January 2026

Powerlink 2027-32 Revenue Proposal

IT Investment Program

IT03 – Health, Safety and Environment

Contents

1. Executive Summary

As a major infrastructure asset owner, manager and operator, Powerlink is committed to ensuring the safety and wellbeing of its staff, contractors and the community, and to managing its impact on the environment. Underpinning this commitment is the Health, Safety and Environment (HSE) Strategy which aligns to Powerlink's corporate objective of "Unleash Our Potential", with four (4) key strategic objectives:

- Empowered People and Learning
- Healthy and Engaged Workforce
- Agile Delivery
- Sustainable Decisions

The successful execution of Powerlink's HSE responsibilities, including compliance with all obligations and requirements, is dependent on Information Technology (IT) as a critical enabler. Our current HSE management tools and databases are spread across multiple aging systems and are not sustainable in their current form. Given the importance of HSE within Powerlink's operations, investment is required for the purposes of consolidation, sustainability, compliance and business improvement.

In the coming regulatory control period (2027-32), through the investments forecast in this preliminary business case, it is proposed to undertake a structure program of three (3) HSE system initiatives:

1. **Safety and Environment Management System Renewal**

   We'll consolidate our various safety technologies and data stores into a single, sustainable HSE solution. This will include standardisation of data capture methods with a consistent user experience (UX), for end-to-end visibility of safety and environment data, incident management, root cause analyses, and for alerting and response management. We'll also integrate safety and environment data capture processes with other targeted systems, for ready access across our business operations.

2. **Safety and Environment Data Reporting**

   We'll leverage our Strategic Data Platform for improvement in HSE reporting, including ongoing compliance with all reporting obligations.

3. **HSE Spatial Integration**

   We'll integrate the HSE solution with the Geographic Information System (GIS) for planning and operational visibility across Powerlink's service area. This will also better support analysis of trends in HSE performance, for targeted process and behaviour interventions.

This business case considers two options to address the business and technology drivers and contrasts these options against a base case (counterfactual) scenario. I.e.:

- **Option 1 (Recommended Option)** "HSE Renewal and Improvement"
- **Option 2 (Alternative Option)** "Uplift HSE Systems, Practices and Analytics"

The Recommended Option "HSE Renewal and Improvement" addresses all the identified business drivers and represents the best NPV outcome over the 10-year analysis period.

The total forecast cost for the recommended option is **$5.37M** ($0.25M Capex, $5.12M Project Opex) in FY27 Real Terms (pre-CAM[1]).

[1] The term "pre-CAM" indicates that the forecast cost represents the holistic Powerlink investment amount, prior to application of the Cost Allocation Method (CAM).

2. Investment Decision

2.1 Investment Drivers

2.1.1 Health, Safety and Environment Context

Powerlink is committed to the proactive and efficient management of HSE risks. As the energy sector continues to rapidly evolve, the organisation acknowledges the need to adapt its approach to ensure ongoing safety and environmental stewardship.

Powerlink's HSE strategy, aligned with the corporate objective to "Unleash Our Potential," empowers and engages the workforce by fostering systems that support safe work practices within a culture of continuous learning and improvement. The HSE strategy focuses on four (4) strategic objectives as outlined in Figure 1 below.

Engage people in designing systems and processes, such that they are fit for purpose and inherently safe. Also, **create an environment that supports learning and meaningful improvement**.

Create and ensure the conditions for psychological safety at work, leading from a place of genuine care.

Focus on **health, safety and environmental risk controls**, ensuring our systems are simple, agile, resilient and adaptive.

Monitor the indicators for **successful, safe and environmentally sustainable work** across the delivery lifecycle.

Figure 1: HSE Strategic Objectives

Within the overarching HSE system, technology plays an important role in supporting Powerlink's workforce to operate safely and effectively, and to do so in an environmentally responsible manner while ensuring that all compliance obligations are met.

The organisation's existing HSE technology comprises a stand-alone software system (known as PQ Switch) together with a set of satellite solutions supporting chemical safety, asbestos management, environmental social and

governance (ESG) reporting and safety audit and risk management. There is also a wide variety of Microsoft Excel spreadsheets, legacy reports and manual processes for reporting on HSE compliance obligations.

2.1.2 HSE Continuous Improvement and Compliance Drivers

Powerlink has strong procedural foundations for HSE management across its operations, however continuous improvement is required to address the current and emerging business drivers as described below.

Improvement Focus Area 1: Psychosocial Safety Risk Management

- Consistent ***end-to-end psychological safety processes*** including the assessment, analysis and management of psychosocial safety risks and incidents whilst maintaining the appropriate level of information confidentiality
- Enhanced capability delivered through a contemporary UX to ***capture and manage psychosocial safety risks and incidents*** to ensure the associated data can be leveraged to support targeted interventions and achieve reporting obligations
- Capability to undertake ***trend analysis on psychosocial safety incidents*** to support effective targeting of education and awareness programs

Improvement Focus Area 2: Chemical Safety Risk Management

- ***Integration of chemical safety risk management within the HSE solution,*** removing the need for manual data entry and risks associated with duplication of data
- ***Alignment of chemical safety risk management processes*** within the overarching HSE end-to-end process

Improvement Focus Area 3: Asbestos Risk Management

- ***Integration of data relating to the external asbestos management service*** (assessment, monitoring, management) within the HSE solution
- ***Linkage of asbestos related information to the works management solution*** to ensure the workforce is aware of site-specific asbestos risks

Improvement Focus Area 4: Assurance and Audit of High-Risk Activities

- ***Embed management of assurance and audit for high-risk activities within the HSE solution*** to enable tight linkage with the overall HSE framework
- ***Digitise current paper-based forms and improve workflow*** to streamline the assurance and audit process for high-risk activities
- ***Automate reporting on assurance and audit work relating to High-Risk activities*** to understand trends in review outcomes and recommendations

Improvement Focus Area 5: Permit Management

- Capability to ***manage permits within the HSE solution,*** which will support job planning, risk assessment, application and issuance of permits to work and review and auditing of workplace activities
- Consistent ***end-to-end business processes*** for permit management integrated within the overarching HSE framework

- Provision of a ***contemporary UX*** supporting the effective and efficient management of permits

2.1.3 Technology Sustainability and Extensibility Drivers

Powerlink's existing HSE activities are managed through a disparate set of systems, legacy custom tools and interfaces, with a range of manual processes in place to deal with shortcomings in the current HSE solution. For ongoing sustainability of these critical business functions, extensibility to enable Powerlink's HSE plans, continuous improvement and obligations for ongoing compliance, the following technology drivers apply.

Sustainability and Extensibility Driver 1: Sustainable Integrated HSE Solution

To provide an integrated, sustainable HSE solution that meets current and emerging requirements and compliance obligations, the existing HSE solution should be renewed, along with replacement and integration of the capabilities currently managed through legacy customised satellite systems including Excel Spreadsheets. This includes:

- ***Renewal of the core HSE management solution*** as the foundation of supported, contemporary HSE management into the 2030s
- ***Consolidation of HSE data stores*** and tools into a single, sustainable HSE management solution
- ***Standardise data capture methods***, to ensure consistent end-to-end visibility of HSE information, incident management, root cause analyses, alerting and response management
- ***Integration of HSE management processes*** with SAP, for ready access across business operations

Sustainability and Extensibility Driver 2: Integration of GIS and HSE Data Sets

Powerlink lacks integration of HSE data with the GIS, which results in operational inefficiencies and limits the organisation's ability to perform robust safety and environmental analysis. Following renewal of legacy systems and tools, the establishment of structured GIS integration will enable geospatial insights to support environmental impact assessments, spatial regulatory compliance reporting and assurance, and geospatially enabled analysis of HSE risks and incidents. These drivers for GIS integration include:

- ***Geospatial layering and integration of HSE data sets***, enabling visualisation of HSE risk and incident patterns and trends, which would otherwise remain undetected
- ***Spatial representation of environmental constraints***, with linkage to affected assets and works plans (including protected areas, waterways, sensitive habitats and other layers)
- ***Spatial mapping of environmental approvals, permits and plans*** to network assets, corridors (and corridor options) and proposed projects
- ***Integration of biodiversity and cultural heritage data*** with environmental spatial network representations
- Spatial support for ***HSE risk assessments***

Sustainability and Extensibility Driver 3: HSE Data Reporting Sustainability and Flexibility

Reporting and analysis of Powerlink HSE data is currently reliant on manual processes to aggregate data, and a disparate source of legacy data stores including Excel spreadsheets and ad hoc data extracts.

This approach has evolved due to the use of disparate HSE systems and tools over an extended period of time. It is inherently inefficient, potentially error prone, and not sustainable or extensible to meet new reporting obligations.

In addition, the approach does not leverage the modern and emerging business intelligence capabilities of machine learning, pattern recognition and artificial intelligence (AI) which are of business value in the mitigation of future HSE risks.

2.2 Inherent risks

Table 1 below summarises the inherent risks requiring mitigation through this proposed investment, with likelihoods forecast as at mid-2032 (i.e. at the end of the coming regulatory control period) if no remedial actions are taken.

Inherent Risk	Likelihood	Consequence	Rating
Risk R1 **Ineffective capabilities to manage psychosocial safety** Risk that safety management systems and processes do not adequately support the management of psychosocial safety.	**C – Possible** The existing HSE systems do not have specific capability to support the management of psychosocial safety, resulting in psychosocial safety being managed through non-systematised business processes. This approach exposes the organisation to the possibility of ineffective risk management or human error due to the manual nature of the current processes.	**4 – Moderate** Through lack of systemised processes and reporting, one or more psychosocial safety incidents could occur, resulting in personal harm or non-compliance.	**4 – Significant**
Risk R2 **System Supportability, Sustainability and Extensibility Risk** Risk that components of the current ecosystem of HSE systems, satellite software and custom tools become unsupportable.	**B – Likely** Without further investment, there is a material likelihood that multiple components of Powerlink's HSE system ecosystem will become unsupported, either through reaching end of life and/or through the custom nature of existing tooling and manual processes.	**4 – Moderate** The consequence of system non-sustainability varies depending on the system in question and the nature of incidents that may result. In the least case, the non-sustainability will limit business continuous improvement. In a larger sense, the non-sustainability increases reliance on manual processes and ad hoc spreadsheets, which can be error prone resulting in potential instances of non-compliance. Potential future non-support for Excel macros would have a further consequence.	**4 – Significant**

Inherent Risk	Likelihood	Consequence	Rating
Risk R3 **Environmental and Climate Change Reporting** Risk that use of manual reporting methods limits the organisation's ability to meet its environmental and climate change reporting obligations.	**C – Possible** Through lack of integrated environmental and climate change reporting capability there is reliance on manual handling and ad hoc processing which may result in Powerlink's inability to produce reporting within the required timeframe or for the reporting to contain errors due to the degree of manual data handling.	**4 – Moderate** Inability to meet reporting obligations may result in reputational damage and also exposes the organisation to fines under the National Greenhouse and Energy Reporting Act 2007.	**4 – Significant**
Risk R4 **Lack of integrated capability to effectively capture and report on asbestos and chemical safety risks.** Risk that the current HSE solution does not manage chemical usage and storage, or data relating to asbestos risk management.	**D – Unlikely** With asbestos and chemical usage not managed within the core HSE solution, this data is not integrated with the organisation's broader safety management data, therefore presenting a possibility that risks associated with specific works, locations or assets are not appropriately assessed or mitigated.	**5 – Major** The consequence of not effectively managing asbestos and chemical safety risks depends on the nature of the shortcoming, ranging from inaccurate reporting and reputational damage, through to personal harm or non-compliance.	**4 – Significant**

Table 1: Inherent Risks

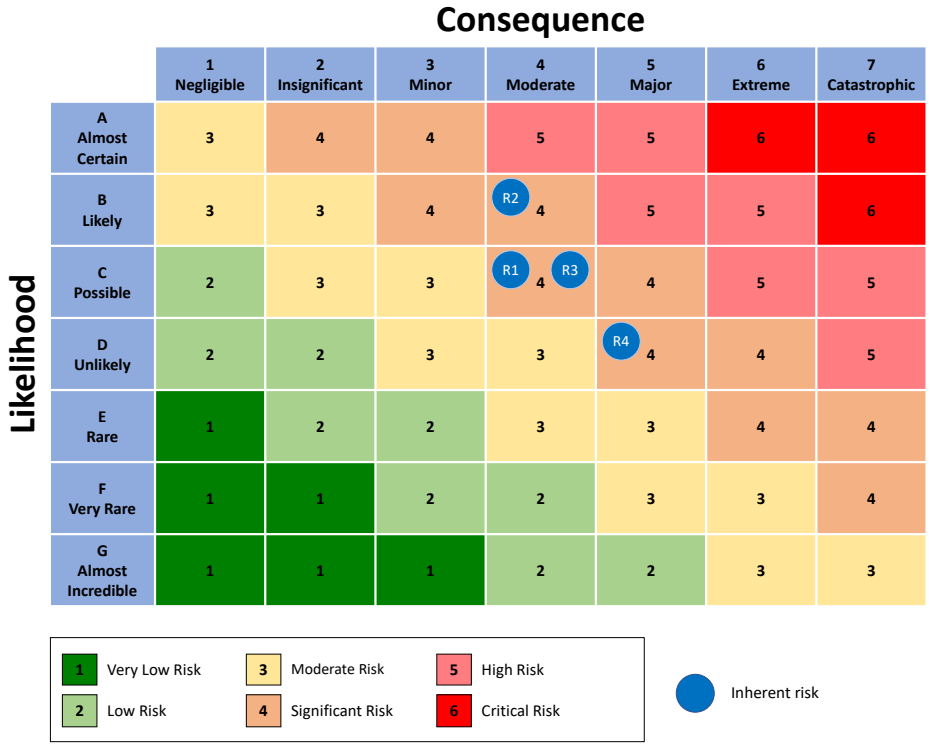

Figure 2: Inherent Risk Matrix

2.3 Regulations, Rules and Codes Compliance

As an Australian Transmission Network Service Provider (TNSP) and as a Queensland electricity network service provider, Powerlink has a range of legislative and regulatory compliance obligations in relation to HSE including those indicated in Table 2 below.

Instrument	Key obligations and implications
Work Health and Safety Act 2011 and Work Health and Safety Regulation 2011	▪ Obligations for the health and safety of the workforce and others who may be affected by Powerlink's operations. Includes requirement to provide a safe working environment, implement risk management processes and ensure that safety measures are maintained to prevent workplace injuries and illnesses. ▪ Further requirements to provide workforce training and supervision, regarding safety procedures and protocols.
Queensland Electrical Safety Act 2002 as amended by Electrical Safety and Other Legislation Amendment Act 2024	▪ Responsibility to ensure that Powerlink's electrical equipment, installations, and works (including transmission lines, substations, and associated equipment) are electrically safe and pose no risks to the health and safety of workers (e.g. employees, contractors, apprentices) or the public. ▪ Obligation for reporting of Serious Electrical Incidents (SEIs) and Dangerous Electrical Events (DEEs) to the Electrical Safety Office along with reporting of audits undertaken of the Safety Management System (SMS)

Environmental Protection Act 1994	▪ Compliance with environmental standards and regulations to minimise Powerlink's impact on the environment. ▪ Management and mitigation of environmental risks associated with all business operations, including construction, maintenance and operation of electricity transmission infrastructure.
Environment Protection and Biodiversity Conservation Act 1999	▪ Compliance with environmental standards and regulations to minimise Powerlink's impact on areas of national environmental significance. E.g. world and national heritage properties and designated marine environments.
National Greenhouse and Energy Reporting Act 2007	▪ Responsibilities for collecting and maintaining accurate data, to ensure transparency and accountability in the management of greenhouse gas emissions and energy use.
Corporations Act 2001	▪ Mandatory climate-related financial disclosures reported in the annual sustainability report, which forms part of the Powerlink's annual report. ▪ This report must comply with the Australian Sustainability Reporting Standards (ASRS), specifically AASB S2 Climate-related Financial Disclosures.

Table 2: Statutory and Regulatory HSE Obligations

3. Options Analysis

3.1 Investment Options Introduction

This business case explores and analyses the following options to address the investment drivers.

Options	Description
Option 1: Recommended Option "HSE Renewal, Consolidation and Improvement"	In this recommended option, Powerlink will invest in renewal of the organisation's HSE systems and custom tools, and associated process improvements to address the business and technical drivers and to mitigate risk.
Option 2: Alternative Option "Uplift HSE Systems, Practices and Analytics"	In this alternative option, Powerlink will uplift and extend the organisation's HSE technology and process capability, leveraging and consolidating on emerging tooling and practices.
Base Case: Counterfactual	In this base case scenario, Powerlink would continue to operate the existing HSE systems, custom tools and associated business processes with minimal change for the medium term.

Table 3: Business Case Options

3.2 Option 1: Recommended Option (HSE Renewal, Consolidation and Improvement)

This Recommended Option (HSE Renewal, Consolidation and Improvement) describes the planned investment within the coming regulatory control period (RCP) proposal.

In this option, Powerlink will undertake a renewal of existing HSE systems for longer term sustainability and extensibility along with consolidation of existing manual processes and custom tools into the core HSE system, to address the business and technical drivers described in section 2.1 and the inherent risks described in section 2.2.

3.2.1 Recommended Option – Scope Description

Initiative 1: HSE Management System Renewal and Consolidation

As described in section 2.1, Powerlink's existing HSE processes are managed through a disparate set of systems, custom tools and interfaces, and supplemented by a range of manual processes. This first planned investment will therefore establish the foundation for long term sustainability and extensibility, through renewal of the core HSE solution to meet the full set of capability requirements.

In parallel, the initiative will leverage the opportunity to also standardise the organisation's HSE data capture methods, to enable consistent end-to-end visibility of safety and environment data, incident management, root cause analyses, alerting and response management.

Core functions of the renewed HSE management system include:

- Hazard identification and risk assessments
- Job safety analyses
- Incident management, root cause analyses and reporting
- Corrective and preventive action management

- Permit management
- Safety audits and inspections
- Emergency response planning and drills
- Return-to-work and rehabilitation management
- Workforce safety training and compliance management
- Wellbeing, mental health and psychosocial safety risk management
- Waste management and monitoring
- Integration of external asbestos management data into the core HSE solution
- Climate and environmental compliance management
- Sustainability metrics and reporting

The renewed HSE management system will integrate Powerlink's safety and environment data capture processes with other core systems, for ready access in all business operations, including:

- **SAP Human Capital Management (HCM)** for:
  - Safety Training Management – Coordination of HCM employee training records with HSE training, to ensure compliance with safety requirements and certifications
  - Incident Management – Linkage of incident management with affected HR records, for accurate tracking of workplace incidents and corrective actions
  - Compliance Management – Centralisation of workforce safety records and training history for efficiency and compliance management
  - Risk Profiling – Correlation of HCM and HSE data to identify high-risk factors to proactively manage safety interventions
- **SAP Enterprise Asset Management (EAM)** for:
  - Asset Safety – Linkage of safety incidents, inspections and risk assessments impacted assets (e.g. transformers, substations, transmission line segments)
  - Permit to Work Integration – EAM triggering of HSE permit workflows where relevant, upon scheduling of work
  - Environmental Impact Tracking – Linkage of potential environmental incidents (e.g. oil leaks) to involved assets
- **Field Automation Platform** for:
  - Safety Data and Procedures – Enablement of field work crews to access asset safety data, processes and procedures from mobile devices, improving situational awareness and mitigating risk during field operations
  - Environmental data provision and capture - Ability to turn data layers on and off for viewing in field and to operate in both online and offline states utilising effective data synchronisation methods
  - Mobile hazard identification and risk assessments

Initiative 2: HSE Data and Reporting

This initiative will build on the foundations of the renewed HSE system and processes, to enable reliable, repeatable and automated safety and environmental reporting, including ongoing compliance with all HSE management obligations.

This includes (but not limited to):

- Audit and inspections reporting
- Compliance with technical standards and codes reporting
- Customer safety incident reporting
- Dangerous electrical event reporting
- Discharge and contaminate reporting
- Electrical safety performance and audit reporting
- Electrical safety training and competency reporting
- Environmental performance reporting
- Greenhouse emissions and energy reporting
- Hazard identification and control measure reporting
- High voltage live work procedure and safety measure reporting
- Interference with electrical supply reporting
- Operational risk reporting
- Serious Electrical Incident (SEI) and Dangerous Electrical Event (DEE) reporting
- Stand-by supply safety reporting
- Substation safety and maintenance reporting
- SMS compliance reporting

The scope of this initiative includes replacement of existing custom analytics, manual data transfers and legacy reports with either (a) "out of the box" provision through the renewed system platform, and/or (b) sustainable reporting and dashboards operating within the [redacted] Cloud Data Analytics Platform (CDAP).

Progressively, the new reporting facility will also utilise modern and emerging analytics techniques, including Artificial Intelligence (AI), machine learning and pattern recognition, to improve and optimise:

- Root cause analyses;
- Trend and risk correlation analyses;
- Risk assessments; and
- Remediation action planning.

Initiative 3: HSE Spatial Integration

This final initiative will integrate the HSE management system with our GIS for planning and operational visibility across Powerlink's large service area, including:

- Spatial layering and integration of HSE data sets, enabling visualisation of HSE risk and incident patterns and trends
- Spatial representation of environmental constraints, with linkage to affected assets and works plans (incl. protected areas, waterways, sensitive habitats and other layers)
- Spatial mapping of environmental risk areas, and locations of potential environmental incidents
- Spatial mapping of environmental approvals, permits and plans to network assets, corridors (and corridor options) and proposed projects.
- Integration of biodiversity and cultural heritage data with spatial network representations

- Spatial information sharing with third parties (e.g. consultants, contractors) with the ability to track changes relating to data within a downloadable map extent
- Standardisation of symbology to ensure consistency of data feature representation
- Spatial support for environmental risk assessments

The initiative will replace legacy custom-built spatial modelling and manual spatial analysis, with a sustainable, accessible spatial representation of environmental management data and compliance reporting, integrated with the GIS, and the SAP ERP and EAM.

3.2.2 Recommended Option – Alignment with Investment Drivers

The extent to which the Recommend Option addresses (or does not address) the identified investment drivers is summarised in Table 4 below.

Alignment with Investment Drivers		
HSE Continuous Improvement and Compliance Drivers		
Investment driver	**Extent addressed through Recommended Option**	
Psychosocial Safety Risk Management	✓	Powerlink's HSE solution will be renewed, including introduction of functionality to effectively manage psychosocial safety risks and incidents across the organisation. The renewed solution will also include reporting and analytics capability on psychosocial safety.
Chemical Safety Risk Management	✓	Functionality will be introduced to manage chemical safety within the core HSE solution, providing a common UX and integration the chemical safety data dataset.
Asbestos Risk Management	✓	Functionality will be introduced to integrate data relating to asbestos safety into the core HSE solution. This change will enable streamlined reporting with reduced need for manual data entry and data duplication between systems. Integration with the SAP works management solution will also allow site and job specific asbestos safety information to be provided to field workers when undertaking work at asbestos impacted sites.
Assurance and Audit of High-Risk Activities	✓	Functionality to manage and conduct assurance and audit tasks for high-risk activities will be included within the core HSE solution, resulting in removal of paper-based forms and streamlined workflows. Introduction of analytics capability will improve the identification of trends, to support continuous improvement and risk reduction.
Permit Management	✓	Functionality to manage permits will be incorporated within the core HSE solution renewal. This will provide a consistent end-to-end process for permit management integrated within the overarching HSE framework and works management processes.
Technology Sustainability and Extensibility Drivers		
Investment driver	**Extent addressed through Recommended Option**	
Sustainable Integrated HSE Solution	✓	Powerlink will renew the core HSE solution, which will enable retirement of several satellite HSE solutions, custom tools, Excel spreadsheets and reduction in manual handling of data. The renewal

		will provide a supported platform into the 2030s, delivering a contemporary UX with enhanced functionality to support the HSE continuous improvement activities.
Integration of GIS and HSE Data Sets	✓	Integration will be established between the GIS and the renewed HSE solution. This integration will provide a spatial representation of HSE risks and incidents with linkage to affected assets and works plans. It will also allow planning and works delivery teams to better manage HSE risks in localities or sites where work is planned.
HSE Data Reporting Sustainability and Flexibility	✓	Following delivery of the renewed HSE solution, the CDAP will be utilised to enable an integrated suite of HSE reporting and dashboards. In addition, analytical capability will support identification of patterns and trends for insight into future HSE awareness and education programs.

Table 4: Recommended Option (HSE Renewal, Consolidation and Improvement) Alignment with Investment Drivers

3.2.3 Recommended Option – Assumptions

The following assumptions are made for this Recommended Option (HSE Renewal, Consolidation and Improvement) scenario:

- The three (3) initiatives described in section 3.2.1 (above), will be delivered as an integrated IT delivery program with coordinated project management, IT design, business process revision, data migration management, system configuration, integration, organisational change management, testing and deployment.
- Bottom-up cost estimates have been developed for each of the three (3) initiatives, using standard labour rates and consistent delivery methods. Costs related to shared activities (including program delivery management, end-to-end design, business process design and program communications) are shared across the estimates for each initiative.
- Table 5 to Table 7 (below and over page) detail the resultant estimated phasing and cost breakdown for each of the three (3) constituent initiatives.
- Table 8 (over page) summarises the total combined cost forecast.

Initiative 1: HSE Management System Renewal and Consolidation			
Phasing			**Months**
Planning and Analysis			3
Design			3
Configure, Build and Test			9
Deployment and Hypercare			1
Total			**16**
FY27 Real Terms	Capex	Project Opex	**Project Total**
Labour	[redacted]	[redacted]	[redacted]
Vendors	-	[redacted]	[redacted]
Software	-	[redacted]	[redacted]
Infrastructure	-	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]

Table 5: Phase and Cost Breakdown – Initiative 1

Initiative 2: HSE Data and Reporting			
Phasing			**Months**
Planning and Analysis			2
Design			2
Configure, Build and Test			5
Deployment and Hypercare			1
Total			**10**
FY27 Real Terms	Capex	Project Opex	**Project Total**
Labour	[redacted]		
Vendors	-	-	-
Software	-	-	-
Infrastructure	-	[redacted]	
Total	[redacted]		

Table 6: Phase and Cost Breakdown – Initiative 2

Initiative 3: HSE Spatial Integration			
Phasing			**Months**
Planning and Analysis			1
Design			2
Configure, Build and Test			5
Deployment and Hypercare			1
Total			**9**
FY27 Real Terms	**Capex**	**Project Opex**	**Project Total**
Labour	[redacted]		
Vendors	-	[redacted]	
Software	-	-	-
Infrastructure	-	-	-
Total	[redacted]		

Table 7: Phase and Cost Breakdown – Initiative 3

Total Combined Investment Cost Forecast			
FY27 Real Terms	Capex	Project Opex	**Project Total**
Construct / Test	[redacted]		
Deploy / Hypercare	-	[redacted]	
Other Expenditure	-	[redacted]	
Vendors	-	[redacted]	
Total	**$0.25M**	**$5.12M**	**$5.37M**

Table 8: Recommended Option Combined Investment Summary

3.2.4 Recommended Option – Risk Mitigation

This recommended option mitigates all existing inherent risks to tolerable levels (as described in Table 1 on page 7) such that the residual risks range from 2 – Low to 3 – Moderate as summarised below.

Inherent Risk	Inherent Risk Rating	Recommended Option Mitigation Controls	Residual Likelihood	Residual Consequence	Residual Risk Rating
Risk R1 **Ineffective capabilities to manage psychosocial safety** Risk that safety management systems and processes do not adequately support the management of psychosocial safety.	**4 – Significant**	The renewed HSE Solution will incorporate functionality to manage psychosocial safety, thereby removing the need for "off-system" data capture and manual processes.	**F – Very rare** The renewed HSE solution will inherently support the management of psychosocial safety, therefore the risk likelihood is significantly reduced.	**4 – Moderate** While the likelihood of the risk is reduced, the consequence of an event is unchanged.	**2 – Low**
Risk R2 **System Supportability, Sustainability and Extensibility Risk** Risk that components of the current ecosystem of HSE systems, satellite software and custom tools become unsupportable.	**4 – Significant**	The renewed HSE solution will provide a stable and supported platform through the 2027-32 RCP, replacing the legacy satellite software, custom tools and ad hoc Excel spreadsheets.	**F – Very Rare** With the proposed renewal and improvement investments, Powerlink's integrated HSE solution will be supportable, sustainable and extensible on an ongoing basis.	**3 – Minor** As well as reducing the likelihood of the risk, the consequence is also reduced due to the reduction in solution complexity and the availability of end-to-end software support.	**2 – Low**

Inherent Risk	Inherent Risk Rating	Recommended Option Mitigation Controls	Residual Likelihood	Residual Consequence	Residual Risk Rating
Risk R3 Environmental and Climate Change Reporting Risk that use of manual reporting methods limits the organisation's ability to meet its environmental and climate change reporting obligations.	**4 – Significant**	Powerlink will implement new reporting and analytics capability, leveraging the organisation's CDAP, to meet all current and anticipated future reporting needs and to provide HSE analytics.	**F – Very Rare** With the proposed improvement, the likelihood of reporting obligation breaches is reduced.	**4 – Moderate** While the likelihood of the risk is reduced, the consequence of an event is unchanged.	**2 – Low**
Risk R4 **Lack of integrated capability to effectively capture and report on asbestos and chemical safety risks.** Risk that the current HSE solution does not manage chemical usage and storage, or data relating to asbestos risk management.	**4 – Significant**	The proposed HSE solution renewal will inherently cater for chemical safety and will incorporate asbestos safety management data from Powerlink's external service provider. This will enable integrated set of data for HSE reporting requirements.	**F – Very Rare** With the proposed renewal and improvement investments, the likelihood of risks associated with disparate management of asbestos and chemical data will reduce.	**5 – Major** While the likelihood of the risk is reduced, the consequence of an event is unchanged.	**3 – Moderate**

Table 9: Recommended Option (HSE Renewal, Consolidation and Improvement) Mitigation of Inherent Risks

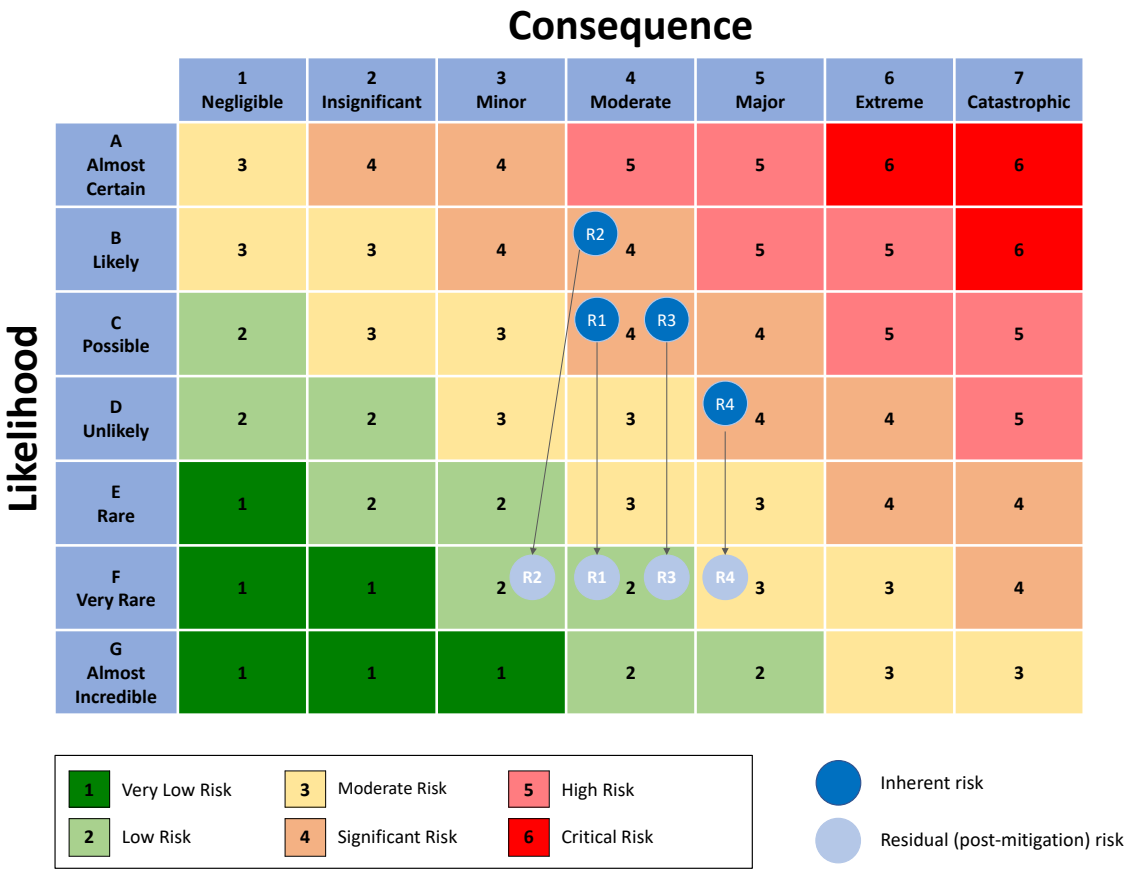

Figure 3: Recommended Option (HSE Renewal, Consolidation and Improvement) Risk Mitigation Matrix

3.2.5 Recommended Option – Benefits

This recommended option enables benefits as summarised in Table 10 below.

Benefit Description	Benefit Value
B1. System sustainability and extensibility benefit Powerlink will retain access to supported versions of the HSE solution, thereby ensuring the organisation's HSE function can continue to operate in an effective and efficient manner.	**Non-Financial** **Risk Mitigation** See mitigation of inherent Risk 2 as summarised in Table 9.
B2. Increased level of workforce engagement across HSE activities The renewed HSE solution will provide staff and contractors with an improved UX covering all dimensions of HSE, making it easier to capture and track HSE risks and incidents. This leads to staff being more responsive to HSE matters and having better line of sight to how risks and incidents are being managed.	**Non-Financial** **Strategic Contribution** Contributes to the HSE strategic objectives of having empowered people and a healthy and engaged workforce.

Benefit Description	Benefit Value
B3. Improved efficiency in HSE compliance and reporting activities With the consolidation of the HSE activities into a single technology platform and with improved integration to other core systems (e.g. ERP including HCM, EAM and GIS), there are productivity benefits across the Powerlink workforce. These benefits include: • Increase in delivery agility through an optimised and fit-for-purpose approach to managing HSE risks and incidents • Reduced time and effort to capture, track and remediate HSE risks and incidents • Reduced level of manual data capture and duplication across multiple HSE systems • Reduced effort to produce required HSE compliance reporting • More targeted and cost efficient HSE interventions resulting from improved data quality and enhanced analytics capability	**Strategic Contribution** Contributes to the strategic HSE objective of Agile Delivery **Indirect Financial** **Operational Efficiency** Contributor towards Powerlink's operational efficiency and productivity commitments
B4. Continuous improvement to reduce HSE incidents Renewed HSE capability will support the overall improvement in HSE performance including the reduction in workplace and environment incidents, through better targeting of HSE engagement and communication programs enable by improved data and spatial awareness overlays.	**Strategic Contribution** Contributes to the strategic HSE objective of having a healthy and engaged workforce. **Indirect Financial** **Avoided Costs** Avoids the costs associated with managing HSE incidents including workforce downtime, incident investigation and incident remediation.

Table 10: Recommended Option (HSE Renewal, Consolidation and Improvement) Benefits

3.3 Option 2: Alternative Option (Uplift HSE Systems, Practices and Analytics)

This Alternative Option (Uplift HSE Systems, Practices and Analytics) describes an alternative investment path to address the business and technical drivers described in section 2.1 and the inherent risks described in section 2.2.

3.3.1 Alternative Option – Scope Description

This alternative option would uplift Powerlink's HSE capability to operate within a tightly integrated solution aligned with the ERP, EAM and GIS platforms. This capability will be implemented through a technology and process transformation of Powerlink's HSE function with the capability uplift delivered via two (2) initiatives being HSE Solution Uplift and HSE Spatial Integration.

Initiative 1 - HSE Solution Uplift

This initiative establishes the foundation for long term sustainability and extensibility, through uplifting the core HSE solution to meet the full set of capability requirements. This uplift will be achieved through a business transformation activity involving the redesign of HSE processes to align with the uplifted technology solution and leveraging automation capability now incorporated into contemporary HSE solutions. This initiative will enable the decommissioning of the current suite of HSE satellite systems resulting in a single HSE solution which is tightly integrated with the core SAP ERP/EAM platforms.

Core functions of the uplifted HSE solution include:

- Risk and Incident capture delivered on a mobile platform using a contemporary UX
- Hazard identification and risk assessments
- Job safety analyses
- Incident management including root cause analyses and reporting
- Return-to-work and rehabilitation management
- Corrective and preventive action management
- Workforce safety training and compliance management natively integrated with the HCM solution, including establishment of protocols for management of high-risk work licences
- Safety audits and inspections integrated with the ERP, EAM and GIS data sets
- Permit management tightly integrated with the works management solution
- Emergency response planning and drills
- HSE workflow automation
- Predictive analytics capability to identify potential hazards, detect patterns, and recommend preventive actions in real-time
- Wellbeing, mental health and psychosocial safety risk management
- Waste management and monitoring
- Hazardous substance management including transportation, storage and usage
- Auto-generation of safety data sheets based on hazardous substance data and integration with logistics management
- Climate and environmental compliance management

The uplifted HSE solution will provide enhanced reporting and analytics capability utilising modern and emerging analytics techniques (AI, machine learning and pattern recognition) and will include (but not limited to):

- Audit and inspections reporting
- Compliance with technical standards and codes reporting
- Customer safety incident reporting
- Dangerous electrical event reporting
- Discharge and contaminate reporting
- Electrical safety performance and audit reporting
- Electrical safety training and competency reporting
- Environmental and sustainability performance reporting
- Greenhouse emissions and energy reporting
- Hazard identification and control measure reporting
- High voltage live work procedure and safety measure reporting
- Interference with electrical supply reporting
- Operational risk reporting
- Predictive analytics capability to identify potential hazards, detect patterns, and recommend preventive actions in real-time
- SEI and DEE reporting
- Stand-by supply safety reporting
- Substation safety and maintenance reporting
- SMS compliance reporting

The uplifted HSE solution will natively integrate with the core SAP ERP/EAM including:

- **SAP Human Capital Management (HCM)** for:
  - Safety Training and Competency Management – Scheduling, tracking, and follow-ups for mandatory HSE training
  - Certificate and Licence management – Tracking of require certificates and licences. E.g. high-risk work licences under national codes
  - Incident Management – Linkage of incident management with affected HR records, for accurate tracking of workplace incidents and corrective actions
  - Contractor and Worker Management – Pre-qualification of contractors and workforce inductions with site specific training
  - Role-Based Authorisations – Linkage of HR position information for HSE authorisations based on job roles, locations, and responsibilities, ensuring relevant safety procedures are visible to the right personnel
  - Compliance Management – Centralisation of workforce safety records and training history for efficiency and compliance management
  - Risk Profiling via AI and pattern recognition – Use of learning algorithms to analyse HCM and HSE data to identify high-risk factors and determine appropriate interventions
- **SAP Enterprise Asset Management (EAM)** for:
  - Asset Safety – Linkage of safety incidents, inspections and risk assessments to impacted assets (e.g. transformers, substations, transmission line segments)

  - Maintenance safety – Alignment of preventive maintenance schedules with safety requirements, ensuring high-risk work is planned with appropriate mitigations and controls
  - Real-time hazard alerts – EAM triggering of potential safety or environment risk alerts, upon exceedance of defined asset condition thresholds
  - Environmental impact tracking – Linkage of potential environmental incidents (e.g. oil leaks) to involved assets
- **Field Automation Platform** for:
  - Safety data and procedures – Enablement of field work crews to access asset safety data, processes and procedures from mobile devices, improving situational awareness and mitigating risk during field operations
  - Environmental data provision and capture - Ability to turn data layers on and off for viewing in field and to operate in both online and offline states utilising effective data synchronisation methods
  - Mobile hazard identification and risk assessments
- **Portfolio and Program Management (PPM) System** for:
  - Project Risk and Incidents – Identification of project risks based on historical analysis of work tasks, and linkage of safety and/or environmental incidents to projects for root cause analysis and decision making

Initiative 2: Environment Spatial Integration

This initiative will integrate the uplifted HSE solution with our GIS for planning and operational visibility across Powerlink's large service area, including:

- Spatial layering and integration of HSE data sets including imagery, enabling visualisation of HSE risk and incidents
- Use of AI, machine learning and pattern recognition to correlate HSE, GIS and other corporate data sets to provide trends and insights and identify areas of risk exposure
- Spatial representation of environmental constraints, with linkage to affected assets and works plans (including protected areas, waterways, sensitive habitats and other layers)
- Spatial mapping of environmental risk areas, and locations of potential environmental incidents with ability make that information through to the field mobility platform
- Spatial mapping of environmental approvals, permits and plans to network assets, corridors (and corridor options) and proposed projects
- Integration of biodiversity and cultural heritage data with spatial network representations
- Spatial information sharing with third parties (e.g. consultants, contractors) with the ability to track changes relating to data within a downloadable map extent
- Standardisation of symbology to ensure consistency of data feature representation and overlay of effective environmental data governance
- Spatial support for environmental risk assessments

The initiative will replace legacy custom-built spatial modelling and manual spatial analysis, with a sustainable, accessible spatial representation of environmental management data and compliance reporting, integrated with the GIS and SAP ERP and EAM.

3.3.2 Alternative Option – Alignment with Investment Drivers

The extent to which the Alternative Option addresses (or does not address) the identified investment drivers is summarised in Table 4 below.

Alignment with Investment Drivers		
HSE Continuous Improvement and Compliance Drivers		
Investment driver	**Extent addressed through Recommended Option**	
Psychosocial Safety Risk Management	✓	Powerlink's HSE solution will be uplifted to an enterprise grade solution that is tightly integrated with the core SAP ERP (including HCM) and EAM platforms. Th HSE solution will have inherent capability to manage psychosocial safety risks and incidents and will also include advanced reporting and analytics capability so that trends can be identified in psychosocial safety risks and incidents.
Chemical Safety Risk Management	✓	Functionality will be introduced to effectively manage chemical safety risks and incidents within the core HSE solution, providing an intuitive and consistent UX with integration of the chemical safety data dataset.
Asbestos Risk Management	✓	Functionality will be introduced to integrate data relating to asbestos safety risks and incidents which are managed via an external service provider. This will mean reporting can be streamlined with reduced manual data entry and duplication of data between systems. Advanced native integration will be introduced with the works management solution to allow site and job specific asbestos safety information to be provided to field workers when undertaking work at asbestos impacted sites.
Assurance and Audit of High Risk Activities	✓	As part of the HSE solution uplift, functionality will be enabled to manage and conduct assurance and audit tasks for h**igh-risk** activities. This will result in elimination of paper-based forms through either mobile data capture or process automation resulted in improved workflow and a streamlined assurance and audit process. There will be automated reporting on assurance and audit work relating to high-risk activities, coupled with the ability to perform advanced analytics to identify performance trends to allow better targeting of HSE improvement activities.
Permit Management	✓	Functionality to manage permits will be introduced as part of the HSE solution uplift. This will support a consistent end-to-end business process for permit management integrated within the overarching HSE framework and the works management processes.
Technology Sustainability and Extensibility Drivers		
Investment driver	**Extent addressed through Recommended Option**	
Sustainable Integrated HSE Solution	✓	Powerlink will uplift the core HSE solution enabling the retirement of the existing suite of HSE solutions, which will eliminate manual data entry and data duplication. The solution uplift will provide a supported

		technology platform through the 2032-37 RCP, delivering a consistent and contemporary UX across all HSE elements.
Integration of GIS and HSE Data Sets	✓	Advanced integration will be established between the GIS and the uplifted HSE solution, delivering spatial representation of HSE information. This will enable analytics to be performed on health and safety risks and incidents within a spatial context which will support earlier identification of potential environmental constraints, with linkage to affected assets and works plans. It will also allow planning and works delivery teams to understand environmental risk areas and potential environmental incidents relevant to the sites where work is being planned.
HSE Data Reporting Sustainability and Flexibility	✓	Following the delivery of the renewed HSE solution a project will be undertaken to incorporate the HSE data into the Strategic Data Platform which will enable an integrated suite of HSE reports and dashboard. Analytical capability leveraging AI, machine learning and pattern recognition will be utilised for trend analysis to provide insights into potentially unidentified HSE risks and to direct future HSE awareness and education programs.

Table 11: Alternative Option (Uplift HSE Systems, Practices and Analytics) Alignment with Investment Drivers

3.3.3 Alternative Option – Assumptions

The following assumptions are made for this Alternative Option (Uplift HSE Systems, Practices and Analytics) scenario:

- The two (2) initiatives described in section 3.3.1, will be delivered as an business transformation program focussed on both technology uplift and business process redesign. The program will include coordinated project management, business process redesign, organisational change management, IT design, data migration management, system configuration, integration, testing and deployment.
- Bottom-up cost estimates have been developed for each of the two (2) initiatives, using standard labour rates and consistent delivery methods. Costs related to shared activities (including program delivery management, end-to-end design, business process design and program communications) are apportioned across the estimates for each initiative.

Table 12 and Table 13 detail the resultant estimated phasing and cost breakdown for each of the two (2) constituent initiatives.

Table 14 (over page) summarises the total combined cost forecast.

Initiative 1 - HSE Solution Uplift			
Phasing			**Months**
Planning and Analysis			3
Design			6
Configure, Build and Test			14
Deployment and Hypercare			1
Total			**24**
FY27 Real Terms	**Capex**	**Project Opex**	**Project Total**
Labour	[redacted]	[redacted]	[redacted]
Vendors	-	[redacted]	[redacted]
Software	-	[redacted]	[redacted]
Infrastructure	-	-	-
Total	[redacted]	[redacted]	[redacted]

Table 12: Phase and Cost Breakdown – Initiative 1

Initiative 2: HSE Spatial Integration			
Phasing			**Months**
Planning and Analysis			1
Design			3
Configure, Build and Test			6
Deployment and Hypercare			1
Total			**11**
FY27 Real Terms	**Capex**	**Project Opex**	**Project Total**
Labour	[redacted]	[redacted]	[redacted]
Vendors	-	[redacted]	[redacted]
Software	-	-	-
Infrastructure	-	-	-
Total	**$0.17M**	**$2.08M**	**$2.25M**

Table 13: Phase and Cost Breakdown – Initiative 2

Total Combined Investment Cost Forecast			
FY27 Real Terms	**Capex**	**Project Opex**	**Project Total**
Labour	[redacted]	[redacted]	[redacted]
Vendors	-	[redacted]	[redacted]
Software	-	[redacted]	[redacted]
Infrastructure	-	-	-
Total	**$0.42M**	**$8.89M**	**$9.31M**

Table 14: Alternative Option (Uplift HSE Systems, Practices and Analytics) Combined Investment Summary

3.3.4 Alternative Option – Risk Mitigation

This recommended option mitigates the existing inherent risks (as described in Table 1 on page 7) such that the residual risks range from 2 – Low to 3 – Moderate as summarised below.

Inherent Risk	Inherent Risk Rating	Recommended Option Mitigation Controls	Residual Likelihood	Residual Consequence	Residual Risk Rating
Risk R1 **Ineffective capabilities to manage psychosocial safety** Risk that safety management systems and processes do not adequately support the management of psychosocial safety.	**4 – Significant**	The uplifted HSE Solution will incorporate functionality to manage psychosocial safety including risk identification and incident logging through mobile enabled capability. The uplifted solution includes advanced reporting and analytics capability to pinpoint specific risk factors and to identify high-risk teams and work practices for targeted intervention. This uplifted capability will remove the need for "off-system" data capture and manual process workflows.	**F – Very rare** The uplifted HSE solution will have inherent capability to support the management of psychosocial safety risks and incidents, therefore the risk likelihood is significantly reduced.	**4 – Moderate** While the likelihood of the risk is reduced, the consequence of an event is unchanged.	**2 – Low**
Risk R2 **System Supportability, Sustainability and Extensibility Risk** Risk that components of the current ecosystem of HSE systems, satellite software and custom tools become unsupportable.	**4 – Significant**	The uplifted HSE solution will provide a stable and supported platform through the coming regulatory control period, replacing the legacy suite of HSE software, custom tools and use of ad hoc Excel spreadsheets.	**F – Very Rare** With the proposed HSE solution uplift investment, Powerlink's integrated HSE solution will be supportable, sustainable and extensible on an ongoing basis, Therefore, the likelihood of the HSE solution falling into an unsupported state or having significant system availability issues is substantially reduced.	**3 – Minor** As well as reducing the likelihood of the risk, the consequence is also reduced due to the reduction in solution complexity and the availability of end-to-end software support.	**2 – Low**
Risk R3 **Environmental and**	**4 – Significant**	Powerlink will implement new reporting and	**F – Very Rare** With the proposed improvement, the	**4 – Moderate** While the likelihood	**2 – Low**

Inherent Risk	Inherent Risk Rating	Recommended Option Mitigation Controls	Residual Likelihood	Residual Consequence	Residual Risk Rating
Climate Change Reporting Risk that use of manual reporting methods limits the organisation's ability to meet its environmental and climate change reporting obligations.		analytics capability, leveraging the organisation's SDP, to meet all current and anticipated future reporting and analytics needs.	likelihood of reporting obligation breaches is significantly reduced.	of the risk is reduced, the consequence of an event is unchanged.	
Risk R4 **Lack of integrated capability to effectively capture and report on asbestos and chemical safety risks.** Risk that the current HSE solution does not manage chemical usage and storage, or data relating to asbestos risk management.	**4 – Significant**	The proposed HSE solution uplift will integrate asbestos safety management data from Powerlink's external service provider into the core system and will also centralise management of chemical usage and storage data.	**F – Very Rare** With the proposed HSE solution uplift, the likelihood of risks associated with disparate management of asbestos and chemical safety data will reduce.	**5 – Major** While the likelihood of the risk is reduced, the consequence of an event is unchanged.	**3 – Moderate**

Table 15: Alternative Option (Uplift HSE Systems, Practices and Analytics) Mitigation of Inherent Risks

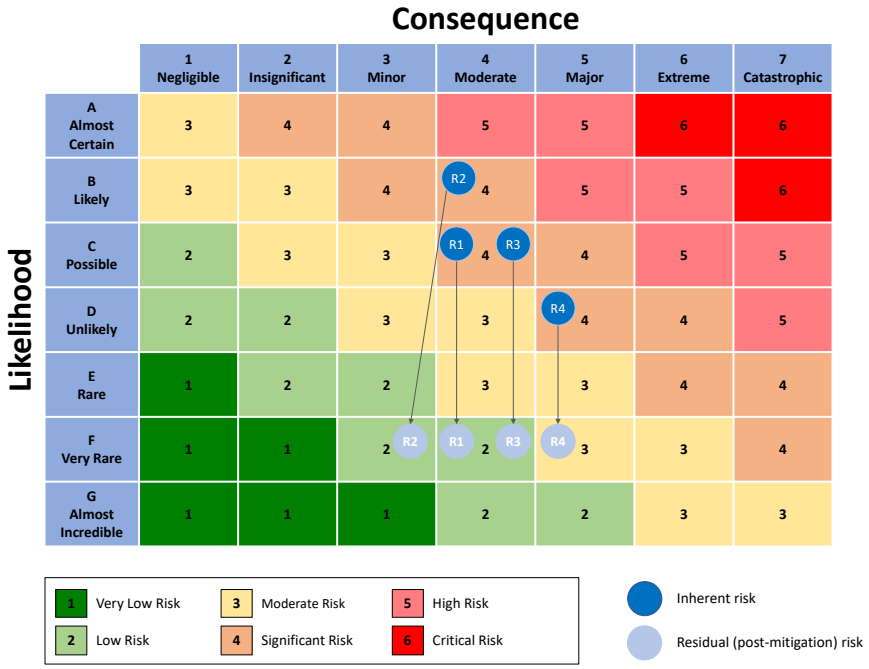

Figure 4: Alternative Option (Uplift HSE Systems, Practices and Analytics) Risk Mitigation Matrix

3.3.5 Alternative Option – Benefits

This recommended option enables benefits as summarised in below.

Benefit Description	Benefit Value
B1. System sustainability and extensibility benefit Powerlink will retain access to supported versions of the HSE solution, thereby ensuring the organisation's HSE function can continue to operate in an effective and efficient manner.	**Non-Financial** **Risk Mitigation** See mitigation of inherent Risk 2 as summarised in Table 15.
B2. Increased level of workforce engagement across HSE activities The renewed HSE solution will provide staff and contractors with an improved UX covering all dimensions of HSE, making it easier to capture and track HSE risks and incidents. This leads to staff being more responsive to HSE matters and having better line of sight to how risks and incidents are being managed.	**Non-Financial** **Strategic Contribution** Contributes to the HSE strategic objectives of having empowered people and a healthy and engaged workforce.

Benefit Description	Benefit Value
B3. Improved efficiency in HSE compliance and reporting activities With the consolidation of the HSE activities into a single technology platform tightly integrated with the core SAP (ERP including HCM and EAM) and GIS platforms, there are productivity benefits across the Powerlink workforce. These benefits include: • Increase in delivery agility through an optimised and fit-for-purpose approach to managing HSE risks and incidents • Reduced time and effort to capture, track and remediate HSE risks and incidents • Reduced level of manual data capture and duplication across multiple HSE systems • Reduced effort to produce required HSE compliance reporting • More targeted and cost efficient HSE interventions resulting from improved data quality and enhanced analytics capability	**Strategic Contribution** Contributes to the strategic HSE objective of Agile Delivery **Indirect Financial** **Operational Efficiency** Contributor towards Powerlink's operational efficiency and productivity commitments
B4. Continuous improvement to reduce HSE incidents Renewed HSE capability will support the overall improvement in HSE performance including the reduction in workplace and environment incidents, through better targeting of HSE engagement and communication programs enable by improved data and spatial awareness overlays.	**Strategic Contribution** Contributes to the strategic HSE objective of having a healthy and engaged workforce. **Indirect Financial** **Avoided Costs** Avoids the costs associated with managing HSE incidents including workforce downtime, incident investigation and incident remediation.
B5. Seamless integration and data-driven insights The tight integration of the HSE with the SAP platform enables embedding HSE processes into the ERP and EAM workflows, improving data visibility, enabling better decision-making, and creating more efficient work practices.	**Strategic Contribution** Contributes to the strategic HSE objective of Agile Delivery **Indirect Financial** **Operational Efficiency** Contributor towards Powerlink's operational efficiency and productivity commitments

Table 16: Alternative Option (Uplift HSE Systems, Practices and Analytics) Benefits

3.4 Base Case: Counterfactual

This Base Case summarises the counterfactual scenario that would eventuate if Powerlink does not proceed with investment in either the Recommended Option or the Alternative Option to address the business and technical drivers described in section 2.1 and the inherent risks described in section 2.2.

3.4.1 Base Case – Alignment with Investment Drivers

The extent to which the Base Case scenario addresses (or does not address) the identified investment drivers is summarised in Table 17 below.

Alignment with Investment Drivers		
HSE Continuous Improvement and Compliance Drivers		
Investment driver	**Extent addressed through this Base Case (Counterfactual)**	
Psychosocial Safety Risk Management	PARTIAL	Interim capability will be established to manage some elements of psychosocial safety including capture of incidents through a forms-based solution and enhancement of reporting via file-based extracts into the PowerBI platform.
Chemical Safety Risk Management	✕	No investment will be made as part of this option to incorporate chemical safety risk management within the HSE solution suite.
Asbestos Risk Management	✕	No investment will be made as part of this option to integrate the HSE solution with the external asbestos management service for reporting and analytics purposes.
Assurance and Audit of High Risk Activities	✕	Powerlink's HSE solution will not be renewed with integrated capability to manage assurance and audit of high-risk activities.
Permit Management	PARTIAL	Powerlink's HSE solution will not be renewed with integrated capability for permit management. Interim add-on improvements may be targeted.
Technology Sustainability and Extensibility Drivers		
Investment driver	**Extent addressed through this Base Case (Counterfactual)**	
Sustainable Integrated HSE Solution	✕	Powerlink will continue to operate the existing suite of HSE systems and custom tools, applying a minimal level of maintenance activities for minor improvements.
Integration of GIS and HSE Data Sets	PARTIAL	Powerlink will continue to use existing methods to undertake ad hoc analysis of environmental and geospatial data, which is labour intensive and potentially prone to human error.
HSE Data Reporting Sustainability and Flexibility	PARTIAL	Powerlink will continue to use existing methods to undertake reporting and analysis of HSE data utilising data extracts from various systems and Microsoft Excel spreadsheets, which is also labour intensive and potentially prone to human error.

Table 17: Base Case (Counterfactual) Alignment with Investment Drivers

3.4.2 Base Case – Assumptions

The following assumptions are made for this Base Case (Counterfactual) scenario:

- Powerlink will continue to operate the existing suite of HSE solutions and legacy tools.
- Interim work-around investments will be made, to enable ad hoc extensions as assumed below. These work-arounds may take the form of additional custom spreadsheet developments, macros, stand-alone databases, custom inter-system synchronisation interfaces and manual processes.
  a) Interim configuration of current HSE solution to incorporate critical elements required to effectively manage psychosocial safety within the workplace – at a cost of $500,000 over the 2027-32 period.
  b) Manual data capture improvements for permit management - at a cost of $200,000 over the 2027-32 period.
  c) Interim interfacing of geospatial and environmental information through the use of data extracts and ad hoc databases to provide a degree of spatial analytical capability – at a cost of $600,000 over the 2027-32 period.
  d) Interim environmental and climate change reporting within current tools including Excel spreadsheets to meet increased reporting obligations – at a cost of $200,000 over the 2027-32 period.
  e) Other ad hoc system customisation and urgent data rectification works – at a cost of $300,000 over the 2027-32 period
- Although this Base Case (Counterfactual) scenario does not make targeted investments in HSE solutions or related process improvements, this does not avoid the need for investment indefinitely into the future. Therefore, this Base Case (Counterfactual) scenario assumes that the investment proposed in “Option 1 (Recommended)” would still be undertaken 4 years later (i.e. in the following regulatory period), at the equivalent cost in real terms.

3.4.3 Base Case – Risk Mitigation

As no material actions are taken in the base case to mitigate the existing inherent risks (as described in Table 1 on page 7), the residual risks remain unchanged, as depicted in Figure 5 below.

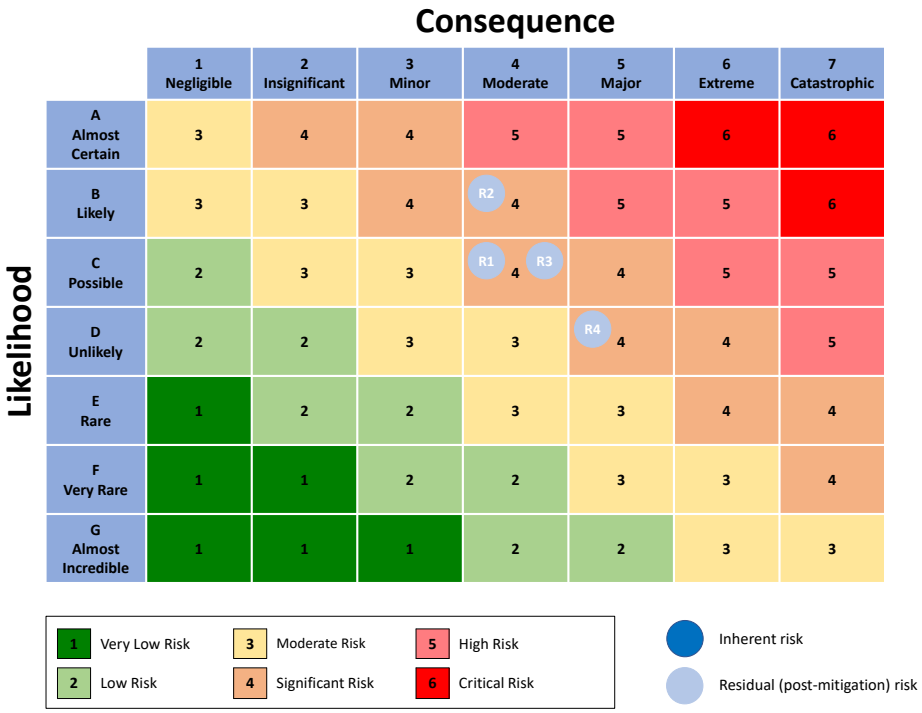

Figure 5: Base Case (Counterfactual) Risk Mitigation Matrix

3.5 Option Comparison

Table 18 below compares the extent to which the options (including the base case) address the identified investment drivers and provides the resultant NPV for each option over a 10-year analysis period.

As depicted in Table 18, Option 1 addresses all of the identified investment drivers and is the recommended option.

Alignment with Investment Drivers			
Investment driver	**Option 1: Recommended Option (HSE Renewal, Consolidation and Improvement)**	**Option 2: Alternative Option (Uplift HSE Systems, Practices and Analytics)**	**Base Case (Counterfactual)**

HSE Continuous Improvement and Compliance Drivers			
Psychosocial Safety Risk Management	✓	✓	PARTIAL
Chemical Safety Risk Management	✓	✓	✗
Asbestos Risk Management	✓	✓	✗
Assurance and Audit of High-Risk Activities	✓	✓	✗
Permit Management	✓	✓	PARTIAL
Technology Sustainability and Extensibility Drivers			
Sustainable Integrated HSE Solution	✓	✓	✗
Integration of GIS and HSE Data Sets	✓	✓	PARTIAL
HSE Data Reporting Sustainability and Flexibility	✓	✓	PARTIAL
NPV	**-$3.4M**	**-$5.8M**	**-$4.1M**

Table 18: Options Comparison

Comparison conclusion

Option 1 "HSE Renewal, Consolidation and Improvement" is recommended on that basis that it:

(a) Addresses all the identified business and technical investment drivers, and

(b) Represents the best NPV investment over the analysis period.

Option 2 "Uplift HSE Systems, Practices and Analytics" is also a suitable response to the investment drivers, but the higher cost of this transformational alternative option likely outweighs the possible incremental future benefits that may be enabled.

4. Other Considerations

4.1 Governance

Funding for the HSE investment proposed through this business case is ultimately governed by the Digital Technology Executive Committee (DTEC) which has the accountability for delivery of the IT investment portfolio. DTEC oversees the management of IT programs and projects through an assigned Program Executive.

The Program Executive is accountable for successful delivery of the program, and achievement of planned program outcomes. The Program Executive is supported by Senior Suppliers, Senior Users and the Program Director in delivery of the program.

The HSE Program Executive will chair a Program Board, with a charter to monitor the progress of the program, to address escalated delivery issues and to support coordination of inter-program dependencies. This governance structure provides ongoing oversight into the running of both the program and the individual constituent initiatives.

4.2 Delivery Schedule

Figure 6 below depicts the proposed high-level delivery schedule, comprising the three coordinated initiatives as described in section 3.2.

Prior to execution of the program, a detailed Program Management Plan (PMP) will be established with an accompanying program schedule.

Investment Program	2027-32 Regulatory Control Period					
2026/27 $M Real	2027/28	2028/29	2029/30	2030/31	2031/32	5yr Total
Safety and Environment	HSE Management System Renewal and Consolidation	HSE Data and Reporting	HSE Spatial Integration			$5.4M

Figure 6: High-level Delivery Schedule