



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9190/3
Permit Holder:	Chevron Australia Pty Ltd
Duration of Permit:	From 23 July 2021 to 22 July 2027

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 removing infrastructure as part of the Thevenard Island Decommissioning Program.

2. Land on which clearing is to be done

Lot 350 on Deposited Plan 37322 (Crown Reserve 33174), Thevenard Island

Lot 134 on Deposited Plan 217262, Thevenard Island

Lot 142 on Deposited Plan 217262, Thevenard Island

3. Clearing authorised

The permit holder must not clear more than 1.063 hectares of native vegetation within the area cross-hatched yellow in Figures 1-4 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any native vegetation after 22 July 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:

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

6. Weed 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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known 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. Fauna management – marine turtle habitat

No clearing within *suitable nesting habitat* for *marine turtle species* is to be undertaken during *turtle nesting season*.

8. Fauna management – nesting habitat for migratory and marine birds

- (a) Immediately prior to undertaking any clearing authorised under this permit within the combined areas cross-hatched yellow on Figures 1-4 of Schedule 1, the permit holder must engage a *fauna specialist* to inspect the permit area to identify *active nest/s* being utilised by *migratory and marine bird species* listed below:
 - (i) *Onychoprion anaethetus* (Bridled tern),
 - (ii) *Pandion cristatus* (Osprey),
 - (iii) *Sterna dougallii* (Roseate tern),
 - (iv) *Sternula albifrons* (Little tern),
 - (v) *Sternula nereis nereis* (Fairy tern), and
 - (vi) *Thalasseus bergii* (Crested tern).
- (b) Where *active nest/s* are identified under condition 8(a), the permit holder must engage a *fauna specialist* to monitor the *active nest/s* and determine when it is no longer in use for that breeding season.
- (c) Where possible, works should be rescheduled, and *active nest/s* should not be cleared whilst it is in use for that breeding season as determined by the fauna specialist under condition 8(b). If disturbance of *active nest/s* cannot be avoided, disturbance of *active nest/s* must be undertaken in accordance with a fauna taking license issued under the *Biodiversity Conservation Act 2016* and *Biodiversity Conservation Regulations 2018*.

9. Revegetation and rehabilitation (temporary works)

The permit holder must *revegetate* and *rehabilitate* areas cleared for *temporary works* by laying stockpiled vegetative material and topsoil on the cleared area(s) within six months of the area no longer being required for the purpose for which it was cleared, unless the *CEO*, in writing, advises the permit holder to the contrary.

10. Revegetation and rehabilitation (shipping marker track)

Within six months of the area no longer being required for the purpose for which it was cleared, the permit holder must *revegetate* and *rehabilitate* the area cross-hatched red in Figure 3 of Schedule 1 by scarifying the track and redistributing topsoil from within the clearing permit area to the scarified area, excluding the area of the track that is located

within the existing cleared airstrip.

PART III - RECORD KEEPING AND REPORTING

11. 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; (f) actions taken to minimise the risk of the introduction and spread of weeds in accordance with condition 6; and (g) actions taken to manage and mitigate impacts to marine turtle habitat in accordance with condition 7.
2.	In relation to nesting habitat for <i>migratory and marine bird</i> management pursuant to condition 8 of this Permit	<ul style="list-style-type: none"> (a) the time(s) and date(s) of inspection(s) by the <i>fauna specialist</i>; (b) the location of the <i>active nest/s</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 degrees; (c) the location of any fauna species listed in condition 8(a), if identified, recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees; (d) the name and amount of each fauna species identified; (e) a description of the inspection methodology employed by the <i>fauna specialist</i>;

No.	Relevant matter	Specifications
		<p>(f) where <i>active nest/s</i> are determined by the <i>fauna specialist</i> to be occupied by any fauna species listed in condition 8(a):</p> <p>(i) the time and date that it was determined to be no longer occupied; and</p> <p>(ii) a description of the evidence by which it was determined to be no longer occupied; and</p> <p>(g) the time and date that the <i>active nest/s</i> were cleared, once no longer in use for that breeding season.</p>
3.	In relation to the revegetation and rehabilitation of areas pursuant to conditions 9 and 10 of this Permit	<p>(a) the size of the area <i>revegetated</i> and <i>rehabilitated</i>;</p> <p>(b) the date(s) on which the <i>revegetation</i> and <i>rehabilitation</i> was undertaken; and</p> <p>(c) the boundaries of the area <i>revegetated</i> and <i>rehabilitated</i> (recorded digitally as a shapefile).</p>

12. Reporting

- (a) The permit holder must provide to the *CEO*, on or before 30 June of each calendar year, a written report containing:
- (i) the records required to be kept under condition 11; and
 - (ii) records of activities done by the permit holder under this permit between 1 January and 31 December of the preceding calendar year.
- (b) If no clearing authorised under this permit has been undertaken, a written report confirming that no clearing under this permit has been undertaken, must be provided to the *CEO* on or before 30 June of each calendar year.
- (c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under condition 11, where these records have not already been provided under condition 12(a).

DEFINITIONS

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

Table 2: Definitions

Term	Definition
active nest/s	means nests of <i>migratory and marine bird species</i> with evidence of current use for nesting, including the presence of the species entering, brooding, or leaving the nest, and/or the presence of eggs, chicks or young.
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .

Term	Definition
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.
direct seeding	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the <i>Biodiversity Conservation Act 2016</i> .
fill	means material used to increase the ground level, or to fill a depression.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same IBRA subregion of the area cleared.
marine turtle species	means one or more of the following species: (a) <i>Chelonia mydas</i> (Green turtle); (b) <i>Eretmochelys imbricata</i> (Hawksbill turtle); and (c) <i>Natator depressus</i> (Flatback turtle).
migratory and marine bird species	means one or more of the following species: (a) <i>Onychoprion anaethetus</i> (Bridled tern); (b) <i>Pandion cristatus</i> (Osprey); (c) <i>Sterna dougallii</i> (Roseate tern); (d) <i>Sternula albifrons</i> (Little tern); (e) <i>Sternula nereis nereis</i> (Fairy tern); and (f) <i>Thalasseus bergii</i> (Crested tern).
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.
rehabilitate/ed/ion	means actively managing an area containing native vegetation in order to improve the ecological function of that area.
revegetate/ed/ion	means the re-establishment of a cover of <i>local provenance</i> native vegetation in an area using methods such as natural regeneration, <i>direct seeding</i> and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
suitable nesting habitat	means habitat known to support nesting by <i>marine turtle species</i> within the known current distribution of the species. This often includes sandy beaches, intertidal zones and dune vegetation.
turtle nesting season	means the period between November and April, where <i>marine turtle species</i> are known to nest.
weeds	means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and</i>

Term	Definition
	<p><i>Agriculture Management Act 2007</i>; or</p> <p>(b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or</p> <p>(c) not indigenous to the area concerned.</p>

END OF CONDITIONS



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

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

11 August 2022

Schedule 1

The boundary of the area authorised to be cleared is shown in the maps below (Figures 1-4).

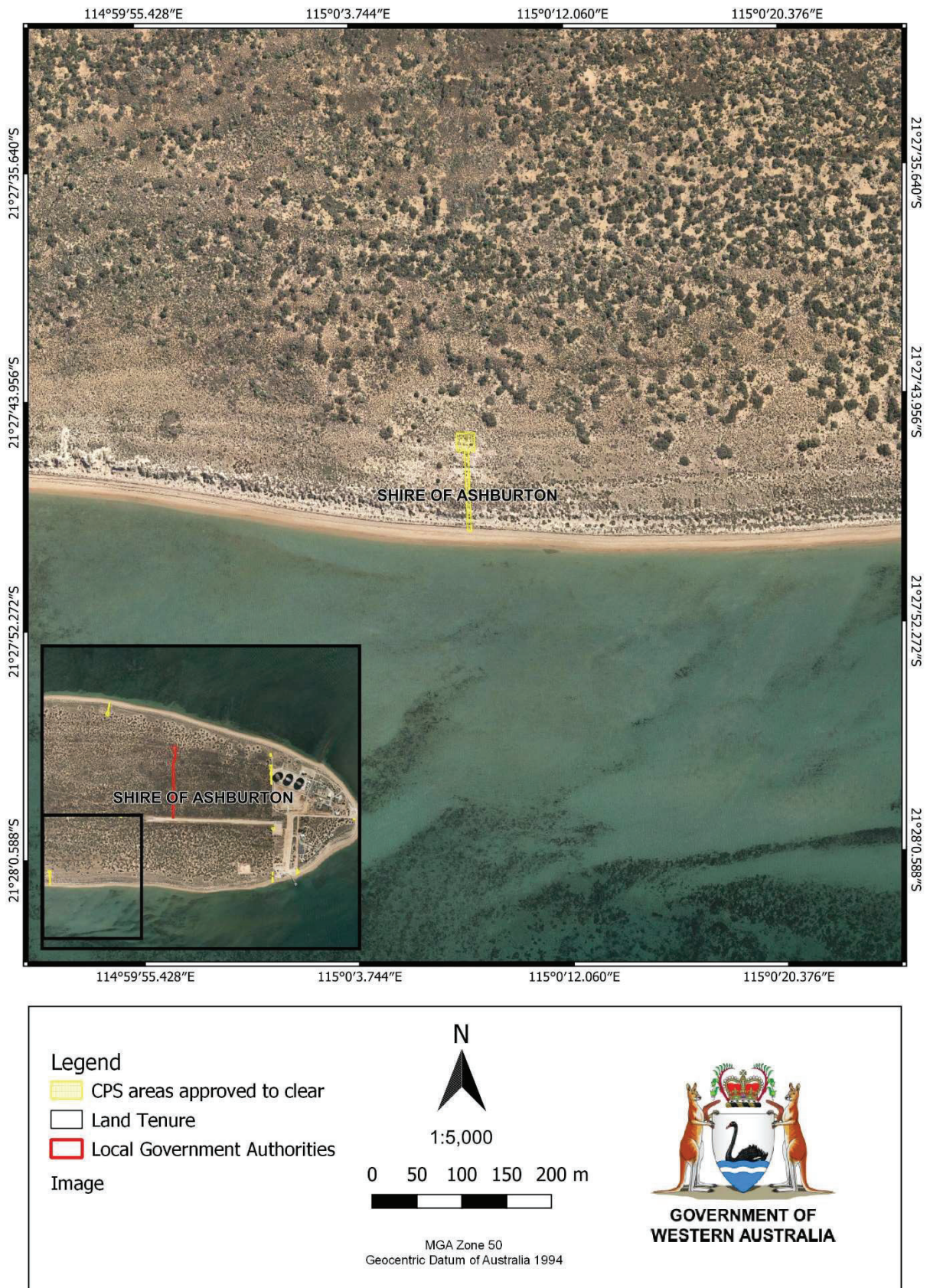


Figure 1: Map of the boundary of the area within which clearing may occur

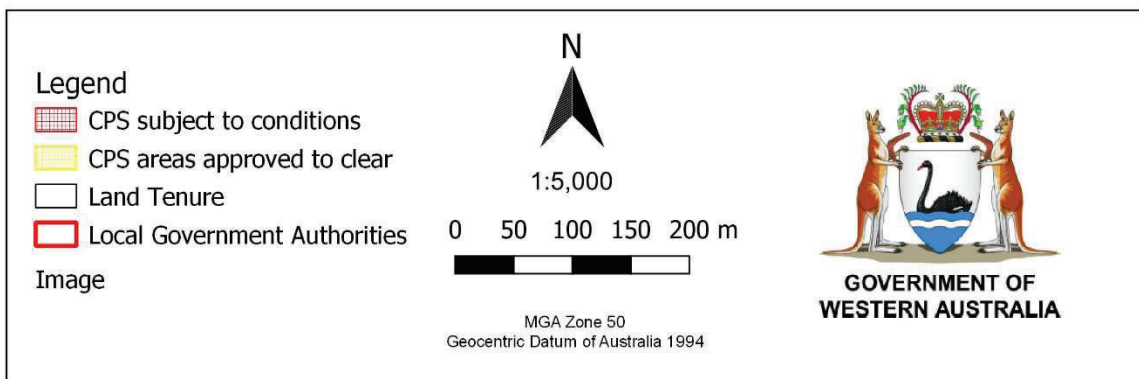
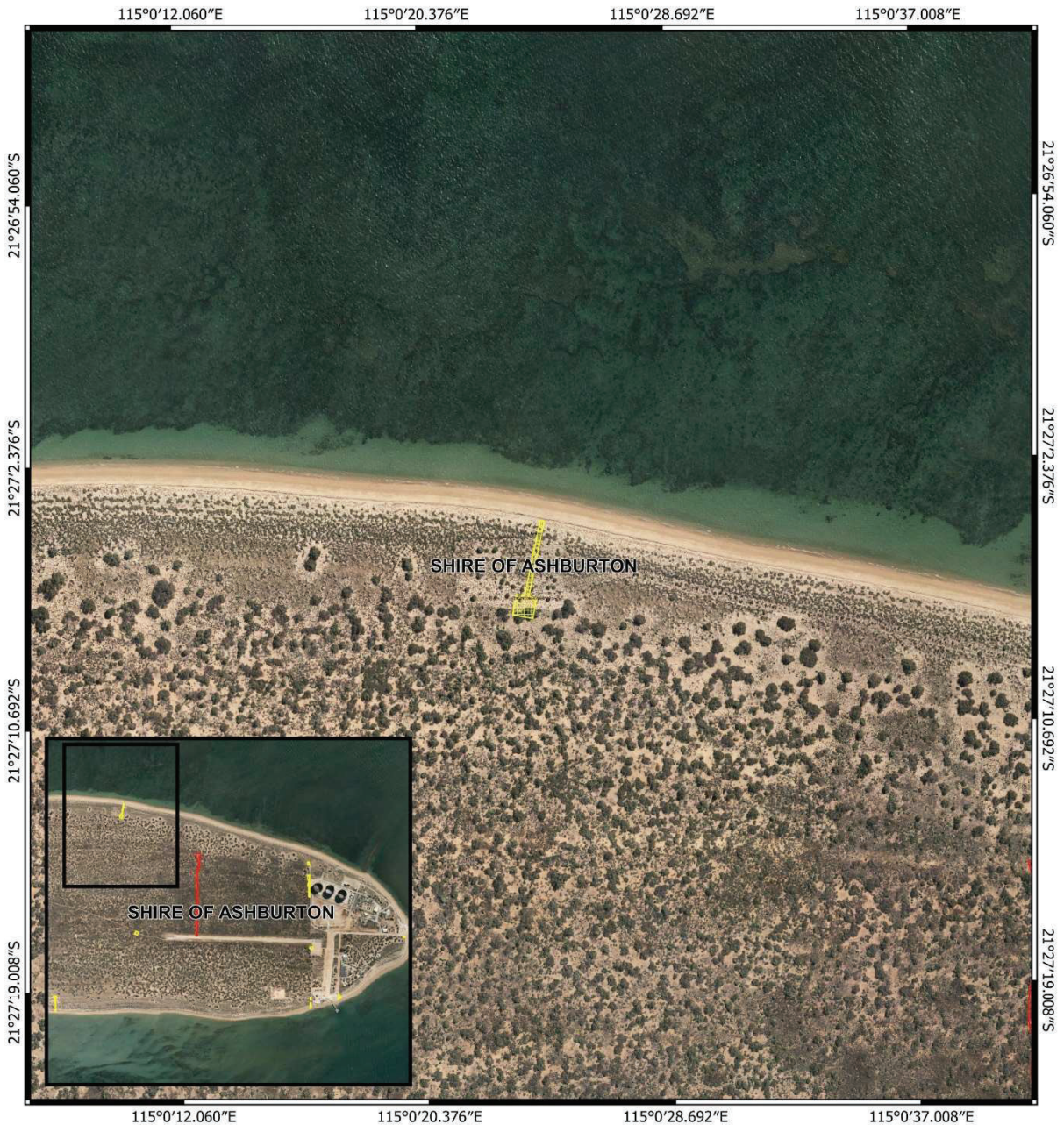


Figure 2: Map of the boundary of the area within which clearing may occur

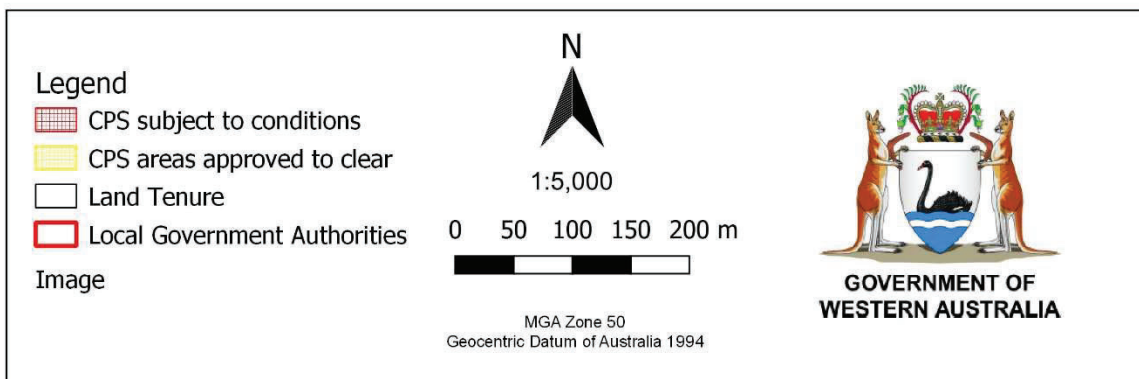
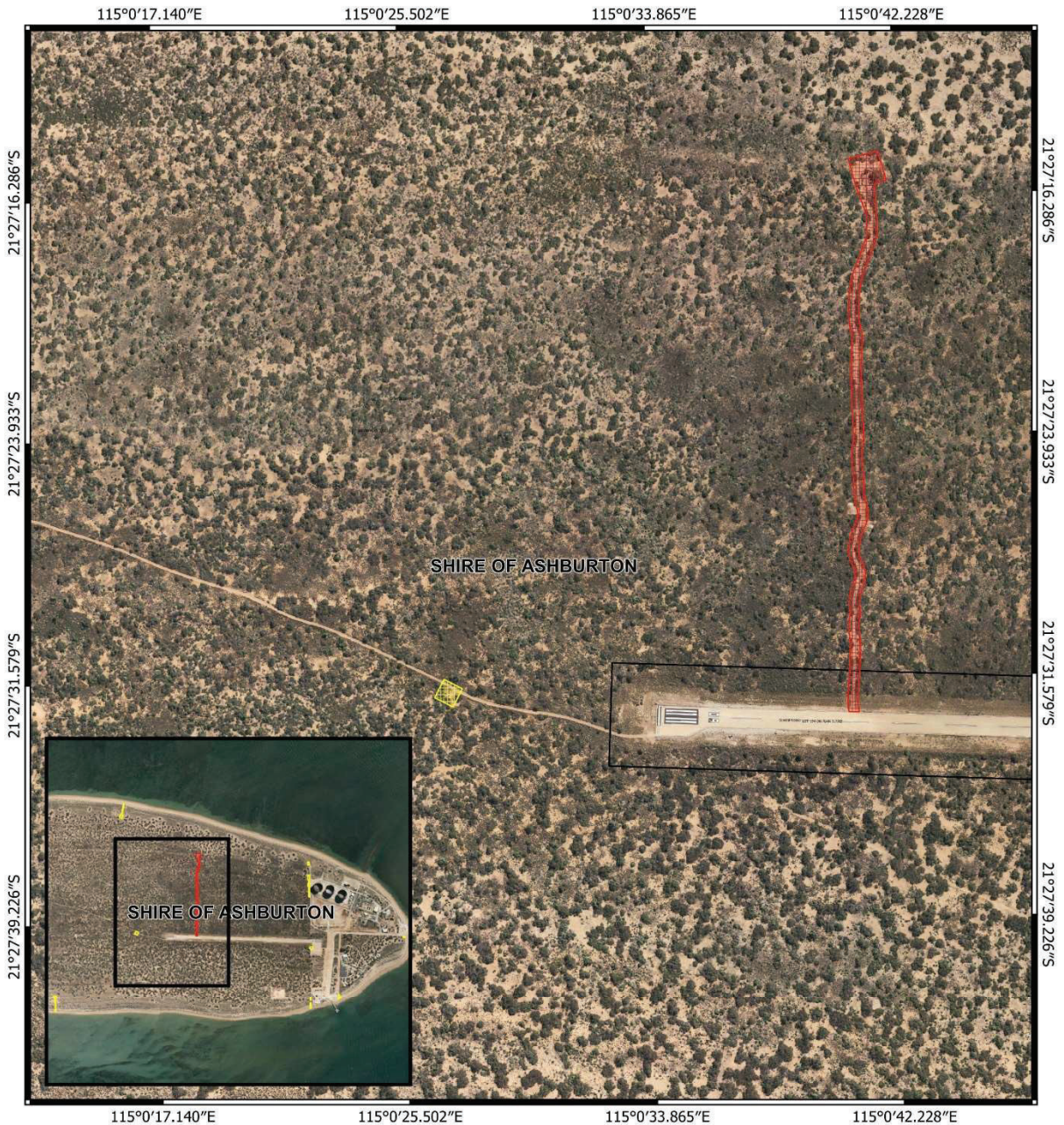


Figure 3: Map of the boundary of the area within which clearing may occur

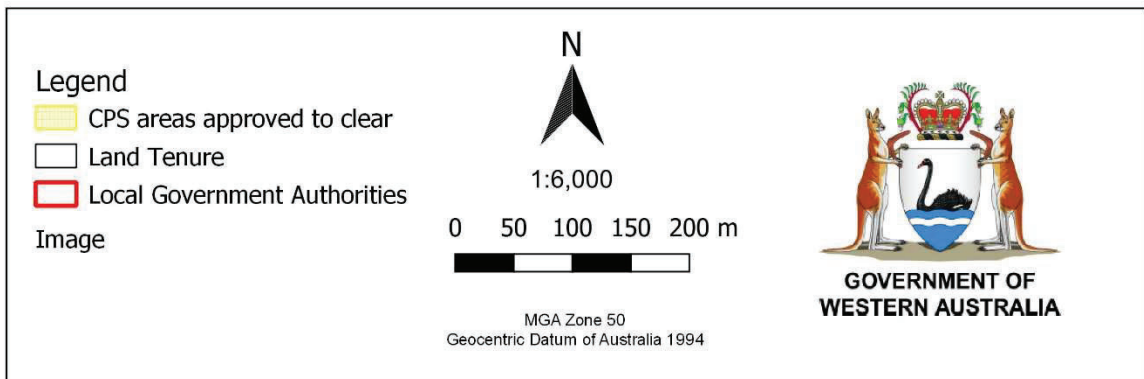


Figure 4: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9190/3
Permit type:	Purpose permit
Applicant name:	Chevron Australia Pty Ltd
Application received:	The administrative amendment was initiated by the Department of Water and Environmental Regulation (DWER) on 20 June 2022
Application area:	1.063 hectares of native vegetation
Purpose of clearing:	Thevenard Island Decommissioning Program
Method of clearing:	Mechanical
Property:	Lot 350 on Deposited Plan 37322 (Crown Reserve 33174) Lot 134 on Deposited Plan 217262 Lot 142 on Deposited Plan 217262
Location (LGA area/s):	Shire of Ashburton
Localities (suburb/s):	Thevenard Island

1.2. Description of clearing activities

The administrative amendment to CPS 9190/2 is to update the definition of “turtle nesting season” on the existing permit, to align with the definition under the *Thevenard Island Care and Maintenance / Retirement Phase Environment Plan*. The vegetation proposed to be cleared under CPS 9190/3 is unchanged from the previous versions of the permit and is distributed across 11 separate areas throughout Thevenard Island (see Figure 1, Section 1.5).

CPS 9190/2 allowed for the clearing of no more than 1.063 hectares of native vegetation within Lot 350 on Deposited Plan 37322 (Crown Reserve 33174), Lot 134 on Deposited Plan 217262, and Lot 142 on Deposited Plan 217262, Thevenard Island, for the purpose of removing infrastructure as part of the Thevenard Island Decommissioning Program. The infrastructure proposed to be removed included a shipping marker, the steel casting of a cuttings well, buried metal sheeting, areas of stabilised sand and gravel, a buried firewater pipeline, groundwater monitoring bores, and water source wells, where clearing footprints were delineated to account for the potential disturbance and clearing of vegetation that may result from the removal activities and vehicle access to removal sites.

Records indicate that approximately 0.124 hectares of clearing has been undertaken to date under CPS 9190/2.

1.3. Decision on application

Decision:	Granted
Decision date:	11 August 2022
Decision area:	1.063 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This administrative amendment was accepted, assessed, and determined in accordance with sections 51K and 51M of the *Environmental Protection Act 1986* (EP Act). The amendment relates only to updating the definition of “turtle nesting season” on the existing permit from October to April to November to April, to align with the definition under the *Thevenard Island Care and Maintenance / Retirement Phase Environment Plan* approved by the Department of Mines, Industry Regulation, and Safety (DMIRS) and supported by the Department of Biodiversity, Conservation and Attractions (DBCA). The Delegated Officer considered that updating this definition also aligns with the peak nesting season for the three marine turtle species that utilise Thevenard Island; *Chelonia mydas* (Green turtle), *Eretmochelys imbricata* (Hawksbill turtle) and *Natator depressus* (Flatback turtle), as specified in the Recovery Plan for Marine Turtles in Australia (2017).

In considering the above, the Delegated Officer considered that the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values remains unchanged from the previous assessments of the permit and can found in the Decision Reports prepared for Clearing Permits CPS 9190/1 and CPS 9190/2. The Delegated Officer considered that, given the administrative nature of the proposed amendment, the existing conditions under Clearing Permit CPS 9190/2 are sufficient to limit the impacts of the proposed clearing:

- Avoid, minimise and reduce the impacts and extent of clearing,
- Avoid clearing of suitable nesting habitat for marine turtle species during turtle nesting season,
- Undertake pre-clearing inspections for migratory bird nest sites and avoid the clearing of any active nests for the duration of the breeding season,
- Take hygiene steps to minimise the risk of the introduction and spread of weeds,
- Revegetate and rehabilitate areas cleared for temporary works by laying stockpiled vegetative material and topsoil on the cleared areas, and
- Revegetate and rehabilitate areas cleared for access and removal of a shipping marker by scarifying the existing track and redistributing topsoil on cleared areas.

1.5. Site maps

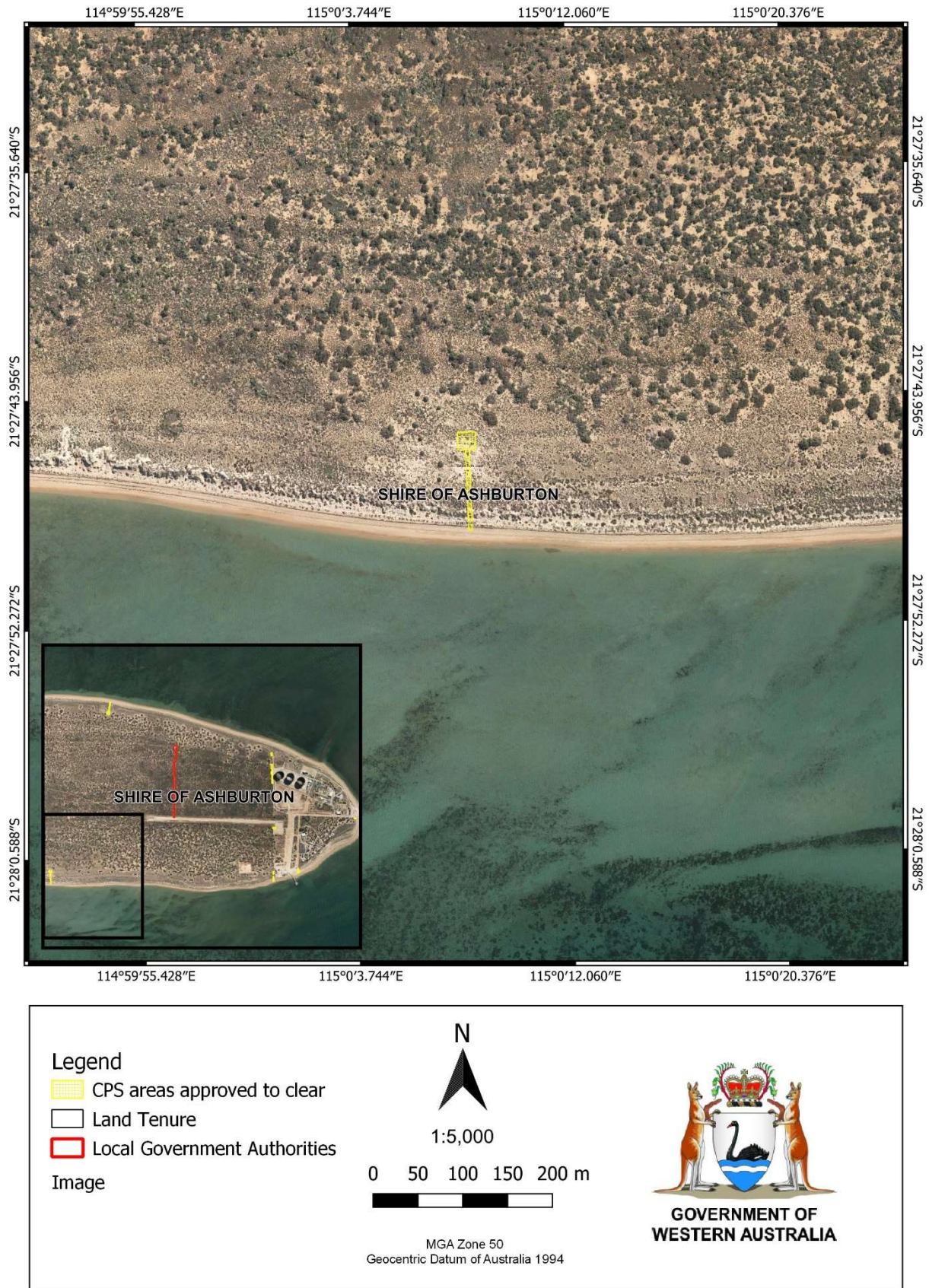


Figure 1 The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

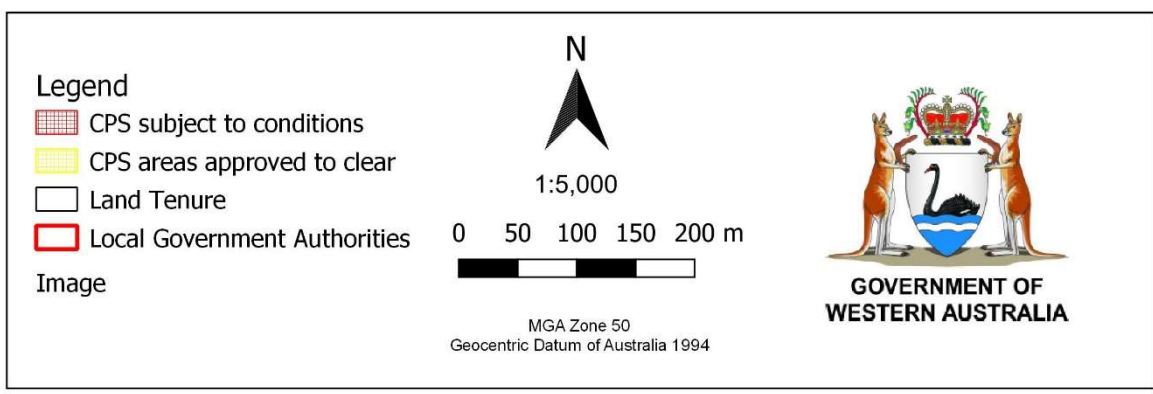
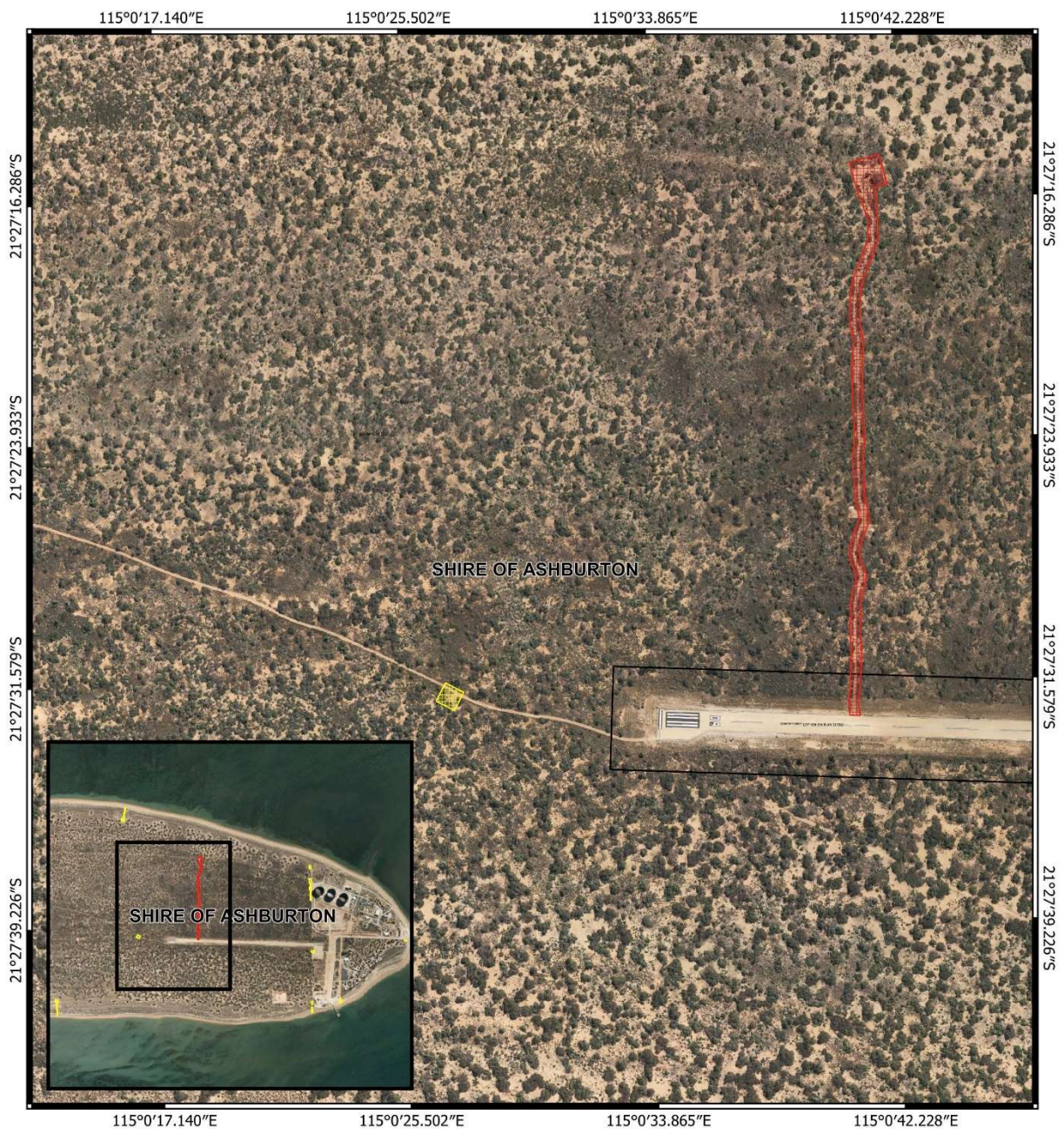






Figure 2 The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.




Legend

-  CPS subject to conditions
-  CPS areas approved to clear
-  Land Tenure
-  Local Government Authorities


Image

N




1:5,000

0 50 100 150 200 m



MGA Zone 50
Geocentric Datum of Australia 1994



**GOVERNMENT OF
WESTERN AUSTRALIA**

Figure 3 The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit. The area cross-hatched red indicates area within which specific revegetation conditions apply.

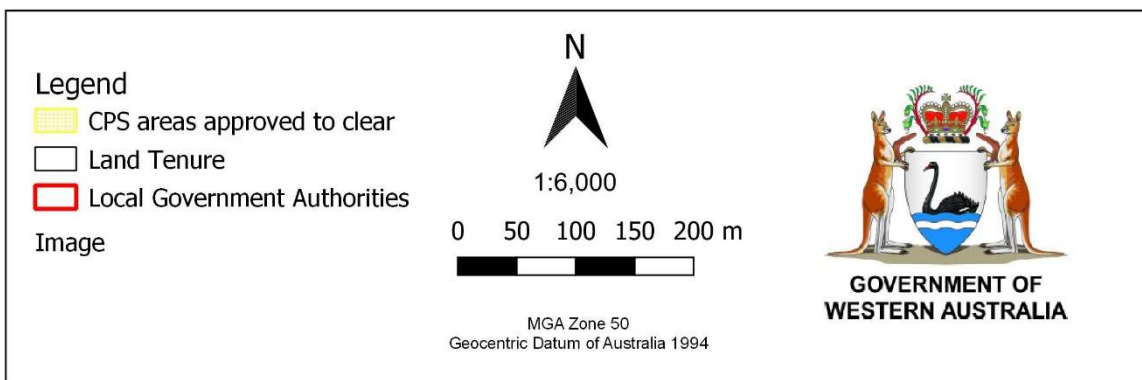


Figure 4 The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

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 principle of the conservation of biological diversity and ecological integrity.

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)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

As this amendment is administrative in nature and relates only to updating a definition on the permit, the avoidance and mitigation measures implemented by the Permit Holder are unchanged and can be found in the Decision Reports prepared for Clearing Permits CPS 9190/1 and CPS 9190/2. The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

This amendment is the result of an administrative error on clearing permit CPS 9190/2, where the definition of “turtle nesting season” (October to April) did not align with the accepted turtle nesting season for Thevenard Island (November to April) as defined in the *Thevenard Island Care and Maintenance / Retirement Phase Environment Plan* (Chevron, 2019), which is approved by the DMIRS and outlines how activities on Thevenard Island must be undertaken with respect to environmental management. The updated definition of “turtle nesting season” was supported by DBCA during consultation on the *Thevenard Island Care and Maintenance / Retirement Phase Environment Plan* (Chevron, 2019) and also aligns with the peak nesting season for the three marine turtle species that utilise Thevenard Island; *Chelonia mydas* (Green turtle), *Eretmochelys imbricata* (Hawksbill turtle) and *Natator depressus* (Flatback turtle), as specified in the *Recovery Plan for Marine Turtles in Australia* (Commonwealth of Australia, 2017).

Given the nature of the proposed amendment, the Delegated Officer determined that the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values remains unchanged from the previous assessments of the permit and can be found in the Decision Reports prepared for Clearing Permits CPS 9190/1 and CPS 9190/2.

3.3. Relevant planning instruments and other matters

Given the administrative nature of the amendment, the assessment against planning instruments and other matters is also unchanged and can be found in the Decision Reports prepared for Clearing Permits CPS 9190/1 and CPS 9190/2.

End

Appendix A. Site characteristics

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

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation within Thevenard Island in the extensive land use zone of Western Australia. It is surrounded by remnant vegetation within the greater Thevenard Island Nature Reserve and is adjacent to previously cleared areas including an airstrip, tourist accommodation and an oil and gas processing facility which is in the process of being decommissioned. The proposed clearing area includes 11 separate areas ranging in size from 0.019 to 0.622 hectares, which all comprise part of an approximately 450-hectare area of native vegetation within the Thevenard Island Nature Reserve. Spatial data indicates that the local area (50-kilometre radius from the centre of the area proposed to be cleared) retains approximately 97.54 per cent of the original native vegetation cover.
Ecological linkage	The application area is not mapped within any formal or informal ecological linkages. Noting that the application area includes eight separate areas of less than one hectare in size within an approximately 450-hectare expansive tract of native vegetation, the application area is not considered to comprise a significant ecological linkage within Thevenard Island.
Conservation areas	The majority of the application area is located within Thevenard Island Nature Reserve (Crown Reserve 33174), which is vested in the conservation estate of Western Australia and managed in perpetuity by the Department of Biodiversity Conservation and Attractions (DBCA).
Vegetation description	<p>Vegetation within the Thevenard Island Nature Reserve has been historically mapped as consisting of three major vegetation associations:</p> <ul style="list-style-type: none"> • <i>Spinifex longifolius</i> coastal grassland on dunes, • <i>Acacia coriacea</i> central shrubland on ridge system, and • Mixed low shrubland and mixed grassland on coastal shelf (LeProvost et al., 1987). <p>As part of the Thevenard Island Terrestrial Ecological Monitoring Program (TEMP), vegetation mapping on Thevenard Island has been categorised into 13 detailed vegetation associations by correlating the aforementioned historical vegetation associations, landform units and the findings of ongoing ecological monitoring (Astron, 2020). The Thevenard Island Retirement Project Terrestrial Ecological Monitoring Report (Astron, 2020) indicates that the vegetation within the proposed clearing area consists of the following vegetation associations:</p> <ul style="list-style-type: none"> • Inland ridge 1 (Ir1), described as <i>Acacia coriacea</i> tall open shrubland over <i>Acacia sclerosperma</i> shrubland to open heath with mixed shrubs over <i>Cenchrus ciliaris</i> tussock grassland, • Coastal plain 1 (Cp1), described as <i>Eulalia aurea</i> tussock grassland with <i>Spinifex longifolius</i> over <i>Carpobrotus</i> sp. Thevenard Island (M White 050) open ground creeper, and can be scattered <i>Acacia coriacea</i> and <i>Cynanchum viminalis</i> subsp. <i>australe</i>, • Coastal plain 2 (Cp2), described as <i>Scaevola crassifolia</i> and <i>Scaevola cunninghamii</i> low shrubland to low open heath over <i>Eulalia aurea</i> very open tussock grassland, • Coastal plain 4 (Cp4), described as <i>Acacia coriacea</i> subsp. <i>coriacea</i> tall open shrubland over <i>Olearia</i> sp. Kennedy Range (B. Byrne 66), <i>Cynanchum viminalis</i> subsp. <i>australe</i>, <i>Rhagodia preisseii</i> subsp. <i>obovata</i> low open to low shrubland

Characteristic	Details
	<p>over <i>Eulalia aurea</i> tussock grassland and <i>Carpobrotus</i> sp. Thevenard Island ground creeper,</p> <ul style="list-style-type: none"> • Coastal foredune 1 (Cf1), described as <i>Spinifex longifolius</i> tussock grassland, sometimes with small populations of <i>Whiteochloa airoides</i> and <i>Eulalia aurea</i>, • Disturbed areas (D1), described as <i>Cenchrus ciliaris</i> (buffel grass) closed tussock grassland over open <i>Ipomoea pes-caprae</i>, <i>Canavalia rosea</i> liane, and • Intertidal zone (Astron, 2020). <p>The full survey descriptions, mapping and representative photographs are available in Appendix D.</p> <p>This is broadly consistent with the mapped Beard vegetation association 117, which is described as hummock grasslands, grass steppe; soft spinifex (Shepherd et al, 2001).</p>
Vegetation condition	<p>Vegetation association descriptions and monitoring photographs contained within the Thevenard Island Retirement Project Terrestrial Ecological Monitoring Report (Astron, 2020) indicate that the vegetation within the proposed clearing area ranges from Very Good to Poor (Trudgen, 1991) condition.</p> <p>The full Trudgen (1991) condition rating scale is provided in Appendix C.</p> <p>Representative photographs are available in Appendix D.</p>
Climate and landform	<p>The climate of Thevenard Island is described as an arid, summer rainfall, sub-tropical zone, where climate is primarily controlled by the sub-tropical high-pressure belt that migrates southward from winter to summer. Mean annual rainfall is 308.4 mm, but seasonal and annual variability is high. The mean annual maximum temperature is 32.1°C and the mean annual minimum temperature is 19.2°C.</p>
Soil description and land degradation risk	<p>Thevenard Island is considered to have formed from the accumulation of Holocene sandy sediment and coral reefs resting on a Pleistocene limestone foundation (LeProvost et al., 1987). Soil on Thevenard Island consists of undulating dune systems with two predominant soil types:</p> <ul style="list-style-type: none"> • medium to coarse grainstone of skeletal quartz with some lithoclastic sand on fore dunes, and • muddy grainstone on ridges and coastal plain, with the coastal plain having a higher content of sand (Astron, 2020). <p>The sandy soils present within the greater Thevenard Island and the application area are vulnerable to wind erosion, particularly if surface vegetation is removed (DBCA, 2020). The soils are not expected to be susceptible to land degradation resulting from water erosion, salinity, subsurface acidification, phosphorus export, waterlogging or flooding.</p>
Waterbodies and hydrogeography	<p>The desktop assessment and aerial imagery indicated that there are no natural waterbodies or mapped wetlands present on Thevenard Island. The closest mapped wetland to the application area is the Exmouth Gulf East, located approximately 46.7 kilometres south-east, along the mainland.</p> <p>The application area is not mapped within any water resources proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (the RIWI Act), the <i>Country Areas Water Supply Act 1947</i> (the CAWS Act) or the <i>Metropolitan Water Supply, Sewerage, and Drainage Act 1909</i>.</p>
Flora	<p>The desktop assessment identified that a total of 8 priority flora species have been recorded within the local area, comprising one Priority 1 (P1) flora and seven Priority 3 (P3) flora (Western Australian Herbarium, 1998-). None of these existing records occur within the application area, with the closest record being an occurrence of <i>Carpobrotus</i></p>

Characteristic	Details
	<p>sp. Thevenard Island (M. White 050) (P3) approximately 0.1 kilometres from the application area.</p> <p>With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), the habitat preferences of the aforementioned species, and ecological monitoring information (Astron, 2020), the application area may provide suitable habitat for two priority flora species and impacts to these species required further consideration (see Appendix A.3).</p> <p>The desktop assessment did not identify records of any threatened flora species occurring within the local area. No flora species listed as threatened under the state BC Act or the Commonwealth EPBC Act are known to occur on Thevenard Island (Astron, 2020; DBCA, 2020). With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and the distribution and extent of existing records, impacts to threatened flora species or significant habitat for these species were not considered likely to result from the proposed clearing and did not require further consideration.</p>
Ecological communities	<p>The desktop assessment identified that the closest state-listed threatened ecological community (TEC) is an occurrence of the Cameron's Cave Troglitic Community TEC, which occurs approximately 106.8 kilometres south-west of the application area, on the mainland.</p> <p>The desktop assessment identified that the closest mapped state-listed priority ecological community (PEC) is an occurrence of the Tanpool Land System PEC, approximately 66.6 kilometres south-east of the application area, on the mainland. However, the Thevenard Island TEMP identified a small, isolated occurrence of the Coastal dune native tussock grassland dominated by <i>Whiteochloa airoides</i> (Tussock grassland of <i>Whiteochloa airoides</i>) PEC within Thevenard Island Nature Reserve in 2017 (Astron, 2020). The occurrence of the Tussock grassland of <i>Whiteochloa airoides</i> PEC is located approximately 2.6 kilometres west of the application area and no other occurrences of the PEC have been recorded within Thevenard Island or the application area (Astron, 2020).</p>
Fauna	<p>The desktop assessment identified that a total of 73 conservation significant fauna species have been recorded within the local area, including 22 threatened fauna species, 11 priority fauna species, 35 fauna species protected under international agreement, and five other specially protected fauna species (DBCA, 2007-). None of these records occur within the application area, with the closest record being a fairy tern (<i>Sternula nereis nereis</i>) occurring approximately 50 metres from the application area.</p> <p>With consideration for the site characteristics set out above and relevant datasets (see Appendix E.1), the application area may provide suitable habitat for 32 of the aforementioned conservation significant fauna species and impacts to these species required further consideration (see Appendix A.4).</p>

A.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*					
Carnarvon	8,382,890.35	8,360,801.46	99.74	1,020,434.08	12.17
Vegetation complex					
Beard vegetation association 117*	897,107.77	883,704.60	98.51	129205.67	14.4
Vegetation complex in IBRA bioregion					
Beard vegetation association 117 (Carnarvon)*	12,424.35	10,907.99	87.80	2,997.21	24.12
Local area					
50km radius	172,702.71	168,448.51	97.54	-	-

*Government of Western Australia (2019)

A.3. Flora analysis table

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

Species 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]
<i>Carpobrotus</i> sp. Thevenard Island (M. White 050)	P3	Y	Y	Y	0.1	12	Y
<i>Corynotheca flexuosissima</i>	P3	Y	Y	Y	0.4	6	Y

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

A.4. Fauna analysis table

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

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records in local area (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Calidris canutus</i> (Red knot)	EN	Y	Y	0.5	3	Y
<i>Calidris ferruginea</i> (Curlew sandpiper)	CR	Y	Y	15.5	5	Y
<i>Calidris tenuirostris</i> (Great knot)	CR	Y	Y	0.5	6	Y
<i>Charadrius leschenaultii</i> (Greater sand plover)	VU	Y	Y	0.5	102	Y
<i>Charadrius mongolus</i> (Lesser sand plover)	EN	Y	Y	8.1	27	Y
<i>Chelonia mydas</i> (Green turtle)	VU	Y	Y	0.3	593	Y

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records in local area (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Eretmochelys imbricata</i> (Hawksbill turtle)	VU	Y	Y	0.6	72	Y
<i>Leggadina lakedownensis</i> (Lakeland Downs mouse)	P4	Y	Y	0.2	348	Y
<i>Limosa lapponica menzbieri</i> (Bar-tailed godwit)	CR	Y	Y	21.1	4	Y
Migratory waterbirds (20 species)	MI	Y	Y	>0.5	-	Y
<i>Natator depressus</i> (Flatback turtle)	VU	Y	Y	0.6	413	Y
<i>Numenius madagascariensis</i> (Eastern curlew)	CR	Y	Y	0.5	27	Y
<i>Sternula nereis nereis</i> (Fairy tern)	VU	Y	Y	<0.1	49	Y
<i>Tringa brevipes</i> (Grey-tailed tattler)	P4	Y	Y	0.5	92	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, MI: migratory birds protected under an international agreement.

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 area proposed to be cleared may contain locally significant flora, fauna, habitats, and assemblages of plants.</p>	<p>May be at variance</p> <p>(as per CPS 9190/2)</p>	No
<p><u>Principle (b):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared contains potential foraging, roosting, and nesting habitat for conservation significant fauna.</p>	<p>May be at variance</p> <p>(as per CPS 9190/2)</p>	No
<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> No flora species listed as threatened under the state BC Act or the Commonwealth EPBC Act are known to occur on Thevenard Island or in the local area.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 9190/2)</p>	No
<p><u>Principle (d):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared consists of predominantly shrubland and heath over hummock grassland that is well-represented across Thevenard Island and does not contain species that can indicate a threatened ecological community listed under the BC Act. Given the distance and separation from the closest TEC, the proposed clearing is not likely to impact or be necessary for the maintenance of any state-listed TEC.</p>	<p>Not likely to be at variance</p> <p>(as per CPS 9190/2)</p>	No

Environmental value: significant remnant vegetation and conservation areas

Principle (e): *“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”*

Assessment: The extent of the mapped vegetation type and native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared includes several small areas within an expansive tract of remnant vegetation and is not considered to be part of a significant ecological linkage in the local area.

Not likely to be at variance

(as per CPS 9190/2)

No

Principle (h): *“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”*

Assessment: The application area occurs within Thevenard Island Nature Reserve. The proposed clearing will result in the loss of vegetation within a conservation area and has the potential to impact on its environmental values.

At variance

(as per CPS 9190/2)

No

Environmental value: land and water resources

Principle (f): *“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”*

Assessment: Given no water courses or wetlands are recorded within Thevenard Island and the closest natural source of surface water occurs on the mainland approximately 20 kilometres south of the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.

Not likely to be at variance

(as per CPS 9190/2)

No

Principle (g): *“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”*

Assessment: The sandy, coastal soils within the application are susceptible to wind and water erosion. However, noting the extent and location of the application area, the proposed clearing is not likely to have an appreciable impact on land degradation.

Not likely to be at variance

(as per CPS 9190/2)

No

Principle (i): *“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”*

Assessment: Given no water courses, wetlands or proclaimed water resources are recorded within Thevenard Island or within 20 kilometres of the application area, the proposed clearing is unlikely to impact surface or ground water quality.

Not likely to be at variance

(as per CPS 9190/2)

No

Principle (j): *“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”*

Assessment: The surveyed soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no water courses are recorded within Thevenard Island and noting the extent and location of the application area, the proposed clearing is unlikely to cause, or exacerbate, the incidence or intensity of flooding or to contribute to waterlogging.

Not likely to be at variance

(as per CPS 9190/2)

No

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

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Biological survey information excerpts

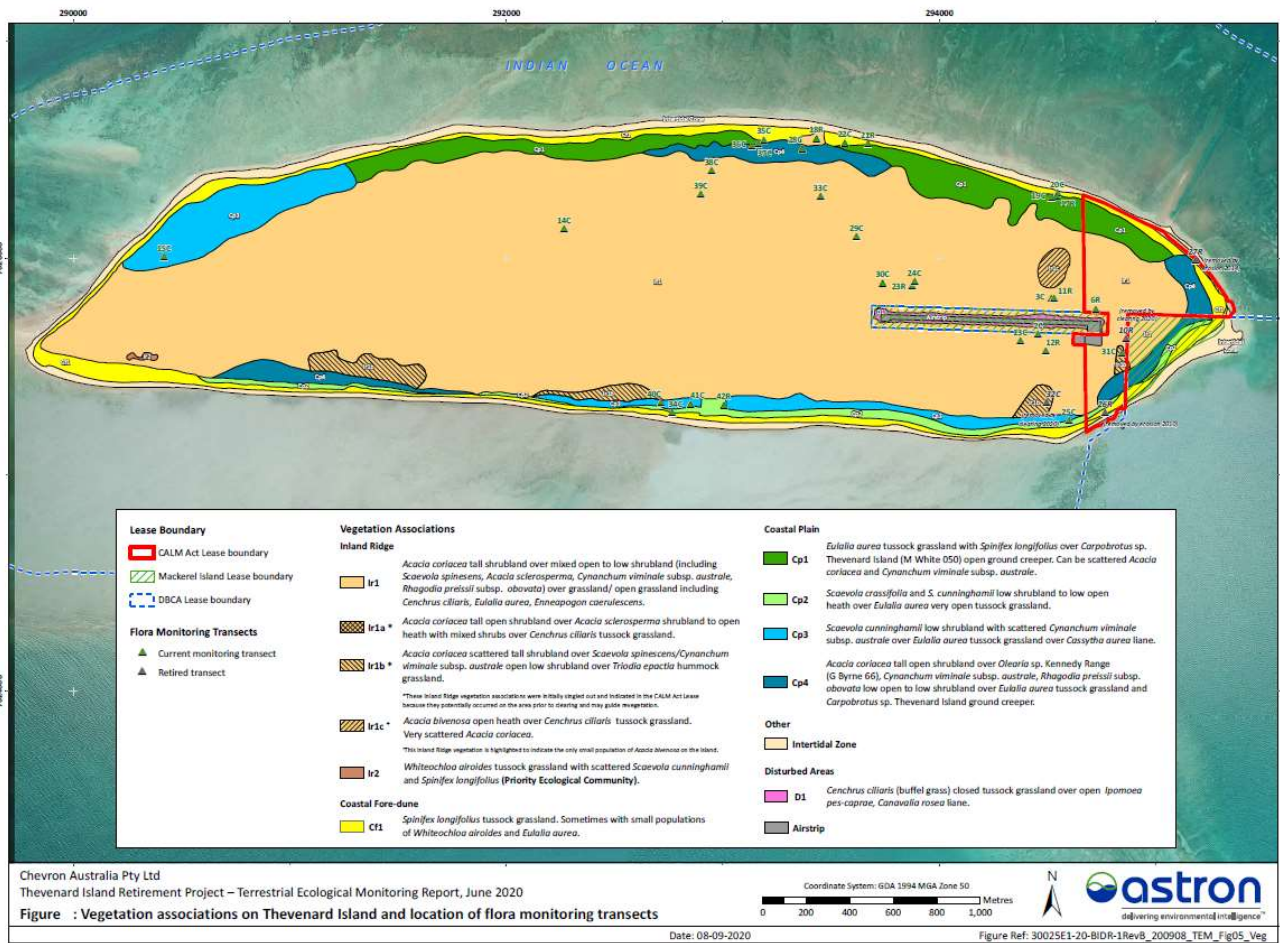


Figure 7. Vegetation association mapping and location of flora monitoring transects on Thevenard Island (Astron, 2020).



Figure 8. Photographs of vegetation representative of the Inland ridge 1 (Ir1) vegetation association, adjacent to the application area (Astron, 2020).



Figure 9. Photographs of vegetation representative of the Coastal plain 2 (Cp2) vegetation association, adjacent to the application area (Astron, 2020).



Figure 10. Photographs of vegetation representative of the Coastal plain 4 (Cp4) vegetation association, adjacent to the application area (Astron, 2020).



Figure 11. Photographs of vegetation representative of the Coastal foredune 1 (Cf1) vegetation association, adjacent to the application area (Astron, 2020).

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)
- 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 Mapping – Best Available
- Soil Landscape Mapping – Systems

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)

E.2. References

Astron Environmental Services Pty Ltd (Astron) (2020) *Thevenard Island Retirement Project Terrestrial Ecological Monitoring Report*, prepared for Chevron Australia Pty Ltd (DWER Ref: A2001517).

Chevron Australia Pty Ltd (Chevron) (2019) *Thevenard Island Care and Maintenance / Retirement Phase Environment Plan Summary*. Available from:
<https://ace.dmp.wa.gov.au/ACE/Public/PetroleumProposals/ViewPlanSummary?registrationId=82714>.

Commonwealth of Australia (2017) *Recovery Plan for Marine Turtles in Australia*. Department of the Environment and Energy, Canberra.

Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) *NatureMap: Mapping Western Australia's Biodiversity*. Department of Parks and Wildlife. Available from:
<http://naturemap.dpaw.wa.gov.au/> (accessed January 2022).

- Department of Environment Regulation (DER) (2013) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.
- Department of Water and Environmental Regulation (DWER) (2019) *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.
- 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>.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.
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