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 11014/1
Permit type:	Area permit
Applicant name:	City of Joondalup
Application received:	27 March 2025
Application area:	0.15 hectares of native vegetation
Purpose of clearing:	Building construction
Method of clearing:	Mechanical
Property:	Lot 15444 on Plan 40340, Lot 300 on Plan 48930
Location (LGA area/s):	City of Joondalup
Localities (suburb/s):	Sorrento

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within two areas (see Figure 1, Section 1.5). The application is to clear coastal shrubs for the construction of Sorrento surf club building and amenities.

The clearing application is to remove 0.15 hectares of native vegetation, with onsite revegetation of 0.089 hectares and a revegetation offset of 0.48 hectares, located 3 kilometres away from the application area, in Lot 15445 on Deposited Plan 40340.

1.3. Decision on application

Decision:	Granted
Decision date:	24 July 2025
Decision area:	0.15 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix H.1), the findings of a flora and vegetation survey (see Appendix G), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 2). The Delegated Officer also took into consideration the necessity of the project. The purpose of the clearing is to improve the surf club facility to meet the needs of the wider community, with the surf club growing in popularity. The existing club facility is in poor condition and the age of the facilities make it

unsuitable for simple upgrades and repairs. The City proposes to demolish the existing Surf Club building and northern toilet block and construct a new facility between the southern and northern car parks (City of Joondalup, 2025).

The assessment identified that the proposed clearing will result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values; and
- The loss of approximately 0.15 hectares of native vegetation within an extensively cleared landscape and a low remnant vegetation.

After consideration of the available information, the Delegated Officer determined the proposed clearing is likely to result in the clearing of native vegetation in an extensively cleared landscape. In accordance with the Government of Western Australia's Environmental Offsets Policy (2011), Environmental Offsets Guidelines (2014) and State Planning Policy 2.8 (SPP 2.8), the City of Joondalup proposed the following onsite revegetation and an offsite revegetation offset, which will address the significant residual impacts of the proposed clearing (see Section 4).

- Revegetation of 0.089 hectares within the application area after works are completed, and
- Revegetation and rehabilitation of 0.48 hectares of good condition vegetation within Pinnaroo point, Hillarys foreshore reserve, within Lot 15445 on Deposited Plan 40340 offset site. Hillarys Foreshore Reserve is a major Conservation Area in Bush Forever site 325 that will continue to be managed as a natural area under the Hillarys - Kallaroo Coastal Foreshore Management Plan (Natural Area Holdings Pty Ltd, 2016)

The Delegated Officer determined that the proposed offset is sufficient to counterbalance the significant residual impacts of the project. Further information on the suitability of the offset is available in Section 4.

The Delegated Officer determined that the proposed clearing is unlikely to have any long-term adverse impacts when assessed against the relevant clearing principles, and that revegetation measures conditioned on the permit will mitigate any potential impacts. The Delegated Officer decided to grant a clearing permit subject to conditions including 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;
- staged clearing to minimise wind erosion;
- revegetate 0.089 hectares of the application area (see figure 2 section 3.1); and
- revegetation and rehabilitation of 0.48 hectares of native vegetation within the identified offset site.

1.5. Site map

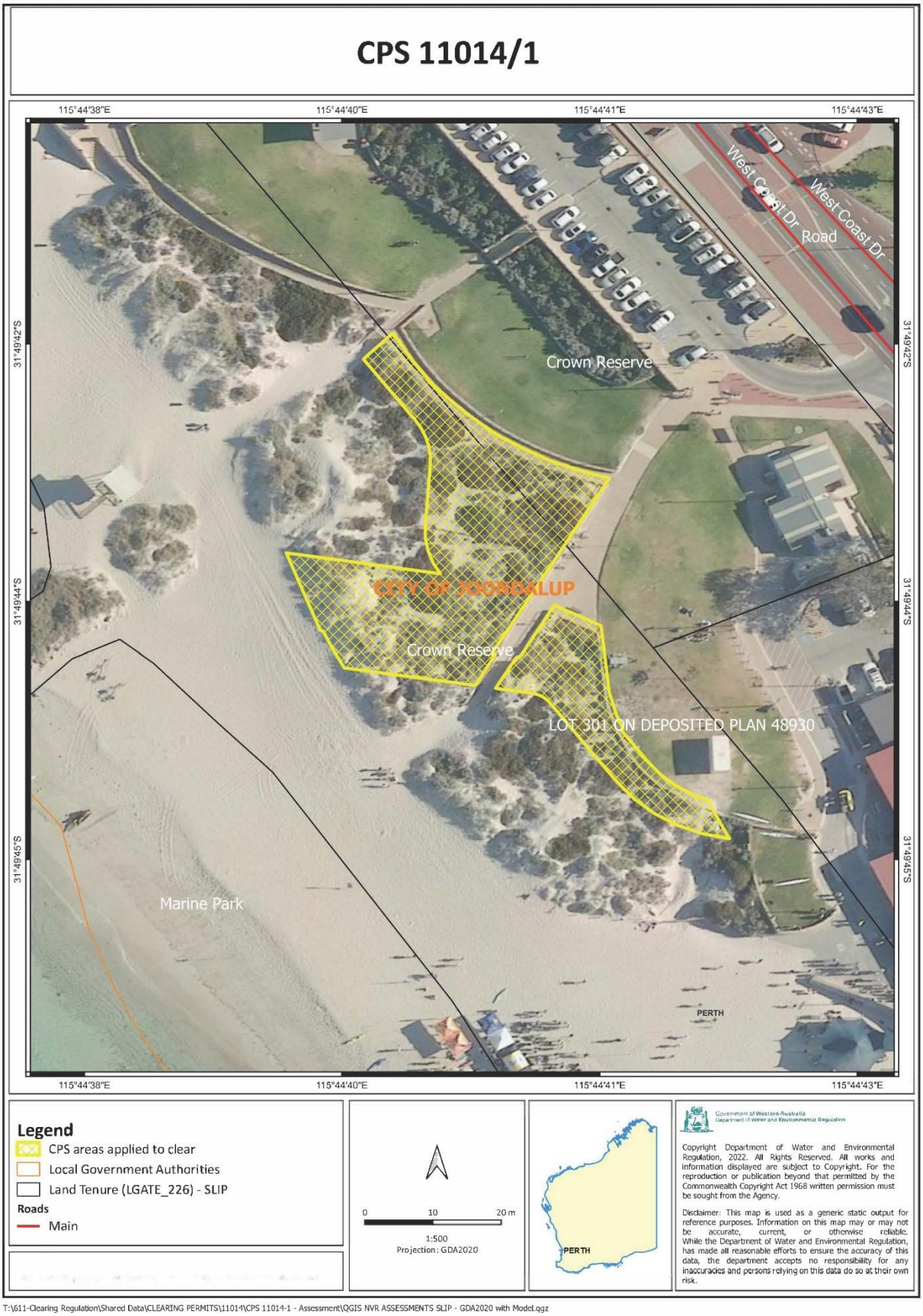

Figure 1- Map of the application area

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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act).

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

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)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016).

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Avoidance and mitigation efforts were submitted by the City of Joondalup. 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. These Avoidance and mitigation measures are detailed below.

Avoidance measures

In efforts to avoid significant residual impacts to vegetation, the City of Joondalup investigated several locations for the surf club and was directed by the council to construct the building between the northern and southern car parks. The design plan of the building was altered, progressing the design from a single story structure to a two-story design and adjusting the width and location of the pedestrian access ramp and amenities. These changes have reduced the overall size and footprint of the surf club clearing area and reduced impacts to native vegetation (City of Joondalup, 2025).

Mitigation measures

To mitigate significant residual impacts of the proposed clearing, the City of Joondalup will revegetate areas which are not permanently replaced with infrastructure or landscaping in order to preserve the dunes. Revegetation will commence within 12 months of the construction being completed to prevent wind erosion. To aid in the success of the onsite revegetation, the City of Joondalup will implement weed management practices and use conservation fencing where applicable. Community Landcare activities are conducted along Sorrento Foreshore by the friends of Sorrento Beach & Marmion Foreshore which will continue to improve the vegetation quality and biodiversity of the proposed revegetation area (City of Joondalup, 2025).

After consideration of avoidance and mitigation measures, an offset to counterbalance the significant residual impacts to remnant vegetation within an extensively cleared landscape was considered necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the onsite revegetation and offset proposed by the City of Joondalup, which meet the environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

Figure 2- area subject to conditions (onsite revegetation of 0.09 hectares)

The area crosshatched red indicates the onsite revegetation area under the granted clearing permit

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix C) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix D) identified that the impacts of the proposed clearing present a risk to significant remnant vegetation, and a possible impact to biological values including fauna and ecological linkages. 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, 55 conservation significant fauna species have been recorded within the local area (10-kilometre radius from the centre of the area proposed to be cleared). Of these, 29 are associated with marine freshwater habitats, or are migratory, which do not occur within or utilise the application area.

Of the remaining 26, 16 are listed as threatened species under the EBPC Act, 10 have been included on the Department of Biodiversity, Conservation and Attractions (DBCA) priority list, with 1 listed as specially protected.

Available data sources indicate the following species located within the local area, have habitat preferences likely to be represented within the application area, and therefore, may occur within the area proposed to be cleared:

- *Isoodon fusciventer* (south-western brown bandicoot/quenda) – Priority 4
- *Synemon gratiosa* (graceful sunmoth) – Priority 4

***Isoodon fusciventer* (south-western brown bandicoot/quenda) – Priority 4**

The nearest quenda record is located 1.07 kilometres north of the application area, with 119 records in the local area. Most of the quenda records are not within the same vegetation complex. The *Isoodon fusciventer* (south-western brown bandicoot/quenda) Inhabits forest, woodland and heathland, usually with dense understorey vegetation, wetland fringes; forages for plant material, fungi and insects by digging in leaf litter and soil (DBCA, 2017). The application area does not provide preferred habitat for quenda due to a lack of dense understory, and minimal leaf litter, therefore the application area is unlikely to be significant habitat for quenda

***Synemon gratiosa* (graceful sunmoth) – Priority 4**

The nearest graceful sunmoth record is located 0.48 kilometres east of the application area within the same vegetation type. The habitat preferences of the graceful sunmoth are associated with coastal heath on Quindalup dunes with preferred host plant *Lomandra maritima* or in Banksia woodland on Spearwood and Bassendean dunes, where preferred host plant *Lomandra hermaphrodita* is widespread; feeding is restricted to the preferred host plants above. The application area may provide an area for the graceful sunmoth to traverse between other areas of vegetation, however is unlikely to provide significant habitat, since the preferred host species vegetation were not identified within the application area during the vegetation survey (Eco Logical, 2024).

Conclusion

Based on the above assessment, the proposed clearing will result in loss of possible habitat for two priority fauna species, however the impact is unlikely to be significant.

For the reasons set out above, it is considered that the impacts of the proposed clearing on fauna habitats can be managed by taking steps to minimise the risk of the introduction and spread of weeds and dieback. The revegetation and offset efforts will further mitigate impacts.

Conditions

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

- Avoid and minimise native vegetation clearing;
- the applicant will be required to take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

3.2.2. Biological values – remnant vegetation - Clearing Principles (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, 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 remnant vegetation cover within the local area is approximately nine per cent of its pre-European native vegetation cover, which is lower than the 10 per cent threshold for constrained areas. As such, the application area is considered to be in an extensively cleared area.

According to available datasets, the application area is mapped as the swan coastal plain – Aeolian deposits, with the vegetation type 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. This description is inconsistent with the two vegetation types mapped and described within the vegetation survey (Eco Logical, 2024), being:

- Sc - Heathland to low open heathland *Scaevola crassifolia* with scattered shrubs *Olearia axillaris* over scattered grassland *Spinifex longifolius* over scattered herbs *Acanthocarpus preissii* and;
- Sl - Grassland to open grassland of *Spinifex longifolius* with scattered shrubs *Olearia axillaris* and *Scaevola crassifolia* (Eco Logical, 2024).

The application area intersects two ecological linkages, the Perth Biodiversity Project and the Gnagara Sustainability Strategy (see Appendix C for details). Aerial imagery indicate the application area provides a link between patches of remnant vegetation across the landscape. However, due to the size of the area to be cleared, and the already cleared adjacent vegetation, the proposed clearing is unlikely to significantly impact or sever connectivity between either of the ecological linkages. The onsite revegetation of 0.089 hectares will further mitigate impacts to linkage values.

Noting the vegetation remaining within the application area is less than the 10 per cent threshold and that the application area provides linkage values across the landscape, the proposed clearing is considered to have a significant residual impact on clearing of native vegetation within an extensively cleared landscape. An offset is required to counterbalance the significant residual impacts for this environmental value, as detailed under section 4 of this report.

Condition

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

- Avoid and minimise native vegetation clearing;
- the applicant will be required to take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- offset of a minimum of 0.48 hectares of native vegetation within Lot 15445 on Deposited Plan 40340 (see figure 3 in section 3.1);
- revegetation of 0.089 hectares within the application area after works are completed (see figure 2 in section 3.1).

3.3. Relevant planning instruments and other matters

The City of Joondalup advised that development approval is not required for the proposed works within the application area and is only required for the commercial space only, which does not require clearing of native vegetation (City of Joondalup, 2025).

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:

- Loss of 0.15 hectares of significant remnant vegetation in an extensively cleared landscape.

To offset the significant residual impact of the proposed clearing, the City of Joondalup intends;

- Revegetate 0.089 hectares within the application area after works are completed, as a mitigation measure;
- offset the reminder of the significant residual impact by rehabilitating 0.48 hectares of good condition vegetation within the Hillarys Foreshore Reserve, Lot 15445 on Deposited Plan 40340, located 3 kilometres northwest of the application area.

The offset area will be planted with species reflective of FCT 29a, the Coastal shrublands on shallow sands Priority Ecological Community (Priority 3). The City of Joondalup will aim to improve the condition of the area to Very Good or Excellent (City of Joondalup, 2025).

The offset site, being Hillarys foreshore reserve is a major conservation area within Bush Forever site 325, which will continue to be managed as a natural area under the Hillarys-Kallaroo Coastal Foreshore Management Plan. The revegetation offset will utilise techniques suited to coastal areas including but not limited to erosion control matting and sand trap fencing. Where required, the City will install temporary fencing and signage to prevent access into the offset site. Maintenance of the site will include additional measures to ensure the success of the revegetation, including weed control, watering, erosion control, and infill planting, as well as site preparation to remove weeds and pest management (City of Joondalup, 2025).

In assessing whether the proposed offset is adequately proportionate to the significance of the remnant vegetation values being impacted, DWER undertook a calculation using the WA Environmental Offsets Metric. The calculation determined that the revegetation of 0.089 hectares with the project area to preserve the existing dunes and the offset planting of at least 5,000 plants from FCT29a, the Coastal shrublands on shallow sands Priority Ecological Community (Priority 3) within a 0.48 hectare area will counterbalance the loss of 0.15 hectares of coastal shrubs to be cleared.

Further, Community Landcare activities including revegetation and weed control are conducted along the Sorrento Foreshore by the Friends of Sorrento Beach & Marmion Foreshore which will continue to improve the vegetation quality and biodiversity of the Sorrento Foreshore Reserve.

The Delegated Officer considers that the proposed onsite revegetation and offset is consistent with the Environmental Offsets Policy (2011) and the Environmental Offsets Guidelines (2014) and adequately counterbalances the significant residual impacts. The justification for the values used in the offset calculation is provided in Appendix F.

Figure 3- Map of area subject to conditions (offset, 0.48 hectares)

The area crosshatched in red indicates the offset site for revegetation under the granted clearing permit.

End

Appendix C. Site characteristics

C.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is a 0.15 hectares of native vegetation in the intensive land use zone of Western Australia. It is within and adjacent to crown reserves which are zoned under the region scheme as regional open space, utilised for public use and urban development. The proposed clearing area contributes to an ecological linkage and is in a small isolated vegetated area 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 nine per cent of the original native vegetation cover.
Ecological linkage	The application area intersects two ecological linkages: • Perth Biodiversity Project and; • Gnagara Sustainability Strategy. The Gnangara Ecological Linkage is a Conceptual Linkage (OBJECTID – 16), which stretches over a 281 hectare area. It is within a broader remnant that has a part in maintaining connectivity between remnants in the local area within zone 7 linkages, connecting coastal linkages, Bold Park, Kings Park, Trigg Bushland and Yellagonga Regional Park (Brown, P.H. et al, 2009). The Perth Regional Ecological Linkage (LINK_ID 1) identifies regional ecological linkages that broadly represent a link between patches of remnant vegetation judged to be of regional significance.
Conservation areas	The application area is not within a conservation area. The closest conservation area is a bush forever site, located 1 kilometre away from the application area.
Vegetation description	Sorrento Foreshore Reserve Flora Survey And Vegetation Condition Assessment (Eco Logical Australia, 2023) indicate the vegetation within the proposed clearing area consists of two vegetation communities: • Sc – heathland to low open heathland *Svaevola crassifolia* with scattered shrubs *Olearia axillaris* over scattered grassland *Spinifex longifolius* over scattered herbs *Acanthocarpus preissi.* • Sl – Grassland to open grassland of *spinifex longifolus* with scattered shrubs *olearia axillaris* and *scaevola crassifolia.* The survey descriptions and maps are available in appendix G. The above survey findings (Eco Logical, 2023) are not consistent with the following description of the Swan Coastal Plain vegetation complex mapped within the application areas (QGIS database): • 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.
Vegetation condition	Sorrento foreshore reserve flora survey and vegetation condition assessment (eco Logical, 2023) indicate the vegetation within the application area is in Very Good (Keighery, 1994) condition, described as: • 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. The full Keighery (1994) condition rating scale is provided in Appendix E. Survey descriptions and mapping are available in Appendix G.

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td>Climate and landform</td><td>The application area occurs on gently undulating to flat topography and has a mean annual maximum temperature of 24.1 degrees Celsius and a mean annual minimum temperature of 14.1 degrees Celsius. The mean annual rainfall is 716.7 millimetres.</td></tr>
<tr><td>Soil description</td><td>The soil is described as white sand, primary dune (Eco Logical Australia, 2024).</td></tr>
<tr><td>Land degradation risk</td><td>The application area is subject to wind erosion (Eco Logical Australia, 2024)
<table>
<tr><th>Risk categories</th><th>Land Unit 1</th></tr>
<tr><td>Wind erosion</td><td>H2: >70% of map unit has a high to extreme wind erosion risk</td></tr>
<tr><td>Water erosion</td><td>M2: 30-50% of map unit has a high to extreme water erosion risk</td></tr>
<tr><td>Salinity</td><td>L1: <3% of map unit has a moderate to high salinity risk or is presently saline</td></tr>
<tr><td>Subsurface Acidification</td><td><3% of map unit has a high subsurface acidification risk or is presently acid</td></tr>
<tr><td>Flood risk</td><td>H2: >70% of map unit has a high water repellence risk</td></tr>
<tr><td>Water logging</td><td>L2: 3-10% of map unit has a moderate to very high waterlogging risk</td></tr>
<tr><td>Phosphorus export risk</td><td>M2: 30-50% of map unit has a high to extreme phosphorus export risk</td></tr>
</table></td></tr>
<tr><td>Waterbodies</td><td>The desktop assessment and aerial imagery indicated that there are no watercourses or water bodies within or adjacent to the application area.
The closest water body is a perennial waterbody located 0.63 kilometres from the application area.
the closets directory of important wetlands Joondalup Lake is located 7.1 kilometres from the application area.</td></tr>
<tr><td>Hydrogeography</td><td>Groundwater salinity within the application area is mapped at 500 to 1000 milligrams per litre total dissolved solids.</td></tr>
<tr><td>Flora</td><td>There are 14 records of priority and threatened flora within 10 kilometres of the application area. Comprising of three priority one (P1), two priority two (P2), six priority three (P3), two priority four (P4), and one threatened flora.
The closest priority flora is Pimelea calcicole, located 0.66 kilometres from the application area.
No conservation significant flora were recorded during surveys conducted in the application area during 2023 (Eco Logical Australia, 2023).</td></tr>
<tr><td>Ecological communities</td><td>The application area is not within a threatened or priority ecological community.
The closest TEC/PEC record Tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain is 2.36 kilometres away.</td></tr>
<tr><td>Fauna</td><td>The desktop assessment identified that a total of 57 threatened or priority fauna species have been recorded within the local area, including 26 threatened fauna species and 31 priority fauna species (DBCA, 2007-). The closest and most abundantly recorded threatened fauna species in the local area is the Zanda latirostris (carnaby's cockatoo), with 668 records within the local area, followed by the Isoodon fusciventer (quenda, southwestern brown bandicoot) with 119, Caretta caretta (loggerhead turtle) with 22 records,, and the Synemon gratiosa (graceful sunmoth) with 108 records.</td></tr>
</table>

C.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	38.44632491
Vegetation complex					
Cottesloe Complex-Central and South	45,299.61	14,567.87	32.16	6,606.12	14.58317703
Local area					
10 km radius	15,979.35	1,439.23	9.01	-	-

*Government of Western Australia (2025a)

C.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
Isoodon fusciventer (quenda, southwestern brown bandicoot)	P4	Y	Y	1.07	119.00
Synemon gratiosa (graceful sunmoth)	P4	Y	Y	0.48	108.00

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

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared does not contain regionally significant flora, fauna, habitats, assemblages of plants. The area proposed to be cleared may contain locally or regionally significant assemblages of plants relating to an ecological linkage.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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 may contain habitat for conservation significant fauna, namely, *Isoodon fusciventer* (quenda, southwestern brown bandicoot), and the *Synemon gratiosa* (graceful sunmoth), however impacts are not considered to be significant.	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: The area proposed to be cleared does not contain any threatened flora listed under the BC Act. No threatened flora were recorded during the flora surveys (Eco Logical Australia, 2023).	Not likely to be at variance	No
Principle (d): "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community." Assessment: The area proposed to be cleared is not within a mapped threatened ecological community (TEC), and does not include vegetation which may represent a TEC. A TEC as defined in the BC Act or the Commonwealth EBPC Act.	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 the mapped vegetation type is inconsistent with the national objectives and targets for biodiversity conservation in Australia, with 9.01 percent remnant vegetation within the local area (10 kilometres radius). 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, the proposed clearing is unlikely to significantly impact or sever connectivity between either of the ecological linkages.	At variance	Yes *Refer to Section 3.2.3, 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 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		

Assessment against the clearing principles	Variance level	Is further consideration required?
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: No watercourses or wetlands are recorded within the application area, and the proposed clearing is not growing in association with an environment associated with a watercourse or wetland. The application area is adjacent to the shoreline, however the proposed onsite revegetation will mitigate any impacts to the dune system. The proposed clearing is unlikely to impact on- or off-site hydrology and water quality.	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 soils are not susceptible to water erosion, nutrient export or salinity, however, mapped as highly susceptible to wind erosion. Noting the size and location of the application area, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Given no watercourses, wetlands or Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.	Not at variance	No
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 soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no wetlands or watercourses are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.	Not at variance	No

Appendix E. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from

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

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

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

Appendix F. Offset calculator value justification

WA Environmental Offsets Calculator Rationale for scores used in the offset calculator.

Calculation	Score (feature)	Rationale
Description	Remnant vegetation in extensively cleared local area	The proposed clearing area contributes to an ecological linkage and is in a small isolated vegetated area in a highly cleared landscape, where the local area retains only 9 per cent remnant vegetation.
Type of Environmental value	Vegetation/habitat	Vegetation
Conservation significance of environmental value	Terrestrial native vegetation complex - <10% extent remaining	Clearing within an extensively cleared landscape
Landscape-level value impacted	Yes/no	yes
Significant impact		
Description	Low remnant vegetation	The proposed clearing area contributes to an ecological linkage and is in a small isolated vegetated area in a highly cleared landscape, where the local area retains only 9 per cent remnant vegetation.
Significant impact (hectares) / type of feature	0.15	Area proposed to be cleared is 0.15 hectares
Quality (scale) / Number	7	Sorrento foreshore reserve flora survey and vegetation condition assessment (eco Logical, 2023) indicate the vegetation within the application area is in Very Good (Keighery, 1994) condition.
Rehabilitation Credit		
Description	Onsite revegetation	To prevent further degradation to the native vegetation surrounding the clearing area, the applicant has proposed to undertake revegetation within the project area (Lot 15444 on Plan 40340, Lot 300 on Plan 48930) within 12 months of the construction being completed to prevent impacts from wind erosion.
Proposed rehabilitation	0.09	The area within the application area proposed for revegetation is 0.09 hectares.
Current quality of rehabilitation site / start number	0.00	Since the area is being cleared for the project, the area will begin as completely degraded before revegetation
Future quality Without rehabilitation	0.00	Without the onsite revegetation, the area will remain cleared, and in completely degraded condition.
Future quality with rehabilitation	6	After revegetation, the area will be improved to a Good quality, with ongoing maintenance. The applicant has advised Community Landcare activities including revegetation and weed control are conducted along the Sorrento Foreshore by the Friends of Sorrento Beach & Marmion Foreshore which will continue to improve the vegetation quality and

		biodiversity of the Sorrento Foreshore Reserve.
Time until ecological benefit	12	The benefits of revegetation actions are expected to provide benefit within 12 years, which has also considered the time taken to commence revegetation.
Confidence in rehabilitation result (%)	0.7	There is a medium level of confidence that the vegetation can be restored within the application area.
Offset		
Description	Offset of 0.48 hectares to minimise impacts to a low remnant vegetation (principle e)	The applicant has proposed to rehabilitate 0.48 hectares of good condition vegetation within the Hillarys Foreshore Reserve, Lot 15445 on Deposited Plan 40340. The offset area will be planted with species reflective of FCT 29a, the Coastal shrublands on shallow sands Priority Ecological Community (Priority 3). The City of Joondalup will aim to improve the condition of the area to Very Good or Excellent (City of Joondalup, 2025). The revegetation offset is located at Pinnaroo Point, Lot 15445 on Deposited Plan 40340, and will utilise techniques suited to coastal areas including but not limited to erosion control matting and sand trap fencing. Where required, the City will install temporary fencing and signage to prevent access into the offset site. Ongoing maintenance of the site will include regular weed control, and summer watering events (City of Joondalup, 2025).
Proposed offset (area in hectares)	0.48	The applicant has proposed to rehabilitate 0.48 hectares
Current quality of offset site	5	The offset area shows signs of disturbance and weeds. Vegetation structure is intact. The survey provided by the applicant determines the quality to be Good (5).
Future quality without offset	5	assuming no change in quality without the proposed revegetation.
Future quality with offset	7	The proposed revegetation including erosion control mapping and sand trapping, the condition is likely to improve to a Very Good condition.
Time until ecological benefit	12	The time it would take for the proposed improvements to the native vegetation to occur, also according to the City of Joondalup (revegetation plan document) and accounting for the time taken to commence revegetation.

Confidence in offset result	0.8	High level of confidence that the vegetation condition would improve, noting it is within a Bush Forever area.
Duration of offset implementation	20	Maximum value to be used. The offset site will provide long term security.
Time until offset site secured	1 year	The site is already within a Bush Forever area. Minimum value given.
Risk of future loss without offset (%)	10	The proposed offset is in a Bush Forever Site.
Risk of future loss with offset (%)	10	Risk of loss will not change as it is within a Bush Forever Site.

Appendix G. Biological survey information excerpts/photographs of vegetation

Figure 4 - vegetation type, extracted from flora survey and vegetation condition assessment (Eco Logical, 2023)

Figure 5 - Vegetation condition, extracted from flora survey and vegetation condition assessment (Eco Logical, 2023)

Plate 1: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from the southern extent of the clearing area, facing west. 31 49'45"S, 115 44'42"E

Plate 2: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from the southern dune, facing southwest. 31 49'44"S, 115 44'41"E

Figure 6 - site photos extracted from supporting document (City of Joondalup, 2025)

Plate 3: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from southern dune, facing west. 31 49'44"S, 115 44'41"E

Plate 4: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from the southern dunes' northern extent, facing south. 31 49'43"S, 115 44'40"E

Figure 7- site photos extracted from supporting document (City of Joondalup, 2025)

Plate 5: Photo of existing beach access stairs to be removed and included in onsite revegetation efforts for the Sorrento Surf Life Saving Club upgrade. Taken from between the northern and southern dunes, facing southwest. 31 49'43"S, 115 44'40"E

Plate 6: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from the northern dune's southern extent, facing west. 31 49'44"S, 115 44'40"E

Figure 8 - site photos extracted from supporting document (City of Joondalup, 2025)

Plate 7: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from the northern dune's southern extent, facing northwest. 31 49'44"S, 115 44'41"E

Plate 8: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from the northern dune, facing southwest. 31 49'43"S, 115 44'41"E

Figure 9 - site photos extracted from supporting document (City of Joondalup, 2025)

Plate 9: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from the northern dune, facing west. 31 49'43"S, 115 44'41"E

Plate 10: Photo of vegetation present within and around the clearing area for the Sorrento Surf Life Saving Club upgrade. Taken from the northern dune's northern extent, facing south. 31 49'42"S, 115 44'39"E

Figure 10 - site photos extracted from supporting document (City of Joondalup, 2025)

Appendix H. Sources of information

H.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)

- Aboriginal Heritage Places (DPLH-001)
- 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)

H.2. References

City of Joondalup (2025) *Clearing permit application and supporting information for CPS 11014/1*, received 27 March 2025 (DWER Ref: DWERDT1096809 and DWERVT18295).

Brown, P.H., Davis, R.A., Sonneman, T. and Kinloch, J. (2009) Ecological Linkages Proposed For The Gnangara Groundwater System

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.

Eco Logical Australia 2024. *Sorrento Foreshore Reserve Flora Survey and Vegetation Condition Assessment*. Prepared for City of Joondalup.

Eco Logical Australia 2024. *Hillarys-Kallaroo Coastal Foreshore Reserve Flora Survey And Vegetation Condition Assessment*. Prepared for City of Joondalup.

Environmental Protection Authority (EPA) (2016). *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf.

Environmental Protection Authority (EPA) (2016). *Technical Guidance – Terrestrial Fauna Surveys.* Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf.

Government of Western Australia (2019) *2018 South West Vegetation Complex Statistics. Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca

Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019.* WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) *Vegetation Complexes of the Darling System, Western Australia*. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

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

Mattiske, E.M. and Havel, J.J. (1998) *Vegetation Complexes of the South-west Forest Region of Western Australia.* Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) *South West Regional Ecological Linkages Technical Report*, Western Australian Local Government Association and Department of Environment and Conservation, Perth.

Natural Area Holdings Pty Ltd, (2016), City of Joondalup Hillarys –Kallaroo Coastal Foreshore Reserve Management Plan

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) *Atlas of Australian Soils*, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.

Schoknecht, N., Tille, P. and Purdie, B. (2004) *Soil-landscape mapping in South-Western Australia – Overview of Methodology and output*s Resource Management Technical Report No. 280. Department of Agriculture.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Valentine, L.E. and Stock, W. (2008) *Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy Study Area*. Edith Cowan University and Department of Environment and Conservation. December 2008.

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 10 June 2025)