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# Entrance Point Native Vegetation Clearing Permit

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**Kimberley Ports Authority**

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## DOCUMENT TRACKING

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Template 2.8.1

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## Abbreviations

Abbreviation	Description
BC Act	<i>Biodiversity Conservation Act 2016</i>
EMP	Environmental Management Plan
EP Act	<i>Environmental Protection Act 1986</i>
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
DBCA	Department of Biodiversity, Conservation and Attractions
DWER	Department of Water and Environmental Regulation
KPA	Kimberley Ports Authority
NVCP	Native Vegetation Clearing Permit
PEC	Priority Ecological Community
PMA	Port Management Area
TEC	Threatened Ecological Community

# 1. Introduction

## 1.1 Development overview and background

Kimberley Ports Authority (KPA) previously obtained approval for a native vegetation clearing permit (NVCP) CPS 6098/1 (now expired; **Appendix A**) for the purposes of clearing 1.84 ha of native vegetation to construct consolidated port administration facilities, passenger terminal, recreation and tourism support facilities, car park and marine rescue facilities within Lot 621 of DP 70861. It is in the intention of KPA to re-instate NVCP 6098/1 for the purposes of clearing 2.29 ha of native vegetation to construct consolidated port administration facilities, passenger terminal, recreation and tourism support facilities, car park and marine rescue facilities within Lot 621 of DP 70861, herein referred to as the 'application area' (Figure 1). This represents a 0.45 ha increase in native vegetation removal in the south west portion of the application area than was previously approved.

The original clearing permit expired on 21 February 2017 with no clearing having been undertaken. Given the age of previous studies used to inform the decision of the CPS 6098/1 by Woodman (2008) and Coffey (2013), Eco Logical Australia (ELA) were engaged to undertake further survey to inform the assessment on the presence or absence of conservation significant flora species and threatened ecological communities.

A targeted conservation listed flora survey and detailed (level two) vegetation survey was undertaken by ELA (2019) within the application area on 4 December 2018 to determine the composition and value of the vegetation currently present. Outcomes from this survey are presented within this document and attached in **Appendix B**.

## 1.2 Purpose of this document

This document has been prepared to support a purpose Native Vegetation Clearing Permit (NVCP) application and has been prepared for assessment and approval under Part V Division 2 of the Western Australian (WA) *Environmental Protection Act 1986* (EP Act).





Figure 1: Site Overview

## 2. Physical Environment

### 2.1 Biogeographic and regional setting

The Port of Broome, located within the Kimberley region of Western Australia is characterised as being within the Dampierland Interim Biogeographic Regionalisation, which retains 99% of pre-European vegetation extent (Beard 1980). This area is classified as having a “Pindan Woodland” or “Pindan with low trees” physiognomic vegetation type characterised by wattle thicket with eucalypt woodland or scattered low trees over spinifex (Beard et al. 2013).

### 2.2 Geology, landform and soils

Schoknecht *et al.* (2004) describes the site to be located within the Ayers-Canning Province with low tablelands of ferruginous and kaolinized materials with laterite and silcrete, resulting from deep weathering of Permian, Jurassic and Cretaceous sandstone and Tertiary siltstones.

Topography for the application area is mapped as 335Cr: Carpentaria system, which is described as coastal plains, extensive bare mud flats, associated sandy margins and minor dunes, saline sands and muds, supporting paperbark thickets, samphire shrublands and fringing mangrove forests (Schoknecht *et al.* 2004).

The application area is located on Pindan soils which are free draining, silty sands of fine to very fine grain (Laws 1991).

### 2.3 Hydrology

#### 2.3.1 Surface water

The application area is located 5 m from the shoreline of the Indian Ocean, within the Cape Leveque Coast drainage basin (DSEWPac 2011) and is not within a proclaimed surface water management area (Department of Water 2009). There are no watercourses or wetlands within the application area. The nearest wetland of significance is at Roebuck Bay conservation reserve approximately 6 km northeast of the application area.

The Kimberley region experiences very hot wet summers and mild dry winters. The Broome Airport weather station (station number 3003; climate data 1939-2018), located approximately 5 km north east of the application area, reports that on average, Broome received 628.1 mm of rain per annum; with 75% of this rain falling between January to March each year (BoM 2019). Any rainfall generated is quickly discharged via evaporation, soil infiltration and percolation into the groundwater (Laws 1991).

#### 2.3.2 Groundwater

Groundwater resources in the Broome region comprise of both confined and unconfined aquifers (Laws 1991). The Cretaceous Broome Sandstone aquifer is an unconfined aquifer and the most utilised in the region. It comprises fine to coarse grained quartzose sandstone with minor beds and/or pebble conglomerate of grey siltstone and claystone. This aquifer is separated from the underlying aquifers by an aquiclude (the Jaremai Siltstone) and two confined aquifers, Alexander Formation and the Wallal Sandstone (Laws 1991). Direct filtration from rainfall is the main recharge to the aquifer. A saltwater wedge occurs in the aquifer near Broome around the coast (Laws 1991). The regional groundwater

moves with the gradient towards the coast (Laws 1991), west towards the Indian Ocean and south towards Roebuck Bay.



## 3. Biological Environment

### 3.1 Flora and Vegetation

A number of flora and vegetation surveys have been undertaken across the application area. Woodman Environmental Consulting (Woodman) conducted a Level 2 flora and vegetation survey across the whole Port Management Area (PMA) in 2007 and 2008 and a targeted survey for the undescribed *Scleria* species in 2009 within the (PMA). Coffey conducted a targeted survey over the application area in 2013.

Due to changes in species listings resulting in possible inconsistencies in the previous studies for other applications in close proximity, ELA (2019) were engaged to undertake targeted conservation listed flora survey and detailed (level two) vegetation survey on 4 December 2018 to better inform the assessment on the presence or absence of certain conservation significant flora species and ecological communities within the site.

#### 3.1.1 Flora

A flora and vegetation survey of the PMA, incorporating both the application area and its surrounds, was conducted by Woodman (2008) identifying a total of 167 discrete vascular plant taxa, from 113 genera from 53 families. The most well-represented families in the PMA were Poaceae (23 taxa, including 3 introduced taxa), Papilionaceae (16 taxa, including two introduced taxa), Mimosaceae (nine taxa), Malvaceae (8 taxa, including one introduced taxa) and Myrtaceae (7 taxa).

ELA (2019) recorded a total of 18 taxa from 16 genera and eight families from within the application area. Fabaceae had the highest number of species (seven species) and *Crotalaria* was the best represented genera with two taxa recorded.

##### 3.1.1.1 Threatened and Priority Flora

A desktop assessment conducted by ELA (2019) initially identified the potential for 13 conservation listed flora species to possibly occur within the application area, however all were considered unlikely to occur based on adequate survey effort and/or lack of suitable habitat.

The survey conducted on 4 December 2018, ELA (2019) did not record any Threatened flora species listed under section 178 of the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) or pursuant to Part 2 of the *Biodiversity Conservation Act 2018* (BC Act) and as listed by the Department of Biodiversity, Conservation and Attractions (DBCA) or Priority flora species as listed by Western Australian Herbarium (1998- ).

##### 3.1.1.2 Introduced species

Two introduced (weed) species were recorded within the application area, *Cenchrus ciliaris* and *Macroptilium atropurpureum* (ELA 2019). Neither of these introduced species are listed as Declared Plants under the *Biosecurity and Agriculture Management Act 2007*.

### 3.1.2 Vegetation

#### 3.1.2.1 Pre-European Vegetation Extent

Vegetation type and extent in WA has been mapped at a regional scale by Beard (1979), who categorised vegetation into broad vegetation associations. Based on this mapping at a scale of 1:1,000,000, DAFWA has compiled a list of vegetation extent and types across WA (Shepherd *et al.* 2002). The site intersects one vegetation system association:

*Dampierland 750: Shrublands, pindan; Acacia tumida shrubland with grey box & cabbage gum medium woodland over ribbon grass & curly spinifex*

The pre-European and current extent of native vegetation associations in WA has been interpreted by Shepherd *et al.* (2002) using data from Beard's (1979) regional vegetation mapping, along with other vegetation mapping and satellite imagery and orthophoto interpretation. A summary of the pre-European and current extent of native vegetation associations within the reserve is provided in Table 1.

**Table 1: Vegetation Association and Complex mapping units occurring within the reserve**

Vegetation Association (Beard 1979)	Pre-European extent (ha) (Government of WA 2018a)	Current extent (%) (Government of WA 2018a)	Extent within the site (ha) (% of current extent)
Dampierland System - 750	1,223,884.58	1,218,427.52 (99.55%)	2.29 (0.0001%)

### 3.1.2.2 Vegetation assessment

One floristic community type was identified as occurring in the application area by ELA (2019) and is comparable with the vegetation community identified by Woodman (2008):

*"Vegetation community 1 – Acacia bivenosa, Crotalaria cunninghamii, Cullen martinii tall open shrubland over Tephrosia rosea, Crotalaria medicaginea mid sparse shrubland over Euphorbia myrtilloides, Tinospora smilacina, Boerhavia gardneri low isolated shrubs and \*Cenchrus ciliaris, Aristida holathera low open tussock grassland"*

### 3.1.2.3 Vegetation condition

Vegetation within the application area was classed as being in Very Good – Good condition throughout based on the EPA *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016). Evidence of disturbance included impacts from grazing, heat stress, weeds and tracks. The application area was also estimated to have been burnt approximately 10 – 20 years ago (ELA 2019).

### 3.1.2.4 Threatened and Priority Ecological Communities

Two Threatened Ecological Communities (TEC) and two Priority Ecological Communities (PEC) have been identified within the greater application area (Woodman 2008, Coffey 2013), however the vegetation community recorded within the application area does not constitute any known TEC listed under the EPBC Act or *Biodiversity Conservation Act 2016* or PEC listed by DBCA (ELA 2019).

## 3.2 Terrestrial Fauna

### 3.2.1 Terrestrial fauna species

A survey on the Broome Port Area determined vertebrate fauna assemblages within the application area are typical of the region (Bamford, 2010). A total of one frog, 10 reptile, 34 bird and five mammal species were recorded during this survey, many of which have widespread distributions through the region, and a number of which are migratory species.

#### 3.2.1.1 Threatened and Priority fauna

Ten conservation significant species were recorded from or likely to occur across the Broome Peninsula (Bamford 2010). These were:

- Barn Swallow (*Hirundo rustica*)- listed migratory species under the EPBC Act;
- Fork-tailed Swift (*Apus pacificus*) – listed migratory species under the EPBC Act;
- Grey Falcon (*Falco hypoleucos*) – Endangered under the EPBC Act and Vulnerable under the BC Act;
- Oriental Cuckoo (*Cuculus saturates*) – listed migratory species under the EPBC Act;
- Peregrine Falcon (*Falco peregrinus*) – Specially Protected under the BC Act,
- White throated Needletail (*Hirundapus caudacutus*) – listed migratory species under the EPBC Act;
- Bilby (*Macrotis lagotis*) – Vulnerable;
- Airlie Island Ctenotus (*Ctenotus angusticeps*) – Vulnerable under the EPBC Act and BC Act;
- Dampierland Burrowing Snake (*Simoselaps minimus*) – Priority 2 under the BC Act ; and
- Dampierland Plain Slider (*Lerista separanda*) – Priority 2 under the BC Act.

Four of these species are migratory birds and are unlikely to be reliant on the fauna habitat within the application area.

The application area is considered to be highly degraded condition based on the *EPA Technical Guidance: Terrestrial Fauna Surveys for Environmental Impact Assessments* (EPA 2004) with a high density on invasive weed species (such as buffel grass). Due to the application area being fragmented with cleared areas and multiple tracks it is considered to be of low value as habitat for conservation significant fauna (Bamford 2010; Coffey 2013).

### 3.2.2 Terrestrial fauna habitat

A previous survey conducted in 2009 by Bamford Consulting Ecologist (Bamford) showed nine fauna habitat types recorded during the survey, with only one fauna habitat type (Pindan vegetation fauna habitat) located within the application area. This habitat type is widespread on the Broome Peninsula and occurs on orange to red Pindan soils found in the southern half of the fauna survey area (Bamford 2010).

The native vegetation located within the application area does not reflect significant foraging, roosting or breeding habitat for the 10 conservation significant fauna species that have potential to occur on the Broome Peninsula.

## 4. Assessment against the Ten Clearing Principles

An assessment of the proposed vegetation clearing against the ten native vegetation Clearing Principles contained in Schedule 5 of the EP Act is provided in Sections 4.1 to 4.10. Table 2 contains a summary of the assessment.

The proposed clearing is not considered to be at variance with any of the Principles.

**Table 2: Summary of assessment against the ten clearing principles**

Clearing Principle	Is not at variance	May be at variance
a) Native vegetation should not be cleared if it comprises a high level of biological diversity	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of Rare flora	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of a threatened ecological community (TEC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Native vegetation should not be cleared if it is significant as remnant vegetation in an area that has been extensively cleared	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Native vegetation should not be cleared if the clearing of vegetation is likely to cause appreciable land degradation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Native vegetation should not be cleared if the clearing of vegetation is likely to cause, or exacerbate, the incidence of flooding	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 4.1 Comprises high level of biological diversity

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

ELA (2019) recorded a total of 18 taxa from 16 genera and eight families from the flora and vegetation survey conducted on 4 December 2018. Other studies conducted on the wider Broome Peninsula region have recorded a total of 167 vascular plant taxa from 113 genera and 53 families, showing the application area does not comprise a high level of biological diversity.

A desktop assessment conducted by ELA (2019) identified the potential for 13 conservation listed flora species to possibly occur within the application area, however all were considered unlikely to occur based on adequate survey effort and/or lack of suitable habitat. No conservation listed flora species were recorded from within the application area.

No State or Federally listed TECs or PECs have been recorded within the application area. Two TECs and two PECs are known to occur nearby.

As the proposed clearing does not comprise a high level of biological diversity, the proposed clearing is not considered to be at variance with this Principle.

#### 4.2 Potential impact to any significant habitat for fauna indigenous to Western Australia

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

A survey of the Broome Port Area identified a total of one frog, ten reptile, 34 bird and five mammal species, many of which have widespread distributions through the region, a number of which are migratory species, and resemble fauna assemblages typical of the region (Bamford 2010).

Ten conservation significant fauna species were recorded or considered likely to utilise the fauna habitat present on the Broome Peninsula (Bamford 2010). Four of these species are migratory birds and are unlikely to be reliant on the fauna habitat within the application area.

The native vegetation located within the application area does not reflect significant foraging, roosting or breeding habitat for the ten conservation significant fauna species that have potential to occur in the Broome Peninsula.

An ecological corridor allowing fauna movement from the southern tip of the peninsula to a larger area of native vegetation is located on the western edge of the Broome Peninsula. The application area is not part of this ecological linkage due to its location on the extreme southern tip of the Broome Peninsula. The clearing associated with the application area will not disrupt the continuity of the ecological corridor.

The fauna habitat in the application area is not considered to be significant for fauna as it is considered to be low habitat quality due to the fragmentation from tracks and previous clearing and the occurrence of invasive species (buffel grass). The removal of vegetation will not be a significant impact to fauna or habitat.

As the native vegetation in the application area is not considered significant habitat for fauna indigenous to Western Australia, the proposed clearing is not considered to be at variance with this Principle.

### 4.3 Potential impact to any rare flora

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

There are no records of any threatened flora species within the application area. Clearing of native vegetation will not directly or indirectly impact any known occurrences of threatened flora (Woodman 2008, Coffey 2013, ELA 2019).

The nearest threatened flora species known to occur within the PMA is *Seringia exastia* (previously *Keraudrenia exastia*) approximately 600 m northwest of the application area and is in a separate area set aside for conservation of the species.

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

### 4.4 Potential of any threatened ecological communities

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

Two TECs and two PECs are known to occur nearby, however no State or Federally listed TECs or PECs have been recorded within the application area.

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

### 4.5 Significance as a remnant of native vegetation in the area that has been extensively cleared

*Principle (e): Native vegetation should not be cleared if it is significant as remnant vegetation in an area that has been extensively cleared.*

The application area is considered to represent vegetation system association 750.1 (Pindan shrublands: *Acacia tumida* shrubland with Grey Box and Cabbage Gum medium woodland over Ribbon Grass and Curly Spinifex). There is 99.6% remaining of this vegetation system from the pre-European extent within the IBRA sub-region of Pindanland, within the Damperland system (Department of Parks and Wildlife 2017). Pindan shrublands has therefore not been extensively cleared within the region.

At a local scale, there has been extensive clearing of native vegetation within the PMA in connection with port facilities. However, the vegetation within the application area is not significant as a remnant of native vegetation, due to its low habitat quality value and insignificant role in the ecological linkages within the PMA

Therefore, the proposed clearing is not considered to be at variance with this Principle.

### 4.6 Impact on any watercourses and/or wetlands

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

The native vegetation located within the application area is not growing in, or in association with, an environment associated with a watercourse or wetland. The application area is located along the



shoreline of the Indian Ocean, on Pindan soils which are free draining, silty sands of fine to very fine grain (Laws 1991). The rainfall leaves the application area via soil infiltration and percolation into the groundwater and evaporation after a rainfall event.

There are no watercourses or wetlands within or nearby the application area. Roebuck Bay Ramsar wetland is the nearest nationally important wetland and is located approximately 6 km northeast of the application area and will not be directly or indirectly impacted by the clearing within the application area.

The proposed clearing is not considered to be at variance with this principle.

#### 4.7 Potential to cause appreciable land degradation

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

The application area occurs within an area that can receive heavy rainfall and cyclonic activities and as a result can cause excessive erosion and degradation of the land. To reduce the likelihood of erosion and land degradation, the clearing of native vegetation shall coincide with the dry season (May-October).

KPA also operates under an Environmental Management Plan, which applies to all activities undertaken by KPA and guides the environmental management within the PMA.

The proposed clearing is not anticipated to cause appreciable land degradation and is not considered to be at variance to this Principle.

#### 4.8 Potential to impact on the environmental values of adjacent or nearby conservation areas

*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.*

There are no conservation reserves within the application area.

Roebuck Bay conservation reserve is approximately 6 km north-east of the application area and will not be impacted by clearing, and so the proposed clearing is not considered to be at variance with this principle.

#### 4.9 Potential deterioration in the quality of surface or underground water

*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.*

The application area is not located in a proclaimed surface water management area (Department of Water 2009), nor is there any watercourses or wetlands located within the application area.

The application area is located on the shoreline of the Indian Ocean, on Pindan soils which are free draining, silty sands of fine to very fine grain (Laws 1991). The rainfall leaves the application area via soil infiltration and percolation into the groundwater and evaporation after a rainfall event.

No deterioration in the quality of surface or underground water is expected given the small area of clearing required within the 2.29 ha application area.

Any potential environmental impacts will be managed in accordance with KPA's EMP.

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

#### 4.10 Potential of clearing to cause, or exacerbate, the incidence of flooding

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

The clearing of native vegetation is not expected to cause or exacerbate the incidence of flooding on the Broome Peninsula. The application area is located on the shoreline of the Indian Ocean, Pindan soils which are free draining, silty sands of fine to very fine grain (Laws 1991). Rainfall leaves the application area via soil infiltration and percolation into the groundwater and evaporation after a rainfall event.

The clearing of native vegetation and management of the application area will be undertaken in accordance with KPA's EMP.

The proposed clearing is not anticipated to cause or exacerbate flooding and is not considered to be at variance to this Principle.

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## Appendix A : Previous NVCP Approval - CPS 6098/1



Government of Western Australia  
Department of Environment Regulation

Your ref: LAN230\_7179  
Our ref: CPS 6098/1  
Enquiries: Clare Ryan  
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Ms Denise True  
Consultant  
Coffey Environments Australia Pty Ltd  
PO Box 4223  
VICTORIA PARK WA 6979

Dear Ms True

**PERMIT TO CLEAR NATIVE VEGETATION UNDER THE *ENVIRONMENTAL PROTECTION ACT 1986***

I refer to the Kimberley Ports Authority's application to clear 1.84 hectares of native vegetation within Lot 621 on Deposited Plan 70861, Minyirr, for the purposes of constructing consolidated port administration facilities, passenger terminal, recreational and tourism support facilities, car park and marine rescue facilities (reference CPS 6098/1).

In an email dated 13 January 2015, Ms Veronica Mair of the Kimberley Ports Authority provided advice from the Shire of Broome that planning approval for the proposed works is not required.

Please find enclosed the Kimberley Ports Authority's permit to clear native vegetation granted under s.51E of the *Environmental Protection Act 1986*. This permit authorises the Kimberley Ports Authority to clear, subject to certain terms, conditions or restrictions. A copy of the permit is now available for the public to view, as required by the regulations.

A copy of the Decision Report is attached for your information. The Decision Report is also available for the public to view.

Please read the permit carefully. If you or the Kimberley Ports Authority wish to discuss the permit, please contact the Department of Environment Regulation immediately. Be aware that there are penalties for failing to comply with the requirements of the permit.

If you are aggrieved by this decision an appeal may be lodged with the Minister for Environment. If you choose to appeal, it must be in writing, clearly set out the grounds of the appeal, and be received by the Minister within 21 days of being notified of the decision. More information on lodging an appeal is available from the Office of the Appeals Convenor on telephone 6467 5190. Completed appeals should be posted or delivered to:

Office of the Appeals Convenor  
Level 22 Forrest Centre  
221 St George's Terrace, PERTH WA 6000  
Tel: 6467 5190 Fax: 6467 5199  
Email: [admin@appealsconvenor.wa.gov.au](mailto:admin@appealsconvenor.wa.gov.au)  
Web: [www.appealsconvenor.wa.gov.au](http://www.appealsconvenor.wa.gov.au)

Third parties may also appeal against the grant of this permit or its conditions.

The Atrium, 168 St Georges Terrace, Perth WA 6000  
Phone: (08) 6467 5000 Fax (08) 6467 5562  
Postal address: Locked Bag 33, Cloisters Square, Perth WA 6850  
[www.der.wa.gov.au](http://www.der.wa.gov.au)

**Please note that clearing must not commence until the date stated on the permit, or in the event of an appeal, after the appeal has been determined and the Kimberley Ports Authority has been notified that it may proceed.**

Please also note that in determining the amount of native vegetation authorised to be cleared under this permit, the Permit Holder is to have regard to avoiding clearing, minimising clearing, and reducing the impacts of clearing on any environmental value.

Be aware also that compliance with the terms, conditions or restrictions of this permit does not absolve the Permit Holder from responsibility for compliance with the requirements of all Commonwealth, State and Local Government legislation.

It has been noted that this permit covers an area in which there exists one registered Indigenous Heritage Site. It is the responsibility of the proponent to ensure that no Aboriginal Sites of Significance are damaged through the clearing process. In implementing this permit please liaise with the Department of Aboriginal Affairs regarding your obligations under the *Aboriginal Heritage Act 1972*.

Yawuru Registered Native Title Body Corporate has requested that the Kimberley Ports Authority consult with them prior to clearing and have advised that the Kimberley Ports Authority should enter into an appropriate heritage protection agreement covering the permit area, a heritage survey should be undertaken, and any vegetation clearing should be done in accordance with any condition set out in the heritage survey report.

If you have any queries regarding this approval, please contact Clearing Regulation Officer Ms Clare Ryan on 6467 5028.

Yours sincerely



M Warnock  
SENIOR MANAGER  
CLEARING REGULATION

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

22 January 2015

Attached: Clearing Permit (CPS 6098/1), Plan 6098/1 and Decision Report.  
Fact Sheet: Complying with your Clearing Permit





## **CLEARING PERMIT**

*Granted under section 51E of the Environmental Protection Act 1986*

<b>Purpose Permit number:</b>	CPS 6098/1
<b>Permit Holder:</b>	Kimberley Ports Authority
<b>Duration of Permit:</b>	21 February 2015 – 21 February 2017

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 purposes of constructing consolidated port administration facilities, passenger terminal, recreational and tourism support facilities, car park and marine rescue facilities.

**2. Land on which clearing is to be done**

Lot 621 on Deposited Plan 70861 (Minyirr 6725)

**3. Area of Clearing**

The Permit Holder must not clear more than 1.84 hectares of native vegetation within the area hatched yellow on attached Plan 6098/1.

**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.

### **PART II – MANAGEMENT CONDITIONS**

**5. Avoid, minimise etc clearing**

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

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

**6. 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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *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 areas to be cleared.

**DEFINITIONS**

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

*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 Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



M Warnock  
SENIOR MANAGER  
CLEARING REGULATION

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

22 January 2015



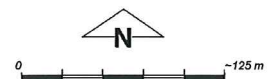
# Plan 6098/1



## LEGEND

- Road Centrelines
- Local Government Authorities
- Clearing Instruments**
- Areas Approved to Clear

- Cadastre for labelling
- Broome Townsite 2007 20cm Orthomosaic - Landgate 2007



Scale 1:4464  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

*M Warnock* Date 22/1/15  
M Warnock

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

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia  
Department of Environment Regulation

WA Crown Copyright 2002





# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 6098/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Kimberley Ports Authority

### 1.3. Property details

Property: LOT 621 ON DEPOSITED PLAN 70861 (MINYIRR 6725)  
Local Government Area: Shire of Broome  
Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.84		Mechanical Removal	Building or Structure

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 22 January 2015

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
A flora and vegetation survey undertaken by Woodman (2008) has identified the southern and extreme western portion of the application as being representative of vegetation association FCT 3d which is described as: a highly disturbed open woodland of mixed species including <i>Bauhinia cunninghamii</i> and <i>Terminalia petiolaris</i> over occasional shrubland dominated by <i>Acacia bivenosa</i> over lower shrubland of mixed species including <i>Tephrosia rosea</i> var. <i>rosea</i> , <i>Euphorbia coghlanii</i> and <i>Abrus precatorius</i> subsp. <i>precatorius</i> on pale orange to brown sand on lower slopes behind dunes, and secondary dunes.	The clearing of 1.84 hectares of native vegetation is for the purposes of constructing consolidated port administration facilities, passenger terminal, recreational and tourism support facilities, car park and marine rescue facilities.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)  To  Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The condition and description of the vegetation has been determined from a flora and vegetation survey undertaken by Woodman (2008) and aerial imagery.  The majority of the area under application is in a degraded (Keighery 1994) condition (Parks and Wildlife 2014b).

A targeted flora survey undertaken by Coffey Environmental Australia Pty Ltd (2013) described the application area as open woodland of mixed species over occasional shrubland dominated by *Acacia bivenosa* over lower shrubland of mixed species.

## 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 clearing of 1.84 hectares of native vegetation is for the purposes of constructing consolidated port administration facilities, passenger terminal, recreational and tourism support facilities, car park and marine rescue facilities.

The majority of the area under application is in a degraded (Keighery 1994) condition (Parks and Wildlife 2014b).

Numerous priority flora and one rare flora species have been recorded within the local area (10 kilometre radius). A targeted flora survey undertaken by Coffey Environments Australia Pty Ltd (2013) in July 2013 and a flora and vegetation survey undertaken by Woodman (2008) did not identify any rare or priority flora within the application area. Therefore the clearing proposed is not likely to impact upon rare or priority flora species.

Two threatened ecological communities (TEC), 'Roebuck Bay mudflats' and 'Vine thickets on coastal sand dunes of the Dampier Peninsula' are located approximately 35 metres and 50 metres respectively from the area under application. Two priority ecological communities (Priority 1) have also been recorded within close proximity of the application area. The targeted flora survey undertaken by Coffey Environmental Pty Ltd (2013) did not identify any TEC's or PEC's within the area under application. The clearing proposed may indirectly impact the TEC's located within close proximity to the application area through the spread of weeds, increased dust or through increased runoff into the areas containing TEC's (Parks and Wildlife 2014b). A weed management condition will help mitigate impacts to the nearby TEC's.

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius) (DEC 2007-). The majority of the vegetation subject to this application is in a degraded (Keighery 1994) condition and therefore the vegetation proposed to be cleared is not likely to comprise of significant habitat for fauna indigenous to Western Australia. Vegetation in a better condition located adjacent to the application area and within the local area (10 kilometre radius) is likely to provide significant habitat for fauna indigenous to Western Australia.

Digital imagery indicates that the local area (10 kilometre radius) surrounding the area under application retains approximately 90 per cent vegetation cover.

Given the above, the clearing as proposed is not likely to comprise a high level of biological diversity and is not likely to be at variance to this principle.

**Methodology**

**References:**

- Coffey Environmental Australia Pty Ltd (2013)
- DEC (2007-)
- Parks and Wildlife (2014a)
- Parks and Wildlife (2014b)
- Woodman (2008)

**GIS Databases:**

- SAC Bio Datasets - accessed June 2014

**(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**

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius) including: Red Knot (*Calidris canutus* subsp. *rogersi*), Curlew Sandpiper (*Calidris ferruginea*), Great Knot (*Calidris tenuirostris*), Greater Sand Plover (*Charadrius leschenaultii* subsp. *leschenaultii*), Lesser Sand Plover (*Charadrius mongolus*), Grey Falcon (*Falco hypoleucos*), Bar-tailed Godwit (*Limosa lapponica* subsp. *menzbieri*), Bilby (*Macrotis lagotis*), Eastern Curlew (*Numenius madagascariensis*), Hutton's Shearwater (*Puffinus huttoni*) (DEC 2007-).

The majority of the application area is in a degraded (Keighery 1994) condition and therefore the vegetation proposed to be cleared is not likely to comprise of significant habitat for fauna indigenous to Western Australia.

Digital imagery indicates that the local area (10 kilometre radius) surrounding the area under application retains approximately 90 per cent vegetation cover. In addition the application area is located adjacent to a reserve managed for conservation and recreation. Therefore vegetation located adjacent to the application area and within the local area (10 kilometre radius) is likely to provide better habitat for the above fauna species.

Given the above the clearing as proposed is not likely to be at variance to this principle.

**Methodology**

**References:**

- DEC (2007-)

**GIS Databases:**

- SAC Bio Datasets - accessed June 2014

**(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**

One rare flora species has been recorded within the local area (10 kilometre radius) the closest being recorded approximately one kilometre north of the area under application.

This species is found on red sand within pindan coastal sites, relict desert dune swale and flowers between April to December (Western Australian Herbarium 1998-).

A targeted flora survey undertaken by Coffey Environmental Australia Pty Ltd (2013) in July 2013 did not identify any rare flora within the application area. Furthermore a flora and vegetation survey undertaken by Woodman (2008) did not identify any rare flora.

Given the above the clearing as proposed is not likely to be at variance with this principle.

**Methodology**    **References:**  
- Coffey Environmental Australia Pty Ltd (2013)  
- Western Australian Herbarium (1998-)  
- Woodman (2008)

**GIS Databases:**  
- SAC Bio Datasets - accessed June 2014

**(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 may be at variance to this Principle**

Two threatened ecological communities (TEC) are known to occur within close proximity of the area under application. 'Roebuck Bay mudflats' and 'Monsoon vine thickets on coastal sand dunes of the Dampier Peninsula' are located approximately 35 metres and 50 metres respectively from the area under application.

The 'Roebuck Bay mudflats' TEC is described based on the assemblage of water birds and the complex, diverse benthic invertebrate community in the intertidal zone. Proposals such as large agricultural developments and industrial plants adjacent to the bay have potential to result in significant impacts to water quality and freshwater inflow volumes into the Roebuck Bay TEC (Parks and Wildlife 2014a). In addition there is increasing pressure on shorebirds from tourism and expansion of Broome. There is likely to be incrementally increased pressure on the Roebuck Bay ecosystem due to cumulative impacts from numerous projects occurring within close proximity to the TEC. However, the proposed clearing of 1.84 hectares of native vegetation and the proposed land use is likely to have a minimal effect upon water quality therefore will not have a significant impact on this TEC (Parks and Wildlife 2014a).

The 'Monsoon vine thickets on coastal sand dunes of the Dampier Peninsula' is located within the reserve adjacent to Lot 621. This TEC may be indirectly impacted if drainage is altered (water flows in or out of the TEC), dust is increased or through the spread of weeds. The proponent must ensure impacts to this TEC are mitigated (Parks and Wildlife 2014a). Weed management practices will help mitigate this risk.

Given the above the clearing as proposed may be at variance to this principle.

To mitigate impacts to the nearby Monsoon vine thickets on coastal sand dune of the Dampier Peninsula the applicant has advised that management measures will be undertaken including:

- Appropriate wildfire management, including the management of an appropriate firebreak and control of fuel load on the boundary of the development area.
- Weed control will occur along the boundary to minimise the spread of weeds into the TEC.
- Stormwater drainage will be diverted away from the TEC to an approved location or alternatively the stormwater will be management appropriately within the development area (Coffey Environmental Australia Pty Ltd 2014).

**Methodology**    **References:**  
- Coffey Environmental Australia Pty Ltd (2014)  
- Parks and Wildlife (2014a)

**GIS Databases:**  
- SAC Bio Datasets - accessed June 2014

**(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 likely to be at variance to this Principle**

The area under application is located within the Dampierland Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 99 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2013).

The area under application is located within the Shire of Broome. This local government area has approximately 99 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2013).



Digital imagery indicates that the local area (10 kilometre radius) surrounding the area under application retains approximately 90 per cent vegetation cover.

Given the vegetation representations outlined above, the area under application is not likely to be a significant remnant in an extensively cleared area.

Therefore the clearing as proposed is not likely to be at variance to this principle.

Pre-European	Current Extent (ha)	Remaining Extent in DPaW Managed Lands (ha)	(%)	(%)
IBRA Bioregion* Dampierland	8,343,939	8,319,872	99	1
Shire*				
Shire of Broome	5,469,436	5,436,202	99	1
*Government of Western Australia (2013)				

**Methodology**    References:  
 -Commonwealth of Australia (2001)  
 -Government of Western Australia (2013)  
 -Keighery (1994)

GIS Databases:  
 -NLWRA, Current Extent of Vegetation Remaining

**(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 not likely to be at variance to this Principle**  
 No watercourses or wetlands are located within the area under application.

The coastline is located approximately 20 metres south of the application area.

A site inspection undertaken by Parks and Wildlife (2014) did not identify riparian vegetation within the area under application.

Therefore the vegetation proposed to be cleared is not likely to be growing in association with a watercourse or wetland.

Given the above the clearing as proposed is not likely to be at variance to this principle.

**Methodology**    GIS Databases:  
 - Hydrography, linear

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

**Comments**    **Proposal may be at variance to this Principle**  
 A portion of the application area is mapped as soil type AB21 which is described as: 'Pindan country--gently undulating sand plain with a few small rocky sandstone residuals; no external drainage: chief soils are red earthy sands'. The remaining application area is unmapped (Northcote 1960 -1968).

A site inspection undertaken by Parks and Wildlife (2014b) described the area under application as coastal primary and secondary dune systems with predominately brown sandy and white sandy soils.

Parks and Wildlife (2014b) identified areas within and adjacent to the area under application that have experienced soil degradation and erosion. The erosion is most likely a result of excessive runoff from surrounding infrastructure, particularly the nearby facilities (Parks and Wildlife 2014b).

The clearing proposed may increase runoff and cause further soil erosion within the application area and adjacent remnant vegetation.

Given the above the clearing as proposed may be at variance to this principle.

The applicant has advised that clearing will coincide with the dry season to reduce the likelihood of erosion and land degradation from heavy rainfall or cyclonic activities (Coffey Environmental Australia Pty Ltd 2014). Stormwater drainage will be diverted away from the TEC to an approved location or alternatively the stormwater will be management appropriately within the development area (Coffey 2014).

**Methodology**    **References:**  
- Coffey Environmental Australia Pty Ltd (2014)  
- Northcote (1960 -1968).  
- Parks and Wildlife (2014b)

**GIS Databases:**  
- Soils, statewide

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

**Comments    Proposal may be at variance to this Principle**

The application area is adjacent to Crown Reserve 51001 which is managed for conservation and recreation.

The vegetation within the adjacent reserve is in a very good (Keighery 1994) condition and contains a TEC, Monsoon vine thickets on coastal sand dunes of the Dampier Peninsula. The clearing proposed may impact upon this conservation area through the spread of weeds, increased dust and by altering drainage flows and increasing run off into this area (Parks and Wildlife 2014a).

Given the above the clearing as proposed may be at variance to this principle.

A weed management condition will help mitigate impacts to the conservation area through the spread of weeds.

To mitigate impacts to the adjacent native vegetation the applicant has advised that management measures will be undertaken including:

- Appropriate wildfire management, including the management of an appropriate firebreak and control of fuel load on the bound of the development area.
- Weed control will occur along the boundary to minimise the spread of weeds into the TEC.
- Stormwater drainage will be diverted away from the TEC to an approved location or alternatively the stormwater will be management appropriately within the development area. (Coffey Environmental Australia Pty Ltd 2014b).

**Methodology**    **References:**  
- Keighery (1994)  
- Coffey Environmental Australia Pty Ltd (2014)  
- Parks and Wildlife (2014b)

**(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**

No watercourses or wetlands are located within the area under application.

The coastline is located approximately 20 metres south of the application area.

Parks and Wildlife (2014b) identified areas within and adjacent to the areas under application that have experienced soil degradation and erosion. The erosion is most likely to be caused by excessive runoff from surrounding infrastructure, particularly the nearby facilities.

The clearing proposed is likely to increase runoff into adjacent vegetation however given no watercourses or wetlands are located within close proximity of the area under application the clearing proposed is not likely to impact upon the quality of surface water.

Groundwater salinity is mapped as less than 500 milligrams per litre of Total Dissolved Solids (TDS) which is considered to be marginal. Given the low salinity level, the proposed clearing of 1.84 hectares of native vegetation is not likely to impact upon ground water quality.

Given the above the clearing as proposed is not likely to be at variance to this principle.

**Methodology**    **References:**  
- Parks and Wildlife (2014b)

**GIS Databases:**  
- Groundwater Salinity  
- Hydrology, linear

**(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**

Natural flood events may occur in the Kimberley region following cyclonic activity. However, the proposed clearing is not expected to increase the incidence or intensity of flooding.

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

**Methodology**

**Planning instrument, Native Title, Previous EPA decision or other matter.**

**Comments**

Nyamba Buru Yawuru Ltd (2014) provided a submission on behalf of the Yawuru Registered Native Title Body Corporate (Yawuru RNTBC) and advised the applicant should consult with Yawuru RNTBC and enter into an appropriate heritage protection agreement covering the permit area, a heritage survey should be undertaken and that any vegetation clearing should be done in accordance with any condition set out in the heritage survey report.

Goolarabooloo Millibinyarri Indigenous Corporation (2014) provided a submission in relation to this application and advised that the application area is located entirely within the area of the 'Song Cycle Path' for which Goolarabooloo have primary traditional authority and responsibility. This area is of ultimate cultural, social religious and environmental importance to Goolarabooloo and other indigenous people within the Shire of Broome. Goolarabooloo Millibinyarri Indigenous Corporation has advised that adequate consultation should be undertaken with Goolarabooloo prior to a permit being granted.

One submission (2014) has been received in relation to this application which has raised concerns regarding impacts on vegetation comprising a high biological diversity, significant fauna habitat, TEC's, significant remnant native vegetation within an extensively cleared area, wetlands, land degradation, conservation areas and surface and ground water quality. These issues have been addressed in clearing principles (a), (b), (d), (e), (f), (g), (h) and (i).

One Aboriginal Site of Significance 'Entrance Point/Yinara' is mapped within the area under application. The applicant will be notified of their obligations under the Aboriginal Heritage Act 1972.

The Shire of Broome (2014) has advised that the proposed works are deemed to be public works and therefore do not require the issue of planning approval from the Shire, however in accordance with the provisions of the Planning and Development Act 2005, the works must be consistent with the purpose and intent of any planning scheme and the orderly and proper planning and preservation of amenity of the locality at that time.

The Shire of Broome (2014) advised that the application area is zoned 'Port' under the provision of Local Planning Scheme No. 4 and the development would be consistent with the Port Land Use Plan, which identifies the application area as 'port related operations'. Therefore the proposed works are considered consistent with the purpose and intent of the planning scheme and the orderly and proper planning of the locality.

**Methodology**

**References:**

- Submission (2014)
- Nyamba Buru Yawuru Ltd (2014)
- Goolarabooloo Millibinyarri Indigenous Corporation (2014)
- Shire of Broome (2014)

**GIS Databases:**

- Aboriginal Sites of Significance

#### 4. References

- Coffey (2013) Pre-Clearance Flora and Vegetation Surveys for Numerous Port Managed Lease Holding. Western Australia. DER Ref: A761102
- Coffey (2014) Broome Port Authority Native Vegetation Clearing Permit Application - Entrance Point. Western Australia. DER Ref: A761102
- DEC (2007 - ) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed June 2014
- Goolarabooloo Millibinyarri Indigenous Corporation (2014) Submission for Clearing Permit Application CPS 6098/1. Western Australia. DER Ref: A762571
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, 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.
- Northcote, K. H. with Beckmann G. G., Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Nyamba Buru Yawuru Ltd (2014) Submission for Clearing Permit Application CPS 6098/1. Western Australia. DER Ref: A765943
- Parks and Wildlife (2014a) Threatened Ecological Community Advice for Clearing Permit Application CPS 6098/1. Department of Parks and Wildlife. Species and Communities Branch. DER Ref: A778729
- Parks and Wildlife (2014b) Site Inspection Report for Clearing Permit Application CPS 6098/1, Lot 621 on Plan 70861, Minyirr. Site inspection undertaken 19 July 2014. Department of Parks and Wildlife, Western Australia (DER Ref: A778724)
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Shire of Broome (2014) Advice for Broome Sea Rescue Land as Port. Western Australia (DER Ref: A853722)
- Submission (2014) Submission for Clearing Permit Application CPS 6098/1. Western Australia. DER Ref: A762567
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/> (Accessed June 2014).
- Woodman (2008). Fauna Assessment of the Broome Port. Woodman Environmental Consulting Pty Ltd. 31st July 2008.





## Complying with your permit to clear native vegetation

Under Part V of the *Environmental Protection Act 1986* (EP ACT)

A clearing permit allows you to legally clear native vegetation.

As the holder of a clearing permit, you are responsible for ensuring the requirements of the clearing permit are followed. This fact sheet is to assist you to understand your clearing permit.

Keep your clearing permit in a secure place where you can access it if you need to check the details.

If there are any particulars of the clearing permit that you do not fully understand please contact the Department of Environment and Conservation (DEC) Native Vegetation Conservation Branch (NVCB) on 9219 8744. If the clearing permit is for a mining or petroleum project please contact the Department of Mines and Petroleum (DMP) Native Vegetation Assessment Branch (NVAB) on 9222 3333.

### Types of clearing permits

Your clearing permit will either allow you to clear a specific area (area permit) or for a specific purpose (purpose permit).

#### Area permits

An area permit will inform you how and where to undertake your clearing.

**Land on which clearing is to be done:** describes the land covered by the clearing permit. The clearing permit plan will show where on this land you are allowed to clear.

**Authorised activity:** describes how the clearing is to be carried out.

#### Purpose permits

Conditions set within the clearing permit will describe for what purpose you are allowed to clear and the areas in which you can clear.

#### Clearing permits may contain conditions

Area permits and purpose permits may be subject to conditions. The types of conditions that are placed on a clearing permit depend on the outcome of the environmental impact assessment. Conditions are used to prevent, control, abate or mitigate environmental harm or to offset the loss of the cleared vegetation.

Conditions may relate to record keeping, reporting, revegetating or other actions.

- **Record keeping and submitting reports:** If your clearing permit requires you to keep records or submit reports, ensure they are submitted by the due date or notify DEC or DMP if there is some reason why this is not possible.
- **Revegetating:** Some clearing permits require land to be revegetated. A range of companies and organisations provide advice and services to achieve this.

Some clearing permits will have no conditions attached.

**Definitions:** of terms specific to the conditions may be included to clarify what is required. Additional terms may be defined separately in the *Environmental Protection Act 1986*.

Contact DEC or DMP if you would like more information about terms used in your clearing permit.

### When can you start clearing?

Check the commencement date on the clearing permit. Generally the start date is set a month after you have received your permit.

If your clearing permit is subject to an appeal, you will be notified by the Appeals Convenor and clearing must not commence until you are provided with notice of the outcome.

Clearing permits will expire—be aware of the entire **duration of the clearing permit** and plan your clearing to be completed within this period.

If you need further time:

- seek an extension of the clearing permit before it expires; or
- apply for a new clearing permit if your clearing permit has expired.





### Are clearing permits publically available?

The *Environmental Protection Act 1986* clearing provisions require that the details of clearing permits are published. Anyone can obtain a copy of your clearing permit and the decision report.

### Ensuring compliance

**Monitoring of compliance:** a range of technologies exist to monitor changes in vegetation. This information is cross analysed with clearing permits.

**Compliance inspections:** may be conducted to audit your clearing permit (refer **Fact Sheet 3**).

### What if you breach the requirements or conditions of your clearing permit or clear an area or in a way not permitted?

You should:

1. Correct the breach as soon as possible to minimise the level of environmental harm
2. Notify DEC / DMP
3. Review your operating procedures to ensure that the breach does not occur again.

### Expeditious notification will be considered as a mitigating factor if enforcement action is taken.

Refer to DEC's Enforcement and Prosecution Policy (2008) for further information about voluntary disclosure.

### Will the clearing permit be affected by a breach?

If enforcement action is taken your clearing permit may be suspended or revoked. A Vegetation Conservation Notice may be given to the responsible person (such as the permit holder or land owner). The notice may specify measures to be undertaken to rectify the breach.

### Can clearing permits be amended, transferred or surrendered during the duration of the clearing permit?

Clearing permits can be amended to correct issues such as clerical mistakes, administrative changes, the size of the areas to be cleared, and dates to comply with permit conditions. Applications (Form C4) for an amendment will need to be assessed.

The clearing permit holder, or any person, may appeal to the Minister for Environment against an amendment. The appeal must be lodged within 21 days of the clearing permit holder being notified of the amendment. Information on the appeal process and how to lodge an appeal can be found on the Office of the Appeals Convenor's website at <[www.appealsconvenor.wa.gov.au](http://www.appealsconvenor.wa.gov.au)>.

Area permits may be transferred to a new property owner by submitting a 'Notification of Change of Land Ownership' (Form C5). The clearing permit will not be valid until this transfer is completed.

If you no longer wish to clear or have completed clearing before the end of the permitted period an 'Application to surrender a clearing permit' (Form C6) may be submitted to end the clearing permit and any conditional requirements.

### On completion of clearing or expiry of the clearing permit ensure all required records have been submitted.

### More information

DEC provides a range of information at <[www.dec.wa.gov/nvp](http://www.dec.wa.gov/nvp)>

**Fact sheets** provide basic information to cover the most common questions DEC receives about the EP Act clearing provisions

**Application forms** include guidance on what information is required to complete the form

**Guides** provide additional detail to what is covered in the facts sheets or forms

**Environmentally sensitive areas** can be viewed from the Native Vegetation Map Viewer at <[www.dec.wa.gov.au/nvp](http://www.dec.wa.gov.au/nvp)> in the 'Data' section

**Be clear before you clear** – if you require assistance please contact DEC's Native Vegetation Conservation Branch on 9219 8744 or email <[nvp@dec.wa.gov.au](mailto:nvp@dec.wa.gov.au)>

If your clearing relates to **mining or petroleum project** please contact **Department of Mines and Petroleum (DMP)** Native Vegetation Assessment Branch for assistance on 9222 3333 or visit: <[www.dmp.wa.gov.au/nvabinfo](http://www.dmp.wa.gov.au/nvabinfo)>

### Please note.....

The above information provides a general guide to the clearing provisions of the *Environmental Protection Act 1986* (available at <[www.slp.wa.gov.au](http://www.slp.wa.gov.au)>). DEC has endeavored to ensure the accuracy of the contents of this document, it accepts no responsibility for any inaccuracies and persons relying on this document do so at their own risk.



## Appendix B : Entrance Point Biological Survey – Field Survey Results

## MEMORANDUM

TO	Kimberley Ports Authority
FROM	Eco Logical Australia
DATE	7 February 2019
SUBJECT	Entrance Point Vegetation and Flora Survey – Field Survey Results

## 1. Introduction

Eco Logical Australia (ELA) was engaged by Kimberley Ports Authority (KPA) to undertake further field survey to support reinstatement of a clearing permit (expired NVCP 6098/1) for Entrance Point site (the application area). The previous and current purpose of the clearing permit is to construct consolidated port administration facilities, passenger terminal, recreational and tourism support facilities, car park and marine rescue facilities. The requirement for additional surveys was a result of initial discussions with the Department of Water and Environmental Regulation (DWER). From these discussions it was confirmed that further field surveys were required to better inform the assessment on the presence or absence of certain conservation significant flora species and ecological communities.

Specifically, DWER requested a targeted conservation listed flora survey and detailed (level two) vegetation survey.

The study area is approximately 2.3 ha in area and is located approximately 6.5 km south west of the Broome town centre, Western Australia (Figure 1).

## 2. Methods

### 2.1 Desktop review and likelihood of occurrence

Prior to the survey, ELA conducted a desktop assessment to gather information on potentially occurring conservation listed flora and vegetation within the study area. The following databases were searched:

- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool (PMST) for Threatened species and communities listed under the EPBC Act (Department of the Environment and Energy [DoEE] 2019); and
- Department of Biodiversity Conservation and Attractions (DBCA) and WA Museum's NatureMap database (DBCA 2007 –).

A 20 km buffer around the study area was used for each of the above database searches. This buffer is considered suitable based on flora expected to occur within the study area. An initial 13 conservation listed flora taxa were identified as possibly occurring within the study area based on database searches.

In addition, a review of previous studies relevant to the study area was also undertaken where applicable, including:

- *Floristic Community Types of The Broome Peninsula* (Woodman Environmental Consulting 2008); and
- *Targeted Flora and Vegetation Survey of Application Area* (Coffey 2013).

## 2.2 Survey team and timing

The survey was undertaken over a single day by ELA Senior Ecologist Dr Jeff Cargill on 4 December 2018. The flora survey was conducted in accordance with the Environmental Protection Authority (EPA) *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016).

The Kimberley region experiences very hot wet summers and mild dry winters. The Broome Airport weather station (station number 3003; climate data 1939-2018), located approximately 5 km north east of the survey area, reports that on average, Broome receives 628.1 mm of rain per annum; with 75% of this rain falling between January to March each year (BoM 2019). Maximum mean monthly temperatures range from 28.9°C (July) to 33.9°C (December). The temperature during the survey was hot, with a maximum temperature experienced during the survey of 33.5°C. No rain was recorded during this time.

A total of 4.8 mm of rain was recorded in the three calendar months prior to the surveys (Sep-Nov; BoM 2019). This is lower than the long-term average for the same period (11.8 mm; BoM 2019).

Although rainfall was below average, and the survey was conducted outside of the optimum survey timing for flora in the region, this was not a limitation for the purposes of the survey. Specifically, the preferred survey timing for the Northern Botanical Province is post wet-season (January to March), however the timing of a supplementary survey post wet season is considered satisfactory as the expected vegetation and species present would be actively growing and able to be correctly identified.

## 2.3 Flora survey

The desktop review, including review of aerial imagery and previous background survey reports, informed the approximate number of sites required to describe vegetation communities within the study area. Three 20 m x 20 m quadrats were established (ELA01, ELA02 and ELA03) to delineate and characterise vegetation communities within the study area. The location of quadrats established within each of the sites is shown in **Figure 1**.

The following tasks were undertaken as part of the flora and vegetation survey:

- Vegetation assessment to delineate and characterise vegetation communities within the study area including vegetation condition assessment in accordance with *EPA Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016);
- Survey for conservation significant flora and vegetation communities; and

- Record opportunistic introduced flora, specifically Weeds of National Significance and Declared Pests under the *Biosecurity and Agriculture Management Act 2007*.

## Entrance Point Data Overview



Figure 1: Site overview and survey effort.



### 3. Results

A total of 18 taxa from 16 genera and eight families were recorded from within the application area. A complete flora species list is provided in **Appendix A**. Fabaceae had the highest number of species (seven species) and *Crotalaria* was the best represented genera with two taxa recorded. Site data is presented in **Appendix B**.

No Federal or State listed Threatened or Priority flora species were recorded within the application area. Of the 13 conservation listed flora species identified in the desktop assessment as possibly occurring, all were considered as unlikely to occur, based adequate survey effort and/or lack of suitable habitat. The flora likelihood of occurrence assessment is presented in **Appendix C**.

Two introduced flora species, *\*Cenchrus ciliaris* and *\*Macroptilium atropurpureum* were recorded within the Entrance Point site. *\*Cenchrus ciliaris* was dominant in parts occurring with cover ranging from 5% - 20% while *\*Macroptilium atropurpureum* was sparse with cover ranging from 0.02% - 0.05%.

One vegetation community was identified within the application area (**Figure 1**):

- **Vegetation Community 1** - *Acacia bivenosa*, *Crotalaria cunninghamii*, *Cullen martinii* tall open shrubland over *Tephrosia rosea*, *Crotalaria medicaginea* mid sparse shrubland over *Euphorbia myrtoidea*, *Tinospora smilacina*, *Boerhavia gardneri* low isolated shrubs and *\*Cenchrus ciliaris*, *Aristida holathera* low open tussock grassland.



**Figure 1:** Vegetation Community 1 within the Entrance Point site.

Vegetation within the study area was previously mapped by Woodman (2008) as FCT 3d, described as a highly disturbed open woodland of mixed species including *Bauhinia cunninghamii* and *Terminalia petiolaris* over occasional shrubland dominated by *Acacia bivenosa* over lower shrubland of mixed species including *Tephrosia rosea* var. *rosea*, *Euphorbia coghlanii* and *Abrus precatorius* subsp. *precatorius* on pale orange to brown sand on lower slopes behind dunes and secondary dunes. Vegetation recorded in the current survey was comparable to FCT 3d described by Woodman (2008).

Vegetation recorded within the study area does not constitute any known Threatened Ecological Communities (TECs) listed under the EPBC Act or *Biodiversity Conservation Act 2016* or Priority Ecological Communities (PECs) listed by DBCA.

Vegetation within the study area was classed as being in Very Good - Good condition throughout based on the EPA *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016). Evidence of disturbances including impacts from grazing, heat stress, weeds and tracks were also recorded. The study area was estimated to have been burnt approximately 10 – 20 years ago.

## 4. Summary

Vegetation condition was Good – Very Good with disturbances including impacts from grazing, heat stress, weeds and tracks. In particular, the grass weed *\*Cenchrus ciliaris* was dominant in parts occurring with cover ranging from 5% - 20%.

No Federal or State listed Threatened or Priority flora species listed by DBCA were recorded within the study area. All conservation significant flora species identified in the database searches were considered unlikely to occur due to adequate survey effort and high detectability of the species (e.g. perennial shrubs) and/or lack of core habitat for these species.

One vegetation community was identified within the study area. This vegetation community does not represent any known TECs or PECs.



## 5. References

Bureau of Meteorology (BOM). 2019. *Climate Data Online*. Available from: <http://www.bom.gov.au/climate/data/>. Accessed January 2019.

Coffey. 2013. *Pre-Clearance Flora and vegetation Surveys for Numerous Port managed Lease Holdings*. Letter report prepared by Coffey Environments Australia Pty Ltd for Broome Port Authority, Broome, WA.

Department of the Environment and Energy (DoEE). 2019. *EPBC Act Protected Matters Search Tool*. Available from: <http://www.environment.gov.au/epbc/pmst/index.html> . Accessed January 2019.

Department of Biodiversity, Conservation and Attractions (DBCA). 2007 -. *NatureMap*. Department of Parks and Wildlife and WA Museum. Available from: <http://naturemap.dpaw.wa.gov.au/default.aspx>. Accessed January 2019.

Environmental Protection Authority (EPA). 2016. *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment*. Perth, Western Australia.

Woodman. 2008. *Broome Port Authority – Floristic Community Types of the Broome Peninsula*. Unpublished Report by Woodman Environmental Consulting Pty Ltd for the Broome Port Authority, Broome, WA.

## Appendix A – Flora species list

Family	Species
Convolvulaceae	<i>Ipomoea pes-caprae</i>
Euphorbiaceae	<i>Euphorbia ?myrtoides</i>
Fabaceae	<i>*Macroptilium atropurpureum</i>
	<i>Acacia bivenosa</i>
	<i>Canavalia rosea</i>
	<i>Crotalaria cunninghamii</i>
	<i>Crotalaria medicaginea</i>
	<i>Cullen martinii</i>
	<i>Tephrosia rosea</i>
Malvaceae	<i>Malvaceae</i> sp.
Menispermaceae	<i>Tinospora smilacina</i>
Moraceae	<i>Ficus aculeata</i> var. <i>indecora</i>
Nyctaginaceae	<i>Boerhavia gardneri</i>
Poaceae	<i>*Cenchrus ciliaris</i>
	<i>Aristida holathera</i>
	<i>Poaceae</i> sp.
	<i>Spinifex longifolius</i>

## Appendix B – Flora site data

Site name and number	Date	Site type	Observer
ELA01	04/12/2018	20 x 20 m quadrat	JC
Condition	Disturbance	Fire history - years	Landscape type
Good - Very Good	Grazing, heat stress, weeds and tracks	Moderate 10-20	Dune
Soil type/geology	Soil colour	Outcropping (%)	Slope (%) / aspect
Coarse sand, ironstone nodules and stones	Weathered red/orange	0	2%, SW
Easting		Northing	
416289		8009042	



Species	Height (cm)	Cover (%)
<i>*Cenchrus ciliaris</i>	50	20
<i>*Macroptilium atropurpureum</i>	cl	0.04
<i>Acacia bivenosa</i>	200	30
<i>Aristida holathera</i>	25	0.05
<i>Boerhavia gardneri</i>	10	0.1
<i>Crotalaria cunninghamii</i>	160	0.2
<i>Crotalaria medicaginea</i>	40	0.2
<i>Cullen martinii</i>	80	0.5
<i>Euphorbia ?myrtoides</i>	30	0.1
<i>Ipomoea pes-caprae</i>	20	0.15

Species	Height (cm)	Cover (%)
<i>Malvaceae sp.</i>	100	0.45
<i>Poaceae sp.</i>	45	1.5
<i>Tephrosia rosea</i>	30	0.02
<i>Tinospora smilacina</i>	cl	0.02

Site name and number	Date	Site type	Observer
ELA02	04/12/2018	20 x 20 m quadrat	JC
Condition	Disturbance	Fire history - years	Landscape type
Good - Very Good	Grazing, heat stress, weeds and tracks	Moderate 10-20	Dune
Soil type/geology	Soil colour	Outcropping (%)	Slope (%) / aspect
Coarse sand, ironstone nodules and stones	Weathered red/orange	0	2%, SW
Easting		Northing	
416321		8009007	



Species	Height (cm)	Cover (%)
<i>*Cenchrus ciliaris</i>	40	5
<i>*Macroptilium atropurpureum</i>	cl	0.05
<i>Acacia bivenosa</i>	180	40
<i>Aristida holathera</i>	35	0.1
<i>Boerhavia gardneri</i>	10	0.05
<i>Crotalaria cunninghamii</i>	150	0.15
<i>Crotalaria medicaginea</i>	45	0.1
<i>Cullen martinii</i>	50	0.1
<i>Euphorbia ?myrtoidea</i>	30	0.08
<i>Ficus aculeata</i> var. <i>indecora</i>	160	0.8
<i>Ipomoea pes-caprae</i>	20	0.1
Species	Height (cm)	Cover (%)

<i>Poaceae</i> sp.	45	1
<i>Spinifex longifolius</i>	45	0.1
<i>Tephrosia rosea</i>	40	0.3



Site name and number	Date	Site type	Observer
ELA03	04/12/2018	20 x 20 m quadrat	JC
Condition	Disturbance	Fire history - years	Landscape type
Good - Very Good	Grazing, heat stress, weeds and tracks	Moderate 10-20	Dune
Soil type/geology	Soil colour	Outcropping (%)	Slope (%) / aspect
Coarse sand, ironstone nodules and stones	Weathered red/orange	0	2%, SW
Easting		Northing	
416278		8008861	



Species	Height (cm)	Cover (%)
<i>*Cenchrus ciliaris</i>	40	15
<i>*Macroptilium atropurpureum</i>	cl	0.02
<i>Acacia bivenosa</i>	180	35
<i>Aristida holathera</i>	30	0.18
<i>Boerhavia gardneri</i>	10	0.02
<i>Canavalia rosea</i>	40	2
<i>Crotalaria cunninghamii</i>	150	2

## Appendix C – Flora likelihood assessment

Species Name	EPBC Act <sup>1</sup>	BC Act <sup>2</sup>	DBCA <sup>3</sup>	Source <sup>4</sup>	Lifeform/Habitat	Likelihood
<i>Seringia exastia</i> (Fringed fire-bush)	CR	CR	T	NatureMap PMST	Pindan (red soil) heathland. North-facing dune slope and flats.	<b>Unlikely.</b> Habitat is potentially suitable and the closest record is approx. 1.2 km away, however this species is a shrub that grows to 0.9 m high and would have been visible if present.
<i>Corymbia paractia</i>			P1	NatureMap	Skeletal soils. In transition zone between coastal beach dunes & red pindan soils.	<b>Unlikely.</b> Habitat is marginally suitable and the closest record is approx. 2.0 km away, however this species is a tree that grows 4-6 m high and would have been visible if present.
<i>Jacquemontia</i> sp. Broome (A.A. Mitchell 3028)			P1	NatureMap	Sandy soils, red pindan soils.	<b>Unlikely.</b> Habitat is potentially suitable however the closest record is approx. 17 km away, and this species is a low perennial herb/shrub that would have been visible if present.
<i>Thespidium basiflorum</i>			P1	NatureMap	Sandy soils. Creeks.	<b>Unlikely.</b> Habitat is potentially suitable however the closest record is approx. 18 km away, and this species is a low perennial herb/shrub that would have been visible if present.
<i>Gomphrena pusilla</i>			P2	NatureMap	Fine beach sand. Behind foredune, on limestone.	<b>Unlikely.</b> Habitat not suitable and closest record is approx. 10 km away.
<i>Acacia monticola</i> x <i>tumida</i> var. <i>kulparn</i>			P3	NatureMap	Coastal cliffs, sand.	<b>Unlikely.</b> Habitat is not suitable and the closest record is approx. 3.6 km away, this species is also a shrub and would have been visible if present.

Species Name	EPBC Act <sup>1</sup>	BC Act <sup>2</sup>	DBCA <sup>3</sup>	Source <sup>4</sup>	Lifefrom/Habitat	Likelihood
<i>Aphyllodium glossocarpum</i>			P3	NatureMap	Sand. Pindan.	<b>Unlikely.</b> Habitat is potentially suitable however the closest record is approx. 12 km away and this species is a shrub that grows to 1.2 m high and would have been visible if present.
<i>Glycine pindanica</i>			P3	NatureMap	Pindan soils.	<b>Unlikely.</b> Habitat is potentially suitable and the closest record is approx. 4.6 km away, however this species is a low scrambling perennial herb and would have been visible if present.
<i>Goodenia byrnesii</i>			P3	NatureMap	Sand. Edge of creek.	<b>Unlikely.</b> Habitat is marginally suitable and the closest record is approx. 1.8 km away, however although this species is a herb it would have been actively growing and visible at the time of the survey.
<i>Nicotiana heterantha</i>			P3	NatureMap	Black clay. Seasonally wet flats.	<b>Unlikely.</b> Habitat not suitable and closest record is approx. 14 km away.
<i>Polymeria</i> sp. Broome (K.F. Kenneally 9759)			P3	NatureMap	Plain, dune swale, orange/red sand.	<b>Unlikely.</b> Habitat is potentially suitable and the closest record is approx. 5.1 km away, however this species is a low trailing herb and would have been visible at the time of the survey.
<i>Seringia katatona</i> (Red dune fire-bush)			P3	NatureMap	Dunes, red sand.	<b>Unlikely.</b> Habitat is potentially suitable and the closest record is approx. 8 km away, however this species is a shrub and would have been visible at the time of the survey.
<i>Terminalia kumpaja</i>			P3	NatureMap	Red sand, flats, dunes.	<b>Unlikely.</b> Habitat is potentially suitable and the closest record is approx. 6 km away, however this species is a tree and would have been visible at the time of the survey.

<sup>1</sup>EPBC Act = Flora listed under the *Environment Protection and Biodiversity Conservation Act 1999*.

CR = listed as Critically Endangered under the EPBC Act

<sup>2</sup>BC Act = Flora listed under the *Biodiversity Conservation Act 2016*. NB: the BC Act currently provides for species, subspecies or populations of native animals (fauna) to be listed as Specially Protected, Threatened (Critically Endangered, Endangered or Vulnerable) or Extinct in Western Australia however the Wildlife Conservation (Specially Protected Fauna) Notice 2018 was issued prior to the BC Act coming into effect and therefore WC Act codes have been included in the likelihood table.

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”.

<sup>3</sup>DBCA = Flora listed as Priority species under the Department of Biodiversity, Conservation and Attractions

P1 = Priority 1: Species that are known from one or a few locations (generally five or less) which are potentially at risk. Listed by DBCA

P2 = Priority 2: Poorly known species that are known from one or a few locations. Listed by DBCA.

P3 = Priority 3: Poorly known species that are known from several locations and the species does not appear to be under imminent threat. Listed by DBCA.

<sup>4</sup>NatureMap = NatureMap database search (DBCA 2007-)

PMST = EPBC Act Protected Matters Search Tool report (DoEE 2019).

