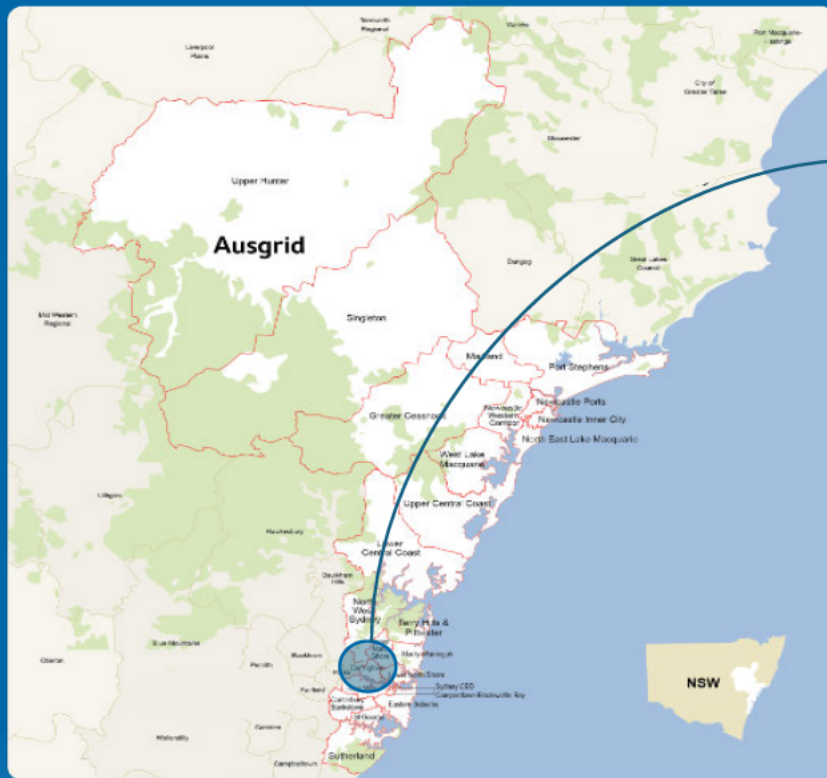


Addressing increased customer demand requirements in the Macquarie Park area

CONTINGENT PROJECT APPLICATION

Appendix 6 – Risk & Contingency Report



07 February 2025

Addressing increased customer demand requirements in the Macquarie Park area

Contingent Project Application
Appendix 6 – Risk & Contingency Report

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1. Project Overview

Macquarie Park is a suburb in Northern Sydney known for being a sizeable business hub. In particular, the suburb is well connected to telecommunications, electrical and transport infrastructure, making it an increasingly popular location for major load customer.

Due to significant connection applications from customers in the Macquarie Park area, and the current Macquarie Subtransmission Substation (STS) being not able to accommodate new loads due to physical site restrictions, Ausgrid is investigating options to facilitate four new connections. Each of these four applications requests connection from December 2028 and that the connection is provided at 33kV.

Ausgrid have assessed four different credible network options, under the Regulatory Investment Test for Distribution (RIT-D) process, in relation to the additional connection requests and are proceeding on the basis of Option 5, being New 132/33kV STS at site 2 tee connected to East Ryde Transition Point to 132kV Feeders 92G and 92J (connecting Mason Park and Lane Cove Subtransmission Switching Stations).

The project is known as Wallumatta STS in recognition of the original name given to the area and acknowledging its indigenous history.

2. Scope of Risk Assessment

The Wallumatta STS Project Manager approached Infrastructure Advisory Group to complete a risk assessment of the planning, design and construction risks associated with the Project, requesting a detailed, quantified risk register and Monte Carlo analysis to calculate and support the contingency value to be included in the Final Project Assessment Report (FPAR) and subsequent Contingent Project Application to be submitted to the AER for approval.

3. How the AER assesses contingent risk costs

The AER's guideline on the regulation of actionable Integrated System Planning (ISP) projects provides guidance on how the AER assesses transmission investment, including risk costs. Whilst this is a RIT-D project, we have had regard to the principles reflected in the AER's guidance, namely;

- risk cost allowance should reflect best estimate of risk costs, given reasonable and realistic expectations of the likelihood and consequence of each identified risk (i.e., the expected cost of the risk);
- the AER has indicated that a Network Service Provider (NSP) should only consider residual risks that affect the cost of the project and cannot be efficiently transferred, avoided or mitigated, including through cost pass through event
- Examples of risks that are generally acceptable include: risks that relate to a realistic latent condition with the site; risks associated with the actions or requirements of a third party not under contract to the NSP and hence the risk cannot be addressed through enforcing contract terms; and risks associated with events outside the NSP's control, such as extended wet weather or changes in market conditions.

Examples of risks that would not reasonably allowed include risks that are under NSP's control/managed by NSP as part of its business-as-usual practice; and risks that are or should be reasonably covered by contract terms or insurance.

4. Key Risks for Project

Ausgrid has undertaken a detailed risk analysis of the potential risks associated with the Wallumatta STS Project. All risks identified have been captured within Section 8 – New Wallumatta STS Project Risk Register.

A general outline of the key risk areas and mitigations is summarised below, noting that the Risk Register is the document that informs all risks identified for the Project, and will be updated throughout design development and the construction phases of the Project.

4.1. Uncertainty around Land

There is significant uncertainty surrounding the parcel of land the Wallumatta STS Project will be constructed on. Whilst a preferred parcel of land has been identified, it is for sale in an open market and there is risk that Ausgrid will not secure the land identified, or not secure it for the price estimated. The risk register sets out the causes and potential consequences in more detail, whilst the summary below illustrates the mitigation tools and tactics that can be used to reduce the likelihood and consequences of this risk.

Ausgrid estimates a contingency allowance of \$6.0 million based on the following assumptions:

- baseline cost estimate allowance of [REDACTED] based on valuation report provided by [REDACTED] Macquarie Park, NSW, 2113. The indicative value of the property was [REDACTED], and consideration was given to use a portion of the site, [REDACTED];
- 50 per cent likelihood of risk occurring, given that property acquisition costs are highly variable and will be mostly determined on a negotiated basis, and changes in market conditions can also impact the value of the property;
- if contingent risk does arise then the consequence would be as follows:
 - (P10) optimistic case would involve additional costs of \$4.5 million, based on the assumption that the site has no other interested purchasers, leading to a quick negotiation process, a discrete [REDACTED] increase in land acquisition costs (equivalent to [REDACTED]), together with stamp duty, legal and other related property acquisition costs adding [REDACTED];
 - (P50) most likely case would involve additional costs of \$12 million, based on the assumption that a [REDACTED] increase in land acquisition costs is realised (equivalent to [REDACTED]) due to changes in market conditions. On top of this, additional [REDACTED] are included to consider the site is available in the real estate market with several interested parties seeking to acquire it, resulting in a premium value added by Ausgrid to secure the site, with additional costs derived from an extended negotiation process, as well corresponding stamp duty, legal and other related costs; and
 - (P90) pessimistic case would involve additional costs of \$22 million, based on the assumption that a [REDACTED] increase in land acquisition costs is realised (equivalent to [REDACTED]) due to significant changes in market conditions. On top of this, additional [REDACTED] are included to consider this property is available in the market and there is significant interest from potential purchasers, resulting in a premium value added by Ausgrid to secure the site, due to the convenience of locating the substation near customers.

Ausgrid considers that it is appropriate for the AER to provide an allowance for this risk as it cannot be efficiently transferred, avoided or mitigated and is beyond reasonable control of Ausgrid. Further, the proposed contingency allowance reflects the expected costs of the residual risks following effective mitigation.

Risk	Potential Impact	Mitigation tools and tactics
Increased land costs	<ul style="list-style-type: none"> • Cost 	<ul style="list-style-type: none"> • Active participation in Macquarie Park real estate market • Seeking approval to secure land at earliest opportunity • Purchase of alternative site?
Property purchased impacts design and construction	<ul style="list-style-type: none"> • Cost • Time 	<ul style="list-style-type: none"> • Engage with designers prior to finalising purchase

4.2. Uncertainty of site impacting Design and Construction

Cost may vary due to unknown site conditions that impact design and construction work.

Ausgrid estimates a contingency allowance of \$5.6 million based on the following assumptions:

- Allowance of \$1.5 million to compensate tenants.

Requirements to pay-out existing leasing agreements and compensate tenants, could result in additional costs that will vary depending on the number of tenants, and the duration of the lease arrangements. The site has tenants in a 2-storey building that provides standard office accommodation and warehouse space. It is assumed that the.

A 75% likelihood of risk occurring has been determined since there are currently nine individual tenants occupying approximately 76% of the lettable area. The consequence would be that under an optimistic case the pay-out costs would be up to \$1.0 million, considering lease arrangements incorporate redevelopment provisions that enable termination of leases in the event a redevelopment is proposed; under the most likely case the pay-out cost would be \$2.0 million, to consider that there provisions in place to terminate the lease agreements but existing leases extend for several years and greater compensation is required; and under a pessimistic case the pay-out could reach \$5.0 million, to consider that no provisions are incorporated to terminate the lease in case of redevelopment.

- Allowance of \$1.5 million due to demolition requirements

It is likely that the 2-story office warehouse building will be demolished. A 75% likelihood of risk occurring has been determined, given that the new substation will occupy some portion or even the entire building area. Based on demolition costs of \$200/m², the estimated consequences are that under an optimistic case demolition costs would be limited to \$1.0 million; or increasing up to \$3.0 million considering that the lettable area is approximately 13,000 m² and there are over 200 car bays for parking. Under the most likely case, the cost could be limited to \$2.0 million as the construction footprint could be moved or adjusted within the site.

- Allowance of \$1.3 million due to possible rezoning

Since 2023, the NSW Department of Planning, Housing and Infrastructure (DHPI) has been implementing a rezoning of the Macquarie Park are to accommodate new residential dwellings and commercial floorspace. A 25% likelihood of risk occurring has been determined, since Stage 2 rezonings have been exhibited, reducing the likelihood of further large-scale changes and additional costs in terms of noise control, fire resistance and buffer zone requirements. The consequence would be that under an optimistic case, additional costs would be limited to \$2.0 million, increasing to \$5.0 million under the most likely place and up to \$10.0 million under a pessimistic case.

- Allowance of \$1.3 million due to cable egress limitations and topography of the site

Additional easements could be required in neighboring properties to avoid constraints on cable ratings. Similarly, sloping ground would require to be levelled out and include retaining walls and setback requirements that will increase the size of the land required to build the substation. A 50% likelihood of risk occurring has been determined, given the extent of the site and the natural fall from the Talavera Road frontage to the northern boundary of the site. The consequence would be that under an optimistic case, additional costs would be limited to \$0.5 million for purchasing easements (based on 1.2m width x 100m long x \$4250/m²) and \$0.25 million for additional earthworks (based on a cost of \$75/m³ x 3,500m³), increasing to \$1.25 million for additional easements and \$1.0 million under the most likely place, and up to \$2.5 million for purchasing easements (based on 6m width x 100m long x \$4250/m²) and \$2.0 million for additional earthworks (based on a cost of \$75/m³ x 27,000m³) under a pessimistic case.

Risk	Potential Impact	Mitigation tools and tactics
Property causes design and construction cost increases	<ul style="list-style-type: none"> • Cost 	<ul style="list-style-type: none"> • Engage with designers prior to finalisation of land purchase

4.3. Changes in Design Standards

Given the national and international focus on renewable and sustainable energy resources, there is a risk that mandated changes to design standards for the project will come into effect during the design and approval phases, which will impact on the Project timeframes and budget, including for alternatives to the use of sulfur hexafluoride¹ (SF₆) as an electrical insulator in circuit breakers.

Ausgrid estimates a contingency allowance of \$1.5 million based on the following assumptions:

- base estimate allowance of \$4.0 million for the purchase of the 132kV switchgear equipment, which assumes that existing standards continue to remain;
- 35% per cent likelihood of risk occurring, based on the opinion of Ausgrid’s subject matter experts invited to the risk workshops. Whilst there is no announcement made in terms of enforcing the use of S_f6 free high voltage circuit breakers, several countries are aiming to phase out new installations of SF₆ breakers by 2025;
- if contingent risk does arise then the consequence would be as follows:
 - (P10) optimistic case would involve additional costs of \$1.1 million, based on a 25% increase assumed for the cost of procuring the equipment (i.e. \$1.0 million) plus \$0.1 million increase in civil construction due to larger floor plan requirements;
 - (P50) most likely case would involve additional costs of \$4.4 million, based on a 100% increase on the switchgear procurement cost (i.e., \$4.0 million) plus \$0.4 million increase in civil construction costs due larger equipment footprint; and
 - (P90) pessimistic case would involve additional costs of \$8.8 million, based on 200% increase on the switchgear procurement cost (i.e., \$8.0 million) plus \$0.8 million increase in civil construction costs due larger equipment footprint.

Ausgrid considers that it is appropriate for the AER to provide an allowance for this risk as this risk cannot be efficiently transferred, avoided or mitigated and is beyond reasonable control of Ausgrid. Further, the proposed contingency allowance reflects the expected costs of the residual risks following effective mitigation.

Risk	Potential Impact	Mitigation tools and tactics
Change to design requirements	<ul style="list-style-type: none"> • Cost • Time 	<ul style="list-style-type: none"> • Regular and detailed interaction with Design team to ensure any changes are pre-known and well planned for.

Further risks are detailed in the Risk Register.

Sections 5 – 8 below set out in detail the process undertaken to complete the risk assessment and contingency determination.

¹ It is estimated that SF₆ is 23,000 times more potent than carbon dioxide (CO₂) at trapping infrared radiation and can remain in the atmosphere for over 1,000 years. The impact of a gas leakage could be severe to the environment and therefore incentives to reduce SF₆ use are likely to be established sooner rather than later.

5. Approach to Risk Wallumatta Risk Assessment

The risk assessment for Wallumatta STS was undertaken in accordance with Ausgrid's Risk Management Framework, which is aligned to ISO 31000:2018 Risk Management – Guidelines.

5.1. Ausgrid Risk Management Framework

Ausgrid's Risk Management Framework has been developed to be:

- Agile - risks may emerge, change or disappear and the Framework must be sufficiently agile to anticipate, detect, acknowledge and respond in an appropriate and timely manner
- Accountable – clear accountability will be determined for each risk
- Integrated – risk management exists within the business rhythm and is not concentrated in a particular business function
- Customised – the Framework is customised to the organisation's context at all levels of the business
- Inclusive – relevant stakeholders are involved in risk-based decision making, enabling integration of knowledge, views and perceptions
- Robust – the Framework is sufficiently structured and comprehensive to enable an effective, efficient and consistent approach to risk management
- Data driven – the right risk data and information is used to inform day to day management and decision making
- Risk Aware – the Framework promotes the most positive behaviour towards risk management
- Continuously improving – the Framework is continuously improved through learning and experience.

These principles were considered throughout formation of the Wallumatta STS Project Risk Register and contingency calculation activities.

5.2. Risk Management Process

The Risk Management Process undertaken for the Wallumatta STS Project is shown in Figure 1 below and detailed further in the following sections.

Figure 1 – Risk management process



5.2.1. Context for Risk Assessment

In planning for a risk assessment, it is important to understand the circumstances surrounding the assessment, the objectives of the assessment, and the context in which the assessment is being undertaken. The first step in putting together the Wallumatta STS Project Risk Register was for the Project Manager and Risk Specialist to discuss the contextual elements affecting the Project. The key elements considered for Wallumatta STS were:

- Availability and price of the parcel of land upon which the Project will be built;
- Timing of project and the impact on supply item contracts expiring; availability of resources when required, escalating material and labour costs; and
- The impact of the land and changes to standards on design from issues such as protected species, geotechnical conditions and street frontage;

Consideration has also been given to stakeholder interactions, including noise complaints and the impact on surrounding businesses and the National Park overlap.

5.2.2. Risk Identification

This step of risk assessment involves identifying the risks that have the potential to impact project, initially identified through a series of risk workshops facilitated by the risk specialist and attended by the Development Manager and bespoke subject matter experts (SMEs) appropriate to each risk theme. Risks were also identified through review of existing documentation, historical information and lessons learned on past and similar STS projects. The workshops held were:

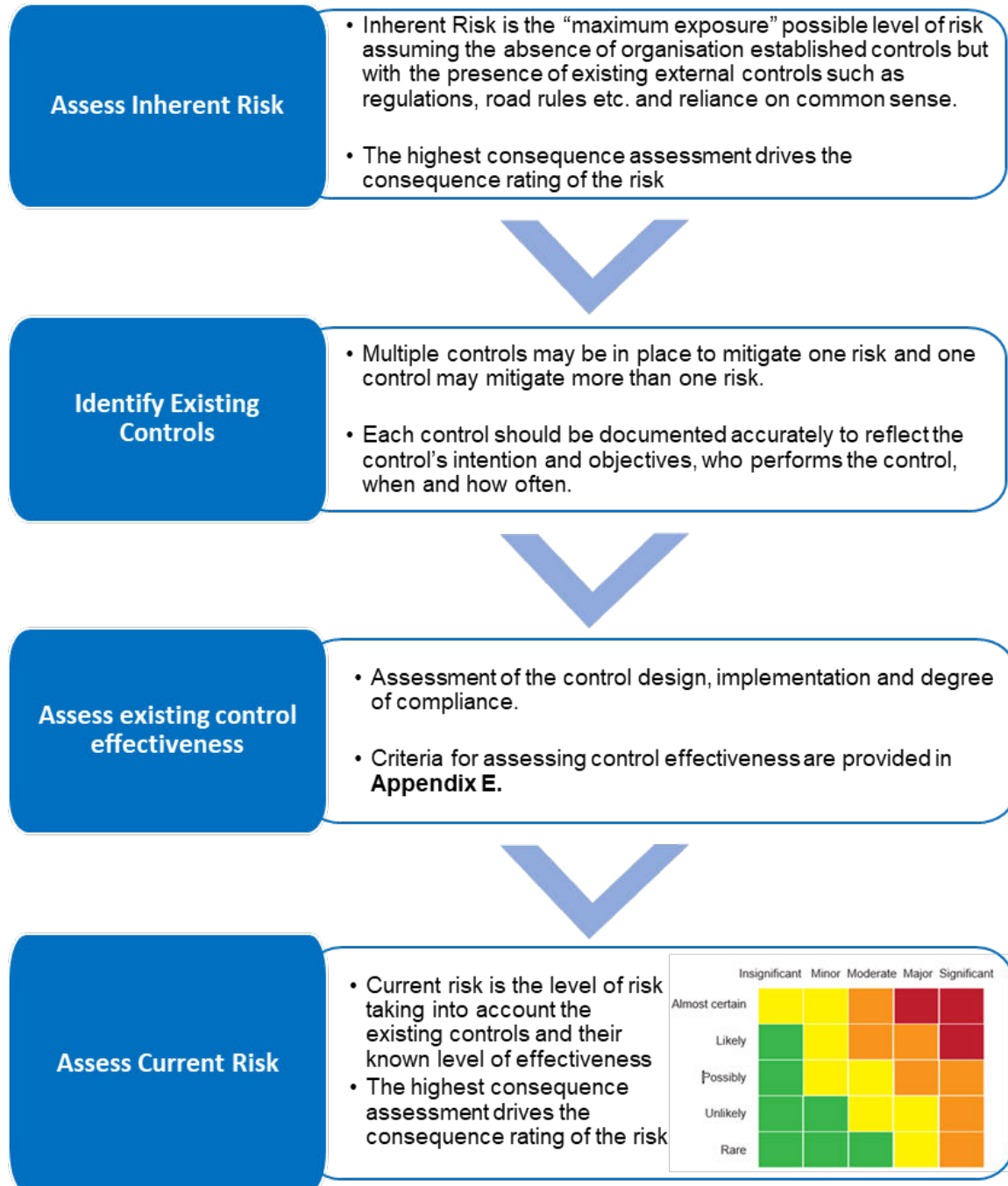
Date	Theme	Attendees
23/8/2024	Overall Project Scope and Context. Explanation of risks captured to date	<ul style="list-style-type: none"> • Development Manager • Risk Specialists
10/9/2024	Property risks and potential costs	<ul style="list-style-type: none"> • Senior Property Development Manager • Development Manager • Risk Specialist
13/9/2024	Commercial Risks	<ul style="list-style-type: none"> • Estimating and Unit Rates Manager • Project Development Manager • Development Manager • Risk Specialist
13/9/2024	Design Risks	<ul style="list-style-type: none"> • Senior Engineer • Design Development Manager • Development Manager • Risk Specialist
16/9/2024	Escalation and project management costs	<ul style="list-style-type: none"> • Estimator • Development Manager • Risk Specialist
16/9/2024	Lessons learned from previous similar projects, particularly Macquarie Park STS	<ul style="list-style-type: none"> • Project Manager (similar projects) • Development Manager • Risk Specialist
20/9/2024	Overall review of risks and contingency	<ul style="list-style-type: none"> • Project Development Manager • Development Manager • Risk Specialists • Investment Approval Manager • Project Managers x 2 (similar projects)

5.2.3. Risk Analysis

Risk analysis involves:

- Assessing the inherent risk
- Identifying existing controls
- Assessing the effectiveness of existing controls
- Assessing the current risk

Figure 2 Risk analysis process



5.2.4. Risk Evaluation

The purpose of risk evaluation is to determine those risks that are acceptable and those that require further treatment, taking into account the established context, emerging risks, risk ratings, effectiveness of controls and the agreed organisational risk appetite.

Given the early stage of the Wallumatta STS Project, a significant number of the risks identified do not have adequate controls currently in place. Accordingly, there is only small changes in the assessment of current risks from the inherent, untreated risks.

5.2.5. Risk Treatment Actions

Risk treatment actions are selected based on a balance of cost-benefit to the organisation (both financial and non-financial in nature). Options for treating risk may involve one or more of the following:

Avoidance – refusing to accept the risk if it cannot be lowered. This is achieved by ceasing the activity where the risk occurs.

Reduction – reducing the likelihood and/or consequence if it is feasible and cost effective.

Transference – moving all or some of the risk to a third party. Transference of a risk does not mean the risk is entirely transferred but generally it is a partial transference through insurance coverage/contractual arrangements or some other means.

Increase – where the level of risk is assessed as too low and is inhibiting the organisation’s ability to achieve its objectives or the costs of controls do not match the benefits achieved.

Given the early stage of the Wallumatta STS Project, all risks were evaluated with a view to considering and applying a future Treatment Task/s in order to mitigate the effects throughout the Project duration.

6. Qualitative Risk Analysis

Qualitative risk management is a key component of risk management and enables the rapid prioritisation of risk and opportunities to assist project teams to achieve their objectives. It involves the approach set out in section 3.2 above to define risk in terms of its impact, being the effect that a risk will have on the project if it occurs; and likelihood, being the extent to which risk effects are likely to occur to ensure that uncertain events which could have varied outcomes on a project are identified, assessed, treated and monitored on an ongoing basis.

A series of workshops, as set out above in section 3.2 were held with SMEs to ensure the Project Manager had a clear understanding of all potential risks, the consequences and available controls and treatment tasks.

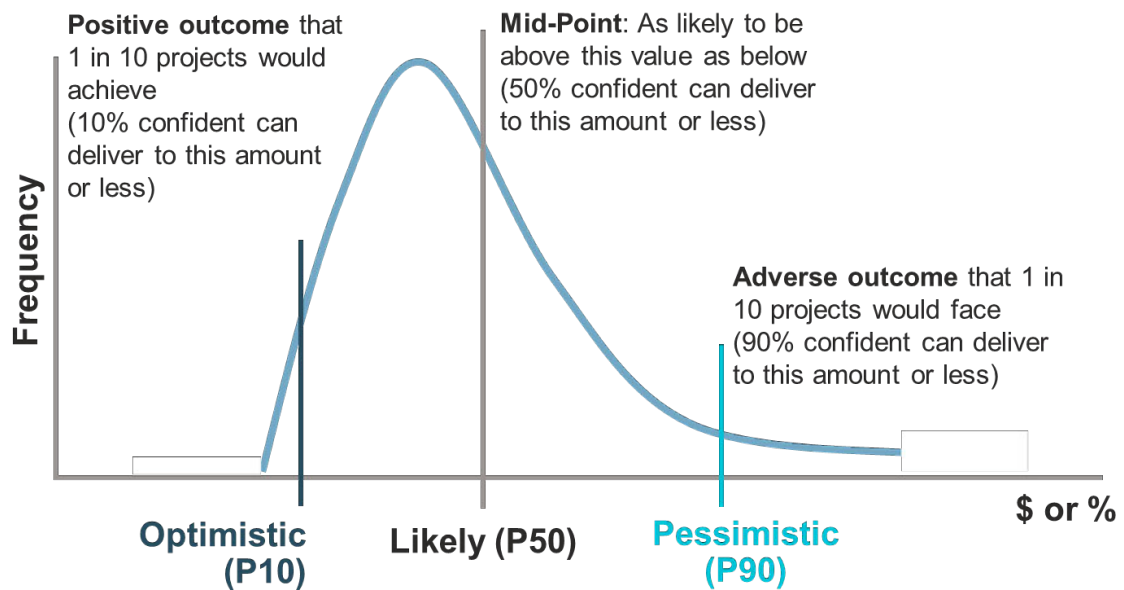
7. Quantitative Risk Analysis

Risk quantification first occurs during the project proposal phase to establish project contingency amounts.

7.1. Cost Risk Inputs

The cost risk analysis used the Wallumatta Project Risk Register as a basis for the cost risk analysis with key inputs outlined below:

Column	Purpose/Description
Optimistic case (P10)	Positive outcome that a project would achieve, i.e. 10% confidence the project would manage to address the risk to this amount or less.
Likely (P50)	The expected outcome that a project would achieve, i.e. 50% confidence the project would manage to address the risk to this amount or less.
Pessimistic case (P90)	Adverse outcome that a project would face, i.e. 90% confidence the project would manage to address the risk to this amount or less.
Probability (%)	A single percentage value from within the likelihood range established during the qualitative risk assessment.
\$ Assessment (Prob. x \$ P50)	The likelihood multiplied by the likely (P50) cost impact.



7.2. Cost Risk Analysis

A basic cost risk analysis was performed which involved multiplying the probability of an event occurring by the likely cost impact once an event occurs. The basic cost analysis was completed as part of the risk assessment workshops utilising actual costs provided by Ausgrid's Property and Estimating teams during or following a workshop. The Wallumatta STS Project Risk Register includes a column to outline the rationale used for assessing the P10, P50 and P90 cost impacts, supported by advice provided by Ausgrid's SMEs and the Development Manager to inform the quantitative assessment.

7.3. Risk Model and Monte Carlo

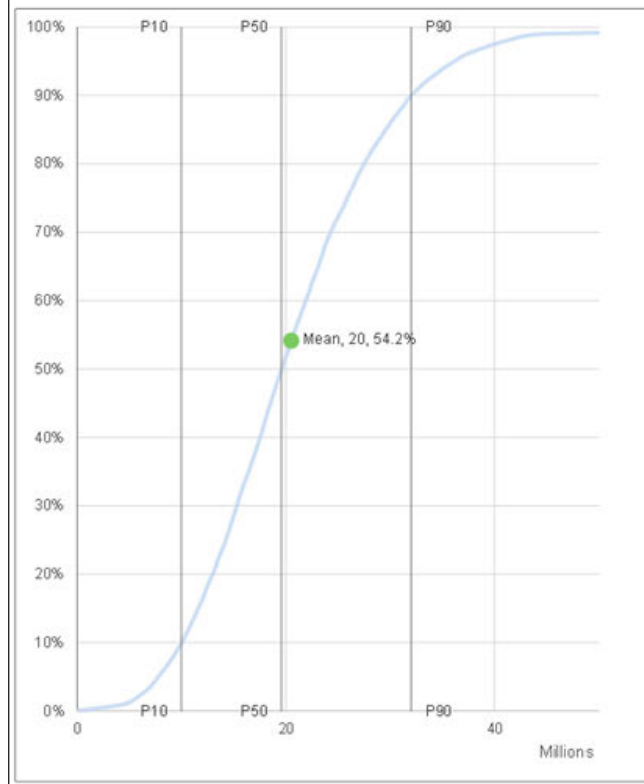
Following the cost risk analysis, the risk register was run through @Risk software, to determine the Monte Carlo outputs for the Wallumatta STS Project.

The summary chart from the cost risk analysis is set out below. This includes three sections, that provide a snapshot of key drivers of the outcomes.

MC Report: Wallumatta Subtransmission Substation

Report Run: 20-Sep-24

Chart A: Probabilistic Distribution and Values



Cost Estimate	137,450,319	
Mean	20,491,740	
Mean Confidence	54.2%	
Mean (% of Estimate)	14.9%	
Conf.	Value (\$)	% of Estimate
P5	7,730,139	5.62%
P10	9,990,039	7.27%
P20	12,965,845	9.43%
P30	15,274,619	11.11%
P40	17,510,499	12.74%
P50	19,577,053	14.24%
P60	21,889,103	15.93%
P70	24,271,760	17.66%
P80	27,482,925	19.99%
P90	32,009,671	23.29%
P95	36,153,102	26.30%
P99	44,588,240	32.44%

Chart B: Top 10 Expected / Mean Items

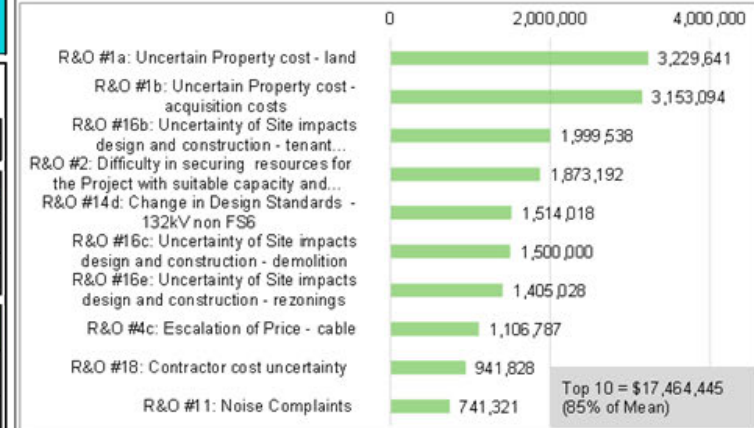


Chart C: Top 10 Sensitivity Items

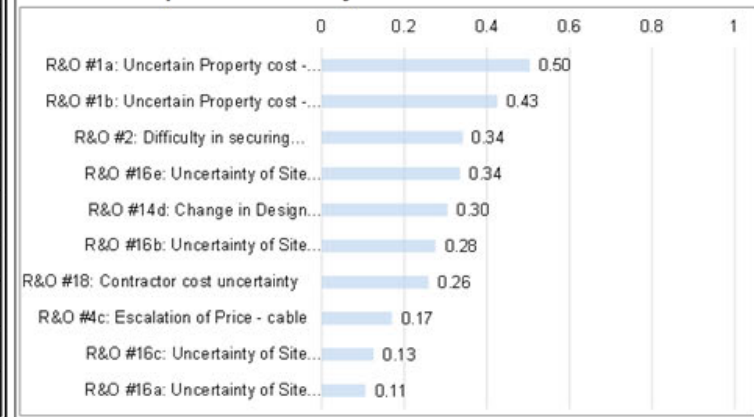


Chart A –shows Probabilistic Distribution and Values displays the percentage of confidence of being able to deliver the project of up to the corresponding contingency value; i.e. the higher the percentage of confidence, the higher the contingency value. For the Wallumatta STS Project, the Monte Carlo results show the \$18.9m derived from the cost risk analysis outlined in the Risk Register is equivalent to a 47% confidence level (P47), or 13.7% of the baseline cost estimate.

It should be noted that this is not P50 because it does not equal the mean. The probabilistic distribution is skewed towards the P10.

Chart B sets out the top 10 expected/ Mean Items shows the top 10 contributors to the mean value in a tornado chart format. The key risk items are discussed in further detail in section 6 below. Key observations from this dataset include that the following areas are notable contributors to the contingency value at the mean:

- Uncertain Property Cost
- Uncertainties around land
- Difficulty in securing resources
- Changes in design
- Escalation of price

Chart C displays the top 10 sensitivity items, which is based on the sensitivity co-efficient determined by the @Risk software package. These items demonstrate the inputs that management attention should be focused on; managing the outcome of these items can have a major influence on the final project costs. For the Wallumatta STS Project, they include:

- Uncertainties around land
- Difficulty in securing resources
- Changes in design
- Escalation of price
- Subcontractor cost uncertainty

8. New Wallumatta STS Project Risk Register

Date Last Reviewed: 20/9/2024																	Sum (\$Assessment) % Contract Value		\$18,857,128 13.7%											
RISK ASSESSMENT										RISK ASSESSMENT					TREATMENT ACTIONS					COST ANALYSIS										
Reference	Risk	Risk Description	Possible Causes (How or Why the risk might occur)	Consequences (The Impact on the Business Group or Wider Organisation is the risk event materialises)	Primary Consequence Category (The consequence category driving the risk rating)	Inherent Risk Rating	What are the controls in place to manage the risk?	Overall Control Effectiveness	Current Risk Consequence	Current Risk Likelihood	Current Risk Rating	Current Risk Rationale (Describe impact and frequency)	Treatment Actions	Process Owner / Responsible Manager	Due Date	Status	Cost rationale	Optimistic (P10)	Likely (P50)	Pessimistic (P90)	Probability (%)	Assessment (Probability x \$P90)								
1	Uncertain Property cost	Ausgrid fails to secure identified land for budgeted price and/or is required to purchase an alternative site	Land identified for Project is on open market with a number of interested purchasers. Requirement to find alternative land could impact land acquisition budget	Commencement of project and provision of additional load capacity delayed. Cost to purchase land for project exceeds budget	Finance	High	1	1 - Poor	Major	Possible	High	Ausgrid actively participating in real estate market, however cannot control outcome of land purchase in an open market	1	Project Manager	December 2024	Not yet commenced	Carry a modest contingency for land acquisition costs, which is reviewed monthly by Project Manager	Paying higher than market rate (20% over 3 years) on rate x total labour budget of \$43.5m	\$1,500,000	\$6,000,000	\$12,000,000	50%	\$3,000,000							
							2						Project Team have submitted an Internal Board Paper to gain approval to purchase land immediately, in order to commence investigations and finalise design						2	Not yet commenced	\$3,000,000	\$6,000,000	\$10,000,000	50%	\$3,000,000					
							3						Land acquisition budget is based on a valuation, not market interest						3	Not yet commenced										
2	Difficulty in securing resources for the Project with suitable capacity and capability	Ausgrid experiences difficulties in resourcing the project, both locally and finding resources with appropriate skills nationally	Currently running a 24/7 network with the same staff that will be used to build Project. Any issues in current network that require rectification will prevent resources from working on Project	Program impact	Finance	High	1	1 - Poor	Moderate	Possible	Medium	The controls in place reduce the likelihood of this risk occurring from a risk that will occur, to a risk that could occur at some point during the Project.	1	Project Manager	ongoing from Commencement Date	Not yet commenced	Project team to hold discussions monthly with internal workgroup managers, to ensure availability of resources for Project	Paying higher than market rates for labour	\$1,087,500	\$4,350,000	\$8,700,000	40%	\$1,740,000							
							2						Follow IMMO procedures for booking of resources						2	Not yet commenced										
							3						Event (eg storm) requires existing network maintenance and repairs leading to resources being unable to work on Project						3	Not yet commenced										
							4						Delays in commencement of Project impacting resource availability						4	Not yet commenced										
							5						External skills shortage in general construction market						5	Not yet commenced										
3	Non Standard Technical Design (change from published design)	Changes to technical elements through non standard technical design	Non-standard design arrangement of 132/33kV panels due to land purchased	larger and more costly design	Finance	Medium	1	1 - Poor	Moderate	Possible	Medium	Controls in place do not impact the likelihood or impact of this risk	1	Design team	December 2024	In progress	Ensure design team progress design as far as practicable up to purchase of land, and have resources available to finalise design upon acquisition	approx 2000 hours for standard design. civil and building design hours could be double and additional design management costs. Average daily rate for an engineer is \$304.05 total average daily rate @ hours = \$380/hr x 2000 hours =	\$180,000	\$380,000	\$780,000	30%	\$114,000							
							2						Difficult to control prior to land being purchased.						2	Not yet commenced										
							3						Street frontage with land acquired will impact design						3	Not yet commenced										
							4						Higher number of feeders than past STS designs						4	Not yet commenced										
4	Escalation of Price	Actual escalation varies from the amount of escalation allowed in the Price due to market conditions	Australia is currently in a high inflation economy	Pricing escalates significantly, beyond funding, resulting in a higher cost to complete, particularly copper	Finance	High	1	2 - Adequate	Minor	Possible	Medium	The controls in place reduce the likelihood of this risk occurring from a risk that will occur, to a risk that could occur at some point during the Project.	1	Procurement Team	ongoing from Commencement Date	Not yet commenced	Request longer validity periods from contractors where possible	Worst case is \$855,805.75 in escalation	\$210,000	\$425,000	\$855,806	40%	\$170,000							
							2						Program delays will impact validity periods and supply chain prices						2	Not yet commenced	\$100,000	\$200,000	\$400,000	40%	\$80,000					
							3						Escalation is not included in base estimate						3	Not yet commenced										
							4						International supply costs/ changing FOREX						4	Not yet commenced										
							5						Pricing is based on existing supply arrangements prior to purchase of land and commencement of construction						5	Not yet commenced										
							6						Switchegear and other supplier agreements off panel agreement and will need to be renegotiated						6	Not yet commenced										
5	Actual ground conditions differ from assumptions	There are unexpected or differing geotechnical conditions and waste classification/contamination or rock across the land which delay the project and impact the price	Unable to test Site due to land being on public market	Additional civil works required (deeper or wider foundations) resulting in additional time and cost	Finance	Medium	1	1 - Poor	Moderate	Possible	Medium	Controls in place do not impact the likelihood or impact of this risk	1	Property Team	December 2024	Not yet commenced	Undertake detailed geotechnical investigations as early as possible - possibly as a condition in the contract for sale of land during cooling off period	disposal of contaminated soil rate?? P10-10% P50-40% P90-80% Rate to dispose of contaminated soil is \$104/m3 based on 5000 sq m 500 cubic metres = \$52,000 rock removal and excavation P10-10% P50-40% P90-80% Average rate to remove rock is \$328.36/m3 based on 500m3 is \$164,180	\$52,300	\$209,200	\$418,400	35%	\$73,220							
							2						Actual conditions differ from assumptions of what is usually found on land in this area						2	Not yet commenced	\$16,418	\$65,672	\$131,344	35%	\$22,089					
							3						Requirement for different types of cable and panels from budget, delaying program and increasing the price						3	Not yet commenced										
							4						Construction and design pricing differs from budget due to ground conditions encountered						4	Not yet commenced										
							5						Design changes required as design is based on assumed geotechnical position resulting in increased costs from design consultants and Program Impact						5	Not yet commenced										
6	Impact of Aboriginal or Heritage artefacts	Unknown Aboriginal artefacts or heritage items are found on Site and remediation causes project delays and an increase in costs	Construction works suspended in parts of Site to remedy artefacts found as per Contract and legal requirements	Construction delayed	Time	Medium	1	1 - Poor	Moderate	Unlikely	Medium	Controls in place do not impact the likelihood or impact of this risk	1	Property Team	December 2024	Not yet commenced	Undertake assessment of construction area as early as possible, to determine likelihood of Aboriginal or cultural heritage items being within the construction corridor	Aboriginal artefacts or heritage items on site will result in large delays - covered under risk 15.												
							2						Initial investigations carried out in Macquarie Park area shows no flora or fauna issues.											2	Not yet commenced					
							3						Increased costs to respond to artefact found											3	Not yet commenced	\$50,000	\$100,000	\$200,000	10%	\$10,000

RISK ASSESSMENT											RISK ASSESSMENT				TREATMENT ACTIONS				COST ANALYSIS																							
Enter	Enter	Enter	Enter	Auto	Enter	Select	Select	Auto	Enter	Enter	Enter	Enter	Enter	Enter	Enter	Enter	Enter	Enter	Enter	Enter	Auto																					
Reference	Risk	Risk Description	Possible Causes (How or Why the risk might occur)	Consequence (The Impact on the Business Group or Wider Organisation is the risk event materialises)	Primary Consequence Category (The consequence category driving the risk rating)	Inherent Risk Rating	What are the controls in place to manage the risk?	Overall Control Effectiveness	Current Risk Consequence	Current Risk Likelihood	Current Risk Rating	Current Risk Rationale (Describe Impact and Frequency)	Treatment Actions	Process Owner / Responsible Manager	Due Date	Status	Cost rationale	Optimistic (P10)	Likely (P50)	Pessimistic (P90)	Probability (%)	\$Assessment (Probability x \$P90)																				
7	Procurement Delays	Delays to Procurement of key items, including those from overseas due to manufacturing and shipping delays	Long lead item timing is extended due to supply chain delays or resourcing issues/ factory capacity	Program impact as unable to install test/ commission equipment	Finance	High	1 Early Interfacing and price establishment with supply chain to secure factory slots and delivery dates	3 - Strong	Moderate	Possible	Medium	Current Controls will reduce both the consequence and likelihood of this risk occurring	1 Secure supply chain as early as possible	Procurement Team	Ongoing	In progress	Manufacturing times and shipping delays outside of Ausgrid control lead to additional storage and double handling fees as per below: Wilson's is \$100/wk storage per transformer x 3 and Double handling fee \$20k P10 = \$20k per item P50 = 3 month delay \$20k plus \$1000/wk P90 = 6 months \$20k plus \$1000/wk	\$60,000	\$72,000	\$88,000	50%	\$36,000																				
			Ports shutting down or being congested	Cost of alternative/different materials			2 Requested realistic delivery timeframes from contractors to program accurately						2 Undertake a thorough evaluation of preferred supplier resourcing plans to ensure they can meet, or better, the Program dates required	Procurement Team	Ongoing	In progress																										
			Customs delays and delays by freight forwarders (logistics)	Equipment arrives late			3 Procurement lead times are written into supply contracts to provide contractual rights for Ausgrid to enforce						3 Procurement Team to establish a process for reviewing order reports and tracking orders monthly to inform Program (with additional reporting by exception)	Procurement Team	Ongoing	Not yet commenced																										
			Damage to equipment during transport or loss of equipment during shipping	Additional storage impact for equipment that arrives outside of planned dates			4						4										Wilson's is \$1000/wk storage per persw/itche gear x 2 and Double handling fee \$20k P10 = \$20k per item P50 = 3 month delay \$20k plus \$1000/wk P90 = 6 months \$20k plus \$1000/wk	\$40,000	\$52,000	\$68,000	50%	\$26,000														
			Anti-dumping and equipment being quarantined	Additional fees (anti-dumping, storage, freight forwarding etc)			5						5										Wilson's is \$1000/wk storage per cables x 1 and Double handling fee \$20k P10 = \$20k per item P50 = 3 month delay \$20k plus \$1000/wk P90 = 6 months \$20k plus \$1000/wk	\$20,000	\$32,000	\$46,000	50%	\$16,000														
			Internal Ausgrid delegation/approval delays to place orders	Additional cost of re-purchasing equipment			6						6																													
			Protracted negotiations with suppliers, particularly international suppliers unfamiliar with market and NEC4 contract	International politics drive up prices and availability of materials			7						7																													
			Damage to or theft of equipment from Site				8						8																													
			International political environment could drive up prices (eg wars)				9						9																													
			Unable to lock in local manufacturing time slots as information needed by suppliers not available on time. Scarcity of resources and high national and international work volumes				10						10																													
			11				11						11																													
8	Health & Safety Event	Harm to resource(s) arising from Project activities	Unknown electricity found on Site	Serious personal injury or death	Health & Safety	High	1 Existing Ausgrid HDMS systems that personnel are familiar with in place to provide a basis for safety management	3 - Strong	Moderate	Possible	Medium	Ausgrid controls are strong for health and safety risks, reducing both the consequence and likelihood.	1 Ausgrid safety team to undertake robust monitoring of subcontractor compliance with safety requirements throughout delivery of works. Meet (or exceed) required KPIs regarding observations, risk assessments and toolbox talks.	Project Manager	Ongoing from Commencement	Not yet commenced	P50 = significant injury/ illness with hospitalisation (LT) No cost impact for a health and safety event																									
			Electrical induction/ working with electricity	Additional safety requirements for construction works imposed, impacting subcontractor costs and Program			2 Engaging major contractors as Principal Contractors (and require systems to be in place)						2 Ensure any resources that commence site work after initial mobilisation phase meet all induction requirements prior to commencing work on site	Project Manager	Ongoing from Commencement	Not yet commenced																										
			Plant and people interaction				3 Ausgrid will utilise contractors with 3rd party accredited safety systems						3																													
			New and additional work requirements may be implemented due to a recent safety event				4 Use Pegasus system to track the training and authorisation of all workers						4																													
							5 All impacted staff are trained in electrical induction controls and Ausgrid will undertake engineering analysis of every stage of construction to identify induction mitigations						5																													
							6 The contractor will have a dedicated safety advisor, who reports up to Ausgrid dedicated safety advisor to ensure alignment of safety and health procedures and management for the project						6																													
9	National Park approvals are late or more onerous than assumed	Uncertainty of National Parks approval times resulting in increased costs and delays - Ausgrid unable to proceed with works as planned through National Park areas	Approvals to commence work are delayed due to late National Parks approvals to work in Park	Program impact of working around National Park areas or waiting for approvals	Time	High	1 Early engagement with National Parks - Ausgrid carried out very similar work/approvals recently for Macquarie STS	2 - Adequate	Moderate	Possible	Medium	The controls in place reduce the consequence of this risk occurring from a risk that will occur, to a risk that could occur at some point during the Project.	1 Obtain Web GIS report for context and review Macquarie Park STS approval documents required.	Property Team	December 2024	Not yet commenced	prolongation costs included in risk 15 for unknown time impact of approvals. Stop mechanical excavation and replace with hand excavation: difference in rate is \$936/m ³ + \$417,840 P10 = 10% P50 = 40% P90 = 80%	\$41,784	\$167,136	\$334,272	35%	\$58,468																				
			Unable to gain timely or adequate access to undertake field studies	Increased costs incurred by Ausgrid			2						2																													
			Need for seasonal studies which have specific windows throughout the year to be completed				3						3																													
10	Unexpected environmental or cultural heritage conditions	Unexpected environmental incident prohibits Ausgrid from proceeding with works as planned.	Protected species found on Site	Potential Program impact as contract relief provisions unknown	Time	Medium	1 Difficult to control prior to land being purchased.	1 - Poor	Minor	Possible	Medium	Controls in place do not impact the likelihood or impact of this risk	1 Entire Site to be investigated by a biodiversity consultant to understand environmental and cultural heritage impacts within construction corridor	Property Team	December 2024	Not yet commenced	Delay impacts included in risk 15																									
			Unexpected or additional vegetation found on Site requiring clearing	REF required to be amended, Program impact			2 Initial investigations carried out in Macquarie Park area show no flora or fauna issues.						2 Undertake an Aboriginal cultural heritage assessment to identify all Aboriginal sites within work footprint	Property Team	December 2024	Not yet commenced																										
			Vibrations from large equipment	Reputational damage			3						3																													
							4						4																													
							5						5																													
							6						6																													

RISK ASSESSMENT							RISK ASSESSMENT					TREATMENT ACTIONS				COST ANALYSIS																
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Reference	Risk	Risk Description	Possible Causes (How or Why the risk might occur)	Consequences (The Impact on the Business Group or Wider Organisation is the risk event materialises)	Primary Consequence Category (The consequence category driving the risk rating)	Inherent Risk Rating	What are the controls in place to manage the risk?	Overall Control Effectiveness	Current Risk Consequence	Current Risk Likelihood	Current Risk Rating	Current Risk Rationale (Describe impact and frequency)	Treatment Actions	Process Owner / Responsible Manager	Due Date	Status	Cost rationale	Optimistic (P10)	Likely (P50)	Pessimistic (P90)	Probability (%)	Assessment (Probability x \$P90)										
11	Noise Complaints	Noise complaints arising from construction works or installed equipment	Landowner or other stakeholder complaints about construction noise as resources will access easements through privately owned land	Reputational damage	Finance	Medium	1 Noise generating works will be confined to hours stated in Construction Noise Guidelines	1 - Poor	Minor	Likely	Medium	Controls in place do not impact the likelihood or impact of this risk	1 Ausgrid to undertake noise studies of both pre-construction and post construction noise levels	Project Manager	December 2024	Not yet commenced	Role for Noise wall and fire wall is \$34,32,044m. Based on Noise & Fire Wall Length 10m H x 12m L x 5 Walls = \$2,059,224 P10 = 1 wall P50 = 3 walls P90 = 5 walls	\$411,845	\$1,235,534	\$2,059,224	60%	\$741,320										
			Installed equipment is noisy	Management time to address complaints			2 Difficult to control prior to land being purchased						2 Consider noise mitigation in design?	Design Team	December 2024	Not yet commenced																
				Additional resources/works required to mitigate noisy equipment which will impact price			3 Project Manager for each scope/subcontract to monitor subcontractors to ensure compliance with noise requirements throughout construction phase						Project Manager	December 2024	Not yet commenced																	
							4 Hold discussions with landowners from purchase regarding potential noise near their properties						Project Manager	December 2024	Not yet commenced																	
							5 EPA guidelines allow construction to take place 5.5 days per week.						Project Manager	December 2024	Not yet commenced																	
							6 Consider amended layout: Transformers on outside then driveway and building is new on design layout to meet noise issues see risk 3 (add this as a consequence)						Design Team	December 2024	Not yet commenced																	
12	IR Issues	Industrial relations issues including blockades, protests and legal challenges occur	Widespread protests regarding Project or labour conditions	Work stopped - Program impact or labour conditions	Finance	High	1 Cannot implement controls prior to EBA negotiation	1 - Poor	Moderate	Likely	High	Controls in place do not impact the likelihood or impact of this risk	1 Early engagement with Ausgrid's established unions, to outline the combined internal/external delivery methodology and long term benefit of Project	Legal	December 2024	Not yet commenced	Allowance in estimate for IR issues, no contingency required.															
			EBA due to be re-negotiated during Project timeframe	Personal injury			2 Agreements and healthy working relationships with Unions						Legal	December 2024	Not yet commenced																	
			Negative side-effects from other projects in area	Community impact and reputational damage			3 Allowance in Estimate for IR issues throughout construction phase						Project Manager	December 2024	Not yet commenced																	
			Cancelled work during EBA negotiations/ industrial action, causing a backlog	Negative media coverage			4																									
				Increased costs incurred			5																									
13	Disaffected Stakeholders	Stakeholders are disaffected	Design requires 6km of 132kV cable route to go through residential properties - concerns, complaints, rectification requirements	Additional access and rectification costs	Finance	High	1 Ausgrid EMF levels always comply with ARPASNA guidelines	2 - Adequate	Minor	Likely	Medium	The controls in place reduce the impact of this risk.	1 Utilise notification, communication, traffic control procedures as relevant	Project Manager	December 2024	Not yet commenced	453m per metre x additional route length if for example cable needs to run along Tw in road, not Cox's Road - 250m of P10 - 0m P50 - 250m P90 - 500m Asphalt restoration is \$110/m2. Based on need to resurface entire road width for 600m, not just lane disturbed there would be an area of 4160m2 as P90 P10 = 100m P50 = 400m P90 = 600m	\$0	\$114,750	\$229,500	20%	\$22,950										
			Businesses in construction area disruption	results in a longer route being designed- extra cost per km plus redesign costs, delays due to new consultation for affected parties.			2 Macquarie Park STS project lessons learned to guide dealings with stakeholders						2 Develop engagement plan for local community	Project Manager	December 2024	Not yet commenced																
			National Parks approval required and onerous obligations included in childcare centres potentially being demolished on land	Reputational damage - complaints, negative media coverage			3 Develop complaints management system, with appropriate points of escalation						Project Manager	December 2024	Not yet commenced																	
				Loss of community trust			4 Community consultation						Project Manager	December 2024	Not yet commenced																	
				Community strikes delaying works			5																									
				Additional Ausgrid resources required to manage issues			6																									
				consider underpinning			7																									
14	Change in Design Standards	Unexpected, mandated change in standards occurs that Project must meet	Evolving industry and requirements, including Ausgrid Standards (eg SFS)	Increased costs incurred to meet standards	Finance	Medium	1 Ausgrid are currently embedded in industry, and have an experienced and dedicated design team for this Project	1 - Poor	Moderate	Possible	Medium	The controls in place reduce the impact of this risk.	1 Draw down on Project contingency to cover additional costs	Project Manager	December 2024	Not yet commenced	Additional design hours for additional design (eg ventilation design might double) generally 3 weeks time - additional time would be 6 weeks (back to back with suppliers etc) Average design rate is \$380/hour x 240 hours	\$45,000	\$61,200	\$165,000	25%	\$22,800										
			Changes are made by parties outside of Project Teams sphere of influence or control	Additional time to deliver project			2 Revisit regulatory determination to incorporate additional costs associated with change if possible						Project Manager	December 2024	Not yet commenced	Increase in civil construction due to larger floor plan: 132kV increased floor size if equipment changes - allow 10% per 132kV switch room. 33kV increased floor size if equipment changes - allow 20% per 33kV switch room \$10990,291m2 Total Area would increase to 795m2 from 723m2 (increase of 72m2. Worst Case is \$10,950.29 x 72m2 = \$	\$68,526	\$304,210	\$788,421	25%	\$68,553											
			Changes made that must be complied with				3																									
							4																									
							5																									
							6																									

RISK ASSESSMENT										RISK ASSESSMENT					TREATMENT ACTIONS				COST ANALYSIS				
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Reference	Risk	Risk Description	Possible Causes (How or Why the risk might occur)	Consequences (The Impact on the Business Group or Wider Organisation is the risk event materialises)	Primary Consequence Category (The consequence category driving the risk rating)	Inherent Risk Rating	Controls (What are the controls in place to manage the risk?)	Overall Control Effectiveness	Current Risk Consequence	Current Risk Likelihood	Current Risk Rating	Current Risk Rationale (Describe impact and frequency)	Treatment Actions	Process Owner / Responsible Manager	Due Date	Status	Cost rationale	Optimistic (P10)	Likely (P50)	Pessimistic (P90)	Probability (%)	Assessment (Probability x \$P90)	
15	Additional Project Management resources required	Additional costs incurred due to delays to construction that cannot be controlled by Ausgrid (including Project team, Legal costs, Environmental costs, consultants, travel and accommodation)	Delay occurs requiring additional Project Management resources to bring project back on track.	Additional costs incurred	Finance	High	1 Ausgrid have an experienced and dedicated project team for the Project 2 Subcontract terms for most subcontractors agreed, or based on risk position previously agreed	2 - Adequate	Moderate	Likely	High	The controls in place reduce the impact of this risk.	1 Consideration of appropriate level of risk to pass down to subcontractors 2 Early purchase of land (prior to Project approval) allowing early commencement of land related enquiries	Commercial Legal Property Team	December 2024 December 2024	In progress In progress	Average daily cost for all construction and commissioning roles is \$6463.26 x 5 days = \$32315/w week P10 = 2 weeks P50 = 6 weeks P90 = 20 weeks	\$64,630	\$103,800	\$646,300	70%	\$135,723	
16	Uncertainty of site impacts design and construction	properly purchased causes design and construction cost increase	Insufficient Cable egress (length of street frontage or easements) Existing tenants with leases Assumed greenfield site but in reality has utilities or other easements with assets to be relocated Joint purchase of a larger block of land adds additional design requirements or additional BCA requirements Existing buildings to be demolished Sloping ground to be levelled out/retaining walls Possible re-zoning impacting land values Actual property purchased results in longer 132kV route Earthing buffer requirements may change from anticipated	Cable ratings decrease- cannot connect as many customers Higher construction cost due to non standard design or backfill or tunnel purchase additional easement in neighbouring properties Cost to pay out lease demolitions- cost and time impact set back requirements add to the size of land required to build substation, increasing cost fire or noise requirements- additional cost shared driveway or security- additional cost lack of buffer zone - additional noise control and fire resistance required additional design costs	Finance	High	1 Engage with designers prior to finalisation of land purchase 2 Carry a modest contingency throughout Project, which is reviewed monthly by Project Manager 3 Cable egress will be addressed by liaising with Design team prior to finalisation of purchase 4 Building code-8m setback for fire compliance- cost of land lost? Joint landowner might request non oil bus or fire walls or earthgrid or emf or extra security access to the site \$0.5-1mtl 5 Likely demolition cost of \$200/m2 for a 3 level building, equating to circa 33m subject to building size 6 Topography could have both time and cost impacts. Subject to the extent of the site, additional earth works programme of 3months could apply. Assuming a clean site, bulk earthworks costings of \$75/m3 would apply multiplied by 2710m3. Total cost 7 The stage costings have been established, reducing the likelihood of further large-scale changes. Any further changes could have a property value impact of +/- 20%, potentially equating to \$10mt, subject to the	1 - Poor	Major	Possible	High	The controls in place do not impact the likelihood or impact of this risk.	1 Carry a modest contingency throughout Project, which is reviewed monthly by Project Manager 2 Cable egress will be addressed by liaising with Design team prior to finalisation of purchase	Project Manager Design Team	Ongoing from Commencement December 2024	Not yet commenced Not yet commenced	Cable egress changes from scope. Longer cable runs. Purchasing easements (eg 6m x 100m @ \$4250/sq metre = \$2.5m) in neighbouring properties to address cable egress. Potential need to pay-out existing leases and compensate tenants which could result in a further cost of \$2-\$5mt, subject to the number of tenancies. Likely relocation of utilities to be priced in at \$100/m, subject to completion as part of broader civil works. Rather than relocate, would move construction footprint P10=0 P50=50m P90=100m Building code-8m setback for fire compliance- cost of land lost? Joint landowner might request non oil bus or fire walls or earthgrid or emf or extra security access to the site \$0.5-1mtl Likely demolition cost of \$200/m2 for a 3 level building, equating to circa 33m subject to building size Topography could have both time and cost impacts. Subject to the extent of the site, additional earth works programme of 3months could apply. Assuming a clean site, bulk earthworks costings of \$75/m3 would apply multiplied by 2710m3. Total cost The stage costings have been established, reducing the likelihood of further large-scale changes. Any further changes could have a property value impact of +/- 20%, potentially equating to \$10mt, subject to the	\$500,000 \$1,000,000 \$0 \$200,000 \$1,000,000 \$254,100 \$2,000,000	\$1,250,000 \$2,000,000 \$5,000 \$500,000 \$2,000,000 \$1,016,400 \$5,000,000	\$2,500,000 \$5,000,000 \$10,000 \$1,000,000 \$3,000,000 \$2,032,800 \$10,000,000	50% 75% 50% 50%	\$825,000 \$1,500,000 \$2,500 \$250,000 \$1,500,000 \$508,200 \$1,250,000	
17	Planning Approval costs exceed budget	Additional planning approval requirements imposed over those allowed for in budget	RMS restrictions on major roads Set backs from main road Threatened flora or fauna found on the site 132kV feeder passes through National park. There are stricter approval requirements Changes to legislation or WHS	night works or reduced hours of access- extra cost and delay protection zones, relocation costs or delays in purchasing a new site Delays or re-route, may require a site aboriginal observer/ranger on site. Possible changes to approval conditions or safety procedures	Finance	Medium	1 Ausgrid is not always obliged to follow other developmental setbacks and may be able to challenge depending on the circumstances. Review ES Act powers. The EPBA Act provides the overall framework for EIAs and planning approvals in NSW (refer to section 1.5). Ausgrid must also comply with the Planning Code. A number of other Commonwealth and NSW laws also apply for issues such as heritage, threatened species, conservation areas and marine vegetation (refer to Table 1.2-1). These Acts may require other approvals. 2 Refer to Macquarie Park STD for guidance on planning approval requirements 3 Early engagement with Approval bodies to ensure a smooth approval process	2 - Adequate	Minor	Possible	Medium	The controls in place reduce the likelihood of this risk occurring from a risk that will occur, to a risk that could occur at some point during the Project.	1 Ausgrid not required to comply with Council setbacks. 2 Refer to Macquarie Park STD for guidance on planning approval requirements 3 Early engagement with Approval bodies to ensure a smooth approval process	Project Manager Project Manager Project Manager	Ongoing from Commencement Ongoing December 2024	Not yet commenced In progress Not yet commenced	Setback covered in risk 1						
18	Contractor cost uncertainty	changes to contracted costs post law and... (variations, other claims, insolvency etc)	Subcontract conditions allow for subcontractors to claim delay costs for a number of delay events	Additional costs incurred for payment of compensable delays	Finance	High	1 Ausgrid have an experienced and dedicated project team for the Project 2 Subcontract terms for most subcontractors agreed through panel agreements, or based on risk position previously agreed	2 - Adequate	Minor	Possible	Medium	The controls in place reduce the likelihood of this risk occurring from a risk that will occur, to a risk that could occur at some point during the Project.	1 Project Managers to review construction progress at least monthly, to ensure subcontractors don't lag behind 2 Engage in collaborative behaviour to encourage early identification of issues/ delays and ability to address quickly and efficiently	Project Manager Project Manager	Ongoing from Commencement Ongoing from Commencement	Not yet commenced Not yet commenced	Contracted Services budget is \$83,790,852 P10=2% P50=5% P90=10% Range on Contracted services amount. Labour uncertainty covered in risk 2 and escalation of materials costed in risk 4.	\$1,675,817	\$4,189,543	\$8,379,085	20%	\$837,909	

Organisational Risk Matrix										
Opportunity / Upside					Likelihood	Threat / Downside				
5	4	3	2	1		1	2	3	4	5
Significant	Major	Moderate	Minor	Insignificant		Insignificant	Minor	Moderate	Major	Significant
<p>Assessment to consider both Ausgrid and industry past events</p>					Almost Certain >=80%					
					Likely >= 50% up to 80%					
					Possible >= 20% up to 50%					
					Unlikely >= 5% up to 20%					
					Rare <5%					
Opportunity / Upside					Consequence	Threat / Downside				
<ul style="list-style-type: none"> Sustained performance and high efficiency of workforce. Optimisation of resources; or Increase in discretionary effort and reduction of dissonance across workforce. Talent used more effectively. Targeted innovation and creativity. Motivational needs met with limited engagement. 					Health & Safety	<ul style="list-style-type: none"> Injury or illness requiring first aid only Injury or illness requiring medical treatment from a medical professional, beyond first aid Significant injury or illness requiring hospitalisation with no long-term effects. Lost time Injury Permanent Total disabling work-related injury or illness to one person; or Significant injury or illness requiring hospitalisation with long-term impairment Permanent Total disabling work-related injury or illness to more than one person; or Loss of life 				
<ul style="list-style-type: none"> Innovative product or service change for all customers and/or customer segments; or Material enhancement to brand reputation; or Customer or Stakeholder major financial improvement. Changed process enabling different experience for many customers or multiple customer segments; or Material enhancement to brand reputation; or Customer or Stakeholder financial improvement. Noticeable enhanced improvement to many customers or multiple segments; or Noticeable enhancement to brand reputation. Small Improvement for many customers or single customer segment. No noticeable improvement for customers. 					Customer & Stakeholder (Reputation)	<ul style="list-style-type: none"> Complaint to Site staff Complaint to Ausgrid Local or regional negative media, complaint to regulator Major negative Media, Ministerial intervention Sustained Media, Legal Action, Embarrassed in front of regulator 				
<ul style="list-style-type: none"> Sustained improvement to organisational culture and/or capability arrangements, and/or ability to attract talent Substantial improvement to organisational culture and/or capability arrangements, and/or ability to attract talent Noticeable improvement to organisational culture and/or capability arrangements, and/or ability to attract talent Small improvement to organisational culture and/or capability arrangements and/or ability to attract talent Minimal improvement to organisational culture and/or capability arrangements and/or ability to attract talent 					Employee	<ul style="list-style-type: none"> An event the impact of which can be absorbed as part of normal activity (Leadership involvement); or Minimal impact on staff morale, leading to very low adverse turnover and vacancy rates. An event, the impact of which can be absorbed but some additional management effort is required (Head of BU involvement over more than a month); or Minimal impact on staff morale, leading to low adverse turnover and vacancy rates, and negative employee engagement impacts limited to isolated teams. An event, the impact of which requires broader management effort is required (EGM level of involvement, or more than one Head of BU over more than a month); or Some impact on staff morale, leading to increased adverse turnover and vacancy rates and negative employee engagement impacting multiple teams. An event which requires extensive management effort but can be survived (ELT involvement over more than a month); or Negative impact on staff morale, leading to industrial unrest and high adverse turnover and vacancy rates, including key management positions. Negative employee engagement across the entire organisation. An event which requires extensive management effort or could potentially lead to termination of an Executive, CEO or Director; or Major negative impact on staff morale, leading to very high adverse turnover and vacancy rates, prolonged industrial unrest/disputation and productivity loss impacting operations. Significant, persistent reduction in employee engagement across entire organisation. 				
<ul style="list-style-type: none"> Increase in revenue/reduction in opex of >\$35 million (>3% of FY23 EBITDA / >35 bps FFO/debt) EV growth of >\$2 billion (>8%) Increase in revenue/reduction in opex of \$15 million - \$35 million (~3% of FY23 EBITDA / + 35 bps FFO/debt) EV growth of \$1-\$2 billion (~4% - 8%) Increase in revenue/reduction in opex of \$5 million to <\$15 million (~1% of FY23 EBITDA / 15 bps FFO/debt) EV growth of \$0.5-\$1 billion (~2%-4%) Increase in revenue/reduction in opex of \$1 million to <\$5 million (~0.5% of FY23 EBITDA / 5 bps FFO/debt) EV growth of \$0.1-\$0.5 billion (~0.5%-2%) Increase in revenue/reduction in opex of <\$1 million (~0.1% of FY23 EBITDA / +1 bps FFO/debt) EV growth of <\$0.1 billion (~0.5%) 					Finance	<ul style="list-style-type: none"> 1% of Project Value 2% of Project Value 5% of Project Value 10% of Project Value 15% of Project Value 				
<ul style="list-style-type: none"> Legal or regulatory body changes legislation, regulation, issues an award in favour. Legal or regulatory body provides positive findings publicly. Legal or regulatory body provides positive finding to industry. Legal or regulatory body expresses positive view of approach. Legal or regulatory body neutral. 					Compliance / Regulatory	<ul style="list-style-type: none"> Identification of potential non compliance; or Unlikely to result in a dispute initiated by a third party; or Indication of interest from regulator. Non compliance issued/acknowledged subject to comment; or Material chance of an unlitigated dispute initiated by a third party; or Investigation and/or specific reporting required. Material non compliance issued/acknowledged and monitoring from applicable regulator; or Litigated dispute expected to lead to compensation payable by Ausgrid of < \$1 million; or Fine between \$10K to <\$100K Material non compliance issued/acknowledged and subject to enforcement action and/or prohibition notices; or Litigated dispute expected to lead to compensation payable by Ausgrid from \$1 million to <\$5 million; or Fine between \$100K to \$1M Material non compliance issued and subject to prosecution, restricted operating licence or accreditation, prison; or Litigated dispute expected to lead to compensation payable by Ausgrid of more than \$5 million; or Personal liability experienced 				
Equal to or greater than 6 months About 4 months About 2 months About 1 month Greater than a week					Time	Up to 1 week About a week About 1 month About 2 months equal to or greater than 6 months				
<ul style="list-style-type: none"> Significant long term, wide spread improvement to ecosystem or cultural heritage. Major, long term improvement affecting ecosystem or cultural heritage. Moderate improvement affecting ecosystem or cultural heritage. Minor improvement to ecosystem or cultural heritage over a limited area. Limited localised improvement to an area with low biological or physical environment (ecosystem) or cultural heritage significance 					Environment	<ul style="list-style-type: none"> Short Term Damage Limited localised damage to a low sensitivity receiver; and/or Remediation <\$10k Limited but medium term damage Material localised damage to the environment. No material impacts to a highly sensitive receiver; and/or Remediation \$10k to <\$100k Major but recoverable Ecological damage Extensive damage to the environment or material localised impacts to a highly sensitive receiver; and/or Remediation \$100k to <\$1M Heavy Ecological damage, Costly restoration Extensive localised damage to a highly sensitive receiver; and/or Remediation \$1M to <\$10M Permanent widespread ecological damage Extensive long term, wide spread impairment of highly sensitive receivers; and/or Remediation >\$10M 				

(*) Highly sensitive receiver: Will depend on the type of impact and may include wetlands, waterways, threatened species, Aboriginal heritage, State/National/World heritage, general public

bps = basis points

Date: January 2023



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