Clearing Assessment Report – CPS 818

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Minilya-Exmouth and Learmonth Public Airport Intersection Upgrade (SLK 180.64 – 181.73)
Minilya-Exmouth Road H048
Mid-west Gascoyne
3586

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Contents

List of Figures

List of Tables

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1 PROPOSAL

1.1 Purpose and Justification

Main Roads Western Australia (Main Roads) proposes to upgrade the intersection of Minilya-Exmouth Road (H048) and the Learmonth Public Airport Straight Line Kilometre (SLK) 180.645 to 181.736, in the locality of Learmonth in the Shire of Exmouth. The proposal will improve road user safety and traffic flow on entry to and exit from Learmonth Airport.

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 upgrade the intersection of Minilya-Exmouth Road (H048) and Learmonth Public Airport between Straight Line Kilometre (SLK) 180.645 and 181.736.

The Proposal includes the following works:

- Construction of a northbound turning lane into the airport.
- Construction of an acceleration lane exiting the airport.
- Construction of a bypass lane heading southbound with a dedicated turning lane into the airport.
- 1m sealed shoulders.
- Removal, replacement and extension of culverts.
- Goring and line marking throughout the intersection.
- Site Office and self-contained ablution blocks for use by site personnel.

1.3 Proposal Location

The Clearing Area is located on the corner of Minilya-Exmouth Road (H048) and Learmonth Public Airport at SLK 180.645 and 181.736 in the locality of Learmonth in the Shire of Exmouth as shown in Figure 1 and Figure 2.and the 20 km Study Area shown in Figure 3.

The central coordinate of the proposal is:
Latitude: 22.2401430
Longitude: 114.0988920

1.4 Clearing Details

Proposed Clearing to be undertaken using CPS 818:
1.28 ha

Areas of Native Vegetation Clearing:
The areas of native vegetation to be cleared are shown in **Error! Reference source not found.**1 and Figure 2.

Type of Native Vegetation:
The type of vegetation to be cleared under this Proposal is Cenchrus ciliaris closed grassland (VT06).

Figure 1: Minilya-Exmouth Road (H048) and Learmonth Public Airport Intersection Upgrade - Clearing Area 1 of 2.

Figure 2: Minilya-Exmouth Road (H048) and Learmonth Public Airport Intersection Upgrade - Clearing Area 2 of 2.

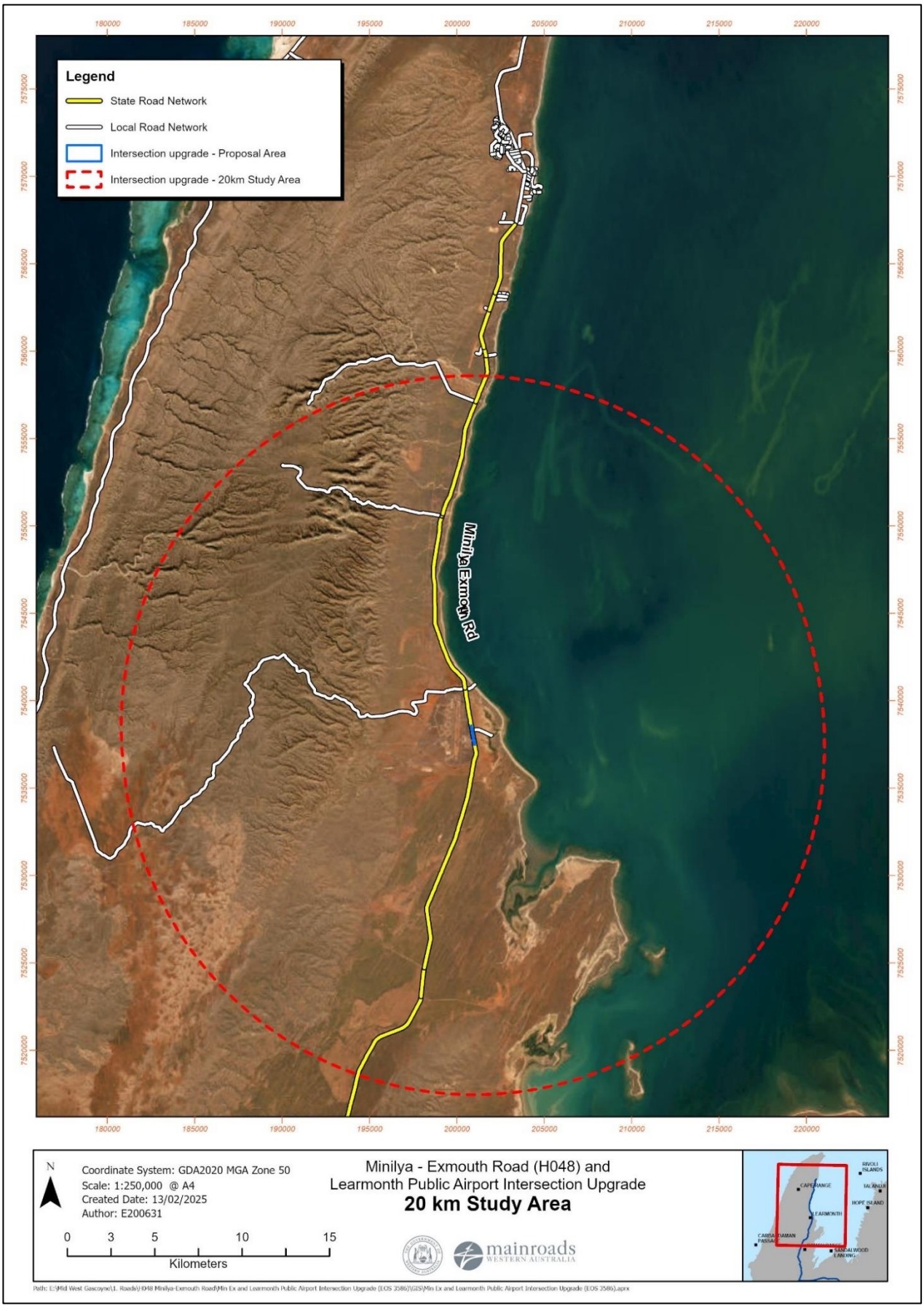

Figure 3: Minilya-Exmouth Road (H048) and Learmonth Public Airport Intersection Upgrade - 20 km Study Area.

1.5 Alternatives to Native Vegetation Clearing Considered During Proposal Development

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

- Do not upgrade the road, however this will potentially result in a poorer safety outcome and may result in future fatalities or serious injuries and further degradation of the State road asset.
- 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 the road formation, 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. Given the proposal relates to intersection upgrades, 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
The use of degraded land	To reduce the clearing of vegetation, existing cleared areas have been utilised where possible. Where clearing of vegetation can't be avoided, the Proposal has been designed to require clearing of vegetation in Completely Degraded condition and avoid vegetation in Good or better condition to minimise clearing impacts. .

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 Assessment Report (CAR).

The CAR 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:

- **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.
- **Study Area** – Area covered by the Desktop Assessment. The Study Area for the Proposal is confined to a local area of a 20km radius.
- **Survey Area** - Area covered by the Biological Survey, which is typically larger than the Clearing Area.

2.2 Desktop Assessment

A desktop assessment of the Clearing Area was undertaken by viewing internal datasets and other government agency managed databases, and consulting with relevant stakeholders where necessary.

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 10.

2.3 Surveys and Assessments

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

- GHD (2022). Minilya-Exmouth Road Biological Survey Technical Report.

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 and 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 Technical Report.	**Survey Area:** The Survey Area comprised approximately 930.05 hectares (ha). This included the Clearing Area under this proposal. **Type:** The survey consisted of three components: 1. Desktop assessment; 2. Flora and Vegetation surveys – This included a combination of Detailed, Targeted, and Opportunistic sampling techniques; an assessment of vegetation types, vegetation condition; and a significant ecological communities' assessment; and 3. Basic Fauna Survey – This included Opportunistic fauna searches and fauna habitat assessment documenting the type, value and connectivity. **Timing:** The field work component for both the Flora and Vegetation and Basic Fauna Surveys were conducted from 23rd – 30th of May and 27th – 29th of July 2022. The recommended timing for flora surveys in the Eremaean Botanical Province region is between March and June (EPA 2016). The second survey focused on significant flora and was undertaken outside of the recommended survey period due to flooding in Exmouth. Although slightly out of season, GHD (2022) considered the second survey was appropriate based on the purpose of the survey. **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

The Biological Survey was undertaken by GHD (2022) between 23 to 30 May and 27 to 29 July 2022. The Biological Survey was undertaken across six locations extending from Exmouth to approximately 67 km southeast of Coral Bay, constituting a combined survey area of 930.05 ha.

The Survey Area included a linear strip over sections of Minilya-Exmouth Road and five proposed material pit and associated track and bore locations

The Clearing Area was traversed by vehicle and by foot. The key findings of the biological field survey for the Survey Area, and those relevant to this proposal are detailed below:

- Nine Vegetation Types were identified within the Survey Area.
    - One Vegetation Type was identified within the Clearing Area (VT06: *Cenchrus ciliaris* closed grassland).
- Vegetation Condition over the Survey Area ranged from Excellent to Completely Degraded (Historically Cleared areas).
    - Within the Clearing Area, the Vegetation Condition was mapped as Completely Degraded.
- No Threatened Ecological Communities listed under the EPBC Act or BC Act or Priority Ecological Communities listed by DBCA were identified within the Survey Area during the field survey.
- No Ramsar Wetlands of International Importance are located within the Survey Area.
- Two hundred and one flora taxa (including subspecies and varieties) representing forty-five families, and one hundred and nineteen genera were recorded from the Survey Area during the field survey. This total comprised of one hundred and ninety-two native taxa and nine introduced flora taxa.
- Nine introduced flora taxa were recorded in the Survey Area. One is listed as a Declared Pest under the *Biosecurity and Management Act* 2007, *Prosopis pallida* (Mesquite). No Weeds of National Significance WoNS) were recorded during the survey. The remaining eight introduced flora have been recorded in the Study Area before.
    - No species listed as a Declared Pest or WoNS were identified within the Clearing Area.
- No EPBC Act or BC Act listed Threatened flora were recorded within the Survey Area. Seven DBCA Priority listed flora species were identified within the Survey Area during the field survey.
    - No Threatened or Priority species were identified within the Clearing Area.

3.2 Summary and Analysis of Fauna Surveys

- Nine broad fauna habitat types (including cleared and disturbed areas) were identified during field investigations in the Survey Area, One of the nine Fauna Habitats was identified within the Clearing Area:
    - VT06: *Cenchrus ciliaris* closed grassland – Scattered Natives Regrowth / Buffel / Modified Areas.
- One hundred and twenty-three fauna species, including 75 birds, 33 reptiles, 12 mammals and three frogs were recorded in the Survey Area. Of these, four species are introduced. The species recorded during the survey are typical for the habitats they were found in and are generally well represented in the region.
- Five significant fauna listed under the EPBC Act and/or BC Act or Priority fauna listed by the DBCA were recorded within the Survey Area.
    - No significant species were identified within the Clearing Area.

4 DESKTOP ASSESSMENT OF VEGETATION

4.1 Desktop Vegetation Description

One vegetation type (VT06) was recorded within the Clearing Area, with the vegetation condition being mapped as Completely Degraded.

One Beard vegetation association occurs within the Clearing Area – Vegetation Association 662 (DBCA, 2019). The National Objectives and Targets for Biodiversity Conservation recognise that it is important that ecological communities are maintained above the threshold level of 30% of pre-European extent for each community and therefore ecological communities with levels below 30% should be fully retained (Commonwealth of Australia, 2001). Vegetation association 662 exceeds the 30% retention threshold at State, Regional and Local levels.

Table 3 and Table 4 provide details of the vegetation types and their condition within the Clearing Area and the remaining extents of these associations.

Table 3. Summary of Vegetation Types within Native Vegetation Clearing Area

Vegetation Type	Extent within Clearing Area (ha)	Total Extent Mapped (ha) within Survey Area
VT06: *Cenchrus ciliaris* closed grassland	1.28 ha	34.51 ha

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. 662 Hummock grassland; shrub steppe; mixed acacia scrub and dwarf scrub with soft spinifex and Triodia basedowii	**Statewide**	~284, 795	~282, 125	~99.06	7.58
	IBRA Bioregion *Carnarvon*	~282, 709	~281, 679	~99.64	7.53
	IBRA Sub-region *Cape Range*	~282, 709	~281, 679	~99.64	7.44
	Local Government Authority *Shire of Exmouth*	~194, 41	~193, 595	~99.58	~6.96

5 ASSESSMENT AGAINST THE TEN CLEARING PRINCIPLES

In assessing whether the 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.

Clearing of up to 1.28 ha of native vegetation is proposed representing one vegetation type (VT06: *Cenchrus ciliaris* closed grassland) (GHD, 2022).

The Clearing Area is located in the Cape Range (CAR01) subregion of the Carnarvon Bioregion of Western Australia. This Bioregion has been identified as one of the eight Biodiversity Hotspots located in Western Australia for priority action (Department of Environmental Regulation (DER), 2014). Cape Range is very rich in flora for an arid area. The tertiary limestones of Cape Range are vegetated by shrublands comprising *Acacia tetragonophylla*, *Acacia bivenosa*, *Grevillea variifolia* subsp. *variifolia*, *Grevillea calcicola*, *Melaleuca cardiophylla* (Department of Conservation and Land Management (CALM), 2003)

One broad-scale pre-European vegetation association (VA 662) is mapped within the Clearing Area (Table 4). VA 662 is defined as Hummock grassland; shrub steppe; mixed acacia scrub and dwarf scrub with soft spinifex and *Triodia basedowii*. The Vegetation Association is widespread and very well represented locally and regionally, with more than 99% of pre-European extent remaining intact at all levels (DBCA, 2019).

During the Detailed Flora Survey, GHD (2022) conducted a vegetation condition assessment of the Clearing Area and mapped the VT06 Vegetation Type within the Clearing Area as Completely Degraded condition.

According to GHD (2022), GIS databases and the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC) PMST Report, there are no Threatened Ecological Communities listed under the EPBC Act or *Biodiversity Conservation Act 2016* (BC Act) or Priority Ecological Communities (PEC) listed by Department of Biodiversity Conservation and Attractions (DBCA) occurring within the 20 km Study Area.

Based on a search of the DBCA Threatened and Priority spatial data (DBCA-036), WA Herbarium and existing Main Roads Flora data, twelve conservation significant flora species were identified within the 20 km Desktop Study Area. This includes: one Priority 1 species, two Priority 2 species, eight Priority 3 species and one Priority 4 species.

No species were listed in the EPBC Act Protected Matters (PMST) Report (DCCEEW, 2025).

GHD (2022) conducted a Detailed and Targeted Flora Survey of the survey area which included the Clearing Area. No Threatened or Priority species were identified within the Clearing Area and are unlikely to occur based on the location and condition of the Clearing Area.

GHD (2022), conducted a Basic Fauna Survey of the Clearing Area as represented by a single fauna habitat. The fauna habitat is described as Scattered Natives regrowth/Buffel/modified areas. The Clearing Area lacks structural diversity with large patches devoid of vegetation. GHD (2022) notes the habitat as degraded and may provide only opportunistic foraging habitat for Peregrine and Grey Falcon. Fauna habitat of higher value is available beyond the Clearing Area with areas of intact remnant vegetation.

GIS database searches identified 44 conservation significant fauna species from within the 20 km Desktop Study Area. The DCCEEW PMST Report identified 37 nationally listed Threatened fauna species (DCCEEW, 2025). An assessment of the survey records and the post-survey Likelihood of Occurrence assessment completed by GHD (2022) was undertaken by Main Roads for the Clearing Area. Thirteen species may occur in the Clearing Area, eleven of which are Birds that would preferentially utilise other areas of better habitat containing more desirable features that is not subject to disturbance. Roosting habitat for these bird species is not available in the Clearing Area. If utilised, the Clearing Area would only provide limited foraging habitat. The remaining two species include the Cape Range Stone Gecko (*Diplodactylus capensis*) (P2) and the Western Pebble-mound Mouse (*Pseudomys Chapman*) (P4). Given the Clearing Area is in Completely Degraded condition, recorded as displaying low habitat value, and is not representative of preferred habitat type, it is unlikely these species would occur or be significantly impacted when habitat in better condition with key features is available outside of the Clearing Area.

Based on the above, the Clearing Area does not support a high level of biological diversity. The proposed clearing is not likely to be at variance to this Principle.

Methodology

- CALM (2003)
- DBCA (2019)
- DCCEEW (2025)
- DER (2014)
- GHD (2022)
- Government GIS Shapefiles:
  - DBCA Threatened and Priority flora database search (DBCA-036, Accessed: March 2025)
  - DBCA Threatened and Priority fauna database search (DBCA-037, Accessed: March 2025
  - DBCA TEC and PEC database search (DBCA-038, Accessed: March 2025)
  - DPIRD Pre-European Vegetation spatial data (DPIRD-006, Accessed: March 2025)
  - DPIRD Rangelands spatial data (DPIRD-063, Accessed: March 2025)
  - Main Roads Fauna Data Locations (Accessed March 2025)
  - Main Roads Flora Data Locations (Accessed March 2025)
  - Western Australian Herbarium (FloraBase, Accessed March 2025)

(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) conducted a Basic Fauna Survey of the Clearing Area which consists of a single fauna habitat described as Scattered Natives regrowth/Buffel/modified areas. The Clearing Area lacks structural diversity

with large patches devoid of vegetation. GHD (2022) notes the habitat as degraded and may provide only opportunistic foraging habitat for Peregrine and Grey Falcon. Fauna habitat of higher value is available beyond the Clearing Area with areas of intact remnant vegetation.

GIS database searches identified 44 conservation significant fauna species from within the 20 km Desktop Study Area.

The DCCEEW PMST Report identified 37 nationally listed Threatened fauna species (DCCEEW, 2025). An assessment of the survey records and the post-survey Likelihood of Occurrence assessment completed by GHD (2022) was undertaken by Main Roads for the Clearing Area. Thirteen species may occur in the Clearing Area, eleven of which are Birds that would preferentially utilise other areas of better habitat containing more desirable features that is not subject to disturbance. Roosting habitat for these bird species is not available in the Clearing Area. If utilised, the Clearing Area would only provide limited foraging habitat.

The remaining two species include the Cape Range Stone Gecko (*Diplodactylus capensis*) (P2) and the Western Pebble-mound Mouse (*Pseudomys Chapman*) (P4). Given the Clearing Area is in Completely Degraded condition, recorded as displaying low habitat value, and is not representative of preferred habitat type, it is unlikely these species would occur or be significantly impacted when habitat in better condition with key features is available outside of the Clearing Area.

Based on the above, the Clearing Area 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

- DCCEEW (2025)
- GHD (2022)
- Government GIS Shapefiles:
  - DBCA Threatened and Priority fauna database search (DBCA-037, Accessed: March 2025)
  - Main Roads Fauna Data Locations (Accessed March 2025)

(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 search of GIS databases and the EPBC Act Protected Matters Report (DCCEEW, 2025) identified no Threatened flora taxa occur within a 20 km radius of the Clearing Area.

No Threatened Flora species were recorded within the Clearing Area during the Biological Survey (GHD, 2022)

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

Methodology

- DCCEEW (2025)
- GHD (2022)
- Government GIS shapefiles:
  - DBCA Threatened and Priority flora database search (DBCA-036, Accessed: March 2025)
  - Main Roads Flora Data Locations (Accessed March 2025)
  - Western Australian Herbarium (FloraBase, Accessed March 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.

According to GHD (2022) , GIS databases and the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC) PMST Report, there are no Threatened Ecological Communities listed under the EPBC Act or *Biodiversity Conservation Act 2016* (BC Act), or Priority Ecological Communities (PEC) listed by Department of Biodiversity Conservation and Attractions (DBCA) within the 20 km Study Area.

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

Methodology

- DCCEEW (2025)
- GHD (2022)
- Government GIS shapefiles:
  - DBCA Threatened Ecological Community database search (Accessed March 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 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).

The proposal involves clearing of 1.28 ha of vegetation that is representative of Vegetation Association 662 (DPIRD-006). The Vegetation Association has greater than 99% of pre-European representation remaining at all scales and therefore exceeds the 30% retention national objectives and targets for biodiversity conservation in Australia (Table 4).

The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area and is contained within a broad landscape of relatively undisturbed vegetation within the IBRA region. The vegetation proposed to be cleared is in Completely Degraded condition and subject to ongoing disturbance. Given that the vegetation association is widespread throughout the area and is well-represented locally and regionally, impacts due to the proposed clearing will not be significant.

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

Methodology

- Commonwealth of Australia (2001)
- DBCA (2019)
- GHD (2022)
- Government GIS shapefiles:
  - Pre-European vegetation (Accessed March 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.

GHD (2022) identified one vegetation type (VT06) within the Clearing Area. Based on the vegetation type description (Table 3), VT06 is not growing in an environment associated with a watercourse or wetland.
According to GIS databases, the closest mapped watercourse to the Clearing Area is a non-perennial watercourse, Wapet Creek, approximately 630 m south of the Clearing Area. Vegetation in the Clearing Area is not connected to this watercourse.

The Clearing Area intersects the nationally important wetland 'Cape Range Subterranean Waterways'. This wetland was listed because of its known or potential value for subterranean fauna and extends over a broad area covering approximately 1- 5km wide and 70km long (~28000 ha). Subterranean fauna species can live in the groundwater (Stygofauna), or in rock voids above the water table (Troglofauna). The presence of subterranean fauna is strongly linked to geology and hydrology and the availability of suitable micro-habitats such as air-filled voids or caves for Troglofauna, and aquifers that are not hypersaline for Stygofauna (Humphreys, 2011). One broad-scale pre-European vegetation association (VA 662) is mapped within the Clearing Area (Table 4). VA 662 is defined as Hummock grassland; shrub steppe; mixed acacia scrub and dwarf scrub with soft spinifex and *Triodia basedowii*.

According to GHD (2022), the Clearing Area is representative of one vegetation type (VT06) - *Cenchrus ciliaris* and other shallow rooted species. The species present in the Clearing Area are not likely to influence the movement of nutrients from the root zone to these underground communities due to being shallow rooted species. Therefore, the vegetation proposed to be cleared is not associated with the mapped subterranean wetland.

Based on the above, vegetation in the Clearing Area is not growing in, or in association with a watercourse or wetland. The proposed clearing is not at variance to this Principle.

Methodology

- GHD (2022)
- Government GIS shapefiles:
  - Geo Science Australia Surface HydroLines (Accessed March 2025)
  - Important Wetlands (Accessed March 2025)
  - Watercourses (Accessed March 2025)
- Management of groundwater species in Karst environments (Humphreys, 2011)
- Pers Comms (Humphreys, Personal Communications, 2024)

(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.

Based on the DPIRD Soil landscape spatial data (DPIRD-017), the Clearing Area is located within Zone 204 (Cape Giralia Coastal Zone). The area is described as Sandy plains, alluvial plains and hills and ranges on Cainozoic deposits and marine limestone over sedimentary rocks of the Carnarvon Basin with Red deep sands and Red loamy earths.

The land zone has been further classified as the Learmonth System (204Le), described as Sandy outwash plains marginal to the Cape Range, supporting mainly soft spinifex hummock grasslands with scattered acacia shrubs (DPIRD-064).

DPIRD (2024), mapping indicates the land degradation risk in the Clearing Area (Table 5):

Table 5: Soil Landscape System Description (DPIRD, 2024)

Risk Percentage	Information
1 %	Very poor to poor drainage potential
1 %	Very high to extreme water erosion hazard
1 %	High to extreme wind erosion hazard
1 %	Moderate salinity hazard
0 %	Has pHCa <4.5 surface acidity
1 %	Moderate to very high waterlogging risk
1 %	Moderate to high flood hazard

The CSIRO Australian Soil Resource System (ASRIS) has been used to determine the Clearing Area is in an area of 'extremely low probability of occurrence' of Acid Sulfate Soil (ASS) occurring.

Based on the above and relatively minor clearing of roadside vegetation in Completely Degraded condition that is subject to disturbance, it is unlikely the proposed clearing would cause appreciable land degradation. The proposed clearing is not at variance to this Principle.

Methodology

- Government GIS Shapefiles:
  - Acid Sulfate Soil Risk Map (Accessed March 2025)
  - Soil landscape land quality – Water Erosion Risk (Accessed March 2025)
  - Soil landscape land quality – Wind Erosion Risk (Accessed March 2025)
  - Soil landscape land quality – Salinity Risk (Accessed March 2025)
  - Soil landscape land quality – Surface Acidity (Accessed March 2025)
  - Soil landscape land quality – Waterlogging Risk (Accessed March 2025)
  - Soil landscape land quality – Flood Risk (DPIRD-007) (Accessed March 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.

Based on the DBCA Legislated Lands and Waters spatial data (DBCA-011) and the EPBC Act Protected Matters Report (DCCEEW, 2025), the Clearing Area does not lie within any conservation areas.
The closest known conservation area is Cape Range Conservation Park, located 5.50 km west of the Clearing Area. The proposed clearing will not impact values of the conservation area due to the distance of separation.

The Directory of Important Wetlands in Australia (DBCA-045) indicates the Clearing Area lies within the Cape Range Subterranean Waterways. The "Cape Range Subterranean Waterways" is part of the Nationally Important Wetlands, is an Environmentally Sensitive Area and includes a wide variety of naturally occurring caves and artificial wells found across the entire Cape Range. This wetland extends over a broad area covering approximately 1- 5km wide and 70km long (~28000 ha). 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.

Based on a literature review, the reported depth to groundwater west of the tidal interface (<5 km from the Exmouth coast) is generally > 100 m and slightly shallower adjacent to drainage lines and waterways (Sutton & Shaw, 2021; Oceanica Consulting Pty Ltd, 2011; TME Town Planning Management Pty. Ltd., 2013). The proposed clearing of shallow-rooted vegetation from the relatively small Completely Degraded and disturbed Clearing Area is not expected to impact on the values of the Cape Range Subterranean Waterways or its assemblage of Troglofauna and Stygofauna.

Given the broad area in which the Subterranean Wetland covers, the depth of the groundwater and the vegetation type to be cleared, the proposed clearing is not at variance to this Principle.

Methodology

- GHD (2022)
- DCCEEW (2025)
- Oceanica Consulting Pty Ltd (2011)
- TME Town Planning Management Pty Ltd (2013)
- Government GIS Shapefiles:
  - DBCA Legislated Lands and Waters & Lands of Interest (Accessed March 2025)
  - Geo Science Australia Surface HydroLines (Accessed March 2025)
  - Important Wetlands (Accessed March 2025)
- Sutton and Shaw (2021)

(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.

The DWER spatial data indicates the Clearing Area is located within the Gascoyne Groundwater Area (DWER-034), proclaimed under the RIWI Act. Based on a literature review, the reported depth to groundwater west of the tidal interface (<5 km from the Exmouth coast) is generally >100 m and slightly shallower adjacent to drainage lines and waterways (Sutton & Shaw, 2021; Oceanica Consulting Pty Ltd, 2011; TME Town Planning Management Pty. Ltd., 2013).

The DWER spatial data also recognises the Clearing Area lies within the Pilbara Surface Water Area (DWER-037), however, no clearing of vegetation associated with a watercourse, wetland or drainage lines is proposed. Vegetation in the Clearing Area is shallow-rooted, Completely Degraded and disturbed, and relatively minor roadside vegetation. It is unlikely the proposed clearing would result in a significant change to surface water flow or drainage patterns and therefore, is not expected to impact the quality of surface or groundwater.

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

Methodology

- Government GIS Shapefiles:
  - RIWI Act, Groundwater Areas (Accessed March 2025)
  - RIWI Act, Surface Water Areas and Irrigation Districts (Accessed March 2025)
  - CAWSA Part 2A Clearing Control Catchments (Accessed March 2025)
  - Public Drinking Water (Accessed March 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.

According to the Bureau of Meteorology (Bureau of Meteorology (BoM), 2025) the average annual rainfall in Learmonth, as recorded approximately 1 km east of the Clearing Area, is 251 mm. The topography for the land system area (204Le) is described as Sandy outwash plains marginal to the Cape Range, supporting mainly soft spinifex hummock grasslands with scattered acacia shrubs.

No watercourses are within or adjacent to the Clearing Area and it is unlikely that the proposed clearing would significantly alter the current drainage patterns given it is a relatively small area of roadside vegetation proposed for clearing.

Given the low rainfall rate and the low flood potential, the minor clearing proposed is not likely to cause or exacerbate the incidence or intensity of flooding.

The proposed clearing is not at variance to this Principle.

Methodology

- BoM Website (Accessed March 2025)
- Government GIS Shapefiles:
  - Soil Mapping (Accessed March 2025)
  - Soil landscape land quality - Waterlogging Risk (Accessed March)
  - Soil landscape land quality - Flood Risk (Accessed March 2025)

6 VEGETATION MANAGEMENT

Main Roads will avoid clearing native vegetation where possible. Where clearing cannot be avoided then this clearing is kept to a minimum.

7 REHABILITATION, REVEGETATION AND OFFSETS

7.1 Revegetation and Rehabilitation

No temporary clearing will be undertaken as part of the Proposal activities and therefore no revegetation or rehabilitation will be conducted under CPS 818.

7.2 Offset Proposal

No offset proposal is required as the proposed clearing will not result in significant residual impacts to native vegetation within the region.

8 STAKEHOLDER CONSULTATION

Main Roads will undertake stakeholder consultation in accordance with CPS 818 Condition 8.

9 COMPLIANCE WITH CPS 818

Table 6 summarises what further pre-clearing impact assessment is required in accordance with CPS 818.

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

Impact of Clearing	Yes/No or NA	Further Action Required
1. The CAR 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	**No**	No further action required.

Impact of Clearing	Yes/No or NA	Further Action Required
underground water quality **and** (j) the incidence of flooding.		
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 *(D17#859669)* and Vehicle, Plant and Machinery Hygiene Register Template *(D23#179551)* 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
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	**Yes**	The Environmental Specialist preparing the Assessment Report and any other associated documentation was suitably qualified and had more than three years' experience.

Impact of Clearing	Yes/No or NA	Further Action Required
Management Plan or Offset Proposal?		

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