



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 8097/1

File Number: DER2018/000941

Duration of Permit: From 28 December 2018 – 28 December 2020

PERMIT HOLDER

City of Armadale

LAND ON WHICH CLEARING IS TO BE DONE

Lot 3597 on Deposited Plan 216929, Bedforddale.

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.0034745 hectares of native vegetation within the area hatched yellow on attached Plan 8097/1.

CONDITIONS

1. Avoid, minimise and reduce the impacts and extent 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.

2. 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; and
- (c) restrict the movement of machines and other vehicles to the limits of the area to be cleared.

RECORD KEEPING AND REPORTING

3. Records to be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this permit:

- (a) 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 or decimal degrees;
- (b) the date that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and the extent of clearing in accordance with condition 1 of this Permit; and
- (e) actions taken to minimise the introduction and spread of *weeds* and *dieback* in accordance with condition 2 of this Permit.

4. Reporting

The Permit Holder must provide to the *CEO* the records required under Condition 3 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 the administration of the clearing provisions under 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*

28 November 2018

Plan 8097/1

116°1'30.000"E

116°2'24.000"E

116°3'18.000"E

32°9'36.000"S

32°10'30.000"S

32°11'24.000"S

32°9'36.000"S

32°10'30.000"S

32°11'24.000"S



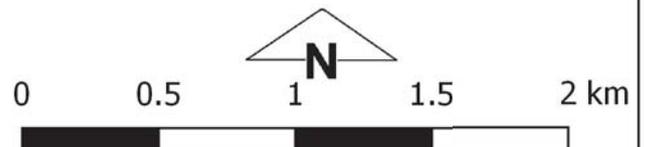
116°1'30.000"E

116°2'24.000"E

116°3'18.000"E

Legend

-  Areas approved to clear base layers
-  cadastre
-  Image



MGA 94
Geocentric Datum of Australia 1994
 Date 28/11/2018
Mathew Gannaway

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



GOVERNMENT OF
WESTERN AUSTRALIA



1. Application details

1.1. Permit application details

Permit application No.: 8097/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: City of Armadale
Application received date: 11 June 2018

1.3. Property details

Property: Lot 3597 on Deposited Plan 216929
Local Government Authority: City of Armadale
Localities: Bedforddale

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.0034745		Mechanical Removal	Recreation

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 November 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 principle (f) and is not likely to be at variance to any of the remaining principles.

The Delegated Officer determined that the proposed clearing may increase the spread of weeds and dieback into adjacent vegetation. 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.

2. Site Information

Clearing Description This application is for the clearing of up to 0.0034745 hectares of native vegetation within Lot 3597 on Deposited Plan 216929, for the purposes of installing phyto-fighters and upgraded signage within Bungendore Park (Reserve 4561).

Vegetation Description The application area is situated within the following mapped vegetation complex's (Mattiske et al 1980):

- Darling Scarp DS2: Mosaic of open forest of Jarrah (*Eucalyptus marginata* subsp. *marginata*) - Marri (*Corymbia calophylla*), with some admixtures with Darling Range Ghost Gum (*Eucalyptus laelliae*) in the north (subhumid zone), with occasional *Eucalyptus marginata* subsp. *elegantella* (mainly in subhumid zone) and *Corymbia* sp.;
- Murray 1: Open forest of Jarrah (*Eucalyptus marginata* subsp. *marginata*) - Marri (*Corymbia calophylla*) – Swan River Blackbutt (*Eucalyptus patens*) on valley slopes to woodland of Flooded Gum (*Eucalyptus rudis*) – Swamp Paperbark (*Melaleuca raphiophylla*) on the valley floors in humid and subhumid zones; and
- Dwellingup D2: Open forest of Jarrah (*Eucalyptus marginata* subsp. *marginata*) - Marri (*Corymbia calophylla*) on lateritic uplands in subhumid and semiarid zones.

A botanical survey carried out in November 1993 identified the following vegetation communities within Bungendore Park (City of Armadale 2018):

- Open Jarrah (*Eucalyptus marginata*) – Marri (*Corymbia calophylla*) forest – mixed forest containing Bull Banksia (*Banksia grandis*), *Allocasuarina* sp., *Xanthorrhoea* sp. and Snottygobble (*Persoonia longifolia*);
- Wandoo (*Eucalyptus Wandoo*) – Marri (*Corymbia calophylla*) woodland, with an understorey of *Grevillea* sp., *Dryandra* sp., *Acacia* sp., *Hakea* sp., *Xanthorrhoea* sp. and *Macrozamia* sp.;
- Upland heath – around the granite outcrops with an upperstorey of Wandoo (*Eucalyptus Wandoo*) and Marri (*Corymbia calophylla*), *Allocasuarina* sp. and an understorey of *Acacia* sp., *Calothamnus* sp., *Conostylis* sp., *Acacia* sp., *Petrophile* sp., *Verticordia* sp. and

Xanthorrhoea sp.;

- Herbland – on granite outcrops including *Stylidium* sp., *Hibbertia* sp., *Borya* sp., mosses and lichens; and
- Sheoak Woodland – includes *Allocasuarina* sp., Marri (*Corymbia calophylla*) and Christmas Tree (*Nuytsia floribunda*) with some Jarrah (*Eucalyptus marginata*) as an upperstorey. The understorey is dominated by *Acacia* sp., *Calothamnus* sp., *Drosera* sp., *Dryandra* sp., *Grevillea* sp., *Calytrix* sp., *Darwinia* sp., *Hovea* sp. and *Hibbertia* sp.

In addition, six floristically distinct units were identified in Bungendore Park in 1997 (City of Armadale 2018);

- Upland Jarrah (*Eucalyptus marginata*) forest;
- Upland Marri (*Corymbia calophylla*) - Jarrah (*Eucalyptus marginata*) woodland;
- Wandoo (*Eucalyptus Wandoo*) - Marri (*Corymbia calophylla*) woodland on poorly drained clay flats;
- Southern granite shrublands and woodlands;
- Woodlands on steep colluvial slopes of scarp face and upper valleys; and
- Shrublands on upper slope granite outcrops.

Vegetation Condition

A review of photographs of the proposed infrastructure locations contained in the Spectrum Ecology (2018) survey report found that the vegetation condition in Bungendore Park ranges from:

Very Good: Vegetation structure altered, obvious signs of disturbance (Keighery 1994).

To

Degraded: Basic vegetation structure severely impacted by disturbance (Keighery 1994). Scope for regeneration, but not to a state approaching good condition without intensive management (Keighery 1994).

Soil type

The application area is mapped as occurring within the following land systems, as described by the Department of Primary Industry and Regional Development (2017);

- Dwellingup 2 Phase: Very gently to gently undulating terrain (<10%) with well drained, shallow to moderately deep gravelly brownish sands, pale brown sands and earthy sands overlying lateritic duricrust;
- Myara 1 Phase: Gentle to steep valley sideslopes (5-35%) and narrow incised valley floors. Variable well drained duplex and gradational soils. Common rock outcrop. Wandoo (*Eucalyptus wandoo*), Powderbark Wandoo (*Eucalyptus accedens*) and Jarrah (*Eucalyptus marginata*) on sandy gravels and *Acacia* sp. on shallow soils;
- Myara 2 Phase: Gentle to moderately inclined lower sideslopes (1-15%). Variable well drained duplex and gradational soils. Common rock outcrop. Wandoo (*Eucalyptus wandoo*) and Powderbark Wandoo (*Eucalyptus accedens*) woodland, Jarrah (*Eucalyptus marginata*) on sandy gravel soils and *Acacia* sp. on shallow rocky soils; and
- Yarragil 1 Phase: Very gentle to moderately inclined concave sideslopes. Moderately well drained yellow duplex soils and yellow and brown massive earths. Woodland of Wandoo (*Eucalyptus wandoo*), Jarrah (*Eucalyptus marginata*) and Powderbark Wandoo (*Eucalyptus accedens*). Swamp Sheoak (*Casuarina obesa*) on salt affected areas.

Comments

The local area referred to in the below assessment is defined as the area within a 10 kilometre radius of the application area.

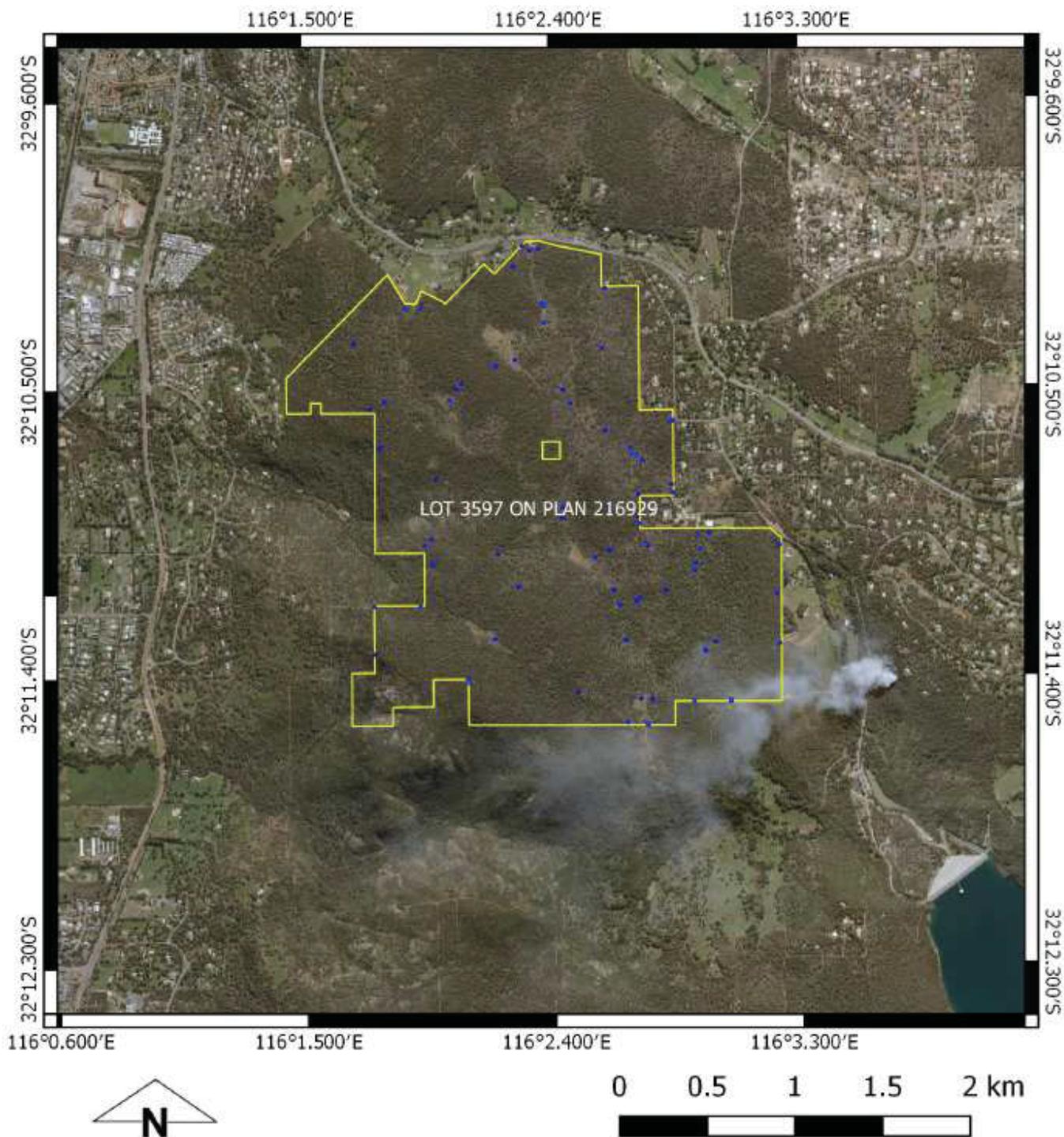


Figure 1: The application area (shown in blue), in the context of the lot boundaries (shown in yellow).

3. Minimisation and mitigation measures

The clearing area sought in this application represents the size of the footings for each of the proposed signs and phyto-fighters, plus additional area to allow for soil disturbance. In email correspondence dated 20 November 2018, the applicant reduced the clearing area sought from 0.026896 hectares to 0.0034745 hectares to reflect the likely disturbance area from the installation of the proposed infrastructure. The signage locations are situated on the edge of fire access tracks. Where the width of these tracks can be maintained, signage will be installed in already cleared areas. Where the track width cannot be maintained, the sign footing will be installed at the edge of the track, with installation sites selected to minimise understory clearing. Where possible, the signage will be installed directly into the gravel substrate without footings. No trees will be cleared to support the installation of the proposed infrastructure.

Desktop assessments undertaken by the applicant in support of this application identified three occurrences of the Star Orchid (*Thelymitra stellata*) (Threatened), recorded in Bungendore Park (City of Armadale 2018). The nearest infrastructure installation locations to these recorded occurrences of the Star Orchid are situated 77 metres, 125 metres and 250 metres away from the recorded occurrences of this species, respectively (City of Armadale 2018).

The installation of the proposed infrastructure will occur in the summer months to minimise the risk of spreading dieback within Bungendore Park.

4. Assessment of application against clearing principles

Bungendore Park is situated on the Darling Scarp, 30 kilometres south east of the City of Perth and comprises 498 hectares of bushland which has been vested with the City of Armadale for conservation and recreational purposes (City of Armadale 2018). Bungendore Park is part of the wider Wungong Regional Park (City of Armadale 2018). There is a network of trails in Bungendore Park which support recreational activities and fire access. The Bungendore Park Signage Strategy and Recreation Plan was developed to account for passive recreational pursuits in Bungendore Park in a manner which protects the conservation values of this reserve (City of Armadale 2018). This requires the installation of signage marking of the walking trails in Bungendore Park (City of Armadale 2018). Phyto-fighters will also be installed as part of this project (City of Armadale 2018).

A review of available databases determined that 56 flora species of conservation significance have been recorded in the local area, comprising five Priority 1 flora species, five Priority 2 flora species, 15 Priority 3 flora species, 16 Priority 4 flora species and 15 threatened flora species. No occurrences of the above species have been recorded within the application area. After reviewing the habitat requirements of the above species, the application area was considered to potentially provide suitable habitat for 25 flora species of conservation significance, comprising three Priority 1 flora species, two Priority 2 flora species, eight Priority 3 flora species, five Priority 4 flora species and seven threatened flora species. A survey was undertaken by Spectrum Ecology in October 2018 to determine whether any of the threatened, Priority 1 or Priority 2 flora species with the potential to occur in the application area were present in this area. A five metre squared area surrounding each proposed infrastructure location was surveyed for the presence of the above conservation significant flora species (Spectrum Ecology 2018). Despite excellent survey conditions, no occurrences of the targeted conservation significant flora species were identified in the application area during the course of this survey (Spectrum Ecology 2018). Given the above, the small extent of clearing proposed and the applicants commitment to select final infrastructure installation locations which are devoid of vegetation or require minimal clearing, it is not anticipated that the proposed clearing activities will result in adverse impacts to the conservation status or distribution of flora species of conservation significance.

A review of available databases determined that 50 fauna species of conservation significance have been recorded within the local area (Department of Biodiversity, Conservation and Attractions 2007-). Given the extent of the proposed clearing, it is not anticipated that the clearing activities will result in the loss of habitat of significance to any conservation significant fauna species.

A review of available databases determined that the application area is situated the following distances from the below priority ecological communities (PEC) and threatened ecological communities (TEC):

- approximately 4 kilometres north east from the closest recorded occurrence of the '*Banksia attenuata* and/or *Eucalyptus marginata* woodlands of the eastern side of the Swan Coastal Plain' TEC, listed as Endangered by both the Western Australian Minister for Environment and under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- approximately 1 kilometre east from the closest recorded occurrence of the '*Banksia* Dominated Woodlands of the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) Region' priority 3 PEC, listed as an Endangered TEC under the EPBC Act;
- approximately 5 kilometres north east from the closest recorded occurrence of the 'Dense shrublands on clay flats' TEC which is listed as Vulnerable by the Western Australian Minister for Environment and Critically Endangered under the EPBC Act;
- approximately 1.5 kilometres north east from the closest recorded occurrence of the '*Corymbia calophylla* - *Eucalyptus marginata* woodlands on sandy clay soils of the southern Swan Coastal Plain' TEC, which is listed as Vulnerable by the Western Australian Minister for Environment;
- approximately 1.5 kilometres east from the closest recorded occurrence of the '*Corymbia calophylla* - *Kingia australis* woodlands on heavy soils, Swan Coastal Plain' TEC, listed as Critically Endangered by the Western Australian Minister for Environment and Endangered under the EPBC Act;
- approximately 4.6 kilometres north east from the closest recorded occurrence of the '*Corymbia calophylla* - *Xanthorrhoea preissii* woodlands and shrublands, Swan Coastal Plain' TEC, listed as Critically Endangered by the Western Australian Minister for Environment and Endangered under the EPBC Act;
- approximately 6.8 kilometres north east from the closest recorded occurrence of the 'Herb rich shrublands in clay pans' TEC, listed as Vulnerable by the Western Australian Minister for Environment and Critically Endangered under the EPBC Act;
- approximately 7.6 kilometres south east from the closest recorded occurrence of the 'Low lying *Banksia attenuata* woodlands or shrublands' priority 3 PEC, listed as an Endangered TEC under the EPBC Act;
- approximately 8.8 kilometres south east from the closest recorded occurrence of the 'Shrublands and woodlands on Muchea Limestone' TEC, listed as Endangered by both the Western Australian Minister for Environment and under the EPBC Act; and
- approximately 7 kilometres south east from the closest recorded occurrence of the 'Shrublands on dry clay flats' TEC, listed as Endangered by the Western Australian Minister for Environment and Critically Endangered under the EPBC Act.

The application area is not considered to be representative of any of the above ecological communities. When the separation distances between the application area and the above ecological communities are considered, it is not anticipated that the proposed clearing will adversely impact the ecological values of any of the above ecological communities, or any ecological linkages promoting biodiversity or species recruitment within the above ecological communities.

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 forms part of the 'Jarrah' IBRA region. This IBRA region retains over 53 per cent of its pre-European clearing extent (Government of Western Australia 2017a). The Darling Scarp DS2, Murray 1 and Dwellingup D2 vegetation complexes currently retain over 41, 76 and 82 per cent of their pre-European clearing extent, respectively (Government of Western Australia 2017b). In addition, a review of available databases determined that the local area retains over 47 per cent of its pre European clearing extent. When the above is

considered alongside the proposed clearing extent, the proposed clearing is not considered to be a significant remnant within an extensively cleared area.

A review of available databases has determined that the proposed clearing will intercept a minor tributary and consequently, vegetation growing in association with a watercourse may be impacted by the proposed clearing. Given the above, the proposed clearing is at variance to principle (f). Given the extent of the proposed clearing, impacts to this watercourse are likely to be short term and minimal, with no significant impacts to riparian vegetation.

Given the proposed clearing extent, and the knowledge that the local area retains over 47 per cent of its pre-European clearing extent, no land degradation impacts are expected to result from the clearing activities. No impacts to the quality of local surface water or ground water resources, or the incidence or intensity of flooding, are expected to result from the clearing activities.

The application area is situated within Bungendore Park. There are also a series of unnamed conservation reserves situated adjacent to the application areas southern and eastern extents. Given the extent of the proposed clearing, the proposed clearing is not anticipated to directly impact the ecological values of the aforementioned conservation reserves. However, the proposed clearing may facilitate the spread of weeds and dieback within the aforementioned conservation reserves. Weed and pathogen management measures should mitigate these potential impacts upon the ecological values of the above conservation reserves. Seven additional conservation reserves are located within the local area, ranging in distance from two to 10.3 kilometres from the application area. With the exception of Bungendore Park and the unnamed conservation reserves previously addressed, when consideration is given to the separation distances between the application area and the conservation reserves, no adverse impacts to these conservation reserves are expected to result from the proposed clearing activities. Given the extent of the proposed clearing, the knowledge that the local area retains over 47 per cent of its pre-European clearing extent and that 32 per cent of the local area is represented in the conservation estate, the proposed clearing activities are not anticipated to result in the loss of ecological linkages promoting species diversity and recruitment within the above conservation areas.

The proposed clearing may increase the spread of weeds and dieback into adjacent vegetation. Weed and dieback management measures will assist in mitigating this risk.

Given the above, the proposed clearing is at variance to principle (f) and is not likely to be at variance to any of the remaining clearing principles.

Planning instruments and other relevant matters.

No Aboriginal sites of significance have been mapped within the application area. A review of available databases has determined that the Neerigen Brook 1 Mythological Aboriginal Heritage Site (Place ID: 3714) is situated approximately 38 metres north of the application areas northern-most extent.

In correspondence dated 17 September 2018, the South West Aboriginal Land and Sea Council advised that at a meeting held on 29 August 2018, the Gnaala Karla Booja Working Party decided that before proceeding with this project, a heritage survey should be conducted. A survey team has been nominated for this purpose. The applicant is advised to ensure they comply with all requirements under the *Aboriginal Heritage Act 1972* which pertain to this project.

The clearing permit application was advertised on the DWER website on 24 July 2018 with a 14 day submission period. Due to changes in the location of some of the proposed infrastructure, this application was readvertised on the DWER website on 25 October 2018 with a seven day submission period. No public submissions have been received in relation to this application.

5. References

- City of Armadale (2018) Clearing permit application and supporting documents. Maintained within DWER records (A1688669).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Biodiversity, Conservation and Attractions (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed October 2018.
- Department of Primary Industry and Regional Development (2017). NRInfo Digital Mapping. Department of Primary Industry and Regional Development. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/>. Accessed October 2018.
- Government of Western Australia (2017a) 2017 Statewide Vegetation Statistics (formerly the CAR Reserve Analysis) – Full Report. Current as of December 2017 (based on most recent date of input datasets). Prepared by the Department of Biodiversity, Conservation and Attractions (DBCA), Perth. Published February 2018.
- Government of Western Australia (2017b) 2017 South West Vegetation Complex Statistics Report, Current as of October 2017.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Spectrum Ecology (2018) Bungendore Park Targeted Flora Survey. Prepared for: City of Armadale.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <http://florabase.dpaw.wa.gov.au/> (accessed October 2018).

GIS Databases:

- Aboriginal Sites of Significance
- Department of Biodiversity, Conservation and Attractions, Managed Tenure
- Geomorphic Wetlands Management Category
- Hydrography Linear – Linear
- Hydrography WA 250K – Surface Water Lines
- SAC bio datasets
- South Coast Significant Wetlands
- TPFL October 2018
- Vegetation Complexes – South West Forests
- WAHerb Data October 2018
- WA TEC PEC Boundaries