Groundwork part of SLR

Native Vegetation Clearance Data Report

RN 12000 Strzelecki Track Upgrade

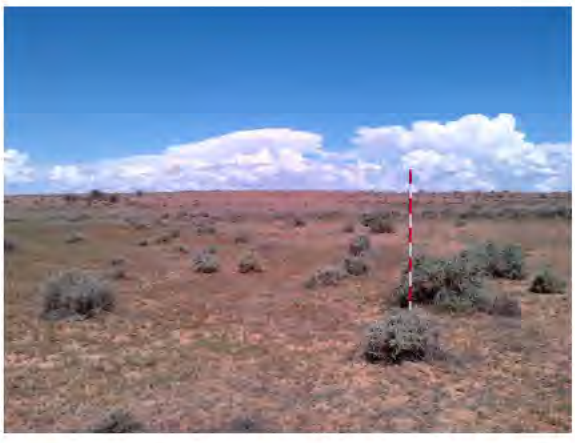
MM267 – MM300

Clearance under the *Native Vegetation Regulations 2017*

Prepared for: Department for Infrastructure and Transport

Date: 05 August 2025

File Reference: 2547.610.020V3



DOCUMENT CONTROL

PROJECT / DETAILS REPORT

Document Title:	Native Vegetation Clearance Data Report RN 12000 Strzelecki Track Upgrade MM267 – MM300
Principal Author:	Louise Jaunay
Client:	Department for Infrastructure and Transport
Reference Number:	5247.610.020V3

DOCUMENT STATUS

Issue	Description	Date	Author	Reviewer
0	Initial Issue	20 December 2024	Louise Jaunay	Matthew Jones
1	Amendments following client comments	07 April 2025	Louise Jaunay	Matthew Jones
2	Inclusion of additional borrow pit neat MM 300	25 June 2025	Louise Jaunay	Matthew Jones
3	Amendments following client comments	05 August 2025	Louise Jaunay	Matthew Jones

DISTRIBUTION RECORD

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1 Applicant Information

Application Details

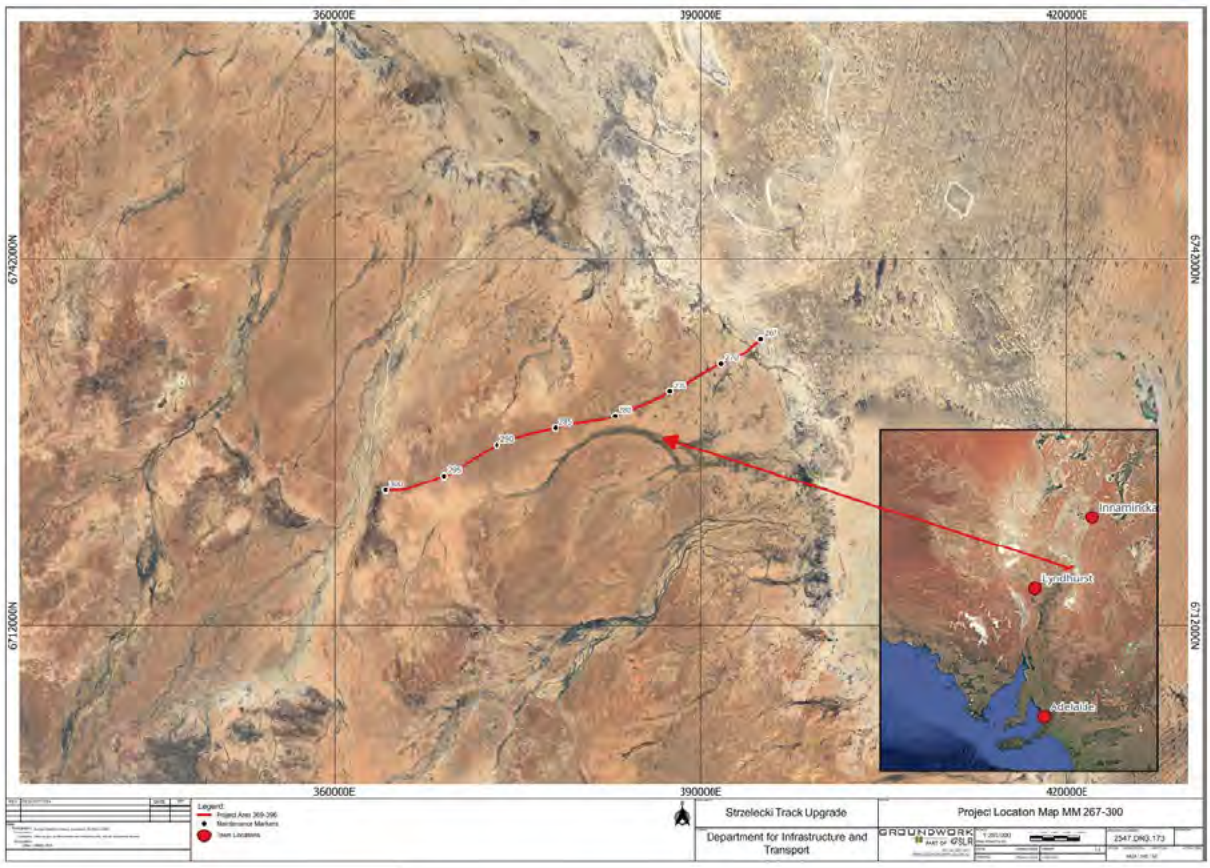
Applicant:	Department for Infrastructure and Transport (DIT)			
Key contact:	Name:	Senior Environmental Advisor		
	Contact details:	Pirie Street, Adelaide 5000		
Landowner:	Name:	Road Reserve and Crown Lease		
	Contact details:	As above		
Site address:	RN120000 Strzelecki Track, MM267 – MM300			
Local Government Area:	Pastoral Unincorporated Area		Hundred:	OH (Marree)
Title ID:	CL/6207/326		Parcel ID:	D42203 A24

Summary of proposed clearance

Purpose of clearance	The proposed upgrade of the Strzelecki Track between Maintenance Marker (MM)267 and MM300 (the Project Area) forms part of the overall Strzelecki Track upgrade and sealing project and aims to improve transport reliability, travel times, lower transport operating costs and improve road safety. Clearance of vegetation is required where proposed construction activities exceed the current road formation and maintenance activity zone. Specifically, this includes: • A linear strip of vegetation either side of the road formation, of approximately 3.8 m, where the CAZ will extend past the current MAZ, • Two (2) new MTPs • The extension of five (5) cut-off drains, • The reconstruction of one (1) dam, • The re-establishment of one (1) bore, • The creation of one (1) new camp site, and • The extension of three (3) borrow pits.
Native Vegetation Regulation	*Part 6, Regulation 12 (32)* – Works on behalf of the Commissioner of Highways.
Description of the vegetation under application	A total of 1.74 hectares (ha) of *Atriplex nummularia +/- Nitraria billardierei* shrubland, A total of 19.2 ha of *Rhagodia spinescens +/- Tecticornia* shrubland, A total of 0.26 ha of *Acacia salicina* tall shrubland,

	A total of 88.03 ha of *Sclerolaena spp.* low very open shrubland, A total of 0.18 ha of *Senna artemisioides spp. +/- Maireana appressa* open shrubland, A total of 3.78 ha of *Maireana pyramidata +/- Rhagodia spinescens* open shrubland, A total of 5.94 ha of *Astrebla pectinata* open grassland, A total of 1.27 ha of *Maireana appressa +/- Rhagodia spinescens* open shrubland, A total of 1.05 ha of *Maireana pyramidata* open shrubland, and A total of 8.8 ha of *Maireana appressa* open shrubland.
Total proposed clearance - area (ha) and number of trees	130.25 ha are proposed to be cleared.
Level of clearance	Level 4
Overlay (Planning and Design Code)	Zone – Remote Areas – RA Overlays - Gas and Liquid Petroleum Pipelines, Gas and Liquid Petroleum Pipeline (Facilities), Hazards (Bushfire – Outback), Heritage Adjacency, Hazards (Flooding – Evidence Required), Key Outback and Rural Routes, Native Vegetation, Prescribed Wells Area, State Heritage Place – 65, State Heritage Place – 71, and Water Resources.

Map of proposed clearance area



Mitigation hierarchy	Typical road drawings have been produced with the aim to avoid and reduce the native vegetation clearance impacts as well as the potential impacts to heritage sites.

	The planned Strzelecki Track upgrades are located at areas that have been exposed to a moderate level of previous vegetation clearance associated with road construction and maintenance activities. Cut-off drains have been positioned within existing historical cut- off drains locations, with five (5) requiring extension. Clearance for extending these drains is unable to be avoided as cut-off drains are essential to clearing the road of water during rainfall events to maintain road user safety. Similarly, water crossings are required to facilitate the movement of water across the roadway, to ensure safety of road users. Clearance is unable to be avoided to ensure appropriate tying-in with surrounding landscape to ensure that water can flow freely away from the road formation. Native vegetation clearance will only be required for minimal widths along the length of the Project Area, as outlined in **Section 4.1 Vegetation Assessment**. The design of the final road formation has been made to ensure the extent of impacts of clearance have been minimised to the lowest possible to achieve the sealing of the roadway and to be an appropriate size for the traffic volume and design speed. Dimensions of cut-off drains and water crossings have been planned to reduce the impact of vegetation clearance whilst still allowing the necessary construction activities to be completed. All contractors will be made aware of the environmental obligations through the implementation of a Contractors Environmental Management Plan (CEMP) during construction to ensure there is no unnecessary damage to surrounding vegetation. It is expected that native vegetation will naturally regenerate all disturbed areas, consistent with observations of past clearance.
Significant Environmental Benefit (SEB) Offset proposal	Payment of $542,387.36, including administration fee of $28,193.03, to be paid into the Native Vegetation Fund (NVF) with opportunities to provide on-ground SEB Offsets via an NVC Accredited Third Party Provider currently being investigated.

2 Purpose of Clearance

2.1 Description

Groundwork part of SLR (Groundwork) have been engaged by DIT to undertake a Native Vegetation Assessment for the purpose of clearance for the Project Area as part of the overall Strzelecki Track Upgrade Project. The Project Area forms part of Stage 3 of the overall upgrade and is currently within the pre-delivery phase. The Strzelecki Track Upgrade Project intends to seal the entirety of the Track over several stages and successive years. Currently, sealing works have been completed for some sections, with some currently in the construction phase. Other sections are still in either design or planning stages.

2.2 Background

The Strzelecki Track is primarily utilised as a transport route for the oil and gas facilities located within the Cooper Basin and the southern access route for the Innamincka township. The direct benefits of the Strzelecki Track upgrade project include, improved transport reliability and safety, improved travel times and lower transport and vehicle operating costs for road users. The Strzelecki Track upgrade is a priority for the Australian and South Australian Governments as it is the only viable land route between Adelaide and the Cooper Basin and is of importance to the expanding oil and gas industry, as well as the pastoral industry in the north east of South Australia.

2.2.1 Interim Biogeographical Regionalisation of Australia (IBRA)

The Project Area is located within the Stony Plains IBRA Region and the Murnpeowie IBRA Subregion. The Stony Plains Region is located across the central to north western parts of the South Australian Arid Lands Landscape Board Region. It is a region of extensive arid stony silcrete tablelands (breakaways), gibber, and gypsum plains crossed by large river floodplains with sparse low chenopod shrublands on duplex soils. Climate is characterised by hot temperatures and persistently low rainfall. Vegetation growth is limited by rainfall and consists of Saltbush, Bluebush, Samphire, Mitchell Grass, or Short-lived Bindyi communities on the Gibber plains with dunefields, swales, and sandy plains dominated by Sandhill Cane-grass. Drainage channels consist of denser vegetation and streams are fringed with Coolabah and River Red Gum (South Australian Arid Lands Biodiversity Strategy - Stony Plains Conservation Priorities, South Australian Arid Lands NRM Board, Department for Environment and Heritage, 2009).

2.2.2 Climate

The nearest weather station is located at Leigh Creek (No. 017110). The regional climate is characterised as arid to semi-arid and is persistently dry. Review of the Government of South Australia's Enviro Data application *NatureMaps* (*NatureMaps*) climate data references a mean annual rainfall of 164 millimetres (mm).

2.3 General Location Map

The Project Area Track is located approximately 600 kilometres (km) to the north east of Adelaide, South Australia, refer to **Drawing No. 2547.DRG.173 – Project Location Map MM 267 – 300** for a visual

representation of the Project Area. Vegetation survey plans for the Project Area are provided as outlined below:

- **Drawing No. 2547.DRG.154R1 – NVC Proposal – MM 267 – MM 300 - Section 1**
- **Drawing No. 2547.DRG.155R1 – NVC Proposal – MM 267 – MM 300 - Section 2**
- **Drawing No. 2547.DRG.156R1 – NVC Proposal – MM 267 – MM 300 - Section 3**
- **Drawing No. 2547.DRG.157R1 – NVC Proposal – MM 267 – MM 300 - Section 4**
- **Drawing No. 2547.DRG.158R1 – NVC Proposal – MM 267 – MM 300 - Section 5**
- **Drawing No. 2547.DRG.159R1 – NVC Proposal – MM 267 – MM 300 - Section 6**
- **Drawing No. 2547.DRG.160R1 – NVC Proposal – MM 267 – MM 300 - Section 7**
- **Drawing No. 2547.DRG.161R1 – NVC Proposal – MM 267 – MM 300 - Section 8**
- **Drawing No. 2547.DRG.162R2 – NVC Proposal – MM 267 – MM 300 - Section 9**

2.4 Details of the Proposal

The proposed upgrade of the Project Area on the Strzelecki Track is between MM267 and MM300 and forms part of the overall Strzelecki Track upgrades and sealing project and aims to improve transport reliability travel times, lower transport operating costs and improve road safety.

The upgraded typical road formation will be based on single lanes of 3.5 metres (m) width, with a sealed shoulder of one (1) m, an unsealed shoulder of one (1) m, totalling in a road formation of 11 m. Longitudinal drainage and batters will extend from the unsealed shoulder, with a one (1) in six (6) slope into the drain, a 1.5 m drain, and one (1) in four (4) slope extending out of the drain. A total Construction Activity Zone (CAZ) of 18 m either side of the existing centreline will be required. Existing cut-off drains will be utilised and extended if required to ensure water movement away from the road formation in rain events.

Sections identified as water crossings and flood ways will be stabilised with a required CAZ of 25 m either side of the existing centreline. Shoulder reconstruction, widening and resealing of a currently sealed section from MM286.962 to MM 293.708, will require a CAZ of 18 m either side of the existing centreline. A series of Maintenance Turn Around Points (MTPs) will also be required during construction. Most of these are existing and require no new vegetation clearance, however, there are some that require extending and some proposed new MTPs that will be required to be formed.

Most of the above construction activities will be contained within the existing road formation and maintenance activity zone (MAZ) and will not require approval for native vegetation clearance, however, there are some areas where activities extend beyond the current MAZ and approval for vegetation clearance is required. It is these areas that are included within this application. Specifically, these areas are:

- A linear strip of vegetation either side of the road formation, of approximately 3.8 m, where the CAZ will extend past the current MAZ,
- Two (2) new MTPs
- The extension of five (5) cut-off drains,
- The reconstruction of one (1) dam,
- The re-establishment of one (1) bore,
- The creation of one (1) new camp site, and
- The extension of three (3) borrow pits.

2.5 Approvals Required or Obtained

A review of *NatureMaps* indicated that there has been one (1) other Native Vegetation clearance application relevant to the Project Area, in 2008 (2008_3120). This was likely associated with the currently sealed section of road.

Other environmental legislation relevant to the project includes:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act provides protection for Matters of National Environmental Significance (MNES). Any action that has, will have or is likely to have a significant impact on MNES requires referral under the EPBC Act. Conservation significant flora and fauna species, and ecological communities listed under the EPBC Act are known from and/or could potentially occur within the Project Area.
- *National Parks and Wildlife Act 1972 (SA)* (NP&W Act). Native plants and animals in South Australia are protected under the NP&W Act. It is an offence to take a native plant or protected animal without approval. Conservation significant flora and fauna species listed on Schedules 7, 8, or 9 of the NP&W Act could potentially occur within the Project Area.
- *Landscape South Australia Act 2019* (Landscape Act). Under the Landscape South Australia Act 2019, landholders have a legal responsibility to manage declared pest plants and animals and prevent land and water degradation. The South Australian Arid Lands Landscape Board has the statutory role of enforcing this within the Project Area. Approval may be required for movement of Declared Plant and Water Affecting Activities (WAA) as associated with the Project.
- *Aboriginal Heritage Act 1988* (AH Act). Approval required if damage to Aboriginal Heritage Sites (reported / registered or undocumented) is required. Ministerial authorisation under section 23 of AH Act.

A detailed Environment and Heritage Impact Assessment according to DIT's internal guidelines has been produced for the project. Relevant environmental and heritage aspects have been assessed as part of this process with recommended mitigations and necessary approvals documented.

2.6 Native Vegetation Regulation

The proposed works are intended to be undertaken within the provisions of clearance of native vegetation provided under the *Native Vegetation Regulations 2017*, Part 6, Regulations 12 (32) – Works on behalf of Commissioner of Highways.

2.7 Development Application Information (if applicable)

Approval under the *Planning, Development and Infrastructure Act 2016* is not required.

3 Method

3.1 Flora Assessment

An online search was undertaken for EPBC Act MNES relevant to flora along with a review of *NatureMaps* for historical records of any rare or endangered flora species within 50 km of the Project Area.

Following a review of the background information and literature, an assessment of the Project Area was undertaken in December 2024 by Groundwork Plus Accredited Consultants involving a general vegetation assessment utilising the Native Vegetation Council's Rangeland Assessment methodology of the Project Area and identification of suitable growing conditions for species of conservation significance.

The Project Area was surveyed for:

- Remnant and regrowth native vegetation,
- Condition of vegetation,
- Introduced plant species, and
- Suitable growing conditions for identified threatened species.

Representative photographs of the vegetation within the Project Area as well as descriptions of the vegetation are provided within **Section 4.1. Vegetation Assessment**.

3.2 Fauna Assessment

An online search was undertaken for EPBC Act MNES relevant to fauna, as well as a review of *NatureMaps* to determine the potential presence of any rare or endangered fauna species recorded within 50 km of the Project Area.

During the field assessment, vegetation was surveyed to determine habitat potential for all fauna species, in particular threatened species identified through the desktop assessment. Opportunistic records of fauna species were also captured. The likelihood of fauna species identified within the desktop searches as being present within the Project Area was assessed based on the species known habitat preferences and the vegetation associations identified onsite and are detailed within **Section 4.2 Threatened Species Assessment**.

4 Assessment Outcomes

4.1 Vegetation Assessment

The vegetation survey was undertaken in December 2024 by Matthew Jones (Technical Director – Environmental Management, Permitting & Compliance, Native Vegetation Accredited Consultant), and Louise Jaunay (Associate Consultant – Ecology & biodiversity, Native Vegetation Accredited Consultant) from Groundwork. The Vegetation Assessment identified the majority of perennial species to be in moderate to good condition with some species flowering and setting seed. Due to rainfall over the early Summer 2024 period, there was evidence of short-lived ephemeral species, some identifiable, some not. During drier periods, cover is usually less dense with annual species.

The topography and vegetation associations changed moving through the Project Area. Generally, the Project Area is located within expansive Gibber Plains, dissected by a number of small drainage lines on hill sides. This created alternations between dry, expansive plains, and gentle undulating hills. The last few kilometres in the northern portion of the Project Area consisted of lower lying clay soils supporting vegetation such as *Atriplex nummularia* (Old Man Saltbush) and *Nitraria billardierei* (Nitre Bush) on sandy mounds known as cobblers. There are no Heritage Agreements within a 50 km radius of the project area. The Strzelecki Regional Reserve is the closest protected area to the Project Area, located approximately 12 km north.

Full assessment of the vegetation attributes and condition scores are provided within **Attachment 1 – Rangeland Assessment Scoresheets**. A list of flora species recorded onsite are provided within **Attachment 2 – Plant Species Recorded (Native and Introduced)**.

Inspection of the Project Area confirmed the presence of native vegetation with the following 10 vegetation associations identified:

- *Atriplex nummularia +/- Nitraria billardierei* shrubland
- *Rhagodia spinescens +/- Tecticornia* shrubland
- *Acacia salicina* tall shrubland
- *Sclerolaena spp.* low very open shrubland
- *Senna artemisioides spp. +/- Maireana appressa* open shrubland
- *Maireana pyramidata +/- Rhagodia spinescens* open shrubland
- *Astrebla pectinata* open grassland
- *Maireana appressa +/- Rhagodia spinescens* open shrubland
- *Maireana pyramidata* open shrubland
- *Maireana appressa* open shrubland

Vegetation associations were classified at a broad level, and based upon landform as well as dominant species, as was appropriate for the context of the landscape and the assessment methodology. Refer to **Table 1 – Vegetation Association 1** to **– Table 10 – Vegetation Association 10** for details of the vegetation associations.

The vegetation associations are connected to surrounding native vegetation and are consistent with regional associations which are well represented. Land use is predominately grazing, with the vegetation showing some evidence of current grazing, particularly within water ways.

Most vegetation within the construction footprint is of lower understorey species and younger overstorey species, with minimal mature overstorey species to be impacted. However, a few mature taller shrubs, particularly in water ways have been identified as falling within the impact area.

Table 1 – Vegetation Association 1

Vegetation Association 1	*Atriplex nummularia +/- Nitraria billardierei* shrubland
 **Representative Photo 1 – *Atriplex nummularia* (Old Man Saltbush) and *Nitraria billardierei* (Nitre Bush) on sandy mounds known as cobblers** **Latitude 29° 30'58.18"S, Longitude 139°54'10.17"E**	
General description	Vegetation located on lower lying ground on clay soils with sandy mounds. Water pooling in some depressions at time of assessment. Dominated by *Atriplex nummularia* with generally sparse vegetation. Small stands of *Acacia salicina* and *Acacia victoriae*. Presence of drying and dried annual species, such as *Cullen australasicum*, as prior conditions had allowed for vegetation germination. Low evidence of current grazing pressure on perennial species. Very low weed species noted within the areas under application. Vegetation is of a density and condition expected of the region. Dominant native species include: o *Atriplex nummularia* o *Niraria billardierei* o *Acacia victoriae* o *Acacia salicina* o *Salsola australis* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.

Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 1 during the field assessment.				
Landscape context score	1.16	**Vegetation condition score**	47.30	**Conservation significance score**	1.10
Unit biodiversity score	60.35	**Area (ha)**	1.74	**Total biodiversity score**	105.01

Table 2 – Vegetation Association 2

Vegetation Association 2	*Rhagodia spinescens* +/- *Tecticornia* shrubland

Representative Photo 2 – Saline clay flat dominated by *Rhagodia spinescens* and *Tecticornia sp.*
Latitude 29° 31'19.13"S, Longitude 139°53'12.38"E

General description	Vegetation association located between 'cobbler' country and higher Gibber plains. Saline soil evident through white salt deposits and presence of Samphire (*Tecticornia sp.*). Occasional emergent Acacia victoriae shrub. Notable presence of dried annual species, as prior conditions had allowed for vegetation germination. Very low evidence of current grazing pressure on perennial species. Very low weed species noted within the areas under application. Vegetation is of a density and condition expected of the region. Dominant native species include: o *Rhagodia spinescens* o *Tecticornis sp.* o *Enchylaena tomentosa* o *Salsola australis* o *Sclerolaena diacantha*

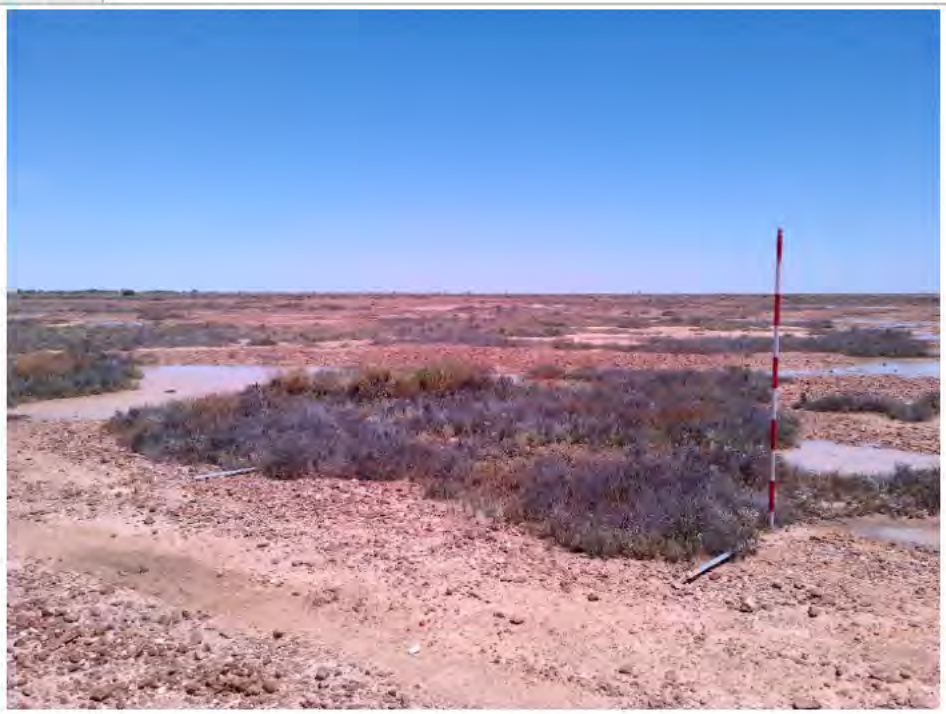
	○ *Atriplex lindleyi* ○ *Maireana appressa* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.				
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 2 during the field assessment.				
Landscape context score	1.16	**Vegetation condition score**	42.56	**Conservation significance score**	1.10
Unit biodiversity score	54.31	**Area (ha)**	19.2	**Total biodiversity score**	1042.75

Table 3 – Vegetation Association 3

Vegetation Association 3	*Acacia salicina* tall shrubland
	
Representative Photo 3 – *Acacia salicina* thicket in lower lying drainage flats. Latitude 29° 31'42.12"S, Longitude 139°52'18.79"E	
General description	Vegetation located within flat drainage lines. Dominated by *Acacia salicina* over *Rhagodia spinscens*. Inundated with water at time of assessment from recent rain event. Notable presence of dried annual species, as prior conditions had allowed for vegetation germination. No evidence of current grazing pressure on perennial species. Low weed species noted within the areas under application. Vegetation is of a density and condition expected of the region. Dominant native species include:

	○ *Acacia salicina* ○ *Rhagodia spinescens* ○ *Enchylaena tomentosa* ○ *Senescio magnificus* ○ *Atriplex lindleyii* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.				
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act were recorded within Vegetation Association 3 during the field assessment. One (1) species, *Orobanche cernua var. australiana* (Australian Broomrape), listed as Rare under the NP&W Act, was recorded during the field assessment. No other species listed under the NP&W Act were recorded.				
Landscape context score	1.16	**Vegetation condition score**	52.33	**Conservation significance score**	1.14
Unit biodiversity score	69.20	**Area (ha)**	0.26	**Total biodiversity Score**	17.99

Table 4 – Vegetation Association 4

Vegetation Association 4	*Sclerolaena spp.* low very open shrubland
 **Representative Photo 4 – Gibber Plains with patches of *Sclerolaena spp* very low shrubs. Water from recent rain pooling in small depressions. Latitude 29° 31'59.02"S, Longitude 139°52'3.52"E**	
General description	High Gibber Plains with sparse, patchy, vegetation. Dominated by Sclerolaena spp. with evidence of dried annual species, as prior conditions had allowed for vegetation germination. Recent rain event had left pooled water in small

	depressions across the vegetation association. Occasional *Maireana spp.*, either as an individual or small clump. No evidence of current grazing pressure on perennial species. No evidence of weed species at time of assessment. Vegetation is of a density and condition expected of the region. Dominant native species include: o *Sclerolaena patenticuspis* o *Sclerolaena intricata* o *Sclerolaena cuneata* o *Astrebla pectinata* o *Eragrostis delsii* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.				
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 4 during the field assessment.				
Landscape context score	1.16	**Vegetation condition score**	48.50	**Conservation significance score**	1.10
Unit biodiversity Score	61.89	**Area (ha)**	88.03	**Total biodiversity Score**	5448.18

Table 5 – Vegetation Association 5

Vegetation Association 5	*Senna artemisioides spp. +/- Maireana appressa* open shrubland

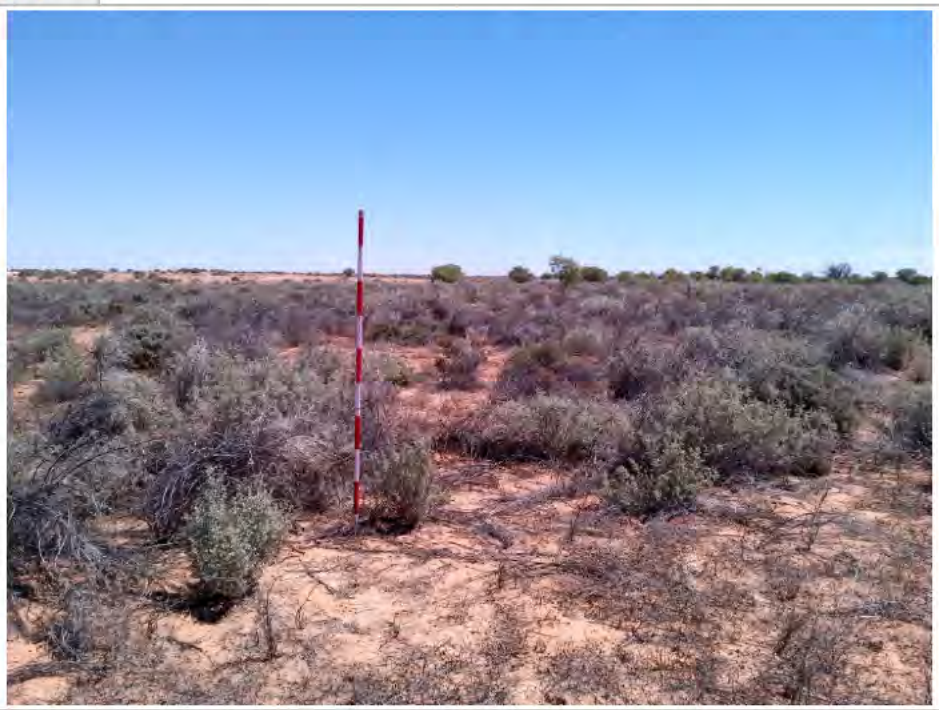
Representative Photo 5 – *Senna artemisioides spp*. shrubland on low hills.
Latitude 29° 32'23.99"S, Longitude 139°50'59.51"E

General description	Vegetation located on small rises with clay soil. Dominated by *Senna artemisioides spp.* and *Maireana appressa*. Some dried annual species, as prior conditions had allowed for vegetation germination. Low evidence of current grazing pressure on perennial species. Low weed species noted within the areas under application. Vegetation is of a density and condition expected of the region. Dominant native species include: o *Senna artemisioides spp.* o *Maireana appressa* o *Atriplex lindleyi* o *Rhagodia spinscens* o *Salsola australis* o *Sclerolaena cuneata* o *Gunniopsis quadrifida* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 5 during the field assessment.

Landscape context score	1.16	**Vegetation condition score**	44.60	**Conservation significance score**	1.10
Unit biodiversity score	56.91	**Area (ha)**	0.18	**Total biodiversity score**	10.24

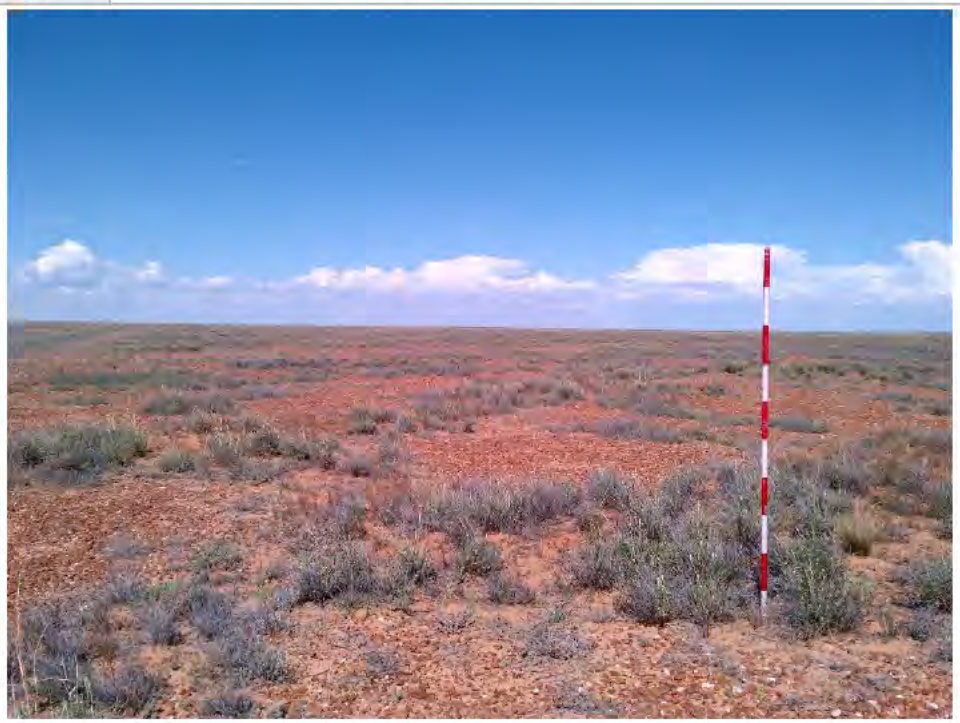
Table 6 – Vegetation Association 6

Vegetation Association 6	*Maireana pyramidata +/- Rhagodia spinescens* open shrubland



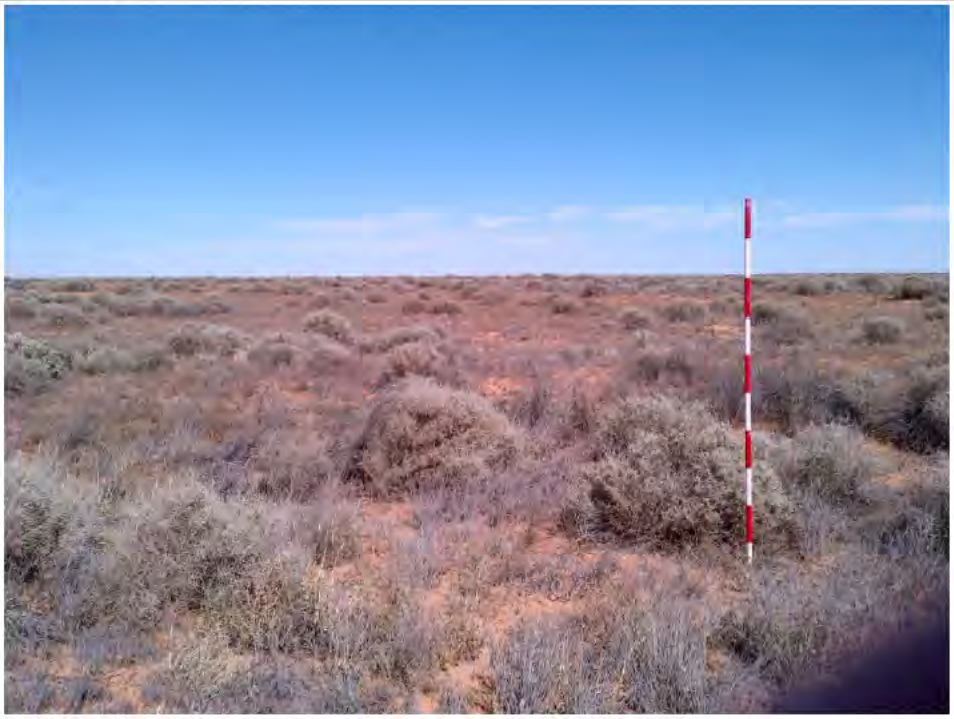
Representative Photo 6 – *Maireana pyramidata +/- Rhagodia spinescens* on flat clay plains. Latitude 29° 49'12.41"S, Longitude 139°3'50.65"E					
General description	Vegetation located on flat clay plains where water is likely to collect in rain events. Dominated by *Maireana pyramidata* and *Rhagodia spinescens*. Taller *Acacia spp*. located within peripheries of vegetation association, not included in species list as not subject to proposed clearance. Some dried annual species, as prior conditions had allowed for vegetation germination. No evidence of current grazing pressure on perennial species. Some weed species noted within the areas under application. Vegetation is of a density and condition expected of the region. Dominant native species include: o *Maireana pyramidata* o *Rhagodia spinescens* o *Enchylaena tomentosa* o *Sclerolaena patenticuspis* o *Salsola australis* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.				
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 6 during the field assessment.				
Landscape context score	1.16	**Vegetation Condition Score**	51.90	**Conservation significance score**	1.10
Unit biodiversity Score	66.22	**Area (ha)**	3.78	**Total biodiversity Score**	250.21

Table 7 – Vegetation Association 7

Vegetation Association 7	*Astrebla pectinata* open grassland				
 **Representative Photo 7 – High Gibber Plain dominated by *Astrebla pectinata* and other low chenopods.** **Latitude 29° 36'4.49"S, Longitude 139°39'26.57"E**					
General description	Vegetation located on high Gibber Plains. Dominated by *Astrebla pectinata* and likely dominated by low *scleroleana spp.* in dry conditions. Some presence of dried annual species, as prior conditions had allowed for vegetation germination. Some evidence of current grazing pressure on perennial species, particularly on the *Astrebla pectinata*. No weed species noted within the areas under application. Vegetation is of a density and condition expected of the region. Dominant native species include: o *Astrebla pectinata* o *Sclerolaena brachyptera* o *Scleroalaena diacantha* o *Salsola australis* o *Sclerolaena cuneata* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.				
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 7 during the field assessment.				
Landscape context score	1.16	**Vegetation condition score**	48.13	**Conservation significance score**	1.10

Unit biodiversity score	61.41	**Area (ha)**	5.94	**Total biodiversity score**	364.78

Table 8 – Vegetation Association 8

Vegetation Association 8	*Maireana appressa +/- Rhagodia spinescens* open shrubland
 **Representative Photo 8 – Gentle sloping hillside with *Maireana appressa* and *Rhagodia spinescens*.** **Latitude 29° 32'54.89"S, Longitude 139°49'48.67"E**	
General description	Vegetation located on higher plains with gentle slope. Clay soil where rainfall is likely to pool in rain events. Dominated by *Maireana appressa* and *Rhagodia spinescens*. No taller shrubs or trees noted. Presence of dried annual species, as prior conditions had allowed for vegetation germination. Low evidence of current grazing pressure on perennial species. No weed species noted within the areas under application. Vegetation is of a density and condition expected of the region. Dominant native species include: o *Maireana appressa* o *Rhagodia spinescens* o *Salsola australis* o *Sclerolaena cuneata* o *Astrebla pectinata* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 8 during the field assessment.

Landscape context score	1.16	**Vegetation condition score**	44.13	**Conservation significance score**	1.10
Unit biodiversity score	53.31	**Area (ha)**	1.27	**Total biodiversity score**	70.34

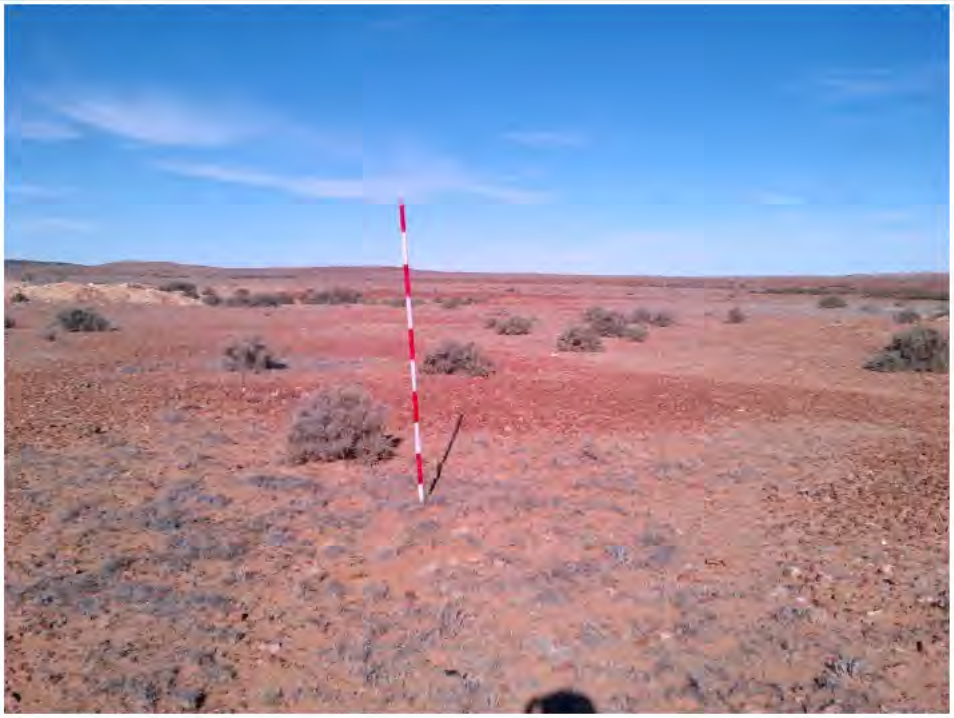
Table 9 – Vegetation Association 9

Vegetation Association 9	*Maireana pyramidata* open shrubland
 **Representative Photo 9 – Stony hillside with sparse chenopod shrubs Latitude 29° 36'52.74"S, Longitude 139°36'46.76"E**	
General description	Vegetation located on stony hillside slopes. Dominated by low chenopod shrubs, particularly species of *Maireana*. Occasional *Acacia tetragonophylla* and *Santalum lanceolatum*, either as an individual or small clump. Some presence of dried annual species, as prior conditions had allowed for vegetation germination. Low evidence of current grazing pressure on perennial species. Very low weed species noted within the areas under application. Vegetation is of a density and condition expected of the region. Dominant native species include: o *Maireana pyramidata* o *Sclerolaena decurrens* o *Salsola australis* o *Sclerolaena brachytpera* o *Atriplex holocarpa* o *Osteocarpum sp.* o *Sida sp.* o *Astrebla pectinata*

	Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.				
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 9 during the field assessment.				
Landscape context score	1.16	**Vegetation condition score**	52.50	**Conservation significance score**	1.10
Unit biodiversity score	66.99	**Area (ha)**	1.05	**Total biodiversity score**	70.34

Table 10 – Vegetation Association 10

Vegetation Association 10	*Maireana apressa* open shrubland



Representative Photo 10 – Gibber plain with sparse chenopod shrubs
Latitude 29° 36'18.95"S, Longitude 139°35'33.52"E

General description	Vegetation located on Gibber plain with gentle slope, in relatively close proximity to water course. This vegetation covers the entirety of a new proposed borrow pit. There are some ground disturbing activities that have historically occurred, with material having been extracted, but this is likely from land managers, not DIT. Dominated by low chenopod shrubs, particularly species of *Maireana*. Occasional *Acacia ligulata* and *Pittosporum angustifolium*, either as an individual or small clump. Some presence of dried annual species, as prior conditions had allowed for vegetation germination. Low evidence of current grazing pressure on perennial species. Low weed species noted within the areas under application. Vegetation is of a density and condition expected of the region.

	Dominant native species include: o *Maireana apressa* o *Sclerolaena brachytpera* o *Enneapogon avenaceus* o *Astrebla pectinata* o *Osteocarpum sp.* o *Sida sp.* o *Acacia ligulata* Refer to **Attachment 1 – Rangeland Assessment Scoresheets** and **Attachment 2 – Plant Species Recorded (Native and Introduced)** for a detailed overview of the assessment outcomes and full species list.				
Threatened species or community	No threatened flora species or ecological communities as listed under the EPBC Act or the NP&W Act were recorded within Vegetation Association 10 during the field assessment.				
Landscape context score	1.16	**Vegetation condition score**	39.38	**Conservation significance score**	1.10
Unit biodiversity score	50.25	**Area (ha)**	8.8	**Total biodiversity score**	442.20

4.2 Threatened Species Assessment

4.2.1 Threatened Flora

A search of *Naturemaps* (2024) found eight (8) threatened species that have previously been recorded within 50 km of the Project Area within the preceding 20 years:

- *Gratwickia monochaeta* (Rare) – Two (2) observations approximately 25 km from the Project Area. Last observed in 2010.
- *Eleocharis plana* (Rare) – One (1) observation on the roadside of the Project Area. Last observed in 2007.
- *Eriocaulon carsonii* ssp. *carsonii* (Endangered) – 80 observations within approximately 20 km of the Project Area. Last observed in 2015.
- *Acacia confluens* (Vulnerable) – Two (2) observations approximately 35 km from the Project Area. Last observed in 2012.
- *Swainsona leeana* (Rare) – Four (4) observations approximately 35 km from the Project Area. Last observed in 2010.
- *Codonocarpus pyramidalis* (Endangered) – Four (4) observations approximately 35 km from the Project Area. Last observed in 2016.
- *Gilesia biniflora* (Rare) – One (1) observation approximately 25 km from the Project Area. Last observed in 2010.
- *Orobanche cernua* var. *australiana* (Rare) – One (1) observation on the roadside of the Project Area. Last observed in 2007.

An EPBC Act Protected Matters Search report (2024) lists the MNES in relation to flora that may occur within 50 km of the project footprint, refer to **Attachment 3 – *Environmental Protection Biodiversity Conservation Act 1999* Protected Matters Report**.

In summary, the EPBC Act Protected Matters Search identified three (3) Listed Threatened Species of flora that may occur: *Codonocarpus pyramidalis* (Slender Bell-fruit), *Eriocaulon carsonii ssp. carsonii* (Salt Pipewort), and *Frankenia plicata*.

An assessment of the likelihood of occurrence of listed species has been completed based upon proximity of recent records to the Project Area, species known habitat requirements, and available habitat recorded onsite through field inspections. Refer to **Attachment 4 – Threatened Species Summary** and **Drawing No. 2547.DRG.129 – Threatened Flora Observations**. In summary, two (2) species *Eleocharis plana* (Flat Spike-rush) and *Orobanche cernua var. australiana* (Australian Broomrape) were considered 'possible' to occur as suitable growing conditions exist and both have been previously recorded within the preceding 20 years within the Project Area. All other threatened species were considered 'unlikely' to occur or excluded due to inconsistent habitat requirements.

One (1) of the listed threatened species identified within the desktop assessment was recorded during the field inspection within the Project Area, *Orobanche cernua var. australiana* (Australian Broomrape, listed as Rare under the NP&W Act). This was recorded within *Acacia salicina* tall shrubland vegetation association. No other threatened flora species were recorded.

4.2.2 Threatened Fauna

A search of *NatureMaps* (2024) sought to identify species of State or National Rated Significance previously recorded within 50 km of the Project Area and within the preceding 20 years. A total of 17 state or nationally listed species were identified in the *NatureMaps* search. An EPBC Act Protected Matters Search report listed 10 nationally threatened fauna species additional to those identified through *NatureMaps* that may occur within proximity (50 km buffer applied) to the Project Area. Refer to **Attachment 4 – Threatened Species Summary** and **Attachment 3 – *Environmental Protection Biodiversity Conservation Act 1999* Protected Matters Report** for a full report of the species results.

An assessment of the likelihood of occurrence of listed species within the Project Area has been completed based upon proximity of recent records, species known habitat requirements, and available habitat recorded onsite through field inspections. Refer to **Attachment 4 – Threatened Species Summary** and **Drawing No. 2547.DRG.130 – Threatened Fauna Observations**.

In summary, one (1) species, *Aspidites ramsayi* (Woma), was considered 'likely' to occur, and three (3) species, *Notomys fuscus* (Dusky Hopping-mouse), *Falco subniger* (Black Falcon), and *Amytornis modestus* (Thick-billed Grasswren), were considered 'possible' to occur. All other species were either excluded or considered 'unlikely' to occur. Aquatic fauna and sub-species with known distribution outside of the Site were excluded from the assessment.

Further information from the SA Arid Lands Landscape Board identified the potential presence of the Plains-wanderer (*Pedionomus torquatus*), listed Critically Endangered under the EPBC Act, in other sections of the Strzelecki Track with a significant impact assessment completed for the project stage between MM 369-396. This species has no records listed on *NatureMaps* within 50km of the current Project Area within the preceding 20 years and was listed within the EPBC Act PMST as 'species or species habitat may occur within the area' and as such, was not included in the initial likelihood of occurrence assessment. However, given the proximity to the other stages and similarity in vegetation and landform, impacts to the species from the current project activities have been considered against the previous significant impact assessment. Based upon the similarities between both the site conditions and the construction activities, it has been determined the outcomes of the significant impact assessment for MM 369-396 are directly applicable to the current stage. In summary, it was determined that the species, if present, would not be significantly impacted by the road upgrade and an EPBC Act referral would not be required. Further details are provided in **Attachment 5 – Plains-wanderer Technical Memorandum**.

The vegetation within the Project Area may provide suitable habitat for multiple fauna species, most notably for bird species. Despite the potential presence of threatened and common fauna species, the proposed works are unlikely to have a significant impact on any fauna populations, based on the narrow linear nature of the works and the location (proximity to the road resulting in increased disturbance and therefore low-quality habitat) and the availability of better-quality vegetation adjacent to the Site.

A project area inspection was undertaken between 03 December and 04 December by SLR Consulting to assess the on-site habitat and opportunistic fauna observations. The inspection did not find any listed fauna species within the Project Area.

Given the results of the desktop assessment, species found onsite, and scale of proposed impacts, an EPBC Act referral will not be required.

4.3 Cumulative Impact

The project forms part of the broader upgrade of the entirety of the Strzelecki Track from an unsealed road to a sealed road. As such, there is some vegetation clearance associated with each section of the project. Given this, the proposed vegetation clearance within the current application is adding to the total amount of vegetation clearance required for the overall upgrade project.

The planned works are located within close proximity to the existing road boundary, where there is a history of maintenance and construction activities. Sites previously disturbed through construction have regenerated native vegetation well, as evident in the current inspection. It is likely that disturbed areas within the current project, such as batters, will regenerate in a similar fashion. The Project will utilise historical borrow pits that have been established and used for ongoing maintenance activities along the road, therefore reducing the cumulative clearance effect.

Given the nature of the proposed work, there may be minor further effects on surrounding native vegetation from aspects such as dust and sediment deposition, weed invasion, rubbish, and alterations to surface water through the installation of water crossings. An Environment and Heritage Impact Assessment has been conducted, as per DIT protocol, with mitigation measures for each of these aspects outlined within the assessment. A Water Affecting Activity Assessment has also been conducted to outline any potential impacts to mapped watercourses.

The preparation of a CEMP and a Soil, Erosion, and Drainage Management Plan will manage potential damaging impacts from aspects such as dust and sediment deposition. Appropriate waste management strategies are required to be implemented to ensure no adverse impacts from waste materials left onsite and the design of any floodway infrastructure will ensure the existing surface water flow paths are not altered.

Weed invasion is possible due to the movement of vehicles and machinery within the application areas, with several declared weed species being previously recorded within the region. Introduction of weed species may result in a degradation of remnant surrounding vegetation, however, during construction, strict hygiene practices must be adhered to ensure weed species are not spread or introduced as per the DIT's procedures.

Future clearance of vegetation surrounding the Project Area is unlikely, given the extent of the proposed upgrade works. If future maintenance activities do result in impacts to vegetation, this is likely to be regrowth vegetation within the approved MAZ and is likely to contribute only to a minor accumulation of clearance effect.

4.4 Address the Mitigation Hierarchy

a) **Avoidance – outline measures taken to avoid clearance of native vegetation**

Typical road drawings have been produced with the aim to avoid and reduce the native vegetation clearance impacts as well as the potential impacts to heritage sites.

The planned Strzelecki Track upgrades are located at areas that have been exposed to a moderate level of previous vegetation clearance associated with road construction and maintenance activities.

Cut-off drains have been positioned predominantly within existing historical cut- off drains locations, with five (5) requiring extension. Clearance for extending these drains is unable to be avoided as cut-off drains are essential to clearing the road of water during rainfall events to maintain road user safety. Similarly, water crossings are required to facilitate the movement of water across the roadway, to ensure safety of road users. Clearance is unable to be avoided to ensure appropriate tying-in with surrounding landscape to ensure that water can flow freely away from the road formation.

b) **Minimisation – if clearance cannot be avoided, outline measures taken to minimise the extent, duration and intensity of impacts of the clearance on biodiversity to the fullest possible extent (whether the impact is direct, indirect or cumulative)**.

Native vegetation clearance will only be required for minimal widths along the length of the Project Area, as outlined in **Section 4.1 Vegetation Assessment**. The design of the final road formation has been made to ensure the extent of impacts of clearance have been minimised to the lowest possible to achieve the sealing of the roadway and to be an appropriate size for the traffic volume and design speed.

Dimensions of cut-off drains and water crossings have been planned to reduce the impact of vegetation clearance whilst still allowing the necessary construction activities to be completed.

All contractors will be made aware of the environmental obligations through the implementation of a Contractors Environmental Management Plan (CEMP) during construction to ensure there is no unnecessary damage to surrounding vegetation.

c) **Rehabilitation or restoration – outline measures taken to rehabilitate ecosystems that have been degraded, and to restore ecosystems that have been degraded, or destroyed by the impact of clearance that cannot be avoided or further minimised, such as allowing for the re-establishment of the vegetation**.

It is expected that native vegetation will naturally regenerate all disturbed areas, consistent with observations of past clearance.

d) **Offset – any adverse impact on native vegetation that cannot be avoided or further minimised should be offset by the achievement of a significant environmental benefit that outweighs that impact.**

At the time of application, DIT will be meeting the SEB Offset requirement via payment to the NV Fund, the amount required for the SEB, as calculated in **Table 13 – Totals Summary Table**. However, in accordance with the DIT Vegetation Impact Assessment Guideline and based on the package of works requiring an offset obligation greater than 150 SEB Points, opportunities to provide on-ground SEB Offsets via an NVC Accredited Third Party Provider are currently being investigated.

4.5 Principles of Clearance (Schedule 1, *Native Vegetation Act 1991*)

The Native Vegetation Council (NVC) will consider Principles 1(b), 1(c) and 1(d) when assigning a level of Risk under Regulation 16 of the Native Vegetation Regulations. The NVC will consider all the Principles of clearance of the Act as relevant, when considering an application referred under the *Planning, Development and Infrastructure Act 2016*.

Table 11 – Principles of Clearance Assessment

Principle of clearance	Relevant information	Assessment against the principles	Moderating factors that may be considered by the NVC
Principle 1(b) – significance as a habitat for wildlife	The vegetation under application contains habitat components, such as ground-level complexities that provide habitat for fauna species, particularly small birds and reptiles. The vegetation is connected with surrounding vegetation that provides similar structure and is not in isolation. Threatened Fauna Scores – All Vegetation Associations: 0.1 Unit Biodiversity Scores – VA1 – 60.35 VA2 – 54.31 VA3 – 69.20 VA4 – 61.89 VA5 – 56.91 VA6 – 66.22 VA7 – 61.41 VA8 – 53.31 VA9 – 66.99 VA10 – 50.25	<u>Seriously at Variance:</u> Yes	Given the shape, size, and landscape context of the vegetation under application, it is unlikely clearance will lead to a long-term decrease in the size of any fauna populations. Likewise, clearance will not significantly reduce the area of occupancy of any fauna species. The application area is located either side of an existing road, therefore clearance will not fragment an existing fauna population into two (2) or more populations. The application area consists of vegetation associations that are regionally well represented and are not critical habitat for any fauna species. Habitat within the application area is likely to provide for common fauna species only. Clearance of the application area will not result in an increase in invasive species that are harmful to a threatened species as construction will adhere to DIT protocols relating to weed management. No threatened species have been recorded within the application area therefore clearance is unlikely to interfere with the recovery of any threatened fauna species.

Principle of clearance	Relevant information	Assessment against the principles	Moderating factors that may be considered by the NVC
Principle 1(c) – plants of a rare, vulnerable or endangered species	One (1) threatened flora species was recorded within one (1) of the application areas during the field assessment. The desktop assessment identified 12 threatened flora species recorded within 50 kms of the Site within the preceding 20 years. Given the disturbance history and physical characteristics (such as soil type) of the Project Area it is unlikely any of the threatened flora species, other than the one (1) recorded in the field, would be present. Threatened Flora Scores: Vegetation Associations 1-2, 4-10 – 0 Vegetation Association 3 – 0.04	Seriously at Variance: No At Variance: Yes	One (1) threatened flora species, *Orobanche cernua var. australiana* (Australian Broomrape, listed as Rare under the NP&W Act) was recorded during the field assessment. No other threatened flora species were recorded and given the proximity of recent records and grazing regime of the vegetation; it is unlikely any others would be present within the Project Area. Given the shape, size, and landscape context of the vegetation under application, it is unlikely clearance will lead to a long-term decrease in the size of any flora populations. Furthermore, in the unlikely event undetected threatened flora species were present within the application area, it is likely that given the shape and size of the area, a very small portion would be affected.
Principle 1(d) – the vegetation comprises the whole or part of a plant community that is Rare, Vulnerable or endangered:	No threatened plant communities were identified within either the desktop assessment or during the Site inspections. Conservation Significance Scores: All Vegetation Associations – 1.26	Seriously at Variance: No At Variance: No	Not Applicable.

4.6 Risk Assessment

Determine the level of risk associated with the application

Table 12 – Risk Assessment

Total clearance	No. of trees	N/A

	Area (ha)	130.25
	Total biodiversity Score	7824.31
Seriously at variance with principle 1(b), 1(c) or 1 (d)		1(b)
Risk assessment outcome		Level 4

5 Clearance Summary

Table 13 – Clearance Areas Summary Table

Block	Site	Threatened Ecological [illegible]	Threatened plant score	Threatened fauna [illegible]	UBS	Area (ha)	Total Biodiversity score	Loss factor	SEB Points required	SEB payment	Admin Fee
A	1	1	0	0.1	60.35	1.74	105.01	1	115.51	$6,880.43	$378.42
A	2	1	0	0.1	54.31	19.2	1042.75	1	1147.03	$68,323.62	$3,757.80
A	3	1	0.04	0.1	69.20	0.26	17.99	1	19.79	$1,178.80	$64.83
A	4	1	0	0.1	61.89	88.03	5448.18	1	5993	$356,977.09	$19,633.74
A	5	1	0	0.1	56.91	0.18	10.24	1	11.26	$670.71	$36.89
A	6	1	0	0.1	66.22	3.78	251.31	1	275.31	$16,400.81	$902.04
A	7	1	0	0.1	61.41	5.94	364.78	1	401.26	$23,901.32	$1,314.57
A	8	1	0	0.1	56.31	1.27	71.51	1	78.66	$4,685.44	$257.70
A	9	1	0	0.1	66.99	1.05	70.34	1	77.37	$4,608.60	$253.47
A	10	1	0	0.1	50.25	8.8	442.20	1	486.42	$30,567.51	$1,593.57
					Total	**121.45**	**7824.31**		**8605.61**	**$514,194.33**	**$28,193.03**

Table 14 – Totals Summary Table

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	7824.31	8605.61	$514,194.33	$28,193.03	$542,387.36

Economies of Scale Factor	0.110
Rainfall (mm)	164

6 Significant Environmental Benefit

A Significant Environmental Benefit (SEB) is required for approval to clear under Division 5 of the *Native Vegetation Regulations 2017*. The NVC must be satisfied that as a result of the loss of vegetation from the clearance that an SEB will result in a positive impact on the environment that is over and above the negative impact of the clearance.

ACHIEVING AN SEB

Indicate how the SEB will be achieved by ticking the appropriate box and providing the associated information:

☐ Establish a new SEB Area on land owned by the proponent.

☐ Use SEB Credit that the proponent has established. Provide the SEB Credit Ref. No. _____

☐ Apply to have SEB Credit assigned from another person or body. The application form needs to be submitted with this Data Report.

☐ Apply to have an SEB to be delivered by a Third Party. The application form needs to be submitted with this Data Report.

☒ Pay into the Native Vegetation Fund.

PAYMENT SEB

Payment of $542,387.36, including administration fee of $28,193.03, to be paid into the NVF with opportunities to provide on-ground SEB Offsets via an NVC Accredited Third Party Provider currently being investigated.

DRAWINGS

ATTACHMENTS

Attachment 1

Rangeland Assessment Scoresheets

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**)			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Acacia victoriae ssp.	Elegant Wattle	P	2			Adult	13.30
Atriplex nummularia ssp. nummul	Old-man Saltbush	P	2			Mixed	
Nitraria billardierei	Nitre-bush	U	2			Mixed	
Enchylaena tomentosa var.	Ruby Saltbush	P	2			Adult	
Acacia salicina	Willow Wattle	U	2			Mixed	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	

Vegetation Condition Scores

SITE (name):	VA1	**SIZE OF SITE (Ha)**	1.74
VEGETATION ASSOCIATION DESCRIPTION	Atriplex nummularia +/- Nitraria billardierei shrubland		
LANDSCAPE TYPE	Claypans and saltlakes		
SURFACE CHARACTER **Dominant**	Cracking	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☑	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☑	☐	1
	Total Score (Max 10 - weighted by 2.5)			5

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☑	☐	1
	Total Score (Max 18 - weighted by 3)			9

Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☑	☐	
Shrubs 1- 3m	☑	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☐	☑	
Total Score (Max 16 - weighted by 4)			**10.0**

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
Total Score (Max 10 - weighted by 2.5)		**10**

Vegetation Utilisation Score	
Total Score (Max 26)	13.30

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**47.30**

Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**47.30**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =

UNIT BIODIVERSITY SCORE	60.35
Total Biodiversity Score (Biodiversity Score x hectares)	105.01

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	

GPS Reference	
Datum	
Zone (52, 53 or 54)	
Easting (6 digits)	
Northing (7 digits)	

Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**115.51**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	15.40
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$6,880.43
Administration fee (GST inclusive)	$378.42
Total Payment Required	**$7,258.85**

SEB Points Provided Calculations

Answer these questions when assessing a site within a proposed SEB area

Refer to the SEB Guide (section on 'Adjust the SEB Points of Gain') for more information

Assessment of SEB site - On ground		
What is the risk of decline or loss of vegetation in the next 20 years?		
Has stock grazing been absent from the site for 10 or more years (and cannot be introduced without approval from the NVC)?		
Is the land subject to zoning or a dedication that is generally restrictive of development activities (e.g. conservation zone, recreation or open space zoning or crown land dedication)?		
There are no, or only very minimal, threats identified that would result in the decline of the vegetation condition (excluding threats beyond the control of the SEB offset provider such as climate change).		
Is the land subject to legally binding obligations (contractual or legislated) that provide an existing level of protection for the native vegetation (e.g. restricts the use of the land or prevents the vegetation from being harmed) that is additional to the protections provided by the Native Vegetation Act 1991?		
Likely % Loss	0.03	Standard
Will the proposed SEB area be subject to management actions that are clearly and significantly in excess of the standard requirements as set out in the SEB Policy?		
Will a very high standard of revegetation be conducted, including the establishment of a very high proportion of the species diversity which would be expected within the relevant vegetation community, and all strata (which should be present) represented including grasses, sedges, herbs and ground cover plants?		
Will fencing be installed (in excess of the standard stock exclusion fencing) in order to exclude introduced species or excessive herbivory by native and introduced fauna?		
Will intensive and substantial management of threatened flora or fauna be undertaken which is not required in association with the proposed clearance for which the SEB is being provided?		
Are the proposed management actions and their scale of impact already required by duty of care or legislation?		
Only minimal management actions have been committed to in the proposed SEB management plan, such as minimal control of species declared for control under the *Landscapes SA Act 2019* .		
Are the management interventions practically difficult to achieve or is the recovery of the vegetation likely to be inhibited in some way?		
Are there management issues, beyond the control of the SEB offset provider, that are technically or practically difficult to address preventing them from being managed to their fullest possible extent (e.g. weed infestations within difficult to access terrain)?		
Are there physical or environmental constraints which are likely to significantly impede the rehabilitation of vegetation and slow the rate of recovery? This may include compacted soils or altered soil chemistry (e.g. high nutrients/salinity issues) where the issue will continue or increase, significant erosion that cannot be controlled without impacting native vegetation or extensive die-back or plant diseases.		
Likely Improvement Due to Management	6.54	Standard
In relation to sites requiring substantial revegetation, is it highly likely that a good outcome will be achieved?		
Does the applicant (or site manager/contractor) have significant experience and capability with sufficient resources in delivering habitat reconstruction (revegetation) projects?		
Are there other risk factors which make the outcome uncertain? ***NVB assessment only***		
Is the applicant proposing novel management actions and the outcomes are uncertain? Are there other issues that pose serious risks to the delivery of the offset that are not already addressed by the above questions?		
Likelihood of Achieving the Outcome	0.57	Standard

Future Negative UBS Score	58.54
Future Positive UBS Score	65.11
UBS Gain Score	6.57
Estimate of SEB Points provided	**11.43**

This is an estimate only and will be subject to review and verification by the Native Vegetation Council.

If you answered 'yes' to any question, provide justification in the Data Report

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation (enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**))			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Acacia victoriae ssp.	Elegant Wattle	P	2			Mixed	14.56
Rhagodia spinescens	Spiny Saltbush	P	2			Mixed	
Enchylaena tomentosa var.	Ruby Saltbush	P	2			Adult	
Senecio magnificus	Showy Groundsel	U	2			Adult	
Eragrostis sp.	Love-grass	P	2			Adult	
Einadia nutans ssp.	Climbing Saltbush	P	2			Adult	
Tecticornia indica ssp. leiostachya	Brown-head Samphire	P	2			Mixed	
Maireana appressa	Pale-fruit Bluebush	P	2			Mixed	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	

Vegetation Condition Scores

SITE (name):	VA2	**SIZE OF SITE (Ha)**	19.2
VEGETATION ASSOCIATION DESCRIPTION	Rhagodia spinescens +/- Tecticornia shrubland		
LANDSCAPE TYPE	Claypans and saltlakes		
SURFACE CHARACTER **Dominant**	Cracking	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☐	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☐	☐	1
	Total Score (Max 10 - weighted by 2.5)			**5**

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☑	☐	1
	Total Score (Max 18 - weighted by 3)			**9**

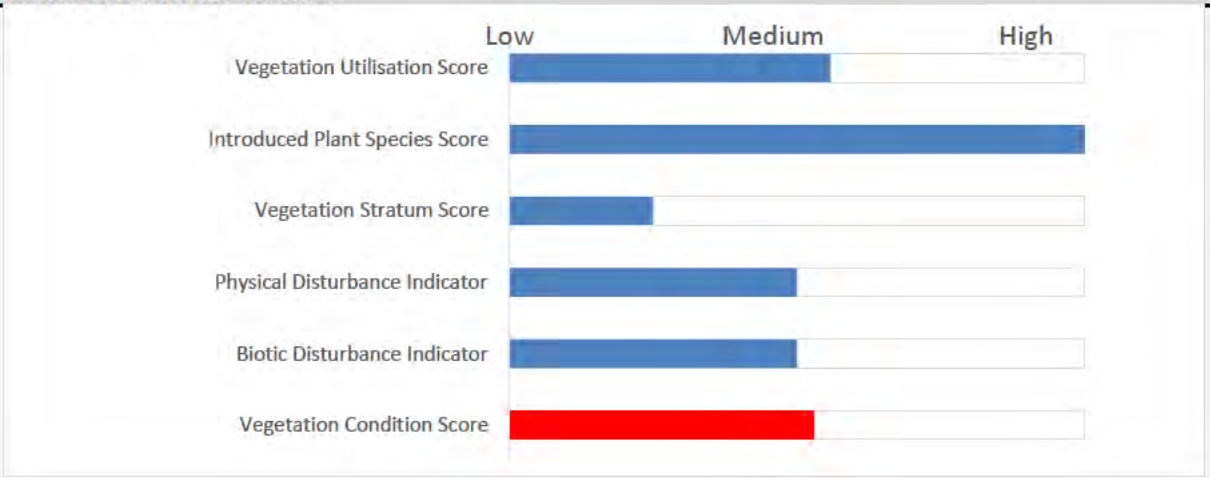
Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☐	☑	
Shrubs 1- 3m	☑	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☐	☑	
	Total Score (Max 16 - weighted by 4)		**4.0**

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
	Total Score (Max 10 - weighted by 2.5)	**10**

Vegetation Utilisation Score		
	Total Score (Max 26)	14.56

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**42.56**



Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**42.56**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =

UNIT BIODIVERSITY SCORE	54.31
Total Biodiversity Score (Biodiversity Score x hectares)	1042.75

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	

GPS Reference	
Datum	
Zone (52, 53 or 54)	
Easting (6 digits)	
Northing (7 digits)	

Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**1147.03**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	152.94
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$68,323.62
Administration fee (GST inclusive)	$3,757.80
Total Payment Required	**$72,081.42**

SEB Points Provided Calculations

Answer these questions when assessing a site within a proposed SEB area

Refer to the SEB Guide (section on 'Adjust the SEB Points of Gain') for more information

Assessment of SEB site - On ground		
What is the risk of decline or loss of vegetation in the next 20 years?		
Has stock grazing been absent from the site for 10 or more years (and cannot be introduced without approval from the NVC)?		
Is the land subject to zoning or a dedication that is generally restrictive of development activities (e.g. conservation zone, recreation or open space zoning or crown land dedication)?		
There are no, or only very minimal, threats identified that would result in the decline of the vegetation condition (excluding threats beyond the control of the SEB offset provider such as climate change).		
Is the land subject to legally binding obligations (contractual or legislated) that provide an existing level of protection for the native vegetation (e.g. restricts the use of the land or prevents the vegetation from being harmed) that is additional to the protections provided by the Native Vegetation Act 1991?		
Likely % Loss	0.04	Standard
Will the proposed SEB area be subject to management actions that are clearly and significantly in excess of the standard requirements as set out in the SEB Policy?		
Will a very high standard of revegetation be conducted, including the establishment of a very high proportion of the species diversity which would be expected within the relevant vegetation community, and all strata (which should be present) represented including grasses, sedges, herbs and ground cover plants?		
Will fencing be installed (in excess of the standard stock exclusion fencing) in order to exclude introduced species or excessive herbivory by native and introduced fauna?		
Will intensive and substantial management of threatened flora or fauna be undertaken which is not required in association with the proposed clearance for which the SEB is being provided?		
Are the proposed management actions and their scale of impact already required by duty of care or legislation?		
Only minimal management actions have been committed to in the proposed SEB management plan, such as minimal control of species declared for control under the *Landscapes SA Act 2019* .		
Are the management interventions practically difficult to achieve or is the recovery of the vegetation likely to be inhibited in some way?		
Are there management issues, beyond the control of the SEB offset provider, that are technically or practically difficult to address preventing them from being managed to their fullest possible extent (e.g. weed infestations within difficult to access terrain)?		
Are there physical or environmental constraints which are likely to significantly impede the rehabilitation of vegetation and slow the rate of recovery? This may include compacted soils or altered soil chemistry (e.g. high nutrients/salinity issues) where the issue will continue or increase, significant erosion that cannot be controlled without impacting native vegetation or extensive die-back or plant diseases.		
Likely Improvement Due to Management	7.49	Standard
In relation to sites requiring substantial revegetation, is it highly likely that a good outcome will be achieved?		
Does the applicant (or site manager/contractor) have significant experience and capability with sufficient resources in delivering habitat reconstruction (revegetation) projects?		
Are there other risk factors which make the outcome uncertain? ***NVB assessment only***		
Is the applicant proposing novel management actions and the outcomes are uncertain? Are there other issues that pose serious risks to the delivery of the offset that are not already addressed by the above questions?		
Likelihood of Achieving the Outcome	0.53	Standard

Future Negative UBS Score	52.14
Future Positive UBS Score	59.37
UBS Gain Score	7.23
Estimate of SEB Points provided	**138.82**

This is an estimate only and will be subject to review and verification by the Native Vegetation Council.

If you answered 'yes' to any question, provide justification in the Data Report

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation (enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**))			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Acacia salicina	Willow Wattle	U	2			Mixed	12.33
Rhagodia spinescens	Spiny Saltbush	P	2			Mixed	
Enchylaena tomentosa var.	Ruby Saltbush	P	2			Adult	
Senecio magnificus	Showy Groundsel	U	2			Adult	
Eragrostis sp.	Love-grass	P	2			Adult	
Einadia nutans ssp.	Climbing Saltbush	P	2			Adult	
Tecticornia indica ssp. leiostachya	Brown-head Samphire	P	2			Mixed	
Gunniopsis quadrifida	Sturt's Pigface	P	2			Adult	
Myoporum montanum	Native Myrtle	U	2			Young	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Orobanche cernua var. australiana	Australian Broomrape		R		Yes

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	
Lactuca serriola f. integrifolia	Prickly Lettuce		Yes	*
Chenopodium album	Fat Hen		Yes	*

Vegetation Condition Scores

SITE (name):	VA7	**SIZE OF SITE (Ha)**	0.26
VEGETATION ASSOCIATION DESCRIPTION	Acacia salicina tall shrubland		
LANDSCAPE TYPE	Drainage lines / floodouts		
SURFACE CHARACTER **Dominant**	Cracking	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☑	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☑	☐	1
	Total Score (Max 10 - weighted by 2.5)			**5**

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☑	☐	1
	Total Score (Max 18 - weighted by 3)			**9**

Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☑	☐	
Shrubs 1- 3m	☑	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☑	☐	
Total Score (Max 16 - weighted by 4)			**16.0**

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
Total Score (Max 10 - weighted by 2.5)		**10**

Vegetation Utilisation Score	
Total Score (Max 26)	12.33

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**52.33**

Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	1
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**1**
Score	0.04

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.14**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**52.33**
CONSERVATION SIGNIFICANCE SCORE	**1.14**

Vegetation Condition x Landscape Context x Conservation Significance =

UNIT BIODIVERSITY SCORE	69.20
Total Biodiversity Score (Biodiversity Score x hectares)	17.99

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	

GPS Reference	
Datum	
Zone (52, 53 or 54)	
Easting (6 digits)	
Northing (7 digits)	
Description	

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**19.79**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	2.64
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$1,178.80
Administration fee (GST inclusive)	$64.83
Total Payment Required	**$1,243.63**

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation (enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**))			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Astrebla pectinata	Barley Mitchell-grass	P	2			Adult	16.50
Maireana aphylla	Cotton-bush	P	2			Mixed	
Maireana appressa	Pale-fruit Bluebush	P	2			Mixed	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	

Vegetation Condition Scores

SITE (name):	VA4	**SIZE OF SITE (Ha)**	88.03
VEGETATION ASSOCIATION DESCRIPTION	Sclerolaena spp. low very open shrubland		
LANDSCAPE TYPE	Plain – level		
SURFACE CHARACTER **Dominant**	Stony	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☐	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☐	☐	1
	Total Score (Max 10 - weighted by 2.5)			5

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☐	☐	1
	Total Score (Max 18 - weighted by 3)			9

Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☐	☐	
Shrubs 1- 3m	☐	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☑	☐	
Total Score (Max 16 - weighted by 4)			**8.0**

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
Total Score (Max 10 - weighted by 2.5)		**10**

Vegetation Utilisation Score	
Total Score (Max 26)	16.50

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**48.50**

Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**48.50**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =

UNIT BIODIVERSITY SCORE	61.89
Total Biodiversity Score (Biodiversity Score x hectares)	5448.18

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	

GPS Reference	
Datum	
Zone (52, 53 or 54)	
Easting (6 digits)	
Northing (7 digits)	

Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**5993.00**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	799.07
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$356,977.09
Administration fee (GST inclusive)	$19,633.74
Total Payment Required	**$376,610.83**

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**)			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Senna artemisioides ssp. filifolia	Fine-leaf Desert Senna	U	2			Mixed	14.60
Rhagodia spinescens	Spiny Saltbush	P	2			Mixed	
Maireana appressa	Pale-fruit Bluebush	P	2			Mixed	
Gunniopsis quadrifida	Sturt's Pigface	P	2			Adult	
Enchylaena tomentosa var.	Ruby Saltbush	P	2			Adult	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	

Vegetation Condition Scores

SITE (name):	VA5	**SIZE OF SITE (Ha)**	0.18
VEGETATION ASSOCIATION DESCRIPTION	Senna artemisioides spp. +/- Maireana appressa open shrubla		
LANDSCAPE TYPE	Ranges and hill slopes		
SURFACE CHARACTER **Dominant**	Stony	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☐	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☐	☐	1
	Total Score (Max 10 - weighted by 2.5)			**5**

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☐	☐	1
	Total Score (Max 18 - weighted by 3)			**9**

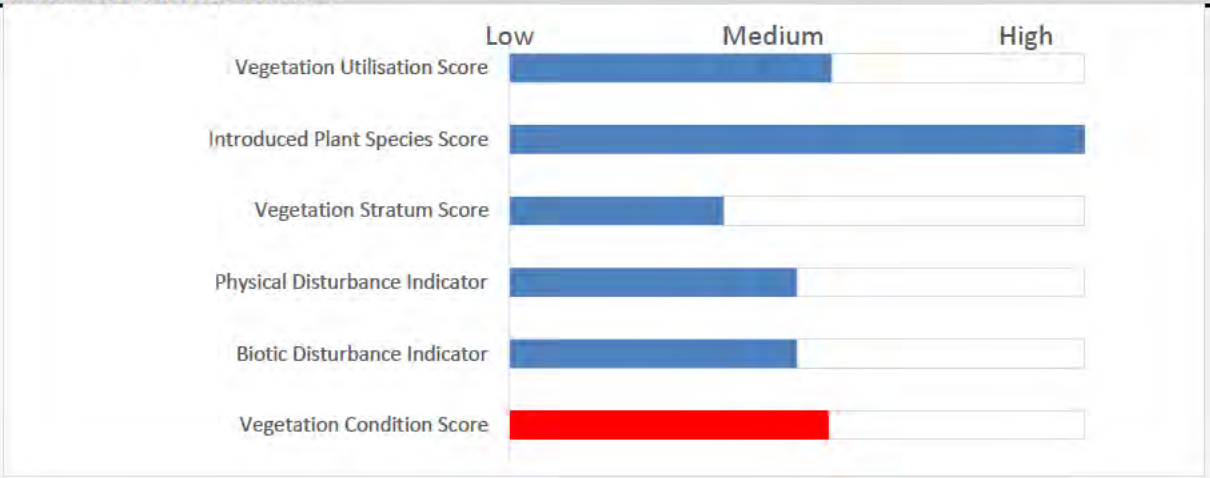
Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☐	☐	
Shrubs 1- 3m	☑	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☐	☑	
	Total Score (Max 16 - weighted by 4)		**6.0**

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
	Total Score (Max 10 - weighted by 2.5)	**10**

Vegetation Utilisation Score		
	Total Score (Max 26)	14.60

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**44.60**



Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**44.60**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =

UNIT BIODIVERSITY SCORE	56.91
Total Biodiversity Score (Biodiversity Score x hectares)	10.24

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	
	GPS Reference
	Datum
	Zone (52, 53 or 54)
	Easting (6 digits)
	Northing (7 digits)
	Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**11.26**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	1.50
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$670.71
Administration fee (GST inclusive)	$36.89
Total Payment Required	**$707.60**

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**)			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Maireana pyramidata	Black Bluebush	P	2			Mixed	15.90
Rhagodia spinescens	Spiny Saltbush	P	2			Mixed	
Enchylaena tomentosa var.	Ruby Saltbush	P	2			Mixed	
Astrebla pectinata	Barley Mitchell-grass	P	2			Adult	
Einadia nutans ssp.	Climbing Saltbush	P	2			Adult	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	
Lactuca serriola f. serriola	Prickly Lettuce		Yes	*
Malvastrum americanum var. americar	Malvastrum		Yes	

Vegetation Condition Scores

SITE (name):	VA6	**SIZE OF SITE (Ha)**	3.78
VEGETATION ASSOCIATION DESCRIPTION	Maireana pyramidata +/- Rhagodia spinescens open shrublan		
LANDSCAPE TYPE	Plain – undulating		
SURFACE CHARACTER **Dominant**	Stony	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☐	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☐	☐	1
	Total Score (Max 10 - weighted by 2.5)			**5**

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☐	☐	1
	Total Score (Max 18 - weighted by 3)			**9**

Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☐	☐	
Shrubs 1- 3m	☑	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☑	☐	
Total Score (Max 16 - weighted by 4)			**12.0**

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
Total Score (Max 10 - weighted by 2.5)		**10**

Vegetation Utilisation Score	
Total Score (Max 26)	15.90

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**51.90**

Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**51.90**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =

UNIT BIODIVERSITY SCORE	66.22
Total Biodiversity Score (Biodiversity Score x hectares)	250.31

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	

GPS Reference	
Datum	
Zone (52, 53 or 54)	
Easting (6 digits)	
Northing (7 digits)	

Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**275.34**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	36.71
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$16,400.81
Administration fee (GST inclusive)	$902.04
Total Payment Required	**$17,302.85**

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation (enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**))			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Astrebla pectinata	Barley Mitchell-grass	P	2			Mixed	16.13
Eragrostis sp.	Love-grass	P	2			Adult	
Abutilon halophilum	Plains Lantern-bush	P	2			Young	
Maireana coronata	Crown Fissure-plant	P	2			Mixed	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	

Vegetation Condition Scores

SITE (name):	VA7	**SIZE OF SITE (Ha)**	5.94
VEGETATION ASSOCIATION DESCRIPTION	Astrebla pectinata open grassland		
LANDSCAPE TYPE	Plain – level		
SURFACE CHARACTER **Dominant**	Stony	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☐	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☐	☐	1
	Total Score (Max 10 - weighted by 2.5)			5

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☐	☐	1
	Total Score (Max 18 - weighted by 3)			9

Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☐	☐	
Shrubs 1- 3m	☐	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☑	☐	
Total Score (Max 16 - weighted by 4)			**8.0**

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
Total Score (Max 10 - weighted by 2.5)		**10**

Vegetation Utilisation Score	
Total Score (Max 26)	16.13

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**48.13**

Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**48.13**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =	
UNIT BIODIVERSITY SCORE	61.41
Total Biodiversity Score (Biodiversity Score x hectares)	364.78

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	
	GPS Reference
	Datum
	Zone (52, 53 or 54)
	Easting (6 digits)
	Northing (7 digits)
	Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**401.26**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	53.50
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$23,901.32
Administration fee (GST inclusive)	$1,314.57
Total Payment Required	**$25,215.89**

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**)			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Maireana appressa	Pale-fruit Bluebush	P	2			Mixed	14.13
Rhagodia spinescens	Spiny Saltbush	P	2			Mixed	
Astrebla pectinata	Barley Mitchell-grass	P	2			Adult	
Senecio magnificus	Showy Groundsel	U	2			Adult	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	
Sisymbrium erysimoides	Smooth Mustard		Yes	*

Vegetation Condition Scores

SITE (name):	VA2	**SIZE OF SITE (Ha)**	1.27
VEGETATION ASSOCIATION DESCRIPTION	Maireana appressa +/- Rhagodia spinescens open shrubland		
LANDSCAPE TYPE	Ranges and hill slopes		
SURFACE CHARACTER **Dominant**	Cracking	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☐	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☐	☐	1
	Total Score (Max 10 - weighted by 2.5)			5

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☐	☐	1
	Total Score (Max 18 - weighted by 3)			9

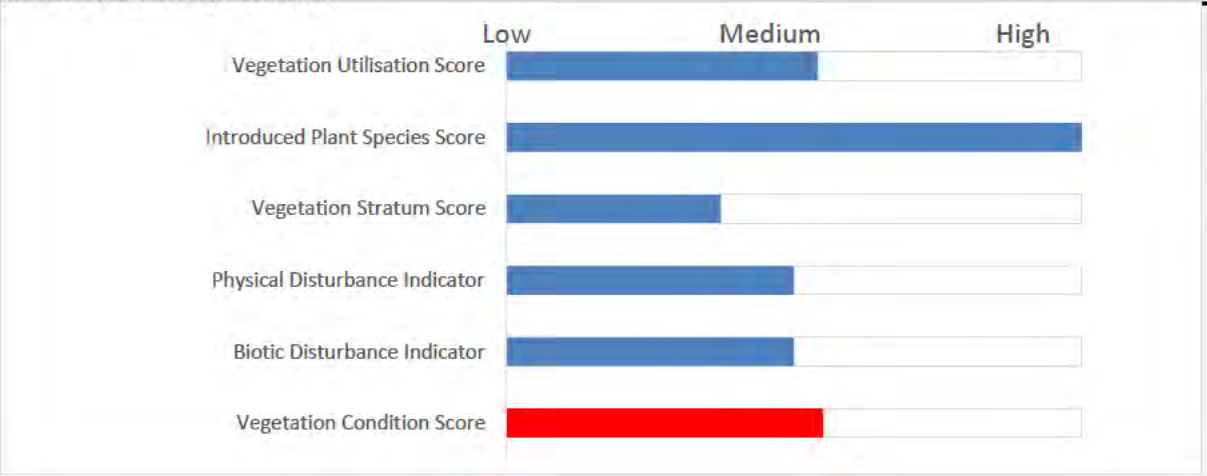
Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☐	☐	
Shrubs 1- 3m	☑	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☐	☑	
	Total Score (Max 16 - weighted by 4)		6.0

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
	Total Score (Max 10 - weighted by 2.5)	10

Vegetation Utilisation Score	
Total Score (Max 26)	14.13

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**44.13**



Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**44.13**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =

UNIT BIODIVERSITY SCORE	56.31
Total Biodiversity Score (Biodiversity Score x hectares)	71.51

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	
	GPS Reference
	Datum
	Zone (52, 53 or 54)
	Easting (6 digits)
	Northing (7 digits)
	Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**78.66**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	10.49
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$4,685.44
Administration fee (GST inclusive)	$257.70
Total Payment Required	**$4,943.14**

SEB Points Provided Calculations

Answer these questions when assessing a site within a proposed SEB area

Refer to the SEB Guide (section on 'Adjust the SEB Points of Gain') for more information

Assessment of SEB site - On ground		
What is the risk of decline or loss of vegetation in the next 20 years?		
Has stock grazing been absent from the site for 10 or more years (and cannot be introduced without approval from the NVC)?		
Is the land subject to zoning or a dedication that is generally restrictive of development activities (e.g. conservation zone, recreation or open space zoning or crown land dedication)?		
There are no, or only very minimal, threats identified that would result in the decline of the vegetation condition (excluding threats beyond the control of the SEB offset provider such as climate change).		
Is the land subject to legally binding obligations (contractual or legislated) that provide an existing level of protection for the native vegetation (e.g. restricts the use of the land or prevents the vegetation from being harmed) that is additional to the protections provided by the Native Vegetation Act 1991?		
Likely % Loss	0.04	Standard
Will the proposed SEB area be subject to management actions that are clearly and significantly in excess of the standard requirements as set out in the SEB Policy?		
Will a very high standard of revegetation be conducted, including the establishment of a very high proportion of the species diversity which would be expected within the relevant vegetation community, and all strata (which should be present) represented including grasses, sedges, herbs and ground cover plants?		
Will fencing be installed (in excess of the standard stock exclusion fencing) in order to exclude introduced species or excessive herbivory by native and introduced fauna?		
Will intensive and substantial management of threatened flora or fauna be undertaken which is not required in association with the proposed clearance for which the SEB is being provided?		
Are the proposed management actions and their scale of impact already required by duty of care or legislation?		
Only minimal management actions have been committed to in the proposed SEB management plan, such as minimal control of species declared for control under the *Landscapes SA Act 2019* .		
Are the management interventions practically difficult to achieve or is the recovery of the vegetation likely to be inhibited in some way?		
Are there management issues, beyond the control of the SEB offset provider, that are technically or practically difficult to address preventing them from being managed to their fullest possible extent (e.g. weed infestations within difficult to access terrain)?		
Are there physical or environmental constraints which are likely to significantly impede the rehabilitation of vegetation and slow the rate of recovery? This may include compacted soils or altered soil chemistry (e.g. high nutrients/salinity issues) where the issue will continue or increase, significant erosion that cannot be controlled without impacting native vegetation or extensive die-back or plant diseases.		
Likely Improvement Due to Management	7.17	Standard
In relation to sites requiring substantial revegetation, is it highly likely that a good outcome will be achieved?		
Does the applicant (or site manager/contractor) have significant experience and capability with sufficient resources in delivering habitat reconstruction (revegetation) projects?		
Are there other risk factors which make the outcome uncertain? ***NVB assessment only***		
Is the applicant proposing novel management actions and the outcomes are uncertain? Are there other issues that pose serious risks to the delivery of the offset that are not already addressed by the above questions?		
Likelihood of Achieving the Outcome	0.54	Standard

Future Negative UBS Score	54.06
Future Positive UBS Score	61.25
UBS Gain Score	7.19
Estimate of SEB Points provided	**9.13**

This is an estimate only and will be subject to review and verification by the Native Vegetation Council.

If you answered 'yes' to any question, provide justification in the Data Report

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**)			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Maireana pyramidata	Black Bluebush	P	2			Mixed	16.50
Eragrostis sp.	Love-grass	P	2			Mixed	
Maireana appressa	Pale-fruit Bluebush	P	2			Mixed	
Astrebla pectinata	Barley Mitchell-grass	P	2			Adult	
Acacia tetragonophylla	Dead Finish	P		2		Adult	
Abutilon halophilum	Plains Lantern-bush	P	2			Mixed	
Rhagodia spinescens	Spiny Saltbush	P	2			Adult	
Santalum lanceolatum	Plumbush	HP	2			Mixed	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	

Vegetation Condition Scores

SITE (name):	VA9	**SIZE OF SITE (Ha)**	1.05
VEGETATION ASSOCIATION DESCRIPTION	Maireana pyramidata open shrubland		
LANDSCAPE TYPE	Ranges and hill slopes		
SURFACE CHARACTER **Dominant**	Stony	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☐	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☐	☐	1
	Total Score (Max 10 - weighted by 2.5)			5

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☑	☐	1
	Total Score (Max 18 - weighted by 3)			9

Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☐	☐	
Shrubs 1- 3m	☑	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☑	☐	
Total Score (Max 16 - weighted by 4)			**12.0**

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	2
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☐	
Very sparse to nil introduced species present (<5% of vegetation cover)	☑	
Total Score (Max 10 - weighted by 2.5)		**10**

Vegetation Utilisation Score	
Total Score (Max 26)	16.50

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**52.50**

Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**52.50**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =	
UNIT BIODIVERSITY SCORE	66.99
Total Biodiversity Score (Biodiversity Score x hectares)	70.34

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	
	GPS Reference
	Datum
	Zone (52, 53 or 54)
	Easting (6 digits)
	Northing (7 digits)
	Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**77.37**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	10.32
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$4,608.60
Administration fee (GST inclusive)	$253.47
Total Payment Required	**$4,862.07**

Rangelands Assessment Scoresheet

(Version - 1 Sept 2024)

Block (name)	Strzelecki Track
Landscapes Region	South Australian Arid Lands
IBRA Sub Region	Murnpeowie
Property Name	DIT

ASSESSOR(S)	LJ
DATE OF ASSESSMENT	03-06 Dec 2024

Map of the Block (Including the Sites)

Insert Map

Landscape Context Scores

Number of Landform Features within Block	5
1 = 0.01pts, 2 = 0.03pts, >2 = 0.06pts	0.06

Size of the Block	
<10ha = 0; 10 - <100ha = 0.01pts; 100 - <500ha = 0.02pts; 500 - <1000ha = 0.03pts; 1000 - <2000ha = 0.04pts; 2000 - 5000 = 0.05pts; >5000pts = 0.06pts	0

% native veg. protected in IBRA Sub region	1
0-2% = 0.05 pts; >2-5% = 0.04 pts; >5-10% = 0.03 pts; >10-25% = 0.02 pt; >25% = 0.01 pt	0.05

Note; Blocks will score a minimum Landscape Context Score of 1

Wetland or Riparian Habitat present	
Does the block contain a wetland feature (Yes/No)	
Permanent or semi permanent = 0.08 pt *Contains water for at least 6 months of the year*	No
Occasionally contains water = 0.05 pts *Contains water approximately once every 5 years*	Yes
Very occasionally contains water = 0.02 pts *Contains water approximately once every 20 years*	Yes
Score	0.05

LANDSCAPE CONTEXT SCORE (max 1.25)	**1.16**

Plant Species	Common name	Palatability	Utilisation enter the tally from datasheet for each category. If a proportion (>50%, <50% or zero) was recorded in the field, enter the code for each proportion (>50% is **2**, <50% is **1**, and 0 is **0**)			Age Class (M/Y/A)	Site Utilisation Score mean
			Intact	Modified	Over utilised		
			number (tally)	number (tally)	number (tally)		
Pittosporum angustifolium	Native Apricot	HP	2			Adult	11.88
Acacia ligulata	Umbrella Bush	U	2			Adult	
Maireana appressa	Pale-fruit Bluebush	P	2			Mixed	
Astrebla pectinata	Barley Mitchell-grass	P		2		Adult	

Threatened Fauna - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed
Amytornis modestus	Thick-billed Grasswren	VU		Yes	
Notomys fuscus	Dusky Hopping-mouse	VU	V	Yes	
Falco subniger	Black Falcon		R	Yes	
Aspidites ramsayi	Woma		R	Yes	

Threatened Flora Species - Recorded or Observed		Threatened Species			
Species	Common Name	EPBC	SA	Past Record	Observed

Introduced Fauna - Recorded or Observed

Species	Common Name	Past Record	Observed	Introduced Species
Vulpes vulpes	Fox (Red Fox)	Yes		*
Bos taurus	Cattle (European Cattle)	Yes		*
Equus sp.		Yes		*
Canis lupus dingo	Dingo	Yes		*
Canis sp.		Yes		*
Capra hircus	Goat (Feral Goat)	Yes		*
Equus asinus	Donkey (Feral Donkey)	Yes		*
Equus caballus	Horse (Brumby)	Yes		*
Felis catus	Domestic Cat (Feral Cat)	Yes		*
Mus musculus	House Mouse	Yes		*
Oryctolagus cuniculus	Rabbit (European Rabbit)	Yes		*

Introduced Flora Species - Recorded or Observed

Species	Common Name	Past Record	Observed	
astrum americanum var. americanum	Malvastrum		Yes	

Vegetation Condition Scores

SITE (name):	VA10	**SIZE OF SITE (Ha)**	8.8
VEGETATION ASSOCIATION DESCRIPTION	Maireana apressa open shrubland		
LANDSCAPE TYPE	Breakaways		
SURFACE CHARACTER **Dominant**	Stony	**Minor**	

Biotic Disturbance Indicators Sites with trees and large shrubs only (select one tickbox for each row)	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Presence of palatable shrubs or perennial grasses under the canopy of tree/shrub >3m	☐	☐	☐	1
Presence of mostly intact litter mats under canopy of tree/shrub >3m tall (>50% of tree canopy area has intertwined litter or shrub cover)	☐	☐	☐	1
	Total Score (Max 10 - weighted by 2.5)			5

Physical Disturbance Indicators	**Dominant >50%**	**Minor <50%**	**None - 0**	**Score**
Prevalence of large patches of bare soil (> 5m x 5m) that shows no signs of productive capacity (ie ephemeral plant litter, stems etc.)	☐	☑	☐	1
Evidence of animal tracks, vehicle tracks or other physical disturbance to the natural land surface	☐	☑	☐	1
Destabilised creek channel banks (if present), characterised by no vegetation or stabilizing roots, deflation and bank erosion. Inspect banks on both sides of channels.	☐	☐	☐	1
	Total Score (Max 18 - weighted by 3)			9

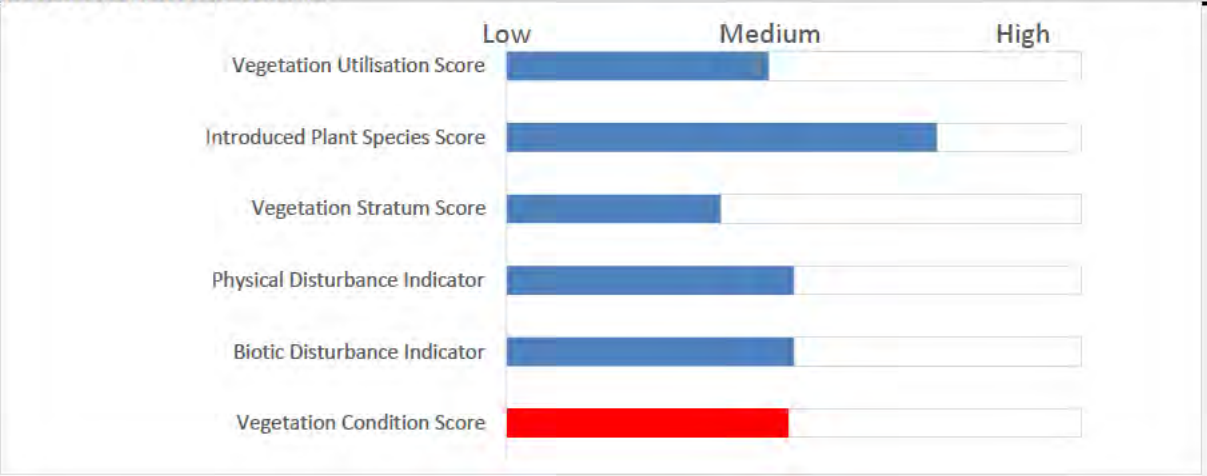
Vegetation Stratum (tick the Present box for all stratum that are present or tick for Absent box of any stratum that should be present but have been removed)	**Present**	**Absent**	*Note; don't tick either box if stratum was likely never present - e.g. Trees stratum in a low shrubland*
Trees/shrubs >3m	☐	☐	
Shrubs 1- 3m	☑	☐	
Low shrubs <1m & hummock grasses	☑	☐	
Perennial tussock grasses with basal areas >30mm	☐	☑	
Total Score (Max 16 - weighted by 4)			6.0

Introduced Plant Species	**Select**	**Score**
Declared species present?		2
Introduced species dominate (>50% of vegetation cover)	☐	1
Moderate invasion of introduced species (5 to 50% of the vegetation cover)	☑	
Very sparse to nil introduced species present (<5% of vegetation cover)	☐	
Total Score (Max 10 - weighted by 2.5)		7.5

Vegetation Utilisation Score	
Total Score (Max 26)	11.88

Vegetation Condition Score Calculation

VEGETATION CONDITION SCORE	**39.38**



Conservation Significance Score

Is the vegetation association considered a Threatened Ecological community or Ecosystem?	Tick if Yes
State (Provisional List of Threatened Ecosystems of SA) **Rare** community (0.1 pt)	☐
State (Provisional List of Threatened Ecosystems of SA) **Vulnerable** community (0.2 pts)	☐
State (Provisional List of Threatened Ecosystems of SA) **Endangered** community (0.3 pts)	☐
Nationally (EPBC Act) V**ulnerable** community (0.35 pts)	☐
Contains a Nationally (EPBC Act) **Endangered** or **Critically Endangered** community (0.4 pts)	☐
Note; all sites will score a minimum Conservation Significance Score of 1 **Score**	1

Number of Threatened Plant Species recorded for within the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species recorded (1 pt each)	0
State **Vulnerable** species recorded (2.5 pt each)	0
State **Endangered** recorded (5 pts each)	0
Nationally **Vulnerable** species recorded (10 pts each)	0
Nationally **Endangered** or **Critically endangered** species recorded (20 pts each)	0
0 = 0 pts; <2 = 0.04 pts; 2 - <5 = 0.08 pts; 5 - <10 = 0.12 pts; 10 - <20 = 0.16 pts; 20 or > = 0.2 pts	**0**
Score	0

Potential habitat for Threatened Animal Species (number observed or recorded) for the Site	**Number**
**If a species has both a State (NP&W Act) and National (EPBC Act) rating, it's only recorded for its National rating.*	
State **Rare** species observed or locally recorded (1 pt each)	2
State **Vulnerable** species observed or locally recorded (2.5 pt each)	0
State **Endangered** species observed or locally recorded (5 pt each)	0
Nationally **Vulnerable** species observed or locally recorded (10 pts each)	2
Nationally **Endangered** or **Critically endangered** species observed or locally recorded (20 pts each)	0
0 = 0 pts; <2 = 0.02 pts; 2 - <5 = 0.04 pts; 5 - <10 = 0.06 pts; 10 - <20 = 0.08pts; 20 or > = 0.1 pts	**22**
Score	0.1

CONSERVATION SIGNIFICANCE SCORE	**1.1**

Total Scores for the Site

LANDSCAPE CONTEXT SCORE	**1.16**
VEGETATION CONDITION SCORE	**39.38**
CONSERVATION SIGNIFICANCE SCORE	**1.10**

Vegetation Condition x Landscape Context x Conservation Significance =

UNIT BIODIVERSITY SCORE	50.25
Total Biodiversity Score (Biodiversity Score x hectares)	442.20

Photo Point and Vegetation Survey Location	**Direction of the Photo**
Insert Photopoint Photo	

GPS Reference	
Datum	
Zone (52, 53 or 54)	
Easting (6 digits)	
Northing (7 digits)	

Description

SEB Offset Calculations
(when assessing a proposed clearance site)

SEB Points Required	
Loss Factor	1.0
Loadings for clearance of protected areas	
Reductions for rehabilitation of impact site	
SEB Uplift Factor	1.10
Total SEB Points Required	**486.42**

SEB - Payment	
SEB points of gain/ha Factor	7.5
Approximate SEB hectares required	64.86
Management Cost ($/ha)	$24,764
Economies of Scale Factor	0.11
Mean Annual rainfall for the site (mm)	164
Payment into the Fund (GST exclusive)	$28,973.94
Administration fee (GST inclusive)	$1,593.57
Total Payment Required	**$30,567.51**

SEB Points Provided Calculations

Answer these questions when assessing a site within a proposed SEB area

Refer to the SEB Guide (section on 'Adjust the SEB Points of Gain') for more information

Assessment of SEB site - On ground		
What is the risk of decline or loss of vegetation in the next 20 years?		
Has stock grazing been absent from the site for 10 or more years (and cannot be introduced without approval from the NVC)?		
Is the land subject to zoning or a dedication that is generally restrictive of development activities (e.g. conservation zone, recreation or open space zoning or crown land dedication)?		
There are no, or only very minimal, threats identified that would result in the decline of the vegetation condition (excluding threats beyond the control of the SEB offset provider such as climate change).		
Is the land subject to legally binding obligations (contractual or legislated) that provide an existing level of protection for the native vegetation (e.g. restricts the use of the land or prevents the vegetation from being harmed) that is additional to the protections provided by the Native Vegetation Act 1991?		
Likely % Loss	0.04	Standard
Will the proposed SEB area be subject to management actions that are clearly and significantly in excess of the standard requirements as set out in the SEB Policy?		
Will a very high standard of revegetation be conducted, including the establishment of a very high proportion of the species diversity which would be expected within the relevant vegetation community, and all strata (which should be present) represented including grasses, sedges, herbs and ground cover plants?		
Will fencing be installed (in excess of the standard stock exclusion fencing) in order to exclude introduced species or excessive herbivory by native and introduced fauna?		
Will intensive and substantial management of threatened flora or fauna be undertaken which is not required in association with the proposed clearance for which the SEB is being provided?		
Are the proposed management actions and their scale of impact already required by duty of care or legislation?		
Only minimal management actions have been committed to in the proposed SEB management plan, such as minimal control of species declared for control under the *Landscapes SA Act 2019* .		
Are the management interventions practically difficult to achieve or is the recovery of the vegetation likely to be inhibited in some way?		
Are there management issues, beyond the control of the SEB offset provider, that are technically or practically difficult to address preventing them from being managed to their fullest possible extent (e.g. weed infestations within difficult to access terrain)?		
Are there physical or environmental constraints which are likely to significantly impede the rehabilitation of vegetation and slow the rate of recovery? This may include compacted soils or altered soil chemistry (e.g. high nutrients/salinity issues) where the issue will continue or increase, significant erosion that cannot be controlled without impacting native vegetation or extensive die-back or plant diseases.		
Likely Improvement Due to Management	8.12	Standard
In relation to sites requiring substantial revegetation, is it highly likely that a good outcome will be achieved?		
Does the applicant (or site manager/contractor) have significant experience and capability with sufficient resources in delivering habitat reconstruction (revegetation) projects?		
Are there other risk factors which make the outcome uncertain? ***NVB assessment only***		
Is the applicant proposing novel management actions and the outcomes are uncertain? Are there other issues that pose serious risks to the delivery of the offset that are not already addressed by the above questions?		
Likelihood of Achieving the Outcome	0.49	Standard

Future Negative UBS Score	48.24
Future Positive UBS Score	55.33
UBS Gain Score	7.09
Estimate of SEB Points provided	**62.39**

This is an estimate only and will be subject to review and verification by the Native Vegetation Council.

If you answered 'yes' to any question, provide justification in the Data Report

Attachment 2

Plant Species Recorded (Native and Introduced)

Plant Species Recorded (Native and Introduced)

Species	Common Name	EPBC Act	NP&W Act	Introduced Species	VA1	VA2	VA3	VA4	VA5	VA6	VA7	VA8	VA9	VA10
Abutilon halophilum	Plains Lantern-bush										✓		✓	
Acacia ligulata	Sandhill Wattle													✓
Acacia salicina	Willow Wattle				✓		✓							
Acacia tetragonophylla	Dead Finish												✓	
Acacia victoriae ssp.	Elegant Wattle				✓	✓								
Anemocarpa podolepidium	Rock Everlasting					✓								
Astrebla pectinata	Barley Mitchell-grass							✓		✓	✓	✓	✓	✓
Atriplex holocarpa	Pop Saltbush										✓		✓	
Atriplex lindleyi ssp.	Baldoo					✓	✓		✓					
Atriplex nummularia ssp. nummularia	Old-man Saltbush				✓									
Atriplex sp.	Saltbush							✓		✓				
Chenopodium album	Fat Hen			*			✓							
Cullen australasicum	Tall Scurf-pea				✓	✓				✓				✓
Dissocarpus paradoxus	Ball Bindyi										✓			
Einadia nutans ssp.	Climbing Saltbush					✓	✓			✓				
Enchylaena tomentosa var.	Ruby Saltbush				✓	✓	✓		✓	✓				

Species	Common Name	EPBC Act	NP&W Act	Introduced Species	VA1	VA2	VA3	VA4	VA5	VA6	VA7	VA8	VA9	VA10
Enneapogon avenaceus	Oat Nineawn													✓
Enneapogon sp.	Bottle-washers/Nineawn							✓						
Eragrostis dielsii	Mulka							✓						
Eragrostis sp.	Love-grass					✓	✓				✓		✓	
Goodenia sp.	Goodenia						✓							
Gunniopsis quadrifida	Sturt's Pigface						✓		✓					
Lactuca serriola f.	Prickly Lettuce			*			✓			✓				
Maireana aphylla	Cotton-bush							✓						
Maireana appressa	Pale-fruit Bluebush					✓		✓	✓			✓	✓	✓
Maireana coronata	Crown Fissure-plant										✓			
Maireana pyramidata	Black Bluebush									✓			✓	
Malvastrum americanum var. americanum	Malvastrum			*						✓				✓
Marsdenia australis							✓							
Minuria sp.	Minuria										✓		✓	✓
Myoporum montanum	Native Myrtle						✓							
Nitraria billardierei	Nitre-bush				✓									
Orobanche cernua var. australiana	Australian Broomrape		R				✓							
Osteocarpum sp.	Bonefruit						✓	✓					✓	✓
Panicum sp.	Panic/Millet									✓				

Species	Common Name	EPBC Act	NP&W Act	Introduced Species	VA1	VA2	VA3	VA4	VA5	VA6	VA7	VA8	VA9	VA10
Pittosporum angustifolium	Native Apricot													✓
Plantago sp.	Plantain							✓			✓	✓		
Portulaca oleracea	Common Purslane							✓						
Rhagodia spinescens	Spiny Saltbush					✓	✓		✓	✓		✓	✓	
Salsola australis	Buckbush				✓	✓	✓	✓	✓	✓	✓	✓	✓	
Santalum lanceolatum	Plumbush												✓	
Sclerolaena bicornis var. bicornis	Goat-head Bindyi											✓	✓	
Sclerolaena brachyptera	Short-wing Bindyi								✓		✓		✓	✓
Sclerolaena cuneata	Tangled Bindyi					✓		✓	✓		✓	✓		
Sclerolaena diacantha	Grey Bindyi					✓					✓	✓		
Sclerolaena decurrens													✓	
Sclerolaena holtiana	Holt's Bindyi						✓		✓					✓
Sclerolaena intricata	Tangled Bindyi					✓		✓						
Sclerolaena lanicuspis	Spinach Bindyi												✓	
Sclerolaena patenticuspis	Spear-fruit Bindyi							✓		✓		✓		
Senecio magnificus	Showy Groundsel					✓	✓					✓		
Senna artemisioides ssp. filifolia	Fine-leaf Desert Senna								✓					
Sida sp.	Sida									✓			✓	✓

Species	Common Name	EPBC Act	NP&W Act	Introduced Species	VA1	VA2	VA3	VA4	VA5	VA6	VA7	VA8	VA9	VA10
Sisymbrium erysimoides	Smooth Mustard			*								✓		
Stemodia florulenta	Bluerod				✓									
Tecticornia indica ssp. leiostachya	Brown-head Samphire					✓	✓							
Vittadinia sp.	New Holland Daisy						✓							

Attachment 3

Environmental Protection Biodiversity Conservation Act 1999 Protected Matters Report

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 12-Nov-2024

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	24
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	15
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	3
EPBC Act Referrals:	7
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	1

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin	Endangered	Community likely to occur within area	In buffer area only

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Amytornis merrotsyi merrotsyi			
Short-tailed Grasswren (Flinders Ranges) [86269]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Amytornis modestus			
Thick-billed Grasswren [84121]	Vulnerable	Species or species habitat known to occur within area	In feature area
Aphelocephala leucopsis			
Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Falco hypoleucos](#) Grey Falcon [929]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area	In feature area
[Grantiella picta](#) Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Neophema chrysostoma](#) Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Pedionomus torquatus](#) Plains-wanderer [906]	Critically Endangered	Species or species habitat may occur within area	In feature area
[Pezoporus occidentalis](#) Night Parrot [59350]	Endangered	Species or species habitat may occur within area	In feature area
[Rostratula australis](#) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area	In feature area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In feature area
MAMMAL			
[Notomys fuscus](#) Dusky Hopping-mouse, Wilkiniti [125]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Petrogale xanthopus xanthopus](#) Yellow-footed Rock-wallaby (SA and NSW) [66646]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
[Pseudomys australis](#) Plains Rat, Palyoora, Plains Mouse [108]	Vulnerable	Species or species habitat known to occur within area	In feature area
PLANT			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Acacia carneorum			
Needle Wattle, Dead Finish, Purple-wood Wattle [66685]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Codonocarpus pyramidalis			
Slender Bell-fruit, Camel Poison [19507]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eriocaulon carsonii			
Salt Pipewort, Button Grass [10584]	Endangered	Species or species habitat known to occur within area	In buffer area only
Frankenia plicata			
[4225]	Endangered	Species or species habitat known to occur within area	In feature area
Pterostylis xerophila			
Desert Greenhood [7997]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Swainsona murrayana			
Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat may occur within area	In feature area
Xerothamnella parvifolia			
[3141]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
REPTILE			
Aprasia pseudopulchella			
Flinders Ranges Worm-lizard [1666]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Listed Migratory Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Motacilla cinerea			
Grey Wagtail [642]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Motacilla flava			
Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Gallinago hardwickii			
Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area	In feature area
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area	In buffer area only
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Neophema chrysostoma			
Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato)			
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Strzelecki	Regional Reserve	SA	In buffer area only

Nationally Important Wetlands		[Resource Information]
Wetland Name	State	Buffer Status
Inland Saline Lakes	SA	In buffer area only
Lake Eyre Mound Springs	SA	In buffer area only
Strzelecki Creek Wetland System	SA	In buffer area only

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
Beverley North Extension to the Beverley Uranium Mine	2009/5138	Controlled Action	Post-Approval	In buffer area only
Expansion of the Olympic Dam copper, uranium, gold and silver mine, processing plant and associated	2005/2270	Controlled Action	Post-Approval	In feature area
Four Mile Extension to the Beverley Uranium Mine	2008/4252	Controlled Action	Post-Approval	In buffer area only
Mt Gee Uranium Mining	2007/3716	Controlled Action	Completed	In buffer area only
Prominent Hill Copper-Gold Project	2005/2040	Controlled Action	Post-Approval	In buffer area only

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Not controlled action (particular manner)				
Beverley North Field Leach Trial	2010/5446	Not Controlled Action (Particular Manner)	Completed	In buffer area only

Bioregional Assessments			[Resource Information]
SubRegion	BioRegion	Website	Buffer Status
Cooper	Lake Eyre Basin	BA website	In buffer area only

Geological and Bioregional Assessments			[Resource Information]
Name	State	Website	Buffer Status
Cooper GBA region	QLD, SA, NSW	GBA website	In buffer area only

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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Attachment 4

Threatened Species Summary

Table 1 – Threatened Flora Observations

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
PLANTS							
Gratwickia monochaeta		R		*NatureMaps* (2024)	10-Oct-2010	One known species native to South Australia, occurs in the Gawler Range, Eyre Penninsula (JSTOR Global Plants).	**Unlikely**. Two (2) observations approximately 25 km from the Project Area. Species habitat requirements are not thoroughly documented. The environment in which the observation was recorded appears consistent with the environment within 10 km of the Project Area as visible on the observation map. However, due to the distance from the Project Area and the age of the last recorded observation it is unlikely that this species will be present.
Eleocharis plana	Flat Spike-rush	R		*NatureMaps* (2024)	25-Sep-2007	Widespread across inland New South Wales, Queensland and South Australia (Atlas of Living Australia). Distribution in SA in LE (eFloraSA 2007).	**Possible**. One (1) observation is present on the roadside of the Project Area. Species habitat requirements are not thoroughly documented, however, appear to be recorded in lower-lying area subject to inundation. Location was inundated during

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
							vegetation survey, so it is possible the species is present at the location, despite the age of the previous record.
Eriocaulon carsonii ssp. carsonii	Salt Pipewort	E	EN	*NatureMaps* (2024) Protected Matters Search (2024)	26-Aug-2015	Currently inhabits nine spring complexes in South Australia, twelve in Queensland and one in New South Wales. Occurs in the Bourke, Lake Frome, Lake Eyre and Springvale spring super groups (DCCEEW n.d).	**Unlikely**. A total of 80 observations are present within approximately 20km of the Project Area. While some creek-beds do pass near the Project Area, due to the distance of the observation from the Project Area and the age of the last recorded observation it is unlikely this species will be present.
Acacia confluens	Arkaroola Wattle	V		*NatureMaps* (2024)	04-Sep-2012	Endemic to South Australia occurring in the Northern part of the Flinders Ranges from Mount Lyndhurst eastwards through Arkaroola, Paralana Springs area to the western side of Moolawatana, just into the Lake Eyre region (eFloraSA n.d.). LE, FR and EA regions. Associated with tall shrubland on steep stony hillsides and gullies. Found in the Tirari Desert and Sturt Stony Desert regions where it	**Unlikely**. Two (2) observations occur approximately 35km from the Project Area. Species is associated commonly with steep hillsides or gullies in tall shrubland communities, inconsistent with the habitat structure present in the Project Area. Both observations are present in the hillsides and gullies to the south of the Project Area. This species is

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
						is situated in gullies and on stony hillsides growing in skeletal calcareous loamy soils as a part of tall shrubland communities (Atlas of Living Australia n.d.).	unlikely to occur within proximity to the Project Area.
Swainsona leeana	Lee's Swainson-pea	R		*NatureMaps* (2024)	11-Oct-2010	South Australia regions in LE, FR, and EP (eFloraSA n.d.). Grows in stony soil or clay-loam in dry water courses in scattered locations in the Flinders Ranges and Kati Thanda-Lake Eyre regions of SA (Atlas of Living Australia n.d.).	**Unlikely**. Four (4) observations occur within approximately 35 km of the Project Area. Stony soils are consistent with the description of a gibber tableland system and dry watercourses do occur in proximity to the Project Area. All observations are confined to the hillsides and gullies to the south of the Project Area. Due to the distance from the Project Area and the age of the last known observation it is unlikely this species will be present.
Codonocarpus pyramidalis	Slender Bell-fruit	E	VU	*NatureMaps* (2024) Protected Matters Search (2024)	31-Jul-2016	Occurs as scattered individuals across areas of the Flinders Ranges, Northern Lofty Ranges and the eastern regions of South Australia such as within the Murray Darling Basin, Eyre Peninsula,	**Unlikely**. Four (4) observations are present approximately 35 km from the Project Area. Species is associated with hillsides and ridges, slopes and creeks, inconsistent with the Project

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
						Yorke and Adelaide. Grows along the crests of hills and ridges, slopes and along creeks, where the soil is either a loamy sand or sandy clay loam with the pH between 8.5-9.	Area. All observations are confined to the hillsides and gullies to the south. Due to the distance from the Project Area and the age of the last known observation it is unlikely this species will be present.
Gilesia biniflora	Western Tar-vine	R		*NatureMaps* (2024)	11-Oct-2010	Found scattered across northern South Australia growing on saline clay soils (Seeds of South Australia n.d.).	**Unlikely.** One (1) observation is present approximately 25km from the Project Area. Species habitat requirements are not thoroughly documented. Due to the distance from the Project Area and the age of the last known observation it is unlikely this species will be present.
Orobanche cernua var. australiana	Australian Broomrape	R		*NatureMaps* (2024)	25-Sep-2007	Coastal sand dunes. In other areas occurs in dry sandy creekbeds and sand cliffs. Parasitic on native *Senecio spp.* and *Ixiolaena tomentosa* (Department for Environment and Heritage 2008).	**Possible**. One (1) observation is located on the roadside of the Project Area. Despite the observation being 17 years old and the only known observation within 50 km of the Project Area, it is possible that this species will be encountered.
Frankenia plicata	Sea Heath		EN	Protected Matters	Unknown (Species or species	Occurs in South Australia from north of Port Augusta to the Northern Territory border,	**Unlikely**. The species has not been recorded within close

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
				Search (2024)	habitat known to occur within feature area)	and from Port Augusta north-east to Maree. Grows in a range of habitats including on small hillside channels, swales of loamy sands to clay. Found in a wide range of vegetation communities that have good drainage (DCCEEW 2008).	proximity to the Project Area since 1994, therefore it is unlikely to be present.

Table 3 – Threatened Fauna Observations

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
BIRDS							
Amytornis modestus	Thick-billed Grasswren		VU	*NatureMaps* (2024) Protected Matters Search (2024)	28-Aug-2016	All subspecies of *Amytornis modestus* are listed under the EPBC Act. *Amytornis modestus raglessi* (Thick-billed Grasswren, northern FR) is relevant to the Project Area. The Thick-billed Grasswren occurs in chenopod shrublands (which occur in the arid and semi-arid zones), especially in shrublands dominated by saltbush *Atriplex spp.* and bluebush *Maireana spp.*, sometimes with widely scattered trees. The eastern subspecies is widespread from the Lake Frome basin, west to the eastern Lake Torrens basin, Northwest to near Leigh Creek and Marree, and along the southern and western fringes of the Lake Eyre Basin, and West to the Coober Pedy region. It has also been recently recorded at two sites northwest of Lake Eyre.	**Possible**. Several observations (both at the species level and the sub-species level) are present approximately 40 – 50 km from the Project Area, on the roadside. Field assessments confirmed suitable habitat exists within the Project Area.

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
Ardeotis australis	Australian Bustard	V		*NatureMaps* (2024)	28-Oct-2011	Mainly occurs in inland Australia and is now scarce or absent from southern and south-eastern Australia. Mainly inhabits tussock and hummock grasslands, though prefers tussock grasses to hummock grasses; also occurs in low shrublands and low open grassy woodlands; occasionally seen in pastoral and cropping country, golf courses and near dams (IUCN n.d.).	**Unlikely**. One (1) observation occurs approximately 45km from the Project Area, on the roadside. While some suitable habitat was found within the Project Area, given the distance, age and number of previous records, it is unlikely the species would be present.
Cladorhynchus leucocephalus	Banded Stilt	V		*NatureMaps* (2024)	10-Feb-2015	Endemic to Australia, mainly in the south and inland. Found mainly in saline and hypersaline (very salty) waters of the inland and coast, typically large, open and shallow (Birds in Backyards 2020).	**Unlikely.** No suitable habitat available within the Project Area.
Elanus scriptus	Letter-winged Kite	V		*NatureMaps* (2024)	29-Aug-2016	Found in the arid inland regions of Northern South Australia. A bird of open country and grasslands where there are tree-lined steams or water courses. When food is plentiful, the species irrupts and birds may disperse to	**Unlikely**. Eight (8) observations are present approximately 40 km from the Project Area, on the roadside. While some suitable habitat was found within the Project Area, given the distance of previous records, it

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
						higher rainfall coastal regions (Birds in Backyards n.d.).	is unlikely the species would be present.
Falco subniger	Black Falcon	R		*NatureMaps* (2024)	29-Aug-2016	This species is found along tree-lined watercourses and in isolated woodlands, mainly in arid and semi-arid areas (BirdLife Australia, n.d.).	**Possible**. One (1) observation of this species is present approximately 20km from the Project Area on the roadside. There is some suitable habitat available within the Project Area.
Phaps histrionica	Flock Bronzewing	R		*NatureMaps* (2024)	10-Oct-2015	The Flock Bronzewing is endemic to Australia, occurring mostly in arid, tropical inland areas. The species has a patchy distribution through north-western WA, central-southern Northern Territory, western Queensland, north-eastern South Australia and north-western NSW (National Parks and Wildlife Services 1999).	**Unlikely**. One (1) observation is present approximately 50 km from the Project Area. Preferred habitat type is not thoroughly documented, but the description of arid inland habitat is consistent with the Project Area and the closely surrounding environment. However, due to distance from the Project Area and the age of the last known observation it is unlikely this species will be present.
Tyto longimembris longimembris	Eastern Grass Owl	R		*NatureMaps* (2024)	01-Sep-2015	Eastern Grass Owls have been recorded occasionally in all mainland states of Australia but are most common in	**Unlikely.** One (1) observation approximately 30 km from the Project Area. No suitable

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
						northern and north-eastern Australia. Eastern Grass Owls are found in areas of tall grass, including grass tussocks, in swampy areas, grassy plains, swampy heath, and in cane grass or sedges on flood plains (Environment and Heritage 2014).	habitat available within the Project Area.
Aphelocephala leucopsis	Southern Whiteface		VU	Protected Matters Search (2024)	Unknown (Species or Species habitat known to occur within feature area)	Inhabits open woodlands from near arid habitats, such as Acacia scrub and hummock grassland, through to the wetter grassy woodlands of SE Australia where Eucalyptus dominates (Blakers et al. 1984 in Department for Environment and Heritage 2008). Occurs across southern and central Australia across most of SA, VIC, and NSW, generally avoiding coastal areas in higher rainfall zones (Blakers et al. 1984; Schodde and Mason 1999 in Department for Environment and Heritage 2008).	**Unlikely**. Limited suitable habitat within the Project Area, no observations within the preceding 20 years within 50 km of the Project Area.
Falco hypoleucos	Grey Falcon		VU	Protected Matters	Unknown (Species or Species habitat	The species frequents timbered lowland plains, particularly acacia shrublands that are crossed by tree-lined	**Unlikely.** Dates of the last known (if any) observation are not available,

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
				Search (2024)	known to occur within feature area)	water courses. The species has been observed hunting in treeless areas and frequents tussock grassland and open woodland, especially in winter (DCCEEW 2022)	as there are no recorded observations within close proximity identified through *NatureMaps*. The habitat present within the Project Area may be suitable for the species, however, given the lack of observations, it is unlikely to be present.
Grantiella picta	Painted Honeyeater		VU	Protected Matters Search (2024)	Unknown (Species or Species habitat known to occur within feature area)	Sparsely distributed from southern Victoria and south-eastern South Australia to far northern Queensland and eastern Northern Territory (Birdlife International n.d.). Forest, woodland, dry scrub, often with abundant mistletoe. Dependent on mistletoe berries (Morecombe eGuide 2011)	**Unlikely**. Very records within South Australia, none in close proximity to the Project Area.
Neophema chrysostoma	Blue-winged Parrot	V	VU	Protected Matters Search (2024)	Unknown (Species or species habitat known to occur within feature area and within area overfly marine area)	This species mainly occurs in Tasmania and Victoria, particularly in southern Victoria and the midlands and eastern areas of Tasmania however sparser populations are also found in western New South Wales and eastern South Australia, extending to south-west Queensland and occasionally into the Northern	**Unlikely.** Very few observations recorded through the region, no suitable habitat within the Project Area.

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
						Territory. Prefers grasslands and grassy woodlands but will inhabit a range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones (Birdlife Australia n.d.).	
MAMMALS							
Macrotis lagotis	Greater Bilby (Bilby)	V	VU	*NatureMaps* (2024)	12-Dec-2017	Found in a range of habitats from arid rocky soils with little ground cover to semi-arid shrublands and woodlands. They are also known to inhabit spinifex and tussock grassland regions. Once common throughout the arid and semi-arid regions of the Australian mainland, however European settlement brought about changes to habitat. Populations are now found within the Tanami Desert of the Northern Territory; in the Great Sandy and Gibson Deserts; parts of the Pilbara and Kimberley (near Broome) regions of western Australia; and the clayey and stony soils of the Mitchell grasslands of southwest Queensland (The	**Unlikely**. No suitable habitat within the Project Area.

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
						Australian Museum 2022).	
Notomys fuscus	Dusky Hopping-mouse	V	VU	*NatureMaps* (2024) Protected Matters Search (2024)	23-Sep-2019	Patchy distribution in the arid areas of south-west Queensland, southern NT, north-east SAS and western NSW. Extensive surveys of suitable habitat (e.g., in the Strzelecki dunefields) confirmed that the species is patchily distributed and highly fragmented. There is a band of suitable habitat between Sturt Desert National Park (NP) through to Strzelecki Regional Reserve (RR) and Cobbler Dunes (DCCEEW n.d.).	**Possible**. A total of 22 observations known within the 50 km buffer area. Multiple observations are recorded as being on the roadside. Known distribution includes the nearby Strzelecki Regional Reserve, and the associated habitat is consistent with the Project Area.
Petrogale xanthopus xanthopus	Yellow-footed Rock-wallaby	SP	VU	*NatureMaps* (2024) Protected Matters Search (2024)	06-Jul-2017	In South Australia, colonies persist in the Gawler Ranges, Flinders Ranges and Olary Hills. At least 24 colonies are known to have become extinct in South Australia. Most of these represent at least half of the known colonies in the Olary Hills and Gawler Ranges regions. The main locations in which the Yellow-footed Rock-wallaby currently exists are Flinders	**Unlikely**. Two (2) observations are present approximately 30 km from the Project Area. No suitable habitat within the Project Area.

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
						Rangers (North, including Flinders Range National Park), Flinders Ranges (Central), Gawler Ranges, Olary Ranges (DCCEEW n.d.).	
Pseudomys australis	Plains Rat		VU	Protected Matters Search (2024)	Unknown (Species or species habitat known to occur within feature area)	Populations are now restricted to the Stony Plains Bioregion in South Australia and the Northern Territory. Habitat that is critical to the survival of the species include large open gypseous cracking clay areas with minor drainage features and depressions within stony gibber plains. Plains mice have also been largely associated with vegetation communities that include, Eucalyptus coolabah (Coolibah) low woodland, Atriplex nummularia (Oldman Saltbush), Maireana aphylla (Cottonbush) / Eragrostis setifolia (Bristly Love-grass) / Astrebla pectinata (Barley Mitchell-grass) / Atriplex vesicaria (Bladder Saltbush) Low Very Open Shrubland and Sclerolaena divaricata (Tangled Bindyi) / Eragrostis	**Unlikely.** Recent records approximately 48 km from the Project Area. Some suitable habitat is present within the Project Area, however, due to the distance from the Project Area, it is unlikely the species would be present.

Species Scientific Name	Common Name	NP&W Act	EPBC Act	Data Source	Date of Last Record	Species Known Habitat Preferences	Likelihood of Use for Habitat - Comments
						Setifolia / Atriplex vesicaria Low Open Shrubland (Brandle 1998).	
REPTILES							
Aspidites ramsayi	Woma	R		*NatureMaps* (2024)	25-Sep-2019	Found in desert dunefields and on sandy plains, usually with hummock grasses but also other natural vegetation. They often inhabit rabbit burrows but may also excavate shelters under hummock grasses or dense bushes. The majority of recent sightings of Woma Pythons in South Australia have come from sandy areas predominantly along the Birdsville and Strzelecki Tracks (SA Arid Lands Natural Resources Management Board 2011).	**Likely**. A total of 10 observations are present within the Project Area, with some recorded on the roadside. Known distributions include the Strzelecki track, and suitable habitat is available.

Table 2 – Species Rating Terms

National Parks and Wildlife Act (NP&W Act)	
Abbreviation	*Meaning*
R	Rare

Environmental Protection Biodiversity Conservation Act (EPBC Act)	
Abbreviation	*Meaning*
R	Rare

V	Vulnerable	VU	Vulnerable
E	Endangered	EN	Endangered
ssp	Sub-species	ssp	Sub-species
sp	Unspecified species	sp	Unspecified species

Attachment 5

Plains-wanderer Technical Memorandum

Technical Memorandum

To:		**From:**	Louise Jaunay
Company:	Department for Infrastructure and Transport		**SLR Consulting Australia Pty Ltd**
		Date:	5 August 2025
		Project No.	655.V10357

RE: Strzelecki Track Upgrades
Significant Impact Assessment Plains-wanderer (*Pedionomus torquatus*)

The Department for Infrastructure and Transport (DIT) have been progressively upgrading the Strzelecki Track, a remote transport route consisting of 470 kilometres of road, from an unsealed to a sealed road. The project, given the length of upgrades required, has been conducted in stages, with necessary environmental approvals being obtained prior to construction works commencing.

During the approval process for native vegetation clearance associated with the upgrade between Maintenance Markers (MM) 369-396, the threatened fauna species Plains-wanderer (*Pedionomus torquatus*), listed Critically Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), was identified as potentially occurring within the project area by anecdotal records obtained by the Arid Lands Landscape Board which were not publicly available at the time to the Native Vegetation Clearance report being prepared. Subsequently, a Significant Impact Assessment was completed to determine the potential impacts to the species and determine if a referral under the EPBC Act would be required.

The assessment was prepared in accordance with the *Significant Impact Guidelines 1.1 - Matters of National Environmental Significance* (Significant Impact Guideline) (DEWHA, 2013), and examined the requirements of a significant impact assessment for a Critically Endangered species; specific species information relevant to the Plain-wanderer, such as critical habitat requirements; and the extent to which the project is likely to impact the species.

The results of the assessment determined that the proposed upgrade is unlikely to have a significant impact upon the Plains-wanderer, within the meaning of the Significant Impact Guidelines and an EPBC Act referral for the upgrades is not required. This was determined based upon the condition of the habitat proposed to be cleared and the area and dimensions of the habitat being cleared.

Currently, the stage of upgrades between MM 267-300 is under application for native vegetation approval. The following information is provided as justification that the results of the Significant Impact Assessment completed for MM 369-396 is applicable to MM 267-300.

MM 267-300 Proposed Upgrades

The upgraded typical road formation will be based on single lanes of 3.5 metres with a total Construction Activity Zone (CAZ) of 18 m either side of the existing centreline required for the total road formation, including table drains and road batters. Existing cut-off drains will be utilised and extended if required to ensure water movement away from the road formation in rain events.

Sections identified as water crossings and flood ways will be stabilised with a required CAZ of 25 m either side of the existing centreline. Shoulder reconstruction, widening and resealing of a currently sealed section from MM 286.962 to MM 293.708, will require a CAZ of 18 m either side of the existing centreline. A series of Maintenance Turn Around Points (MTPs) will also be required during construction. Most of these are existing and require no new vegetation clearance, however, there are some that require extending and some proposed new MTPs that will be required to be formed.

Most of the above construction activities will be contained within the existing road formation and maintenance activity zone (MAZ) and will not require any native vegetation clearance, however, there are some areas where activities extend beyond the current MAZ. Specifically, these areas are:

- A linear strip of vegetation either side of the road formation, of approximately 3.8 m wide, where the CAZ will extend past the current MAZ,
- Two (2) new MTPs
- The extension of five (5) cut-off drains,
- The reconstruction of one (1) dam,
- The re-establishment of one (1) bore,
- The creation of one (1) new camp site, and
- The extension of three (3) borrow pits.

The above construction activities are consistent with those that were planned for MM 369-396, where the following was proposed:

- A linear strip of vegetation either side of the road formation, of approximately 3.8 m wide, where the CAZ will extend past the current MAZ,
- Four (4) new MTPs,
- The extension of one (1) cut-off drain, and
- The extension of one (1) borrow pit.

Existing Site Conditions

Field assessments between MM 270-300 found the topography and vegetation changed through the area with the landscape consisting of expansive Gibber Plains, dissected by a number of small drainage lines on hill sides. This created alternations between dry, expansive plains, and gentle undulating hills. The last few kilometres in the northern portion of the project area consisted of lower lying clay soils supporting vegetation such as *Atriplex nummularia* (Old Man Saltbush) and *Nitraria billardierei* (Nitre Bush) on sandy mounds known as cobblers.

Vegetation associations were classified at a broad level, and based upon landform as well as dominant species, as was appropriate for the context of the landscape and the assessment methodology. The vegetation associations are connected to surrounding native vegetation and are consistent with regional associations which are well represented. Land use is predominately grazing, with the vegetation showing some evidence of current grazing, particularly within water ways.

Several of the vegetation associations were consistent with the vegetation associations recorded along MM 369-396, particularly the open low shrublands dominated by *Sclerolaena spp.* and *Maireana spp*. on Gibber Plains.

Relevance to Plains-wanderer

Habitat

Plains-wanderers are ground dwelling birds living in semi-arid, lowland native grasslands that typically occur on hard red-brown soils in Queensland, NSW, Victoria and South Australia. Habitat structure appears to play a more important role than plant species composition. Preferred grassland habitat of the plains-wanderer typically comprises 50% bare ground, 10% fallen litter, and 40% herbs, forbs and grasses (TSSC, 2015). Surveys indicate that plains-wanderers appear to avoid being in close proximity to living or dead trees, with no records of any birds within 300 m of trees of 10 m or greater in height across their strongholds in New South Wales and Victoria. In the Riverina region, the home range of individual plains-wanderers vary in size from 7–21 hectares (ha) (DoE & DEWNR, 2016).

Plains-wanderers feed on a mixture of seeds, leaves and invertebrates, with seeds and leaves accounting for nearly 60% of the annual diet. Seeds and leaves are taken from grasses (including native species of *Austrostipa*, *Sporobolus*, *Panicum*, *Austrodanthonia*, and *Eragrostis* and occasionally exotic species of *Vulpia*), chenopods (including species of *Atriplex*, *Maireana*, *Chenopodium* and *Sclerolaena*) and other plants (such as native species of *Asperula*, *Galium*, and *Euphorbia* and possibly exotic species of *Spergularia* and *Carthamus*). They occasionally occur in other types of habitat such as in stubble; amongst low cereal crops; and in low, sparse chenopod shrubland (DoE & DEWNR, 2016).

During the SIA for MM 369-396, it was identified that several species of plants that provide foraging opportunities for the Plains-wanderer were recorded during the vegetation surveys of the section between MM 369-396. These species, predominately *Eragrostis, Atriplex*, *Maireana*, and *Sclerolaena* were also recorded within the vegetation surveys of the section between MM 267-300.

According to the National Recovery Plan for the plains-wanderer, habitat critical to the survival of the species includes any region where the species is mapped as likely to occur, and any newly discovered locations that extend the likely range of the plains-wanderer (DoE & DEWNR, 2016).

Identified Threats

Threats to this species include:

- Habitat loss and fragmentation as a result of land conversion for the cultivation of crops, including the introduction of pasture species, weeds, and woody vegetation
- Inappropriate grazing, including both over and under grazing by domestic livestock and rabbits.
- Low population size, which increases the risk of extinction
- Predation by foxes, cats, and birds of prey
- Pesticide use, particularly for the historical control of the Australian plague locust
- Planting and natural recruitment of trees in or near native grasslands.

Assessment of Significance

As with the completed SIA for MM 369-396, the vegetation within project area is not considered critical habitat for the species. This is based upon the records obtained during the desktop assessment being consistent with the Commonwealth mapping where “species

or species habitat may occur" and do not constitute any newly discovered locations that extend the likely range.

The vegetation proposed to be removed is similar in condition and geometry to the vegetation between MM 369-396 as per the SIA. The vegetation being removed is largely consisting of linear strips that have been subject to previous clearing from routine road infrastructure maintenance, and ecological assessment evidenced the present of weed colonisation, uncontrolled grazing and impacts of degradation through dust deposition, and public use (such as littering).

As with the SIA for MM 369-396, if a population persists within the area between MM 267-300, mitigation measure detailed within the CEMP and relevant sub-plans will mitigate any residual impacts to the species. Once the road upgrade has been completed, any rain event is likely to be directed, through cut-off drains, to move water away from the road formation and into the roadside verges. This will also ensure that rainwater is not absorbed into the current sand/dirt substrate and 'lost'. This redirection of water will likely facilitate a flush of new growth within the roadside verges. Whilst the landscape is, and will continue to be, unfenced, grazing pressure is still likely, however, the increased availability of water may likely benefit these communities to enable the recolonisation of native plants which will serve to benefit plains-wanderer in the long term. The sealing of the road will also likely decrease the existing dust deposition on plants to generate a healthier community to facilitate the regrowth of availability of native grass species, chenopods and other plants which are key components to the diet of plains-wanderer.

Consistent with the assessment completed for MM 369-396, the above determines that the road upgrade is unlikely to have a significant impact upon plains-wanderer. within the meaning of the Significant Impact Guidelines. Therefore, an EPBC referral for the Action is not required.

Closure

Thank you for retaining SLR to provide this service. We wish you well and look forward to working with you again. Should you have questions or require additional information, please do not hesitate to contact the below.

Sincerely,

Louise Jaunay, BApSc
Associate Consultant – Ecology and Biodiversity