within the local area and broader region.

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

Methodology

References:
Commonwealth of Australia (2012)
DBCA (2007-)
Department of the Environment and Energy (2017)
Keighery (1994)
Valentine and Stock (2008)

GIS Datasets:
SAC bio datasets (accessed May 2017)

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

Comments

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

One threatened flora species has been recorded within the local area, located approximately six kilometres from the application area.

This species is found only between Dowerin and Goomalling and grows in grey sandy soil on the edge of salt lakes, in low scrub (Brown et al., 1998).

Given the above, suitable habitat for this species is not likely to be present within the application area. DBCA did not identify this species within the application area (DBCA, 2017)

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

Methodology

References:
Brown et al. (1998)
DBCA (2017)

GIS Datasets:
SAC Biodata sets accessed November 2017

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

Comments

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

One TEC, 'Eucalypt woodlands of the Western Australian Wheatbelt' has been mapped approximately 15 metres from the application area. The *Approved Conservation Advice (including listing advice) for the Eucalypt Woodlands of the Western Australian Wheatbelt* states that these woodlands are dominated by a complex mosaic of eucalypt species with a tree or mallet form over an understorey that is highly variable in structure and composition (Threatened Species Scientific Committee [TSSC], 2015).

Noting the condition of the vegetation within the application area, the application area does not meet the condition thresholds required to be representative of this TEC. The application area may provide a buffer to this TEC, however the proposed clearing intends to widen the road by approximately 1 – 2 metres and therefore vegetation will remain within the road reserve that will provide a buffer to this TEC.

The application area is not likely to include or be necessary for the maintenance of a TEC.

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

Methodology

References:
TSSC (2015)

GIS Datasets:
SAC Biodata sets accessed November 2017

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

Comments

Proposed clearing is at variance to this Principle

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The application area is located within the Avon Wheatbelt Interim Biogeographic Regionalisation for Australia (IBRA) bioregion which retains approximately 19 per cent of its pre-European vegetation extent (Government of Western Australia, 2018). The local area (10 kilometre radius) also retains approximately 7 per cent native vegetation and the Shire of Northam retains 24 per cent of its pre-European vegetation extent.

The application area is mapped as Beard vegetation associations 694 and 1049 of which both retain 7 per cent of their pre-European vegetation extents within the Avon Wheatbelt IBRA bioregion (Government of Western Australia, 2018). Impacts on a vegetation association that has less than 10 per cent of its pre-European vegetation extent remaining is considered severe as any remaining native vegetation is critical to the continued existence of the associations environmental values.

Noting the current vegetation extents for the bioregion, the Shire of Northam, the mapped Beard vegetation associations within the bioregion and the local area, are all well below the 30 per cent threshold, the application area is considered to be within an extensively cleared area.

As discussed under principle (b), the vegetation within the application area provides an ecological linkage between areas of remnant vegetation in the local area, and is likely to facilitate landscape connectivity and contribute to fauna dispersal between larger isolated bushland fragments in an extensively cleared landscape.

Given the application area comprises Beard vegetation associations 694 and 1049 of which both retain 7 per cent, the vegetation with the application area is considered critical to the continued existence of these associations and is considered significant as a remnant of native vegetation in an area that has been extensively cleared.

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

It is noted that without the provision of an appropriate offset, the proposed clearing of the 0.82 hectares is likely to result in unacceptable environmental impact.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DBCA Managed Lands (%)
IBRA Bioregion				
Avon Wheatbelt	9,517,110	1,763,071	19	10
Local Government Authority				
Shire of Northam	143 131	33 815	24	25
Beard Vegetation Association in Bioregion*				
694	173,922	12,637	7	14
1049	833,385	56,618	7	6

Methodology

References:
Commonwealth of Australia (2001)
DWER (2017)
*Government of Western Australia (2018)
Keighery (1994)

GIS Databases:
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

According to available databases, two minor watercourses intersect the application area and a wetland is mapped within the southern portion of the application area.

Riparian vegetation was identified within the application area during the DWER site inspection (DWER, 2017).

Given the above, sections of the vegetation within the application area are considered to be growing in association with a watercourse, and therefore the proposed clearing is at variance to this principle.

Given that there are likely to be culverts or existing drainage infrastructure in place, the proposed clearing is not likely to have a significant impact on vegetation associated with a watercourse.

Methodology

References:
DWER (2017)
Keighery (1994)
GIS Databases:
Hydrology, linear

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

Comments

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

Two soils types have been mapped within the application area which are described as (Northcote et al., 1960 – 1968):

- Va63: valley plains and terraces: chief soils are hard alkaline yellow mottled soils. Associated are small areas of a range of soils including both containing laterite or large amounts of ironstone gravels ; and
- Uf1: Undulating terrain with ridges, spurs, and lateritic mesas and buttes: chief soils on the broad undulating ridges and spurs are hard, and also sandy, neutral, and also acidic, yellow mottled soils, all containing ironstone gravels.

Given the abovementioned mapped soil types, the clearing of five hectares of native vegetation along a linear stretch of road in a completely degraded to degraded (Keighery, 1994) condition is not likely to lead to land degradation through water erosion, water logging, wind erosion, salinity or eutrophication.

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

Methodology

References:
Northcote et al. (1960 – 1968)

GIS databases:
Hydrology, linear
Soils, statewide

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

Comments

Proposed clearing may be at variance to this Principle

The closest conservation area is 'Cartamulligan Well Nature Reserve' located approximately 4.5 kilometres north west of the application area.

Given the distance to the closest conservation area, the proposed clearing is not likely to have a direct impact on the environmental values of any nearby conservation areas.

As discussed within principles (b) and (e), the application area functions as an ecological linkage between areas of remnant vegetation in the landscape. Given the extent of native vegetation remaining in the local area, Shire of Northam and the IBRA Bioregion, the application area may contribute towards fauna dispersal between the abovementioned conservation area and remnant vegetation located within the local area, and the proposed clearing may therefore impact on the environmental values of these areas.

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

Methodology

GIS Databases:
DBCA, Tenure

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

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

According to available databases, two minor watercourses intersect the application area and a wetland is mapped within the southern portion of the application area.

The proposed clearing may increase run-off and sedimentation into the watercourse and wetland intersecting the application area, however this impact is likely to minimal and short term. In addition, there are likely to be culverts in place which will ensure that surface water flow is not disturbed.

Groundwater salinity is mapped between 14000 - 35000 milligrams per litre total dissolved solids which is considered to be highly saline. Due to the small size and linear nature of the proposed clearing, the completely degraded to degraded (Keighery, 1994) condition of the application area and that native vegetation is to remain within the road corridor, the proposed clearing is not likely to cause deterioration in the quality of underground water.

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

Methodology

References:
Keighery (1994)

GIS Databases:
Hydrology, linear
Groundwater salinity

(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

Given the mapped soil type present and that vegetation remains within the road reserve, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

While two minor watercourses intersect the application area, the proposed clearing is not likely to be of a size or scale as to cause or exacerbate flooding.

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

Methodology

GIS Datasets:
Hydrography, linear

Planning instruments and other relevant matters.

Comments

One Aboriginal Site of Significance, 'Southern Brook', is mapped within the most southern portion of the application area. It is the applicant's responsibility to ensure that no Aboriginal Sites of Significance are damaged through the clearing process and that they adhere to their obligations under the *Aboriginal Heritage Act 1972*.

The application was advertised on DWER's website on 2 August 2017 for a 21 day submission period. No submissions have been received in relation to this application.

Methodology

GIS Datatsets:
Aboriginal Sites of Significance

5. Applicant's Submissions

On 29 November 2017, a Delegated Officer of DWER wrote to the applicant, outlining the above mentioned environmental impacts. It was noted that the applicant reduced the application from five hectares to 2.4 hectares, however despite these measures the Delegated Officer advised that significant residual impacts remain and advised that in order to address potential impacts further avoidance and minimisation was required and an offset for the remaining significant residual impacts.

On 6 December 2017, the applicant advised that the application area could be further reduced to 0.82 hectares, which will address the minimum safety requirements. The applicant advised that:

> "the proposed works will improve safety for road users by allowing two (2) vehicles to safely pass one another without having to leave the sealed road surface. The current sealed road width is as little as 3.7 meters in some sections which presents a significant safety risk. If the widening / clearing works were to proceed there is sufficient vegetation within the road reserve that will still maintain the existing linkages between the landscapes for fauna dispersal" (Shire of Northam, 2017).

On the 14 December 2017, a Delegated Officer of DWER wrote to the applicant and noted that the clearing had been reduced to 0.82 hectares will minimise the identified environmental impacts. However, despite these measures the significant residual impacts remain and advised that in order to address potential impacts further avoidance and minimisation was required and an offset for the remaining significant residual impacts.

On 24 October 2018, a copy of the preliminary assessment and DWER's letter dated 14 December 2017 was re sent to the applicant.

On 26 November 2018, the Delegated Officer wrote to the applicant and provided 21 days written notice of the intent to refuse to grant a clearing permit. No further response from the applicant was received.

6. References

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

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

Commonwealth of Australia (2012). EPBC Act referral guidelines for three threatened black cockatoo species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra

Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed October2017

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Department of the Environment (2017). Dasyurus geoffroii in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat.

Government of Western Australia (2016). 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. WA Department of Parks and Wildlife, Perth.

Government of Western Australia (2017). 2016 South West Vegetation Complex Statistics. Current as of December 2016. WA Department of Parks and Wildlife, Perth

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

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