

### **CLEARING PERMIT**

Granted under section 51E of the Environmental Protection Act 1986

#### PERMIT DETAILS

Area Permit Number: CPS 10972/1

File Number: DWERVT18066

Duration of Permit: From 25 August 2025 to 25 August 2032

#### PERMIT HOLDER

City of Mandurah

#### LAND ON WHICH CLEARING IS TO BE DONE

Lot 4738 on Deposited Plan 38279 (Crown Reserve 47584), Mandurah Lot 4999 on Deposited Plan 38266 (Crown Reserve 48021), Mandurah Easement (Public access 3357791)

### **AUTHORISED ACTIVITY**

The permit holder must not clear more than 0.068 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 25 August 2027.

## 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 *dieback* or *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.

#### 4. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner from south to north to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

## 5. Revegetation and rehabilitation

- (a) Within 12 months of the area no longer being required for the purpose for which it was cleared and at an *optimal time*, the permit holder must commence *revegetating and rehabilitating* the areas cross-hatched red in Figure 2 Schedule 1, by way of:
  - (i) deliberately *planting* native vegetation using the species list in Table 1 of Schedule 2 of this permit; unless otherwise approved by the *CEO*;
  - (ii) ensure only *local provenance* species and propagating material are used; and
  - (iii) undertake *weed* control activities to reduce *weed* cover within the cleared areas for at least two years.
- (b) The permit holder must within 24 months of undertaking *revegetation and rehabilitation* in accordance with condition 5(a) of this permit:
  - (i) Engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated and rehabilitated*; and
  - (ii) engage an *environmental specialist* to make a determination as to whether the composition, structure and density determined under condition 5(b)(i) of this permit will, without further *revegetation*, result in a similar species composition, structure and density to that of agreed species composition as listed in Table 1 Schedule 2.
- (c) If the determination made by the *environmental specialist* under condition 5(b)(ii) is that the species composition, structure, and density determined under condition 5(b)(i) will not, without further *revegetation*, result in a similar species composition, structure and density to that of agreed species list in Table 1 Schedule 2, the permit holder must *revegetate* the area by deliberately *planting* and/or *direct seeding native vegetation* seeds that will result in a similar species composition, structure, and density of *native vegetation* to that of agreed species composition as listed in table 1 Schedule 2.

- (d) Where additional *planting* or *direct seeding* of *native vegetation* is undertaken in accordance with condition 5(c), the permit holder must repeat the activities required by condition 5(b) within 24 months of undertaking the additional *planting* or *direct seeding* of *native vegetation*.
- (e) Where a determination is made by an *environmental specialist* under condition 5(b)(ii) that the composition, structure and density within areas *revegetated and rehabilitated* will result in a similar species composition, structure and density to that of agreed species list in Table 1 Schedule 2, that determination shall be submitted to the *CEO* within three months of the determination being made by the *environmental specialist*.

## 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 <i>clearing</i>	(a)	the species composition, structure, and density of the <i>cleared</i> area;		
	activities generally	(b)	the location where the <i>clearing</i> occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings;		
		(c)	the date that the area was cleared;		
		(d)	the size of the area <i>cleared</i> (in hectares);		
		(e)	actions taken to avoid, minimise, and reduce the impacts and extent of <i>clearing</i> in accordance with condition 2;		
		(f)	actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 3; and		
		(g)	direction of <i>clearing</i> activities in accordance with condition 4 of this Permit.		
2.	In relation to revegetation and rehabilitation pursuant to condition	(a)	A description of the <i>revegetation</i> and <i>rehabilitation</i> activities undertaken each year, once commenced, outlined in a report produced by an <i>environmental specialist</i> ;		
	5	(b)	the location and size of the areas <i>revegetated</i> and <i>rehabilitated</i> (in hectares) recorded using a GPS unit set to GDA 2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees;		
		(c)	the date that <i>revegetation</i> and <i>rehabilitation</i> works began;		

No.	Relevant matter	Specifications
		(d) the baseline data recorded for the area to be revegetated/rehabilitated, including species richness, species density, vegetation structure and weed cover;
		(e) the species composition, structure, density of the areas <i>revegetated/rehabilitated</i> recorded annually;
		(f) results of annual monitoring against the completion criteria for condition 5;
		(g) the date completion criteria area considered to have been met for condition 5; and
		(h) any other actions in accordance with condition 5.

# 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.
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.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
direct seeding	direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of two (2) years' work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.
EP Act	Environmental Protection Act 1986 (WA)
fill	means material used to increase the ground level, or to fill a depression.
Local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation

Term	Definition		
	for Australia (IBRA) subregion of the area cleared, unless otherwise approved by the CEO.		
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.		
optimal time	means the period between April and July		
planting	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species.		
revegetation and rehabilitation	means actively managing an area containing native vegetation in order to improve the ecological function of that area.		
weeds	means any plant —  (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**

Meenu Vitarana MANAGER

Native Vegetation Regulation

Officer delegated under Section 20 of the Environmental Protection Act 1986

31 July 2025

# **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



Figure 2: Map of the boundary of the area subject to condition 5 (revegetation and rehabilitation)

# **SCHEDULE 2**

The species list for the *revegetation* and *rehabilitation* area is shown in the table below (Figure 1).

Table 2: species list for the revegetation and rehabilitation area

Species	Total	Total number for revegetation
Acacia <u>rostellifera</u>	1	3
Ficinia nodosa	39	117
Lepidosperma gladiatum	1	3
Olearia axillaris	36	108
Rhagodia baccata	1	3
Luecophyta brownii	22	66
Scaevola <u>crassifolia</u>	42	126
Spinifex <u>hirsutus</u>	1	3
Spinifex <u>longifolius</u>	9	27
Total	152	456



# **Clearing Permit Decision Report**

# 1 Application details and outcome

## 1.1. Permit application details

Permit number: CPS 10792/1

Permit type: Area permit

**Applicant name:** City of Mandurah

**Application received:** 28 February 2025

**Application area:** 0.068 hectares of native vegetation

Purpose of clearing: Town Beach seawall upgrade

Method of clearing: Mechanical

Property: Lot 4738 on Deposited Plan 38279 (Crown Reserve 47584)

Lot 4999 on Deposited Plan 38266 (Crown Reserve 48021)

Easement (public access 3357791)

Location (LGA area/s): City of Mandurah

Localities (suburb/s): Mandurah

#### 1.2. Description of clearing activities

The vegetation proposed to be cleared is 0.068 hectares of linear strip of coastal scrub along Mandurah Town Beach, adjacent to Dolphin Drive and residential properties within the Marina Precinct (see Figure 1, Section 1.5).

The proposed clearing is focused on construction of a new buried seawall to facilitate the replacement of the existing seawall at Town Beach. The new seawall is designed to mitigate future coastal erosion, ensuring the long-term protection of the Marina Precinct. This area encompasses a diverse range of uses, including business, commercial, tourism, and other mixed land developments critical to the region's economic and social values (City of Mandurah, 2025a).

#### 1.3. Decision on application

**Decision:** Granted

**Decision date:** 31 July 2025

**Decision area:** 0.068 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 (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix B), relevant datasets (see Appendix F.1), the photographs provided with the application (see Appendix E), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C), 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 of

the clearing is to upgrade the existing seawall constructing a new buried seawall to mitigate future coastal erosion and ensuring the long-term protection of the Marina Precinct.

The assessment identified that the proposed clearing will result in:

- the loss of 0.068 hectares of native vegetation in an area that has been extensively cleared
- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality
  of the adjacent vegetation and its habitat values and
- potential land degradation in the form of wind erosion.
- impacts to fauna individuals present within the application area if they present during the time of clearing

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 environmental values and can be minimised and managed through permit conditioning. 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
- Fauna management to provide fauna an opportunity to move into adjacent native vegetation ahead of the clearing activity; and
- revegetation management to restore the vegetation within areas to be cleared and areas which are not required for the construction of seawall.

## 1.5. Site maps



Figure 1 Map of the application area. The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.



The areas cross-hatched red indicates areas within which subject to revegetation and rehabilitation condition.

## 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 510 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

Evidence was submitted by the applicant, demonstrating that the proposed seawall upgrade is to mitigate the future coastal erosion and ensuring the long-term protection of the Marina Precinct.

The city is aimed to mitigate the future erosion by clearing of 0.068 hectares of coastal scrub to facilitate the removal of the existing seawall and the construction of a new seawall at Town Beach. The following steps will be taken to avoid and mitigate the impacts from the proposed clearing.

- The new seawall will be constructed in a location closely aligned with the existing structure to minimise
  potential environmental impacts.
- Following the completion of construction, the city will implement a revegetation program during the subsequent winter, utilising coastal endemic plant species to restore and enhance the local habitat.
- The affected area, along with the surrounding coastal reserves, will be replanted at a ratio of three plants for every one that is removed (City of Mandurah, 2025a).

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 B) 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 C) identified that the impacts of the proposed clearing present a risk to biological values (fauna). 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. Environmental value: Biological value(fauna) - Clearing Principles (b)

#### <u>Assessment</u>

The desktop assessment identified a total of 59 conservation significant fauna species that had previously recorded within the local area. Given the boundary of the local area overlaps the ocean, the majority of the recorded species are exclusively associated with marine, estuarine or freshwater habitats (wetlands) that do not occur within the application area. Noting the habitat requirements, distribution of the recorded species, the mapped vegetation type and the condition of the vegetation within the application area, the application area is likely to comprise suitable habitat for:

- quenda
- Perth slider
- black-striped snake

Noting the small extent of vegetation proposed to be cleared, considering that the proposed vegetation is planted within the previous seawall area and its quality, the application area is unlikely to provide significant habitat for these species:

- Quenda prefers dense scrubby, often swampy, vegetation with dense cover up to one metre high. It also occurs in woodlands and may use less ideal habitat where this habitat occurs adjacent to the thicker, more desirable vegetation (Department of Environment and Conservation (DEC), 2012). Also, quenda have adapted to urban and suburban habitats and are known to seek shelter and food in gardens and remanent bushlands in urban areas (DBCA, 2017). Noting that the proposed vegetation is not remnant and planted species within the old seawall area, this species is likely a transient feeder within the site noting a lack of dense understorey to provide permanent habitat.
- Perth slider is largely restricted to the Swan Coastal Plain including Garden and Rottnest Island, mostly within the highly developed southern Perth Metropolitan Area. The species likely has poor dispersal abilities and relies on litter ground cover and other debris for shelter, which makes it vulnerable to fire. Perth slider is known to occur in several bush remnants near Perth, including Forrestdale Lake Nature Reserve, Jandakot Airport, Modong Nature Reserve and Woodman Point. The species unlikely occupies small remnants of native vegetation (Threatened Species Scientific Committee, 2020). Noting the above, the application area is unlikely to comprise a significant habitat for this species.
- Black-striped snake is one of five species of small burrowing elapids in the Perth region. The species is more abundant north of the Swan River, whereas records are comparatively scarcer to the south. Black-striped snake typically occupy Banksia woodlands atop soft calcareous sand and, to a lesser extent, coastal

heathlands and shrublands. Although relatively abundant in both habitats, scientists recorded higher capture rates of Black-striped snake in Banksia woodlands which are also the preferred habitat for skinks, such as Aprasia and Lerista spp., which are exclusive food resources for Black-striped snake. Black-striped snake is rarely found in small urban bushland remnants as these are more susceptible to weed infestation, bushfires and predation by feral species, with weeds having an adverse effect on the composition of microhabitats required by fossorial species (He, 2021).

Noting the small extent of the application area and its position within the landscape, the vegetation proposed to be cleared does not comprise significant habitat for the above fauna species. To mitigate any potential impacts on ground dwelling fauna which may use the application area for dispersal, the applicant will be required to conduct directional clearing.

#### Conclusion

Based on the above assessment, the proposed clearing is unlikely to provide significant habitat for the above fauna species. However, it may be used for fauna dispersal or occasional foraging.

#### Conditions

The fauna management condition to provide fauna an opportunity to move into adjacent native vegetation ahead of the clearing activity will adequately mitigate the potential impacts of the proposed clearing on the above environmental values (as conditioned on the clearing permit).

### 3.3. Relevant planning instruments and other matters

In accordance with section 51E(4A) of the EP Act, the department invited comments from the Peel Harvey Catchment Council as part of the application area was within the peel inlet management area. No comments received in this regard to the date.

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. Additional information provided by applicant

Summary of comments	Consideration of comment
City of Mandurah (2025c)	Shapefile for the revegetation areas along with the species list
City of Mandurah (2025d)	Amendments to species list

# Appendix B. Site characteristics

# B.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is a linear strip of 0.068 hectares of native vegetation in the intensive land use zone of Western Australia. It is surrounded by the Mandurah foreshore area, and it is within Town Beach, Mandurah.
	The proposed clearing area is within the Peel Inlet Management area and within the Perth-Peel Strategic assessment boundary.
	Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 19.93 per cent of the original native vegetation cover.
Ecological linkage	The application area does not occur within mapped ecological linkages and given it is surrounded by developed urban area and the ocean, it is unlikely to support fauna movement across the landscape.
	The closest mapped ecological linkage is Southwest Regional Ecological Linkage approximately 790 metres south of the application area.
Conservation areas	There are no mapped conservation areas within the application area. The closest
	mapped conservation area is DBCA Legislated Lands and Waters, located approximately 2.2 kilometres south of the application area.
Vegetation description	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of coastal scrub.
	Representative photos and maps are available in Appendix E.
	This is inconsistent with the mapped pre-European mapped vegetation type of Yoongarillup Complex which is described as Woodland to tall woodland of <i>Eucalyptus gomphocephala</i> (Tuart) with <i>Agonis flexuosa</i> in the second storey.
	The mapped vegetation type retains approximately 35.81 per cent of the original extent (Government of Western Australia, 2019.
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in good to degraded (Keighery, 1994) condition, described as:  • 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.
	<ul> <li>Degraded - Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management</li> </ul>

Characteristic	Details			
	The full Keighery (1994) condition rating scale is provided in Appendix DD.			
	Representative photos are available in Appendix E.			
Climate and landform	The highest mean maximum temperature is in February at 33°C, the lowest is in August at 16.6°C. The average annual rainfall is 535.2mm in 2024.			
Soil description and land degradation risk	The soil is mapped as Quindalup South Qf1 Phase (211Qu_Qf1), described as Foredune/blowout complexes (semi-erosional) with very low relief ridge and swale topography with deep uniform calcareous sands.			
	The mapped soil type has a high risk of land degradation risk resulting from wind and water erosion and high-water repellence risk. However, the mapped soil is less prone to the land degradation in the form of water logging, surface acidification, phosphorus export, salinity and flooding (DPIRD, 2019).			
Waterbodies and hydrogeography	The application area is in close proximity to the coastline but does not intersect any watercourses or wetlands. The application area is 120meters west to the conservation category Peel Inlet Estuary.			
	The application area:			
	falls within South West Coast Groundwater Area proclaimed under the RIWI Act; and			
	<ul> <li>falls within Peel Inlet Management Area proclaimed under the Waterways Conservation Act</li> </ul>			
	Groundwater salinity within the application area is mapped at 1000 to 3000 milligrams per litre total dissolved solids.			
Flora	The desktop assessment identified a total of 20 conservation significant flora species that had previously been recorded within the local area. These include two threaten flora, four priority two flora species (P2), nine Priority three flora species (P3) and five priority flour flora species (P4) (Western Australian Herbarium, 1998-). None of these existing records occur within the application area, with the closest records being <i>Beyeria cinerea</i> subsp. <i>cinerea</i> (P3), <i>Ornduffia submersa</i> (P4) and <i>Pimelea calcicole</i> (P3) recorded approximately 0.49 kilometres from the application area.			
Ecological communities	No Threatened Ecological Communities (TEC) are mapped over the application area. The closest record is an occurrence of tuart ( <i>Eucalyptus gomphocephala</i> ) woodlands and forests of the Swan Coastal Plain, which is a state-listed priority three (P3) ecological community (PEC), approximately 0.98 kilometres southwest to the application area.			
Fauna	The desktop assessment identified a total of 59 conservation significant fauna species that had previously recorded within the local area. These include 42 migratory species, 11 mammals, four reptiles and two invertebrates. The closest record is an occurrence of a greater sand plover ( <i>Charadrius leschenaultii</i> ), approximately 0.38 kilometres away from the application area.			

# B.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*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	38.45	14.85
Vegetation complex					
Yoongarillup Complex	27,977.93	10,018.14	35.81	5,151.57	18.41
Local area					
10km radius	17250.13	3437.81	19.93	-	-

<sup>\*\*</sup>Government of Western Australia (2019b)

# B.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]
Falco peregrinus (peregrine falcon)	os	Υ	Υ	1.16	210	N/A
Isoodon fusciventer (quenda)	P4	Υ	Υ	0.45	10920	N/A
Lerista lineata (Perth slider)	P3	Υ	Υ	1.83	336	N/A
Neelaps calonotos (black-striped snake)	P3	Υ	N	3.63	210	N/A

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, OS: Other Specially Protected

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

# B.4. Land degradation risk table

Risk categories	Land Unit 1		
Wind erosion	H2: > 70% of the map unit has a high to extreme wind erosion risk		
Water erosion	M2: 30-50% of the map unit has a high to extreme water erosion risk		
Salinity	L1: <3% of the map unit has a moderate to high salinity risk		
Water Repellence	H2: > 70% of the map unit has a high-water repellence risk		
Subsurface Acidification	L1: <3% of the map unit has a high subsurface acidification risk		
Flood risk	L1: <3% of the map unit has a moderate to high flood risk		
Water logging	L1: <3% of the map unit has a moderate to very high-water logging risk		
Phosphorus export risk	M2: 30-50% of the map unit has a high to extreme Phosphorus export risk		

# Appendix C. 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:	Not likely to be at variance	No
The application area is unlikely to comprise a high level of biodiversity given:  it is unlikely to provide significant habitat for Threatened or Priority flora  it does not contain native vegetation which represents Threatened (TECs) or Priority Ecological Communities (PECs); and  it does not comprise significant habitat for fauna.		
Given that the area proposed to be cleared is within the highly cleared landscape of a Marina precinct in the City of Mandurah, it is unlikely to have high level of diversity.		
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."	Not likely to be at variance	Yes Refer to Section 3.2.1, above.
Assessment: Noting the small extent of the application area and its position within the landscape, the vegetation proposed to be cleared does not comprise significant habitat for threatened fauna. To mitigate any potential impacts on ground dwelling fauna which may use the application area for dispersal, the applicant will be required to conduct directional clearing.		0.2.11, 0.2010.
Principle (c): "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."	Not likely to be at	No
Assessment: Two threaten flora species were recorded within the local area, they are occurrence of <i>drakaea elastica</i> with the closest record approximately 4.39 kilometres east to the application area and <i>diuris micrantha</i> with the closest record 8.29 kilometers east from the application area.	variance	
drakaea elastica is associated with Banksia or Eucalyptus woodland, often associated with Kunzea sp. in thickets or tall shrubland whereas diuris micrantha occurs in winter wet, wetland or swamp vegetation, including Melaleuca sp., Acacia sp., Hakea sp., Xanthorrhoea sp., over sedges.		
Noting the habitat requirement for above species and application area is previously cleared and revegetation has occurred for the coastal erosion control and aesthetic purposes, the area proposed to be cleared is unlikely to contain habitat suitable for the above threaten flora species		

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."	Not likely to be at variance	No
Assessment: The application area does not contain species that can indicate a Threatened Ecological Community. No TEC are mapped in the local area		
Environmental value: significant remnant vegetation and conservation are	eas	
<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."	Not likely to be at variance	No
Assessment:	variance	
The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia.		
The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The Environmental Protection Authority (EPA) recognises the Perth and Peel Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008).		
The local area (10-kilometre radius from the centre of the area proposed to be cleared) has been extensively cleared with 19.93 per cent native vegetation remaining. However, the application area does not comprise significant environmental value and is not considered significant as remnant vegetation within the local area. Further, it is consistent with the 10 per cent threshold level within the Perth and Peel region.		
The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.		
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."	Not likely to be at variance	No
<u>Assessment:</u> Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.		
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."	Not likely to be at	No
<u>Assessment:</u> Given that no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.	variance	
The native vegetation is not considered to be growing in, or in association with, an environment associated with a watercourse or wetland.		
Principle (g): "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."	Not likely to be at	No
Assessment: The mapped soil is highly susceptible to erosion in the form of water, wind and water repellence. Noting the small extent of the clearing and the purpose of the clearing is to upgrade the seawall to mitigate the future	variance	

Assessment against the clearing principles	Variance level	Is further consideration required?
erosion, the proposed clearing is not likely to have an appreciable impact on land degradation.		
Additionally, applicant has proposed for revegetation following the completion of seawall construction, through an implementation of revegetation program within affected area and along the surrounding coastal reserves, using the coastal endemic plant species (1:3 ratio) to restore and enhance the local habitats.		
Given the above measures, it is unlikely to have an appreciable impact on land degradation from the proposed clearing of 0.068 hectares.		
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."	Not likely to be at variance	No
Assessment:		
The application area is in close proximity to the coastline but does not intersect any watercourses or wetlands.		
Application area is partially mapped with the peel inlet management area declared under the <i>Waterways Conservation Act 1976</i> . Noting the small extent of clearing within the planted vegetation, the clearing is unlikely to cause deterioration in the quality of surface or underground water within the area.		
<u>Principle (j):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."	Not likely to be at variance	No
Assessment: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.		

## Appendix D. 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.

Condition	Description
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 E. Map and the photographs of the vegetation



Figure 1: Town Beach Seawall Project Area





Photo 01 Photo 02



Photo 03

Figure 2: Photographs of the application area

# Appendix F. Sources of information

## F.1. GIS databases

Publicly available GIS Databases used (sourced from <a href="www.data.wa.gov.au">www.data.wa.gov.au</a>):

- 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)

## F.2. References

- City of Mandurah (2025a) Clearing referral application REF 10917/1, received 15 January 2025 (DWER Ref: DWERDT1061864).
- City of Mandurah (2025b) *Clearing permit application CPS 10972/1*, received 28 February 2025 (DWER Ref: DWERVT18066).
- City of Mandurah (2025c) Clearing permit application- supporting information CPS 10972/1, received 07 July 2025 (DWER Ref: DWERDT1667882).
- City of Mandurah (2025d) Clearing permit application- supporting information CPS 10972/1, received 28 July 2025 (DWER Ref: DWERDT1667906).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Biodiversity, Conservation and Attractions. (2017). Fauna Notes Living with Quenda. Retrieved from: Home | Department of Biodiversity, Conservation and Attractions
- Department of Environment Regulation (DER) (2013). A guide to the assessment of applications to clear native vegetation. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2\_assessment\_native\_veg.pdf.

- Department of Primary Industries and Regional Development (DPIRD) (2019). NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed 27 June 2025).
- Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure Native vegetation clearing permits v1.PDF.
- Government of Western Australia (2019) 2018 South West Vegetation Complex Statistics. Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca
- He, Forrest. (2021). The distribution of the threatened Black-striped Burrowing Snake (Neelaps calonotos) in the Perth region, Western Australia. Journal of the Royal Society of Western Australia, 104: 85–90, 2021.

  Retrieved from The distribution of the threatened Black-striped Burrowing Snake (Neelaps calonotos) in the Perth region, Western Australia
- Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) *Vegetation Complexes of the Darling System, Western Australia*. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) *Vegetation Complexes of the South-west Forest Region of Western Australia.*Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) *South West Regional Ecological Linkages Technical Report*, Western Australian Local Government Association and Department of Environment and Conservation, Perth.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) *Atlas of Australian Soils*, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.
- Schoknecht, N., Tille, P. and Purdie, B. (2004) Soil-landscape mapping in South-Western Australia Overview of Methodology and outputs Resource Management Technical Report No. 280. Department of Agriculture.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Western Australian Herbarium (1998-). FloraBase the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 27 June 2025)