



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8035/1
Permit Holder:	City of Wanneroo
Duration of Permit:	4 October 2018 to 4 October 2023

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 road widening.

2. Land on which clearing is to be done

Lot 3771 on Deposited Plan 65568, Banksia Grove

Lot 3180 on Deposited Plan 47664, Tapping

Pinjar Road Reserve (PIN 1177674), Mariginiup

Pinjar Road Reserve (PINs 11490209, 11494898, 11490210, 11529827, 11529826, 11023859, 11490198, 11490195, 11751088), Tapping

Pinjar Road Reserve (PINs 11490208, 11490207, 11490206, 11906145, 11490205, 11531632, 11490202, 11490204, 11490201, 11490203, 11490200, 11490212, 11490219, 11490219, 11490218, 11490199, 11490196, 11490197), Banksia Grove

Mornington Drive Road Reserve (PINs 1177701, 11751087), Mariginiup

Joondalup Drive Road Reserve (PIN 11309555), Carramar

3. Area of Clearing

The Permit Holder must not clear more than 2.2 hectares of native vegetation within the area hatched yellow on attached Plan 8035/1.

4. Application

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

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

6. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the right to access land under the *Land Administration Act 1997* or any other written law.

PART II –MANAGEMENT CONDITIONS

7. Avoid, minimise and reduce the extent and impact of clearing

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

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

8. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared;
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

PART III - RECORD KEEPING AND REPORTING

9. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) the date that the area was cleared;
 - (iii) the size of the area cleared (in hectares);
 - (iv) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 7 of this Permit; and
 - (v) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 8 of this Permit.

10. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 9 of this Permit, when requested by the *CEO*.

Definitions

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

CEO means the Chief Executive Officer of the Department responsible for administering the *Environmental Protection Act 1986*;

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

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

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

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*;
or
- (b) published in a Department of Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

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

4 September 2018

Plan 8035/1

31.708406°S

31.708406°S

115.796182°E

115.813068°E






115.796182°E

115.813068°E

31.716185°S

31.716185°S

Legend

-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority




1:8,478

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

 Date 04/09/2018
Mathew Gannaway

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



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WESTERN AUSTRALIA
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1. Application details

1.1. Permit application details

Permit application No.: 8035/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: City of Wanneroo
Application received date: 27 March 2018

1.3. Property details

Property: Lot 3771 on Deposited Plan 65568, Banksia Grove
Lot 3180 on Deposited Plan 47664, Tapping
Pinjar Road Reserve (PIN 1177674), Mariginiup
Pinjar Road Reserve (PINs 11490209, 11494898, 11490210, 11529827, 11529826, 11023859, 11490198, 11490195, 11751088), Tapping
Pinjar Road Reserve (PINs 11490208, 11490207, 11490206, 11906145, 11490205, 11531632, 11490202, 11490204, 11490201, 11490203, 11490200, 11490212, 11490219, 11490219, 11490218, 11490199, 11490196, 11490197), Banksia Grove
Morningside Drive Road Reserve (PINs 1177701, 11751087), Mariginiup
Joondalup Drive Road Reserve (PIN 11309555), Carramar

Local Government Authority: Wanneroo, City of
Localities: Mariginiup and Tapping and Banksia Grove and Carramar

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 4 September 2018
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 (d) and (f) and is not likely to be at variance to the remaining principles.

It has been determined that the proposed clearing will result in the following impacts:

- clearing of 0.1 hectares of a threatened ecological community (TEC) in a good to very good (Keighery, 1994) condition; and
- clearing of 0.2 hectares of wetland vegetation in a degraded (Keighery, 1994) condition.

The impacts of the proposed clearing are not considered significant given the small area of proposed impact.

The Delegated Officer determined that the proposed clearing may increase the spread of weeds and dieback into adjoining areas of TEC. To minimise this impact, a condition has been placed on the permit requiring the implementation of weed and dieback management measures.

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is unlikely to lead to an unacceptable risk to the environment.

Given the above, the Delegated Officer decided to grant a clearing permit subject to avoid and minimise and weed and dieback management conditions.

2. Site Information

Clearing Description The application is to clear 2.2 hectares of native vegetation within Pinjar Road reserve, Tapping, Mariginiup, Carramar and Banksia Grove for the purpose of road widening (Figure 1).

Vegetation Description The application area is mapped as Heddle vegetation complex Karrakatta Complex-Central and South and is described as open forest of *Eucalyptus gomphocephala* – *Eucalyptus marginata* – *Corymbia calophylla* and woodland of *Eucalyptus marginata* – Banksia species. *Agonis flexuosa* (peppermint) is co-dominant south of the Capel River (Heddle et al. 1980).

A flora and vegetation assessment undertaken in November 2017 identified that the vegetation within the application area consists of:

- 1.9 hectares of scattered degraded to completely degraded (Keighery, 1994) *Banksia* woodland consisting of scattered *Allocasuarina*, *Xanthorrhoea* or *Banksia* trees over grassy weeds and cleared areas.
- 0.1 hectares of *Banksia* and *Melaleuca* woodland in good to very good (Keighery, 1994) condition
- 0.2 hectares of wetland vegetation consisting of *Banksia prionotes*, *Banksia grandis* and *Melaleuca raphiophylla* over weedy *Typha orientalis* sedgeland in degraded (Keighery, 1994) condition (Aston Environmental, 2017).

Vegetation Condition

The vegetation within the application area is in a Completely Degraded to Very Good condition (Aston Environmental, 2017), described as:

- Completely Degraded: No longer intact; completely/almost completely without native species; to
- Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).

Soil type

Two soil types are identified within the application area, namely:

- Karrakatta Sand Grey Phase subsystem described as low hilly to gently undulating terrain, Iron podzols; and
- Karrakatta Sand Yellow Phase subsystems described as low hilly to gently undulating terrain, yellow sand over limestone at 1-2 m (Department of Primary Industries and Rural Development, 2017).

Comment

The condition of the vegetation within the application area was determined by a targeted spring flora survey conducted by Aston Environmental (Aston Environmental, 2017).

The local area of the application area is considered to be a 10 kilometre radius.

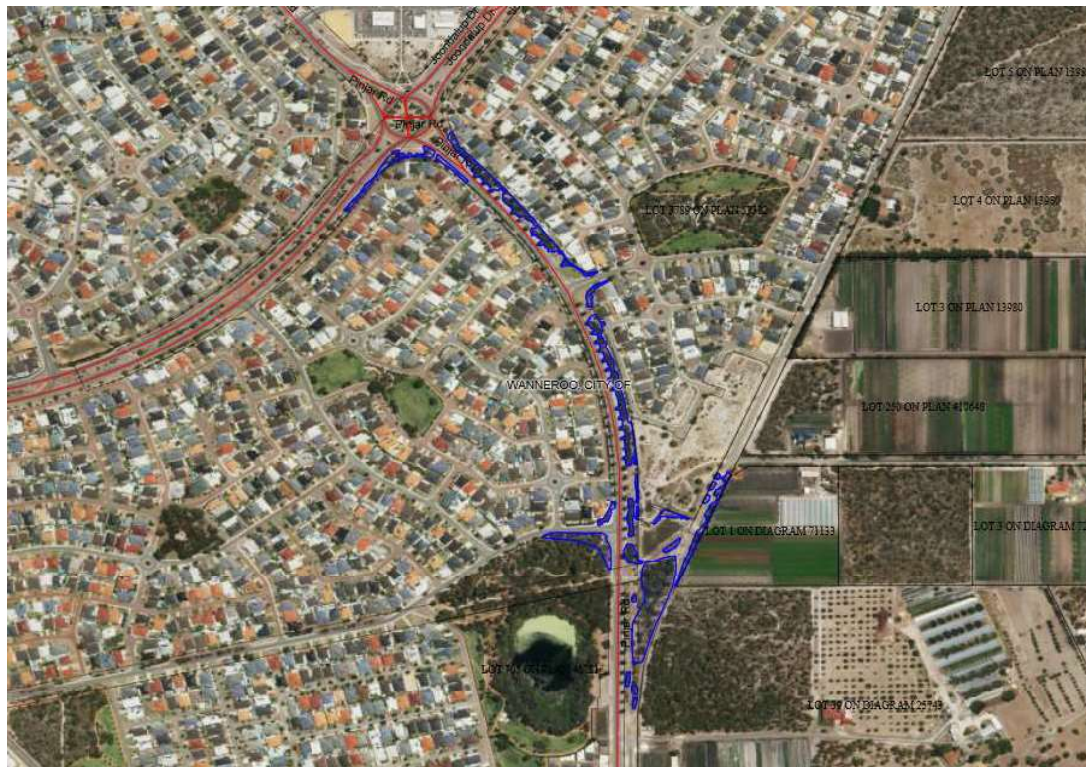


Figure 1: Map of application area (hatched blue)

3. Assessment of application against clearing principles

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

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

The majority of the application area (1.9 hectares) has been previously cleared and consists of scattered *Allocasuarina*, *Xanthorrhoea* or *Banksia* trees over grassy weeds and cleared areas. A small area (0.2 hectares) consists of wetland vegetation associated with a sumpland consisting of *Banksia prionotes*, *Banksia grandis* and *Melaleuca raphiophylla* over weedy *Typha orientalis* sedgeland in degraded (Keighery, 1994) condition. A small area of 0.1 hectares of *Banksia* and *Melaleuca* woodland in good to very good (Keighery, 1994) condition also occurs in the western portion of the application area (Aston Environmental, 2017).

As discussed in principle (c) no rare flora species were identified within the application area (Astron Environmental, 2017).

One Priority 4 flora species, *Jacksonia sericea*, was recorded from two locations within the application area, where it appeared to have been planted (Astron Environmental, 2017). The proposed clearing is not likely to impact on the conservation status of this species.

As discussed in principle (b), the application area does not provide significant fauna habitat for local or conservation significant fauna species, given its predominantly completely degraded to degraded (Keighery, 1994) condition and lack of potential nesting trees.

As discussed in principle (d), the application area contains 0.1 hectares of native vegetation in good to very good (Keighery, 1994) condition that is considered to represent the threatened ecological community (TEC) Banksia Woodlands of the Swan Coastal Plain ecological community. The proposed clearing of 0.1 hectares of this TEC is not considered to significantly impact this community.

Given the above, the application area is not considered to comprise a high level of biodiversity and the proposed clearing is not likely to be at variance to this Principle.

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

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

According to available databases, a total of 22 bird, four mammal, one reptile and five invertebrate species have been recorded within 10 kilometres of the application area, including one fauna specially protected under the *Wildlife Conservation Act 1950* (WC Act), 13 protected under international agreement, 12 priority fauna and six fauna species classed as rare or likely to become extinct under the WC Act (DBCA, 2007-).

Three broad habitat types were identified within the application area, being *Banksia/Melaleuca* woodland dominated by proteaceous shrubs (0.1 hectares), sumpland vegetation (0.2 hectares) and parkland habitat (1.9 hectares) (Astron Environmental, 2017).

The Carnaby's Cockatoo (*Calyptorhynchus latirostris*) (Rare, WC Act), (Endangered, *Environmental Protection and Biodiversity Conservation Act, 1998* (EPBC Act)) and the forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) (vulnerable, WC Act and EPBC Act) have been recorded within the local area of the proposed clearing. Black cockatoo species have a preference for foraging habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as *Banksia* sp., *Hakea* sp. and *Grevillea* sp. (Commonwealth of Australia, 2012). It is considered for the *Banksia/Melaleuca* woodland habitat type to represent foraging habitat for the black cockatoo species.

The application area contains 0.1 hectares of foraging habitat for black cockatoo species in a good to very good (Keighery, 1994) condition and 1.9 hectares of scattered foraging habitat in a degraded to completely degraded (Keighery, 1994) condition (Astron Environmental, 2017). Given the limited amount of suitable foraging habitat within the application area, it is not considered for the application area to contain significant foraging habitat for black cockatoo species.

Black cockatoos breed in large hollow-bearing trees such as karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012). No potential nesting hollows for conservation significant black cockatoo species occur within the clearing area (Astron Environmental, 2017). It is not considered for the application area to provide significant nesting habitat for black cockatoo species.

Based on the habitat requirements of the remaining conservation significant fauna, significant habitat for these species is not likely to occur within the application area.

Given the above, the application area does not comprise of significant habitat for local and conservation significant fauna and the proposed clearing is not likely to be at variance to this Principle.

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

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

Four rare flora species have been recorded within the local area of the application.

The preferred habitat for three of the four rare flora species recorded within the local area does not occur within the application area. The remaining species has a flowering period between Septembers to October and occurs in deep sandy soil in mixed woodland of *Eucalyptus marginata* (jarrah) and *Banksia*. Its growth is suppressed by weed invasion (Brown et al. 1998).

A targeted flora survey of the application area was conducted on 10 November 2017 by Aston Environmental (2017) and did not identify any rare flora species within the application area.

The majority of the application area consists of scattered *Allocasuarina*, *Xanthorrhoea* or *Banksia* trees over grassy weeds. Small areas contain wetland vegetation and *Banksia* and *Melaleuca* woodland in good to very good (Keighery, 1994) condition.

Given that the application area does not contain jarrah and banksia woodland and predominately occurs in a degraded to completely degraded (Keighery, 1994) condition, it is not considered that application area to include or be necessary for the continued existence of rare flora.

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

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

Proposed clearing is at variance to this Principle

The portion of the application area (0.1 hectares) (South west portion of application area) that contains *Banksia/Melaleuca* woodland in good to very good (Keighery, 1994) condition is mapped by the Commonwealth Department of the Environment and Energy (DotEE) as a 'likely to occur' area for the Banksia Woodlands of the Swan Coastal Plain ecological community (Banksia Woodlands TEC), which is listed as an endangered threatened ecological community (TEC) under the EPBC Act. DotEE's mapping provides an indicative distribution of the ecological community, defining areas mapped as 'likely to occur' and 'may occur'. The approved conservation advice for this community states that "Ground-truthing (e.g. an on-ground survey) is required to verify if a particular site meets the required key diagnostic characteristics and minimum condition thresholds to be the described ecological community" (Threatened Species Scientific Committee, 2016).

It is estimated from the information provided by the applicant and by reviewing the key diagnostic characteristics and minimum condition thresholds for this TEC that approximately 0.1 hectares of the application area consists of this TEC, as it is a part of a larger TEC patch that is 1.67 hectares in size.

The total mapped occurrence of this TEC is 321,728 hectares. Noting that the 0.1 hectares proposed for clearing represents approximately 0.000031 per cent of the TEC's mapped occurrence, and the TEC will remain adjacent to the application area, the proposed clearing is unlikely to significantly impact on this community, or its occurrence within the local area.

The proposed clearing may cause degradation of the adjoining patch of TEC through the introduction and spread of weeds and dieback. Weed and dieback management measures would reduce this risk.

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

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

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

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). 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, 2015). The application area is zoned as 'Urban' and 'Other Regional Roads' within the Metropolitan Region Scheme and is therefore considered to be located within a constrained area.

The local area retains approximately 20 per cent native vegetation cover.

As indicated in Table 1, the application area is represented by Heddle vegetation complex Karrakatta Complex-Central and South which has approximately 23 per cent pre-European vegetation remaining. The remaining extents of native vegetation within the bioregion and the local area are all above the 10 per cent threshold (Government of Western Australia, 2018).

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

Table 1: Vegetation extents

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Current Extent in DCBA Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,222	578,997	38	38
Heddlle vegetation complex				
Karrakatta Complex-Central and South	53,081	12,465	23	8

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

Proposed clearing is at variance to this Principle

There are no mapped wetlands or watercourses within the application area. The closest mapped wetland to the application area is a resource enhancement sumpland located 16 metres to the west of the application.

A small portion (0.2 hectares) of the application area consists of wetland vegetation associated with a sumpland consisting of *Banksia prionotes*, *Banksia grandis* and *Melaleuca raphiophylla* over weedy *Typha orientalis* sedgeland in degraded (Keighery, 1994) condition (Astron Environmental, 2017).

Given the wetland vegetation identified within the application area, it is considered that sections of the application area are growing in association with a wetland environment, and the proposed clearing is at variance to this Principle.

Given the degraded (Keighery, 1994) condition of the wetland vegetation and the relatively small size of the area consisting of wetland vegetation (0.2 hectares), it is not considered for the proposed clearing to significantly impact the environmental values of the nearby wetland.

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

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

The application area is mapped as occurring within the Karrakatta Sand Grey Phase and the Karrakatta Sand Yellow Phase subsystems. Soils within both subsystems consist of pale deep sands and yellow deep sands (DPIRD, 2017).

The soil types within the application area have a low risk of water erosion, waterlogging and salinity (DPIRD, 2017).

Given the sandy nature of the soils within the application area, there is a risk of wind erosion (DPIRD, 2017). However, given the relatively small size of the proposed clearing and its long and linear nature within an existing transport corridor, it is not considered for the proposed clearing to cause appreciable land degradation in the form of soil erosion.

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

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

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

The nearest conservation area to the application area is Bush Forever site 147, Mariginiup Lake and Adjacent Bushland, Mariginiup, located 500 metres south east of the area under application. Two other conservation areas are in close proximity to the application area including Gngarara – Moore River State Forest which is located two kilometres north east and Bush Forever site 383, Neerabup National Park, Lake Gowerup Nature Reserve and Adjacent Bushland located 2.6 kilometres west from the area under application.

The application area does not impact on an ecologically linkage between conservation areas located within the local area.

Given this and the distance to the nearest conservation area, it is not considered for the proposed clearing to impact the environmental values of conservation areas. The proposed clearing is not likely to be at variance to this Principle.

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

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

As discussed in Principle (g), the soils mapped within the application area have a very low risk of salinity (DPIRD, 2017). Therefore it is not considered for the proposed clearing to cause deterioration of underground water through an increase in salinity.

The mapped soil types present within the application area have a low risk of eutrophication (DPIRD, 2017). The proposed clearing is not considered likely to cause the deterioration of surface water in the form of eutrophication.

The proposed clearing includes an area that contains wetland vegetation (0.2 hectares) in degraded (Keighery, 1994) condition associated with a small basin. The proposed clearing of this area is not considered likely to cause deterioration of surface water

given the small scale of clearing and degraded (Keighery, 1994) condition of the vegetation. The application area is also 16 metres from a lake and is separated from the lake by Pinjar Road. Given this buffer and the relatively small area proposed to be cleared, it is not considered for the proposed clearing to cause deterioration to surface water of the nearby lake.

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

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

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

As discussed under Principles (g) and (i), the soils mapped and recorded within the application area are largely sandy soils and considered to be highly permeable. Noting this, the moderate annual rainfall experienced by the region, and its occurrence along an existing transport corridor, the proposed clearing is not likely to result or exacerbate the incidence or intensity of flooding.

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

Planning instruments and other relevant matters.

The proposed clearing is for the purpose of constructing a dual carriageway along Pinjar Road. The project will improve the capacity and safety of Pinjar Road and provides a strategic traffic link to Banksia Grove which is currently experiencing urban growth (City of Wanneroo, 2018).

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

The clearing permit application was advertised on the DWER website on 26 April 2018 with a 21 day submission period. No public submissions have been received in relation to this application.

4. References

- Astron Environmental (2017) Pinjar Road Targeted Flora Survey and Level 1 Fauna Survey. November 2017. Prepared for City of Wanneroo. DWER ref A1643880
- Department of Biodiversity, Conservation and Attractions (2007) NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity Conservation and Attractions. URL: <http://naturemap.dbca.wa.gov.au/>. Accessed July 2018.
- City of Wanneroo (2017) Clearing permit application and supporting information CPS 8035/1 for Pinjar Road Reserve. DWER ref A1643880
- 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 Primary Industries and Rural Development (2017) Land degradation report for clearing permit application CPS 8035/1.
- EPA (2015) Perth and Peel @ 3.5 million - Environmental impacts, risks and remedies, Interim strategic advice of the Environmental Protection Authority to the Minister for Environment under section 16(e) of the Environmental Protection Act 1986. Office of the Environmental Protection Authority, Perth.
- Government of Western Australia. (2018). 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions.
- Government of Western Australia. (2018). 2017 South West Vegetation Complex Statistics. Current as of October 2017. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Threatened Species Scientific Committee (2016). Approved Conservation Advice (incorporating listing advice) for the Banksia Woodlands of the Swan Coastal Plain Ecological Community. Canberra: Department of the Environment and Energy. Available from: <http://www.environment.gov.au/biodiversity/threatened/communities/pubs/131-conservation-advice.pdf>

GIS Databases

- Bush Forever
- Hydrography, linear
- Hydrography, hierarchy
- Wetlands, Swan Coastal Plain
- DBCA tenure
- Hedde Vegetation Complexes
- Pre-European vegetation
- SAC bio datasets accessed July 2018
- Virtual mosaic
- Aboriginal sites register system
- Metropolitan Regional Scheme Zones