



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8913/1
Permit Holder:	North West Resorts Pty Ltd
Duration of Permit:	10 August 2020 – 10 August 2025

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 is for the purpose purpose of facilitating the maintenance and construction of access tracks to the borefield.

2. Land on which clearing is to be done

Lot 143 on Deposited Plan 93456, North West Cape
Lot 307 on Deposited Plan 40825, North West Cape
Lot 308 on Deposited Plan 40825, North West Cape
Unallocated Crown Land (PIN 1240777), North West Cape.

3. Area of Clearing

The Permit Holder must not clear more than 2.3 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8913/1.

4. Application

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

5. Type of clearing authorised

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

PART II – MANAGEMENT CONDITIONS

6. Flora management

Prior to and for the duration of any clearing authorised under this Permit, the Permit Holder shall:

- engage a *botanist* to demarcate all *priority flora* individuals located within the area cross-hatched yellow on Plan 8913/1; and
- ensure that no clearing of *priority flora* occurs.

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

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

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

8. 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.

PART III – RECORD KEEPING AND REPORTING

9. Record must be kept

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

- (a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (b) the date(s) that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with Condition 7 of this Permit;
- (e) actions taken to minimise the risk of the introduction and spread of weeds in accordance with Condition 8 of this Permit; and

10. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 9 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 10 May 2025, the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.

DEFINITIONS

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

botanist means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of two (2) years work experience in Western Australian flora identification and undertaking flora surveys native to the bioregion being inspected or surveyed, or who is approved by the CEO as a suitable environmental specialist for the bioregion, and who holds a valid flora licence issued under the Biodiversity Conservation Act 2016.

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;


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

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

priority flora means those plant taxa associated with that specific priority flora classification.

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*;
or
- (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

 Ryan Mincham
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+08'00'

Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

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

17 July 2020

Plan 8913/1

114°6'7"

-21°49'30"

-21°48'30"

-21°50'2"

-21°50'2"



114°6'7"


Legend

-  CPS areas approved to clear
-  Local Government Authorities
-  Localities - Landgate
Cadastre Address (LGATE-002)

0 100 200 300 400 m



MGA 94
Geocentric Datum of Australia 1994

 Ryan Mincham
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Officer delegated under section 20 of the
Environmental Protection Act 1986



GOVERNMENT OF
WESTERN AUSTRALIA





Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 8913/1
Permit type:	Purpose permit
Applicant name:	North West Resorts Pty Ltd
Application received:	19 May 2020
Application area:	2.3 hectares (ha) of native vegetation
Purpose of clearing:	Construction of access tracks for water well drilling.
Method of clearing:	Mechanical removal
Property:	Lot 143 on Deposited Plan 93456, Lot 307 on Deposited Plan 40825, Lot 308 on Deposited Plan 40825 and Unallocated Crown Land (PIN 1240777)
Location (LGA area/s):	Shire of Exmouth
Localities (suburb/s):	North West Cape

1.2. Description of clearing activities

The vegetation applied to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5).

The application proposes to clear vegetation for the construction of access tracks to allow access to bore sites as part of the bore field, supporting the Exmouth Lighthouse Resort. The clearing consists of the removal of 0.3 hectares of vegetation for a new track to deviate around and preserve a heritage site, and removal of 2 hectares of vegetation for the construction of new tracks which provide access for the maintenance of bore wells. The clearing will be performed through the removal of shrubs and trees to create tracks with a bobcat.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	17 July 2020
Decision area:	2.3 hectares (ha) of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Water and Environmental Regulation (DWER) on 19 May 2020. DWER advertised the application for public comment and no submissions were received.

In undertaking their assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the Clearing Principles in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (see Sections 3 and 4).

In particular, the Delegated Officer has determined that:

- the clearing is not likely to have a significant impact on the local population, or conservation status of conservation significant flora (see Section 3.2.2). The implementation of a condition that requires the clearing area to be inspected by a botanist prior to, and during the clearing will ensure no conservation significant flora individuals are cleared.

- the implementation of a suitable weed management condition is appropriate to mitigate the impact of spreading weeds into adjacent vegetation (see Section 3.2.1).
- the applicant has suitably demonstrated avoidance and minimisation measures (see Section 3.1)

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is not likely to lead to an unacceptable risk to the environment.

1.5. Site map

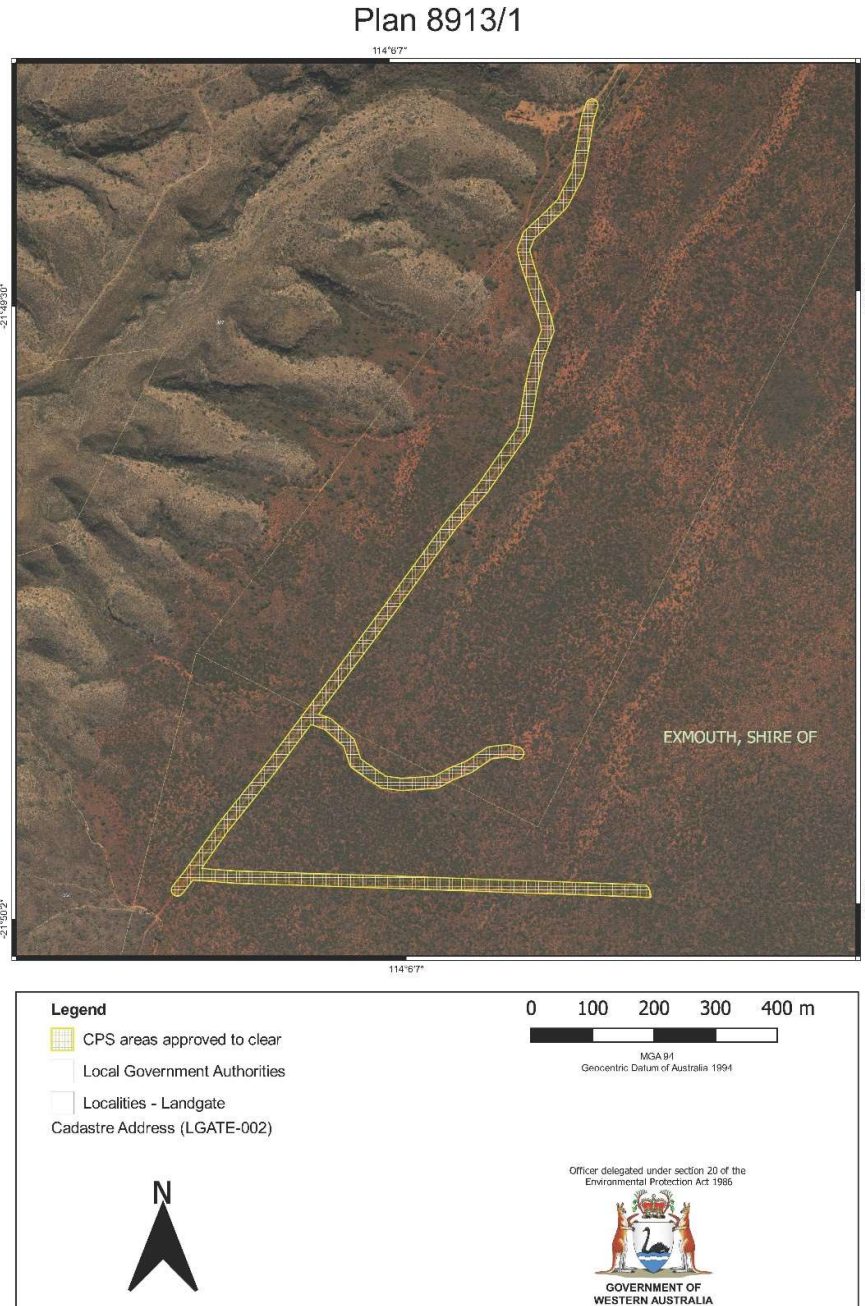


Figure 1. The area cross-hatched yellow indicates the area authorised to be cleared.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

1. the precautionary principle;
2. the principle of the conservation of biological diversity and ecological integrity; and

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that the proposed water bore locations were intentionally positioned along existing tracks so that clearing would be minimal. This will avoid the need for clearing of dense vegetation and clearing will only be to the extent necessary. The applicant also provided DWER with a mitigation strategy and committed to retaining all Priority flora individuals located within the application area. This adequately demonstrated that all reasonable efforts had been taken to avoid and minimise potential impacts of the clearing on environmental values.

3.2. Assessment of environmental impacts

In assessing the application in accordance with section 51O of the EP Act, the Delegated Officer has examined the application and site characteristics (Appendix C) and considered whether the clearing poses a risk to environmental values. The assessment against the Clearing Principles is contained in Appendix D.

This assessment identified that the clearing may pose a risk to the environmental values of conservation significant flora and fauna, and land and water resources, and that these required further consideration. The detailed consideration and assessment of the clearing impacts against the specific environmental values is provided below. Where the assessment found that the clearing presents an unacceptable risk to environmental values, conditions aimed at controlling and/or ameliorating the impacts have been imposed under sections 51H and 51I of the EP Act. These are also identified below.

3.2.1. Environmental value: biological values (fauna) – Clearing Principle (b)

Assessment: Based on a review of the available databases, a total of thirty-one fauna species listed as threatened under the state *Biodiversity Conservation Act 2016* (BC Act) or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), have been recorded within the local area (50 km). There were also records of thirty-eight species listed as Migratory and protected under International Agreements (IA) or Other Specially Protected fauna species, and nine species listed as Priority by the Department of Biodiversity of Conservation and Attractions (DBCA).

Of those mentioned above, seven were listed as Critically Endangered (CR), nine Endangered (EN), fourteen Vulnerable (VU), one Conservation Dependent (CD), thirty-five under International Agreement (IA), three Other Specially Protected Species (OS), two Priority 2, two Priority 3 and five Priority 5. This culminated to a total of seventy-eight species with records in the local area (50 km).

The flora and vegetation survey, as discussed further under section 3.2.2. identified 3 distinct vegetation types within the wider survey area (Strategen, 2020). Based on the vegetation types as described from the survey and the habitat preferences of the fauna species listed above, the application area indicated suitable habitat for one fauna species. This species is the Endangered black-footed rock-wallaby (*Petrogale lateralis lateralis*). There are four subspecies of black-footed rock wallabies (*Petrogale lateralis*) that occur in Western Australia including the black flanked rock-

wallaby - *Petrogale lateralis lateralis*, Recherche rock-wallaby - *Petrogale lateralis hacketti*, MacDonnell Range rock-wallaby - *Petrogale lateralis subsp. (MacDonnell Ranges)* and West Kimberley rock-wallaby - *Petrogale lateralis subsp. (West Kimberley)* (DBCA, 2020).

The species *Petrogale lateralis* is widespread, but the subspecies are geographically separated which has resulted in them being morphologically and/or genetically distinct (DBCA, 2020). Therefore, the subspecies *Petrogale lateralis lateralis* with known records within 50 km of the applied clearing area, is conservation significant. It is protected under state and commonwealth legislation and has a conservation status of Endangered under both the BC Act and the EPBC Act.

As the common name suggests, rock-wallabies have a preference for rocky habitats. They occur on a wide variety of rock types but require complex caves and crevices as opposed to large, smooth surfaces. Permanent water does appear to be an essential component of rock-wallaby habitat (DBCA, 2020). The main threats to the sub-species includes fox, wild dog and feral cat predation; competition for food and shelter with introduced herbivores; habitat loss and degradation from land clearing, mining and weed incursion; limited genetic variation due to small population size and population fragmentation; and climate change leading to a decline in rainfall and higher summer temperatures (DBCA, 2020). The local area contains twenty-two historical recordings of the species, recorded from 1981 to 2002 with the closest being approximately 10.6 km away. As per the flora survey, the application area did contain rocky elements, such as VT3 described as low limestone hills, however, the application area does not contain complex caves and crevices. Given this, the applied clearing area is not considered to be significant habitat for this species.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered **acceptable** in relation to this environmental value.

Conditions: No fauna management conditions required.

3.2.2. Environmental value: biological values (flora) – Clearing Principles (a) to (d)

Assessment: A review of the available databases indicated records of 26 Priority flora species within the local area. Of those, one was listed as Priority 1, twelve Priority 2, nine Priority 3 and four Priority 4.

Based on the vegetation within the application area and the habitat preferences of those species listed above, four species were considered highly likely to occur within the application area. These include:

- *Eremophila occidens* (P2)
- *Verticordia serotina* (P2)
- *Daviesia pleurophylla* (P2)
- *Corchorus congener* (P2)

A further five species are assessed as having a medium likelihood of occurrence within the application area. These include:

- *Cucumis sp. Barrow Island (D.W. Goodall 1264)* (P2)
- *Tephrosia sp. North West Cape (G. Marsh 81)* (P2)
- *Brachychiton obtusilobus* (P2)
- *Phyllanthus fuernrohrii* (P3)
- *Stackhousia umbellate* (P3)

The applicant engaged Strategen to undertake a flora reconnaissance and targeted flora and vegetation survey. This survey was conducted on 13 June 2020 in accordance with guidelines provided in *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016). The reconnaissance flora and vegetation survey was conducted across the site, with the targeted survey within areas likely to support conservation significant flora species. A total of seven relevés were conducted during the survey resulting in identification of 31 taxa from 11 families and 21 genera (Strategen, 2020). The most commonly recorded family was Fabaceae, which accounted for 32% of all taxa collected in the survey area, constituting 10 taxa and four genera. One of the 31 taxa could not be confirmed, namely *Eremophila ?atrobei* subsp. *glabra*. The lack of reproductive structure prevented confirmation of identification, however, this specimen is not considered to be a conservation significant taxa.

Within the survey area, two Priority flora species were identified: *Daviesia pleurophylla* (P2) and *Brachychiton obtusilobus* (P4) (Strategen, 2020). *Daviesia pleurophylla* (P2) was recorded at five locations within the survey area, with a total of 58 individuals. Of these, 13 individuals (from four locations) are contained within the clearing application area. *D. pleurophylla* is known from 6 previous records over a range of 73km (Western Australian Herbarium, 1998-). *D. pleurophylla* occurs on dune crests on red sand (FloraBase 2007-). This habitat is well represented locally with approximately 3,600ha of this vegetation association occurring within a 10km radius of the survey area. Based on

the large extent of suitable habitat, it is likely that this species is present in other areas (Strategen, 2020). All identified Priority flora individuals will be avoided during the clearing and a condition has been imposed on the permit which requires that a botanist be engaged to inspect all areas to be cleared prior to and during the clearing to ensure Priority flora individuals are not cleared. The applicant has committed to deviating the proposed access tracks around the P2 species to offer a vegetated buffer within the 20 metre wide clearing envelope (Pennington Scott, 2020).

Brachychiton obtusilobus (P4) was recorded at two locations during the survey, with a total of three individuals. This species was not recorded within the clearing application area. Given this, no impact to this species from the proposed clearing will occur.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered **acceptable** subject to relevant conditions (see below) in relation to this environmental value.

Conditions: To address the above impacts, a flora management condition has been imposed that requires the clearing area to be inspected by a botanist prior to, and during the clearing to ensure no conservation significant flora individuals are cleared.

3.3. Relevant planning instruments and other matters

Other relevant authorisations required for the proposed land use include:

- On 14 July 2020, the applicant received approval for a section 26D licence under the *Rights in Water and Irrigation Act 1914* to drill 7 bore holes on Lot 308 on Plan 40825 - Volume/Folio LR3139/354, Lot 308 Unallocated Crown Land - PIN 1240777 from 14 July 2020 to 1 July 2021;
 - o This licence (Instrument number - CAW204525(1)) is subject to the following conditions:
 1. The well must be constructed by a driller having a current class 1 water well drillers certificate issued by the Western Australian branch of the Australian Drilling Industry Association or equivalent certification recognised nationally by the Australian Drilling Industry Association; and
 2. Any well that is to be permanently decommissioned shall within 30 days of abandonment, be sealed and filled to prevent the surface entry of contaminants and the vertical movement of water in the well, using methods described in "Minimum construction requirements for water bores in Australia, 3rd edition, National Uniform Drillers Licensing Committee (2012)".
- A section 5C take licence will be subject to a separate assessment by DWER, whereby the applicant will need to demonstrate the take of water is sustainable as per Operational policy no. 5.12 – Hydrogeological reporting associated with a groundwater well licence;
- On 3 July 2020, the applicant received approval for a section 91 licence from the Department of Planning, Lands and Heritage (DPLH) as per the *Land Administration Act 1997*. The section 91 Licence area comprises of Lot 307 on Deposited Plan 40825, Lot 308 on Deposited Plan 40825 and portion of Unnamed Unallocated crown land ID 1240777. This allows the applicant a non-exclusive right for the term to enter upon, and remain on and use the Licence Area, with such vehicles, machinery, plant or equipment as is reasonably necessary for the purpose of:
 - o "low impact ground disturbing investigative activities and access associated with hydrogeological investigations of Water Bores with the aim of defining the location of a potable water supply to support the operations of the Ningaloo Lighthouse Caravan Park including but not limited to general site inspections, hydrological investigative activities, environmental and Aboriginal heritage surveys and clearing and use of temporary access tracks as required and incidental works"

DWER sent a Direct Interest Letter to the Shire of Exmouth on 9 June 2020 requesting comment on any environmental matters and advice on whether the proposed clearing is consistent with the local Town Planning Scheme and whether any planning approvals have been granted and/or are required. No response was received from the Shire of Exmouth in relation to the proposed clearing.

There are no mapped Aboriginal Heritage sites within the applied clearing area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

As per the *Native Title Act 1993*, the proposed clearing is considered a 'future act'. DWER has a responsibility to notify the Baiyungu, Thalanyji and Yinggarda People. On 9 June 2020 DWER sent notifications to the Baiyungu, Thalanyji, Yinggarda People and Representative bodies; Nganhurra Thanardi Garrbu Aboriginal Corporation and Yinggarda Aboriginal Corporation in accordance with the relevant subdivision under Part 2 Division 3 of the NT Act. A 28 day submission was given as per section 24HA(7) of the *Native Title Act 1993*. No response was received in relation to the proposed clearing.

Appendix A – Additional information provided by applicant

Summary of comments	Consideration of comment
Survey information from Strategen	Was used to determine the locations of the Priority flora to be avoided
Risk mitigation strategy	Provided by the applicant and outlines that clearing within the envelope will avoid all identified Priority flora individuals. Referred to in Section 3.2.2

Appendix B – Details of public submissions

No public submissions were received in relation to the clearing permit application CPS 8913/1.

Appendix C – Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix D.

1. Site characteristics

Site characteristic	Details																		
Local context	The proposed clearing area is part of an expansive tract of native vegetation and follows an existing cleared bush access track. It is surrounded by abundant shrubland and hummock grassland. The proposed clearing area follows an existing track that provides access through the dense vegetation. Spatial data indicates the local area (50 km radius of the proposed clearing area) retains approximately 92.6 % of the original native vegetation cover.																		
Vegetation description	<p>A vegetation survey (Strategen, 2020) indicates that the vegetation within the proposed clearing area consists of four vegetation units. Representative photos and the full survey descriptions are available in Appendix G. These vegetation units include:</p> <ul style="list-style-type: none"> • VT1: <i>Grevillea stenobotrya</i> and <i>Banksia ashbyi</i> open low shrubland over <i>Triodia angusta</i> hummock grassland • VT2: <i>Corymbia hamersleyana</i> open low woodland over <i>Grevillea stenobotrya</i> and <i>Acacia bivenosa</i> open shrubland over <i>Triodia angusta</i> hummock grassland. • VT3: <i>Acacia bivenosa</i> and <i>Melaleuca cardiophylla</i> low open shrubland over <i>Triodia wiseana</i> and <i>Triodia basedowii</i> open hummock grassland. • Cleared: No vegetation present. <p>The breakdown of the application area and its associated vegetation mapping (Strategen, 2020) is shown in the table below:</p> <table border="1"> <thead> <tr> <th>Vegetation Type</th> <th>Area</th> <th>% of Application Area</th> </tr> </thead> <tbody> <tr> <td>VT1</td> <td>4.15</td> <td>77.99</td> </tr> <tr> <td>VT2</td> <td>0.61</td> <td>11.50</td> </tr> <tr> <td>VT3</td> <td>0.00</td> <td>0.07</td> </tr> <tr> <td>Cleared</td> <td>0.56</td> <td>10.45</td> </tr> <tr> <td>Total</td> <td>5.32</td> <td>100.00</td> </tr> </tbody> </table> <p>This is consistent with the mapped vegetation type:</p>	Vegetation Type	Area	% of Application Area	VT1	4.15	77.99	VT2	0.61	11.50	VT3	0.00	0.07	Cleared	0.56	10.45	Total	5.32	100.00
Vegetation Type	Area	% of Application Area																	
VT1	4.15	77.99																	
VT2	0.61	11.50																	
VT3	0.00	0.07																	
Cleared	0.56	10.45																	
Total	5.32	100.00																	

Site characteristic	Details
	<ul style="list-style-type: none"> Beard 662 which is described as Hummock grassland; shrub steppe; mixed acacia scrub & dwarf scrub with soft spinifex & <i>Triodia basedowii</i> (Shepherd et al, 2001).
Vegetation condition	<p>Vegetation survey (Strategen, 2020) indicate the vegetation within the proposed clearing area is in Poor to Excellent (Trudgen, 1991) condition, described as:</p> <ul style="list-style-type: none"> Poor: Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds; Excellent: Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement. <p>The full Trudgen condition rating scale is provided in Appendix E, below. The full survey descriptions are available in Appendix G.</p>
Soil description	<p>The soil is mapped as on the Range System soils (204Ra) which is described as 'Dissected limestone plateaux, hills and ridges with gorges and steep stony slopes supporting hard spinifex, sparse shrubs and eucalypts (Schoknecht et al., 2004). The vegetation notes indicate most of the higher units are inaccessible to stock, and only a fraction of the system is used for pastoral purposes. The predominantly Hard Spinifex (HASP) pastures are unproductive. The system is not susceptible to accelerated erosion.</p>
Land degradation risk	<p>The above mentioned soils indicate a low risk of acidification, salinity and wind erosion, and a moderate to high risk of water logging and water erosion (DPIRD, 2017).</p>
Waterbodies	<p>The desktop assessment and aerial imagery indicated that a non-perennial water system is mapped just west and south of the application area. This is not given a name and is classified as a minor river that would only flow during seasonally high rain events.</p>
Conservation areas	<p>Spatial data and aerial imagery indicate the application area is located approximately 1.8 km from the Ningaloo Marine Park which covers the majority of the coastal marine waters in the area. The application area is also <15 km north of the Cape Range National Park which covers a significant proportion of the Exmouth Peninsula.</p>
Climate and landform	<p>The application area occurs within the Carnarvon Botanical District of the Eremaean Province which is characterised by <i>Acacia</i> scrub and low woodland moving to tree and shrub steppe in the north (Beard 1990).</p> <p>The application area is located within the Range system. The landform notes indicate the area consists of erosional surfaces on a dissected anticlinal plateaux of 250-300 m relief: residual summits, hills and ridges with steep foot slopes, dendritic drainage of high density draining east and west of the range, and locally internally into large depressions within the plateaux residuals.</p> <p>The Exmouth area (22.24°S, 114.10°E) has a mean maximum and minimum temperature of 32°C and 17.7°C respectively and 253.5mm of annual rainfall (BOM, 2020).</p>

2. Flora, fauna and ecosystem analysis

With consideration for the site characteristics set out above, relevant datasets (see Appendix H), and biological survey information the following conservation significant flora and fauna species, and ecological communities may be impacted by the clearing.

Species / Ecological Community	Distance of closest record to application area (kilometres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)	Suitable habitat features (fauna)	Are surveys adequate to identify? (Y, N, N/A)
<i>Brachychiton obtusilobus</i>	2384.0396	Y	Y	N/A	Y - Found
<i>Corchorus congener</i>	3016.3404	Y	Y	N/A	Y – Not found
<i>Cucumis sp. Barrow Island (D.W. Goodall 1264)</i>	1702.2089	Y	Y	N/A	Y – Not found
<i>Daviesia pleurophylla</i>	5.6606697	Y	Y	N/A	Y - Found
<i>Eremophila occidens</i>	16985.464	Y	Y	N/A	Y – Not found
<i>Phyllanthus fuernrohrii</i>	1746.4886	Y	Y	N/A	Y – Not found
<i>Stackhousia umbellata</i>	1289.9276	Y	Y	N/A	Y – Not found
<i>Tephrosia sp. North West Cape (G. Marsh 81)</i>	10627.216	Y	Y	N/A	Y – Not found
<i>Verticordia serotina</i>	17686.668	Y	Y	N/A	Y – Not found
<i>Petrogale lateralis subsp. Lateralis</i> (EN) – black footed rock wallaby	1077.91	N/A	N/A	Y	Y – Not found

3. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	% remaining	Current extent in all DBCA managed land (ha)	% current extent in all DBCA managed land (proportion of pre-European extent)
IBRA bioregion					
Carnarvon	8,382,890.35	8,360,801.46	99.74	1,020,434.08	12.17
Carnarvon (CAR01)	2,368,970.05	2,356,438.09	99.47	403,557.95	17.04
Vegetation complex					
BVA 662	282,709.68	281,679.33	99.64	20,960.36	7.41

Appendix D – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
<u>Principle (a):</u> “Native vegetation should not be cleared if it comprises a high level of biodiversity.” <u>Assessment:</u>	Not likely to be at variance	Yes

Assessment against the Clearing Principles	Variance level	Is further consideration required?
The vegetation survey identified two Priority flora species, with only one occurring within the application area; P2 <i>Daviesia pleurophylla</i>		Refer to Section 3.2.2 above.
<p><u>Principle (b):</u> “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.”</p> <p><u>Assessment:</u></p> <p>The proposed clearing area contains suitable habitat for the Endangered black-footed rock-wallaby (<i>Petrogale lateralis lateralis</i>), however, given the lack of caves or deep crevices, the application area is unlikely to be significant habitat.</p>	Not likely to be at variance	Yes Refer to Section 3.2.2 above.
<p><u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</p> <p><u>Assessment:</u></p> <p>The proposed clearing area is unlikely to contain flora species listed as threatened under the BC Act.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> “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.”</p> <p><u>Assessment:</u></p> <p>The proposed clearing area does not contain vegetation that is representative of any known threatened ecological community as listed under the BC Act.</p>	Not likely to be at variance	No
Environmental values: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> “Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</p> <p><u>Assessment:</u></p> <p>The extent of the mapped vegetation type and native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (Government of Western Australia, 2019; Commonwealth of Australia, 2001). Vegetation in the proposed clearing area is not considered to be part of a significant ecological linkage in the local area.</p>	Not likely to be at variance	No
<p><u>Principle (h):</u> “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.”</p> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not likely to be at variance	No
Environmental values: land and water resources		
<p><u>Principle (f):</u> “Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</p> <p><u>Assessment:</u></p>	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
<p>Given no water courses or wetlands are recorded within the proposed clearing area, the clearing is unlikely to impact on or off-site hydrology and water quality.</p>		
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils are moderately susceptible to water erosion and waterlogging (Schoknecht et al., 2004). Noting the extent of the proposed clearing and the clearing extending previously cleared tracks, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	<p>Not likely to be at variance</p>	<p>No</p>
<p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u></p> <p>Given no watercourses, wetlands or Public Drinking Water Sources Areas are recorded within the proposed clearing area, the clearing is unlikely to impact surface or ground water quality.</p>	<p>Not likely to be at variance</p>	<p>No</p>
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p> <p>Given no watercourses or wetlands are recorded within the proposed clearing area, the clearing is unlikely to contribute to waterlogging.</p>	<p>Not likely to be at variance</p>	<p>No</p>

Appendix E – Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Measuring Vegetation Condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very Poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded	Areas that are completely or almost completely without native species in the structure of their vegetation, i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix G – Biological survey information excerpts / photographs of the vegetation



Photo 1: Vegetation type 1 - *Grevillea stenobotrya* and *Banksia ashbyi* open low shrubland over *Triodia angusta* hummock grassland



Photo 2: Vegetation type 2 - *Corymbia hamersleyana* open low woodland over *Grevillea stenobotrya* and *Acacia bivenosa* open shrubland over *Triodia angusta* hummock grassland.



Photo 3: Vegetation type 3 - *Acacia bivenosa* and *Melaleuca cardiophylla* low open shrubland over *Triodia wiseana* and *Triodia basedowii* open hummock grassland.

Appendix H – References and databases

1. GIS datasets

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Aboriginal Heritage Places (DPLH-001)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping – Best Available

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

2. References

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