



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8343/1
Permit Holder:	Shire of Ngaanyatjaraku
Duration of Permit:	20 April 2019 – 20 April 2024

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 construction and upgrades

2. Land on which clearing is to be done

Lot 9 on Plan 91722, Ngaanyatjarra-Giles

3. Area of Clearing

The Permit Holder must not clear more than 32.66 hectares of native vegetation within the area hatched yellow on attached Plan 8343/1.

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.

PART II – MANAGEMENT CONDITIONS

6. 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:

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

7. 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*:

- clean any earth-moving machinery and other clearing equipment of soil and vegetation prior to entering and leaving the area to be cleared;

- (b) ensure that no known *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.

PART III - RECORD KEEPING AND REPORTING

7. Records must 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 extent of clearing in accordance with condition 6 of this Permit; and
- (e) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 7 of this Permit.

8. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 7 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*;

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; and

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; and
- (d) that is a species permitted for planting under a Pastoral Diversification Permit issued by the Department of Regional Development and Lands

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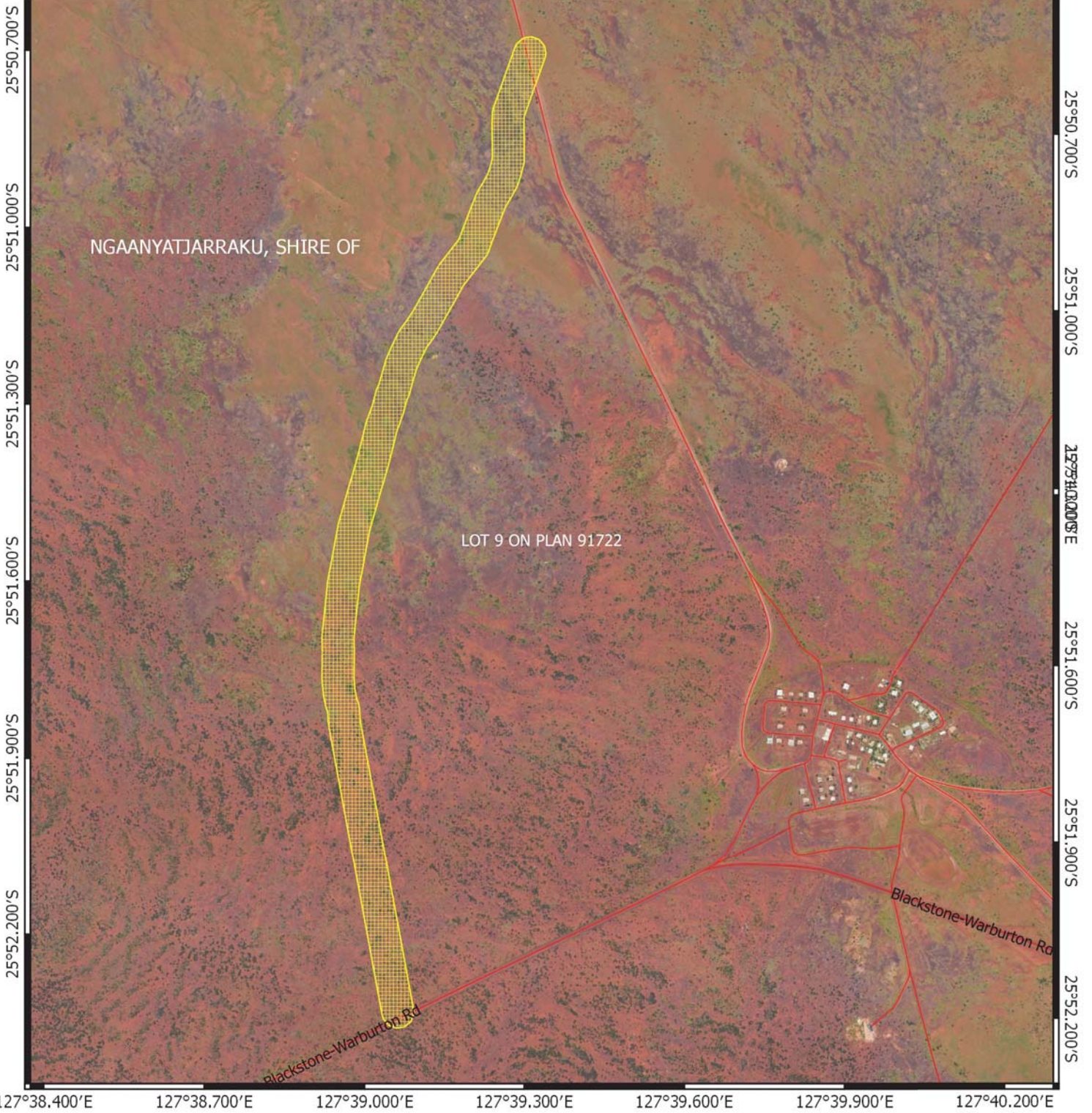
Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

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

28 March 2019

Plan 8343/1

127°38.400'E 127°38.700'E 127°39.000'E 127°39.300'E 127°39.600'E 127°39.900'E



Legend

base layers

 Cadastre

 Road Centrelines

Local Government Authorities

Image



MGA 94
Geocentric Datum of Australia 1994

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Ryan Mincham

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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.: 8343/1
Permit type: Purpose Permit

1.2. Proponent details

Applicant's name: Shire of Ngaanyatjarraku

1.3. Property details

Property: Lot 9 On Plan 91722
Local Government Authority: NGAANYATJARRAKU, SHIRE OF
Localities: Ngaanyatjarra-Giles

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 28 March 2019
Reasons for Decision: The clearing permit application was received on 24 January 2019 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is not likely to be at variance to the clearing principles.

The Delegated Officer considered that the implementation of a suitable weed management condition was appropriate to mitigate the impact of spreading weeds into adjacent vegetation.

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: The application is to clear up to 32.66 hectares within Lot 9 on Plan 91722, Ngaanyatjarra-Giles, Shire of Ngaanyatjarraku, for the purpose of road construction and upgrades. The application area is shown in Figure 1.

Vegetation and Site Description: The application area is mapped as Beard vegetation association 18, which is described as Low Woodland; mulga (*Acacia aneura*).

The vegetation survey conducted by by Ngaanyatjarra Council's Land and Culture Unit on 4 December 2018, identified seven vegetation associations occurring within the application area (Ngaanyatjarra Council, 2019):

- **Stony Ironstone Grassland/Mulga Shrubland;** comprising *Eragrostis eriopoda*, *Dissocarpus paradoxa* and *Bonamia erecta* at low densities. This area has been subject to frequent fire events, which has denuded the area of trees and the grass cover is less than 5 per cent (Figure 2);
- **Hardpan Mulga Woodland-Drainage;** comprising *Acacia aneura*, *Senna artemesoides*, *Dissocarpus paradoxa*, *Eragrostis eriopoda*, *Eremophea spinosa*, *Rhagodia eremea*, *Maireana triptera*, *Sclerolaena cornishiana*, *Aristida holathera* and *Convolvulus clementii*, as well as *Cenchrus ciliaris** at low densities (2 per cent) (Figure 3);
- **Seasonally inundated Claypan Grassland;** described as a small, internally draining depression dominated by *Eragrostis eriopoda* and *Fimbristylis dichotoma* (no fertile material), with *Atriplex verscaria* and an indeterminate Bryophyte, grading into the adjacent Claypan Grassland (Figure 4);
- **Claypan Grassland;** comprising graminoid species with frequent chenopods *Dissocarpus paradoxa* and *Sclerolaena cornishiana* (Figure 5);
- **Mulga over Maireana triptera Shrubland;** comprising *Maireana triptera*, *Acacia aneura*, *Eragrostis eriopoda*, *Dissocarpus paradoxa*, *Sclerolaena cornishiana*, *Rhagodia eremea*, *Eremophila longifolia* with *Cymbopogon ambiguus* at low densities (Figure 6);
- **Stony Ironstone Mulga Shrubland;** described as patchy *Eremophila duttonii*, *Bonamia erecta* and *Senna artemesoides* low shrubland on clay with Ironstone gravel/gibber

surface. *Hakea lorea* was recorded in the broader area but not captured in the quadrat (Figure 7); and

- **Mulga Grove**; dominated by *Acacia aneura*, with groundcovers codominated by chenopods, *Eragrostis* spp. and *Triodia* sp. (indet.), with scattered *Eremophila glabra*. Tree cover varies with groves interspersed with open areas dominated by tussock grasses (Figure 8).

* denotes a weed species.

Vegetation Condition: Good: Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate it (Keighery, 1994);

To

Excellent: Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species (Keighery, 1994).

Soil and Landform Type: The application area is located within the Musgrave Range Zone (Department of Primary Industries and Regional Development, 2019), which is described as 'Sandplain and dunes with hills, ranges, plains and some wash plains on Musgrave Complex granite and gneiss (with some volcanic and sedimentary rocks). Red sandy earths with red deep sands, red loamy earths and some stony soils and self-mulching cracking clays' (Tille, 2006).

Comment: The vegetation condition was derived from the flora and vegetation survey conducted by the Ngaanyatjarra Council (2019), and converted to the Keighery (1994) scale.

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

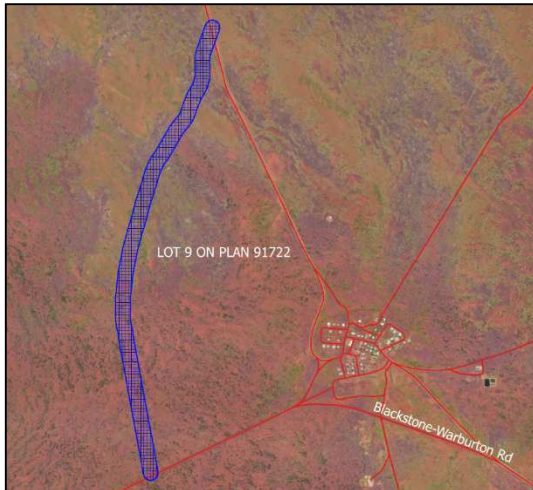


Figure 1. Application area (cross-hatched blue)



Figure 2. Stony Ironstone Grassland/ Mulga Shrubland (Ngaanyatjarra Council Land and Culture Unit, 2019a)

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Figure 3. Hardpan Mulga Woodlands - Drainage (Ngaanyatjarra Council Land and Culture Unit, 2019a)



Figure 4. Seasonally inundated Claypan Grassland (Ngaanyatjarra Council Land and Culture Unit, 2019a)



Figure 5. Claypan Grassland
(Ngaanyatjarra Council Land and Culture Unit, 2019a)



Figure 6. Mulga over *Maireana triptera* Shrubland
(Ngaanyatjarra Council Land and Culture Unit, 2019a)



Figure 7. Stony Ironstone Mulga Shrubland
(Ngaanyatjarra Council Land and Culture Unit, 2019a)



Figure 8. Mulga Grove
(Ngaanyatjarra Council Land and Culture Unit, 2019a)

3. Assessment of application against clearing principles

Comments

The application proposes to clear up to 32.66 hectares of native vegetation to construct a road to bypass the Jameson (Mantamaru) township, Ngaanyatjarra-Giles. The application area is located within the Interim Biogeographic Regionalisation for Australia (IBRA) Central Ranges Bioregion, which is described as high proportion of Proterozoic ranges and derived soil plains, interspersed with red Quaternary sandplains. The sandplains support low open woodlands of either Desert Oak or Mulga over *Triodia basedowii* hummock grasslands. Low open woodlands of Ironwood (*Acacia estrophiolata*) and Corkwoods (*Hakea* spp.) over tussock and hummock grasses often fringe ranges. The ranges support mixed wattle scrub or *Callitris glaucophylla* woodlands over hummock and tussock grasslands (Thackway and Cresswell, 1995). The flora and vegetation survey over the application area determined that the vegetation was in a Good to Excellent (Keighery, 1994) condition (Ngaanyatjarra Council Land and Culture Unit, 2019a).

A review of available databases determined that no flora species of conservation significance has been recorded in the local area. The closest record of a conservation significant flora species is of *Goodenia hirsuta* (Priority 3), located approximately 17.3 kilometres from the application area (Western Australian Herbarium 1998-). The flora and vegetation survey identified 25 flora species of conservation significance as potentially occurring within the application area, of which *Indigofera warburtonensis* (Priority 1), *Tephrosia* sp. Central (P.K. Latz 17037) (Priority 3) and *Aristida jerichoensis* var. *subspinulifera* (Priority 3) were considered to have high potential to occur based on the availability of suitable habitat (Ngaanyatjarra Council, 2019a). The flora and vegetation survey did not identify any of these conservation significant flora species as occurring within the application area (Ngaanyatjarra Council, 2019a). According to available databases, 51 terrestrial fauna species have been recorded within a 40 kilometre radius of the application area, including four species of conservation significance; Brush-tailed Mulgara (*Dasyercus blythi*, Priority 4), Greater Stick-nest Rat (*Leporillus conditor*, other specially protected fauna), Black-flanked Rock-wallaby (*Petrogale lateralis* subsp. *lateralis*, Endangered), and Malleefowl (*Leipoa ocellata*, Vulnerable) (Department of Biodiversity, Conservation and Attractions, 2007-). Given the linear extent of the application area, and the vegetation associations within the application area being well represented in the local area, the application area is not likely to consist of higher biodiversity value than the surrounding areas, or necessary for the maintenance of a significant fauna habitat.

Clearing activities have the potential to facilitate the spread of weeds into adjacent native vegetation. Two weed species were recorded during the survey including one weed of national significance, *Prosopis* sp. (Mesquite) and *Cenchrus ciliaris* (Buffel Grass) (Ngaanyatjarra Council, 2019a). Weed species can decrease the biodiversity value of an area, as they out-compete native vegetation for available resources, contribute to land degradation and increase the frequency and intensity of fires. Potential impacts to biodiversity within and nearby the

application area as a result of the proposed clearing may be minimised by the implementation of weed management practices.

No threatened ecological communities (TECs) or priority ecological communities (PECs) occur within the Central Ranges IBRA bioregion. The closest PEC is located over 500 kilometres from the application area. The application area is not likely to comprise, or be necessary for the maintenance of any TEC or PEC. The closest conservation area is the Gibson Desert National Reserve located approximately 140 kilometres northwest from the application area. Given the distance between the application area and the nearest conservation area, the application area is not likely to have an impact on the environmental values of any adjacent or nearby conservation areas.

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). Both the IBRA Central Ranges Bioregion and the mapped Beard vegetation association retains approximately 99 per cent of their pre-European extent (Government of Western Australia, 2018). Given this, the application area is not considered to be remnant native vegetation within an area that has been extensively cleared.

According to available databases, no watercourses and wetlands occur with the application area. Given this, the proposed clearing will not impact on vegetation growing in, or in association with, an environment associated with a watercourse or wetland. However, the local area contains mulga dominant woodlands that occur in banded formations. Banded mulga communities are dependent on sheet flow, and therefore any obstruction to sheet flow can have negative impacts upon such communities. Based on the available aerial imagery, the application area appears to be downslope of the banded mulga communities. Given this, the proposed clearing is not likely to alter the sheet flow in a way that will significantly impact on the adjacent mulga communities.

There are no public drinking water source areas located within the application area. The application area is located within the East Murchison Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914*. A review of available databases determined the groundwater resources in the vicinity of the application area has been mapped at a total dissolved solids content of 1,000 - 3,000 milligrams per litre, which is considered to be brackish. No adverse impacts to the quality of groundwater is anticipated to result from the proposed clearing.

Inundation may occur following significant rainfall events within the application area and surrounding environment. However, given the relatively low annual average rainfall of 293 millimetres and high annual average pan evaporation rates of 3,400 millimetres, the proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding.

The application area is located within the Musgrave Range Zone (Department of Primary Industries and Regional Development, 2019), which is described as 'Sandplain and dunes with hills, ranges, plains and some wash plains on Musgrave Complex granite and gneiss (with some volcanic and sedimentary rocks). Red sandy earths with red deep sands, red loamy earths and some stony soils and self-mulching cracking clays' (Tille, 2006). Based on the images provided by the applicant (Ngaanyatjarra Council Land and Culture Unit, 2019a), the soil within the application area is consistent with the described red sandy earths and stony soils. A review of aerial imagery of the application area and its surrounding environment has not identified any land degradation impacts from past clearing campaigns. When consideration is given to the large extent of native vegetation remaining in the local area and the condition and composition of the remaining vegetation found in the application area, no appreciable land degradation impacts are expected to result from the proposed clearing activities.

Given the above, clearing the vegetation under application is not likely to be at variance to the clearing principles.

Planning instruments and other relevant matters.

Comments There are no registered Aboriginal Sites of Significance within the permit application area. It is the applicant's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

A heritage survey was conducted over the application area by the Ngaanyatjarra Council Land and Culture Unit on 19 November 2018. The application area for the Jameson bypass road was confirmed acceptable by the heritage survey team (Ngaanyatjarra Council Land and Culture Unit, 2019b).

The clearing permit application was advertised on 18 February 2019 with a 14 day submission period. No submissions were received in relation to this application.

4. References

- 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, <http://naturemap.dpaw.wa.gov.au/> (Accessed March 2019).
- Department of Primary Industries and Regional Development (2019). NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (Accessed March 2019).
- Government of Western Australia (2018). 2017 State-wide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of February 2018. WA Department of Parks and Wildlife, Perth.

- Keighery, B.J. (1994). Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Ngaanyatjarra Council Land and Culture Unit (2019a). Terrestrial Flora and Vegetation Impact Assessment, Ngaanyatjarra-Giles, Western Australia. (DWER Ref: A1775076).
- Ngaanyatjarra Council Land and Culture Unit (2019b). Report to Ngaanyatjarraku Shire on Consultations and Heritage Survey in Relation to Proposed Construction of a Bypass Road on the western side of Jameson Community, Ngaanyatjarra-Giles, Western Australia. (DWER Ref: A1765345).
- Thackway, R., and Cresswell, I.D. (1995) (Eds). An Interim Biogeographic Regionalisation for Australia: a framework for establishing the national system of reserves, Version 4.0. Australian Nature Conservation Agency, Canberra.
- Tille, P.J. (2006). Soil-landscapes of Western Australia's rangelands and arid interior. Department of Agriculture and Food, Western Australia.
- Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <http://florabase.dpaw.wa.gov.au/> (Accessed March 2019).

GIS Databases:

- Aboriginal Sites of Significance
- DPaW Tenure
- Hydrography, linear
- Hydrography, hierarchy
- SAC bio datasets accessed March 2019