GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 11216/1

File Number: DWERVT19667

Duration of Permit: From 12/03/2026 to 12/03/2038

PERMIT HOLDER

City of Joondalup

LAND ON WHICH CLEARING IS TO BE DONE

Lot 11485 on Deposited Plan 217974, Burns Beach

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.34 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 12/03/2028.

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

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

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

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

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

3. Weed and dieback management

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

and *dieback*:

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

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

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

4. Directional clearing

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

5. Priority ecological community management

The permit holder must not clear more than 0.33 hectares of native vegetation that is representative of the 'FCT 29a: Coastal shrublands on shallow sands' priority ecological community.

6. Erosion Management

(a) The permit holder must apply *erosion control measures*, no later than one (1) month after undertaking the authorised clearing activities to reduce land degradation risks.

(b) *Erosion control measures* applied under condition 6(a) must remain in place and be maintained as necessary to manage erosion until the permit holder commences activities related to the purpose of the clearing.

7. Revegetation and rehabilitation - mitigation

(a) The permit holder must implement and adhere to the following actions:

(i) within 24 months of commencing clearing authorised under this permit, at an *optimal time* and no later than 12 March 2028, commence *revegetating* and *rehabilitating* the combined areas cross-hatched red on Figure 2 of Schedule 2 within Lot 11485 on Deposited Plan 217974, by implementing and adhering to the *Revegetation Plan* prepared by the City of Joondalup, including but not limited to the following actions:

a. undertake *weed* control activities prior to *planting* and/or direct seeding;

b. undertake pest management measures, prior to *planting* and/or direct seeding, as required;

c. install temporary fencing around the perimeter of the revegetation sites;

d. deliberately undertake *planting* and/or *direct seeding* of *native vegetation* that will result in the minimum completion criteria detailed in Table 3 of Schedule 3 of this permit and ensuring only *local provenance* seeds and propagating material are used; and

e. establish at least five 10 x 10 metre quadrat monitoring sites within *rehabilitated* areas.

(ii) undertake *weed* control activities to achieve and maintain the minimum completion criteria specified in Table 3 of Schedule 3.

(iii) undertake monitoring of the areas *revegetated* and *rehabilitated* under condition 7 of this permit by an *environmental specialist* in accordance with Table 3 of Schedule 3 until the completion criteria listed in Table 3 of Schedule 3 have been met.

(b) The permit holder must undertake remedial actions for areas *revegetated* and *rehabilitated* under condition 7(a)(ii), where monitoring indicates that the *revegetation* and *rehabilitation* has not met the completion criteria specified in Table 3 of Schedule 3, including:

(i) revegetate the area by deliberately *planting* and/or *direct seeding native vegetation* that will result in the minimum completion criteria detailed in Table 3 of Schedule 3 and ensuring only *local provenance* seeds and propagating material are used;

(ii) additional *weed* control activities;

(iii) annual monitoring of the *revegetated* and *rehabilitated* areas by an *environmental specialist*, until the completion criteria are met; and

(iv) where an *environmental specialist* has determined that the completion criteria, outlined in Table 3 of Schedule 3 has been met, that determination shall be submitted to the CEO within three months of the determination being made by the *environmental specialist*.

8. Revegetation and rehabilitation – temporary works

Within 12 months of the commencement of clearing, the permit holder must undertake revegetation and rehabilitation activities including but not limited to the following actions:

(a) commence revegetation and rehabilitation of the areas that are no longer required for the purpose for which they were cleared under this Permit by:

(i) deliberately planting tube stock and/or direct seeding native vegetation; and

(ii) ensuring only local provenance seeds and propagating material are used to revegetate and rehabilitate the area.

(iii) ensuring the plant species used to revegetate and rehabilitate comprise species resistant to wind erosion.

(b) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site.

9. Records that must be kept

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

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to 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); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 2; (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 3; (g) actions undertaken in accordance with condition 4; (h) actions undertaken in accordance with condition 5; and (i) actions undertaken in accordance with condition 6;
2.	In relation to the revegetation and rehabilitation of areas pursuant to condition 7 of this permit	(a) a description of the revegetation and rehabilitation activities undertaken each year, once commenced, outlined in a report produced by an environmental specialist; (b) the location and size of the areas revegetated and rehabilitated (in hectares) recorded using a GPS unit set to GDA 2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees; (c) the date that revegetation and rehabilitation works began; (d) the baseline data recorded for the area to be revegetated/rehabilitated,

No.	Relevant matter	Specifications
		including species richness, species density, vegetation structure and weed cover; (e) the species composition, structure, density of the areas revegetated/rehabilitated recorded annually; (f) results of annual monitoring against the completion criteria (g) the date completion criteria are considered to have been met; and (h) any other actions in accordance with condition 7.
3.	In relation to the revegetation and rehabilitation of areas pursuant to condition 8 of this permit	(a) the location of any *revegetated* and *rehabilitated* areas, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees; (b) a description of the *revegetation* and *rehabilitation* activities undertaken; (c) the size of the area revegetated and *rehabilitated* (in hectares); and (d) the date(s) on which the *revegetation* and *rehabilitation* was undertaken.

10. Reporting

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

DEFINITIONS

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

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
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.
dieback	means the effect of *Phytophthora* species on native vegetation.
direct seeding	direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of two (2) years' work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.
EP Act	*Environmental Protection Act 1986* (WA)
erosion control measures	means the application of hydromulch to slopes within 10 metres of retained vegetation less than 1 in 3 gradient, and jute or coir matting to slopes between 1 in 2 and 1 in 3 gradient.
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 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	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	remedial action/s means for the purpose of this permit, any activity that is required to ensure successful re-

Term	Definition
	establishment of understorey to its pre-clearing composition, structure and density, and may include a combination of soil treatments and revegetation.
revegetate/revegetated/ revegetation	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.
rehabilitate/rehabilitated/rehabilitation	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
Revegetation plan	means the 'Burns Beach Café Development Revegetation Plan' prepared by the City of Joondalup.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

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Caitlin Conway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20 of the Environmental Protection Act 1986

17 February 2026

SCHEDULE 1

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

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

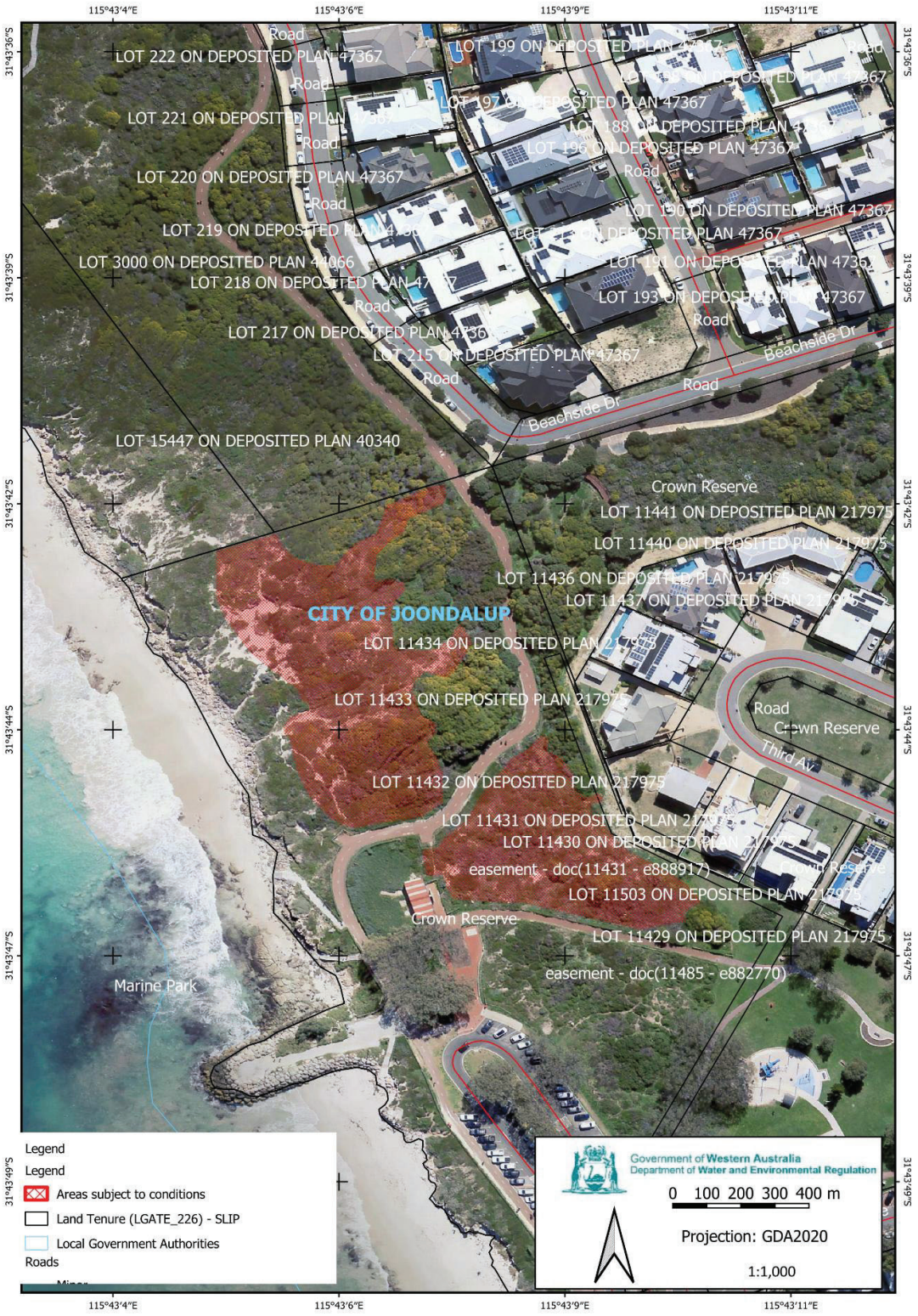

Figure 2: Map of the boundary of the areas within which revegetation and rehabilitation must occur

SCHEDULE 2

Table 3: The table below outlines the revegetation completion targets and criteria associated with Condition 7 for mitigation revegetation and rehabilitation.

Measure	Completion Targets	Completion Criteria	Monitoring
Native species diversity	Minimum of 60% of native species returned	A minimum of 7 native species per 10 x 10 quadrat	Native diversity will be counted annually in years 2 and 3. If the completion criteria are not met within 3 years, monitoring will continue annually until completion criteria is met.
Weed density	Weed cover at the site is 10% or less (minor non-competitive weeds)	Weed cover is to be 10% or less of minor non-competitive weeds	Weed cover percentage will be assessed annually in years 2 and 3. If the completion criteria are not met within 3 years, monitoring will continue annually until completion criteria is met.
Declared weeds	No declared weeds or Weeds of National Significance identified.	No declared weeds or Weeds of National Significance identified.	Assessed annually in years 1, 2 and 3. If the completion criteria are not met within 3 years, monitoring will continue annually until completion criteria is met.
Native species density	Survival rate of 2 plant /m2	A survival rate of 2 plant / m2 is to be achieved after 3 years. All planted species that have not survived will be replanted within 12months and monitored for a further 2 years.	The number of surviving plants will be counted annually in years 2 and 3. If the completion criteria are not met within 3 years, monitoring will continue annually until completion criteria is met.
Watering	Watering of tubestock over summer months	Watering to be conducted 5 times over the summer months each year for 3 years	Watering of tubestock to be conducted 5 times in years 1, 2 and 3, or until completion criteria is met.
Weed control	Quarterly weed control events with the first event to be undertaken prior to planting	Weed control events to be conducted quarterly each year for 3 years	Watering of tubestock to be conducted 5 times in years 1, 2 and 3, or until completion criteria is met.

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 11216/1
Permit type:	Area permit
Applicant name:	City of Joondalup
Application received:	5 August 2025
Application area:	0.34 hectares of native vegetation
Purpose of clearing:	constructing an upgraded recreational space
Method of clearing:	Mechanical
Property:	Lot 11485 on Deposited Plan 217974
Location (LGA area/s):	City of Joondalup
Localities (suburb/s):	Burns Beach

1.2. Description of clearing activities

The vegetation proposed to be cleared includes three patches of native vegetation, comprising 0.34 hectares, at the Burns Beach Foreshore Reserve located in Burns Beach, approximately 30 kilometres north of Perth Central Business District in Western Australia (see Figure 1, Section 1.5).

The proposed clearing is to remove 0.34 hectares of native vegetation to develop the Burns Beach Café Development. The proposal will include a café building and redevelopment of the coastal node (City of Joondalup, 2025).

1.3. Decision on application

Decision:	Granted
Decision date:	17 February 2026
Decision area:	0.34 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 two submissions were received. Consideration of matters raised in the public submissions are summarised in Appendix A.

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 the ecological surveys
- the clearing principles set out in Schedule 5 of the EP Act (see Appendix C),

- relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The Delegated Officer also took into consideration that the proposed development is to provide the greater accessible spaces, promote commercial activity within the area and form connections between the park and the beach ensuring both spaces function as an integrated regional recreational destination.

The upgrades will ensure the space functions as an integrated regional recreational destination with the following social and economic benefits.

- A new playground, turfed areas, landscaped native garden beds, and upgraded public amenities, enhancing recreational opportunities
- Demolition of outdated facilities and construction of modern infrastructure, improving safety and usability
- Relocation of the car park, reducing congestion and improving pedestrian safety
- A café/restaurant, which will be leased to a commercial operator to offset ongoing maintenance costs and contribute the local economy (City of Joondalup, 2025).

The assessment identified that the proposed clearing will result in:

- the loss of 0.33 hectares of native vegetation that is representative of the Coastal shrublands on shallow sands (FCT29a) Priority Ecological Community (PEC)
- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values and
- potential land degradation in the form of wind erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to have long-term adverse impacts on environmental values and can be minimised and managed to unlikely lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures and committed to mitigate the impacts to 0.33 hectares of the Coastal shrublands on shallow sands (FCT29a) Priority Ecological Community (PEC) by revegetating and rehabilitating of 0.7 hectares of representative vegetation within the Burns Beach Foreshore Reserve within Lot 11485 on Deposited Plan 217974 adjacent to the proposed clearing area (see section 3.1).

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 terrestrial fauna to move into adjacent habitat ahead of the clearing activity.
- commence activities related to the purpose of the clearing, no later than two (2) months after undertaking the authorised clearing activities
- Revegetation/rehabilitation of 0.7 hectares of native vegetation within the Burns Beach Foreshore Reserve within Lot 11485 on Deposited Plan 217974 in accordance with the applicant's revegetation plan.

1.5. Site maps

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

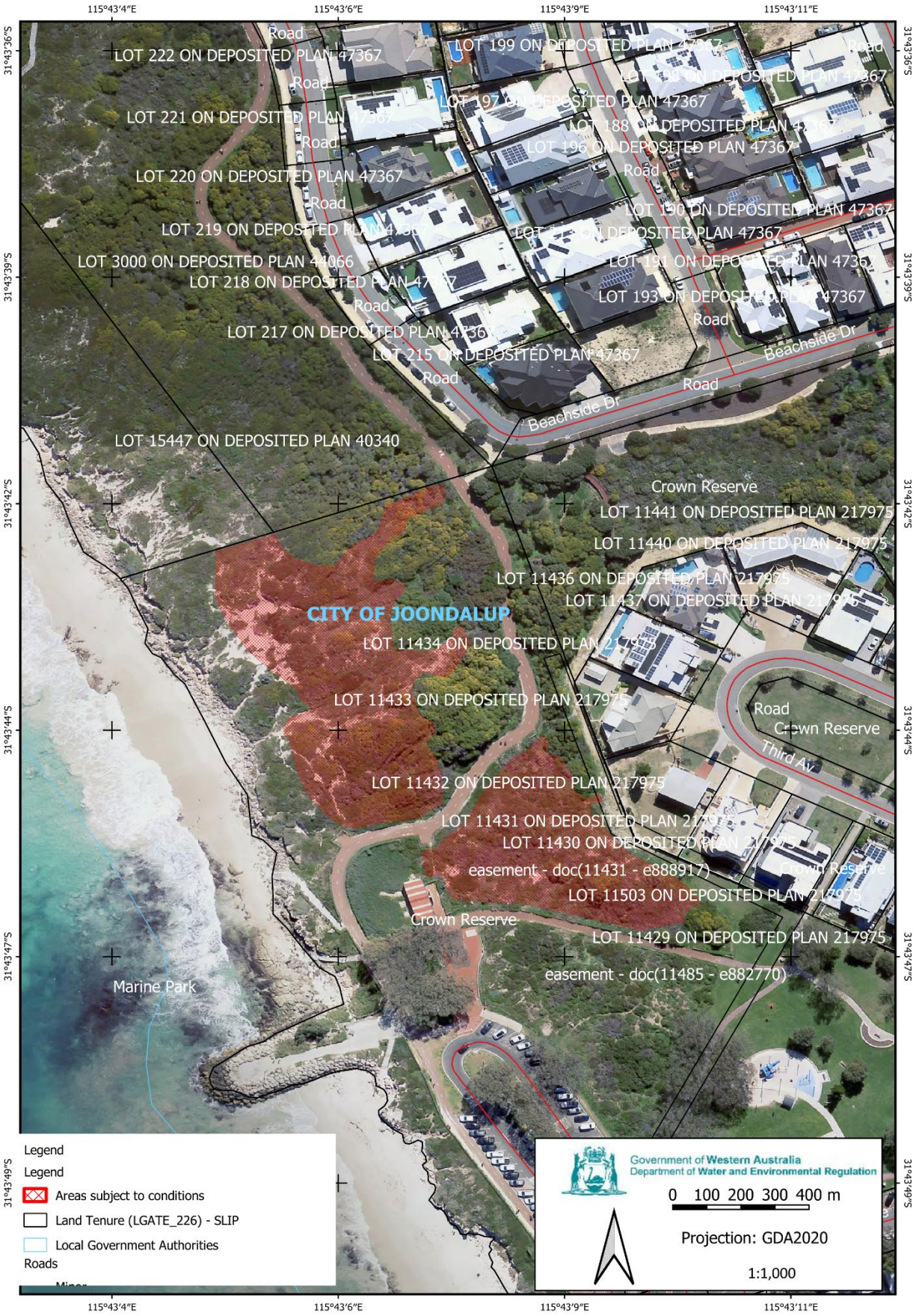

Figure 2. The areas cross-hatched red indicate areas within which revegetation and rehabilitation under condition 7 must occur

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)

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The following evidence was submitted by the applicant (City of Joondalup, 2025a) to demonstrate their consideration of avoidance and minimisation of clearing:

- the proposal has been designed to avoid environmental impacts, including avoiding clearing native vegetation, where possible, or minimise impacts to As Low as Reasonably Practicable (ALARP) where unavoidable
- potential impacts have primarily been avoided or minimised through the design and layout of the café development and supporting facilities.

The applicant (City of Joondalup, 2025a) also proposed the following mitigation measures:

- Portions of the clearing area that have been temporarily cleared and are not required for infrastructure will be revegetated by native plants and seeds, which have been sourced from the cleared vegetation. This will limit the potential for edge effects to flora and fauna.
- Implementation of erosion controls following clearing, including soil stabilisation measures to reduce the potential for wind or water erosion. A soft nature-based approach with either coir/jute mesh and/or a brush mattress will be employed, along with revegetation efforts to control erosion
- Concrete paths will be installed between any proposed turf and native vegetation to limit the potential for weed intrusion
- Implementation of appropriate weed and pathogen controls, such as clean on entry and exit procedures, in accordance with the City's Weed Management Plan to manage the occurrence of weeds and/or disease with the objective of minimising indirect impacts to surrounding vegetation
- Clearing will occur in the direction of adjacent retained vegetation to allow fauna to move away from clearing activities to the surrounding remnant vegetation
- Utilisation of existing tracks as much as possible to minimise the area required to be cleared. Vehicles and personnel access will be restricted to the direct works areas and not allowed to have uncontrolled access into other areas of the foreshore reserve. There will not be any clearing outside the works areas to facilitate vehicle stand-by or equipment lay down areas.
- Where possible all vehicles and construction materials will be stored within the development area and not within the foreshore reserve.
- Areas will be surveyed and verified before any ground disturbing activities commence, to ensure that construction will be limited to those areas to which they are required and intended.

The applicant also proposed rehabilitation of an additional 0.7 hectares of vegetation (refer to Figure 2), representative of the Coastal shrublands on shallow sands (FCT29a) Priority Ecological Community in currently Good condition, within the Burns Beach Foreshore Reserve to the north of the application area. The applicant proposes to

improve the condition of this vegetation to Very Good to Excellent condition by undertaking pest management, weed control, erosion control, revegetation and watering in accordance with a revegetation plan (City of Joondalup, 2025b). This revegetation has been conditioned on the permit.

The Delegated Officer was satisfied that the applicant has sufficiently considered avoidance and mitigation of clearing.

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 and priority ecological communities), significant remnant vegetation and land 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 (Vegetation and Fauna) - Clearing Principles (a and b)

Assessment

Ecological communities

A total of 39 flora species (15 native and 24 introduced) from 23 families and 34 genera were recorded during the survey conducted by the Ecological Australia Pty Ltd in 2024 (Ecological Australia Pty Ltd, 2024). No Threatened flora species listed under the EPBC Act or BC Act or Priority species listed by DBCA were recorded from within the clearing area and none were considered with the potential to occur. Approximately 62% of the total species recorded in the survey area were introduced species, reflective of the location of the survey area in proximity to urban development (Ecological Australia Pty Ltd, 2024).

One vegetation community (MiTdEl) was delineated and mapped within the application area, covering a total of 0.33 hectares, and classified as being in 'Good' condition (Ecological Australia Pty Ltd, 2024). This vegetation community was considered representative of the Priority Ecological Community 'Coastal shrublands on shallow sands (FCT29a)', as listed by the Department of Biodiversity, Conservation and Attractions (DBCA). The applicant's commitment to rehabilitate a 0.7-hectare area of vegetation to the north of the application area, representative of this same PEC, from a Good to a Very Good to Excellent condition (refer to Section 3.1 for further details), is considered to adequately mitigate the impacts to the PEC from the clearing.

MiTdEl - vegetation community was dominated by shrublands consisting mainly of *Myoporum insulare*, *Olearia axillaris*, *Rhagodia baccata*, *Tetragonia decumbens*, *Scaevola crassifolia*, *Pelargonium capitatum*, *Acacia rostellifera*, and *Spyridium globulosum*. The MiTdEl community does not represent the Federally listed Honeymyrtle Shrubland TEC based on an assessment against the key diagnostic characteristics described by DCCEEW (2023) as it does not contain any of the key indicator species of the TEC and does not occur on skeletal soils of outcrops derived from Tamala limestone (Ecological Australia Pty Ltd, 2024). In addition, this community is not considered to represent the State-listed Honeymyrtle Shrubland TEC as it does not align floristically with FCT type 26a (Ecological Australia Pty Ltd, 2024).

Fauna

One fauna habitat type (Dunes and Swales) was identified within the clearing area, covering a total of 0.33 ha. The Dunes and Swales habitat is considered to provide habitat to the conservation significant mammal, Quenda. (Ecological Australia Pty Ltd, 2024). An additional two species were considered to have the potential to occur based on the availability of suitable habitat and the proximity of previous records, including the Black-striped snake (*Neelaps calonotos*) and the Graceful Sunmoth (*Synemon gratiosa*) under the BC Act).

Quenda (*Isoodon fusciventer*) – Priority 4

Quenda prefers dense scrubby, often swampy, vegetation with dense cover up to one metre high. It also occurs in woodlands and may use less ideal habitat where this habitat occurs adjacent to the thicker, more desirable vegetation (Department of Environment and Conservation (DEC), 2012). There are 384 records of this species within the local area. From the larger survey conducted within the Burns beach and Illuka beach, there were 8 quenda individuals were recorded in 2021 (Ecological Australia Pty Ltd, 2021). The Dunes and Swales habitat that occurs with the clearing area is not considered to be locally restricted, as it extends along the coastline to the north and south of the clearing area. Noting the extent of clearing and the potentially suitable habitat within the local area, the proposed

clearing is unlikely to impact on significant habitat for this species. However, individuals of the species may be subject to harm should they be present at the time of clearing. Quenda are mobile and provided clearing takes place in a directional manner so that individuals can move into adjacent vegetation, impacts to individuals will likely be avoided.

Black-striped snake (*Neelaps calonotos*) – Priority 3

Black-striped snake is one of five species of small burrowing elapids in the Perth region. The species is more abundant north of the Swan River. Black-striped snake typically occupy Banksia woodlands atop soft calcareous sand and, to a lesser extent, coastal heathlands and shrublands (He, 2021). Although relatively abundant in both habitats, scientists recorded higher capture rates of Black-striped snake in Banksia woodlands which are also the preferred habitat for skinks, such as *Aprasia* and *Lerista* spp., which are exclusive food resources for Black-striped snake. Black-striped snake is rarely found in small urban bushland remnants as these are more susceptible to weed infestation, bushfires and predation by feral species, with weeds having an adverse effect on the composition of microhabitats required by fossorial species. Given that the proposed clearing is adjacent to the costal developments, it is unlikely to have a significant impact for the habitats for this species. This species is considered to be mobile and provided clearing takes place in a directional manner so that individuals can move into adjacent vegetation, impacts to individuals will likely be avoided.

Graceful Sunmoth (*Synemon gratiosa*) – Priority 4

The graceful sunmoth is most common in sedgelands, heathlands, woodlands and occasionally within open parts of forest where their 'foodplants' (various grasses, sedges and mat-rushes) are found. Within Quindalup dunes associated with coastal heath, where the application area is located, the graceful sunmoth's feeding is restricted to their preferred host plants, including *Lomandra maritima* in these locations (DEC, 2011). The graceful sunmoth is known from 282 records within the local area (10 kilometre radius), with the nearest occurring approximately 0.47 kilometres from the application area.

Given the preferred foraging habitat of *Lomandra maritima* was identified in several survey quadrats undertaken in Iluka-Burns Beach Foreshore Reserve flora survey, vegetation condition assessment and fauna survey in 2021 by Ecologia Australia Pty Ltd, this species may occur in the proposed clearing area. However, noting that the application area is adjacent to remnant vegetation that provides similar habitat values in a more protected location, the vegetation within the application is not likely to comprise significant habitat for this species or be important for the continued survival of this species.

Conclusion

The proposed clearing will remove 0.33 hectares of the Priority Ecological Community 'Coastal shrublands on shallow sands (FCT29a)', however the applicant's commitment to rehabilitating 0.7 hectares of this vegetation community to the north of the application area is considered to adequately mitigate impacts to this community.

Whilst the application area does not comprise of significant habitat for quenda, black striped snake and graceful sunmoth, there is the potential for individuals to be present at the time of clearing. Slow, directional clearing to allow the movement of fauna that may be present at the time of clearing into adjacent vegetation will mitigate any impacts to fauna individuals.

Conditions

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

- Directional clearing, which requires slow, progressive, one directional clearing to allow terrestrial fauna to disperse ahead of the clearing activity should they occur on site at the time of clearing.
- Revegetation/rehabilitation of 0.7 hectares of native vegetation within the Burns Beach Foreshore Reserve within Lot 11485 on Deposited Plan 217974 in accordance with the applicant's revegetation plan (refer to Section 3.1).

3.2.2. Environmental Value (Significant remnant vegetation) - Clearing Principle (e)

Assessment

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The EPA recognises the Perth Metropolitan Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008).

The mapped vegetation community over the application area is the Cottesloe Complex-Central and South, which is described as mosaic of woodland of *Eucalyptus gomphocephala* (Tuart) and open forest of *Eucalyptus gomphocephala* (Tuart) - *Eucalyptus marginata* (Jarrah) - *Corymbia calophylla* (Marri); closed heath on the Limestone outcrops (Government of Western Australia, 2019). This community is consistent with the national objectives and targets for biodiversity conservation in Australia, with 32.16% vegetation remaining (Table B.2.).

The local area (10-kilometre radius from the centre of the area proposed to be cleared) has been highly cleared with 28.94% native vegetation remaining, which is consistent with the 10 per cent threshold level within constrained areas in the Perth Metropolitan region.

The application area is within two ecological linkages (Perth regional ecological linkage and the Gnangara Ecological Linkage). Due to the size of the area to be cleared, and the already cleared adjacent vegetation and the existing development, the proposed clearing is unlikely to significantly impact or sever connectivity between either of the ecological linkages.

Considering the small area proposed to be cleared within the local area, the proposed clearing is unlikely to significantly reduce the remnant extent within the local area. Therefore, the proposed clearing is not considered as the significant remnant vegetation in an area that has been extensively cleared.

Conclusion

The proposed clearing is unlikely to significantly impact on the remnant vegetation extent as well as conservation areas nearby. The adjacent remnant vegetation may be impacted by the increasing risk of weed or dieback spreading.

Conditions

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

- Weed and dieback management.
- Revegetation/rehabilitation of 0.7 hectares of native vegetation within the Burns Beach Foreshore Reserve within Lot 11485 on Deposited Plan 217974 in accordance with the applicant's revegetation plan.

3.2.3. Environmental Value (Land degradation) - Clearing Principle (g)

Assessment

The soil within the application area is mapped as being highly susceptible to wind erosion and moderately susceptible to water erosion and phosphorus export risk. Noting the extent of the clearing, the clearing is unlikely to result in to appreciable water erosion and phosphorus export risk.

To manage wind erosion, the applicant has committed to undertaking the following erosion management measures, as conditions on the permit:

- Erosion control measures will be applied no later than one (1) month after undertaking the authorised clearing activities. These will include application of hydromulch to slopes within 10 metres of retained vegetation less than 1 in 3 gradient, and jute or coir matting to slopes between 1 in 2 and 1 in 3 gradient. The measures will remain in place until the proposed development occurs within these areas, and are required to be maintained for efficacy while they are in place.
- To manage erosion in the long term, areas that are no longer required for the purpose for which they were cleared are required to be revegetated and rehabilitated.

Conclusion

While soil within the application area is mapped as being highly susceptible to wind erosion, these risks are considered to be adequately managed through permit conditions.

Conditions

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

- Erosion management measures.
- Revegetation and rehabilitation of temporarily cleared areas.

3.3. Relevant planning instruments and other matters

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

End

Appendix A. Details of public submissions

Summary of comments	Consideration of comment
context map identifies a small location on such a large, scaled context map	Submitter was provided with an alternative context map during the assessment. Figure 1 in the appendix F shows the regional context of the proposal
Questioned about the proposed revegetation plan as quoted in the section 6.1 of the application form	Proposed revegetation plan was published in the department website after consideration of the comments. Initially, it was not published due to some confidential information and later published redacting the confidential information.

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of a 0.34-hectare of part of a linear tract of native vegetation along the coastline in the intensive land use zone of Western Australia. It is surrounded by the Burns Beach foreshore node, and the associated infrastructure. The proposed clearing contributes to an important linkage such as Gnangara conceptual linkage and the Perth Regional Ecological linkage, and it is a part of an isolated strip of remnant along the coastline in a highly cleared landscape. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 28.94 per cent of the original native vegetation cover.
Ecological linkage	The application area is mapped within both the Gnangara Ecological Linkages as a Conceptual Linkage and the Perth Regional Ecological Linkage.
Conservation areas	The application area is not mapped within a conservation area. The closest conservation area is the Marmion Marine Park, located approximately 40 meters west to the application area. The application area is surrounded by two Bush forever sites namely the Bush Forever site 322 and 325. The Bush forever site 322 is approximately 140 meters north to the application area and the Bush forever site 325 is approximately 195 meters south to the application area.
Vegetation description	Burns Beach Foreshore Reserve Honeymyrtle Shrubland TEC report and Black Cockatoo assessment survey 2024 from Ecological Australia Pty Ltd indicates the vegetation within the survey area including the proposed clearing consists of Costal Shrubland vegetation community. This vegetation community was dominated by shrublands consisting mainly of *Myoporum insulare*, *Olearia axillaris*, *Rhagodia baccata*, *Tetragonia decumbens*, *Scaevola crassifolia*, *Pelargonium capitatum*, *Acacia rostellifera*, and *Spyridium globulosum* The full survey descriptions and maps are available in Appendix E. This is inconsistent with the mapped vegetation type of Cottesloe Complex – Central and South (52), which is described as Mosaic of woodland of Eucalyptus gomphocephala (tuart) and open forest of *Eucalyptus gomphocephala* (tuart) - *Eucalyptus marginata* (jarrah) - *Corymbia calophylla* (marri), closed heath on the Limestone outcrops. (Heddle et al, 1980).

Characteristic	Details
	The mapped vegetation type retains approximately 32.16 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Burns Beach Foreshore Reserve Honeymyrtle Shrubland TEC report and Black Cockatoo assessment survey 2024 from Ecological Australia Pty Ltd indicates the vegetation within survey area including the proposed clearing is in good (Keighery, 1994) condition, described as: • 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. The full Keighery (1994) condition rating scale is provided in Appendix D. The full survey descriptions and mapping are available in Appendix E.
Climate and landform	Climate within the application area experiences hot, dry summers and cool, wet winters. The annual mean rainfall of 717 mm (BoM 2025) with approximately 80% falling between May and September. The mean maximum temperatures range from 18.5°C in July to 31.7°C in February, whilst mean minimum temperatures range from 7.8°C in August to 18.4°C in February ((City of Joondalup, 2025).
Soil description	The application area is mainly mapped as the Quindalup South youngest dune Phase (211Qu__Q4) landform, described as the youngest phase. Irregular dunes with slopes up to 20%. Loose pale brown calcareous sand with no soil profile development and slightly mapped with the Karrakatta shallow soils Phase (211Sp__Kls) landform, described as the low hills and ridges. Bare limestone or shallow siliceous or calcareous sand over limestone. Dense low shrub dominated by *Dryandra sessilis*, *Melaleuca huegellii* and species of Grevillea. (DPIRD 2019).
Land degradation risk	The soil within the application area is mapped as being highly susceptible to wind erosion and moderately susceptible to water erosion and phosphorus export risk. The risk from other categories are minimal.
Waterbodies and Hydrogeography	The application area is in close proximity to the coastline but does not intersect any watercourses or wetlands. The proposed clearing is mapped within the Perth Groundwater Area Proclaimed under the RIWI Act. Groundwater salinity within the application area is mapped at 500 to 1000 milligrams per litre total dissolved solids.
Flora	The desktop assessment identified a total of 26 conservation significant flora species that had previously been recorded within the local area. These include seven threaten flora, three priority one flora species (P1), three priority two flora species (P2), Ten Priority three flora species (P3) and Three priority flour flora species (P4) (Western Australian Herbarium, 1998-). None of these existing records occur within the application area, with the closest records being *Hibbertia leptotheca* (P3) recorded approximately 0.60 kilometres from the application area.
Ecological communities	No Threatened Ecological Communities (TEC) or buffers are mapped over the application area, or close proximity to the application area. The Coastal shrublands on shallow sands, which is a state-listed priority three (P3) ecological community (PEC) is mapped with the application area.
Fauna	The desktop assessment identified a total of 43 conservation significant fauna species that had previously recorded within the local area. These include 28 birds from which 12 are migratory species, Seven mammals, four reptiles and four invertebrates. The closest records are occurrence of *Thalasseus bergii* (crested tern) and *Isoodon fusciventer* (quenda) approximately 0 kilometres away from the application area.

B.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	14.85
Vegetation complex					
Cottesloe Complex – Central and South (52)	45,299.61	14,567.87	32.16	6,606.12	14.58
Local area					
10km radius	16,259.69	4,706.06	28.94	-	-

Government of Western Australia (2019b)

B.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Isoodon fusciventer	Priority 4	Y	Y	0	284	Y
Synemon gratiosa	Priority 4	Y	Y	0.47	282	
Neelaps calonotos	Priority 3	Y	Y	3.37	36	

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

B.4. Ecological community analysis table

Community name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Costal shrublands on shallow sands (FCT 29a)	Priority 3	Y	Y	Y	within	6	Y

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

B.5. Land degradation risk table

Risk categories	*Land Unit 1*
Wind erosion	H2: >70% of map unit has a high to extreme wind erosion risk
Water erosion	M2: 30-50% of map unit has a high to extreme water erosion risk
Salinity	L1: <3% of map unit has a moderate to high salinity risk or is presently saline
Subsurface Acidification	L1: <3% of map unit has a high subsurface acidification risk or is presently acid
Flood risk	L1: <3% of the map unit has a moderate to high hazard
Water logging	L2: 3-10% of the map unit has a moderate to very high to risk
Phosphorus export risk	M2: 30-50% of map unit has a high to extreme phosphorus export risk

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared does not contain locally significant ecological communities and habitats, including the significant habitat for threatened and priority flora and fauna species. The vegetation proposed to be cleared is representative of the Coastal shrublands on shallow sands (FCT29a) Priority Ecological Community. Which is priority 3 State listed ecological community.	May be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The area proposed to be cleared contain suitable habitat for few conservation significant fauna species, however, the habitat is not considered significant for any of these species (see Appendix A.4).	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: No flora species listed under the EPBC Act or BC Act, or listed priority species by DBCA were recorded within the survey area. Approximately 62% of the total species recorded in the survey area were introduced species, reflective of the location of the survey area in proximity to urban development, which acts as a vector for the spread of weeds (Eco logical Australia Pty Ltd,2024). The Desktop data indicates that application area does not contain any records of flora species listed under the EPBC Act or BC Act, or as priority species by DBCA. Therefore, the area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: No threatened ecological communities are mapped within the area proposed to be cleared. The flora and vegetation survey did not identify vegetation dominated by species indicative of a threatened ecological community.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of native vegetation in the local area is less than the 30% threshold set by the national objectives and targets for biodiversity conservation in Australia. However, it is within the Metropolitan Region Scheme which is subject to the EPA modified objective of 10% vegetation retention within a constrained area. The application area is within two ecological linkages (Perth regional ecological linkage and the Gnangara Ecological Linkage). Due to the size of the area to be cleared, and the already cleared adjacent vegetation and the existing development, the proposed clearing is unlikely to significantly impact or sever connectivity between either of the ecological linkages.	Not likely to be at variance	Yes *Refer to Section 3.2.2 above.*
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation areas and noting that there are no conservation areas within the proposed clearing area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no water courses or wetlands are recorded the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality. The native vegetation is not considered to be growing in, or in association with, an environment associated with a watercourse or wetland.	Not at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soil types is highly susceptible to erosion in the form of wind and water. Noting the small extent of the clearing and the applicant's mitigation erosion measures, it is likely that these land degradation risks can be managed such that appreciable impacts are unlikely.	May be at variance	Yes *Refer to Section 3.2.3 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:	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
The application area is in close proximity to the coastline but does not intersect any watercourses or wetlands. Noting that the mapped soil within the application area has a low risk of salinity, the proposed clearing is unlikely to increase the salinity to the level where groundwater will be affected. Given that the mapped soil within the application area has low risk of Acid Sulphate Soil (ASS), it is unlikely that that the clearing will expose ASS and contaminate the groundwater. Given that no water courses/wetlands or Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or groundwater quality in terms of salinity or acidity.		
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soil and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.	Not 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 and biological survey information excerpts

Plate 1: Photo of the southern clearing area facing north

Plate 2: Photo of the southern clearing area facing northwest

Plate 3: Photo of the southern clearing area facing west

Plate 4: Photo of the southern clearing area facing west

Plate 5: Photo of the southern clearing area facing west

Plate 6: Photo of the northeastern clearing area facing north

Plate 7: Photo of the northeastern clearing area facing north

Plate 8: Photo of the northeastern clearing area facing north

Plate 9: Photo of the southern clearing area facing south

Plate 10: Photo of the southern clearing area facing south

Plate 11: Photo of the southern clearing area facing south

Plate 12: Photo of the southern clearing area facing south

Plate 13: Photo of the southern clearing area facing east

Plate 14: Photo of the southern clearing area facing east

Plate 15: Photo of the southern clearing area facing northeast

Plate 16: Photo of the southern clearing area facing northeast.

Plate 17: Photo of the northwestern clearing area facing north

Plate 18: Photo of the northwestern clearing area facing northwest

Plate 19: Photo of the northwestern clearing area facing northwest

Figure 1-1: Regional Context of the Proposal

Figure E-1: Regional context of the Proposal (Ecological Australia Pty Ltd, 2021)

Figure E-2: Proposed concept design (City of Joondalup, 2025a)

Figure E-3: Survey Footprint (Ecological Australia Pty Ltd, 2021)

Figure E-4: Land systems (Ecological Australia Pty Ltd, 2021)

Vegetation community code	Representative photograph	Vegetation description	Associated species	Quadrats	Extent within the survey area	Proportion of the survey area
MiTdEl		*Myoporum insulare, Olearia axillaris, Rhagodia baccata* Mid Shrubland over **Tetragonia decumbens, Scaevola crassifolia, *Pelargonium capitatum* Low Sparse Shrubland over **Ehrharta longiflora, *Bromus diandrus* Low Sparse Grassland and *Lepidosperma gladiatum* Low Sparse Sedgeland	*Acacia rostellifera, Hardenbergia comptoniana, Spinifex longifolius, Spyridium globulosum, Threlkeldia diffusa, *Arctotis stoechadis, *Brassica tournefortii, *Crassula glomerata, *Galium murale, *Lactuca serriola, *Lysimachia arvensis, *Melilotus indicus, *Sonchus oleraceus, *Stellaria media, *Trachyandra divaricata*	BB01, BB02, BB03	0.7	82.2
-		Managed gardens of planted **Casuarina equisetifolia* over shrubland	**Casuarina equisetifolia, *Metrosideros excelsa, *Tetragonia decumbens, *Arctotis stoechadis, *Atriplex prostrata, *Trifolium campestre, *Poaceae* sp., **Lactuca serriola, *Sonchus oleraceus, Grevillea banksii x bipinnatifida*	REL01	0.1	12.0
				Cleared	0.1	5.9
				Total	0.9	100

Table E-1: Vegetation Communities recorded within the survey areas (Ecological Australia Pty Ltd, 2021)

Figure E-5: Vegetation communities in the survey area (Ecological Australia Pty Ltd, 2021)

Figure 6: Vegetation condition in the survey area (Ecological Australia Pty Ltd, 2021)

Figure 7: Conservation significant ecological communities in the survey area (Ecological Australia Pty Ltd, 2021)

Appendix F. Sources of information

F.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

F.2. References

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