GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9963/1
Permit Holder:	Department of Jobs, Tourism, Science and Innovation
Duration of Permit:	From 05 January 2023 to 05 January 2028

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of hazard reduction prior to temporary event space development.

2. Land on which clearing is to be done

Lot 112 on Deposited Plan 182633, Learmonth

3. Clearing authorised

The permit holder must not clear more than 2.89 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 05 January 2028.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of *native vegetation*;

(b) minimise the amount of *native vegetation* to be cleared; and

(c) reduce the impact of clearing on any environmental value.

6. Weed management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Wind erosion management

The permit holder must commence construction activities no later than two (2) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

8. Retain vegetative material and topsoil

The permit holder shall retain the vegetative material and topsoil removed by clearing authorised under this permit:

(a) vegetative material and topsoil must be stockpiled in an area that has already been cleared; and

(b) within three months following clearing authorised under this permit, the permit holder shall lay the vegetative material and topsoil on the cleared area.

PART III - RECORD KEEPING AND REPORTING

9. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994/2020 (GDA94/20), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; (f) actions taken to minimise the risk of the introduction and spread of *weeds* in

No.	Relevant matter	Specifications
		accordance with condition 6; (g) actions taken in accordance with condition 7; and (h) actions taken in accordance with condition 8.

10. Reporting

The permit holder must provide to the *CEO* the records required under condition 9 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
fill	means material used to increase the ground level, or to fill a depression.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

12 December 2022

Schedule 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).

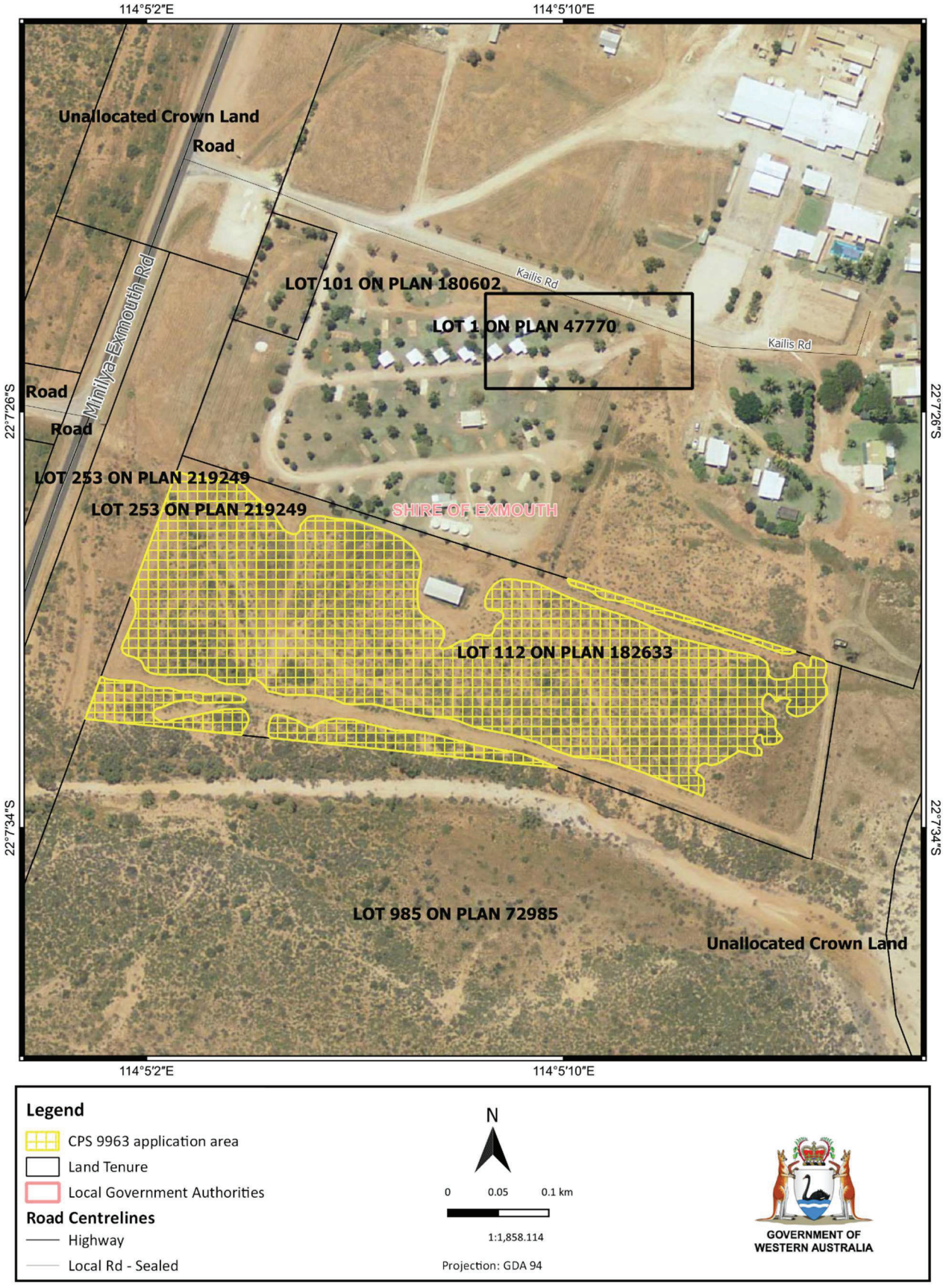

Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9963/1
Permit type:	Purpose permit
Applicant name:	Department of Jobs, Tourism, Science and Innovation's (JTSI)
Application received:	17 November 2022
Application area:	2.89 hectares of native vegetation
Purpose of clearing:	Hazard reduction prior to temporary event space development
Method of clearing:	Mechanical
Property:	Lot 112 on Deposited Plan 182633
Location (LGA area/s):	Exmouth
Localities (suburb/s):	Learmonth

1.2. Description of clearing activities

The vegetation proposed to be cleared is located within a single contiguous area, boarded to the east by the Exmouth Gulf (see Figure 1, Section 1.5). The Department of Jobs, Tourism, Science and Innovation's (JTSI) propose to clear 2.89 hectares of native vegetation for the temporary use of the site for the development of temporary event space for the viewing of the 2023 Ningaloo Solar Eclipse. It is noted that the application area is proposed for future development as a caravan park.

1.3. Decision on application

Decision:	Granted
Decision date:	12 December 2022
Decision area:	2.89 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (the department) advertised the application for 7 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix E.1), the findings of a biological survey (RPS, 2012) and site visit (Coterra Environmental, 2022), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the purpose of the clearing is for the development of temporary event space for the viewing of the 2023 Ningaloo Solar Eclipse.

The assessment identified that the proposed clearing will result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;

- the potential for land degradation in the form of wind erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to unacceptable impacts to the environment.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds
- revegetation of areas where topsoil is disturbed
- construction activities to commence within two months of clearing to minimise wind erosion

1.5. Site map

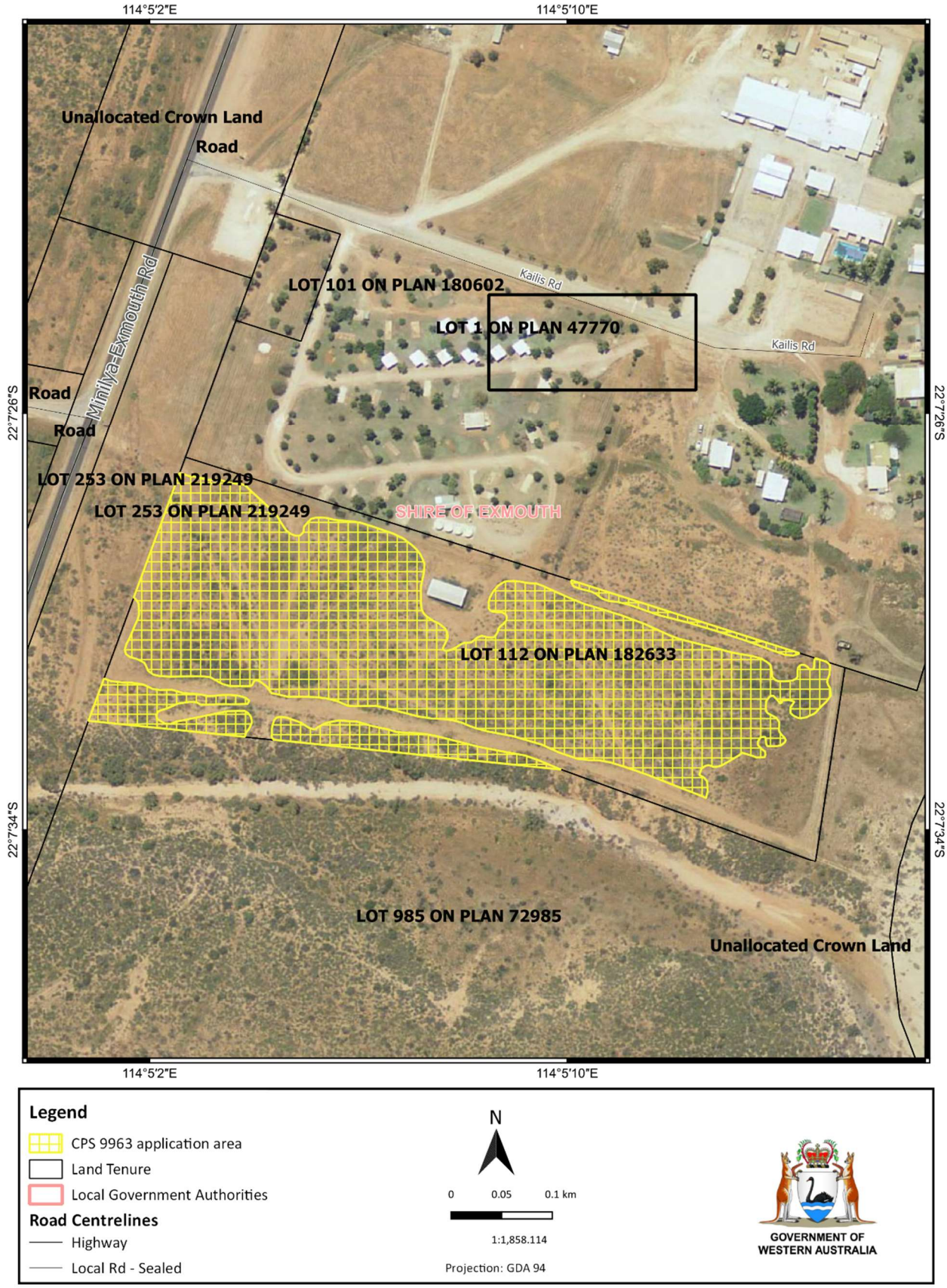

Figure 1 Map of the application area

The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

2 Legislative context

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

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

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

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that the mitigation hierarchy has been applied to the proposed clearing which noted the following:

- in order to minimise the extent of clearing the following was undertaken:
  - temporary buildings and infrastructure have been located in areas already cleared, where possible
  - existing roads have been utilised to facilitate access to and within the site to avoid the need for any additional vegetation impacts
  - topsoil will not be removed from the site and as such regrowth of vegetation following the solar eclipse event will be possible.
- the site will be stabilised with gravel/stone (cracker dust) to supress dust and hydromulch will be considered to promote vegetation regrowth as required (Coterra Environmental, 2022).

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix B**Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to biological values (flora and fauna) and land and water resources. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values - Clearing Principles (a and b)

Assessment

Flora

A reconnaissance flora and vegetation survey was conducted by RPS in 2011, followed by a site visit by Coterra Environment in 2020. The reconnaissance survey encompassed a study area of 27.84 hectares, extending beyond the application area. A total of 67 taxa were recorded from the study area comprising of 64 native species and 3 introduced species. It was noted that the vegetation of the study area is considered to be of low diversity and a majority of the area has been invaded by **Cenchrus ciliaris* (Buffel Grass) (RPS, 2012).

The condition of the vegetation within the application area ranged from Good to Completely Degraded (Trudgen, 1991), due to a significant proportion of the application area being subject to historical clearing during the construction

of facilities associated with the prawn processing factory previously established on the site by Kailis (RPS, 2012). A site visit undertaken by Coterra Environmental in 2020 identified the vegetation condition within the application area remains consistent with the assessment made by RPS in 2011 (Coterra Environment, 2022).

No conservation significant flora species or Threatened Ecological Communities (TECs) listed under the BC Act or EPBC Act were recorded within the proposed clearing area. Two Priority flora species, *Corchorus congener* (P3) (two plants) and *Gymnanthera cunninghamii* (P3) (one plant) were recorded within the study area, approximately 0.6 kilometres north of the application area (RPS, 2012). These species will not be impacted by the proposed clearing.

According to available databases, 10 conservation significant flora species have been recorded within the local area (10 kilometre radius from the application area) comprising three Priority 2 (P2) species, six Priority 3 (P3) species and one Priority 4 (P4) species. None of these records occur within the application area. The likelihood of each taxa occurring within the application area has been assessed based on soil type, habitat preference and proximity to the application area, as summarised in Appendix B.

Of the 10 conservation significant flora species identified within the local area, five are found on the same soil type as the application area: *Tephrosia* sp. North West Cape (G. Marsh 81) (P2), *Corchorus congener* (P3), *Gymnanthera cunninghamii* (P3), *Stackhousia umbellata* (P3) and *Brachychiton obtusilobus* (P4). All four priority species are known from several locations across the Carnarvon IBRA region (Western Australian Herbarium,1998-). Given the previous surveys did not record any conservation significant flora species within the application area (RPS, 2012) and the majority of the vegetation within the application area is in Completely Degraded condition (RPS, 2012; Coterra Environment, 2022), it is considered unlikely that the proposed clearing area contains conservation significant flora or significant habitat for conservation significant flora.

The vegetation within the application area contains many exotic herbs and grasses, therefore, the clearing activities have the potential to cause the introduction and spread of weeds into nearby vegetation.

Fauna

The reconnaissance fauna survey conducted by RPS (2012) recorded 16 bird species, three mammal species and two reptile species within the study area (27.84 hectares, extending beyond the application area, Appendix D). One conservation significant fauna species, the rainbow bee-eater (*Merops ornatus*, MI) was recorded within the study area, approximately 0.6 kilometres north of the application area.

The rainbow bee-eater occupies open forests and woodlands, including cleared or semi-cleared areas and farmland, and prefers timbered landscapes. They nest in burrows on flat or sloping ground, cliff faces or mounds of gravel. Vegetation within the application area mapped as low open shrublands over tussock grasslands (V5) is considered suitable habitat for the rainbow bee-eater.

According to available databases, 19 conservation significance fauna species occur within the local area (10 kilometres of the application area), comprising one extinct (EX), one Priority 2 (P2), one Priority 3 (P3), three Priority 4 (P4), three Endangered (EN), one Critically Endangered (CR), three Vulnerable (VU), one conservation dependent (CD) and six migratory (MI) species. None of these records occur within the application area.

In determining the likelihood of conservation significant fauna occurring within the application area, considerations were given to number of records in the local area, preferred habitat types and typical home ranges, proximity of records to the application area, the type and condition of the vegetation within the application area and historical nature of the records. A summary of fauna recorded within the local area and their potential of occurrence within the application area is presented in Appendix A.3.

The likelihood assessment considered that the application area contains potential habitat for four of the 19 conservation significant fauna species recorded within the local area. Of these, three are considered unlikely to occur within the proposed clearing area due to a lack of recent records within the local area. One species, Osprey (*Pandion cristatus*) is considered to be a possible transient visitor to the application area due to the presence of a nest observed on the beach foreshore near the southern end of the site during the 2020 site visit (Coterra Environmental, 2022). The nest is located outside the application area and is not proposed to be impacted by the proposal.

The fauna habitats identified during the survey were not considered to be unique to the study area (RPS, 2012). The proposed clearing area is therefore not considered to comprise vegetation necessary for the maintenance of significant fauna habitat.

The application area intersects the nationally important wetland ‘Cape Range Subterranean Waterways’. This wetland was listed because of its known or potential value for subterranean fauna (Coterra Environmental, 2022).

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 (EPA, 2016b). Coterra Environmental (2022) considered the presence of these subterranean fauna within the application area was unlikely due to the lack of these micro-habitats. Given this and that the proposed works do not include excavation of groundwater, it is considered unlikely that the values of the nationally important wetland 'Cape Range Subterranean Waterways' will be impacted by the proposed clearing activities.

Conclusion

Given the previous survey results (RPS, 2012) and the condition of the vegetation (majority is in completely degraded condition), the proposed clearing area is unlikely to contain a high level of biodiversity, conservation significant flora species or communities. The proposed clearing, however, has the potential to cause the introduction and spread of weeds nearby vegetation, which could impact on the quality of the vegetation.

Given the lack of suitable habitat and recent records within the local area, the application area is not likely to comprise significant habitat for conservation significant fauna, nor be significant for the continued survival of conservation significant fauna. In particular, the presence of subterranean fauna is considered unlikely to be present and therefore the proposed clearing is unlikely to impact the values of the mapped 'Cape Range Subterranean Waterways' wetland.

Conditions

To address potential impacts to nearby native vegetation from the proposed clearing, weed management measures will be required as a condition on the clearing permit to mitigate impacts to adjacent vegetation.

3.2.2. Land and water resources - Clearing Principles (f and g)

Assessment:

The application area is located within the Learmonth soil system. The soil is mapped as having a high susceptibility to wind and water erosion, and a moderate to high risk of flooding.

The area proposed to be cleared intersects the mapped nationally important wetland 'Cape Range Subterranean Waterways', defined on the basis of its known or potential value for subterranean fauna. Coterra Environmental (2022) considered the presence of subterranean fauna within the application area was unlikely due to the lack of suitable micro-habitats. Additionally, the application area was not considered to contain any surface water or vegetation associated with a watercourse or wetland (Coterra Environment, 2012; RPS, 2012).

The soil is mapped as having a moderate to high risk of flooding due to the numerous occurrences of non-perennial watercourses in the local area. No watercourses occur within the application area. One minor-non perennial river occurs 10 metres south of the application area, likely only to be flowing in times of high rainfall events. Given the vegetation condition, extent of the proposed clearing and that no water courses or wetlands are recorded within the application area, it is considered that the proposed clearing is unlikely to contribute to increased incidence or intensity of flooding.

Mitigation measures proposed by the applicant include the retention of topsoil, the use of gravel/stone to supress dust post clearing and the potential use of hydromulch to promote regrowth of vegetation following the solar eclipse event where possible (Coterra Environment, 2022). Given this, and the temporary nature of the project, any impacts from the clearing are expected to be minor and temporary.

Conclusion:

For the reasons set out above, and the avoidance and mitigation measures provided by the applicant (Section 3.1), it is considered that the potential impacts of the proposed clearing on land and water resources can be managed by the implementation of erosion management strategies. In the even that topsoil is disturbed as a result of the clearing activities, the applicant will be required to replace the topsoil and vegetation.

Conditions:

To address the above impacts, construction activities will be required to commence within two months of clearing to minimise the impact of wind and water erosion.

Revegetation of areas will be required where topsoil is disturbed.

3.3. Relevant planning instruments and other matters

The Shire of Exmouth advised DWER that the Shire did not have any objections to the proposed clearing (Shire of Exmouth, 2022).

The application area is not located within any Irrigation Districts proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act) (DWER-037), or any *Country Areas Water Supply 1947* (CAWS Act) Clearing Control Catchments, or Public Drinking Water Source Areas (DWER-033). The application area is proclaimed within the Gascoyne groundwater area and Pilbara Surface Water area protected under the RIWI Act (DWER-034). However, no groundwater or surface water will be intercepted during the planned works.

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

End

Appendix A. Site characteristics

A.1. Site characteristics

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

Characteristic	Details
Local context	The area proposed to be cleared is part of a single contiguous area of native vegetation bound by the coast to the east and located within the extensive land use zone of Western Australia. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 96 per cent of the original native vegetation cover.
Ecological linkage	There are no formal mapped ecological linkages within the application area. Due to the degraded condition and sparsity of the vegetation within the application area, it is unlikely that this vegetation serves any potential linkage function.
Conservation areas	The application area is within 2.69 kilometres of the Cape Range Conservation Park and 6.22 kilometres of the Cape Range National Park.
Vegetation description	The flora and vegetation survey (RPS, 2012) indicates the vegetation within the proposed clearing area consists of three vegetation units: • Tall open shrubland of *Acacia synchronicia* over low shrubland of *Scaevola spinescens, Acacia tetragonophylla, Stylobasium spathulatum* and *Maireana polypterygia* over tussock grassland of **Cenchrus ciliaris* and *Triodia epactia*. • Low open shrubland of *Acacia synchronicia* and/or *Maireana polypterygia* over tussock grassland of **Cenchrus ciliaris* and *Triodia pungens*. • Cleared areas with pastoral weeds and/or planted species The full survey descriptions and maps are available in Appendix D. This is consistent with the mapped Beard Vegetation Association 663 of the Cape Range vegetation system, described as: • hummock grasslands, shrub steppe; waterwood over soft spinifex The mapped vegetation type retains approximately 88.98 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	The vegetation survey (RPS, 2012) and site visit by Coterra Environment (2022) indicates the vegetation within the proposed clearing area is in Completely Degraded to Good-Degraded condition (Trudgen, 1991). The full Trudgen (1991) condition rating scale is provided in Appendix C. The full survey descriptions and mapping are available in Appendix D.
Climate and landform	The long-term average rainfall for Exmouth is approximately 300 mm per annum, which generally falls during either from January through to March or from May to July.
Soil description	The soil is mapped as Learmonth system, described as: sandy outwash plains marginal to the Cape Range, supporting mainly soft spinifex hummock grasslands with scattered acacia shrubs.
Land degradation risk	The mapped soil type within the application area has a high risk of land degradation in the form of water and wind erosion. The soil type is also mapped as having a high to moderate risk of flooding. Land degradation from substrate acidification and phosphorus export are mapped as low.
Waterbodies	The desktop assessment and aerial imagery indicated that the application area does not intersect any waterways. A non-perennial, minor river is located 10 metres south of the application area.

Characteristic	Details
	The application area is located partially within the nationally important wetland 'Cape Range Subterranean Waterways'.
Hydrogeography	The application area intersects the nationally important wetland 'Cape Range Subterranean Waterways'. The application area is within the Gascoyne Groundwater area and Pilbara Surface Water area proclaimed under the RIWI Act.
Flora	Available databases show there are 10 conservation significant flora species recorded within the local area. Five species are found on the same soil type as the application area. Two Priority 3 species were recorded to the north of the application area, *Corchorus congener* and *Gymnanthera cunninghamii* (RPS, 2012).
Ecological communities	No Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) are mapped within the local area, and none were recorded within the application area (RPS, 2012; Coterra Environment, 2022).
Fauna	Available databases show there are 24 conservation significant fauna species recorded within the local area. Of these, one extinct, three are marine species and six are migratory species. The closest record to the application area is the Osprey (MI). Seventeen conservation significant vertebrate fauna species were noted to potentially occur within the application area (RPS, 2012).

A.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information (RPS, 2012), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Brachychiton obtusilobus	P4	N	Y	Y	0.85	4	Y
Tephrosia sp. North West Cape (G. Marsh 81)	P2	N	Y	Y	2.18	1	Y
Gymnanthera cunninghamii	P3	N	Y	Y	2.62	1	Y
Stackhousia umbellata	P3	N	Y	Y	8.39	3	Y
Corchorus congener	P3	N	Y	Y	8.56	3	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Petrogale lateralis lateralis (black-flanked rock wallaby)	EN	N	N	3.41	1	Y
Diplodactylus capensis (Cape Range stone gecko)	P2	N	N	6.94	5	Y
Nocticola flabella (Cape Range blind cockroach)	P4	N	N	8.26	5	Y

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Bamazomus subsolanus (Eastern Cape Range bamazomus)	EN	N	N	8.46	1	Y
Phascogale calura (red-tailed phascogale)	CD	N	N	8.58	7	Y
Pseudomys fieldi (Shark bay mouse)	VU	N	N	8.58	1	Y
Zyzomys pedunculatus (central rock-rat)	CR	N	N	9.17	1	Y
Sminthopsis longicaudata (long-tailed dunnart)	P4	N	N	9.17	2	Y
Lerista allochira (Cape Range slider)	P3	N	N	9.29	12	Y
Dasyurus hallucatus (Northern quoll)	EN	N	N	9.79	4	Y
Mesembriomys macrurus (Golden-backed tree-rat)	P4	N	N	9.79	2	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared does not contain locally or regionally significant flora, fauna, habitats or assemblages of plants.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (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."* Assessment: No conservation significant fauna were recorded within the application area (RPS, 2012). Noting this and the amount of remnant vegetation within the local area, it is considered the application area is not a significant habitat for fauna species.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: No records of threatened flora occur within the local area nor were any threatened flora species recorded during the flora and vegetation survey (RPS, 2012). Give this and the condition of the vegetation (RPS, 2012), the application area is considered unlikely to contain habitat necessary for the continued existence of Threatened flora species.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (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."* Assessment: No threatened ecological communities (TEC) have been mapped within the local area and the area proposed to be cleared does not contain species that can indicate a TEC.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (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."* Assessment: The extent of the mapped vegetation type and the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not likely to be at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area is 2.69 kilometres, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: The area proposed to be cleared intersects the mapped nationally important wetland 'Cape Range Subterranean Waterways', however the proposed clearing area is not considered to be located within an area associated with a watercourse or wetland.	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The application area and its local context are mapped as having a high susceptibility to wind and water erosion.	May be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: No waterways are recorded within the application area. Given the proposed works will not intersect any surface or groundwater, it is considered unlikely that the proposed clearing will impact surface or ground water quality.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soil type within the application area has a moderate to high risk of flooding. These occurrences are aligned with the numerous non-perennial watercourses in the local area. One minor-non perennial river occurs 10 metres south of the application area, likely only to be flowing in times of high rainfall events. Given the vegetation condition, extent of the proposed clearing and that no water courses or wetlands are recorded within the application area, it is considered that the proposed clearing is unlikely to contribute to increased incidence or intensity of flooding.	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*

Appendix C. Vegetation condition rating scale

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

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

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

Appendix D. Biological survey information excerpts (RPS, 2012; Coterra Environment, 2022))

Figure 2. Vegetation within the application area (Coterra Environmental, 2022)

Figure 3 Vegetation condition mapped across the broader study area (RPS, 2012)

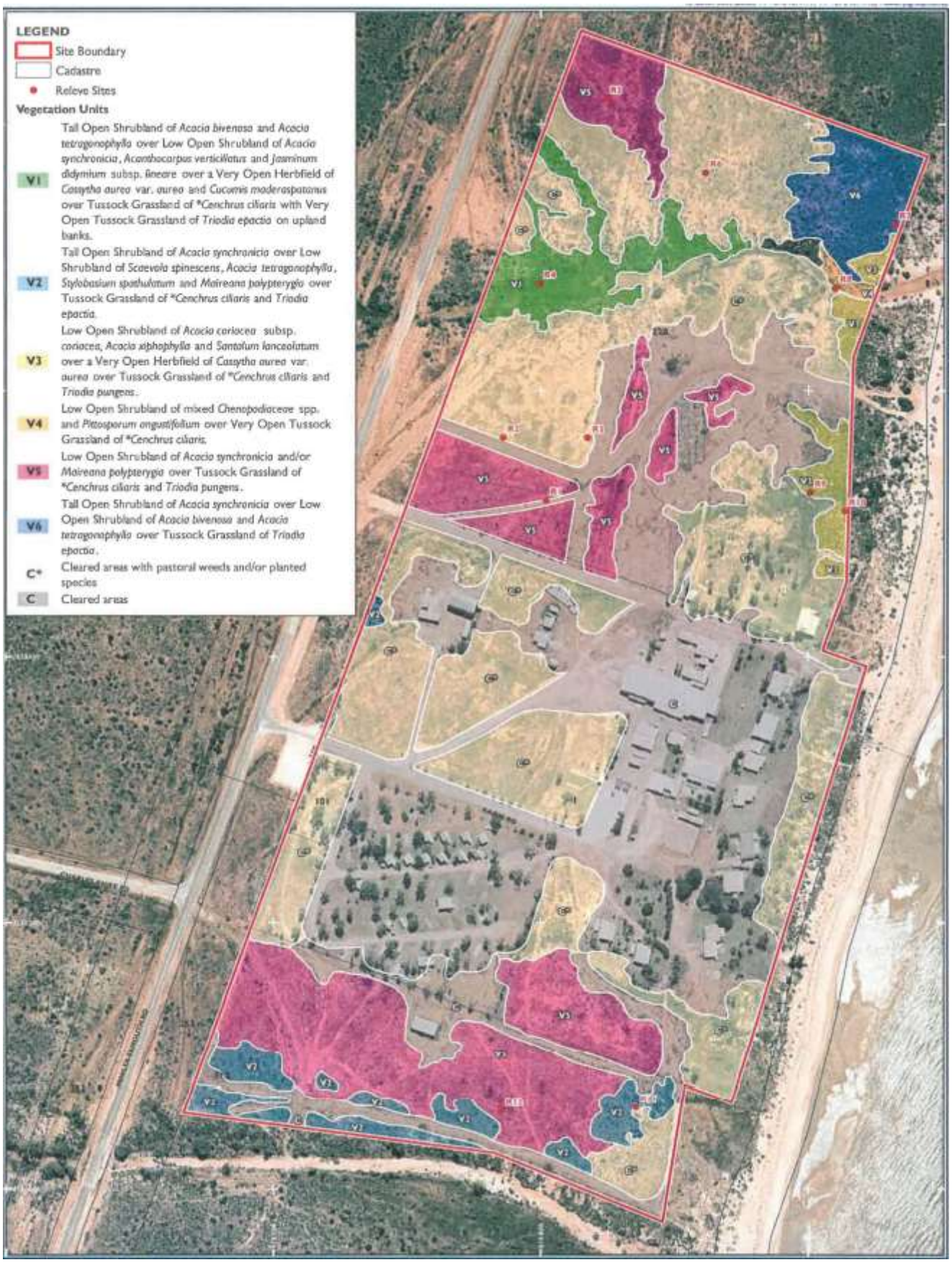

Figure 4 Vegetation units mapped across the broader study area (RPS, 2012)

Appendix E. Sources of information

E.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

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

E.2. References

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