



Meridian Coal Seam Gas Project - Major EA Amendment Application

Supporting Information Report

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Supporting Information Report

0726926



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ACRONYMS AND ABBREVIATIONS

Acronym	Description
CSG	Coal seam gas
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment, and Water
DETSI	Queensland Department of the Environment, Tourism, Innovation and Science
EA	Environmental Authority
The EA	EA EPPG00783713
EP Act	<i>Environmental Protection Act 1994 (Queensland)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
EPBC Approval	EPBC Act Approval 2021/9117
EP Regulation	Environmental Protection Regulation 2019 (Queensland)
ESA	Environmentally Sensitive Area
ESR/2015/1733	Application to amend an environmental authority
EV	Environmental value
MLES	Matter of Local Environmental Significance
MSES	Matter of National Environmental Significance
MNES	Matter of State Environmental Significance
NC Act	<i>Nature Conservation Act 1992 (Queensland)</i>
Offsets Act	<i>Environmental Offsets Act 2014 (Queensland)</i>
Offsets Regulation	Environmental Offsets Regulation 2014 (Queensland)
PEM	Prescribed Environmental Matter
PL	Petroleum Lease
PL94	Petroleum Lease 94
The Project	Meridian Coal Seam Gas Project
Project Area	PL94
PMST	Protected Matters Search Tool
PWH	Protected Wildlife Habitat
RE	Regional Ecosystem
SRI	Significant Residual Impact
TEC	Threatened Ecological Community
VM Act	<i>Vegetation Management Act 1999 (Queensland)</i>
Westside	Westside Corporation Pty Ltd

EXECUTIVE SUMMARY

Westside Corporation Pty Ltd is seeking a major amendment to Environmental Authority (EA) EPPG00783713 for the PL94 Coal Seam Gas Project, located near Moura, Queensland. The amendment is required to align the State environmental authority framework with the Project's existing Commonwealth approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (EPBC 2021/9117). Specifically, Westside seeks to amend Condition F11 of the EA to authorise impacts to prescribed environmental matters (PEMs) that are also Matters of National Environmental Significance (MNES), within the disturbance limits already assessed and approved under the EPBC approval.

The PL94 Project is an established coal seam gas development authorised for the construction, operation, decommissioning and rehabilitation of up to 600 CSG wells and associated supporting infrastructure. The proposed EA amendment does not seek to increase approved well numbers, expand the Project Area, introduce new petroleum activities, add new tenure, or alter the nature of the authorised activity. Rather, it is a targeted amendment to ensure the Environmental Authority appropriately authorises impacts to specified PEMs where the same matters, disturbance limits and impact context have already been considered and approved through the Commonwealth assessment process. Condition 3 of EPBC 2021/9117 establishes maximum disturbance limits for defined MNES habitats, including Brigalow Threatened Ecological Community, listed threatened flora, Australian Painted Snipe, Greater Glider, Koala, Ornamental Snake, Painted Honeyeater and Squatter Pigeon (Southern).

This Supporting Information Report has been prepared to support the amendment application and address the relevant requirements of the *Environmental Protection Act 1994* (Queensland) (EP Act), including requirements for amendment applications generally, environmental authority amendment applications and CSG-related amendment considerations. The environmental assessment considered potential implications for surface water, groundwater, wetlands, land, land use, air, acoustic values, waste and rehabilitation.

The amendment has been framed to limit impacts to the specific PEMs that correspond with MNES habitat already assessed and approved under EPBC 2021/9117. A significant residual impact assessment identifies likely significant residual impacts for Koala and Ornamental Snake, with significant residual impacts for the remaining assessed matters considered unlikely based on the approved disturbance limits and assessed impact context. Where significant residual impacts are identified, Westside proposes to manage offset obligations in accordance with EPBC 2021/9117, including implementation of an Offset Area Management Plan. Overall, the proposed EA amendment provides a targeted and defensible mechanism to align the Environmental Authority with EPBC 2021/9117 while retaining the existing environmental management framework for PL94.

1. INTRODUCTION

1.1 BACKGROUND

Westside Corporation Pty Ltd (Westside) is seeking an amendment to its current Environmental Authority (EA) EPPG00783713 (the EA) which authorises petroleum activities for the Meridian Coal Seam Gas (CSG) Project (the Project) on Petroleum Lease (PL) 94 (the Project Area) approximately 13 km south-west of Banana in the Bowen Basin, Queensland.

The Project includes the construction, operation, decommissioning and rehabilitation of up to 600 CSG wells and associated supporting infrastructure. The current EA for petroleum activities within PL94 was originally granted by the Department of Environment, Tourism, Science, and Innovation (DETSI) in August 2021 with the latest amended version having the effective date of December 2024.

The proposed EA amendment seeks to change Condition F11 of the EA to authorise impacts to Prescribed Environmental Matters (PEMs), to align the EA with the disturbance limits of Matters of National Environmental Significance (MNES) habitats prescribed in Condition 3 of the Project's Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval EPBC 2021/9117 (the EPBC approval).

1.2 PURPOSE

This Supporting Information Report has been prepared to support an application to amend the EA. The amendment application includes the following documents:

- Application to amend an environmental authority (Application form ESR/2015/1733);
- Supporting Information Report (this Report); and
- Appendix documents.

Pursuant to Section 224 of the *Environmental Protection Act 1994* (EP Act), the holder of an EA may, at any time, apply to the administering authority to amend the EA. This Report has been prepared in accordance with the following sections of the EP Act:

- Section 226 - Requirements for amendment applications generally;
- Section 226A - Requirements for amendment applications for environmental authorities; and
- Section 227 - Requirements for amendment applications – CSG activities.

Section 227 has been considered because the EA relates to CSG activities. However, the proposed EA amendment does not involve any change to CSG water management and therefore the additional requirements under section 227 are not triggered.

Consideration has also been given to the applicable DETSI guidelines:

- ESR/2015/1684 – Major and minor amendments (Version 11.04); and
- ESR/2015/1743 – Approval processes for environmental authorities (Version 9.01).

1.3 PROJECT AREA AND PROPOSED ACTIVITY

The Project Area is defined as PL94, in the Moura-Theodore district of the Banana Shire Local Government Area in Central Queensland. The PL94 area encompasses approximately 24,300 hectares (ha) of land, extending 8 kilometers (km) east-west, and 37 km north-south.

Within PL94, Westside currently operates and maintains 250 CSG wells (referred to as Stage 1), with approval granted under the EA for the development, construction, operation and maintenance, decommissioning and rehabilitation of up to 600 CSG wells. The additional 350 CSG wells comprise Stage 2 of the Project, with federal approval for Stage 2 also granted under the EPBC approval on 10th November 2025.

No new tenure, project area, activity type or well numbers are proposed as part of the EA amendment application.

2. LEGISLATIVE REQUIREMENTS OF AN EA AMENDMENT APPLICATION

This section outlines the requirements for an EA amendment application as specified in the EP Act and identifies where these requirements are addressed within this supporting information report.

TABLE 2-1 REQUIREMENTS FOR AMENDMENT APPLICATIONS GENERALLY (EP ACT S226)

Content Requirement	Response
1. Be made to the administering authority;	The EA amendment application was submitted to DETSI as the administering authority for EPPG00783713 under the EP Act.
2. Be in the approved form;	The EA amendment application is in the approved form ESR/2015/1733 with relevant attachments provided.
3. Be accompanied by the fee prescribed by regulation;	The applicable application fee of \$392.70 was paid at the time of lodgment of the EA amendment application. It is recognised that an additional assessment fee equating to 30% of the annual fee for the authority (at the time of the application is made) may be payable once the notification of the assessment level decision is issued by DETSI.
4. Describe the proposed amendment;	Refer to Section 3
5. Describe the land that will be affected by the proposed amendment; and	Refer to Section 6
6. Include any other document relating to the application prescribed by regulation.	Refer to this Supporting Information Report

TABLE 2-2 REQUIREMENTS FOR AMENDMENT APPLICATIONS FOR ENVIRONMENTAL AUTHORITIES (EP ACT 226A)

Content Requirement	Response
1. If the amendment application is for the amendment of an environmental authority, the application must also—	
a. describe any development permits in effect under the Planning Act for carrying out the relevant activity for the authority; and	Refer to Section 11. There are no development permits in effect under the <i>Planning Act 2016</i> (QLD) (Planning Act) for the activities proposed as part of the EA amendment application.
b. state whether each relevant activity will, if the amendment is made, comply with the eligibility criteria for the activity; and	Not applicable. There are currently no eligibility criteria for the activities proposed as part of the EA amendment application.
c. if the application states that each relevant activity will, if the amendment is made, comply with the eligibility criteria for the activity—include a declaration that the statement is correct; and	Not applicable. There are currently no eligibility criteria for the activities proposed as part of the EA amendment application.

Content Requirement	Response
d. state whether the application seeks to change a condition identified in the authority as a standard condition; and	Not applicable. The EA amendment application does not relate to any standard conditions.
e. if the application relates to a new relevant resource tenure for the authority that is an exploration permit or GHG permit—state whether the applicant seeks an amended environmental authority that is subject to the standard conditions for the relevant activity or authority, to the extent it relates to the permit; and	Not applicable. The EA amendment application does not relate to new relevant resource tenures.
f. include an assessment of the likely impact of the proposed amendment on the environmental values, including—	Refer to Section 6.
i. a description of the environmental values likely to be affected by the proposed amendment; and	Refer to Sections 6.1.1, 6.2.1, 6.3.1, 6.4.1, 6.5.1, 6.6.1, 6.7.1, and 6.8.1.
ii. details of emissions or releases likely to be generated by the proposed amendment; and	Refer to Sections 6.1.2, 0, 6.3.2, 6.4.2, 6.5.2, 6.6.2, 6.7.2, and 6.8.2.
iii. a description of the risk and likely magnitude of impacts on the environmental values; and	
iv. details of the management practices proposed to be implemented to prevent or minimise adverse impacts; and	Refer to Sections 6.1.3, 6.2.3, 6.3.3, 0, 6.5.3, 6.6.3, 6.7.3, and 6.8.3.
v. if a PRCP schedule does not apply for each relevant activity—details of how the land the subject of the application will be rehabilitated after each relevant activity ends; and	Refer to Section 7.
g. include a description of the proposed measures for minimising and managing waste generated by amendments to the relevant activity; and	Refer to Section 9.
h. include details of any site management plan or environmental enforcement order issued under section 362 (1) that relates to the land the subject of the application.	Not applicable. There is no relevant site management plan or current Environmental Protection Orders relating to land located within PL94.
2. Subsection (1)(f) does not apply for an amendment application for an environmental authority if—	
a. either—	Not applicable. The proposed EA amendment is not subject to an Environmental Impact Statement (EIS).
i. the process under chapter 3 for an EIS for the proposed amendment has been completed; or	
ii. (ii) the Coordinator-General has evaluated an EIS for the proposed amendment and there are	

Content Requirement	Response
Coordinator-General's conditions that relate to the proposed amendment; and	
b. an assessment of the environmental risk of the proposed amendment would be the same as the assessment in the EIS mentioned in paragraph (a)(i) or the evaluation mentioned in paragraph (a)(ii).	Not applicable. An assessment process similar to an EIS is not proposed as part the EA amendment application.
3. Also, subsection (1)(a), (d), (e), (f), (g) and (h) does not apply to an application for a condition conversion.	Not applicable. A condition conversion is not proposed as part of the EA amendment application.
4. Despite subsection (1)(f), (g) and (h), if the amendment application is for an environmental authority for the prescribed ERA mentioned in the Environmental Protection Regulation 2019, schedule 2, section 13A—	Not applicable. The EA amendment application is not for an environmental authority for the prescribed ERA mentioned in the Environmental Protection Regulation 2019 (QLD) (EPP Regulation), schedule 2, section 13A.
a. it need only include the matters mentioned in subsection (1)(f)(i) to (iv), (g) and (h) to the extent the matters relate to fine sediment, or dissolved inorganic nitrogen, entering the water of the Great Barrier Reef or Great Barrier Reef catchment waters; and	The EA subject to the amendment application is for the prescribed ERAs mentioned in the EPP Regulation schedule 2, section 15 and section 63, and schedule 3, section 6 and section 8.
b. subsection (1)(f)(v) does not apply for the amendment application.	

TABLE 2-3 REQUIREMENTS FOR AMENDMENT APPLICATIONS - CSG ACTIVITIES (EP ACT S227)

Content Requirement	Response
1. This section applies for an amendment application if -	Not applicable. The proposed EA amendment would not result in changes to the management of CSG water.
a. the application relates to an environmental authority for a CSG activity; and	
b. the proposed amendment would result in changes of the management of CSG water; and	
c. the CSG activity is an ineligible ERA	
2. The application must also -	
a. state the matters mentioned in section 126(1); and	
b. comply with section 126(2)	

3. DESCRIPTION OF PROPOSED AMENDMENT

The following section provides a description of the proposed EA amendment, pursuant to Section 8 of ESR/2015/1733.

3.1 DESCRIPTION OF AMENDMENT

The proposed EA amendment seeks to amend Condition F11 to authorise impacts to prescribed environmental matters within limits already assessed and approved under EPBC 2021/9117. The proposed EA amendment does not seek to increase approved petroleum activities or expand the Project Area.

All impacts to MNES have been assessed and approved at the Commonwealth level, including the application of avoidance and mitigation measures, pre-clearance survey requirements, and environmental offset obligations.

3.2 ASSESSMENT LEVEL DECISION

In accordance with Section 6 of ESR/2015/1733 and the EP Act, an EA amendment application may be made for the following types of amendments:

- Major amendment;
- Minor amendment (threshold); and
- Minor amendment (condition conversion).

Section 223 of the EP Act sets out definitions for minor and major amendments as follows:

Minor amendment, for an environmental authority or PRCP schedule, means an amendment that is –

(a) For an environmental authority –

(i) A condition conversion; or

(ii) A minor amendment (threshold)

Major amendment, for an environmental authority or PRCP schedule, means an amendment that is not a minor amendment.

In accordance with the definitions set out in Section 223 of the EP Act, the proposed EA amendment meets the threshold for a major EA amendment.

4. PROPOSED CHANGES TO EA CONDITIONS

This section outlines the details of the proposed condition change, pursuant to Section 14 of ESR/2015/1733.

The proposed EA amendment seeks to vary EA Condition F11 to align with the disturbance limits of EPBC 2021/9117 Condition 3 and to authorise impacts to PEMs.

The proposed EA amendment does not:

- Seek to increase petroleum activities approved by the current EA; and
- Seek to approve impacts to PEMs such as MSES, MLES, or MNES not prescribed in Condition 3 of EPBC 2021/9117.

The proposed amendments to Condition F11 are **highlighted in red text** for ease of reference:

(F11)	Significant residual impacts to prescribed environmental matters are not authorised under this environmental authority or the <i>Environmental Offsets Act 2014</i> unless the impact is specified in Schedule F, Protecting Biodiversity Values, Table 3 – Authorised impacts to prescribed environmental matters.	
	Schedule F, Protecting Biodiversity Values, Table 3 – Authorised impacts to prescribed environmental matters	
	Prescribed environmental matter	Maximum extent of impact
	Matters of national environmental significance	
	Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant) Threatened Ecological Community	0.9 hectares
	<i>Solanum johnsonianum</i> potential habitat	1.0 hectares
	<i>Solanum dissectum</i> potential habitat	1.0 hectares
	<i>Xerothamnella herbacea</i> potential habitat	1.0 hectares
	Australian Painted-Snipe (<i>Rostratula australis</i>) potential habitat	6.0 hectares
	Greater Glider (Southern and Central) (<i>Petauroides volans volans</i>) potential habitat	2.0 hectares
	Koala (<i>Phascolarctos cinereus</i>) potential habitat	8.9 hectares
	Ornamental Snake (<i>Denisonia maculata</i>) potential habitat	16.0 hectares
	Painted Honeyeater (<i>Grantiella picta</i>)	6.9 hectares

	Squatter Pigeon (Southern) (<i>Geophaps scripta scripta</i>)	2 hectares
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5. JUSTIFICATION FOR AMENDMENT

This section outlines the details of the justification for the proposed EA amendment, pursuant to Section 14 of ESR/2015/1733.

5.1 CLEARING LIMITS UNDER THE EA

Whilst the existing EA authorises petroleum activities, it does not authorise significant residual impacts to PEMs as defined under the Environmental Offsets Regulation 2014 (Queensland) (Offsets Regulation).

Schedule F of the EA outlines the conditions for Protecting Biodiversity Values, with Condition F9 to F11 outlining the conditions pertaining to Impacts to Matters of State Environmental Significance. Condition F11 states the following:

(F11) Significant residual impacts to prescribed environmental matters are not authorised under this environmental authority or the Environmental Offsets Act 2014.

In accordance with Section 10(1) of the *Environmental Offsets Act 2014* (Queensland) (Offsets Act), a PEM includes a MNES, and matter of state environmental significance (MSES), and a matter of local environmental significance (MLES).

Furthermore, Section 5(1) of the Offsets Regulation prescribes specific MNES as PEMs. This includes EPBC-listed threatened species, threatened ecological communities, and migratory species (amongst other matters protected under the EPBC Act).

5.2 CLEARING LIMITS UNDER THE EPBC ACT APPROVAL

The Project was referred to the Commonwealth Department of Climate Change, Energy the Environment and Water (DCCEEW) for a controlled action decision under the EPBC Act. In June 2022, the Project was deemed a controlled action (EPBC 2021/9117), with assessment by Preliminary Documentation and conditional approval granted in November 2025.

Condition 3 of the EPBC approval sets the approved clearing limits for the habitats of MNES species:

3) *The approval holder must not clear more than*

- a) 16.0 ha of Ornamental Snake suitable habitat*
- b) 0.9 ha of Brigalow (Acacia harpophylla dominant and co-dominant) Threatened Ecological Community*
- c) 1.0 ha of Solanum johnsonianum potential habitat*
- d) 1.0 ha of Solanum dissectum potential habitat*
- e) 1.0 ha of Xerothamnella herbacea*
- f) 6.0 ha of Australian Painted Snipe habitat*
- g) 6.9 ha Painted Honeyeater habitat*
- h) 1.0 ha of Squatter Pigeon (Southern) Breeding Habitat*
- i) 1.0 ha of Squatter Pigeon (Southern) Foraging Habitat*
- j) 40.0 ha of Squatter Pigeon (Southern) Dispersal Habitat*
- k) 2.0 ha of Greater Glider (Southern and Central) Foraging and Dispersal Habitat.*
- l) 6.9 ha of Koala shelter habitat*

m) 2.0 ha of Koala Breeding and foraging habitat

n) 400 ha of Koala dispersal habitat.

The prescribed MNES species habitats (with the exception of the dispersal habitats for the Squatter Pigeon (Southern) and Koala) and the associated disturbance limits are also PEMs as defined under the Queensland Offsets Framework, and as per Section 10 of the Offsets Act and Section 5(1) of the Offsets Regulation.

Where Condition 3 of the EPBC approval approves disturbance involving MNES values that are also PEMs (and the impact is a significant residual impact), Condition F11 of the EA also needs to authorise that impact. Therefore, the EA needs amending to reflect the EPBC approval.

6. ASSESSMENT OF ENVIRONMENTAL VALUES

The following section provides an assessment of the likely impact of the proposed EA amendment on the environmental values prescribed in Section 16 of ESR/2015/1733. The assessment seeks to address the requirements outlined in Section 226(A)(1)(f) of the EP Act.

6.1 SURFACE WATER

6.1.1 DESCRIPTION OF ENVIRONMENTAL VALUES

PL94 is located within the Dawson River sub-basin, which comprises part of the wider Fitzroy Basin. The primary surface water feature of PL94 is the Dawson River, a stream order 9 watercourse which flows in a northerly direction throughout the western side of the PL. The Dawson River is characterised by perennial (year-round) flows. All other waterways in the PL are tributaries of the Dawson River, most notably Kianga Creek (stream order 4), and three stream order 2 (Huon Creek, Gralow Creek, and Four Mile Creek) waterways. There are multiple unnamed stream order 1-3 waterways identified throughout the PL, the majority of which are characterised by intermittent or ephemeral flows.

Other notable surface water features include the Moura Offstream Storage, a 70 ha, 2,820 megaliter (ML) water reservoir operated by SunWater in the north of the PL. Additionally, there is an extensive network of small rural water dams located throughout the PL, the majority of which do not have connection to the mapped watercourse network.

The *Environmental Protection (Water and Wetland Biodiversity) Policy 2019* (Queensland) identifies the environmental values for waters and wetlands to be enhanced and protected under the policy. In accordance with WQ1309 (DEHP, 2011b), PL94 is located across the "Lower Dawson main channel – regulated reaches" and "Eastern tributaries – developed areas" waters. The environmental values for both of these water types as specified in the Dawson River Sub-basin Environmental Values and Water Quality Objectives (DEHP, 2011a) are as follows:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Aquatic ecosystems • Irrigation • Farm supply/use • Stock water • Aquaculture • Human consumer | <ul style="list-style-type: none"> • Primary recreation • Secondary recreation • Visual recreation • Drinking water • Industrial use • Cultural and spiritual values |
|---|--|

6.1.2 ASSESSMENT OF POTENTIAL IMPACTS

Habitat mapping for all species listed in Condition 3 of the EPBC approval includes areas of riparian vegetation associated with mapped waterways. The clearing of MNES habitat has the potential to impact upon surface water EVs where the clearing of riparian vegetation results in the following processes which may lead to a worsening of downstream water quality:

- Reduction in bank stability;
- Increased erosion and sediment mobilisation;
- Increased runoff and peak flows; and
- Reduced filtering capacity of riparian vegetation.

In accordance with Condition G3 of the EA, only construction or maintenance of linear infrastructure is permitted in or within any wetland of other environmental value or in a watercourse. Additionally, Condition G4 states that the construction or maintenance of linear infrastructure in a wetland or other environmental value must not result in the clearing of riparian vegetation outside of the minimum area practicable to carry out the works. The proposed EA amendment does not introduce any additional riparian clearing beyond that already permitted under the existing EA conditions and will be undertaken in accordance with those conditions. No changes to Schedule G (Protecting Water Values) are requested as part of this assessment.

6.1.3 MITIGATION MEASURES

All activities associated with the proposed EA amendment will be undertaken in accordance with Schedule G of the EA. In accordance with Condition G7 of the EA, a water quality monitoring program will be implemented to demonstrate that the activities associated with the PL94 Project (including those associated with the proposed EA amendment) are compliant with the contaminant limits specified in Schedule G, Protecting Water Values, Table 1 – Release limits for construction or maintenance of linear infrastructure.

The proposed EA amendment does not seek changes to Schedule G or authorise additional watercourse disturbance beyond that already regulated under the EA.

6.2 GROUNDWATER

6.2.1 DESCRIPTION OF ENVIRONMENTAL VALUES

The Environmental Protection (Water and Wetland Biodiversity) Policy 2019 identifies the environmental values for groundwaters to be enhanced and protected under the policy. As per WQ1310 (DEHP, 2011c), PL94 is located within the “Lower Dawson Groundwaters” zone. The applicable environmental values for Lower Dawson Groundwaters are as specified in WQ1310:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Aquatic ecosystems • Irrigation • Farm supply/use • Stock water | <ul style="list-style-type: none"> • Aquaculture • Primary recreation • Drinking water • Cultural and spiritual values |
|--|--|

As per the Queensland State “Groundwater dependent ecosystems and potential aquifer mapping” (DETSI, 2021), there are several “Low confidence” Groundwater Dependent Ecosystems (GDEs) throughout the Project Area, with these GDEs primarily associated with the Dawson River. These terrestrial GDEs are also captured under the Australian Government’s Groundwater Dependent Atlas (Bureau of Meteorology, 2026), which classifies these GDEs as “Low potential GDEs”.

6.2.2 ASSESSMENT OF POTENTIAL IMPACTS

No direct impacts to groundwater systems are foreseen as part of the activities proposed under the proposed EA amendment. Impacts to groundwater systems may be observed where clearing activities result in changes to infiltration and recharge rates, although such impacts are expected to be localised and minor. The activities proposed as part of the EA amendment do not involve the take or interference of underground water through an artesian or sub

artesian bore(s). No changes to Schedule G of the EA are requested as part of the EA amendment.

6.2.3 MITIGATION MEASURES

All activities associated with the proposed EA amendment will be undertaken in accordance with Schedule G of the EA. Westside implements a Groundwater Monitoring Strategy (GMS) as required under the approved PL94 Underground Water Impact Report (UWIR). All activities undertaken as part of the proposed EA amendment will be done so in accordance with the procedures established in the GMS. Where necessary, the GMS may be updated to capture any additional impacts to groundwater that may arise as a result of the clearing activities proposed under the EA amendment. Furthermore, Westside compiles an Annual Groundwater Monitoring Report/Review that is submitted to DETSI for review.

6.3 WETLANDS

6.3.1 DESCRIPTION OF ENVIRONMENTAL VALUES

As per the Offsets Regulation, a wetland is regarded as a MSES where it:

- Is in a wetland protection area; and
- Is of high ecological significance shown on the map of Queensland wetland environmental values.

A wetland or watercourse may also be regarded as a MSES where they occur in high ecological value waters, as per Environmental Protection (Water and Wetland Biodiversity) Policy 2019, schedule 2.

PL94 is not intersected by any wetlands shown on the map of Queensland wetland environmental values. There are also no high ecological significance watercourses or high ecological significance wetlands within PL94.

6.3.2 ASSESSMENT OF POTENTIAL IMPACTS

The EPBC-approved clearing limits do not require clearing of mapped wetlands. All activities associated with the proposed EA amendment avoid mapped wetlands. As such, no impacts to wetlands are anticipated as a result of the clearing activities proposed under the EA amendment. No changes to Schedule G of the EA are requested as part of the amendment.

6.3.3 MITIGATION MEASURES

All activities associated with the proposed EA amendment will be undertaken in accordance with Schedule G of the EA.

6.4 LAND

6.4.1 DESCRIPTION OF ENVIRONMENTAL VALUES

Whilst there are no prescribed EVs relating to soils and land under the Environmental Protection Policy 2019, the land and soil types within the Project Area underpin key environmental values such as vegetation, soil stability, and hydrological function.

6.4.1.1 TOPOGRAPHY

The Project Area is characterised by generally undulating topography and is situated between three topographic highs; the Malakoff Range, a north-south trending ridge 3 km to the southeast of the Project Area, the Banana and Auburn Ranges, approximately 40 km to the east of the Project Area, and the Dawson Range, 8 km to the west of the Project Area. with elevation across the PL ranging between 110 and 170 metres with respect to the Australian Height Datum (mAHD).

6.4.1.2 SOILS

Australian Soil Classification (ASC) mapping indicates that the Project Area is predominantly underlain by Kurosols in the north, and Vertosols in the south. Smaller areas of Sodosols, Kandosols, Chromosols, and Tenosols are also observed throughout parts of the Project Area. A breakdown of the properties of soils within the Project Area is as follows:

- Vertosol – very high soil fertility and large water holding capacity;
- Kurosol, Chromosol, Sodosol – texture contrast soils, which are often prone to erosion.; and
- Tenosol, Kandosol - low fertility and poor water holding capacity.

6.4.1.3 ENVIRONMENTALLY SENSITIVE AREAS

This section details the Environmentally Sensitive Areas (ESAs) present within the Project Area and surrounding environment. Under the Environmental Protection Regulation 2019 (EP Regulation), ESAs are categorised into Categories A, B, and C, reflecting the varying levels of ecological significance.

ESAs include national parks, state forests, world heritage areas, Ramsar wetlands, nationally important wetlands, 'endangered' and 'of concern' REs and Essential Habitat. In addition, there are feature areas of significant natural and cultural value such as habitat for conservation of significant flora and fauna and places of Aboriginal and European cultural heritage.

There are no Category A ESAs within the Project Area. The ESAs applicable to the Project Area are:

- Category B
 - Endangered REs (Biodiversity Status)
- Category C
 - Of Concern REs (Biodiversity Status)
 - Koala Habitat Area (as defined under *the Nature Conservation Act 1992*)
 - Essential Habitat

Authorised resource activities in ESAs and their protection zones is prescribed in the EA Schedule F, Protecting Biodiversity Values, Table 1 – *Authorised resource activities in Environmentally Sensitive Areas and their protection zones*. No changes to Table 1 or the broader Schedule F (beyond those proposed in Section 4) are requested as part of the proposed EA amendment.

A full breakdown of the ESAs and their relevancy to the Project Area are outlined in Table 6-1 below. Further details on the ESAs present within the Project Area is presented in the following subsections.

TABLE 6-1 ENVIRONMENTALLY SENSITIVE AREAS RELEVANT TO THE PROJECT AREA

Environmentally Sensitive Area	PEM	Relevant Section
Category A Protected Areas		
National Parks (Aboriginal Land)		Category A ESAs have not been mapped within the Project Area and are therefore not relevant to this Report.
National Parks (Torres Strait Islander Land)		
National Park		
National Park (Scientific)		
National Park (Recovery)		
Conservation Park		
Forest Reserves		
Wet Tropics World Heritage Area	✓	
Great Barrier Reef Marine Park Area	✓	
Marine Parks (other than general use zones)		
Category B Protected Areas		
Endangered REs (Biodiversity Status)	✓	These Category B ESAs have not been mapped within the Project Area and are therefore not relevant to this Report.
Coordinated Conservation Areas		
Wilderness area		
Areas of critical habitat, of major interest identified under a conservation plan or subject to an interim conservation order		
World Heritage Management Areas	✓	
International Agreement Areas		
Endangered REs (Biodiversity Status)	✓	Section 6.4.1.3
Ramsar Wetlands	✓	These Category B ESAs have not been mapped within the Project Area and are therefore not relevant to this Report.
Protection of the World Cultural and Natural Heritage		
Conservation of Migratory species		
General Use Zones of Marine Parks		
Place of Cultural Heritage Significance (Registered Place, Protected Areas)		
Aboriginal Cultural Heritage Areas		
Torres Strait Islander Cultural Heritage Areas		
Designated Landscape Areas - other than Stanbroke		
Feature Protection Area, State Forest Park or a Scientific Area		
Fish Habitat Areas and areas of Marine Plants	✓	
An Area to the Seaward Side of the Highest Astronomical Tide		

Environmentally Sensitive Area	PEM	Relevant Section
Category A Protected Areas		
Category C Protected Areas		
Of Concern REs (Biodiversity Status)	✓	Section 6.4.1.3
Declared areas		These Category C ESAs have not been mapped within the Project Area and are therefore not relevant to this Report.
Nature Refuges and Resource Reserves		
Declared Catchment Areas; Declared Irrigation Areas; Water Supply Areas and Drainage Areas		
River Improvement Areas		
Stanbroke Designated Landscape Area		
State Forests or Timber Reserves		
Koala Habitat Area		Section 6.4.1.3
Essential Habitat		Section 6.4.1.3.
Coastal Management Districts		These Category C ESAs have not been mapped within the Project Area and are therefore not relevant to this Report.
Aboriginal and Torres Strait Islander owned land and identified interests		
Referable Wetlands		
Reserves under the Land Act 1994		
Bureau of Sugar Experiment Stations (research sites)		
PI Research Site		

Endangered REs (Biodiversity Status)

In accordance with the EP Regulation, Endangered REs is defined as a Category B ESA in accordance with schedule 19, section 2(j), which states that:

A category B environmentally sensitive area means any of the following –

(j) an endangered regional ecosystem identified in the database known as the 'Regional ecosystem description database' published on the department's website.

Within the Project Area, there are 234.25 ha of mapped Endangered (as per the *Vegetation Management Act 1999* (QLD) (VM Act)) REs.

Endangered REs within the Project Area are listed below in Table 6-2.

TABLE 6-2 REMNANT ENDANGERED RES WITHIN THE PROJECT AREA

Name	Short Description	Status	Area
11.3.1	Acacia harpophylla and/or Casuarina cristata open forest on alluvial plains	Remnant	19.87

Name	Short Description	Status	Area
11.3.17	Eucalyptus populnea woodland with Acacia harpophylla and/or Casuarina cristata on alluvial plains	Remnant	12.34
11.4.3	Acacia harpophylla and/or Casuarina cristata shrubby open forest on Cainozoic clay plains	Remnant	7.81
11.4.7	Eucalyptus populnea with Acacia harpophylla and/or Casuarina cristata open forest to woodland on Cainozoic clay plains	Remnant	5.54
11.4.8	Eucalyptus cambageana woodland to open forest with Acacia harpophylla or A. argyrodendron on Cainozoic clay plains	Remnant	58.46
11.4.9a	Acacia harpophylla shrubby woodland with Terminalia oblongata on Cainozoic clay plains	Remnant	61.29
11.9.1	Acacia harpophylla-Eucalyptus cambageana woodland to open forest on fine-grained sedimentary rocks	Remnant	32.16
11.9.4a	Semi-evergreen vine thicket or Acacia harpophylla with a semi-evergreen vine thicket understorey on fine-grained sedimentary rocks	Remnant	0.38
11.9.5	Acacia harpophylla and/or Casuarina cristata open forest to woodland on fine-grained sedimentary rocks	Remnant	36.38
Total			234.25

Of Concern REs (Biodiversity Status)

Category C ESAs are not defined under Schedule 19 of the EP Regulation, but are defined under Schedule K (Definitions) of the EA.

Under the schedule, Of Concern REs are defined as a Category C ESA as follows:

'of concern regional ecosystems' that are remnant vegetation and identified in the database called 'RE description database' containing regional ecosystem numbers and descriptions.

Within the Project Area, there are 972.51 ha of mapped Of Concern (as per the VM Act) REs.

TABLE 6-3 REMNANT OF CONCERN RES WITHIN THE PROJECT AREA

Name	Short Description	Status	Area
11.3.2	Eucalyptus populnea woodland on alluvial plains	Remnant	572.28
11.3.25	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	Remnant	246.15
11.3.3	Eucalyptus coolabah woodland on alluvial plains	Remnant	8.71
11.3.4	Eucalyptus tereticornis and/or Eucalyptus spp. woodland on alluvial plains	Remnant	123.31
11.3.6	Eucalyptus melanophloia woodland on alluvial plains	Remnant	22.06
Total			972.51

Koala Habitat Areas

Koala habitat areas are not identified as Category C ESA under Schedule K of the EA. Rather, koala habitat areas are classified as a Category C ESA under the Streamlined model conditions for petroleum activities (ESR/2016/1989) (DESI, 2024), which states that:

Category C Environmentally Sensitive Area means any of the following areas:

- *Koala habitat areas as defined under the Nature Conservation (Koala) Conservation Plan 2006*

The Nature Conservation (Koala) Conservation Plan 2006 (QLD) has since been repealed and replaced by the Nature Conservation (Koala) Conservation Plan 2017 (QLD) (Koala Conservation Plan). Koala habitat areas are addressed under Section 7A of the Koala Conservation Plan. The plan does not prescribe koala habitat areas directly but instead provides the mechanisms for the chief executive to determine areas as koala habitat based on the presence of suitable vegetation and their importance in sustaining viable koala populations.

Under Schedule 1, Section 3 of the Koala Conservation Plan, the Project Area is located within Koala district C. Koala populations within district C are defined as generally low-density populations, with evidence of decline but generally perceived as having lower threats (DES, 2021).

Table 6-4 presents habitat for koala within the Project Area that has been mapped in accordance with guidance provided by the Office of Co-ordinator General. This classification is used to identify areas that have the potential to support koalas, however, it does not constitute

a determination of “koala habitat areas” as prescribed under Section 7A of the Koala Conservation Plan. Rather, the suitable habitat identified in Table 6-4 represents the ecological basis that may inform such determinations which are formally made by the chief executive under Section 7A of the Koala Conservation Plan.

TABLE 6-4 KOALA HABITAT MAPPING RULES WITHIN THE PROJECT AREA

Habitat type	Description	Mapping Rules	Area (ha)
Suitable habitat	Widely distributed species that can live in many different eucalypt forest and woodland environments ranging from dense, wet coastal forests to semi-arid scattered woodlands, and even suburban or rural landscapes, in patches or strips of native vegetation interspersed with isolated trees. In semi-arid climates, they prefer riparian habitats, where nearby streams and creeks provide refuge during times of drought and extreme heat. Koala habitat can be broadly defined as any forest or woodland containing species that are known koala food trees, or shrubland with emergent food trees.	• <i>Acacia harpophylla</i> woodland +/- gilgai; • Riparian open forests of the Dawson River; and • <i>Eucalyptus populnea</i> or <i>E. melanophloia</i> woodland • <i>Eucalyptus</i> on floodplains, natural wetlands ephemeral streams.	2,550.0
Unsuitable habitat	Canopy species the species utilises are below 10 cm DBH. Waterbodies can create barriers for dispersal for the species and can result in drownings.	• Exotic pastures and other non-remnant areas – practically no canopy it is stated that recruiting trees present but are 10 cm DBH or under not suitable for koala as per Youngentob Section 7.2; and • Farm dams and modified wetlands – non-canopied areas, can create barriers to movement	18,452.13

Essential Habitat

Schedule K of the EA defines Essential Habitat as a Category C ESA as follows:

An area validated from ground-truthing surveys as 'essential habitat' on the Queensland Government Essential Habitat Map in accordance with section 20AC of the Vegetation Management Act 1999 for a species of wildlife listed as critically endangered, endangered or vulnerable under the Nature Conservation Act 1992.

Essential habitat is protected as MSES when it is also Category B RE. The Project Area contains 1,207.8 ha of Category B RE that is categorised as essential habitat.

6.4.1.4 PRESCRIBED ENVIRONMENTAL MATTERS

The following section provides an overview of the PEMs (as defined by Section 10 of the Offsets Act) present with the PL94 area. The following PEMs have been identified as occurring with the Project Area:

- A threatened species;
- A threatened ecological community;
- A migratory species;
- A water resource, within the meaning of the Water Act 2007;
- Regulated Vegetation;
- Connectivity areas;
- Protected wildlife habitat; and
- Waterways providing fish passage.

A full breakdown of PEMs, and their relevance to the Project Area is outlined in Table 6-5. Additional detail on each of the PEMs present within the Project Area is provided in the following sections.

TABLE 6-5 PEMS WITHIN THE PROJECT AREA

PEMs	Occurs	Relevance
A declared World Heritage property	X	Not present
A National Heritage place	X	Not present
A declared Ramsar wetland	X	Not present
A threatened species	✓	There are 34 listed threatened species present
A threatened ecological community	✓	There are 5 listed threatened species present
A migratory species	✓	There are 5 listed migratory species present
A Commonwealth marine area	X	Not present
The Great Barrier Reef Marine Park	X	Not present
A water resource, within the meaning of the Water Act 2007 (Cwlth)	✓	As per the EPBC referral, no significant impacts to groundwater or surface water have been identified (Umwelt, 2025).
Regulated vegetation; endangered REs, of concern REs, REs that intersects with an area shown as a wetland, an area of essential habitat. REs within a defined distance from the defining banks of a relevant watercourse or relevant drainage feature	✓	The MSES search identified endangered or of concern category B vegetation within the Project Area. The MSES search identified Category B vegetation within a defined distance from the defining banks of a relevant watercourse or relevant drainage feature The MSES search did identify essential habitat within the Project Area.

PEMs	Occurs	Relevance
		The MSES search identified Category B vegetation within 100 meters of a defined Vegetation Management Wetland.
Connectivity areas	✓	Important connectivity areas are present within the Project Area and throughout the broader Locality. The Project Area does contain statewide biodiversity riparian corridors associated with waterways. As well as being in close proximity to a statewide terrestrial corridor and a regional terrestrial corridor.
Wetlands and watercourses; in wetland protection areas, or of high ecological significance, or high ecological value waters	X	The MSES search did not identify any High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values within 1 km of the Project Area. Stream orders 1, 2, 3 and 4 watercourses are present within the Project Area. In accordance with the Development Assessment Mapping System (DAMS) mapping, however there are no watercourses mapped as high ecological significance, or high ecological value, within the Project Area.
Designated precinct in a strategic environmental area	X	The MSES search did not identify any Designated precinct in a strategic environmental area within the Project Area
Protected wildlife habitat	✓	Habitat for threatened fauna and flora species (each listed under both the NC Act and EPBC Act) was ground-truthed by Umwelt within the Project Area
Protected areas	X	The MSES search did identify protected areas within 10 km of the Project Area but not within the Project Area: • Dawson River Conservation Park; and • Highworth Bend Conservation Park.
Highly protected zones of state marine parks	X	The MSES search did not identify any highly protected zones of State marine parks within 1 km of the Project Area.
Fish habitat areas	X	The MSES search did not identify any fish habitat areas within 1 km of the Project Area.
Waterway providing for fish passage (QLD waterways for waterway barrier works)	✓	In accordance with DAMS mapping, there are fish passage waterways for waterway barrier works within the Project Area. This is inclusive of multiple low and one major risk waterways.
Marine plants	X	The MSES search did not identify any Marine Plants within the Project Area.
Legally secured offset areas	X	The MSES search did not identify any legally secured offset areas within 1 km of the Project Area.

Threatened Species

Threatened species are defined as a PEM under Section 5(1)(d) of the Offsets Regulation, which states that:

5 (1) For section 10(1)(a) of the Act, each of the following matters of national environmental significance is a prescribed environmental matter –

(d) a threatened species within the meaning of the Commonwealth Environment Act in a list established under section 178 of that Act.

Table 6-6 presents the EPBC Act listed threatened species that may occur, are likely to occur, or are known to occur within the Project Area. Species were identified using the Protected Matters Search Tool (PMST) (DCCEEW, 2026), with the PMST search undertaken during the development of the MNES assessment report to support the Project's EPBC approval.

36 listed threatened species were identified in the PMST search. In accordance with the EPBC approval, the proposed EA amendment seeks to allow for impacts on the habitat of the threatened species prescribed under Condition 3 of the EPBC approval. Impacts to the habitat of threatened species not identified under Condition 3 of the EPBC approval are not proposed are part of the EA amendment.

TABLE 6-6 LISTED THREATENED SPECIES WITHIN THE PROJECT AREA

Listed Threatened Species	Threatened Category	Presence within Project Area	Impacts to habitat proposed under the EA amendment?
Birds			
Sharp-tailed Sandpiper (<i>Calidris acuminata</i>)	Vulnerable	May occur	No
Curlew Sandpiper (<i>Calidris ferruginea</i>)	Critically Endangered	May occur	No
Red Goshawk (<i>Erythrorhynchus radiatus</i>)	Endangered	May occur	No
Grey Falcon (<i>Falco hypoleucos</i>)	Vulnerable	Known	No
Latham's Snipe, Japanese Snipe (<i>Gallinago hardwickii</i>)	Vulnerable	May occur	No
Squatter Pigeon (southern) (<i>Geophaps scripta scripta</i>)	Vulnerable	Likely	Yes
Painted Honeyeater (<i>Grantiella picta</i>)	Vulnerable	May occur	Yes

Listed Threatened Species	Threatened Category	Presence within Project Area	Impacts to habitat proposed under the EA amendment?
White-throated Needletail (<i>Hirundapus caudacutus</i>)	Vulnerable	May occur	No
Star Finch (eastern), Star Finch (southern) (<i>Neochmia ruficauda ruficauda</i>)	Endangered	Likely	No
Australian Painted Snipe (<i>Rostratula australis</i>)	Endangered	Likely	Yes
Diamond Firetail (<i>Stagonopleura guttata</i>)	Vulnerable	May occur	No
Black-breasted Button-quail (<i>Turnix melanogaster</i>)	Vulnerable	May occur	No
Mammals			
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]	Endangered	Likely	No
Ghost Bat (<i>Macroderma gigas</i>)	Vulnerable	May occur	No
Corben's Long-eared Bat, South-eastern Long-eared Bat (<i>Nyctophilus corbeni</i>)	Vulnerable	May occur	No
Greater Glider (southern and central) (<i>Petauroides volans</i>)	Endangered	Known	Yes
Yellow-bellied Glider (south-eastern) (<i>Petaurus australis australis</i>)	Vulnerable	Likely	No
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) (<i>Phascolarctos cinereus</i>)	Endangered	Likely	Yes
Grey-headed Flying-fox (<i>Pteropus poliocephalus</i>)	Vulnerable	May occur	No

Listed Threatened Species	Threatened Category	Presence within Project Area	Impacts to habitat proposed under the EA amendment?
Plants			
Hairy-joint Grass (<i>Arthraxon hispidus</i>)	Vulnerable	May occur	No
Ooline (<i>Cadellia pentastylis</i>)	Vulnerable	Likely	No
Cossinia (<i>Cossinia australiana</i>)	Endangered	May occur	No
King Blue-grass (<i>Dichanthium queenslandicum</i>)	Endangered	Known	No
Bluegrass (<i>Dichanthium setosum</i>)	Vulnerable	Likely	No
<i>Polianthion minutiflorum</i>	Endangered	May occur	No
<i>Solanum dissectum</i>	Endangered	Known	Yes
<i>Solanum johnsonianum</i>	Endangered	Known	Yes
<i>Xerothamnella herbacea</i>	Endangered	Known	Yes
Reptiles			
Adorned Delma, Collared Delma (<i>Delma torquata</i>)	Vulnerable	May occur	No
Ornamental Snake (<i>Denisonia maculata</i>)	Vulnerable	Known	Yes
Yakka Skink (<i>Egernia rugosa</i>)	Vulnerable	Known	No
Southern Snapping Turtle, White-throated Snapping Turtle	Critically Endangered	Known	No
Dunmall's Snake (<i>Furina dunmalli</i>)	Vulnerable	May Occur	No
Grey Snake (<i>Hemiaspis damelii</i>)	Endangered	Likely	No
Fitzroy River Turtle, Fitzroy Tortoise, Fitzroy Turtle, White-	Endangered	Known	No

Listed Threatened Species	Threatened Category	Presence within Project Area	Impacts to habitat proposed under the EA amendment?
eyed River Diver (<i>Rheodytes leukops</i>)			
Snails			
Boggomoss Snail, Dawson River Snail, Dawson Valley Snail (<i>Adclarkia dawsonensis</i>)	Critically Endangered	Known	No

Threatened Ecological Community

Threatened ecological communities (TECs) are defined as a PEM under Section 5(1)(e) of the Offsets Regulation, which states that:

5 (1) For section 10(1)(a) of the Act, each of the following matters of national environmental significance is a prescribed environmental matter –

(e) a threatened ecological community within the meaning of the Commonwealth Environment Act in a list established under section 181 of that Act.

Table 6-7 presents the EPBC Act listed TECs that may occur, are likely to occur, or are known to occur within the Project Area. TECs were identified using DCCEEW's PMST, with the PMST search undertaken during the development of the MNES assessment report to support the Project's EPBC approval.

Five TECs were identified in the PMST search. In accordance with the EPBC approval, the proposed EA amendment seeks to allow for impacts on the habitat of the TECs prescribed under Condition 3 of the EPBC approval. Impacts to TECs not identified under Condition 3 of the EPBC approval are not proposed are part of the EA amendment.

TABLE 6-7 LISTED THREATENED ECOLOGICAL COMMUNITIES WITHIN THE PROJECT AREA

Listed Threatened Ecological Community	Threatened Category	Presence within Project Area	Impacts proposed under the EA amendment?
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant)	Endangered	Known	Yes
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Likely	No
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Likely	No

Listed Threatened Ecological Community	Threatened Category	Presence within Project Area	Impacts proposed under the EA amendment?
Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions	Endangered	Likely	No
Weeping Myall Woodlands	Endangered	Likely	No

Migratory Species

Migratory species are defined as a PEM under Section 5(1)(f) of the Offsets Regulation, which states that:

5 (1) For section 10(1)(a) of the Act, each of the following matters of national environmental significance is a prescribed environmental matter –

(f) a migratory species within the meaning of the Commonwealth Environment Act in a list established under section 209 of that Act.

Table 6-8 presents the EPBC Act listed migratory species that may occur, are likely to occur, or are known to occur within the Project Area. Migratory species were identified using DCCEEW's PMST, with the PMST search undertaken during the development of the MNES assessment report to support the Project's EPBC approval.

11 migratory species were identified in the PMST search. The proposed EA amendment does not seek to authorise impacts to the habitat of any EPBC Act listed migratory species. The clearing activities proposed as part the EA amendment are not proposed to include areas mapped as habitat for listed migratory species.

TABLE 6-8 LISTED MIGRATORY SPECIES WITHIN THE PROJECT AREA

Listed Migratory Species	Threatened Category	Presence within Project Area	Impacts to habitat proposed under the EA amendment?
Migratory Marine Birds			
Fork-tailed Swift (<i>Apus pacificus</i>)	Migratory	Likely	No
Migratory Marine Species			
Salt-water Crocodile, Estuarine Crocodile (<i>Crocodylus porosus</i>)	Migratory	Likely	No
Migratory Terrestrial Species			

Listed Migratory Species	Threatened Category	Presence within Project Area	Impacts to habitat proposed under the EA amendment?
Oriental Cuckoo, Horsfield's Cuckoo (<i>Cuculus optatus</i>)	Migratory	May occur	No
White-throated Needletail (<i>Hirundapus caudacutus</i>)	Migratory / Vulnerable	May occur	No
Yellow Wagtail (<i>Motacilla flava</i>)	Migratory	May occur	No
Migratory Wetlands Species			
Common Sandpiper (<i>Actitis hypoleucos</i>)	Migratory	Likely	No
Sharp-tailed Sandpiper (<i>Calidris acuminata</i>)	Migratory / Vulnerable	May occur	No
Curlew Sandpiper (<i>Calidris ferruginea</i>)	Migratory / Critically Endangered	May occur	No
Pectoral Sandpiper (<i>Calidris melanotos</i>)	Migratory	May occur	No
Latham's Snipe, Japanese Snipe (<i>Gallinago hardwickii</i>)	Migratory / Vulnerable	May occur	No
Osprey (<i>Pandion haliaetus</i>)	Migratory	Likely	No

Water Resources, within the meaning of the Water Act 2007

A water resource is defined as a PEM under Section 5(1)(i) of the Offsets Regulation, which states that:

5 (1) For section 10(1)(a) of the Act, each of the following matters of national environmental significance is a prescribed environmental matter –

(i) a water resource, within the meaning of the Water Act 2007 (Cwlth), to the extent the taking of action mentioned in section 24D or 24E of the Commonwealth Environment Act in relation to the water resource is prohibited under either of those sections.

This PEM is triggered as the PL94 Project is a CSG development. As per the EPBC referral process, no significant impacts to groundwater or surface water were identified as part of the

wider PL94 CSG Project (Umwelt, 2025). The clearing activities proposed as part of the EA amendment are not proposed to introduce any new groundwater or surface impacts relative to those assessed throughout the EPBC approval process.

Regulated Vegetation

In accordance with Section 10(1)(b) of the Offsets Act, MSES are prescribed a PEM. Regulated vegetation is defined as a MSES under Schedule 2, Section 2 of the Offsets Regulation. Under the Offsets Regulation, there are several categories of regulated vegetation that are protected as MSES. These include prescribed REs that are:

- Endangered or Of Concern RE;
- RE that intersects with a wetlands as shown on the vegetation management wetlands map;
- An area of essential habitat on the essential habitat map for Critically Endangered, Endangered, or Vulnerable wildlife;
- An area of essential habitat on the essential habitat map for an animal that is critically endangered wildlife, endangered wildlife or vulnerable wildlife or a plant that is critically endangered wildlife, endangered wildlife or vulnerable wildlife; and
- Located within a defined distance from the defining banks of a relevant watercourse identified on the vegetation management watercourse and drainage feature map.

A prescribed RE is defined as 'a RE, other than a RE mentioned in the *Vegetation Management Act 1999 (VM Act)*, section 8(b), located in a Category B area on the regulated vegetation management map, to the extent the ecosystem contains remnant vegetation.'

The presence of the above categories of regulated vegetation in the Project Area has been assessed in the MSES Baseline Report (ERM, 2026).

The proposed EA amendment does not seek to authorise disturbance to regulated vegetation. All clearing activities undertaken as part of the proposed EA amendment will avoid areas of mapped regulated vegetation to ensure that no impact arises.

Connectivity Areas

Connectivity areas are prescribed as a MSES, and as such a PEM, under Schedule 2 Section 3 of the Offsets Regulation. Connectivity areas are an MSES that relates to the change of the ecosystem tract in the context of the local and regional landscape. An impact on connectivity areas is not relative to a determinant or prescribed MSES layer (such as essential habitat, or watercourses) but expressed as areas of remnant vegetation outside urban areas containing prescribed REs that are required for ecosystem functioning.

The Project Area contains Category B vegetation. Of the Category B area in the Project Area, 876.9 ha is Least Concern RE and 293.8 ha is Endangered RE. Connectivity is assessed against the relative change that the development footprint will create from removal of Category B vegetation as opposed to the development not occurring. The rate of change to this vegetation is then assessed for significance.

The proposed EA amendment does not seek to authorise disturbance to Category B vegetation. All clearing activities undertaken as part of the proposed EA amendment will avoid areas of mapped Category B vegetation to ensure that no impacts to connectivity occur.

Protected Wildlife Habitat

Protected wildlife habitat (PWH) is prescribed as both a MSES and a PEM, under Schedule 2 Section 6 of the Offsets Regulation, and is also defined as a Category C ESA under Schedule K of the EA.

PWH under the Offsets Regulation is defined broadly and may occur across both remnant and non-remnant vegetation, including habitat that supports foraging, roosting, nesting or breeding for species protected under the NC Act. Under the Offsets Regulation's definition, PWH for a number of protected flora and fauna species was identified and ground-truthed by Umwelt within the Project Area. As per Section 4, the proposed EA amendment seeks to authorise impacts to the habitat for a number of these species. A summary of this is presented in Table 6-9.

As noted through this Report, these impacts are limited to those previously assessed and authorised under the EPBC approval.

TABLE 6-9 PROTECTED WILDLIFE HABITAT WITHIN THE PROJECT AREA

Species with ground-truthed PWH in the Project Area	Impacts proposed as part of the EA amendment?
<i>Xerothamnella herbacea</i>	Yes
<i>Solanum dissectum</i>	Yes
<i>Solanum johnsonianum</i>	Yes
Ornamental snake (<i>Denisonia maculata</i>)	Yes
Koala (<i>Phascolarctos cinereus</i>)	Yes
Painted honeyeater (<i>Grantiella picta</i>)	Yes
Squatter pigeon (southern) (<i>Geophaps scripta scripta</i>)	Yes
Greater glider (southern and central) (<i>Petauroides volans</i>) Yellow-bellied glider (south-eastern) (<i>Petaurus australis australis</i>)	Yes
White-throated snapping turtle (<i>Elseya albagula</i>)	No
Fitzroy River turtle (<i>Rheodytes leukops</i>)	No
White-throated needletail (<i>Hirundapus caudacutus</i>)	No
Australian painted snipe (<i>Rostratula australis</i>)	No
Yakka skink (<i>Egernia rugosa</i>)	No
Boggomoss snail (<i>Adclarkia dawsonensis</i>).	No

PWH as defined under Schedule K of the EA represents a more specific subset of areas requiring protection as Category C ESAs, specifically targeting habitat that is a category A, B or C on the Regulated Vegetation Management Map. The clearing activities proposed under the EA amendment will be designed to avoid areas that meet the definition of PWH as a Category C ESA, including that are classified as a category A, B or C on the Regulated Vegetation Management Map.

Accordingly, while impacts to PWH as a MSES/PEM are proposed and align with existing EPBC approval conditions, no impacts to PWH as a Category C ESA are proposed. On this basis, amendment to Schedule F, Protecting Biodiversity Values, Table 1 – *Authorised resource activities in Environmentally Sensitive Areas and their protection zones* to authorise clearing activities within PWH as a Category C ESA is not required, nor requested as part of the proposed EA amendment.

Waterways Providing Fish Passage

Waterways providing fish passage is prescribed as a MSES and a PEM, under Schedule 2 Section 10 of the Offsets Regulation. In accordance with DAMS mapping, there are fish passage waterways for waterway barrier works within the Project Area. This is inclusive of multiple low and moderate waterways, as well as the Dawson River, which is classified as a major waterway.

The clearing activities proposed as part of the EA amendment do not involve the construction, installation or modification of waterway barrier works that will limit the passage of fish along the waterways. Accordingly, no impacts to waterways providing fish passage will occur as a result of the proposed EA amendment.

6.4.2 ASSESSMENT OF POTENTIAL IMPACTS

With regard to impacts to soil and topography, the proposed EA amendment does not introduce any new activities or impacts to land values to those previously assessed under the current EA. No changes to Schedule E (Protecting Land Values) of the EA are requested as part of the proposed EA amendment. No impacts to land environmental values are anticipated as a result of the proposed EA amendment.

All activities associated with the proposed EA amendment will be undertaken in accordance with Schedule E of the EA. Pursuant to Condition E3 of the EA, disturbed land is to be managed to ensure that mass movement, gully erosion, rill erosion, sheet erosion and tunnel erosion do not occur on the land. All clearing activities undertaken as part of the proposed EA amendment will be completed in accordance with the appropriate environmental management plans which are to be informed by best practice land clearing techniques. Clearing activities undertaken as part of the proposed EA amendment will adhere to Condition F6 of the EA to ensure that no unauthorised disturbance to ESAs occur. No additional changes to Schedule F (Protecting Biodiversity Values) beyond the amendments requested in Section 4 are proposed.

Clearing associated with the proposed EA amendment will be confined to habitat areas previously assessed and authorised under the EPBC approval, corresponding to MNES habitat for listed threatened species and listed TECs. Section 7 presents a significant residual impact assessment (SRI) for the listed threatened species for which impacts are proposed under the EA amendment.

While a detailed development footprint has not yet been finalised, the extent and location of clearing will be managed to maintain separation from ESAs and other PEMs not listed under Condition 3 of the EPBC approval. Accordingly, no impacts to ESAs are proposed, and any impacts to Prescribed Environmental Matters (PEMs) are limited to those already authorised under Condition 3 of the EPBC approval.

6.5 LAND USE

6.5.1 DESCRIPTION OF ENVIRONMENTAL VALUES

The land within the PL94 tenure and the Project Area is predominantly freehold, with the predominant land use being agricultural activities (cotton, grain and cattle production).

The *Regional Planning Interest Act 2014* (RPI Act) identifies areas of regional interest throughout Queensland, with the aim to manage the impact of resource activities and regulated activities on those identified areas. Areas of regional interest are areas of the State which contribute, or are likely to contribute to Queensland's economic, social and environmental prosperity. The majority of the Project Area is mapped as strategic cropping land (SCL). SCL is land that is, or is likely to be, highly suitable for cropping because of a combination of the land's soil, climate and landscape features. The Project Area occurs wholly within the Central Highlands Isaac Western Cropping zone.

To support agricultural development, the Project Area has been subject to historical broad scale land clearing (as indicated by historical aerial imagery from 1953 onwards), with extensive areas cleared by 1965 (Umwelt, 2025).

6.5.2 ASSESSMENT OF POTENTIAL IMPACTS

The clearing activities requested as part of the proposed EA amendment are not anticipated to impact upon, or change the suitability of the land to support existing land uses.

6.5.3 MITIGATION MEASURES

All clearing activities associated with the proposed EA amendment will be undertaken in accordance with Schedule E of the EA.

The proposed EA amendment does not change the authorised land use or introduce new activity types. Land use impacts remain those associated with the already authorised petroleum activities, with the amendment limited to authorising PEM impacts within EPBC-approved limits.

6.6 AIR

6.6.1 DESCRIPTION OF ENVIRONMENTAL VALUES

The *Environment Protection (Air) Policy 2019* identifies the environmental values to be enhanced and protected under the policy. These are:

- (a) The qualities of the air environment that are conducive to protecting the health and biodiversity of ecosystems;
- (b) The qualities of the air environment that are conducive to human health and wellbeing;
- (c) The qualities of the air environment that are conducive to protecting the aesthetics of the environment, including the appearance of buildings, structures and other property; and
- (d) The qualities of the air environment that are conducive to protecting agricultural use of the environment.

All these values are applicable to the PL94 area.

6.6.2 ASSESSMENT OF POTENTIAL IMPACTS

The proposed EA amendment does not introduce any new activities or introduce any new air emissions relative to those previously assessed under the current EA. No changes to Schedule D (Protecting Air Values) of the EA are requested as part of the proposed EA amendment.

Clearing may generate temporary dust, but the amendment does not change gas production, flaring, compression or other operational air emission sources. No significant impacts to air environmental values are anticipated as a result of the proposed EA amendment.

6.6.3 MITIGATION MEASURES

All activities associated with the proposed EA amendment will be undertaken in accordance with Schedule D of the EA. Pursuant to Condition D7 of the EA, Westside has developed and implements an air receiving environment monitoring program (AREMP) to demonstrate that the activities associated with the PL94 Project (including those associated with the proposed EA amendment) are compliant with the contaminant limits specified in Schedule D, Protecting Air Values, Table 1 – Maximum Ground Level Concentration Criteria.

6.7 ACOUSTIC

6.7.1 DESCRIPTION OF ENVIRONMENTAL VALUES

The *Environment Protection (Noise) Policy 2019* identifies the environmental values to be enhanced and protected under the policy. These are:

- (a) The qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems; and
- (b) The qualities of the acoustic environment that are conducive to human health and wellbeing, including ensuring a suitable acoustic environment for individuals to do any of the following –
 - (i) Sleep;
 - (ii) Study or learn;
 - (iii) Be involved in recreation, including relaxation and conversation; and
- (c) The qualities of the acoustic environment that are conducive to protecting the amenity of the community

6.7.2 ASSESSMENT OF POTENTIAL IMPACTS

Vegetation clearing has the potential to result in increases in noise levels where machinery is used to undertake the clearing activities. Impacts to acoustic environmental values are expected to be localised and short-term. The clearing activities associated with the proposed EA amendment are not anticipated to introduce any new acoustic emissions beyond the noise nuisance limits established under Schedule C, Protecting Acoustic Values, Table 1 – Noise nuisance limits of the current EA. No changes to Schedule C (Protecting Acoustic Values) of the EA are requested as part of the proposed EA amendment. No impacts to acoustic environmental values are anticipated as a result of the proposed EA amendment.

The amendment does not seek to authorise new noise-generating infrastructure or change operational noise limits. Any temporary clearing or construction noise will be managed under existing EA and construction management requirements.

6.7.3 MITIGATION MEASURES

All activities associated with the proposed EA amendment will be undertaken in accordance with Schedule C of the EA. Whilst not foreseen, potential impacts to acoustic environmental values as a result of activities associated with the proposed EA amendment will be managed appropriately through continued implementation of the PL94 Environmental Management Plan (EMP) which includes specific mitigation measures addressing noise management.

6.8 WASTE

6.8.1 DESCRIPTION OF ENVIRONMENTAL VALUES

Whilst there are no prescribed EVs relating to soils and land under the Environmental Protection Policy 2019, environmental values relevant to waste within the Project Area include surface water, groundwater, soils, and ecological values (flora and fauna), which may be affected by the improper storage, handling, or disposal of waste materials.

6.8.2 ASSESSMENT OF POTENTIAL IMPACTS

It is anticipated that the vegetation clearing activities proposed as part of the EA amendment will include the generation of green waste and vegetation waste. The improper storage, handling, and disposal of waste generated from clearing activities associated with the proposed EA amendment has the potential to impact upon local environmental receptors, such as waterways, groundwater, soils, and flora and fauna.

The proposed EA amendment does not seek to introduce new waste streams or waste emissions additional to those previously approved under the current EA, with green waste and vegetation addressed under Condition B4 and B5 of the EA respectively. No changes to Schedule B (Waste Management) of the EA are requested as part of the proposed EA amendment. No impacts to waste related environmental values are anticipated as a result of the proposed EA amendment.

6.8.3 MITIGATION MEASURES

All activities associated with the proposed EA amendment will be undertaken in accordance with Schedule B of the EA. Pursuant to Condition B4 of the EA, green waste may be used on-site for either rehabilitation or sediment and erosion control, or both. Furthermore, Condition B5 establishes that vegetation waste may be burned if it relates to a state forest, timber reserve or forest entitlement area administered by the *Forestry Act 1959* and a permit has been obtained under the *Fire and Rescue Service Act 1990*. Further detail on the waste management for the proposed EA amendment is outlined in Section 9.

7. REHABILITATION STRATEGY

All rehabilitation activities will be undertaken in accordance with Schedule H (Rehabilitation) of the EA. Pursuant to Condition H1 of the EA, Westside have developed and implemented a Rehabilitation Management Plan which includes the rehabilitation goals, and the procedures to be undertaken for rehabilitation that will achieve the requirement of Condition H2 to H6, and provide appropriate monitoring and maintenance.

The proposed EA amendment does not change the rehabilitation objectives or obligations under the EA. Areas disturbed for authorised petroleum activities, including areas containing PEM habitat, will be progressively rehabilitated in accordance with existing EA requirements.

8. RESIDUAL IMPACTS AND ENVIRONMENTAL OFFSETS

8.1 RESIDUAL IMPACTS

The proposed EA amendment seeks only to permit disturbance to PEMs which are also MNES as prescribed under Condition 3 of the EPBC Approval. No impacts are proposed to other PEMs such as MSES, MLES, or MNES not prescribed in Condition 3 of the EPBC approval. As stated in Section 5.2, the PEMs with clearing limits specified in the EPBC approval include:

- Brigalow (*Acacia harpophylla* dominant and co-dominant) Threatened Ecological Community;
- *Solanum dissectum*;
- *Solanum johnsonianum*;
- *Xerothamnella herbacea*;
- Australian Painted Snipe (*Rostratula australis*);
- Greater glider (southern and central) (*Petauroides volans*);
- Koala (*Phascolarctos cinereus*);
- Ornamental snake (*Denisonia maculata*);
- Painted honeyeater (*Grantiella picta*); and
- Squatter pigeon (southern) (*Geophaps scripta scripta*);

A significant residual impact (SRI) assessment has been undertaken in accordance with the criteria provided in the Queensland Environmental Offsets Policy Significant Residual Impact Guidelines (DEHP, 2014) for each of the above PEMs prescribed under the EPBC approval. To ensure that the assessment of impacts under the State framework is directly aligned with the disturbance extents assessed and approved under the EPBC approval, the SRI for each PEM has been undertaken based on the clearing limits specified in Condition 3 of the EPBC Approval.

The full assessment is presented in Appendix A, with a summary of the findings presented in Table 8-1.

TABLE 8-1 SIGNIFICANT RESIDUAL IMPACT ASSESSMENT SUMMARY

PEM	Likelihood of Occurrence	NC Act listing	Assessment of potential for SRI
<i>Solanum johnsonianum</i>	Potential	Endangered	Unlikely The proposed EA amendment is unlikely to result in a significant residual impact to 1.0 ha of <i>Solanum johnsonianum</i> habitat.
<i>Solanum dissectum</i>	Potential	Endangered	Unlikely The proposed EA amendment is unlikely to result in a significant residual impact to 1.0 ha of <i>Solanum dissectum</i> habitat.
<i>Xerothamnella herbacea</i>	Potential	Endangered	Unlikely The proposed EA amendment is unlikely to result in a significant residual impact to 1.0 ha of <i>Xerothamnella herbacea</i> habitat.

PEM	Likelihood of Occurrence	NC Act listing	Assessment of potential for SRI
Australian Painted Snipe (<i>Rostratula australis</i>)	Potential	Endangered	Unlikely The proposed EA amendment is unlikely to result in a significant residual impact on Australian painted snipe.
Greater Glider (Southern and Central) (<i>Petauroides volans volans</i>)	Potential	Vulnerable	Unlikely The proposed EA amendment is unlikely to result in a significant residual impact on greater glider (southern and central).
Koala (<i>Phascolarctos cinereus</i>)	Potential	Endangered	Likely The proposed EA amendment is likely to result in a significant residual impact on koala. The proposed amendment is likely to interfere with the recovery of the species, and is likely to cause disruption to ecologically significant locations of the species.
Ornamental Snake (<i>Denisonia maculata</i>)	Known	Vulnerable	Likely The proposed EA amendment is likely to result in a significant residual impact on ornamental snake. The proposed amendment is likely to lead to a long-term decrease in the size of a local population of the species, and is likely to reduce the extent of occurrence of the species.
Painted Honeyeater (<i>Grantiella picta</i>)	Potential	Vulnerable	Unlikely The proposed EA amendment is unlikely to result in a significant residual impact on painted honeyeater.
Squatter Pigeon (Southern) (<i>Geophaps scripta scripta</i>)	Potential	Vulnerable	Unlikely The proposed EA amendment is unlikely to result in a significant residual impact on squatter pigeon.

The assessment determined that a SRI is likely for the Koala and Ornamental Snake. The proposed offsets strategy for these species is outlined in the following section.

8.2 OFFSETS STRATEGY

Westside proposes to manage offsets in accordance with the offset requirements outlined in the EPBC approval.

In accordance with Condition 32 of the EPBC approval, to compensate for the significant residual impacts on the Koala and Ornamental Snake, an Offset Area Management Plan (OAMP) will be implemented.

Pursuant to Section 15(1) of the Offsets Act, the administering authority may only impose an offset condition on an authority only if the same, or substantially the same, impact has not been assessed under a relevant Commonwealth Act.

Impacts to PEMs (that are also MNES) have been assessed under the Commonwealth EPBC Act, with maximum disturbance limits authorised under Condition 3 of the EPBC approval, and

offsets specified under Conditions 32 to 38. As the proposed EA amendment does not seek to alter the extent, nature, or significance of impacts to MNES beyond those already assessed and approved under the EPBC approval, and pursuant to Section 15(1) of the Offsets Act, it is not anticipated that additional State offsets will be required. No additional State offset is proposed where the same, or substantially the same, impact to the same, or substantially the same, matter is subject to an offset requirement under EPBC 2021/9117.

9. WASTE MANAGEMENT

In accordance with Section 226(1)(g) of the EP Act and Section 19 of ESR/2015/1733 respectively, this section seeks to detail the proposed measures for minimising and managing waste generated by amendments to the relevant activity.

As outlined in Section 6.8.2, the proposed EA amendment does not seek to introduce any new waste streams additional to those previously assessed under the existing EA. The primary waste type generated from the proposed EA amendment is green waste and vegetation waste from clearing activities. The management of these waste streams is addressed in Condition B3 and Condition B4 of the EA respectively, and all activities undertaken as part of the proposed EA amendment will be in accordance with those conditions.

Furthermore, and pursuant to Condition B1 of the EA, all wastes will be managed in accordance with the waste and resource management hierarchy.

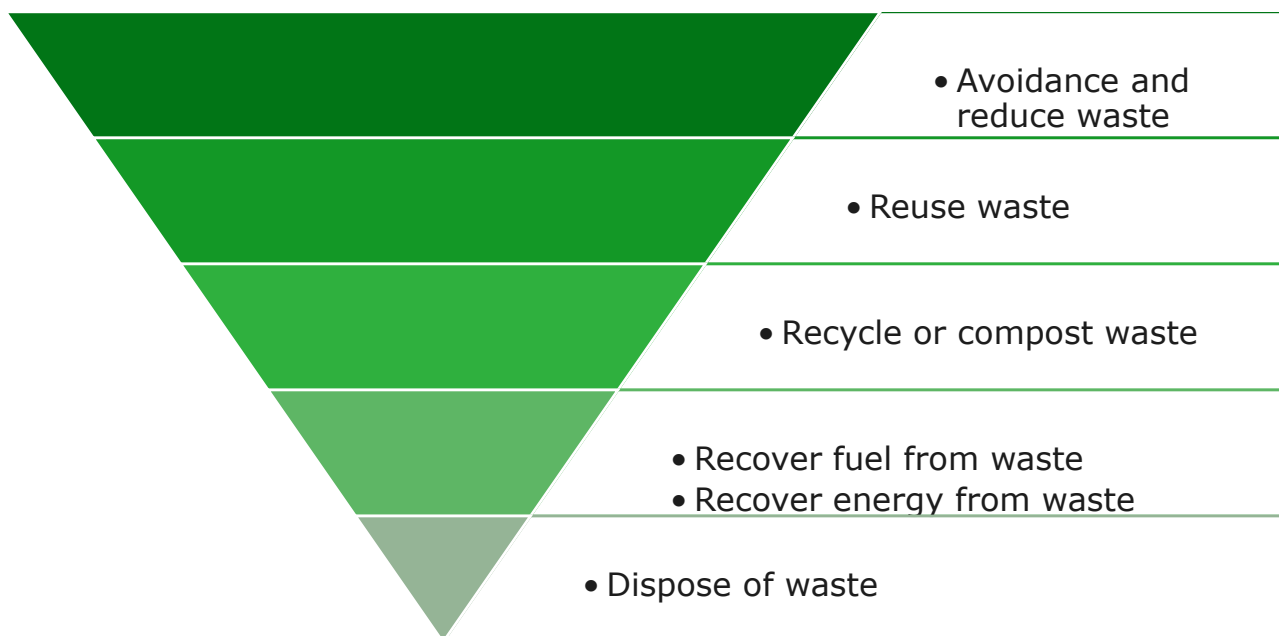


FIGURE 9-1 WASTE MANAGEMENT HIERARCHY

Whilst preference is given to the avoidance of waste, opportunities for waste management at all levels of the hierarchy are presented in Table 9-1.

TABLE 9-1 WASTE MANAGEMENT MEASURES

Hierarchy Level	Proposed Measures
Avoidance	Refinement of clearing limits and micro-siting to minimise the volumes of waste generated from proposed vegetation clearing activities
Reuse	- Reuse green waste on-site for rehabilitation or sediment and erosion control, or both, in accordance with EA Condition B4 - Off-site transportation of waste for lawful off-site reuse in accordance with Condition B2 of the EA
Recycling or composting	Composting of suitable organic material (where practicable) for soil conditioning in rehabilitation areas

Hierarchy Level	Proposed Measures
	Off-site transportation of waste for lawful off-site recycling in accordance with Condition B2 of the EA
Recovery of energy or fuel	Controlled burning of vegetation waste where permitted and appropriately authorised (e.g. Forestry Act / Fire and Rescue Service Act), consistent with Condition B5 of the EA
Disposal	Off-site transportation of waste for lawful off-site disposal in accordance with Condition B2 of the EA

10. MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

This section contains the supporting information in response to the requirements for MNES, pursuant to Section 18 of ESR/2015/1733.

As detailed in this Report, the proposed EA amendment seeks to update clearing provisions to allow for impacts to PEMs that are also MNES protected under the EPBC Act. As such, the clearing activities proposed as part of the proposed EA amendment will have a significant impact to MNES.

There are currently nine MNES protected under the EPBC Act, with impacts anticipated to the matter "listed threatened species and ecological communities", specifically, the habitat of the following EPBC Act listed threatened species and ecological communities:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant) Threatened Ecological Community • <i>Solan dissectum</i> • <i>Solanum johnsonianum</i> • <i>Xerothamnella herbacea</i> | <ul style="list-style-type: none"> • Australian Painted Snipe • Greater Glider (Southern and Central) • Koala • Ornamental Snake • Painted Honeyeater • Squatter Pigeon (Southern) |
|---|--|

No impacts to any other MNES are anticipated as part of the proposed EA Amendment.

The potential impacts to MNES have been formally assessed when the Project was referred to the Commonwealth Department of Climate Change, Energy the Environment and Water (DCCEEW) for a controlled action decision under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). In June 2022, the Project was deemed a controlled action (EPBC 2021/9117), with assessment by Preliminary Documentation and conditional approval eventually granted in November 2025.

"Listed threatened species and communities" was the only MNES assessed under the EPBC approval, with impacts subject to conditions in the EPBC approval. These conditions include clearing limits, avoidance measures, pre-clearance survey requirements, and offsets obligations that apply to MNES and their habitats. Accordingly, there are no MNES that were assessed under the EPBC approval that are not conditioned.

The proposed EA amendment does not seek to increase or alter the impacts to the MNES assessed under the EPBC approval, but rather ensure that the State approval framework is consistent with the existing EPBC approval by enabling clearing of MNES as PEMs within the federally approved limits. All impacts to MNES will continue to be managed in accordance with the relevant EPBC approval conditions.

The EPBC approval includes environmental offset requirements to compensate for the same residual significant impacts and for the same MNES as those proposed under the EA amendment. Offsets are conditioned under Condition 32 to Condition 38 of the EPBC approval. As per Section 8, all offset obligations will continue to be implemented in accordance with the EPBC approval conditions.

11. OTHER APPROVALS AND INTERFACE WITH PLANNING FRAMEWORK

In accordance with Section 226A(1)(a) of the EP Act, the EA amendment application must describe any development permits in effect under the Planning Act for carrying out the relevant activity for the authority. No new development permit or Planning Act approval is required because the amendment does not add an ERA, change the authorised activity location, or authorise new development outside the existing EA framework.

12. CONCLUSION

The proposed EA amendment seeks to vary Condition F11 to authorise impacts to prescribed environmental matters within the disturbance limits already assessed and approved under EPBC 2021/9117. The amendment does not seek to authorise additional petroleum activities, expand the Project Area, or change existing EA controls for water, land, air, acoustic, waste or rehabilitation. The assessment identifies likely significant residual impacts for koala and ornamental snake, with offset obligations to be managed in accordance with the EPBC approval where they relate to the same or substantially the same impacts and matters.

13. REFERENCES

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APPENDIX A SIGNIFICANT RESIDUAL IMPACT ASSESSMENT

1. METHODS

1.1 SIGNIFICANT RESIDUAL IMPACT ASSESSMENT

A significant residual impact (SRI) assessment has been undertaken in accordance with the criteria provided in the Significant Residual Impact Guidelines (DEHP, 2014b) for relevant MSES within the Project footprint. Detailed assessments were undertaken for each PEM, protected wildlife habitat for flora and fauna.

2. SIGNIFICANT RESIDUAL IMPACT ASSESSMENT

Potential Project impacts to ecological values, as well as the avoidance, mitigation and management measures are discussed in Section 6. For the purposes of SRI assessment, the maximum potential disturbance to each ecological value has been used.

The mapping for threatened species assumes that habitat is present unless there is sufficient and robust scientific information to support a species being excluded from the assessment. This represents an application of the precautionary principle and a conservative estimate of Project impacts.

2.1 PROTECTED WILDLIFE HABITAT (FLORA)

Section 6.4.1.4 details protected wildlife habitat for flora species with the potential to occur within the Project Area. When considering the potential for SRI to flora species during the Project construction phase, pre-clearance surveys were considered. Where State-based information for species SRI assessments has not been available, recognised guidelines (e.g. SPRAT profile, conservation advice, recovery plan) and other available literature have been used.

2.1.1 SOLANUM JOHNSONIANUM

Solanum johnsonianum is listed as Endangered under the NC Act and is known to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-1.

TABLE 2-1 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (*SOLANUM JOHNSONIANUM*)

Criteria	Assessment against SRI criteria <i>Solanum johnsonianum</i> - Endangered
Lead to a long-term decrease in the size of a local population of the species	Unlikely The Project Area contains 1.0 ha of suitable <i>Solanum johnsonianum</i> habitat which will be cleared by the Project. <i>Solanum johnsonianum</i> was observed within the Project Area. However, the removal of 1.0 ha of suitable habitat is unlikely to lead to a long-term decrease in the size of the local population of the species.
Reduce the extent of occurrence of the species	Unlikely The Project footprint is not located at the limit of the species occurrence, and as such removal of potential habitat within the Project footprint is unlikely to reduce the extent of occurrence of this species.
Fragment an existing population	Unlikely The Project will clear 1.0 ha of suitable <i>Solanum johnsonianum</i> habitat. While a population is present, the Project is unlikely to represent a barrier for dispersal or cross-pollination for the species (Shapcott et al., 2017). As such, the Project is unlikely to fragment an existing population.

Criteria	Assessment against SRI criteria <i>Solanum johnsonianum</i> - Endangered
Result in genetically distinct populations forming as a result of habitat isolation	Unlikely As above, the Project is unlikely to fragment an existing population or represent a barrier for dispersal or cross-pollination for the species. The Project is not likely to impact the processes associated with wind dispersal and seed dispersal. Therefore, it is unlikely the Project will result in genetically distinct populations of this species.
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely Invasive species are a known threat to <i>Solanum johnsonianum</i> (TSSC, 2016a). The Project will implement appropriate weed and pest management measures to prevent and minimise the spread of invasive weeds within the Project footprint throughout the clearing, construction and operation phase of the Project. This will be through the implementation of a Biosecurity Management Plan. Examples of these mitigation measures include washdown and weed certification protocols, weed surveillance and control. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will result in invasive species that are harmful to the species becoming established in the species habitat.
Introduce disease that may cause the population to decline	Unlikely There are currently no known diseases that pose a threat to <i>Solanum johnsonianum</i>. The Project will employ a Biosecurity Management Plan that will outline appropriate disease management measures to prevent the introduction and spread of diseases as a result of Project activities. Project equipment sourced from overseas will be quarantined as required under State and Commonwealth legislation. The Project is considered unlikely to introduce disease that may cause the species to decline.
Interfere with the recovery of the species	Unlikely No specific recovery plan has been developed for the species. The conservation advice (TSSC, 2016a) identifies the following management actions: • Undertake appropriate seed collections from a wide range of populations and prepare and store seed using leading practice in a recognised seed bank facility. • Manage sites to identify, control and reduce the spread of invasive species such as introduced grasses. • Implement an appropriate monitoring program to establish a more accurate assessment of the current extent of occurrence, area of occupancy and population size with sufficient power to detect sudden changes, and notable fluctuations, in populations. The Project will not remove any known individuals, as any identified individuals will be translocated, and it will also implement appropriate weed controls. It is unlikely that the project will interfere with the above management recommendations, and thus unlikely to interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Unlikely Ecologically significant locations for <i>Solanum johnsonianum</i> is considered suitable habitat where the species is present. While several patches of the species have been identified, a pre-clearance survey will be conducted and any individuals identified will be safely translocated. Therefore, it is considered unlikely the Project will cause disruption to ecologically significant locations of a species.
Assessment of potential for SRI	The Project is unlikely to result in a significant residual impact to 1.0 ha of <i>Solanum johnsonianum</i> habitat.

2.1.2 SOLANUM DISSECTUM

Solanum dissectum is listed as Endangered under the NC Act and is known to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-2.

TABLE 2-2 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (*SOLANUM DISSECTUM*)

Criteria	Assessment against SRI criteria <i>Solanum dissectum</i> – Endangered
Lead to a long-term decrease in the size of a local population of the species	Unlikely The Project Area contains 1.0 ha of suitable <i>Solanum dissectum</i> habitat which will be cleared by the Project. <i>Solanum dissectum</i> was observed within the Project Area. However, the removal of 1.0 ha of suitable habitat is unlikely to lead to a long-term decrease in the size of the local population of the species.
Reduce the extent of occurrence of the species	Unlikely The Project footprint is not located at the limit of the species occurrence, and as such removal of potential habitat within the Project footprint is unlikely to reduce the extent of occurrence of this species.
Fragment an existing population	Unlikely The Project will clear 1.0 ha of suitable <i>Solanum dissectum</i> habitat. While a population is present, the Project is unlikely to represent a barrier for dispersal or cross-pollination for the species (Shapcott et al., 2017). As such, the Project is unlikely to fragment an existing population.
Result in genetically distinct populations forming as a result of habitat isolation	Unlikely As above, the Project is unlikely to fragment an existing population or represent a barrier for dispersal or cross-pollination for the species. The Project is not likely to impact the processes associated with wind dispersal and seed dispersal. Therefore, it is unlikely the Project will result in genetically distinct populations of this species.
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely Invasive species are a known threat to <i>Solanum dissectum</i> (TSCC, 2016b; Bean 2004). The Project will implement appropriate weed and pest management measures to prevent and minimise the spread of invasive weeds within the Project footprint throughout the clearing, construction and operation phase of the Project. This will be through the implementation of the Biosecurity Management Plan. Examples of these mitigation measures include washdown and weed certification protocols, weed surveillance and control. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will result in invasive species that are harmful to the species becoming established in the species habitat.
Introduce disease that may cause the population to decline	Unlikely There are currently no known diseases that pose a threat to <i>Solanum dissectum</i> . The Project will employ a Biosecurity Management Plan that will outline appropriate disease management measures to prevent the introduction and spread of diseases as a result of Project activities. Project equipment sourced from overseas will be quarantined as required under State and Commonwealth legislation. The Project is considered unlikely to introduce disease that may cause the species to decline.
Interfere with the recovery of the species	Unlikely No specific recovery plan has been developed for the species. The conservation advice (TSSC, 2016b) identifies the following management actions: • Undertake appropriate seed collections from a wide range of populations and prepare and store seed using leading practice in a recognised seed bank facility.

Criteria	Assessment against SRI criteria <i>Solanum dissectum</i> – Endangered
	• Manage sites to identify, control and reduce the spread of invasive species such as introduced grasses, especially buffel grass (<i>Cenchrus ciliaris</i>). • Identify recruitment and vegetative responses to fires, and optimal fire regimes for regeneration (vegetative regrowth and/or seed germination), and response to other prevailing fire regimes. Land clearing for agriculture and tilling are known threats. The Project will not remove any known individuals, as any identified individuals will be translocated, and it will also implement appropriate weed controls and not allow ploughing or tilling within the Project Area. It is unlikely that the project will interfere with the above management recommendations, and thus unlikely to interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Unlikely Ecologically significant locations for <i>Solanum dissectum</i> is considered suitable habitat where the species is present. While several patches of the species have been identified, a pre-clearance survey will be conducted and any individuals identified will be safely translocated. Therefore, it is considered unlikely the Project will cause disruption to ecologically significant locations of a species.
Assessment of potential for SRI	The Project is unlikely to result in a significant residual impact to 1.0 ha of <i>Solanum dissectum</i> habitat.

2.1.3 XEROTHAMNELLA HERBACEA

Xerotheramnella herbacea is listed as Endangered under the NC Act and is known to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-3.

TABLE 2-3 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (*XEROTHAMNELLA HERBACEA*)

Criteria	Assessment against SRI criteria <i>Xerotheramnella herbacea</i> – Endangered
Lead to a long-term decrease in the size of a local population of the species	Unlikely The Project Area contains 1.0 ha of suitable <i>Xerotheramnella herbacea</i> habitat which will be cleared by the Project. <i>Xerotheramnella herbacea</i> was observed within the Project Area. However, the removal of 1.0 ha suitable habitat is unlikely to lead to a long-term decrease in the size of the local population of the species.
Reduce the extent of occurrence of the species	Unlikely The Project footprint is not located at the limit of the species occurrence, and as such removal of potential habitat within the Project footprint is unlikely to reduce the extent of occurrence of this species.
Fragment an existing population	Unlikely The Project will clear 1.0 ha of suitable <i>Xerotheramnella herbacea</i> habitat. While a population be present, the Project is unlikely to represent a barrier for dispersal or cross-pollination for the species. As such, the Project is unlikely to fragment an existing population.
Result in genetically distinct populations forming as a result of	Unlikely As above, the Project is unlikely to fragment an existing population or represent a barrier for dispersal or cross-pollination for the species. The Project is not likely to impact the processes associated with wind dispersal and seed dispersal. Therefore, it is unlikely the Project will result in genetically distinct populations of this species.

Criteria	Assessment against SRI criteria <i>Xerothamnella herbacea</i> – Endangered
habitat isolation	
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely Invasive species are a known threat to <i>Xerothamnella herbacea</i> (DEWHA, 2008). The Project will implement appropriate weed and pest management measures to prevent and minimise the spread of invasive weeds within the Project footprint throughout the clearing, construction and operation phase of the Project. This will be through the implementation of the Biosecurity Management Plan. Examples of these mitigation measures include washdown and weed certification protocols, weed surveillance and control. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will result in invasive species that are harmful to the species becoming established in the species habitat.
Introduce disease that may cause the population to decline	Unlikely There are currently no known diseases that pose a threat to <i>Xerothamnella herbacea</i>. The Project will employ the Biosecurity Management Plan that will outline appropriate disease management measures to prevent the introduction and spread of diseases as a result of Project activities. Project equipment sourced from overseas will be quarantined as required under State and Commonwealth legislation. The Project is considered unlikely to introduce disease that may cause the species to decline.
Interfere with the recovery of the species	Unlikely No specific recovery plan has been developed for the species. The conservation advice (DEWHA, 2008) identifies the following management actions: • Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on <i>Xerothamnella herbacea</i>. • Develop and implement a management plan for the control of Green Panic and Buffel Grass in the local region. • Develop and implement a suitable fire management strategy to minimise the intensity and frequency of fires in remnant Brigalow and Semi-evergreen vine thicket communities. The Project will not remove any known individuals, as any identified individuals will be translocated, and it will also implement appropriate weed controls. It is unlikely that the project will interfere with the above management recommendations, and thus unlikely to interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Unlikely Ecologically significant locations for <i>Xerothamnella herbacea</i> is considered suitable habitat where the species is present. While several patches of the species have been identified, a pre-clearance survey will be conducted and any individuals identified will be safely translocated. Therefore, it is considered unlikely the Project will cause disruption to ecologically significant locations of a species.
Assessment of potential for SRI	The Project is unlikely to result in a significant residual impact to 1.0 ha of <i>Xerothamnella herbacea</i> habitat.

2.2 PROTECTED WILDLIFE HABITAT (FAUNA)

Section 6.4.1.4 identifies protected wildlife habitat for fauna species known, likely or potentially occurring within the Project footprint. When considering the potential for SRIs to fauna species during the construction phase, pre-clearance surveys were considered. Where State-based information for species SRI assessments has not been available, recognised guidelines (e.g. SPRAT profile, conservation advice, recovery plan) and other available literature have been used.

2.2.1 AUSTRALIAN PAINTED SNIPE

The Australian painted snipe (*Rostratula australis*) is listed as Endangered under the NC Act and has the potential to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-4.

TABLE 2-4 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (AUSTRALIAN PAINTED SNIPE)

Criteria	Assessment against SRI criteria Australian painted snipe (<i>Rostratula australis</i>) – Endangered
Lead to a long-term decrease in the size of a local population of the species	Unlikely No direct sightings of Australian painted snipe were recorded during surveys, the species is considered to have the potential to occur within the Project Area. As a result of this, no local population has been identified. As 6.0 ha of potential habitat is expected to be cleared within the Project Area, the Project is considered unlikely to result in a long-term decrease in the size of a local population.
Reduce the extent of occurrence of the species	Unlikely The extent of occurrence for this species is estimated to be 4,500,000 km² (DSEWPC, 2013). The Project footprint contains 6.0 ha of suitable Australian painted snipe habitat which will be cleared for the Project. This represents 0.00000001% of the extent of occurrence. Therefore, the Project is considered unlikely to reduce the extent of occurrence of the species.
Fragment an existing population	Unlikely No individuals were observed during field surveys. Additionally, this species is highly mobile and migratory (DSEWPC, 2013). As the area of habitat expected to be cleared is small and part of an existing extremely fragmented landscape, it is unlikely to support an unknown population of Australian painted snipes. As a result of this, it is considered unlikely that the Project will fragment an existing population.
Result in genetically distinct populations forming as a result of habitat isolation	Unlikely The area of Australian painted snipe habitat expected to be cleared is small within part of an existing extremely fragmented landscape. Additionally, the species is extremely mobile. Therefore, the Project is unlikely to result in genetically distinct populations forming from habitat isolation.
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely Predation by introduced predators such as feral cats (<i>Felis catus</i>) and European red fox (<i>Vulpes vulpes</i>) may occur, however are not considered to be major threats for this species (DSEWPC, 2013). The replacement of native wetland vegetation by invasive weeds is however, a potential threat (DCCEE, 2022b). Feral animals, including foxes and cats are known to occur within the Project footprint. Invasive plants have the potential to degrade the quality of suitable habitat without suitable management measures. The Project will implement weed surveillance and treatment, and vehicle washdown and hygiene protocol as part of the Biosecurity Management Plan that will reduce the risk the risk of introduction of invasive plants to within acceptable levels. The Project is considered unlikely to result in invasive species becoming established in this species' habitat.
Introduce disease that may cause the population to decline	Unlikely Australian painted snipe are not currently threatened by diseases (DSEWPC, 2013). Appropriate disease management measures to prevent the introduction of diseases as a result of Project activities will be implemented during construction, as part of the Biosecurity Management Plan. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will introduce disease that may cause a population to decline.

Criteria	Assessment against SRI criteria Australian painted snipe (<i>Rostratula australis</i>) – Endangered
Interfere with the recovery of the species	Unlikely The species' National Recovery Plan (DCCEEW, 2022b) lists several recovery actions relevant to the Project, including: • Restore historical breeding habitat where feasible. • Protect areas of 'habitat critical for survival' not currently managed for nature conservation. • Identify and map available habitat and assess habitat health. The quality and area of suitable habitat for this species is considered to be low within the Project Area. It is unlikely the Project will interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Unlikely Habitat critical to the survival of the Australian painted snipe can be used in lieu of ecologically significant locations. The Project Area contains 6.0 ha of suitable Australian painted snipe habitat, which will be cleared for the Project. The landscape surrounding the Project Area has been subject to historical and ongoing clearing and mining practices which has significantly reduced/alterd the availability shallow terrestrial freshwater (occasionally brackish) wetlands, inundated or waterlogged grassland or saltmarsh. However, this land use change has increased the availability of dams, sewage farms and bore drains. The Project will implement mitigation measures to minimise the risk of impacts on the species, including pre-clearance surveys and restricted works near any observed nesting sites. Should a breeding place for the species be located during pre-clearance surveys, a high-risk species management plan will be procured in line with the NC Act. As such, the Project is unlikely to cause disruption to ecologically significant locations of the species.
Assessment of potential for SRI	The Project is unlikely to result in a significant residual impact on Australian painted snipe.

2.2.2 GREATER GLIDER

The greater glider (southern and central) (*Petauroides volans volans*) is listed as Vulnerable under the NC Act and has the potential to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-5.

TABLE 2-5 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (GREATER GLIDER)

Criteria	Assessment against SRI criteria greater glider (southern and central) (<i>Petauroides volans volans</i>) – Vulnerable
Lead to a long-term decrease in the size of a local population of the species	Unlikely No direct sightings of greater glider (southern and central) were recorded during surveys, the species is considered to have the potential to occur within the Project Area. As a result of this, no local population has been identified. As 2.0 ha of potential habitat is expected to be cleared within the Project Area, the Project is considered unlikely to result in a long-term decrease in the size of a local population.
Reduce the extent of occurrence of the species	Unlikely The extent of occurrence for this species is estimated to be 15,316 km² (DCCEEW, 2022a). The Project footprint contains 2.0 ha of potential greater glider habitat which will be cleared for the Project. This represents 0.000001% of the extent of occurrence. Therefore, the Project is considered unlikely to reduce the extent of occurrence of the species.
Fragment an existing population	Unlikely No individuals were observed during field surveys. Additionally, this species is sedentary, requiring a small home range (1-4 ha) within a well-connected woodland or forest (DCCEEW, 2022a; Eyre et al., 2022). As the area of habitat

Criteria	Assessment against SRI criteria greater glider (southern and central) (<i>Petauroides volans volans</i>) – Vulnerable
	expected to be cleared is small and part of an existing extremely fragmented landscape, it is unlikely to support an unknown population of greater gliders. As a result of this, it is considered unlikely that the Project will fragment an existing population.
Result in genetically distinct populations forming as a result of habitat isolation	Unlikely As the area of greater glider (southern and central) habitat expected to be cleared is small and part of an existing extremely fragmented landscape, it is unlikely that a population of greater gliders is present. Therefore, the Project is unlikely to result in genetically distinct populations forming from habitat isolation.
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely Predation by introduced predators such as feral cats (<i>Felis catus</i>) and European red fox (<i>Vulpes vulpes</i>) does occur, however are not considered to be major threats for this species (DCCEEW, 2022a). Feral deer are a threat to the saplings of habitat trees by trampling, rubbing and browsing (DCCEEW, 2022a). Feral animals, including foxes and cats are known to occur within the Project footprint. Invasive plants have the potential to degrade the quality of suitable habitat without suitable management measures. The Project will implement weed surveillance and treatment, and vehicle washdown and hygiene protocol as part of the Biosecurity Management Plan that will reduce the risk the risk of introduction of invasive plants to within acceptable levels. The Project is considered unlikely to result in invasive species becoming established in this species' habitat.
Introduce disease that may cause the population to decline	Unlikely Greater gliders (southern and central) are not currently threatened by diseases (DCCEEW, 2022a). Appropriate disease management measures to prevent the introduction of diseases as a result of Project activities will be implemented during construction, as part of the Biosecurity Management Plan. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will introduce disease that may cause a population to decline.
Interfere with the recovery of the species	Unlikely The species' conservation advice (DCCEEW, 2022a) lists several recovery actions relevant to the Project, including: • In the aftermath of bushfires, protect any unburnt habitat (within or adjacent to recently burnt landscapes) in order to support population recovery. This includes, but is not limited to: ○ Areas identified to be important post-fire refuges; ○ Protecting hollow-bearing trees from post-fire salvage timber harvesting and clean up operations; and ○ Avoiding hazard reduction burns in these areas. • Protect and maintain sufficient areas of suitable habitat, including denning and foraging resources and habitat connectivity, to sustain viable subpopulations throughout the species' range. • Restore habitat and connectivity: ○ Where habitat has been substantially fragmented, disturbed or modified; ○ Between small habitat patches and larger areas of contiguous forest; ○ At a landscape scale through projects such as the Great Eastern Ranges Initiative, to facilitate movement and recolonisation of areas impacted by fires, droughts or other factors, and to provide opportunities for the species to adapt to the changing climate; ○ Following climate-ready restoration guidelines; and ○ Following the National Restoration Standards (Standards Reference Group SERA 2021). While the Project may be a potential point source of ignition for fires, this is considered likely to be a rare event and the provision of adjacent access roads for the Project will enhance access for bushfire control in the wider landscape.

Criteria	Assessment against SRI criteria greater glider (southern and central) (<i>Petauroides volans volans</i>) – Vulnerable
	Should a population be present, it would not be considered as important subpopulation. It is unlikely the Project will interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Unlikely Habitat critical to the survival of the greater glider (southern and central) can be used in lieu of ecologically significant locations. The Project Area contains 2.0 ha of potential greater glider (southern and central) foraging and dispersal habitat, which will be cleared for the Project. Greater gliders show a preference for mature old growth forest for foraging, with adequate hollows for denning (Eyre et al., 2022). The landscape surrounding the Project Area has been subject to historical and ongoing clearing and mining practices which has significantly reduced/alterd the availability of mature hollow bearing trees suitable for denning. The Project will implement mitigation measures to minimise the risk of impacts on the species, including pre-clearance surveys and restricted works near any observed nesting sites. Should a breeding place for the species be located during pre-clearance surveys, a high-risk species management plan will be procured in line with the NC Act. As such, the Project is unlikely to cause disruption to ecologically significant locations of the species.
Assessment of potential for SRI	The Project is unlikely to result in a significant residual impact on greater glider (southern and central).

2.2.3 KOALA

The koala (*Phascolarctos cinereus*) is listed as Endangered under the NC Act and has the potential to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-6.

TABLE 2-6 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (KOALA)

Criteria	Assessment against SRI criteria koala (<i>Phascolarctos cinereus</i>) – Endangered
Lead to a long-term decrease in the size of a local population of the species	Unlikely No direct sightings of koala were recorded during surveys; the species is considered to have the potential to occur within the Project Area. As a result of this, no local population has been identified. Of the total 2,549.9 ha of suitable habitat, 8.9 ha (6.9 ha shelter, 2.0 ha breeding and foraging) is expected to be cleared within the Project Area, the Project is considered unlikely to result in a long-term decrease in the size of a local population.
Reduce the extent of occurrence of the species	Unlikely The extent of occurrence for this species is estimated to be 1,665,850 km ² (DAWE, 2022a). The Project footprint contains 8.9 ha of suitable koala habitat which will be cleared for the Project. This represents 0.0005% of the extent of occurrence. Therefore, the Project is considered unlikely to reduce the extent of occurrence of the species.
Fragment an existing population	Unlikely No individuals were observed during field surveys. Additionally, this species is frequently sedentary, although home range size is highly variable and dependent on life stage and habitat quality (DAWE, 2022a). As a result of this, it is considered unlikely that the Project will fragment an existing population.
Result in genetically distinct populations	Unlikely As the area of koala habitat expected to be cleared is part of an existing extremely fragmented landscape, it is unlikely that a population of koalas is present within the Project Area. Additionally, any individual that occurs will be

Criteria	Assessment against SRI criteria koala (<i>Phascolarctos cinereus</i>) – Endangered
forming as a result of habitat isolation	translocated safely. Therefore, the Project is unlikely to result in genetically distinct populations forming from habitat isolation.
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely Predation by introduced predators such as feral cats (<i>Felis catus</i>) and European red fox (<i>Vulpes vulpes</i>) does occur, however are not considered to be major threats for this species (DAWE, 2022a). Feral animals, including foxes and cats are known to occur within the Project footprint. Invasive plants have the potential to degrade the quality of suitable habitat without suitable management measures. The Project will implement weed surveillance and treatment, and vehicle washdown and hygiene protocol as part of the Biosecurity Management Plan that will reduce the risk of introduction of invasive plants to within acceptable levels. The Project is considered unlikely to result in invasive species becoming established in this species' habitat.
Introduce disease that may cause the population to decline	Unlikely Koala is currently threatened by KoRV, and myrtle rust (<i>Austropuccinia psidii</i>) (DAWE, 2022b). Appropriate disease management measures to prevent the introduction of diseases as a result of Project activities will be implemented during construction, as part of the Biosecurity Management Plan. Additionally, if any koalas are observed that may be infected by KoRV, they will be reported to DETSI, captured by a licensed fauna spotter catcher and treated by appropriate wildlife carers before being re-released to appropriate habitat nearby. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will introduce disease that may cause a population to decline.
Interfere with the recovery of the species	Likely The species' National Recovery Plan (DAWE, 2022b) lists several recovery actions relevant to the Project, including: • The area of occupancy and estimated size of populations that are declining, suspected to be declining, or predicted to decline are instead stabilised then increased. • Identify nationally important populations and habitat for recovery across the listed koala range under current and future conditions. • Implement on-ground revegetation or restoration programs in previously cleared areas of koala habitat, following local-level restoration guidelines for the koala where they exist. • Investigate the potential to increase the protection of priority koala habitat, including climate refugia, through identification and registration of Critical Habitat where appropriate. The Project will involve the clearing of 8.9 ha, directly contradicting recovery plan actions. As such, it is likely the Project will interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Likely Habitat critical to the survival of the koala can be used in lieu of ecologically significant locations: "For an individual koala, these resources include access to sufficient quality food and shelter trees to meet their daily energetic requirements and reproductive needs, and a place to avoid predators." (DAWE, 2022a). The Project Area contains 8.9 ha of suitable koala habitat, which will be cleared for the Project. The landscape surrounding the Project Area has been subject to historical and ongoing clearing and mining practices which has significantly reduced/alterd the availability of mature trees suitable for breeding and foraging. As a result of the highly variable home range size and limited regional suitable habitat, this habitat is potentially some of the last remaining habitat in the broader landscape. The Project will implement mitigation measures to minimise the risk of impacts on the species, including pre-clearance surveys and restricted works near any observed nesting sites. Should a breeding place for the species be located during pre-clearance surveys, a high-risk species management plan will be procured in

Criteria	Assessment against SRI criteria koala (<i>Phascolarctos cinereus</i>) – Endangered
	line with the NC Act. Despite this, the Project is likely to cause disruption to ecologically significant locations of the species.
Assessment of potential for SRI	The Project is likely to result in a significant residual impact on koala.

2.2.4 ORNAMENTAL SNAKE

The ornamental snake (*Denisonia maculata*) is listed vulnerable under the NC Act and is known to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-7.

TABLE 2-7 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (ORNAMENTAL SNAKE)

Criteria	Assessment against SRI criteria ornamental snake (<i>Denisonia maculata</i>) – Vulnerable
Lead to a long-term decrease in the size of a local population of the species	Likely The Project Area is located within the southern extent of the species known distribution and the species has been recorded within the Project Area, based on desktop assessments and field surveys. There are several desktop records of the species adjacent to the Project Area and within the locality, suggesting a local population is present. The Project Area contains 2,923.26 ha of breeding and foraging habitat and 2,647.63 ha of dispersal habitat for the species. This habitat is considered reduced quality, due to the presence of known threats, cattle grazing and pastoral grass incursion. The Project will impact 6 ha of breeding and foraging habitat and 10 ha of dispersal habitat for the species, being 0.2% and 0.4% of the total available habitat, respectively. Impacts to more than 2 ha of habitat for ornamental snake is considered a significant impact in the <i>Draft Referral Guidelines for the Nationally Listed Brigalow Belt Reptiles</i> (DSEWPC, 2011). Therefore, impacts to a total 16 ha of habitat for the species may lead to a long-term decrease in the size of a local population of the species.
Reduce the extent of occurrence of the species	Likely The extent of occurrence for the ornamental is not estimated; however, is restricted to the Brigalow Belt (North and South) and Desert Uplands bioregions. The extent of occurrence is highly localised and reliant on habitat and habitat conditions. The Project footprint will impact 6 ha of breeding and foraging habitat and 10 ha of dispersal habitat for the species, being 0.2% and 0.4% of the total available habitat, respectively. Given the species localised extents of occurrence and records within the Project Area, impacts to habitat are likely to reduce the extent of occurrence of the species.
Fragment an existing population	Unlikely The ornamental snake was recorded within non-remnant gilgai habitat within Project Area during the field surveys. The species is known to rely on the presence of appropriate refuge and prey, and thus, is unlikely to complete large local movements or move outside of mapped habitat. The Project design has considered co-locating infrastructure and utilise areas which are not considered habitat for the species. The Project design avoids majority of habitat for the ornamental snake, with only 6 ha of breeding and foraging habitat and 10 ha of dispersal habitat for the species impacted, being 0.2% and 0.4% of the total available habitat, respectively. Project design has further considered collocating infrastructure to minimise creating barriers for dispersal. Additionally, the ornamental snake has been recorded in areas containing linear infrastructure and

Criteria	Assessment against SRI criteria ornamental snake (<i>Denisonia maculata</i>) – Vulnerable
	cleared areas dominated by exotic grass and subject to grazing, suggesting the species has the ability to utilise fragmented landscapes. Given the Project's design considerations and impacts to a relatively small quantum of habitat for the species, the Project will not fragment an existing population.
Result in genetically distinct populations forming as a result of habitat isolation	Unlikely The ornamental snake is known to occur in areas containing linear infrastructure and cleared areas dominated by exotic grass and subject to grazing, suggesting the species has the ability to utilise fragmented landscapes. Additionally, the ornamental snake does not require a specific breeding place for live births, and young are independent from birth. The Project will impact 6 ha of breeding and foraging habitat, being 0.2% of the total available habitat for the species. Such a small quantum of impact is unlikely to result in genetically distinct populations forming as a result of habitat isolation.
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely The ornamental snake is threatened by the predation of invasive species (DCCEEW, 2026). Appropriate management and mitigation measures, including waste management will be implemented to reduce the attraction of invasive fauna within the Project Area. The Project will further implement weed surveillance and treatment, and vehicle washdown and hygiene protocol as part of the Biosecurity Management Plan. The Project is considered unlikely to result in invasive species becoming established in this species' habitat.
Introduce disease that may cause the population to decline	Unlikely Ornamental snake are not currently threatened by diseases (DCCEEW, 2026). Appropriate disease management measures to prevent the introduction of diseases as a result of Project activities will be implemented during construction, as part of the Biosecurity Management Plan. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will introduce disease that may cause a population to decline.
Interfere with the recovery of the species	Unlikely There is no adopted or made Recovery Plan for this species and a recovery plan is not required. The Project has considered impacts to the species during the design phase, and will collocate infrastructure to reduce impacts. Additionally, the Project will implement management and mitigation measures to further reduce impacts to the species, including a Biosecurity Management Plan. With appropriate management and mitigation measures, and infrastructure design, impacts to 6 ha of breeding and foraging habitat (0.2%) and 10 ha of dispersal habitat for the species (0.4%) will not interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Unlikely Habitat critical to the survival of the ornamental snake can be used in lieu of ecologically significant locations. The Project will impact 6 ha of breeding and foraging habitat and 10 ha of dispersal habitat for the species impacted, being 0.2% and 0.4% of the total available habitat, respectively. While habitat within the Project Area is considered important for the species, majority of the mapped habitat is highly fragmented and in non-remnant condition. The Project will implement mitigation measures to minimise the risk of impacts on the species, including pre-clearance surveys and collocation of infrastructure to maintain dispersal opportunities for the species. As such, the Project is unlikely to cause disruption to ecologically significant locations of the species.
Assessment of potential for SRI	The Project is likely to result in a significant residual impact on ornamental snake.

2.2.5 PAINTED HONEYEATER

The painted honeyeater (*Grantiella picta*) is listed vulnerable under the NC Act and is considered with potential to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-8.

TABLE 2-8 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (PAINTED HONEYEATER)

Criteria	Assessment against SRI criteria painted honeyeater – vulnerable
Lead to a long-term decrease in the size of a local population of the species	Unlikely The Project Area does not contain an existing population of the species as there are no field survey or desktop records of the species within the Project Area. Despite this, the Project Area contains 2,826.96 ha of habitat for the painted honeyeater, of which 6.9 ha (0.2% of the total available habitat) will be impacted. Habitat within the Project Area is highly fragmented and clearing of 0.2% of the available habitat will occur in small, isolated patches. Given the species high mobility in response to seasonal conditions, such impacts will not impact the species movements. Therefore, the Project will not lead to a long-term decrease in the size of a local population of the species.
Reduce the extent of occurrence of the species	Unlikely The extent of occurrence for this species is estimated to be 2,800,000 km ² (being 280,000,000 ha). The Project will impact 6.9 ha of suitable habitat for the species. This represents 0.000002% of the extent of occurrence. Therefore, the Project is considered unlikely to reduce the extent of occurrence of the species.
Fragment an existing population	Unlikely The painted honeyeater is not known to occur within the Project Area and therefore, the Project Area does not contain an existing population of the species. Habitat within the Project Area is highly fragmented as a result of historical clearing and agricultural practices, and connectivity is limited to riparian corridors and as isolated patches. Additionally, the species is highly mobile, frequently undergoing seasonal movements. Therefore, impacts to 6.9 ha of habitat (0.2% of the available habitat) is considered unlikely to will fragment an existing population.
Result in genetically distinct populations forming as a result of habitat isolation	Unlikely As the area of painted honeyeater habitat expected to be cleared is small and part of an existing extremely fragmented landscape, it is unlikely that a population of the species is present. Additionally, the species is highly mobile, frequently undergoing seasonal movements. Therefore, the Project is unlikely to result in genetically distinct populations forming from habitat isolation.
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely The painted honeyeater is threatened by the predation of invasive species including black rats (<i>Rattus rattus</i>). Black rats have not been recorded within the Project Area. Appropriate management and mitigation measures, including waste management will be implemented to reduce the attraction of invasive fauna within the Project Area. The Project will further implement weed surveillance and treatment, and vehicle washdown and hygiene protocol as part of the Biosecurity Management Plan. The Project is considered unlikely to result in invasive species becoming established in this species' habitat.
Introduce disease that may cause the population to decline	Unlikely The painted honeyeater is not currently threatened by diseases. Appropriate disease management measures to prevent the introduction of diseases as a result of Project activities will be implemented during construction, as part of the Biosecurity Management Plan. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will introduce disease that may cause a population to decline.

Criteria	Assessment against SRI criteria painted honeyeater – vulnerable
Interfere with the recovery of the species	The <i>National Recovery Plan for the Painted Honeyeater</i> (Grantiella picta) (DAWE, 2021) lists the following recovery objective for the species: - By 2031, measure and sustain a positive population trend (compared to 2020 baseline counts) in the number of mature individuals of the painted honeyeater. - By 2031, maintain or improve the extent, condition and connectivity of habitat of the painted honeyeater. To achieve the above recovery objectives, the following main strategies are proposed: - Protect, manage and restore painted honeyeater breeding and foraging habitats at the local, regional and landscape scales. - Monitor, reduce and manage threats and sources of mortality. - Develop and apply techniques to measure changes in population trajectory in order to measure the success of recovery actions. - Improve understanding of habitat use at a landscape scale in order to better target protection and restoration measures. - Engage local communities and stakeholders in painted honeyeater conservation. - Coordinate, review and report on recovery progress. The Project design has avoided the majority of the species potential habitat, impacting only 6.9 ha (being 0.2% of the available habitat). Such small impacts is considered to have negligible impacts on the species in the long-term or on a population scale. The Project will not result in disruptions to breeding cycles and existing threats to the species are unlikely to be increased. As such, the Project is considered unlikely to interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Unlikely Habitat critical to the survival of the painted honeyeater can be used in lieu of ecologically significant locations. The Project will impact 6.9 ha of potential habitat, being 0.2% of the total available habitat within the Project Area. This habitat is highly fragmented as a result of historical clearing and agricultural practices, and connectivity is limited to riparian corridors and as isolated patches. The Project has avoided majority of the species habitat, and where possible, clearing of trees containing mistletoe will be retained. Additionally, the Project will implement mitigation measures to minimise the risk of impacts on the species, including pre-clearance surveys. While clearing of a small scale of habitat is proposed, this will occur in small, isolated areas and is not likely to cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species.
Assessment of potential for SRI	The Project is unlikely to result in a significant residual impact on painted honeyeater.

2.2.6 SQUATTER PIGEON

The squatter pigeon (southern) (*Geophaps scripta scripta*) is listed vulnerable under the NC Act and is considered with potential to occur within the Project Area. An assessment against the significant impact criteria (DEHP, 2014) has been presented in Table 2-9.

TABLE 2-9 MATTERS OF STATE ENVIRONMENTAL SIGNIFICANCE SIGNIFICANT RESIDUAL IMPACT CRITERIA – PROTECTED WILDLIFE HABITAT (SQUATTER PIGEON (SOUTHERN))

Criteria	Assessment against SRI criteria squatter pigeon (southern) – vulnerable
Lead to a long-term decrease in the size of a local	Unlikely The squatter pigeon (southern) has not been recorded within the Project Area and there are few desktop records of the species within proximity to the Project Area. The majority of records of the species are located south-west and north-east of the Project Area. Therefore, the Project Area does not contain a local

Criteria	Assessment against SRI criteria squatter pigeon (southern) – vulnerable
population of the species	population of the species. The Project Area contains a combined total 5,153.81 ha of habitat for the species, of which 1 ha breeding (<0.1%), and 1 ha foraging (1.7%) will be impacted by the Project. Available habitat within the Project Area is considered low to moderate quality, due to historical and ongoing disturbance. The squatter pigeon (southern) is known to occur in disturbed areas, including along dirt access tracks. The Project will implement mitigation measures to minimise the risk of impacts on the species, including pre-clearance surveys and siting of infrastructure will maximise previously cleared areas as well as existing breaks in vegetation. Impacts to a total 2 ha (1 ha breeding, and 1 ha foraging) will not lead to a long-term decrease in the size of a local population of the species.
Reduce the extent of occurrence of the species	Unlikely The extent of occurrence for this species is estimated to be 440,000 km² (being 280,000,000 ha). The Project will impact 1 ha breeding (<0.1%), and 1 ha foraging (1.7%) habitat for the species. This represents a total 0.0000007% of the extent of occurrence. Therefore, the Project is considered unlikely to reduce the extent of occurrence of the species.
Fragment an existing population	Unlikely The Project Area does not support an existing population of the species, as the species has not been recorded within the Project Area. Habitat within the Project Area is highly fragmented as a result of historical clearing and agricultural practices. Additionally, squatter pigeon (southern) is known to occur in disturbed areas, including along dirt access tracks. Therefore, impacts to a total 42 ha of habitat (less than 3% of the available habitat) is considered unlikely to will fragment an existing population.
Result in genetically distinct populations forming as a result of habitat isolation	Unlikely The Project will impact 1 ha breeding (<0.1%), and 1 ha foraging (1.7%) habitat for the species. The Project Area does not contain an important population of the species, as defined in the species Conservation Advice. The Project will implement management and mitigation measures, including pre-clearance surveys to determine if the species and nests are present. If present, the area containing the nest will be categorised as breeding habitat and will be preferentially avoided, as per the constraints hierarchy. The species is known to occur in disturbed landscapes, and the Project will not constrain movement of the species and will not result in genetically distinct populations forming as a result of habitat isolation.
Result in invasive species that are harmful to a vulnerable species becoming established in the species habitat	Unlikely The squatter pigeon (southern) is threatened by the predation of invasive species including foxes (<i>Vulpes vulpes</i>) and feral cats (<i>Felis catus</i>). The species habitat is also threatened by the invasion of buffel grass (<i>Cenchrus ciliaris</i>). Feral animals, including foxes and cats are known to occur within the Project Area. Appropriate management and mitigation measures, including waste management will be implemented to reduce the attraction of invasive fauna within the Project Area. The Project will further implement weed surveillance and treatment, and vehicle washdown and hygiene protocol as part of the Biosecurity Management Plan. The Project is considered unlikely to result in invasive species becoming established in this species' habitat.
Introduce disease that may cause the population to decline	Unlikely The squatter pigeon (southern) is not currently threatened by diseases. Appropriate disease management measures to prevent the introduction of diseases as a result of Project activities will be implemented during construction, as part of the Biosecurity Management Plan. With the appropriate management and mitigation measures applied, it is considered unlikely the Project will introduce disease that may cause a population to decline.

Criteria	Assessment against SRI criteria squatter pigeon (southern) – vulnerable
Interfere with the recovery of the species	There is no adopted or made recovery plan for this species and a recovery plan is not required. The Conservation Advice lists the following conservation and management actions for the species: • Identify sub-populations of high conservation priority, especially in the southern part of the squatter pigeon's (southern) range. • Protect and rehabilitate areas of vegetation that support important sub-populations. • Protect sub-populations of the listed subspecies through the development of covenants, conservation agreements or inclusion in reserve tenure. • Develop and implement a stock management plan for key sites. • Develop and implement a management plan, or nominate an existing plan to be implemented, for the control and eradication of feral herbivores in areas inhabited by the squatter pigeon (southern). • Raise awareness of the squatter pigeon (southern) within the local community, particularly among land managers. The Project Area does not contain any populations of the squatter pigeon (southern) and the Project Area is not considered a key site. The Project avoids the majority of habitat for the species, and where clearing occurs, this is primarily located in dispersal habitat. Clearing of small portions of habitat is unlikely to change the subspecies utilisation of the Project Area, and thus, the Project will not interfere with the recovery of the species.
Cause disruption to ecologically significant locations (breeding, feeding, nesting, migration or resting sites) of a species	Unlikely All of the relatively small, isolated and sparsely distributed sub-populations occurring south of the Carnarvon Ranges in Central Queensland are considered to be important sub-populations of the subspecies. This includes, but is not limited to: • Populations occurring in the Condamine River catchment and Darling Downs of southern Queensland; • The populations known to occur in the Warwick-Inglewood-Texas region of southern Queensland; and • Any populations potentially occurring in northern NSW. The Project Area does not contain a population of the species, as the species has not been recorded based on desktop records or field survey records. Therefore, impacts to 1 ha breeding (<0.1%), and 1 ha foraging (1.7%) habitat for the species will not cause disruption to ecologically significant locations.
Assessment of potential for SRI	The Project is unlikely to result in a significant residual impact on squatter pigeon.

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