



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9124/2
Permit Holder:	Shire of Esperance
Duration of Permit:	1 May 2021 to 1 May 2036

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The Permit Holder is authorised to clear native vegetation for the purpose of constructing a dual shared-use path.

2. Land on which clearing is to be done

Lot 20 on Deposited Plan 251103, Bandy Creek
Lot 881 on Deposited Plan 217292, Bandy Creek
Lot 9003 on Deposited Plan 69443, Bandy Creek

3. Clearing authorised

The Permit Holder must not clear more than 1.79 hectares of native vegetation within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The Permit Holder must not clear any native vegetation after 1 May 2026.

PART II – MANAGEMENT CONDITIONS

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

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

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

6. Weed and dieback management

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

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known dieback or weed-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Directional clearing

The permit holder must conduct clearing activities of the area authorised to be cleared under condition 3 of this Permit, in a slow, progressive manner from one side to another, to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

8. Retain vegetative material and topsoil, and rehabilitation

- (a) The Permit Holder must retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) The Permit Holder must within 12 months of undertaking clearing authorised under this Permit and no later than 1 May 2027, revegetate and rehabilitate the areas that are no longer required for the purpose for which they were cleared under this Permit to establish a sustainable vegetation cover to control erosion by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land;
 - (ii) ripping the ground on the contour to remove soil compaction;
 - (iii) laying the vegetative material and topsoil retained under Condition 8(a) on the cleared area;
 - (iv) deliberately *planting* native vegetation that will result in similar species composition, structure and density of native vegetation to the surrounding vegetation within the areas that are no longer required for the purpose for which they were cleared;
 - (v) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area. In the event that *local provenance* material cannot be obtained, *locally endemic* species must be used;
 - (vi) undertake a pre-*planting* weed control program where required; and
 - (vii) install and maintain a *fence* to exclude public access from the revegetation area; and
 - (viii) install educational signage to inform reserve users of the *revegetation* and *rehabilitation* activities being undertaken.
- (c) The Permit Holder must within 18 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 8(b) of this Permit:
 - (i) engage an environmental specialist to determine the species composition, structure and density of the vegetation of area revegetated and rehabilitated;
 - (ii) engage an environmental specialist to make a determination as to whether the composition, structure and density determined under condition 8(c)(i) of this Permit will, without further revegetation, result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area; and

- (iii) undertake *weed* control activities to maintain a weed coverage consistent with the surrounding areas of native vegetation.
- (d) If the determination made by the environmental specialist under condition 8(c)(ii) is that the species composition, structure, and density determined under condition 8(c)(i) will not, without further revegetation, result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must revegetate the area by deliberately planting and/or direct seeding native vegetation seeds that will result in a similar species composition, structure, and density of native vegetation to pre-clearing vegetation types in that area and undertake further weed control activities.
- (e) Where additional planting or direct seeding of native vegetation is undertaken in accordance with condition 8(d), the Permit Holder must repeat the activities required by condition 8(c) and 8(d) within 12 months of undertaking the additional planting or direct seeding of native vegetation.
- (f) Where a determination is made by an environmental specialist under condition 8(c)(ii) that the composition, structure and density within areas revegetated and rehabilitated will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, that determination shall be submitted to the CEO within three months of the determination being made by the environmental specialist.

PART III - RECORD KEEPING AND REPORTING

9. Records that must be kept

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

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	<ul style="list-style-type: none"> (a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5 of this permit; (f) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 6 of this permit; and (g) actions taken in accordance with condition 7 of this Permit.
2.	In relation to the <i>revegetation</i> and <i>rehabilitation</i> areas pursuant to condition 8 of this Permit	<ul style="list-style-type: none"> (a) The location of any areas <i>revegetated</i> and <i>rehabilitated</i>, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal

No.	Relevant matter	Specifications
		degrees; (b) A description of the <i>revegetation</i> and <i>rehabilitation</i> activities undertaken; (c) The size of the area <i>revegetated</i> and <i>rehabilitated</i> (in hectares); (d) The species composition, structure and density of <i>revegetation</i> and <i>rehabilitation</i> ; (e) The number of plants and species installed; (f) The source of <i>local provenance</i> seeds and propagating material; (g) The description of <i>weed</i> management activities undertaken; (h) The description of a <i>fence</i> installed to exclude public access from the revegetation areas; (i) Any remedial actions undertaken; and (j) A copy of the environmental specialist's report.

10. Reporting

- (a) The Permit Holder must provide to the *CEO* on or before 30 June of each year, a written report:
- (i) of records required under condition 9 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this Permit has been carried out, must be provided to the *CEO* on or before 30 June of each year.
- (c) Prior to 1 February 2036, the Permit holder must provide to the *CEO* a written report of records required under condition 9 of this Permit, where these records have not already been provided under condition 10(a) of this Permit.

DEFINITIONS

In this permit, the terms in Table 2 have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .
Clearing	has the meaning given under section 3(1) of the EP Act.
Condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
Dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
Direct seeding	means a method of re-establishing vegetation through establishment of a seed bed and the introduction of seeds of the desired plant species.
Department	means the department established under section 35 of the <i>Public Sector</i>

Term	Definition
	<i>Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
Fence	means a barrier or other appropriate means to control access to the <i>revegetation</i> and <i>rehabilitation</i> area(s).
Fill	means material used to increase the ground level, or to fill a depression.
Locally endemic	means plant species that have been recorded as naturally occurring within the Shire of Esperance coastal foreshore.
Local provenance	means native vegetation seeds and propagating material from natural sources within 100 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.
Mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
Native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
Planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
Rehabilitate, rehabilitated and rehabilitation	means actively managing an area containing native vegetation in order to improve the ecological function of that area using methods such as natural <i>regeneration</i> , <i>direct seeding</i> and/or <i>planting</i> , so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
Revegetate/ed/ion	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
Weeds	means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i> ; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS


 Ryan Mincham
 2021.08.11
 14:48:13 +08'00'

Ryan Mincham
 MANAGER
 NATIVE VEGETATION REGULATION

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

11 August 2021

Schedule 1

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

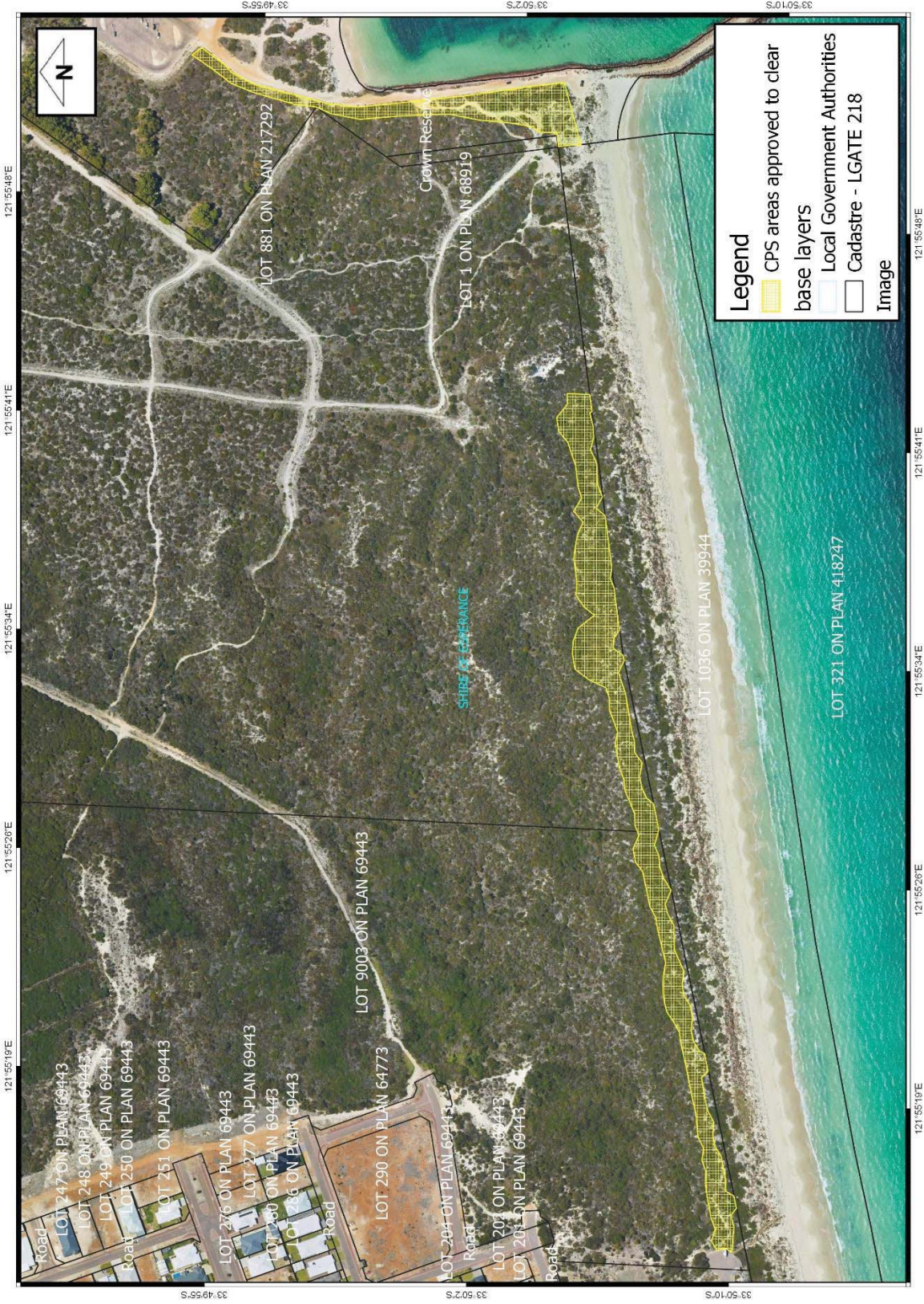


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9124/2
Permit type:	Purpose permit
Applicant name:	Shire of Esperance (the Shire)
Application received:	26 November 2020
Application area:	1.79 hectares (ha) of native vegetation
Purpose of clearing:	Constructing a dual-use pathway
Method of clearing:	Mechanical
Property:	Lot 20 on Deposited Plan 251103 Lot 881 on Deposited Plan 217292 Lot 9003 on Deposited Plan 69443
Location (LGA area/s):	Shire of Esperance
Localities (suburb/s):	Bandy Creek

1.2. Description of clearing activities

The application is to clear 1.79 ha of native vegetation in an approximately 1.92 ha clearing footprint for the purpose of constructing a dual-use path between the Castletown Quays development and Bandy Creek. The application area comprises of two linear strips of native vegetation along coastline separated by a patch of native vegetation (see Figure 1, Section 1.5). This patch was not included in the application as, at the time of the application, the Shire was still negotiating planning matters with the landowner.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	11 August 2021
Decision area:	1.79 ha of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

On 8 April 2021, the Department of Water and Environmental Regulation granted the Shire Clearing Permit CPS 9124/1 to clear 1.79 ha of native vegetation within Lot 20 on Deposited Plan 251103, Lot 881 on Deposited Plan 217292 and Lot 9003 on Deposited Plan 69443, Bandy Creek, for the purpose of constructing a dual-use pathway. One appeal was lodged against the conditions of the clearing permit.

The clearing permit amendment gives effect to the determination of the Western Australia Minister for Environment (Minister) who upheld the appeal and determined that the permit should be amended to require the Shire to:

- revegetate areas to be cleared but not needed for operation and maintenance of the final pathway. The Minister further advised that the Shire must:
 - revegetate the required areas with local native species
 - establish sustainable vegetation cover to control erosion
 - install and maintain fencing to exclude public access from the revegetation areas

- control and remove weed species within the revegetation for a period of 10 years
- undertake the clearing activities only within five years from the commencement date of the permit
- maintain records of the proposed revegetation activities
- submit annual reports of records required under condition 7 of Clearing Permit CPS 9124/1.

The Delegated Office had taken the above into consideration and decided to grant an amended clearing permit to reflect the Minister's determination. The Delegated Officer imposed additional conditions on the permit to reflect this.

The Delegated Officer reviewed the information available at the time of the amendment (Appendix E) and noted that the site characteristics (Appendix A) and assessment against the clearing principles (Appendix B) have not changed from the Clearing Permit Decision Report CPS 9124/1.

1.5. Site map

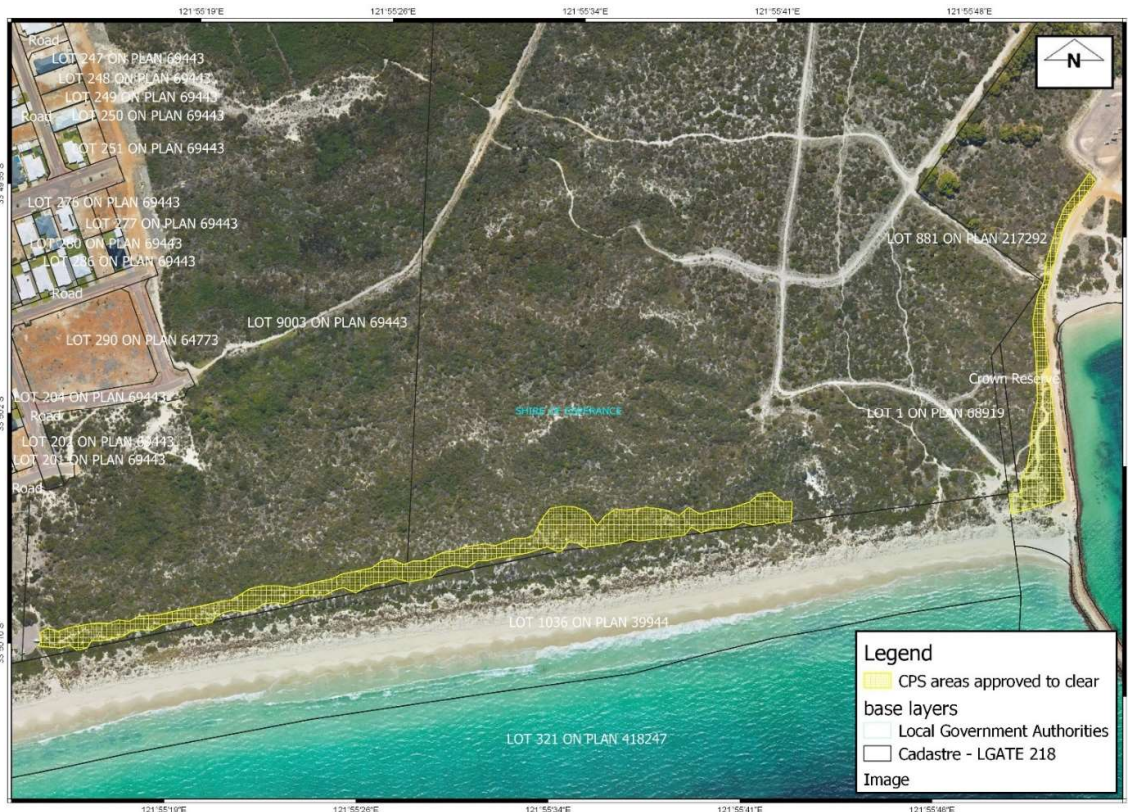


Figure 1 - Map of the application area. The areas cross-hatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

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 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)
- *Planning and Development Act 2005* (WA) (P&D Act).

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013)

- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016).

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

In relation to whether alternatives that would avoid or minimise the need for clearing were considered, the Shire (2020a) advised that:

- the only practical alternative was to place the footpath directly on the beach. This was not deemed feasible as the path could get washed away;
- other options away from the beach were not possible due to encroachment of the upcoming Flinders Stage 3 development and restrictions with other private property; clearing was minimised by aligning some of the pathway in existing cleared footprints, such as underneath powerlines;
- where possible, the path was placed on the road shoulders.

The Delegated Officer was satisfied that the Shire made all reasonable efforts to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

The Delegated Officer reviewed the information available at the time of the amendment (Appendix E) and noted that the site characteristics (Appendix A) and assessment against the clearing principles (Appendix B) have not changed from the Clearing Permit Decision Report CPS 9124/1.

3.3. Relevant planning instruments and other matters

The assessment against planning instruments and other matters has not changed since the assessment under CPS 9124/1.

On 12 July 2021, in accordance with Section 51M(2) of the EP Act, DWER gave the Shire an opportunity to provide comments on Draft Clearing Permit CPS 9124/2.

On 10 August 2021, the Shire (2021) accepted the conditions imposed by the Delegated Officer on Draft Clearing Permit CPS 9124/2.

Appendix A. Site characteristics

Characteristic	Details
Local context	<p>The application area is mapped within the Esperance Plains IBRA bioregion and is part of a larger, approximately 95 ha in size, area of native vegetation. This area is surrounded by a residential development and the coastline.</p> <p>Spatial data indicate the local area (20 km radius of the application area) retains approximately 39.4 per cent (84,000 ha) of the original native vegetation cover.</p>
Ecological linkage	<p>The application area is not within mapped ecological linkages.</p> <p>The closest mapped ecological linkage is South Coast Linkage (axis ID 34) approximately 1.2 km north of the application area.</p>
Conservation areas	<p>Approximately 11.4 per cent of the local area (approximately 9,500 ha) occurs within DBCA managed estate.</p> <p>The application area is not part of any conservation area.</p> <p>The closest conservation area is Woody Lake Nature Reserve (Class A) located approximately 1.9 km north of the application area.</p>
Vegetation description	<p>The Flora survey conducted by the Shire (2020b) indicates the vegetation within the application area consists of immediate coastal fore-dune shrubland, with swales dominated by <i>Lepidosperma gladiatum</i> and <i>Tetragonia implexicoma</i>, the slopes by <i>Acacia cochlearis</i> and <i>Rhagodia baccata</i>, and the ridges dominated by <i>Spyridium globulosum</i>. Representative photos are available in Appendix D.</p> <p>This is consistent with the Beard vegetation association 42 mapped in the application area which is described as shrublands; mallee & acacia scrub on south coastal dunes (Shepherd et al, 2001)</p> <p>The mapped vegetation type retains approximately 95 per cent of the original extent (Government of Western Australia, 2019).</p> <p>Representative photos and the Flora survey summary (Shire of Esperance, 2020b) are available in Appendix D.</p>
Vegetation condition	<p>The Flora survey (the Shire, 2020b) indicate the vegetation within the proposed clearing area ranges from very good (Keighery, 1994) to completely degraded (Keighery, 1994) condition.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C</p> <p>Representative photos and the Flora survey summary (Shire of Esperance, 2020b) are available in Appendix D.</p>
Climate and landform	<p><i>Rainfall</i>: 700 millimetres <i>Evapotranspiration</i>: 400 millimetres <i>Groundwater Salinity (Total Dissolved Solids)</i>: 500-1000 milligrams per litre total dissolved solids</p>
Soil description	<p>The soil subsystem within the application area is mapped as Tooregullup 5 Subsystem (Department of Primary Industries and Regional Development, 2021) described as level plain with moderately inclined dune ridges and associated swales with occasional swamps Calcareous deep sands associated pale deep sands and minor calcareous shallow sands (Northcote et al., 1968).</p>
Land degradation risk	<p>The soils subsystem mapped in the application area has a high risk of water repellency, water storage and microbial purification and elevated risk of sub surface compact.</p> <p>Risks of salinity, flood, waterlogging, instability, water and wind erosion are very low.</p>

Characteristic	Details
Waterbodies	<p>No wetlands are mapped within the application area.</p> <p>The closest wetland is the Ramsar category wetland, Lake Warden System mapped approximately 2 km north of the application area.</p> <p>No watercourses intersect the application area.</p> <p>The closest watercourses from the application area is Bandy Creek mapped approximately 460 m northeast of the application area.</p>
Hydrogeography	The application area is mapped within a proclaimed Esperance Groundwater Area and is not mapped within any proclaimed Surface Water Area.
Flora	<p>According to available databases, 40 Priority listed flora species have been recorded within the local area. No flora species listed as threatened under the BC Act have been recorded in the local area.</p> <p>Based on the similarities shared between the soil and vegetation types within the application area and the habitats within which these flora taxa have been identified, some flora species may occur within the application area.</p>
Ecological communities	<p>Two federally listed TECs, which area also state listed Priority 3 ecological communities, have been mapped within the local area:</p> <ul style="list-style-type: none"> • Proteaceae dominated kwongan shrublands of the southeast coastal floristic province of Western Australia • Subtropical and Temperate Coastal Saltmarsh.
Fauna	According to available databases, 55 conservation significant fauna species have been recorded within the local area (DBCA, 2007). Given the boundary of the local area overlaps the ocean, the majority of the recorded species are exclusively associated with marine, estuarine or freshwater habitats that do not occur within the application area.

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*					
Esperance Plains	2,899,940.66	1,494,450.87	51.53	55.05	28.37
Vegetation complex					
Beard vegetation association 42 *	135,419.99	128,052.58	94.56	56.82	53.73
Local area (calculation - delete if not required)					
20km radius	33,006.73	83,818.7	39.38	9,513.68	11.35

*Government of Western Australia (2019)

Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information (the Shire, 2020b), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features?	Suitable vegetation type?	Suitable soil type?	Distance of closest record to application area (m)	Are surveys adequate to identify?
<i>Banksia prolata</i> subsp. <i>calvicola</i>	4	Yes	Yes	Yes	3,898	Yes
<i>Eucalyptus litorea</i>	2	Yes	Yes	Yes	15,406	Yes
<i>Eucalyptus preissiana</i> subsp. <i>lobata</i>	4	Yes	Yes	Yes	17,483	Yes
<i>Goodenia quadrilocularis</i>	2	Yes	Yes	Yes	15,919	Yes
<i>Myosotis australis</i>	4	Yes	Yes	Yes	16,336	Yes

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

Fauna analysis table

Species name	Conservation status	Suitable habitat features?	Distance of closest record (m)	Are surveys adequate to identify?
Peregrine falcon	OS	Yes	2,426	No
Quenda, southwestern brown bandicoot	P4	Yes	7,324	No
Southern death adder	P3	Yes	4,840	No

CR: critically endangered, EN: endangered, VU: vulnerable, EX: Presumed extinct species, IA (M) Migratory birds protected under an international agreement, CD: Conservation dependent fauna, OS: Other specially protected fauna

Land degradation risk table

C	C1	C2	C3	C4
pH				
0-10 acidity	very strongly acid: 0 %	strongly acid: 0 %		
0-10 alkalinity	strongly alkaline: 0 %	alkaline: 79 %		
50-80 acidity	very strongly acid: 0 %	strongly acid: 0 %		
50-80 alkalinity	strongly alkaline: 8 %	alkaline: 71 %		
acidification risk	presently acid: 21 %	high: 0 %	moderate: 0 %	low: 79 %
SALINITY				
salinity risk	presently saline: 0 %	high: 0 %	moderate: 0 %	nil or partial: 100 %
surface salinity	extreme: 0 %	high: 0 %	moderate: 0 %	slight to nil: 100 %
SOME PLANT LIMITS				
rooting depth	very shallow: 0 %	shallow: 8 %	moderately shallow: 0 %	deep to moderate: 92 %
sub surface compact	high: 0 %	moderate: 100 %	low: 0 %	
water repel	high: 91 %	moderate: 8 %	low: 0 %	nil: 1 %
water storage	extremely low: 78 %	very low: 1 %	low: 20 %	high to moderate: 1 %
EROSION				
flood risk	high: 0 %	moderate: 0 %	low: 0 %	low: 100 %
instability	high: 0 %	moderate: 0 %	low: 1 %	nil to very low: 99 %
water erosion	extreme: 1 %	very high: 5 %	high: 5 %	nil to moderate: 89 %
wind erosion	extreme: 0 %	very high: 0 %	high: 20 %	nil to moderate: 80 %
WATER & DRAINAGE				
site drainage	very poor: 0 %	poor: 1 %	moderate: 0 %	high: 99 %
waterlogging	very high: 0 %	high: 0 %	moderate: 0 %	nil to low: 99 %
OTHER QUALITIES				
excavation ease	very low: 6 %	low: 8 %	moderate: 7 %	high: 79 %
microbial purification	very low: 72 %	low: 8 %	moderate: 20 %	high: 0 %
phosphorus loss	extreme: 1 %	very high: 6 %	high: 5 %	nil to moderate: 88 %

*Note: (column 1 most limiting, 4 least)

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u> The vegetation proposed to be cleared is not considered to be part of an ecological linkage and does not provide suitable habitat for threatened or priority ecological communities, assemblages of plants or significant habitat for conservation significant fauna. Based on the results of the Flora survey (Shire of Esperance, 2020b), conservation significant flora species are considered to have a low likelihood of presence within the application area.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>Yes</p> <p>Refer to Section 3.2.1, above</p>
<p><u>Principle (b):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared does not contain foraging, roosting or breeding habitat for Carnaby’s cockatoo or significant habitat for conservation significant fauna.</p> <p>Peregrine falcon and ground dwelling conservation significant fauna may utilise the application area.</p>	<p>May be at variance</p> <p>As per CPS 9124/1</p>	<p>Yes</p> <p>Refer to Section 3.2.2, above.</p>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u> Noting the findings of the Flora survey (the Shire, 2020b), the application area is unlikely to contain habitat for threatened flora species listed under the BC Act.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>No</p>
<p><u>Principle (d):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.”</i></p> <p><u>Assessment:</u> The application area does not contain species that can indicate the occurrence of a threatened ecological community listed under the BC Act.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>No</p>
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u> The extents of the mapped vegetation type and native vegetation in the local area are consistent with the national objectives and targets for biodiversity conservation in Australia.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>No</p>
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u> Given the separation distance between the application area and conservation areas, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>No</p>
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u> Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>No</p>
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u> The mapped soils are not susceptible to wind, water erosion, nutrient export or salinity. Noting the extent of the application area, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>No</p>
<p><u>Principle (i):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u> Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>No</p>
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u> 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.</p> <p>Given no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.</p>	<p>Not likely to be at variance</p> <p>As per CPS 9124/1</p>	<p>No</p>

Appendix C. 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 D. Photographs of the vegetation, Survey summary



Figure 1 - Representative photograph of the vegetation in the application area (Shire of Esperance, 2020b)



Figure 1 - Vegetation in the application area in degraded condition (Shire of Esperance, 2020b)

The Flora survey summary

The Flora survey was conducted in accordance with the Environmental Protection Authority's *Technical Guidance, Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia (2016)*.

The field work was undertaken on 15 July 2020. Whilst it was mid-winter, many plants were beginning to flower and many annual herb species were present with the wetter soil conditions. It was therefore considered that the timing of the survey was suitable to determine the presence or absence of any priority or threatened flora. Vegetation was thoroughly searched throughout the application area. Suitable habitat for threatened and priority flora determined in the desktop study were particularly focused on and extensively searched.

Due to the high diversity and complexity of Esperance's flora, all species were recorded to compile an incidental species list. All species unknown in the field were collected and identified ex situ, using keys, Western Australian

Herbarium's Florabase (DBCA 2020e), manuals and Esperance District Herbarium, to ensure no threatened and priority flora were missed.

Results

The Flora survey identify the following:

- using the Keighery (1994) vegetation condition scale, the vegetation within the application area appeared to be in:
 - very good (approximately 68 per cent)
 - good (approximately 9.6 per cent)
 - degraded (approximately 18.2 per cent)
 - completely degraded condition (approximately 3.4 per cent)
- a single vegetation community was identified within the application area: common immediate coastal fore-dune shrubland, with swales dominated by *Lepidosperma gladiatum* and *Tetragonia implexicoma*, the slopes by *Acacia cochlearis* and *Rhagodia baccata*, and the ridges dominated by *Spyridium globulosum*
- the vegetation in the application area is mostly not susceptible to *Phytophthora cinnamomi* and would likely be classified as uninterpretable
- the vegetation in the application area did not meet key diagnostic criteria of any PEC or TEC mapped in the local area
- no threatened or priority flora were identified within the application area.

Appendix E. Sources of information

E.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)

E.2. References

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

Department of Environment and Conservation (2012a) Fauna profiles. Quenda, *Isoodon obesulus* (Shaw, 1797). Retrieved from

https://www.dpaw.wa.gov.au/images/documents/conservation-management/pests-diseases/quenda_2012.pdf

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 the Environment (2013) Matters of National Environmental Significance. Significant impact guideline 1.1. EPBC Act. Retrieve from https://www.environment.gov.au/system/files/resources/42f84df4-720b-4dcf-b262-48679a3aba58/files/nes-guidelines_1.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.
- 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.
- 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>
- INaturalist (2021) *Eucalyptus litorea*. Retrieved from [inaturalist.org/taxa/1075057-Eucalyptus-litorea](https://www.inaturalist.org/taxa/1075057-Eucalyptus-litorea)
- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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.
- 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.
- Shire of Esperance (2020a) Application form related to the clearing permit application CPS 9124/1. Received by DWER on 26 November 2020. DWER Ref: A1958247.
- Shire of Esperance (2020b) *Vegetation, Flora, Fauna and Environmental Consideration and Targeted Flora Report*. Supporting document received in relation to the clearing permit application CPS 9124/1. Received by DWER on 26 November 2020. DWER Ref: A1958247. Available at <ftp://ftp.dwer.wa.gov.au/permit/9124/>
- Shire of Esperance (2021) Comments on Draft Clearing Permit CPS 9124/2. Received by DWER on 10 August 2021. DWER Ref: DWERDT488626.
- Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed April 2021)