Government of Western Australia
Department of Mines, Industry Regulation and Safety

# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

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|---|---|
| **Permit application No.:** | 8278/1 |
| **Permit type:** | Purpose Permit |

### 1.2. Proponent details

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|---|---|
| **Proponent's name:** | **DBP Development Group Nominees Pty Ltd** |

### 1.3. Property details

| | |
|---|---|
| **Property:** | Pipeline Licence PL 16<br>Pipeline Licence PL 19<br>Pipeline Licence PL 20<br>Pipeline Licence PL 103<br>Pipeline Licence PL 112<br>Production Licence L 9 |
| **Local Government Area:** | Shire of Ashburton |
| **Colloquial name:** | Ashburton West Pipelines |

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|---|---|---|---|
| 227 | | Mechanical Removal | Pipeline Maintenance and Associated Activities |

### 1.5. Decision on application

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|---|---|
| **Decision on Permit Application:** | Grant |
| **Decision Date:** | 29 August 2019 |

## 2. Site Information

### 2.1. Existing environment and information

*2.1.1. Description of the native vegetation under application*

**Vegetation Description**

The vegetation of the application area is broadly mapped as the following Beard vegetation associations (GIS Database):

117: Hummock grasslands, grass steppe; soft spinifex;

127: Bare areas; mudflats;

589: Mosaic: Short bunch grassland – savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex;

608: Mosaic: Shrublands; *Acacia victoriae* and snakewood scrub patches / Short bunch grassland – savanna / grass plain (Pilbara);

676: Succulent steppe; samphire; and

1271: Bare areas; claypans.

A Level 1 flora and vegetation survey of the pipeline project area was undertaken by Mattiske Consulting Pty Ltd (Mattiske) in April 2013. The survey area covered a wider corridor than the application area and also covered an area north of the application area that is not part of the current application. There is an approximate 5 kilometre section of the permit area which was not covered by the flora survey. The flora and vegetation survey identified a total of 30 different vegetation communities (Mattiske, 2013):

**Tidal Mudflats and Tidal Creeks**

T1: *Tecticornia* spp. low scattered shrubs;

T2: *Avicennia marina* mid open scrubland;

**Claypans and Clayey Plains**

C1: Bare Claypan;

C2: *Tecticornia* spp. low sparse chenopod shrubland with *Sporobolus mitchellii*, *Eriachne helmsii* low isolated tussock grasses;

C3: *Acacia tetragonophylla*, *Acacia synchronicia*, **Vachellia farnesiana* mid isolated shrubs over *Urochloa occidentalis* var. *occidentalis*, *Chrysopogon fallax*, *Sporobolus mitchellii*, **Cenchrus ciliaris* low open tussock grasses;

C4: *Tecticornia* spp. low shrubland;

**Coastal Sand Dunes**

CD1: *Acacia coriacea* subsp. *coriacea* tall shrubland over *Crotalaria cunninghamii*, *Trichodesma zeylanicum* var. *grandiflorum* mid open shrubland over *Triodia epactia* mid open hummock grassland with **Cenchrus ciliaris* low open tussock grassland;

**Coastal Sand and Clayey Plains**

CP1: *Eucalyptus victrix* low open woodland over *Acacia tetragonophylla*, *Acacia sclerosperma* subsp. *sclerosperma*, *Scaevola spinescens* tall sparse shrubland over *Triodia epactia* mid open hummock grassland with *Sporobolus mitchellii*, *Chrysopogon fallax*, **Cenchrus ciliaris* low sparse tussock grassland;

CP2: *Eucalyptus victrix* low open woodland over *Abutilon oxycarpum*, *Ipomoea muelleri*, *Panicum decompositum* mid sparse forbland over *Enteropogon ramosus*, *Eriachne helmsii*, *Sporobolus mitchellii* low open tussock grassland;

CP3: *Acacia tetragonophylla* low scattered shrubs over *Triodia epactia* low hummock grassland with **Cenchrus ciliaris* low open tussock grassland;

CP4: **Prosopis pallida*, *Acacia tetragonophylla*, *Acacia synchronicia* tall scattered shrubs over *Triodia epactia* mid sparse hummock grassland with **Cenchrus ciliaris* low open tussock grassland;

CP5: *Sporobolus mitchellii*, *Eriachne* aff. *benthamii*, *Eriachne benthamii, Eulalia aurea* mid tussock grassland;

**Inland Sand Dunes**

ID1: *Grevillea stenobotrya* low sparse shrubland over *Acacia stellaticeps* mid open shrubland over *Triodia epactia* hummock grassland;

ID2: *Acacia stellaticeps*, *Acacia sclerosperma* subsp. *sclerosperma* mid sparse shrubland with *Bonamia erecta*, *Hibiscus brachychlaenus, Scaevola sericophylla* low sparse shrubland over *Triodia epactia* mid hummock grassland with **Cenchrus ciliaris*, *Eragrostis eriopoda* low sparse tussock grassland;

ID3: *Grevillea stenobotrya* tall open shrubland over *Crotalaria cunninghamii*, *Trichodesma zeylanicum* var. *grandiflorum* mid open shrubland over *Triodia epactia* mid open hummock grassland;

**Inland Sand and Clayey Plains**

IP1: *Eucalyptus victrix* low scattered trees over *Acacia synchronicia*, *Acacia xiphophylla*, *Acacia sclerosperma* subsp. *sclerosperma* tall open shrubland over *Triodia lanigera* mid hummock grassland with **Cenchrus ciliaris* low sparse tussock grassland;

IP2: *Eucalyptus victrix* low isolated trees over *Acacia synchronicia, Acacia tetragonophylla, Acacia xiphophylla* tall sparse shrubland with *Senna artemisioides* subsp. *oligophylla, Scaevola spinescens* low sparse shrubland over *Triodia epactia* mid hummock grassland with *Eriachne helmsii*, **Cenchrus ciliaris* low open tussock grassland;

IP3: *Eucalyptus victrix, Grevillea striata* low isolated trees over *Hakea chordophylla*, *Acacia sclerosperma* subsp. *sclerosperma, Acacia trachycarpa* tall open shrubland with *Acacia synchronicia, Acacia tetragonophylla* low sparse shrubland over *Triodia epactia* mid isolated hummock grasses with **Cenchrus ciliaris* low sparse tussock grassland;

IP4: *Acacia xiphophylla*, *Acacia synchronicia* low open shrubland over *Senna artemisioides* subsp. *oligophylla*, *Solanum lasiophyllum* low sparse shrubland over *Eragrostis xerophila*, **Cenchrus ciliaris* low sparse tussock grassland;

IP5: *Acacia synchronicia*, *Acacia tetragonophylla*, *Acacia sclerosperma* subsp. *sclerosperma* low sparse shrubland over *Chrysopogon fallax*, *Eriachne helmsii*, *Urochloa occidentalis* var. *occidentalis* low open tussock grassland;

IP6: *Acacia synchronicia*, *Acacia sclerosperma* subsp. *sclerosperma*, *Acacia xiphophylla* low sparse shrubland over *Eragrostis eriopoda*, *Eriachne aristidea*, **Cenchrus ciliaris* low open tussock grassland;

IP7: *Eucalyptus victrix* low open woodland over *Acacia tetragonophylla*, *Acacia synchronicia*, *Cullen leucanthum* mid sparse shrubland over *Eriachne helmsii, Eulalia aurea*, **Cenchrus ciliaris* low sparse tussock grassland;

IP8: *Eucalyptus victrix* low isolated trees over *Acacia tetragonophylla*, *Acacia synchronicia* tall isolated shrubs with *Acacia stellaticeps*, *Acacia coriacea* subsp. *coriacea*, *Senna artemisioides* subsp. *oligophylla* low sparse shrubland over *Triodia epactia* mid hummock grassland with *Eulalia aurea, Eragrostis eriopoda*, **Cenchrus ciliaris* low sparse tussock grassland;

**Inland Floodplains and Depressions:**

IF1: *Eucalyptus victrix* low open woodland over *Acacia synchronicia*, *Acacia tetragonophylla*, *Scaevola spinescens* tall sparse shrubland with *Rhynchosia minima*, *Senna artemisioides* subsp. *oligophylla*, *Eremophila*

*longifolia* mid sparse shrubland over *Triodia epactia* low isolated hummock grasses with *Eriachne helmsii*, *Chrysopogon fallax*, *Urochloa occidentalis* var. *occidentalis* low sparse tussock grassland;

IF2: *Acacia xiphophylla*, *Acacia synchronicia* mid open shrubland over *Salsola australis*, *Rhagodia eremaea*, *Maireana* spp. mid sparse chenopod shrubland over *Eriachne benthamii*, *Sporobolus australasicus*, **Cenchrus ciliaris* low open tussock grassland;

IF3: *Acacia synchronicia*, *Acacia xiphophylla*, *Acacia trachycarpa* low sparse shrubland over *Salsola australis*, *Threlkeldia diffusa*, *Rhagodia eremaea* mid sparse chenopod shrubland with *Chrysopogon fallax*, *Enteropogon ramosus*, **Cenchrus ciliaris* low open tussock grassland;

IF4: *Eucalyptus victrix* low open woodland over *Acacia synchronicia*, *Acacia tetragonophylla*, *Scaevola spinescens* tall sparse shrubland over *Sporobolus mitchellii*, *Eriachne helmsii*, *Eulalia aurea* low open tussock grassland;

IF5: *Eucalyptus victrix* low open woodland over *Acacia synchronicia*, *Acacia tetragonophylla*, *Senna artemisioides* subsp. *oligophylla* mid sparse shrubland over *Panicum decompositum*, *Rhynchosia minima*, *Neptunia dimorphantha* mid sparse forbland with *Eriachne helmsii*, *Eragrostis xerophila*, *Iseilema membranaceum* low open tussock grassland;

**River Zones and Drainage Channels**

R1: *Eucalyptus victrix*, **Parkinsonia aculeata* low woodland over *Acacia tetragonophylla*, *Acacia coriacea* subsp. *coriacea* tall open shrubland over *Eulalia aurea*, *Leptochloa digitata* low tussock grassland;

R2: *Eucalyptus victrix*, *Eucalyptus camaldulensis* low woodland over *Scaevola spinescens, Acacia coriacea* subsp. *coriacea*, *Melaleuca glomerata* mid sparse shrubland over *Ipomoea muelleri*, *Euphorbia boophthona*, **Portulaca oleracea* low sparse forbland with **Cenchrus ciliaris* low sparse tussock grassland.

*denotes weed species.

**Clearing Description**

Ashburton West Pipelines.
DBP Development Group Nominees Pty Ltd proposes to clear up to 227 hectares of native vegetation within a boundary of approximately 525 hectares, for the purpose of pipeline maintenance and associated activities. The project is located approximately 13 kilometres south-west of Onslow runs in a general south-easterly direction for approximately 110 kilometres.

**Vegetation Condition**

Pristine: No obvious signs of disturbance (Keighery, 1994);

to

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

**Comment**

The vegetation condition was derived from a report prepared by Mattiske (2013).

Above average rainfall was recorded in December 2012, January 2013 and February 2013. However, March 2013 recorded no rainfall and high temperatures which resulted in annual species and perennial grasses being in poor health at the time of the flora survey (Mattiske, 2013).

The majority of the permit area covers an area previously approved for pipeline construction and associated activities under clearing permit 5920/1.

## 3. Assessment of application against Clearing Principles

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

**Comments**

**Proposal is not likely to be at variance to this Principle**

The flora and vegetation survey undertaken by Mattiske (2013) identified 30 different vegetation communities. Given the application area spans a length of approximately 110 kilometres it would be expected that a high number of vegetation communities would be present. The majority of the vegetation was in pristine to excellent condition. The vegetation has since been disturbed by clearing undertaken under CPS 5920/1 and it is unlikely that there would be many areas still in pristine condition. The primary causes of disturbance within the application area were clearing, vehicle and cattle movement and grazing activities (Mattiske, 2013). Coastal communities CP3 and CP4 are in a degraded condition due to the domination of Buffel Grass (*Cenchrus ciliaris*) in the area (Mattiske, 2013). None of the vegetation communities were identified as being a Threatened or Priority Ecological Community (Mattiske, 2013).

A total of 139 flora taxa from 80 genera and 28 families were recorded by the flora survey undertaken by Mattiske (2013). Approximately 97% of the flora species potentially present within the survey area were recorded (Mattiske, 2013). Whilst this percentage seems high for a survey area so large, this is due to the vegetation communities being comprised of similar dominant species. Compared to other surveys within the Pilbara, the average number of species found at each site indicates that the application area has a relatively low species diversity (Mattiske, 2013). The Priority 3 flora species *Eremophila forrestii* subsp. *viridis* and *Grevillia subterlineata* were both recorded at one location within the application area (Mattiske, 2013). One plant of *Grevillia subterlineata* was recorded which was a sterile specimen and therefore, was not able to be positively identified (Mattiske, 2013). There were three individuals of *Eremophila forrestii* subsp. *viridis*

recorded within the application area. The vegetation communities these species were recorded from were well represented within the application area. The proposed clearing for pipeline maintenance is not likely to have any additional impact on these species above the clearing already undertaken under CPS 5920/1.

Based on known records and habitats present, seven frog, 99 reptile, 29 mammal and 132 bird species could be present within the application and surrounding area (Ninox, 2013). The high number of species potentially present is due to the application area passing through a wide range of habitats. However, as the proposed clearing is narrow and linear in nature it will only have a minor impact on each of the habitats. The proposed clearing is not likely to have an impact on faunal diversity in the local area.

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

**Methodology** Mattiske (2013)
Ninox (2013)

**(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**

**Proposal is not likely to be at variance to this Principle**

A Level 1 fauna survey was conducted by Ninox Wildlife Consulting (Ninox) in April 2013. The fauna survey covered a similar area to the flora survey which also includes areas that are outside the application area. The following 13 habitats were identified within the larger fauna survey area (Ninox, 2013):

1. Tidal mudflats/creeks and mangroves
2. Seasonally inundated inland wetlands
3. Chenopod shrublands
4. Acacia over spinifex and buffel on sand
5. Acacia over spinifex on clay
6. Acacia over grasses on clay
7. Grasslands on clay
8. Shrubs over spinifex on sand
9. Eucalypts and shrubs over grasses on clay
10. Eucalypts and shrubs over spinifex and buffel on clay
11. Eucalypts over shrubs and grasses on clay
12. Riparian zones on clay
13. Riparian zones on sandy clay

The majority of fauna habitats recorded are widespread in the local area, however, mangrove habitat was identified as having particular importance (Ninox, 2013). This habitat is significant as it is the only closed canopy forest in the area and supports a range of species not found elsewhere (Ninox, 2013). The areas of mangroves recorded during the vegetation survey are located outside the application area (Mattiske, 2013). There are areas of fauna habitat type 1 within the application area, however, they are predominantly associated with tidal mud flats. Whilst they don't provide the shelter of the mangroves, the tidal mud flats are utilised by a number of shore, wading and migratory birds (Ninox, 2013). As this area was previously cleared under CPS 5920/1, the proposed clearing for pipeline maintenance is not likely to have a significant impact on this habitat.

A higher level of bird species were recorded in riverine habitat, in particular where the application area crosses the Ashburton River as there were still pools of fresh water present (Ninox, 2013). Whilst this habitat is important for local fauna, it has suffered significant degradation from cattle grazing and soil disturbance (Ninox, 2013). Habitat features such as termite mounds are important for a number of vertebrates, and cracking clays are used for shelter in the dry months for a range of species including planigales and dunnarts (Ninox, 2013). These habitat features were not restricted to a specific habitat type.

There have been numerous fauna species of conservation significance recorded within or nearby to the application area, in particular bird species (Ninox, 2013). The application area also contains habitat with the potential to support a number of conservation significant species that have not been recorded. Whilst the proposed clearing will impact habitat for conservation significant fauna, the disturbance in each habitat is relatively minor as it will be in a narrow corridor over a large distance. Given the nature of the disturbance and the representation of the habitats outside the application area, the proposed clearing is not likely to significantly impact native fauna species.

Based on the above the proposed clearing is not likely to be at variance to this Principle.

**Methodology** Mattiske (2013)
Ninox (2013)

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

**Comments**

**Proposal is not likely to be at variance to this Principle**

According to available databases, there are no records of any Threatened Flora species within the application area (GIS Database). The flora survey of the application area did not record any Threatened Flora species (Mattiske, 2013).

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

**Methodology**

Mattiske (2013)

GIS Database:
- Threatened and Priority Flora

**(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**

**Proposal is not likely to be at variance to this Principle**

According to available databases, there are no records of any Threatened Ecological Communities (TECs) within the application area (GIS Database). The vegetation survey of the application area did not identify any communities listed as a TEC (Mattiske, 2013).

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

**Methodology**

Mattiske (2013)

GIS Database:
- Threatened and Priority Ecological Communities Boundaries
- Threatened and Priority Ecological Communities Buffers

**(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**

**Proposal is not at variance to this Principle**

The application area falls within the Carnarvon Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99.74% of the pre-European vegetation still exists in the Carnarvon Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations 117, 127, 589, 608 and 1271 (GIS Database). These vegetation associations have not been extensively cleared as over 87% of the pre-European extent of each of these vegetation associations remains uncleared at both the state and bioregional level (Government of Western Australia, 2019). The permit area does not contain any remnants nor does it form part of any remnants in the local area (GIS Database).

Based on the above, the proposed clearing is not at variance to this Principle.

**Methodology**

Government of Western Australia (2019)

GIS Database:
- IBRA Australia
- Imagery
- 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**

**Proposal is at variance to this Principle**

The application area crosses several non-perennial watercourses (GIS Database). The most significant of these is the Ashburton River which it crosses in two locations, once at the northern end of the application area and again at the southern end (GIS Database). The vegetation community R1 was associated with the Ashburton River in the north and vegetation community R2 is found near the Ashburton River in the south of the application area (Mattiske, 2013). The R1 vegetation community was already in a degraded condition due to the existing vehicle tracks and disturbance from cattle (Mattiske, 2013). Prior to being cleared under CPS 5920/1, the R2 community was in excellent condition and comprised a more intact mid and ground storey (Mattiske, 2013). Care should be taken to ensure that the proposed clearing activities do not alter the surface flow of the Ashburton River. Potential impacts to the Ashburton River may be minimised by the implementation of a watercourse management condition.

The application area also crosses numerous seasonally inundated wetlands (Mattiske, 2013). The majority of these wetlands are associated with vegetation community C1: bare claypan. This vegetation community only contains isolated mixed tussock grasses (Mattiske, 2013). Given the low density of vegetation, the proposed clearing is not likely to impact on these wetland areas.

In the north of the application area the proposed clearing will impact vegetation community T1 which is associated with tidal mudflats. There was 56.64 hectares of this habitat mapped within the survey boundary (Mattiske, 2013). It is estimated that only 7.71 hectares of this community will be cleared by this project (Australian Gas Infrastructure Group, 2018). As this permit is for maintenance clearing, there is not likely to be additional impacts above those for the original clearing to construct the pipeline.

Given the project will clear vegetation growing in association with watercourses and wetlands, the proposed clearing is at variance to this Principle. Although the proposed clearing will impact a number of environments associated with watercourses and wetlands, the narrow and linear nature of the disturbance is not likely to have a significant on these waterbodies.

**Methodology** Australian Gas Infrastructure Group (2018)
Mattiske (2013)

GIS Database:
- Hydrography, linear

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

**Comments** **Proposal is not likely to be at variance to this Principle**
The application area has been mapped as occurring on the Cheetara, Dune, Globe, Littoral, Minderoo, Nanyarra, Onslow and Yankagee land systems (GIS Database). Coastal dune systems of the Onslow and Littoral lands systems have a high susceptibility to wind erosion if cleared (Payne et al., 1988). Some inland areas associated with watercourses may be moderately susceptible to erosion (Payne et al., 1988).

The application area is relatively flat and narrow, and given the proposed activities are for maintenance activities, the clearing is not likely to result in any appreciable land degradation (GIS Database).

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

**Methodology** Payne et al. (1988)

GIS Database:
- Landsystem Rangelands

**(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** **Proposal is not likely to be at variance to this Principle**
The application area does not lie within any conservation areas or Department of Biodiversity, Conservation and Attractions managed lands (GIS Database). The Cane River Conservation Park and the former Mt Minnie and Nanutarra pastoral leases are all within 20 kilometres of the application area (GIS Database). However, the proposed clearing will not impact on any ecological links to these conservation areas.

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

**Methodology** GIS Database:
- DPaW Tenure

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

**Comments** **Proposal is not likely to be at variance to this Principle**
The application is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). There are no permanent watercourses within the application area, however, it crosses the Ashburton River in two locations (GIS Database). The proposed clearing is a narrow corridor and whilst it will cross a number of seasonally wet areas it is not likely to cause a deterioration of surface water quality.

The groundwater within the application area ranges from 1,000 to 14,000 milligrams per litre of total dissolved solids (GIS Database). Given the nature of the proposed clearing, it would not be expected that it would cause salinity levels within the application or surrounding area to alter.

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

**Methodology** GIS Database:
- Groundwater Salinity, Satewide
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)

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

**Comments**

**Proposal is not likely to be at variance to this Principle**

The proposed clearing is for pipeline maintenance and the application area is relatively flat across its whole distance (GIS Database). Given this, the proposed clearing is unlikely to cause excessive levels of water runoff that would exacerbate the incidence or intensity of flooding in the local area.

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

**Methodology** GIS Database:
- Topographic Contours, Statewide

### Planning Instrument, Native Title, previous EPA decision or other matter.

**Comments**

The clearing permit application was advertised on 25 February 2019 by the Department of Mines, Industry Regulation and Safety (DMIRS), inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2019). This claim has been determined by the Federal Court on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are three registered Aboriginal Sites of Significance within the application area (DPLH, 2019). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

The project was referred to the Environmental Protection Authority (EPA) on 28 October 2013. The determination of the EPA was 'Not Assessed – No Advice Given'. The project was also referred to the (Federal) Department of the Environment under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The project was deemed not to be a controlled action under the EPBC Act.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

**Methodology** DPLH (2019)

## 4. References


Australian Gas Infrastructure Group (2018) Native Vegetation Clearing Permit Application, Supporting Documentation. Australian Gas Infrastructure Group, November 2018.

DPLH (2019) Aboriginal Heritage Enquiry System. Department of Planning, Lands and Heritage. http://maps.daa.wa.gov.au/AHIS/ (Accessed 26 August 2019).

Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

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 (2013) Flora and Vegetation of the CS2 - Tubridgi - Wheatstone Gas Pipeline Project Area. Report prepared for DBP by Mattiske Consulting Pty Ltd, dated April 2013.

Ninox (2013) Level 1 Vertebrate Fauna Assessment of the Proposed Tubridgi to Wheatstone Gas Pipeline, Western Australia. Report prepared for Mattiske Consulting Pty Ltd by Ninox Wildlife Consulting, dated April 2013.

Payne, A.L., Mitchell, A.A. and Holman, W.F. (1988) An Inventory and Condition Survey of Rangelands in the Ashburton River Catchment, Western Australia. Department of Agriculture, Western Australia.

## 5. Glossary

### Acronyms:

| | |
|---|---|
| **BoM** | Bureau of Meteorology, Australian Government |
| **DAA** | Department of Aboriginal Affairs, Western Australia (now DPLH) |
| **DAFWA** | Department of Agriculture and Food, Western Australia (now DPIRD) |
| **DBCA** | Department of Biodiversity, Conservation and Attractions, Western Australia |
| **DEC** | Department of Environment and Conservation, Western Australia (now DBCA and DWER) |
| **DEE** | Department of the Environment and Energy, Australian Government |
| **DER** | Department of Environment Regulation, Western Australia (now DWER) |
| **DMIRS** | Department of Mines, Industry Regulation and Safety, Western Australia |
| **DMP** | Department of Mines and Petroleum, Western Australia (now DMIRS) |
| **DPIRD** | Department of Primary Industries and Regional Development, Western Australia |
| **DPLH** | Department of Planning, Lands and Heritage, Western Australia |
| **DRF** | Declared Rare Flora |
| **DoE** | Department of the Environment, Australian Government (now DEE) |
| **DoW** | Department of Water, Western Australia (now DWER) |
| **DPaW** | Department of Parks and Wildlife, Western Australia (now DBCA) |
| **DSEWPaC** | Department of Sustainability, Environment, Water, Population and Communities (now DEE) |
| **DWER** | Department of Water and Environmental Regulation, Western Australia |
| **EPA** | Environmental Protection Authority, Western Australia |
| **EP Act** | *Environmental Protection Act 1986*, Western Australia |
| **EPBC Act** | *Environment Protection and Biodiversity Conservation Act 1999* (Federal Act) |
| **GIS** | Geographical Information System |
| **ha** | Hectare (10,000 square metres) |
| **IBRA** | Interim Biogeographic Regionalisation for Australia |
| **IUCN** | International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union |
| **PEC** | Priority Ecological Community, Western Australia |
| **RIWI Act** | *Rights in Water and Irrigation Act 1914*, Western Australia |
| **TEC** | Threatened Ecological Community |

### Definitions:

**{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-**

**T** **Threatened species:**

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

***Threatened fauna*** is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

***Threatened flora*** is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife Conservation (Rare Flora) Notice 2018* for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

**CR** **Critically endangered species**
Threatened species considered to be "*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

**EN** **Endangered species**
Threatened species considered to be "*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for endangered flora.

**VU** **Vulnerable species**

Threatened species considered to be "*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for vulnerable fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for vulnerable flora.

**Extinct Species:**

**EX** **Extinct species**

Species where "*there is no reasonable doubt that the last member of the species has died*", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

**EW** **Extinct in the wild species**

Species that *"is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

**Specially protected species:**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

**MI** **Migratory species**

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

**CD** **Species of special conservation interest (conservation dependent fauna)**

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

**OS** **Other specially protected species**

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

**P** **Priority species:**

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

**P1** **Priority One - Poorly-known species**
Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

**P2** **Priority Two - Poorly-known species**
Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

**P3** **Priority Three - Poorly-known species**
Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

**P4** **Priority Four - Rare, Near Threatened and other species in need of monitoring**
(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.
(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.
(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.