Health, Safety and Environment Management System

Plan

QSN.2373-PL-HSE-0002

QSN Link Pipeline, QSN Expansion Pipeline and Moomba Interconnect Pipeline Statement of Environmental Objectives

Version Control and Authorisation

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0.2	25/07/19	Incorporation of DEM comments	Angela Gamble Environment Lead	Glenn Platt Senior Technical Regulatory Specialist	Paul Thorley Manager Operations QLD	Alicia Zillman Manager Environment & Heritage
0.1	16/04/19	Updated into current National APA Environment Plan template; Five yearly renewal; new document number.	Lisa Graham	Glenn Platt	Paul Thorley	Alicia Zillman
C (POL 1-16)	17/12/13	Incorporate changes from Govt. Dept.s	M. McLeod	J Bryan	-	M. Cave

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1.4	Revision based on DEM feedback	12/06/2026
1.5	Draft for Public Consultation	28/07/2026

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1 Introduction

This Statement of Environmental Objectives (SEO) is for the operation of:

- Pipeline Licence 18 (PL18) – QSN Link (Ballera Qld to Moomba SA)

This SEO has been prepared by APA Group in accordance with the requirements of Section 99 of the South Australian *Energy Resources Act 2000* (ER Act) and the *Energy Resources Regulations 2013* (ER Regs).

This SEO is based on the previously-approved Epic Energy SEO Q-02-102-LAE-G-002 prepared by RPS Ecos on behalf of Epic Energy, and the previously approved SEO prepared by APA Group QSN.2373-PL-HSE-0002 (Version 1, dated 21/04/2020).

1.1 Background

APA (SWQP) Pty Limited (ABN 67 066 656 219), a wholly owned subsidiary of the APA Group, holds the licence for, and operates the Queensland, South Australia and New South Wales (QSN) Link and the QSN Expansion Gas Pipeline, covered by Pipeline Licence (PL) PL18.

The QSN Link and QSN Expansion Pipeline transport natural gas between APA's Moomba Compressor Station in South Australia (SA) and the South West Queensland Pipeline (SWQP) Ballera Gas Facility in Queensland (Qld). Both pipelines are bi-directional transporting sales quality natural gas between the SWQP at Ballera, the Moomba to Adelaide Pipeline (MAP) and the Moomba to Wilton Pipeline (MWP) at Moomba.

The QSN Link is approximately 182.7 km in length and has a nominal outside diameter of 400 mm. The QSN Expansion is approximately 182.7 km in length and has a nominal outside diameter of 450 mm. The pipelines are contained within a common easement. The pipelines traverse SA for 92.6 km (KP90.1 to KP182.7 measured from Ballera) and are subject to the conditions of PL18.

Also included in PL18 is a section of the 650 mm nominal diameter Moomba Interconnect Pipeline (MIP), approximately 374 m long from the Moomba Compressor Station to the intersection of the PL7 easement. The remaining section of the MIP is within PL7.

The scope of this SEO covers the SA section of the QSN Link, the QSN Expansion Pipeline and the MIP, herein collectively referred to as 'the Pipeline'.

1.2 Location

The South West Queensland Pipeline System is located in rural, regional and remote areas of SA and Qld.

The SWQP traverses 65 Freehold and 43 Leasehold properties in Queensland. The pipeline passes through the Maranoa Regional Council, Murweh Shire Council, Quilpie Shire Council and Bulloo Shire Council areas.

Land use associated with the broader regional area is predominantly for agricultural and grazing purposes, oil and gas production as well as tourism and conservation. Most of the project area is sparsely populated and remote from residential communities with the nearest townships located between 13 km and 32 km north of the existing pipelines.

The QSN is located within the Shire of Bulloo (QLD) and the Pastoral Unincorporated Area (SA) which is managed and governed by the Outback Communities Authority (OCA).

The QSN Link crosses three active pastoral stations, two of which are in the South Australian section of the Pipeline. The region is also used for oil and gas production, and there is significant oil and gas infrastructure crossing or paralleling the pipeline route in numerous locations.

The route passes through the Innamincka Regional Reserve in South Australia for approximately 55 km. This is a multiple use reserve, and is managed under a conservation framework while permitting the sustainable use of resources (i.e. oil and gas production and grazing). The South Australian Department for Environment and Water have specific requirements for operation in this reserve.

1.3 Timeframe

The SWQP was commissioned in 1996 with a design life of 50 years.

The QSN Link was commissioned in 2008 with a design life of 50 years.

The SWQPE and QSNE were commissioned in 2012 with design life of 50 years.

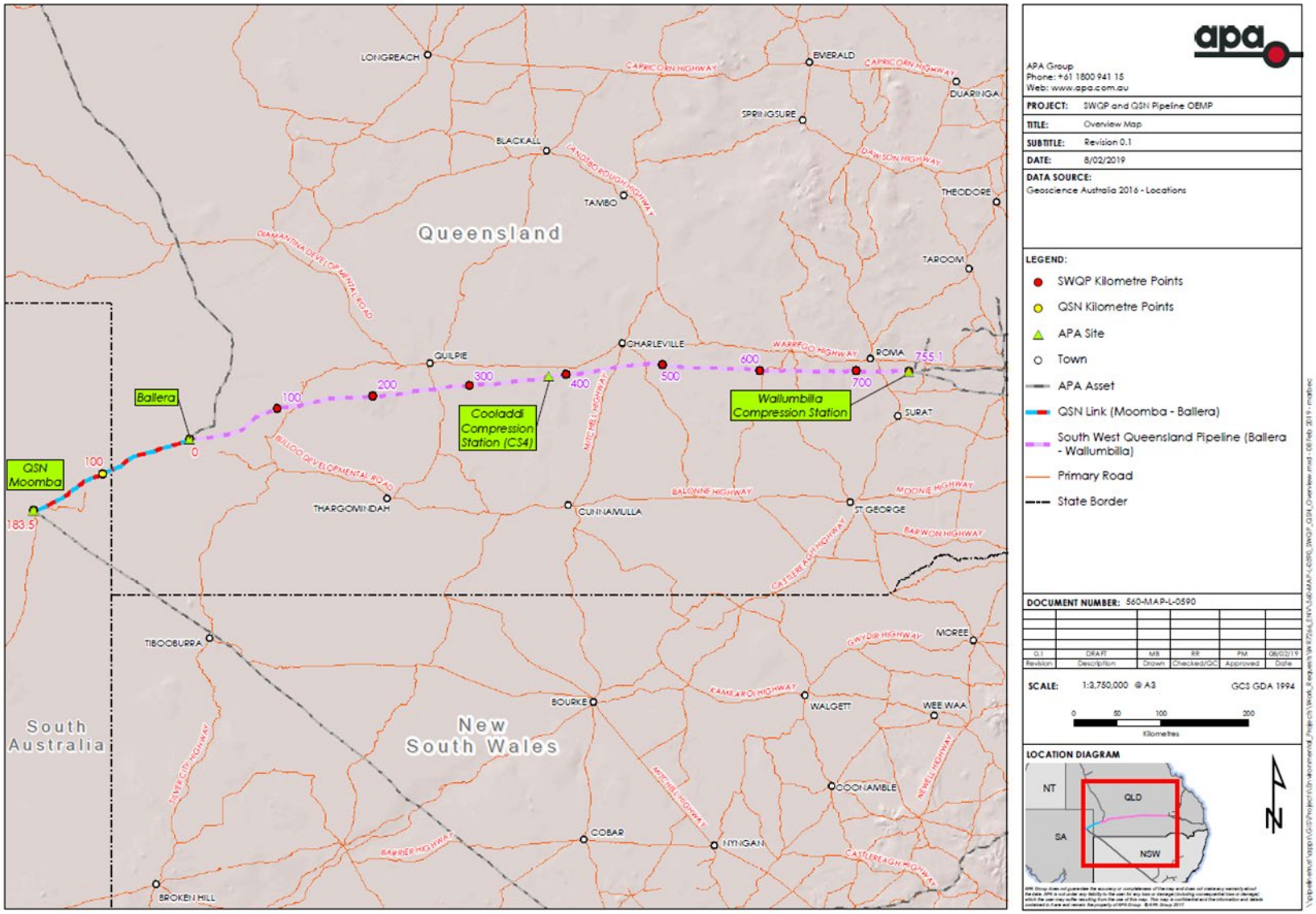
The pipelines were designed to AS 2885 as applicable at the time of design. The pipelines are operated to the current version of AS 2885 and the APA Group pipeline management system. Remaining life reviews are required to be carried out at typically 10-year intervals.

Please refer to Table 1 below for the Pipeline Licence Details.

Please refer to Figure 1 below for the Pipeline Locality Maps.

Table 1 Pipeline Licence Details

Pipeline Licence	Licensee	Date of Issue	Expiry Date
PL 18	APA (SWQP) Pty Limited	7 April 2008	6 April 2029



apa

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PROJECT:	SWQP and QSN Pipeline OEMP
TITLE:	Overview Map
SUBTITLE:	Revision 0.1
DATE:	8/02/2019
DATA SOURCE:	Geoscience Australia 2016 - Locations

LEGEND:

- SWQP Kilometre Points
- QSN Kilometre Points
- APA Site
- Town
- APA Asset
- QSN Link (Moomba - Ballera)
- South West Queensland Pipeline (Ballera - Wallumbilla)
- Primary Road
- State Border

DOCUMENT NUMBER: 560-MAP-L-0590

Revision	Description	Drawn	Checked/QC	Approved	Date
0.1	DRAFT	MB	RR	PM	08/02/19

SCALE: 1:3,750,000 @ A3 GCS GDA 1994

0 50 100 200
Kilometres

LOCATION DIAGRAM

N

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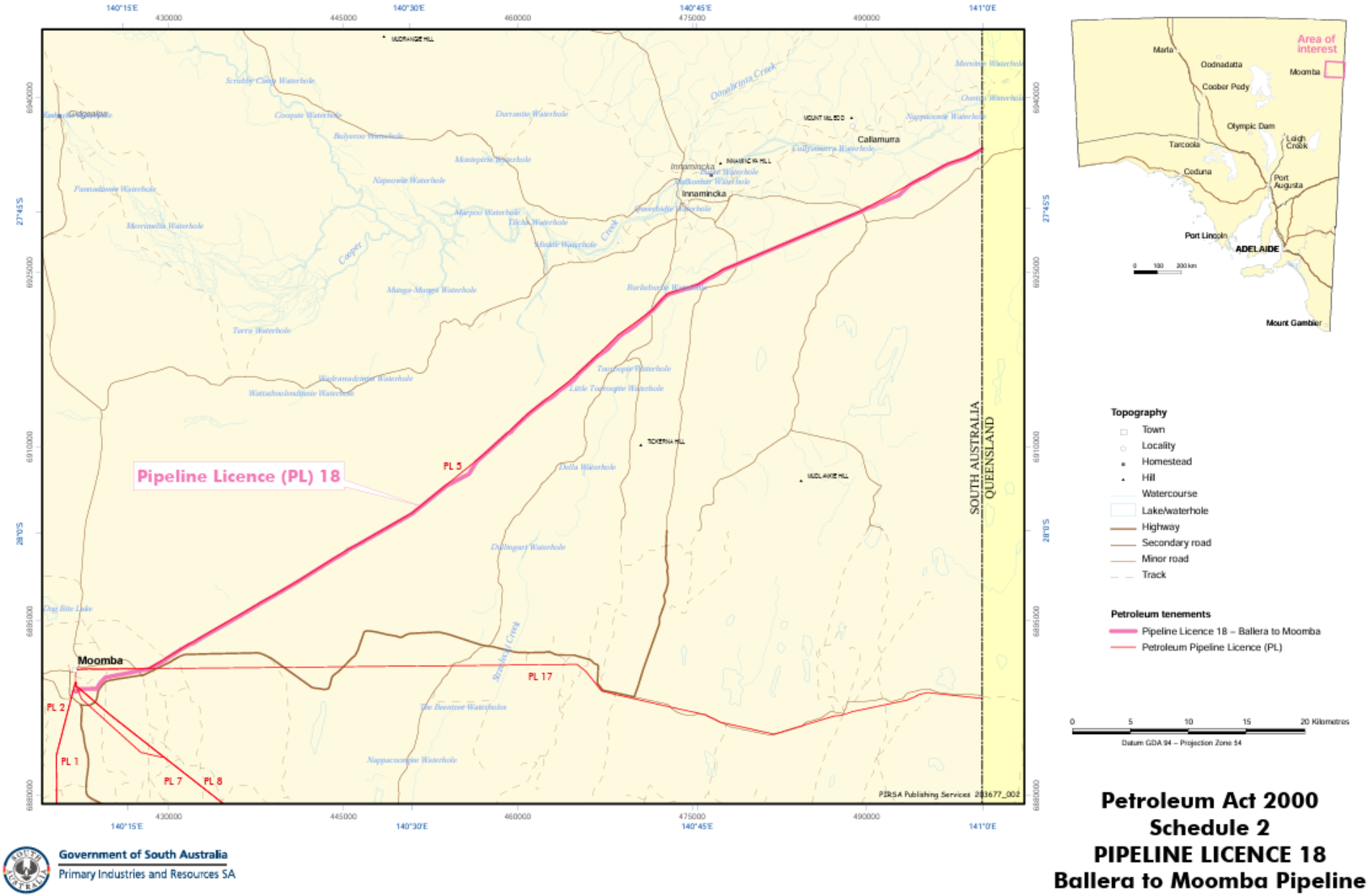

Government of South Australia
Primary Industries and Resources SA

Petroleum Act 2000
Schedule 2
PIPELINE LICENCE 18
Ballera to Moomba Pipeline

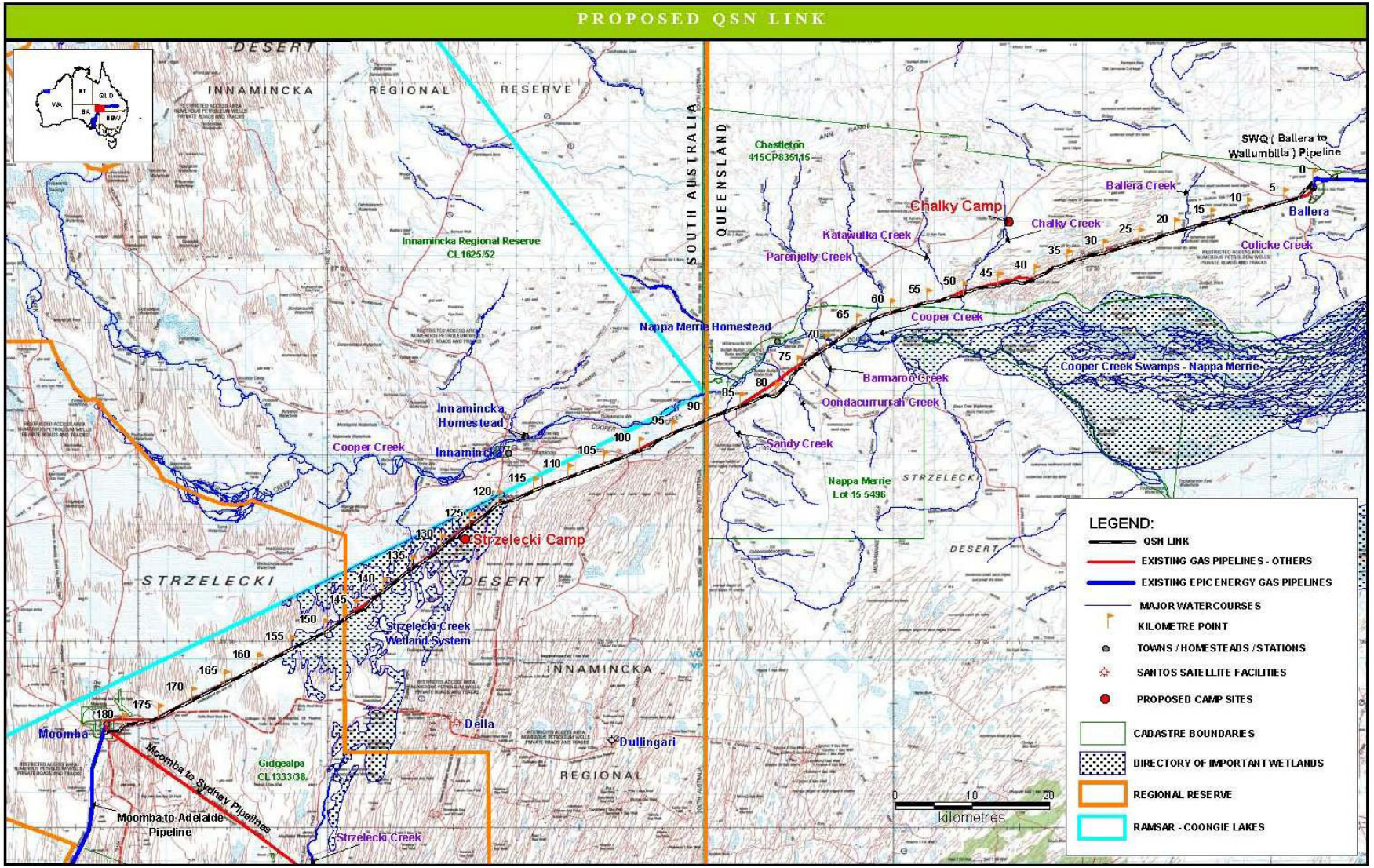

Figure 1 Pipeline Locality Maps

1.4 Purpose

The purpose of this SEO is to outline the environmental objectives to which the Pipeline operation, maintenance and decommissioning activities will conform and the criteria upon which the achievement of these objectives will be assessed.

The objectives of this SEO have been developed on the basis of information and issues identified in the QSN Link Pipeline, QSN Expansion Pipeline and Moomba Interconnect Pipeline Environmental Impact Report (QSN.2373-PL-HSE-0001) (EIR) and are in keeping with the objectives of the ER Act, which include:

- To ensure that regulated activities that may have adverse effects on the environment:
  - Are properly managed to reduce environmental damage; and
  - Are carried out in a way that eliminates or limits the risk of significant long term environmental damage; and
- To ensure that land adversely affected by regulated activities is properly rehabilitated; and
- To establish appropriate consultative processes involving people directly affected by regulated activities including Aboriginal people and the public generally; and
- To protect the public from risks inherent in regulated activities.

In accordance with section 100 of the ER Act this SEO:

- States environmental objectives that must be achieved in carrying out the regulated activity;
- States criteria to be applied to determine whether the stated environmental objectives have been achieved in a particular case; and
- Sets out:
  - Leading performance criteria;
  - Immediately reportable incidents and reportable incidents; and
  - Such other information as prescribed by the Regulations.

1.5 Regulatory Definitions

Environment is defined in the ER Act to include:

- Land, air, water (including both surface and underground water and sea water), organisms, ecosystems, flora and fauna; and
- Buildings, structures and other forms of infrastructure and cultural artefacts; and
- Existing and potential land use; and
- Public health, safety or amenity; and
- The heritage, aesthetic or cultural values of an area; and
- The economic or social impact on an area.

The environmental objectives outlined in this SEO incorporate these aspects.

Leading Performance Criteria means criteria used to give an early warning that a control or other strategy necessary for compliance with a statement of environmental objectives is absent or may fail or be failing.

Natural Gas means petroleum that is, or would be, gaseous, at Standard Temperature and Pressure.

Pipeline means a pipe or system of pipes for conveying a regulated substance from place to place and includes:

- Tanks, machinery and equipment necessary for, or associated with, its operation; and
- A part of a pipeline.

Petroleum refers to a naturally occurring substance consisting of a hydrocarbon or mixture of hydrocarbons in gaseous, liquid or solid state.

Regulated Activity has the same meaning as defined in Section 10 of the ER Act.

1.6 Pipeline Operations and Maintenance Activities

This SEO applies to all APA Group pipeline operation, maintenance and decommissioning activities relating to PL18. Operational and maintenance activities that are covered by this document include:

- Easement maintenance including:
  - Patrolling / inspections (including aerial inspections) – easement access.
  - Weed control.
  - Line-of-sight clearance.
- Pipeline operations including:
  - Cathodic protection surveys.
  - Testing and inspection of relief valves.
  - Erosion events.
  - Emissions (methane gas release).
- Pipeline maintenance including:
  - Pigging and integrity testing.
  - Excavations, including coating refurbishment, installation of anode beds, emergency response exercises and new tie-ins.
  - Replacement of pipeline section.
  - Welding.
  - Coating.
  - Hydro-testing.
- Facility operation and maintenance including:
  - Metering and gas delivery stations.
  - Weed control.
  - Production of hazardous waste.
  - Waste disposal.
  - Station blow downs.
  - Upgrades.

These activities are described in detail in Pipeline Licence 18 and Section 3.3 of the QSN Link Pipeline, QSN Expansion Pipeline and Moomba Interconnect Pipeline EIR.

2 Environmental Objectives

Potential environmental hazards and consequences associated with the operation and maintenance of the Pipeline and associated facilities have been identified in the EIR.

2.1 Operations and Maintenance

Regulation 12(3)(a) of the ER Regs requires that objectives be included in this SEO that relate to dealing with impacts on various elements of the environment, associated with carrying out the regulated activity.

The objectives for the environmental management of the Pipeline, during operations and maintenance, are provided below in Table 2. These objectives have had the Assessment Criteria, outlined in Section 3 below, applied to them to determine whether or not they can be achieved in a particular case. The full environmental impact assessment is detailed in the EIR.

Note that the construction of the QSN Expansion Pipeline was completed in 2011 and no further pipeline construction activities are anticipated in the foreseeable future, therefore, the objectives for environmental management during Pipeline construction have been removed.

To ensure the overall objectives are achieved, specific goals have also been prepared for each objective, to ensure the objectives can be achieved.

Table 2 Operation and Maintenance Objectives

Objective	Goal
1. No significant** adverse changes in soil stability, structure, composition or quality resulting from activities	1.1 To minimise soil erosion and sedimentation as a result of pipeline maintenance and to remediate in a timely manner when due to operations
	1.2 To reinstate soil and terrain as near as practicable to pre-maintenance contours and conditions
	1.3 To prevent soil inversion
	1.4 To remediate erosion or subsidence as a result of pipeline operations in a timely manner
2. No significant** adverse impacts to existing surface water resources, including aquatic ecosystems and no changes to groundwater quality	2.1 To minimise short term, and prevent long-term, interruption or modification to surface drainage patterns including drainage lines, clay pans and flood out areas
	2.2 To minimise the amount of sediment entering surface water features and groundwater
	2.3 To minimise disruption to third party use of surface waters and groundwater
	2.4 To maintain current surface drainage patterns
3. No new contamination or regulatory breaches associated with waste resulting from activities	3.1 To prevent spills occurring and if they occur minimise their impact
	3.2 To ensure that rubbish and waste material are disposed of in an appropriate manner
	3.3 To prevent impacts as a result of hydro test water, trench water and waste water (e.g. wash-down water) disposal
	3.4 To ensure the safe and appropriate disposal of facility wastewater (grey water, sewage)
4. No clearance of native vegetation or disturbance to native fauna unless prior approval under the relevant legislation is obtained	4.1 To minimise clearing of remnant vegetation
	4.2 To minimise disturbance to fauna
	4.3 To appropriately rehabilitate the easement to pre-maintenance condition, as far as reasonably practical
	4.4 To achieve a significant environmental benefit for native vegetation clearance
	4.5 To promote and maintain regrowth on the easement to be consistent with surrounding area
	4.6 To minimise additional clearing of native vegetation as part of operational activities

Objective	Goal
	4.7. To ensure operation and maintenance activities are planned and conducted in a manner that minimises impacts on native fauna
5. No introduction or spread of weeds, pest animals and pathogens as a result of these activities	5.1 To avoid the introduction or spread of weeds and pathogens and undertake control where required
6. No damage, disturbance or interference to Aboriginal or non-Aboriginal heritage unless authorised under the relevant legislation	6.1 To ensure that identified heritage sites are not disturbed
7. Minimise disturbance to receptors, land use and infrastructure due to operation and maintenance activities	7.1 To minimise noise impacts associated with the movement and operation of vehicles and equipment
8. Minimise atmospheric emissions	8.1 To minimise the generation of dust
	8.2 To eliminate uncontrolled atmospheric emissions
	8.3 To comply with air quality requirements
9. No injuries, deaths or health impacts to the public or third parties from activities that could have been reasonably prevented by the operator	9.1 To minimise disturbance or damage to infrastructure / land use and remediate where disturbance cannot be avoided
	9.2 To minimise disturbance to landholders
	9.3 To appropriately reinstate and rehabilitate the easement to allow continuation of current land use activities post-maintenance
	9.4 To prevent injury to general public and adequately protect public health and safety during operations
	9.5 To avoid fires associated with pipeline maintenance activities
	9.6 To prevent unauthorised activity on the easement that may adversely impact on the pipeline integrity
	9.7 To ensure that all wastewater (not from industrial processes) is collected, treated and disposed of to not adversely impact on health or the environment
	9.8 To ensure that there is no untreated wastewater exposed to the open environment or discharged directly into the ground
10. To ensure that security of natural gas supplies are maintained to gas consumers	10.1 To minimise the potential for significant disruption of gas supply to customers in line with contractual agreements

**A “Significant” adverse change is one that is considered to be “Moderate”, “High” or “Extreme” using the definitions and risk rating in the EIR’s Environmental Significance Assessment. Acceptable changes are those that are rated as “Low” or “Negligible” in the Environmental Significance Assessment with all the listed control and management measures in place.

2.2 Decommissioning

A natural gas transmission pipeline can potentially have an indefinite operational lifespan; however as the Pipeline ages the level of maintenance required will increase. The original design life of the Pipeline was 50 years. Ongoing condition assessments are conducted on the Pipeline in accordance with the requirements outlined in the most recent revision of *AS 2885.3:2022: Pipelines – Gas and liquid petroleum – Operation and maintenance* (AS2885).

Fitness for Purpose assessments, under the requirements of Section 30 of the ER Regs are also conducted. These assessments involve engineering investigation of the design, operating conditions, integrity assessments and the history of the Pipeline to determine the condition and any limits for continued safe operation.

In the event that the utility is no longer required, the Pipeline will be decommissioned in accordance with AS 2885 and the regulatory requirements and accepted current environmental best practices of the day.

Please refer to Table 3 for the decommissioning objectives.

Table 3 Decommissioning Objectives

Objective	**Goal**
11. To appropriately decommission the pipeline in accordance with regulatory requirements and accepted best practice environmental management	11.1 To safely decommission the pipeline and associated above-ground infrastructure in accordance with appropriate regulatory requirements
	11.2 To minimise disturbance to landholder and other third party stakeholders

3 Assessment Criteria

The environmental objectives, outlined in Section 2 above, are subject to an assessment to measure the level of achievement. The full environmental impact assessment is detailed in the EIR.

The assessment criteria (used to undertake the environmental impact assessment) have been prepared in accordance with:

- South Australian Department for Energy and Mining (DEM)'s Environmental Impact Assessment Criteria (EIAC) (Energy Information Sheet 014, July 2024); and
- DEM's EIAC Guidelines (ERG 015, June 2024).

Assessment Criteria – the *Assessment Criteria* in this SEO have been detailed to outline the criteria used by APA to inform the effectiveness of their management measures. Assessment criteria for each item have been developed in line with one of the following:

- Defined conditions – objectives for activities that can only be managed through the prevention of unacceptable actions (e.g. "No new outbreak or spread of weeds or pathogens as a result of pipeline activities"); and
- Defined requirements – the achievement of an objective can be assessed against the implementation of specific procedures or actions required for an activity (e.g. "Demonstrated compliance with AS 2885").

Goal Attainment Scaling (GAS) Criteria – objectives requiring visual assessment can be prone to uncertainties of subjective judgement. To minimise this occurring, GAS is used to measure such objectives against a series of criteria described by a written description and/or photographically. In this SEO, GAS is applied to measuring construction and restoration of borrow pits where applicable.

Leading Performance Criteria – the *Leading Performance Criteria* outlined in this SEO have been developed to ensure they give an early warning that a control or other strategy necessary for compliance with the SEO is absent, may fail or is failing, and the environmental objective is at risk of not being achieved, allowing time to respond accordingly.

Appendix 1 below outlines:

- *Impact ID* – a code corresponding to the Impact ID in the EIR;
- *Potential Impact Event* – a combination of the source, pathway and environmental receptor;
- *Environmental Objectives* – objectives that must be achieved for the Operations and Maintenance of the Pipeline (as identified in the EIR);
- Assessment *Criteria* – measures used to assess whether the proposed environmental objective has been achieved;
- *Leading Performance Criteria* – criteria used to give an early warning that a control or other strategy necessary for compliance with the SEO is absent, may fail or be failing; and
- *Guide to Achieving Objectives* – which are controls that will be implemented by APA Group to ensure that environmental objectives are achieved. These controls are not intended to be a mandatory regulatory requirement, but are provided to give an indication of the measures that can be implemented to ensure compliance.

4 Reporting

Section 85 of the ER Act classifies incidents that must be reported to DEM as either ***immediately reportable incidents*** or ***reportable incidents***.

4.1 Immediately Reportable Incidents

Immediately reportable incidents are defined in Section 85 of the Act as:

> *(a) an incident arising from activities conducted under a licence specified in the relevant statement of environmental objectives to be an immediately reportable incident; or*
>
> *(b) any other matter brought within the ambit of this definition by the regulations.*

Immediately reportable incidents must be reported to DEM by telephone ((08) 8463 6666) or email (DEM.Engineering@sa.gov.au) within 24 hours after the licensee becomes aware of the occurrence of the incident (email notification is preferred).

An ***immediately reportable incident*** initial report should be emailed to DEM and must include (in accordance with Regulation 32(3) of the ER Regs:

> *(a) the name and business address of the licensee;*
>
> *(b) the name and telephone number of a person who can be contacted about the matter;*
>
> *(c) the time and date of the occurrence of the incident;*
>
> *(d) the place where the incident occurred (using GDA 2020 co-ordinates or distances from significant topographical features);*
>
> *(e) in a case involving a spillage — the approximate quantity of the spillage;*
>
> *(f) the approximate size of any area affected by the incident (if relevant);*
>
> *(g) the nature and extent of any injury to a person and, if death has occurred, the cause and place of death;*
>
> *(h) the steps that have been taken to control, minimise or address any damage to any area affected by the incident.*

A comprehensive report must be submitted within three months, including, as per Regulation 32(4) of the ER Regs:

> *(a) the results of any assessment or investigation of the conditions or circumstances that caused or contributed to the occurrence of the incident, including an assessment of the effectiveness of the design, procedures and management systems that were in place to prevent the incident occurring;*
>
> *(b) the nature and extent of any damage to the environment that occurred as a result of the incident;*
>
> *(c) the steps that have been taken, or are proposed to be taken, to clean up and rehabilitate any area affected by the incident;*
>
> *(d) the steps that have been taken, or are proposed to be taken, to prevent a recurrence of the incident.*

4.2 Reportable Incidents

Reportable incidents are defined in Section 85 of the Act as:

> *(a) an incident (not being an immediately reportable incident) arising from activities conducted under a licence specified in the statement of environmental objectives to be a reportable incident; or*
>
> *(b) any other matter brought within the ambit of this definition by the regulations.*

As per Regulation 32 of the ER Regs, the following are classified as reportable incidents:

> *(a) an escape of a regulated substance, a processed substance, a chemical or a fuel that affects an area that has not been specifically designed to contain such an escape;*
>
> *(b) an incident identified as a reportable incident under the relevant statement of environmental objectives.*

Reportable incidents must be reported to DEM on a quarterly basis within 1 month of the end of the quarter, as per Regulation 32 of the ER Regs.

4.3 Other Reporting Requirements

Other reporting requirements are contained within the *Environment Protection Act 1993* (SA) as per below.

Any environmental incidents causing or threatening serious or material environmental harm, or site contamination of underground water must also be reported to the South Australian Environment Protection Authority (EPA), as per Section 83 and 83A of the *Environment Protection Act 1993.*

4.4 Reportable Incident Definitions

Table 4 sets out the definitions of **immediately reportable** and **reportable incidents** for the purposes of this SEO.

Table 4 Reportable Incident Definitions

Immediately Reportable Incidents	Reportable Incidents
1. A person is seriously injured[1] or killed. 2. An imminent risk to public health or safety arises. 3. Serious environmental damage occurs or an imminent risk of serious environmental damage arises. For example: a) Damage, disturbance or interference to cultural heritage sites without appropriate permits and approvals[2]. b) An escape of petroleum, process substance, a chemical or a fuel to a water body, or to land in a place where it is reasonably likely to enter a water body by seepage or infiltration, or onto land that affects the health of native flora and fauna species[3]. c) Detection of a declared weed, animal/plant pathogen or plant pest species that has been introduced or spread as a direct result of activities. d) Any removal of rare, vulnerable or endangered flora and fauna without appropriate permits and approvals[4]. 4. Security of natural gas supply is prejudiced or an imminent risk of prejudice to security of natural gas supply arises[5]. 5. An event that results in a rupture of a pressure containing asset or facility. 6. A regulated activity[6] being undertaken in manner that involved or will involve a serious risk to the health and safety of a person emanating from an immediate or imminent exposure to a hazard[7]. 7. Activity on a pipeline easement where the pipeline is contacted and repair action is required[8]. 8. An uncontrolled regulated substance release or malfunction or failure of critical plant or equipment resulting in the activation of emergency response or evacuation procedures, fire or explosion.	1. An escape of petroleum[9], processed substance, a chemical or a fuel that affects an area that has not been specifically designed to contain such an escape[10] (other than an immediately reportable incident). 2. An event that has the potential to compromise the physical integrity of an asset or facility. For example: a) Activity on a pipeline easement with equipment that has been identified[8] as exceeding the pipeline's penetration resistance, determined in accordance with Australian Standard (AS) 2885. b) Identification of a through-wall defect on a pipeline[11] or place component (other than an immediately reportable incident). c) Identification[12] of a partial through-wall defect (e.g. through visual inspection, inline inspection, non-destructive testing) that requires repair or replacement action, or a reduction of the Maximum Allowable Operating Pressure, to maintain safe operation (other than an immediately reportable incident). d) Activity on a pipeline easement with equipment or vehicles that have been identified[8] as exceeding allowable stress limits, determined in accordance with AS 2885. e) An unapproved[13] excursion outside of critical design or operating conditions/parameters. f) Failure of a critical procedural control in place to reduce a credible threat to low or as low as reasonably practicable (ALARP)14 3. Unauthorised activity on a pipeline easement where the pipeline is contacted by repair action is not required. 4. Malfunction or failure of critical plant or equipment that had (or still has) potential to cause an immediately reportable incident. 5. Any event where an excursion outside a culturally cleared area has occurred or the conditions[15] of a cultural heritage clearance have not been complied with (other than an Immediately Reportable Incident)

[1] As per the definition in section 36 of the *Work Health and Safety Act 2012*.

[2] Pursuant to *Aboriginal Heritage Act 1988* and *Heritage Places Act 1993*.

3 For reporting purposes, the assessment of 'reasonably likely to enter a water body by seepage or infiltration' may require further intrusive assessment. Should delineation of the extent of the release not be achieved within one week of becoming aware of the incident, DEM will be notified of the incident and the proposed site investigation methodology, including time-frames.

[4] Pursuant to *Native Vegetation Act 1991* (flora) and *National Parks and Wildlife Act 1972* (fauna).

[5] That is, after taking into account relevant factors on a day and rights and obligations under contracts, a significant curtailment of firm service that detrimentally impacts or is likely to impact upon the security of electricity supply to South Australia or to gas supplies to a significant number of commercial and/or domestic gas users in SA.

[6] Regulated activity as defined in Section 10 of the *Energy Resources Act* 2000.

[7] Resulting in the issuing of a prohibition notice by SafeWork SA pursuant to Section 195 the *Work Health and Safety Act 2012.*

8 For the case where a detailed assessment is required to determine this, DEM recommends the incident be reported initially and amended at a later date if required.

9 In gaseous, liquid or solid state, as per *Energy Resources Act 2000* definition.

10 An area assigned during a Hazard and Operability Process (HAZOP) study as a hazardous area for the purpose of gas venting, and designed as such, is considered to be an area specifically designed to contain a gas escape.

11 As per the *Energy Resources Act 2000* definition, the term 'pipeline' includes task, machinery and equipment necessary for, or associated with operation of the pipeline.

12 For reporting purposes, the incident is considered to have occurred at the time that a decision is made to repair or replace the defect, or reduce the Maximum Allowable Operating Pressure.

13 "Approval" as per AS 2885 definition. Note that there may be situations where excursions are allowable under AS 2885.

14 As per the Safety Management System process articulated in AS 2885.1-2018, or similar risk assessment process.

15 Note: Cultural heritage clearances are not defined under or referenced by the *Aboriginal Heritage Act 1988* and cannot ever authorise impacts to Aboriginal heritage.

5 Abbreviations

Refer to Table 5 for abbreviations used within this SEO.

Table 5 Abbreviations

Abbreviation	Expansion
ALARP	As Low As Reasonably Practicable
ANZECC	Australian and New Zealand Environment and Conservation Council
AS 2885	Australian Standard AS 2885.3-2022: Pipelines - Gas and liquid petroleum – Operation and maintenance
DEM	Department for Energy and Mining
DEW	Department for Environment and Water
EIA	Environmental Impact Assessment
EIAC	Environmental Impact Assessment Criteria
EIR	Environmental Impact Report
EMP	Environmental Management Plan
EMS	Environmental Management System
EP	Environment Procedures
EPA	Environment Protection Authority
KP	Kilometre Point (measured from Ballera)
LDA	APA Land Disturbance Assessment
MAP	Moomba to Adelaide Pipeline
MIP	Moomba Interconnect Pipeline
MWP	Moomba to Wilton Pipeline
PL	Pipeline Licence
QSN	Queensland-South Australia- New South Wales
ROW	Right Of Way
SA	South Australia
SEB	Significant Environmental Benefit
SEO	Statement of Environmental Objectives
SG+	Safeguard Plus (used by APA to record risks, actions, auditing and incident management system)
SWQP	South West Queensland Pipeline
XIC	X-Info Connect (used by APA to record Landholder Contact Program, landholder information, access conditions, stakeholder consultation)

6 Definitions

Definitions of the terms used in the SEO are provided below in Table 6.

Table 6 Definitions

Term	Definition
Approval	Refers to approval under the relevant legislation.
Consistent with surrounding land/area	A qualitative assessment of land condition on the easement to determine if condition of the easement is similar to that of adjacent land (i.e. soil, vegetation, landform).
Easement	An easement is a section of land registered on a property title that gives an authority or third party the right to use the land for a specific purpose even though they are not the land owner. Easements acquired are registered on the property title in the name of the acquiring authority. Future landowners remain subject to these easement conditions. The easement document explains the easements obligations and any land-use restrictions that apply to the landowner and anyone else with an interest in the land. The easement allows the acquiring authority (or an authorised third party) to take all actions required to construct, operate and maintain infrastructure in the easement. Note that previously the term Right of Way was used.
Infrastructure	Physical assets which are built on the land (e.g. roads, power poles, fences, railway, troughs, gates, dams, other services).
Landholder	Owner or occupier of the land.
Land use	Use of land e.g. grazing, mining, oil and gas production, access, industrial, residential, environmentally sensitive area, recreational.
Line of sight clearance	Clearing of large vegetation between pipeline markers to maintain a clear line of site between each pipeline marker (e.g. for trees on easement where large trees cannot be retained, vegetation trimmed to height of 1m over pipeline and to 3m either side of centreline). This is to satisfy the operational obligations to ensure pipeline integrity and personnel safety cannot be compromised (i.e. any objective is subservient to these requirements).
Minimise	To reduce as far as possible, considering all other factors (e.g. requirements for safe operations and accessibility).
Pipeline Operation and Maintenance	Refer to Section 1.6 for Pipeline operation and maintenance activities.
Significant	A “Significant” adverse change is one that is considered to be “Moderate”, “High” or “Extreme” using the definitions and risk rating in the EIR’s Environmental Significance Assessment. Acceptable changes are those that are rated as “Low” or “Negligible” in the Environmental Significance Assessment with all the listed control and management measures in place.

7 References

- Department for Energy and Mining, (DEM), South Australia: *Incident Definitions for Facilities and Pipelines Regulated under the Petroleum and Geothermal Energy Act 2000*, SA DEM website http://www.energymining.sa.gov.au/petroleum/legislation_and_compliance/compliance_and_monitoring Access October 2019.
- Epic Energy (2003) *Statement of Environmental Objectives Pipeline Licence No.1*.Prepared by Ecos Consulting for Epic Energy, March 2003.
- Jacobs SKM, (2014) *Review of Current Goal Attainment Scaling (GAS) criteria for borrow pit construction, use and rehabilitation within the Cooper Basin.* Report prepared for the Department for Manufacturing, Innovation, Trade, Resources and Energy, March 2014.
- McDonough, R. (1999). *Goal attainment scaling: a tool for evaluating pipeline environmental* performance. Primary Industries and Resources, South Australia.
- Origin Energy (2005) SESA Pipeline Statement of Environmental Objectives. Prepared by Ecos Consulting for Origin Energy, February 2005.
- South Australian Government, Native Vegetation Council, *Guide for a Significant Environmental Benefit for* the *clearance of native vegetation associated with the Minerals and Petroleum Industry* (2017), SA Department of Environment and Water website https://www.environment.sa.gov.au/topics/native-vegetation/developers-major-projects-mining, accessed 13 March 2025.
- South Australian Government, *Energy Resources Act* 2000, SA Government Legislation website https://www.legislation.sa.gov.au/lz?path=%2FC%2FA%2FEnergy%20Resources%20Act%202000, accessed 21st February 2025.
- South Australian Government, Energy Resources Regulation 2013, SA Government Legislation website https://www.legislation.sa.gov.au/lz?path=%2FC%2FR%2FEnergy%20Resources%20Regulations%202013, accessed 21st February 2025.

8 Audits and Inspections

Monitoring of environmental performance will be undertaken by operations personnel on an ongoing basis via a number of patrols, inspections and audits. These include:

- Daily pre-starts
- Routine site inspections (weekly, monthly or 3-monthly depending on maintenance schedule)
- Workplace HSEH/housekeeping inspections (weekly, monthly or 3-monthly depending on maintenance schedule)
- Aerial patrols / inspections of the easement (using low-flying aircraft, typically carried out 1 – 3 monthly)
- Ground patrols / inspections of the easement (frequency ranging from weekly to monthly or longer, dependent on particular issues that require monitoring, or every six-months)
- Annual Spill Kit Response Inspections
- Audits (minimum every 3 years for SEO, EIR, OEMP and APA Protocols).

Environmental performance is measured against the objectives and commitments of this SEO and the OEMP, which is assessed annually as part of the Annual Licence Report (ALR). The ALR includes a review of operational compliance with objectives and standards specified within this SEO and the OEMP, and takes into consideration the routine inspections outlined above.

The ALR includes details of:

- Any significant disturbance during the reporting period
- Any rehabilitation undertaken
- A list of all valid complaints relating to environmental issues (by date, source, reason for complaint and description of investigation to resolve complaint)
- Results of all monitoring.

Gas emissions are monitored by direct and calculated event-based data. Monitoring uses metered data. Fugitive emissions calculations account for vented gas by default as per National Greenhouse and Energy Reporting (NGER) methodologies. Emissions are captured annually as part of NGER and National Pollutant Inventory (NPI) reporting, and annual Sustainability Reporting.

Waste generation is monitored by direct event-based data, recorded by the waste contractor (reported through invoices).

Refer to Table 7 for a summary of inspections and audits including evidence collected, the frequency and the integration system used.

Table 7 Audits and Inspections

ERA ID	Inspection / Monitoring	Evidence or Compliance Record	Frequency	Integration System / Method
All	Daily Pre-Starts	• Daily Pre-Start Records	Daily	Maximo SG+
NV1, W1, W2, W3, W4, W5, C1 – C6, F1, TP1	Licensed Contractors	• Purchase Orders • Maintenance Records • Contractor HSE Assessment Tool (CHAT) • Waste Tracking Certificates	As required	Maximo CHAT
C1 – C6	Spills	• SG+ Records • Incident Reports	As required	SG+
C1 – C6	Testing undertaken by NATA accredited laboratory	• SG+ Records of lab results • Purchase Orders	As required	SG+

ERA ID	Inspection / Monitoring	Evidence or Compliance Record	Frequency	Integration System / Method
All	Routine site inspections: • Native vegetation and fauna • Soil erosion and subsidence • Surface and ground water • General housekeeping • Pollution / oil / chemical spills / waste • Weeds and pests • Heritage • Bunds drained / inspected • Noise, dust, odour • Fire • Third Party / Public health and safety	• Work Orders • Daily Pre-start Records • Routine Site Inspection Checklist • Maintenance Records • SG+ Incident Reports • Waste Tracking Certificates • Consignment Notes • Inspection Records in Maximo • Contractor Records / Reports • Location of weeds sprayed along the ROW • Washdown Records • Landholder requirements in XIC	Weekly, monthly or three-monthly frequency (dependent on the maintenance regime in Maximo)	Maximo XIC SG+
All	Workplace HSEH/housekeeping inspections (i.e. at maintenance bases): • Soil erosion and subsidence • General housekeeping • Pollution / oil / chemical spills • Weeds and pests • Bunds drained / inspected • Noise, dust and odour • Fire • Fuel and chemical storage • Waste management • Availability of spill kits	• HSEH Housekeeping Inspection Checklist • Contractor HSE Assessment Tool (CHAT)	Weekly, monthly or three-monthly frequency (dependent on the maintenance regime in Maximo)	Maximo XIC
P1, P2, S1, S2, S3, NV1, NV2, NV3, WA1, WA2	Aerial patrols / inspections: • Weeds • Erosion, subsidence, stability issues • Vegetation growth • Line of sight • Third party encroachments • Exposed pipe • Condition of signage and aerial markers	• Work Orders • Patrol Reports / Sightings • Location of weeds sprayed along the ROW	1 – 3 Monthly	Maximo

ERA ID	Inspection / Monitoring	Evidence or Compliance Record	Frequency	Integration System / Method
P1, P2, S1, S2, S3, H1, WA1, WA2, C1 – C6, W1 – W5, NV1, NV2, NV3	Ground patrols / inspections: • Weeds and pests • Erosion, subsidence, stability issues • Vegetation growth • Line of sight • Third party encroachments • Exposed pipe • Condition of signage and aerial markers • Heritage • Native vegetation and fauna • Surface and groundwater • Contamination	• Work Orders • Patrol Reports / Sightings • Location of weeds sprayed along the ROW • Washdown Records	Weekly - Minimum 6 monthly (frequency dependent on particular issues that require monitoring)	Maximo
C1 – C6, W – W5	Annual inspection of spill kit response equipment	• Work Orders • Daily Pre-Starts • Maintenance Records • Incident Reports • Waste Tracking Certificates • Consignment Notes • Inspection Records in Maximo • Contractor Records / Reports	Annual	Maximo
TP1, N1 – N4	Monthly inspections of Control Buildings (FM200 Fire Suppression System).	• Work Orders • Daily Pre-starts • Maintenance Records • Incident Reports • Contractor Records / Reports • Monthly system testing without release • Monthly inspection • System maintenance	Monthly	Maximo
TP1, C2, W1, W5	Inspection of plant and equipment as part of maintenance including Compressor Units and Gas Engine Alternators	• Patrol Reports / Sightings • Work Orders • Daily Pre-starts • Maintenance Records • Incident Reporting • Waste Tracking Certificates • Consignment Notes • Inspection Records in Maximo • Contractor Records / Reports • HSEH Housekeeping Inspection Checklist	As per maintenance schedule	Maximo
W1, C5	Compressors Stations (CS) – septic systems and associated water treatment and drainage (note: water discharged to ground is estimated by monitoring CS water input and outputs)	• Station water input and outputs • Water delivery invoices (water input) • Oily water controlled waste tracking receipts (water output)	As per maintenance schedule	Maximo
C2	Waterbath heaters (by contractors)	• Inspection Records	Daily or Weekly	Maximo

ERA ID	Inspection / Monitoring	Evidence or Compliance Record	Frequency	Integration System / Method
All	Daily Checks – when doing Excavations / Dig ups	• Daily Pre-Starts • Monitoring Reports • Annual Licence Report • Landholder Requirements in XIC • Washdown Records • Daily Check Sheets / Log of Works	Daily	Work Orders XIC
N1, N2	Gas Emissions Vehicle and Equipment emissions via diesel usage	• Gas emissions are estimated by monitoring gas delivered downstream, gas input upstream and compressor station fuel gas usage • NGERS and NPI Reporting • Annual Sustainability Report • Diesel delivery invoice records	As required and annually for NGER, NPI and Sustainability Reporting	Maximo
W1 – W5	Waste generation is monitored by direct event-based data, recorded by the waste contractor (reported through invoices)	• Waste Records	Monthly	Maximo

8.1.1 Auditing

All environmental auditing on the asset is undertaken in line with the APA Line 2 Assurance Schedule. The SEO, EIR, APA Environmental Protocols and the OEMP are audited at a minimum once every three years. Suitably qualified and experienced environmental professionals undertake the audits. The audits are undertaken using the APA Environment Audit tool and focus on the risks identified in the SEO, EIR, APA Environmental Protocols and the OEMP. A dedicated team are responsible for scheduling the audit to ensure they meet the regulatory requirements and timeframes under the ER Act and Regulations.

The Annual Licence Reports (ALRs) are submitted annually and include details of previous audits undertaken, and the next scheduled audit, and submitted to DEM within the required timeframes. Following an environmental audit, the audit report is circulated to relevant personnel detailing the audit findings, including any non-conformances, corrective actions or opportunities for improvement. A timeframe for addressing audit actions is agreed to by management, and audit actions are reviewed by the Environment Advisor to ensure they have been adequately addressed and closed out.

Following an audit, the OEMP may be reviewed, updated and re-issued to reflect any findings, including regulatory and organisational changes. Dependent on the type of non-conformances, additional environmental training will be scheduled. Non-conformances are entered into SG+. Additional auditing may be undertaken commensurate with the level of works being undertaken on the pipeline.

Appendix 1 – Objectives, Assessment Criteria and Leading Performance Criteria

Operations and Maintenance Objectives, Assessment Criteria and Leading Performance Criteria

The Assessment Criteria shown have been developed to be “black and white”. Professional judgement is required to assess whether non-compliance is minor or major. It is necessary to ensure that adequate information is available to enable this judgement to be made.

The Guide to Achieving Objectives column below is provided for information only. Under the ER Act, only Objectives, Assessment Criteria and Leading Performance Criteria are approved.

The Assessment Criteria and Leading Performance Criteria refer to Audits and Inspections. For frequency of these audits/inspections, refer to section 8 above.

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
SOIL MANAGEMENT			
1. No significant adverse changes in soil stability, structure or composition resulting from activities.	• SG+ audit records, LDA documents and aerial / vehicle patrol inspections demonstrate the extent of soil erosion, surface contours, remediation of soil erosion and vegetation on the easement is consistent with surrounding land. • Records of completion confirm 0, +1 or +2 GAS criteria are obtained for borrow pit construction and restoration, as listed in Appendix 2. • SG+ records verify no reasonable landholder complaints associated with soil disturbance within or adjacent to the easement. • Records of audits / inspections demonstrate no un-remediated subsidence.	• SG+ audit records demonstrate erosion hazard assessments have been completed prior to undertaking soil disturbance that: • Will disturb more than >1000m2 of land at any one time • Is within or adjacent to a watercourse, or • Is on a slope >10% gradient and >30m in length. • SG+ audit records demonstrate annual land survey completed to look for soil discolouration and vegetation health. • SG+ audit records demonstrate ground and aerial patrols undertaken following specific works, and significant storm events.	• No soil disturbance activities undertaken without approved LDA in place. • Landowner consulted prior to land-disturbing activities. • Erosion hazard assessment must be completed using APA HSE EP 13.06 T3 Erosion Hazard Assessment Template or equivalent regulatory or industry accepted framework and provided to the E&H Team with the completed LDA. • Implement the Pipeline EMP and APA Soil and Water Protocol (erosion and sediment runoff controls, separating topsoil and sub-surface material during excavation and reinstatement requirements) until site has been stabilised. • Implement specific requirements based on soil type and erosion risk (e.g. in gibber, minimise gibber disturbance, roll areas rather than clearing where traffic levels will not be high, carefully stockpile gibber and replace in reinstatement). • Install and maintain erosion and sedimentation control structures in susceptible areas. • Regularly inspect easement to look for evidence of erosion. • Reinstate stockpiles in appropriate order during backfill. • When undertaking soil disturbance, sufficient topsoil must be preserved for reuse as part site reinstatement and stabilisation.
WATER MANAGEMENT			
2. No significant adverse impacts to existing surface water resources, including aquatic ecosystems and no changes to	• SG+ audit / inspection records demonstrate compliance with *EPA Environment Protection (Water Quality) Policy 2015* • SG+ records of audits demonstrate no water affecting activities have been undertaken (as defined under the	• SG+ audit records, LDA documents and aerial / vehicle patrol inspections demonstrate surface drainage patterns are restored to pre-maintenance condition or better.	• Any water discharged to a watercourse of more than 1 ML will require a Water Affecting Activity permit. • Installation and subsequent removal of appropriate temporary watercourse crossing measures. • No stockpiling of materials in watercourses/ flow-lines (trench spoil may be stockpiled in dry watercourse beds for very short periods e.g. less than a day)

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
groundwater quality.	*Landscape South Australia Act 2019*) without relevant approvals in place. • SG+ records verify no reasonable complaints received from landholders or third party users regarding use of surface waters or groundwater quality. • Audit / inspection / incident management system records demonstrate no adverse impacts (i.e. to downstream ecology, land use, altered watercourse, groundwater, pipeline-related erosion to watercourse) resulting from pipeline operation and maintenance activities. • Audit records demonstrate inspections of easement, surface drainage and watercourse undertaken in accordance with Maximo regime. • Consultation records verify stakeholders contacted for any potential disruptions	• SG+ training records demonstrate 100% of personnel undertaking land-disturbing activities have completed required environmental and erosion control training prior to commencing work. • SG+ records of audits demonstrate APA's third party consultation and engagement procedures are up to date and documented, and records of communications with landowners / third parties maintained. • Maximo records confirm patrols undertaken following significant storm events • Maximo records confirm easement patrols are completed to survey for evidence of erosion or abnormal vegetation growth • LDA records verify maintenance activities with potential to impact water flow are only completed in accordance with LDA controls.	• Use of appropriate sediment and silt capturing devices • Installation of permanent berms on slopes, as required • Stabilisation and reinstatement of watercourses and drainage lines • Liaison with third party users regarding potential disruptions • Minimising period of disturbance and prompt reinstatement in sections of easement intersecting or adjacent to water bodies • Installation and subsequent removal of appropriate temporary watercourse/water body protection measures to prevent flow interruptions • Regular patrols and survey undertaken to look for evidence of erosion, windrow development, abnormal vegetation growth or death or any changes to the easement which could change surface hydrology conditions, particularly in the Strzelecki Creek wetland area • Landowner consulted regarding land-disturbing activities • When undertaking soil disturbance, sufficient topsoil must be preserved for reuse as part site reinstatement and stabilisation. • When undertaking soil disturbance, controls in the LDA and the APA Soil and Water Protocol in addition to all reasonable and practical measures must be implemented to control erosion and protect watercourses from sediment runoff and pollution. This includes both during and following the works, until such time as the site has been stabilised. • No soil disturbance activities to be undertaken without an approved LDA in place.
WASTE, CHEMICAL AND CONTAMINATION MANAGEMENT			
3. No new contamination or regulatory breaches associated with	• SG+ records of audits / inspections and incident management system demonstrate no soil or water contamination as a result of spills during pipeline activities.	• SG+ records and audits / inspections demonstrate Waste Tracking Certificates obtained and retained and (where necessary) provided to the EPA and waste disposed of at an EPA licenced facility or via an approved	• Regular inspections for evidence of soil or water discolouration, vegetation or fauna death. • Use of spill protection methods where work is completed within or adjacent to environmentally sensitive areas.

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
waste resulting from activities	• SG+ records of audits / inspections demonstrate compliance with EP Act including the *Environment Protection (EP) (Waste to Resources) Policy 2010* and *EP (Water Quality) Policy* including discharge limits. • SG+ records of audits / inspections and incident management system demonstrate any escape of petroleum, processed substance, chemical or fuel is either immediately contained and removed or assessed in accordance with the National Environmental Protection Measure (NEPM) Assessment of Site Contamination (ASC) guidelines and remediated in accordance with relevant SA EPA guidelines in a timely manner. • SG+ records demonstrate pipeline integrity actions as defined in the Pipeline Integrity Management Plan, are completed in line defined timeframes / frequencies. • SG+ records of audits / inspections and incident management system demonstrate waste segregated and securely stored, no pipeline related rubbish on easement, at facilities or on surrounding land and no evidence of impacts to soil, water and vegetation as a result of water disposal (e.g. soil erosion, dead vegetation, water discoloration). • Records demonstrate discharge water meets appropriate ANZECC and EPA criteria for point of disposal. • Records demonstrate EPA has been notified if serious or material environmental harm from pollution is caused or threatened, or site contamination of groundwater found.	process under the *Environment Protection Act 1993*. • SG+ records and audits / inspections demonstrate stored chemicals are segregated in accordance with the Australian Dangerous Goods (ADG) Code, and the requirements of their SDSs, and flammable and combustible liquids are stored in accordance with AS1940 (Storage and handling of flammable and combustible liquids). • SG+ records and audits / inspections demonstrate secondary containment bunding and the control and management of chemical (including flammable and combustible liquid) spills is in accordance with EPA Guideline EPA 080/16 and *APA HSE EP Spill Preparedness and Response*. • SG+ and Maximo records demonstrate yearly inspection of spill response kits completed and any non-conformances closed out • SG+ records / inspections demonstrate waste water disposal system complies with the *South Australian Public Health (Wastewater) Regulations 2013* or is to the satisfaction of the Department for Health and Wellbeing.	• APA HSE EP 13.04.01 Chemical Spill Management, requiring spills to be reported, contained, cleaned-up, cause investigated, corrective action implemented. • Spills/contamination remediated in consultation with regulatory agencies and landholder, as required. • Personnel trained in spill response procedures. • Containment of all fuel, oil, hazardous substances and liquid waste in appropriate vessels/containment areas (e.g. polythene lined, bunded areas or on bunded pallets). • Uncovered bunded areas must have sufficient freeboard (e.g. to hold a 1:100 year, 24hr rainfall event). • Hydro test water not discharged to watercourse or onto land where reasonably likely to enter waters (including groundwater) unless complies with Water Quality EPP. • Prior to any disposal, Supervisor must ensure disposal is in accordance with waste water regulations including any approvals that are required. • A Pipeline Integrity Management Plan has been prepared and implemented in line with the requirements of AS2885.3, to ensure continued pipeline integrity. • Covered bins for the collection, storage and transport of wastes. • Regular inspection to look for evidence of rubbish, spills (soil discolouration). • Appropriately licensed contractors used for any hazardous waste disposal and records are maintained for all hazardous waste disposal. • Water disposed of in a manner that prevents discharge or runoff to watercourses or environmentally sensitive areas. • Water discharged onto stable ground, with no evidence of erosion as a result of discharge • Records on source of water and discharge method/location. • Investigation of water quality prior to release/disposal of trench water and wastewater. Testing of hydro-test water if potentially harmful chemicals added.

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
	• SG+ records of audits / inspections and incident management system demonstrate EPA notified and approval obtained for disposal if NORMS is found in the form of scale or residues. • SG+ records of audits / inspections demonstrate compliance with the SA EPA Septage Management Guidelines (2020).		• Inspection of water disposal sites for evidence of water entering a watercourse or environmentally sensitive area. • Treated sewage wastewater disposed of onto land, well away from any place from which it is reasonably likely to enter any waters in accordance with the Water Quality EPP. • Approval must be given by the Department for Health and Wellness or relevant authority (within a Local Government area).
NATIVE VEGETATION AND FAUNA MANAGEMENT			
4. No clearance of native vegetation or disturbance to native fauna unless prior approval under the relevant legislation is obtained	• SG+ records of audits / inspections demonstrate vegetation/ fauna surveys carried out by suitably qualified person in accordance with regulatory survey standards / guidelines**.** • Records of *APA's Land Disturbance Assessment* (LDA) verify vegetation clearing is within approved area in accordance with NV Act. • Audits / inspections / daily pre-start and clearing records confirm non-ground disturbance clearing methods (slashing/mulching) are used in preference to ground disturbing methods to maintain rootstock, and facilitate effective rehabilitation. • Records demonstrate no herbicide sprayed around watercourses or in location where herbicide could be washed into watercourse by rain. • SG+ records verify fauna injuries/ fatalities reported and no native fauna casualties associated with operations that could have reasonably been prevented. • Records of audits / inspections / patrols demonstrate vegetation and species abundance on easement is reasonably consistent with the surrounding areas. Note: assessment of the consistency with surrounding areas will take into	• Prior to activities impacting protected vegetation/ fauna, relevant manager must have approved LDA outlining controls to meet statutory approvals (including measures to minimise fauna entrapment and / or injury in open excavations and pipework), with exemptions/ agreements obtained. • Records demonstrate work supervisor has complied with conditions of LDA, daily checks of compliance undertaken during clearing/ land disturbance activities, records completed and activities have remained within authorised disturbance boundaries. • Prestart/site induction records demonstrate work supervisor has communicated relevant vegetation/ fauna management requirements and responsibilities to workers during job prestart/ site induction. • SG+ audit and inspection records demonstrate that sites with known native fauna are identified, flagged (where appropriate) and avoided. • SG+ audit/inspection records demonstrate vegetation clearing within easement or on land adjacent to easement limited to previously disturbed areas, unless prior regulatory approval obtained under NV Act (as evidenced by approved LDA).	• Potential impacts to protected vegetation and fauna must be assessed in accordance with *APA HSE GP 40.00 Environment and Heritage Approvals* (as evidenced approved LDA). • Herbicide use records must include evidence that use in accordance with registration/permit label instructions in accordance with *Agricultural and Veterinary Products (Control of Use) Act 2002.* • Retain trees on easement, trim vegetation in lieu of removal, where possible, restrict disturbance to Easement and approved access and work areas. • Obtain permits / clearance consent required. • Fauna ramps at regular intervals in open trench, prompt reinstatement of easement. • Daily inspection of open trenches and removal of trapped fauna by appropriately trained personnel. • No domestic pets allowed at camps or worksites, No feeding of wildlife (e.g. dingoes). • Implement reinstatement requirements specified in Environmental Management Plan (EMP) and Environmental Protocols (EPs). • Clearance of native vegetation undertaken in accordance with Reg 14 *Native Vegetation Regulations 2017* (NV Regs) (in accordance with a management plan approved by NVC that results in SEB; or payment made into Native Vegetation Fund of amount considered by NVC to be sufficient. SEB requirement either: • Determined using NVC's *Guide for a Significant Environmental Benefit for the clearance of native*

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
	account that regrowth is a time and rainfall dependent process. • SG+ and XIC records demonstrate no reasonable complaints received from landholders in relation to vegetation regrowth on easement. • SG+ records of audits/inspections demonstrate that SEB approved by DEM (where delegated authority applies) or NVC, and the SEB obligation satisfied / implemented.		*vegetation associated with the Minerals and Petroleum Industry (March 2025);* or • Negotiated with NVC where SEB calculation differs from standard methodology (case-by- case assessment of SEB by NVC in some circumstances e.g. where SEB capping or additional mitigation measures apply). • Annual land survey to assess vegetation rehabilitation and look for evidence of disturbance to vegetation on easement (apart from access tracks) • Follow-up rehabilitation work undertaken where natural regeneration is inadequate • Avoid vehicle travel and works in known high-risk fauna areas during dawn and dusk. • Vehicle to remain within speed limit and keep to existing tracks.
PEST, DISEASE AND WEED MANAGEMENT			
5. No introduction or spread of weeds, pest animals and pathogens as a result of these activities	• SG+ records of audits/inspections patrols demonstrate presence of weeds on easement consistent with or better than adjacent land. • SG+ records of audits/inspections patrols demonstrate no new outbreak or spread of weeds or pathogens as a result of pipeline activities. • SG+ and XIC records demonstrate hygiene forms and vehicle wash-down registers completed. • Records of herbicide use demonstrate only used according to registration/ permit label instructions in accordance with the *Agricultural and Veterinary Products (Control of Use) Act 2002*.	• A register of known and potential pests, weeds and diseases (PWD risks) is in place for locations (e.g. operational regions, project areas) within which APA undertakes activities and any new outbreaks recorded. • SG+ records of audits and inspections demonstrate individual PWDs have been risk assessed to identify priority PWD applicable to the activity area. • Maximo records demonstrate aerial and ground patrols have been undertaken to look for evidence of weeds on easement and adjacent land and additional patrols have been considered following heavy rain fall events or in known weed outbreak / infestation areas	• Identification of weeds/ pathogens on easement and adjacent land. • Implementation of control measures of weeds and pathogens on easement. • Vehicle cleaning/wash-down register. • Regular patrols undertaken to look for evidence of weeds on easement and adjacent land (if weeds on easement but not adjacent land must implement control to prevent spread). • Additional patrols / surveys considered following heavy rain fall events or known weed outbreaks/infestations in certain areas.
HERITAGE MANAGEMENT			
6. No damage, disturbance or interference to Aboriginal or	• SG+ records of audits / inspections demonstrate no impact to non-Aboriginal heritage places and related objects protected under the *Heritage Places Act*	• SG+ records of audits demonstrate the potential for an activity to impact on heritage has been assessed prior to activity commencement in accordance	• If suspected cultural heritage material is discovered during operations, stop work in area, secure site, ensure no further ground disturbing activity takes place. Aboriginal heritage sites, objects and remains

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
non-Aboriginal heritage unless authorised under the relevant legislation	*1993* unless approval has been obtained. • SG+ records of audits / inspections demonstrate any breaches (damage, disturbance or interference) to Aboriginal sites, objects and remains (as defined under *Aboriginal Heritage Act 1988*) are appropriately reported, investigated and remediation in consultation with the relevant Aboriginal heritage group. • Records of approved APA LDA verify controls associated with heritage protection are implemented in accordance with APA protocols and relevant legislation. • Records of audits confirm if sites, remains or objects are discovered during operations, the discovery is reported to appropriate authority and recorded, consistent with the *Aboriginal Heritage Act 1988.* • SG+ records demonstrate that if suspected remains are discovered, the SA Police are notified immediately. • Records of training confirm relevant personnel have completed appropriate cultural heritage training.	with APA HSEH GP 47.00 T04 Heritage Management Flow Chart and attached to the LDA for internal approval. • SG+ records of audit demonstrate control measures outlined in the APA LDA to mitigate heritage impacts have been developed in consultation with external heritage stakeholders (where required) unless the activity is subject to a statutory exemption that does not require consultation. • SG+ audit records indicate that prior to work, the work supervisor has been provided with the approved LDA and a copy of, and completed a review of, the heritage obligations applicable to the work. • Prestart and site induction records demonstrate the work supervisor has ensured any relevant heritage obligations are communicated to relevant workers as part of the job prestart / site induction. • Prestart and site induction records demonstrate the work supervisor has ensured any exclusion or restricted zones are appropriately marked out or otherwise defined prior to and during work.	discovered during operations reported and responded to, consistent with *Aboriginal Heritage Act 1988 (AH Act)*. • Obtain necessary approvals in event of an accidental/ unavoidable site disturbance, including contact Yandruwandha Yawarrawarrka Traditional Owners (YY) to identify an appropriate course of action. Options include risk managing the area with YY's assistance or applying for s.23 authorisation under *AH Act* if discovery not already covered by one. • Induction/training to include heritage management requirements. • Consultation with heritage groups if operations occurring outside known surveyed areas. • Site examined for cultural heritage material prior to work involving disturbance outside known surveyed areas by appropriately qualified personnel (eg. NT group, anthropologist, relevant Aboriginal heritage group). • Records of site locations in Operations GIS. • Non-Aboriginal heritage sites identified and avoided. • A record of completed heritage management actions and controls must be maintained.
NOISE MANAGEMENT			
7. Minimise disturbance to receptors, land use and infrastructure due to operation and maintenance activities	• SG+ records of audits / inspections demonstrate activities comply with noise regulations under the *Environment Protection (Commercial and Industrial Noise) Policy 2023* (Noise EPP) and EP Act. • SG+ and XIC records confirm no reasonable complaints received. • SG+ and XIC records confirm no non-compliances noted or received.	• Audit and inspection records demonstrate location of sensitive receptors (e.g. residences) considered when planning noise-generating activities, and avoidance/ mitigation measures implemented where required. • SG+ records of audits / inspections demonstrate infrastructure, plant and equipment are operated and maintained in accordance with manufacturer's specifications.	• Regular maintenance of vehicles and equipment. • Facilities designed to meet the noise requirements under the EP Act.

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
DUST AND ODOUR MANAGEMENT			
8. Minimise atmospheric emissions	• SG+ records of audits / inspections demonstrate activities comply with the Air Quality EPP and Waste EPP. • SG+ and XIC records confirm no reasonable complaints received. • SG+ records of audits / inspections demonstrate no uncontrolled atmospheric emissions (e.g. due to malfunction or mis-operation). • SG+ and XIC records confirm no non-compliances noted or received.	• Records demonstrate that prior to any Abrasive Blasting or Surface Coating, Schedule 1 of the EP Act has been checked to confirm whether the works trigger a licence requirement. • Audit and inspection records demonstrate location of sensitive receptors (e.g. residences) considered when planning dust/odour-generating activities, and avoidance/ mitigation measures implemented where required. • SG+ records of audits / inspections demonstrate infrastructure, plant and equipment operated and maintained in accordance with manufacturer's specifications.	• Management requirements specified in EMP/EP. including use of water trucks and sprayers, if necessary. • Records of induction/training regarding EMP/EP requirements. • Maintenance procedures implemented. • A Pipeline Integrity Management Plan has been prepared and implemented in line with the requirements of AS2885.3, to ensure continued pipeline integrity. • Compliance with *Environment Protection (Air Quality) Policy 2016* (Air Quality EPP), Noise EPP, Waste EPP and EP Act.
THIRD PARTY AND PUBLIC HEALTH AND SAFETY			
9. No injuries, deaths or health impacts to the public or third parties from activities that could have been reasonably prevented by the operator	• SG+ and Xinfo records confirm comprehensive liaison programs communicated to landowners. • SG+ and Xinfo records confirm no reasonable landowner complaints received (associated with disturbance or restoration of land/infrastructure following unavoidable disturbance), XInfo records of landholder complaints verify the duration of disturbance does not exceed agreed timeframe. • Records of audits / inspections demonstrate no disturbance outside the easement and approved access and work areas. • Records of completed APA LDA confirm that adverse impacts to Innamincka Regional Reserve operations or conservation values are minimised. • SG+ records of audits / inspections and incident management system demonstrate no injuries, fires related to pipeline activities, incidents involving the	• SG+ records of audits demonstrate APA's third party consultation and engagement procedures, including formal easement agreements outlining the legal responsibilities of APA and landholders, are up to date and documented, with records of communications with landowners and third parties maintained. • SG+ records of audits demonstrate ground and aerial patrols are conducted and documented. • SG+ records demonstrate pipeline integrity testing has been completed to schedule. • SG+ records of audits / inspections / daily prestarts demonstrate fire ban requirements are checked and documented daily, fire response equipment within service life.	• Formal easement agreements outlining the legal responsibilities of APA Group and landholders. • Restrict disturbance to the easement and approved access and work areas. • Landholder activities not restricted as a result of pipeline activities. • Identification of utilities present on or near the easement on EMP. • Records of communications with landholders / third party maintained, landholder contacts database. • Compliance with the *National Parks and Wildlife Act 1972* and Regulations pertaining to correct conduct in a Regional Reserve. • Management of fuel, oil and spills (if they occur) to meet landholder requirements for Quality Assurance programs (e.g. Cattlecare).

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
	public or unauthorised activity that has potential to impact pipeline integrity. • Records of inspections identifying unauthorised activities confirm investigations are completed and reported.		• Reinstatement of easement in accordance with EMP/EP. • Use of signage or bunting to identify all potentially hazardous areas. • Site induction program for all personnel/visitors. • Adequate implementation of traffic management practices. • Records of Annual Reports, Fitness for Purpose Reports, Risk Assessments and inspections. • A Pipeline Integrity Management Plan must be prepared and implemented in line with the requirements of AS2885.3. • Records of regular fire safety and emergency response training. • Appropriate fire prevention/control equipment on site. • Community education program and Before You Dig (BYD) number and web page available and widely advertised. • Clear identification of the pipeline by signs installed in accordance with AS2855, records demonstrating compliance. • All reports of unauthorised activity are reported and investigated.
SECURITY OF GAS SUPPLY			
10. To ensure that security of natural gas supplies are maintained to gas consumers	• Records of audits / inspections demonstrate no unplanned interruption to gas supply that impacts the public. • Training records confirm emergency response procedures are effectively implemented in the event of an emergency to reinstate gas supply in a timeframe consistent with good industry practice, as assessed by post incident debrief.	• SG+ records of audits demonstrate emergency response training has been conducted and logged, emergency response exercises have been carried out, Emergency Response Plan in place. • SG+ records of audits demonstrate ground and aerial patrols are conducted and documented. • SG+ records of audits demonstrate pipeline integrity testing has been completed to schedule.	• Pipeline subjected to ongoing pipeline integrity management through Direct Current Voltage Gradient (DCVG) surveys, pigging, dig-ups and patrols, Before You Dig Australia (BYDA), pipeline markers, facility signage, education of and liaison with stakeholders (e.g. landholders, local governments, other utility companies, etc.), patrols and aerial surveys are activities conducted to manage third party encroachment and minimise/prevent damage from third parties to pipelines. • All works on pipeline easement are controlled and managed through appropriate procedures. • Emergency Response Exercises carried out to determine prompt and effective procedure and response.

Objectives	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
			• In event of an emergency where gas supplies are disrupted, ensure pipeline system returned efficiently to a safe, operational state with minimum customer and environmental impact. • No pipeline "failure" as defined under clause 1.6.16 of AS2885.1. • Achieve compliance with *Energy Resources Act 2000* requirements for Fitness-for-purpose assessments.

Decommissioning Objectives and Assessment Criteria

Objective	Assessment Criteria	Leading Performance Criteria	Guide to Achieving Objectives
DECOMMISSIONING			
11. To appropriately decommission the pipeline in accordance with regulatory requirements and accepted best practice environmental management	• Pipeline decommissioned in accordance with an approved EMP • Pipeline and associated above-ground infrastructure decommissioned to standard required by legislation • Records of audits / inspections demonstrate land rehabilitated to surrounding landscape and as near as possible to its undisturbed state	• Prior to decommissioning, Pipeline Decommissioning EMP prepared and approved • Third party consultation and engagement procedures are followed and documented prior to any decommissioning works.	• Records of consultation with appropriate regulatory authorities and industry associations • Incident management system • No above-ground infrastructure evident • As and when the QSN pipeline is to cease operation, a decommissioning plan will be developed in accordance with AS2885 (Part 3) • As and when the QSN pipeline is to be abandoned, an abandonment plan, including an environmental rehabilitation plan, will be developed in accordance with AS2885 (Part 3) and the APGA Code of Environmental Practice
	• XIC records demonstrate landowner consulted regarding land-disturbing activities • SG+ and XIC records demonstrate no reasonable landholder complaints • Landholder activities not restricted or disturbed as a result of pipeline activities unless by prior arrangement	• Third party consultation and engagement procedures are followed and documented prior to any decommissioning works. • Prior to decommissioning, emergency response training has been conducted and logged.	• Records of communications with adjacent landholders / third parties prior to and during maintenance work • Landholder activities not restricted as a result of pipeline activities

Appendix 2 - Goal Attainment Scaling Criteria for Borrow Pit Rehabilitation

Objectives	Goals	Goal Exceeded +2	Goal Exceeded +1	Goal Attained 0	Minor Shortfall - 1	Significant Shortfall -2
Minimise water retention in pit	**Predictive** **Minimal or no water retention in pit footprint**	-	-	Measures to minimise water retention implemented (e.g. upslope runoff diverted by contour banks or bunds, rip base, etc.)	-	No measures to minimise water retention evident
	Ongoing **Minimal or no water retention in pit footprint**	No evidence of water retention	-	Minor retention - pit retains water for less than 1 month following rainfall event or drawdown of floodwaters (as a guide - max. water depth up to 0.2 metres) or Water retention in pit consistent with surrounding land	Pit retains water for up to 3 months following rainfall event or drawdown of floodwaters (as a guide - max. water depth < 1 metre)* and Water retention in pit inconsistent with surrounding land	Pit holds water for more than 3 months following rainfall event or drawdown of floodwaters (as a guide - max water depth > 1.0 metre)* and Water retention in pit inconsistent with surrounding land
Minimise impacts on soil	**Predictive** **Minimise soil erosion**	-	-	Measures to minimise erosion implemented (e.g. upslope runoff diverted by contour banks or bunds)	-	No measures to minimise erosion evident
	Ongoing **Minimise soil erosion**	Soil surfaces stable No accelerated erosion	-	Minor erosion of pit sides or up-slope from pit*	Moderate erosion* Areas of pit footprint unstable with some uncontrolled runoff	Active severe erosion* Large areas of pit footprint unstable Uncontrolled run-off
Minimise impacts on vegetation	**Pit footprint revegetated with indigenous species (subject to time and preceding climatic conditions)**	Vegetation community re-established with species and cover typical for land unit	Pit footprint revegetated with perennial species mix and cover levels typical for land unit	Pit footprint revegetated with species mix similar to surrounding area, some bare patches still present	Revegetation confined to base of pit, pit sides bare, species mix differs from surrounding area, annual species dominate	No revegetation evident
	No weed infestations on pit footprint**	No weeds on pit footprint	-	Presence of weeds** on pit footprint consistent with pre-disturbance conditions and adjacent land	Weeds** present on pit footprint which is inconsistent with pre-disturbance conditions and adjacent land	Declared weeds*** present on pit footprint which is inconsistent with pre-disturbance conditions and adjacent land

Objectives	Goals	Goal Exceeded +2	Goal Exceeded +1	Goal Attained 0	Minor Shortfall - 1	Significant Shortfall -2
Minimise visual impacts	**Borrow pit effectively contoured and ripped**	Pit contours indistinguishable from surrounding landscape Access tracks ripped	Pit contours blend in with surrounding landscape, although still evident	Pit sides battered and ripped along contours but pit still highly visible Topsoil and vegetative material re-spread over disturbed area	Pit sides battered but not ripped	No re-contouring of pit has occurred – pit sides very steep Topsoil and vegetative material not re-spread
Site to be left in a clean and tidy condition	**Litter and other foreign materials removed**	-	-	No litter and other foreign materials on pit footprint or surrounds	Scattered litter and/or other foreign materials on pit footprint or surrounds	Litter and/or other foreign materials common on pit footprint or surrounds

Figure 2 GAS Criteria Tables for the Rehabilitation of Borrow Pits in the Cooper Basin SA (Jacobs SKM 2014)