GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 11104/1

File Number: DWERVT19040

Duration of Permit: From 20 December 2025 to 20 December 2033

PERMIT HOLDER

City of Mandurah on behalf of Western Australian Planning Commission

LAND ON WHICH CLEARING IS TO BE DONE

Lot 403 on Deposited Plan 404743, Furnissdale

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.018 hectares of *native vegetation* within the areas cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. 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.

2. 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;

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

3. Directional clearing

The permit holder must:

(a) conduct clearing activities in a slow, progressive manner 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.

4. Revegetation and rehabilitation

(a) Prior to 20 December 2029, the permit holder must undertake deliberate *planting* of native vegetation within the area cross-hatched red in Figure 2 of Schedule 1 by *planting* the number and amount per flora species listed in Table 1.

Table 1: Flora species and number of each to be *planted.*

Flora species	Number of individuals to be planted
Casuarina obesa	6
Eucalyptus rudis	1
Gahnia trifida	1
Juncus pallidus	32
Rhagodia baccata	1

(b) The permit holder must ensure that:

(i) only *local provenance* species are used;

(ii) *planting* is undertaken at the *optimal time;* and

(iii) undertaking *weed* control and watering of *plantings* for at least two years post *planting,* if required.

(c) Within 24 months of *planting* in accordance with condition 4(a) of this permit, the permit holder must:

(i) engage an *environmental specialist* to make a determination that at least 80 per cent of the *planted* vegetation listed in Table 1, will persist and survive; and

(ii) if the determination made by the *environmental specialist* under condition 4(c)(i) is that at least 80 per cent of the *planted* vegetation will not survive, undertake additional *planting* that will result in at least 80 per cent of the *planted* vegetation listed in Table 1, persists within the area cross-hatched red in Figure 2 of Schedule 1.

(d) Where additional *planting* is undertaken in accordance with condition 4(c)(ii), the permit holder must repeat the activities required by conditions 4(b) and 4(c).

5. 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 2.

Table 2: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing	(a) the species composition, structure, and density of the cleared area;

No.	Relevant matter	Specifications
	activities generally	(b) the location where the clearing 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 cleared (in hectares); and (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; (f) actions taken to minimise the risk of the introduction and spread of *weeds* in accordance with condition 2; and (g) actions taken in accordance with condition 3.
2.	In relation to *revegetation and rehabilitation* pursuant to condition 4.	(a) The date(s) on which the *planting* was undertaken; (b) The boundaries of the *planted* area, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA20202), expressing the geographical coordinates in Eastings and Northings or decimal degrees; (c) A description of the *planting* activities undertaken. (d) A copy of the *environmental specialist's* monitoring report and determination; and (e) A description of any *remedial actions* undertaken pursuant to conditions 4(b)(ii) and 4(c) where monitoring indicates that the *planted* species will not survive.

6. Reporting

The permit holder must provide to the *CEO* the records required under condition 5 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table 3 have the meanings defined.

Table 3: 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.
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.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of 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 100 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.
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 from May to July for undertaking planting.
planted/ing	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species.
rehabilitate/ion	means the re-establishment of a cover of local provenance native vegetation in an area sing methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
revegetate/ion	means actively managing an area containing native vegetation in order to improve the ecological function of the area.
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

Term	Definition
	invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Jessica Burton
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

27 November 2025

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (

Figure 1 1.).

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

Figure 2: Map of the boundary of the area within which *revegetation* and *rehabilitation* pursuant to condition 4 must occur (cross-hatched red).

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 11104/1
Permit type:	Area permit
Applicant name:	City of Mandurah on behalf of Western Australian Planning Commission
Application received:	30 May 2025
Application area:	0.018 hectares of native vegetation
Purpose of clearing:	Construction of a new jetty
Method of clearing:	Mechanical and hand
Property:	Lot 403 on Deposited Plan 404743
Location (LGA area/s):	City of Mandurah
Localities (suburb/s):	Furnissdale

1.2. Description of clearing activities

The vegetation proposed to be cleared is distributed across three adjoining areas, located at the end of Birchley Road, extending along the western bank of the Serpentine River by approximately 50 metres (see Figure 1, Section 1.5).

The total amount of vegetation to be cleared is 0.018ha and surrounds the existing boat ramp and jetty infrastructure at Birchley Rd. The existing infrastructure was inspected by specialist coastal and marine engineers and deemed to be in degraded condition. The City of Mandurah proposes to upgrade the facilities by installing a new boat ramp, floating jetty and rock revetment. This requires the removal of both mature trees and understory vegetation which overlap with the new infrastructure design.

1.3. Decision on application

Decision:	Granted
Decision date:	27 November 2025
Decision area:	0.018 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 C), relevant datasets (see Appendix H.1), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), 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 for the upgrade of Birchley Rd boat ramp to improve public safety and protection of the riverine environment in that location.

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 loss of riparian vegetation that is suitable habitat for conservation significant fauna species; and
- short term sedimentation of surface water.

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 can be effectively minimised and managed and will not result in long-term adverse impacts on 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
- Undertake slow, progressive one directional clearing to allow fauna to move into adjacent habitat ahead of the clearing activity and;
- Revegetation of the adjacent area with a mixture of riparian vegetation consisting of *Casuarina obesa*, *Eucalyptus rudis*, *Gahnia trifida*, *Juncus pallidus* and *Rhagodia baccata*.

1.5. Site map

Figure 1 Map of the application area

The areas crosshatched yellow indicates the areas 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 polluter pays principle
- 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, minimisation and mitigation measures

Evidence was submitted by the applicant, demonstrating that:

- the location of the new boat ramp could not be relocated or redesigned to avoid vegetation due to constraints imposed by existing infrastructure;
- works would be carried out in a way that prevents materials from falling into the water;
- work area is to be delineated and movement within the water is to be restricted;
- silt curtains are to be installed where working in or near the water;
- a rock revetment will be installed on either side of the new boat ramp; and
- an adjacent area will be revegetated with a mixture of riparian vegetation consisting of *Casuarina obesa, Eucalyptus rudis, Gahnia trifida, Juncus pallidus* and *Rhagodia baccata.*

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 C) and the extent to which the impacts of the proposed clearing present a risk to biological, land and water resource values.

The assessment against the clearing principles (see **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to biological values (fauna and adjacent Threatened Ecological Community), 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 (fauna) - Clearing Principles (a) and (b)

Assessment

Photographs and supporting information provided by the applicant indicate that vegetation within the application area is a mixture of riparian vegetation consisting of Eucalyptus rudis (Flooded Gum), Juncus pallidus (Pale Rush), Casuarina obesa (Swamp Sheok), Gahnia trifida (Coast saw-edge), Rhagodia bacatta (Berry saltbush), Suadea australis (Seablite). The vegetation within the application area is in degraded to good (Keighery, 1994) condition and is in a disturbed recreation area.

Despite this, the vegetation within the application area is consistent with the habitat requirements for four priority bird species and two priority mammal species. The application area may provide habitat for the following three migratory or wetland birds:

- *Botaurus poiciloptilus* (Australian bittern)
- *Calidris subminuta* (long-toed stint)
- *Plegadis falcinellus* (glossy ibis)

Whilst these species may temporarily utilise the application area, it is unlikely to comprise significant habitat for these migratory species due to the lack of suitable breeding habitat. Therefore, impacts on these species are likely to be minimal. The three remaining conservation significant fauna species recorded within the local area that require further consideration include:

- *Oxyura australis* (blue-billed duck)
- *Hydromys chrysogaster* (water rat)
- *Isoodon fusciventer* (Quenda)

Blue-billed duck

Blue-billed duck can breed from August to March, mostly between October to January (DBCA, 2021). Breeding habitat is typically secluded densely vegetated areas, with the nest constructed amongst rushes, sedges and melaleuca, in permanent water. Nests are usually constructed from dead leaves and sometimes thinly lined with down (Birdlife Australia, 2020). Given the purpose of the clearing is to remove dense riparian vegetation, the proposed clearing may impact the breeding habitat of this species. A fauna management condition will be implemented on this permit to mitigate impacts to Blue-billed duck if present at the time of clearing.

Water rat

Water rat are semiaquatic mammals reaching up to 70 centimetres in length (from nose to end of the tail), feeding largely underwater, on a wide range of prey including large insects, crustaceans, mussels and fishes, and even frogs, lizards, small mammals and water birds. Although dependent on water for foraging, water rats live on land, in burrows within sunken logs or within low banks of rivers, lakes, wetlands, and estuaries including coastal areas. Intact riparian vegetation and associated bank stability is critical to their survival (DWER, 2021). Water rats have been recorded within 500m of the application area, they may be transient, through the area as ranging territory can be up to four kilometres of riverbank (DWER, 2021). However, as the clearing area is relatively small and there is similarly high value habitat nearby, it is unlikely the proposed clearing will significantly impact this species.

Quenda

Quenda inhabits forest, woodland and heathland, usually with dense understorey vegetation, sometime wetland fringes; forages for plant material, fungi and insects by digging in leaf litter and soil. The application area is in degraded to good condition with the understorey vegetation structure being largely intact in some places. However, given the small size of the application area, its linear shape, and the extensive remnant native vegetation remaining connected to the application area, it is not likely to comprise significant habitat for this species. Quenda have been recorded within 10km of the application area. As a result, they may occur within the application area while moving through the landscape, and there is a risk of injury to such individuals during clearing.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.018 hectares of suitable habitat for conservation significant fauna. Given the size of the proposed clearing area, it is not likely to have a significant impact on the habitat for fauna.

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant fauna is minimal and can be managed by taking steps to minimise the risk of the introduction and spread of weeds and slow directional clearing to allow fauna to move into adjacent vegetation. The Delegated Officer also had consideration for the applicant's commitment to rehabilitate an adjacent area to ensure that habitat is not permanently lost.

Conditions

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

- Management of weeds and dieback to avoid spread of contaminated material into uncontaminated areas.
- Slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals; and
- Revegetation of adjacent habitat.

3.2.2. Biological values (TEC) - Clearing Principles (d)

Assessment

A review of the available databases determined that the application area is mapped on the opposite side of the Serpentine River, 90m from an occurrence of the Subtropical and Temperate Coastal Saltmarsh (Coastal Saltmarsh), listed as a priority three ecological community by DBCA and as a vulnerable Threatened Ecological Community (TEC) under the federal EPBC Act. The Coastal Saltmarsh ecological community consists mainly of salt-tolerant vegetation including grasses, herbs, sedges, rushes and shrubs generally of less than 0.5m height (DCEEW, 2021).

The clearing area is not mapped as part of the Coastal Saltmarsh, however there is the potential for clearing activities to negatively impact the Coastal Saltmarsh. Specifically, the area to be cleared is growing in association with the banks of the Serpentine River and so there is an increased risk of sedimentation and turbidity of surface water which could impact the Coastal Saltmarsh across the river. The applicant has proposed to mitigate this impact through:

- Silt curtains to be installed where working in or near the water.
- Works to be carried out in a way that prevents materials from falling into the water.
- Work area to be delineated and movement within the water to be restricted

Conclusions

Based on the above assessment, and with consideration for the applicant's management measures, the proposed clearing is not likely to result in a significant risk to the TEC.

Conditions

- Nil

3.2.3. Land and water resources (land degradation and water) - Clearing Principles (f), (g) and (i)

Assessment

Land degradation

The mapped soil phase within the application area is Vasse V1 which is characterised by saline tidal flats composed of grey, black and brown foetid muds and humic sandy clays with locally common shell and limestone fragments. This soil phase is highly susceptible to water erosion. The vegetation which is proposed to be cleared will be providing stability to the bank and preventing land degradation through water erosion. After the vegetation is cleared along the bank of the river, the site may be subject to increase foot traffic and general use with more waves colliding with the bank. This has the potential to cause an increased risk of water erosion along the bank of the river.

The clearing area is relatively small, and the applicant has committed to constructing a rock revetment on either side of the jetty along the bank, in order to reduce the risk and consequent impacts of water erosion.

Water resources

The application area is situated on the banks of the Serpentine River, which is a direct tributary to the Peel-Harvey Estuary. According to available databases the clearing area is adjacent to a conservation category wetland, as mapped in the Geomorphic Wetlands Swan Coastal Plain. Conservation category wetlands are those of high ecological value in which no development or clearing is considered appropriate (EPA, 2008). Although the clearing area is not within the conservation category wetland, pictures and supporting information provided by the applicant indicate that the vegetation to be cleared is a mixture of riparian species growing in direct association with this water course. The loss of this riparian vegetation could impact the overall ecological value of the adjacent conservation category wetland.

The applicant has agreed to the permitted condition to revegetate the adjacent area with a mixture of riparian species consisting of *Casuarina obesa, Eucalyptus rudis, Gahnia trifida, Juncus pallidus* and *Rhagodia baccata*. This will enhance the adjacent riparian vegetation, provide habitat and prevent the further loss of riparian vegetation.

Clearing along the banks of the river also has the potential to destabilise the bank and cause turbidity and sedimentation of surface water. Turbidity and sedimentation have the potential to impact marine growth beyond the clearing area and the ability of fauna to utilise the water column adjacent to the clearing area.

The applicant has committed to a number of management and mitigation measures to minimise the impact of turbidity and sedimentation as a result of clearing native vegetation. Management measures include:

- works would be carried out in a way that prevents materials from falling into the water
- work area is to be delineated and movement within the water is to be restricted

- silt curtains are to be installed where working in or near the water

This assessment has consideration for the above management measures, and the small extent of the clearing, in determining that the impacts of the clearing would not cause appreciable loss of riparian vegetation, land degradation or contamination of water resources.

Conclusion
Based on the above assessment, and with consideration for the applicant's management measures the proposed clearing is not likely to result in appreciable land degradation. The impact of lost riparian vegetation, water erosion, sedimentation, and turbidity are likely to be short term and can be managed through the applicant's proposed management measures.

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

- Revegetation of the adjacent area with a mixture of riparian species consisting of *Casuarina obesa, Eucalyptus rudis, Gahnia trifida, Juncus pallidus* and *Rhagodia baccata.*

3.3. Relevant planning instruments and other matters

Planning framework
The application area is zoned as Public Open Space within the Peel Metropolitan Regional Scheme. The purpose of the proposed clearing is consistent with this zoning.

Advice was sought from the department's Water Licensing branch regarding the proposed clearing. Advice received, stated that although the proposed clearing is located within the Peel Inlet Management Area proclaimed under the *Waterways Conservation Act 1976,* a permit to interfere with the bed and banks is not required. The proposed boat ramp works are considered to be minor with little risk posed to water quality in the area.

One 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.

Impacts of end land use
The application area has been mapped as high to moderate risk of Acid Sulfate Soils (ASS). ASS occur in low lying coastal areas and when exposed to air, the iron sulphides in the soil oxidise to produce iron compounds and sulfuric acid. This acid can react with other compounds and release harmful substances, including the acids and heavy metals themselves, into the environment and waterway. The purpose of the proposed clearing (installation and construction of a boat ramp) may expose ASS. The applicant has advised that an Acid Sulfate Soils investigation and an Acid Sulfate Soils Management Plan (ASSMP) will be developed, prior to clearing and construction of the boat ramp to management Impacts of ASS. It is recommended that the ASSMP is developed in accordance with DWER's Guideline: Identification and Investigation of Acid Sulfate Soils and Acidic Landscapes and Guideline: Treatment and Management of Soil and Water in Acid Sulfate Soil Landscapes.

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
The applicant provided the following additional supporting information on 15 October 2025, in response to a formal Request for Further Information issued by DWER: • Demonstration of mitigation strategies to reduce the risk of soil/sediment transportation • Commitment to revegetate an adjacent area with a mixture of riparian vegetation consisting of *Casuarina obesa, Eucalyptus rudis, Gahnia trifida, Juncus pallidus* and *Rhagodia baccata,* with a total of 43 individual plants.	The additional information provided was considered as follows: • The proposed mitigation and rehabilitation action is outlined under avoidance and mitigation measures (see section 3.1) and assessment of impacts on environmental values (see section 3.2)

Appendix C. Site characteristics

C.1. Site characteristics

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

Characteristic	Details
Local context	The application area is part of an approximately 90-hectare isolated patch of native vegetation in the intensive land use zone of Western Australia. It is on the western bank of the Serpentine River in a largely residential area. The local area (10-kilometre radius from the centre of the application area) retains approximately 25.97 per cent of the original native vegetation cover.
Ecological linkage	The application area does not intersect any formal ecological linkages.
Conservation areas	The application area is located within Environmentally Sensitive Area (ESA) 9875, and adjacent to a protected Foreshore Reserve.
Vegetation description	Photographs and information supplied by the applicant indicate the vegetation within the application area consists of closed shrub, composed of *Eucalyptus rudis* (Flooded Gum), *Juncus pallidus* (Pale Rush), *Casuarina obesa* (Swamp Sheok), *Gahnia trifida* (Coast saw-edge), *Rhagodia bacatta* (Berry saltbush), *Suadea australis* (Seablite). Representative photos are available in Appendix F. This is broadly consistent with the mapped vegetation type: • Vasse Complex- which is described as Mixture of the closed scrub of *Melaleuca* species fringing woodland of *Eucalyptus rudis* (Flooded Gum) - *Melaleuca* species and open forest of *Eucalyptus gomphocephala* (Tuart) - *Eucalyptus marginata* (Jarrah) - *Corymbia calophylla* (Marri). Will include areas dominated by *Tecticornia* and *Sarcocornia* species (Samphire) near Mandurah and south of the Capel River. The mapped vegetation type retains approximately 31.4 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the application area is in Very Good and Completely Degraded (Keighery, 1994) condition.

Characteristic	Details
	The full Keighery (1994) condition rating scale is provided in Appendix E. Representative photos and mapping are available in Appendix F.
Climate and landform	Based on available information, the application is situated on predominantly flat topography. The mean annual rainfall recorded in Furnissdale is 629.8 millimeters. The mean maximum temperature recorded in Furnissdale is 23.4 degrees Celsius and the mean minimum temperature is 14.8 degrees Celsius.
Soil description	The soil is within the application area is mapped as: • Vasse V1 Phase (211Va_V1) which is described as saline tidal flats composed of grey, black and brown foetid muds and humic sandy clays with locally common shell and limestone fragments.
Land degradation risk	The soils within the application area are mapped as having a high risk of water erosion, wind erosion, flooding, waterlogging and subsurface acidification (DPIRD, 2025)
Waterbodies and hydrogeography	The application area is located on the western bank of the Serpentine River. Serpentine River is a major water body which forms a component of the Peel-Harvey Estuary System, listed in the Directory of Important Wetlands (DAWE (2020b). The application area is located within Southwest Coastal Groundwater area which are proclaimed under the RIWI Act. Groundwater salinity within the application area is mapped at 1000-3000 milligrams per total dissolved solids.
Flora	The desktop assessment identified that 37 conservation significant flora species recorded within the local area, comprising five threatened flora species and 32 priority flora species (Western Australian Herbarium, 1998). None of these existing records occur within the application area, with the closest record being an occurrence of *Dillwynia dillwynioides* approximately 0.5 kilometres from the application area.
Ecological communities	The desktop assessment identified that no ecological communities intersect the application area. The closest ecological community is the Subtropical and Temperate Saltmarsh (WA P3, COMM VU), 88m away and on the eastern bank of the serpentine river.
Fauna	The desktop assessment identified that a total of 59 conservation significant fauna species have been recorded within the local area including 24 threatened fauna species, eight priority fauna species, 25 migratory fauna species and one specially protected fauna species. None of these existing records occur within the application area, with the closest being an occurrence of the water-rat, *Hydromys chrysogaster* approximately 0.26 kilometres from the application area. The Proposed clearing is considered suitable habitat for the Australian Bittern (*Botaurus poiciloptilus),* Long-Toed Stint (*Calidris subminuta),* Water rat *(Hydromys chrysogaster)*, Quenda (*Isoodon fusciventer),* Blue-Billed Duck (*Oxyura australis),* and Glossy Ibis *(Plegadis falcinellus)*, and thus these species have been considered in the assessment.

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*					
Swan Coastal Plain	1501221.93	579813.47	38.62	222916.97	14.85
Vegetation complex					
Vasse Complex*	15691.63	4926.97	31.40	2294.43	14.62
Local area					
10km radius	31491.96	4618.70	25.97	-	-

*Government of Western Australia (2019)

C.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]
Botaurus poiciloptilus (Australian Bittern)	EN	Y	Y	Within 10	2	**N/A**
Calidris subminuta (Long-Toed Stint)	MI	Y	Y	Within 10	3	**N/A**
Hydromys chrysogaster (Water Rat)	P4	Y	Y	0.2	21	**N/A**
Isoodon fusciventer (Quenda)	P4	Y	Y	0.8	245	**N/A**
Oxyura australis (Blue-Billed Duck)	P4	Y	Y	Within 10	5	**N/A**
Plegadis falcinellus (Glossy Ibis)	MI	Y	Y	Within 10	7	**N/A**

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

Appendix D. 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 assessment found that the application area is unlikely to contain any locally or regionally significant flora, fauna, or assemblages of plants. However, the application area is in good condition and is likely to provide habitat for conservation significant fauna.	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."*	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
Assessment: The application area may contain suitable habitat for conservation significant fauna. However, given the extent of clearing, it is not likely to be significant.		
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain habitat for conservation significant flora species listed under the BC Act	Not likely to be at variance	No
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: Environmental impacts of the proposed clearing is not considered likely to cause secondary impacts to the adjacent threatened ecological community.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
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 vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area. The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia.	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 that the application area is small, and that the applicant has proposed suitable mitigation, the proposed clearing is not likely to impact the environmental values of the adjacent conservation category wetland.	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: Given that the application area proposes to clear riparian species of vegetation growing in association with the Serpentine River.	At variance	Yes *Refer to Section 3.2.4, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are highly susceptible to wind erosion, water erosion, flooding, waterlogging and subsurface acidification. Noting the small extent of the application area and management measures committed to by the application, appreciable land degradation is unlikely.	May be at variance	Yes *Refer to Section 3.2.4, 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: Given that the application area is within the South West Coastal Ground Water Area and proposes to clear vegetation growing in association with the Serpentine River, the proposed clearing may cause minor short term impact to surface water quality.	May be at variance	Yes *Refer to Section 3.2.4, above.*

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: Given the size of the application area, the mapped soils and the topographic contours in the surrounding area, the proposed clearing is unlikely to contribute to increased incidence or intensity of flooding.	Not likely to be at variance	No

Appendix E. 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 F. Photographs of the vegetation

Figure 1. Photographs of the vegetation proposed to be cleared and existing jetty infrastructure

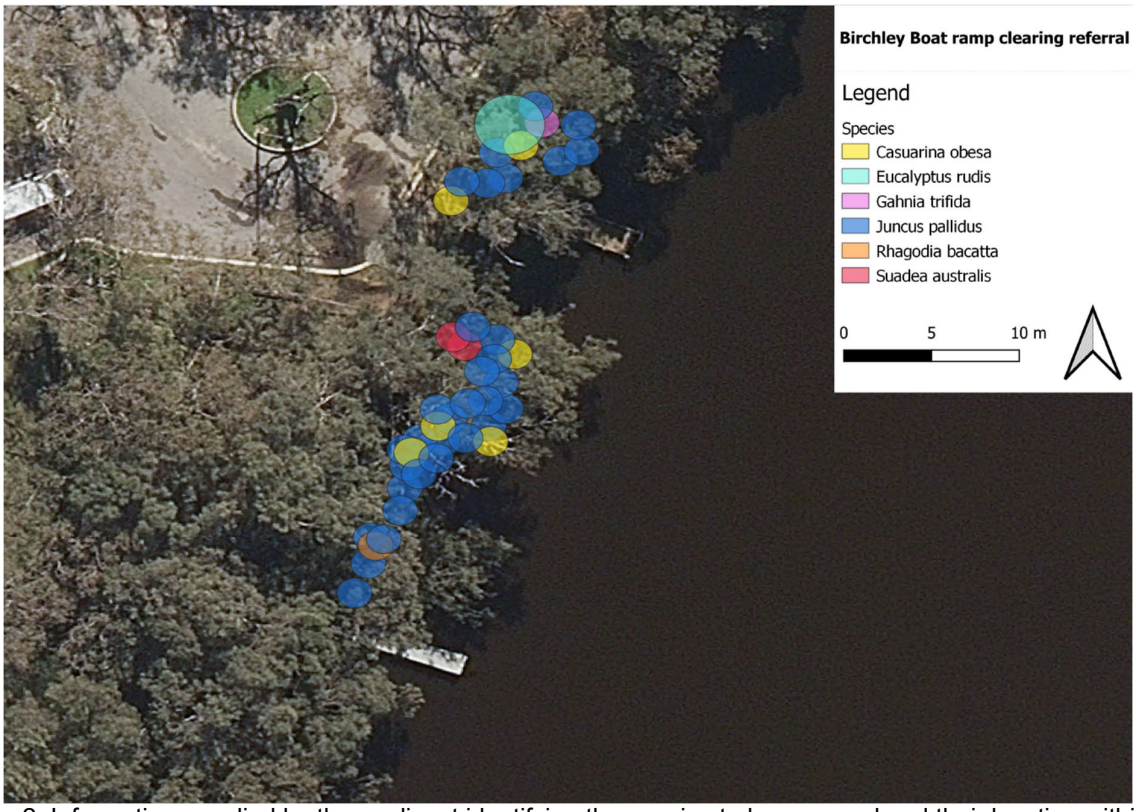

Figure 2. Information supplied by the applicant identifying the species to be removed and their location within the clearing area

Appendix H. Sources of information

H.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)

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