



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10923/1
Permit type:	Area permit
Applicant name:	City of Stirling
Application received:	21 January 2025
Application area:	0.006 hectares of native vegetation
Purpose of clearing:	Constructing a surf lookout
Method of clearing:	Mechanical
Property:	Lot 8 on Deposited Plan 240238 (Crown Reserve 12992)
Location (LGA area/s):	City of Stirling
Localities (suburb/s):	Trigg

1.2. Description of clearing activities

The vegetation proposed to be cleared is distributed across five fragmented patches of dune vegetation at South Trigg Beach (see Figure 1, Section 1.5). The proposed clearing will facilitate the installation of a small surf lookout platform and the construction of limestone retaining walls (City of Stirling, 2025a).

1.3. Decision on application

Decision:	Granted
Decision date:	19 August 2025
Decision area:	0.006 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 14 days and 14 submissions were received. Consideration of matters raised in the public submissions is summarised in Appendix B.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix G.1), photographs of the vegetation and supporting information provided by the applicant (Appendix F), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into account that the purpose of the clearing was to provide a surf lookout platform which is expected to limit pedestrian access to the dunes to promote successful establishment of newly planted dune vegetation.

The assessment identified that the proposed clearing will result in:

- the loss of 0.006 hectares of native vegetation that is representative of the Coastal shrublands on shallow sands, southern Swan Coastal Plain ('floristic community type 29a') (SCP29a) priority ecological community (PEC);
- the loss of 0.006 hectares of regionally significant bushland within Bush Forever Site 308;
- the potential for land degradation in the form of wind erosion;
- the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined that some of the impacts of the proposed clearing, including impacts to the SCP29a PEC, the potential to facilitate wind erosion, and the introduction of weeds and dieback, can be minimised and managed to unlikely lead to an unacceptable risk to environmental values through permit conditioning. However, the loss of regionally significant bushland within Bush Forever Site 308 remains significant even after the application of minimisation and mitigation measures and constitutes a significant residual impact.

In accordance with the *Government of Western Australia's Environmental Offsets Policy* (2011), *Environmental Offsets Guidelines* (2014), and *State Planning Policy 2.8 - Bushland policy for the Perth Metropolitan Region* (2010) the Delegated Officer determined that the revegetation of at least 0.012 hectares of dune vegetation within Bush Forever Site 308 is required to address the significant residual impacts of the proposed clearing (see Section 4).

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

- avoid, minimise, and reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- commence construction no later than two months after undertaking the authorised clearing activities to reduce the potential for wind erosion; and
- implement an offset involving the rehabilitation of at least 0.012 hectares of dune vegetation within Bush Forever Site 308 to counterbalance the loss of regionally significant bushland.

1.5. Site map



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

2 Legislative context

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

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

- the precautionary principle
- the principle of intergenerational equity
- the polluter pays principle
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

Relevant policies considered during the assessment include:

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

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)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant advised that there is a genuine need to provide a dedicated observation point for surfers at South Trigg Beach, noting:

- there is currently no publicly accessible infrastructure at the specific vantage point necessary for observing wave conditions, resulting in surfers navigating the dunes to seek visibility, and
- foot traffic from surfers within dune vegetation has been excessive and is a limiting factor for the success of dune restoration efforts opposite the Surfing WA building, with approximately 40 per cent of the 0.365-hectare dune area subject to persistent trampling (City of Stirling, 2025a).

The applicant advised that the intent of the proposed clearing is to install a small surf lookout platform, strategically positioned at a high point within the sand dunes to ensure optimal visibility of wave activity for surfers, while minimising impacts to dune vegetation and allowing surrounding dunes to be restored with minimal foot traffic (City of Stirling, 2025a). The applicant has indicated that the surf lookout platform will be complemented by updates to the public open space adjacent to the dunes (City of Stirling, 2025a). However, the proposed upgrades are predominantly within the existing lawn space and the clearing required to facilitate works is limited to 0.006 hectares for the installation of the surf lookout platform and the construction of limestone retaining walls to provide a clean edge between the turf and sand dunes and further prevent the public from accessing the dunes (City of Stirling, 2025a).

The applicant advised that the proposed clearing has been limited to the extent necessary to facilitate construction and that the location of all infrastructure has been carefully considered to minimise environmental impact (City of Stirling, 2025a). The applicant advised that the lookout platform and associated landscape works have been designed with the goal of minimising vegetation clearing, protecting the dunes, and enhancing recreational amenity within a designated area (City of Stirling, 2025b). The design involves the installation of two informal paths to guide visitors to the designated surf observation points as a low impact, minimal-infrastructure solution (City of Stirling, 2025b). The design has also incorporated physical management measures such as limestone walls to minimise sand drift and mitigate weed encroachment into the dunes (City of Stirling, 2025b).

The applicant has indicated that the following measures will be implemented during clearing and construction activities to limit indirect impacts:

- Landscape contractors will be required to retain and protect remaining dune vegetation through temporary site fencing and bunting,
- The authorised clearing area will be fenced to limit construction activities to the scope of the works area,

- Technical officers will superintend the construction and regularly inspect the site to ensure any clearing is restricted to authorised areas, and
- Suitable, weed free vegetative material will be stockpiled for use in dune restoration efforts (City of Stirling, 2025a).

Following clearing and construction, the applicant has advised that an extensive dune rehabilitation program will be implemented (City of Stirling, 2025a). To support successful revegetation, low dune fencing, plant guards and erosion control matting will be used as needed (City of Stirling, 2025b). As the planted vegetation matures, it will further deter foot traffic, contributing to long-term dune stability and environmental preservation (City of Stirling, 2025b).

In considering the above, 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.

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to regionally significant bushland within Bush Forever Site 308 was necessary. In accordance with SPP 2.8 and the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

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 biological values (ecological communities), significant remnant vegetation and conservation areas, and land degradation. 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 (ecological communities) - Clearing Principle (a)

Assessment

Although available mapping and spatial data did not indicate that conservation significant ecological communities were located within the application area or immediate surrounds, photographs and supporting information supplied by the applicant indicate that the vegetation within the application area may be representative of the Coastal shrublands on shallow sands, southern Swan Coastal Plain ('floristic community type 29a') (SCP29a) ecological community, which is listed as a Priority 3 ecological community (PEC) by the Department of Biodiversity, Conservation and Attractions (DBCA). SCP29a is described as mostly heaths on shallow sands over limestone close to the coast with no single dominant but important species include *Spyridium globulosum*, *Rhagodia baccata*, and *Olearia axillaris* (DBCA, 2023). The applicant advised that this assumption is based on desktop estimations of potential Gibson et al. (1994) Floristic Community Types (FCTs) and observations of vegetation descriptions from site inspections, but no formal assessment against FCTs have been undertaken for the area (City of Stirling, 2025b). In the absence of targeted surveys, DWER has taken a precautionary approach and assumed that the application area comprises 0.006 hectares of the SCP29a PEC.

Based on DBCA datasets (see Appendix G.1) and known biological survey information for the local area, there is approximately 61 hectares of native vegetation representing the SCP29a PEC within 10-kilometres of the application area. Of this, 58 hectares is located within Bush Forever areas and has a relatively low risk of loss in the future.

The application area consists of five fragmented patches of SCP29a representative vegetation between 0.0005 and 0.0019 hectares in size and in Good to Degraded (Keighery, 1994) condition. Based on the photographs and supporting information supplied by the applicant, it is highly likely that the occurrence of the SCP29a PEC extends beyond the application area into the adjacent 0.373-hectare dune cell and may also be present in other dune systems along South Trigg Beach. The loss of approximately 1.5 per cent of the SCP29a PEC within the dune cell and 0.01 per cent of the PEC within the local area is unlikely to significantly reduce the community's extent of occurrence.

Further, dune restoration efforts proposed to offset impacts to Bush Forever Site 308 (see Section 4) are guided by reference sites within similar vegetation types to the application area and will utilise suitable, weed free vegetative material from clearing activities. Therefore, vegetation commensurate with the SCP29a PEC will likely be restored through the proposed offset. Restoration efforts, combined with management measures to minimise sand drift and

mitigate weed spread are sufficient to mitigate indirect impacts to the remaining SCP29a PEC adjacent to the application area.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.006 hectares of native vegetation that is representative of the SCP29a PEC. For the reasons set out above, it is considered that the impacts of the proposed clearing can be managed to be environmentally acceptable and does not constitute a significant residual impact.

Conditions

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

- weed and dieback management measures, requiring the permit holder to take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback to adjacent vegetation.

3.2.2. Significant remnant vegetation and conservation areas - Clearing Principles (e) and (h)

Assessment

Significant remnant vegetation

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). Further, the Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region to be a constrained area, in which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008).

While the current vegetation extent for the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and the mapped Quindalup vegetation complex is above the 10 per cent threshold, remaining native vegetation in the local area is approximately 9.93 per cent (see Appendix C.2). Therefore, the application area may be considered a remnant within an extensively cleared landscape.

However, the proposed clearing represents less than 0.001 per cent of remaining native vegetation in the local area. The application area is also highly fragmented, both within the dune cell and from other nearby vegetation, and is not likely provide an ecological linkage or to be significantly contributing to vegetation extent in the local area.

Conservation areas (Bush Forever Site 308)

The application area is located within Bush Forever Site 308 and has been identified as regionally significant bushland subject to the policy measures of SPP 2.8 (see Section 3.3). Therefore, the proposed clearing will result in the loss of 0.006 hectares of native vegetation within a conservation area and may impact on the environmental values of Bush Forever Site 308.

Advice received from the Department of Planning, Lands and Heritage (DPLH) (2025) indicates that the proposed clearing can be justified under SPP 2.8, given:

- The applicant's intent to formalise access to the dune to minimise long-term disturbance, limit the extent of clearing, and rehabilitate the dune,
- The ongoing social and recreational needs of the community,
- The existing use of the site for recreation,
- The designated purpose of Crown Reserve 12992 under management order being 'Recreation', and
- The land being reserved for Regional open space under the Metropolitan Region Scheme (MRS).

The Delegated Officer determined that an offset in accordance with Appendix 4 of SPP 2.8 is required to counterbalance the loss of vegetation within Bush Forever Site 308 and ensure there will be an environmental gain for the proposed clearing. The applicant has proposed to restore at least 0.012 hectares of dune vegetation immediately adjacent to the application area, which is sufficient to counterbalance the impacts to regionally significant bushland within Bush Forever Site 308 and align with SPP 2.8.

DPLH advised that the proposed revegetation should take into consideration the bushfire mitigation requirements of the approved Bush Fire Management Plan (i.e., management of vegetation to a low-risk state) and should have due regard, where appropriate, to the landscaping plan approved as part of the Surfing WA Development Application (DPLH, 2025).

The proposed clearing also has the potential to result in indirect impacts to habitat values in Bush Forever Site 308 through the spread of weeds and other pathogens.

Conclusion

Based on the above assessment, the proposed clearing will impact regionally significant bushland within Bush Forever Site 308. There is potential for the clearing activities to result in the introduction or spread of weeds into adjacent vegetation. It is considered that impacts to adjacent vegetation can be appropriately mitigated and managed through hygiene protocols.

For the reasons set out above, it is considered that the impacts of the proposed clearing on significant bushland within Bush Forever Site 308 constitutes a significant residual impact. In accordance with SPP 2.8, this significant residual impact has been addressed through the conditioning of environmental offset requirements, as outlined under Section 4.

Conditions

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

- weed and dieback management measures, requiring the permit holder to take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback to adjacent vegetation, and
- offset – revegetation and rehabilitation, requiring the permit holder to rehabilitate at least 0.012 hectares of dune vegetation within Bush Forever Site 308.

3.2.3. Land degradation (wind erosion) - Clearing Principle (g)

Assessment

The application area has a high risk of land degradation resulting from wind erosion due to the characteristics of the mapped soil system (DPIRD, 2025), the sandy nature of topsoil across the application area, and its coastal location. However, given the extent of the application area across five fragmented patches of dune vegetation and the Good to Degraded (Keighery, 1994) condition, the proposed clearing is unlikely to cause appreciable land degradation.

It is also acknowledged that the proposed end land use will involve permanent structures (e.g., surf lookout platform, limestone retaining walls) that will minimise sand drift and limit erosion. The areas not subject to permanent structures will be revegetated with native vegetation cover (see Section 4) and, if required, erosion matting will be installed to minimise the risk of erosion.

To minimise the risk of wind erosion during clearing and construction through the exposure of bare soils, the applicant will be required to ensure works commence within two months of clearing.

Conclusion

Based on the above assessment, the proposed clearing may cause land degradation in the form of wind erosion. For the reasons set out above, it is considered that the risk of wind erosion can be managed to be environmentally acceptable through permit conditioning.

Conditions

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

- Wind erosion management, requiring the permit holder to commence construction no later than two months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on DWER's website on 24 February 2025, inviting submissions from the public within a 14-day period. A total of 14 submissions were received at this time and consideration of matters raised in the public submissions are summarised in Appendix B.

Noting that the application area is within a coastal reserve, the Delegated Officer considers that *State Planning Policy 2.6 – State Coastal Planning Policy* (SPP 2.6) is a relevant matter for this application. In having regard to SPP 2.6, the Delegated Officer considers that the proposal is consistent with the policy objectives and measures, noting that the proposal seeks to provide for access to public coastal foreshore reserves, enhance coastal zone values, and design public open space that complements and enhances the coastal environment.

The application area is zoned Regional Open Space under the Metropolitan Region Scheme (MRS) and is a designated Bush Forever area. Therefore, the Delegated Officer considers that SPP 2.8 is a relevant matter for this application.

SPP 2.8 sets out that:

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

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

In considering SPP 2.8 and advice received from DPLH (see Section 3.2.2), the Delegated Officer considered it appropriate to grant the clearing permit in relation to Bush Forever Site 308 given the proposed surf lookout platform is consistent with the purpose and intent of the land parcel, is justified based on the need to provide a dedicated observation point for surfers (see Section 3.1), and a suitable environmental offset is implemented to counterbalance the loss of vegetation (see Section 4). Therefore, the Delegated Officer determined that the proposed clearing is consistent with the provisions of SPP 2.8.

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.

4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that a significant residual impact to regionally significant bushland within Bush Forever Site 308 remains after the application of the avoidance and mitigation measures summarised in Section 3.1.

The applicant proposed an environmental offset involving the revegetation of at least 0.012 hectares of dune vegetation within Bush Forever Site 308, immediately adjacent to the application area (see Figure 2 below).



Figure 2. Map of the revegetation offset area (cross-hatched red) with respect to the application area (cross-hatched yellow).

The South Trigg Lookout Revegetation Plan (City of Stirling, 2025c) indicates that the proposed revegetation offset area is currently in Completely Degraded to Very Good (Keighery, 1994) condition, with weed cover ranging from 0-20 per cent in the central portion of the cell, up to 81-100% in the westernmost portion (see Figures 3 and 4 below). Based on a reference dune cell in predominantly Good to Very Good (Keighery, 1994) condition approximately 250 metres south of the application area, the applicant has committed to revegetating the offset site to achieve:

- An improvement in vegetation condition of the foredune (excluding front 15 metres) and primary swale to a Good to Very Good (Keighery, 1994) condition (see Figure 5 below),
- The establishment of a healthy and functional dune system with local native species,
- A reduction in weed cover to a maximum of 20 percent throughout the primary swale (see Figure 6 below),
- An increase in native vegetation cover to at least 35 per cent throughout the primary swale, and
- The maintenance of *Ammophila arenaria* (marram) and *Thinopyrum junceiforme* (sea wheat) to front 15 metres of the foredune to ensure integrity of frontal dune, while integrating native species within the foredune including local native *Spinifex longifolia* and/or *Spinifex hirsutus* (City of Stirling, 2025c).

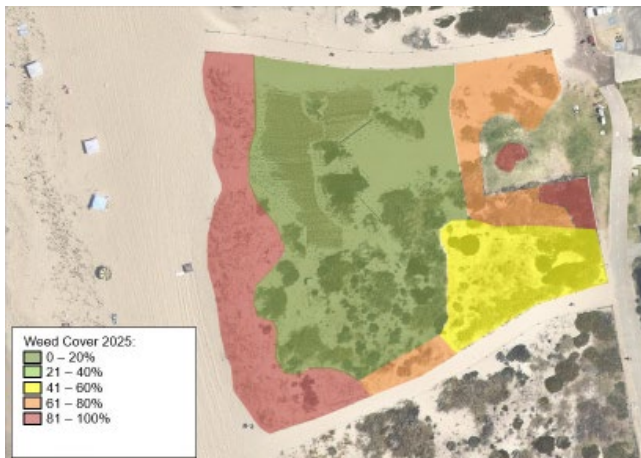


Figure 3. Current weed cover within the revegetation offset area (City of Stirling, 2025c).



Figure 4. Current Keighery (1994) vegetation condition within the revegetation offset area (City of Stirling, 2025c).



Figure 5. Target weed cover within the revegetation offset area (City of Stirling, 2025c).



Figure 6. Target Keighery (1994) vegetation condition within the revegetation offset area (City of Stirling, 2025c).

In assessing whether the proposed offset is adequately proportionate to the significance of the environmental values being impacted, DWER noted that Appendix 4 of SPP 2.8 specifies that clearing of high-value vegetation within Bush Forever Sites should be offset with a net outcome of at least 2 times the calculated habitat loss in hectares, to ensure there will be an environmental gain for the proposed clearing. Given the proposed clearing of 0.006 hectares, the revegetation of at least 0.012 hectares is sufficient to offset the loss of vegetation within Bush Forever Site 308.

Therefore, the Delegated Officer considers that the proposed offset adequately counterbalances the significant residual impact to Bush Forever Site 308 and is consistent with the *WA Environmental Offsets Policy* (2011), *WA Environmental Offset Guidelines* (2014), and SPP 2.8.

End

Appendix A. Additional information provided by applicant

Since the application was accepted for assessment on 24 February 2025, the following additional information was provided by the applicant:

Summary of comments	Consideration of comment
<p>The applicant provided the following additional supporting information on 13 June and 15 July 2025, in response to a formal Request for Further Information issued by DWER:</p> <ul style="list-style-type: none"> • Response to matters raised in public submissions, • Clarification of the vegetation type within the proposed clearing area, and • Identification of an environmental offset within Bush Forever Site 308 (City of Stirling, 2025b). 	<p>The additional information provided was considered as follows:</p> <ul style="list-style-type: none"> • The applicant's response to matters raised in public submissions was used to inform DWER's consideration of these matters under <i>Appendix B</i>, • The vegetation type is summarised in the site characteristics under <i>Appendix C</i>, and • The proposed environmental offset is presented in <i>Suitability of offsets</i> (see Section 4).

Appendix B. Details of public submissions

DWER advertised the application on 24 February 2025 for 14 calendar days. A total of 14 submissions were received. Where submissions raised similar concerns, consideration of the comments provided was combined into one ground of submission to allow a more streamlined response. A total of 11 grounds of submission were raised across the 14 submissions. Table 1 below indicates the overlap in grounds between submissions. DWER's consideration of the submissions is summarised in Table 2.


Table 1. Summary of grounds of submission (Submissions, 2025).


	Ground of submission	Submission													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Necessity of clearing	✓			✓	✓	✓	✓	✓		✓	✓		✓	
2.	Demonstration of mitigation hierarchy					✓	✓	✓		✓	✓			✓	
3.	Inadequate environmental management		✓	✓		✓	✓	✓			✓	✓		✓	
4.	Inadequate environmental assessment	✓				✓	✓	✓			✓			✓	
5.	Impacts to significant environmental values			✓									✓		
6.	Protection of conservation areas	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7.	Erosion risk					✓	✓	✓			✓			✓	
8.	Planning approvals	✓													
9.	Inconsistency with the Coastal Hazard Risk Management and Adaptation Planning (CHRMAP) framework,	✓													
10.	Inconsistency with <i>State Planning Policy 2.6 – Coastal Planning</i>	✓													
11.	Unauthorised clearing			✓		✓	✓	✓	✓	✓	✓			✓	

Table 2. Details of public submissions (Submission, 2025) and DWER's consideration of matters raised.


	Summary of comments	Consideration of comment
1.	<p>A number of submissions stated that the necessity of the proposed clearing has not been adequately justified and that there are alternatives to clearing that have not been appropriately considered.</p> <p>In particular, the submissions noted the adjacent Surfing WA facility, which provides an elevated outdoor structure with views of surf conditions as an alternative to the proposed lookout platform. It was also raised that the business case for the Surfing WA facility specified that "passive surveillance" would be enabled from the building to the southern car parks and beach and that there would be "...minimal disruption to coastal sand dunes". The submissions proposed that the City could negotiate with Surfing WA for public access to these facilities as an alternative to clearing.</p> <p>The submissions also suggested that the proposed surf lookout platform and limestone retaining wall will not serve the intended purpose of limiting dune access and erosion, noting:</p> <ul style="list-style-type: none"> members of the public will still be able to access and trample dune vegetation, unless the dunes are fully fenced to restrict unauthorised access; limestone retaining walls require ongoing maintenance by machinery that will impact the dune ecosystems and facilitate erosion; and similar structures have been installed at Mullaloo Beach and subsequently had to be removed due to damage caused to the coastal reserve. 	<p>DWER's consideration of the necessity of the proposed clearing and the applicant's consideration of alternatives are summarised in <i>Avoidance and mitigation measures</i> (see Section 3.1).</p> <p>In addition, the applicant advised that due to the degree of trampling currently experienced, a suitable incentive is necessary for the community to avoid trampling areas which should be exclusively used as dune conservation habitat (City of Stirling, 2025b).</p> <p>In relation to the adjacent Surfing WA facility, the applicant (City of Stirling, 2025b) advised that:</p> <ul style="list-style-type: none"> Surfing WA operates as a private entity with its own policies and governance, which makes facilitating public access to its facilities inappropriate. While the upper terraces adjacent to the Surfing WA Headquarters provide coastal views, they do not offer the specific vantage point necessary for observing wave conditions, something surfers actively seek when navigating the dunes. The proposed lookout platform has been strategically positioned at a high point within the sand dunes to ensure optimal visibility of wave activity while minimising impact on dune vegetation. <p>Regarding the intended purpose of limiting dune access and erosion, the applicant (City of Stirling, 2025b) advised that:</p> <ul style="list-style-type: none"> The City is confident that the proposed surf lookout and retaining walls, combined with dune revegetation, erosion control matting, low fencing, and educational signage, will effectively minimize public disturbance to the dunes. Limestone retaining walls are utilised across the 7.5 kilometres of coastline managed by the City and provide an effective barrier against unauthorised access while helping control weed encroachment. Limestone retaining walls are designed for longevity, with a minimum lifespan of 50 years and require little to no maintenance. Enclosing the area with conservation fencing has not been proposed, to maintain clear sightlines across the public open space. The low dune fencing proposed for this project is a widely used method and is effective in deterring unauthorised access at

	Summary of comments	Consideration of comment
		<p>nearby Trigg Lookout. Regular monitoring will be conducted, and additional dune fencing may be installed, if required.</p> <ul style="list-style-type: none"> • The City understands that the similar structures being referenced are at the West Lookout, which remains in place on the dune face but has recently been buried by sand. In contrast, the proposed lookout platform at Trigg will be positioned at a high point at the rear of the dune, making the two situations fundamentally different and not directly comparable. • The proposed location for the Trigg Surf Lookout has been successfully stabilised through the City's recent revegetation and erosion control measures. However, if the structure is affected by coastal processes, it can be removed or relocated as necessary.
2.	Several submissions raised that the clearing permit application has not demonstrated adequate consideration of the mitigation hierarchy.	DWER's consideration of the applicant's implementation of the mitigation hierarchy is summarised in <i>Avoidance and mitigation measures</i> (see Section 3.1).
3.	<p>Several submissions expressed concerns that there has not been adequate environmental management of the area to date, citing past clearing and unsuccessful dune restoration as a key cause of dune deterioration and erosion in the area.</p> <p>The submissions indicated that appropriate measures have not been implemented to control or prohibit access to the dunes, redirect surfers to existing lookouts and views at Trigg Beach, ensure revegetation success, or minimise erosion and sand drift onsite.</p> <p>The submissions proposed that additional clearing of dune vegetation for the proposal will worsen dune deterioration and that the site will not be adequately managed post-clearing.</p>	<p>To consider this ground of submission, DWER sought further information from the applicant regarding its management of the site to date. The applicant (City of Stirling, 2025b) advised that:</p> <ul style="list-style-type: none"> • The City has successfully implemented a comprehensive dune rehabilitation program across the Trigg coastline, followed by effective long-term management. • In preparation for this project, the City partnered with Stirling Natural Environment Coastcare (SNEC) volunteers to rehabilitate the front face of the dune at Trigg Beach. Both SNEC and Perth NRM have contributed thousands of volunteer hours to rehabilitation projects across the City of Stirling. • Figures 7 and 8 below provide before-and-after photos to demonstrate the effectiveness of the City's restoration strategy. While the recently revegetated dune is establishing well, it remains at risk of failure if measures are not implemented to restrict pedestrian access east of the dunes. • The primary challenge in restoring the dune system opposite the Surfing WA Headquarters has been the persistent foot traffic from surfers seeking views of the surf conditions, which has hindered rehabilitation efforts.

	Summary of comments	Consideration of comment
		<ul style="list-style-type: none">• The City is confident that this project will significantly enhance dune health, noting the areas of vegetation proposed for clearing are already isolated and degraded.• In addition to protecting existing vegetation by restricting access, the works will facilitate the revegetation of over 200 sqm of dune and the conversion of more than 50 sqm of lawn into dune/native vegetation.  <p data-bbox="1167 1209 2038 1273">Figure 7. Trigg Beach dune in April 2024 prior to revegetation (City of Stirling, 2025b).</p>

	Summary of comments	Consideration of comment
		 <p data-bbox="1167 805 2040 866">Figure 8. Trigg Beach dune in May 2025 after revegetation and installation of erosion control matting (City of Stirling, 2025b).</p>
4.	<p>A number of submissions suggested that the area proposed to be cleared has not been subject to adequate environmental assessment and that further assessment is required to determine the short, medium, and long-term effects of the proposed structures on the sensitive coastal ecosystem.</p>	<p>The applicant has advised that the landscape design and lookout platform have been reviewed by the City's degree-qualified environmental scientists (City of Stirling, 2025b). The applicant indicated that the works are largely restricted to existing areas of lawn and degraded dune vegetation, which is unlikely to have short, medium or long-term impacts on the surrounding natural areas (City of Stirling, 2025b). The applicant also notes that, by limiting pedestrian access to the dunes, the proposal will support the successful establishment of newly planted dune vegetation and ultimately lead to an increase in dune vegetation (City of Stirling, 2025b).</p> <p>DWER considers that the available information is sufficient to inform its assessment of impacts on environmental values as outlined in <i>Detailed assessment of application</i> (see Section 3).</p>
5.	<p>Several submissions raised that the proposed clearing would result in impacts to significant environmental values, including:</p>	<p>DWER's assessment of impacts to significant environmental values is summarised in <i>Detailed assessment of application</i> (see Section 3) and</p>

	Summary of comments	Consideration of comment
	<ul style="list-style-type: none"> Vegetation with a Bush Forever Area and designated Environmentally Sensitive Area (ESA), Quindalup dune types, Linkage values between the Quindalup and Spearwood dune interface, and Habitat for a high number of reptile species. 	<p><i>Assessment against the clearing principles</i> (see Appendix D), which includes consideration of impacts to Bush Forever Areas, dune vegetation, and ecological linkages.</p> <p>In relation to fauna, one conservation significant terrestrial reptile has been recorded within the local area; <i>Neelaps calonotos</i> (black-striped burrowing snake). Whilst the black-striped burrowing snake has been recorded in coastal heathland and shrublands, the species is thought to prefer soft, calcareous sands in Banksia woodlands (Wilson and Swan, 2013). The species is also rarely found in small urban bushland remnants and is considered to prefer mature and fire-resistant habitats (Valentine et al., 2012). It is considered highly unlikely that the application area provides significant habitat for this species or any other conservation significant reptile, noting the small, isolated, and degraded nature of the vegetation proposed to be cleared and the high level of foot traffic on the dunes.</p>
6.	<p>A number of submissions noted that the application area is located within a conservation area, occurring within Bush Forever Site 308 and being adjacent to the South Trigg Beach Class A Reserve.</p> <p>The submissions indicated that these areas are recognised locally, regionally, and nationally for their heritage and conservation values and should be afforded a high level of protection. Some submissions suggested that the proposed clearing and construction of a surf lookout platform was not an appropriate land-use within these conservation areas and is inconsistent with SPP 2.8.</p>	<p>DWER's assessment of impacts to conservation areas is summarised in <i>Assessment of impacts on environmental values</i> (see Section 3.2.2). DWER's consideration of relevant policies and planning frameworks is outlined in <i>Relevant planning instruments and other matters</i> (see Section 3.2.2).</p> <p>Regarding South Trigg Beach Class A Reserve (Crown Reserve 32559), DWER notes that the application area is separated from this reserve by road infrastructure within West Coast Drive. Therefore, direct impacts resulting from the proposal are unlikely. Indirect impacts to nearby vegetation are likely to be managed through permit conditioning for hygiene measures and wind erosion management.</p>
7.	<p>Several submissions raised that the application area has a high erosion risk and that the proposed clearing will increase erosion and sand drift.</p> <p>Submissions referred to projected coastal erosion lines from the City of Stirling (2023) Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) as evidence that the Trigg Beach foredune should be protected and dune vegetation maintained.</p>	<p>DWER's assessment of wind erosion risk is summarised in <i>Assessment of impacts on environmental values</i> (see Section 3.2.3).</p>

	Summary of comments	Consideration of comment
	 <p>Figure 9. Coastal erosion hazard for Trigg Beach (City of Stirling, 2023).</p>	
8.	One submission queried whether planning or development approvals were required for the proposal and have been obtained.	DWER understands that as this project falls under public works within regional open space, development approvals are not required.
9.	The submissions stated that the proposed clearing is inconsistent with the City's CHRMAP framework, which states that development on undeveloped coastal dunes at Trigg and South Trigg Beach should be avoided.	<p>The applicant (City of Stirling, 2025b) advised that the proposed clearing is consistent with the CHRMAP, noting that:</p> <ul style="list-style-type: none"> • The lookout platform will be situated in a degraded dune area that is largely devoid of vegetation due to excessive trampling by the public. • The accompanying landscape works will occur within an existing area of lawn and public open space, rather than on undeveloped coastal dunes.

	Summary of comments	Consideration of comment
		<ul style="list-style-type: none"> No infrastructure will be installed on the frontal dune, and the lookout is a permeable structure that can be removed/relocated if affected by coastal processes.
10.	The submissions stated that the proposed clearing is inconsistent with <i>State Planning Policy 2.6 – State Coastal Planning Policy</i> (SPP 2.6).	<p>DWER's consideration of relevant policies and planning frameworks is outlined in <i>Relevant planning instruments and other matters</i> (see Section 3.2.2).</p> <p>In addition, the applicant (City of Stirling, 2025b) advised that the proposed development aligns with SPP 2.6, as:</p> <ul style="list-style-type: none"> it involves upgrades to public recreation facilities that do not adversely impact the coastal environment; and the infrastructure has been carefully designed and positioned to minimize risks associated with erosion, storm surge, and other coastal hazards, ensuring long-term sustainability.
11.	Several submissions raised that the City of Stirling has undertaken unauthorised clearing at the site in the past and should not be authorised to undertake any further clearing due to this mismanagement.	<p>DWER acknowledges that a report (ICMS 84636) was received alleging unauthorised clearing of native vegetation within Lot 8 on Deposited Plan 240238 (Crown Reserve 12992) (Trigg Beach Surf Lookout) between 31 July 2024 and 14 September 2024.</p> <p>DWER's Environmental Assurance division investigated the report in accordance with DWER's <i>Compliance and Enforcement Policy</i> (2021) (C&EP). This investigation concluded that the clearing of native vegetation was not conducted in accordance with the EP Act or any relevant exemptions. Having due consideration for the C&EP, DWER determined that the unauthorised clearing be dealt with through a Letter of Education on 5 December 2024. This response was considered appropriate in this instance due to the size of the clearing and the environmental impact.</p> <p>Noting the Applicant's cooperation with the investigation and that the incident is closed, DWER does not consider this a relevant matter when assessing the application.</p>

Appendix C. Site characteristics

C.1. Site characteristics

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

Characteristic	Details
Local context	<p>The application area consists of five fragmented patches of native dune vegetation ranging in size from 0.0005 to 0.0019 hectares in the intensive land use zone of Western Australia. It is adjacent to existing cleared, turf areas and remnant dune vegetation within the South Trigg dune cell.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the application area) retains approximately 9.93 per cent of the original native vegetation cover (see Appendix C.2).</p>
Ecological linkage	The application area is mapped within the Gnangara Ecological Linkages dataset as a conceptual linkage associated with Bush Forever Sites (Brown et al., 2009). Noting the application area consists of isolated patches of dune vegetation of 0.0005 to 0.0019 hectares in size, it is not considered that the application area is contributing significantly to the north-south linkage within Bush Forever Site 308.
Conservation areas	The application area is located within Bush Forever Site 308.
Vegetation description	<p>Photographs and supporting information supplied by the applicant indicate that the vegetation within the application area consists of <i>Olearia axillaris</i> and <i>Scaevola crassifolia</i> shrubland. Representative photos are available in Appendix F.</p> <p>This is broadly consistent with the mapped Swan Coastal Plain vegetation complex; Quindalup complex, which is described as a coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of <i>Melaleuca lanceolata</i> (Rottnest Teatree) - <i>Callitris preissii</i> (Rottnest Island Pine), the closed scrub of <i>Acacia rostellifera</i> (Summer-scented Wattle) and the low closed <i>Agonis flexuosa</i> (Peppermint) forest of Geographe Bay (Heddlé, et al., 1980).</p> <p>The mapped vegetation type retains approximately 60.49 per cent of the original extent (see Appendix C.2).</p>
Vegetation condition	<p>Photographs and supporting information supplied by the applicant indicate that the vegetation within the application area is in Degraded to Good (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> • 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. <p>The full Keighery (1994) condition rating scale is provided in Appendix E. Representative photos are available in Appendix F.</p>
Climate and landform	The application area is located on relatively flat topography.

Characteristic	Details
	It has a mean annual maximum temperature of 24.1°C and a mean annual minimum temperature of 14.1°C (BoM, 2025). The mean annual rainfall recorded at the nearest Bureau of Meteorology weather station (Swanbourne) is 724.4 millimetres (BoM, 2025).
Soil description and land degradation risk	<p>The soil is mapped within the Quindalup System as EnvGeol S1 Phase (211Qu__S1), described as calcareous sand; white, fine to medium-grained, sub-rounded quartz and shell debris, of eolian origin (DPIRD, 2025).</p> <p>The mapped soil type has a moderate to low risk of land degradation resulting from water erosion, salinity, flooding, waterlogging, subsurface acidification, and phosphorus export, but has a high risk of wind erosion (DPIRD, 2025).</p>
Waterbodies and hydrogeography	<p>The desktop assessment and aerial imagery indicated that no wetlands or watercourses transect the application area. The closest source of surface water is a manmade perennial lake at Abbett Park Reserve.</p> <p>The application area is mapped within the Perth Groundwater Area, proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (the RIWI Act).</p> <p>Groundwater salinity within the application area is mapped at 500-1000 milligrams per litre total dissolved solids.</p>
Flora	<p>The desktop assessment identified that a total of 15 conservation significant flora species have been recorded within the local area, comprising two Priority 1 (P1) flora, two Priority 2 (P2) flora, nine Priority 3 (P3) flora, and two Priority 4 (P4) flora species. None of these existing records occur within the application area, with the closest record being an occurrence of <i>Jacksonia sericea</i> (P4) approximately 1.5 kilometres from the application area.</p> <p>Given the site characteristics set out above, relevant datasets (see Appendix G.1), the habitat preferences of the aforementioned species, and the extent of the proposed clearing, the application area is unlikely to provide significant habitat for conservation significant flora species and impacts to flora did not require further consideration.</p>
Ecological communities	<p>The desktop assessment identified that the closest mapped occurrence of a state or federally listed threatened ecological community is the <i>Callitris preissii</i> (or <i>Melaleuca lanceolata</i>) forests and woodlands of the Swan Coastal Plain (floristic community type 30a as originally described in Gibson et al. 1994) community approximately 200 metres south-east of the application area, separated by West Coast Highway.</p> <p>Photographs and supporting information supplied by the applicant indicate that the vegetation within the application area may be representative of the Coastal shrublands on shallow sands, southern Swan Coastal Plain ('floristic community type 29a') (SCP29a) ecological community, which is listed as Priority 3 by DBCA. Impacts to this community required further consideration (see Appendix C.3).</p>
Fauna	<p>The desktop assessment identified that a total of 64 conservation significant fauna species have been recorded within the local area, including 25 threatened fauna species, 14 priority fauna species, two conservation dependent species, one other specially protected fauna species, and 22 fauna species protected under international agreement. The closest is a record of <i>Thalasseus bergii</i> (crested tern) approximately 475 metres from the application area.</p> <p>Given the site characteristics set out above, relevant datasets (see Appendix G.1), the habitat preferences of the aforementioned species, and the extent and fragmented nature of the proposed clearing, the application area is unlikely to provide significant habitat for conservation significant fauna species and impacts to fauna did not require further consideration.</p>

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	14.85
Swan Coastal Plain vegetation complex*					
Quindalup Complex	54,573.87	33,011.64	60.49	5994.64	10.98
Local area					
10-kilometre radius	16,683.81	1,656.75	9.93	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

C.3. Ecological community analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix G.1), and photographs and supporting information supplied by the applicant, impacts to the following conservation significant ecology community required further consideration.

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]
Coastal shrublands on shallow sands, southern Swan Coastal Plain ('floristic community type 29a')	P3	Y	Y	Y	61.5	3	N/A

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

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p>Principle (a): "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p>Assessment: The area proposed to be cleared contains vegetation that may be representative of the SCP29a PEC and regionally significant vegetation within Bush Forever Site 308.</p>	May be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p>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."</p> <p>Assessment: The area proposed to be cleared comprises dune vegetation which may be utilised transiently by migratory bird species. However, noting the application area consists of 0.0058 hectares of fragmented dune</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
vegetation adjacent to existing areas of turf and public open space, it is highly unlikely to be utilised for as foraging or nesting sites or to provide significant habitat for fauna.		
<p><u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</p> <p><u>Assessment:</u> No threatened flora species listed under the BC Act have been recorded within the local area. The area proposed to be cleared is highly unlikely to contain habitat for any threatened flora species.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> “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.”</p> <p><u>Assessment:</u> The area proposed to be cleared does not contain species that can indicate a threatened ecological community.</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> “Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</p> <p><u>Assessment:</u> The extent of native vegetation in the local area is inconsistent with the national objectives and targets for biodiversity conservation in Australia.</p>	May be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><u>Principle (h):</u> “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.”</p> <p><u>Assessment:</u> Given the application area is located within Bush Forever Site 308, the proposed clearing will have an impact on the environmental values of a conservation area.</p>	At variance	Yes <i>Refer to Section 3.2.2, above.</i>
Environmental value: land and water resources		
<p><u>Principle (f):</u> “Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</p> <p><u>Assessment:</u> Given no water courses or wetlands are recorded within the application area, the proposed clearing will not impact vegetation growing in association with a watercourse or wetland.</p>	Not likely to be at variance	No
<p><u>Principle (g):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</p> <p><u>Assessment:</u> The mapped soils are highly susceptible to wind erosion.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.3, above.</i>
<p><u>Principle (i):</u> “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.”</p> <p><u>Assessment:</u> Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (j)</u>: “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment</u>: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing of 0.0058 hectares is likely to contribute to increased incidence or intensity of flooding.</p>	Not likely to be at variance	No

Appendix E. Vegetation condition rating scale

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

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

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

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

Appendix F. Photographs of the vegetation



Appendix G. Sources of information

G.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)
- Bush Forever Areas 2000 (DPLH-019)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- CAWSA Part 2A Clearing Control Catchments (DWER-004)
- Consanguineous Wetlands Suites (DBCA-020)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- DBCA Statewide Vegetation Statistics
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments - Catchments (DWER-028)

- Hydrographic Catchments - Divisions (DWER-029)
- Hydrography, Linear (Hierarchy) (DWER-031)
- 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 (DPIRD-006)
- 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 (DPIRD-027)
- Soil Landscape Mapping – Systems (DPIRD-064)
- Vegetation Complexes - Swan Coastal Plain (DBCA-046)

Restricted GIS Databases used:

- Conservation Covenants Western Australia (DPIRD-023)
- Contaminated Sites Database - Restricted (DWER-073)
- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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