Clearing Desktop Report – CPS 818

We're working for Western Australia.

Minilya – Exmouth Road SLK 43.8 & 164.8
Water Bores

Minilya – Exmouth Road (H048)
Mid West - Gascoyne
3680

D25#729328
July 2025

Contents

List of Figures

List of Tables

Document Control

Report Compilation & Review	Name and Position	Document Revision	Date
Author:	Environment Officer	Draft v1	21/07/2025
Reviewer:	Senior Environment Officer	Draft v1	31/07/2025
Author:	Environment Officer	Final	06/08/2025
Reviewer:	Senior Environment Officer	Final	07/08/2025

1 PROPOSAL

1.1 Purpose and Justification

Main Roads Western Australia proposes to utilise two existing water bores located along Minilya – Exmouth Road (H048) at SLKs 43.8 and 164.8 (Shires of Carnarvon and Exmouth, respectively), as a potential water source for construction purposes during the Learmonth Airport Intersection Upgrade Project. Both water bores hold existing 5C licences, as issued under the *Rights in Water and Irrigation Act 1914*:

- SLK 48.3: GWL50973.
    - Licence Allocation: 128,000 kL.
    - Expiry Date: 16 September 2030.
- SLK 164.8: GWL201409.
    - Licence Allocation: 20,000 kL.
    - Expiry Date: 15 September 2030.

1.1.1 Main Roads Approach to Road Safety and the Environment

Main Roads is committed to minimising the environmental impacts of all of its activities and manages the State road network to achieve balanced economic, social, safety and environmental benefits for the community. Main Roads recognises that Western Australia's environment is significant from a global perspective and the unique conservation values that are contained within its road reserve. Main Roads road network often adjoins natural areas and, in some locations, the reserve itself hosts remnant vegetation with high environmental values. Although the reserves were not established for this purpose, Main Roads recognises that it has a responsibility to conserve the environmental values that occur within the State's road network and minimise the impact its proposals have on the environment. In addition to providing a safe and efficient road network for all people using the roads under its control, Main Roads is also committed to protecting the natural environment.

In accordance with National and State Government road safety policies, Main Roads is also committed to substantially reducing road trauma on the road network through Safe System principles. The Safe System approach acknowledges that more than two thirds of all serious crashes are due to human error rather than deliberate risk taking (e.g. speeding or drink driving) and seeks to improve behaviour through education and enforcement while managing the safety of vehicles, speeds and the road and road infrastructure. It is shown that improving sub-optimal road formation will substantially reduce the likelihood and severity of road crashes. For example, according to the Road Safety Management Guideline, increasing the sealed shoulder from 0.5 m to 2 m will reduce Killed and Seriously Injured numbers by more than 50%.

As the statutory authority responsible for providing and managing a safe and efficient main road network in Western Australia, Main Roads focuses on improving road safety by thoroughly considering all environmental, economic and community benefits and impacts. It operates on a hierarchy of avoiding, minimising, reducing and then, if required, offsetting our environmental impacts. This has been achieved through changes in proposal scope and design. Main Roads regularly reduces its clearing footprint by restricting earthworks limits for proposals, steepening batters, installing barriers, establishing borrow pits in cleared paddocks and avoiding temporary clearing for storage, stockpiles and turn around bays to avoid and minimise its impacts.

Further details on measures to avoid, minimise and reduce are provided in Section 1.5.

1.2 Proposal Scope

Main Roads proposes to clear 5 ha within a 9.66 ha Development Envelope (DE) to facilitate the following scope of works:

- Reinstate existing access tracks from Minilya – Exmouth Road to the SLK 43.8 and 164.8 water bore sites;
- Reestablish two existing turkey's nests at both locations;
- Establishment of parking areas for mobile plant, light vehicles and trucks;
- Laydown areas for equipment and material;
- Turnaround areas for mobile plant and trucks; and
- Installation of supplementary access tracks, to ensure a seamless and safer flow of vehicle movement through both sites.

1.3 Proposal Location

The DE is located on Minilya – Exmouth Road (H048) at the following locations, as shown in Figure 1 and Figure 2:

- SLK 43.72 – 43.98 (Shire of Carnarvon).
    - Central coordinates: 113.9457892°E, -23.383204°S.
- SLK 164.72 – 164.98 (Shire of Exmouth).
    - Central coordinates: 114.064800°E, -23.378700°S.

1.4 Clearing Details

Proposed Clearing to be undertaken using CPS 818:
Up to 5 ha (within a 9.66 ha DE).

Areas of Native Vegetation Clearing:
The areas of native vegetation to be cleared are shown in Appendix 1.

Type of Native Vegetation:
The type of vegetation to be cleared under this Proposal is as follows:

- **SLK 43.8**:
    - VT06 - *Cenchrus ciliaris* closed grassland.
    - VT08 - *Acacia sclerosperma subsp. sclerosperma. Stylobasium spathulatum, Eremophila spp. o*pen shrubland on sandy low rises.
- **SLK 164.8**:
    - VT05 - *Acacia spp.* low shrubland on undulating dunes/swales.

Figure 1. Minilya – Exmouth Road (H048) Water Bores Project Location (SLK 43.8).

Figure 2. Minilya – Exmouth Road (H048) Water Bores Project Location (SLK 164.8).

1.5 Alternatives to Native Vegetation Clearing Considered During Proposal Development

The following alternatives to clearing were considered during the development of the proposal:

- Alternative water source locations were considered for the Learmonth Airport Intersection Upgrade Project, however, there are no other suitably licenced water bores in close proximity to the works. One other alternative considered was hauling water from other sources. However, due to the high cost of transport, this option was deemed unfeasible.
- Another proposal involved using a portion of Exmouth's scheme water however, given the high demand of this water source to supply the local community, Shire of Exmouth and other external stakeholders, securing an appropriate allocation may not be possible. Additionally, the existing borefield (managed by Water Corporation) in Exmouth is designed and operated to abstract water at low flow rates to mitigate saline water intrusion and maintain the conditions of stygofauna habitat. These low-yielding bores would not be a feasible option for consistent use required during construction activities.
- The proposed clearing will only be undertaken to the extent necessary to facilitate the reinstatement of existing access tracks, reestablishment of the existing turkey's nests and installation of laydown and parking areas, vehicle turnaround locations and supplementary access tracks.
- Main Roads retains frangible vegetation where a clear zone is to be established for road projects. For this project, however, clearing will only be required to accommodate access to and use of existing water bores and associated infrastructure, with no clear zone being established. Accordingly, the retention of frangible vegetation does not apply to this proposal.
- Reducing the speed limit to minimise clearing requirements, while still balancing safety (driver fatigue) and freight efficiency. Speed Limits are an essential mechanism to ensure the safe and efficient operation of road networks. The application of appropriate speed limits and other traffic management measures is a key mechanism in managing vehicle speeds to achieve desired safety, mobility, traffic management, local amenity, and road user expectations. There are several factors involved in road safety, including road conditions, driver behaviour and overall road design. Except in special situations, reducing speed limits below national standards on state and national roads is not typically supported as it has the potential to contribute to driver frustration, impatience, tiredness and recklessness. The environmental values protected by reducing the speed limit, do not justify the impacts on freight efficiencies nor road user safety. As this clearing is for the purpose of accessing and utilising existing water bores and associated infrastructure, accordingly, the reduction of the speed limits to avoid clearing of native vegetation for this proposal is not proposed.

1.6 Measures to Avoid, Minimise, Reduce and Manage Proposal Clearing Impacts

The design and management measures implemented to avoid and minimise the potential clearing impacts of the Proposal are provided in Table 1.

Table 1. Measures Undertaken to Avoid, Minimise, Reduce and Manage the Proposal Clearing Impacts

Design or Management Measure	Discussion and Justification
Use of existing cleared areas for access tracks, construction storage and stockpiling	Using the existing access tracks to and from the water bore sites and turkey's nests is the preferred approach. This will involve the clearing of regrowth vegetation and associated activities i.e. grading and compaction. Additional infrastructure in the form of laydown and parking areas, vehicle turnaround locations and supplementary access tracks will be required. However, these components will only involve clearing a minor portion of the DE.
Use of alternative water sources for construction purposes	As stated in Section 1.5, alternative water sources for the Learmonth Airport Intersection Upgrade project were explored but no suitably licensed bores were found nearby and hauling water from distant sources was dismissed due to high transport costs. Using Exmouth's scheme water was also considered, but the high demand for usage and environmental constraints on the local borefield - designed for low-yield extraction to protect against saline intrusion and preserve stygofauna habitat - make securing a reliable supply for construction purposes unlikely.

1.7 Approved Policies and Planning Instruments

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, Main Roads has also had regard to the below instruments where relevant.

Other Legislation potentially relevant for assessment of clearing and planning/other matters:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P and D Act)
- *Soil and Land Conservation Act 1945* (WA)
- *Rights in Water and Irrigation Act 1914*
- *Aboriginal Heritage Act 1972* (WA).

Environmental Protection Policies:

- Environmental Protection (Peel Inlet - Harvey Estuary) Policy 1992
- Environmental Protection (Western Swamp Tortoise Habitat) Policy 2011.

Other relevant policies and guidance documents:

- Environmental Offsets Policy (Government of Western Australia, 2011)
- A guide to the assessment of applications to clear native vegetation (Government of WA, December 2014)
- Procedure: Native vegetation clearing permits (Government of WA, October 2019)
- Environmental Offsets Guidelines (Government of Western Australia, 2014)
- Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment (EPA, 2020)
- Approved conservation advice under section 266B of the EPBC Act for threatened flora/fauna/vegetation communities.

2 SCOPE AND METHODOLOGY ASSESSMENT OF CLEARING

Native vegetation will be cleared to accommodate this Proposal. This clearing will be undertaken using the Main Roads Statewide Clearing Permit CPS 818.

To comply with CPS 818, Main Roads must prepare a Clearing Desktop Report (CDR).

The CDR outlines the key activities associated with the Proposal, the existing environment and an assessment of native vegetation clearing. This assessment provides an evaluation of the vegetation clearing impacts associated with the Proposal using the ten Clearing Principles listed under s51 of the *Environmental Protection Act 1986* (EP Act) and strategies used to manage vegetation clearing.

2.1 Report Terminology and Sources

The following terms are used in this Clearing Report:

- **Development Envelope** – The maximum extent within which clearing will be located. This will allow for minor changes to the Proposal's footprint and to account for unexpected changes that may occur during construction, such as working to avoid a large tree or encountering buried boulders or services. This flexibility allows the site personnel to make modifications to the Proposal to avoid areas that may contain better environmental values. The CDR has assessed all environmental values within the Development Envelope as though all of these values will be impacted. For this proposal the DE is represented by an area of 9.66 ha across two locations.
- **Native Vegetation Clearing Area –** The maximum amount of native vegetation to be cleared for the Proposal that will accommodate the designed earthworks and, typically a nominal buffer to allow for the safe movement of machinery during construction. The Native Vegetation Clearing Area for this proposal is up to 5 ha across two locations.
- **Study Area** – Area covered by the Desktop Assessment. The Study Area for the Proposal is confined to a local area of a 20 km radius.
- **Survey Area** – Area covered by the Biological Survey, which is typically larger that the Development Envelope.

2.2 Desktop Assessment

A desktop assessment of the DE was undertaken by viewing internal datasets and other government agency managed databases, and consulting with relevant stakeholders where necessary. Results from searches can be found in Appendices 2, 3 and 4.

GIS layer viewing and mapping is done using ArcMap and/or Main Roads corporate mapping system known as iMaps. Referencing of the GIS layers accessed is done under the relevant methodology section of each clearing principle. Government managed databases were searched to locate additional information, which are found under References in Section 7.

2.3 Surveys and Assessments

The following surveys/assessments were undertaken to inform this CDR:

- GHD (2022), Minilya-Exmouth Road Biological Survey.

Biological and targeted surveys conducted for the proposal are outlined in Table 2 and a summary of the findings in these reports are presented in Sections 3.1 to 3.2.

Table 2. Summary of Biological and Targeted Surveys Relevant to the Proposal

Consultant and Survey Name	Survey Details
GHD (2022), Minilya-Exmouth Road Biological Survey	**Survey Area:** The Survey Area consists of the following locations: • Road reserve along Minilya – Exmouth Road (SLK 166.5 – 211.75). • Two material pits along Minilya – Exmouth Road (SLK 38.6 and 54). • One material pit along Shothole Canyon Road (SLK 201). • One material pit along Charles Knife Road (SLK 194.2). • One material pit along North West Coastal Highway (SLK 660). • Two water bore locations along Minilya – Exmouth Road (SLK 43.8 and 164.8). The above locations constitute a combined Survey Area of 930.05 hectares (ha). **Type:** A single season detailed flora and vegetation survey, targeted flora survey and a basic fauna assessment. The purpose of the survey was to delineate key flora, fauna, soil and surface water values (wetlands) and potential sensitivity to impact areas within the Survey Area. **Timing:** The flora and vegetation survey was undertaken from 23 – 30 May and 27 – 29 July 2022. The basic fauna survey was undertaken from 23 – 30 May 2022. **Survey Results Shapefile TRIM Ref:** D22#1323156 **Document TRIM Ref:** D22#1323152

3 SURVEY RESULTS

3.1 Summary and Analysis of Flora and Vegetation Surveys

GHD (2022) undertook a single season detailed and targeted flora and vegetation survey. The survey was undertaken to identify and describe the broad dominant vegetation types, assess vegetation condition, and complete high intensity sampling of vascular flora taxa present at the time of survey. Searches for significant ecological communities and flora species were also undertaken during the field survey.

The survey extent covered a total of 930.05 ha, within the areas listed in Table 2.

Vegetation

Ten vegetation types were identified within the GHD (2022) Survey Area, three of which are present within the DE, being:

- **VA06 (*Cenchrus ciliaris* closed grassland)** - Isolated clumps of native shrubs over **Cenchrus ciliaris* closed grassland.
- **VT08 (*Acacia sclerosperma subsp. sclerosperma. Stylobasium spathulatum, Eremophila spp.* open shrubland on sandy low rises)** - *Acacia sclerosperma* subsp. *sclerosperma, Stylobasium spathulatum* and *Eremophila* spp. mid open shrubland over *Solanum lasiophyllum, Indigofera occidentalis* and *Enchylaena tomentosa* var. *tomentosa* low sparse shrubland over **Cenchrus ciliaris, Aristida holathera* var. *holathera* and *Eriachne aristidea* grassland.
- **VT05 (*Acacia spp.* low shrubland on undulating dunes/swales)** - *Acacia spp.* and *Solanum lasiophyllum* low shrubland over *Acanthocarpus verticillatus, Isotropis atropurpurea* and *Dampiera incana* var. *incana* open herbland with *Eriachne spp.* and *Triodia epactia* open grassland.

None of the vegetation types recorded by GHD (2022) are representative of communities that correspond to Threatened Ecological Communities listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or *Biodiversity Conservation Act 2016* (BC Act) or Priority Ecological Communities (PEC) listed by Department of Biodiversity Conservation and Attractions (DBCA).

The condition of the vegetation within the Survey Area, as reviewed and rated by GHD (2022) ranges from Excellent to Completely Degraded, with the vegetation within the DE mapped as Excellent to Completely Degraded as well.

Flora

GHD (2022) recorded a total of 201 flora taxa within the Survey Area, representing 45 families and 119 genera. Nine of the identified flora taxa were introduced. One species listed as a Declared Pest under the *Biosecurity and Management Act* 2007, *Prosopis pallida*, was identified within the DE (Appendix 3).

Seven flora species of conservation significance were recorded by GHD (2022) with the Survey Area. These species included:

- *Acacia startii* (Priority 3)
- *Corchorus congener* (Priority 3)
- *Eremophila forrestii* subsp. *Capensis* (Cape Range Poverty Bush) (Priority 3)
- *Gymnanthera cunninghamii* (Priority 3)
- *Stackhousia umbellata* (Priority 3)
- *Tephrosia* sp. North West Cape (G. Marsh 81) (Priority 3)
- *Tinospora esiangkara* (Priority 2)

Of the seven species identified only two, *Corchorus congener* (one plant) and *Tephrosia* sp. North West Cape (one plant), are located within the DE. All remaining recorded individuals are located outside of the DE. No flora protected under the EPBC Act or the BC Act were identified in the DE.

3.2 Summary and Analysis of Fauna Surveys

GHD (2022) undertook a single season basic fauna survey of the Survey Area, covering a total of 930.05 ha, within the areas listed in Table 2.

Nine broad fauna habitat types were identified within the Survey Area, four of which are present within the DE, being:

- Scattered Natives Regrowth / Buffel / Modified Areas.
- Mixed Open Shrubland over Triodia Hummock or Tussock Grasslands on Sandplains.
- Sparse Acacia Shrublands on Red Sand Dunes.
- Road / Cleared.

The vegetation within the Survey Area forms part of a large continuous tract of habitat. The fauna habitat types identified during the survey are not confined to the Survey Area and are considered well represented in the local and regional area.

123 fauna species, including 75 birds, 33 reptiles, 12 mammals and 3 frogs were recorded during the survey. Of these, four species are introduced: dingo/dog, cow, cat and rabbit. The fauna species

recorded during the survey are typical for the habitats they were found in and are generally well represented in the region.

Five fauna species of conservation significance listed under the EPBC Act and/or BC Act, or Priority fauna listed by the DBCA were recorded during the survey:

- Brush-tailed Mulgara (*Dasycercus blythi*) - P4
- Western Pebble-mound Mouse (*Pseudomys chapmani*) – P4
- Peregrine Falcon (*Falco peregrinus*) - OS
- Osprey (*Pandion haliaetus*) - MI
- Caspian Tern (*Hydroprogne caspia*) - MI.

A likelihood of occurrence assessment concluded fifteen additional conservation significant fauna species are considered by GHD (2022) as likely to occur in the Survey Area based on suitable habitat:

- Cape Range Stone Gecko (*Diplodactylus capensis*) – P2
- Ningaloo Worm Lizard (*Aprasia rostrata*) – P3
- Common Sandpiper (*Actitis hypoleucos*) – MI
- Gull-billed Tern (*Gelochelidon nilotica*) – MI
- White-winged Black Tern (*Chlidonias leucopterus*) – MI
- Grey Falcon (*Falco hypoleucos*) – VU
- Eastern Curlew (*Numenius madagascariensis)* – CR/MI
- Wood Sandpiper (*Tringa glareola)* – MI
- Common Greenshank (*Tringa nebularia)* – MI
- Sharp-tailed Sandpiper (*Calidris acumimata)* – MI
- Bar-tailed Godwit (*Limosa lapponica)* – CR/MI
- Curlew Sandpiper (*Calidris ferruginea)* – CR/MI
- Grey-tailed Tattler (*Tringa brevipes)* – P4/MI
- Pectoral Sandpiper (*Calidris melanotos)* – MI
- Oriental Plover (*Charadrius veredus)* - MI

4 DESKTOP ASSESSMENT OF VEGETATION

4.1 Desktop Vegetation Description

Three vegetation types were described by GHD (2022) as occurring within the DE, as shown in Table 3 below, with vegetation condition ranging from Excellent to Completely Degraded.

Table 3. Summary of Vegetation Types within Native Vegetation Development Envelope

Vegetation Type	Extent within Development Envelope (ha)	Total Extent Mapped (ha) within Survey Area
VT06 – *Cenchrus ciliaris* closed grassland Isolated clumps of native shrubs over **Cenchrus ciliaris* closed grassland.	1.71	34.51
VT08 – *Acacia sclerosperma subsp. sclerosperma. Stylobasium spathulatum, Eremophila spp.* open shrubland on sandy low rises. *Acacia sclerosperma* subsp. *sclerosperma, Stylobasium spathulatum* and *Eremophila* spp. mid open shrubland over *Solanum lasiophyllum, Indigofera occidentalis* and *Enchylaena tomentosa* var. *tomentosa* low sparse shrubland over **Cenchrus ciliaris, Aristida holathera* var. *holathera* and *Eriachne aristidea* grassland.	2.97	49.02
VT05 – *Acacia spp.* low shrubland on undulating dunes/swales. *Acacia spp.* and *Solanum lasiophyllum* low shrubland over *Acanthocarpus verticillatus, Isotropis atropurpurea* and *Dampiera incana* var. *incana* open herbland with *Eriachne spp.* and *Triodia epactia* open grassland.	4.81	228.20

The DE is located within the Interim Biogeographic Regionalisation for Australian (IBRA) Carnarvon Bioregion. According to the broad scale mapping undertaken by Beard (Shepherd et al. 2002) the DE is mapped as occurring within the following pre-European vegetation associations:

- **658 (SLK 43.8)**: Scrub, open scrub or sparse scrub of wattle, tea tree and other species of *Acacia* spp. and *Melaleuca* spp.
- **662 (SLK 164.8)**: Spinifex completes, *Triodia* spp. hummock grassland with scattered low trees over dwarf shrubs or mixed

The vegetation associations have greater than 95% of pre-European extent remaining at all levels, as shown in Table 4 below.

Table 4. Pre-European Vegetation Representation

Pre-European Vegetation Association	Scale	Pre–European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA Managed Land (proportion of pre-European Extent)
Veg Assoc No. 658	**Statewide**	200,281.99	200,281.99	100	22.05
	IBRA Bioregion Carnarvon	200,281.99	200,281.99	100	22.05
	IBRA Sub-region Cape Range	133,266.87	133.266.87	100	33.14
	Local Government Authority Shire of Exmouth	68,131.82	68,131.82	100	64.82
Veg Assoc No. 662	**Statewide**	284,795.92	282,125.59	99.06	7.58
	IBRA Bioregion Carnarvon	282,709.68	281,679.33	99.64	7.41
	IBRA Sub-region Cape Range	282,709.68	281,679.33	99.64	7.41
	Local Government Authority Shire of Carnarvon	90,385.25	88,529.85	97.95	8.77

5 ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES

In assessing whether the Proposal's proposed clearing is likely to have a significant impact on the environment, the Proposal was assessed against the ten Clearing Principles (EP Act, Schedule 5).

Each principle has been assessed in accordance with the former Department of Environment Regulation (now Department of Water and Environmental Regulation (DWER) '*A Guide to the Assessment of Applications to Clear Native Vegetation*' (Department of Environment Regulation, 2014) and other relevant clearing permit application decision reports prepared by DWER.

The proposed clearing is not at or not likely to be at variance with the ten Clearing Principles.

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

Proposed clearing is not likely to be at variance to this Principle.

Vegetation

The Proposal will result in the clearing of up to 5 ha of native vegetation within a 9.66 ha DE split across two locations. The Proposal is located within the Interim Biogeographic Regionalisation for Australian (IBRA) Carnarvon Bioregion (Government of Western Australia 2019). According to the broad scale mapping undertaken by Beard (Shepherd et al. 2002) the DE is mapped as occurring within the following pre-European vegetation associations:

- **658 (SLK 43.8)**: Scrub, open scrub or sparse scrub of wattle, teatree and other species of *Acacia* spp. and *Melaleuca* spp.
- **662 (SLK 164.8)**: Spinifex completes, *Triodia* spp. hummock grassland with scattered low trees over dwarf shrubs or mixed

This vegetation association has greater than 97% of pre-European extent remaining at all levels.

The pre-European vegetation within the DE is well represented locally and regionally and is not considered a significant remnant of native vegetation. The native vegetation extent (DPIRD-005) comprises 95% and 72% of the 20 km study area, for SLK 43.8 and 164.8, respectively. With the proposed native vegetation clearing representing <0.001% of the native vegetation extent.

Three vegetation types were described by GHD (2022) for the DE, with further information found in Table 3:

- **VA06** - *Cenchrus ciliaris* closed grassland.
- **VT08** - *Acacia sclerosperma subsp. sclerosperma. Stylobasium spathulatum, Eremophila spp. o*pen shrubland on sandy low rises**.**
- **VT05** - *Acacia spp.* low shrubland on undulating dunes/swales.

According to GHD (2022), the vegetation types were assessed as showing the following vegetation condition:

- **VT06**: Completely Degraded.
- **VT08**: Good.
- **VT05**: Excellent.

Threatened Ecological Communities/ Priority Ecological Communities

A search of the DBCA restricted TEC/PEC GIS dataset (DBCA-038) identified one Priority Ecological Community (PEC), Marloo Land System (Priority 3) and no Threatened Ecological Communities

(TEC) within the 20 km study area of the DE. The Marloo Land System PEC is located approximately 8.8 km east of the DE and will not be impacted by the proposed clearing.

Flora

A field survey undertaken by GHD (2022) identified 201 flora taxa within the total Survey Area, representing 45 families and 119 genera. Nine of the identified flora taxa were introduced.

GHD (2022) identified seven species of Priority flora within the total Survey Area (930.05 ha), as shown in Table 5 below.

Table 5. Priority Flora Recorded within the Survey Area

Taxon	Conservation Status	GHD Records
Acacia startii	P3	1036 plants
Corchorus congener	P3	13 plants
Eremophila forrestii subsp. *capensis*	P3	11 plants
Gymnanthera cunninghamii	P3	101 plants
Stackhousia umbellata	P3	24 plants
Tephrosia sp. North West Cape (G. Marsh 81)	P2	2 plants
Tinospora esiangkara	P2	1 plant

Of the seven species identified only two, *Corchorus congener* (one plant) and *Tephrosia* sp. North West Cape (one plant), are located within the DE. All remaining recorded individuals are located outside of the DE. No flora protected under the EPBC Act or the BC Act were identified in the DE.

Impacts to *Corchorus congener*

Corchorus congener is a shrub that grows to approximately 0.6 m. The taxon grows on sandy or red sandy loam with limestone soils on sand dune and plains and is currently known from the Carnarvon and Pilbara IBRA bioregions, with populations found across the Exmouth Gulf, Barrow Island, Nanutarra and south of Gnoorea. *Corchorus congene* was found growing in *Acacia* spp. open shrubland (VT01) and *Acacia* spp. low shrubland on undulating dunes/swales (VT05). GHD (2022) identified 13 individuals within the total Survey Area and one individual within the DE.

Given the minimal number of *Corchorus congene* individuals recorded within the Survey Area and 20 km of the DE, a 20 m buffer will be applied around the single individual identified within the SLK 164.8 section of the DE. No clearing will be permitted within the 20 m buffer. This will prevent any clearing and construction impacts to *Corchorus congene*.

Impacts to *Tephrosia* sp. North West Cape (G. Marsh 81)

Tephrosia sp. North West Cape is a low perennial shrub that grows up to 0.3 m high and 0.1 m wide. The taxon has been recorded growing on sandy to loamy orange soils over exposed limestone and is currently known from the Carnarvon IBRA bioregions, with populations found only in the Exmouth Gulf. *Tephrosia* sp. North West Cape was found growing in *Acacia* spp. low shrubland on undulating dunes/swales (VT05) and *Acacia* spp. and *Melaleuca* spp. low open shrubland (VT07). GHD (2022) identified 2 individuals within the total Survey Area, one of which is located within the DE.

A 20 m buffer will be applied around the single individual identified within the SLK 164.8 section of the DE. No clearing will be permitted within the 20 m buffer. This will prevent any clearing and construction impacts to *Tephrosia* sp. North West Cape.

Fauna

GHD (2022) identified three key fauna habitats within the DE, as described below. The habitat types identified during the survey are not confined to the Survey Area and are considered well represented in the local and regional area.

The three fauna habitat types within the DE include:

- Scattered Natives Regrowth / Buffel / Modified Areas – 1.71 ha.
- Mixed Open Shrubland over Triodia Hummock or Tussock Grasslands on Sandplains – 2.97 ha.
- Sparse Acacia Shrublands on Red Sand Dunes – 4.81 ha.

GHD (2022) considered the habitats within the survey area to be well represented within the local area and well represented within the greater study area, given the extent of the corresponding native vegetation associations remaining.

A fauna field survey by GHD (2022) recorded 123 fauna species within the Survey Area including 75 birds, 33 reptiles, 12 mammals and 3 frogs. Of these, 4 species are introduced: dingo/dog, cow, cat and rabbit.

Five conservation significant fauna species listed under the EPBC Act and/or BC Act or Priority fauna listed by DBCA were recorded during the survey:

- *Dasycercus blythi* (Brush-tailed Mulgara) - P4
- *Pseudomys chapmani* (Western Pebble-mound Mouse) - P4
- *Falco peregrinus* (Peregrine Falcon) - OS
- *Pandion haliaetus* (Osprey) - MI
- *Hydroprogne caspia* (Caspian Tern) – MI

GHD (2022) did not identify any evidence e.g. scats, burrows, traces of foraging, etc that the five species were utilising the vegetation within the DE.

The proposed clearing will not significantly impact the remaining vegetation levels (>95%) at a local or regional scale, and the vegetation is not considered to be part of a significant remnant of vegetation or provide ecological linkage. Given the application of a 20 m buffer around the *Corchorus congene* (P3) and *Tephrosia* sp. North West Cape (P2) individuals within the SLK 164.8 portion of the DE, these taxa will not be impacted by the proposed works.

Whilst the vegetation present within the DE has the potential to support fauna species of conservation significance, it is unlikely to provide important habitat (e.g. breeding habitat or key foraging habitat), when species may only use the vegetation within the DE for temporary refuge or opportunistic foraging. The fauna habitat identified by GHD (2022) forms part of a larger area of the same vegetation types throughout the greater locality.

Based on the above, the native vegetation does not comprise a large number or diverse suite of flora or fauna, with none of the identified species considered to have a range restriction to the DE. The DE does not comprise a high level of biological diversity.

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

Methodology

- Biological Survey (GHD 2022)
- DCCEEW Protected Matters Search Tool Report
- Government GIS Shapefiles:
  - DBCA Threatened and Priority Ecological Community database search (Accessed 21 July 2025)
  - DBCA Threatened and Priority flora database search (Accessed 21 July 2025)
  - WA Herbarium (Accessed 21 July 2025)
  - Ecological Linkages (Accessed 21 July 2025)
  - Native Vegetation Extent (Accessed 21 July 2025)
- Statewide Vegetation Statistics (Government of Western Australia 2019).

(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.

Proposed clearing is not likely to be at variance to this Principle.

GHD (2022) identified three key fauna habitats within the DE, as described below. The habitat types identified during the survey are not confined to the Survey Area and are considered well represented in the local and regional area.

The three fauna habitat types within the DE include:

- Scattered Natives Regrowth / Buffel / Modified Areas – 1.71 ha.
- Mixed Open Shrubland over Triodia Hummock or Tussock Grasslands on Sandplains – 2.97 ha.
- Sparse Acacia Shrublands on Red Sand Dunes – 4.81 ha.

GHD (2022) considered the habitats within the survey area to be well represented within the local area and well represented within the greater study area, given the extent of the corresponding native vegetation associations remaining.

A fauna field survey by GHD (2022) recorded 123 fauna species within the survey area including 75 birds, 33 reptiles, 12 mammals and 3 frogs. Of these, 4 species are introduced: dingo/dog, cow, cat and rabbit.

Five conservation significant fauna listed under the EPBC Act and/or BC Act or Priority fauna listed by DBCA were recorded during the survey:

- *Dasycercus blythi* (Brush-tailed Mulgara) - P4
- *Pseudomys chapmani* (Western Pebble-mound Mouse) - P4
- *Falco peregrinus* (Peregrine Falcon) - OS
- *Pandion haliaetus* (Osprey) - MI
- *Hydroprogne caspia* (Caspian Tern) – MI

Dasycercus blythi (Brush-tailed Mulgara) - Brush-tailed Mulgara occur in a range of vegetation types associated with sandplain or inland sand dunes, particularly mature hummock grasslands comprising Triodia. Evidence of Brush-tailed Mulgara presence was found to occur in the Mixed Open Shrubland over Triodia Hummock or Tussock Grasslands on Sandplains (VT08) fauna habitat. This was in the form of burrows, scat and/or prints However, this evidence was found in other sections of the survey area outside of the DE. Although there was no evidence of Brush-tailed Mulgara presence within the DE, there is suitable habitat present within the DE for refuge and foraging purposes. While this species may occur in the DE, impacts will not be significant as the DE does not represent critical habitat.

Pseudomys chapmani (Western Pebble-mound Mouse) - Habitat for the Western Pebble-mound Mouse can be found on stony hillsides with hummock grasslands and little or no soil. Although the Mixed Open Shrubland over Triodia Hummock or Tussock Grasslands on Sandplains fauna habitat type (SLK 43.8 section of the DE) contains "hummock grasslands", the soil type (deep sand and silty clay) within the DE is not suitable for the Western Pebble-mound Mouse to create its burrows and mounds. Additionally, presence of the Western Pebble-mound Mouse and its burrows and mounds were not identified within the DE and 20 km study area of SLK 43.8. It is unlikely that the proposed clearing will impact on this species.

Falco peregrinus (Peregrine Falcon) - Peregrine Falcon is a widespread but uncommon species that occurs in a variety of habitats including open woodlands, grasslands with trees, lakes, timbered watercourses and urban areas. Only one record of this species was observed flying over the DE, most likely hunting due to its high-speed flight. Whilst the species may traverse the area, the habitat types within the DE (Scattered Natives Regrowth / Buffel / Modified Areas, Mixed Open Shrubland over Triodia Hummock or Tussock Grasslands on Sandplains and Sparse Acacia Shrublands on Red Sand Dunes) only offer opportunistic foraging resources. Considering the substantial foraging resources and presence of the same habitat types in the rest of the survey area (34.51 ha, 273.91 ha and 228.20, respectively), the proposed clearing will not significantly impact this species.

Pandion haliaetus (Osprey) – Osprey utilise coastal waters and estuaries to hunt fish and coastal mainland areas for nesting. Beaches and reefs are also used but generally not far out to sea. The species also follows major rivers far inland from the coast and occurs in arid areas where large pools occur in gorges. During the survey this species was recorded at two locations; the Learmonth Jetty Creek and Learmonth industrial area, which is outside of the DE. The vegetation within the DE does not provide suitable habitat for Osprey, therefore the proposed clearing will not impact on the conservation of this species.

Hydroprogne caspia (Caspian Tern) – The species is mostly found in sheltered coastal embayment's (harbours, lagoons, inlets, bays, estuaries, and river deltas) and those with sandy or muddy margins are preferred. They also occur on near-coastal or inland terrestrial wetlands that are either fresh or saline, especially lakes (including ephemeral lakes), waterholes, reservoirs, rivers, and creeks. During the survey this species was recorded at the Learmonth Jetty Creek, flying along the water body likely hunting between coastal environments and small inlets scattered along the gulf region. The location where it was recorded is outside of the DE. The vegetation within the DE does not provide suitable habitat for the Caspian Tern, therefore it is unlikely that the proposed clearing will impact on the conservation of this species.

GHD (2022) did not identify any evidence e.g. scats, burrows, traces of foraging, etc that the five significant fauna species were utilising the vegetation within the DE.

Whilst the vegetation present within the DE has the potential to support species of conservation significance it does not represent critical habitat (e.g. breeding habitat or key foraging habitat).

As the vegetation within the DE does not form part of an ecological linkage, the proposed clearing will not result in habitat fragmentation.

The vegetation proposed for clearing does not comprise the whole or a part of and is not necessary for the maintenance of a significant habitat for fauna.

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

Methodology

- Biological Survey (GHD 2022)
- DCCEEW Protected Matters Search Tool Report
- Government GIS Shapefiles:
  - DBCA Threatened and Priority fauna database search (Accessed 21 July 2025)
  - Ecological Linkages (Accessed 21 July 2025)

- Species specific conservation listing advice and recovery plans

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

Proposal is not at variance to this Principle.

A desktop assessment by GHD (20 km radius) identified no taxa listed as Threatened under the *Biodiversity Conservation Act 2016* (BC Act) were present. No Threatened flora listed under the BC Act were recorded within the Survey Area (GHD 2022).

Main Roads undertook an additional desktop assessment of the restricted DBCA and WA Herbarium database within a 20 km radius of the DE and found no Threatened flora present.

No Threatened flora species were recorded during the field survey by GHD (2022). Based on the lack of suitable habitat and that no Threatened flora species have been identified during the field survey, it is unlikely that Threatened flora would be impacted by the proposed works.

The proposed clearing is not at variance to this Principle.

Methodology

- Biological Survey (GHD 2022)
- Government GIS shapefiles:
  - DBCA Threatened flora database search (Accessed 21 July 2025)
  - WA Herbarium (Accessed 21 July 2025)

(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.

Proposed clearing is not at variance to this Principle.

A search of the DBCA restricted TEC GIS dataset (DBCA-038) identified no Threatened Ecological Communities (TEC) within the 20 km study area of the DE.

Likewise, a search of DCCEEW Protected Matters Search Tool did not identify any federally listed TEC within the DE.

The vegetation type described is not representative of communities that correspond to any State (BC Act) or Commonwealth (EPBC Act) listed TEC.

The proposed clearing is not at variance to this Principle.

Methodology

- Biological Survey (GHD 2022)
- Community specific conservation listing advice and recovery plans
- Government GIS shapefiles:
  - DBCA Threatened Ecological Community database search (Accessed 21 July 2025)

(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.

Proposed clearing is not at variance to this Principle.

The DE is located within the Interim Biogeographic Regionalisation for Australian (IBRA) Carnarvon Bioregion. According to the broad scale mapping undertaken by Beard (Shepherd et al. 2002) the DE is mapped as occurring within the following pre-European vegetation associations:

- **658 (SLK 43.8)**: Scrub, open scrub or sparse scrub of wattle, teatree and other species of *Acacia* spp. and *Melaleuca* spp.
- **662 (SLK 164.8)**: Spinifex completes, *Triodia* spp. hummock grassland with scattered low trees over dwarf shrubs or mixed

The National Objectives and Targets for Biodiversity Conservation recognise that the retention of 30% or more of the pre-clearing extent of each ecological community is necessary if Australia's biological diversity is to be protected (Commonwealth of Australia 2001) except in constrained areas (Perth and Peel) where 10% representation should be maintained.

The DE is not located within a constrained area, with vegetation associations 658 and 662 having greater than 30% of pre-European vegetation extend remaining at all levels, as summarised in the table below.

Pre-European Vegetation Association	Scale	Pre–European Extent (ha)	Current Extent (ha)	% Remaining	% Current Extent in DBCA Managed Land (proportion of pre-European Extent)
Veg Assoc No. 658	**Statewide**	200,281.99	200,281.99	100	22.05
	IBRA Bioregion Carnarvon	200,281.99	200,281.99	100	22.05
	IBRA Sub-region Cape Range	133,266.87	133.266.87	100	33.14
	Local Government Authority Shire of Exmouth	68,131.82	68,131.82	100	64.82
Veg Assoc No. 662	**Statewide**	284,795.92	282,125.59	99.06	7.58
	IBRA Bioregion Carnarvon	282,709.68	281,679.33	99.64	7.41
	IBRA Sub-region Cape Range	282,709.68	281,679.33	99.64	7.41
	Local Government Authority Shire of Carnarvon	90,385.25	88,529.85	97.95	8.77

The native vegetation extent (DPIRD-005) comprises 95% and 72% of the 20 km study area, for SLK 43.8 and 164.8, respectively. The proposed native vegetation clearing represents <0.001% of the native vegetation extent.

The vegetation within the DE is well represented locally and regionally (>95%). As such the vegetation is not considered significant as a remnant of native vegetation.

The proposed clearing is not at variance to this Principle.

Methodology

- Aerial photography
- Statewide Vegetation Statistics (Government of Western Australia 2019)
- Biological Survey (GHD 2022)
- Government GIS shapefiles:
  - Pre-European vegetation (Accessed 21 July 2025)
  - IBRA Regions (Accessed 21 July 2025)
  - IBRA Sub-Regions (Accessed 21 July 2025)

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

Proposed clearing is not at variance to this Principle.

Assessment

The DE is not within and does not intersect with:

- Any Internationally Important Wetlands (i.e RAMSAR)
- A Nationally Important Wetland; or
- Watercourses and drainage lines.

The nearest Nationally Important Wetland is located approximately 280 m northwest of the DE (SLK 164.8) being the Cape Range Subterranean Waterways.

The Cape Range Subterranean Waterways is an Environmentally Sensitive Area. It includes a wide variety of naturally occurring caves and artificial wells found across the entire Cape Range. This ecosystem contains numerous species that have either been newly discovered or had their known range extended through the drilling of artificial wells and bores where the absence of natural cave entrances has previously precluded the sampling of subterranean fauna.

Given the primary vegetation of the DE (SLK 164.8) consists of shallow rooted vegetation types such as *Accacia spp*. shrubland, and this distance of separation from this wetland area, the proposed clearing will not impact the Troglofauna and Stygofauna community within the Cape Range Subterranean Waterways.

None of the vegetation within the DE is considered to be growing in or in association with a watercourse or wetland.

The proposed clearing is not at variance to this Principle.

Methodology

- Biological Survey (GHD 2022)
- Government GIS shapefiles:
  - Geomorphic Wetlands (Accessed 21 July 2025)
  - Ramsar Wetlands (Accessed 21 July 2025)
  - Important Wetlands (Accessed 21 July 2025)
  - Watercourses (Accessed 21 July 2025)
  - RIWI Act, Surface Water Areas and Irrigation Districts (Accessed 21 July 2025)

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

Proposed clearing is not at variance to this Principle.

Assessment

The Australian Soil Resource Information System (ASRIS) mapping indicates that two soil landscape types occur within the DE, being:

- Donovan System (204Dn) - Gently sloping outwash plains and minor stony plains with alkaline loamy and clayey soils supporting tall shrublands of snakewood and other acacias and low shrublands of bluebush.
- Learmonth System (204Le) - Sandy outwash plains marginal to the Cape Range, supporting mainly soft spinifex hummock grasslands with scattered acacia shrubs.

The CSIRO ASRIS Acid Sulfate Soils mapping indicated an extremely low risk of acid sulfate soils within the DE. The proposed works are not anticipated to have an impact on soil acidity.

DPIRD mapping indicates that the DE presents the following land degradation risk:

- 1% - Moderate to high flood risk
- 1% - Very high to extreme water erosion hazard
- 1% - High to extreme wind erosion hazard
- 1% - Moderate salinity Hazard
- 1% - Moderate to very high waterlogging and inundation risk
- 1% - Very poor to poor site drainage potential
- 0% - High susceptibility to subsurface acidification

The clearing of vegetation is not likely to exacerbate salinity, acidification, flooding or waterlogging, resulting in appreciable land degradation.

The proposed clearing is not at variance to this Principle.

Methodology

- Biological Survey (GHD 2022)
- Government GIS Shapefiles:
  - Acid Sulfate Soil Risk Map (Accessed 21 July 2025)
  - Soil landscape land quality – Water Erosion Risk (Accessed 21 July 2025)
  - Soil landscape land quality – Wind Erosion Risk (Accessed 21 July 2025)
  - Soil landscape land quality – Salinity Risk (Accessed 21 July 2025)
  - Soil landscape land quality – Surface Acidity (Accessed 21 July 2025)
  - Soil landscape land quality – Waterlogging Risk (Accessed 21 July 2025)
  - Soil landscape land quality – Flood Risk (DPIRD-007) (Accessed 21 July 2025)
- Natural Resource Management – Soil Mapping (Accessed 21 July 2025)

(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.

Proposed clearing is not at variance to this Principle.

Assessment

A desktop assessment indicates no nature reserves, conservation areas, RAMSAR and geomorphic wetlands or DBCA managed lands are located within 100 metres of the DE.

A search of the DBCA database (DBCA-011) indicates that the nearest conservation area, Ningaloo Marine Park, is located approximately 17 km to the west of SLK 43.8, while Giralia Nature Reserve is located approximately 6 km east of SLK 164.8.

The nearest Nationally Important Wetland is located approximately 280 m northwest of the DE (SLK 164.8) being the Cape Range Subterranean Waterways.

The Cape Range Subterranean Waterways is an Environmentally Sensitive Area. It includes a wide variety of naturally occurring caves and artificial wells found across the entire Cape Range. This ecosystem contains numerous species that have either been newly discovered or had their known range extended through the drilling of artificial wells and bores where the absence of natural cave entrances has previously precluded the sampling of subterranean fauna.

Given the primary vegetation of the DE (SLK 164.8) consists of shallow rooted vegetation types such as *Accacia spp.* shrubland and distance of separation from this wetland area, the proposed clearing will not impact the Troglofauna and Stygofauna community within the Cape Range Subterranean Waterways.

The proposed clearing will not have any impact on the environmental values of any conservation areas.

The proposed clearing is not at variance to this Principle**.**

Methodology

- Biological Survey (GHD 2022)
- Government GIS Shapefiles:
  - DBCA Legislated Lands and Waters & Lands of Interest (Accessed 21 July 2025)
  - DBCA Lands of Interest (Accessed 21 July 2025)
  - Geomorphic Wetlands (conservation category wetlands only) (Accessed 21 July 2025)
  - Ramsar Wetlands (Accessed 21 July 2025)
  - Important Wetlands (Accessed 21 July 2025)

(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.

Proposed clearing is not at variance to this Principle.

Assessment

A desktop assessment indicates that the DE is located within the Pilbara Surface Water Area (DWER-037) and Gascoyne Groundwater Area (DWER-034) as proclaimed under the RIWI Act. Clearing of native vegetation within the DE will not alter salinity, pH of water tables or existing water regimes.

The DE is not located within a Public Drinking Water Source Area or within any of the controlled catchment areas under the *Country Areas Water Supply Act 1947* (CAWS Act).

No watercourses intersect the DE. The closest being Lyndon River (Mainstream), located 9 km south of SLK 43.8 and a Coastal Waterline, located 6 km east of SLK 164.8.

Given the low annual rainfall - averaging 220.2 mm at SLK 43.8 and 256 mm at SLK 164.8 (BoM 2025) - and the absence of permanent surface water bodies within the DE, clearing activities are unlikely to cause sedimentation, erosion, or turbidity effects on nearby watercourses or wetlands.

The proposed clearing is not at variance to this Principle.

Methodology

- Biological Survey (GHD 2022)
- BoM Website (Accessed 21 July 2025)
- Government GIS Shapefiles:
  - RIWI Act, Surface Water Areas and Irrigation Districts (Accessed 21 July 2025)
  - CAWSA Part 2A Clearing Control Catchments (Accessed 21 July 2025)
  - RIWI Act, Groundwater Areas (Accessed 21 July 2025)
  - Soil Mapping (Accessed 21 July 2025)
  - Soil landscape land quality - Subsurface Acidification Risk (Accessed 21 July 2025)

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

Proposed clearing is not at variance to this Principle.

Assessment

The Shire of Carnarvon and Exmouth experiences low annual rainfall, with Carnarvon receiving an average annual rainfall of 220.2 mm and Exmouth receiving 256 mm. The majority of rainfall occurs between the months of May and July (BoM 2025).

The Australian Soil Resource Information System (ASRIS) mapping indicates that two soil landscape types occur within the DE, being:

- Donovan System (204Dn) - Gently sloping outwash plains and minor stony plains with alkaline loamy and clayey soils supporting tall shrublands of snakewood and other acacias and low shrublands of bluebush.
- Learmonth System (204Le) - Sandy outwash plains marginal to the Cape Range, supporting mainly soft spinifex hummock grasslands with scattered acacia shrubs.

The DE is mapped as having a low risk of waterlogging (1% of map unit has a moderate to very high waterlogging risk).

No watercourses intersect the DE. The closest being Lyndon River (Mainstream), located 9 km south of SLK 43.8 and a Coastal Waterline, located 6 km east of SLK 164.8.

With a low risk of waterlogging and flooding in the area, the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

The proposed clearing is not at variance to this Principle.

Methodology

- Biological Survey (GHD 2022)
- BoM Website (Accessed 21 July 2025)
- Government GIS Shapefiles:
  - Soil Mapping (Accessed 21 July 2025)
  - Soil landscape land quality - Waterlogging Risk (Accessed 21 July 2025)
  - Soil landscape land quality - Flood Risk (Accessed 21 July 2025)
- Natural Resource Management – Soil Mapping (Accessed 21 July 2025)

6 COMPLIANCE WITH CPS 818

The clearing associated with the proposal is not at or not likely to be at variance with the Clearing Principles. Additional management actions under CPS 818 are detailed in Table 6.

Table 6. Summary of Additional Management Actions Required by CPS 818

Impact of Clearing	Yes/No or NA	Further Action Required
1. The CDR indicates that the clearing is 'At Variance' or 'May be at Variance' with one or more of the Clearing Principles.	**No**	No further action required.
2. Clearing is at variance or may be at variance with Clearing Principle (g) land degradation, (i) surface or underground water quality **or** (j) the incidence of flooding.	**No**	No further action required.
3. Clearing is at variance with Clearing Principle (g) land degradation, (i) surface or underground water quality **and** (j) the incidence of flooding.	**No**	No further action required.
4. The Proposal involves clearing for temporary works (as defined by CPS 818).	**No**	No further action required.
5a. Proposal is within a Region that: • has rainfall greater than 400mm; and, • is South of the 26th parallel; and, • works are necessary in 'Other than dry conditions'; and, • works have potential for **uninfested** areas to be impacted.	**No**	Standard Vehicle and Plant management actions from Annexure 204B (TABLE 204B.9.1), Hygiene Checklists and Vehicle, Plant and Machinery Hygiene Register Template will be applied.
5b. Do the proposed works require clearing within or adjacent to DBCA managed lands in non-dry conditions?	**No**	No further action required.
6. Main Roads has been notified by DWER or an environmental specialist that the area to be cleared is susceptible to a pathogen other than dieback.	**No**	No further action required.

Impact of Clearing	Yes/No or NA	Further Action Required
7. Weeds are likely to spread to and result in environmental harm to adjacent areas of native vegetation that are in good or better condition.	**No**	No further action required.
8. Did an environmental specialist conduct the survey or field assessment?	**Yes**	The Environmental Specialist undertaking the biological assessments was suitably qualified and had more than three years' experience.
9. Did an environmental specialist prepare the Assessment Report and any other associated documentation including the VMP, Dieback Management Plan or Offset Proposal?	**Yes**	The Environmental Specialist preparing the Assessment Report and any other associated documentation including the VMP, Dieback Management Plan or Offset Proposal was suitably qualified and had more than three years' experience.

7 REFERENCES

Bureau of Meteorology Australia. (2025). Climate Averages for Australian Sites – Carnarvon – Available online from http://www.bom.gov.au/climate/data/index.shtml
Accessed 21 July 2025.

Bureau of Meteorology Australia. (2025). Climate Averages for Australian Sites – Exmouth – Available online from http://www.bom.gov.au/climate/data/index.shtml
Accessed 21 July 2025.

Commonwealth Scientific and Industrial Research Organisation, 2015. Australian Soil Resource Information System (ASRIS). Available online from http://www.asris.csiro.au
Accessed 21 July 2025.

Department of Climate Change, Energy, the Environment and Water. (2025). Protected Matters Search Tool Report. Available online from: http://www.environment.gov.au/epbc/pmst/index.html
Accessed 21 July 2025.

Department of Climate Change, Energy, the Environment and Water. (2025). Species Profile and Threats Database. Available online from: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl
Accessed 21 July 2025.

Department of Water and Environmental Regulation (2014). *A guide to the assessment of applications to clear native vegetation under Part V Division 2 of the Environmental Protection Act 1986*. Department of Environment Regulation. Perth, Western Australia.

Environmental Protection Authority (2020). *Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment*. Perth, Western Australia.

Environmental Protection Authority (2016). *Technical Guide – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment* (eds. K Freeman, G Stack, S Thomas and N Woolfrey). Perth, Western Australia.

GHD (2022) Minilya – Exmouth Road Biological Survey. Unpublished Report Prepared for Main Roads Western Australia.

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

Government of Western Australia (2019). *Native Vegetation Clearing Permits. Application, assessment, and management requirements under Part V Division 2 of the Environmental Protection Act 1986.* Department of Water and Environmental Regulation.

Government of Western Australia (2014a). *A guide to the assessment of applications to clear native vegetation Under Part V Division 2 of the Environmental Protection Act 1986*. Department of Environmental Regulation.

Natural Resource Management in WA. (2025). SLIP portal, Soil-Landscape Mapping. Available online from: http://maps.agric.wa.gov.au/nrminfo/framesetup.asp
Accessed 21 July 2025.