



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6736/1
Permit Holder:	City of Wanneroo
Duration of Permit:	13 July 2016 to 13 July 2021

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of upgrading Old Yanchep Road.

2. Land on which clearing is to be done

LOT 10823 ON DEPOSITED PLAN 187676 (RESERVE 11598)
CROWN RESERVE 11598
ROAD RESERVE (PIN 11585469 AND PIN 11751044)
OLD YANCHEP ROAD RESERVE (PIN 11751045)
SPENCE ROAD RESERVE (PIN 1192731 AND PIN 1141639)

3. Area of Clearing

The Permit Holder shall not clear more than 2.39 hectares of native vegetation within the area cross hatched yellow on attached Plan 6736/1a.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 3 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II – MANAGEMENT CONDITIONS

6. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

7. Land on which revegetation and rehabilitation is to be done

LOT 774 ON DEPOSITED PLAN 246224

LOT 672 ON DEPOSITED PLAN 245973

8. Revegetation and rehabilitation (offsets)

- (a) The permit holder must establish and maintain native vegetation within the areas identified under condition 7 of this permit and cross hatched red on attached Plan 6736/1b.
- (b) Within 12 months of establishing and maintaining native vegetation in accordance with condition 8(a) of this Permit the Permit holder shall:
 - (i) engage an *environmental specialist* to determine whether the following completion criteria have been met:
 - A. native vegetation density of 2 stems per metre square throughout the revegetation area; and
 - B. 30 different native species in each hectare of the revegetation area; and
 - C. species composition of 5-10 per cent overstorey, 15-20 per cent midstorey and 70-75 per cent understorey within the revegetation area; and
 - D. weed coverage of less than 10 per cent within the revegetation area.
 - (ii) where in the opinion of an *environmental specialist*, the completion criteria listed under Condition 8(b)(i) of this Permit will not be established and maintained, undertake additional *plantings* until the completion criteria listed under condition 8(b)(i) is achieved.
- (c) Where additional planting is undertaken in accordance with condition 8(b)(ii) of this Permit, the Permit Holder shall repeat condition 8(b)(i) and 8(b)(ii) within 12 months of undertaking the additional *planting*.
- (d) Where there is a determination by an *environmental specialist* that the completion criteria listed under condition 8(b)(i) is achieved, as determined in Condition 8(b)(i) and (ii) of this permit, that determination shall be submitted to the Department for consideration. If the CEO or his delegate does not agree with the determination made under condition 8(b)(ii), the CEO or his delegate may require the Permit Holder to undertake additional *planting* in accordance with the requirements under condition 8(b)(ii).

9. Weed and dieback control

- (a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
 - (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
 - (ii) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared;
 - (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared;
 - (iv) only move soils in *dry conditions*; and
 - (v) where *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is to be removed from the area to be cleared, ensure it is transferred to areas of comparable *soil disease status*.
- (b) At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.
- (c) Prior to leaving the area(s) cross-hatched red on attached Plan 6736/1a, the Permit Holder must clean earth-moving machinery of soil and vegetation.

PART III – RECORD KEEPING AND REPORTING

10. Records to be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 8 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
 - (v) a copy of the environmental specialist's report.

11. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 10 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 13 April 2021, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

Definitions

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

dieback means the effect of *Phytophthora* species on native vegetation;

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

environmental specialist means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist.

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources geographically similar and within as close proximity as practicably possible; local provenance in areas of high diversity, such as the Swan Coastal Plain, can be within 50 kilometres, whereas in areas with homogenous diversity, such as the Central Kimberley, can be within 200km.

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

planting/s means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

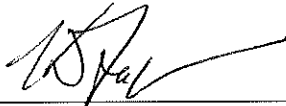
regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing mulch;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

soil disease status means soil types either infested, not infested, uninterpretable or not interpreted with a pathogen;

weed/s means any plant that is -

- (a) a declared plant under section 35 of the *Agricultural and Related Resources Protection Act 1976*;
- (b) a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*;
- (c) published in the Department of Parks and Wildlife's ranking summary results by region (regardless of ranking); or
- (d) not indigenous to the area concerned;



Kelly Faulkner
EXECUTIVE DIRECTOR
LICENSING AND APPROVALS

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

13 June 2016

Plan 6736/1a



Legend

-  Areas approved to clear
 -  Roads
 -  Cadastre
- Virtual Mosaic (LGATE-V001)



1:4,832

MGA 94
Geocentric Datum of Australia 1994



Date 17/6/16

Kelly Faulkner

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

100 0 100 200 300 m







GOVERNMENT OF
WESTERN AUSTRALIA

Plan 6736/1b



Legend

-  Clearing Instruments Conditions
-  Roads
-  Cadastre
-  Virtual Mosaic



1:4,832

MGA 94

Geocentric Datum of Australia 1994


Date 13/6/16
Kelly Faulkner

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

100 0 100 200 300 m



GOVERNMENT OF
WESTERN AUSTRALIA



1. Application details

1.1. Permit application details

Permit application No.: 6736/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: City of Wanneroo

1.3. Property details

Property: LOT 10823 ON PLAN 187676, PINJAR
CROWN RESERVE 11598, NEERABUP
ROAD RESERVE - 1141639, PINJAR
ROAD RESERVE - 1192731, PINJAR
ROAD RESERVE - 11751045, NEERABUP
ROAD RESERVE - 11585469, PINJAR
ROAD RESERVE - 11751044, PINJAR
Old Yanchep Road and Spence Road
WANNEROO, CITY OF
Greater Swan
SWAN COASTAL
NEERABUP and PINJAR

Colloquial name:
Local Government Authority:
DER Region:
DPaW District:
Localities:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.39		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 13 June 2016
Reasons for Decision: The applicant has applied to clear 2.39 hectares of native vegetation for the purpose of road construction or upgrades.

The clearing 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), and it has concluded that the proposed clearing is at variance to Principles (a), (f) and (h) and is not likely to be at variance to the remaining Principles.

The Delegated Officer determined that the proposed clearing will impact vegetation in good (Keighery, 1994) condition, a priority ecological community, vegetation growing in association with a wetland, suitable habitat for conservation significant fauna, environmental values of adjacent conservation areas, and may impact priority flora. The Delegated Officer noted that the application area includes approximately one hectare of Bush Forever site 295 and approximately 0.57 hectares of Bush Forever site 382.

To mitigate the impacts to conservation areas, the clearing permit will include conditions for weed and dieback management, consistent with the applicant's commitments.

To mitigate the impacts to Bush Forever areas consistent with the *State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region*, the clearing permit will include conditions for offsets. Consistent with the WA Environmental Offset Policy (2011) and WA Environmental Offsets Guidelines (2014), and pursuant to section 51(2)(b) of the EP Act, the Permit Holder is required to comply with the completion criteria specified in the applicant's revegetation plan.

These factors were taken into consideration by the Delegated Officer in the decision to grant a clearing permit.

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation association 6: Medium woodland; tuart & jarrah (Shepherd et al., 2001).	The applicant proposes to clear 2.39 hectares of native vegetation for the purpose of upgrading Old Yanchep Road.	Completely Degraded; No longer intact, completely/almost completely without native species (Keighery, 1994).	The condition of the vegetation under application was determined by a site inspection undertaken by officers of the Department of Environment Regulation (DER, 2015).
Heddle vegetation complex Karrakatta-Central And\South: Predominantly open forest of <i>Eucalyptus gomphocephala</i> (Tuart) - <i>Eucalyptus marginata</i> (Jarrah) - <i>Corymbia calophylla</i> (Marri) and woodland of <i>Eucalyptus marginata</i> (Jarrah) - <i>Banksia</i> species (Heddle et al., 1980).		To	
Heddle vegetation complex Pinjar: Vegetation ranges from woodland of <i>Eucalyptus marginata</i> (Jarrah) - <i>Banksia</i> species to a fringing woodland of <i>Eucalyptus rudis</i> (Flooded Gum) - <i>Melaleuca preissiana</i> (Moonah) and sedgeland (Heddle et al., 1980).		Good; Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).	

3. Assessment of application against clearing principles

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

Comments Proposed clearing is at variance to this Principle

The application is to clear up to 2.39 hectares of native vegetation for the purpose of road widening and reconstruction of existing curves for improved road safety of Old Yanchep Road. The proposed clearing occurs within Lot 10823 on Deposited Plan 187676 (Reserve 11598), Crown Reserve 11598, un-named road reserve (PIN 11585469 and PIN 11751044), Old Yanchep Road reserve (PIN 11751045) and Spence Road reserve (PIN 1192731 and PIN 1141639), Pinjar and Neerabup. This proposed road construction is a black spot funded project.

A site inspection of the application area undertaken by officers of the Department of Environment Regulation determined that the vegetation proposed to be cleared ranges from a good (Keighery, 1994) to completely degraded (Keighery, 1994) condition, with approximately 40 per cent of the vegetation considered to be in a good (Keighery, 1994) condition (DER, 2015).

Vegetation within the southern portion of the application area immediately to the south of Pederick Road is a *Banksia* woodland that consists of an overstorey of *Banksia menziesii*, *Banksia attenuata*, and *Nuytsia floribunda*, a mid-storey of *Adenanthos cygnorum*, *Hibbertia hypercoides*, *Xanthorrhoea preissii*, *Conospermum* and *Allocasuarina* species over an understorey of sedge species (DER, 2015).

Vegetation on the western side of Old Yanchep Road from the intersection of Spence Road up to approximately 400 metres north west up Old Yanchep Road is in good (Keighery, 1994) condition (DER, 2015). The vegetation comprises of low open woodland of *Banksia littoralis* and *Banksia ilicifolia* over a tall open shrubland of *Adenanthos cygnorum* over an open low heath of *Hypocalymma angustifolium* over open Low Heath of *Euchilopsis linearis* and *Hypocalymma angustifolium* with very open Sedgeland of *Baumea juncea* (Ecoscape (Australia) Pty Ltd, 2007).

Vegetation within the eastern side and northern half of the western side of the application area is in completely degraded to degraded (Keighery, 1994) condition given the high cover of weeds and lack of understorey. The vegetation consists of low woodland of *Eucalyptus rudis* regrowth, over a tall shrubland of *Adenanthos cygnorum* over an understorey of veldt grasses (DER, 2015).

According to available databases, the application area is part of Bush Forever sites 295 and 382, known as 'Flynn Drive Bushland, Neerabup' and 'Lake Pinjar and Adjacent Bushland, Pinjar' respectively (Government of Western Australia, 2000). Approximately one hectare of the vegetation under application is mapped within Bush Forever site 295, and is in good (Keighery, 1994) condition (DER, 2015). Approximately 0.57 hectares of the vegetation under application is mapped within Bush Forever site 382, and is in degraded to completely degraded (Keighery, 1994) condition. Noting the vegetation condition and the extent of clearing within these sites, it is considered that the proposed clearing will impact on the environmental values of Bush Forever site 295 through the direct removal of vegetation and increased edge effects.

A flora survey undertaken by Ecoscape (Australia) Pty Ltd in 2007 identified one Priority Ecological Community (PEC) within the application area. This Priority 3 (P3) PEC is known as 'Low lying *Banksia attenuata* woodlands or shrublands'. Noting that approximately 60 per cent of the vegetation under application is in degraded to completely degraded (Keighery, 1994) condition, it is considered that the impacts of the proposed clearing on the overall representation of this PEC are unlikely to be significant. According to available databases a second P3 PEC known as '*Banksia ilicifolia* woodlands' has been mapped within the application area, however the flora survey conducted by Ecoscape (Australia) Pty Ltd (2007) identified that the vegetation under application is not consistent with this PEC.

Twenty six species of priority flora have been recorded in the local area (10 kilometre radius). The closest priority flora is *Drosera x sidjamesii* (Priority 1) mapped approximately 14 metres from the application area. This species prefers peaty sand and occurs along lake margins, close to the winter high-water line (Western Australian Herbarium, 1998-). Noting the habitat requirements of this species, it is considered that the application area is unlikely to contain suitable habitat for this species.

The application area may include suitable habitat for two priority 2 species, *Calectasia elegans* (formally named *Calectasia Pinjar*) and *Stenanthemum sublineare*, which have been recorded from the same soil and vegetation types as found within the application area. Noting that approximately 60 per cent of the vegetation under application is in degraded to completely degraded (Keighery, 1994) condition, and the presence of vegetation in similar or better condition adjacent to the application area (within Bush Forever site 295), it is considered that the proposed clearing is unlikely to impact upon the conservation status of this species. No priority flora taxa were recorded within the application area during the survey conducted by Ecoscape (Australia) Pty Ltd in 2007.

The banksia woodland vegetation present within the application area is likely to provide foraging habitat for the Carnaby's cockatoo (*Calyptorhynchus latirostris*) and Baudin's cockatoo (*Calyptorhynchus baudinii*), both listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950*.

Noting that the application area includes vegetation in good (Keighery, 1994) condition, suitable habitat for conservation significant fauna, is representative of a PEC, and may contain priority flora, it is considered that the vegetation under application comprises a high level of biodiversity.

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

Methodology

References:

DER (2015)
Ecoscape (Australia) Pty Ltd (2007)
Government of Western Australia (2000)
Keighery (1994)
Western Australian Herbarium (1998-)

GIS Databases:

- NLWRA, Current Extent of Native Vegetation
- SAC Bio Datasets (Accessed December 2015)
- Bush Forever
- Parks and Wildlife Tenure

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

Comments

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

A total of 36 conservation significant fauna have been recorded within 10 kilometres of the application area (Parks and Wildlife, 2007-). Of these species the following are likely to utilise the application area: Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), both listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* (WC Act), peregrine falcon (*Falco peregrinus*) listed as Schedule 7 (other specially protected fauna) under the WC Act, native bee (*Hylaeus globuliferus*), western brush wallaby (*Macropus irma*) and quenda (*Isoodon obesulus fusciventer*), listed as Priority 3, 4 and 4 respectively by the Department of Parks and Wildlife (Parks and Wildlife).

Carnaby's cockatoo and Baudin's cockatoo forage on the seeds, nuts and flowers of a large variety of plants including proteaceous species (*Banksia*, *Hakea*, *Grevillea*), as well as *Allocasuarina* and *Eucalyptus* species, *Corymbia calophylla* and a range of introduced species (Valentine and Stock, 2008). The area of Banksia woodland that is of a good (Keighery, 1994) condition that occurs south of Pederick Road and on the western side of Old Yanchep Road from the intersection of Spence Road up to approximately 400 metres north up Old Yanchep Road, provides suitable foraging habitat for both species of black cockatoos. Although suitable foraging habitat occurs within the application area, it is not likely to provide significant foraging habitat given the linear nature of the proposed clearing and that higher quality vegetation which is located within the adjacent Bush Forever sites 382 and 295.

Potential habitat trees for black cockatoo species have a diameter at average adult human chest height of greater than 50 centimetres. Suitable habitat trees generally contain dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna. A site inspection of the application area undertaken by officers of the Department of Environment Regulation (DER, 2015) and a flora survey conducted by Ecoscape (Australia) Pty Ltd (2007) did not observe hollows of a suitable size for black cockatoo breeding.

The peregrine falcon has a preference for areas with rocky ledges, cliffs, watercourses, open woodlands or margins of cleared land (Ecoscape (Australia) Pty Ltd, 2007). Noting the condition and type of vegetation under application, and the presence of open woodlands and cleared land in the local area, it is considered that the application area may contain suitable habitat for this species. However noting the mobile nature of this species, it is unlikely these species would roost exclusively within the application area.

The native bee forages on flowers of *Adenanthos cygnorum* and *Banksia attenuata*. These flora species occur within the application area (Ecoscape (Australia) Pty Ltd, 2007; DER, 2015). Noting that approximately 60 per cent of the vegetation under application is in degraded to completely degraded (Keighery, 1994) condition, and the presence of vegetation in similar or better condition adjacent to the application area (within Bush Forever site 295), it is considered that the proposed clearing is unlikely to impact significant habitat for this species.

The western brush wallaby's optimum habitat is open forest or woodland, particularly favouring open, seasonally wet flats, with low grasses, and open scrubby thickets (Parks and Wildlife, 2012a). Suitable habitat is present within the portion of the application area located in Bush Forever site No. 295, which contains open woodland and a dense shrub layer. Noting that approximately 60 per cent of the vegetation under application is in degraded to completely degraded (Keighery, 1994) condition, and the presence of vegetation in similar or better condition adjacent to the application area (within Bush Forever site 295), it is considered that the proposed clearing is unlikely to impact significant habitat for this species.

The quenda has a preference for dense scrubby, often swampy, vegetation with dense cover of up to one metre high (Parks and Wildlife, 2012b). This species often forages in areas of pasture and croplands that lie close to dense cover (Parks and Wildlife, 2012b). Possible diggings were observed within the application area during a survey undertaken by Ecoscape (Australia) Pty Ltd (2007). Noting the presence of dense understorey within the application area and that approximately 40 per cent of the vegetation under application (within Bush Forever site 295) is in good (Keighery, 1994) condition, it is considered that the application area may contain suitable habitat for this species. However, the presence of vegetation in similar or better condition adjacent to the application area (within Bush Forever site 295), it is considered that the proposed clearing is unlikely to impact significant habitat for this species.

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

Methodology

References:

DER (2015)
Ecoscape (Australia) Pty Ltd (2007)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2012a)
Parks and Wildlife (2012b)
Valentine and Stock (2008)

GIS Databases:

- 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 is not likely to be at variance to this Principle

Three species of rare flora have been recorded within the local area (10 kilometre radius).

The closest known record of rare flora is located approximately 3.6 kilometres north west of the application area. This species prefers habitat in shallow sand on limestone ridges and slopes, where it emerges from heath and thicket of parrot bush and chenille honey-myrtle (Brown et al., 1998). Noting the habitat requirements of this species and the vegetation and soil types found within the application area, it is considered that the application area is unlikely to contain suitable habitat for this species.

The second species of rare flora is located approximately 6.1 kilometres east of the application area. The preferable habitat for this species is within mixed jarrah and banksia in areas that contain lush undergrowth (Brown et al, 1998). Noting the habitat requirements of this species and the vegetation and soil types found within the application area, it is considered that suitable habitat for this species may occur within the application area. No rare flora taxa were recorded during a flora survey undertaken by Ecoscape (Australia) Pty Ltd (2007), which was conducted at the appropriate time of year to enable identification of this species. On this basis, it is considered that the application area is unlikely to include this species.

The third species of rare flora is located approximately 9.3 kilometres west of the application area. Noting the habitat requirements of this species and the vegetation and soil types found within the application area, it is considered that the application area is unlikely to contain suitable habitat for this species.

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

Methodology

References:

Brown et al. (1998)
Ecoscape (Australia) Pty Ltd (2007)

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 closest threatened ecological community (TEC) to the application area has been mapped approximately two kilometres south west and is known as '*Banksia attenuata woodland over species rich dense shrublands*'. This TEC is listed as endangered under the *Wildlife Conservation Act 1950*.

A flora survey undertaken by Ecoscape (Australia) Pty Ltd in 2007 found that the vegetation under application is not considered to be analogous to a TEC. On this basis, it is considered that the application area is unlikely to comprise the whole or part of, or be necessary for the maintenance of, a TEC.

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

Methodology

References:

Ecoscape (Australia) Pty Ltd (2007)

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 not likely to be at variance to this Principle

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). Within constrained areas on the Swan Coastal Plain, the target for representation of the pre-clearing extent of a particular native vegetation complex is 10 per cent (EPA, 2006). The application area is zoned as 'urban' within the Metropolitan Regional Scheme and is therefore considered to be located within a constrained area.

The application area is located within the City of Wanneroo, within which approximately 45 per cent pre-European extent of vegetation cover remains (Government of Western Australia, 2014). The local area surrounding the application (10 kilometre radius) retains approximately 30 per cent native vegetation cover.

The vegetation under application is mapped as Beard vegetation association 6, of which approximately 24 per cent pre-European extent remains within the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) Bioregion (Government of Western Australia, 2014). The vegetation under application is also mapped as Heddlé Vegetation Complex 'Karrakatta Complex-Central and South' and 'Pinjar', of which 23 and

30 per cent pre-European extents remain respectively (Parks and Wildlife, 2015).

The vegetation extents applicable to the application area are greater than the recommended 10 per cent threshold for constrained areas.

Noting that the application area includes vegetation in good (Keighery, 1994) condition, suitable habitat for conservation significant fauna, is representative of a PEC, and may contain priority flora, it is considered that the vegetation under application comprises a high level of biodiversity and therefore may be significant as a remnant. However the application area is not located within an area that has been highly cleared.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,222	580,697	39	37
Local government*				
City of Wanneroo	67,517	30,382	45	53
Beard vegetation association in Bioregion*				
6	56,343	13,543	24	37
Hedde vegetation complex **				
Karrakatta Complex-Central And\South	49,912	11,374	23	6
Pinjar Complex	4,893	1,461	30	5

Methodology References
 Commonwealth of Australia (2001)
 EPA (2006)
 *Government of Western Australia (2014)
 **Parks and Wildlife (2015)

GIS Databases:
 - NLWRA, Current Extent of Native Vegetation
 - Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposed clearing is at variance to this Principle

According to available databases, approximately 1.17 hectares of the application area is mapped as a conservation category wetland (sumpland), and is in degraded (Keighery, 1994) condition.

A site inspection of the application area undertaken by officers of the Department of Environment Regulation (2015) observed species within the application area that typically occur on the edge of wetlands, including; *Eucalyptus rudis* and *Banksia littoralis*. The vegetation along the eastern side of Old Yanchep Road reserve comprises *Eucalyptus rudis* regrowth, with a dense understorey of weeds that is of a completely degraded (Keighery, 1994) condition due to previous disturbance through grazing practices (Ecoscape (Australia) Pty Ltd, 2007). The vegetation within the western side of Old Yanchep Road reserve has *Banksia littoralis* scattered throughout the overstorey.

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

Noting that the application area is aligned with, and for the purpose of upgrading, an existing road, it is considered that the proposed clearing is unlikely to significantly impact this wetland.

The applicant advised that strategies will be implemented to mitigate impacts to Pinjar Park and the mapped wetland, including clearing machinery prior to entering the construction site, ensuring soil, fill and mulch materials required in the construction works are disease and weed free, moving soil in dry conditions only, and installing exclusion fencing to delineate the edges of the application area.

Methodology References:
 DER (2015)
 Ecoscape (Australia) Pty Ltd (2007)

Keighery (1994)

GIS Databases:

- Geomorphic Wetlands, Swan Coastal Plain
- 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 not likely to be at variance to this Principle

The application area is mapped within soil type Cb39, which is described as subdued dune-swale terrain; chief soils are leached sands and on the low dunes (Northcote et al., 1960-68).

The proposed clearing on sandy soils may increase the risk of wind erosion. Noting the linear shape and extent of the proposed of the clearing, it is considered that the risk of appreciable land degradation in the form of wind erosion is minimal.

Ground water salinity levels in the local area have been mapped at less than 500 milligrams per litre total dissolved solids. On this basis, and noting the extent of the proposed clearing, it is considered that the proposed clearing is unlikely to increase groundwater salinity.

Noting the sandy soil type present within the application area, it is considered that the proposed clearing is unlikely to result in water erosion.

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

Methodology References:

Northcote et al. (1960-68)

GIS Databases:

- Soils, statewide
- Groundwater Salinity, 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 is at variance to this Principle

According to available databases, the application area is part of Bush Forever sites 382 and 295, known as 'Lake Pinjar and Adjacent Bushland, Pinjar' and 'Flynn Drive Bushland, Neerabup' respectively (Government of Western Australia, 2000).

Approximately 0.57 hectares of the vegetation under application is mapped within Bush Forever site 382, and is in degraded to completely degraded (Keighery, 1994) condition (DER, 2015). Bush Forever site 382 comprises approximately 494.6 hectares of native vegetation (Government of Western Australia, 2000). Given the extent of clearing proposed within this site, and noting condition of the vegetation, it is considered that the proposed clearing is unlikely to impact on the environmental values of this site.

Approximately one hectare of the vegetation under application is mapped within Bush Forever site 295, and is in good (Keighery, 1994) condition (DER, 2015). Bush Forever site 295 comprises approximately 4.85 hectares of native vegetation (Government of Western Australia, 2000). Given the extent of clearing proposed within this site, and noting condition of the vegetation, it is considered that the proposed clearing will impact on the environmental values of this site through the direct removal of vegetation and increased edge effects (including the potential introduction and spread of weeds and dieback).

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

The applicant advised that strategies will be implemented to mitigate impacts to Pinjar Park and the mapped wetland, including clearing machinery prior to entering the construction site, ensuring soil, fill and mulch materials required in the construction works are disease and weed free, moving soil in dry conditions only, and installing exclusion fencing to delineate the edges of the application area.

To mitigate the impacts to conservation areas, the clearing permit will include conditions for weed and dieback management. To mitigate the impacts to Bush Forever sites, the clearing permit will include conditions for offsets.

Methodology References:

DER (2015)
Government of Western Australia (2000)
Keighery (1994)

GIS Databases:

(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, approximately 1.17 hectares of the application area is mapped as a conservation category wetland (sumpland), and is in degraded (Keighery, 1994) condition. A site inspection of the application area undertaken by officers of the Department of Environment Regulation (2015) identified wetland vegetation within the application area, however no watercourses were observed.

Noting that there are no mapped watercourses within the application area, the degraded condition of the wetland vegetation under application, and sandy soil type present within the application area, it is considered that the proposed clearing is unlikely to cause deterioration in the quality of surface water quality.

Ground water salinity levels in the local area have been mapped as fresh at less than 500 milligrams per litre total dissolved solids. On this basis, and noting the extent of the proposed clearing, it is considered that the proposed clearing is unlikely to cause deterioration in the quality of groundwater.

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

Methodology References:
DER (2015)
Keighery (1994)

GIS Datasets:
- Hydrography linear
- Soils, statewide
- Groundwater Salinity, Statewide

(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**
Noting that there are no mapped watercourses within the application area, and the sandy soil type present within the application area, it is considered that the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

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

Methodology GIS Datasets:
- Hydrography linear
- Soils, statewide

Planning instruments and other relevant matters.

Comments The application area is located within a Native Title Claimant area. The Single Noongar Claim (Area 1), Swan River People 2 and Whadjuk People native title claimants and the South West Aboriginal Land and Sea Council (SWALSC), Albert Corunna and Clayton Utz Lawyers have been notified. The SWALSC (2015) advised that the proposed clearing may affect unregistered Aboriginal heritage sites within the application area. In order to address these concerns, the SWALSC has requested a heritage survey be undertaken and/or a Whadjuk representative is contracted to monitor the clearing process. The City of Wanneroo is advised to consult with the SWALSC in respect to this matter.

The Department of Planning Policy Development and Review (DoP) advised that the existing geometry of the road does not comply with design standards for the current posted speed limit (DoP, 2015). DoP advised that if reducing the speed limit is not a viable option, then it considers that the proposed clearing is justified with regard to road safety. DoP advised that mitigation and offsets for the loss of regionally significant bushland is required.

DoP advised that the site implementation category for the subject area of Bush Forever sites 295 and 382 are classified as Bush Forever Reserves under the *State Planning Policy 2.8 – Bushland Policy for the Perth Metropolitan Region*. Section 5.1.2.1 of this policy outlines specific policy measures for Bush Forever reserves, including that there is a general presumption against the clearing of regionally significant bushland except where the proposal is consistent with the overall purpose and intent of an existing reserve or can be reasonably justified with regard to wider environmental, social, economic or recreation needs, and that reasonable offset strategies are secured to offset any loss of regionally significant bushland, where appropriate and practical (DoP, 2015).

The application was advertised in *The West Australian* newspaper on 28 September 2015 for a 21-day submission period. No public submissions were received in relation to the proposed clearing.

On 17 December 2015 a Delegated Officer of the Department of Environment Regulation (DER) wrote to the applicant (DER ref. A1023449), advising of the impact to Bush Forever site 295, and recommending that the applicant consult with the SWALSC in respect to native title matters. The letter invited the applicant to provide additional advice addressing these issues and information on how the impacts of the proposed clearing will be avoided, minimised and offset.

In a letter dated 18 January 2016 (DER ref. A1042457), the applicant advised that:

- they will liaise with the SWALSC regarding unregistered Aboriginal heritage sites;
- they had previously approached Main Roads WA to reduce the speed limit on Old Yanchep Road, however this request was not supported by Main Roads WA, and the proposed clearing is therefore required to mitigate road safety risk;
- the [extent of the] application area ensures that the proposed construction works are compliant with the current Australian design standards, in addition batters on either side with a one-in-six gradient will provide for vehicle recovery area;
- a Crown land subdivision was submitted to the Department of Lands in mid-2015 for portions of Wattle Park and Pinjar Park to be excised and dedicated to road reserve, noting that pending approval from the Department of Lands the application area would wholly be located within road reserves;
- strategies will be implemented to mitigate impacts to Pinjar Park and the mapped wetland, including clearing machinery prior to entering the construction site, ensuring soil, fill and mulch materials required in the construction works are disease and weed free, moving soil in dry conditions only, and installing exclusion fencing to delineate the edges of the application area;
- an upgrade is proposed to the north and east perimeter boundary fencing of Pinjar Park within the 2016/17 financial year to assist in the long term protection of the reserve (the southern boundary fencing was upgraded in the 2013/14 financial year); and
- in August 2013 the clearing authorised under clearing permit CPS 2184/2 was reduced, which in turn reduced the offset (at Lake Badgerup) required for that clearing, resulting in a credit of 2.64 hectares as a banked offset which may be used for this application if an offset required.

On 10 February 2016 a Delegated Officer of DER wrote to the applicant (DER ref. A1048725), acknowledging the applicant's attempts to avoid or minimise the impacts of the proposed clearing, advising that the offset at Lake Badgerup has been fully allocated, and inviting the applicant to submit an offset proposal for consideration that addressed the impacts to Bush Forever site 295.

The applicant submitted an offset proposal to DER for consideration (DER ref. A1095370), comprising of a revegetation plan with completion criteria to achieve a 1:1.5 ratio to mitigate the residual environmental impact of the proposed clearing to the Bush Forever sites. The applicant requested in-principle agreement to enable the revegetation plan to be endorsed by Council. The applicant's offset proposal was referred to the DoP for review (DER ref. A1099297). DoP advised that they have no objection to the revegetation plan (DoP, 2016).

Methodology References:
DoP (2015)
DoP (2016)
SWALSC (2015)

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