Business Case: Mount Barker Depot

2025-30 Regulatory Proposal
Property Portfolio

Supporting document 5.11.12

January 2024

SA Power Networks

Empowering South Australia

Contents

Glossary

Acronym / term	Definition
AER	Australian Energy Regulator
AMP	Asset Management Plan
BAU	Business as Usual
BSO	Business Services Officer
CAB	Community Advisory Board
Capex	Capital expenditure
CBA	Cost Benefit Analysis
CBD	Central Business District
CCP	Consumer Consultation Panel
EAM	Engineering and Asset Management
EV	Electric Vehicles
EWP	Elevated Work Platforms
FY	Financial Year
LV	Low Voltage
MCA	Multi Criteria Analysis
Mt	Mount
NPV	Net Present Value
OH&S	Occupational Health and Safety
Opex	Operating expenditure
PV	Photovoltaic
RCP	Regulatory Control Period
Repex	Replacement Expenditure
SACOSS	South Australian Council of Social Services
SMAS	Substation Maintenance Ancillary Services

1. About this document

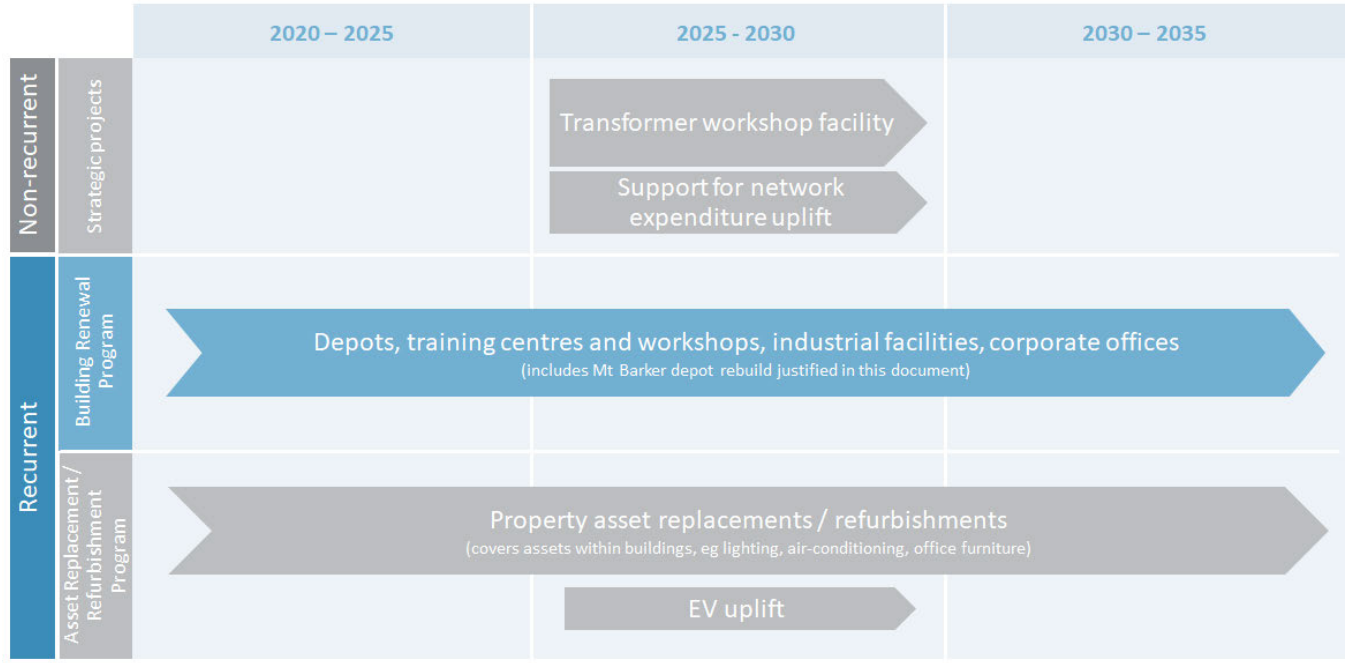
1.1 Purpose and context

This business case supports SA Power Networks' regulatory proposal to the Australian Energy Regulator (**AER**) for the 2025-30 Regulatory Control Period (**RCP**).

It describes the drivers for investment in the Mount (**Mt**) Barker Depot facility, analyses the potential options to address the identified need and sets out the preferred investment option. The options assessment is based on cost benefit analysis (**CBA**) supplemented by multi criteria analysis (**MCA**).

The investment in the Mt Barker Depot forms part of our recurrent Building Renewal Program (Figure 1). Therefore, the expenditure set out in the preferred option of this business case has been included in the preferred option of the Recurrent property expenditure business case[1], which covers the entire program of the ongoing investments in the property portfolio.

Figure 1: Property expenditure classification and investment roadmap



1.2 Expenditure category

- Non-network capex: property (recurrent)

1.3 Related documents

Table 1: Related documents

Ref	Title	Author	Version / date
	Property Condition Assessment Report 31 Alexandrina Rd, Mount Barker, SA	KPMG Property & Environmental Services Pty Ltd	31 August 2022
5.11.1	Property Expenditure Forecasting Methodology	SA Power Networks	January 2024
5.11.7	Recurrent property expenditure business case	SA Power Networks	January 2024
5.2.5	Resourcing Plan for Delivering the Network Program	SA Power Networks	January 2024

[1] SA Power Networks, *Recurrent property expenditure business case*, August 2023.

2. Executive summary

The Mt Barker Depot was built in 1965 and is one of our operational works depot sites. It serves Mt Barker, the surrounding Adelaide Hills region and the south-eastern part of the Fleurieu Peninsula. The depot is located 33km from the Adelaide city centre and is situated within a densely populated residential area. The region is experiencing rapid residential development growth.

The Mt Barker Depot is identified as a site with High importance within the property portfolio, due to its role in disaster recovery activities and supply restoration in difficult terrain, and the very high bushfire risk danger within the Adelaide Hills region.

To meet the operational and customer needs arising from current and forecast growth in demand for regulated distribution network services in the region, the depot serving this region needs to be of sufficient size, appropriately located, and have sufficient capacity for the storage of Network equipment and facilities for field crews.

There are three drivers underpinning the case for investment into the Mt Barker Depot:

1. capacity constraints: the current depot facilities are at full capacity, stretching their ability to meet the current service need;
2. inability to accommodate future growth: the current depot site is not capable of supporting the expansion in plant, equipment and personnel required to meet forecast growth in service need for the area; and
3. community safety: the location of the current depot site presents an increasing safety risk to the community through the encroachment of surrounding residential developments.

Three options were considered that would address the identified need. These were compared against the business-as-usual (**BAU**) base case, to determine the most appropriate option for investment. The BAU base case is not considered as a credible or sustainable option for investment because it does not address the identified need and will exacerbate the operational constraints.

The three options were:

- Option 1: Rebuild on the same site, which requires demolition of the existing depot buildings, replacement of these with new buildings and site layout configuration changes;
- Option 2: Build at the new site, which involves sale of the existing site, purchase of an outer suburban site and construction of new buildings and hardstand area;[2] and
- Option 3: Lease a new site, which requires leasing an appropriate site in Mt Barker area to eliminate the existing site constraints.

The options were assessed via a CBA, which considered monetised costs and benefits, supplemented by an MCA which assessed costs and benefits that were challenging to quantify, and a risk assessment. The timeframe for assessment used for the CBA was 30 years commencing in July 2025.

The results of the assessment are presented in Table 2. The costs and benefits shown in Table 2 are incremental to the BAU base case.

[2] Hardstand is a heavy-duty bitumen or concrete pavement to facilitate heavy vehicle movements and storage of plant and equipment

Table 2: Summary of assessment ($m, June 2022 real, 30-year period)[3]

Option	RCP 2025-2030 Costs		30-year costs		30-year benefits	30-year NPV[4]	MCA Score	Risk Level	Rank
	Capex	Opex	Capex	Opex					
Business as Usual (BAU) Base Case	-	-	-	-	-	-	-	High	Not Credible
Option 1: Rebuild at the same site	$10.6m	$1.3m	$10.6m	$1.3m	$9.4m	-$4.9m	14/30	Medium	2
Option 2: Build at a new site	$14.6m	$0.0m	$14.6m	$0.0m	$32.8m	$6.6m	**21/30**	**Medium**	**1**
Option 3: Lease at a new site	$1.6m	$9.8m	$1.6m	$59.0m	$24.7m	-$18.0m	19/30	Medium	3

We also engaged extensively with our stakeholders, customers and community to inform our assessment and seek views on investment options. We conducted a multi-stage engagement program to develop our expenditure forecasts over five iterations over two years with our customers, in a transparent, objective and outcomes-focused manner. We asked customers to help us determine what services and programs we should deliver, and what investments we should make during the 2025-30 RCP.

The recommendation through stakeholder engagement was that we should invest in a proactive program of building renewals to address the identified needs that are not being met by the BAU approach. In continuing a BAU approach of operating and maintaining the existing Mt Barker Depot facility, we forecast the site will have insufficient capacity to manage current work volumes and an inability to meet the needs of customers with the expansion of the network through increased residential development in coming years.

Further, continuing to operate this depot in this location is presenting an increased safety risk to the community given its proximity to residences.[5] We engaged with customers on how to respond to the need, and they expect, as reflected in the People's Panel recommendations that we proceed with the option recommended in this business case.

Recommendation

Based on the results of the assessment, the **recommended preferred option is *Option 2: Build at the new site*.** Option 2 is superior to the other options both from the comparison of the Net Present Value (**NPV**) results in the CBA and is strengthened further through the MCA rating. This is noting that:

- Option 2 represents the highest incremental NPV of $6.6 million. Comparison of the NPV's for each option shows that building the Mt Barker Depot at a new site under Option 2 is more efficient than Option 1: Rebuild on same site and Option 3: lease a site; and
- Option 2 also delivers the greatest non-quantified benefits with a rating of 21 out of 30 from the MCA. The most important benefits are lowered congestion and pedestrian risks and improved outage response time by ensuring a depot is adequately sized to meet forecast growth in the region so field staff can readily access stored equipment and operate in a more efficient manner without mobilising from multiple locations.

Table 3 shows Option 2 with incremental costs and benefits.

[3] Totals presented in tables throughout this document may not exactly match the sums of individual figures due to rounding. The costs and benefits are incremental to the BAU base case.

[4] Discounted at 4.05% discount rate over 10 years

[5] SA Power Networks 2025-30 Draft Regulatory Proposal - Part B p.43

Table 3: Option 2 costs and benefits by cost type and RCP, incremental to the BAU base case ($m, June 2022 real, undiscounted)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total 2025 - 30	2030-31	2031-32	2032-33	2033-34	2034-35	Total 2030-35	Total 2025 to 2055
Benefits (Capex)	$1.2m	$0.0m	$0.0m	$4.1m	$2.5m	**$7.9m**	$0.1m	$0.2m	$0.2m	$0.1m	$0.1m	**$0.7m**	**$13.6m**
Benefits (Opex)	$0.0m	$0.0m	$0.0m	$0.6m	$0.6m	**$1.3m**	$0.6m	$0.6m	$0.6m	$0.6m	$0.6m	**$3.1m**	**$16.9m**
Benefits (Customer Benefit)	$0.0m	$0.0m	$0.0m	$0.0m	$0.1m	**$0.1m**	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	**$0.5m**	**$2.3m**
Costs (Capex)	$0.0m	$0.0m	$9.4m	$5.3m	$0.0m	**$14.6m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$14.6m**
Costs (Opex)	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$0.0m**
Net benefits	**$1.2m**	**$0.0m**	**-$9.4m**	**-$0.5m**	**$3.3m**	**-$5.4m**	**$0.8m**	**$0.9m**	**$0.9m**	**$0.8m**	**$0.9m**	**$4.3m**	**$18.2m**

In summary, Option 2: Build on new site, represents the preferred solution to maintain the capabilities and services provided by the Mt Barker Depot in alignment with current and future requirements. A project cost of **$14.6 million** (real $ June 2022) is recommended to be approved to build a new Mt Barker Depot at a new site.

3. Background

3.1 Scope

3.1.1 In scope

The scope of this business case encompasses the following:

- capital works and maintenance of the entire Mt Barker Depot Site, including buildings, hardstand areas, fit-outs, vehicle parking areas and fencing; and
- construction, project management and relocation costs of the facility where applicable

Note: The total capital investment costs for the preferred option for Mt Barker Depot have been included in the total costs displayed in **Supporting Document 5.11.7 – Recurrent Property Portfolio** business case.

3.1.2 Out of scope

- Depot Improvement works to accommodate additional requirements from Network program uplift covered in **Supporting Document 5.2.5 - Resourcing Plan for Delivering the Network Program**.
- Expenditure uplift for property infrastructure at Mt Barker site to support Electric Vehicle (**EV**) charging.

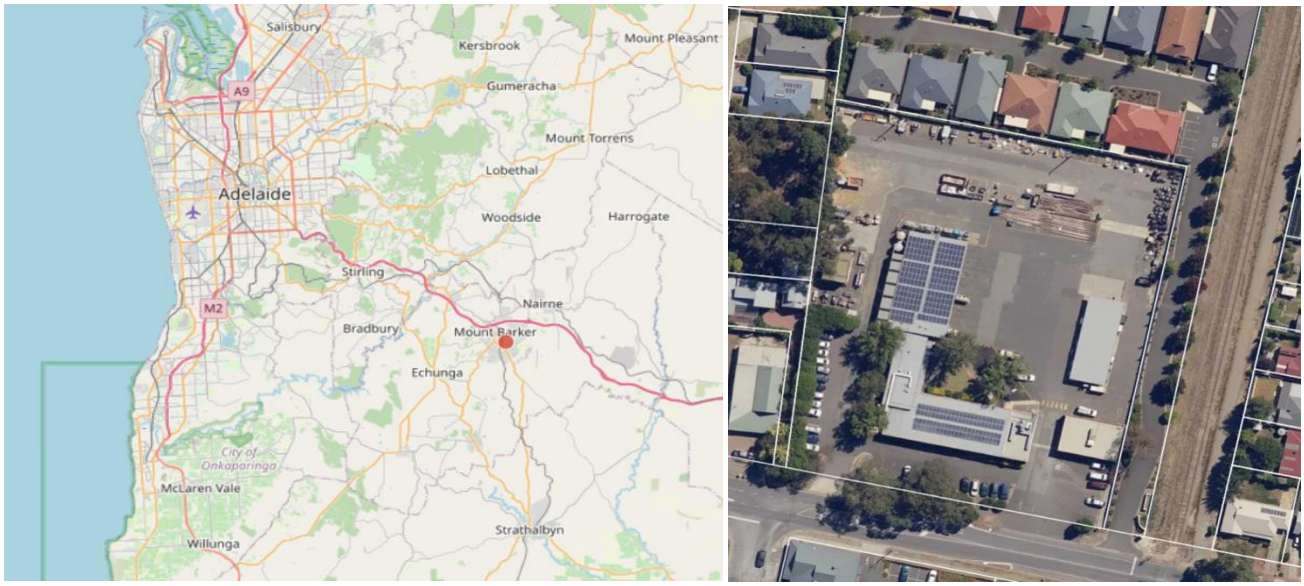
3.2 The property

3.2.1 Overview of the Mount Barker Site

The Mt Barker Depot is our operational works facility located about 33km from the City of Adelaide and is situated centrally in the township and surrounded by a densely populated residential area. The depot services Mt Barker, the surrounding Adelaide Hills, and as far south-east as Lake Alexandrina and the northern part of the Fleurieu Peninsula. It encompasses one of the highest bushfire risk zones in South Australia.

The eastern part of the Adelaide Hills region is experiencing rapid population growth and expanding residential development. The land was acquired, and the building constructed in 1965 when the depot was located in a sparsely populated area of the township.

Figure 2: Map showing proximity of the depot to Adelaide CBD and aerial view of the property



An overview of the Mt Barker Depot is presented in Table 4.

Table 4: Mt Barker property overview

Key property characteristics	Values			
Street and Other Addresses	31 Alexandrina Rd, Mount Barker, SA			
Property Title:	D51523AL2 CT5667/122			
Site Area:	9,535 m² Total			
Site Configuration:	The site is rectangular in shape with open space around the lot boundary for parking and general storage of building materials.			
Site Access:	The site is accessible via two entrances off Alexandrina Road on the southern boundary.			
Site Topography:	The site and surrounding natural topography are considered to be generally flat with nearby hills.			
Site Acquired:	Circa 1965			
Building Summary	Name	Building Area (m^2)	Levels	Year of Construction
	Building 1 – Main office building & Workshop/Store	1,260	1	1965
	Building 2 – Lineman's office	170	1	1965
	Total	1,430		
Hard Stand Area:	7,400 m² (approximate)			
Parking Spaces:	37 bays inside lot boundary; 16 undercover internally			

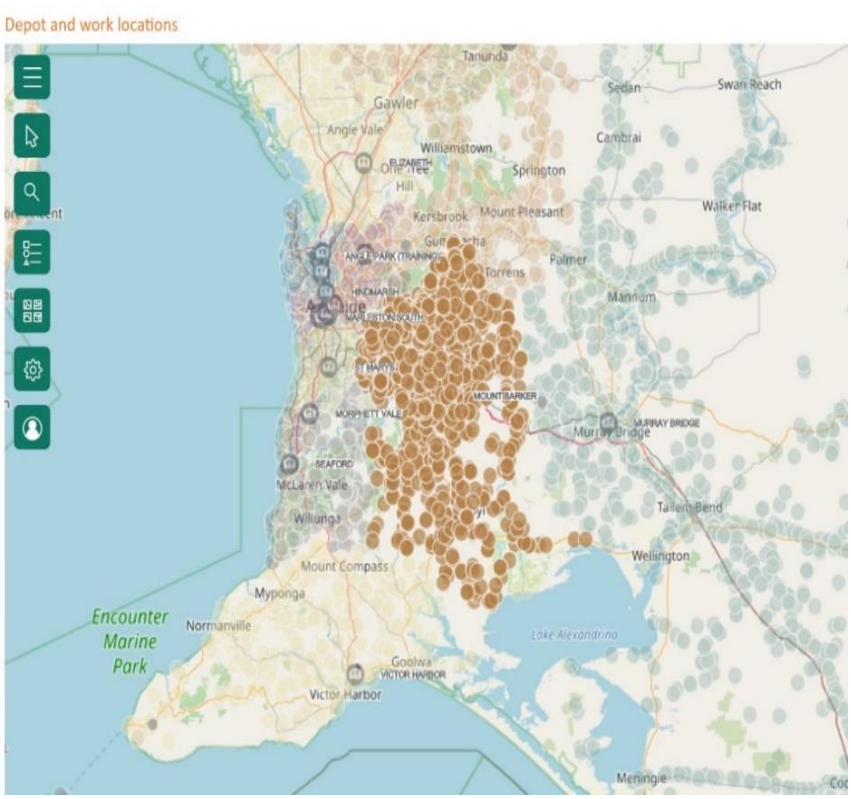
3.3 Our performance to date

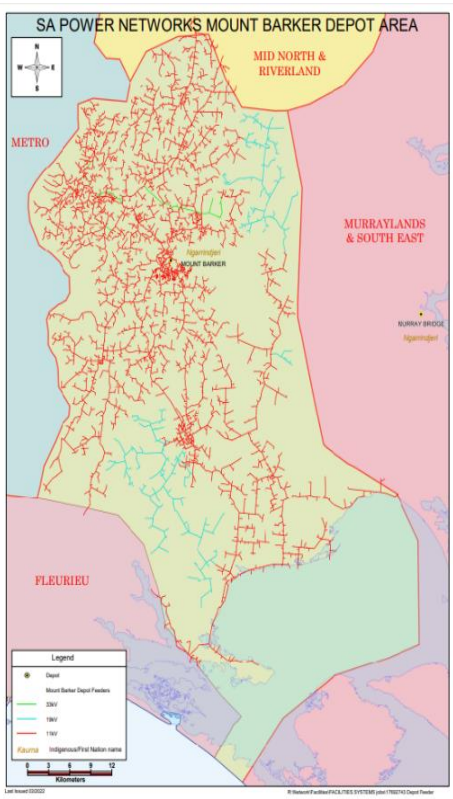
The Mt Barker Depot performs an important range of Network field work related functions and currently supports 50 field and office support staff members working in Network Customer Solutions, Network, Logistics, and Electrical Services. To service the growing customer base in the area, the number of staff at the Mt Barker Depot is expected to grow by 20 additional staff during the 2025-30 RCP.

The Mt Barker Depot services a population of 45,500. South Australian government population forecasts indicate that the population of the region will grow by around 34% between 2023 and 2036[6]. It is the fastest growing area in South Australia. The Adelaide Hills region that the depot covers is an area of about 600 km^2, has complex topography and dense mature trees and vegetation. The Mt Barker Depot serves a wider area than the Mt Barker local government area and extends to Lake Alexandrina and the northern part of the Fleurieu Peninsula. Figure 3 shows the journeys undertaken by Mt Barker Field crews and the Network Feeder area serviced by Mt Barker Depot.

[6] https://forecast.id.com.au/mount-barker Population Forecast Mount Barker District Council data accessed April 2023

Figure 3: Maps of journeys undertaken by Mt Barker field crews and the customer and distribution feeder locations serviced by Mt Barker Depot





3.3.1 The Functions of the Mt Barker Depot

The main types of support services that Mt Barker Depot provides to our electricity network and customers include the following.

Network construction and maintenance

The depot is responsible for constructing and maintaining the physical infrastructure of the distribution network, including power lines, transformers, substations, and other equipment. To support the forecast growth of the Mt Barker and Adelaide Hills area, we project that we will need to construct additional substations and associated electrical feeder extensions in the region over the next 30 years. This work will be carried out by crews from the Mt Barker depot. Maintenance activities involve ongoing inspections, repairs, and upgrades to ensure that the network remains in good working order.

Emergency response

The depot is responsible for responding to emergency situations such as power outages, equipment failures, storms, bushfires and natural disasters. This involves mobilising crews and equipment to the affected area, coordinating with other SA Power Networks depots and external agencies as necessary, and communicating with customers to provide updates and information.

Fault location, isolation, and supply restoration

When faults occur in the part of an electricity network that it serves, the Mt Barker Depot is responsible for identifying the location of the fault and making supply restoration as quickly as possible. This can involve using specialised equipment such as fault locators and cable testers, as well as conducting visual inspections and other diagnostic tests to isolate the fault.

Vehicle maintenance and repair

A fleet of vehicles, including trucks, Elevated Work Platforms (**EWP**'s), vans, and other commercial vehicles, require regular maintenance and repair, undertaken at the depot site. This can include routine services such as oil changes, tyre rotations, brake inspections, and high voltage testing. The difficult terrain in the Adelaide Hills region also requires a larger proportion of 4x4 vehicles and EWP's.

Equipment maintenance and repair

In addition to vehicles, Mt Barker Depot has a range of specialised equipment, such as power tools, generators and safety equipment, that require regular maintenance and repair to ensure safe and efficient operation.

Material handling and storage

Mt Barker Depot has a range of network material spares and project supplies, such as electrical components and hardware, that need to be stored and handled safely and efficiently. This involves tasks such as inventory management, stock replenishment, and order picking.

3.4 Drivers for change

Current operations at the depot are fully constrained by the size of the site and the residential zone around the depot, providing no possibility of expansion beyond the current site boundary. These limitations of the existing Mt Barker Depot reduce the possibility of expanding operations to meet current and future service needs, limit the ability to be as efficient as possible and as such are the key drivers for change.

3.3.1 Capacity constraints

The current depot facilities at the Mt Barker site are at full capacity, stretching their ability to meet the current service need. There is no additional space in the offices or warehouse buildings and outdoor storage areas. There are also vehicle storage and manoeuvrability restrictions arising from the utilisation of external areas and the lack of additional vehicle spaces. The site does not have a female change-room facility, which needs to be remedied in the short-medium term with planned increases to gender diversity in the business.

There are safety issues arising from staff crossing the heavy vehicle circulation and material handling paths. Loading and unloading semi-trailers is problematic. The site adjoins a developing residential interface which restricts it from any expansion as shown in Figure 4. In addition, the buildings and hardstand areas at the site are deteriorating in condition and likely to need significant capital investment in the medium to long term should the business remain at this location.

Figure 4: Site limitations

Source: Nearmaps, PlanSA, KPMG Analysis

3.3.2 Inability to accommodate future growth

The current depot site is not capable of supporting the expansion required to meet forecast growth in customer service need. Significant growth is forecast for the region and we will be responsible for building and maintaining the associated electricity distribution network required to support the increased residential and industrial electricity demand. The population is expected to continue to grow rapidly, driving increases in electricity demand in the region.

Expansion will be required for the depot to satisfy the growing customer profile of the region as the current site is not capable of supporting the increased activities, potentially putting at risk high levels of reliable electricity service to new residents.

If the depot cannot meet the demand, this may have several negative impacts on our customers, including:

- reliability of supply: the most immediate impact is the time required to resolve power outages, which disrupt daily life, impact residential and businesses operations, and may pose safety hazards;
- speed of response during Catastrophic fire danger days; and
- reduced customer satisfaction: due to poorer reliability and higher response times, negatively impacting on our reputation and potentially leading to regulatory service penalties.

3.3.3 Community safety

The location of the current depot site presents an increasing safety risk to the community.

The Mt Barker Depot is located within a residential zoned area. When the depot was constructed in the 1965, the extent of the township was much smaller, and the depot had few neighbouring residences. Daily heavy vehicle traffic movements in and out of the depot contribute to increased traffic congestion and present a safety risk for the public through heavy vehicle movements in a now built-up residential area. As the Mt Barker residential suburbs extend around the depot, its current location will become increasingly inappropriate in the future.

3.5 Alignment with building industry practices

Following AER feedback on our proposed Property expenditure in our Regulatory Proposal for the 2020-25 RCP, we worked extensively over the last three years to establish a clear strategic direction and achieve an uplift in building asset lifecycle management maturity. This included extensive asset data collection, detailed condition reports and improvements to the operational planning, maintenance and management of our properties by applying building industry standards that have proven to facilitate efficient and cost-effective management of long-lived property assets such as buildings in utilities and other industries. This improvement responds directly to concerns of the AER and its Consumer Challenge Panel (**CCP**) in the 2020-25 Distribution Determination. We engaged KPMG Property and Environmental Services and KPMG Asset Management experts to work with us to develop a structured, data-driven and sustainable framework for property management, aligned with the building and construction industry.

KMPG's Engineering and Asset Management (**EAM**) team, with input from our operations team, developed a suite of asset management tools, documentation, and frameworks to baseline, and then advance the existing property portfolio in alignment with industry standards and regulations.[7]

In December 2021, KPMG completed a detailed property asset condition assessment of the Mt Barker Depot facility's buildings, systems and external surfaces, which includes the main office building, workshop/store, and lineman's office, hardstand and storage areas. Mt Barker Depot facility's buildings were rated in the condition assessment as largely being in good to fair condition.[8] If the capacity constraints were not the main driver, the business would rebuild the facility under the new proactive asset replacement, building refurbishment and maintenance regime. Continuing to invest into a site that will struggle to meet the needs of the future network and customers is not considered a prudent or commercially viable option.

In March 2023, we also commissioned KPMG to conduct a criticality analysis on all our property assets, their locality, systems and subsystems to assist us in the prioritisation of buildings and assets, determination of priority ranking for maintenance tasks, scheduling, and forecasting, identification of risk mitigation strategies, and guidance of budget allocation so critical assets are given high priority for upgrades or replacement.

The Mt Barker Depot was identified as a site with High importance within the property portfolio, due to disaster recovery activities, supply restoration in difficult terrain and the very high bushfire risk danger within the Adelaide Hills region. The overall criticality score was assessed as above average with a High rating.

[7] Buildings were inspected in accordance with AS 4349-2007 Inspection of Buildings, the Institute of Public Works Engineering Australia (IPWEA) Building Condition and Performance Assessment Guidelines and Royal Institution of Chartered Surveyors (RICS) relevant guidance. Also, all building services assets are assessed with respect to their respective Australian Standard.

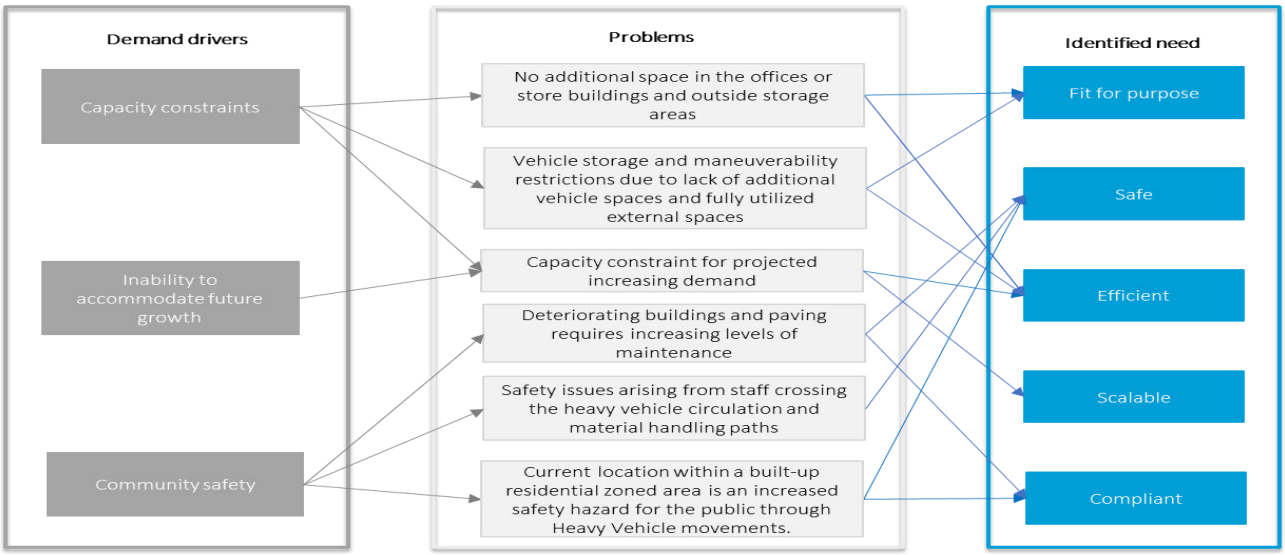
[8] The condition rating scale and condition explanation can be found in Appendix A.

4. The identified need

Ensuring the safe and efficient operation of the depot is essential to meeting our obligations to maintain a reliable electricity supply for residential and commercial customers in the area.

To meet the operational and customer needs arising from the current and forecast growth in demand for regulated distribution network services in the region, the depot serving this region needs to be of sufficient size, appropriately located, and have sufficient capacity for the storage of Network equipment and facilities for field crews. Sufficient capacity of the depot is critical to ensuring a safe and efficient electricity supply to our customers that will continue to be reliable into the foreseeable future. Figure 5 maps out the key demand drivers (as outlined in Section 3.4) to the current issues and the requirements driving the need for investment.

Figure 5: Identified need logic mapping



To address the key issues underpinned by the demand drivers, the following requirements have been identified:

- **fit-for-purpose:** we require a fit-for-purpose facility to efficiently manage the workflow to support high levels of customer reliability and connection outcomes in the supply of electricity;
- **safe:** safety of our employees, visitors and community members at the depot is crucial. Improved safety features must be installed to mitigate the present safety risks and meet future safety standards;
- **promote operational efficiency:** upgrading the building's infrastructure, such as electrical, plumbing, hard stand areas and the Network equipment used, including the site layout for moving vehicles is required to improve efficiency;
- **scalable**: as the demand for network installation, repairs and maintenance has grown in the past and is expected to grow in the future, the Depot needs to increase its capacity output; and
- **compliant:** the depot must comply with current regulations and building codes, such as those related to fire safety, disability access, structural integrity, and toilet and changing room amenities.

To address these requirements, an efficient and prudent investment must be made as the following risks of not progressing with the investment are not acceptable:

- ongoing expenditure in infrastructure that is no longer completely fit for purpose;
- increased likelihood of unexpected maintenance expenditure to repair failing assets;
- increased risk of public road accidents from heavy vehicle movements in the built-up residential areas; and
- risks to employee well-being, health, and safety.

5. Comparison of options

The options presented in this section are the credible options that were compared to a counterfactual BAU base case. The options represent substantially different commercially and technically credible options. Credible options are those that meet the following criteria:

- addresses the identified need;
- is commercially prudent expenditure and technically feasible; and
- can be implemented in sufficient time to meet the identified need.

5.1 The options considered

The assessed options that are relevant and credible to address the identified need are summarised in Table 5. Each credible option is further described in the subsequent chapters of this business case.

The BAU base case:

- Includes works required to continue operations at the current Mt Barker site, continuing existing maintenance and asset replacement activities.
- Serves as a comparator for each option; and
- is not considered an economically viable option for investment because as it does not address the identified need.

Table 5: Summary of options considered

Option	Description
The base case (BAU)	The BAU base case reflects the continued operation of the current Mt Barker Depot under previous management practices (Statutory Maintenance and Break-Fix Repairs and Replacements) supplemented with the minimum work and supplemental storage required to continue feasible operations for Standard Control Services.
Alternative options considered	
Option 1: Rebuild on the same site	This option is to rebuild the Mt Barker Depot on the same location, utilising the same footprint where the current depot is situated. The current depot would be demolished and unable to provide support to network support services during the reconstruction period. This option will require leasing of a site for 12-18 months to use for storage and temporary offices during construction. The construction of the project would take place over 10-12 months during 2027/28 and 2028/29.
Option 2: Build at a new site	This option is to construct a new Mt Barker Depot facility at a more suitable location outside the densely populated residential area, to allow for a larger space and more modern surrounding facilities. The existing Mt Barker Depot would continue to provide network support services in parallel during the construction of the new depot. This option involves divestment of the existing site and buildings, purchase of an outer suburban site and construction of new buildings and storage areas. The construction of the project would take place over 10-12 months during 2027/28 and 2028/29.
Option 3: Lease new site	This option is to permanently vacate and divest the current Mt Barker depot site. Instead, the depot would be relocated to a leased site owned by a third party. SA Power Networks would install facilities and make improvements to ensure site security.

5.2 Option investigated but deemed non-credible

The option to delay construction was considered but not progressed. This option involves delaying any strategic investment in the existing Mt Barker Depot until the 2030-35 RCP. This option was not considered credible due to the risks involved in not meeting the identified need for the Mt Barker Depot during the 2025-30 RCP.

Delaying construction to the next RCP would result in operational inefficiencies from lease of additional external storage space, potentially mobilising from multiple locations, and an increased level of risk for staff safety via congestion and inadequate vehicle flow on the site and risk of accidents to the public from access and egress from the site within the residential zone There is also a risk of cost escalation by delaying construction to the next RCP.

5.3 Approach to the evaluation of options

To evaluate the credible options listed in Table 5, an assessment is used that considers both qualitative and quantitative factors to provide a more complete understanding of potential outcomes of each option. This includes the non-monetised or qualitative factors and the results from the CBA for the quantified factors to ensure all factors are appropriately considered when selecting a recommended option for an investment decision. This approach is summarised in Table 6.

Table 6: Summary of the approach used for the evaluation of options

	Evaluation Measure	Description	Assessment Approach
Costs, benefits	Monetary	Impacts that can be reasonably identified and valued in monetary terms. This includes both direct construction costs and indirect costs that can be quantified in monetary terms, in addition to benefits that have a measurable monetary impact.	CBA of credible options.
	Qualitative	Impacts are known to exist but are not valued in monetary terms due to the absence of market signals or opportunity cost estimates.	Some risk quantifications in CBA and MCA of credible options. Risk assessment.

Costs and benefits are assessed on an incremental basis relative to the BAU base case. The modelling period in the CBA is 30 years for each option. The NPV represents the net value of future cash flows after accounting for the time value of money and the initial investment. The option that generates the highest NPV (or least negative NPV) delivers the greatest net monetised benefit (or lowest net cost) relative to the base case.

A summary of the costs and benefits evaluated is presented in Table 7.

Table 7: Summary of benefits and costs considered by option

Benefits	Description	Option 1	Option 2	Option 3
Avoided maintenance cost	Avoided maintenance cost is the money saved by avoiding the need for planned maintenance activities on an asset. It represents the saving that the given option delivers with reference to the cost that would have been incurred for the maintenance activities if the BAU base case was followed.	Y	Y	Y
Avoided works	Avoided works refers to the costs saved by avoiding the need for construction or renovation activities that would be required as part of the BAU base case.	Y	Y	Y
Avoided reactive cost	Avoided reactive cost refers to the cost that is saved by avoiding or reducing the need for reactive repairs and maintenance activities on assets or equipment.	Y	Y	Y

Benefits	Description	Option 1	Option 2	Option 3
Avoided depot asset replacement cost	Avoided depot asset replacement cost is the cost to replace assets, due to their condition and recommended lifecycle age, at the current depot that are avoided.	Y	Y	Y
Land sale	Land sale benefit is the expected market value of the land if it were to be sold.	N	Y	Y
Terminal value improved buildings	The value of the built structures that remains at the end of the period of analysis	Y	Y	N
Terminal value of land	The value of land that remains in use.	Y	Y	N
Avoided storage cost	The expected monetary benefit gained from not having to invest in additional storage facilities, equipment, or services to accommodate inventory or assets.		Y	Y
Land cost	The cost of purchasing land to build the depot.	N	Y	N
Lease land and buildings	Lease land and building refers to the cost per annum for renting third party owned land to provide depot services. It may be a temporary accommodation requirement during construction on-site, or permanent lease site.	Y	N	Y
Relocation cost	Relocation costs refers to the cost in moving staff and equipment to another site.	Y	Y	Y
Project construction cost	Project capital cost refers to the construction cost of building the depot, including design, project management and fit out.	Y	Y	N
Site improvements and security	Site improvements and security are required to address identified vulnerabilities, such as break-ins and theft of copper.	N	N	Y
Demolition cost	The cost of removing structures and hardstand in order to re-construct.	Y	N	N

The risk assessment adopts our Corporate Risk Management Framework. Key risks are identified for the base case and each alternative option. Consequences and likelihood of each identified risk are evaluated based on the impact to SA Power Networks and our customers as shown in Appendix D.

The unquantifiable costs and benefits are evaluated via the risk assessment and MCA. The MCA uses ratings to evaluate the options. Several cost impacts were removed from the cost analysis and included in the MCA instead, due to a lack of information to support robust cost estimates. These cost impacts relate to improvements in reliability and Occupational health and safety (**OH&S**), as well as electricity efficiency savings.[9]

MCA relies on qualitative judgment to assess the options against the criteria. A consistent rating scale is applied to all MCA criteria. There is no double counting between MCA and CBA because the criteria included in the MCA and the CBA are mutually exclusive.

The MCA criteria used in this business case align with the relevant parts of our Strategic Plan and consider deliverability and social or economic benefits attributable to electricity customers. There are six MCA criteria and each criterion is rated on a scale from 1 (little to no attainment of the criterion) to 5 (very high attainment of the criterion). The scores against each of the six criteria are then summed up to give the total MCA score. Therefore, the higher the MCA score the better the option is according to the MCA assessment, with the highest possible score being 30/30. The details of the MCA criteria and rating scale are provided in Appendix B.

[9] For guidance on inclusion of intangible benefits as supplementary information to quantified analysis see AER (2019) "Non-network ICT Capex Assessment Approach" p.20

5.4 Analysis summary and recommended option

To evaluate the credible options listed in Table 5, an assessment is used to consider both quantitative and unquantifiable factors to provide a complete understanding of the potential outcomes of each option. This has been outlined in detail further on in this report.

5.5.1 Options assessment results

This section sets out the assessment of each of the credible options considered for the Mt Barker Depot. The assessment describes each option and provides the results of the CBA, MCA and risk assessment. A summary of the scores from the assessment aprpoach including the results of the CBA, MCA and risk for each option are listed in Table 8. Note that the MCA does not change the result obtained under the CBA, where Option 2 has the highest incremental NPV.

Table 8: Summary of Assessment ($m, June 2022 real, 30-year period)[10]

Option	RCP 2025-2030 Costs		30-year costs		30-year benefits	30-year NPV[11]	MCA Score[12]	Risk Level[13]	Rank
	Capex	Opex	Capex	Opex					
Business as Usual (BAU) Base Case	-	-	-	-	-	-	-	High	Not Credible
Option 1: Rebuild at the same site	$10.6m	$1.3m	$10.6m	$1.3m	$9.4m	-$4.9m	14/30	Medium	2
Option 2: Build at a new site	$14.6m	$0.0m	$14.6m	$0.0m	$32.8m	$6.6m	**21/30**	**Medium**	**1**
Option 3: Lease at a new site	$1.6m	$9.8m	$1.6m	$59.0m	$24.7m	-$18.0m	19/30	Medium	3

Table 9: Options summary

Credible Option	Summary of advantages and disadvantages
Option 1: Rebuild at the same site	✓ Avoided costs in depot asset replacement, maintenance costs, works, reactive costs and storage costs × Capex costs × Lease costs of alternative land during construction
Option 2: Build at a new site	✓ Avoided costs in depot asset replacement, maintenance costs, works, reactive costs and storage costs × Capex and land purchase costs ✓ Sale of current Mt Barker land and buildings
Option 3: Lease site	× Likely to be located well outside Mt Barker area due to lack of large, commercial sites for lease, increasing travel times for crews

10 Note: Costs and benefits in this table are undiscounted.

11 Discounted at 4.05% discount rate over 10 years.

12 The MCA score indicates the extent of meeting the qualitative criteria for the unquantified costs and benefits set out in Appendix B (the higher the MCA score the better the attainment to the criteria is).

13 The overall residual risk level for each option in accordance with SA Power Networks Risk Framework (Appendix D).

5.5.2 Recommended option

The option with the most favourable result is **Option 2: Build at the new site** because it represents the highest value, with an assessed rank of 1, noting that:

- under the CBA Option 2 has the highest incremental NPV of $6.6m million. The next best option is Option 1 with incremental NPV of $-4.9 million; and
- under the MCA Option 2 has the highest 21/30. The next best option is Option 1 which is 2 points lower.

The BAU base case is not an option for investment because it does not address the identified need.

Under the CBA approach, Options 2 is superior to other options which holds true across sensitivity and scenarios tested as reported in Section 5.5. This option provides the greatest long-term benefits by addressing the identified need in the most efficient and prudent way. Customers broadly support investment to build Mt Barker Depot at a new site as described below.

The incremental undiscounted costs and benefits of Option 2 are presented in Section 5.8.

From both an MCA and CBA perspective, Option 2 is the preferred option and delivers the best outcome for the business and customers. Additionally, it effectively addresses the fit-for-purpose, efficiency, safety and future growth requirements for the Mt Barker Depot.

5.5 Scenario and sensitivity analysis

This section presents the sensitivity and scenario analysis results in testing the robustness of the CBA under different key projection inputs and assumptions. A number of key cost and benefit parameters can be varied in the model. The worst case and best case scenarios were also tested for a combination of key variables to show the possible low and high range of the option performance. Table 10 shows the key variables tested and values adopted under each test. The default settings used in this report are the core case scenario.

Table 10: Sensitivity testing parameters

	Core case	Parameter value tested
Annual increase in reactive costs	3.25%	+/-25%
Project construction cost (FY23)	$11,000,000	+25%, +50%
Off-site lease cost (FY23)	$150	+/-25%
Discount rate	4.05%	3%, 3.5%, 4.5% and 5%
Worst case	As above	• -25% on annual increase in reactive maintenance • +50% construction costs • -25% on off-site lease cost • 5% discount rate
Best case scenario	As above	• +25% on annual increase in reactive maintenance • Core case construction costs • +25% on off-site lease cost • 3% discount rate

The sensitivity testing results are presented in Table 11. The outcome suggests that the preference of Option 2 over other options holds true across sensitivity and scenarios tested. This provides confidence that the preferred option is the most prudent option for the project, under changes to key variables.

Table 11: Sensitivity testing results ($m, June 2022 real, 30-year period, 4.05% discount rate where discount rate is not stated)

	Option 1 NPV	Option 2 NPV	Option 3 NPV
Core case	-$4.9m	$6.6m	-$18.0m
Annual increase in reactive maintenance +25%	-$4.8m	$6.7m	-$17.9m
Annual increase in reactive maintenance -25%	-$5.0m	$6.6m	-$18.1m
Construction cost +25%	-$6.9m	$4.6m	-$18.0m
Construction cost +50%	-$9.0m	$2.6m	-$18.0m
Off-site lease cost +25%	-$5.2m	$8.9m	-$24.3m
Off-site lease cost -25%	-$4.6m	$4.3m	-$11.7m
Discount rate at 3%	-$4.6m	$8.7m	-$21.2m
Discount rate at 3.5%	-$4.8m	$7.7m	-$19.6m
Discount rate at 4.5%	-$5.0m	$5.9m	-$16.8m
Discount rate at 5%	-$5.1m	$5.1m	-$15.6m
Worst case scenario	-$8.9m	-$1.0m	-$10.0m
Best case scenario	-$4.8m	$11.5m	-$28.2m

5.6 The base case: BAU – reflecting operational demand

This section describes the base case used to analyse the relative merits of the proposed project options. The base case is represented as a BAU option, reflecting the continued operation of the current Mt Barker Depot under existing management practices of break-fix repairs and replacements and statutory maintenance supplemented with the minimum work required to continue operations. This includes the costs of securing the minimum land needed to meet operational demand. The options in the next sections are compared to the BAU base case. The BAU base case is not an option for investment because it does not address the identified need.

Costs and risks associated with the BAU base case remain.

5.6.1 Costs and benefits for the BAU Base Case

The most significant costs associated with continuing BAU operations at the Mount Barker Depot at its current site are leasing costs for storage to meet service needs. Our current capacity restraints will not allow the depot to meet the rapidly growing regional demand. Not increasing storage capacity would require regular trips from the Mount Barker to the nearest large depots in Murray Bridge (Approx 32 mins drive) or St Marys (Approx 36 mins drive). This has the potential to significantly deteriorate service levels in the Adelaide Hills well below customer expectations. With elevated risks on catastrophic fire days and unplanned outage events.

Calculated in Table 12 below, we have modelled the 4465m^2 of improved leased land beginning in the 2029/30 regulatory year. This aligns with our modelled requirements to fulfill service demand throughout the lifespan of a new depot, and it would be most efficiently acquired in a single instance.

Table 12: Leasing cost calculation (Per Annum $2022)

Item	Value
Per annum cost of improved leased land in Mount Barker	$141/m^2
Land Required to meet service needs	4465m^2
Total cost pa.	$627,400

We quantified the risk cost posed by heavy vehicle movements through the residential zone. Historical data indicates the Mount Barker region has averaged approximately one pedestrian fatality on local roads a year for the past 10 years[14]. We model our share of this risk to be 2%, this is while we don't represent this amount of vehicle traffic, our vehicles are disproportionately heavy vehicles which carry significantly higher risks than standard passenger vehicles. This risk cost is calculated in Table 13 below.

Table 13: Risk cost of operating depot in residential zone (Per Annum $2022)

Item	Value
Disability weighted value of life	$5.3m
Average deaths per year	1
SAPN Exposure to risk	2%
Total risk cost pa.	$106,000

Our current site doesn't have modernised security systems, such as electrified fences that our new depots are built with, we have historically found non-network sites with these improvements experience no or negligible theft. On average, our non-network sites lose approximately $250,000 pa through theft, leaving an individual sites risk exposure at $8,000 pa, we have included this in our modelling.

The remaining costs arise from repairs to the existing Mt Barker Depot in its current location to continue its operation throughout the modelling period. The costs are depot asset replacement, maintenance, works and reactive costs.

As mentioned, the BAU is treated as the base measured against project options. Therefore, the CBA result of the BAU Base Case is an NPV of zero. The costs and benefits are presented below in Table 14 in absolute terms. The BAU base case is shown to have a negative NPV at $-14.6 million. The results of CBA for the BAU base case are presented in Table 14. The costs and benefits of the base case by review cycle is also presented below in Table 15.

Table 14: BAU base case – costs and benefits ($m, June 2022 real, 30-year period)

Costs/benefits	Cost Type	Present Value (PV @ 4.05% discount rate)	Undiscounted
Benefits			
Terminal value - land	Capex	$2.0m	$6.5m
Total Capex	Capex	$2.0m	$6.5m
Total Opex	Opex	$0.0m	$0.0m
Sum of benefits		**$2.0m**	**$6.5m**
Cost			
Depot asset replacement cost	Capex	$2.8m	$3.8m
Maintenance cost	Capex	$0.7m	$1.1m
Works	Capex	$1.2m	$1.2m
Reactive cost	Capex	$0.7m	$1.3m
Storage cost	Opex	$9.2m	$16.9m
Pedestrian risk cost	Customer risk	$1.9m	$3.2m
Theft risk	Capex	$0.1m	$0.2m
Total Capex	Capex	$5.5m	$7.7m
Total Opex	Opex	$9.2m	$16.9m
Risk Costs	Customer risk	$1.9m	$3.2m
Sum of cost		**$16.6m**	**$27.9m**
Differences in costs and benefits (NPV)		**-$14.6m**	**-$21.4m**

[14] Australian Road Deaths Database, Bureau of Infrastructure and Transport Research Economics, Nov 2023

Table 15 presents the base case costs and benefits by cost type and review cycles.

Table 15: BAU base case – costs and benefits by cost type and RCP ($m, June 2022 real, undiscounted)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total 2025 - 30	2030-31	2031-32	2032-33	2033-34	2034-35	Total 2030-35	Total 2025 to 2055
Benefits (Capex)	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$6.5m**
Benefits (Opex)	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$0.0m**
Costs (Capex)	$1.3m	$0.1m	$0.1m	$0.1m	$2.5m	**$4.1m**	$0.1m	$0.2m	$0.2m	$0.1m	$0.1m	**$0.6m**	**$7.7m**
Costs (Opex)	$0.0m	$0.0m	$0.0m	$0.6m	$0.6m	**$1.3m**	$0.6m	$0.6m	$0.6m	$0.6m	$0.6m	**$3.1m**	**$16.9m**
Costs (Customer risk)	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	**$0.5m**	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	**$0.5m**	**$3.2m**
Net benefits	**-$1.4m**	**-$0.2m**	**-$0.2m**	**-$0.9m**	**-$3.3m**	**-$5.9m**	**-$0.9m**	**-$0.9m**	**-$0.9m**	**-$0.8m**	**-$0.9m**	**-$4.3m**	**-$21.4m**

5.6.2 MCA for BAU Base Case

The results of MCA for the BAU base case are presented in Table 16 in line with the criteria and rating scale outlined in Appendix B. The base case has the lowest MCA results.

Table 16: MCA for BAU base case

MCA criteria		MCA assessment	Rating
Network Reliability	×	Requires time to travel to another storage site to access materials.	2
Operational Safety	×	Staff access and congestion in the heavy vehicle circulation and material handling paths.	1
Culture and Workforce	×	Limited office space.	2
Deliverability	✓	Maintenance, reactive costs and works are capable of being delivered using current contractual arrangements.	3
Socio-economic and environmental impacts	×	Location in residential area is inappropriate for a 24/7 depot facility and interface issues including noise, light spill, low visual quality and street congestion).	2
Operational Efficiencies	×	Higher electricity costs from older building standards for energy efficiency.	1
	×	Logistical challenges and additional travel time between sites.	
MCA Score			**11**

5.7 Option 1: Rebuild at the same site

This option is to build the new depot at the same location of the existing depot. The construction of the project would be initiated in the first half of the year 2028 and would take 10-12 months across the 2 financial years of 2027/28 and 2028/29. This option would require the existing Mt Barker Depot to be temporarily relocated to a leased site. There is a risk that a suitable temporary location for the depot may not be available in the region.

It is assumed that the new depot reconstruction would optimise use of the land within the existing footprint as far as practicable to make space available for storage requirements on the site, but ultimately constrained by the property boundaries. This assumption is limited in practice, as there are limits to the scope for additional storage capacity on the same site. Safety risks associated with the depot remaining in a built-up residential area will not be resolved under this option.

The temporary relocation of the existing depot poses a risk to the reliability of operations from inferior temporary office and storage arrangements and possible location too far away from the core customer areas.

5.7.1 CBA for Option 1: Rebuild at the same site

The costs are project construction costs, relocation, demolition and lease land and building costs. See Table 17 for cost details. There are additional capital and operational costs required to maintain the depot operations at another site during construction such as temporary lease of a new site during construction.

The primary opportunities for benefits in this option are from avoiding current operational costs in relation to the planned and reactive maintenance, asset replacements and avoided works. The site will also be electrified, eliminating the exposure to the risk of theft.

This option is shown to have the second rank incremental NPV at $-4.9 million. The results of CBA for Option 1 are presented in Table 17. The costs and benefits of the base case by review cycle is presented in Table 18.

Table 17: Option 1 – Costs and benefits incremental to the BAU base case ($m, June 2022 real, 30-year period)

Costs/benefits	Capex/Opex	Present Value (PV @ 4.05% discount rate)	30 year Undiscounted
Incremental Benefits			
Terminal value improved buildings	Capex	$1.1m	$3.6m
Avoided depot asset replacement cost	Capex	$2.5m	$3.1m
Avoided maintenance cost	Capex	$0.3m	$0.4m
Avoided works	Capex	$1.2m	$1.2m
Avoided reactive cost	Capex	$0.4m	$0.8m
Avoided risk of theft	Capex	$0.1m	$0.2m
Total Capex	Capex	$5.7m	$9.4m
Total Opex	Opex	$0.0m	$0.0m
Sum of Benefits		**$5.7m**	**$9.4m**
Incremental Cost			
Project construction cost	Capex	$9.1m	$10.3m
Relocation cost	Capex	$0.2m	$0.2m
Demolition cost	Capex	$0.1m	$0.1m
Lease land and buildings	Opex	$1.2m	$1.3m
Total Capex	Capex	$9.5m	$10.6m
Total Opex	Opex	$1.2m	$1.3m
Sum of cost		**$10.6m**	**$12.0m**
NPV		**-$4.9m**	**-$2.6m**

Table 18: Option 1 costs and benefits by cost type and RCP, incremental to the BAU base case ($m, June 2022 real, undiscounted)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total 2025 - 30	2030-31	2031-32	2032-33	2033-34	2034-35	Total 2030-35	Total 2025 to 2055
Benefits (Capex)	$1.2m	$0.0m	$0.1m	$0.1m	$2.5m	**$3.9m**	$0.1m	$0.2m	$0.2m	$0.1m	$0.1m	**$0.7m**	**$9.4m**
Benefits (Opex)	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$0.0m**
Costs (Capex)	$0.0m	$0.0m	$5.4m	$5.3m	$0.0m	**$10.6m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$10.6m**
Costs (Opex)	$0.0m	$0.0m	$0.7m	$0.7m	$0.0m	**$1.3m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$1.3m**
Net benefits	**$1.2m**	**$0.0m**	**-$6.0m**	**-$5.8m**	**$2.5m**	**-$8.1m**	**$0.1m**	**$0.2m**	**$0.2m**	**$0.1m**	**$0.1m**	**$0.7m**	**-$2.6m**

5.7.2 MCA for Option 1: Rebuild at the same site

The results of MCA for Option 1 are presented in Table 19 in line with the criteria and rating scale outlined in Appendix B.

Table 19: Option 1 MCA

MCA criteria		MCA assessment	Rating
Network Reliability	✗	Requires time to travel to another storage site to access materials.	1
	✗	Relocation of depot during construction risks reliability due to location, temporary office and storage arrangements.	
Operational and Safety	✓	Safety risks likely to reduce provided rebuild resolves site congestion.	4
	✓	Better site layout will reduce time spent managing heavy vehicle traffic flows.	
Culture and Workforce	✓	Improved staff workplace conditions	3
Deliverability	✓	Construction approvals within SA Power Networks ownership control.	2
	✗	Risk of non-availability of leasable site for the duration of construction	
	✗	Challenges in construction sector costs and timing.	
Socio-economic and environmental impacts	✗	No resolution of impact on neighbouring residents (from noise, light spill, low visual quality, and street congestion).	2
	✗	Additional impact on community during re-construction.	
	✓	Sustainability improvements and reduced carbon footprint through Environmentally sensitive design.	
Operational Efficiencies	✓	Electricity cost savings from building improvements	2
	✗	Logistical challenges and additional travel time between sites.	
MCA Score			**14**

5.8 Option 2: Build at a new site

This option is to construct a new depot at a new site in the Mt Barker region which is located outside the densely populated residential parts of the township, closer to arterial roads and freeway access points. The site will be a larger site to facilitate safe traffic management of long and heavy vehicles, under cover storage with modern building and storage facilities to be built. Relocating the depot to a less populated area will mitigate the public risks associated with heavy vehicle traffic and noise. Improvements to the site security will be made and the new site will be scalable to accommodate future expansion needs.

The current depot will continue to provide network support services in parallel during the construction of the new depot. Consequently, the current quality and consistency of the work will be maintained.

The construction of the project is expected to be initiated in the second half of 2027. The construction of the project will take 10-12 months across the 2 years of 2027/28 and 2028/29.

5.8.1 CBA for Option 2: Build at a new site

The costs are project construction costs, project management, fit-out, relocation, and demolition costs. See Table 20 for cost details.

The primary driver for benefits in this option are the avoided costs of leasing external storage, which are met by the purchase of a larger parcel of land, in line with our projected operational demand. external storage, which are met by the greater land acquisition.

We reduce our exposure to the risk of pedestrian accidents, quantified in Table 13, by 85% by reducing most of our vehicle movements through the Mount Baker Township. This generates a benefit of $90,100.

The remaining benefits arise from current operational costs of planned and reactive maintenance, asset replacements and works. We also avoid our exposure to the risk of theft from building an electrified site. This option involves sale of the current site, purchase of an outer suburban, suitably zoned industrial site and construction of new buildings.

This option is shown to have the highest incremental NPV at $6.6 million. The results of CBA for Option 2 are presented in Table 20. The costs and benefits of the base case by review cycle is also presented below in Table 21.

Table 20: Option 2 – costs and benefits incremental to the BAU base case ($m, June 2022 real, 30-year period)

Costs/benefits	Capex/Opex	Present Value (PV)	Undiscounted
Incremental Benefits			
Terminal value of land	Capex	$2.1m	$6.7m
Terminal value improved buildings	Capex	$1.1m	$3.6m
Avoided depot asset replacement cost	Capex	$2.5m	$3.0m
Avoided maintenance cost	Capex	$0.3m	$0.4m
Avoided works	Capex	$1.2m	$1.2m
Avoided reactive cost	Capex	$0.4m	$0.8m
Avoided pedestrian risk	Customer benefit	$1.2m	$2.3m
Avoided theft risk	Capex	$0.1m	$0.2m
Land sale[15]	Capex	$1.6m	-$2.3m

[15] The land sale value is incremental to BAU. This includes the sales benefit of the land deducted by the BAU terminal value of the land of the existing site.

Costs/benefits	Capex/Opex	Present Value (PV)	Undiscounted
Avoided storage cost	Opex	$9.2m	$16.9m
Total Capex	Capex	$9.2m	$13.6m
Total Opex	Opex	$9.2m	$16.9m
Risk Reduction	Customer benefit	$1.2m	$2.3m
Sum of Benefits		**$19.7m**	**$32.8m**
Incremental Cost			
Project construction cost	Capex	$9.1m	$10.3m
Relocation cost	Capex	$0.1m	$0.1m
Land purchase cost	Capex	$3.8m	$4.2m
Total Capex	Capex	$13.1m	$14.6m
Total Opex	Opex	$0.0m	$0.0m
Sum of cost		**$13.1m**	**$14.6m**
NPV		**$6.6m**	**$18.2m**

Table 21: Option 2 costs and benefits by cost type and RCP, incremental to the BAU base case ($m, June 2022 real, undiscounted)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total 2025 - 30	2030-31	2031-32	2032-33	2033-34	2034-35	Total 2030-35	Total 2025 to 2055
Benefits (Capex)	$1.2m	$0.0m	$0.0m	$4.1m	$2.5m	**$7.9m**	$0.1m	$0.2m	$0.2m	$0.1m	$0.1m	**$0.7m**	**$13.6m**
Benefits (Opex)	$0.0m	$0.0m	$0.0m	$0.6m	$0.6m	**$1.3m**	$0.6m	$0.6m	$0.6m	$0.6m	$0.6m	**$3.1m**	**$16.9m**
Benefits (Customer Benefit)	$0.0m	$0.0m	$0.0m	$0.0m	$0.1m	**$0.1m**	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	**$0.5m**	**$2.3m**
Costs (Capex)	$0.0m	$0.0m	$9.4m	$5.3m	$0.0m	**$14.6m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$14.6m**
Costs (Opex)	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$0.0m**
Net benefits	**$1.2m**	**$0.0m**	**-$9.4m**	**-$0.5m**	**$3.3m**	**-$5.4m**	**$0.8m**	**$0.9m**	**$0.9m**	**$0.8m**	**$0.9m**	**$4.3m**	**$18.2m**

5.8.2 MCA for Option 2: Build at a new site

The results of MCA for Option 2 are presented in Table 22 in line with the criteria and rating scale outlined in Appendix B.

Table 22: Option 2 MCA

MCA criteria		MCA assessment	Rating
Network Reliability	✓	Low reliability risk as there is no service disruption during construction works.	4
	✓	Larger site supports network operations to meet energy demand growth.	
Operational Safety	✓	Safety risks removed due to rectified site congestion issues.	4
	✓	Better site layout will reduce time spent managing heavy vehicle traffic flows.	
Culture and Workforce	✓	Improved workplace conditions for staff	3
Deliverability	×	Challenges in construction sector costs and timing.	3
Socio-economic and environmental impacts	✓	Resolves impact on neighbouring residents of current site (from noise, Light spill, low visual quality, and street congestion).	4
	✓	Sustainability improvements and reduced carbon footprint through Environmentally sensitive design.	
Operational Efficiencies	✓	Reduced mobilisation and preparation time through efficient layout of storage and logistics.	3
MCA Score			**21**

5.9 Option 3: Lease site

This option is to permanently vacate and sell the current Mt Barker depot site. Instead, the depot would be relocated to a leased site owned by a third party. We would install facilities, office fit-out, fibre connection, fencing, gates and security. It is likely to be located outside Mt Barker due to lack of sites for lease, increasing travel times for crews.

5.9.1 CBA for Option 3: Lease site

This option is shown to have the lowest incremental NPV at $-18.0m. Our benefits are the same as option 2, excluding the terminal value of land and buildings. The results of CBA for Option 3 are presented in Table 23. The costs and benefits of the base case by review cycle is also presented below in Table 24.

Table 23: Option 3 – costs and benefits incremental to the BAU base case ($m, June 2022 real, 30-year period)

Costs/benefits	Capex/Opex	Present Value (PV)	Undiscounted
Avoided depot asset replacement cost	Capex	$2.8m	$3.8m
Avoided maintenance cost	Capex	$0.7m	$1.1m
Avoided works	Capex	$1.2m	$1.2m
Avoided reactive cost	Capex	$0.7m	$1.3m
Avoided pedestrian risk	Customer benefit	$1.5m	$2.6m
Avoided theft risk	Capex	$0.1m	$0.2m
Avoided storage cost	Opex	$9.2m	$16.9m
Land sale[16]	Capex	$1.8m	-$2.5m
Total Capex	Capex	$7.4m	$5.2m
Total Opex	Opex	$9.2m	$16.9m
Total Risk Reduction	Customer benefit	$1.5m	$2.6m
Sum of Benefits		**$18.1m**	**$24.7m**
Incremental Cost			
Lease land and buildings	Opex	$34.5m	$59.0m
Relocation cost	Capex	$0.1m	$0.1m
Site improvements & security	Capex	$1.5m	$1.5m
Total Capex	Capex	$1.6m	$1.6m
Total Opex	Opex	$34.5m	$59.0m
Sum of cost		**$36.0m**	**$60.6m**
NPV		**-$18.0m**	**-$35.9m**

[16] The land sale value is incremental to BAU. This includes the sales benefit of the land deducted by the BAU terminal value of the land of the existing site.

Table 24: Option 3 costs and benefits by cost type and RCP, incremental to the BAU base case ($m, June 2022 real)

	2025-26	2026-27	2027-28	2028-29	2029-30	Total 2025 - 30	2030-31	2031-32	2032-33	2033-34	2034-35	Total 2030-35	Total 2025 to 2055
Benefits (Capex)	$5.2m	$0.1m	$0.1m	$0.1m	$2.5m	**$8.0m**	$0.1m	$0.2m	$0.2m	$0.1m	$0.1m	**$0.7m**	**$5.2m**
Benefits (Opex)	$0.0m	$0.0m	$0.0m	$0.6m	$0.6m	**$1.3m**	$0.6m	$0.6m	$0.6m	$0.6m	$0.6m	**$3.1m**	**$16.9m**
Benefits (Customer Benefit)	$0.0m	$0.1m	$0.1m	$0.1m	$0.1m	**$0.4m**	$0.1m	$0.1m	$0.1m	$0.1m	$0.1m	**$0.5m**	**$2.6m**
Costs (Capex)	$1.6m	$0.0m	$0.0m	$0.0m	$0.0m	**$1.6m**	$0.0m	$0.0m	$0.0m	$0.0m	$0.0m	**$0.0m**	**$1.6m**
Costs (Opex)	$2.0m	$2.0m	$2.0m	$2.0m	$2.0m	**$9.8m**	$2.0m	$2.0m	$2.0m	$2.0m	$2.0m	**$9.8m**	**$59.0m**
Net benefits	**$1.6m**	**-$1.8m**	**-$1.8m**	**-$1.1m**	**$1.3m**	**-$1.8m**	**-$1.1m**	**-$1.1m**	**-$1.1m**	**-$1.2m**	**-$1.1m**	**-$5.6m**	**-$35.9m**

5.9.2 MCA Option 3: Lease site

The results of MCA for Option 3 are presented in Table 25.

Table 25: Option 3 MCA

MCA criteria		MCA assessment	Rating
Network Reliability	✓	Low reliability risk.	4
	✓	Larger site supports network operations to meet energy demand growth.	
Operational Safety	✓	Safety risks likely to reduce due to lower site congestion.	4
	✓	Better site layout will reduce time spent managing heavy vehicle traffic flows.	
Culture and Workforce	✓	Improved staff workplace conditions	3
Deliverability	×	Difficulty in finding a large industrial site available for lease.	1
	×	Uncertainty of owner's approval required for building and site improvements	
Socio-economic and environmental impacts	✓	Resolves impact on neighbouring residents of current site (from noise, dust, odours, low visual quality, and street congestion).	4
	✓	Reduced carbon emission from electricity efficiency gains.	
Operational Efficiencies	✓	Electricity cost savings from building improvements	3
MCA Score			**19**

6. Deliverability of recommended option

In structuring the identified activities into a sequenced program of work to be undertaken in the 2025-30 RCP, we considered the level and nature of works related to the recommended option that can be delivered, noting the availability of resources and materials.

Both capital construction and operational maintenance are undertaken by outsourced service providers. Administration and project management functions are undertaken by internal SA Power Networks' resources.

We have existing building panel arrangements in place with several construction vendors in the market to provide resources or skills as required, noting that specialised electrical skills are not generally required for the majority of property works. Vendor Panels are in place with suppliers for architecture, engineering, trade and building construction works. The appointment of each supplier to the panel is subject to a process of negotiation to ensure the contracted arrangement reflects the efficient cost to procure the resources as and when required. A high-level conceptual depot design has been prepared, shown in Figure 6 and Figure 7 below and an independent quantity surveyor estimate developed.

We have a proven track record of managing the build of new depots to schedule and within budget, with Angaston Depot in the Barossa Valley region being the most recent example of comparable size and nature of development. Following the recommendation of the Asset Condition and Risk sub-committee and focussed workshops with our stakeholders and customers, consideration will also be given to bundling of works by region or project type and builder to achieve economies of scale savings on similar projects.

In developing the proposed program of work, we assessed the optimal timing and resourcing for Mt Barker and in relation to the overall program of project works. The total expenditure program has been considered in terms of the timing and site location of each item. The register of works in each associated year per site are then assessed against:

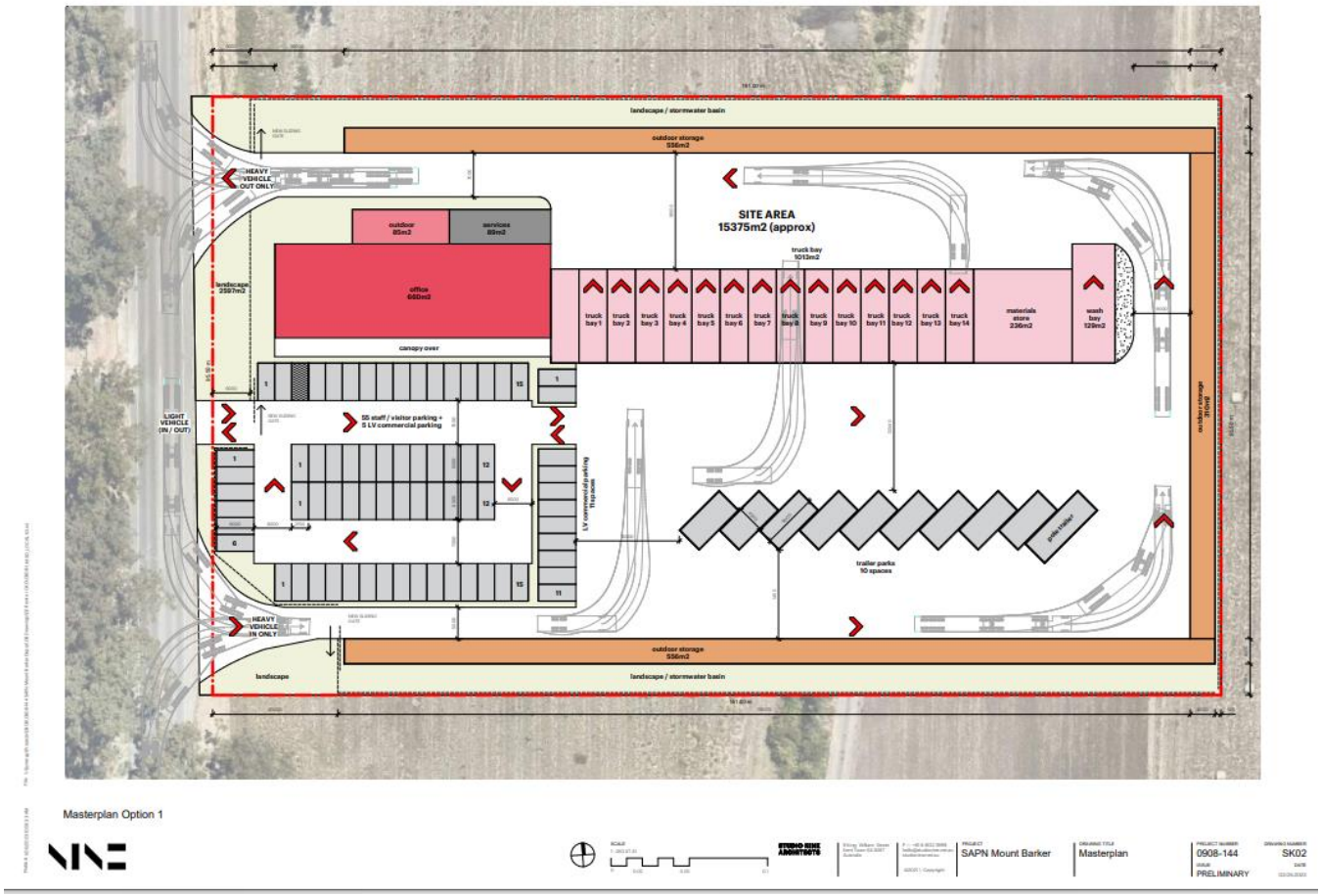
- forecast resource availability; and
- other items of work to be undertaken at similar points in time or at the same site.

Through this assessment, we undertake proactive workforce planning by seeking to identify gaps in resource capacity and opportunities to achieve cost efficiencies in the delivery of multiple items of work.

The beginning of construction of the Mt Barker Depot is timed to commence after the construction of another proposed, large strategic project (Transformer Workshop construction) is completed, so that building construction vendors can competitively tender and have capacity to undertake large construction projects.

Figure 6: Concept image for the new Mt Barker Depot – Recommended Option

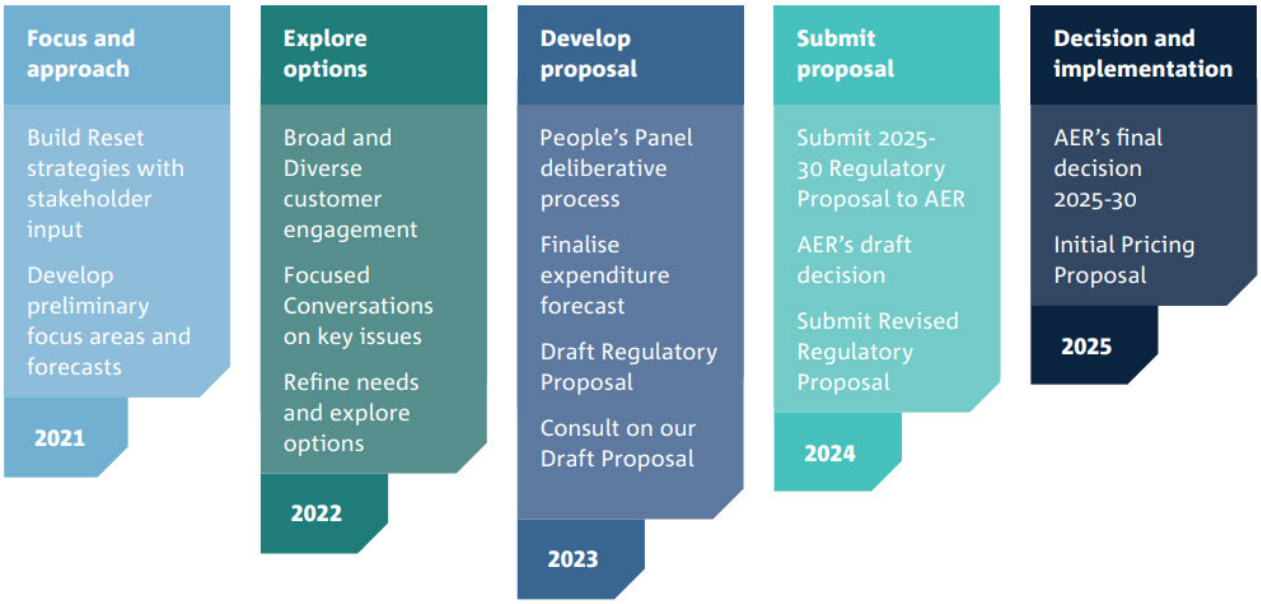
Figure 7: Concept Masterplan for the new Mt Barker Depot – Recommended Option



7. How the recommended option aligns with our engagement

A series of stakeholder engagement sessions were held about the proposed property methodology and expenditure options throughout the course of developing our Regulatory Proposal for 2025-30. Figure 8 below outlines the key stages of our engagement program.

Figure 8: Key stages of engagement



Engagement with customers and community began in 2021 where we sought broad input on key factors that customers value in the delivery of the distribution network services. We presented an overview of the property portfolio including asset management plans and the proposed systematic and proactive approach to building asset lifecycle management to achieve strategic objectives. The options for the Mt Barker Depot were also presented as part of the recurrent stream of expenditure for discussion, including general costs and benefits of the program.

This was followed in early 2022 by broad engagement across South Australia with geographically and socially diverse groups of customers, and then six months of Focused Conversations on critical issues with a selection of stakeholders with deep knowledge.

This process culminated in a People's Panel early this year, where advice was sought from a representative group of 51 South Australian customers as to the most appropriate overall balance between price and service in the 2025-30 period, considering all aspects of trade-offs between price and service.

Our total property forecast and the needs it responds to were discussed in detail with customers in our Focused Conversations, and deliberated on and supported by the People's Panel recommendations. The sections below provide further detail of core components of the process where we engaged our customers and the community on the Recurrent expenditure investment decision and options.

Throughout the engagement process, customers recognised the need to respond to the deteriorating condition of our property assets to maintain fit for purpose, safe, suitable and efficient working environments to support our network distribution service provision.

To date, the conclusion at each engagement stage was that we should invest in addressing the identified needs that are not being met by the current Mt Barker Depot. Customers have told us that they expect us to invest to address the current shortfalls of the Mt Barker Depot in the most cost-effective manner, especially in lieu of the location being a high bushfire danger zone. The recommended Option 2 of rebuilding Mt Barker Depot at the newly acquired site aligns with their views communicated to us because Option 2 will enable:

- improved reliability of electricity supply and mobilisation in emergency or natural disaster scenarios. The new depot will be adequately sized to meet the current and forecast demand for electricity distribution services in the Adelaide Hills region. The new Mt Barker Depot will be better equipped to handle network repair, which will help ensure that customers can rely on a stable and uninterrupted supply of electricity;
- effective safety, traffic, and congestion management on and around the current site, with a larger and more efficient depot that is located outside the city centre.

7.1 Alignment to other stakeholders

In the second half of 2022 we held over 40 Focused Conversations with 300 stakeholders. The aim of these conversations was to dive deeper into specific priorities and key issues identified in the earlier engagement and narrow options on service and price outcomes.

A Property Focused Conversation workshop was held with Community Advisory Board (**CAB**) on 11 November 2022 to seek feedback on the proposed property methodology and approaches. This board has building construction and maintenance industry expertise representation and we consulted on renewal and refurbishment of property assets, change of approach to lifecycle management, strategic construction projects and appropriately responding to asset condition, work volume, and operational efficiencies.

We presented the work undertaken and findings of the strategic direction, condition assessment, criticality risk assessment, building asset register and portfolio Asset Management Plans (**AMP**s). Three scenarios were presented to help frame the engagement and facilitate discussions on a preferred recommendation:

1. Basic - asset replacement and routine maintenance;
2. Maintain – basic scenario plus proactive asset replacement and refurbishment; and
3. New value – new or expanded capability and strategic projects.

Specifically for Mt Barker, we presented the following four options:

- Base case - All assets at existing site to be replaced, maintained and renewed;
- Option 1: Re-develop in situ: Space for new facility to be built whilst old facility in operation;
- Option 2: Build a new depot at a new site; and
- Option 3: Delay.

Participants of the Focussed Conversations recommended to the People's Panel that we should invest in the Mt Barker Depot upgrade under Option 2, and part of Scenario 2: Maintain. This was recommended over the other investment options because it was considered the level of investment required to ensure we meet building compliance and undertake renewal projects to ensure assets are fit-for-purpose, safe and compliant. This was on the basis this option:

- provides a fit for purpose facility to manage expected demand for standard control services. Customer demand is expected to exceed current capacity of field operations to serve;
- supports the replacement expenditure plans to meet expected demand for standard control services;
- is well located in commercial site outside current residential land use;
- manages long-term strategic and industry aligned program of depot renewals; and
- the project is important to the ongoing viability of the business was noted.

Participants in Focused Conversations noted that the current market and geo-political environment can impact costs, and consequently makes forecasting projects difficult and increases project risks.

7.2 Alignment to customer expectations

In February 2023, the People's Panel deliberated on a portion of the recurrent expenditure, and supported the Focused Conversations recommendation. The People's Panel recognised that property expenditure is critical to our service, and recognised the importance of keeping work local to reduce work time and provides employment, and that purpose-built facilities provide safer and more efficient workspaces with a more enagaged workforce.

Table 26: Alignment of Option 2 benefits with customer expectations

Customer expectations (Internal and external)	How Option 2 will address customer expectations
Access to safe and of quality work environment to workforce and customers	• Improved quality of workplace environment through proactive identification and remediation of safety issues • Improved asset condition due to strategic investments in renewing asset life • Building outside of the densely populated residential area reduces safety risks • Clean, hygienic, and compliant workplace
Facilities are reliable, fit-for-purpose and efficient	• New facility with a larger space in a more suitable location and with an improved layout will enable more effective delivery of services
Uninterrupted delivery of network services	• The current location will continue to provide support for network support services during the new depot construction to maintain quality and consistency of work.
Portfolio is managed in an optimal and financially prudent manner	• Assessed against all viable options, Option 2 represents the highest incremental NPV and delivers the greatest non-quantified benefits.
Minimal downward pressure on customer costs	
Minimal impact on environment, leading to no health and safety hazards	• Option 2 resolves environmental impact on neighbouring residents and delivers reduced carbon footprint through sustainable building initiatives and environmentally sensitive designs.

7.3 Submissions on Draft Proposal

Since conducting the People's Panel, we published a Draft Proposal to play back how we gave effect to customer recommednations and to confirm that those recommendations remain valid given continued cost of living pressuress and to obtain further input to refine our Regulatory Proposal. Submissions received on our Draft Proposal suggest the People's Panel recommendations remain valid with respect to property, this is noting that:

- members of the People's Panel affirmed that their recommendations, including in respect of property expenditure as set out in this business case, remain current;[17]
- some parties such as that from South Australian Council of Social Services (**SACOSS**)[18] and the Department of Energy and Mining[19] urged further consideraiton of the overall magnitude of our forecat capital expenditure across in totality;
- no other submission received has raised concerns in relation to property expenditure; and
- a submission received from a sub-group of our CAB which took the lead in engaging on property issues (the Asset Condition and Risk Sub-Committee) endorsed the recommendation on property reflected in this business case, on the basis that it is an appropriate level of risk mitigation that will deliver a fit-for-

[17] DemocracyCo, *Submission: SA Power Networks Draft Regulatory Proposal 2025-30*, 30 August 2023.

[18] SACOSS, *South Australian Council of Social Service Submission on SA Power Networks' 2025-30 Draft Regulatory Proposal*, September 2023.

[19] DEM, South Australian Department of Energy and Mining – Submission, October 2023.

purpose, safe and compliant property portfolio of assets that meets the needs of SA Power Networks' customers and employees.[20]

[20] AC&RSC, *Submission on behalf of the Asset Condition and Risk Sub-Committee: Draft Regulatory Proposal 2025-30*, 17 August 2023.

8. Alignment with our vision and strategy

The preferred option to build a new Mt Barker Depot aligns with our vision and 30-year Property Strategy in a number of ways. Figure 9 below shows where this case for investment resides within the broader framework of relevant plans and strategies that outline the approach by which we will provide and maintain a fit-for-purpose, safe and compliant portfolio of property assets that effectively and efficiently meets the needs of our people and our customers.

By investing in modern and efficient infrastructure, we can ensure that the Network remains reliable and resilient and can meet the evolving needs of customers. A new depot supports this objective by providing fit-for-purpose, contemporary facilities for:

- the network construction and maintenance activities,
- emergency and disaster response,
- fault location, isolation, and supply restoration,
- vehicle maintenance and repair,
- equipment maintenance and repair and
- material handling and storage.

With regards to Safety, the new Mt Barker Depot can provide a safe work environment for the people working within the facility, for its visitors and community. The depot will be designed to adhere to relevant safety standards and regulations, ensuring that the facility is fit for purpose and minimises the risk of incidents.

In addition, the construction of a new Mt Barker Depot can help us to meet our Sustainability goals. By incorporating water sensitive and energy-efficient design features and utilising renewable energy sources such as rooftop solar photovoltaic (**PV**) panels, the facility will reduce its environmental impact and support our commitment to reducing our carbon footprint.

Furthermore, the construction of a new depot supports our objective of delivering affordable energy to our customers. By investing in a modern and efficient depot, we can reduce future cost escalations and improve operational efficiency, which contributes towards lower electricity prices for our customers.

Overall, the new Mt Barker Depot plays a key role in supporting several of the focus areas outlined in our Property Strategy, including Safety, Customer, Network, and Sustainability, while also supporting the goal of providing and maintaining a fit-for-purpose, safe, and compliant portfolio of property assets that effectively and efficiently meets the needs of our people and customers.

Figure 9: Map or property-related documents

9. Appendix A: Property Condition Assessment Report Mt Barker

Property Condition Assessment Report Mt Barker

10. Appendix B: MCA Criteria and Ratings Scale

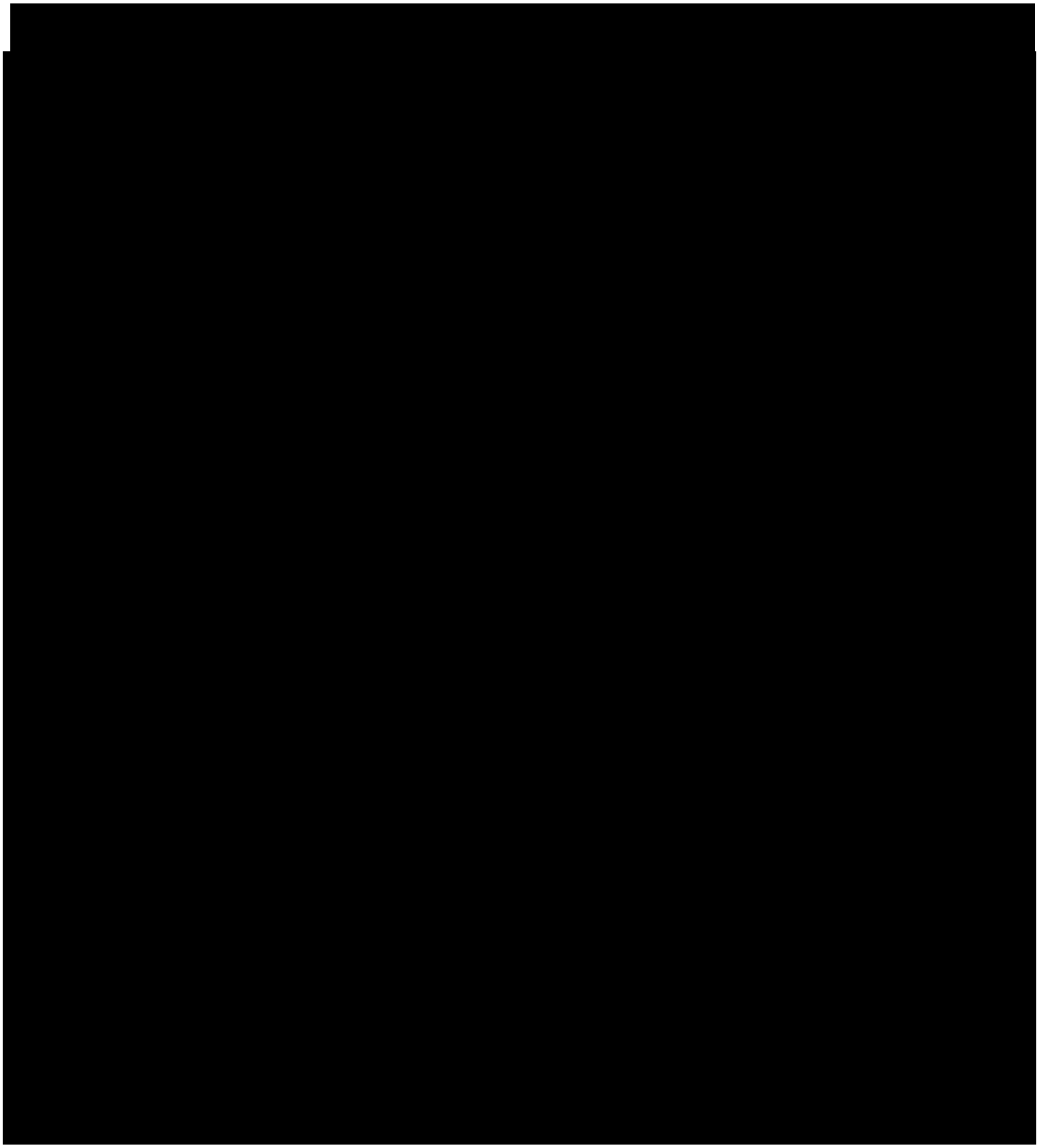
Table 26 outlines the MCA criteria used in the qualitative benefits and costs assessment.

Table 26: MCA criteria

#	MCA criteria	Description
1	Network and Reliability	The option is likely to support strategic focus areas: "Providing the foundation for the new energy future" and "Achieving operational excellence and delivering on our priorities" (Strategic Plan 2022-2026). The option indirectly supports reliability and security energy supply.
2	Operational Safety	The option is likely to support strategic focus areas of Safety "Ensuring the safety of our people and community, every day" (Strategic Plan 2022-2026) and safety of supply of electricity.
3	Culture and Workforce	Support the critical enabler of "An engaged, aligned and high performing workforce" (Strategic Plan 2022-2026).
4	Deliverability	The option is capable of being delivered in practical terms of the market capacity to supply materials and skilled construction workers.
5	Socio-economic and environmental impacts	The option will deliver positive broad socio-economic and environmental benefits including broader employment, local community, land use and environmental benefits.
6	Network assets recycling opportunities	The option provides the ability to recover essential parts from units that are not suitable for refurbishment. This is particularly important for critical components of the network like ABB Isolators that are essential for the efficient, safe, and reliable operation of the SA electricity distribution network.

Table 27: MCA rating scale

#	MCA rating scale
1	Little to no attainment of the criterion
2	Low attainment of the criterion
3	Moderate attainment of the criterion
4	High attainment of the criterion
5	Very high attainment of the criterion



12. Appendix D: Risk assessment and risk framework

				Current risk BaU			Rebuild on same Residual risk Option1			Rebuild on new Residual risk Option 2			Lease Residual risk Option 3			
ID	Risk scenario	Consequence description	Consequence category	Consequence	Likelihood	Risk Level	Consequence	Likelihood	Risk Level	Consequence	Likelihood	Risk Level	Consequence	Likelihood	Risk Level	
1	Constraints on the store of materials and space to manoeuvre vehicles.	Delays to obtain necessary materials and equipment for field operations to maintain the network.	Performance & Growth	2	2	Low	4	4	High	2	2	Low	2	3	Medium	
2	Growth in electricity demand in the region cannot be met due to insufficient staff being able to be accommodated at the depot	Requirement to accommodate staff in other depots, increasing response time to outages.	Network	2	4	Medium	3	4	Medium	2	2	Low	2	2	Low	
		Potential disruption of supply to customer or poor level of service	Customers	3	3	Medium	2	3	Low	2	2	Low	3	3	Medium	
3	Congestion in adjoining residential and nearby commercial streets causes vehicle or pedestrian collision.	Potential safety impacts for staff due to lack of fit for purpose facility and for public due to location in town centre.	Safety	4	4	High	4	4	High	2	2	Low	3	3	Medium	
		Lack of a safe and compliance environment for workforce	Culture & workforce	4	4	High	2	2	Low	2	2	Low	3	3	Medium	
4	Site noise and activity increases disruption to surrounding houses as congestion increases to meet forecast high demend and when fulfilling disaster recovery	Unable to achieve SA Power Networks sustainability targets	Sustainability	4	4	High	4	4	High	2	2	Low	3	3	Medium	
	Overall Risk Level					High			Medium			Medium			Medium	

Note: For each option, the overall risk level is the highest of the individual risk levels.

13. Appendix E: SAPN Property Criticality Assessment Overview

Property Criticality Assessment_Overview_Sept2023