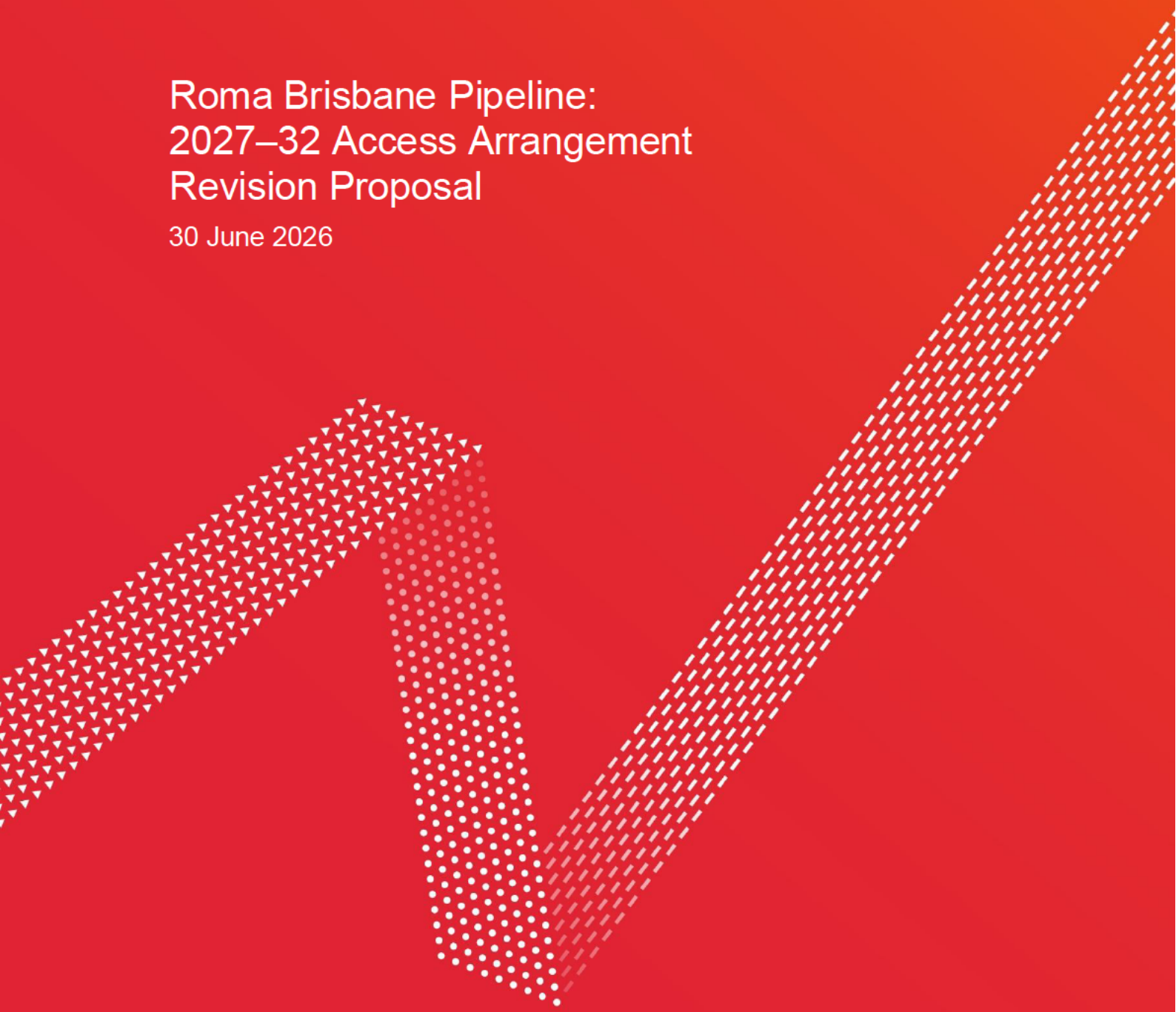
APA
Australia's energy infrastructure partner

Lifecycle Management Plan

Roma Brisbane Pipeline: 2027–32 Access Arrangement Revision Proposal

30 June 2026



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1. Introduction

1.1. Purpose

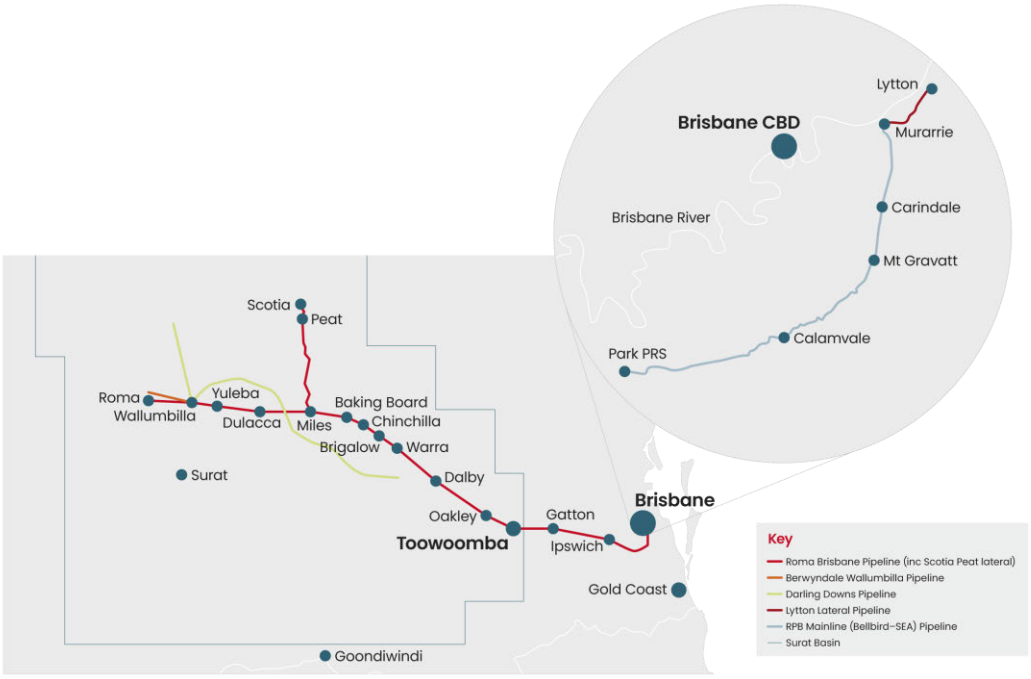
This Lifecycle Management Plan (LMP) outlines the approach to managing the Roma to Brisbane Pipeline (RBP) and its associated laterals over the 2027–32 Access Arrangement period. The LMP provides a structured overview of the asset base, its current condition and performance, and the lifecycle management activities required to ensure the safe, reliable and efficient provision of pipeline services over time.

The plan has been developed collaboratively by operational subject matter experts and process owners and reflects the most recent information available on asset condition, operating risks and performance trends. It is intended to support prudent and efficient investment decision-making by identifying actions necessary to meet the RBP's key safety, reliability and compliance objectives, consistent with accepted good industry practice.

1.2. Scope

This document is specific to the Roma to Brisbane Pipeline, including the mainline and connected laterals, and does not apply to any other pipeline systems or jurisdictions. The LMP has been prepared to support the RBP Access Arrangement and associated capital and operating expenditure forecasts for the 2027–32 period.

Figure 1: Roma to Brisbane Pipeline System Geographical Position



The RBP was commissioned in its original configuration in 1969 and has evolved through looping, compression and expansion works. It currently comprises approximately 440 km of mainline pipeline, together with the Peat, Scotia, Swanbank and Lytton laterals, supplying a combination of

production facilities, power generation and refinery customers. Approximately 34 km of the pipeline traverses the Brisbane metropolitan area, where the pipeline supplies multiple distribution system offtakes and operates in a high-consequence urban environment.

The LMP addresses lifecycle considerations across this asset base, including asset condition, integrity risks, environmental exposure, operational constraints and end-of-life management. It provides the foundation for the asset management strategies and business cases described later in this document and reflects a RBP-specific assessment of risks and required interventions.

2. APA Asset Management

APA's approach to asset management is founded on a structured, enterprise-wide framework that integrates operations, engineering, risk management and capital planning to support the safe, reliable and efficient operation of its transmission assets. This framework is aligned with accepted good industry practice and is designed to ensure that asset lifecycle decisions are informed, risk-based and proportionate.

For the Roma to Brisbane Pipeline (RBP), asset management activities are coordinated through APA's Operations, Strategy and Capital model, which provides clear accountability for asset performance, risk identification, investment prioritisation and delivery. This model ensures that lifecycle interventions for RBP assets are developed based on current condition information, operating context and forecast risk, rather than reactive or time-based replacement.

2.1. Asset Management Objectives

APA's asset management objectives for the RBP are to:

- protect public and worker safety;
- maintain compliance with applicable legislation and AS 2885;
- manage integrity and environmental risks to as low as reasonably practicable;
- provide reliable pipeline services at the lowest sustainable whole-of-life cost.

These objectives are applied consistently across all lifecycle stages and underpin the capital and operating expenditure proposed in the 2027–32 Access Arrangement.

2.2. Governance and Decision-Making

Asset management decision-making for the RBP is governed through a tiered structure that links operational performance with strategic planning and capital allocation. Operational teams are responsible for monitoring asset condition, integrity threats and performance indicators, while engineering and integrity specialists assess risk and identify appropriate treatment options. These inputs are consolidated through formal governance forums that prioritise works based on safety, risk reduction and economic efficiency.

This structure ensures that only investments that are demonstrably prudent and efficient progress to the capital planning stage, consistent with AER expectations that expenditure reflect reasonable forecasts based on the information available at the time.

2.3. Risk-Based Lifecycle Planning

Lifecycle planning for the RBP is underpinned by a risk-based methodology consistent with AS 2885. Asset condition data (including in-line inspection results, cathodic protection performance, environmental exposure and operational history) is used to identify and assess integrity risks across the asset base. These risks are then evaluated in terms of likelihood, consequence and trend over time.

Where risks cannot be adequately managed through operational controls alone, targeted lifecycle interventions are identified. This includes integrity remediation, asset replacement, system rationalisation and end-of-life management. For mature assets such as the DN250 pipeline sections, this process explicitly considers whether continued operation represents an efficient use of capital or whether transition to alternative assets (such as the DN400) provides a lower-risk, lower-cost outcome.

2.4. Integration with Capital Planning

The asset management framework directly informs APA's capital planning process for the RBP. Identified lifecycle needs are translated into scoped capital works and assessed through business cases that evaluate options, costs, benefits and delivery risks. This ensures alignment between asset condition, risk management and the proposed capital expenditure forecast.

The resulting capital program reflects a considered balance between proactive risk mitigation and cost efficiency, with timing and scale of investment calibrated to manage uncertainty and avoid unnecessary early replacement. This approach supports compliance with the National Gas Rules by ensuring expenditure is incurred only where it is reasonably required to provide pipeline services.

This asset management framework provides the foundation for the RBP lifecycle strategies and capital investments described in subsequent sections of this plan.

2.4.1. Project Identification and Selection

APA applies a structured, risk-based prioritisation process to determine the timing and sequencing of capital investments for the Roma to Brisbane Pipeline (RBP). The process is designed to ensure that expenditure is directed to the highest priority risks and outcomes, consistent with accepted good industry practice and the National Gas Rules.

Potential capital investments are initially identified through operational monitoring, integrity assessments, compliance obligations and asset condition information. Each initiative is assessed against a common set of prioritisation criteria that focus on safety, reliability, compliance, environmental risk and whole-of-life cost efficiency (Figure 2: Project Proposal Lifecycle Map). This ensures that investments addressing higher-consequence or deteriorating risks are prioritised over discretionary or deferrable works.

Proposed capital works are then subject to comparative assessment through APA's capital planning framework, which considers:

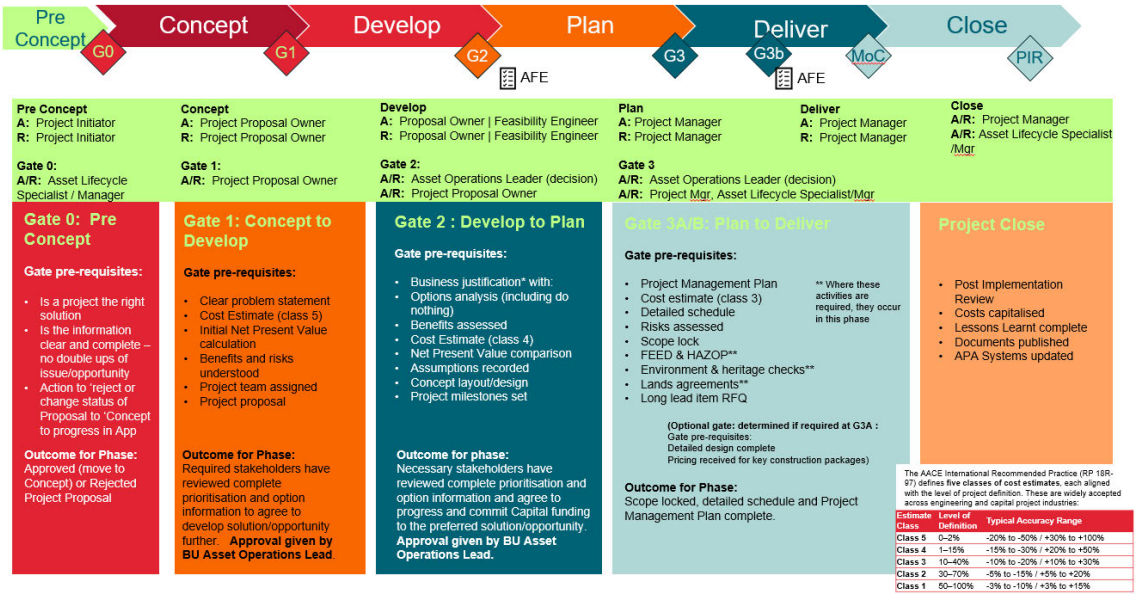
- the severity and trajectory of the underlying risk;
- the effectiveness and sustainability of the proposed mitigation;
- the availability of non-capital or lower-cost alternatives;
- delivery complexity, execution risk and interdependencies with other works.

This assessment allows investments to be ranked and staged in a manner that balances risk reduction with efficient use of capital. Where multiple treatment options are available, preference is given to solutions that reduce risk over the longest period at the lowest sustainable cost.

Final prioritisation decisions are made through formal governance forums that integrate operational, engineering and financial oversight. This ensures that proposed projects reflect a reasonable forecast of expenditure based on the information available at the time, and that only investments that are demonstrably prudent and efficient are included in the Access Arrangement capital forecast.

For the RBP, this prioritisation process ensures that lifecycle interventions—particularly for mature assets approaching end of economic life—are sequenced appropriately, risks are managed proactively, and customers are protected from both unmanaged integrity risk and unnecessary expenditure.

Figure 2: Project Proposal Lifecycle Map



2.4.2. Investment Review and Approval

Capital investments identified through the prioritisation process are subject to a structured review and approval framework to ensure that proposed expenditure is prudent, efficient and appropriately scoped. This framework provides independent challenge to cost, scope and timing assumptions before investments are committed.

For the RBP, proposed capital works are developed into defined initiatives supported by technical assessments and option analysis. Each proposal must clearly demonstrate the underlying risk or obligation being addressed, the consequences of inaction, and the rationale for the preferred treatment option relative to alternatives. This ensures that investment decisions are driven by clearly articulated need rather than asset age or discretionary considerations.

Proposals are progressively reviewed through a series of governance checkpoints that assess:

- alignment with asset management objectives and risk reduction priorities;
- technical feasibility and constructability;
- cost realism, including treatment of uncertainty and contingency;
- interdependencies with other operational or capital works.

Where material uncertainty exists, projects may be re-scoped, staged or deferred until sufficient information is available to support an efficient investment decision. This staged approval approach allows APA to manage risk and avoid unnecessary early expenditure while still ensuring that emerging integrity or compliance risks are addressed in a timely manner.

Final approval of capital investments incorporates operational, engineering and financial oversight, ensuring that only projects that represent a reasonable forecast of expenditure based on the information available at the time are included in the Access Arrangement capital program. This provides assurance that the capital works proposed for the RBP are appropriately governed and consistent with the prudency and efficiency requirements of the National Gas Rules.

3. Key Operational Processes

The Roma to Brisbane Pipeline (RBP) is operated within APA's Operational Excellence framework, which defines the core processes used to manage asset performance, risk and compliance. The processes outlined in this section describe how asset management objectives are delivered in practice, providing structured and consistent approaches to monitoring performance, executing maintenance, managing integrity and meeting regulatory obligations. The specific Operational Excellence business processes referenced in Sections 3.1–3.7 are shown in *italics*, consistent with APA's Business Process Definitions. Collectively, these processes ensure that operational activities are aligned with lifecycle planning and support the safe, reliable and efficient delivery of pipeline services over the 2027–32 period.

3.1. .Asset Optimisation

The purpose of the *Asset Optimisation* business process is to plan and manage the operational performance of our assets to deliver customer services within safe operating limits. It involves proactive identification and mitigation of reliability or revenue impacting events as well as identification of improved efficiencies to drive positive financial and operational outcomes.

The *Asset Optimisation* business process considers the asset strategy and market demand when developing and managing Optimisation Project Proposals.

Key Performance Indicators are outlined in the *Asset Optimisation* business process and discussed monthly in Asset Performance Meetings and other forums.

3.2. Reliability and Maintenance Strategy

The *Reliability and Maintenance Strategy* business process ensures equipment is available when needed while minimising risks of equipment failure through the effective and efficient implementation of reliability and maintenance strategies.

APA have adopted a Reliability Centred Maintenance (RCM) strategy which is focused on providing a consistent corporate level maintenance strategy with the aim to improve safety, reliability, and efficiency to APA's Operations.

RCM has delivered improved equipment reliability by applying the correct level of maintenance effort, consistency and focus against equipment appropriate to its level of criticality to the business.

RCM is a proactive, risk-based approach to maintenance that helps identify and prioritise maintenance activities based on the criticality of equipment and systems, ensuring that the right maintenance is done at the right time to maintain equipment reliability and availability and delivery cost effective outcomes. It is based on the idea that equipment should be maintained in a way that addresses the root causes of failure, rather than simply fixing problems as they arise.

RCM involves analysing the equipment and systems to identify the possible failure modes and their causes, determining the consequences of those failures, and choosing the maintenance activities that will minimise the likelihood of those failures.

The goal of RCM at APA is to minimise equipment downtime, reduce maintenance costs, and improve overall equipment reliability.

3.3. Asset Integrity Linear

The *Asset Integrity - Linear* business process maintains the physical life of our linear assets (e.g., hydrocarbon pipelines and electrical transmission) to ensure the safety of our employees, contractors and the public and ensure security of supply. Most transmission assets are exposed to

corrosion, cracking, fatigue, stress related failure, vibration, wear, third party damage and other degradation.

The purpose of this business process is to:

- Develop operating and maintenance strategies to balance cost with maintaining asset life.
- Integrate asset maintenance, data collection with lifecycle planning to continuously improve integrity management plans and proactively ensure the life of our assets.
- Actively monitor and assure the Manage Asset Integrity business process, measure performance against KPIs and takes corrective action to balance cost and improve performance.

3.4. Asset Integrity Facilities

The *Asset Integrity – Facilities* business process ensures the safety of our employees, contractors, and the public; uphold regulatory compliance and security of supply by maintaining the integrity, safety, and physical life of pressure equipment assets at APA facilities.

Pressure equipment assets are exposed to numerous damage mechanisms including corrosion, cracking, fatigue, stress related failure, vibration, wear, third party damage and other degradation.

Safety and compliance are maintained via ongoing integrity monitoring.

We actively monitor pressure equipment and measure performance against KPIs delivering preventive and corrective actions that balance risk, cost, and improved performance.

3.5. Risk and Opportunity

The *Asset Risks and Opportunities* business process ensures assets are being managed to achieve the strategic objectives. These objectives allow us to extract maximum value from assets by balancing performance and cost with risk.

Risks are considered those things that will stop the asset achieving its objectives and opportunities being those things that assist in exceeding objectives.

Risk and opportunity management involves identification of the risks and opportunities as well as getting agreement on ownership and accountability for each. Consistent analysis and assessment of both risks and opportunities ensures risks are managed within the APA risk appetite and that appropriate controls are in place and treatment actions are established.

Our processes enable risk-based decision making and the effective allocation of resources as well as provision for the reporting and escalation of risks as required

3.6. Maintenance execution

The goal of the *Maintenance Execution* business process is to execute the preventive maintenance programme in line with agreed priorities and in accordance with applicable technical and regulatory standards. This business process also ensures we respond to system faults, equipment breakdowns and emergencies to best support continued delivery of customer commitments and ensures appropriately skilled and competent personnel are completing work in an optimised manner.

The objective of this business process is to produce an integrated proactive and reactive work plan so that repair work is minimised, and reliability and availability of equipment is optimised. The *Maintenance Execution* business process will deliver from a list of prioritised activities, executed safely in respect of people, contractors, environment, and the community.

The end-to-end process of execution of maintenance activities including planning, scheduling and execution is monitored and reviewed for opportunity to improve effectiveness of execution and support balanced decisions regarding equipment maintenance strategies.

3.7. Regulatory compliance

The purpose of the *Regulatory Compliance* business process is to ensure all assets are being managed and operated in accordance with legislative obligations.

Regulatory Compliance ensures that reporting and management of regulatory compliance activities align with APA's Group Risk and Compliance Standard and the APA Risk Appetite for compliance.

All applicable legislation, regulation, standards, and associated reporting requirements are identified and accountability for obligations and associated actions are defined and reviewed consistently. The regulatory compliance business process ensures adequate systems and processes are in place to manage a register of obligations, regulatory documentation, mandatory compliance reporting, scheduled and ad hoc reporting to regulators.

APA's regulator relationships are managed as part of this business process, through proactive regulator meetings. Internal & external technical compliance audit programs, audit action management and the interface to industry for regulatory/standard changes are also managed via this business process.

4. Asset Summary

APA manages the Roma to Brisbane Pipeline (RBP) to ensure that public safety, asset integrity, capacity and reliability are maintained at all times. Asset management activities are directed towards achieving the following objectives:

- ensure the continued safe and reliable operation of the pipeline, protecting APA personnel, the community and the environment;
- prudently operate the pipeline within technical specifications and meet contracted level of supply reliability for customers;
- manage operating and capital costs in a manner that reflects forecast demand for pipeline services;
  maintain compliance with applicable technical and regulatory requirements; and
- align asset reliability and performance with the criticality of pipeline segments and facilities.

These objectives underpin the lifecycle management strategies and capital investments proposed for the 2027–32 Access Arrangement period.

4.1. Asset Details

The RBP comprises a mix of pipeline assets, including sections commissioned in the late 1960s. As a result, ongoing asset renewal and targeted replacement are required to manage age-related degradation and equipment obsolescence. With the exception of the DN250 pipeline, the majority of the pipeline is currently assessed to be in a generally sound condition; however, like all transmission assets, progressive degradation is expected over the remainder of its operating life.

Facility condition is assessed through routine inspection, operational performance monitoring and engagement with original equipment manufacturers. Ageing electrical, control and instrumentation equipment has been identified at several older stations and will require ongoing management and periodic replacement to maintain functionality and compliance.

The LMP identifies several asset condition themes of particular relevance to the RBP:

- adequacy and performance of cathodic protection (CP) systems;
- hazardous area compliance at stations and facilities; and
- obsolescence of electrical and control system equipment.

These issues are currently managed through established inspection, maintenance and refurbishment programs. As the pipeline continues to age, the frequency and cost of these activities are expected to irease, reinforcing the need for proactive lifecycle planning.

4.2. Regulatory obligations

The RBP is subject to legislative and regulatory requirements governing pipeline safety, operation and environmental protection in Queensland. These requirements include obligations that the pipeline be designed, constructed, operated and maintained in accordance with AS 2885.

Compliance with these obligations requires APA to demonstrate that risks are systematically identified, assessed and managed to as low as reasonably practicable. As assets age, maintaining compliance increasingly relies on enhanced inspection, technical assessment and, where necessary, capital intervention rather than reliance on operational controls alone.

The RBP is subject to the requirements of the following legislation:

— *Petroleum & Gas (Production & Safety) Act 2004*
— *Petroleum & Gas (Safety) Regulation 2018*
— *Mineral and Energy Resources (Common Provisions) Act 2014 (Qld)*
— *Environmental Protection Act 1994 (Qld)*

4.3. Risk Assessment

APA operates the RBP in accordance with AS 2885.3 and applies a structured risk assessment methodology consistent with AS 2885.6. Asset risks are assessed using a standard risk matrix that considers likelihood, consequence and escalation over time and is applied consistently across the pipeline system.

. No immediate intolerable risks have been identified; however, this outcome reflects the historically proactive approach adopted to integrity management and asset renewal.

Proactive risk management requires upfront investment, which APA manages through medium-term, planned programs to avoid step-changes in risk, sudden expenditure shocks or unplanned service disruptions. This approach is expected to continue over the 2027–32 period.

Pipeline-specific risk assessments undertaken to support this LMP and associated business cases confirm that future works are predominantly driven by the need to address identified threats before they materialise into higher-consequence events. The most significant long-term integrity risk relates to corrosion associated with failed shrink-sleeve coatings. This risk is actively monitored and managed to avoid the need for clustered or reactive repairs within a single inspection interval.

Given the RBP's role as a major transmission pipeline supplying critical customers, it is considered prudent and consistent with accepted good industry practice to actively manage ageing and degradation. This LMP has therefore been developed on the basis that the pipeline will continue to be operated and maintained to a standard that ensures safety, reliability and efficient long-term service provision.

5. Asset Management Plan

The asset management strategies in Section 5 provide an integrated, risk-based approach to managing the Roma to Brisbane Pipeline (RBP) over the 2027–32 Access Arrangement period, addressing integrity, reliability, environmental and obsolescence risks associated with a mature transmission system. Investment is focused on maintaining assets that continue to provide efficient service, progressively transitioning assets nearing end of economic life—particularly the DN250 pipeline—and implementing targeted interventions to manage foreseeable degradation, external threats and system resilience. Across all asset classes, APA has applied consistent decision-making to identify the least-cost means of achieving required safety, compliance and service outcomes, with expenditure staged to manage uncertainty and minimise whole-of-life costs. The resulting program represents a reasonable forecast based on the information available at the time, consistent with accepted good industry practice and the prudency and efficiency requirements of the National Gas Rules.

5.1. Pipeline Integrity Management

Pipeline integrity management is a core element of APA's asset management strategy for the Roma to Brisbane Pipeline (RBP) and a primary driver of capital investment over the 2027–32 Access Arrangement period. The RBP includes a mix of asset vintages, with significant sections commissioned in the late 1960s and operating in high-consequence environments. As a result, maintaining integrity requires ongoing, proactive intervention informed by inspection, monitoring and risk assessment.

APA's integrity strategy for the RBP is based on continued application of its Pipeline Integrity Management Plan (PIMP) in accordance with AS 2885.3. The strategy focuses on early identification and remediation of degradation mechanisms before they escalate into safety, reliability or compliance risks. Key integrity threats addressed under this strategy include external corrosion associated with coating deterioration and shielding of cathodic protection, stress corrosion cracking, dent and gouge degradation, weld-related defects in vintage ERW pipe, and strain arising from ground movement and external loading.

To manage these risks, the integrity strategy comprises an integrated suite of activities, including:

- periodic in-line inspections (ILI) using appropriate technologies to identify corrosion, cracking, dents and deformation;
- validation and safety-critical excavations to confirm inspection results and remediate defects exceeding acceptance criteria;
- targeted cathodic protection upgrades and ongoing CP optimisation to control external corrosion; and
- supporting upgrades, including pigging enablement works and enhanced monitoring where required to maintain inspection capability and assurance.

These activities are mutually reinforcing and are planned and prioritised as a coordinated program rather than as standalone interventions. This approach enables APA to manage uncertainty, improve defect growth modelling, optimise re-inspection intervals and avoid inefficient reactive repairs or unplanned outages. The strategy is particularly critical for remaining in-service legacy assets and for sections of the network operating in metropolitan and other high-consequence locations.

The integrity management strategy has been selected as the preferred approach following assessment of credible alternatives. Deferring or materially reducing integrity activities would increase the likelihood of undetected degradation, potentially requiring pressure restrictions, unplanned outages or emergency repairs, with higher whole-of-life costs. Full pipeline replacement was assessed as not efficient given the availability of targeted integrity treatments that achieve required safety and reliability outcomes at significantly lower cost.

The proposed integrity program therefore represents a prudent and efficient response to known and foreseeable risks, consistent with accepted good industry practice and the capital expenditure criteria in Rule 79 of the National Gas Rules. Detailed justification, scope and cost forecasts for this strategy are set out in **Business Case A1.02 – RBP Integrity**.

5.2. DN250

The DN250 pipeline sections of the Roma to Brisbane Pipeline represent the oldest assets within the RBP system and are approaching the end of their economic and practical service life. Commissioned in the late 1960s, the DN250 was designed to standards and operating assumptions that differ materially from current expectations, particularly with respect to inspection capability, integrity assurance and ongoing compliance.

While the DN250 has historically provided reliable service, ongoing operation requires increasing levels of inspection, monitoring and remediation to manage age-related integrity risks. These risks include corrosion associated with legacy coatings, constraints on in-line inspection technology, and increasing dependence on operational controls to manage uncertainty. Over time, this approach results in rising operating expenditure and increasing residual risk without delivering commensurate customer benefit.

APA's lifecycle management strategy for the DN250 is therefore to progressively transition supply to the newer and more capable DN400 pipeline, enabling the controlled suspension and decommissioning of DN250 assets. The DN400 has sufficient capacity, superior inspection capability and lower integrity risk, allowing equivalent or improved service outcomes to be delivered at lower whole-of-life cost.

The DN250 transition strategy includes:

- staged transfer of connected customers from the DN250 to the DN400, coordinated to minimise operational and customer impacts;
- rationalisation of redundant facilities and interfaces associated with DN250 operation; and
- suspension of DN250 sections once no longer required for service provision.
- continued to evaluate the rapidly changing energy landscape to determine if the DN250 can returned to active service and provide economic benefit through the transport of additional natural gas, alternative gases (hydrogen, biogas and others) or other services.

This staged approach allows risks to be managed progressively, avoids unnecessary early expenditure, and provides flexibility to respond to changing demand or operational constraints. Importantly, it also reduces long-term reliance on intensive integrity management of an ageing asset, improving overall system risk profile.

Alternative options were considered as part of the strategy development. Continuing to operate the DN250 without transition would defer some capital expenditure items but bring forward others and is expected to result in increasing operating costs and higher long-term integrity risk. Full replacement of the DN250 was assessed as not efficient given the availability of an existing, lower-risk transmission path with sufficient capacity. Completing early works without proceeding to full suspension would similarly defer, rather than avoid, future costs.

The DN250 lifecycle transition and suspension strategy has therefore been selected as the preferred approach, as it minimises whole-of-life costs while maintaining safety and reliability outcomes. The strategy is consistent with accepted good industry practice and represents a prudent and efficient response to managing assets nearing end of economic life. Detailed scope, options assessment and cost forecasts are provided in **Business Case A2.02 – DN250 Lifecycle Transition and Suspension**.

5.3. Environment Risk Mitigation and Remediation

Environmental risk management forms a targeted component of APA's asset management strategy for the Roma to Brisbane Pipeline (RBP), particularly where external environmental processes pose a threat to pipeline integrity, safety or compliance. Environmental interventions are prioritised where deterioration or external change results in a credible risk to continued safe operation that cannot be adequately managed through monitoring or temporary controls alone.

A key environmental risk addressed during the 2027–32 Access Arrangement period relates to the Gowrie Creek crossing, where repeated flood events have caused progressive scour and loss of cover over the RBP400 pipeline. Hydraulic turbulence at this location, exacerbated by an upstream weir structure, has resulted in pipeline exposure beneath the waterline. Without permanent remediation, continued erosion is expected to increase the likelihood of undermining, free-spanning and debris impact, leading to elevated integrity and safety risk.

Temporary protection measures are currently in place to manage this risk; however, these controls are subject to regulatory approval time limits and do not represent a durable or fully compliant long-term solution. Permanent remediation is therefore required to ensure compliance with AS 2885 and to reduce environmental and integrity risks to as low as reasonably practicable.

APA's environmental management strategy for Gowrie Creek prioritises in-situ creek bed stabilisation where approvals allow, as this represents the lowest-cost and lowest-disruption solution capable of addressing the identified risks. However, delivery of this option is subject to third-party approval constraints associated with adjacent infrastructure. Where such approvals cannot be obtained, pipeline replacement by horizontal directional drilling (HDD) represents the only feasible permanent alternative.

Given this approval uncertainty, the Access Arrangement forecast reflects the upper-bound cost outcome to ensure that a safety-critical solution can be delivered within the period regardless of external approval constraints. This approach is prudent and efficient, as it avoids the risk of under-forecasting expenditure required to address a known and escalating environmental risk while preserving the ability to deliver a lower-cost solution should approvals permit.

This targeted environmental remediation strategy ensures that site-specific risks are addressed proactively, avoids unplanned intervention following major flood events, and minimises whole-of-life costs to users. Detailed scope, options assessment and cost justification are provided in **Business Case A3.02 – Environmental Risk Mitigation (Gowrie Creek)**.

5.4. Instruments and Control Systems

Reliable instrumentation, metering and control systems are essential to the safe, compliant and efficient operation of the Roma to Brisbane Pipeline (RBP). These systems underpin custody transfer, billing accuracy, gas quality compliance, SCADA visibility and safe pipeline control. As a result, their performance and supportability are critical to both customer outcomes and regulatory compliance.

A significant portion of the RBP's metering and control equipment was installed more than 20 years ago and has reached, or is approaching, end of manufacturer support. Obsolescence across key asset classes—including gas chromatographs, moisture analysers, turbine meters, flow computers and remote terminal units—has materially increased the risk of in-service failure, extended outages and loss of measurement capability. Long lead times for replacement equipment and diminishing availability of spare parts mean that a reactive, run-to-failure approach is no longer viable for assets performing billing-critical and safety-critical functions.

APA's lifecycle management strategy for instrumentation and control assets is therefore based on **planned and proactive renewal**, prioritised by asset criticality, condition and risk. The strategy focuses on replacing obsolete or unsupported equipment before failure, enabling orderly transition

to modern, supportable platforms that maintain measurement accuracy, operational control and cybersecurity resilience.

Key elements of this strategy include:

- replacement of obsolete gas chromatographs and moisture analysers at receipt and delivery points to maintain accurate determination of gas composition, heating value and moisture compliance;
- replacement of ageing turbine meters with modern Coriolis meters to improve accuracy, diagnostics and long-term maintainability;
- progressive upgrade of flow computers and RTUs where existing platforms are approaching end-of-support, including transition away from ControlWave Micro devices prior to vendor support withdrawal; and
- standardisation of instrumentation platforms to improve supportability, spare parts management and lifecycle cost efficiency.

Alternative options were considered, including continued operation until failure and reliance on stockpiled spare parts for obsolete systems. These approaches were assessed as not prudent, as they expose APA and customers to foreseeable risks including prolonged outages due to equipment lead times, increased likelihood of inaccurate billing, regulatory and contractual non-compliance, and escalating lifecycle costs driven by emergency replacement and inefficient resourcing.

The proactive replacement strategy provides a stable and predictable investment profile, supports efficient bundling of site works, and materially reduces long-term operational and compliance risk. Importantly, it represents the lowest sustainable cost of maintaining measurement integrity and control system reliability over the life of the assets.

The proposed instrumentation and control systems program is therefore a prudent and efficient response to known and emerging obsolescence risks and is consistent with accepted good industry practice, AS 2885 requirements and the capital expenditure criteria in Rule 79 of the National Gas Rules. Detailed scope, options assessment and cost forecasts are provided in **Business Case A4.02 – Instruments and Control Systems**.

5.5. Facilities

Aboveground facilities are a critical enabler of the safe, reliable and compliant operation of the Roma to Brisbane Pipeline (RBP). While these assets do not directly perform transportation or metering functions, their condition materially influences operational reliability, worker safety, integrity outcomes and APA's ability to meet regulatory obligations.

A significant portion of the RBP's aboveground infrastructure—including compounds, pipework, steel structures, platforms, fencing and electrical earthing systems—has been in service for several decades and is subject to progressive deterioration due to environmental exposure, ageing materials and operational wear. Without proactive intervention, this deterioration increases safety risk, shortens asset life and raises the likelihood of unplanned outages or regulatory non-compliance.

APA's facilities lifecycle management strategy therefore focuses on **extending the service life of critical facilities through targeted, proactive intervention**, rather than allowing condition to deteriorate to the point where major replacement is required. Two key programs underpin this strategy: earthing upgrades and a structured station coating and painting program.

The earthing upgrade program addresses identified non-conformances and degradation across prioritised RBP sites. Earthing systems are a fundamental safety control, protecting personnel and equipment from electrical faults and lightning events. Asset audits have identified that a number of facilities require upgrading to meet current Australian Standards and WHS obligations. Proactive remediation reduces electrical safety risk, restores compliance and avoids reliance on reactive repairs following fault events.

The station painting and coating program addresses corrosion risk across exposed aboveground assets. Queensland environmental conditions accelerate coating degradation, increasing the likelihood of structural corrosion and premature asset failure if left untreated. A structured, risk-based coating program allows corrosion to be controlled at an early stage, extending asset life and avoiding higher-cost structural repairs or replacements in later years.

Alternative approaches, including reactive repair or run-to-failure strategies, were assessed as not prudent. These approaches defer expenditure in the short term but lead to higher whole-of-life costs, increased safety exposure, inefficient emergency works and elevated compliance risk. In contrast, proactive refurbishment enables efficient work bundling, predictable expenditure profiles and lower long-term cost to customers.

The facilities lifecycle strategy is therefore directed toward:

- maintaining safe access and working conditions at pipeline sites;
- preserving asset integrity and serviceability;
- reducing safety and compliance risk to so far as is reasonably practicable; and
- stabilising lifecycle costs through planned, efficient intervention.

This approach represents accepted good industry practice and is consistent with the capital expenditure criteria in Rule 79 of the National Gas Rules. Detailed scope, risk assessment and cost forecasts for these programs are set out in **Business Case A5.02 – Facilities**.

5.6. SIB Projects

In addition to major integrity, lifecycle transition and renewal programs, APA undertakes a coordinated program of stay-in-business (SIB) capital investment to maintain the safe, reliable and compliant operation of the Roma to Brisbane Pipeline (RBP). These investments address ageing, degraded or obsolete assets where continued operation without intervention would materially increase safety, reliability or compliance risk.

The SIB program covers a portfolio of electrical, mechanical, instrumentation and civil works at above-ground facilities and associated compounds. Assets within this program are fundamental to pipeline operability, protection and maintenance, despite not directly providing transportation capacity. Failure of these assets would expose APA and customers to unplanned outages, safety risk or regulatory non-compliance.

5.6.1. Facilities, Electrical and Mechanical SIB Works

SIB projects included in the 2027–32 Access Arrangement period address identified deficiencies in:

- pipeline isolation infrastructure (including ageing and passing valves);
- shutdown and overpressure protection devices affected by contamination or obsolescence;
- backup electrical power systems (including diesel engine alternators and changeover panels);
- control room structural integrity;
- critical maintenance and response equipment, including specialised lifting capability.

These assets are managed through planned replacement or remediation prior to failure, informed by condition assessments and operational experience. A run-to-failure approach was assessed and rejected, as it would lead to unpredictable expenditure, increased outage risk, reliance on emergency response and escalation of whole-of-life costs.

The SIB renewal strategy allows:

- efficient bundling of works across sites;

- predictable capital and resourcing profiles;
- reduced reliance on temporary or non-compliant controls; and
- maintenance of operational readiness and capability.

5.6.2. Ellengrove Reliability Enhancement

A significant component of the SIB program relates to the Ellengrove Reliability Project, which addresses a material change in the RBP operating context following network reconfiguration associated with the DN250 lifecycle transition.

Ellengrove is now the sole supply point to the Brisbane metropolitan and Gold Coast load centres. Historically, system-level redundancy was provided via alternative upstream flow paths; however, following the removal of these paths, Ellengrove will rely exclusively on its onsite pressure control and metering infrastructure to maintain supply continuity.

Under the current configuration, Ellengrove operates with two partially independent pressure control runs. While acceptable under the previous system configuration, this arrangement no longer provides adequate resilience given the increased consequence of failure. Risk assessment identified that a common-mode event, impairment or forced outage affecting both runs would result in a loss of supply to a large and concentrated demand centre.

The Ellengrove Reliability Project therefore proposes installation of a third pressure control and metering run, restoring effective station-level redundancy and materially reducing supply risk. This investment is not driven by growth or augmentation but is a response to the changed operating environment and the loss of upstream redundancy.

The project has been assessed as the only credible option that reduces residual operational risk from High to Low, consistent with ALARP and accepted good industry practice. Deferring or avoiding the investment would expose customers to an unacceptable level of supply disruption risk and is not consistent with prudent asset management of a critical system node.

5.6.3. Prudency and Efficiency

Collectively, the SIB and system reliability investments represent a prudent and efficient lifecycle response to known and foreseeable risks. The program:

- maintains compliance with AS 2885 and pipeline licence obligations;
- reduces reliance on reactive maintenance and emergency intervention;
- avoids step-changes in risk or expenditure; and
- delivers the lowest sustainable cost of maintaining safe and reliable pipeline services.

Detailed justification, scope and cost forecasts for these investments are provided in **Business Case A6.02 – SIB Projects**.