NGP ANNUAL COMPLIANCE REPORT - 2025

Revision Number: 1
Revision Date: 18/08/2025

INTERNAL

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DOCUMENT HISTORY

Revision	Date	Author	Description of Changes
1.0	18/08/2025	Rahul Dorairaj	New Document

OWNING FUNCTIONAL GROUP & DEPARTMENT / TEAM

People, Safety & Legal : Environment and Sustainability

TABLE OF CONTENTS

1 INTRODUCTION

Jemena Northern Gas Pipeline Pty Ltd (referred to herein as *Jemena*) gained approval under the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) in 2017 as the approval holder to construct and operate the Jemena Northern Gas Pipeline, from Tenant Creek, Northern Territory to Mt Isa, Queensland (EPBC 2015/7569). The Northern Gas Pipeline involves the construction of a new, underground, natural gas transmission pipeline, approximately 622 km in length and the associated facilities.

This Annual Compliance report will cover compliance against each of the EPBC conditions issued to Jemena between 21 May 2024 and 20 May 2025 period.

1.1 EPBC APPROVAL KEY INFORMATION SUMMARY

EPBC Number	EPBC 2015/7569
Project Name	Jemena Northern Gas Pipeline
Approval Holder and ACN	Jemena Northern Gas Pipeline Pty Ltd (ACN: 607 928 790)
Approved Action	Construct and Operate a buried 622 km high-pressure gas pipeline from Tennant Creek (Northern Territory) to Mount Isa (Queensland)
Location of the Project	Tennant Creek (Northern Territory) to Mount Isa (Queensland)
Project Commencement Date	20 May 2017
Person accepting responsibility of this report	Rahul Dorairaj
Dates for the reporting period of this report	21 May 2024 to 20 May 2025

1.2 EPBC APPROVAL CONDITIONS – COMPLIANCE STATUS

A total of 15 environmental approval conditions were placed on the project. The compliance status of these 15 approval conditions is detailed below:

Condition Number	Condition	Is the Project compliant with this condition?	Evidence/ Comments
1	The approval holder must only take the proposed action within the **project area**.	Compliant	All operations during this period have been within the designated project area as described in the final public environment report. This is inclusive of: • 30 metre construction right-of-way; • work spaces; • camp sites; • operational facilities; • dams; and, • access tracks.
2	To protect the EPBC Act listed Plains Death Adder (*Acanthophis hawkei*), the approval holder must not: a) **disturb** more than 791 hectares of **suitable Plains Death Adder habitat**; and, b) **remove** more than 36 hectares of **suitable Plains Death Adder habitat**.	Compliant	Since the commencement of the action, as per Table 3 below, the following occurred concerning the Plains Death Adder (*Acanthophis hawkei*): a) 692 hectares of **suitable Plains Death Adder habitat** has been **disturbed**; and, b) 4.8 hectares of **suitable Plains Death Adder habitat has been removed** to allow for one (1) mainline valve and three (3) cathodic protection stations. All construction work subject to the final public environment report and regulatory approval are complete. No further disturbance or removal of **Plains Death Adder habitat** is proposed. Vegetation maintenance and erosion repairs have resulted in slashing of vegetation in some areas, however these are likely to grow back throughout the year. It is to be noted that vegetation slashing will be an ongoing annual requirement to maintain the asset integrity.

3	For the protection of the **EPBC Act** listed Plains Death Adder, Carpentarian Antechinus (*Pseudantechinus mimulus*) and Greater Bilby (*Macrotis lagotis*), the approval holder must undertake open trench inspection activities in accordance with the **Trench Inspection Procedure (Procedure)**.	Compliant	All open trench inspections have been in accordance with the **Trench Inspection Procedure** (version 2) as provided to the Department on 23 February 2017. This version of the Trench Inspection Procedure is available on Jemena's Northern Gas Pipeline Website: https://jemena.com.au/pipelines/northern-gas-pipeline All construction work subject to the final public environment report and regulatory approval are complete. No trenches were excavated during the reporting period.
4	Within five (5) years of the completion of **construction**, the approval holder must **rehabilitate** no less than 791 hectares of **suitable Plains Death Adder habitat**.	Compliant (ongoing)	Completion of construction occurred during 2018-2019 reporting period. Rehabilitation has commenced as per the approved Rehabilitation Management Plan. The asset is currently in the Transitional Rehabilitation stage. Transitional Rehabilitation Completion criteria is yet to be achieved due to ongoing adverse weather events. A Transitional Rehabilitation Monitoring Report (2025) has been prepared and provided in Appendix A of this report.
5	The approval holder must submit a Rehabilitation Management Plan for the Minister's approval in writing. The Rehabilitation Management Plan must include: a) **rehabilitation acceptance criteria**; b) procedures, including contingency measures, that will be undertaken to achieve the **rehabilitation acceptance criteria**; and, c) a monitoring program to determine the success of **rehabilitation** procedures implemented by the approval holder over the duration of the approval.	Compliant	The Rehabilitation Management Plan was issued to the Minister for approval on 31 March 2017. The Rehabilitation Management Plan is available on Jemena's Northern Gas Pipeline Website: https://jemena.com.au/pipelines/northern-gas-pipeline This document is confirmed to contain: a) rehabilitation acceptance criteria; b) procedures, including contingency measures, that will be undertaken to achieve the rehabilitation acceptance criteria; and, c) a monitoring program to determine the success of rehabilitation procedures implemented by the approval holder.

			A Transitional Rehabilitation Monitoring Report (2025) has been prepared and provided in Appendix A of this report.
6	The approval holder must not **commence** the action until the Rehabilitation Management Plan has been approved by the **Minister** in writing. The approved Rehabilitation Management Plan must be implemented by the approval holder.	Compliant	The Rehabilitation Management Plan was approved on behalf of the Minister on 19 April 2017. No action was commenced until the plan was approved. Transitional Rehabilitation Monitoring Report (2025) has recommended to review and update the Rehabilitation Management Plan as the asset is yet to achieve the transition rehabilitation criteria.
7	Within 10 days after the **commencement** of the action, the approval holder must advise the **Department** in writing of the actual date of **commencement**.	Compliant	The date of commencement of the Project was 20 May 2017. This was communicated to the Department on 29 May 2017. Refer to Appendix B of this report.
8	The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the **Procedure** and management plan required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.	Complaint	All records have been accurately maintained and can be made available to the Department should there be any request to do so. This includes the current 2025 Northern Gas Pipeline Transitional Rehabilitation Monitoring Report which is the basis for this EPBC Annual Report.
9	Within three (3) months of every 12 month anniversary of the **commencement** of the action, the approval holder must publish a report (the Annual Compliance Report) on its website describing compliance with each of the conditions of this approval, during the previous 12 months. The approval holder must also provide in this report: a) a reconciliation of actual **disturbance** and **removal** of **suitable Plains Death Adder habitat** (in hectares) on the **project area** against the	Complaint	a) Reconciliation of actual disturbance and removal of suitable Plains Death Adder habitat (in hectares) on the project area against the disturbance and removal limits specified in condition 2 is provided in Section 1.3 of this report. b) Progress against the Rehabilitation Acceptance Criteria is detailed in Appendix A of this report.

	disturbance and **removal** limits specified in condition 2; and b) progress against the **rehabilitation acceptance criteria** required at condition 5. Documentary evidence providing proof of the date of the publication must be provided to the **Department** at the same time as the Annual Compliance Report is published. The approval holder must continue to publish the Annual Compliance Report each year until such time as agreed to in writing by the **Minister**.		The Annual Compliance Report is available on Jemena's Northern Gas Pipeline Website: https://jemena.com.au/pipelines/northern-gas-pipeline
10	The approval holder must report any potential or actual contravention of the conditions of this approval to the **Department** in writing within two (2) days of the approval holder becoming aware of a contravention.	Not applicable	There has been no contravention to the conditions of this approval to date.
11	Upon the written direction of the **Minister**, the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The approval holder must not commence the audit until the **Minister** approves the independent auditor and audit criteria in writing. The audit report must address the criteria to the satisfaction of the **Minister**.	Not applicable	This did not occur during the reporting period.
12	The approval holder may choose to revise the **Procedure** or management plan approved by the **Minister** under conditions 3 and 5 without submitting it for approval under section 143A of the **EPBC Act,** if the taking of the action in accordance with the revised **Procedure** or management plan would not be likely to have a **new or increased impact**. If the approval holder makes this choice they must: a) notify the **Department** in writing that the approved **Procedure** or management plan has been revised and provide the **Department**, at least four weeks before implementing the revised **Procedure** or management plan, with:	Not applicable	This did not occur during the reporting period.

	i. an electronic copy of the revised **Procedure** or management plan; ii. an explanation of the differences between the revised **Procedure** or management plan and the approved **Procedure** or management plan; and the reasons the approval holder considers that the taking of the action in accordance with the revised **Procedure** or management plan would not be likely to have a **new or increased impact**.		
12A	The approval holder may revoke its choice under condition 12 at any time by notice to the **Department**. If the approval holder revokes the choice to implement the revised **Procedure** or management plan, without approval under section 143A of the **EPBC Act**, the **Procedure** or management plan approved by the **Minister** must be implemented.	Not applicable	This did not occur during the reporting period.
12B	If the **Minister** gives a notice to the approval holder that the **Minister** is satisfied that the taking of the action in accordance with the revised **Procedure** or management plan would be likely to have a **new or increased impact**, then: a) condition 12 does not apply, or ceases to apply, in relation to the revised **Procedure** or management plan; and b) the approval holder must implement the **Procedure** or management plan approved by the **Minister**. To avoid any doubt, this condition does not affect any operation of conditions 12 and 12A in the period before the day the notice is given. At the time of giving the notice, the Minister may also notify the approval holder that for a specified period of time that condition 12 does not apply for the Procedure or management plan required under the approval.	Not applicable	This did not occur during the reporting period.

13	Conditions 12, 12A and 128 are not intended to limit the operation of section 143A of the **EPBC Act** which allows the approval holder to submit a revised **Procedure** or management plan to the **Minister** for approval.	Not applicable	This did not occur during the reporting period.
14	If, at any time after five (5) years from the date of this approval, the approval holder has not **commenced** the action, then the approval holder must not **commence** the action without the written agreement of the **Minister**.	Not applicable	The date of commencement of the Project was 20 May 2017. This was communicated to the Department on 29 May 2017. Refer to Appendix B of this report.
15	Unless otherwise agreed to in writing by the **Minister**, the approval holder must publish the **Procedure** and Rehabilitation Management Plan on its website. The **Procedure** and Rehabilitation Management Plan must be published on the website within one (1) month of being approved by the **Minister** or being submitted under condition 12. The published **Procedure** and Rehabilitation Management Plan must remain on the website for the lifetime of the approval unless otherwise agreed to in writing by the **Minister**.	Compliant	The approved rehabilitation management plan has been published on Jemena's Northern Gas Pipeline Website: https://jemena.com.au/pipelines/northern-gas-pipeline

1.3 PLAINS DEATH ADDER HABITAT DISTURBANCE AND REMOVAL

Table 3 below demonstrates the currently reconciled areas of suitable Plains Death Adder habitat disturbed and removed during the reporting period and since project commencement. To date, these are within the permitted thresholds of this EPBC decision.

Please note that the removal of Plains Death Adder habitat was associated with the construction of the following:

- one mainline valve; and
- three cathodic protection stations.

During this reporting period (20th May 2024 to 19th May 2025), there was no further Plains Death Adder habitat removed. Vegetation maintenance and erosion repairs have resulted in slashing of vegetation in some areas, however these are likely to grow back throughout the year. It is to be noted that vegetation slashing will be an ongoing annual requirement to maintain the asset integrity.

Table 3: Plains Death Adder disturbed and removed habitat

	Maximum Permitted Quantity[1]	Previously Reported Reconciled Quantity	Additional Reconciled Quantity for Current Reporting Period	Total Reconciled Quantity Since Project Commencement
Plains Death Adder Habitat Area Disturbed	791 ha	692 ha	0 ha	692 ha
Plains Death Adder Habitat Area Removed	36 ha	4.8 ha	0 ha	4.8 ha

Note 1: *Maximum limit as set out in EPBC Decision 2015/7569*

2 APPENDICES

2.1 APPENDIX A – TRANSITIONAL REHABILITATION MONITORING REPORT - 2025

JEMENA NORTHERN GAS PIPELINE

TRANSITIONAL REHABILITATION ASSESSMENT

REPORT 2025

Report prepared for Jemena Ltd.
August 2025

Prepared by:

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Frontispiece: Top - cattle using pipeline signage as a scratching post. Bottom - revegetation on the ROW at KP 350.

DISCLAIMER

This document has been prepared by Low Ecological Services (LES) for Jemena Ltd. LES has prepared this document using the skill and care expected from professional scientists to provide factual and technical information and reasonable solutions to identified risks. It does not constitute legal advice.

DOCUMENT CONTROL

Approvals	Name	Signature	Date
Prepared by:	K. Ward		01/08/2025
Approved by:	Bill Low		06/08/2025
Jemena:	Rahul Dorairaj		11/08/2025

REVISION DETAILS

Date	Revision	Author/Reviewer	Company	Comments
01/08/2025	V1	K. Ward	Low Ecological Services	Draft V1
16/08/2025	V2	K. Ward	Low Ecological Services	Updated after Jemena review

EXECUTIVE SUMMARY

The Northern Gas Pipeline (NGP) is a 622 km buried gas pipeline linking existing gas pipelines in the Northern Territory (NT) and Queensland (Qld). The NGP is currently in the transitional rehabilitation phase which involves returning disturbed areas to a stable, non-polluting landform, the return of native species, and the control of weed species. The transitional rehabilitation phase monitors the progress of rehabilitation ensuring that it is transitioning towards final rehabilitation. Meeting the transitional rehabilitation criteria is the responsibility of Jemena Ltd. Monitoring will be conducted annually for the first five years following completion of construction (or until the transitional rehabilitation criteria are met). The 2024 survey, the fifth transitional rehabilitation assessment of the NGP project area found that the project had not met the transitional rehabilitation criteria and further remediation activities and surveys were required. This report documents the sixth transitional rehabilitation assessment of the NGP project area.

The survey was conducted over 7 days from the 23rd - 29th June 2025. The NGP ROW was traversed from west to east in 4WD vehicles. Locations inspected during the survey included the ROW, construction areas, waterway crossings, and areas of works conducted since the completion of the pipeline. Sites identified in previous transitional rehabilitation assessments as not meeting the criteria were also reassessed. Similar to previous years, assessment focused on three key rehabilitation factors; weed infestation, land stability, and revegetation. Additionally, targeted plains death adder (*Acanthophis hawkei*) habitat surveys were conducted in the Mitchell Grass Downs bioregion to assess compliance with EPBC 2015/7569 Condition 4.

WEEDS (Section 4.1)

Transitional rehabilitation criteria in relation to weeds was not met: "*No weed incursion or spread within the NGP footprint.*"

The presence of weeds along the pipeline easement was similar to previous years (LES 2023, LES 2024). Some species have increased, especially kapok at the eastern end of the easement. There were very few instances of weeds previously recorded that could not be found on this survey. Several new areas of weed infestation were identified that were not recorded in 2024.

Weed occurrences were typically in low density within the ROW and mostly the result of encroachment from adjacent pastoral land. Declared weed species recorded during the survey included Noogoora burr and mesquite, both of which should be prioritised for management.

Recommendations regarding management of non-declared weed species remain the same as advice provided in 2024 (LES). High density populations should be targeted to prevent further spread along the easement and into adjacent land. In particular, the populations of kapok bush near KP 566, and the eastern most 40 km stretch of the ROW, have increased in size and continue to spread into the surrounding landscape and westerly along the ROW.

Ongoing management and working in conjunction with local landholders is required to reduce the spread of weed species along the easement and into surrounding lands.

LAND STABILITY

Transitional rehabilitation criteria in relation to land stability was not met: *"Disturbed areas are a stable landform within 12 months."*

A significant portion of the ROW meet this criterion. However, there remain areas of erosion, subsidence, and ineffective and deteriorating berms at multiple locations along the ROW. While the majority of these issues are minor, management action is required to achieve a stable landform along the pipeline in areas identified as having moderate to significant land stability issues.

The transitional rehabilitation criteria also requires disturbed areas to be re-profiled to contours consistent with the surrounding landform. This criterion was met in 2023, however it was noted in the 2024 and 2005 assessments that areas of the ROW had become lower than the surrounding landscape. This lowering was likely a result of removal of material through sheet flow erosion, grading over the ROW and/or repeated vehicle access on the ROW.

Grading activities are likely to increase susceptibility to erosion both in areas where berms had been removed, and in areas where grading has formed windrows. Windrows have the potential to redirect water flow along the ROW and encourage erosion by preventing water from leaving the easement.

Personnel carrying out pipeline maintenance activities including grading and vegetation clearing should be informed regarding transitional rehabilitation criteria goals and the most appropriate methods of remediation to prevent further issues.

Erosion (Section 4.2.1)

The overall level of erosion over the extent of the ROW observed in the 2025 survey was low. Erosion was recorded at numerous locations along the easement; however, approximately 60% of these instances were classified as minor, and only 5% were considered moderate to severe. In areas of berm removal, sheet erosion had increased. Remediation work has decreasederosion along the length of the pipeline easement since it was last surveyed in 2024.

As noted in previous surveys (LES 2023, LES 2024), the majority of erosion was confined to the access track within the ROW, where limited vegetation cover increased susceptibility to erosion. The most common form of erosion was sheet erosion. Significant portions of the ROW had high coverage of vegetation making it difficult to accurately assess those areas for erosion, this may have led to underreporting.

As a priority, it is recommended that all severe to moderate erosion should be remediated by constructing multiple series of shallow berms and back-filling and leveling where appropriate.

Minor erosion should continue to be monitored and if earthworks equipment is in the area, shallow berms should also be constructed to prevent these from worsening over time.

Compromised berms (Section 4.2.2)

It is difficult to compare the number of compromised berms in 2025 compared to previous years as grading activities on the western end of the pipeline has resulted in the complete removal of multiple berms. In these areas, multiple series of shallow trafficable berms must be re-constructed to prevent erosion on the ROW.

Of the berms that remain, 42 berms are compromised. Damage was most often due to water erosion resulting in erosion channels through the berms or the berms being washed out. There were several occurrences of water flowing around the ends of berms and back onto the ROW rather than diverting outwards into adjacent land. This was often due to berms not extending far enough at the edges of the ROW. Cattle tracking has also caused erosion of berms in some instances, as well as vehicle activity along the access track of the ROW.

All compromised berms should be repaired or reinstated promptly. Additional berms are also required in several locations along the ROW as indicated in Appendix A, Table 9-9-2.

Subsidence (Section 4.2.3)

Subsidence issues were recorded at several locations on the ROW. The majority of subsidence issues observed were associated with water channelling and erosion across the pipeline or along the pipeline trench, with several locations attributed to cattle and vehicle tracks. Filling in of subsidence is recommended in all instances of significant, significant/moderate and moderate subsidence issues, some of those will require erosion control berms with monitoring recommended for minor subsidence issues.

REVEGETATION (Section 4.4)

Transitional rehabilitation criteria in relation to revegetation has not been wholly met: *"Ground cover which is not a declared species is growing in disturbed areas within 12 months of the completion of construction activities and maintained."* The transitional rehabilitation of the NGP ROW continues to progress and is estimated to be approximately 85% complete. Transitional rehabilitation was assessed as 95% and 90% complete in the 2023 and 2024 reports respectively, the reduction in percent complete is due to vegetation clearing to meet pipeline Australian Standards AS 2885. This has removed ground cover from highly rehabilitated areas, leading to an interim reduction in rehabilitation. Ensuring topsoil remains after grading works is essential for regrowth of grasses and low shrubs in these areas.

Overgrowth

On several sections of the ROW, dense overstory vegetation was recorded which require clearing to meet AS 2885 minimum management requirements of vegetation within the pipeline corridor to provide access and ensure visibility of pipeline warning signs and the pipeline trench.

There was less overgrowth observed in 2025 compared to 2024 as additional sections of the pipeline clearing had been undertaken. Vegetation and topsoil cleared off the ROW has been pushed off to the side in piles. The piles contain high nutrient soil as well as seed bank for grasses, both of which will encourage rapid rehabilitation. It is recommended that these piles be redistributed along areas of the pipeline which require fill material or used to construct shallow bunds, with precautions for fauna safety that may have taken up residence in these piles. Regular ongoing maintenance to prevent an overstorey re-establishing along the ROW in the future will be required.

The continued removal of the overstorey vegetation overgrowth on the pipeline easement remains a priority. During the clearing process, land stability issues can be rectified, and soil stabilisation and berms can be repaired and added where appropriate.

PLAINS DEATH ADDER HABITAT

Transitional rehabilitation criteria in relation to suitable Plains Death Adder habitat was incomplete: *“No less than 791 ha of suitable Plains Death Adder habitat is rehabilitated within 5 years of completion of construction.”*

Habitat for the threatened Plains Death Adder extending from KP 355 to KP 561 continues to shows increased rehabilitation with each survey. Cracks and holes along the appropriate habitat are forming and vegetation cover is high creating habitat appropriate for hunting and temporary shelter for Death Adders. Detailed vegetation surveys comparing plant species adjacent to and on the ROW indicate species composition on the ROW is not yet 70% equivalent of vegetation off the ROW; more time is required for a range of species to reestablish although the major Mitchell and other mid-grasses is similar both on and off the ROW. It is important to protect this section from clearing or other major works with heavy machinery.

REHABILITATION MANAGEMENT PLAN

The original RMP states that if there is a delay in progress towards meeting the rehabilitation completion criteria over two consecutive years, then a review of the RMP should be undertaken. A number of events and circumstances over the last two years, such

uncontrollable natural events, and proximity to culturally sensitive land has delayed Jemena meeting the transitional rehabilitation criteria.

Table of Contents

List of Tables

List of Figures

GLOSSARY

Ground cover: Low-growing native herbaceous flora, such as grasses, forbs and ferns.

Laydown area: Sites which were cleared during the construction of the pipeline to store materials for the pipeline.

Overstorey: The woody mid and upper story vegetation which obstructs view of the soil surface and can send roots to the depth of the gas pipe, impacting the integrity of the pipe.

Topsoil: The uppermost layer of soil, rich in organic matter, microorganisms, and seeds, which are essential for natural revegetation processes.

ABBREVIATIONS

APGA	Australian Pipelines and Gas Association
CoEP	APGA Code of Environmental Practice
CP	Cathodic protection
EPBC	Environment Protection and Biodiversity Conservation Act 1999
EPA	Northern Territory Environment Protection Authority
KP	Key points – every kilometre along the length of the pipeline from KP 0 at the Phillip Creek Compressor Station to KP 622 at the Mount Isa Compression Station.
MLV	Main line valve
NGP	Northen Gas Pipeline
PIMP	Pipeline Integrity Management Plan
RMP	Rehabilitation Management Plan
ROW	Right of way - The 30 metre wide corridor in which the pipeline is laid and where pipeline maintenance activities occur.
WONS	Weed of national significance

1. INTRODUCTION

1.1. Background

The Northern Gas Pipeline (NGP) is a 622 km buried gas pipeline linking existing gas pipelines in the Northern Territory (NT) and Queensland (Qld). Construction of the pipeline commenced on 20th May 2017, with Jemena Ltd. taking control of the site from the construction contractors in June 2018, and the pipeline becoming operational on 3rd January 2019.

The NGP commences at the Phillip Creek Compressor Station, approximately 45 km north-west of Tennant Creek, and terminates 7 km south-west of Mount Isa at the Mount Isa Compression Station. The NGP project area comprises of a 30 m wide Right of Way (ROW), temporary workspaces and camp sites, operational facilities, dams, and access tracks.

Approval for the NGP was dependent on the development and implementation of a Rehabilitation Management Plan (RMP) that incorporated the requirements of the three interested jurisdictions – NT, Qld, and the Commonwealth. Of particular interest to the Commonwealth was the restoration of habitat for the threatened plains death adder (*Acanthophis hawkei*) found in the Barkly Tablelands between key points (KP) KP 355 - KP 561 of the NGP ROW.

The RMP states that the ROW and all temporary facilities will be progressively rehabilitated on completion of the construction phase. The only components to be retained long term are permanent facilities (compressor stations, main line valve (MLV) and cathodic protection (CP) stations) and their associated access tracks and any access tracks or dams requested by the landholder.

The RMP defined three phases to rehabilitation:

- ***Reinstatement****: The process of bulk earthworks and structural replacement of pre-existing conditions of a site (i.e. backfilling of trench, reinstating soil surface topography including scouring or ripping, watercourse lines, culverts, fences and gates and other landscape features). It also includes placing cleared vegetation across disturbed areas. Reinstatement occurs during the construction phase and is the responsibility of the Construction Contractor.*

- ***Transitional rehabilitation****: The process of returning disturbed areas to a stable, non-polluting landform, the return of native species and the control of weed species. It differs from the reinstatement phase in that it generally does not involve bulk earthworks, but instead monitors the progress of rehabilitation ensuring that it is transitioning towards final rehabilitation, where an issue is found it is to be rectified. Transitional rehabilitation monitoring will focus on areas where failure risk is high. These include erosion at watercourse crossings; weeds at construction weed hygiene locations and preventing any weed incursion.*

- ***Rehabilitation****: The process of returning a site's structural habitat complexity, and ecosystem processes and services to that of the pre-existing conditions at the site or an analogue site.*

Meeting the transitional rehabilitation criteria is the responsibility of Jemena. The RMP states that monitoring of the transitional rehabilitation phase is to be conducted annually for the first five years and then every five years following the transitional rehabilitation criteria being met for three consecutive years. If the rehabilitation criteria are not met within five years of the transitional rehabilitation period finishing, the RMP is to be reviewed taking into consideration the monitoring results to ensure rehabilitation criteria are eventually met. Once the rehabilitation criteria are met, two additional rehabilitation monitoring events will be undertaken to ensure that the rehabilitation is stable. That is, three consecutive annual surveys must demonstrate that the rehabilitation criteria have been attained/maintained before cessation of rehabilitation condition monitoring may be considered. Following the rehabilitation criteria being met over a three-year period, a final rehabilitation report will be prepared, published and submitted to regulators.

The NGP is currently in the sixth year of the transitional rehabilitation phase. In addition to weeds, land stability and revegetation, this survey included targeted vegetation and habitat surveys in plains death adder habitat to determine if plant species composition on the ROW contains 70% of the species found in adjacent comparable habitat (ie similar soils, topography and drainage criteria).

There is quality habitat for the threatened plains death adder on the ROW in the Barkley, Georgina, Wonardo, Austral, Wonorah-Barkley and Kalalla land systems (KP 355 to KP 561). The EPBC License which extends to 2027 also states the requirements for return of the total length of Death Adder habitat, 791 ha, less xx ha of land for infrastructure construction, and habitat monitoring frequency.

Table 1. Surveys conducted to date in the NGP footprint.

Year	Survey Details
2020	Land stability and revegetation (EcOz, 2020).
2021	Weeds, land stability, and revegetation (LES 2021).
2022	Weeds and land stability (Jemena 2022).
2023	Weeds, land stability, and revegetation (LES 2023). NT Government Transitional Rehabilitation Assessment (NT Government 2023)
2024	Weeds, land stability, and revegetation (LES 2024).
2025	Weeds, land stability, revegetation, and plains death adder assessment.

1.2. Scope

The scope of this report is to assess the current status of transitional rehabilitation across the NGP project area. In this assessment, the focus is on weeds, land stability, and revegetation with reference to the RMP transitional rehabilitation criteria, as discussed in Section 0 of this report. In areas where the criteria are not met, remediation recommendations are provided in Section 7. Jemena agreed to a proposal to begin monitoring of habitat quality for Death Adders in the Barkly Tableland clay soils to allow assessment of meeting rehabilitation requirements for Death Adder habitat.

1.3. Regulatory framework

1.3.1. AS 2885: Australian Standard for High Pressure Pipeline Systems (2022)

AS 2885 was adopted by the Council of Australian Governments in its communiqué of 25th February 1994 in which it agreed to adopt AS 2885 to achieve uniform national pipeline construction standards by the end of 1994. AS 2885 provides an authoritative source of fundamental principles and practical guidelines for use by responsible and competent persons or organisations. It is the foundation on which the high-pressure pipelines sector provides assurance to itself, policy makers, regulators and the wider community that the pipelines that carry very hazardous materials at high pressure (i.e. hydrocarbons, hydrogen, CO_2 and other fluids) are safe, environmentally benign and reliable. AS 2885 is considered to be 'single and sufficient' for design, construction, maintenance and operations of pipeline systems carrying fluid at high pressures, because it is comprehensive in the matters that need to be covered by pipeline technical regulation and there is no need for the State technical regulators to make further or additional technical regulations.

1.3.2. Pipeline Integrity Management Plan (GAS-300-PA-IN-002) (2022)

The Pipeline Integrity Management Plan (PIMP) outlines the integrity requirements and controls as determined by the NGP design and Jemena's integrity management process and includes references to procedures, plans and other documentation. Jemena manages the integrity of the NGP in compliance with AS 2885.

1.3.3. Northern Territory Environment Protection Authority Assessment Report 79 (2017)

The Northern Territory Environment Protection Authority (NT EPA) prepared Assessment Report 79 in accordance with section 7(2)(g) of the Environmental Assessment Act 1982 and clause 14(3) of the Environmental Assessment Administrative Procedures. The purpose of this report is to ensure that matters affecting the environment to a significant extent are fully examined and reported. The report was provided to the Northern Territory Ministers for Environment and Natural Resources (the Minister) and Primary Industry and Resources (the

responsible Minister) to be considered in decisions made by the Northern Territory Government; it does not provide an environmental approval.

1.3.4. Rehabilitation Management Plan (GAS-399-PA-EV-002) (2017)

The RMP was developed to fulfil the requirements of the environmental approvals processes for the NGP project, in particular Condition 5 of the EPBC approval dated 9th March 2017. The RMP covers the entire length of the pipeline including all areas within the project area in both the NT and Qld.

The primary objective of the RMP is to return the land to comparable state to the pre-construction condition such that it can support a suitable land use and function as plains death adder habitat. The RMP describes the rehabilitation management measures that will be implemented to mitigate identified environmental impacts and meet the relevant rehabilitation criteria. There are three phases to the RMP: reinstatement, transitional rehabilitation, and rehabilitation.

Plains Death Adder Habitat

Condition 4 of the EPBC approval pertains to plains death adder habitat rehabilitation and states

> *Within five (5) years of the completion of construction, the approval holder must rehabilitate no less than 791 hectares of suitable Plains Death Adder habitat.*

The RMP outlines rehabilitation completion criteria in section 4.3.1:

The following criteria has been specified to achieve successful rehabilitation of disturbed areas.

> *All significantly disturbed areas caused during construction of the NGP which are not being or intended to be utilised by the landholder or overlapping tenure holder, must be rehabilitated to meet the following final acceptance criteria measured either against the highest ecological value adjacent land use or the pre-disturbed land use:*
>
> > *(a) greater than or equal to 70 % of native ground cover species richness*
> >
> > *(b) greater than or equal to the total per cent of ground cover*
> >
> > *(c) less than or equal to the per cent species richness of declared plant pest species; and*
> >
> > *(d) where the adjacent land use contains, or the pre-clearing land use contained, one or more regional ecosystem(s), then at least one regional ecosystem(s) from the same broad vegetation group, and with the equivalent biodiversity status or a biodiversity status with a high conservation value as any of the regional ecosystem(s) in either the adjacent land or pre-disturbed land, must be present.*

No less than 791 ha of suitable Plains Death Adder habitat is rehabilitated within 5 years of completion of construction.

Rehabilitation of suitable Plains Death Adder habitat will be complete when the above completion criteria are met.

This report addresses the condition of the plains death adder habitat six years after the completion of construction.

1.3.5. APGA Code of Environmental Practice 2013

The Australian Pipelines and Gas Association (AGPA) Code of Environmental Practice (CoEP) provides industry accepted guidance on environmental management through the planning and asset acquisition, construction, operational and decommissioning phases of a pipelines' lifecycle. The CoEP focuses on the key activities conducted during different pipeline lifecycle phases, and the potential environmental risks that arise from these activities. The CoEP has been developed by APGA in consultation with its membership, the former Australian Gas Association, the Australian Petroleum Production and Exploration Association and pipeline regulating authorities in each Australian State and Territory.

2. EXISTING ENVIRONMENT

2.1. Rainfall

The NGP project area is in an arid climate characterised by low (<380 mm/year on average) and highly variable rainfall. Rainfall affects rehabilitation through plant recruitment and erosional processes. The rainfall pattern across the project area is driven by monsoonal or cyclonic events to the north resulting in higher rainfalls in summer. La Niña has also affected rainfall in the NGP project area with a significant increase during the 2022/2023 and 2023/2024 summer periods in comparison to other years. Rains in 24/25 were patchy with some extended dry periods but with periodic large falls of rain, particularly January, March and June, 2025. The large amount of rain resulted in extensive vegetation growth along the pipeline, particularly shrubs in the desert and mountain country, and perennial and annual grasses in the black soil country. Rainfall also exacerbated erosion issues and assisted in the spread and proliferation of weed species.

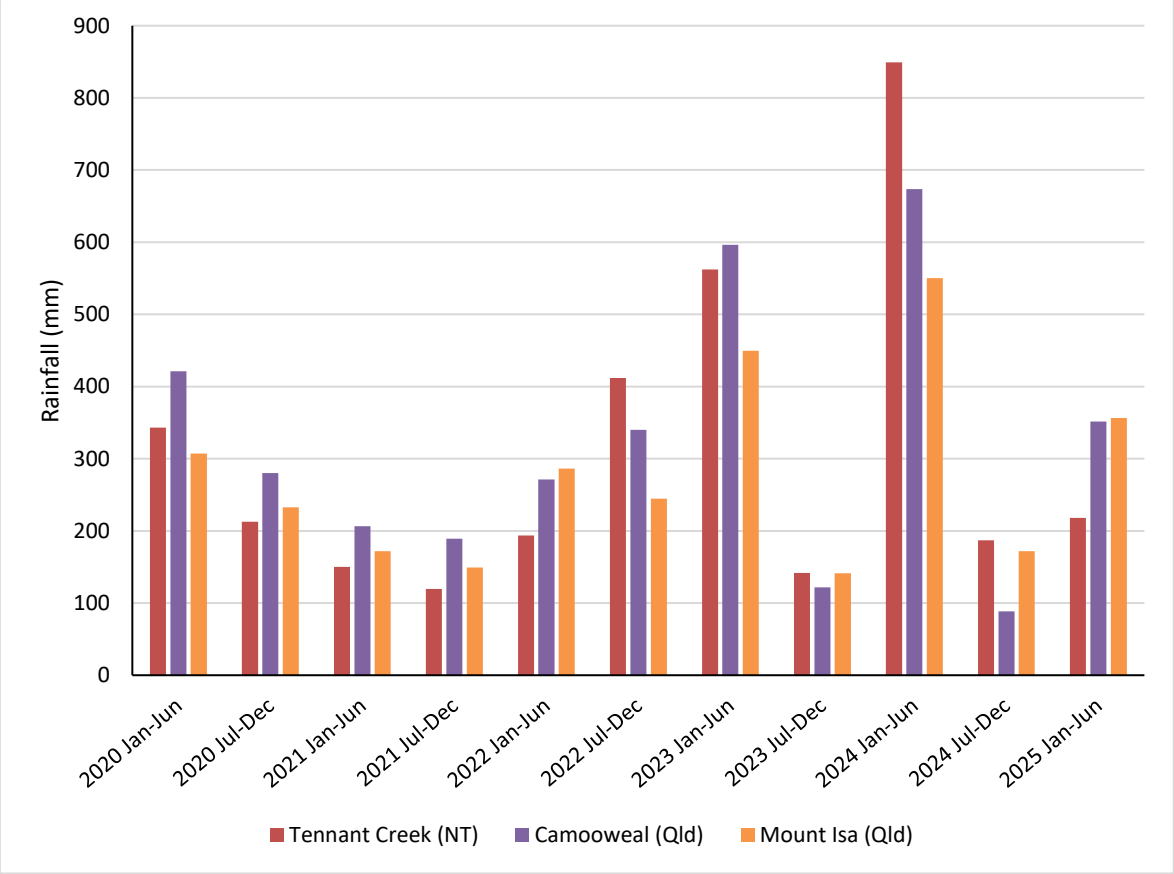

Figure 2-1. Total rainfall in Tennant Creek (NT), Camooweal (Qld) and Mount Isa (Qld) from January 2020 to June 2025 (inclusive).

2.2. Fire History

Australia's biggest bushfire season in more than a decade occurred in 2023. Between September and October 2023 more than 18 million hectares burnt in the Barkly, Tanami and Great Sandy Deserts of the Northern Territory and Western Australia. La Niña was the major driver of these fires. The high rainfall increased vegetation growth, resulting in a greater fuel load. Fires caused by lightning strikes increase when weather conditions are extreme, and fuel is dry. Fire removes the plants and organic material that naturally stabilises soil, therefore making it more prone to erosion (Natural Resources SA, 2015). Large areas of the NGP were affected by the 2023 fires (Figure).

A very small portion of the pipeline easement was burned in 2025 at the western end. In the 2025 field survey, there was evidence of a recent burn on the eastern end of the pipeline close to Mount Isa which is not captured in the map below.

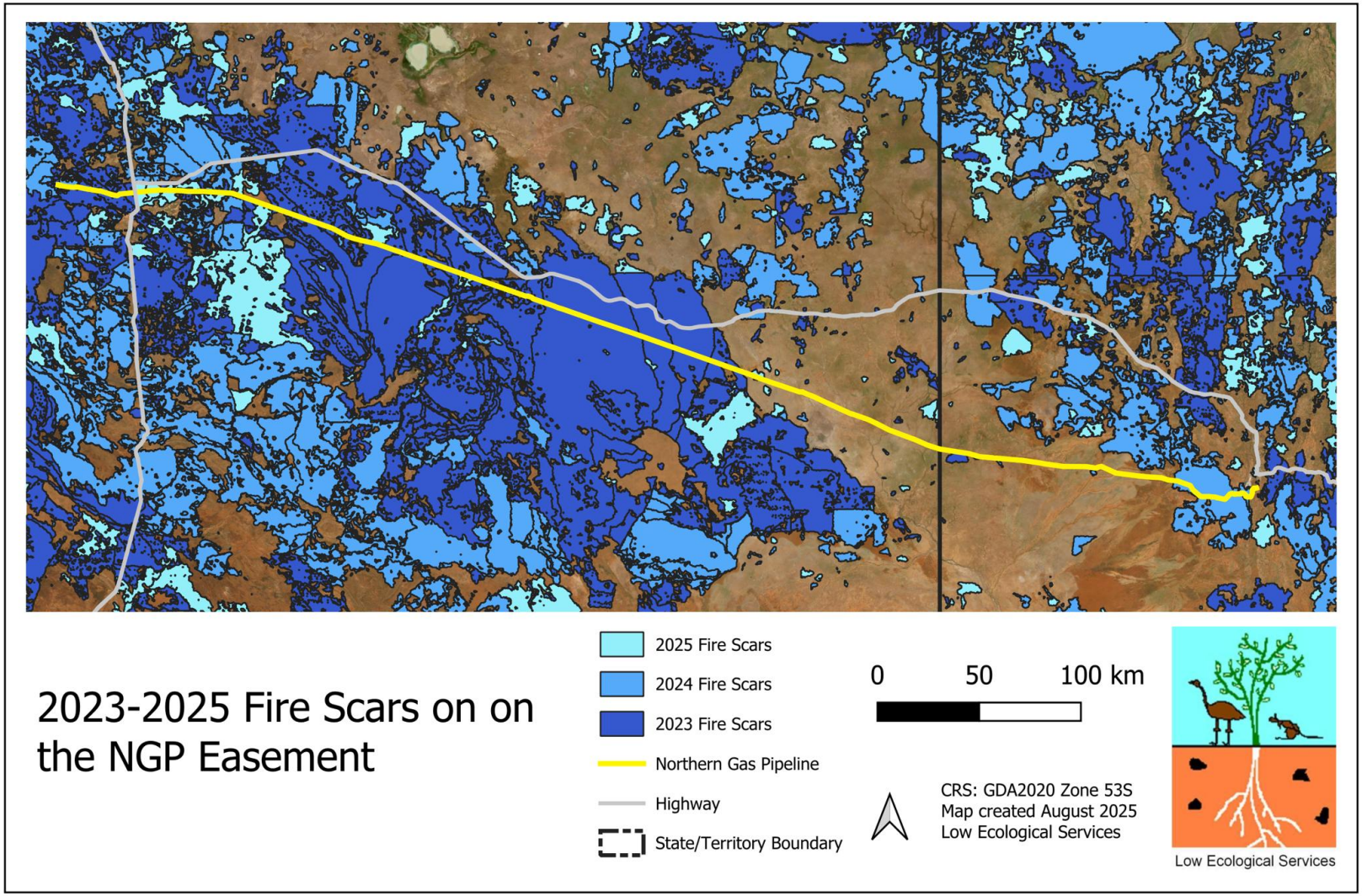

Figure 2-2. Fire activity along NGP ROW between January 2023 and June 2025.

2.3. Biogeographic regions

The Interim Biogeographic Regionalisation of Australia (IBRA) provides a division of Australia in geographically distinct bioregions based on common climate, geology, landform, native vegetation, and species information (Thackway & Cresswell, 1995). The NGP ROW falls within four biogeographic regions described in Table 2.

Table 2. Biogeographic regions intersecting the NGP ROW.

Region	Description
Davenport Murchison Ranges (NT)	Area: 58,050 km^2, characterised by a chain of rocky ranges surrounded by lowland plains. Vegetation is predominantly eucalypt low, open woodland and acacia-sparse shrubland over hummock grassland. Semiarid to subtropical climate, most rainfall occurs in summer and is higher in the north of the bioregion. Spatially averaged median (1890–2005) rainfall is 289 mm.
Tanami (NT)	Area: 259,970 km^2, characterised by featureless sand plains with small areas of alluvial plains, low ridges and stony rises. Vegetation is predominantly spinifex hummock grassland with a tall-sparse shrub overstorey. Climate is semiarid with a monsoonal influence. Rainfall is summer dominant and the spatially averaged median (1890–2005) rainfall is 298 mm.
Mitchell Grass Downs (Qld)	Area: 335,320 km^2, characterised by largely treeless plains with some occasional ridges, rivers and gorges. The dominant vegetation type is Mitchell tussock grasslands. Dry monsoonal to semiarid climate in the south and subhumid tropical climate in the north. Spatially averaged median (1890–2005) rainfall is 332 mm, but some parts receive more than 500 mm each year.
Mount Isa Inlier (Qld)	Area: 66,640 km^2, characterised by rugged hills and mountain ranges separated by undulating valleys. The predominant vegetation is low open woodland over spinifex hummock grassland. Hot and semiarid climate with summer-dominant rainfall. Spatially averaged median (1890–2005) rainfall is 388 mm.

2.4. Land Systems

Land systems have long been used as classification units and are suggested as effectively representing broad patterns of different biological assemblages across the landscape (Oliver, 2004). The NGP ROW intersects several land systems which are described in Table 3 and mapped in Figure .

Table 3. Land systems intersecting the NGP ROW.

Land System	Description
Austral	Several small areas of gently undulating Mitchell grass plains near Brunette Downs homestead in the Barkley Basin and between Austral Downs and Carandotta Homesteads in the Georgina Basin.
Barkly	Very gently undulating to nearly flat Mitchell grass plains covering much of the area commonly referred to as the Barkly Tableland.
Bundella	Undulating, sandy, low-scrub country extending from Barkly Downs Homestead and south towards Admore Homestead.
Camil	This gently undulating country with spinifex and low shrubs has leached limestone soils; it occurs as one large and several small areas west of Lake Nash Homestead.
Camilrock	Several small areas of gently undulating country with numerous limestone outcrops and carrying spinifex and low shrubs to the west and north-west of Lake Nash Homestead.
Georgina	Flat to gently undulating plains and alluvial plains. Slopes 0-4% and mainly <2%.
Gosse	Several small, scattered areas of sandy, seasonally flooded flats in the south-west '"desert" portion of the region.
Kalalla	Flat to very gently undulating plains with occasional internal drainage depression. Slopes <2%.
Mt Isa	This lightly timbered, rugged, hilly country with north-south ridges extend from the south-east corner of the area to about 193 km north and west of Lawn Hill Homestead.
Prentice	Gently undulating country carrying scrubby vegetation and occurring between Wonorah and Frewina on the Barkly Highway.
Tennant Creek	An area of lightly timbered flat-topped hills and broad valleys in the south-west corner of the region.
Waverly	A broken strip of hilly lightly timbered granite country with mostly steep to moderate slopes which extends from the south-east corner of the region to the north of Mt. Isa.
Wonardo	Irregular areas of gently undulating to nearly flat Mitchell grass plains confined to the Georgina valley in the south-east portion of the region.
Wonorah	Gently undulating country with deep lateritic soil and low scrubby vegetation. There is one large area in the south-west and numerous scattered areas in the central and eastern portions.
Wonorah-Barkly	Gently undulating country with deep lateritic soil and low scrubby vegetation. There is one large area in the south-west and numerous scattered areas in the central and eastern portions.
Yelvertoft	Numerous widely separated areas of undulating timbered country in the south half of the region with gravelly and stony lateritic soils.

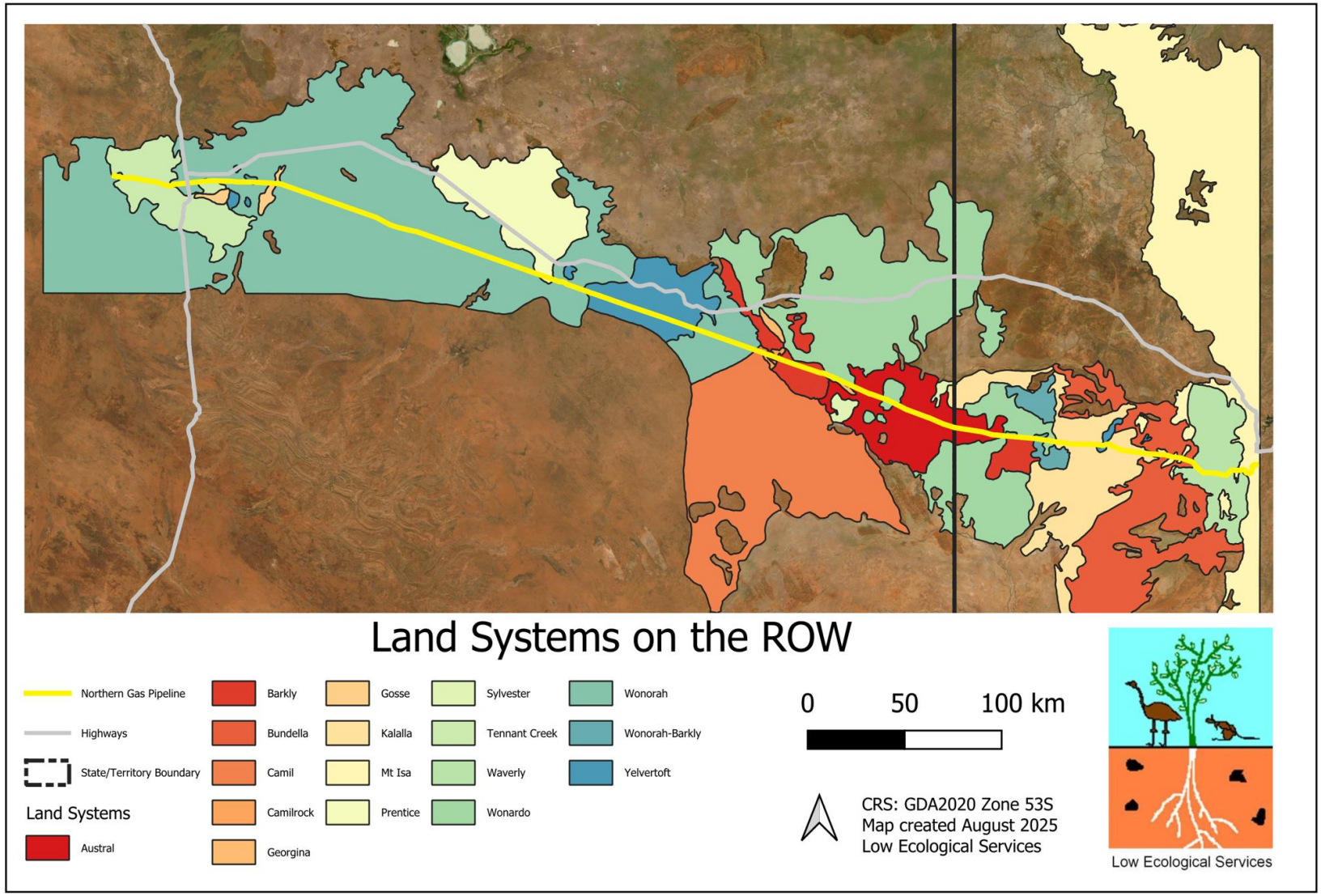

Figure 2-3. Land systems intersecting the NGP ROW.

3. METHODOLOGY

The NGP ROW was traversed from west to east in two 4WD vehicles. The survey was conducted over 7 days from the 23rd - 29th June 2025, with the two vehicles leapfrogging each other to survey approximately 25 km at a stretch.

Key point (KP) locations marked along the pipeline denote distance (kilometres) from the western end of the NGP, starting at the gate to the Phillip Creek Compressor Station (KP0). The survey was broken down into 25 sections, with 25 kilometres in each section e.g. KP0 - KP25, with the exception of the final section which was 22 kilometres (KP600 - KP622). Data collected for Map 18 (KP 425 to KP 450) was lost due to a technological issue.

Locations inspected during the survey included the ROW, laydown areas, waterway crossings, and areas of works conducted since the completion of the pipeline. Locations identified in previous transitional rehabilitation assessments as not meeting the criteria were also assessed.

Observations, photos and notes were recorded on tablets using the Avenza Maps application and GPS devices and were subsequently analysed using QGIS mapping tools.

Four key rehabilitation indicators were assessed; weed infestation, land stability, revegetation, and plains death adder habitat rehabilitation. Assessment methodologies for each rehabilitation factor are outlined below.

3.1. Weeds

Identified weed species and locations were recorded with a description and classification of density within the NGP ROW and the adjacent land. Weeds recorded were both declared species and non-declared species. Photos were taken to demonstrate density for declared species. All previously recorded weed locations were assessed and compared where relevant.

3.2. Land Stability

Land stability issues, such as erosion, subsidence, and compromised berms were recorded with a description of the instability that had occurred as well as remediation recommendations.

All issues were given a score between 1-5 reflecting the severity of the issue:

1. Significant issues that require remediation.
2. Moderate issues that could become significant and require remediation.
3. Moderate issues that require remediation.
4. Minor issues that require monitoring.
5. Very minor issues that require monitoring.

Previously recorded land stability issues were assessed and compared where relevant.

3.3. Revegetation

Revegetation condition was recorded along the entirety of the pipeline easement. The assessment focused on the level of vegetation cover to identify the efficacy of revegetation methods, particularly in assisting land stability and ensuring suitable native species were regenerating. The similarity of revegetation species composition to surrounding remnant vegetation and the relevant land systems was broadly considered however species compositions were not assessed in detail.

All areas were given a score between 1-5 reflecting the state of revegetation:

1. No revegetation evident in any stratum.
2. Vegetation cover is sparse and limited to one or two strata, is in poor condition and/or has weed infestations.
3. Moderate vegetation cover and condition in either ground or shrub stratum, may include sparse vegetation in other relevant stratum, species composition broadly suitable to relevant land system.
4. Moderate to dense vegetation cover in two or more stratum, species composition suitable to relevant land system.
5. Excellent vegetation cover in all relevant strata, condition, and species composition comparable to adjacent vegetation and relevant land system.

All previously recorded revegetation classifications and comments were assessed and compared where relevant.

3.4. Plains Death Adder Habitat

Targeted habitat surveys were conducted at 14 locations (MG01-MG14) along the ROW in the Mitchell Grasslands, six in the NT and eight in Qld.

At each site, all flora species were documented within two 100 m² quadrats: one located on the ROW and the other in adjacent, equivalent habitat off the ROW. Ground cover characteristics (including plant species, non-vegetative cover such as rock or bare ground) were recorded at 1-metre intervals along two 100-metre transects, both on and off the ROW. The number of soil cracks holes observed along each transect was also recorded.

For each site, the composition of vegetation species was compared in the transect on the pipeline with the quadrat off the pipeline. The target for rehabilitation was 70% of species that occurred off the ROW should also occur on the ROW.

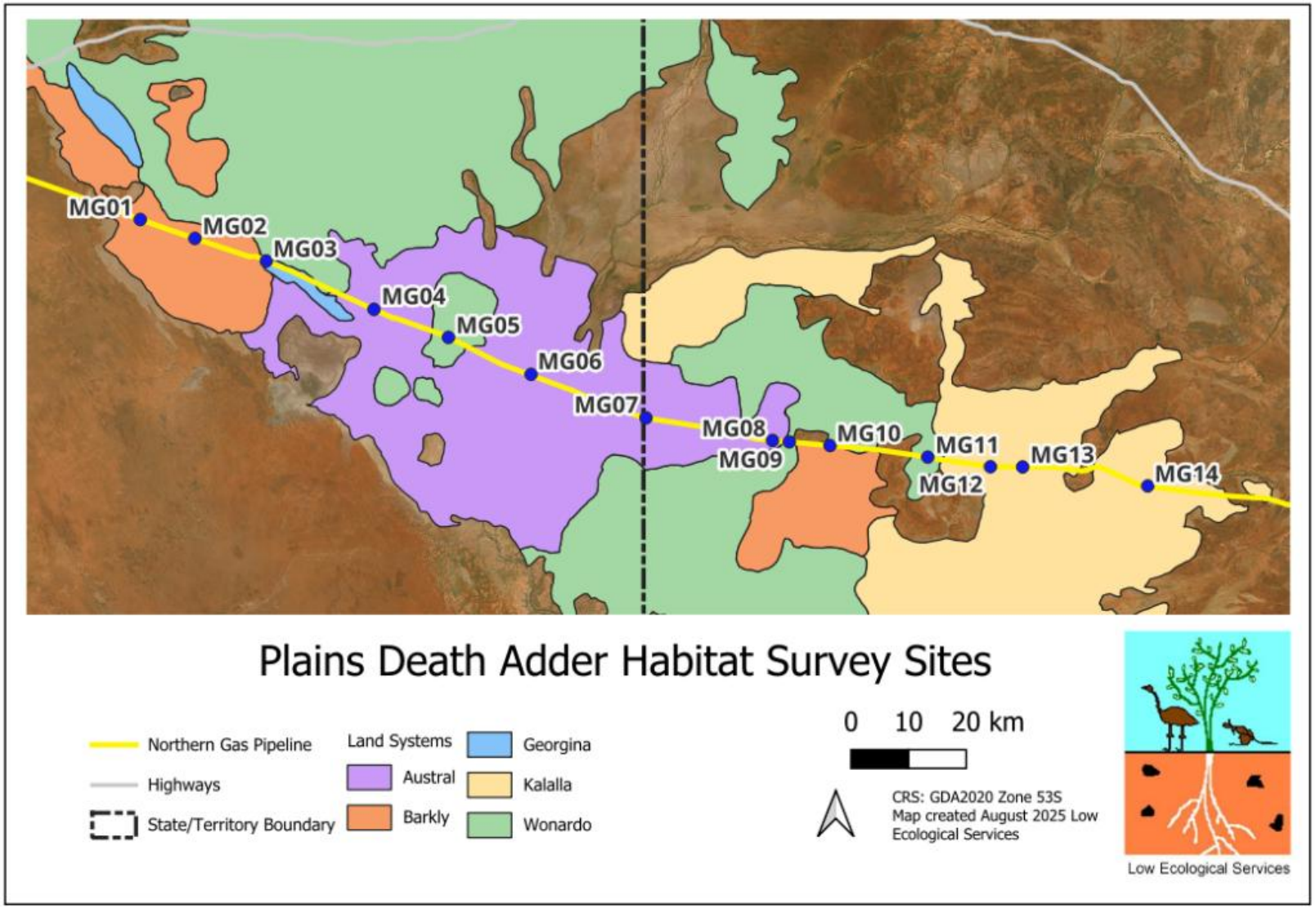

Figure 3-1. Plains death adder habitat survey sites MG01-MG14 on the NGP. Note MG06 is approximate only.

4. FIELD SURVEY RESULTS

The following results do not include data collected between KP 425 to KP 450 which was lost to due to a technological issue. All GPS points are provided in Appendix A, along with detailed information on each data point.

4.1. Weeds

The presence of weeds along the pipeline easement was similar to previous years (LES 2023, LES 2024). Some species have increased, especially kapok at the eastern end of the easement. There were very few instances of weeds previously recorded that could not be found on this survey. Several new areas of weed infestation were identified that were not recorded in 2024. Examples of weeds observed on the transitional rehabilitation assessment are shown in Figure .

Weed occurrences were typically in low density within the ROW and mostly the result of encroachment from adjacent pastoral land. This suggests that reestablishment of weeds is likely in most areas even if Jemena undertake actions to remove weeds from the easement. Parts of the ROW are used as access tracks for vehicles not associated with the NGP, this can also contribute to the spread of weed species along the ROW.

Introduced flora species identified on the rehabilitation assessment in 2025, their status in NT and Qld, and whether they are classified as a Weed of National Significance (WONS) are listed in Table 4. Declared weed species recorded included Noogoora burr and mesquite, which should be managed as a priority.

As noted in the 2023 and 2024 transitional rehabilitation assessments, an exception to the overall weed management performance is the persistence and continued spread of Kapok Bush (*Aerva javanica*) along the easternmost 40 km of the pipeline easement. The encroachment of Kapok Bush into adjacent areas was first observed in 2023, and its spread has further increased in 2024 and 2025. This indicates that the dense population within the easement is expanding both westward along the corridor and into surrounding land.

This is significant, as the RMP includes the performance indicator: *"No weed incursion or spread within the NGP footprint."* The observed spread of kapok bush does not meet this criterion.

The patch of kapok identified in 2024 near a Cathodic Protection site at KP 566.4 has increased significantly. This patch was not recorded during the 2023 assessment and, given the absence of kapok bush near other ROW infrastructure, is likely to have been introduced via vehicle movement during ROW inspections. This constitutes another breach of the RMP performance indicator. The patch at KP 566.4 should be prioritised for treatment and removal to prevent further spread.

Refer to Appendix A for detail information on weed species and location.

Table 4. Introduced flora species observed during the survey.

Common Name	Scientific Name	NT Weed Category*	Qld Weed Category**	WONS
Mesquite	*Prosopsis* sp.	Class A and Class C	Category 3	Yes
Prickly Acacia	*Vachellia farnesiana*	Class A and Class C	Other	No
Parkinsonia	*Parkensonia aculeata*	Class B and Class C	Category 3	No
Rubber Bush	*Calotropis procera*	Class B and Class C (south of 16°30' S latitude)	Other	No
Noogoora Burr	*Xanthium strumarium*	Class B and Class C	Other	No
Buffel Grass	*Cenchrus ciliaris*	Declared (unclassified)	Not Listed	No
Kapok Bush	*Aerva javanica*	Not Declared	Not Listed	No
Fleabane	*Conyza* sp.	Not Declared	Not Listed	No
Paddy Melon	*Cucumis myriocarpus*	Not Declared	Not Listed	No
Spiked Malvastrum	*Malvastrum americanum*	Not Declared	Not Listed	No
Verbena	*Verbena* sp.	Not Declared	Not Listed	No

*NT weed categories: Class A - to be eradicated, Class B - growth and spread to be prevented, Class C - not to be introduced.
**Qld Weed categories: Category 3 - restricted (cannot be given away, sold or released into the environment).

Mesquite (*Prosopsis sp.*)

Mesquite was observed at nine locations this year, three times more than in 2024. This increase in numbers is of concern as mesquite is a WONS, Class A and C in the NT and Category 3 weed in Qld. All sightings of mesquite not yet found in Queensland must be reported to Biosecurity Queensland within 24 hours of the sighting. Landholders, including Jemena, have an obligation to manage impacts of mesquite on their land.

Prickly Acacia (*Vachellia farnesiana*)

There were also an increased number of prickly acacias observed on the pipeline easement this year. Generally, they were in localised patches along the easement associated with drainage depressions or creek lines and frequently associated with other individuals in the adjacent pastoral land outside of the easement. Although the presence of the acacia may be associated with acacias in the surrounding lands, as a Class A listed species in the NT, efforts should be made to eradicate the plant. Disturbed soils associated with the pipeline may be providing prickly acacia with opportunities to become established.

Parkinsonia (*Parkinsonia aculeata*)

Parkinsonia was identified in one riparian area in 2025. There were two observations of the species in 2024, one could not be identified this year.

Rubber Bush (*Calotropis procera*)

Only one individual rubber bush was observed on the pipeline easement this year. Previously, it was observed at three locations.

Noogoora Burr (*Xanthium strumarium*)

The number of Noogoora burr patches observed on the pipeline easement has steadily increased over the previous couple of years and appears to be associated with pastoral activities. High density populations were observed in riparian corridors and areas of high cattle activity. There were also several observations of individual plants, often associated with gates and infrastructure (e.g. pipeline signs, monitoring poles).

Management actions should be taken to reduce its distribution, targeting areas around infrastructure and waterways. This is a high priority as the species is listed as a WONS. Low density isolated patches should be a priority to control and eliminate.

Buffel Grass (*Cenchrus ciliaris*)

Buffel grass was predominantly observed at both ends of the pipeline easement, which is consistent with expectations given the higher levels of vehicle traffic in these areas and the appropriate habitat. A section of buffel grass between KP XX and XX south of Barkly Homestead, appears to have been established by pastoral activities rather than as a direct result of pipeline operations. A dense patch of buffel grass recorded between KP 210 and KP 238 in the Northern Territory in 2023 and 2024 remains present, with evidence of minor spread to KP 246 observed in 2025. Isolated high-density patches were recorded in 2024 were also present this year in the railway corridor near KP 16 and also at KP 6 and 51. These isolated patches should be targeted to prevent further spread.

The recent declaration of Buffel grass as a weed under the *Weeds Management Act 2001* by the Northern Territory Government has increased the significance of managing these populations. The forthcoming classification will guide the specific control measures required.

Dense Buffel grass growth was also observed in the final 40 km of the eastern end of the pipeline easement—an area that also contains dense Kapok Bush. Unlike the Kapok Bush, this Buffel grass incursion is likely the result of spread from surrounding land, rather than direct disturbance associated with the pipeline.

Kapok Bush (*Aerva javanica*)

In a similar stretch (KP 222 to 238), kapok has become established, and it is well-established along the pipeline from KP 556 to 618. This is likely an impact of the pipeline and disturbed ground. Recent fires have reduced kapok presence KP 613 to 615 and it is a potential

management option. The increase of kapok since previous surveys (July 2023, July 2024) is an indicator that remediation actions should be implemented to prevent further spread. It is also recommended that kapok immediately adjacent to the easement, likely to have established because of activities associated with the pipeline, be removed. Fire reduces seed and adult plants, chemical control required during rapid growth stage of seedings (following rainfall)

Fleabane (*Conyza* sp.)

One individual was observed on the pipeline easement; no observations of the species had been recorded prior. This species should be targeted to prevent it becoming established on the ROW.

Prickly Paddy Melon (*Cucumis myriocarpus*)

Three individual was observed on the pipeline easement; no observations of the species had been recorded prior. This species should be targeted to prevent it becoming established on the ROW.

Spiked Malvastrum (*Malvastrum americanum*)

Malvastrum is widespread across the Barkly Tablelands and is more likely associated with pastoral activities than with the pipeline itself. However, disturbance caused by pipeline construction and maintenance has likely facilitated its growth. Given its extensive distribution across pastoral lands, further spread along the pipeline corridor is likely. Eradication of this species is considered highly unlikely.

Verbena (*Verbena* sp.)

One individual was observed on the pipeline easement; no observations of the species had been recorded prior. This species should be targeted to prevent it becoming established on the ROW.

Weeds not Observed

Horehound (*Hyptis suaveolens*) was recorded within the ROW in 2023; however, it was not observed during the 2024 or 2025 surveys. This absence may be attributed to fire activity in areas where the species was previously recorded or due to suppression by competing groundstorey vegetation, particularly in years with higher vegetation cover. Although horehound has not been detected in the past two assessments, its presence in 2023 indicates that it remains a potential concern. Targeted monitoring following periods of increased rainfall is recommended to enable early detection and management of any re-emergence.

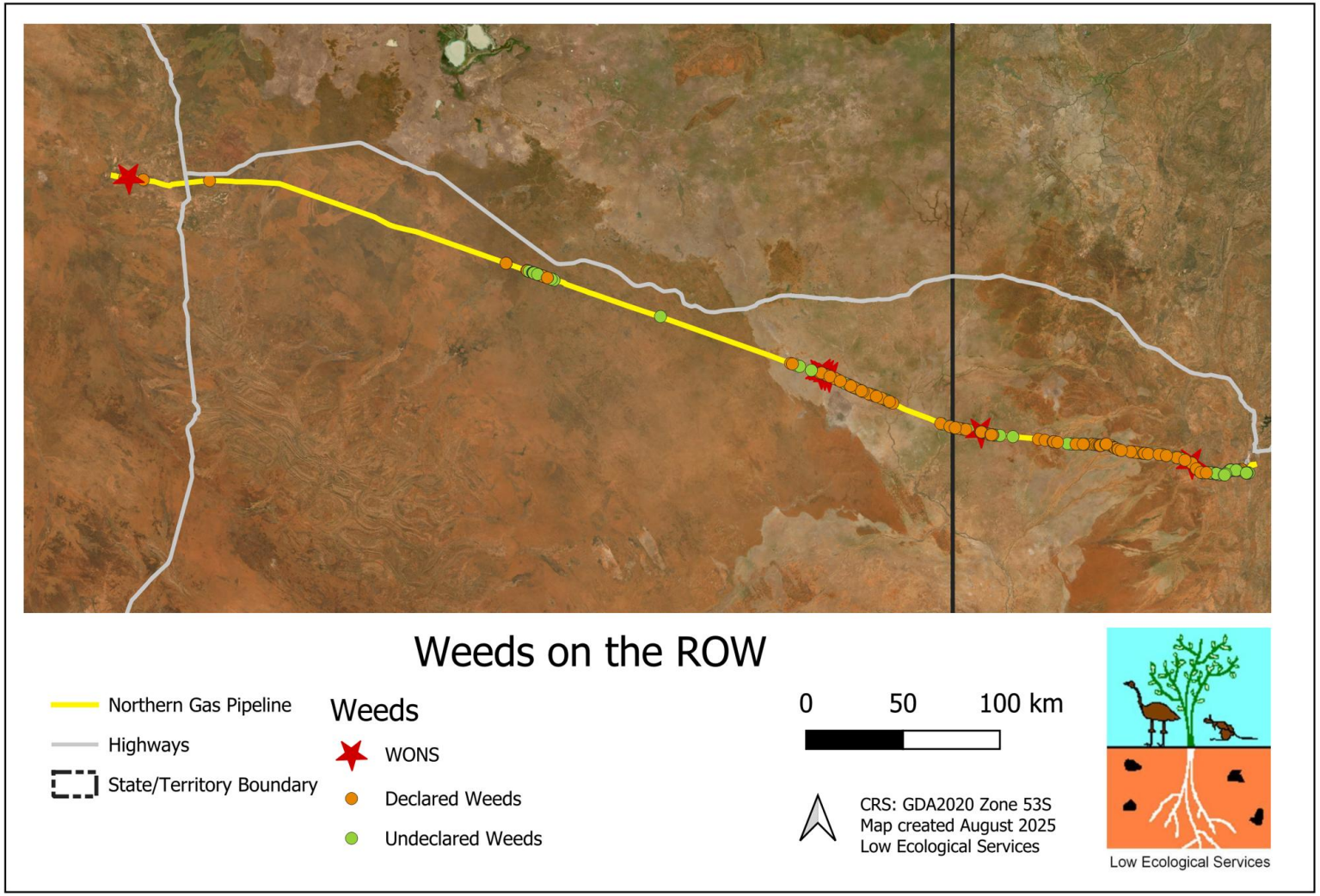

Figure 4-1. Introduced flora species observed during the survey displayed by weed classification. Refer to Table 4 for state and territory categories.

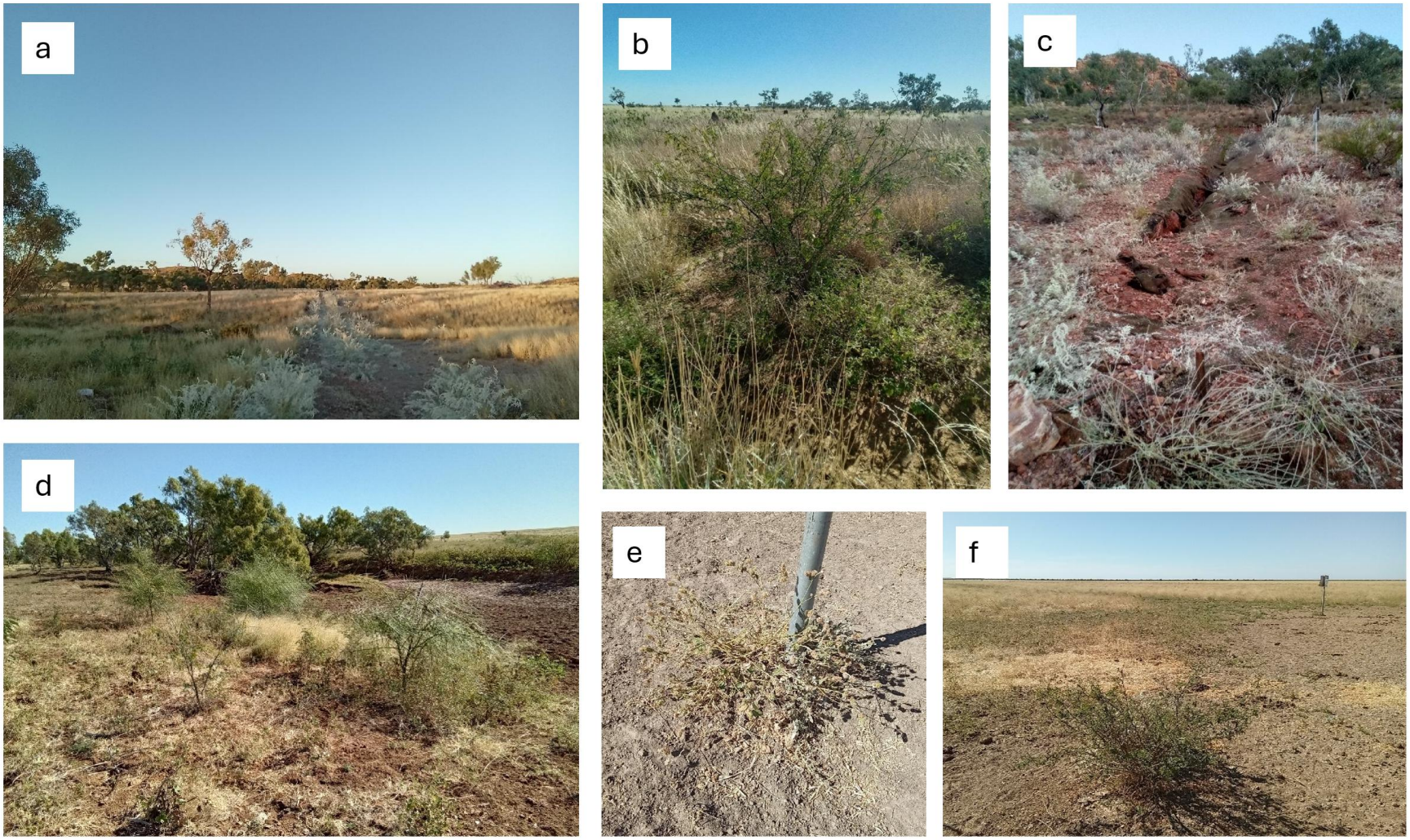

Figure 4-2. Images from the transitional rehabilitation assessment survey: a) Kapok bush along vehicle road on ROW, b) Spiky acacia, c) Kapok bush and erosion d) Mesquite e) Noogoora burr at base of infrastructure, likely from cattle scratching, f) multiple weed species including malvastrum, Noogoora burr and spiky acacia

4.2. Land Stability

4.2.1. Erosion

Erosion was recorded at numerous locations along the easement; however, approximately 60% of these instances were classified as minor, and only 5% were considered moderate to severe. The breakdown of erosion severity is as follows:

Level 1: Significant issues requiring remediation – 2%

Level 2: Moderate issues with potential to become significant, requiring remediation – 3%

Level 3: Moderate issues requiring remediation – 24%

Level 4: Minor issues requiring monitoring – 31%

Level 5: Very minor issues requiring monitoring – 32%

In addition, erosion directly attributed to vehicle activity accounted for approximately 9% of the records.

Remediation work has seen instances of erosion decrease along the length of the pipeline easement since it was last surveyed in 2024 (Table 5).

Table 5. Number of erosion instances in 2024 vs 2025.

Erosion classification	Number of Observations in 2024	Number of Observations in 2025
Level 1	7	4
Level 2	28	7
Level 3	66	51
Level 4	270	66
Level 5	19	68

As noted in previous surveys (LES 2023, LES 2024), the majority of erosion was confined to the access track within the ROW, where limited vegetation cover increased susceptibility to erosion. Sheet erosion was the most common form.

Grading activities are likely to increase susceptibility to erosion both in areas where berms had been removed, and in areas where grading has formed windrows. Windrows have the potential to cause altered water flow and encourage erosion by preventing water from leaving the easement.

Gully erosion was observed primarily in areas adjacent to or along drainage lines. In some areas, erosion was caused or exacerbated by cattle movement along the access track.

Along the ROW there were sections where the surface of the easement was lower than the surrounding landscape. These sections are likely to alter the natural waterflow in the area and cause water to pool and flow down the easement. Erosion was found on the edge of these low areas extending into the easement due to the difference in ground level.

Examples of varying degrees of erosion observed in the transitional rehabilitation assessment are shown in Figure and Figure .

All Level 1 and Level 2 erosion should be prioritised for remediation through filling and the installation of erosion control berms. Where earthworks machinery is already operating in the vicinity, opportunistic rehabilitation of Level 3 erosion should also be undertaken. Level 4 and Level 5 erosion can generally be managed through the installation of erosion control berms alone. Management of erosion near water crossing should also be prioritised. Vehicles should be encouraged to stay on the access track to reduce vehicle erosion across other areas of the ROW.

Similar to the 2024 transitional rehabilitation assessment, high vegetation cover across significant portions of the ROW made accurate erosion assessment difficult in those areas. As a result, the extent of erosion may be underreported.

Locations of erosion issues are presented in Appendix A.

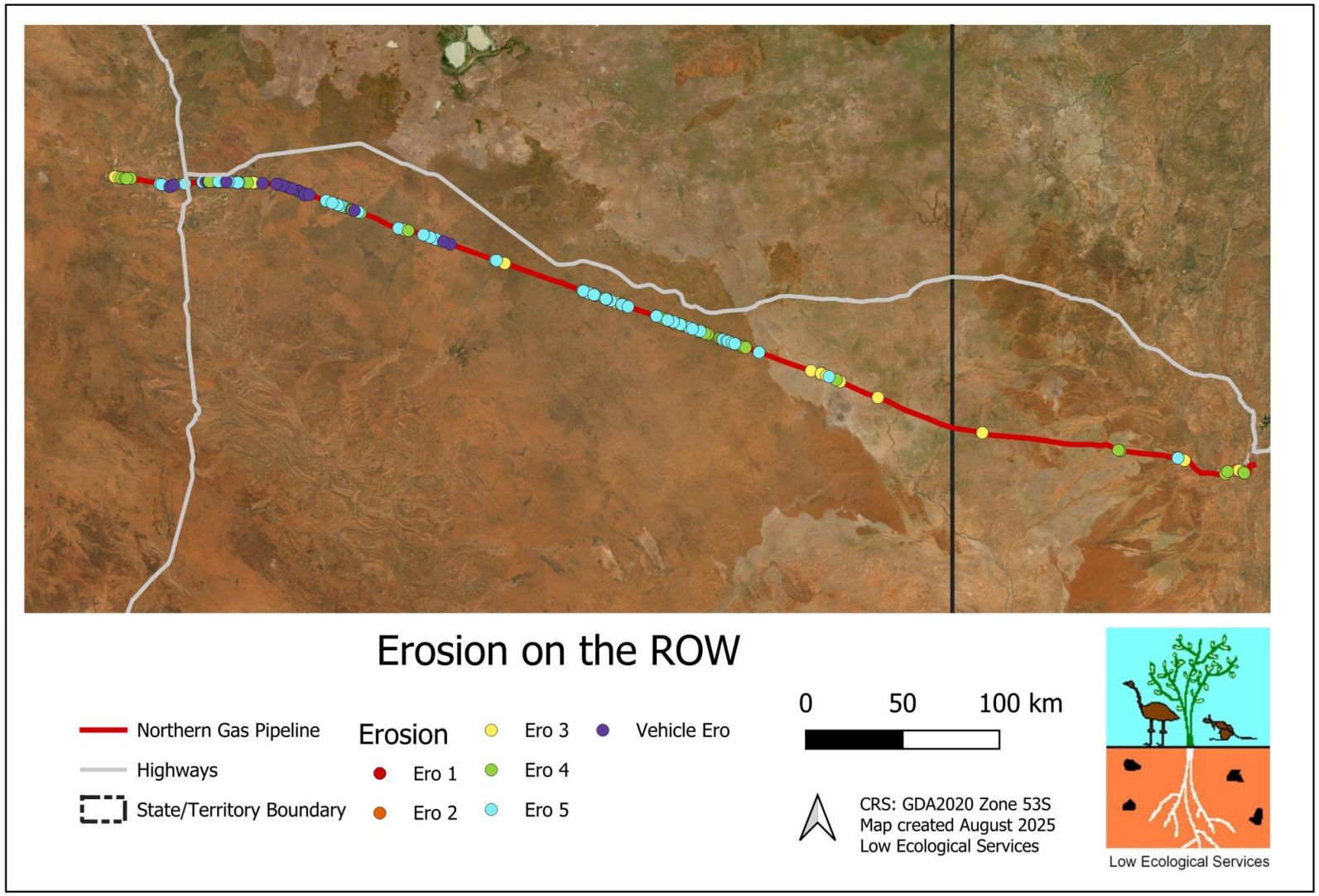

Figure 4-3. Locations of erosion observed on the NGP ROW in 2025.

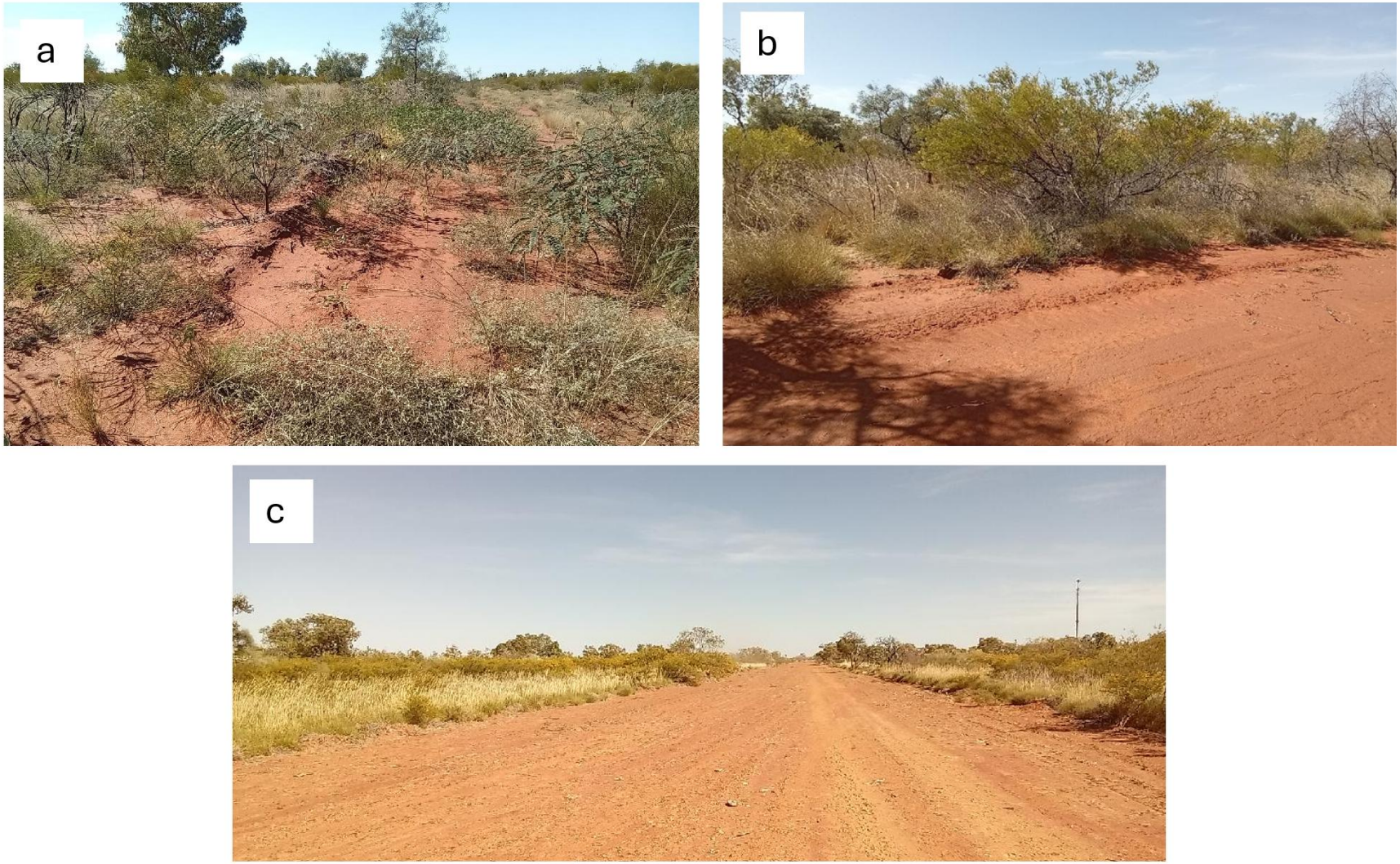

Figure 4-4. Images from the transitional rehabilitation assessment survey: a) Windrow that needs to be brought in, b) grading creating height difference c) overgraded section with berms removed, windrows built up and sheet erosion (level 5).

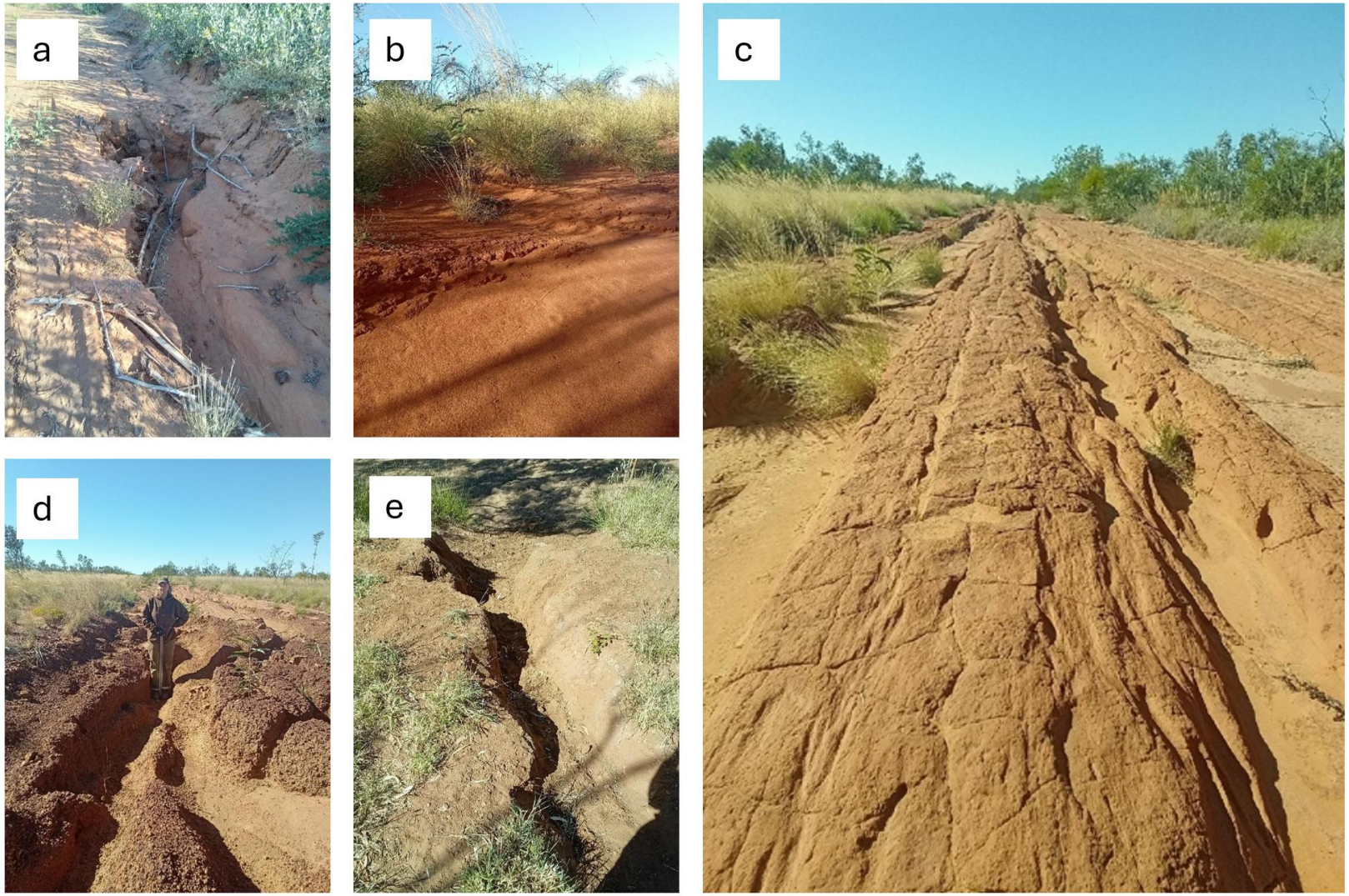

Figure 4-5. Images from the transitional rehabilitation assessment survey: a) erosion at a creek crossing, b) level 4 erosion, c) level 3 erosion, d) level 1 erosion, e) level 2 erosion.

4.2.2. Compromised Berms

Comparison of the number of compromised berms in 2025 to previous years is difficult, as grading activities on the western end of the pipeline have resulted in the complete removal of multiple berms. In these areas, multiple series of shallow berms must be constructed to prevent erosion on the ROW.

Of the berms that remain, 42 have been compromised. For comparison, in 2024 the number of compromised berms increased to 65, compared to a total of 28 in 2023. In 2024, compromised berms were most prevalent on the western end of the ROW, where many of the berms have now been completely removed.

Damage was most often due to water erosion, resulting in erosion channels forming through the berms or the berms being washed out. There were several occurrences of water flowing around the ends of berms and back onto the ROW, rather than diverting outwards into adjacent land. This was often due to berms not extending far enough at the edges of the ROW.

Cattle tracking also caused erosion of berms in some instances, along with vehicle activity along the access track of the ROW. Several berms were ineffective due to their orientation on the ROW, where their construction did not follow the natural lay of the land, causing water to flow directly back onto the ROW.

Many of the berms would be more effective if they extended beyond the disturbed area of the ROW easement, allowing water to be diverted and dispersed onto adjacent undisturbed land. In some cases, this may not have been possible due to heritage buffers, which restricted berm construction to within the ROW. Some berms that do not extend beyond the easement fail to fully divert water off the ROW, allowing it to flow around the ends of the berm and continue channelling downslope, increasing the risk of erosion.

Several of the berms on the ROW were not appropriate in height and width. Rather than one tall narrow berm, which can impede vehicle and machinery movement, series of wide, shallow berms would be most effective.

All compromised berms should be repaired or reinstated promptly. Locations of observed compromised berms along the NGP ROW and proposed berm locations are presented in Figure . Refer to Appendix A for locations and recommendations regarding compromised berms and additional berms.

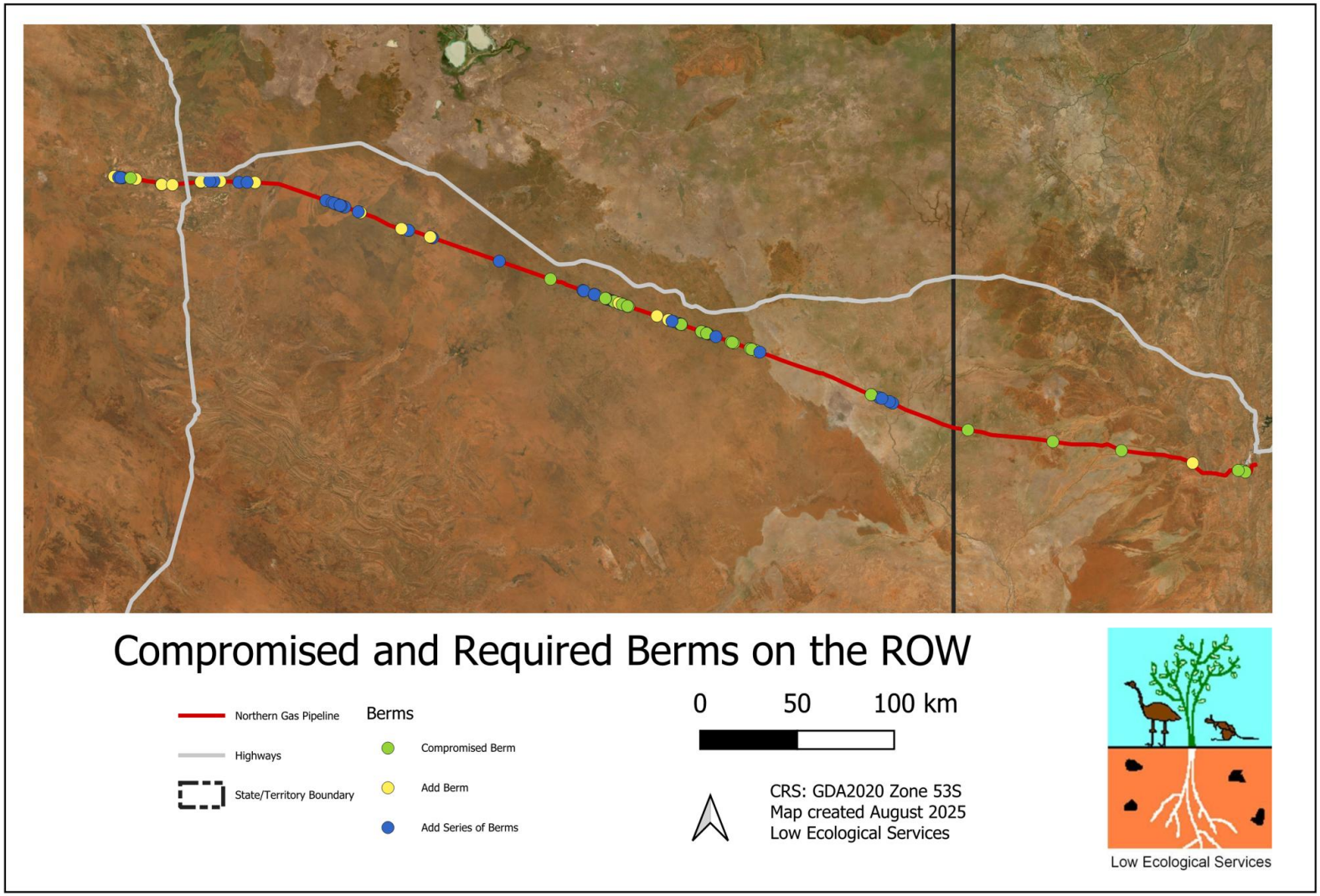

Figure 4-6. Locations of compromised berms observed on the NGP ROW in 2025.

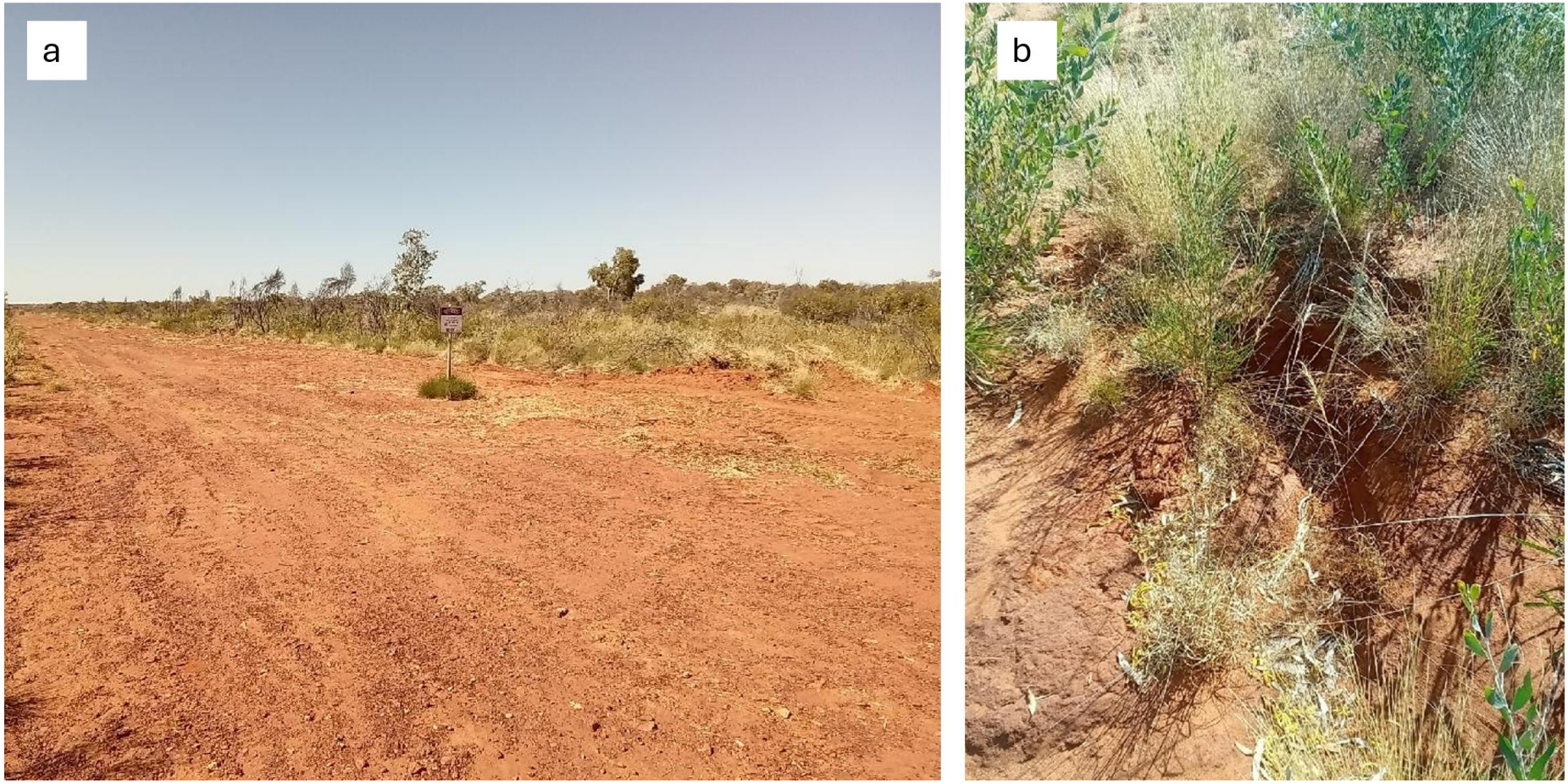

Figure 4-7. Images from the transitional rehabilitation assessment survey: a) berm has been removed in recent grading works b) compromised berm.

4.2.3. Subsidence

Subsidence issues were recorded at 17 locations along the ROW in 2025, a decrease from 57 instances recorded in 2024. This reduction is likely due to both a genuine decline in occurrences through remediation works and potentially influenced by differences in assessment between individual assessors.

Most of the observed issues were caused by water channelling and erosion across the pipeline, with some attributed to cattle and vehicle activity.

There were few instances of significant or moderate subsidence, most of which occurred in the Barkly Tablelands. It is recommended that all significant or moderate subsidence areas be remediated through filling, while minor subsidence should be monitored over time.

Locations of observed subsidence along the NGP ROW are presented in Figure . Refer to Appendix A for locations and recommended actions.

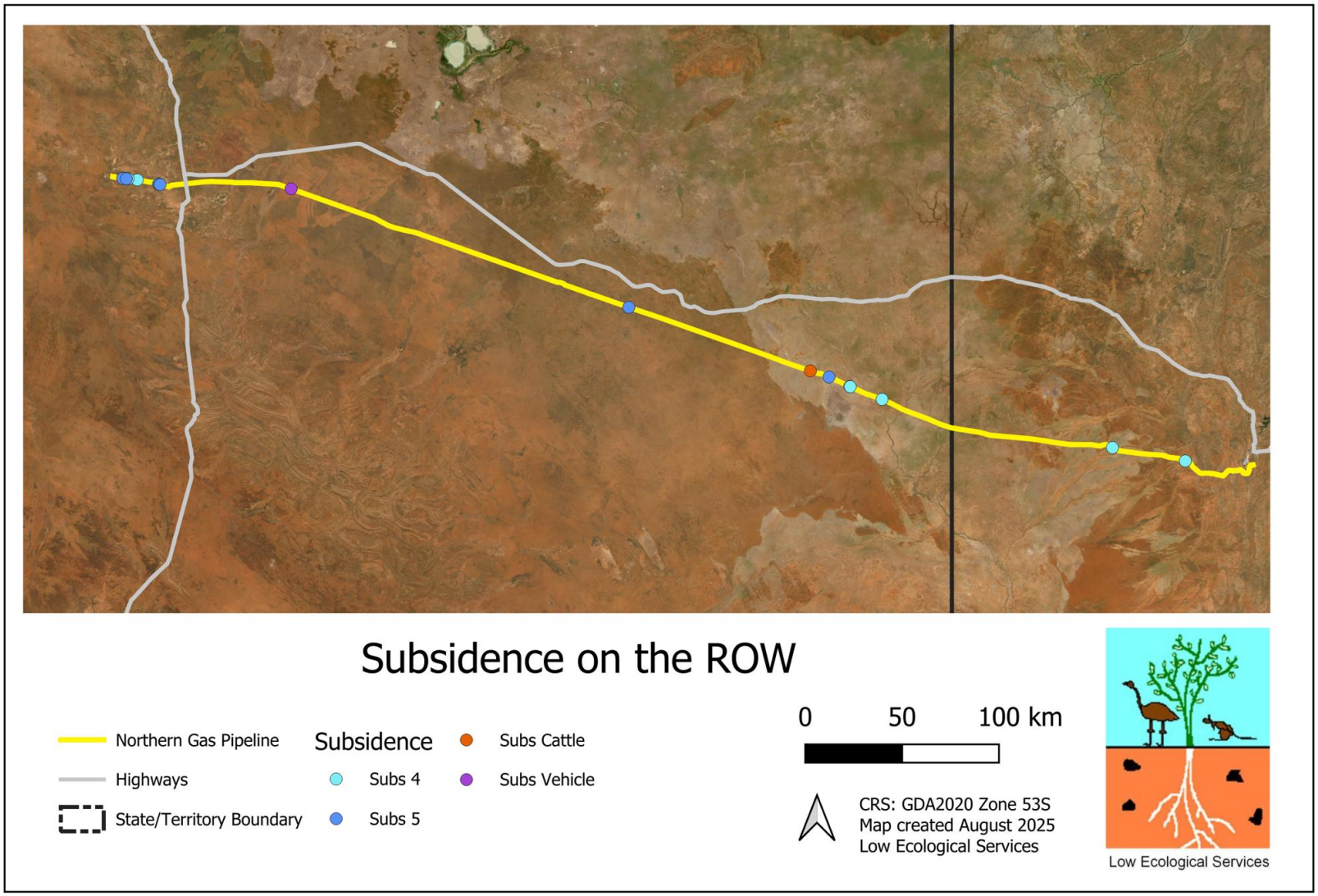

Figure 4-8. Locations of observed subsidence along the NGP ROW in 2025.

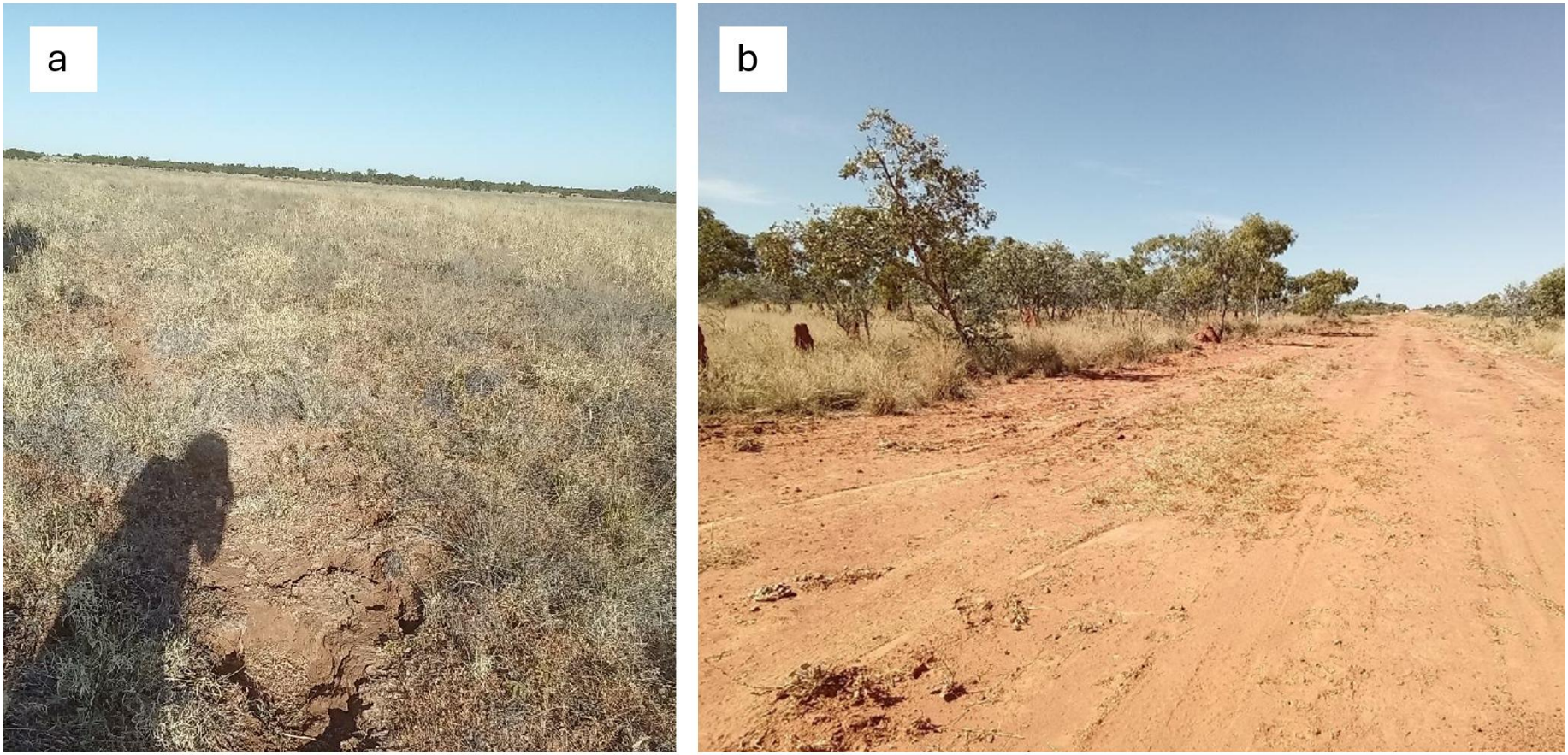

Figure 4-9. Images from the transitional rehabilitation assessment survey: a) level 2 subsidence, b) level 4 subsidence.

4.3. Land Stability Remediation

At the time of the transitional rehabilitation assessment in June 2025, grading and vegetation clearing were underway at the western end of the ROW. Similar activities were also occurring in this area during the 2024 assessment.

Much of the erosion and subsidence observed during the 2023 and 2024 assessments has been remediated (Figure).

However, as discussed above, some of the remediation work on the ROW has created new issues that now require further attention. In particular, grading has resulted in the formation of windrows, the removal of berms, and the accumulation of soil and plant material piles on the side of the ROW that need to be redistributed. In some locations, valuable topsoil has been pushed off the ROW, which is impeding revegetation. Locations of works required are shown in Figure

Figure 4-10. Image from the transitional rehabilitation assessment survey: remediated erosion.

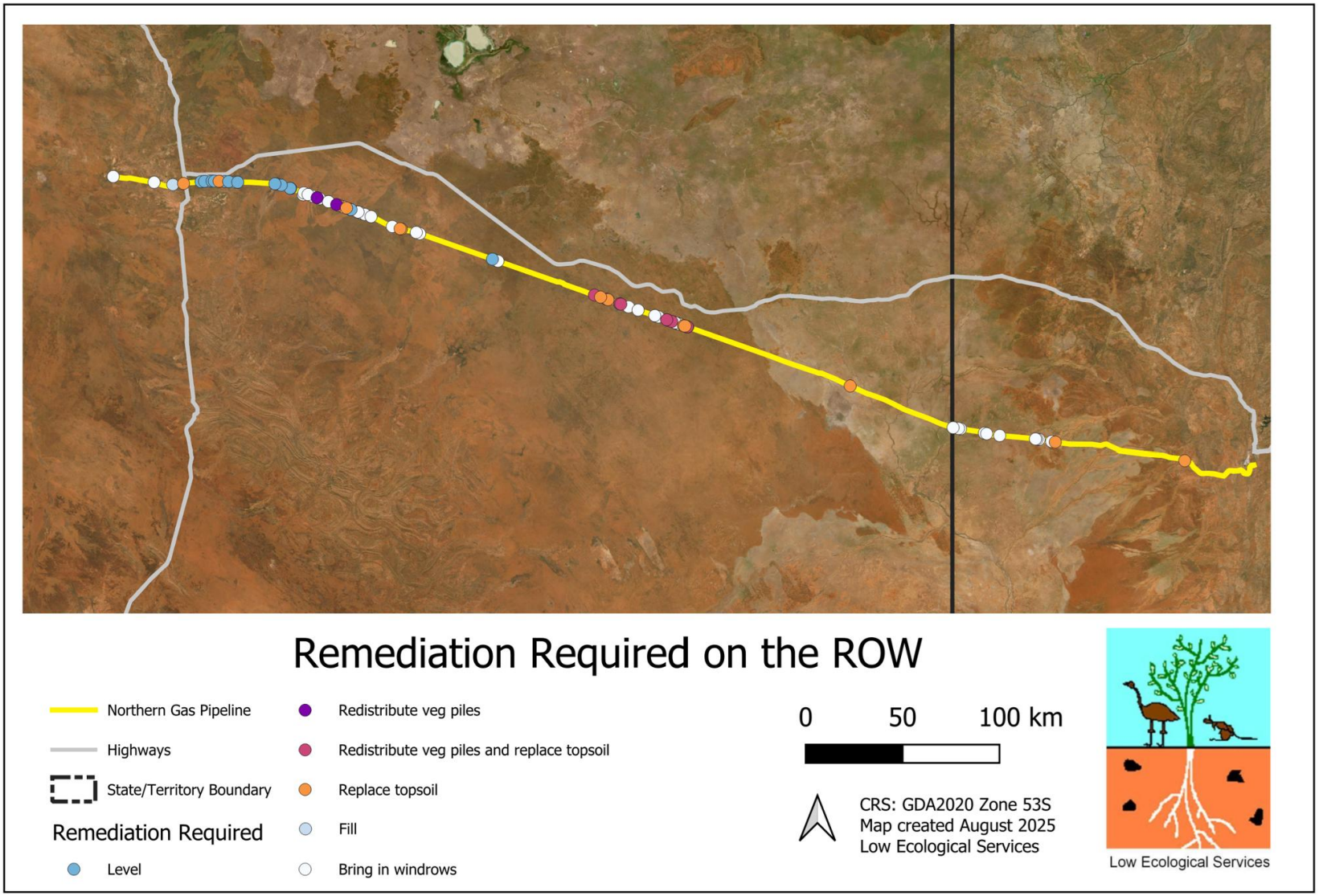

Figure 4-11. Location of additional remediation works required on the ROW.

4.4. Revegetation/Overgrowth

Revegetation

Vegetation cover across the ROW at the time of assessment was generally high. Extensive overstorey growth across significant stretches of the easement indicates that rehabilitation following construction is progressing, with the majority of the ROW assessed as exhibiting excellent revegetation. Notably, spinifex species were observed in areas previous assessments had noted the species had not yet reestablished.

This regrowth is likely supported by above-average rainfall during 2023 and 2024, and recent rainfall prior to the 2025 assessment. Most of the ROW had high species richness and ground cover; however, in some areas, thick overstorey vegetation was limiting the development of ground cover.

Vegetation extent across the ROW observed were as follows:

- Vegetation Level 1 – 6%
- Vegetation Level 2 – 15%
- Vegetation Level 3 – 19%
- Vegetation Level 4 – 19%
- Vegetation Level 5 – 41%

It should be noted that the vegetation on the ROW does not always reflect species composition and density in the surrounds. Often, species that thrive in disturbed soils are more abundant in the ROW. This is true for all land systems but more pronounced in some than others.

Some small areas along the ROW showed little to no regrowth, typically where topsoil had been removed due to erosion, grading, or the creation of laydown areas during construction. These areas are unlikely to regenerate without intervention. The addition of topsoil, ideally sourced from nearby cleared areas where stockpiles remain, is recommended to aid recovery The addition of topsoil will be needed and ideally, be similar to the surrounding soil. It was observed in areas which had been cleared, topsoil had been pushed to the side in piles, and this soil would be ideal to rehabilitate nearby erosion and topsoil loss (refer to Section 7.3).

Due to the excessive overstory growth and land stability issues, grading of the ROW had begun from the western end of the pipeline to approximately 88.6 km. This had remedied some erosion but also removed almost all vegetation from a 20 m width of the ROW.

As noted in both the 2023 and 2024 reports, the easternmost 40 km of the ROW remains heavily impacted by weed growth. This continues to limit native vegetation recovery. Targeted weed control in this area will assist in improving rehabilitation outcomes.

The ROW between KP 356 - KP 526 and KP 535 - KP 560 crossed the Barkley, Georgina, Wonardo, Austral, Wonorah-Barkley and Kalalla land systems of the Barkley Tablelands. This

section is characterised by open grass plans with very little woody vegetation growth. No overstory growth was observed along the ROW and the ground cover does not obstruct vision or impact on pipeline infrastructure, therefore can and should be maintained.

Overgrowth

Some sections of the ROW experienced significant overstorey growth, particularly between KP 251 and KP 296. These areas, situated within the Wonorah and Yelvertoft land systems, are dominated by stony quartz soils and support woody shrubs such as *Acacia hilliana*. Although these shrubs do not obstruct access, their woody structure qualifies them as overstorey vegetation, which may compromise land stability assessments and pose risks to pipeline integrity.

Dense overstorey vegetation was also observed across multiple other sections of the ROW, impeding access and obscuring signage and access tracks. To meet AS 2885 minimum vegetation management requirements, this overgrowth requires removal.

Grading works had commenced at the western end of the pipeline, near the Phillip Creek Compressor Station, extending to approximately 88.6 km. While this temporarily impacts ground cover, the existing vegetation has demonstrated resilience and is likely to re-establish under suitable conditions.

Overgrowth was reduced in 2025 compared to 2024, as targeted clearing activities were conducted across several sections. Cleared vegetation and topsoil were pushed into piles alongside the ROW. These piles are high in nutrients and contain viable seed banks, making them suitable for redistribution across degraded areas—provided fauna safety is considered during the process.

Regular maintenance, including slashing and overstorey suppression, will be necessary to prevent future re-establishment. Continued removal of overstorey vegetation is essential for pipeline integrity, access, and safety. Clearing activities should also be used to address land stability issues and to install or repair berms and other erosion control structures where needed.

Overgrowth along the NGP ROW is mapped in Figure , with recommended actions discussed in Section 7.3.

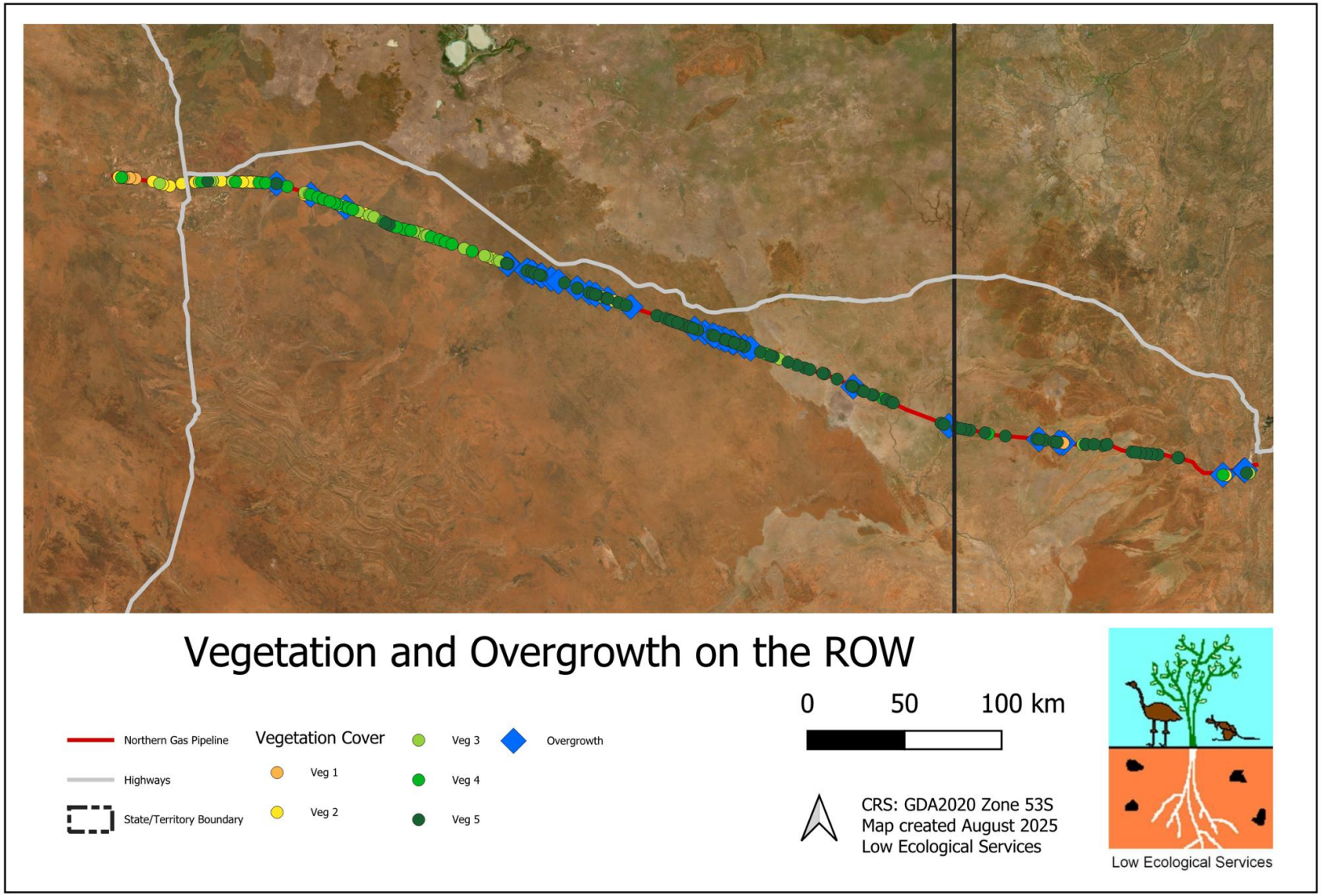

Figure 4-12. Overgrowth along the NGP ROW observed in 2025.

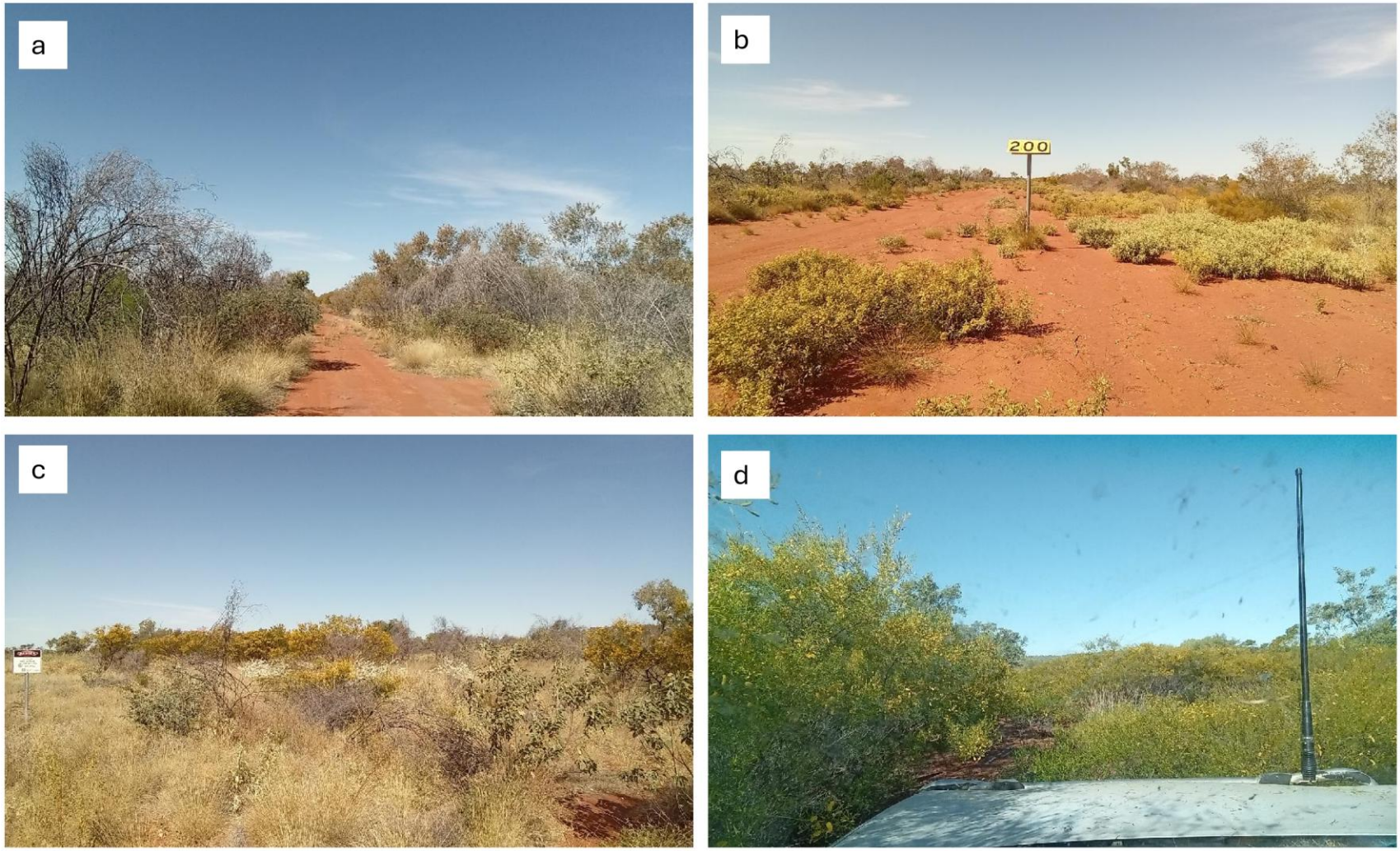

Figure 4-13. Images from the transitional rehabilitation assessment survey: a) level 5 vegetation, shrubs require clearing, landholder maintains road clear as effective fire break, b) level 2 vegetation, lack of topsoil impeding revegetation, c) and d) level 5 vegetation, shrubs require removal.

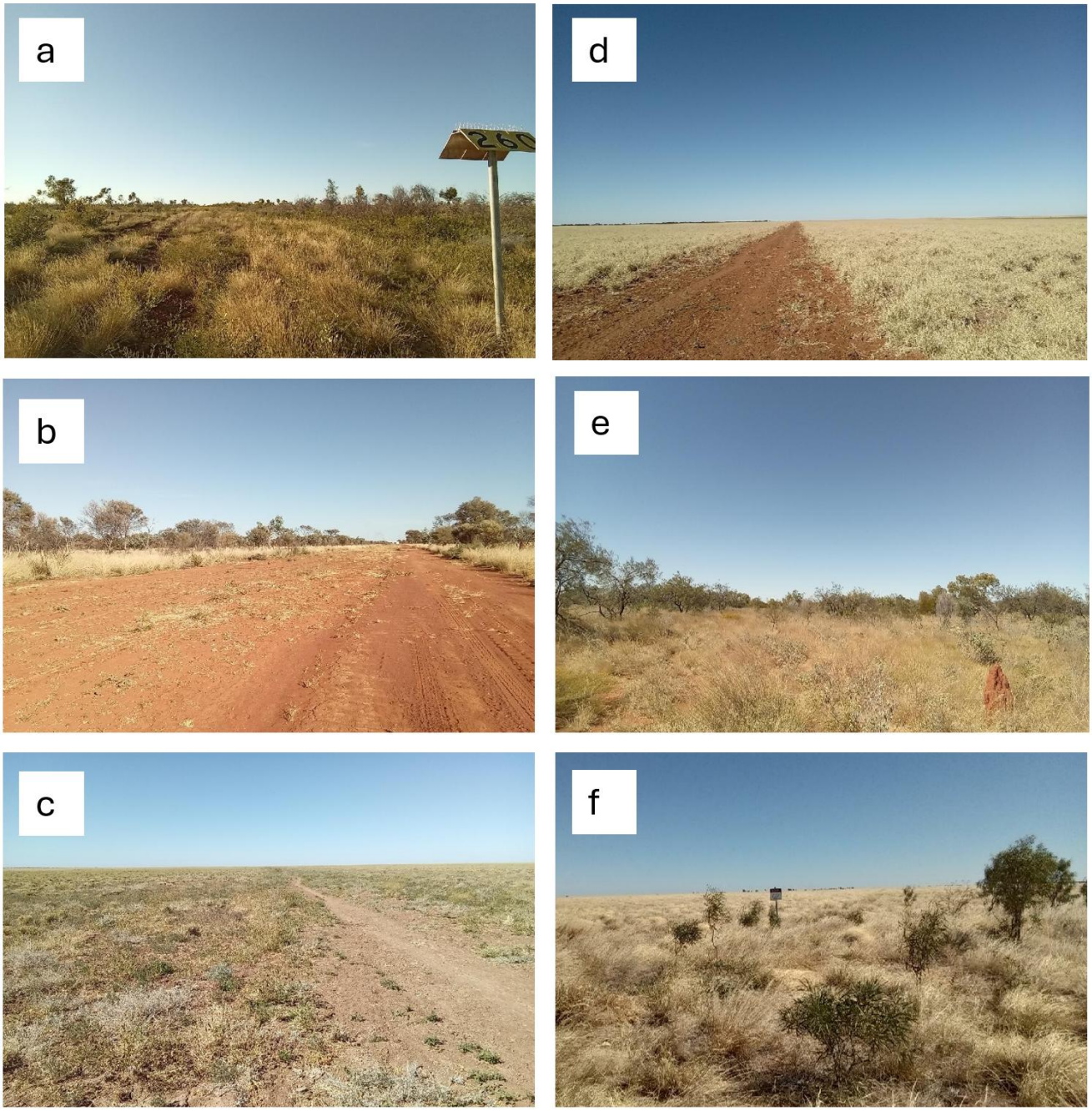

Figure 4-14. Images from the transitional rehabilitation assessment survey: a) level 5 vegetation with no shrubs, b) level 1 vegetation caused by grading, c) cattle tracks through vegetation, d) level 5 vegetation in comparison to surrounds, e) level 5 vegetation with some shrubs that will require clearing, f) level 5 vegetation with whitewood in easement, high priority to clear as growing over pipeline.

4.5. Infrastructure

Throughout the survey, the condition of signage poles and monitoring poles was noted. There were many occasions where signage was not visible due to overgrowth.

There were many pipeline signage poles that were damaged, burned, had fallen over or been knocked over. Often damaged signs were on the pastoral land between KP 356 and KP 560, suggesting cattle had used them as scratching poles in a landscape with very few trees (Figure). This year there were multiple burned signs towards Mount Isa from recent fires.

There were only two observations of damaged monitoring poles which had fallen over or been knocked over by cattle. There were exposed wires at the base and repairing them should be a high priority.

There was dense vegetation inside the fencing at Main Line Valve 3. This was reported to Jemena field staff at the completion of the field assessment (Figure 4-17).

Locations of damaged infrastructure are shown in Figure and a summary of infrastructure issues are included in Appendix A.

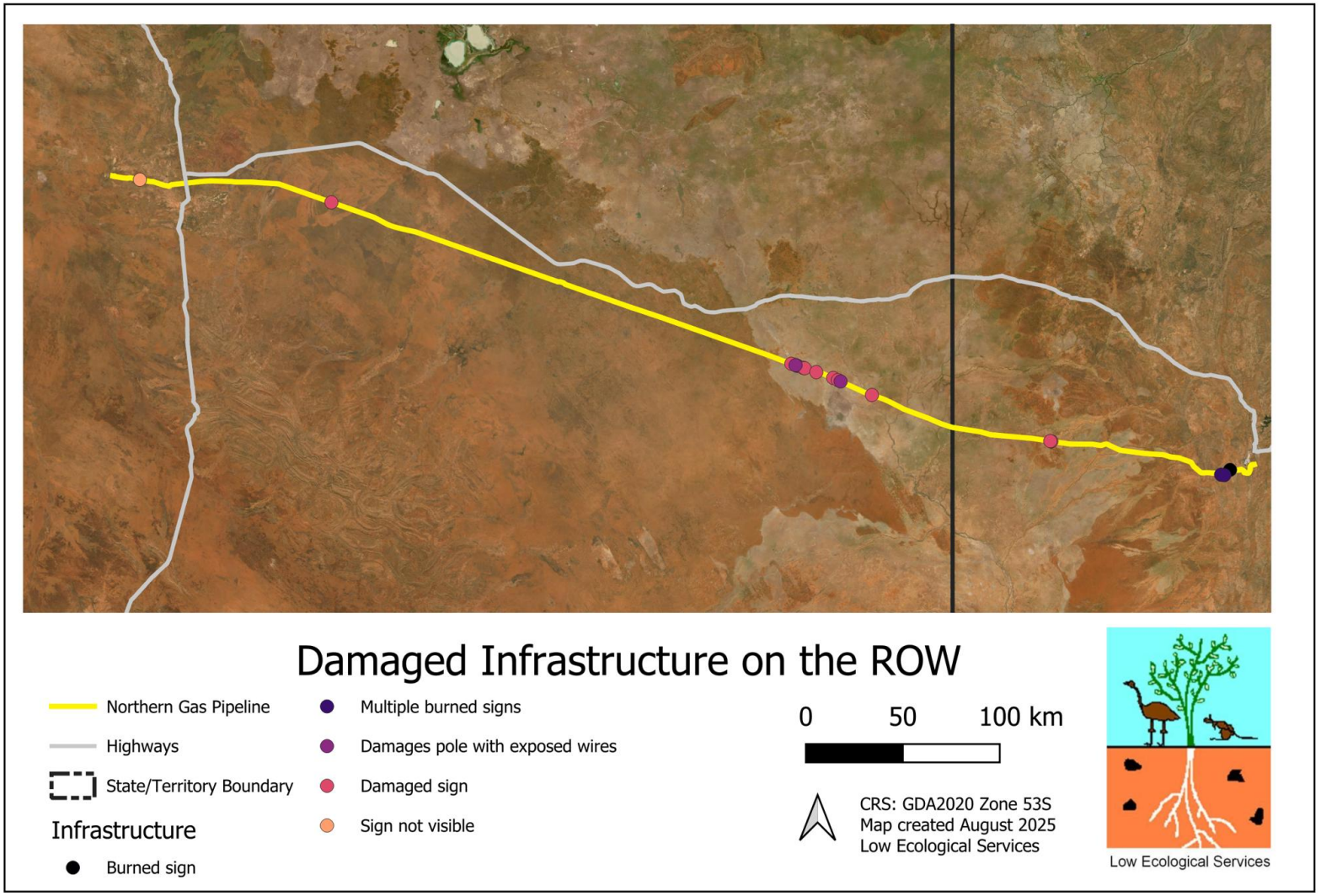

Figure 4-15. Locations of damaged infrastructure observed on the ROW in 2025.

Figure 4-16. Images from the transitional rehabilitation assessment survey: a) fallen sign, b) damaged pole with exposed wires, c) burned sign, d) cattle using sign as scratching post.

Figure 4-17. Vegetation posing a potential fire risk inside the fencing at Main Line Valve 3.

4.6. Plains Death Adder Habitat Survey

This section pertains only to the land systems surveyed for plains death adder habitat. Additional surveys are required in the future targeting all remaining land systems that intersect with the NGP.

Criteria 4.3.1. (a) greater than or equal to 70 % of native ground cover species richness

The transitional rehabilitation criteria requires that at least 70% of flora species present in the representative adjacent habitat should be present in the ROW. Whilst there was good quality vegetation and coverage present on the ROW at all sites surveyed, the composition of species met this 70% threshold at five sites, two in the Kalalla land system and one site each in of the Barkly, Georgina and Wonardo land systems (Table 6).

Flora species observed in quadrats at all sites are listed in Table 6.

Table 6. Summary of plains death adder habitat survey data.

Site	Land System	% Species Present on ROW that are Present off ROW
MG01	Barkly	60%
MG02	Barkly	71.4%
MG03	Georgina	75%
MG04	Austral	64.7%
MG05	Wonardo	37.5%
MG06	Austral	61.5%
MG07	Austral	50%
MG08	Austral	66.7%
MG09	Wonardo	70%
MG10	Barkly	55.6%
MG11	Wonardo	57.1%
MG12	Kalalla	80%
MG13	Kalalla	70.6%
MG14	Kalalla	59.1%

Table 7. List of all flora species recorded in quadrats.

Abelmoschus ficulneus	*Euphorbia mitchelliana*	*Pluchea ferdinandi-mulleri*
Abutilon hannii	*Euphorbia tannensis*	*Polymeria longifolia*
Acacia nilotica	*Evolvulus alsinoides*	*Portulaca digyna*
Acacia victoriae	*Evolvulus alsinoides* var. *villosicalyx ooststr*	*Portulaca filifolia*
Alternanthera nodiflora	*Fimbristylus* sp.	*Portulaca oleracea*
Alysicarpus muelleri	*Flaveria australascia*	*Prosopis pallida*
Aristada holathera	*Glycine falcata*	*Ptilotus exaltatus*
Aristida latifolia	*Gomphrena breviflora*	*Ptilotus spicatus*
Aristida pruinosa	*Gomphrena conica*	*Rhynchosia minima*
Astrebla elymoides	*Goodenia nigrescens*	*Rostellularia adscendens*
Astrebla pectinata	*Goodenia ramelii*	*Salsola tragus*
Astrebla squarrosa	*Goodenia strangfordii*	*Schizachyrium fragile*
Brachyscome dentata	*Gossypium sturtoanum*	*Sclerolaena bicornis*
Chloris pectinata	*Haloragis aspera*	*Sclerolaena cornishiana*
Chrysopogon fallax	*Hibiscus trionum*	*Senna planitiicola*
Cleome viscosa	*Impomoea costata*	*Sida fibulifera*
Cucumis melo	*Ipomoea diamantinensis*	*Sida filiformis*
Cullen cinereum	*Ipomoea Lonchophylla*	*Sida laevis*=
Cullen pustulatum	*Ipomoea muelleri*	*Sida* sp. Walhallow station
Cynodon dactylon	*Iseilema fragile*	*Sida trichopeda*
Cyperus gilesii	*Iseilema membranaceum*	*Solanum succosum*
Dactyloctenium radulans	*Iseilema vagiflorum*	*Spermacoc brachystone*
Desmodium campylocaulon	*Malvastrum americanum*	*Stemodia sp. Tanamai*
Dicanthium sericeum	*Neptunia dimorphantha*	*Streptoglossa adscendens*
Digitaria coenicola	*Neptunia monosperma*	*Streptoglossa bubakii*
Eragrostis eriopoda	*Oleria ciliata*	*Stylidirum desertora*
Eragrostis tenellula	*Oleria ferresii*	*Trichodesma zeylanicum*
Eriachne benthamii	*Oleria stuartii*	*Triraphis mollis*
Eulalia aurea	*Operculina aequisepala*	*Vicia Sativa*
Euphorbia australis	*Oryza australiensis*	*Vigna lanceolata*
Euphorbia coghlanii	*panicum decompositum*	*Yakirra asutraliensis*
Euphorbia drummondii	*Phyllanthus maderaspatensis*	

Criteria 4.3.1. (b) greater than or equal to the total per cent of ground cover

Vegetation cover, leaf litter, bare ground and rocks were recorded every metre along a 100 m transect both on and off the ROW at each site. The percentage of vegetation cover is detailed in Table 8. Refer to Figure 4-18 Figure 4-19 and for examples of vegetation cover on the ROW compared to vegetation cover off the ROW.

Table 8. Percentage of vegetation cover.

Site	Veg Cover on ROW	Veg Cover off ROW	Difference
MG01	41%	50%	9%
MG02	58%	64%	6%
MG03	60%	60%	0%
MG04	53%	55%	2%
MG05	52%	38%	-14%
MG06	46%	39%	-7%
MG07	65%	51%	-14%
MG08	39%	57%	18%
MG09	61%	64%	3%
MG10	30%	30%	0%
MG11	72%	67%	-5%
MG12	55%	45%	-10%
MG13	61%	67%	6%
MG14	46%	70%	24%

Criteria 4.3.1. (c) less than or equal to the per cent species richness of declared plant pest species

There was only one observation of WONS prickly acacia, this was in a quadrat and not on a transect, thus unquantifiable. There were no other declared weeds on the ROW.

Criteria 4.3.1. (d) where the adjacent land use contains, or the pre-clearing land use contained, one or more regional ecosystem(s), then at least one regional ecosystem(s) from the same broad vegetation group, and with the equivalent biodiversity status or a biodiversity status with a high conservation value as any of the regional ecosystem(s) in either the adjacent land or pre-disturbed land, must be present.

The number of cracks and holes on the ROW compared to off the ROW was deemed to be representative at most sites. See Figure 4-20Figure 4-21 for examples of cracks and holes formed on the ROW.

Table 9. Cracks and holes recorded on and off the ROW.

Site	Land System	Cracks off ROW	Cracks on ROW	Holes off ROW	Holes on ROW
MG01	Barkly	8	12	14	24

MG02	Barkly	11	9	28	13
MG03	Georgina	15	1	17	1
MG04	Austral	9	9	18	20
MG05	Wonardo	16	1	6	6
MG06	Austral	0	1	44	45
MG07	Austral	2	2	33	17
MG08	Austral	2	4	21	29
MG09	Wonardo	5	4	37	11
MG10	Barkly	0	0	0	2
MG11	Wonardo	3	0	1	5
MG12	Kalalla	35	18	3	0
MG13	Kalalla	13	1	1	2
MG14	Kalalla	39	34	1	1

Whilst there has been good progress towards rehabilitation, RMP criteria has not yet been met.

Figure 4-18. Vegetation on the ROW similar to vegetation off the ROW but not yet meeting transition criteria.

Figure 4-19. Images from assessment survey. Mitchell grasses recovering well in general. (a) KP 400 vegetation cover on the ROW representative of vegetation off the ROW, (b) cattle tracks following the ROW, impacting vegetation cover and (c) less vegetation cover on the ROW compared to off the ROW.

Figure 4-20. Blue tongue lizard using crack formed on the ROW.

Figure 4-21. Examples of cracks and holes on the ROW.

5. ASSESSMENT OF TRANSITIONAL COMPLETION CRITERIA

As the RMP review has not been finalised, the transitional completion criteria used in this assessment are from the original RMP.

The following criteria are used to assess the transitional rehabilitation status of disturbed areas.

Significantly disturbed areas that are no longer required for operational purposes, must be transitionally rehabilitated within 12 months (unless exceptional circumstance in the area to be rehabilitated (e.g. flood event) prevents this timeframe being met) and be maintained to meet the following acceptance criteria:

a) Disturbed areas are:
  i. a stable landform
  ii. re-profiled to contours consistent with the surrounding landform
b) Surface drainage lines are re-established;
c) Topsoil is reinstated in disturbed areas; and
d) Either:
  i. Ground cover, that is not a declared pest species, is growing in disturbed areas; or
  ii. an alternative soil stabilisation methodology that achieves effective stabilisation is implemented and maintained in disturbed areas.

No less than 791 ha of suitable Plains Death Adder habitat is rehabilitated within 5 years of completion of construction.

Table 10 summarises the results of the assessment of each transitional rehabilitation criteria. This table reports on the fifth year of the 5-year transitional rehabilitation phase.

Table 10. Assessment of transitional rehabilitation criteria.

Criteria	Conclusion/Recommendations
Disturbed areas are a stable landform within 12 months.	Incomplete. There is a significant portion which meets this criterion. However, there were areas of erosion, subsidence, and ineffective and deteriorating berms observed at various locations throughout the ROW. These conditions are predominately minor; however, management action is required to achieve a stable landform along the pipeline in areas identified as having moderate to significant land stability issues. Recommendations are provided in Section 7.
Disturbed areas are re-profiled to contours consistent with the surrounding landform within 12 months.	This criterion was met in the 2023, however, areas of the ROW that had become lower than the surrounding landscape were noted in both 2024 and 2025. This lowering was most likely a result of grading over the ROW and/or repeated vehicle access on the ROW, and due to removal of material through sheet flow erosion. These areas were uncommon and sporadic over the easement; however, this increases the risk of erosion and pooling of water. Actions should be taken to raise the level of the ROW erosion control berms as

	appropriate in these areas and monitoring should occur to ensure adverse effects do not occur and the issue does not progress.
Surface drainage lines are re-established within 12 months.	Complete, but with minor exceptions. Re-establishment was completed during the project's reinstatement phase. This criterion has been met; however, it is recommended that monitoring and water flow management be continued to reduce any negative effects where drainage depressions cross or coincide with the ROW.
Topsoil is re-instated and maintained in all disturbed areas.	This criterion was undertaken during the projects' reinstatement phase, however, the action of erosion and to a lesser extent grading and clearing of the ROW has reduced or removed topsoil from some areas. The recommendation is that topsoil be replaced in these areas as an action of remediating erosion, plus soil stabilisation methods, such as berms, and encouraging vegetation be utilised to reduce the risk of further loss.
Ground cover which is not a declared species is growing in disturbed areas within 12 months of the completion of construction activities and maintained.	Incomplete. Overall, the 622 km long ROW is revegetating well and mostly meets the transitional rehabilitation criteria. Removal of ground cover is currently necessary to remove the undesirable overstorey, however, ground cover should recover and be managed in the future by slashing with a minimum ground clearance between 150 and 300 mm. Further recommendations are provided in Section 7.
An alternative soil stabilisation methodology that achieves effective stabilisation is implemented and maintained in disturbed areas.	Incomplete. In areas that are currently not stabilised with sufficient ground cover, erosion control berms are in place along sections of the ROW, however, some have been cleared with grading while others have been compromised, and some areas require additional berms. Recommendations are provided in Section 7.
No weed incursion or spread within the NGP footprint.	Incomplete. Occurrences of declared weed species within the ROW are limited and are predominately a result of encroachment from adjacent pastoral land. There are some instances of declared weed species within the ROW that require management, including Noogoora burr and mesquite To be effective, cooperative control with the adjacent landholders would be required and control should take place before seed set and focus on upstream and/or upwind weed populations. The largest weed encroachments within the ROW occur in the easternmost 40 km. Dense to moderately dense populations of kapok bush have been established within the ROW in large areas. Kapok bush is not a declared weed species however management is recommended to remediate spread along the ROW and into adjacent land. Refer to Section 7 for recommendations. The population of kapok bush at KP 556.3 is likely the result of pipeline activities and should be a priority to manage.
No less than 791 ha of suitable Plains Death Adder habitat is rehabilitated within 5 years of completion of construction.	Incomplete. Habitat is showing increased rehabilitation. Cracks along the appropriate habitat are forming and vegetation cover is high creating a habitat appropriate for hunting and temporary shelter. More time is required for vegetation on ROW to become representative of vegetation off the ROW.

The transitional rehabilitation of the NGP ROW continues to advance and is estimated to be over 85% complete. Required clearing of the overstorey on the ROW will likely remove the ground cover from highly rehabilitated areas, leading to an interim reduction in rehabilitation which will need to be monitored for land stability until ground cover is reestablished. This will be a good opportunity to remediate land stability issues. After which, management efforts will be important to enable quick recovery and high rehabilitation success.

6. RISKS TO REHABILITATION OBJECTIVES

The management actions detailed in Section 7 have been identified to meet the respective completion criteria. However, following the implementation of management actions, some events or circumstances may impede the attainment of completion criteria. The following events/circumstances have been identified in the RMP as posing a risk to achieving rehabilitation objectives:

- **Increase in the diversity of weed species.** Even after weed hygiene is undertaken (particularly vehicle hygiene and weed inspections prior to transport to site), there is a chance that weed species not currently present in within the Project footprint may be brought to site. New weed introduction poses a risk to the land returning to a comparable pre-disturbance state and the habitat for plains death adder being rehabilitated.

- **Increase in weed cover.** Increase in weed cover could occur due to opportunistic growth into disturbed areas where there are existing weeds present. Increase in weed cover could prevent or delay the establishment of native ground cover species and/or suppress ground cover species richness. This would hinder suitable habitat for the Plains Death Adder returning, and the return of the land to comparable pre-disturbance state.

- **Erosion at watercourse crossings**. Watercourse crossings are the most likely location for erosion to occur. Without management actions, watercourse crossings are expected to erode due to river flow. Erosion of this nature poses a risk to the objective of returning the land to a comparable pre-disturbance state, and (in areas) would prevent the successful rehabilitation of suitable plains death adder habitat.

- **Extreme weather event which negatively impacts rehabilitation.** As construction is occurring in the dry season, it is unlikely that an extreme weather event (particularly flooding rain) will occur prior to reinstatement, however, such an event could occur before rehabilitation is complete. An extreme weather event could wash away rehabilitated areas (both land and vegetation) and negatively impact on landform in general and specifically plains death adder habitat. Alternatively, a protracted drought could lead to rehabilitation objectives not being met.

- **Stock or native fauna activity impacting rehabilitation.** As the land is currently used for grazing stock and supports native fauna, rehabilitation could be impacted by stock and/or fauna grazing. This is most likely to occur around water points (troughs, dams etc). This activity could supress the regeneration of native species, and in turn, the rehabilitation of the land to its pre-disturbance condition.

- **Unplanned/uncontrolled fire.** Construction activities during the dry season, particularly the use of heavy machinery for vegetation clearing, are a possible source

of wildfire ignition. Although heavy machinery will be used predominately in clearing and on the cleared ROW, a fire that spreads into reinstated areas could negatively impact rehabilitation success through burning new growth.

A number of these risks to rehabilitation have occurred over the past three years of transitional rehabilitation which pose a risk to achieving rehabilitation objectives, which are summarised in Table 11.

Table 11. Risks to transitional rehabilitation completion.

Risk	Event or circumstance
Increase in weed cover	Kapok bush does well in disturbed soils, the combination of disturbed soils and vehicle traffic on multiple sections of the pipeline has caused the spread of this species. Significant rainfall events during the 2023 and 2024 summer periods resulted in increased revegetation along the pipeline easement, which also assisted in the spread and proliferation of weed species such as Noogoora burr and kapok bush.
Extreme weather event that negatively impacts rehabilitation	The NGP project area has experienced two years of significant rainfall events, a total of 600-700 mm per year in 2023 and 2024. This year alone Tennant Creek recorded over 1,000 mm within just 6 months, and Mt Isa and Camooweal 600-700 mm in the same period. Significant rainfall events such as these increase the risk of erosion, remove topsoil and negatively impact the progress of rehabilitation.
Stock or native fauna activity impacting rehabilitation.	The majority of the NGP project area is situated within pastoral land used for grazing stock. Stock activity around watering points and cattle tracks along the ROW are obvious and have contributed to erosion in some areas and have likely contributed to the spread of weeds, such as Noogoora burr. Disturbance from cattle in high-activity locations has also likely suppressed the regeneration of native vegetation.
Unplanned/ uncontrolled fire	Fire occurrences between September and October 2023 have affected a large area of the NGP project area. Significant rainfall events resulting in an increase of vegetation along the ROW likely fuelled fires caused by lightning strikes. This has negatively impacted rehabilitation efforts by burning new growth and removing organic material that naturally stabilises the soil, therefore becoming more prone to erosion.

7. CONCLUSION AND RECOMMENDATIONS

The sixth transitional rehabilitation survey of the Northern Gas Pipeline undertaken in June 2025 found the condition of the ROW to have improved compared to the 2024 surveys in some categories including land erosion but to have worsened in other aspects i.e. weed management Generally, the condition of the disturbed areas present on the ROW have remained relatively stable and shows good to excellent rehabilitation over the ROW.

7.1. Weeds

The presence of weeds was still evident in the ROW, however, management to remove mesquite has been somewhat effective. The mesquite trees identified in this assessment were adjacent to the cleared area of the ROW and minimal effort would be required to remove these. They appeared to be isolated individual trees; therefore, it is encouraged to remove the issue of this Weed of National Significance from the easement as a priority. Cooperative discussions with the adjoining landholder provides opportunity to remove adjacent seed sources.

Noogoora burr was observed in high density along riparian corridors, often however, the weed was also located just outside the easement making management of these populations difficult without the cooperation of adjacent landowners. It is recommended that initial efforts are focussed on the small, isolated populations of Noogoora burr along the ROW which most likely occur due to cattle transporting seeds to these areas. This initial management effort would help reduce the further spread of this weed.

Weed management should also target the kapok bush population in the vicinity of KP 566 which has increased since the 2024 survey. This population is highly likely a result of pipeline management vehicles transporting seeds to this area and is therefore the responsibility of Jemena to remove as the seed has already begun to spread. Vehicle hygiene practices should ensure this does not happen in the future. The high density of kapok bush in the eastern 40 km of the pipeline was discussed in the both the 2023 and 2024 reports and has since continued to spread off the ROW and into the surrounding landscape. The RMP performance indicator for transitional rehabilitation of *'No weed incursion or spread within the NGP footprint'* is affected by the above-mentioned kapok bush populations and therefore efforts should be made to control these populations as soon as possible.

A targeted survey to map large infestations of weeds and treat the isolated populations may be an effective way of managing the weed populations on the ROW. This survey could also remove the small populations of Noogoora burr, mesquite, kapok bush and rubber bush identified during the 2025 survey.

Recommendations regarding management of non-declared weed species are the same as advice provided in 2024 (LES). High density populations should be targeted to prevent further spread along the easement and into adjacent land. In particular, the populations of kapok bush

near KP 566, and the eastern most 40 km stretch of the ROW, have increased in size and continue to spread into the surrounding landscape.

Ongoing management and working in conjunction with local landholders is required to reduce the spread of weed species along the easement and into surrounding lands.

The following actions are recommended to meet the transitional rehabilitation criteria:

- Prioritise management of all instances of declared weeds.
- Consider working with adjacent landholders for long term management of weed encroachment into the ROW. Management should take place before seed set and focus on upstream or upwind weed populations.
- Management actions for non-declared weeds should focus on areas of high infestation, particularly the spreading populations of kapok bush in the far eastern portion of the ROW and the Cathodic Protection site at KP 566.4
- Future monitoring should reinspect all weed records to ensure control has been effective and weeds have not spread.

7.2. Land Stability

Much of the land stability issues, erosion and subsidence, documented in the 2024 assessment appeared to have been remediated by the earthworks being undertaken in the western half of the NGP.

Reinstating erosion control berms in areas where they have been removed by grading and remediation works is a high priority. Windrows formed by grading and areas where grading has caused the ROW to become lower than the surrounding landscape, the risk of erosion is increased because they effect the flow of water. These issues should be addressed where required and machinery operators responsible for the maintenance of the ROW should be alerted to the importance of eliminating these issues to promote effective water flow.

Piles of soil and plant material accumulated from the clearing was observed along the edges of the ROW. These should be redistributed on the ROW and is ideal to use to fill in any subsidence and erosion in the vicinity of the soil or to construct shallow berms for runoff control. If this soil contains woody vegetation, it should not be distributed on the vehicle access section of the easement to reduce the risk of vehicle damage. As these piles of vegetation have been stockpiled for a lengthy duration, the APGA CoEP requires a suitably qualified fauna spotter/catcher to check the stockpile and catch and relocate any fauna inhabiting the vegetation and soil, prior to redistributing on the ROW.

The following actions are recommended to meet the land stability transitional rehabilitation criteria:

- Remediate all Level 1 and 2 land stability issues as a priority.
- Remediate Level 3 moderate land stability issues.
- Monitor Level 4 and 5 minor land stability issues.

- Construct additional erosion control berms as required upslope of areas where erosion or subsidence is developing due to water channelling along ROW.
- Where appropriate, back-fill and level subsidence surrounding landscape level.
- Where appropriate, fill and level erosion occurrences to prevent further advancement and encourage vegetation to establish. Eroded sediment from the downslope could be used where available.
- Where appropriate, return ROW easement to the surrounding landscape level.
- Remove windrows.
- Repair compromised berms, with some requiring extension, if possible, to effectively remediate erosion issues.
- Re-build berms after vegetation clearance and in future, alter clearance methods to keep berms intact (i.e. slashing).
- Ensure berms are oriented correctly to ensure desired water management.

7.3. Revegetation and Overgrowth

The level of revegetation was high along the ROW with most sections being assessed as having good ground cover with a high species richness. There were only a few sections of the easement where vegetation was observed to be slow to reestablish.

It is widely accepted that rehabilitation best practice is to allow the environment to recover naturally. This can lead to a more robust and resilient environment. In areas where topsoil is still present, it is recommended that these areas be left to revegetate naturally with continued monitoring for weeds and erosion.

Some areas of low revegetation are likely due to a lack of topsoil, lost through overzealous grading and erosion. The topsoil needs to be replaced, ideally with similar soil from graded areas nearby. Erosion control will be important in these areas to keep the replaced topsoil in position. However, considering the regrowth in adjacent areas in the ROW, suggests if this is done effectively, revegetation will occur quickly.

While the revegetation is high in most areas, most of this revegetation consists of an overstory. The Australian standards for high pressure pipeline systems, AS 2885, states that vegetation within the pipeline corridor shall be managed to:

a) *Maintain line of sight between pipeline markers;*
b) *Maintain access and line of site for third party detection and pipeline patrols;*
c) *Minimise the risk of roots damaging the pipeline coating; and*
d) *Minimise the risk of damage to above-ground facilities due to radiant heat in the event of a bushfire.*

In addition, the Group Gas Operational Environmental Management Plan (GAS-999-PA-EV-002) (2021) recommends *'Regrowth vegetation on the pipeline easement shall be maintained to ensure root systems do not create a safety risk to the pipeline'*. The overstory observed along the ROW does not conform to these requirements and therefore, it is necessary to clear

this vegetation, particularly, the woody roots present. If the ground cover can be spared in this process it should be encouraged, but it is likely most of the ground cover will be removed in this process. This will significantly reduce the level of rehabilitation over the ROW and therefore all repairs to the easement should be completed at this time. After the clearing of vegetation, managing water flow by ensuring there are adequate erosion control berms will be important to protect the repairs and topsoil which has been disturbed and redistributed. If this is managed correctly, it will increase the speed and completeness of further rehabilitation.

Once revegetation has begun, management through regular monitoring and slashing to a minimum height of between 150 mm to 300 mm will be important to keep ground cover healthy while discouraging woody overstory growth. This management will allow ease and effectiveness of aerial and ground surveys and pipeline management in the future.

7.4. Plains Death Adder Habitat

The plains death adder habitat, between KP 355 and K 561, is well rehabilitated although vegetation on the ROW observed was not always representative of vegetation on the ROW. It is strongly recommended that this section of the ROW be protected from any clearing, grading or access by heavy machinery to maintain the cracks and holes. Low level cattle grazing is currently effective at managing the vegetation and therefore it is important that only minor works to control and manage weeds take place in this area.

The following actions are recommended to meet the transitional rehabilitation criteria:

- Limit the clearing of groundcover where possible. Many of the plants that are present are plants that do well in disturbed ground, it will take time for late succession species to reestablish.
- Protect the plains death adder habitat from major works to encourage cracking clay to continue to establish cracks.

This targeted survey pertains only to the land systems surveyed for plains death adder habitat. Additional surveys are required in the future targeting all remaining land systems that intersect with the NGP to meet RMP requirements.

8. REFERENCES

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9. APPENDICES

Appendix A

The following tables list the GPS points for weeds, land stability issues (erosion, compromised and required berms, subsidence, additional remediation required), vegetation and overgrowth, damaged infrastructure, and plains death adder habitat survey sites.

Detailed information for each site is provided in attached document '*2025 Jemena NGP Transitional Rehabilitation Survey Data*'.

Weeds

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-19.4577	133.9099	BUFFEL_GRASS	-20.8262	139.2901	KAPOK_BUSH	-20.3635	137.3459	MESQUITE
-19.4678	134.001	BUFFEL_GRASS	-20.8266	139.2916	KAPOK_BUSH	-20.3689	137.3636	MESQUITE
-19.8915	135.9017	BUFFEL_GRASS	-20.8271	139.2939	KAPOK_BUSH	-20.3635	137.3471	MESQUITE
-19.8893	135.8952	BUFFEL_GRASS	-20.8246	139.2683	KAPOK_BUSH	-20.3774	137.385	MESQUITE
-19.8892	135.8947	BUFFEL_GRASS	-20.8276	139.2964	KAPOK_BUSH	-20.6356	138.1361	MESQUITE
-19.8554	135.7926	BUFFEL_GRASS	-20.8245	139.2316	KAPOK_BUSH	-20.7784	139.1763	MESQUITE
-19.8917	135.9027	BUFFEL_GRASS	-20.8277	139.2979	KAPOK_BUSH	-20.7787	139.1765	MESQUITE
-19.8903	135.8982	BUFFEL_GRASS	-20.824	139.351	KAPOK_BUSH	-20.3634	137.3483	MESQUITE_NGOORA_BURR
-19.8899	135.8969	BUFFEL_GRASS	-20.8169	139.3573	KAPOK_BUSH	-20.6924	138.6853	VAFA
-19.8553	135.7919	BUFFEL_GRASS	-20.8109	139.3661	KAPOK_BUSH	-20.6943	138.7003	VAFA
-19.8937	135.9086	BUFFEL_GRASS	-20.8121	139.4008	KAPOK_BUSH	-20.3635	137.3511	NGOORA_BURR
-19.9007	135.9296	BUFFEL_GRASS	-20.8124	139.3869	KAPOK_BUSH	-20.3634	137.3488	NGOORA_BURR
-19.8987	135.9232	BUFFEL_GRASS	-20.8248	139.4426	KAPOK_BUSH	-20.3946	137.4278	NGOORA_BURR
-19.8987	135.9237	BUFFEL_GRASS	-20.825	139.4585	KAPOK_BUSH	-20.3635	137.3439	NGOORA_BURR
-19.8996	135.9264	BUFFEL_GRASS	-20.8253	139.4507	KAPOK_BUSH	-20.37	137.3666	NGOORA_BURR
-19.905	135.9428	BUFFEL_GRASS	-20.8121	139.3684	KAPOK_BUSH	-20.3708	137.3662	NGOORA_BURR
-19.9058	135.9451	BUFFEL_GRASS	-20.8125	139.3962	KAPOK_BUSH	-20.3702	137.3667	NGOORA_BURR
-19.9083	135.9525	BUFFEL_GRASS	-20.8251	139.4469	KAPOK_BUSH	-20.3702	137.3666	NGOORA_BURR
-19.9213	135.992	BUFFEL_GRASS	-20.8344	139.3385	KAPOK_BUSH	-20.3635	137.3424	NGOORA_BURR
-19.9227	135.9962	BUFFEL_GRASS	-20.8321	139.3418	KAPOK_BUSH	-20.4631	137.593	NGOORA_BURR
-19.8981	135.9217	BUFFEL_GRASS	-20.8291	139.3447	KAPOK_BUSH	-20.4597	137.581	NGOORA_BURR
-19.9	135.9277	BUFFEL_GRASS	-20.7335	138.931	KAPOK_MALVASTRUM_NGOORA_VAFA	-20.6374	138.1427	NGOORA_BURR
-19.9003	135.9286	BUFFEL_GRASS	-20.327	137.2223	MALVASTRUM	-20.6386	138.1473	NGOORA_BURR
-19.9067	135.9478	BUFFEL_GRASS	-20.3331	137.2416	MALVASTRUM	-20.6401	138.1525	NGOORA_BURR
-19.9075	135.9502	BUFFEL_GRASS	-20.3634	137.3498	MALVASTRUM	-20.741	139.0375	NGOORA_BURR
-19.9096	135.9568	BUFFEL_GRASS	-20.3783	137.3873	MALVASTRUM	-20.7776	139.1757	NGOORA_BURR
-19.9144	135.9712	BUFFEL_GRASS	-20.3768	137.3834	MALVASTRUM	-20.718	138.8175	NGOORA_BURR
-19.9168	135.9783	BUFFEL_GRASS	-20.3592	137.3245	MALVASTRUM	-20.718	138.8175	NGOORA_BURR
-19.9176	135.9808	BUFFEL_GRASS	-20.3932	137.4246	MALVASTRUM	-20.718	138.8175	NGOORA_BURR
-19.92	135.9879	BUFFEL_GRASS	-20.3592	137.3246	MALVASTRUM	-20.6458	138.1737	NGOORA_BURR
-19.9064	135.947	BUFFEL_GRASS	-20.3654	137.3556	MALVASTRUM	-20.6488	138.1879	NGOORA_BURR
-20.8135	139.3815	BUFFEL_GRASS	-20.369	137.3638	MALVASTRUM	-20.6488	138.1884	NGOORA_BURR
-20.8123	139.402	BUFFEL_GRASS	-20.3758	137.3805	MALVASTRUM	-20.3188	137.1965	NGOORA_BURR_MALVASTRUM
-19.9324	136.0258	BUFFEL_KAPOK	-20.3841	137.4035	MALVASTRUM	-20.3217	137.2056	NGOORA_BURR_MALVASTRUM
-19.9298	136.0179	BUFFEL_KAPOK	-20.3906	137.4184	MALVASTRUM	-20.3721	137.371	NGOORA_BURR_MALVASTRUM
-19.9315	136.0231	BUFFEL_KAPOK	-20.3946	137.4277	MALVASTRUM	-20.3899	137.417	NGOORA_BURR_MALVASTRUM
-19.9012	135.9313	BUFFEL_KAPOK	-20.4082	137.4578	MALVASTRUM	-20.6381	138.1453	NGOORA_BURR_MALVASTRUM
-19.9025	135.9352	BUFFEL_KAPOK	-20.4182	137.4814	MALVASTRUM	-20.7301	138.903	NGOORA_BURR_MALVASTRUM
-19.903	135.9365	BUFFEL_KAPOK	-20.4214	137.489	MALVASTRUM	-20.7347	138.9392	NGOORA_BURR_MALVASTRUM
-19.933	136.0276	BUFFEL_KAPOK	-20.4214	137.489	MALVASTRUM	-20.3745	137.3768	NGOORA_BURR_MALVASTRUM_VAFA
-19.9123	135.9647	BUFFEL_KAPOK	-20.4128	137.4688	MALVASTRUM	-20.6354	138.1352	NGOORA_BURR_MALVASTRUM_VAFA
-19.9129	135.9668	BUFFEL_KAPOK	-20.3895	137.4161	MALVASTRUM	-20.6368	138.1404	NGOORA_BURR_MALVASTRUM_VAFA
-19.9151	135.9734	BUFFEL_KAPOK	-20.3888	137.4144	MALVASTRUM	-20.6363	138.1385	NGOORA_BURR_MALVASTRUM_VAFA
-20.8116	139.373	BUFFEL_KAPOK	-20.3772	137.3844	MALVASTRUM	-20.6486	138.1855	NGOORA_BURR_PRICKLY_PADDY_MELON

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-20.8119	139.405	BUFFEL_KAPOK	-20.3606	137.3291	MALVASTRUM	-20.3634	137.3493	PARKINSONIA
-20.8125	139.3906	BUFFEL_KAPOK	-20.3681	137.3618	MALVASTRUM	-20.7589	139.1234	PRICKLY_PADDY_MELON
-20.8249	139.4565	BUFFEL_KAPOK	-20.3574	137.3187	MALVASTRUM	-19.9227	135.9962	RUBBER_BUSH
-20.8105	139.4252	BUFFEL_KAPOK	-20.465	137.5991	MALVASTRUM	-20.42	137.4856	VAFA
-20.8116	139.4291	BUFFEL_KAPOK	-20.4855	137.6608	MALVASTRUM	-20.4246	137.4966	VAFA
-20.8086	139.4209	BUFFEL_KAPOK	-20.4624	137.5908	MALVASTRUM	-20.425	137.4974	VAFA
-20.8119	139.411	BUFFEL_KAPOK	-20.4901	137.6712	MALVASTRUM	-20.4254	137.4982	VAFA
-19.4716	134.3282	BUFFEL_GRASS	-20.4894	137.6717	MALVASTRUM	-20.5033	137.7009	VAFA
-20.8089	139.2044	CAMEL_BUSH	-20.5013	137.6964	MALVASTRUM	-20.4283	137.5052	VAFA
-20.7861	139.1814	CAMEL_BUSH	-20.4944	137.6812	MALVASTRUM	-20.4492	137.5543	VAFA
-20.7908	139.1846	CAMEL_BUSH	-20.43	137.5076	MALVASTRUM	-20.496	137.6849	VAFA
-20.8245	139.2291	CAMEL_BUSH	-20.4338	137.5182	MALVASTRUM	-20.472	137.6203	VAFA
-20.6982	138.7268	CAMEL_BUSH	-20.4282	137.504	MALVASTRUM	-20.4305	137.5099	VAFA
-20.698	138.7313	CAMEL_BUSH	-20.4318	137.5134	MALVASTRUM	-20.4462	137.5463	VAFA
-20.7549	139.1098	CAMEL_BUSH_PRICKLY_PADDY_MELON	-20.4608	137.5859	MALVASTRUM	-20.4235	137.4939	VAFA
-20.3635	137.3447	FLEABANE_NGOORA_BURR	-20.437	137.5257	MALVASTRUM	-20.6112	137.9836	VAFA
-20.812	139.3985	KAPOK_BUSH	-20.4217	137.4896	MALVASTRUM	-20.617	138.0095	VAFA
-19.8927	135.9054	KAPOK_BUSH	-20.6256	138.069	MALVASTRUM	-20.6742	138.4527	VAFA
-19.9333	136.0284	KAPOK_BUSH	-20.6127	137.9889	MALVASTRUM	-20.6808	138.4927	VAFA
-19.9288	136.015	KAPOK_BUSH	-20.6103	137.9805	MALVASTRUM	-20.6823	138.5065	VAFA
-19.8987	135.9233	KAPOK_BUSH	-20.622	138.0442	MALVASTRUM	-20.6808	138.4955	VAFA
-19.8988	135.924	KAPOK_BUSH	-20.6266	138.0746	MALVASTRUM	-20.6834	138.5143	VAFA
-19.8991	135.9248	KAPOK_BUSH	-20.6001	137.9465	MALVASTRUM	-20.7545	139.105	VAFA
-19.8997	135.9268	KAPOK_BUSH	-20.6917	138.5875	MALVASTRUM	-20.7269	138.8755	VAFA
-19.9005	135.9291	KAPOK_BUSH	-20.692	138.6276	MALVASTRUM	-20.7347	138.9437	VAFA
-19.9067	135.9477	KAPOK_BUSH	-20.6914	138.5757	MALVASTRUM	-20.7366	138.9618	VAFA
-19.9227	135.9962	KAPOK_BUSH	-20.6894	138.5635	MALVASTRUM	-20.7396	139.016	VAFA
-20.1022	136.5545	KAPOK_BUSH	-20.7268	138.8747	MALVASTRUM	-20.7452	139.0518	VAFA
-20.8072	139.2023	KAPOK_BUSH	-20.7538	139.099	MALVASTRUM	-20.803	139.197	VAFA
-20.7961	139.1882	KAPOK_BUSH	-20.803	139.1971	MALVASTRUM	-20.78	139.1773	VAFA
-20.8187	139.2169	KAPOK_BUSH	-20.8055	139.1999	MALVASTRUM	-20.8054	139.2	VAFA
-20.8268	139.2928	KAPOK_BUSH	-20.8341	139.3394	MALVASTRUM	-20.8224	139.2215	VAFA
-20.8052	139.1998	KAPOK_BUSH	-20.6923	138.6853	MALVASTRUM	-20.824	139.2489	VAFA
-20.8036	139.1978	KAPOK_BUSH	-20.6945	138.7012	MALVASTRUM	-20.7659	139.1436	VAFA
-20.7549	139.1108	KAPOK_BUSH	-20.6926	138.7498	MALVASTRUM	-20.6921	138.6449	VAFA
-20.765	139.1421	KAPOK_BUSH	-20.6979	138.7242	MALVASTRUM	-20.6961	138.7124	VAFA
-20.7746	139.1718	KAPOK_BUSH	-20.6922	138.6518	MALVASTRUM	-20.6972	138.7195	VAFA
-20.7849	139.1806	KAPOK_BUSH	-20.718	138.8175	MALVASTRUM	-20.6978	138.724	VAFA
-20.7934	139.1863	KAPOK_BUSH	-20.6491	138.1917	MALVASTRUM	-20.6982	138.7266	VAFA
-20.7938	139.1866	KAPOK_BUSH	-20.648	138.1821	MALVASTRUM	-20.6921	138.7524	VAFA
-20.7952	139.1875	KAPOK_BUSH	-20.6502	138.2047	MALVASTRUM	-20.6918	138.7535	VAFA
-20.8026	139.1965	KAPOK_BUSH	-20.6504	138.2072	MALVASTRUM	-20.6993	138.7787	VAFA
-20.8054	139.2	KAPOK_BUSH	-20.6523	138.2307	MALVASTRUM	-20.7063	138.791	VAFA
-20.8099	139.2057	KAPOK_BUSH	-20.6576	138.294	MALVASTRUM	-20.7084	138.7958	VAFA
-20.8219	139.2208	KAPOK_BUSH	-20.6478	138.1802	MALVASTRUM_PRICKLY_PADDY_MELON	-20.709	138.7972	VAFA
-20.8246	139.2393	KAPOK_BUSH	-20.4683	137.6089	MALVASTRUM_VAFA	-20.7097	138.7988	VAFA
-20.8238	139.2587	KAPOK_BUSH	-20.4443	137.5418	MALVASTRUM_VAFA	-20.7149	138.811	VAFA
-20.8238	139.2593	KAPOK_BUSH	-20.4801	137.6448	MALVASTRUM_VAFA	-20.7165	138.8148	VAFA
-20.8245	139.2678	KAPOK_BUSH	-20.4483	137.5512	MALVASTRUM_VAFA	-20.721	138.8291	VAFA
-20.826	139.2795	KAPOK_BUSH	-20.4697	137.6146	MALVASTRUM_VAFA	-20.6916	138.7547	VAFA
-20.8259	139.2807	KAPOK_BUSH	-20.4677	137.6074	MALVASTRUM_VAFA	-20.6921	138.6412	VAFA
-20.8261	139.2895	KAPOK_BUSH	-20.6176	138.014	MALVASTRUM_VAFA	-20.6494	138.1953	VAFA
-20.8277	139.2973	KAPOK_BUSH	-20.5971	137.9377	MALVASTRUM_VAFA	-20.6493	138.1948	VAFA

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-20.8299	139.3035	KAPOK_BUSH	-20.623	138.0503	MALVASTRUM_VAFA	-20.6488	138.1877	VAFA
-20.8319	139.3155	KAPOK_BUSH	-20.6195	138.0276	MALVASTRUM_VAFA	-20.3797	137.3913	MALVASTRUM_VAFA
-20.8288	139.2998	KAPOK_BUSH	-20.6246	138.0619	MALVASTRUM_VAFA	-20.4012	137.4421	MALVASTRUM_VAFA
-20.8295	139.3008	KAPOK_BUSH	-20.6698	138.4201	MALVASTRUM_VAFA	-20.3513	137.2993	VERBANE
-20.8298	139.3021	KAPOK_BUSH	-20.6919	138.6057	MALVASTRUM_VAFA			
-20.8281	139.2989	KAPOK_BUSH	-20.7332	138.9281	MALVASTRUM_VAFA			
-20.8314	139.3131	KAPOK_BUSH	-20.7352	138.9493	MALVASTRUM_VAFA			
-20.7976	139.1902	KAPOK_BUSH	-20.7269	138.8783	MALVASTRUM_VAFA			
-20.8063	139.2011	KAPOK_BUSH	-20.7316	138.9153	MALVASTRUM_VAFA			
-20.7748	139.1725	KAPOK_BUSH	-20.7284	138.8892	MALVASTRUM_VAFA			
-20.8273	139.2948	KAPOK_BUSH	-19.4591	133.9288	MESQUITE			

Erosion

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-19.4574	133.9068	ERO_4	-19.4847	134.6625	SUB_5	-20.1412	136.6662	ERO_2
-19.4503	133.858	ERO_3	-19.5151	134.7619	VEHICLE_ERO	-20.1331	136.6234	ERO_2
-19.4537	133.88	ERO_3	-19.4966	134.7058	VEHICLE_ERO	-20.1772	136.7756	ERO_3
-19.4566	133.8988	ERO_3	-19.5163	134.7655	VEHICLE_ERO	-20.1355	136.6492	ERO_3
-19.4564	133.8961	ERO_3	-19.5183	134.7715	VEHICLE_ERO	-20.171	136.7562	ERO_3
-19.4577	133.9099	ERO_4	-19.4802	134.5878	VEHICLE_ERO	-20.1377	136.6559	ERO_3
-19.4554	133.8904	ERO_4	-19.5051	134.7312	VEHICLE_ERO	-20.1788	136.7799	ERO_3_4
-19.4574	133.9356	ERO_4	-19.4846	134.6623	VEHICLE_ERO	-20.1703	136.7542	ERO_4
-19.4575	133.9085	ERO_4	-19.4905	134.6873	VEHICLE_ERO	-20.1817	136.7884	ERO_4
-19.4583	133.9169	ERO_4	-19.4843	134.6563	VEHICLE_ERO	-20.1176	136.5953	ERO_4
-19.484	134.0814	ERO_5	-19.593	134.9979	ERO_3	-20.175	136.7684	ERO_4
-19.4876	134.0931	ERO_3	-19.5899	134.9885	ERO_4	-20.1396	136.6614	ERO_4
-19.4871	134.0913	ERO_3	-19.5944	135.002	ERO_4	-20.1772	136.775	ERO_4
-19.4952	134.1261	ERO_3	-19.5922	134.9956	ERO_4	-20.1186	136.5984	ERO_4
-19.488	134.152	ERO_3	-19.5791	134.9557	ERO_5	-20.1338	136.6441	ERO_4
-19.4732	134.3054	ERO_3	-19.5863	134.9774	ERO_5	-20.1342	136.6453	ERO_4
-19.4732	134.3065	ERO_3	-19.5615	134.9024	ERO_5	-20.1666	136.7429	ERO_5
-19.4956	134.1284	ERO_3	-19.5808	134.9609	ERO_5	-20.1331	136.6421	ERO_5
-19.4866	134.0899	ERO_5	-19.5808	134.9609	ERO_5	-20.1515	136.6976	ERO_5
-19.4956	134.1318	ERO_5	-19.5713	134.9322	ERO_5	-20.1209	136.605	ERO_5
-19.4827	134.205	ERO_5	-19.5261	134.7952	VEHICLE_ERO	-20.1242	136.6152	ERO_5
-19.4735	134.3012	ERO_5	-19.5352	134.7956	VEHICLE_ERO	-20.1364	136.6523	ERO_5
-19.4742	134.2915	ERO_5	-19.5338	134.8188	VEHICLE_ERO	-20.1245	136.6181	ERO_5
-19.4919	134.1079	SUB_5	-19.6019	135.0248	ER0_4	-20.1676	136.7513	ERO_5
-19.4959	134.1301	VEHICLE_ERO	-19.6032	135.0288	ER0_4	-20.157	136.7124	ERO_5
-19.473	134.3085	VEHICLE_ERO	-19.6043	135.032	ER0_4	-20.1162	136.5907	ERO_5
-19.4885	134.1472	VEHICLE_ERO	-19.6044	135.0324	ER0_4	-20.2392	136.9619	ERO_3
-19.4727	134.3939	ERO_3	-19.6177	135.0725	ER0_4	-20.2398	136.9638	ERO_3
-19.4712	134.3396	ERO_3	-19.6141	135.0616	ER0_5	-20.2404	136.9654	ERO_3
-19.4712	134.3365	ERO_3	-19.6073	135.0409	VEHICLE_ERO	-20.2232	136.9136	ERO_4
-19.4718	134.3278	ERO_3	-19.7448	135.4576	ERO_5	-20.2007	136.8459	ERO_4
-19.4713	134.3459	ERO_3	-19.6946	135.2807	ERO_5	-20.2207	136.906	ERO_4
-19.4717	134.357	ERO_3	-19.7353	135.4288	ERO_5	-20.2223	136.9109	ERO_4
-19.4718	134.3586	ERO_3	-19.739	135.4359	ERO_5	-20.2232	136.9138	ERO_4
-19.4723	134.3802	ERO_3	-19.6958	135.2857	ERO_3	-20.2238	136.9154	ERO_4
-19.478	134.5522	ERO_3	-19.7003	135.3071	ERO_4	-20.229	136.9314	ERO_4
-19.4726	134.3847	ERO_3	-19.7438	135.4545	ERO_4	-20.2377	136.9575	ERO_4
-19.4727	134.39	ERO_3	-19.732	135.4189	ERO_4	-20.2397	136.9635	ERO_4
-19.4729	134.3966	ERO_3	-19.7012	135.3112	ERO_4	-20.2436	136.9752	ERO_4
-19.4777	134.5491	ERO_3	-19.6897	135.2599	ERO_5	-20.2031	136.8531	ERO_4
-19.4722	134.3208	ERO_3	-19.7331	135.4221	ERO_5	-20.2059	136.8615	ERO_4
-19.4712	134.3433	ERO_3	-19.7402	135.4435	ERO_5	-20.2184	136.8994	ERO_5

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-19.4774	134.542	ERO_3	-19.7312	135.4163	ERO_5	-20.2066	136.8636	ERO_5
-19.4713	134.3347	ERO_3	-19.7006	135.3084	ERO_4_5	-20.2125	136.8813	ERO_5
-19.4769	134.4615	ERO_3	-19.7201	135.3827	ERO_5	-20.2147	136.888	ERO_5
-19.4713	134.3331	ERO_4	-19.8528	135.7846	ERO_3	-20.2214	136.9084	ERO_5
-19.4718	134.3619	ERO_4	-19.8377	135.7386	ERO_5	-20.2257	136.9214	ERO_5
-19.4714	134.3498	ERO_4	-19.8395	135.7442	ERO_5	-20.2657	137.0419	ERO_5
-19.4721	134.3216	ERO_4	-20.0166	136.281	ERO_2	-20.3511	137.2987	ERO_3
-19.4711	134.3386	ERO_4	-20.037	136.3428	ERO_3	-20.3635	137.3511	ERO_2
-19.4727	134.3883	ERO_4	-20.0358	136.3393	ERO_3	-20.3634	137.3498	ERO_3
-19.4739	134.428	ERO_4	-19.9988	136.227	ERO_4	-20.401	137.4421	ERO_3
-19.473	134.3998	ERO_4	-19.9796	136.1689	ERO_4	-20.3635	137.3486	ERO_3
-19.472	134.3229	ERO_4	-19.9978	136.2236	ERO_4	-20.3737	137.3747	ERO_3
-19.4712	134.3424	ERO_4	-20.0165	136.2803	ERO_4	-20.393	137.4241	ERO_4
-19.4719	134.3655	ERO_4	-20.0014	136.2349	ERO_4	-20.3783	137.3873	ERO_5
-19.477	134.4722	ERO_4	-19.9911	136.2007	ERO_5	-20.475	137.6292	ERO_3
-19.4737	134.4228	ERO_4	-20.0001	136.2308	ERO_5	-20.6381	138.1453	ERO_3
-19.4716	134.329	ERO_4	-19.9814	136.1738	ERO_5	-20.7657	139.1445	ERO_3
-19.4773	134.4675	ERO_4	-20.0198	136.2908	ERO_5	-20.7551	139.1112	ERO_4
-19.477	134.5132	ERO_4	-20.0189	136.2875	ERO_5	-20.7551	139.112	ERO_5
-19.4712	134.3358	ERO_4	-20.0204	136.2922	ERO_5	-20.8124	139.3969	ERO_2
-19.4718	134.3256	ERO_4	-20.0421	136.3582	ERO_5	-20.8238	139.4369	ERO_2
-19.4722	134.3751	ERO_5	-19.9984	136.2258	ERO_5	-20.8115	139.4132	ERO_3
-19.4724	134.381	ERO_5	-20.0262	136.31	ERO_5	-20.8197	139.4357	ERO_3
-19.4735	134.4136	ERO_5	-20.0192	136.2891	ERO_5	-20.824	139.351	ERO_3
-19.4732	134.4064	ERO_5	-20.0439	136.3637	ERO_5	-20.8278	139.3461	ERO_4
-19.4739	134.428	ERO_5	-20.0179	136.2848	ERO_5	-20.8169	139.3573	ERO_4
-19.4759	134.4518	ERO_5	-20.0979	136.5345	ERO_1	-20.8236	139.4397	ERO_4
-19.4764	134.4561	ERO_5	-20.0974	136.533	ERO_1	-19.764	135.5157	VEHICLE_ERO
-19.4769	134.4702	ERO_5	-20.0993	136.5388	ERO_1	-19.7517	135.4816	VEHICLE_ERO
-19.4769	134.4656	ERO_5	-20.1002	136.5418	ERO_2	-20.718	138.8175	ERO_4
-19.4719	134.3712	ERO_5	-20.116	136.5904	ERO_3	-20.7207	138.8253	ERO_4
-19.4736	134.4182	ERO_5	-20.1025	136.5494	ERO_4	-20.718	138.8175	ERO_4
-19.4733	134.4087	VEHICLE_ERO	-20.1124	136.5795	ERO_4			
-19.5055	134.7342	VEHICLE_ERO	-20.0495	136.3807	ERO_5			
-19.5032	134.7259	ERO_4	-20.0439	136.3636	ERO_5			
-19.5051	134.7313	ERO_4	-20.054	136.3944	ERO_5			
-19.5094	134.7448	ERO_5	-20.098	136.5345	ERO_5			

Compromised and Required Berms

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-19.4503	133.858	ADD_BERM	-19.7012	135.3112	ADD_BERM	-20.1703	136.7542	COMP_BERM
-19.4537	133.88	SERIES_BERM	-19.7331	135.4221	SERIES_BERMS	-20.1817	136.7884	COMP_BERM
-19.4566	133.8988	SERIES_BERM	-19.7312	135.4163	ADD_BERM	-20.1176	136.5953	SERIES_BERMS
-19.4564	133.8961	SERIES_BERM	-19.7006	135.3084	SERIES_BERMS	-20.175	136.7684	SERIES_BERMS
-19.4554	133.8904	SERIES_BERM	-19.6931	135.2743	ADD_BERM	-20.1186	136.5984	SERIES_BERMS
-19.4617	133.9642	ADD_BERM	-19.8437	135.757	SERIES_BERMS	-20.1338	136.6441	SERIES_BERMS
-19.4572	133.9388	COMP_BERM	-19.927	136.0094	COMP_BERM	-20.1342	136.6453	SERIES_BERMS
-19.4876	134.0931	ADD_BERM	-20.0166	136.281	SERIES _BERMS	-20.1331	136.6421	SERIES_BERMS
-19.4871	134.0913	ADD_BERM	-20.037	136.3428	SERIES_BERMS	-20.1245	136.6181	SERIES_BERMS
-19.4866	134.0899	ADD_BERM	-20.0358	136.3393	SERIES_BERMS	-20.1162	136.5907	ADD_BERM
-19.4735	134.3012	ADD_BERM	-19.9988	136.227	COMP_BERM	-20.1807	136.7856	COMP_BERM
-19.4873	134.0922	ADD_BERM	-19.9796	136.1689	SERIES _BERMS	-20.1361	136.6506	COMP_BERM
-19.4732	134.3055	ADD_BERM	-19.9978	136.2236	SERIES _BERMS	-20.18	136.7831	COMP_BERM
-19.4887	134.145	ADD_BERM	-20.0014	136.2349	ADD_BERM	-20.1701	136.7535	COMP_BERM
-19.4749	134.2851	ADD_BERM	-20.0001	136.2308	COMP_BERM	-20.1368	136.6533	COMP_BERM
-19.4749	134.2851	ADD_BERM	-19.9814	136.1738	SERIES _BERMS	-20.1793	136.7808	COMP_BERM
-19.4713	134.3459	SERIES_BERMS	-20.0198	136.2908	SERIES _BERMS	-20.179	136.7804	COMP_BERM
-19.4717	134.357	SERIES_BERMS	-20.0189	136.2875	SERIES_BERMS	-20.1786	136.7794	COMP_BERM
-19.4723	134.3802	ADD_BERM	-20.0204	136.2922	SERIES_BERMS	-20.122	136.6086	SERIES_BERMS
-19.478	134.5522	ADD_BERM	-20.0421	136.3582	SERIES_BERMS	-20.2232	136.9136	COMP_BERM
-19.4714	134.3498	SERIES_BERMS	-19.9984	136.2258	SERIES_BERMS	-20.2184	136.8994	COMP_BERM
-19.477	134.4722	SERIES_BERMS	-20.0262	136.31	SERIES_BERMS	-20.2498	136.9934	COMP_BERM
-19.477	134.5132	SERIES_BERMS	-20.0192	136.2891	SERIES_BERMS	-20.2596	137.0236	COMP_BERM

-19.4716	134.329	SERIES_BERMS	-20.0439	136.3637	COMP_BERM	-20.2207	136.9063	COMP_BERM
-19.5899	134.9885	SERIES_BERMS	-20.0179	136.2848	SERIES_BERMS	-20.2597	137.0239	COMP_BERM
-19.5922	134.9956	SERIES_BERMS	-20.0292	136.3194	SERIES _BERMS	-20.2523	137.0014	COMP_BERM
-19.5791	134.9557	SERIES_BERMS	-20.0368	136.3423	COMP_BERM	-20.1939	136.8252	SERIES_BERMS
-19.5863	134.9774	SERIES_BERMS	-20.0304	136.3229	COMP_BERM	-20.2657	137.0419	SERIES_BERMS
-19.5615	134.9024	SERIES_BERMS	-20.0168	136.2816	COMP_BERM	-20.475	137.6292	SERIES_BERMS
-19.5808	134.9609	SERIES_BERMS	-20.0164	136.2804	COMP_BERM	-20.4631	137.593	COMP_BERM
-19.5808	134.9609	SERIES_BERMS	-20.0434	136.3619	COMP_BERM	-20.4624	137.5908	COMP_BERM
-19.5713	134.9322	SERIES_BERMS	-20.0384	136.347	ADD_BERM	-20.5013	137.6964	SERIES_BERMS
-19.5747	134.9423	SERIES_BERMS	-20.0979	136.5345	ADD_BERM	-20.4944	137.6812	SERIES_BERMS
-19.5844	134.9718	SERIES_BERMS	-20.0495	136.3807	COMP_BERM	-20.4797	137.6432	SERIES_BERMS
-19.6177	135.0725	ADD_BERM	-20.0439	136.3636	COMP_BERM	-20.6255	138.0682	COMP_BERM
-19.6177	135.0725	ADD_BERM	-20.054	136.3944	COMP_BERM	-20.6797	138.4869	COMP_BERM
-19.6141	135.0616	SERIES_BERMS	-20.0523	136.3891	COMP_BERM	-20.7782	139.1761	ADD_BERM
-19.7353	135.4288	SERIES_BERMS	-20.1772	136.7756	COMP_BERM	-20.8115	139.4132	COMP_BERM
-19.6958	135.2857	ADD_BERM	-20.1355	136.6492	COMP_BERM	-20.8197	139.4357	COMP_BERM
-19.732	135.4189	SERIES_BERMS	-20.1377	136.6559	COMP_BERM	-20.8121	139.4008	COMP_BERM
						-20.7207	138.8251	COMP_BERM

Subsidence

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-19.4574	133.9068	SUB_4	-19.4857	134.087	SUB_5	-20.4231	137.4929	SUB_4
-19.4637	133.9746	SUB_4	-19.4586	133.9206	SUB_5	-20.4242	137.4953	SUB_4
-19.4589	133.9291	SUB_4	-19.5055	134.7342	SUB_VEHICHLE	-20.4828	137.6525	SUB_4
-19.4833	134.0789	SUB_4	-20.0563	136.4019	SUB_5	-20.7675	139.1501	SUB_4
-19.457	133.9031	SUB_5	-20.3795	137.3905	SUB_5	-20.706	138.7903	SUB_4
-19.4847	134.0836	SUB_5	-20.3511	137.2987	SUB_CATTLE			

Land Stability Remediation

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-19.4503	133.858	BRING_IN_WINDROWS	-19.5899	134.9885	BRING_IN_WINDROWS	-20.117	136.5934	BRING_IN_WINDROWS
-19.4713	134.3459	LEVEL	-19.5922	134.9956	BRING_IN_WINDROWS	-20.1186	136.5984	BRING_IN_WINDROWS
-19.4713	134.3331	BRING_IN_WINDROWS	-19.5968	135.0096	REPLACE_TOPSOIL	-20.1242	136.6152	BRING_IN_WINDROWS
-19.4717	134.357	LEVEL	-19.602	135.0248	BRING_IN_WINDROWS	-20.1242	136.6152	REPLACE_TOPSOIL_REDISTRIBUTE_VEG_PILES
-19.4723	134.3802	REPLACE_TOPSOIL	-19.6035	135.0296	BRING_IN_WINDROWS	-20.1274	136.6247	BRING_IN_WINDROWS
-19.4724	134.381	BRING_IN_WINDROWS	-19.6043	135.032	LEVEL	-20.1303	136.6336	BRING_IN_WINDROWS
-19.4727	134.3832	BRING_IN_WINDROWS	-19.6141	135.0616	BRING_IN_WINDROWS	-20.1331	136.6421	BRING_IN_WINDROWS
-19.473	134.3085	LEVEL	-19.6157	135.0666	BRING_IN_WINDROWS	-20.1338	136.6441	BRING_IN_WINDROWS
-19.4732	134.3065	BRING_IN_WINDROWS	-19.6207	135.0815	BRING_IN_WINDROWS	-20.1342	136.6453	BRING_IN_WINDROWS
-19.4733	134.4087	LEVEL	-19.6221	135.086	BRING_IN_WINDROWS	-20.1364	136.6523	BRING_IN_WINDROWS
-19.4739	134.428	BRING_IN_WINDROWS	-19.6266	135.0997	BRING_IN_WINDROWS	-20.1433	136.6729	REPLACE_TOPSOIL
-19.4739	134.428	LEVEL	-19.637	135.131	BRING_IN_WINDROWS	-20.1451	136.6783	REPLACE_TOPSOIL
-19.4742	134.2915	LEVEL	-19.6832	135.2354	BRING_IN_WINDROWS	-20.1487	136.6891	REPLACE_TOPSOIL_REDISTRIBUTE_VEG_PILES
-19.4769	134.4656	BRING_IN_WINDROWS	-19.6931	135.2743	REPLACE_TOPSOIL	-20.1493	136.691	BRING_IN_WINDROWS
-19.477	134.4722	BRING_IN_WINDROWS	-19.6946	135.2807	REPLACE_TOPSOIL	-20.4231	137.4929	REPLACE_TOPSOIL
-19.477	134.4722	LEVEL	-19.7106	135.354	BRING_IN_WINDROWS	-20.6157	138.0007	BRING_IN_WINDROWS

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-19.4774	134.0599	BRING_IN_WINDROWS	-19.7163	135.3712	BRING_IN_WINDROWS	-20.617	138.0095	BRING_IN_WINDROWS
-19.4827	134.205	REPLACE_TOPSOIL	-19.8348	135.7299	LEVEL	-20.6195	138.0276	BRING_IN_WINDROWS
-19.4843	134.6563	LEVEL	-19.8395	135.7442	BRING_IN_WINDROWS	-20.6211	138.0376	BRING_IN_WINDROWS
-19.4846	134.6623	LEVEL	-19.8437	135.757	BRING_IN_WINDROWS	-20.6409	138.1553	BRING_IN_WINDROWS
-19.488	134.152	FILL	-20.0013	136.2335	REPLACE_TOPSOIL_REDISTRIBUTE_VEG_PILES	-20.6438	138.1665	BRING_IN_WINDROWS
-19.4905	134.6873	LEVEL	-20.0109	136.2638	REPLACE_TOPSOIL	-20.6523	138.2307	BRING_IN_WINDROWS
-19.5051	134.7312	LEVEL	-20.0204	136.2922	REPLACE_TOPSOIL_REDISTRIBUTE_VEG_PILES	-20.668	138.4076	BRING_IN_WINDROWS
-19.5055	134.7342	LEVEL	-20.023	136.3004	REPLACE_TOPSOIL	-20.6689	138.4141	BRING_IN_WINDROWS
-19.5267	134.7986	BRING_IN_WINDROWS	-20.0421	136.3582	REPLACE_TOPSOIL_REDISTRIBUTE_VEG_PILES	-20.6704	138.425	BRING_IN_WINDROWS
-19.5341	134.8196	BRING_IN_WINDROWS	-20.0439	136.3637	REPLACE_TOPSOIL_REDISTRIBUTE_VEG_PILES	-20.6796	138.4872	BRING_IN_WINDROWS
-19.5352	134.7956	BRING_IN_WINDROWS	-20.0563	136.4019	BRING_IN_WINDROWS	-20.6823	138.5052	REPLACE_TOPSOIL
-19.5424	134.8426	BRING_IN_WINDROWS	-20.0711	136.449	BRING_IN_WINDROWS	-20.7657	139.1445	REPLACE_TOPSOIL
-19.5489	134.8644	BRING_IN_WINDROWS	-20.097	136.5316	BRING_IN_WINDROWS			
-19.5489	134.8644	REDISTRIBUTE_VEG_PILES	-20.1002	136.5418	BRING_IN_WINDROWS			
-19.5529	134.8765	BRING_IN_WINDROWS	-20.1025	136.5494	BRING_IN_WINDROWS			
-19.5674	134.9202	BRING_IN_WINDROWS	-20.116	136.5904	BRING_IN_WINDROWS			
-19.5808	134.9609	REDISTRIBUTE_VEG_PILES	-20.1162	136.5907	BRING_IN_WINDROWS			
-19.5844	134.9718	REPLACE_TOPSOIL	-20.1162	136.5907	REPLACE_TOPSOIL_REDISTRIBUTE_VEG_PILES			

Vegetation and Overgrowth

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-20.8358	139.3345	VEG_2	-20.1631	136.7325	VEG_5	-19.7088	135.3482	VEG_2
-20.833	139.3206	VEG_4	-20.158	136.717	OVERGROWTH	-19.706	135.3345	VEG_3
-20.833	139.3206	OVERGROWTH	-20.1554	136.7093	VEG_5	-19.7029	135.3195	VEG_4
-20.8253	139.4507	VEG_3	-20.1515	136.6976	VEG_5	-19.7012	135.3112	VEG_3
-20.8238	139.4369	VEG_5	-20.1505	136.6943	VEG_5	-19.7006	135.3084	VEG_2
-20.8116	139.4291	OVERGROWTH	-20.1493	136.691	VEG_4	-19.6958	135.2857	VEG_4
-20.8105	139.4252	OVERGROWTH	-20.1487	136.6891	VEG_1	-19.6946	135.2807	VEG_2
-20.7543	139.1025	VEG_5	-20.1462	136.6813	VEG_2	-19.6939	135.2777	VEG_2
-20.7538	139.099	VEG_5	-20.1451	136.6783	VEG_3	-19.687	135.2485	VEG_4
-20.7392	139.0009	VEG_5	-20.1433	136.6729	VEG_2	-19.6855	135.2426	VEG_3
-20.737	138.9711	VEG_5	-20.1412	136.6662	VEG_4	-19.6832	135.2354	VEG_4
-20.7347	138.9437	VEG_5	-20.1377	136.6559	VEG_5	-19.6807	135.2275	VEG_4
-20.7316	138.9153	VEG_5	-20.1364	136.6523	VEG_3	-19.676	135.2127	VEG_5
-20.7284	138.8892	VEG_5	-20.1303	136.6336	VEG_5	-19.6735	135.208	VEG_4
-20.7269	138.8721	VEG_5	-20.1285	136.628	VEG_5	-19.6694	135.1999	VEG_4
-20.6979	138.7326	VEG_5	-20.1274	136.6247	VEG_4	-19.6671	135.1953	VEG_5
-20.6925	138.7505	VEG_5	-20.1237	136.6135	VEG_4	-19.6632	135.1874	VEG_4
-20.6923	138.6854	VEG_5	-20.122	136.6086	VEG_2	-19.6606	135.1824	VEG_3
-20.6921	138.6467	VEG_5	-20.1209	136.605	VEG_2	-19.6392	135.1376	VEG_3
-20.6921	138.6412	VEG_4	-20.1204	136.6036	VEG_5	-19.6314	135.1142	VEG_3

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-20.692	138.629	VEG_3	-20.1176	136.5953	VEG_4	-19.6242	135.0921	VEG_2
-20.686	138.534	VEG_1	-20.117	136.5934	VEG_5	-19.6141	135.0616	VEG_3
-20.686	138.534	TREE_ON_PIPE	-20.1162	136.5907	VEG_1	-19.6141	135.0616	VEG_3
-20.6839	138.5176	VEG_1	-20.1105	136.5739	VEG_5	-19.6073	135.0409	VEG_3
-20.6834	138.5143	OVERGROWTH	-20.0984	136.536	VEG_1	-19.6047	135.0331	VEG_4
-20.6823	138.5052	VEG_2	-20.097	136.5316	VEG_5	-19.6033	135.0288	VEG_3
-20.6818	138.502	VEG_5	-20.0563	136.4019	OVERGROWTH	-19.5984	135.0139	VEG_3
-20.6808	138.4955	VEG_5	-20.0495	136.3807	VEG_5	-19.5976	135.0117	VEG_4
-20.6796	138.4872	VEG_5	-20.0439	136.3637	VEG_4	-19.5968	135.0096	VEG_2
-20.6731	138.4435	VEG_5	-20.0439	136.3637	VEG_4	-19.593	134.9979	VEG_4
-20.6689	138.4141	VEG_5	-20.0358	136.3393	VEG_5	-19.593	134.9979	OVERGROWTH
-20.6689	138.4141	OVERGROWTH	-20.0292	136.3194	VEG_2	-19.5844	134.9718	VEG_2
-20.6674	138.4026	VEG_5	-20.0204	136.2922	VEG_2	-19.5791	134.9557	VEG_4
-20.6538	138.2487	VEG_5	-20.0192	136.2891	VEG_5	-19.5747	134.9423	VEG_4
-20.6435	138.1652	VEG_4	-20.0192	136.2891	OVERGROWTH	-19.5674	134.9202	VEG_4
-20.6386	138.1473	VEG_5	-20.0165	136.2803	VEG_5	-19.5569	134.8886	VEG_4
-20.6266	138.0746	VEG_5	-20.0109	136.2638	VEG_3	-19.5529	134.8765	VEG_4
-20.623	138.0503	VEG_5	-20.0014	136.2349	VEG_5	-19.5489	134.8644	VEG_3
-20.6195	138.0276	VEG_5	-19.9994	136.2288	VEG_5	-19.5478	134.8609	VEG_4
-20.617	138.0095	VEG_5	-19.9994	136.2288	OVERGROWTH	-19.5364	134.8264	OVERGROWTH
-20.6072	137.9706	WHITEWOOD	-19.9953	136.2152	VEG_5	-19.5361	134.8255	VEG_4
-20.6001	137.9465	VEG_5	-19.9903	136.1989	VEG_5	-19.5361	134.8255	OVERGROWTH
-20.5944	137.9311	VEG_5	-19.9903	136.1989	OVERGROWTH	-19.5352	134.7956	VEG_2
-20.5013	137.6964	VEG_5	-19.9697	136.1386	VEG_5	-19.5338	134.8188	VEG_3
-20.4975	137.6882	VEG_5	-19.9697	136.1386	OVERGROWTH	-19.5261	134.7952	VEG_3
-20.4855	137.6608	VEG_5	-19.9697	136.1387	VEG_5	-19.498	134.7101	VEG_4
-20.4807	137.6462	VEG_4	-19.9453	136.0765	VEG_5	-19.4956	134.1318	VEG_2
-20.465	137.5991	VEG_5	-19.9396	136.0474	OVERGROWTH	-19.4888	134.0968	VEG_2
-20.4624	137.5908	VEG_5	-19.9277	136.0115	OVERGROWTH	-19.4847	134.0836	VEG_2
-20.4483	137.5512	VEG_5	-19.927	136.0094	OVERGROWTH	-19.4845	134.6585	VEG_5
-20.4443	137.5418	VEG_5	-19.912	135.964	VEG_5	-19.4844	134.6576	OVERGROWTH
-20.4256	137.4988	VEG_5	-19.912	135.964	OVERGROWTH	-19.4843	134.6561	VEG_4
-20.4256	137.4988	OVERGROWTH	-19.9106	135.9597	VEG_5	-19.4842	134.1906	VEG_2
-20.4235	137.4939	VEG_5	-19.9106	135.9597	OVERGROWTH	-19.484	134.0814	VEG_3
-20.4217	137.4896	VEG_5	-19.9084	135.9532	VEG_5	-19.4811	134.6035	VEG_4
-20.391	137.4193	VEG_5	-19.9	135.9276	VEG_5	-19.4802	134.5878	VEG_4
-20.3666	137.3578	VEG_5	-19.8981	135.9217	OVERGROWTH	-19.4791	134.5708	VEG_4
-20.3635	137.3487	VEG_5	-19.8957	135.9145	VEG_5	-19.478	134.5565	VEG_1
-20.3471	137.2855	VEG_5	-19.8957	135.9145	OVERGROWTH	-19.478	134.5522	VEG_1
-20.3389	137.2594	VEG_5	-19.8954	135.9136	VEG_5	-19.4776	134.2568	VEG_2
-20.327	137.2223	VEG_5	-19.8899	135.8969	VEG_5	-19.4774	134.542	VEG_2
-20.3239	137.2127	VEG_3	-19.8899	135.8969	OVERGROWTH	-19.477	134.5132	VEG_2
-20.3125	137.1775	VEG_5	-19.8882	135.8919	VEG_5	-19.4769	134.4816	VEG_1
-20.2974	137.1343	VEG_3	-19.8882	135.8919	OVERGROWTH	-19.4769	134.5274	VEG_2
-20.2865	137.1047	VEG_5	-19.8576	135.7991	VEG_5	-19.4769	134.4899	VEG_2
-20.2825	137.0925	VEG_5	-19.8576	135.7991	OVERGROWTH	-19.4769	134.4702	VEG_2
-20.2802	137.0857	VEG_4	-19.8559	135.7938	VEG_5	-19.4764	134.4561	VEG_4
-20.2774	137.077	VEG_4	-19.8559	135.7938	TREE_ON_PIPE	-19.4759	134.4518	VEG_3
-20.2735	137.0674	VEG_4	-19.8544	135.7893	VEG_4	-19.4757	134.2764	VEG_3
-20.2657	137.0419	VEG_5	-19.8528	135.7846	VEG_3	-19.4746	134.2876	VEG_4
-20.2498	136.9934	OVERGROWTH	-19.8437	135.757	VEG_3	-19.4744	134.4395	VEG_3
-20.2398	136.9638	VEG_5	-19.8395	135.7442	VEG_3	-19.4742	134.0497	VEG_2
-20.2392	136.9619	VEG_5	-19.8305	135.717	VEG_2	-19.4732	134.3054	VEG_3
-20.2392	136.9619	OVERGROWTH	-19.8267	135.7055	VEG_2	-19.4726	134.3847	VEG_2
-20.2327	136.9424	VEG_5	-19.8234	135.6954	VEG_3	-19.4723	134.3186	VEG_5
-20.229	136.9314	VEG_5	-19.8213	135.689	VEG_2	-19.4722	134.3208	VEG_3
-20.2231	136.9136	VEG_5	-19.8189	135.6818	VEG_3	-19.4716	134.329	VEG_3
-20.2223	136.9109	OVERGROWTH	-19.799	135.6214	VEG_4	-19.4712	134.3424	VEG_3
-20.2214	136.9084	VEG_5	-19.7858	135.5815	VEG_3	-19.4613	133.9624	VEG_1
-20.2207	136.9063	VEG_5	-19.7663	135.5226	VEG_4	-19.4591	133.9269	VEG_1
-20.2207	136.9063	OVERGROWTH	-19.763	135.5127	VEG_3	-19.4586	133.9206	VEG_1
-20.2207	136.906	VEG_5	-19.755	135.4889	VEG_4	-19.4578	133.9441	VEG_1
-20.2184	136.8994	OVERGROWTH	-19.7475	135.4657	VEG_3	-19.4576	133.9341	VEG_1
-20.2125	136.8813	VEG_5	-19.7456	135.46	VEG_4	-19.4574	133.9421	VEG_1
-20.2088	136.8703	VEG_5	-19.7448	135.4576	VEG_3	-19.4572	133.9388	VEG_1
-20.2088	136.8703	OVERGROWTH	-19.7402	135.4435	VEG_3	-19.457	133.9031	VEG_2
-20.2059	136.8615	VEG_5	-19.739	135.4359	VEG_3	-19.4564	133.8961	VEG_2
-20.2059	136.8615	OVERGROWTH	-19.732	135.4189	VEG_4	-19.456	133.894	VEG_4

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-20.1989	136.8403	OVERGROWTH	-19.7298	135.4119	VEG_3	-19.4537	133.88	VEG_2
-20.1907	136.8158	VEG_5	-19.7289	135.4093	VEG_2			
-20.1907	136.8158	OVERGROWTH	-19.7271	135.3874	VEG_3			
-20.1877	136.8066	OVERGROWTH	-19.7255	135.3989	VEG_3			
-20.1868	136.8034	VEG_5	-19.7163	135.3712	VEG_3			
-20.175	136.7684	OVERGROWTH	-19.7126	135.3598	VEG_2			

Infrastructure

Latitude	Longitude	Code	Latitude	Longitude	Code	Latitude	Longitude	Code
-19.466	133.9872	SIGN_NOT_VIS	-20.327	137.2223	DAMAGED_POLE_ EXPOSED_WIRES	-20.6782	138.4791	DAMAGED_SIGN
-19.5713	134.9322	DAMAGED_SIGN	-20.3592	137.3245	DAMAGED_SIGN	-20.8109	139.3661	BURNED_SIGN
-20.3298	137.2313	DAMAGED_SIGN	-20.3861	137.4081	DAMAGED_SIGN	-20.8332	139.3217	BURNED_SIGNS_MULTIPLE
-20.3285	137.2268	DAMAGED_SIGN	-20.3961	137.4312	DAMAGED_SIGN	-20.8355	139.3377	BURNED_SIGNS_MULTIPLE
-20.3389	137.2594	DAMAGED_SIGN	-20.4022	137.4446	DAMAGED_POLE_ EXPOSED_WIRES			
-20.341	137.2669	DAMAGED_SIGN	-20.465	137.5991	DAMAGED_SIGN			
-20.3204	137.2015	DAMAGED_SIGN	-20.6791	138.4845	DAMAGED_SIGN			

Plains Death Adder Habitat Survey Sites

Latitude	Longitude	Site	Latitude	Longitude	Site	Latitude	Longitude	Site
-20.3058	137.1572	MG01	-20.5476	137.8091	MG06*	-20.6917	138.5753	MG11
-20.3352	137.2484	MG02	-20.6155	138.0008	MG07	-20.6155	138.0008	MG12
-20.3706	137.3675	MG03	-20.6508	138.2119	MG08	-20.692	138.629	MG13
-20.4461	137.547	MG04	-20.6530	138.2397	MG09	-20.7217	138.8377	MG14
-20.4899	137.6713	MG05	-20.6587	138.3077	MG10			

* Location for site MG06 is approximate only

2.2 APPENDIX B – NOTIFICATION OF COMMENCEMENT

Marc Rullo

From: Marc Rullo
Sent: Monday, 29 May 2017 3:12 PM
To: EPBCMonitoring@environment.gov.au
Cc: Russell Brooks; Jeff.richardson@ecoz.com.au; Cox, Vaughn
Subject: Notification of Commencement | Jemena Northern Gas Pipeline (EPBC 2015/7569)

Dear Sir or Madam,

In accordance with Condition 7 of EPBC Decision 2015/7569 (Jemena Northern Gas Pipeline), Please be advised the commencement of actions was **20 May 2017**.

Please acknowledge receipt of this email. If you require further information, do not hesitate to contact me using the details below.

Thank you and kind regards,

Marc Rullo
Project Engineer – Northern Gas Pipeline
Jemena
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1