SIB Projects Business Case

Roma to Brisbane Gas Pipeline Access Arrangement 2028–32

29 May 2026

Contents

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Table 1-1: Revision Record

Version	Changes Made
0.1	*Initial draft*
0.2	*Feedback received from document review*
0.3	*Additional detail requested*

Table 1-2: Review and Distribution

Name	Role	Action	Sections
[redacted]	*Specialist – Asset Lifecycle*	*Initial draft*	*All*
[redacted]	*Senior Engineer - Electrical and Instrumentation*	*Review and Input*	*5*
[redacted]	*Manager of Asset Operations - SEQ*	*Review and Input*	*All*
[redacted]	*Team Leader Asset Operations RBP West*	*Review and Input*	*All*
[redacted]	*Team Leader Asset Operations RBP East*	*Review and Input*	*All*
[redacted]	*Manager Capacity & Long Term Planning*	*Review and Input*	*All*
[redacted]	*Team Lead Asset Engineering - Qld*	*Review and Input*	*All*

This document requires the following approvals. Approvals are inserted as an object in the table below (preferred) or stored with the approved document in electronic version on the Project Site in Project Server.

Table 1.3: Approvals

Name	Role	Approval	Date Approved
[redacted]	*Head of Asset Operations Qld*	*Approval*	
[redacted]	*General Manager – Gas Operations East*	*Approval*	

Other project specific approvers can be added if required.

Delegation Policy

1. Overview

Number/ identifier	A-6_SIB Projects
Description of Issue/ Project	This business case covers a coordinated package of **stay-in-business capital projects** required to maintain the safe, reliable and compliant operation of the Roma to Brisbane Pipeline (RBP). These works address ageing electrical; mechanical and instrumentation assets located at above-ground facilities and associated compounds. The SIB program ensures that degraded or obsolete assets are replaced before they compromise pipeline integrity, safety, operability, or regulatory compliance.
Options considered	Two strategic options were assessed for managing ageing facility assets: **Option 1 — Run to Failure / Do Nothing** Under this approach, assets remain in service until they degrade to the point of failure or become unrepairable due to OEM obsolescence. This results in: • Increased safety and reliability risks • Higher likelihood of unplanned outages • escalating corrective maintenance costs • Potential non-compliance with regulatory and licence obligations **Option 2 — Planned Proactive Replacement (Preferred)** This option involves a targeted, risk-based replacement and upgrade program designed to maintain: • Safety • Operational reliability • Access to spare parts and technical support • Compliance with relevant standards and licence conditions This option represents prudent and efficient asset stewardship.
Proposed Solution	The preferred solution is **Option 2**, as it appropriately balances cost, safety, operational reliability, and regulatory compliance. It avoids the increasing risks associated with equipment deterioration, including the potential for regulatory breaches and loss of operating licence if critical equipment fails.
Estimated Cost	$3.49 million
Relevant standards	The SIB program ensures compliance with key standards and licence requirements, including: • **AS 2885.3 – Pipelines: Gas and Liquid Petroleum – Operations and Maintenance** • **RBP Pipeline Licence** These standards require operators to maintain safe and reliable facilities, manage risks to ALARP, and proactively address emerging asset integrity issues.

Stakeholder Engagement	• Scope discussed during RBP Access Arrangement Stakeholder Meetings #3 (25/11/2025); #4 (10/02/2026); and #5 (31/03/2026)
Consistency with National Gas Rules (NGR)	The proposed SIB projects comply with **NGR Rule 79** because the expenditure: • **Is necessary** to maintain and improve safety and service integrity (79(2)(c)(i)–(ii)) • **Reflects what a prudent service provider** would undertake, acting efficiently and in line with good industry practice (79(1)(a)) • **Achieves the lowest sustainable cost** of providing pipeline services through proactive rather than reactive intervention Together, these projects maintain essential operational capability and ensure the RBP continues to provide safe, reliable service to customers.

2. Program details

2.1. Background

Stay-in-business (SIB) capital expenditure on the RBP focuses on maintaining the long-term safety, reliability, and integrity of pipeline facilities so they remain fit-for-purpose throughout their operational life. The SIB program covers a diverse portfolio of **electrical, mechanical, and instrumentation upgrades and replacements** across above-ground facilities and associated compounds. These works are identified through routine inspections, condition assessments, and performance data, and delivered through planned refurbishment cycles.

For the 2028–32 Access Arrangement period, the following assets have been identified as requiring targeted upgrades:

- SEA valve replacements
- Replacement crane truck
- Kogan Scraper Station DEA & Changeover panel upgrade
- Shutdown Valve (SDV) at Condamine
- Woodroyd, Arubial and Scotia Obsolete SDV over pressure devices
- Dalby CS control room footings
- Ellengrove Reliability Project

Each of these items is assessed in detail in Sections 3 to 8.

2.2. Assessment of options

Two strategic management approaches were considered:

Option 1 — Accept Non-Conformance and Allow Assets to Fail

This option would allow deterioration to continue unchecked, replacing or repairing assets only when failure occurs. This approach results in:

- Higher operational and safety risks
- Increased likelihood of regulatory non-compliance
- Unpredictable, lumpy, and typically higher unplanned expenditure
- Potential loss of operating licence

Given the age of the assets and limited OEM support, this option is inefficient and imprudent.

Option 2 — Planned Proactive Replacement and Upgrades (Preferred)

This option maintains an appropriate level of work to ensure reliable ongoing operation, including proactive refurbishment, replacement, and condition-based maintenance. Benefits include:

- Predictable and efficient expenditure profiles
- Reduced risk of unplanned outages
- Improved safety and compliance
- Efficient use of resources by coordinating works across sites

Planned intervention is clearly the prudent, efficient approach aligned with good industry practice.

2.2.1. Inherent Risk assessment

A detailed risk assessment has been undertaken for each of the individual SIB project items outlined in Sections 3 to 8 of this business case. These assessments evaluate health and safety, operational, compliance, reputational, environmental and financial risks using APA's Enterprise Risk Matrix. The inherent (untreated) risks identified for the assets, when no action is taken, range from **Moderate to High**, reflecting the combined effects of asset ageing, OEM obsolescence, and increasing maintenance requirements. [

Overall, the collective inherent risk profile of the SIB assets—if left unaddressed under Option 1—results in a **HIGH untreated risk rating**, driven primarily by the potential for regulatory non-compliance, increased likelihood of equipment failure, and elevated safety and operational risks. The project-specific assessments presented in Sections 3–8 demonstrate that proactive renewal (Option 2) reduces these risks to **Low or Negligible** by addressing foreseeable failures, improving reliability, and ensuring assets remain compliant with licence and standard requirements.

This confirms that a planned, proactive SIB program is required to reduce risks to ALARP and maintain the safe and reliable operation of the RBP.

Financial assessment

A consideration of the pros and cons of the expected financial outlays for both options is shown below. Given end-of-life replacement and rectification costs are inevitable, this business case demonstrates that the proposed expenditure is efficient and appropriate to manage the associated risks.

Table 2-1: Financial assessment for the Facilities business case

	Commentary
Option 1: Accept non-conformance with regulations and asset failure	• Unplanned approach to replacements and rectification leads to lumpy and more unpredictable expenditure. • Replacements are more expensive given the efficiency losses (costs and staff/contractor resources) of unplanned works compared to planned works. • Expenditure grows significantly once the level of failures exceeds the capacity of staff resources –significant increased costs for contractors to be on stand-by. • Avoided costs in the earlier years are more than offset by regulatory fines and the financial costs and penalties arising from reputational damage, legal action and the loss of the RBP operating licence.
Option 2: Planned approach to managing risks and costs	• Where possible, replacements take place with other works at the site, improving cost and resource efficiency. • Steady replacement rate over the coming years gives predictability in expenditure. • Expect a reduction in some costs over time ahead of reaching a stabilised level of expenditure.

The risk and financial assessments above support the preferred option (option 2) as appropriately balancing costs and risks.

2.3. Consistency with the National Gas Rules and other regulations

The SIB program satisfies the **NGR Rule 79** capital expenditure criteria because it:

- **Is necessary** to maintain safety and integrity of services (79(2)(c)(i)–(ii))
- **Reflects prudent and efficient expenditure** expected of a responsible asset manager (79(1)(a))

- **Aligns with good industry practice**, particularly AS 2885 and electrical/mechanical integrity standards
- Ensures compliance with the RBP Pipeline Licence and legislative obligations

Most works will be delivered by APA field resources, with external contractors engaged following APA Procurement Policy requirements where specialised skills are necessary.

2.4. Proposed costs for FY28-FY32

This includes the planned expenditure on all projects listed in Sections 3 to 8. A full breakdown is included in Table 2-3 of the source document.

Table 2–3 Total cost for SIB business case ($'000s Real 2026-27)

Description	FY28	FY29	FY30	FY31	FY32	Total
Lytton Valve replacement DN300 & DN200	-	-	-	116	117	233
Replacement for Crane truck	-	289	-	-	-	289
Generator Upgrades	-	-	-	116	117	233
SDV at Condamine	-	-	116	-	-	116
Woodroyd, Arubial & Scotia Actuators	-	-	58	58	58	174
Dalby CS control room footings	-	116	-	-	-	116
Ellengrove Reliability	-	-	-	2,327	-	2,327
FY Totals	0	404	174	2,618	292	3,488

3. SEA valve replacements

3.1. Project objective and scope

The objective of this project is to replace ageing DN300 and DN200 valves at Lytton to ensure continued safe operation, reliable isolation capability, and compliance with AS 2885 requirements for pipeline integrity. These valves form part of the broader isolation and protection system along the RBP and must remain operable to allow APA to respond effectively to maintenance needs and abnormal operating conditions.

The project scope includes removal of existing valves, installation of new DN300 and DN200 isolation valves, and all associated mechanical, civil, and commissioning activities.

3.2. Background

The affected valves were installed as part of older pipeline infrastructure and have reached a point where replacement is required to maintain system integrity. As with many legacy assets along the RBP, age-related deterioration and limitations in spare-parts availability increase the risk of valve malfunction or inability to isolate the pipeline when required.

These risks cannot be effectively mitigated through in-service maintenance alone, given the safety, operational and compliance requirements associated with isolation equipment.

3.3. Assessment of options

The options considered for the access arrangement period are:

— Option 1: Do nothing

— Option 2: Replace valves identified as passing

3.3.1. Risk assessment

The risk is being unable to positively isolate sections of the station due to passing valves. Preventing other station works from happening due to the isolation issues.

Table 3-1: Risk assessment – SEA Valve Replacement

Risk Area	Potential Impact	Option 1:		Option 2:	
		Likelihood / Impact	Inherent risk rating	Likelihood / Impact	Risk rating
Health & Safety	Exposure to fugitive emissions	Frequent / Minimal	Low	Remote / Minimal	Negligible
Environment	Impacting Site	Frequent / Minimal	Low	Remote / Minimal	Negligible
Operational	n/a	n/a	n/a	n/a	n/a
People	n/a	n/a	n/a	n/a	n/a
Compliance	Regulatory breach	Frequent / Minor	Moderate	Remote / Minor	Negligible
Reputation & Customer	Adverse media	Occasional / Significant	Moderate	Remote / Significant	Low
Financial	n/a	n/a	n/a	n/a	n/a
Untreated risk			**MODERATE**		**LOW**

Option 1 – Do Nothing

Leaving the valves in service without planned replacement significantly increases the likelihood of valve failure. Continued degradation may limit isolation capability during emergencies or maintenance activities (such as in line inspection (ILI)), exposing APA to non-compliance with AS 2885.3 and the RBP Pipeline Licence.

While this option defers expenditure, it materially increases:

- the risk of uncontrolled gas release
- unplanned outages
- higher-cost emergency remediation
- safety and reputational impacts

Option 1 is not technically acceptable or consistent with prudent pipeline operation.

Option 2 – Replace DN300 & DN200 Valves (Preferred)

This option involves planned replacement of the valves to ensure reliable pipeline isolation and long-term integrity. This is the only credible and practicable option, consistent with good industry practice and APA's obligations under:

- AS 2885.3 – Operations and Maintenance
- the RBP Pipeline Licence

Replacing the valves proactively ensures continued compliance and avoids the substantially higher costs and risks associated with managing valve failures.

3.3.2. Financial assessment

Table 3-2: SEA valve replacement ($000 Real 30 June 2026)

Option	Estimated cost	Treated residual risk rating	Benefit / Disbenefit
Option 1	N/A	High	Does not mitigate Compliance or Reputation & Customer Risk
Option 2	$233	Low	Efficiently mitigates Compliance and Reputation & Customer Risk and complies with regulatory requirements.

End-of-life replacement and rectification costs are inevitable, so the significant question is how the spend should be balanced to appropriately manage the associated risks.

Table 3–3: Financial assessment – Replace Valves ($ Real 30 June 2026)

	Commentary
Option 1: Change nothing	• A qualitative financial assessment demonstrates that: • **Option 1 (Do Nothing)** results in unpredictable, potentially very high lifecycle costs due to emergency repairs, safety risks, and possible regulatory penalties.
Option 2: Replace DN300 & DN200 Valves at Lytton	• **Option 2 (Replace Valves)** enables efficient planning, coordination with other site works, and greatly reduces overall lifecycle risk and cost exposure. • Accordingly, Option 2 delivers the **lowest sustainable cost** over the asset life.

The preferred option that we believe appropriately balances costs and risks is the programmed replacement of the identified valves.

3.4. Proposed costs for FY28-FY32

Replacement of the DN300 and DN200 Lytton valves is planned for **FY31–FY32**.

These activities will be delivered using APA resources and specialist contractors where required, consistent with APA's Procurement Policy.

Table 3–4: Estimated annual cost to Replace Valves ($'000s June 2026-27)

Description	FY28	FY29	FY30	FY31	FY32	Total
Lytton Valve replacement DN300 & DN200	-	-	-	116	117	233

Table 3–5: Class 5 Cost Estimate for Replace Valves ($s Real 30 June 2026)

Cost Component	Cost ($)	Percentage
Project Management	24,035	10.32%
Design	40,720	17.48%
Procurement (Valves, Fabrication, Materials)	108,274	46.47%
Construction	50,637	21.73%
Commissioning & Handover	9,334	4.01%
Total Project cost	**233,000**	

Note: Costs based on current valve quotes and bottom-up build based on previously executed similar projects.

4. Replacement Crane truck

4.1. Project objective and scope

The objective of this project is to replace the existing crane truck used to support routine and reactive maintenance activities on the RBP. The crane truck is essential for safely transporting, lifting, and installing heavy equipment—particularly at cathodic protection (CP) sites and locations requiring electrical or mechanical repairs.

The replacement truck will enable APA to continue meeting operational, safety, and compliance requirements by ensuring maintenance activities can be undertaken efficiently and in accordance with relevant standards.

4.2. Background

APA relies on crane-equipped vehicles to transport and install CP units, electrical components, and other heavy infrastructure necessary for maintaining pipeline integrity. The current truck will exceed 20 years of age during this access arrangement and is now reaching the end of its serviceable life.

As with other CP and facility assets described in the business case, several factors drive the need for replacement:

- Increasing component failures due to age
- Difficulty sourcing spare parts for older equipment
- Rising maintenance and reliability risks
- Dependency on crane capability for safe installation of CP units and other site infrastructure

Given the long lead time for procuring replacement vehicles and the criticality of crane-assisted tasks, timely renewal is necessary to maintain field readiness and avoid delays in integrity-related work.

4.3. Assessment of options

The options considered for the access arrangement period are:

— Option 1: Do nothing,

— Option 2: Replace crane truck with a compliant vehicle

4.3.1. Risk assessment

Failing to update the Crane Truck may result in:

- CP system could have delayed maintenance as no flexibility to complete in house.
- Emergency response times delayed.
- Erosion repairs delayed maintenance as no flexibility to complete in house.
- Pigging gear transport cost absorbed by new truck.

Table 4-1: Risk assessment – Crane Truck Replacement

Risk Area	Potential Impact	Option 1 :		Option 2:	
		Likelihood / Impact	Inherent risk rating	Likelihood / Impact	Risk rating
Health & Safety	n/a	n/a	n/a	n/a	n/a
Environment	n/a	n/a	n/a	n/a	n/a
Operational	Disruption 1-3 months	Frequent / Minimal	Low	Remote / Minimal	Negligible
People	n/a	Frequent / Minor	Moderate	Remote / Minor	Negligible
Compliance	Regulatory breach	Frequent / Minor	Moderate	Remote / Minor	Negligible
Reputation & Customer	n/a	n/a	n/a	n/a	n/a
Financial	n/a	n/a	n/a	n/a	n/a
Untreated risk			**MODERATE**		**NEGLIBIBLE**

4.3.2. Option 1

Under this option, the current crane truck remains in service beyond its effective operational life until the point of terminal failure. This approach introduces several risks:

- Increased potential for breakdowns
- Reduced ability to perform CP and electrical upgrades safely
- Higher maintenance expenditure
- Operational delays due to unavailability of lifting equipment
- Non-compliance with safe-work requirements if equipment reliability degrades

Option 1 exposes APA to increased safety, operational and financial risk, and is not aligned with prudent asset management.

4.3.3. Option 2

Option 2 involves replacing the crane truck as part of the planned SIB program. Benefits include:

- Ensures safe and efficient installation of CP units and associated equipment
- Reduces risk of work delays arising from vehicle or lifting-device failure
- Minimises maintenance costs associated with ageing equipment
- Supports compliance with AS 2885, electrical safety requirements, and APA's internal operating procedures
- Reduce on-road incident risks for both APA staff and the public due to inclusions of modern safety aids.

This option is consistent with good industry practice, particularly given the reliance on crane-assisted installations across the pipeline system.

Financial assessment

Table 4-2: Options assessment - Replacement Crane truck ($000 Real 30 June 2026)

Option	Estimated cost	Treated residual risk rating	Benefit / Disbenefit
Option 1	N/A	High	Does not mitigate People or Compliance Risk
Option 2	$289	Low	Efficiently mitigates People and Compliance Risk

Table 4-3: Financial assessment – Replacement Crane Truck ($ Real 30 June 2026)

	Commentary
Option 1: Change nothing – continue to maintain old truck and engage contractors	• Defers capital expenditure in the short term but results in higher whole-of-life costs due to increasing breakdowns and reactive maintenance. • Increased reliance on external contractors leads to higher unit costs, mobilisation expenses, and reduced scheduling flexibility. • Unplanned failures risk delays to critical CP, electrical, and integrity works, increasing indirect operational costs. • Maintenance expenditure becomes unpredictable and lumpy, reducing cost efficiency over time. • Exposes APA to escalating costs associated with emergency response and loss of internal capability.
Option 2: Purchase new fit for purpose truck	• Requires upfront capital investment but delivers lower and more predictable lifecycle costs. • Enables continued use of internal resources, avoiding contractor premiums and repeated mobilisation costs. • Supports efficient planning by coordinating lifting capability with scheduled maintenance activities. • Reduces ongoing maintenance and downtime costs associated with ageing equipment. • Represents the lowest sustainable cost option when whole-of-life costs and risk exposure are considered. • Provides a safer truck for staff and other road users

The preferred option that appropriately balances costs and risks is the replacement of the Crane Truck.

4.4. Proposed costs for FY28-FY32

The cost reflects procurement of the vehicle and associated crane equipment. The work will be undertaken by APA, with the vehicle supplied in accordance with APA's Procurement Policy.

Current quotes have been supplied by APA approved vendors for the various components to assemble the new fit for purpose truck, these include:

- Isuzu Cab Chassis

- Tilt Tray, Utility Crane and miscellaneous equipment

Table 4-4: Estimated Cost - Replacement Crane Truck ($'000s Real 2026-27)

Description	FY28	FY29	FY30	FY31	FY32	Total
Replacement for Crane truck		289				**289**

Table 4-5: Cost breakdown - Replacement Crane Truck ($s Real 30 June 2026)

	Description	Total
Tilt Tray	Quote from South East Qld Tilt Tray 26/11/2024	**112,339.30**
Cab Chassis	Quote from Black Truck & Ag 26/11/2024	**153,606.05**
Trailer	Quote from Toowoomba Trailers 26/11/2024	**10,512.00**
Traymount Sprayer	Quote from Toowoomba Sprayshop	**12,951.46**
	Total	**289,408.81**

5. Kogan Scraper Station DEA and Changeover panel upgrade

5.1. Project objective and scope

The objective of this project is to restore reliable and compliant **backup electrical power** to the Kogan Scraper Station by replacing the ageing **Diesel Engine Alternator (DEA)** and **Automatic Transfer Switch (ATS) changeover panel**.

These assets provide critical standby power capability required to maintain essential functions during mains supply failures, support operational safety systems, and ensure compliance with electrical standards.

The project scope includes:

- Replacement of the existing 250 kVA DEA
- Replacement of the obsolete ATS/changeover panel
- Integration and commissioning of new compliant equipment
- Rectification of existing safety and electrical compliance deficiencies

5.2. Background

The existing DEA and ATS panel have reached end-of-life and present multiple operational, reliability and compliance risks:

- The DEA installation was added in the late 1980s when compression was added at Kogan station and has not been fully operational since **2019**, with only short no-load test runs possible, creating uncertainty about its ability to supply power during an outage.
- Key ATS components — the Automatic Mains Failure (AMF) module and control PCB — are **no longer available**, limiting maintainability.
- Multiple safety and electrical compliance issues exist, including:
    - No mechanical interlock between mains and generator
    - No power isolation on the panel
    - Exposed conductors
    - Inadequate segregation between control and LV circuits

While the generator setup at this site was under evaluation for decommissioning, the new Kogan – Brigalow pipeline that will supply the CS Energy operated Brigalow Peaking Power Plant starts from the APA Kogan station. This has resulted in an increased criticality of the Kogan site and warranted the continued presence of a backup generator for operational resilience. Once any changes are made to the installation it needs to be fully complaint to AS 3000 wiring rules. Assessment of options

The options considered for the access arrangement period are:

- Option 1: Do nothing
- Option 2: Replace the existing DEA and ATS changeover panel with modern, compliant units

5.2.1. Risk assessment

Operating an ageing, unreliable, and non-compliant backup generator presents the following risks:

- **Health & Safety:** Exposure to electrical hazards due to lack of isolation and exposed conductors.
- **Operational:** Significant risk of outage impacts if the DEA fails during critical conditions.

- **Compliance:** Non-compliance with electrical standards and RBP Licence obligations.
- **Financial:** Increased maintenance costs, extended downtime, and potential regulatory penalties.

With replacement (Option 2), risks reduce to **Low or Negligible** across all areas.

Table 5-1: Risk assessment – DEA & ATS replacement

Risk Area	Potential Impact	Option 1 :		Option 2:	
		Likelihood / Impact	Inherent risk rating	Likelihood / Impact	Risk rating
Health & Safety	Injury	Unlikely / Significant	Moderate	Remote / Significant	Low
Environment	n/a		n/a	n/a	n/a
Operational	Disruption 1-3 months	Unlikely / Minimal	Negligible	Remote / Minimal	Negligible
People	n/a		n/a	n/a	n/a
Compliance	Regulatory breach	Unlikely / Minor	Low	Remote / Minor	Negligible
Reputation & Customer	n/a		n/a	n/a	n/a
Financial	n/a	n/a	n/a	n/a	n/a
Untreated risk			**MODERATE**		**NEGLIGIBLE**

Option 1

The 'Do Nothing' option increases the risk that the DEA will fail during critical operations.

Under this option, the current DEA and ATS remain in service despite their degraded condition.

Consequences include:

- High likelihood of generator failure during a mains outage
- Safety hazards associated with non-compliant electrical equipment
- Inability to repair or maintain ATS components due to obsolescence
- Reduced operational capability and increased reliance on temporary measures
- Elevated regulatory and licence compliance risk

This option is not technically acceptable or aligned with prudent asset management.

Option 2

This option involves replacing both the DEA and ATS panel with modern, compliant equipment.

Benefits include:

- Restored and reliable backup power capability
- Elimination of safety and compliance defects

- Resolution of parts-obsolescence risks
- Support for future operational demands and system expansion
- Improved maintainability and vendor support

Option 2 is the only prudent option and is fully aligned with APA's electrical safety obligations and good industry practice.

Financial assessment

Table 5-2: Options assessment – DEA & ATS replacement ($000 Real 30 June 2026)

Option	Estimated cost	Treated residual risk rating	Benefit / Disbenefit
Option 1	N/A	Moderate	Does not mitigate Health & Safety, Operational or Compliance Risk
Option 2	$233	Negligible	Efficiently mitigates Health & Safety, Operational and Compliance Risk

Table 5–3: Financial assessment – DEA & ATS replacement ($ Real 30 June 2026)

	Commentary
Option 1: **Change nothing**	• Short-term capital deferral only. • Long-term cost increases due to emergency failure, temporary supply solutions, and compliance breaches. • Risk of reputational and regulatory impacts far outweighs avoided CapEx
Option 2: **Replace DEA and ATS (Preferred)**	• Replacement occurs in a controlled, planned manner. • Enables bundling with other site work for efficiency. • Provides predictable expenditure and ensures long-term compliance.

The preferred option that appropriately balances costs and risks is Option 2, replacing existing DEA and ATS changeover panel.

5.3. Proposed cost for FY28-FY32

The DEA and ATS replacement is planned over FY31–FY32.

Work will be completed using a combination of APA resources and specialist electrical contractors, procured in accordance with APA's Procurement Policy.

Table 5–4: Estimated yearly cost of DEA & ATS replacement ($'000s Real 2026-27)

Description	FY28	FY29	FY30	FY31	FY32	Total
Generator Upgrades				116	117	**233**

Table 5–5: Cost breakdown – DEA & ATS replacement ($s Real 30 June 2026)

	Description	Total
Materials	55kva standby (50kva prime) Cummins enclosed generator set model C55D5LC-2	**52,535.00**
Materials	E&I Construction Materials	**21,418.70**
Contractor	Commissioning	**19,760.00**
Contractor	Travel & Accommodation	**21,850.00**
Labour - Operations	Construction & commissioning	**38,047.50**
Labour - Internal	Project Engineering, Operations, Document Control & Drafting	**77,520.00**
	Total	**231,131.20**

Note: Costs based on current generator quote and bottom-up build based on previously executed similar projects.

6. Shutdown Valve (SDV) at Condamine

6.1. Project objective and scope

The objective of this project is to replace two safety critical Shutdown Valves (SDV 901A and 901B) at Condamine to address reliability issues, eliminate operational impairments, and ensure adequate protection against **overpressure events** on the DN400 section between Wallumbilla and Condamine due to the different maximum operating pressure west of Condamine compared to that east of Condamine.

The scope includes installation of two new SDVs with **integrated gas filtration**, replacement of contaminated or degraded components, required control upgrades, and commissioning. The replacement valves will restore reliable isolation and protection capability, in line with AS 2885 performance requirements.

6.2. Background

The SDV 901A/B manifold has become **contaminated with debris** from process gas, which has significantly reduced operational reliability and compromised protection functionality.

Key issues identified include:

- SDVs can be **closed only once**, requiring manual technician intervention before re-use
- Each activation requires an safety system impairment that carries a “moderate” risk assessment
- Long lead times (12–16 weeks) for critical parts
- Specialist Rotork expertise is required but minimally available in Australia

These deficiencies reduce operational flexibility, increase maintenance burden, and elevate the risk of delayed or inadequate response to abnormal operating conditions.

The RBP is the **sole gas supply route** to homes and businesses across major SEQ population centres (Brisbane, Gold Coast, Ipswich, Toowoomba, northern NSW), making reliable protection equipment essential from a system-wide security-of-supply perspective.

6.3. Assessment of options

The options considered for the access arrangement period are:

— Option 1: Change nothing – risk of overpressure incident between Wallumbilla & Condamine

– Option 2: Install 2 new valves with gas filtration

6.3.1. Risk assessment

The inherent risks of retaining the current SDVs include:

- **Operational:** delayed or failed shutdown during an overpressure event
- **Compliance:** inability to meet AS 2885 protection system requirements
- **Safety:** increased risk of uncontrolled pressure excursions
- **Financial:** cost and delays associated with long lead times and unplanned outages

With replacement, residual risks fall to **Negligible**, consistent with ALARP expectations.

Table 6-1: Risk assessment – Shutdown Valve at Condamine

Risk Area	Potential Impact	Option 1 :		Option 2:	
		Likelihood / Impact	Inherent risk rating	Likelihood / Impact	Risk rating
Health & Safety	Fatality	Occasional / Major	High	Remote / Minor	Negligible
Environment	n/a		n/a	n/a	n/a
Operational	Disruption 1-3 months	Occasional / Minor	Low	Remote / Minor	Negligible
People	n/a	n/a	n/a	n/a	n/a
Compliance	n/a	n/a	n/a	n/a	n/a
Reputation & Customer	Adverse local media	Occasional / Minor	Low	Remote / Minor	Negligible
Financial	Revenue Impact <$1M	Occasional / Minor	Low	Remote / Minor	Negligible
Untreated risk			**HIGH**		**NEGLIGIBLE**

Option 1

Under this option:

- SDVs remain unreliable and require constant manual intervention
- Protection function remains impaired, increasing the risk of overpressure
- Operations staff continue to experience reduced ability to respond
- Long specialist lead times increase the risk of extended outages
- Risk profile remains "Moderate" even under best-effort maintenance

This option is not acceptable technically, nor consistent with AS 2885 obligations or prudent pipeline practice.

Option 2

Replacing the valves with modern units incorporating gas filtration:

- Eliminates contamination issues
- Restores valve reliability and protection functionality
- Reduces impairments and operational delays
- Fully mitigates the risk of overpressure events
- Provides long-term maintainability and alignment with OEM support

This approach significantly reduces safety, operational, and compliance risks and delivers predictable performance consistent with good industry practice.

6.3.2. Financial assessment

Table 6-2: Options assessment – DEA & ATS replacement($000 Real 30 June 2026)

Option	Estimated cost	Treated residual risk rating	Benefit / Disbenefit
Option 1	N/A	High	Does not mitigate Health & Safety Risk
Option 2	$116	Negligible	Efficiently mitigates Health & Safety Risk

Table 6-3: Financial assessment – Shutdown Valve at Condamine ($ Real 30 June 2026)

	Commentary
Option 1: Change nothing – risk of overpressure incident between Wallumbilla & Condamine	• Lower short-term cost but exposes APA to higher long-term costs • Potential regulatory and reputational penalties due to reliability issues • Increased Opex from ongoing impairments and technician interventions
Option 2: Install 2 new SDVs	• Enables coordinated installation and testing • Provides predictable Capex • Reduces lifecycle costs by eliminating emergency response and high-risk operational exposure

The preferred option that appropriately balances costs and risks is Option 2, Install 2 new valves with gas filtration

6.4. Proposed cost for FY28-FY32

The estimated cost for the SDV replacement at Condamine isset out in

This includes supply and installation of valves and contractor support for configuration and commissioning.

All procurement will comply with APA's Procurement Policy.

Table 6-4: Annual estimated cost SDV replacement ($'000s Real 2026-27)

Description	FY28	FY29	FY30	FY31	FY32	Total
SDV at Condamine			116			**116**

Table 6-5: Cost breakdown – SDV at Condamine ($s Real 30 June 2026)

	Description	Quantity	Unit Price	Total
Materials	QD10 PRO F10 B4 - 24V DC Electric actuator	2	23,555	**47,109.36**
Labour - Operations	Installation & Commissioning			**37,120.00**

Labour - Internal	Project Engineering, Drawings & Documentation			**31,320.00**
	Total			**115,549.36**

Note: Costs based on current actuator quote and bottom-up build based on previously executed similar projects.

7. Woodroyd, Arubial and Scotia Obsolete SDV over pressure devices

7.1. Project objective and scope

The objective of this project is to restore reliable over-pressure protection capability at the Arubial, Woodroyd, and Scotia sites by replacing obsolete Bettis Over-Pressure Pilot Control Valves with modern, supported alternatives using conversion kits.

The scope includes:

- Installation of conversion kits on all affected pilot control valves
- Integration and commissioning of the new pilot control assemblies
- Staged implementation across all three sites to align with operational and maintenance schedules

This work is required to ensure valves can return to service following an over-pressure event and continue to perform essential emergency shutdown (ESD) functions.

7.2. Background

Recent Emergency Shut Down (ESD) testing at Arubial confirmed that while the pilot control valves still operate, the installed Bettis units are now obsolete, and replacement parts are no longer manufactured.

The supplier, Pacific Controls, has advised:

- The valves are no longer available from the supplier
- New alternatives must be sourced
- Expected lead time for replacements is up to 25 weeks

These obsolete pilot control valves are also installed at Woodroyd and Scotia, exposing all three sites to the same reliability, safety, and maintainability issues.

Continued operation of unsupported pilot valves creates a risk that:

- Valves cannot return to service after an over-pressure event
- Over-pressure protection performance degrades
- APA may be unable to complete scheduled ESD tests
- Operational response capability is impaired

Given the critical safety function of these valves, proactive replacement is essential.

7.3. Assessment of options

The options considered for the access arrangement period are:

— Option 1: Change nothing – unable to return to service after an overpressure event

– Option 2: Install conversion kits to restore valves to intended operability

7.3.1. Risk assessment

Option 1 (Do Nothing):

- **Health & Safety:** Increased risk due to unreliable over-pressure response
- **Operational:** Up to 1–3 months service disruption if valves cannot be returned to operation
- **Compliance:** Potential breach of licence and AS 2885 testing requirements

- **Financial:** Higher long-term repair and emergency response costs

Option 2 (Preferred):

- Residual risks reduce to **Negligible** across all categories
- Ensures ongoing operability and protection capability

Table 7-1: Risk assessment – obsolete pilot control valves

Risk Area	Potential Impact	Option 1 :		Option 2:	
		Likelihood / Impact	Inherent risk rating	Likelihood / Impact	Risk rating
Health & Safety	Fatality	Occasional / Major	High	Remote / Minor	Negligible
Environment	n/a		n/a	n/a	n/a
Operational	Disruption 1-3 months	Occasional / Minor	Low	Remote / Minor	Negligible
People	n/a	n/a	n/a	n/a	n/a
Compliance	n/a	n/a	n/a	n/a	n/a
Reputation & Customer	Adverse local media	Occasional / Minor	Low	Remote / Minor	Negligible
Financial	Revenue Impact <$1M	Occasional / Minor	Low	Remote / Minor	Negligible
Untreated risk			**HIGH**		**NEGLIGIBLE**

Option 1

If APA continues using the existing Bettis pilot control valves:

- Valves may **fail to return to service** following an over-pressure event
- Spares are unobtainable, preventing future repairs
- APA may be **unable to complete ESD testing**
- Reliability of over-pressure protection decreases over time

While this option defers capital expenditure, it is not technically acceptable and is inconsistent with prudent pipeline safety obligations.

Option 2

Option 2 involves replacing the obsolete Bettis pilot control valves with modern, supported devices via **conversion kits**, implemented through a staged upgrade across the three affected sites.

Benefits include:

- Restores full and reliable over-pressure protection
- Ensures valves can return to service after activation
- Eliminates spares and obsolescence risk

- Allows upgrades to align with other planned maintenance, improving efficiency
- Ensures long-term vendor support and maintainability

This option represents prudent, efficient asset management consistent with AS 2885 principles and APA's operational requirements.

The preferred option that appropriately balances costs and risks is Option 2, install a suitable conversion kit to the existing valves.

7.3.2. Financial assessment

Table 7-2: Options assessment – DEA & ATS replacement ($000 Real 30 June 2026)

Option	Estimated cost	Treated residual risk rating	Benefit / Disbenefit
Option 1	N/A	High	Does not mitigate Health & Safety Risk
Option 2	$174	Negligible	Efficiently mitigates Health & Safety Risk

A qualitative financial comparison shows:

- **Option 1** appears cheaper initially but ultimately results in higher costs from failures, emergency interventions, and compliance risks.
- **Option 2** enables efficient, predictable expenditure by integrating replacements with other site works.

Given that obsolescence makes repair impractical and unreliable, Option 2 is the prudent and efficient choice under NGR 79.

Table 7-3: Financial assessment – obsolete pilot control valves ($ Real 30 June 2026)

	Commentary
Option 1: Change nothing – unable to return to service after overpressure event	• Defers immediate capital expenditure but results in higher long-term costs due to increased likelihood of valve failure and emergency response. • Inability to source spare parts leads to extended outages and reliance on temporary or manual workarounds. • Emergency repairs and unplanned interventions are more expensive and less efficient than planned upgrades. • Increased risk of non-compliance may expose APA to regulatory, reputational, and remediation costs. • Whole-of-life costs are higher due to reactive maintenance and elevated operational risk.
Option 2: Install conversion kit to existing valves	• Requires planned capital expenditure but delivers lower whole-of-life cost by avoiding emergency failures. • Enables efficient, scheduled works that can be bundled with planned maintenance activities. • Eliminates obsolescence-related costs by restoring access to supported components and vendor support. • Reduces likelihood of outages and associated economic and operational disruption costs. • Represents the lowest sustainable cost option when risk, reliability, and lifecycle considerations are included.

7.4. Proposed cost for FY28-FY32

Total proposed investment is for installation of conversion kits across Arubial, Woodroyd and Scotia:

Works will be delivered by APA field teams with specialist vendor support where required, in accordance with APA's Procurement Policy.

Table 7-4: Annual estimated cost of obsolete pilot control valves ($'000s Real 2026-27)

Description	FY28	FY29	FY30	FY31	FY32	Total
Woodroyd, Arubial & Scotia Actuators			58	58	58	**174**

Table 7-5: Cost breakdown per site– obsolete pilot control valves ($s Real 30 June 2026)

	Description	Total
Materials	Pilot Shut off valves for Bettis SDV's	**16,927.00**
Labour - Operations	Installation & Commissioning	**23,200.00**
Labour - Internal	Project Engineering, Drawings & Documentation	**17,400.00**
	Total	**57,527.00**

Note: Costs based on current valve quotes and bottom-up build based on previously executed similar projects.

8. Dalby CS control room footings

8.1. Project objective and scope

The objective of this project is to **restore structural integrity and operational functionality** of the Dalby Compressor Station (CS) control room building by re-levelling the existing footings and implementing a longer-term engineering solution to prevent recurring subsidence.

The scope includes:

- Engaging a specialist local contractor to re-level the building
- Engaging a qualified civil engineer to assess and design a long-term corrective solution (e.g., installation of adjustable stumps)
- Implementing required structural works to restore safe access, maintain security, and ensure proper operation of fire-system control measures

These works are essential to maintain building usability and ensure the control room continues to support safe compressor station operations.

8.2. Background

The Dalby CS control room building has experienced ongoing movement since its construction in 2012, due to the highly reactive local soil conditions. After more than a decade of extreme weather variations, the footings have shifted to the point where:

- Control room doors may soon be unable to close, compromising site security
- Misalignment may interfere with fire-system pressurisation requirements
- Operational access and use of the control room may be impaired

Recent inspection and laser-level measurements identified:

- Height variances of up to 45 mm across the foundation
- Up to 25 mm differential over a 2.5 m span
- The largest deviations occurring beneath the rear control room door

Without intervention, further movement will compromise building function and safety controls critical for compressor operations.

8.3. Assessment of options

The options considered for the access arrangement period are:

— Option 1: Change nothing – Unable to use Dalby Compressor

— Option 2: Level the control room building

8.3.1. Risk assessment

Risks assessed are

Table 8-1: Risk assessment – Dalby CS control room footings

Risk Area	Potential Impact	Option 1 :		Option 2:	
		Likelihood / Impact	Inherent risk rating	Likelihood / Impact	Risk rating
Health & Safety	Injury	Unlikely / Significant	Moderate	Rare / Significant	Negligible

Environment	n/a	n/a	n/a	n/a	n/a
Operational	Disruption 1-3 months	Unlikely / Significant	Moderate	Rare / Significant	Negligible
People	n/a	n/a	n/a	n/a	n/a
Compliance	n/a	n/a	n/a	n/a	n/a
Reputation & Customer	Adverse National media	Unlikely / Significant	Moderate	Rare / Significant	Negligible
Financial	Revenue Impact <$1M	Unlikely / Minor	Low	Remote / Minor	Negligible
Untreated risk			**MODERATE**		**NEGLIGIBLE**

Option 1

Choosing not to address the footing movement results in:

- **Fire system malfunction**, as pressurisation may not operate correctly
- **Security risks**, since the control room door may not close
- Eventual inability to use the Dalby Compressor Station control room

Although Option 1 avoids immediate capital expenditure, it exposes APA to safety, compliance, and operational risks that are unacceptable for a critical facility.

Option 2

This option restores the control room to correct elevations and ensures long-term structural stability.

Key benefits include:

- Restores full control-room functionality, including fire-system integrity
- Ensures reliable and secure door operation
- Reduces operational risk from foundation movement
- Uses proven local contract capability and specialist engineering design

This option addresses both immediate safety concerns and provides a sustainable long-term asset solution, consistent with prudent pipeline facility management and AS 2885 principles.

The preferred option that appropriately balances costs and risks is Option 2, Use local Contractor to level the Control Room building.

8.3.2. Financial assessment

Table 8-2: Options assessment – DEA & ATS replacement ($000 Real 30 June 2026)

Option	Estimated cost	Treated residual risk rating	Benefit / Disbenefit
Option 1	N/A	Moderate	Does not mitigate Health & Safety or Reputation & Customer Risk

Option 2	$116	Negligible	Efficiently mitigates Health & Safety and Reputation & Customer Risk

Table 8–2: Financial assessment – Dalby CS Control Room footings

	Commentary
Option 1: Change nothing – unable to function effectively	• Defers immediate capital expenditure but leads to higher long-term costs as building condition continues to deteriorate. • Increases likelihood of emergency remediation, site access issues, and unplanned outages affecting compressor station operations. • Ongoing movement may compromise fire-system performance and site security, resulting in costly compliance rectification. • Reactive repairs are less efficient and more expensive than planned structural intervention. • Whole-of-life costs increase due to escalating risk, disruption, and potential loss of use of the control room facility.
Option 2: Level Control Room and Implement Long-Term Solution	• Requires planned capital expenditure but delivers lower whole-of-life cost by addressing root cause of footing movement. • Enables works to be undertaken in a controlled and efficient manner, reducing risk of emergency repairs. • Restores full functionality of the control room, avoiding future costs associated with security or fire-system non-compliance. • Improves predictability of expenditure and avoids repeated short-term fixes. • Represents the lowest sustainable cost option when lifecycle, risk, and operational impacts are considered.

8.4. Proposed cost for FY28-FY32

The cost is based on contemporary quotes from local contractors and includes both re-levelling and engineering design for a long-term solution.

Work will be performed by a combination of APA staff and specialist contractors engaged under APA's Procurement Policy.

Table 8-4: Cost estimate for Control room footings ($'000s Real 2026-27)

Description	FY28	FY29	FY30	FY31	FY32	Total
Dalby CS control room footings		116				**116**

Table 8-5: Cost breakdown – Control room footings ($s Real 30 June 2026)

Description		Total
Labour - Internal Resources	Site works, supervision, permitting	**34,800**
Building Contractor	Level control room - quote from Darbey Constructions	**23,884.70**

Excavation and Civil Construction	Rectification of piers/footings	**46400**
Design & Technical Review activities	Project Engineering, Document Control	**10440**
	Total	**115,524.70**

Note: Costs based on current building contractor quote and bottom-up build based on previously executed similar projects.

9. Ellengrove Reliability

9.1. Project objective and scope

The objective of the Ellengrove Reliability project is to maintain the continuity and reliability of gas supply to the Brisbane metropolitan and Gold Coast load centres by addressing the loss of upstream system redundancy following recent network reconfiguration.

The project proposes the installation of a third pressure control and metering run at Ellengrove Station, providing sufficient on-site redundancy to enable continued operation in the event of a failure, maintenance activity, or impairment affecting one of the existing runs.

The scope of works includes:

- Design and installation of a third pressure control and metering run
- Associated piping, valving, instrumentation and control integration
- Modifications to civil foundations, structural steel, and station layout as required
- Integration with existing control and protection systems
- Commissioning and functional testing

These works restore effective redundancy at Ellengrove and ensure the station can continue to meet its critical system role under changed operating conditions.

9.2. Background

Ellengrove Station is the sole point of supply to the Brisbane metropolitan area and the Gold Coast, servicing a large and highly concentrated demand centre. The station was originally designed as a supplementary pressure supply point to the main supply being the original build Bellbird Park station.

The design of Ellengrove station with two pressure control runs (duty and standby) that were not wholly independent, with system-level redundancy provided through the original primary flow path via Bellbird Park.

Under recent and planned network changes — including the DN250 Supply Security Project — Bellbird Park will no longer be available as an alternate supply path. As a result, Ellengrove will operate without any external system redundancy, relying solely on the availability of its two internal runs.

While Ellengrove is currently performing as originally designed, the operating context has fundamentally changed with the loss of Bellbird Park. The loss of the alternative supply path materially increases the consequences of a failure or forced outage at Ellengrove. In the absence of additional on-site redundancy, a common-mode event or major failure affecting both runs would result in a loss of supply to Brisbane and the Gold Coast, with significant customer, reputational, and regulatory consequences.

An internal Ellengrove Reliability Review Summary Report assessed this changed risk profile and concluded that additional on-site redundancy is required to maintain system reliability at an acceptable level.

9.3. Assessment of options

The options considered for the access arrangement period are:

- Option 1: Do Nothing
- Option 2: Install a third pressure control and metering run (Preferred)

Risk assessment

Loss of supply at Ellengrove would have widespread impacts on gas customers across Brisbane and the Gold Coast. The risk assessment summarised in Table 9–1 shows that retaining the existing configuration exposes APA and customers to an unacceptable level of risk, while installation of a third run materially mitigates that exposure.

Table 9-1: Risk assessment – Ellengrove Reliability

Risk Area	Potential Impact	Option 1		Option 2	
		Likelihood / Impact	Inherent risk rating	Likelihood / Impact	Risk rating
Health & Safety	n/a	n/a	n/a	n/a	n/a
Environment	n/a	n/a	n/a	n/a	n/a
Operational	Disruption 1-3 months	Remote / Catastrophic	High	Rare / Catastrophic	Low
People	n/a	n/a	n/a	n/a	n/a
Compliance	n/a		n/a	/a	n/a
Reputation & Customers	Adverse media, negative feedback	Remote / Major	Moderate	Rare / Major	Low
Financial	n/a	Remote / Major	Moderate	Rare / Major	Low
Untreated risk			**HIGH**		**LOW**

9.3.1. Financial assessment

Table 9-2: Options assessment – DEA & ATS replacement ($000 Real 30 June 2026)

Option	Estimated cost	Treated residual risk rating	Benefit / Disbenefit
Option 1	N/A	High	Does not mitigate Operational, Reputation & Customer or Financial Risk
Option 2	$2,327	Low	Efficiently mitigates Operational, Reputation & Customer and Financial Risk

Table 9-3: Financial assessment – Install 3rd Metering Run ($ Real 30 June 2026)

	Commentary
Option 1: Change nothing	While Option 1 defers immediate capital expenditure, it does so at the cost of: • Increased exposure to high-consequence outage events • Potential emergency response and unplanned reinforcement costs • Elevated reputational and regulatory risk arising from loss of supply to major demand centres
Option 2: Install 3rd Run at Ellengrove	Option 2 involves a higher upfront capital investment but delivers: • Predictable, planned expenditure • Significantly reduced risk of unplanned outages • Lower expected lifecycle cost when risk exposure is taken into account

Option 1

Under this option, Ellengrove would continue to operate with two pressure control runs only, relying on internal redundancy alone following the removal of Bellbird Park as an alternate supply path.

This option:

- Accepts the increased consequence of a dual-run failure
- Provides no practical mitigation for common-mode failures, major maintenance, or latent defects
- Exposes customers to a prolonged loss of supply in the event of a major outage
- Increases reliance on emergency response measures rather than engineered controls

The inherent risk associated with this option is assessed as **High**, driven primarily by the scale of customer impact and the concentration of demand supplied through Ellengrove.

Option 1 is inconsistent with prudent asset management for a critical supply node and does not adequately manage foreseeable reliability risks.

Option 2

This option involves installing a third run at Ellengrove in line with the recommendations of the Ellengrove Reliability Review.

The additional run:

- Restores effective redundancy at the station level
- Allows maintenance or fault response on one run without materially increasing supply risk
- Significantly reduces the likelihood and consequence of a full station outage
- Improves the resilience of supply to major demand centres

The risk assessment (Table 9–1) demonstrates that Option 2 reduces the untreated operational risk rating from **High to Low**, bringing residual risk to a level consistent with ALARP principles and good industry practice.

Option 2 is the only option that credibly addresses the changed operating environment and the removal of upstream redundancy.

The preferred option that appropriately balances costs and risks is Option 2, Install 3rd metering run at Ellengrove

9.4. Proposed cost for FY28-FY32

The estimated cost of installing a third pressure control and metering run at Ellengrove is $2.0 million (Real $2026). This estimate is based on costs for comparable pressure control and metering upgrades on similar APA assets.

The expenditure is currently forecast in FY31, aligning with the completion of the DN250 Supply Security Project and the point at which Ellengrove becomes solely reliant on on-site redundancy.

Table 9–4: Annual estimated cost of Ellengrove Reliability project ($'000s Real 2026-27)

Description	FY28	FY29	FY30	FY31	FY32	Total
Ellengrove Reliability				2,327		**2,327**

Table 9-5: Cost breakdown – Ellengrove Reliability project ($s Real 30 June 2026)

Stage	Element	Total
Concept	Project Management	56,116.27
	Design	121,259.93
Design	Project Management	67,339.52
	Design	166,152.94
Delivery	Project Management	197,870.83
	Design	560,674.68
	Procurement	907,863.57
	Construction & Commissioning	109,060.74
Closing	Handover	14,639.03
	Project Management	49,772.69
	Design	62,947.81
	Qleave Levy (0.575%)	13,301.99
	Total	2,327,000.00

Note: Estimate based on Class 5 estimate for Project of similar scope on an APA non-regulated asset.