



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

### PERMIT DETAILS

Area Permit Number: CPS 10482/1  
File Number: DWERVT14372  
Duration of Permit: From 25 October 2024 to 25 October 2033

### PERMIT HOLDER

City of Wanneroo

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 501 on Deposited Plan 73317 (Crown Reserve 33206), Wanneroo

### AUTHORISED ACTIVITY

The permit holder must not clear more than 0.092 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 October 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:

- (a) conduct clearing activities in a slow, progressive manner towards adjacent remnant *native vegetation*; and
- (b) allow reasonable time for fauna present within the area being cleared to move into adjacent *native vegetation* ahead of the clearing activity.

#### 5. Fauna management

- (a) Immediately prior to, and for the duration of, clearing activities under this permit, the permit holder must engage a *fauna specialist* to inspect the area cross-hatched yellow on Figure 1 of Schedule 1, to identify the presence of any *conservation significant fauna*.
- (b) Clearing activities must cease in any area where *conservation significant fauna* are identified under condition 5(a), until either:
  - (i) the fauna individual(s) have moved on from that area to adjoining suitable habitat; or
  - (ii) the fauna individual(s) have been removed and relocated to adjoining suitable habitat by a *fauna specialist*.

#### 6. Offset – revegetation and rehabilitation requirements

Within 12 months of the commencement of clearing and no later than 25 October 2027 at an *optimal time*, the permit holder must implement and adhere to the *Revegetation Plan*, including but not limited to the following actions:

- (a) commence *revegetating* and *rehabilitating* the area cross-hatched red on Figure 2 of Schedule 1, by way of:
  - (i) deliberately *planting* tube stock and salvaged *native vegetation* that will result in the minimum completion criteria detailed in Table 5 of the *Revegetation Plan*; and
  - (ii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (b) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site;
- (c) undertake *weed* control activities prior to *planting*, and annually thereafter for the duration of this permit;

- (d) undertake watering of the *planted* vegetation between October and March post-*planting* as required, for the duration of this permit;
- (e) install temporary fencing around the northern and eastern perimeter of the *revegetation* and *rehabilitation* area and undertake annual monitoring and maintenance of the fence as required, for the duration of this permit;
- (f) install signage to educate reserve users of the revegetation activities being undertaken;
- (g) establish no less than two 10 x 10 metre quadrat monitoring sites within the *revegetated* and *rehabilitated* area;
- (h) engage an *environmental specialist* to undertake annual monitoring within the quadrats specified in condition 6(g) until the completion criteria detailed in Table 5 of the *Revegetation Plan* are met; and
- (i) undertake *remedial action* where monitoring undertaken in accordance with condition 6(h) indicated that *revegetation* has not met the completion criteria detailed in Table 5 of the *Revegetation Plan*, including:
  - (i) repeating the *revegetation* actions required under conditions 6(a)-(d);
  - (ii) annual monitoring of the additional *revegetated* and *rehabilitated* areas by an *environmental specialist*, until the completion criteria detailed in Table 5 of the *Revegetation Plan* are met; and
  - (iii) where an *environmental specialist* has determined that the completion criteria detailed in Table 5 of the *Revegetation Plan* have been met, that determination must be submitted to the *CEO* within three months of the determination being made by the *environmental specialist*.

**7. 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"> <li>(a) the species composition, structure, and density of the cleared area;</li> <li>(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;</li> <li>(c) the date that the area was cleared;</li> <li>(d) the size of the area cleared (in hectares);</li> <li>(e) the direction of clearing;</li> <li>(f) actions taken to avoid, minimise, and reduce the impacts and extent of clearing</li> </ul>

No.	Relevant matter	Specifications
		<p>in accordance with condition 2;</p> <p>(g) 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</p> <p>(h) fauna management actions undertaken in accordance with condition 5.</p>
2.	In relation to the <i>revegetation</i> and <i>rehabilitation</i> of areas pursuant to condition 6	<p>(a) size of the area <i>revegetated</i> and <i>rehabilitated</i>;</p> <p>(b) the date(s) on which the area <i>revegetation</i> and <i>rehabilitation</i> was undertaken;</p> <p>(c) the boundaries of the area <i>revegetated</i> and <i>rehabilitated</i> (recorded digitally as a shapefile);</p> <p>(d) a list of species, including quantities, used for <i>revegetation</i> and <i>rehabilitation</i>;</p> <p>(e) description of the <i>revegetation</i> and <i>rehabilitation</i> activities undertaken, including actions taken to implement hygiene protocols and weed control;</p> <p>(f) a copy of the <i>environmental specialist's</i> monitoring report;</p> <p>(g) any remedial actions required to be undertaken;</p> <p>(h) the date completion criteria are considered to have been met by the <i>environmental specialist</i>; and</p> <p>(i) any other actions taken in accordance with condition 6.</p>

## 8. Reporting

- (a) The permit holder must provide to the *CEO*, on or before 30 June of each calendar year, a written report containing:
- (i) the records required to be kept under condition 7; and
  - (ii) records of activities done by the permit holder under this permit between 1 January and 31 December of the preceding calendar year.
- (b) If no clearing authorised under this permit has been undertaken, a written report confirming that no clearing under this permit has been undertaken, must be provided to the *CEO* on or before 30 June of each calendar year.
- (c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under condition 7, where these records have not already been provided under condition 8(a).

## DEFINITIONS

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


**Table 2: Definitions**

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <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.
conservation significant fauna	means those fauna taxa – <ul style="list-style-type: none"> <li>(a) that are listed as threatened fauna under the <i>Biodiversity Conservation Act 2016</i> (WA); or</li> <li>(b) described as priority flora classes 1, 2, 3, or 4 in the Department of Biodiversity, Conservation and Attractions <i>Threatened and Priority Fauna List for Western Australia</i> (as amended from time to time).; or</li> <li>(c) that are listed as migratory species and declared under the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (Cth).</li> </ul>
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
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.
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	<i>Environmental Protection Act 1986</i> (WA)
fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of two (2) years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the <i>Biodiversity Conservation Act 2016</i> .
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 25 kilometres and the same 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.

Term	Definition
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
remedial action/s	means, for the purpose of this permit, any activity that is required to ensure successful re-establishment of understorey to its pre-clearing composition, structure and density, and may include a combination of soil treatments and revegetation.
rehabilitate/ed/ing/ion	means the re-establishment of a cover of local provenance native vegetation in an area using 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/ed/ing/ion	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
Revegetation Plan	Means the plan developed by the permit holder for the <i>revegetation</i> and <i>rehabilitation</i> of the offset site in accordance with condition 6 of this permit: “CPS 10482-1 Revegetation Plan – Yellagonga Bird Watch (City of Wanneroo, 2024).”
weeds	means any plant – <ul style="list-style-type: none"> <li>(d) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; or</li> <li>(e) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or</li> <li>(f) not indigenous to the area concerned.</li> </ul>

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**END OF CONDITIONS**

  
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Temika Mathieson  
 A/MANAGER  
 NATIVE VEGETATION REGULATION

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

1 October 2024



# SCHEDULE 1

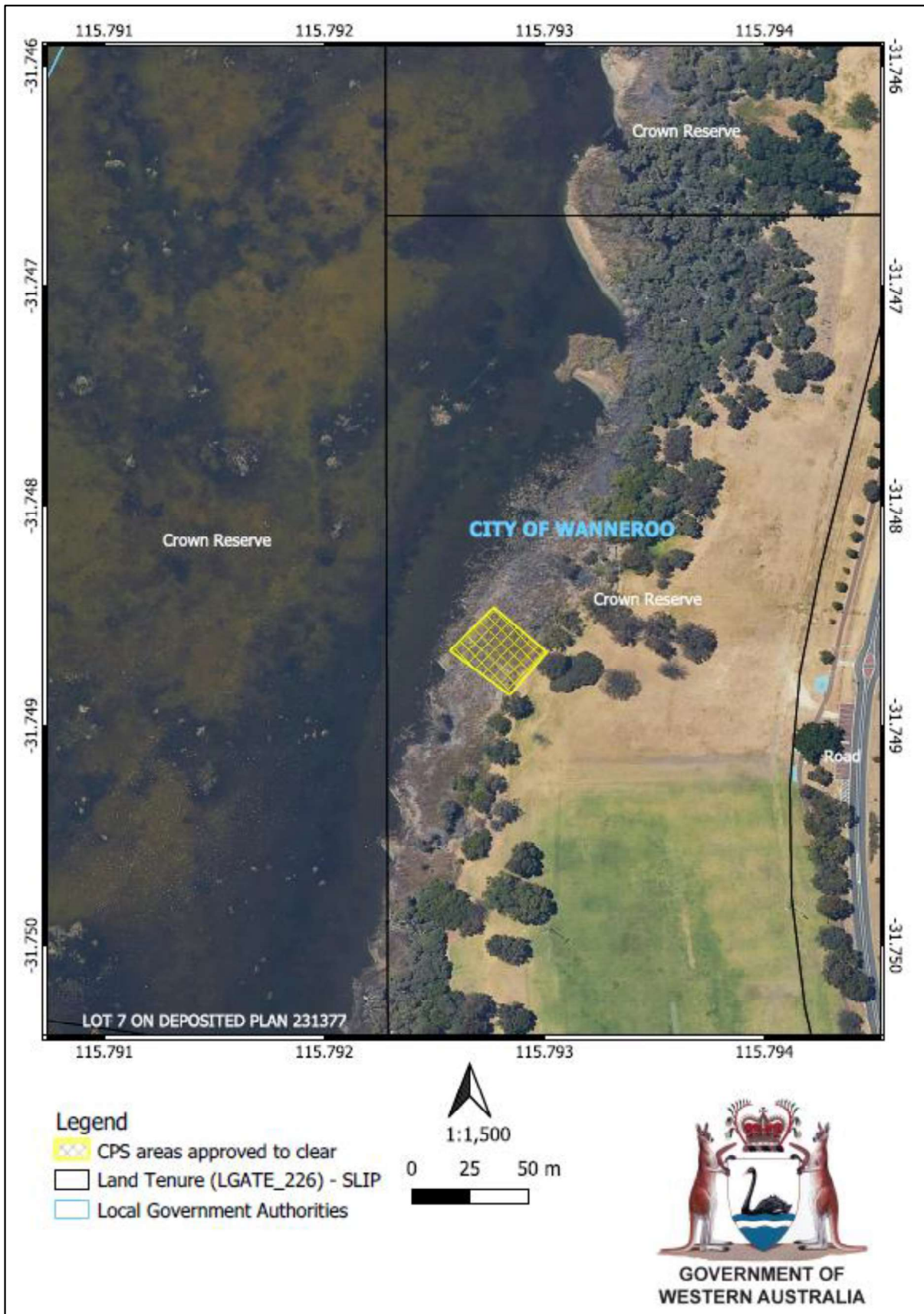


Figure 1: Map of the boundary of the area within which clearing may occur



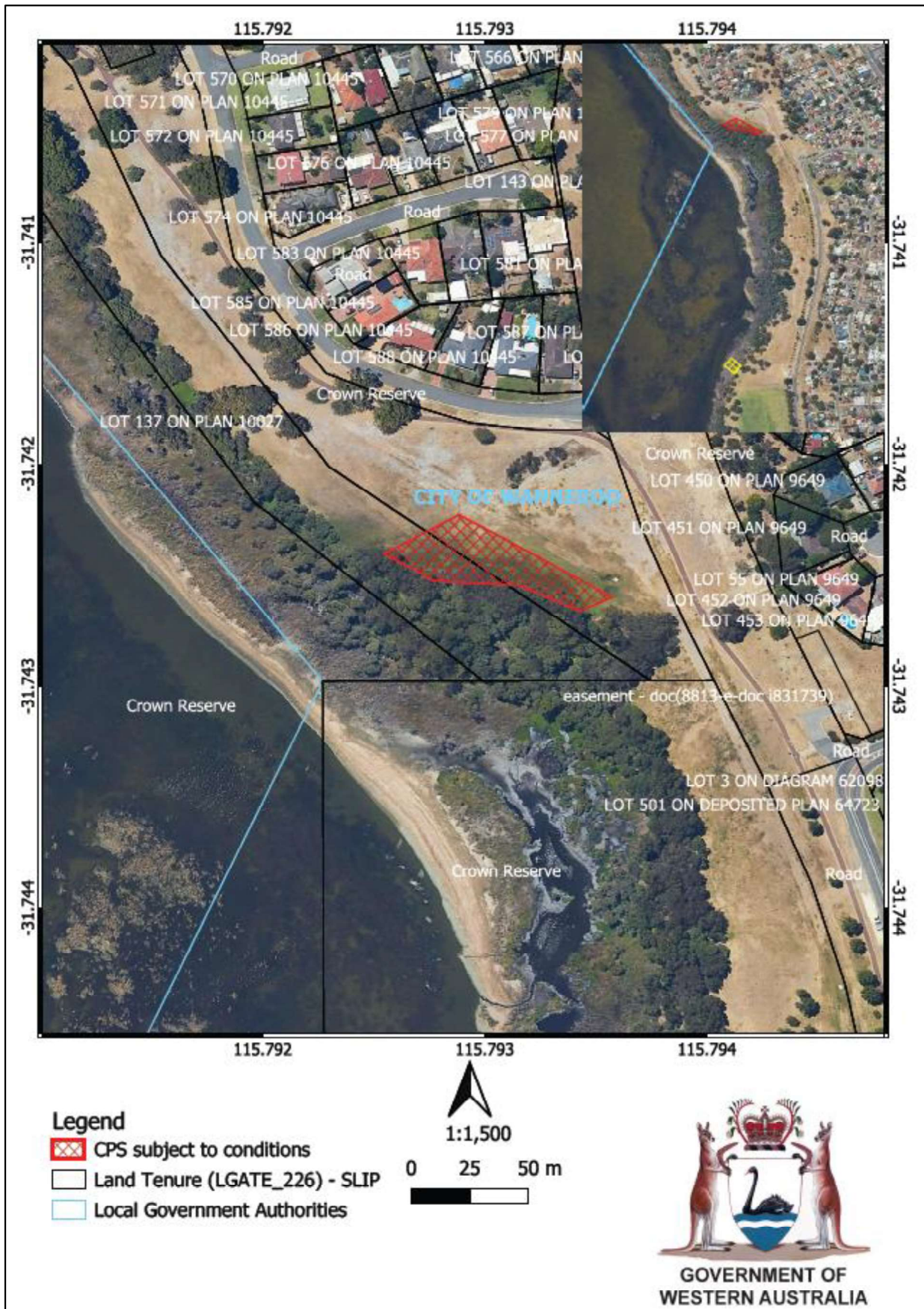


Figure 2: Map of the boundary of the area subject to revegetation in accordance with condition 6 of this permit.





# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1. Permit application details

<b>Permit number:</b>	CPS 10482/1
<b>Permit type:</b>	Area permit
<b>Applicant name:</b>	City of Wanneroo
<b>Application received:</b>	15 January 2024
<b>Application area:</b>	0.092 hectares of native vegetation
<b>Purpose of clearing:</b>	Installing a bird lookout spot
<b>Method of clearing:</b>	Mechanical
<b>Property:</b>	Lot 501 on Deposited Plan 73317 (Crown Reserve 33206)
<b>Location (LGA area/s):</b>	City of Wanneroo
<b>Localities (suburb/s):</b>	Wanneroo

### 1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area on the eastern edge of Lake Joondalup (see Figure 1, Section 1.5).

The purpose of the proposed clearing is to facilitate the installation of a dedicated bird watching facility within the Yellagonga Regional Park. The proposed clearing also includes vegetation clearance of three metres around the lake lookout structure to reduce the fire risk in perpetuity as requested by the City of Wanneroo's Fire Protection Officer (City of Wanneroo, 2024).

### 1.3. Decision on application

<b>Decision:</b>	Granted
<b>Decision date:</b>	1 October 2024
<b>Decision area:</b>	0.092 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 findings of a vegetation survey (Ecoscape, 2020), photographs of vegetation (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 installation of a dedicated bird lookout spot was a result of ongoing requests from the community and local bird watchers and will make bird viewing in the area more controlled and managed to prevent the future damage to vegetation in the Yellagonga Regional Park.

The assessment identified that the proposed clearing will result in:

- the loss of 0.092 hectares of native vegetation that is suitable habitat for the Australasian bittern, Australian little bittern, black bittern (southwest subpopulation), blue-billed duck and rakali;
- direct impacts on fauna individuals if present within the application area at the time of the clearing;
- the loss of 0.092 hectares of native vegetation within Bush Forever Site 299;
- the loss of 0.092 hectares of native vegetation on the banks of Joondalup Lake, mapped within a Conservation Category Wetland (CCW) and the Directory of Important Wetlands in Australia (DIWA); and
- the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined that the impacts of the proposed clearing, including the loss of suitable habitat for above-mentioned fauna species, direct impacts to fauna individuals, and the potential to facilitate the introduction of weeds and dieback can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values through permit conditioning. However, impacts on Bush Forever Site 299 remained significant even after the application of minimisation and mitigation measures and constituted a significant residual impact.

The Delegated Officer determined that the revegetation of at least 0.184 hectares of native vegetation within Bush Forever Site 299, was sufficient to counterbalance the significant residual impacts of the proposed clearing (see Section 4).

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

- Avoid, minimise, and 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 terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- Engage a fauna specialist to undertake inspections for conservation significant fauna pre-clearing and for the duration of works, where clearing must cease in any areas where fauna are identified, until the individuals have moved into adjacent suitable habitat or have been relocated; and
- Revegetate and rehabilitate a total of 0.184 hectares of native vegetation within Bush Forever Site 299.

1.5. Site map

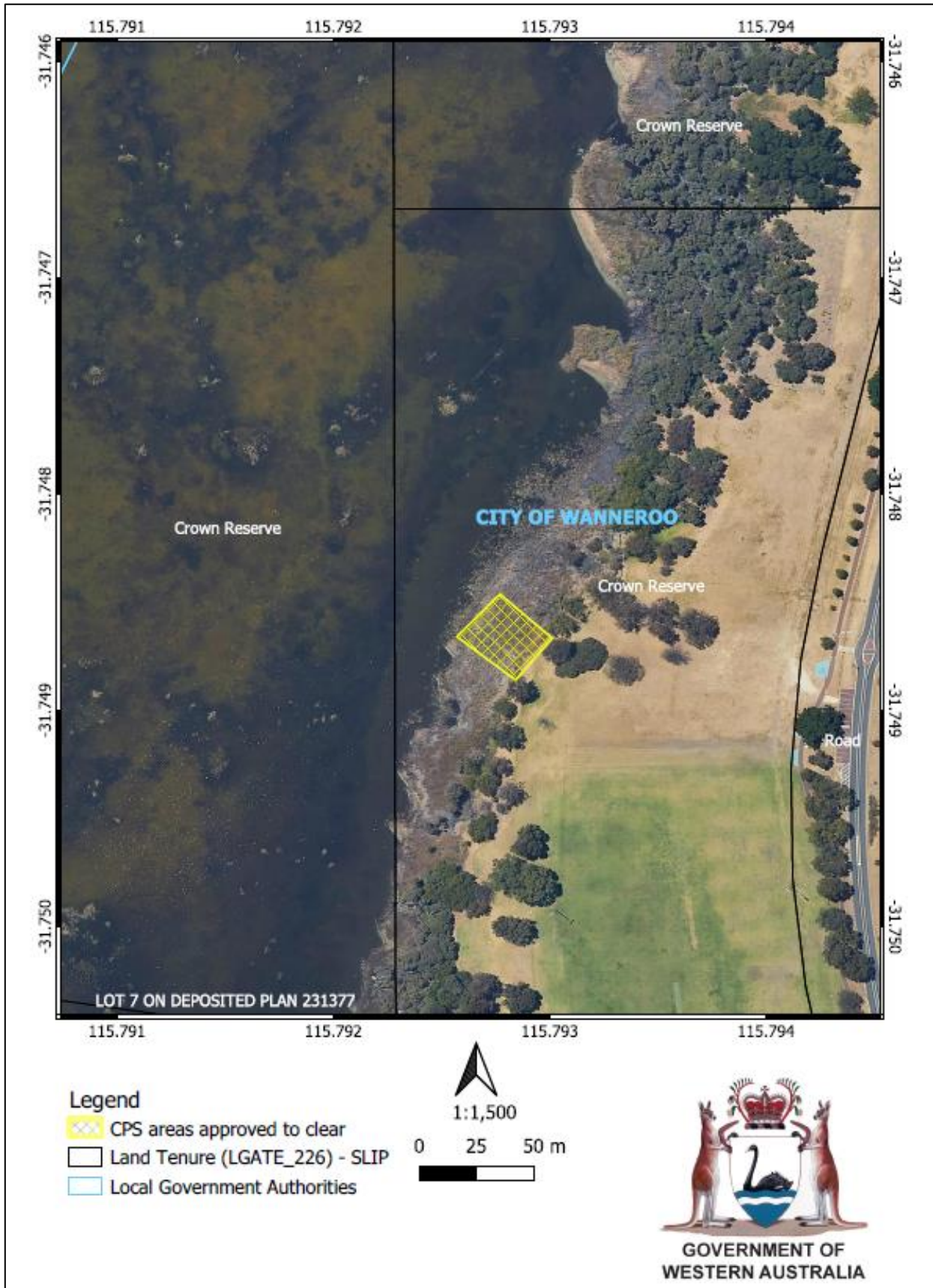


Figure 1 Map of the application area. The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

## 2 Legislative context

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

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

- the precautionary principle.
- the principle of intergenerational equity.
- the 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)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)
- *State Planning Policy 2.8 - Bushland policy for the Perth Metropolitan Region* (2010)

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)
- *Environmental Offsets Guidelines* (August 2014)
- *Technical guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

## 3 Detailed assessment of application

### 3.1. Avoidance and mitigation measures

The applicant advised that the following avoidance and mitigation measures have been applied (City of Wanneroo, 2024a):

- A feasibility study was conducted in 2020 to select a suitable site for building the bird viewing facility by considering and comparing five sites along the eastern edge of Lake Joondalup. Site 2 - Lake Joondalup Park was selected as it was identified as the most feasible site due to the lower environmental impacts (degraded sedges and rushes) and there will be no clearing of major vegetation (Ecoscape, 2020).
- Two options at site 2 were also considered, including Option A Boardwalk and Bird Hide and Option B Lake Lookout. Option B was finally selected as it has the lowest amount of vegetation to be cleared. If Option A were chosen, it would have required clearing of 0.273 hectares, compared to the 0.092 hectares required for Option B (City of Wanneroo, 2024a).
- Dewatering for construction purpose will be avoided to limit the risk of soil acidification after clearing:
  - No dewatering is required for the instalment of the platform as the applicant proposed to use a continuous flight auger to screw in the proposed eight piles into the ground and hold up the Lake Lookout structure.
  - The piles are bored in using a hollow auger, once the pile is at the required depth concrete is pumped down the hollow centre of the auger, while the auger is gradually withdrawn.
  - The applicant also proposed to use a hydrophobic concrete admixture in the piles to limit the effects of acid soils or water.
- The applicant has committed to flagging the clearing area during construction to ensure that clearing does not occur outside the clearing area boundary.

In response to a request from the Department of Planning, Lands and Heritage's (DPLH) Bush Forever office on further measures to manage rubbish, dust and other potential impacts resulting from the construction to the Bush Forever site 299 (DPLH, 2024), the applicant has committed to undertake the following mitigation activities (City of Wanneroo, 2024b):

- The contractor must keep the site clean and tidy and regularly remove rubbish and surplus material.
- The contractor is to present the site in a clean and tidy condition, free of any excess building materials, spoil, concrete slurry and general rubbish.



- All debris, soil, rubbish or materials will be suitably contained and covered in the vehicles during transportation from the site to prevent spillage or contamination of Bush Forever area 299 and other properties.
- The contractor must during the execution of the works, carry out appropriate dust control measures to prevent any nuisance to persons or property or any dangerous or hazardous situations and on the instruction of the superintendent.
- The contractor must ensure that disturbances to all areas outside of permitted areas are minimised. Vehicles must remain on roads or defined construction tracks.
- The City of Wanneroo will allocate an area to the contractor for his temporary buildings, offices, sheds, materials, plant storage and servicing, vehicle parking and the like.
- Material storage will be well way from the bushland area and will be fenced off.
- Bushland and trees within the construction site and adjacent to the construction vehicle paths will be fenced off to prevent any potential damage.
- The contractor will be advised to provide their Environmental Management Plans to demonstrate their approach to implementing measures to comply with the above requirement.

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 **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to biological values (fauna), conservation areas, 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 (b)

##### Assessment

According to available databases, 31 conservation significant fauna are recorded in the local area (10-kilometre radius of the application area). The application area may provide suitable habitat for nine conservation significant fauna species which tend to occupy riparian habitats. Of these, four migratory or wetland bird species, including *Plegadis falcinellus* (Glossy ibis), *Tringa glareola* (Wood sandpiper), *Tringa nebularia* (Common greenshank) and *Tringa stagnatilis* (Marsh sandpiper), are not considered to depend exclusively on foraging in habitats prone to *Typha* infestation. The application area is not likely to provide significant habitat for these species and therefore, impacts on these species are likely to be minimal.

Five remaining species, including four birds and one mammal, are discussed in detail below.

##### **Bird**

*Botaurus poiciloptilus* (Australasian bittern) is an endangered species, with six records in the local area. This species favours permanent freshwater wetlands with tall, dense vegetation, particularly *Eleocharis* spp. (Spike rushes) and *Typha* (DBCA, 2018). The species is known to breed in spring-summer, with egg laying known to occur in September to December (DBCA, 2021).

*Ixobrychus dubius* (Australian little bittern) is a Priority 4 species, with four records in the local area. This species inhabits dense emergent vegetation of reeds and sedges. Their breeding time is spring and early summer, in dense wetland vegetation, with the nests are made from reeds and other plant matter (ALA, 2024a).

*Ixobrychus flavicollis australis* (Black bittern (southwest subpopulation)) is a Priority 2 species, with one record in the local area, mapped approximately 1.3 kilometres from the application area. This bird species' nests are made of twigs in a leafy tree or dense vegetation above or near the water (ALA, 2024b). Nesting time of *I. flavicollis australis* is from September to January (Heron Conservation, 2024).

*Oxyura australis* (Blue-billed duck) is a Priority 4 species with 74 records in the local area. This species 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 in *Typha* beds or other vegetation, in permanent water. Nests are usually constructed from dead *Typha* leaves and sometimes thinly lined with down (Australian Museum, 2020).

Based on the above information, these species may utilize the application area for nesting. However, noting the small area proposed to be cleared and the extent of similar habitat in the local context, the proposed clearing is unlikely to significantly impact the habitat for these bird species.

## Mammal

*Hydromys chrysogaster* (Rakali) is a Priority 4 species. Rakalis are semiaquatic mammals reaching up to 70 centimetres in length, 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 (DWER, 2024a). There are 11 records of the rakali in the local area and the closest record is approximately 1.1 kilometres from the application area. Although dependent on water for foraging, rakalis live on land, in burrows on low banks of rivers, lakes, wetlands, and estuaries including coastal areas. The clearing activities may impact rakali foraging habitat. However, considering the small extent of clearing area, the existence of similar or higher quality habitat in adjacent remnant vegetation along the river, it is unlikely the proposed clearing will significantly impact the foraging habitat of this species.

The clearing activities may have impacts on individuals of the above species should they be present within the application area at the time of clearing. These impacts can be managed by conducting pre-clearing site inspections and slow directional clearing.

## Conclusion

Based on the above assessment, the proposed clearing may impact suitable habitat for Australasian bittern, Australian little bittern, black bittern (southwest subpopulation), blue-billed duck, and rakali, but the impact is unlikely to be significant. There is also the potential that individuals of conservation significant fauna species may occur within the application area during the clearing period, however impacts can be avoided by undertaking pre-clearing site inspections and slow, directional clearing.

## Conditions

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

- Engage a fauna specialist to undertake inspections for conservation significant fauna pre-clearing and for the duration of works, where clearing must cease in any areas where fauna are identified, until the individuals have moved into adjacent suitable habitat or have been relocated.
- Undertake slow, progressive one directional clearing to allow terrestrial and avian fauna to move into adjacent habitat ahead of the clearing activity.
- Take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

### 3.2.2. Environmental value (Conservation area) - Clearing Principles (h)

#### Assessment

Considering that the application area is within the Yellagonga Regional Park and Bush Forever site 299, advice from Department of Biodiversity Conservation and Attractions (DBCA) and DPLH's Bush Forever office has been sought.

DBCA advised that it has been consulted about the proposed works during the preparation of the feasibility study conducted by Ecoscape (2020). DBCA also stated that the new bird lookout spot will ensure the bird viewing on the lake is undertaken in a controlled and managed area, rather than risking further damage to riparian vegetation in other locations (DBCA, 2024).

DPLH advised that an offset in accordance with Appendix 4 of *State Planning Policy 2.8 - Bushland policy for the Perth Metropolitan Region* (SPP 2.8) should be implemented for the proposed clearing (DPLH, 2024). For clearing within a Bush Forever site, an offset ratio of 2:1 is applied, to ensure there will be an environmental gain for the proposed clearing. DPLH also requested further measures to manage rubbish, dust and other potential impacts resulting from the construction to the Bush Forever Site 299 should be undertaken (DPLH, 2024). The applicant committed to undertake further mitigation measures as outlined in Section 3.1 (City of Wanneroo, 2024b).

There are five weed species observed within the application area, including *\*Avena barbata*, *\*Cenchrus clandestinus*, *\*Cyperus papyrus*, *\*Malva parviflora L.* and *\*Medicago polymorpha L.* (Ecoscape, 2020). The proposed clearing has the potential to introduce these weeds and other pathogens into the area, which could impact on the quality of the adjacent vegetation with Bush Forever Site 299 and its habitat values.

Conclusion

Based on the above assessment, the proposed clearing impacts native vegetation within the Bush Forever Site 299. There is potential that the clearing activities could result in the introduction or spread of weeds and dieback into adjacent vegetation. It is considered that impacts to adjacent vegetation can be managed by requiring the applicant to undertake weed and dieback management.

Conditions

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

- avoid and minimise clearing, to minimise the direct impacts to native vegetation.
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.
- offset – revegetation of a minimum of 0.184 hectares within the Bush Forever Site 299.

**3.2.3. Environmental value (Water resources) - Clearing Principles (f) and (j)**Assessment

The application area is on the eastern bank of Lake Joondalup which is mapped as a CCW and within the DIWA. Therefore, the vegetation proposed to be cleared is growing in association with a watercourse and wetland. In addition, the proposed clearing may result in deterioration of surface water quality through soil erosion, increased sedimentation and turbidity, and impacts on aquatic fauna. However, noting the small area under application (0.092 hectares), the degraded condition of the vegetation proposed to be cleared (comprising invasive species), and the construction methods proposed by the applicant (Section 3.1), it is unlikely that the proposed clearing will impact the environmental values of the watercourse and wetland significantly or in the long term. Furthermore, the proposed offset for impacts to Bush Forever Site 299 will involve the planting of 0.184 hectares of wetland associated vegetation adjacent to the mapped wetland (see Section 4) which will provide a net gain in the extent of vegetation within the wetland buffer and assist in maintaining the wetland values into the future.

The proposed clearing area is located within the Perth Coastal and Gwelup Underground Water Pollution Control Area, a Priority 3 Public Drinking Water Source Area (PDWSA). DWER's Water Source Protection Planning branch advised that under the Policy - Land use compatibility in public drinking water source areas and Water Quality Protection Note (WQPN) 25 - Land use compatibility tables for public drinking water source areas, the proposed bird lookout spot (which would most align to 'Tracks and trails' land use, as a boardwalk and viewing platform) is acceptable in Priority 3 areas of PDWSA. It was also recommended that the following best practice guidance should be applied (DWER, 2024b):

- WQPN 81: Tracks and trails near sensitive water resources.

Conclusion

Based on the above assessment, the impacts of the proposed clearing on water resource can be considered not significant.

Conditions

No management conditions required.

**3.3. Relevant planning instruments and other matters**

The clearing permit application was advertised on DWER's website on 3 April 2024, inviting submissions from the public within a 21-day period. No submissions were received.

The application area is reserved Parks and Recreation in the Metropolitan Region Scheme (MRS) and is a designated Bush Forever area (DPLH, 2024). Therefore, the Delegated Officer considers that SPP 2.8 is a relevant matter for this application.

SPP 2.8 sets out that:

*'Proposals or decision-making' in respect of Bush Forever areas 'should:*

- (i) support a general presumption against the clearing of regionally significant bushland or other degrading activities, except where a proposal or decision –*
  - a. is consistent with the overall purpose and intent of an existing Crown reserve or can be reasonably justified with regard to wider environmental, social, economic or recreational needs, and all reasonable alternatives have been considered in order to avoid or minimise any direct loss of regionally significant bushland, and reasonable offset strategies are secured to offset any loss of regionally significant bushland, where appropriate and practical (clause 5.1.2.1(i)(e)).*

In considering SPP 2.8 and advice received from DPLH and DBCA (see Section 3.2.2), the Delegated Officer considered it appropriate to grant the clearing permit in relation to Bush Forever Site 299 given the proposed bird watching facility is consistent with the purpose and intent of the reserve, is justified based on the social and recreational need for a dedicated facility (see Section 3.1), and a suitable environmental offset is implemented to counterbalance the loss of vegetation (see Section 4).

The Delegated Officer noted that the EPA's Guidance Statement No. 33, 'Environmental Guidance for Planning and Development' (EPA, 2008) discusses the need for protection of CCWs. As the proposed clearing will result in the loss of 0.092 hectares of vegetation within a mapped CCW (see Section 3.2.3), the Delegated Officer considered Guidance Statement No. 33 to be a relevant 'other matter' for this application. The statement considers CCWs to be wetlands of high conservation significance and of high priority for protection, and does not consider clearing within CCWs to be appropriate. However, in this instance, given the extent of the proposed clearing in relation to the overall extent of the CCW and that the vegetation to be removed comprises only Typha and *Machaerina articulata* with invasive species (see Section 3.2.3), the Delegated Officer considered it appropriate to grant the clearing permit in relation to the wetland and does not consider the proposed clearing to be at odds with the intent of Guidance Statement No. 33 to protect CCWs.

DWER's Contaminated Sites branch advised that there was a report indicating unauthorised historic deposition of waste materials, including building rubble and possibly asbestos-containing material in 2006 at the Lot 501 on Deposited Plan 73317, where the application area is located. However, no further information has been received and the site remains as "awaiting classification" due to lack of sufficient information; and the unauthorised waste deposition is unlikely to be uniform throughout Lot 501, considering the large expanse of the reported land (DWER, 2024c). The Contaminated Sites branch also recommended that the applicant develop a site-specific health and safety plan to address health risks for any workers undertaking the intrusive works (DWER, 2024c).

The application area is partly mapped within the Lake Joondalup, which is registered as an Aboriginal Heritage Place (ID 3740). 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.

#### 4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- The loss of 0.092 hectares of native vegetation within Bush Forever Site 299.

To offset the loss of native vegetation within a Bush Forever area, an offset ratio 2:1 has been applied (DPLH, 2024). An offset to revegetate an area of 0.184 hectares within Bush Forever Site 299 is therefore required. Noting that the vegetation to be cleared is predominantly Typha, the "like for like" assumption has not been applied in this instance. Any native vegetation species naturally occurring in the area can be considered suitable to be revegetated as an offset.

The applicant proposed an environmental offset consisting of the revegetation of a 0.184-hectare area, approximately 650 metres north of the application area (Figure 2), within Bush Forever Site 299. The offset site is in Completely Degraded (Keighery, 1994) condition and nearby remnant vegetation in Good (Keighery, 1994) condition has been chosen as a reference site. The applicant has committed to restore the offset area from degraded wetland associated vegetation to native vegetation that acts as natural filter, trapping pollutants, nutrients, and sediments from runoff before entering the lake (City of Wanneroo, 2024c). Eleven key native species have been committed to be restored at the offset site including *Acacia saligna*, *Banksia attenuata*, *Banksia ilicifolia*, *Banksia littoralis*, *Hakea prostrata*, *Melaleuca raphiophylla*, *Viminaria juncea*, *Juncus pallidus*, *Machaerina articulata*, *Centella asiatica* and *Eucalyptus rudis* (City of Wanneroo, 2024c).





Figure 2. Context map showing the locations of the application area (yellow), revegetation area (green) and reference site (blue) within the Bush Forever site 299 (black hatched area) (City of Wanneroo, 2024c).

The Delegated Officer considers that the proposed offset is consistent with guidance under SPP 2.8 for clearing within a Bush Forever site (detailed in Sections 3.2.2 and 3.3), as well as with the *Environmental Offsets Policy* (2011) and the *Environmental Offsets Guidelines* (2014). The Delegated Officer considers that this adequately counterbalances the significant residual impacts listed above.

**End**

## Appendix A. Additional information provided by applicant

During the assessment, the applicant responded to requests for information on the following (see below).

Summary of additional information	Consideration of provided additional information
Further measures to manage rubbish, dust and potential impacts resulting from the proposed clearing and construction within Bush Forever Site 299.	This information has been considered and presented as Avoidance and mitigation measures in Section 3.1.
The provision of a satisfactory environmental offset and associated revegetation plan.	This information is presented in Section 4.

## Appendix B. Site characteristics

### B.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 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 C.

Characteristic	Details
Local context	<p>The area proposed to be cleared is located on the eastern bank of Joondalup Lake within a Yellagonga Regional Park. The proposed clearing area is part of a linear stretch of lakeside remnant vegetation in the intensive land use zone of Western Australia.</p> <p>Aerial imagery indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 22.2 per cent of the original native vegetation cover.</p>
Ecological linkage	The application area is mapped within the Gngangara Ecological Linkages as a Conceptual Linkage associated with Bush Forever areas.
Conservation areas	The application area is mapped within Yellagonga Regional Park and Bush Forever Site 299, which are considered conservation areas.
Vegetation description	<p>A vegetation survey (Ecoscape, 2020) and photographs supplied by the applicant (City of Wanneroo, 2024) indicate most of the vegetation within the proposed clearing area consists of <i>Typha orientalis</i> and <i>Machaerina articulata</i>. Representative photos are available in Appendix E.</p> <p>This is partly consistent with the mapped vegetation type Herdsman complex, which is described as sedgelands and fringing woodland.</p> <p>The mapped vegetation type retains approximately 32.1 per cent of the original extent (Government of Western Australia, 2019).</p>
Vegetation condition	<p>A vegetation survey (Ecoscape, 2020) indicate the vegetation within the proposed clearing area is in Degraded (Keighery, 1994) condition.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix D. Representative photos are available in Appendix E.</p>
Climate	The closest BOM weather station with available data is located at Perth Metro, which is 22.0 kilometres from Wanneroo (BOM, 2024). The highest mean maximum temperature is in February at 31.7°C, the lowest is in July at 18.5°C. The highest mean minimum temperature is in February at 18.4°C and the lowest is in July at 8.1°C. The average annual rainfall is 721.9 mm.

Characteristic	Details
Soil and landform	The soil is mapped as 211SpW_LAKE, described as spearwood wet, lake phase
Land degradation risk	The soil within the application area is mapped as being susceptible to flooding, water logging and phosphorus export. The risks from other factors including wind and water erosion, salinity and subsurface acidification are minimal.
Waterbodies	The desktop assessment and aerial imagery indicated that the proposed clearing area is on the edge of Joondalup Lake which is mapped as a CCW and within the DIWA.
Hydrogeography	The application area falls within the Perth Coastal and Gwelup Underground Water Pollution Control Area, a Priority 3 Public Drinking Water Source Area. Groundwater salinity within the application area is mapped as less than 500 milligrams per litre total dissolved solids.
Flora	According to available databases, there are 29 conservation significant flora species within the local area, including five threatened and 24 priority species. The most frequently recorded species is <i>Jacksonia sericea</i> (P4). The closest recorded species were <i>Acacia benthamii</i> (P2), <i>Baeckea</i> sp. <i>Limestone</i> (N. Gibson & M.N. Lyons 1425) (P1), <i>Pimelea calcicole</i> (P3), <i>Thelymitra variegata</i> (T) and <i>Utricularia oppositiflora</i> (P3) which are mapped approximately 640 metres from the application area.
Ecological communities	The application area is not mapped within any threatened/priority ecological communities.
Fauna	According to available databases, 34 conservation significant fauna species have been recorded within the local area, including 12 threatened fauna species, 12 priority fauna species, and ten specially protected fauna species. The closest record is for Carnaby's black cockatoo ( <i>Zanda latirostris</i> ), approximately 0.5 kilometres from the application area.

## B.2. 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 within the local area (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Botaurus poeciloptilus</i> (Australasian bittern)	EN	Y	Y	3.89	6	N/A
<i>Hydromys chrysogaster</i> (Rakali)	P4	Y	Y	1.09	18	N/A
<i>Ixobrychus dubius</i> (Australian little bittern)	P4	Y	Y	2.88	4	N/A
<i>Ixobrychus flavicollis australis</i> (southwest subpopulation) (black bittern (southwest subpopulation))	P2	Y	Y	1.31	1	N/A
<i>Oxyura australis</i> (Blue-billed duck)	P4	Y	Y	0.74	74	N/A
<i>Plegadis falcinellus</i> (Glossy ibis)	MI	Y	Y	1.39	33	N/A
<i>Tringa glareola</i> (Wood sandpiper)	MI	Y	Y	3.89	9	N/A
<i>Tringa nebularia</i> (Common greenshank)	MI	Y	Y	1.18	47	N/A
<i>Tringa stagnatilis</i> (Marsh sandpiper)	MI	Y	Y	5.24	2	N/A

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



**B.3. Land degradation risk table**

Risk categories	211SpW_LAKE
Wind erosion	L1: <3% of map unit has a moderate/high to high/extreme risk
Water erosion	L1: <3% of map unit has a moderate/high to high/extreme risk
Salinity	L1: <3% of map unit has a moderate/high to high/extreme risk
Subsurface Acidification	L1: <3% of map unit has a moderate/high to high/extreme risk
Flood risk	H2: >70% of map unit has a moderate/high to high/extreme risk
Water logging	H2: >70% of map unit has a moderate/high to high/extreme risk
Phosphorus export risk	H2: >70% of map unit has a moderate/high to high/extreme risk

**Appendix C. Assessment against the clearing principles**

Assessment against the clearing principles	Variance level	Is further consideration required?
<b>Environmental value: biological values</b>		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment</u></p> <p>The area proposed to be cleared contains only two native flora species including <i>Typha orientalis</i> and <i>Machaerina articulata</i>; and five weed/planted species. Therefore, the vegetation proposed to be cleared is unlikely to comprise a high level of biodiversity.</p>	Not likely to be at variance	No
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains suitable habitat for conservation significant fauna, however this habitat is not considered significant due to the small extent of clearing and the existing of similar habitat in the area.</p>	May be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain threatened flora species.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain species that can indicate a threatened ecological community.</p>	Not at variance	No
<b>Environmental value: significant remnant vegetation and conservation areas</b>		



Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The extent of native vegetation in the local area is inconsistent with the national objectives and targets for biodiversity conservation in Australia. However, in constrained areas, the EPA has a revised target of native vegetation and communities retaining more than 10 percent. The local area and mapped vegetation complex are above the 10 percent threshold. Furthermore, noting the small application area, the proposed clearing is unlikely to significant change the remnant vegetation area.</p> <p>Although being located within an ecological linkage, noting the small area of vegetation proposed to be cleared, the proposed clearing is unlikely to significantly impact the linkage and movements of related fauna species.</p>	Not likely to be at variance	No
<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></p> <p>Given the application area is within a Bush Forever site, the proposed clearing may have an impact on the environmental values of the conservation area.</p>	At variance	Yes <i>Refer to Section 3.2.2, above.</i>
<b>Environmental value: land and water resources</b>		
<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></p> <p>Given the application area is located on the edge of Joondalup Lake which is mapped as a CCW and within DIWA, the proposed clearing is in an environment associated with a watercourse and wetland. However, noting that the vegetation proposed to be cleared is invasive and easily dominate wetland ecosystems; and the extent of clearing is small, the proposed clearing is unlikely to significantly impact the watercourse and wetland.</p>	At variance	Yes <i>Refer to Section 3.2.3, above.</i>
<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></p> <p>The mapped soils are highly susceptible to flooding, water logging and phosphorus export. Noting the extent and location of the application area, and the construction methods proposed by the applicant (see Section 3.1), the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No
<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></p> <p>Given the application area is within a watercourse, the removal of vegetation has the potential to increase sedimentation and turbidity of the water within the application area, thereby possibly impacting surface water quality. However, due to the small scale of the clearing, it is not likely to cause long-term deterioration in the quality of surface water.</p>	May be at variance	Yes <i>Refer to Section 3.2.3, above.</i>

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><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.”</p> <p><u>Assessment</u>:</p> <p>Noting the extent of the application area, the proposed clearing is unlikely to cause, or exacerbate, the incidence or intensity of flooding in the local context.</p>	Not likely to be at variance	No

## 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.
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. Photographs of the vegetation**



Figure: Representative photos of vegetation at the application area (City of Wanneroo, 2024)



## Appendix F. Sources of information

### F.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- DBCA – Lands of Interest (DBCA-012)
- 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)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- 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

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