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ATLAS Stage 3 – EPBC Pre-clearance Survey Report – Pecos Valley Access Track

Prepared for: Senex Report issued: May 2025



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Document status

Revision	Reason for issue	Author	Reviewed	Issued to	Date
Rev 0	Draft report	M. Neill	L. Eade	Senex	14/03/2025
Rev 1	Issued to client	M. Neill	L. Grigg	Senex	15/05/2025
Rev 2	Issued to client	M. Neill	L. Grigg	Senex	22/05/2025
Rev 3	Issued to client	M. Neill	L. Grigg	Senex	27/05/2025



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Glossary of Terms

Acronym	Description			
ATP	Authority to Prospect			
GTRE	Ground-truthed regional ecosystem			
DBH	Diameter at breast height			
EA	Environmental Authority			
ECPPFD	Environmental Constraints Protocol for Planning and Field Development			
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Cth)			
EP Regulation	Environmental Protection Regulation 2008			
ESA	Environmentally Sensitive Areas			
ha	Hectares			
m	Metres			
MNES	Matters of National Environmental Significance			
MSES	Matters of State Environmental Significance			
PL	Petroleum Lease			
RE	Regional Ecosystem			
sp.	Species (singular)			
spp.	Species (plural)			
sqm	Square metres			
SQP	Suitably qualified person			
TEC	Threatened Ecological Community			



1 Introduction

The pre-clearance survey methodology applied within this package of works is deemed appropriate to confirm the on-the-ground biodiversity values present.

1.1 Project background

The Atlas Stage 3 Gas Project (EPBC Act referral 2022/09410) involves developing, operating, decommissioning and rehabilitating up to 151 coal seam gas wells; gas and water gathering systems for the producing wells; access tracks; brine and produced water storages; borrow pits; and ancillary supporting facilities on Petroleum Lease (PL) 445, PL209, PL1127 and parts of PL1037 in the central part of the Surat Basin, Queensland (Senex, 2024).

This report provides the results of an EPBC pre-clearance survey on a planned upgrade to an existing landholder access track, associated wells and gathering including a 30 m buffer (survey area) within Pecos Valley property: Lot 10 on Plan FT949.

1.2 Scope

Ausecology Pty Ltd (Ausecology) was engaged by Senex Energy Pty Ltd (Senex) to undertake pre-clearance ecological surveys as part of the approval conditions for the Atlas Stage 3 Gas Project and in accordance with the *Atlas Stage 3 Environmental Constraints Protocol for Planning and Field Development* (ECPPFD) document (Senex, 2024). The ECPPFD provides a framework for identifying, assessing and managing potential impacts to Matters of National Environmental Significance (MNES) and Matter of State Environmental Significance (MSES) associated with development of the Atlas Stage 3 Gas Project. Data collected during the pre-clearance surveys will be used by Senex to ensure:

- infrastructure siting complies with relevant environmental approval conditions and does not exceed the maximum disturbance limits
- infrastructure siting adheres to the constraints mapping
- no functional change to Koala dispersal habitat, the approval holder must not remove more than a total of 4 ha of trees, measured in canopy cover within mapped koala dispersal habitat.

Results from the pre-clearance survey findings (this report) will be published on the website, including:

- the location and extent of trees to be cleared, including maps; and
- a discussion of how removal of trees will not change the ability of koalas to disperse across the landscape.

This survey also involved targeted threatened flora surveys, active threatened fauna surveys (where suitable habitat was identified) and fauna habitat identification (where encountered) as per the ECPPFD.



2 Methodology

An Ausecology Senior ecologist (suitably qualified) and ecologist conducted field constraint surveys on foot on the 21st of January 2025 to determine potential impacts of upgrading an existing landholder access track on the Pecos Valley property as shown in Figure 2-1.

2.1 Regional Ecosystem assessment and Threatened Ecological Communities

2.1.1 Desktop assessments

Desktop assessment and baseline ecological assessments of the property have previously been undertaken (Boobook, 2023), including ground-truthed regional ecosystem (GTRE) mapping and threatened ecological community surveys. No further detailed desktop analysis was required.

2.1.2 Regional Ecosystem assessment

During pre-clearance surveys, quaternary site assessments to verify regional ecosystems were undertaken where necessary with tertiary site assessments undertaken where vegetation and ecological communities have been determined to vary from the mapping at the time of the pre-clearance surveys. These assessments were conducted in accordance with the ECPPFD.

2.1.3 Threatened Ecological Communities

Where necessary Threatened Ecological Community (TEC) assessments were undertaken to confirm the presence and condition of TECs identified as known or potential in The Footprint if these were determined to vary from the mapped TEC areas identified in the constraints mapping.

2.2 Targeted threatened flora surveys

These surveys were conducted by a suitably qualified person (SQP). Targeted flora surveys of all known, likely or potential threatened flora species were conducted within The Footprint and 30 m buffer, where mapped constraint areas were present and/or suitable habitat was identified by the SQP, in accordance with the ECPPFD.

These surveys were conducted using the random meander methodology and if a species was encountered, a population survey was undertaken to determine the extent and density of the population. Threatened flora species and the locations of all individuals were recorded and specimens collected of any unknown individual requiring confirmation by the Queensland Herbarium.

Potentially occurring threatened species in the area as per the ECPPFD include Belson's panic (*Homopholis belsonii*), red soil woolly wrinklewort (*Rutidosis lanata*) and winged nightshade (*Solanum stenopterum*).

2.3 Fauna habitat assessment

Senex has committed to not clearing any areas confirmed as habitat for threatened species (ECPPFD), with the exception of koala (*Phascolarctos cinereus*) dispersal habitat and short-beaked echidna (*Tachyglossus aculeatus*) habitat. Fauna habitat baseline assessments have been conducted to an adequate level of detail to enable known, likely and potentially present species to be identified and comprehensive Project impact assessment and constraints mapping has been completed (ECPPFD).

The pre-clearance surveys will reassess the habitat present (as mapped in the constraints mapping (ECPPFD)) or otherwise identified by the SQP during the pre-clearance surveys) in order to refine mapped habitat areas. They will also identify and record micro-habitat features and breeding sites to facilitate avoidance and minimisation

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of impacts to potentially utilised micro-habitat features and breeding sites. Recorded micro-habitat features, where present include:

- Hollow-bearing trees;
- Dead standing trees;
- Hollow logs;
- Termite mounds;
- Woody debris;
- Surface rocks;
- Gilgais;
- Soil cracks / cracking clay;
- Rocky outcrops, crevices, overhangs and caves;
- Mistletoes;
- Nests;
- Animal burrows;
- Watercourses, wetlands and dams (including proximity); and
- Any other significant habitat features, or values present, such as dense leaf litter, heavily decorticating bark, dense grass/shrub shelter, seeding grass cover, fruiting plants, nectar and pollen producing plants and koala food trees.

2.4 Threatened fauna surveys

As areas confirmed as habitat for threatened species have been effectively avoided by The Footprint (with the exception of koala dispersal habitat and echidna habitat), the area required to be surveyed was minimal.

Active fauna surveys of all known, likely or potential threatened fauna species are to be undertaken where suitable potential habitat is mapped or found to be present within the proposed disturbance footprint (refer to the constraints mapping and the habitat features listed in Appendix A of the ECPPFD). Active fauna searches as per Table 1, Appendix A of the ECPPFD include scanning trees, the ground and habitat features; overturning rocks, logs and other woody debris; searching under peeling bark; raking leaf litter and soil at the base of trees; and flushing birds from dense shrubs and groundcover.

Invasive active searches were not undertaken in the 30 m buffer of the disturbance footprint within mapped constraint areas, given no impact is expected and active searches outside of The Footprint would be detrimental to the fauna species habitat. Instead of invasive searches in the 30 m buffer, surveys included incidental observations and scat and sign searches.

2.5 Koala dispersal habitat

Canopy cover of each koala dispersal tree identified in the field was measured by walking the dripline using a sub-10 cm accuracy handheld Trimble GPS unit. The diameter at breast height (DBH) of each of the trees was measured and height data was collected. Where denser regrowth was present and canopy cover of individual trees could not be distinguished, the canopy cover of the clump of trees was walked at the outer dripline and average height assessed. Thorny tree species which are not able to be climbed by koala (i.e. desert lime (*Citrus glauca*) were noted in the field but excluded from the final koala tree canopy cover calculations.



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3 Results

The complete survey area was checked and it was noted that the existing landholder access track runs through a patch of remnant Poplar box (*Eucalyptus populnea*) woodland on alluvial plains (RE 11.3.2) which was also confirmed as Poplar Box Grassy Woodland on Alluvial Plains TEC. Ausecology recorded the maximum width of the existing track using a sub-10 cm accuracy handheld Trimble GPS unit to record a high accuracy vegetation boundary (Appendix A).

At its narrowest point the track is a minimum of seven meters wide between trees and as discussed with Senex, they will be able to utilise the existing track without clearing any vegetation. There was no other vegetation found outside of this section.



Figure 3-1 Example images along access track

3.1 Regional Ecosystems and Threatened Ecological Communities

The landholder access track has been historically cleared and either side of the access track was determined to be remnant Poplar box (*Eucalyptus populnea*) woodland on alluvial plains (RE 11.3.2) and Poplar Box Grassy Woodland on Alluvial Plains TEC. Further details on the vegetation assessments undertaken is provided in the Ausecology Constraints Assessment Report, March 2025.



3.2 Targeted threatened flora surveys

No Belson's panic (*Homopholis belsonii*), red soil woolly wrinklewort (*Rutidosis lanata*) and winged nightshade (*Solanum stenopterum*) were identified within the landholder access track corridor or in vegetation patches within 100m. It is unlikely for these species to be present in the access track, due to the grazing pressure and presence of non-native grasses, mainly buffel grass (*Cenchrus ciliaris*).

3.3 Opportunistic fauna surveys and habitat assessment

No threatened fauna species were observed in suitable potential habitat within 30 m of The Footprint. Habitat searches found several micro-habitat features including course woody debris, tree hollows, dead standing trees (stags), decorticating bark and bird nests. Nests identified in the 30m buffer did not have any nesting birds at the time of the survey. Invasive searches were not undertaken on habitat features in the proposed footprint, as fauna may be disturbed unnecessarily.

3.4 Ground-truthed koala dispersal trees within petroleum lease (PL 445)

Table 3-1 provides the results including canopy cover, height and DBH of the trees assessed in the field in koala dispersal areas. All trees were assessed and, where determined they could be avoided (through underground boring or realignment), have been marked up as "retain" and will be avoided during construction. Trees unable to be avoided have had their canopy cover assessed and calculated under disturbance limits. Mapping of nearby vegetation within the 30m buffer of access track can be found in Appendix A.

Location (Desktop ID)	Area (sqm)	Species		DBH (cm)	Height (m)	Action	Photo
PecosKT01	37.86	Casuarina cristata		30	14	Retain	
PecosKT02	75.41	Eucalyptus populnea		35	13	Retain	
Remove area:		Total (sqm)	0				
		Total (ha)	0				
Retain area:		Total (sqm)	113.27				
		Total (ha)	0.0113				

Table 3-1Dispersal habitat trees



4 Discussion

The surveys on the Pecos Valley property found that there would no impacts to koala dispersal habitat within the total survey area including the access track corridor with a total of 0.0113 ha to be retained. Use of the existing landholder track by Senex is unlikely to change the ability of koalas to disperse across the landscape. No TECs, remnant or advanced regrowth vegetation or potential threatened fauna habitat are present within the access track corridor.

Threatened flora searches found no threatened species within or in proximity to the survey area or the existing landholder access track.

Senex will be able to use the existing access track and will not have a significant impact on surrounding vegetation. Track upgrades outside the Petroleum lease must be undertaken with agreement of the landholder. It is assumed that track upgrade works can be undertaken as part of a 'make good agreement' or similar.



Appendix A – Mapping







Appendix B – Habitat Features



Habitat type	Habitat location
Large poplar box- multiple hollows	-26.164882, 149.865761
Babbler nest- abandoned	-26.164929, 149.865702
Babbler nest- abandoned	-26.164889, 149.865702
Babbler nest- abandoned	-26.164879, 149.865698
Large poplar box- multiple hollows	-26.16478, 149.865639
Log, 10m long, hollow about 20cm width	-26.16508, 149.865855
Log, 15m long, hollow about 30cm width	-26.165204, 149.86593
Large E camaldulensis - 100cm dbh, 20m height,	
multiple small hollows	-26.165435, 149.865666
Babbler nest- abandoned	-26.165651, 149.865732
Large E camaldulensis - 120cm dbh, 20m height, one	
large hollow - 25cm width, 12m high, multiple small	
hollows	-26.165164, 149.865044
Course Woody Debris	-26.164065, 149.865262
Large Eucalyptus camaldulensis with several small	
hollows	-26.165436, 149.865675