



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 10543/1
File Number: DWERVT14738
Duration of Permit: From 15 July 2024 to 15 July 2026

PERMIT HOLDER

Shire of Irwin

LAND ON WHICH CLEARING IS TO BE DONE

Lot 11702 on Diagram 91641, Port Denison

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.037 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 14 July 2026.

2. 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.

3. Weed and dieback 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* and *dieback*:

- (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* or *dieback* 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.

4. Wind erosion management

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

5. Direction clearing

The permit holder must

- (a) conduct clearing authorised under this permit in one direction towards adjacent *native vegetation*; and
- (b) allow a reasonable time for fauna present within the area being cleared to move into adjacent *native vegetation* ahead of the clearing activity.

6. 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	<ul style="list-style-type: none"> (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 GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the direction of clearing; (e) the size of the area cleared (in hectares); (f) the date turf laying commenced; (g) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 2; and (h) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 3.

7. Reporting

The permit holder must provide to the *CEO* the records required under condition 6 of this permit when requested by the *CEO*.

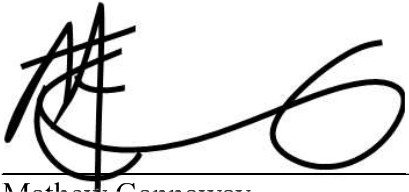
DEFINITIONS

In this permit, the terms in Table 2 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 <i>Environmental Protection Act 1986</i> .
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.
dieback	Means the effect of <i>Phytophthora</i> species on <i>native vegetation</i>
fill	means material used to increase the ground level, or to fill a depression.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (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 – <ul style="list-style-type: none"> (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; 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

A handwritten signature in black ink, appearing to be 'Mathew Gannaway', written over a horizontal line.

Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

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

21 June 2024

SCHEDULE 1

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

CPS 10543/1 - Map



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



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10543/1
Permit type:	Area permit
Applicant name:	Shire of Irwin
Application received:	29 February 2024
Application area:	0.037-hectare of native vegetation
Purpose of clearing:	Establishing a grassed area
Method of clearing:	Mechanical
Property:	Lot 11702 on Deposited Plan 91641
Location (LGA area/s):	Shire of Irwin
Localities (suburb/s):	Port Denison

1.2. Description of clearing activities

The Shire of Irwin is proposing to clear 0.037 hectares of native vegetation within Lot 11702 on Deposited Plan 91641 (Common Reserve 137), Port Denison. The clearing will facilitate the establishment of a grassed area.

1.3. Decision on application

Decision:	Granted
Decision date:	21 June 2024
Decision area:	0.037-hectare 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 (DWER) advertised the application for 21 days, but 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 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 that the proposed clearing is minor in nature and will help remove the encroaching vegetation on building adjacent to the application area.

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact the quality of the adjacent vegetation and its habitat values; and
- 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 appreciable land degradation or have long-term adverse impacts on the surrounding vegetation and can be minimised and managed to unlikely lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures.

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 and dieback.
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.
- commence construction activities no later than two (2) months after undertaking the authorised clearing activities.

1.5. Site maps

CPS 10543/1 - Context map



Legend

- CPS area approved to clear
- Local Government Authorities

Roads

- State Highway
- Main

0 1 2 3 km
1:45,000
Projection: GDA2020

GOVERNMENT OF WESTERN AUSTRALIA

Figure 1: Context map of the application area, the area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

CPS 10543/1 - Map



Legend

- CPS area approved to clear
- Land Tenure (LGATE_226) - SLIP
- Local Government Authorities

Roads

- Minor

0 10 20 30 40 m
1:500
Projection: GDA2020

GOVERNMENT OF WESTERN AUSTRALIA

Figure 2: 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)
- *Soil and Land Conservation Act 1945* (WA)

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)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant has stated that the vegetation is encroaching onto the building adjacent to the application area, specifically the café, and must be removed as there are no alternatives to address the encroachment. Only the small area encroaching on the cafe is proposed to be cleared (Shire of Irwin, 2024). Due to the minimal extent of the clearing, the Delegated Officer was satisfied that the applicant had 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) identified that the impacts of the proposed clearing present a risk to biological values (biodiversity and fauna) and land and water resources (land degradation). 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 (biodiversity and fauna) - Clearing Principles (a) and (b)

Assessment

The application is located within the Irwin region. The Delegated officer examined the vegetation proposed to be cleared using the site photos provided by the applicant and rated the vegetation to be in a good to degraded condition (Keighery, 1994).

According to the available databases, 16 conservation significant fauna species have been recorded within the local area (20-kilometre radius) comprising one Priority 3, one Priority 4, two Endangered, one Vulnerable, ten migratory, and one specially protected species (OS) fauna taxa. Noting the habitat requirements, the distribution of the recorded species, the mapped vegetation types, and the condition of vegetation within the application area, the application area is likely to comprise suitable habitat for the following fauna species:

- *Calidris ruficollis* (Red-necked stint) (MI)
- *Pandion haliaetus* (Osprey) (MI)
- *Thalasseus bergii* (Crested tern) (MI)

Migratory Birds

During breeding and non-breeding seasons, migratory birds change their behaviour, food preferences, and living environment. Migratory birds have a wide habitat range, with many breeding in the northern hemisphere while spending their non-breeding seasons in the southern hemisphere. Juvenile birds that are not mature will remain in Australia and not migrate to the northern hemisphere (BirdLife International, 2023). The *Calidris ruficollis* and

Thalasseus bergii breed within the northern hemisphere and migrate south during non-breeding periods (Birdlife International, 2024a; 2024b). The *Calidris ruficollis* and *Thalasseus bergii* favour open areas for roosting. The application area is open to the surrounding area, but within the application area, the vegetation is dense with flora (see Figure 3). Any proposed clearing is unlikely to affect migratory breeding birds but may impact some non-breeding juvenile species.

The *Pandion haliaetus* breeds along the northern coastlines of Australia, from Albany, Western Australia, to Lake Macquarie, New South Wales. The species nests on cliff edges or other structures that can support bulky nests that are safe from predators (DCCEEW, 2020). The application area is low to the ground with only ground-covering flora species, making it an unsuitable habitat for the *Pandion haliaetus*.

Based on the habitat in and around the application area, the proposed clearing is unlikely to have a significant impact on migratory bird species. The application area is surrounded by an abundant shoreline, which provides roosting grounds for some migratory birds.

Conclusion

Given the extent of clearing, the condition of the vegetation, and the abundance of suitable habitat surrounding the application area, the application area is not likely to compromise significant habitat for conservation significant fauna. To avoid disturbing individual transitory migratory birds that may be present at the time of clearing, slow, one-directional clearing should be implemented to mitigate the risk to individuals.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- weed and dieback management measures will be required as a condition on the clearing permit to mitigate impacts to adjacent vegetation for fauna species;
- undertake slow, progressive, one-directional clearing to allow terrestrial fauna to move into adjacent habitats ahead of the clearing activities.

3.2.2. Land and water resources (land degradation) - Clearing Principle (g)

Assessment

According to available databases, the soil within the application area is mapped as Quindalup Central System, a coastal dune system that is moderately susceptible to land degradation from wind erosion and phosphorous export. Given that the proposed clearing is minor in nature (0.037 hectares), it is unlikely that the proposed clearing will have any large-scale effect through wind erosion. In addition, the proposed works on the application area will involve removal of the surface layer of sand to facilitate the installation of turf across the entire proposed area. Consequently, it is unlikely that there will be any significant impact on phosphorous export. Minor wind erosion events may occur if soils are left exposed for extended periods post-clearing.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on wind erosion are likely to be short-term, minimal and can be managed by minimising the time between clearing and post-clearing activities.

Conditions

To address the above impacts, the following management measure will be required as a condition on the clearing permit:

- The permit holder must commence construction activities no later than two (2) months after undertaking the authorised clearing activities.

3.3. Relevant planning instruments and other matters

Several Aboriginal sites of significance have been mapped adjacent to 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

C.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	<p>The area proposed to be cleared is a 0.037-hectare area that is part of an expansive tract of coastal native vegetation in Western Australia's intensive land use zone. It is adjacent to several other properties that have been Cleared, in part, for the same purpose. The proposed clearing area contributes to a remnant running north-south along the coastline.</p> <p>Spatial data indicates that the local area (a 20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 42.57 per cent of the original native vegetation cover.</p>	
Ecological linkage	<p>There are no mapped ecological linkages within the application area. The vegetation within the application area provides some linkage values at a local level as it is part of the larger remnant. The linkage is not likely to be significantly impacted by the clearing.</p>	
Conservation areas	<p>There are no conservation areas within the immediate vicinity of the application area. The closest conservation area is Conservation Covenant (ID K212826), approximately 8.6 kilometres east of the application area.</p>	
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of Coastal dune vegetation dominated by <i>Olearia</i> and <i>Scaevola</i> species. Representative photos are available in Appendix D.</p> <p>This is broadly inconsistent with the mapped vegetation type:</p> <ul style="list-style-type: none"> Greenought 17, which is described as Wattle, casuarina and Teatree <i>Acacia-Allocasuarina-Melaleuca</i> alliance. <p>The mapped vegetation type retains approximately 48.11 per cent of the original extent (Government of Western Australia, 2019).</p>	
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in good (Keighery, 1994) condition. The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.</p>	
Climate and landform	<p>The climate experienced in the application area is Mediterranean, characterized by hot and dry summers and cool and wet winters. According to the Bureau of Meteorology (2023), the proposed clearing area has an average annual rainfall of 390.0 millimetres. The data was gathered from the closest open Meteorological site (ID 008305) located approximately 2.63 kilometres northeast of the application.</p> <p>The elevation of the application area rises precipitously in some areas based on the site photos; however, most of the area's elevation is level at 5 meters Isohyet across the application area.</p>	
Soil description	Name	Quindalup Central System
	Soils	221Qu
	Description	Coastal dune system, including foredunes, beach ridge plains, parabolic dunes, deflation basins and flats. No fixed drainage. Calcareous deep and shallow sands. Coastal heathlands and scrub.
Land degradation risk	<p>The degradation risk factors mapped over the application area are detailed below:</p>	
	Wind erosion	M2: 30-50% of map unit has a high to extreme wind erosion risk

Characteristic	Details		
	Water erosion	L2: 3-10% of map unit has a high to extreme water erosion risk	
	Salinity risk	L2: 3-10% of map unit has a high to extreme water erosion risk	
	Phosphorous export	M1: 10-30% of map unit has a high to extreme phosphorus export risk	
	Waterlogging	L1: <3% of map unit has a high subsurface acidification risk or is presently acid	
	Subsurface acidification	L1: <3% of map unit has a high subsurface acidification risk or is presently acid	
	Acid sulphate soils	L1: <3% of map unit has a high subsurface acidification risk or is presently acid	
	Flooding	L1: <3% of map unit has a high subsurface acidification risk or is presently acid	
	Floodplains	No	
Waterbodies	Aerial imagery indicated that the closest waterbody to the application area is the Indian Ocean, approximately 15 meters west. The Irwin River is approximately 2.5 kilometres north of the application area.		
Hydrogeography	Hydrological Zone	Arrowsmith	
	Basin	Greenough River (701)	
	Hydrographic Catchment	_Coastal	
	RIWI Act Surface Water and Irrigation District	No	
	RIWI Act Rivers	No	
	RIWI Act Groundwater Areas	Yes	Arrowsmith
	CAWS Act Clearing Control Catchment	No	
	Public Drinking Water Source Areas	No	
	Wellhead Protection Zone	No	
	Reservoir Protection Zone	No	
	The salinity of the application area is mapped at 3000-7000 total dissolved solids milligrams per litre.		
Flora	<p>According to the available database, 24 conservation-significant flora species have been recovered within the local area (a 20-kilometre radius from the centre of the area proposed to be cleared). These species comprise four Priority 2, 11 Priority 3, six Priority 4, and three threatened flora taxa.</p> <p>Based on the photos provided with the application and the habitat preferences of the species recorded in the local area, the application area is not likely to contain threatened or priority flora.</p>		
Ecological communities	According to available databases, two Priority Ecological Communities (PEC's) occur within the local area (a 20-kilometre radius from the centre of the area proposed to be cleared). None of these records occur over the application area. The closest PEC (Subtropical and Temperate Coastal Saltmarsh) is located approximately 2.34 kilometres from the application area.		
Fauna	According to the available database, 16 conservation-significant fauna species have been recorded within the local area, comprising one Priority 3, one Priority 4, two Endangered, one Vulnerable, ten migratory, and one specially protected species (OS) fauna taxa.		

Characteristic	Details
	The closest species to the application area is the migratory bird <i>Thalasseus bergii</i> (crested tern), which is approximately 170 metres from the application area.

C.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Geraldton Sandplains 103	3,136,037.83	1,404,424.32	44.78	568,255.10	18.12
Vegetation complex					
GREENOUGH_17	16,833.94	8,098.26	48.11	849.58	5.05
Local area					
20km radius	60,514.71	25,759.90	42.57	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

C.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), 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]
<i>Acacia telmica</i>	P3	N	Y	Y	7.16	2	N
<i>Anthocercis intricata</i>	P3	N	Y	N	1.53	6	N
<i>Austrostipa nunaginensis</i>	P3	N	N	N	19.17	1	N
<i>Baeckea</i> sp. Walkaway (A.S. George 11249)	P3	N	N	N	16.26	2	N
<i>Banksia elegans</i>	P4	N	N	N	17.14	3	N
<i>Beyeria gardneri</i>	P3	N	N	N	18.52	1	N
<i>Calytrix eneabensis</i>	P4	N	N	Y	3.86	2	N
<i>Comesperma griffinii</i>	P2	N	N	N	18.96	1	N
<i>Conostylis dielsii</i> subsp. <i>teres</i>	T	N	N	N	17.50	1	N
<i>Conostylis micrantha</i>	T	N	N	Y	19.54	1	N
<i>Dampiera tephrea</i>	P3	N	N	Y	9.11	2	N
<i>Eremaea acutifolia</i>	P3	N	N	N	17.76	1	N
<i>Eucalyptus ebbanoensis</i> subsp. <i>photina</i>	P4	N	N	N	7.99	1	N
<i>Eucalyptus zopherophloia</i>	P4	N	N	N	9.66	5	N

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]
<i>Grevillea hirtella</i>	P3	N	N	N	17.49	2	N
<i>Haloragis foliosa</i>	P3	Y	Y	N	1.70	2	N
<i>Liparophyllum congestiflorum</i>	P4	N	N	N	8.60	1	N
<i>Schoenus</i> sp. Eneabba (F. Obbens & C. Godden 1154)	P2	N	N	N	19.32	2	N
<i>Scholtzia calcicola</i>	P2	N	Y	Y	9.84	3	N
<i>Stawellia dimorphantha</i>	P4	N	N	Y	7.84	7	N
<i>Stylidium</i> sp. Three Springs (J.A. Wege & C. Wilkins JAW 600)	P2	N	Y	N	10.77	1	N
<i>Thryptomene</i> sp. Lancelin (M.E. Trudgen 14000)	P3	N	Y	Y	13.20	1	N
<i>Verticordia densiflora</i> var. <i>roseostella</i>	P3	N	N	Y	16.23	1	N
<i>Wurmbea tubulosa</i>	T	N	N	N	17.44	2	N

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

C.4. 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]
Birds						
<i>Actitis hypoleucos</i> (common sandpiper)	MI	N	N	3.32	13	N
<i>Anous tenuirostris melanops</i> (Australian lesser noddy)	EN	N	N	3.84	2	N
<i>Apus pacificus</i> (fork-tailed swift)	MI	N	Y	3.76	1	N
<i>Arenaria interpres</i> (ruddy turnstone)	MI	N	N	3.32	1	N
<i>Calidris acuminata</i> (sharp-tailed sandpiper)	MI	N	N	3.76	1	N
<i>Calidris ruficollis</i> (red-necked stint)	MI	Y	Y	0.61	6	N
<i>Falco peregrinus</i> (peregrine falcon)	OS	N	Y	3.06	2	N
<i>Hydroprogne caspia</i> (Caspian tern)	MI	Y	N	3.62	7	N
<i>Pandion haliaetus</i> (osprey)	MI	Y	Y	3.32	5	N
<i>Thalasseus bergii</i> (crested tern)	MI	Y	Y	0.17	29	N
<i>Tringa nebularia</i> (common greenshank)	MI	Y	Y	3.62	2	N
<i>Tringa stagnatilis</i> (marsh sandpiper)	MI	N	N	3.32	1	N
<i>Zanda latirostris</i> (Carnaby's cockatoo)	EN	N	N	3.62	4	N
Mammals						
<i>Dasyurus geoffroi</i> (chuditch, western quoll)	VU	N	N	3.71	1	N
<i>Hydromys chrysogaster</i> (water-rat, rakali)	P4	N	N	1.81	1	N
Reptiles						
<i>Neelaps calonotos</i> (black-striped snake, black-striped burrowing snake)	P3	N	N	6.49	2	N

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

C.5. Ecological community analysis table

Community 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]
Coastal sands dominated by <i>Acacia rostellifera</i> , <i>Eucalyptus oraria</i> and <i>Eucalyptus obtusiflora</i> (Geraldton area)	P1	N	N	N	7.51	14	N
Subtropical and Temperate Coastal Saltmarsh	P3	N	N	N	2.34	1	N

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		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u> The area proposed to be cleared may contain habitat for conservation significant fauna. However, proposed clearing area is not likely to contain habitat for conservation significant flora or communities or a unique assemblage of plants.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (b):</u> "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."</p> <p><u>Assessment:</u> The area proposed to be cleared may contain habitat for conservation significant fauna.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u> The area proposed to be cleared is unlikely to contain habitat for threatened flora species.</p>	Not at variance	No
<p><u>Principle (d):</u> "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."</p> <p><u>Assessment:</u> According to spatial data, the area proposed to be cleared does not contain species that can indicate a threatened ecological community.</p>	Not at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."</p> <p><u>Assessment:</u> The extent of the mapped vegetation type in the local area is consistent with Australia's national objectives and targets for biodiversity conservation. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (h):</u> <i>“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.”</i></p> <p><u>Assessment:</u> Given the distance to the nearest conservation area (approximately 8.60 kilometres from the application area), the proposed clearing is not likely to impact the environmental values of any conservation areas.</p>	Not at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u> Given that the Indian Ocean is the only water body recorded within 2.5 kilometres of the application area (approximately 120 meters from the application area), the proposed clearing is unlikely to impact an environment associated with a watercourse or wetland.</p>	Not at variance	No
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u> The mapped soils are moderately susceptible to wind erosion and phosphorous export. Given the minor extent of the proposed clearing and the location of the application area, the proposed clearing may likely have an appreciable impact on land degradation.</p>	May be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><u>Principle (i):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u> Given that no watercourses or wetlands are recorded within proximity of the application area, the proposed clearing is unlikely to impact surface water quality. Given the extent of native vegetation proposed to be cleared, the clearing is unlikely to impact upon groundwater quality.</p>	Not at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u> The mapped soils and topographic contours in the surrounding area do not indicate that the proposed clearing is likely to increase the incidence or intensity of flooding. Given that the closest waterbody to the application area is the Indian Ocean (approximately 120 meters west of the application area), the proposed clearing is unlikely to contribute to waterlogging.</p>	Not at variance	No

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 Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. photographs of the vegetation

Table 1: Species identified during the City’s onsite vegetation assessment.

Native species	Weeds
<i>Olearia axillaris</i>	<i>Trachyandra divaricata</i>
<i>Spinifex longifolius</i>	<i>Thinopyrum distichum</i>
<i>Melaleuca huegelii</i>	



Figure 3: Site photo of the application area and vegetation, facing south



Figure 4: Site photo of the application area and vegetation, facing south



Figure 5: Site photo of the application area and vegetation, facing east west



Figure 6: Site photo of the application area and vegetation, facing North

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)
- 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
- Wheatbelt Wetlands Stage 1 (DBCA-021)

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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