



REVIEW OF STRATEGIC PLAN ACQUISITION PROGRAM

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REPORT FOR THE 2013-2018 RESET

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EXECUTIVE SUMMARY

ElectraNet has identified 21 sites and routes (project areas) for which it proposes to seek funding from the Regulator, in order to purchase/secure land and easements.

Some of these project areas are likely to be subject to future rezoning, which could result in a form and intensity of development which is incompatible with the establishment of future transmission infrastructure.

Alternatively, some of the project areas are in locations where competing developments are likely or are in locations where community sensitivity is likely to be high.

The purpose of these investigations is to determine how ElectraNet's Strategic Land Acquisition Programme may be affected by existing strategic and statutory plans, likely future strategic directions and competing development pressures. It is a planning investigation and does not consider other influences such as property values, environmental issues or political agendas.

In a general sense, locations closest to metropolitan Adelaide and settled areas within rural regions have the greatest potential to be subject to either competing land uses or community sensitivity. In such circumstances land acquisition can be problematic, as either the corridors will be put to an alternate purpose, or landowners become reluctant to negotiate.

It is clear from the investigations that growth and development pressure within both the Greater Adelaide region and selected regional locations is significant. The 30 Year Plan for Greater Adelaide clearly articulates future housing, population and employment growth. Greater Adelaide is expected to accommodate the following growth:

- an additional 560,000 persons;
- 258,000 additional dwellings; and
- an additional 282,000 new jobs.

A high proportion of this growth is projected in Northern Adelaide and the Barossa Region.

In regional areas, there has been several recent wind farm developments, mines and associated infrastructure projects which have raised sensitivity with local communities, some of which can become highly vocal and mobilised in expressing objections.

In several project areas, the need for a future transmission line has been identified within strategic plans including the 30 Year Plan for Greater Adelaide, plus several regional volumes of the Planning Strategy. However in the substantial majority of instances, the strategic designation of corridors has not been translated into Development Plan policy. At the least it would be preferable for corridors to be specifically designated within Development Plans, and this should be an outcome pursued when Councils undertake reviews of their Development Plans. This would increase the potential for corridors not put to an alternate purpose, and to control the nature of potentially conflicting uses established adjacent.

However without such Development Plan policy, the risk of either having corridors developed, or conflicting uses established adjacent, remains high.

Planning is always subject to review and change, as evidenced in September 2011, when the Minister for Planning proposed new legislation, in the form of two Bills, to protect the special character of the Barossa Valley and McLaren Vale. At the same time the minister also proposed a Development Plan Amendment (DPA) to prevent inappropriate development in the two districts. Following consultation with councils and the community in late 2011, the Minister revised both the draft legislation and the DPA in response to the feedback. The Bills currently are under consideration by the South Australian Parliament, with the revised DPA on public exhibition.

The Bills reflect the political and community sensitivity in respect to the development of these two regions, and how quickly planning policy can change, potentially limiting development options that previously were thought to exist.

The above indicates that transmission corridors should be obtained (easements purchased) as early as possible to:

- minimise the potential development of the corridors for alternate purposes;
- manage and address the encroachment of potentially conflicting development adjacent to the corridors;
- minimise the risk of changes to strategic and statutory planning, or changes in legislation; and
- minimise potential community influences on landowners.

1. INTRODUCTION

As the owner and manager of South Australia's electricity transmission network, ElectraNet is committed to the delivery of a secure, reliable and value for money transmission network to support the development of a sustainable and prosperous South Australian economy.

ElectraNet is a monopoly Transmission Network Service Provider. To ensure it delivers efficient and necessary solutions to the energy market, every five years ElectraNet's operations and business plans are subject to formal review by the Australian Energy Regulator (AER). This process of review is known as the Revenue Reset.

The AER's Revenue Reset decision determines which projects ElectraNet is authorised to undertake in the next five year window (Reset Period) and as a consequence ElectraNet's future revenue.

In order to build new substations and transmission lines ElectraNet requires land as well as easements for the expansion of the network. In urban areas these acquisitions often need to be undertaken years in advance of the actual project to ensure that land is available.

ElectraNet has identified 21 sites and routes (project areas) for which it proposes to seek funding from the Regulator, in order to purchase/secure land and easements. Some of these project areas are likely to be subject to future rezoning, which could result in a form and intensity of development which is incompatible with the establishment of future transmission infrastructure.

The purpose of these investigations is to review ElectraNet's Strategic Land Acquisition Programme and assess how the sites included in the Programme are affected by:

- 30 Year Plan for Greater Adelaide;
- relevant Regional Volumes of the Planning Strategy;
- current and planned Ministerial Development Plan Amendments (DPA's);
- current and planned Council DPA's; and
- any other future plans within the State of South Australia which may be of relevance.

2. PROJECT METHODOLOGY

ElectraNet have provided general location plans for each of the 21 project areas. The plans identify existing infrastructure and/or potential corridor locations.

The 21 projects are referenced in Table 1 as follows.

Table 1: Project Identification

Projects	Project No
Fleurieu Peninsula Reinforcement Land and Easement Acquisition	EC.11132
Mount Barker South Triple Circuit Easement Expansion	EC.11383
Cultana to Stony Point Land and Easement Acquisition	EC.11461
Eyre Peninsula Reinforcement Land and Easement Acquisition	EC.11630
Yorke Peninsula Reinforcement Land and Easement Acquisition	EC.11905
Riverland Reinforcement Land and Easement Acquisition	EC.10424
Snuggery Substation Replacement Land Acquisition	EC.11627
Kadina East to Hummocks Land and Easement Acquisition	EC.11633
Torrens Island C Switching Station Land and Easement Acquisition	EC.11642
Angas Creek Substation Replacement Land Acquisition	EC.11718
Morphett Vale East/Cherry Gardens/Happy Valley Easement Expansion	EC.11721
Tepko Substation Land Acquisition	EC.11723
Wilmington Substation Land Acquisition	EC.11724
Lincoln Gap Land Acquisition	EC.11726
Fourth Northern Suburbs Substation Land Acquisition	EC.11727
Jamestown Substation Land Acquisition	EC.11728
South East to Mount Gambier to Snuggery Easement Expansion	EC.11729
Para to Tungkillo Easement Expansion	EC.11736
Mallala to Para Easement Expansion	EC.11738
Templers to Para Easement Expansion	EC.11739
Mallala to Templers West Land and Easement Acquisition	EC.11893

The plans prepared by ElectraNet provide a general spatial parameter in respect to the investigations.

Specific tasks undertaken in respect to these investigations have included:

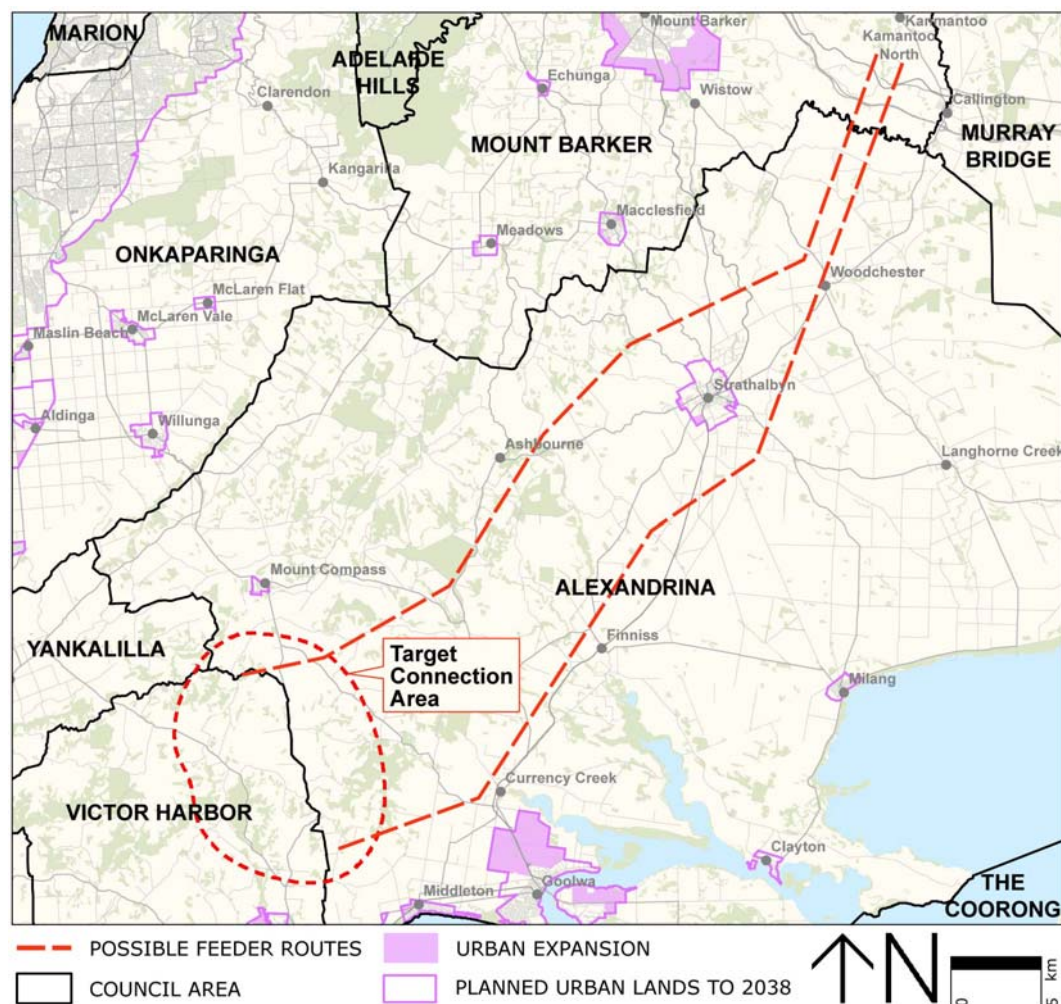
- identify all the strategic and statutory planning changes that may impact on the availability of land, based on a review of all current strategic (Planning Strategy) and statutory (Development Plan) documents;
- document known structure plan and rezoning proposals;
- confer with relevant Council's concerning existing/proposed/mooted structure plan and rezoning proposals;
- confer with DPTI concerning existing/proposed/mooted structure plan and rezoning proposals;
- provide commentary in respect to findings, including specific details of proposals where known and anticipated timeframes;
- provide commentary concerning certainty and implications of proposals; and
- prepare draft and final report.

3. FLEURIEU PENINSULA REINFORCEMENT LAND AND EASEMENT ACQUISITION

3.1 Location

The location of this project area is identified in Figure 1. The project area is located to the south of metropolitan Adelaide between Kanmantoo North and the South Coast.

Figure 1: Fleurieu Peninsula Project Area



3.2 Project Description/Risk

The project will require the following:

- the establishment of a 275 kv switching station in the Kanmantoo north area; and
- the construction of a double circuit transmission line from the Kanmantoo north switching station to a terminal substation in the Fleurieu peninsula area, nominally around the existing square waterhole substation. Two possible routes have been identified.

The construction of substations and transmission lines in environmentally and politically sensitive greenfield locations carries a heightened risk of community opposition and outrage which could delay a project or ultimately bring development to a halt.

3.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

State Government Region:	Fleurieu and portion of Adelaide Hills
Region Plan:	30 Year Plan for Greater Adelaide
Local Government Area:	Primarily Alexandrina Council, and includes portion of the District Council of Mount Barker
Development Plan:	Alexandrina, Mt Barker (DC)
Zones:	Watershed Protection 2, General Farming, Landscape (Port Elliot and Goolwa), Rural (Currency Creek), Grazing, General Farming, Watershed Protection, Rural (Kanmantoo).

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure

Policies

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

Electricity

15. *Study area for high voltage electricity reinforcement, Fleurieu Peninsula.*

The project area is identified in the 30 Year Plan as a study area for high voltage reinforcement for the Fleurieu Peninsula.

3.4 Consultation and Conclusions

The project area is primarily within rural/farming land which extends between Mount Barker and Victor Harbor. A significant proportion of the likely corridor is within the Watershed, Watershed 2 and General Farming Zone. These zones provide only limited potential for urban development, and as such risk of intensification is low.

The indicative line route is generally adjacent to the settlements of Woodchester, Finniss, Currency Creek and Ashbourne.

These settlements are unlikely to expand in the future, based on current Development Plan and 30 Year Plan directions. Infill development however is likely to occur.

Communication with Alexandrina Council has determined that:

- there are no known development proposals which would impact upon the corridor; and
- at a strategic level there are no known proposals to intensify development within the corridor.

However, both of the proposed routes go through visually sensitive hills areas and is close to several small settlements. The southern option primarily traverses broad hectare land which is reasonably flat. Community opposition is anticipated for either route.

Whilst the project area is identified in the 30 Year Plan this is only of relevance to rezoning proposals and does not guarantee land being set aside for infrastructure purposes. The current Development Plans relevant to the project area do not recognise the project area from a statutory planning perspective and as such competing development could readily occur within the desired corridor.

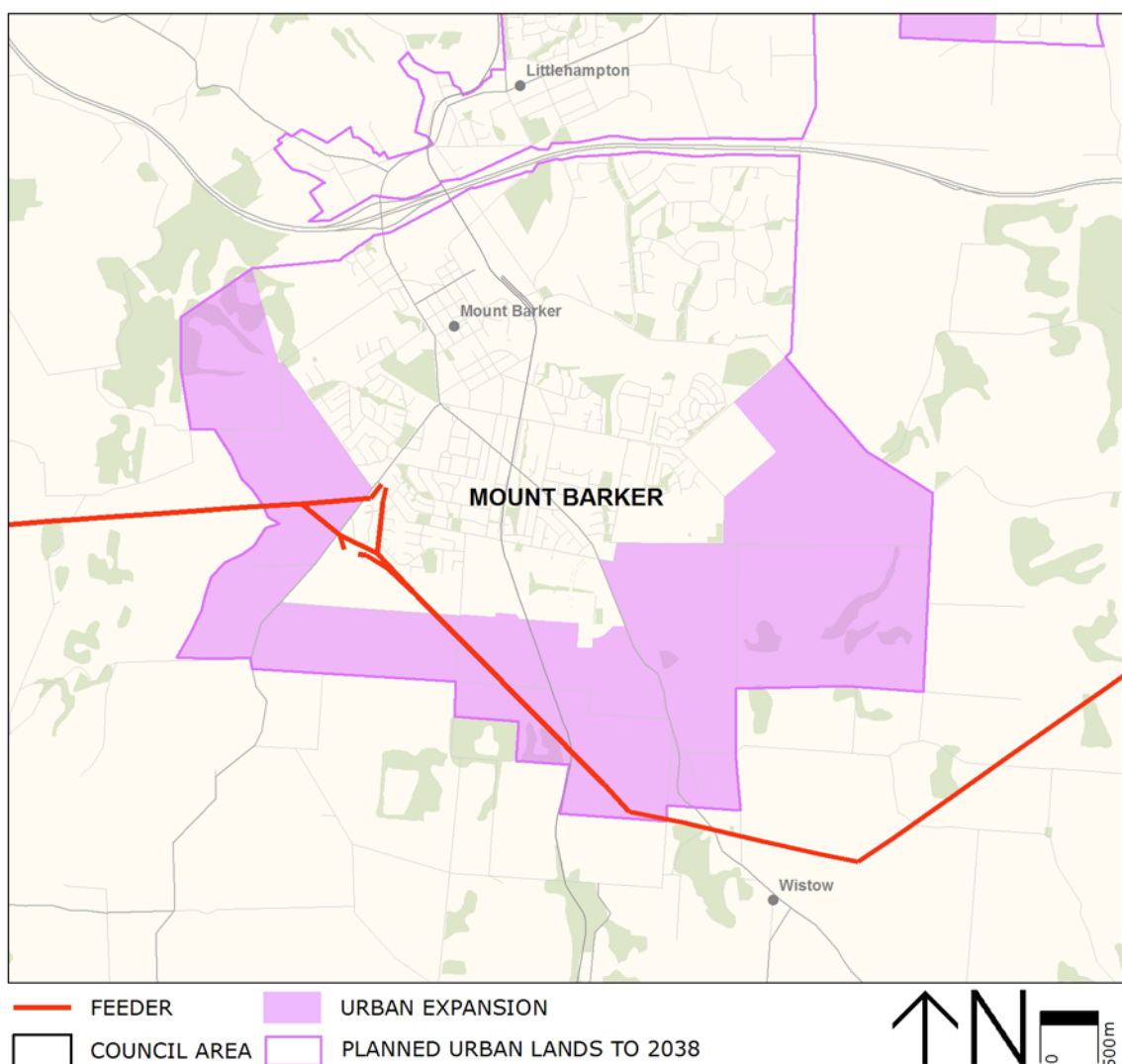
The above indicates that the transmission corridor must be obtained early to ensure potential community and landowner concerns do not extinguish the ability to build the new line.

4. MOUNT BARKER SOUTH TRIPLE CIRCUIT EASEMENT EXPANSION

4.1 Location

The location of this project area is identified in Figure 2. The project area is located to the south of the Mount Barker township.

Figure 2: Mount Barker Project Area



4.2 Project Description/Risk

The project involves the expansion of the existing easement to create a clear corridor adjacent the southern side of the existing transmission line. The proposed easement will be 50 metres in width.

With land recently rezoned, plans to divide the project area are advancing daily.

As planning by developer's progresses, and their investment in infrastructure and planning approvals advances, the cost and difficulties of obtaining easements to preserve a viable transmission corridor escalate.

4.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

State Government Region:	Adelaide Hills
Region Plan:	30 Year Plan for Greater Adelaide
Local Government Area:	Primarily Alexandrina Council, and includes portion of the District Council of Mount Barker
Development Plan:	Mt Barker (DC)
Zones:	Residential Neighbourhood, Rural Mount Barker

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure

Policies

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

Electricity

4. *Corridor protection for future upgrades.*

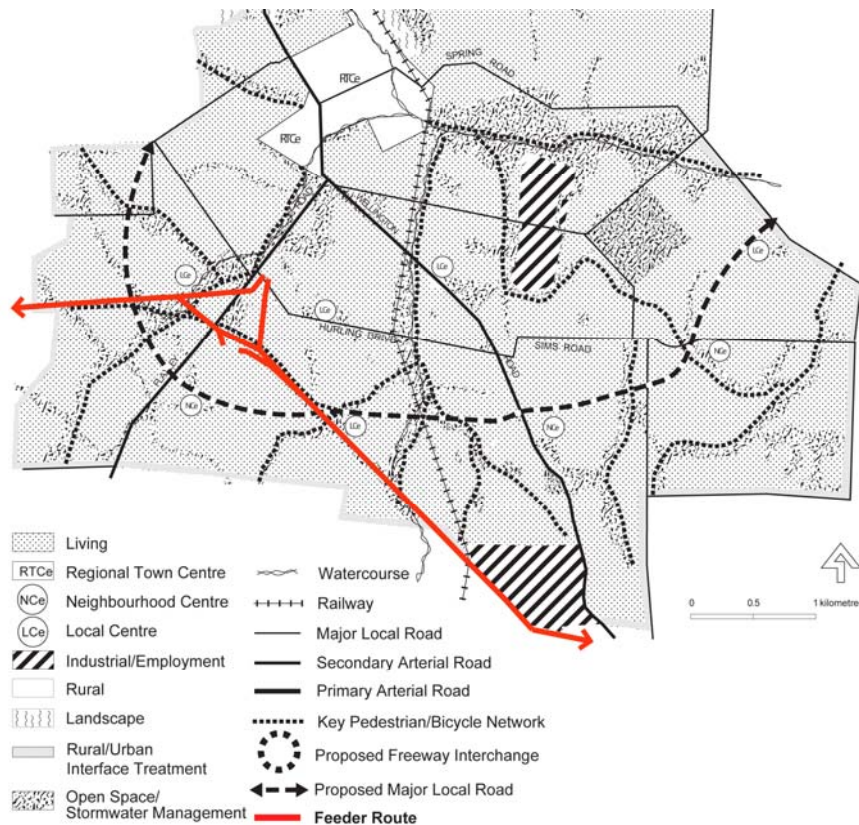
The project area is identified in the 30 Year Plan, with it notated that:

' strategies for urban growth to ensure minimum 50m clearance adjacent edge of existing high voltage transmission line easement to allow for Taillem Bend-Cherry Gardens transmission line upgrade'.

4.4 Consultation and Conclusions

The project area is within a mix of rural/farming land together with land recently zoned for urban expansion.

The recent rezoning makes specific reference to the need to establish and maintain a corridor for electricity infrastructure purposes. The structure plan contained in the Development Plan is reproduced below, with the proposed feeder route included as an overlay. It is evident that the feeder route is not located within a designated corridor, other than that described as a 'key pedestrian/bicycle network'.



Most of the land rezoned will be subject to land division applications in the short to medium term, particularly once infrastructure agreements with Council are reached.

Via policy statements, the Development Plan has 'set aside' land for the duplication of high voltage powerlines south of the existing easement. Whilst this provides some comfort, this does not guarantee that the land will be put to that purpose, and as such acquisition of the easement should be prioritised to avoid the potential loss of the corridor, and also to avoid the potential for community opposition once the land various estates are developed and occupied.

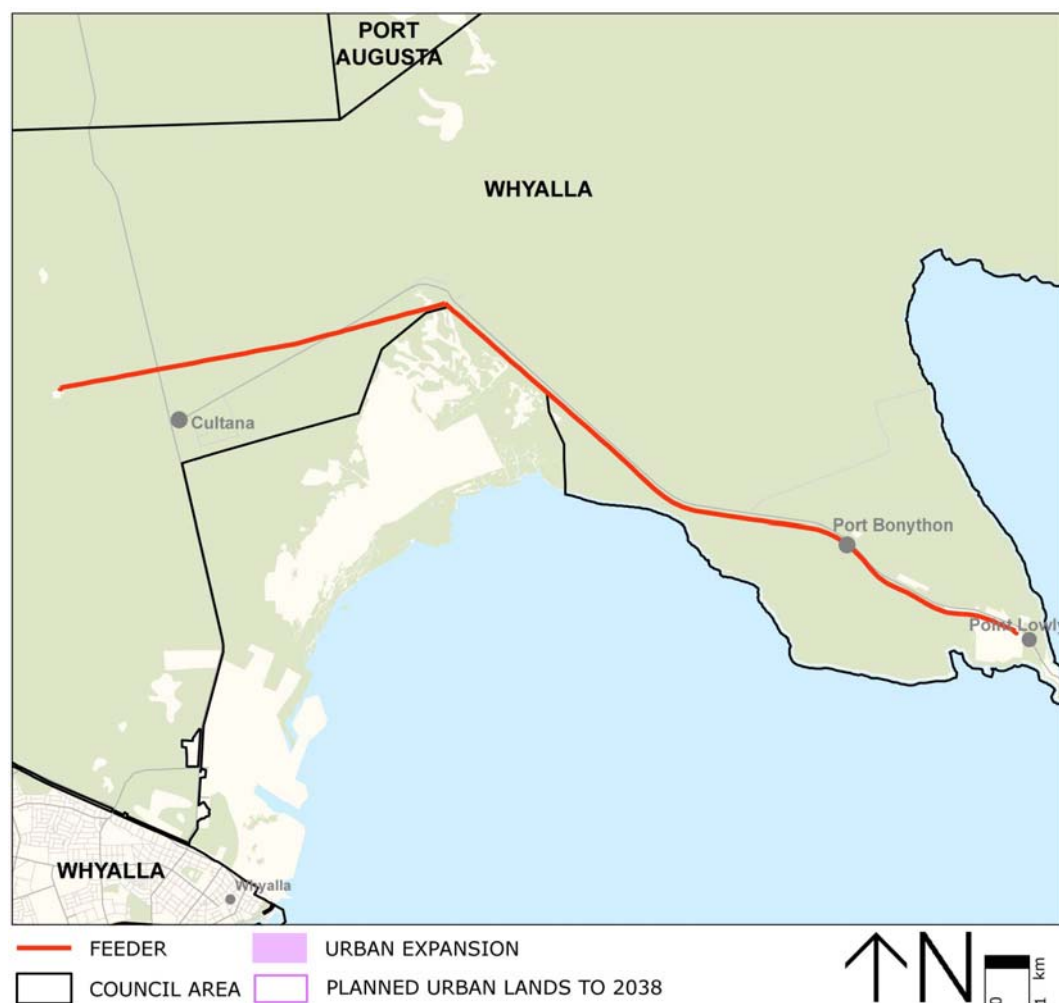
In a location as complex as this, the acquisition of easements is the only way to guarantees tenure, with planning instruments only able to indicatively designate, rather than protect corridors.

5. CULTANA TO STONY POINT LAND AND EASEMENT ACQUISITION

5.1 Location

The location of this project area is identified in Figure 3. The project area is located between Cultana in the west to Point Lowly in the east.

Figure 3: Cultana to Stony Point Project Area



5.2 Project Description/Risk

The project involves the acquisition of easements for the construction of a double circuit 275 kV transmission line from the Cultana sub-station to Stony Point. The proposed easement is to follow the existing 132 kV transmission line on the south side and be approximately 50 metres in width.

Route options are constrained by pre-existing infrastructure and competing land uses. The increase in mining activity in the area and its accompanying infrastructure requirements generate risks in respect to potential conflicts.

5.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Eyre and Western
Local Government Area:	City of Whyalla
Development Plan:	Whyalla (City)
Zones:	No Zones, Special Industry, Deferred Industry, Special Industry (Hydro), Industry Buffer

Relevant extracts from the Eyre and Western Region Plan are provided as follows.

Population and regional centres

Nearly 70 percent of the region's 59,203 population live in the three urban centres of Whyalla, Port Lincoln and Ceduna.

Principle 4

Protect and build on the region's strategic infrastructure

Policies

- 4.1** *Infrastructure development should be consolidated to limit unnecessary duplication of services and resources and to reduce the impact on the surrounding environment, economy and community.*
- 4.2** *Ensure Development Plans provide for existing and future strategic infrastructure corridors and assets by:*
- > identifying land for expansion*
 - > protecting corridors and assets from encroachment by incompatible land uses*
 - > addressing impacts of climate change*
 - > incorporating flexible policy to accommodate changing operational needs.*

Principle 11

Plan and manage township growth, and develop Structure Plans for key growth centres

Policies

- 11.1** *Prepare Structure Plans for key growth centres to promote orderly and efficient development.*
- 11.2** *Townships should consolidate development and population growth within existing boundaries.*

5.4 Consultation and Conclusions

Communication with the City of Whyalla has determined that there are several proposals of relevance within the project area including:

- Stage 1 of a 2 stage distillate storage plant which was approved by the Development Assessment Commission (DAC) 2 years ago;
- a de-salinisation plant (slightly north of Point Lowly) has been approved by Cabinet but not signed off by the Board of BHP;
- major ammonium nitrate plant which is at the planning stage; and

- Flinders Ports have announced a major project involving another deep water jetty and rail facility. This is a state sanctioned project and will service 4 companies.

Indications exist that there is some community opposition to the industrialization of the peninsula on which Point Lowly is situated.

Overall there is a relatively high number of potential influences with in the project area, given its relatively remote location.

The nature and scale of the potential projects is such that the ability to influence outcomes is likely to be minimal.

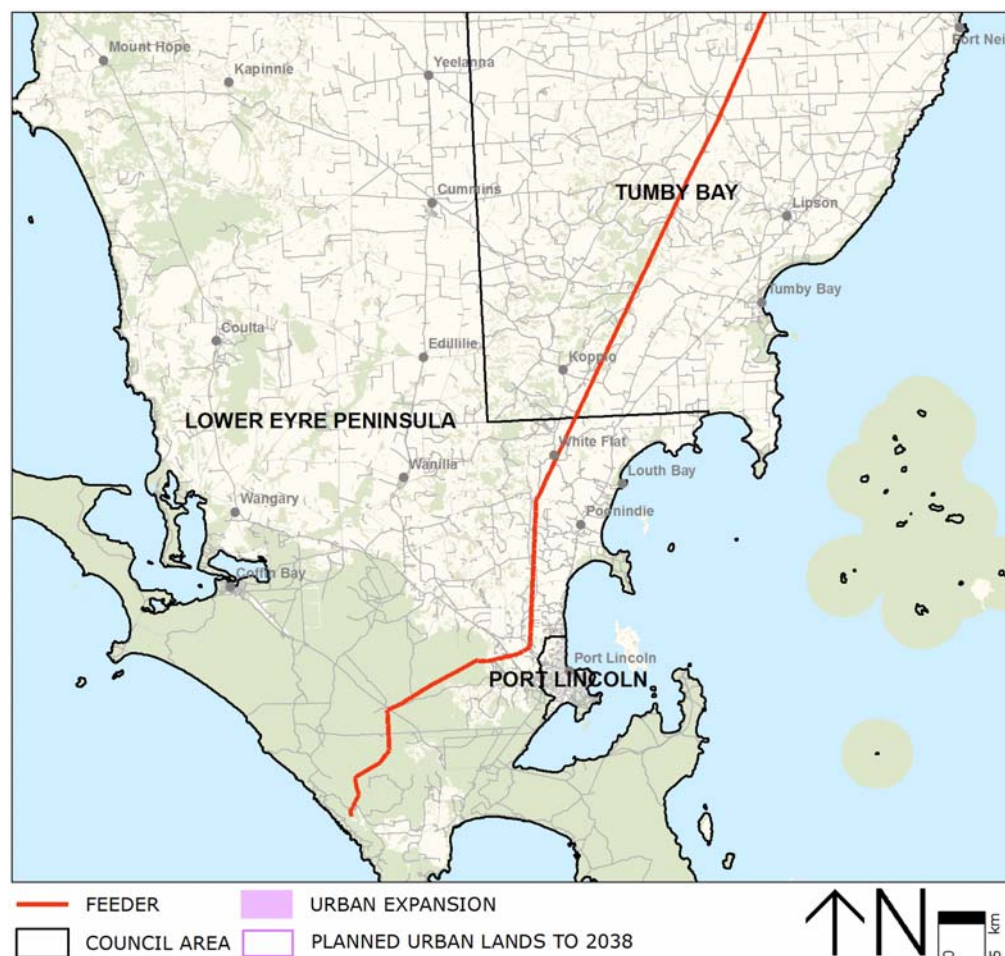
The above indicates that a transmission corridor should be obtained early to ensure an extensive number of planned and mooted competing land uses (particularly mining related) do not extinguish or inhibit the ability to build the new line.

6. EYRE PENINSULA REINFORCEMENT LAND AND EASEMENT ACQUISITION

6.1 Location

The location of this project area is identified in Figure 4. The project area is located on the Lower Eyre Peninsula, extending from Tumby Bay to the north to Port Lincoln to the south.

Figure 4: Eyre Peninsula Project Area



6.2 Project Description

This is an 'active' program and as such only high level investigations are required.

6.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan: Eyre and Western

Local Government Area: Lower Eyre Peninsula, Tumby Bay, Port Lincoln

Development Plan: Lower Eyre Peninsula, Tumby Bay, Port Lincoln

Zones: Coastal, Water Protection, General Farming

Relevant extracts from the Eyre and Western Region Plan are provided as follows.

Population and regional centres

Nearly 70 percent of the region's 59,203 population live in the three urban centres of Whyalla, Port Lincoln and Ceduna.

Principle 4

Protect and build on the region's strategic infrastructure

Policies

4.1 Infrastructure development should be consolidated to limit unnecessary duplication of services and resources and to reduce the impact on the surrounding environment, economy and community.

4.2 Ensure Development Plans provide for existing and future strategic infrastructure corridors and assets by:

- > identifying land for expansion
- > protecting corridors and assets from encroachment by incompatible land uses
- > addressing impacts of climate change
- > incorporating flexible policy to accommodate changing operational needs.

Principle 11

Plan and manage township growth, and develop Structure Plans for key growth centres

Policies

11.1 Prepare Structure Plans for key growth centres to promote orderly and efficient development.

11.2 Townships should consolidate development and population growth within existing boundaries.

The project area is identified in the Eyre and Western Region Plan as a potential power line corridor.

6.4 Consultation and Conclusions

The increase in mining activity in the area and its accompanying infrastructure requirements has the potential to limit a route for the new line.

High level investigations have determined the following projects which demonstrate the extent of activity and potential development in the project area.

DC Tumby Bay:

- 3 iron ore mines (one near Koppio);
- a de-salination plant at Port Neill;
- population/township growth at Port Neill;
- new bulk port - Port Spencer;
- Fusion in Koppio.

Council is currently undertaking a Structure Plan Review which may be an appropriate forum to make submission in respect to corridor alignments.

Whilst any alignment is likely to encounter native vegetation and native title issues, the community is generally supportive of infrastructure upgrades.

Lower Eyre Peninsula:

Council is currently undertaking the Greater Port Lincoln Structure Plan, in conjunction with the City of Port Lincoln.

Current proposals include:

- a Settlement DPA around North Shields (extending to the Pines area);
- Point Boston Rural DPA is currently on hold until the Structure Plan is complete (this incorporates expansion to the west and south of the current rural living zone around Port Lincoln).

The Cathedral Rocks Wind Farm is located within the vicinity of the project area.

Whilst the project area is identified in the Eyre and Western Region Plan this is only of relevance to future rezoning proposals and does not guarantee land being set aside for infrastructure purposes. The current Development Plans of relevance to the project area do not spatially recognise the corridor and therefore provide little protection of the corridor from the establishment of competing uses, which can certainly influence position of the proposed alignment.

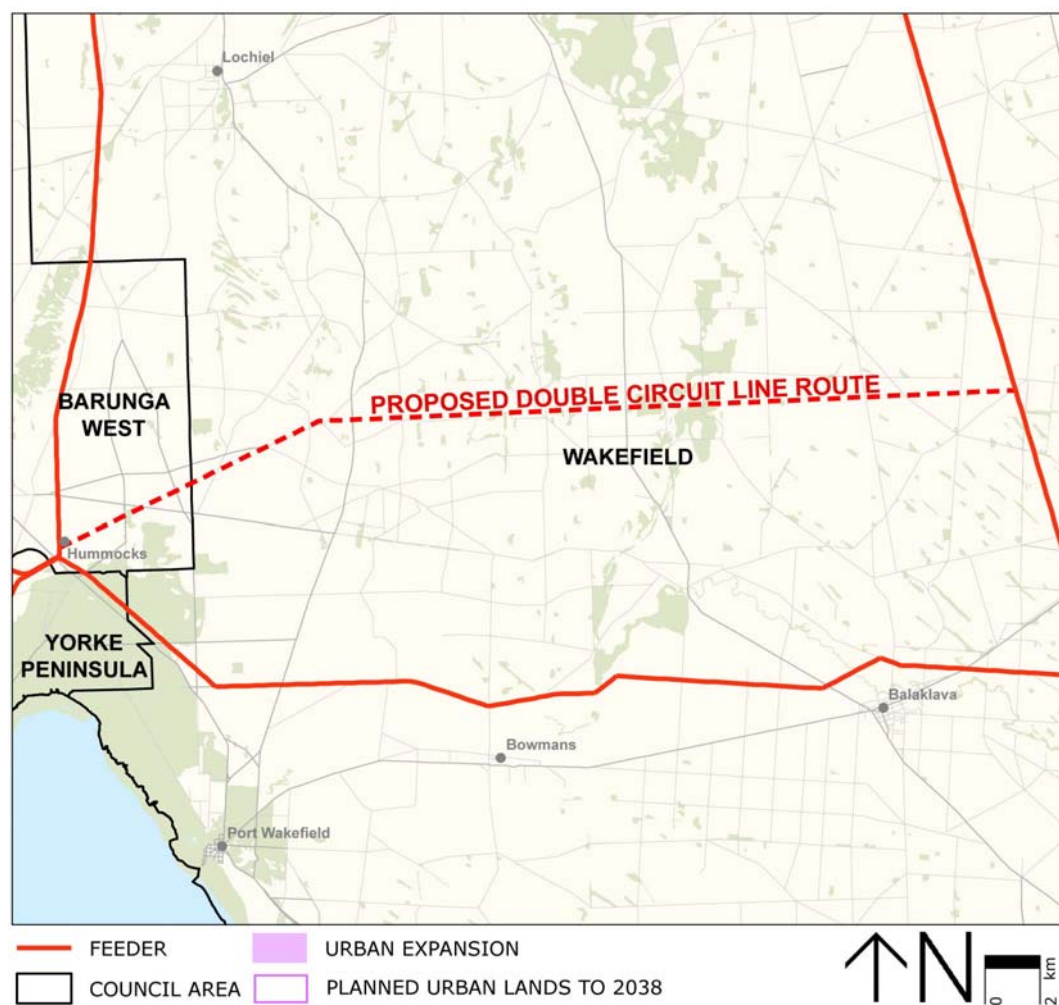
The above indicates that a transmission corridor should be obtained early to ensure an extensive number of planned and mooted competing land uses (primary mining and township expansion) do not extinguish or inhibit the ability to build the new line.

7. YORKE PENINSULA REINFORCEMENT LAND AND EASEMENT ACQUISITION

7.1 Location

The location of this project area is identified in Figure 5. The project area is located well north of Balaklava.

Figure 5: Yorke Peninsula Project Area



7.2 Project Description

The project involves the provision of a 275kV injection point at the existing Hummocks substation site. Part of this will include the construction of a double circuit line from Blyth West to Hummocks.

7.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Yorke Peninsula
Local Government Area:	Wakefield Regional Council, Barunga West Council
Development Plan:	Wakefield Regional Council, Barunga West Council
Zones:	General Farming, Primary Production

Relevant extracts from the Yorke Peninsula Region Land Use Plan are provided as follows.

Infrastructure and Services

Electricity is supplied via the Hummocks sub-station. 132 Kv transmission line runs to the Ardrossan West sub-station, which serves most of the Peninsula.

Role and Function of Towns

The communities within the Yorke Peninsula region are diverse and each has various connections within and outside the region. For instance:

- *Copper Coast townships, Port Broughton and places on the eastern side of the Peninsula function in part as recreation/holiday areas for weekend tourists from Adelaide, Mid North and Port Pirie.*
- *Kadina and Balaklava are key regional centres providing a range of services for communities across Yorke Peninsula and the Adelaide Plains.*
- *Inland towns on the Peninsula, such as Yorketown, Minlaton and Maitland, service surrounding areas, provide affordable housing within proximity to coastal towns, and a range of tourist services.*

Objective 17: Reinforce the role, functionality and vibrancy of towns and settlements

Strategies

17.1 Reinforce the major commercial and service role of Kadina, as the focus of major retail, commercial, administrative, education, health, justice and recreational developments in the region.

17.2 Reinforce the supporting commercial and service roles of Ardrossan, Port Broughton, Balaklava, Wallaroo and Maitland, as the foci of secondary retail, commercial, administrative, education, health, justice and recreational developments in the region and build on Minlaton's role as the tourist gateway to southern Yorke Peninsula.

Objective 18: Strategically plan and manage township growth, with master planning for coastal areas a priority

Strategies

18.1 Focus development in existing towns and settlements based on role and function (see Objective 17)

7.4 Consultation and Conclusions

The project area is primarily within rural/farming land which is remote from any townships. A significant proportion of the corridor is within the General Farming and Primary Production Zones. These are zones where there is little prospect of more intensive land uses being established.

The line route is well north of the settlements of Balaklava and Bowmans and well south of Lochiel.

These settlements are unlikely to expand in the future, based on current Development Plan and Yorke Peninsula Region Plan directions.

Communication with the Wakefield Regional Council has determined that:

- there are no known development proposals which would impact upon the corridor;
and
- at a strategic level there are no proposals to intensify development within the corridor.

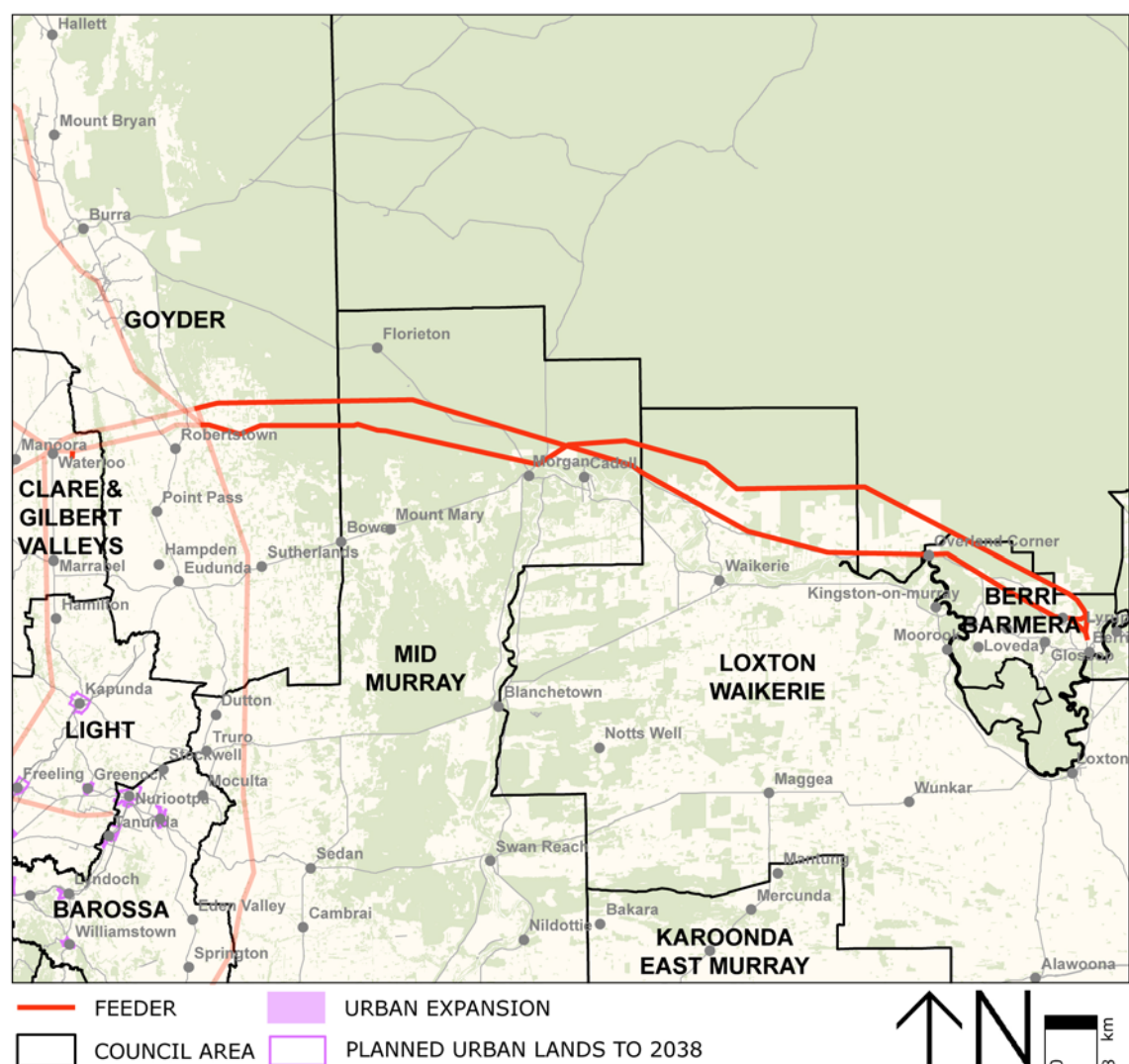
Whilst no significant competing land uses have been identified, a transmission corridor should be obtained early to ensure potentially conflicting uses do not emerge to extinguish or inhibit the ability to build the new line. In this respect we note that new wind farm projects are being frequently announced and such an example could have impacts upon securing land.

8. RIVERLAND REINFORCEMENT LAND AND EASEMENT ACQUISITION

8.1 Location

The location of this project area is identified in Figure 6. The project area extends from Berri in the east to Robertstown to the west. The indicative alignments pass through Monash, Overland Corner, Cadell, Morgan and then Robertstown.

Figure 6: Riverland Project Area



8.2 Project Description/Risk

Two transmission options have been identified as part of this project, these being:

- Option A: Establish a 275/132 kV substation at Monash, including 275kV lines from Robertstown to Monash; or
- Option B: Construct additional 132 kV lines between Robertstown and Monash.

It is understood that landowner agreements for the sale of land and the granting of easements around the Robertstown substation have been acquired by a Wind Farm proponent. These agreements may pose a risk to this project in that the agreements could either prevent or constrain the expansion of the Robertstown substation and/or connection options available for the 275 kV line entry.

8.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Murray and Mallee
Local Government Area:	Berri Barmera, Loxton Waikerie, Mid Murray, Goyder
Development Plan:	Berri Barmera (DC), Loxton Waikerie, Mid Murray, Goyder
Zones:	River Murray Fringe, Primary Production, Remote Areas Enterprise.

Relevant extracts from the Murray and Mallee Region Plan are provided as follows.

The Murray and Mallee region at a glance

The Murray and Mallee region:

- *has a major centre, Murray Bridge, which has an economy based on food production and processing, and is also the centre for government services in the region*
- *has three other important regional services centres—Loxton, Berri and Renmark.*

Infrastructure and service provision

- *Providing strategic electricity infrastructure corridors for augmentation and extension of the transmission network.*

Overview

The region has major rail and road freight transportation networks that provide access to key markets in Adelaide and the eastern states. Additional key infrastructure includes the electricity network, with transmission network service provider ElectraNet undertaking regular reviews to identify the need for upgrades, as well as gas pipeline infrastructure, which may need enhancement in some areas (particularly the Mallee and Riverland) in order to attract industrial and commercial investment.

The geothermal, biomass and wind potential of the region is particularly significant, and future upgrades and modification to the transmission and distribution networks will be required in order to realise this potential.

Principle 5

Protect and build on the region’s strategic infrastructure

Policies

5.3.1 Provide for strategic electricity infrastructure corridors for augmentation and extension of the transmission network

Principle 10

Strategically plan and manage the growth of towns

Policies

10.1 Focus growth and development in existing towns and settlements based on their roles and functions, as described in Principle 9 and shown on Map D3.

Other infrastructure and service priorities and issues

- *allow for future electricity transmission upgrades by provision and protection of corridors parallel to existing infrastructure or where identified by ElectraNet*

It is noted that the proposed route is identified in the Murray and Mallee Region Plan, which is relevant in respect to any future rezoning proposals which need to take into account the need for the corridor.

8.4 Consultation and Conclusions

The project area is primarily within rural/farming land typical of that found in the Riverland and Murray Mallee region.

Communication with the local Councils has determined that:

Loxton Waikerie:

No plans for any major developments. The only likely future intensification of land use would be an increase in the area of land put under irrigation for horticulture.

Goyder:

There are no plans for any intensification of development.

Mid Murray:

Morgan has modest expansion plans to expand along the Murray River side, but no plans to extend any further north.

On the western side there is an Enterprise Zone which aims to provide for intensive animal keeping. These policy provisions have not been utilized to their full capacity and it will take a while for development to catch up.

Berri Barmera:

To the north and west of the Berri township, some areas have been recently rezoned, to facilitate the development of 60-80 dwellings. No land is set aside for expansion in Monash.

Whilst the Murray and Mallee Region Plan identifies the proposed corridor, such does not guarantee other competing and potentially conflicting land uses may emerge. The current Development Plans of relevance to the project area do not spatially recognise the corridor and therefore provide little protection of the corridor from the establishment of competing uses, which can certainly influence position of the proposed alignment.

We understand that the previous establishment of the Buronga to Robertstown line caused significant community resistance. As such any new line may also create community concern, with the potential line being in the vicinity of the bookmark biosphere reserve.

The above investigations indicate that there is potential for community resistance within portions of the project area, highlighting the need to progress acquisition.

9. SNUGGERY SUBSTATION REPLACEMENT LAND ACQUISITION

9.1 Location

The location of this project area is identified in Figure 7. The project area is located to the north of the Tantanoola township.

Figure 7: Snuggery Project Area



9.2 Project Description/Risk

The rebuild of the Snuggery Substation will require a new site in the immediate locality, to reduce the line and cable costs associated with a switchover.

Established infrastructure and industrial activity on adjoining land limit the availability of land suitable for this purpose. A long history of strained relations with the remaining landowners adds to the risk of securing the timely acquisition of a suitable site in the area noting some easements for the wind farm connection were compulsorily acquired.

The risk for this land acquisition is therefore whether suitable land is available adjacent to the current site and the sentiment of adjoining landowners.

9.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Limestone Coast
Local Government Area:	Wattle Range
Development Plan:	Wattle Range (DC)
Zones:	Primary Production

Relevant extracts from the Limestone Coast Region Plan are provided as follows.

The Limestone Coast region at a glance

The Limestone Coast region:

- *Covers an area of around 21,400 square metres*
- *Has a population of around 65,400*
- *Is well placed to accommodate population growth, given its strong economy and well serviced regional centre*

Principle 5

Protect and build on the region's strategic infrastructure

5.2 Establish appropriate buffers to protect existing strategic infrastructure and sites and corridors identified as potential locations for future infrastructure from encroachment that may compromise their operation or expansion.

POPULATION AND SETTLEMENTS

Overview

The region currently has a significant amount of undeveloped, ready zoned land suitable for residential development, which includes around 1329 hectares (ha) zoned residential and 3048 ha zoned rural living. A further 225 ha of deferred urban land could in part be used for residential development, as shown in Table D2.

Principle 11

Strategically plan and manage the growth of towns

Policies

11.1 Focus growth and development in existing towns and settlements based on their roles and functions, as described in Principle 10 and shown on Map D3.

9.4 Consultation and Conclusions

The project area is primarily within rural/farming land which predominates within the South-East Region.

A significant proportion of the project area is within the Primary Production Zone. This is a zone where there is little prospect of more intensive land uses being established.

Communication with Wattle Range Council has determined that:

- there are no known development proposals which would impact upon the corridor;
and
- at a strategic level there are no proposals to intensify development within the corridor.

Community issues are however likely to be at play with wind farm and other energy related projects impacting upon landowner attitudes.

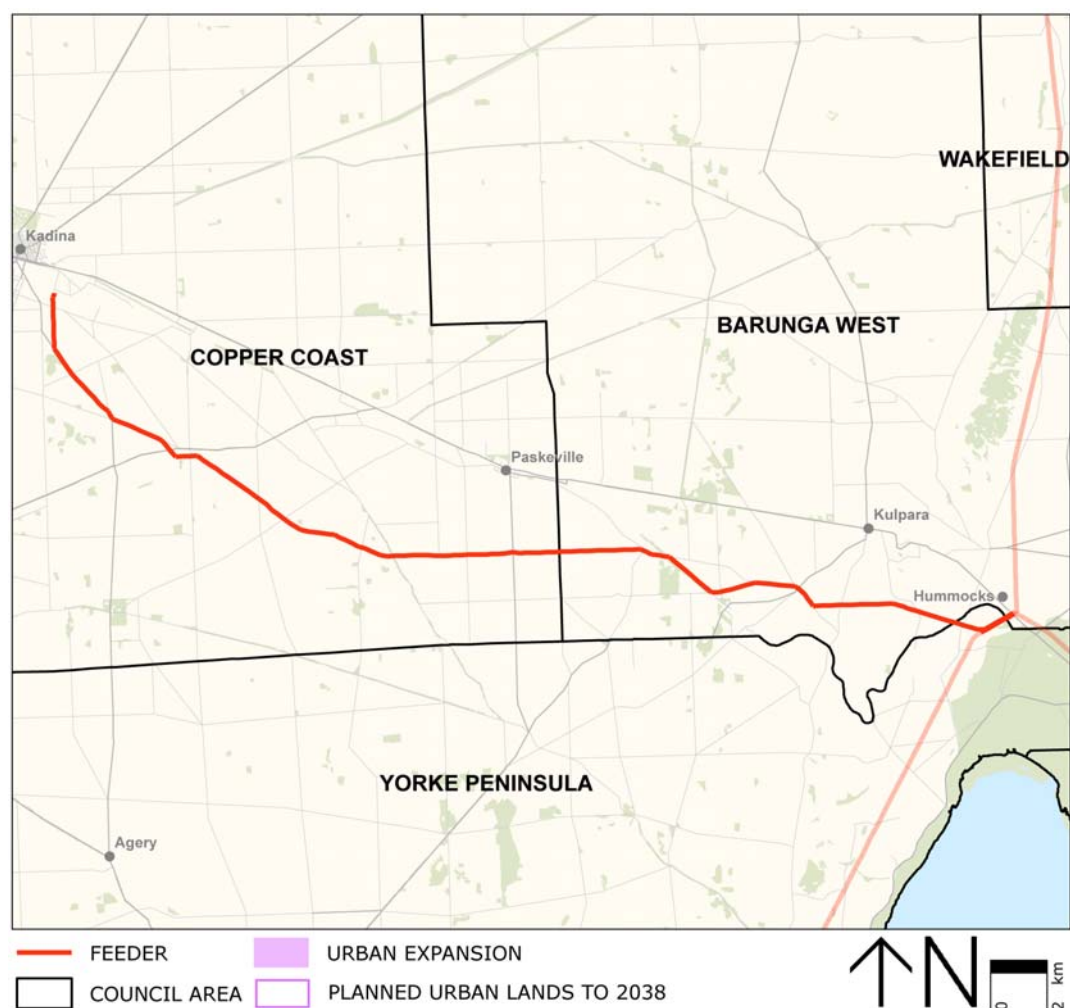
The above investigations indicate that there is potential for community resistance within the project area, highlighting the need to progress acquisition.

10. KADINA EAST TO HUMMOCKS LAND AND EASEMENT ACQUISITION

10.1 Location

The location of this project area is identified in Figure 8. The project area extends between Kadina and Hummocks and is located to the south of the townships of Paskeville and Kulpara.

Figure 8: Kadina East to Hummocks Project Area



10.2 Project Description/Risk

We understand that this is a line rebuild project, meaning the new line is likely to follow parallel to the existing transmission line between Kadina East and Hummocks.

Due to the increasing urbanisation of Kadina, Moonta and Wallaroo, the topography, land use and environmental issues mean this a complex project.

10.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Yorke Peninsula
Local Government Area:	Copper Coast, Barunga West
Development Plan:	Copper Coast, Barunga West
Zones:	General Farming

Relevant extracts from the Yorke Peninsula Region Plan are provided as follows.

Infrastructure and Services

Electricity is supplied via the Hummocks sub-station. 132 Kv transmission line runs to the Ardrossan West sub-station, which serves most of the Peninsula.

Role and Function of Towns

The communities within the Yorke Peninsula region are diverse and each has various connections within and outside the region. For instance:

- *Copper Coast townships, Port Broughton and places on the eastern side of the Peninsula function in part as recreation/holiday areas for weekend tourists from Adelaide, Mid North and Port Pirie.*
- *Kadina and Balaklava are key regional centres providing a range of services for communities across Yorke Peninsula and the Adelaide Plains.*
- *Inland towns on the Peninsula, such as Yorketown, Minlaton and Maitland, service surrounding areas, provide affordable housing within proximity to coastal towns, and a range of tourist services.*

Objective 17: Reinforce the role, functionality and vibrancy of towns and settlements

Strategies

17.1 Reinforce the major commercial and service role of Kadina, as the focus of major retail, commercial, administrative, education, health, justice and recreational developments in the region.

17.2 Reinforce the supporting commercial and service roles of Ardrossan, Port Broughton, Balaklava, Wallaroo and Maitland, as the foci of secondary retail, commercial, administrative, education, health, justice and recreational developments in the region and build on Minlaton's role as the tourist gateway to southern Yorke Peninsula.

Objective 18: Strategically plan and manage township growth, with master planning for coastal areas a priority

Strategies

18.1 Focus development in existing towns and settlements based on role and function (see Objective 17)

10.4 Consultation and Conclusions

The project area is primarily within rural/farming land which characterises the Yorke Peninsula region.

Communication with Copper Coast and Barunga West Council's has determined that:

- there are no known development proposals which would impact upon the corridor; and
- at a strategic level there are no proposals to intensify development adjacent to the corridor.

In locations at the periphery of townships, some landowners have speculative holdings with a vision of potential future rezoning.

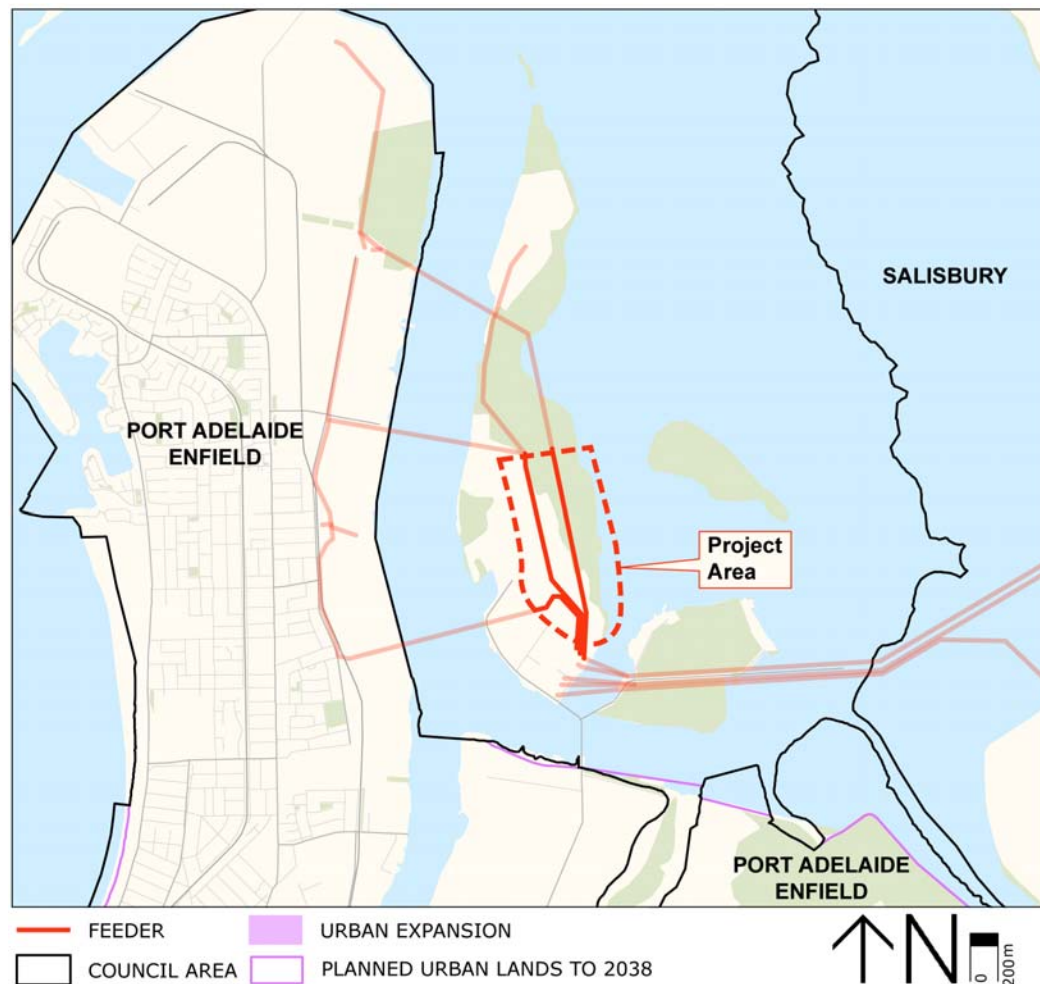
The above investigations indicate that there is potential for protracted landowner negotiations and therefore community resistance within portions of the project area, highlighting the need to progress acquisition.

11. TORRENS ISLAND C SWITCHING STATION LAND AND EASEMENT ACQUISITION

11.1 Location

The location of this project area is identified in Figure 9. The project area is located on Torrens Island.

Figure 9: Torrens Island C Project Area



11.2 Project Description/Risk

The focus of the project is the establishment of a 275kV switchyard to the north of the existing.

The flexibility of the land acquisition project is very limited. The area of acquisition must be at Torrens Island and there are complexities in relation to environmental and other issues.

11.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	N/A
Local Government Area:	Out of Council
Development Plan:	Out of Council
Zones:	Public Purpose (Power Station) Metropolitan Open Space System (Conservation)

11.4 Consultation and Conclusions

Torrents Island is associated with the environmentally sensitive nature of the mangroves, the Barker Inlet and the dolphin sanctuary.

As a consequence, EPBC referrals and extensive community consultation may be required ahead of any statutory approvals.

Given the complexities associated with Torrents Island, early acquisition is recommended.

12. ANGAS CREEK SUBSTATION REPLACEMENT LAND ACQUISITION

12.1 Location

The location of this project area is identified in Figure 10. The project area is located to the north of the Mount Torrens township.

Figure 10: Angas Creek Project Area



12.2 Project Description

The project seeks to rebuild the existing Angus Creek substation which will require the purchase of additional land located to the east of the existing sub-station. Approximately 5ha of land will be required.

12.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

State Government Region: Adelaide Hills

Region Plan: 30 Year Plan for Greater Adelaide

Local Government Area: Adelaide Hills

Development Plan: Adelaide Hills

Zones: Watershed (Primary Production)

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure

Policies

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

12.4 Consultation and Conclusions

The project area is primarily within rural/farming land typical of that found throughout the Adelaide Hills. A significant proportion of the likely corridor is within the Watershed (Primary Production) Zone. This is a zone where there is little prospect of more intensive land uses being established.

The project area is well removed from the closest townships of Birdwood and Mount Torrens.

These settlements are unlikely to expand in the future, based on current Development Plan and 30 Year Plan directions. Infill development is however anticipated.

Communication with Adelaide Hills Council has determined that:

- there are no known development proposals which would impact upon the project area; and
- at a strategic level there are no proposals to intensify development within or adjacent to the project area.

Whilst this project is for a rebuild, the project area is within a visually sensitive hills area whereby community opposition can be anticipated.

The above investigations indicate that there is potential for community resistance within portion of the project area, highlighting the need to progress acquisition.

13. MORPHETT VALE EAST/CHERRY GARDENS/HAPPY VALLEY EASEMENT EXPANSION

13.1 Location

The location of this project area is identified in Figure 11. The project area is located adjacent to The Vines Golf Club and Tangari Regional Park. The majority of the project area is located outside of the boundary of planned urban lands and is within the Hills Face Zone.

Figure 11: Morphett Vale East/Cherry Gardens/Happy Valley Project Area



13.2 Project Description

The project requires portion of the existing corridor to be increased from 45 to 100 metres in width.

As load demand in the Southern Metropolitan area increases, a second 275 kV line from Cherry Gardens will be required to reinforce supply to the Morphett Vale East Substation and a double circuit 275 kV line will also be required between the Morphett Vale East Substation and Happy Valley Substation.

Approximately 2 km of new widened easements will be required to enable these works to proceed.

13.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

State Government Region:	Southern Adelaide
Region Plan:	30 Year Plan for Greater Adelaide
Local Government Area:	City of Onkaparinga
Development Plan:	Onkaparinga (City)
Zones:	landscape and Community Uses

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure

Policies

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

Electricity

12. *Corridor for a double circuit 275 kV line and a 500-275 kV substation.*
14. *Cherry Gardens – Morphett Vale East transmission line upgrade and additional easement acquisition*

The project area is identified in the 30 Year Plan with it notated ' *Cherry Gardens-Morphett Vale East transmission line upgrade and additional easement upgrade*'.

Portion of the project area is located within the proposed McLaren Vale Character Preservation Area, which increases the potential sensitivity for new infrastructure proposals.

13.4 Consultation and Conclusions

The majority of development is non-complying in the Hills Face Zone and therefore intensification of development within the project area is unlikely.

Communication with the City of Onkaparinga has determined that:

- there are no known development proposals which would impact upon the project area; and
- at a strategic level there are no proposals to intensify development within the corridor.

Whilst the project area is identified in the 30 Year Plan this is only of relevance to future rezoning proposals and does not guarantee land being set aside for infrastructure purposes. The current Development Plans of relevance to the project area do not spatially recognise the corridor and therefore provide little protection of the corridor from the establishment of competing uses, which can certainly influence position of the proposed alignment.

The project area is located within a sensitive area which is likely to raise issues in respect to the local community. In addition, the location of portion of the corridor within the Hills Face Zone presents challenges from a planning perspective.

Without early action there is a high risk a suitable widened easement corridor will become more challenging, as urban development to the north and west intensifies over time.

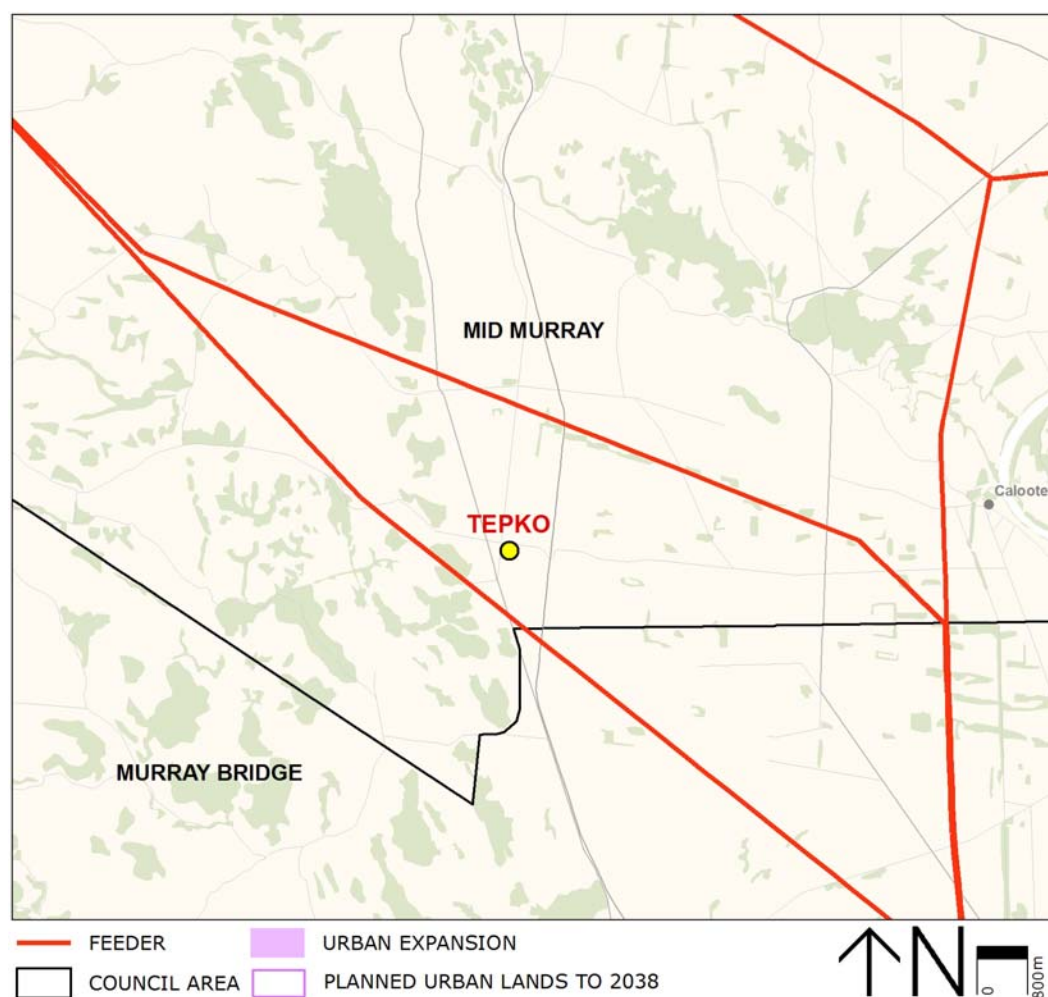
The above investigations indicate that there is potential for intensification and community resistance adjacent to and/or within portions of the project area. This highlights a desire to progress acquisition.

14. TEPKO SUBSTATION LAND ACQUISITION

14.1 Location

The location of this project area is identified in Figure 12. The project area is located immediately to the east of the Tepko settlement.

Figure 12: Tepko Project Area



14.2 Project Description/Risk

The project requires the acquisition of land for the development of a sub-station at Tepko. It is intended to establish the sub-station adjacent to the existing power station, with a land area in the order of 12.5ha required.

14.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan: Murray and Mallee

Local Government Area: Mid Murray Council

Development Plan: Mid Murray

Zones: Rural

Relevant extracts from the Murray and Mallee Region Plan is provided as follows.

The Murray and Mallee region at a glance

The Murray and Mallee region:

- *has a major centre, Murray Bridge, which has an economy based on food production and processing, and is also the centre for government services in the region*
- *has three other important regional services centres—Loxton, Berri and Renmark.*

Infrastructure and service provision

- *Providing strategic electricity infrastructure corridors for augmentation and extension of the transmission network.*

The principles are:

10 Strategically plan and manage the growth of towns

Overview

The region has major rail and road freight transportation networks that provide access to key markets in Adelaide and the eastern states. Additional key infrastructure includes the electricity network, with transmission network service provider ElectraNet undertaking regular reviews to identify the need for upgrades, as well as gas pipeline infrastructure, which may need enhancement in some areas (particularly the Mallee and Riverland) in order to attract industrial and commercial investment.

The geothermal, biomass and wind potential of the region is particularly significant, and future upgrades and modification to the transmission and distribution networks will be required in order to realise this potential

Principle 5

Protect and build on the region's strategic infrastructure

Policies

5.3.2 Provide for strategic electricity infrastructure corridors for augmentation and extension of the transmission network

Principle 10

Strategically plan and manage the growth of towns

Policies

10.1 Focus growth and development in existing towns and settlements based on their roles and functions, as described in Principle 9 and shown on Map D3.

Other infrastructure and service priorities and issues

- *allow for future electricity transmission upgrades by provision and protection of corridors parallel to existing infrastructure or where identified by ElectraNet*

14.4 Consultation and Conclusions

The project area is primarily within rural/farming land typical of the Murray and Mallee region. The Tepko site is located between Murray Bridge and Palmer.

Communication with Mid Murray Council has determined that:

- a peaking plant (to be utilized during peak times) approximately 1 km north east from the existing Tepko power station received planning approved 1-2 years ago. This proposed plant has not yet received building approval;
- at a strategic level there are no proposals to intensify development within the corridor.

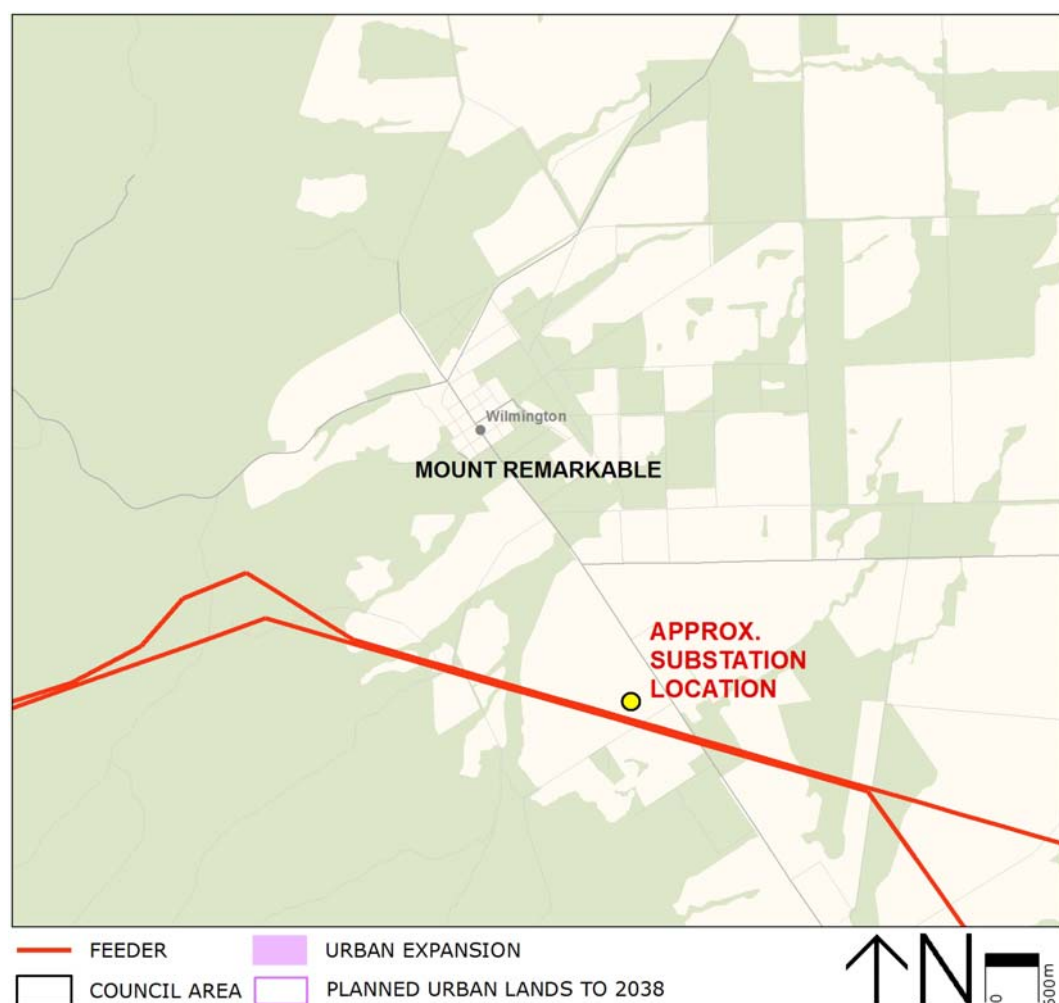
The project area is within a visually sensitive area whereby community opposition can be anticipated. Accordingly, early acquisition is recommended.

15. WILMINGTON SUBSTATION LAND ACQUISITION

15.1 Location

The location of this project area is identified in Figure 13. The project area is located to the south of the Wilmington township.

Figure 13: Wilmington Project Area



15.2 Project Description

The project is to establish a new sub-station. The proposed Wilmington Substation requires the purchase of approximately 5 hectares proximate to the 275 kV line from Davenport.

This represents a strategic site for future network development. This project is linked to future major load expansion on the network, wind energy development and the longer term potential for large scale interconnection requirements with the eastern seaboard.

15.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Mid North
Local Government Area:	Mount Remarkable
Development Plan:	Mount Remarkable
Zones:	Ranges

Relevant extracts from the Mid North Region Plan is provided as follows.

The Mid North region at a glance

The Mid North region:

- *has a major commercial and service centre, Port Pirie, which contains 33 per cent of the population; four important towns—Clare, Peterborough, Jamestown and Crystal Brook—which contain 20 per cent of the population; 15 smaller towns, which contain 16 per cent of the population; and other settlements and areas, which contain 31 per cent of the population*

Infrastructure and services provision

- *Planning for the expansion of the transmission infrastructure required to meet increased electricity generation.*

An integrated approach

The aims of the vision are to:

- *manage the region's population, with a focus on Port Pirie, Clare, Burra, Crystal Brook, Jamestown, Peterborough and Booleroo Centre.*

The principles are:

- 10 *Strategically plan and manage town growth.*

15.4 Consultation and Conclusions

The project area is primarily within rural land typical of that found in the mid north region. A significant proportion of the likely corridor is within the Ranges Zone. The objective of this zone seeks the '*preservation of the natural character, and the scenic, scientific and heritage features of the Southern Flinders Ranges, whilst maintaining water quality and accommodating a diversity of established pastoral, agricultural and forestry activities*'.

Based on the above, major intensification of development within the zone is not likely.

The indicative sub-station location is south of the township of Wilmington. Wilmington is unlikely to expand in the future, based on current Mid North Region Plan directions.

Communication with District Council of Mount Remarkable has determined that the following development proposals which may impact upon the project area:

- there is an existing wind farm monitoring mast on the western side of Wilmington;

- there is currently an application for a second wind farm monitoring mast on the north western side of Wilmington. These wind farm monitoring masts are owned by the same company: Wind Prospect, which is considering options for the future development of a wind farm in the area; and
- on the outskirts of Wilmington in the north-east, east and south east, people have recently acquired rural living allotments, on which dwellings are likely to be built in the near future.

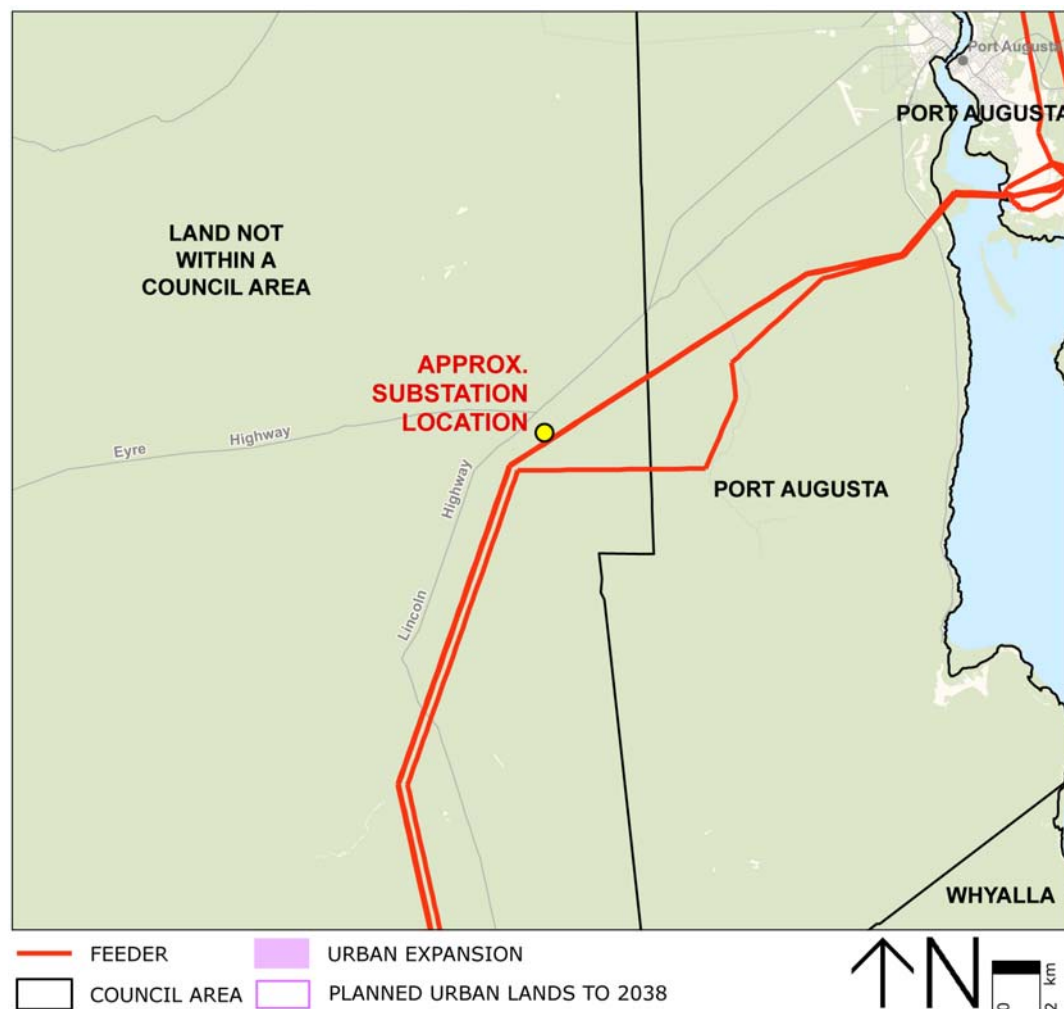
The above indicates that a site should be obtained as a priority given development pressures which could give rise to community and landowner sensitivity in the project area.

16. LINCOLN GAP LAND ACQUISITION

16.1 Location

The location of this project area is identified in Figure 14. The project area is located between Port Augusta and Whyalla, adjacent to the intersection of the Eyre Highway and the Lincoln Highway.

Figure 14: Lincoln Gap Project Area



16.2 Project Description/Risk

This project contemplates the establishment of a 275 kV substation at Lincoln Gap to provide a connection node to the region. The activities of wind farm proponents in this area drive the need to make a timely decision on the location of the node.

16.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Eyre and Western
Local Government Area:	Out of Councils
Development Plan:	Out of Councils
Zones:	No Zones

Relevant extracts from the Eyre and Western Region Plan is provided as follows.

Population and regional centres

Nearly 70 percent of the region's 59,203 population (Estimated Resident Population [ERP]¹ 2010) live in the three urban centres of Whyalla, Port Lincoln and Ceduna.

Principle 4

Protect and build on the region's strategic infrastructure

Policies

- 4.1*** *Infrastructure development should be consolidated to limit unnecessary duplication of services and resources and to reduce the impact on the surrounding environment, economy and community.*
- 4.2*** *Ensure Development Plans provide for existing and future strategic infrastructure corridors and assets by:*
 - > identifying land for expansion*
 - > protecting corridors and assets from encroachment by incompatible land uses*
 - > addressing impacts of climate change*
 - > incorporating flexible policy to accommodate changing operational needs.*

Principle 11

Plan and manage township growth, and develop Structure Plans for key growth centres

Policies

- 11.1*** *Prepare Structure Plans for key growth centres to promote orderly and efficient development.*
- 11.2*** *Townships should consolidate development and population growth within existing boundaries.*

16.4 Consultation and Conclusions

The project area is primarily within rural land which extends between Port Augusta and Whyalla.

Although a potential site in this region is unlikely to be at risk of urban encroachment, other competing land uses relating to wind farms and potentially mining mean that there is potential for increased conflicts if land is not acquired promptly.

17. FOURTH NORTHERN SUBURBS SUBSTATION LAND ACQUISITION

17.1 Location

The location of this project area is identified in Figure 15. The project area is located adjacent to the intersection of Huxtable Road and Short Road.

Figure 15: Fourth Northern Suburbs Project Area



17.2 Project Description/Risk

The purpose of the project is to establish a new connection point in the vicinity of Virginia.

The recommended solution is to establish a 275/66 kV connection point at Waterloo Corner connected to the new Munno Para Substation via a single 275 kV cable (14–15 km).

The proposed site is located adjacent to the corner of Huxtable Road and Short Road at Waterloo Corner about 1 km west of the Edinburgh Air base.

A 5 Ha site is required to ensure sufficient design flexibility for substation orientation and construction if the site is connected via cable. The site area requirements will increase if an overhead connection is proposed.

17.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

State Government Region:	Northern Adelaide
Region Plan:	30 Year Plan for Greater Adelaide
Local Government Area:	Playford
Development Plan:	Playford
Zones:	Primary Production, Recreation

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure

Policies

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

17.4 Consultation and Conclusions

Communication with the City of Playford has determined that:

- there are no known development proposals which would impact upon the project area; and
- at a strategic level there are no known proposals to intensify development within the project area.

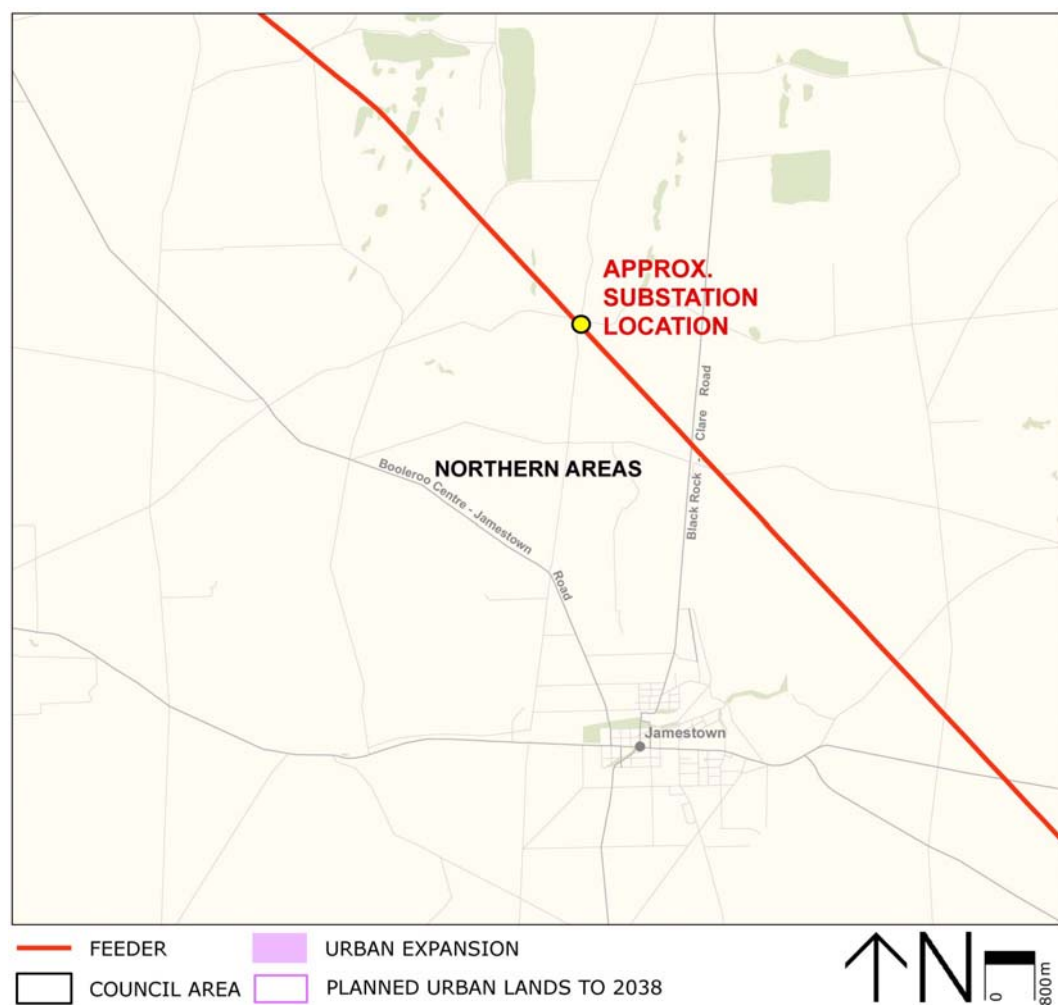
However, the proposed site is located near to Edinburgh RAAF base, where development controls do apply for certain vertical structures that may impact on airport operations.

18. JAMESTOWN SUBSTATION LAND ACQUISITION

18.1 Location

The location of this project area is identified in Figure 16. The project area is located to the north of the Jamestown township.

Figure 16: Jamestown Project Area



18.2 Project Description/Risk

The purpose of the project is to establish a new sub-station, approximately 7km north of Jamestown. The substation site will be to the west of and alongside the existing 275 kV Davenport to Belalie and Canowie lines.

The construction of a substation in green field location carries with it the risk of community opposition or outrage which could bring development to a halt.

There is evidence of increased landowner opposition to wind farms in the region and this frustration often manifest in protests against any infrastructure that could be construed as contributing or assisting wind farm developments.

18.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Mid North
Local Government Area:	Northern Areas
Development Plan:	Northern Areas
Zones:	Primary Production

Relevant extracts from the Mid North Region Plan is provided as follows.

The Mid North region at a glance

The Mid North region:

- *has a major commercial and service centre, Port Pirie, which contains 33 per cent of the population; four important towns—Clare, Peterborough, Jamestown and Crystal Brook—which contain 20 per cent of the population; 15 smaller towns, which contain 16 per cent of the population; and other settlements and areas, which contain 31 per cent of the population*

Infrastructure and services provision

- *Planning for the expansion of the transmission infrastructure required to meet increased electricity generation.*

An integrated approach

The aims of the vision are to:

- *manage the region's population, with a focus on Port Pirie, Clare, Burra, Crystal Brook, Jamestown, Peterborough and Booleroo Centre.*

Principle 5

Protect and build on the region's strategic infrastructure

- *wind farms and associated electricity transmission infrastructure.*

Policies

- 5.2** *Establish appropriate buffers to protect existing strategic infrastructure and sites, and corridors identified as potential infrastructure locations from encroachment that may compromise their operation or potential.*

Priorities for councils

- *Strategically plan approaches to strengthening agribusiness centres in the southern and central parts of the Mid North, such as Jamestown, Crystal Brook and Eudunda.*

18.4 Consultation and Conclusions

The project area is primarily within rural/farming land typical of that found through much of the Mid North Region. A significant proportion of the likely corridor is within the Primary Production Zone. The protection of scenic qualities of this zone is anticipated.

Communication with the Northern Areas Council has determined that:

- there is currently an application with DAC for a large wind farm (the Hornsdale Wind farm, consisting of 105 turbines);
- there are two separate mining tenements, which have been problematic for the Hornsdale Windfarm;
- there are Aboriginal interests / Native Title issues but these are probably a little further north than the project area;
- there are no strategic plans for growth.

The community has been vocal in respect to wind farm proposals in the region, as such there could be sensitivity to associated infrastructure delivery.

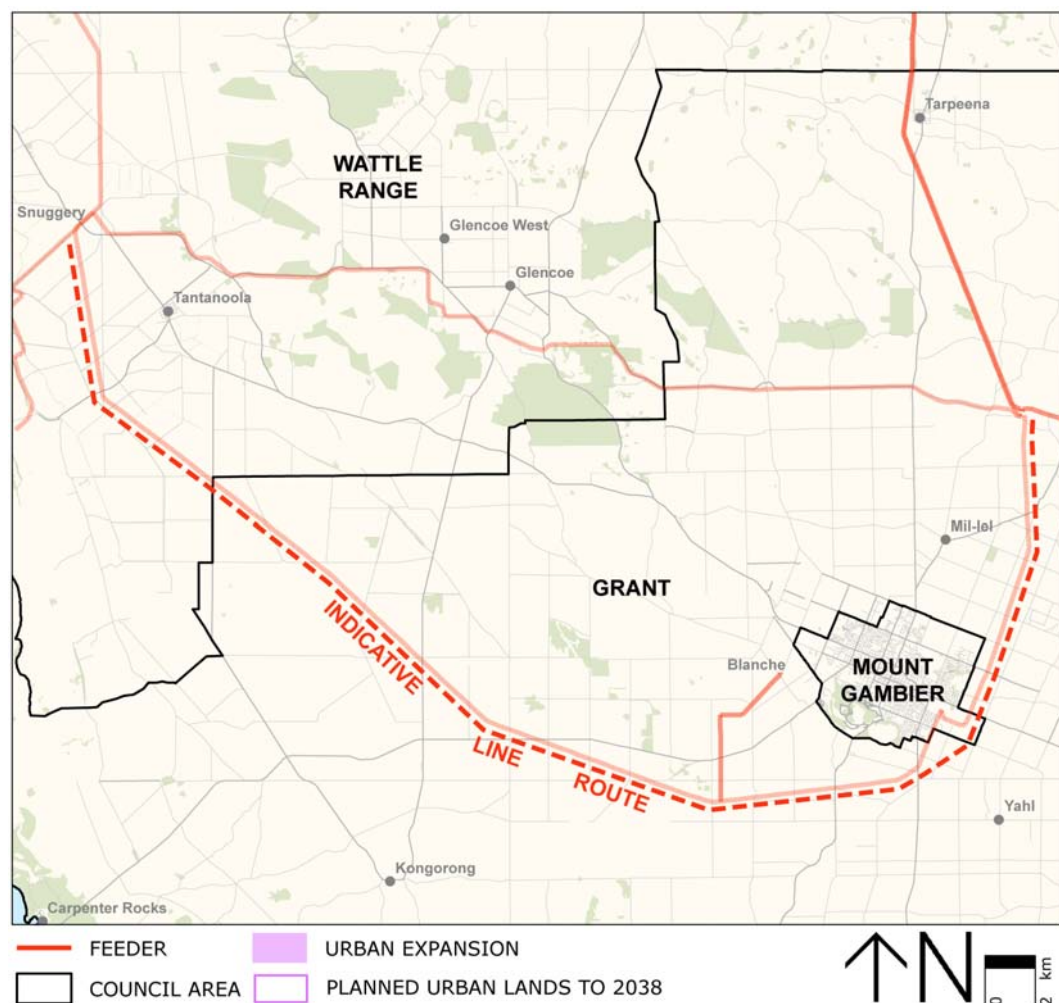
Based on the above, early action is recommended in selecting and procuring a suitable site, as negotiations with land owners could be made more difficult if community concerns continue to escalate.

19. SOUTH EAST TO MOUNT GAMBIER TO SNUGGERY EASEMENT EXPANSION

19.1 Location

The location of this project area is identified in Figure 17. The project area is extensive generally following the existing corridor which passes through the City of Mount Gambier.

Figure 17: Snuggery Project Area



19.2 Project Description/Risk

The purpose of the project is to build a second 132 kV line from Snuggery to Blanche to Mount Gambier to South East line.

This project provides for the acquisition of additional easement width along the length of the feeders between the Snuggery to Blanche, Blanche to Mount Gambier and Mount Gambier to South East substations. The project estimate is based on the following assumptions:

- acquisition of a 40 m wide easement for the full length of Feeder 1838 Snuggery to Blanche (50 km approx. 93 affected properties) inclusive of requisite easements for access;
- acquisition of a 40 m wide easement for the full length of Feeder 1839 Blanche to Mount Gambier (19 km approx. 86 affected properties) inclusive of requisite easements for access;
- acquisition of a 40 m wide easement for the full length of Feeder 1839 Mount Gambier to South East (15 km approx. 42 affected properties) inclusive of requisite easements for access; and
- as the project covers a significant distance (84 km) including several kilometres of easement through the urban and peri urban areas surrounding Mount Gambier the timely delivery of easements carries with it significant risk.

19.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

Region Plan:	Limestone Coast
Local Government Area:	Grant, Mount Gambier, Wattle Range
Development Plan:	Grant, Mount Gambier, Wattle Range
Zones:	Primary Industry, Recreation, Primary Production, Country Living, Horticulture

Relevant extracts from the Limestone Coast Region Plan is provided as follows.

The Limestone Coast region at a glance

The Limestone Coast region:

- *Covers an area of around 21,400 square metres*
- *Has a population of around 65,400*
- *Is well placed to accommodate population growth, given its strong economy and well serviced regional centre*

Principle 5

Protect and build on the region's strategic infrastructure

- 5.2 *Establish appropriate buffers to protect existing strategic infrastructure and sites and corridors identified as potential locations for future infrastructure from encroachment that may compromise their operation or expansion.*

POPULATION AND SETTLEMENTS

Overview

The region currently has a significant amount of undeveloped, ready zoned land suitable for residential development, which includes around 1329 hectares (ha) zoned residential and 3048 ha zoned rural living. A further 225 ha of deferred urban land could in part be used for residential development, as shown in Table D2.

Principle 11

Strategically plan and manage the growth of towns

Policies

11.1 Focus growth and development in existing towns and settlements based on their roles and functions, as described in Principle 10 and shown on Map D3.

Priorities for the Limestone Coast Region, as identified in the Strategic Infrastructure Plan for South Australia, Regional Overview, 2005-06-2014-15

Energy

- *Investigate the viability of biomass power generation from timber waste.*

The Limestone Coast Region Plan identifies the project area as a potential power line corridor.

19.4 Consultation and Conclusions

The project area is primarily within rural/farming land typical of that found within the lower South East region. A small portion of the project area extends within the western portion of the City of Mount Gambier, which is primarily of an industrial nature, but also includes public open space.

Communication with the Wattle Range Council, District Council of Grant and the City of Mount Gambier has determined that there is the potential for the second stage of the Infagen Energy wind farm to link back into the substation, but spatially this should not impact the widening of the existing easement.

Whilst the project area is identified in the Limestone Coast Region Plan this is only of relevance to future rezoning proposals and does not guarantee land being set aside for infrastructure purposes.

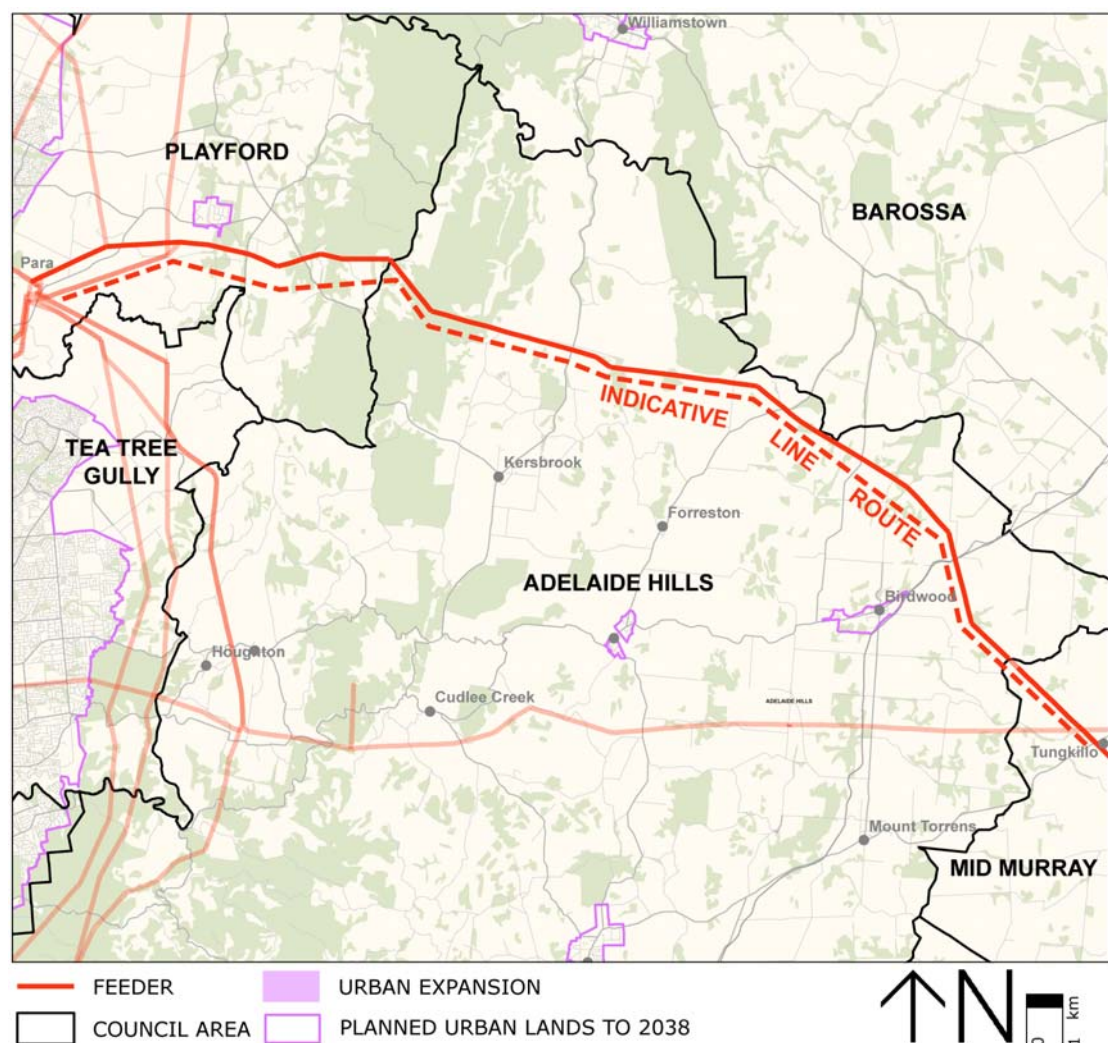
The above indicates that a transmission corridor should be obtained early to ensure an extensive number of planned and potential competing land uses do not extinguish or inhibit the ability to build the new line.

20. PARA TO TUNGKILLO EASEMENT EXPANSION

20.1 Location

The location of this project area is identified in Figure 18. The project area is located to the east of Adelaide, extending from Tungkillo in the east to Para to the north.

Figure 18: Para to Tungkillo Project Area



20.2 Project Description/Risk

The project is to either convert the Para to Tungkillo circuit to a high capacity line or to construct a second line.

This project deals specifically with the easements needed to enable the conversion of the current 275 kV single circuit line between Para and Tungkillo to a high capacity double circuit line over a distance of approximately 41 km.

Whether the existing easement is widened or an alternate alignment is sought, the topography, land use and environmental issues mean this a complex project. Detailed early studies and corridor investigations will be required to obtain the required Development Approvals required for the construction project. These may require EPBC referrals and extensive community consultation. Thus long lead times will be required to deliver an accessible line corridor in time to meet the network trigger dates. Early commencement and action is recommended.

The construction of a new transmission line in the Adelaide Hills carries with it the risk of community opposition or outrage. The Adelaide Hills and the Hills Face Zone are environmentally and politically sensitive areas and as a consequence large infrastructure projects are likely to attract significant interest from stakeholder groups.

20.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the study area, in terms of state and local government jurisdictions.

State Government Region:	Adelaide Hills
Region Plan:	30 Year Plan for Greater Adelaide
Local Government Area:	Adelaide Hills
Development Plan:	Adelaide Hills
Zones:	Watershed (Primary Production), Watershed Protection (Mt Lofty Ranges), Primary Production (Mt Lofty Ranges), Hills Face

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure

Policies

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

Electricity

12. *Corridor for a double circuit 275 kV line and a 500-275 kV substation.*

The project area is identified in the 30 Year Plan, with it notated that:

'corridor for a double-circuit 275kV line and a 500-275kV substation'.

Portion of the project area is located within the proposed Barossa Character Preservation Area, which increases the potential sensitivity for new infrastructure proposals.

20.4 Consultation and Conclusions

The project area is primarily within rural/farming land which extends between Birdwood and the existing Para sub-station. Intensification of development intensifies at the western end of the corridor. A significant proportion of the likely corridor is within the Watershed, Primary Production or Hills Face Zone. There is little prospect of more intensive land uses being established within these zones.

These settlements are unlikely to expand in the future, based on current Development Plan and 30 Year Plan directions.

Communication with the Adelaide Hills Council and the City of Playford has determined that:

- there are no known development proposals which would impact upon the corridor; and
- at a strategic level there are no proposals to intensify development within the corridor.

Much of the corridor is within a scenic and well vegetation area within the Adelaide Hills and Barossa Region. Numerous issues are likely to emerge, including strong community sensitivity.

Whilst the project area is identified in the 30 Year Plan this is only of relevance to rezoning proposals and does not guarantee land being set aside for infrastructure purposes.

The current transmission line route crosses through the Barossa Valley Protection District, north of Kersbrook. An extra transmission line may be contrary to the Planning Minister's intent to preserve the area's character.

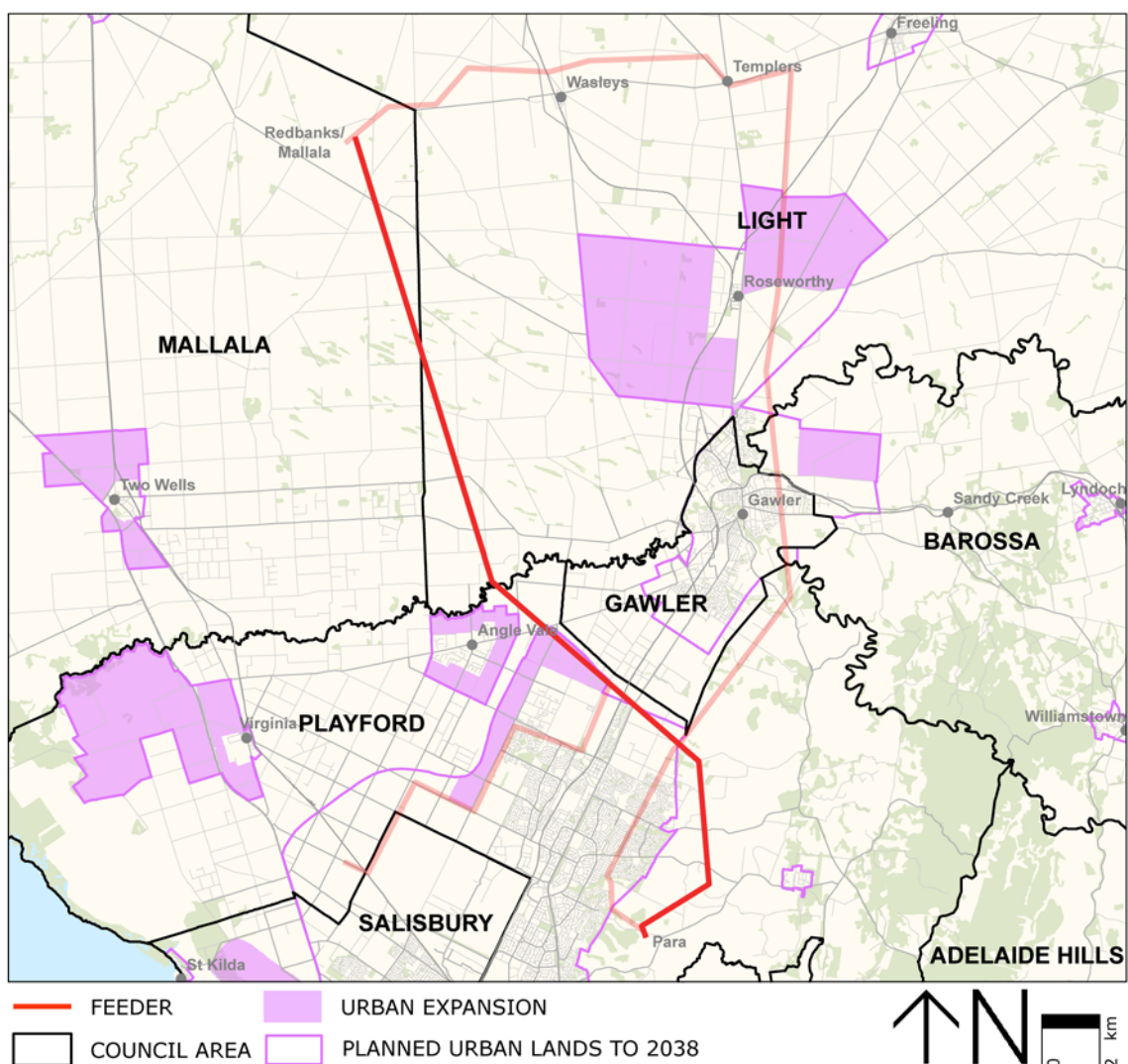
The above indicates that a transmission corridor must be obtained early to allow necessary timing for planning and community consultation.

21. MALLALA TO PARA EASEMENT EXPANSION

21.1 Location

The location of this project area is identified in Figure 19. The project area is located in northern Adelaide, extending from Para to Redbanks/Mallala.

Figure 19: Mallala to Para Project Area



21.2 Project Description/Risk

The project will require upgrades at three sub-stations and the construction of a double circuit transmission line from the Para sub-station to the Mallala and Munno Para sub-station. The line route will ideally follow the existing west circuit transmission line. Either the existing easement may be widened or an alternate alignment sought.

Residential load increases in the vicinity of Munno Para and Roseworthy or the significant development of generation around Mallala will trigger the need to rebuild the Mallala to Munno Para to Para 275 kV line as a double circuit 275 kV line.

This need to reinforce the backbone network is anticipated to occur by the early 2020s, though this could be realised earlier if the rate of urban development increases.

This project deals specifically with the easements needed to enable the rebuild of the current single circuit 275 kV line between Mallala and Para to a high capacity double circuit line – a distance of approximately 40 km.

The need to pass through residential and urban growth areas increases the risk and complexity of obtaining Development Approvals required for the line construction project.

This is likely to involve extensive community consultation and liaison with stakeholders. In this regard long lead times will be required to deliver an accessible line corridor in time to meet the network trigger dates. Early commencement and action is recommended.

The high density of residential land uses and the high values associated with urban land increases each stakeholder's interest in opposing development that are perceived to diminish the value of their land holding.

21.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

State Government Region:	Northern Adelaide/Barossa
Region Plan:	30 Year Plan for Greater Adelaide
Local Government Area:	Mallala, Light
Development Plan:	Mallala, Light
Zones:	Hills Face, Metropolitan Open Space System, General Farming, Primary Industry, Residential Playford, Primary Production

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure***Policies***

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

The project area is identified in the 30 Year Plan, with it notated:

'corridor protection for future upgrades'.

21.4 Consultation and Conclusions

The project area extends northward from Para, behind the Hills Face escarpment before passing through the northern Adelaide Plains.

Part of the project extends through the *Playford North Extension*, land presently the subject of a Structure Plan and DPA.

The *Playford North Extension* will result in the rezoning of land for urban purposes. Both the Structure Plan and DPA (as drafted) make provision for the corridor, as it extends through that development area.

The project area also passes through the Angle Vale area, again a growth area which is presently the subject of a Structure Plan and rezoning process.

The project area is considered to be highly sensitive, with rezoning and therefore competing land uses imminent.

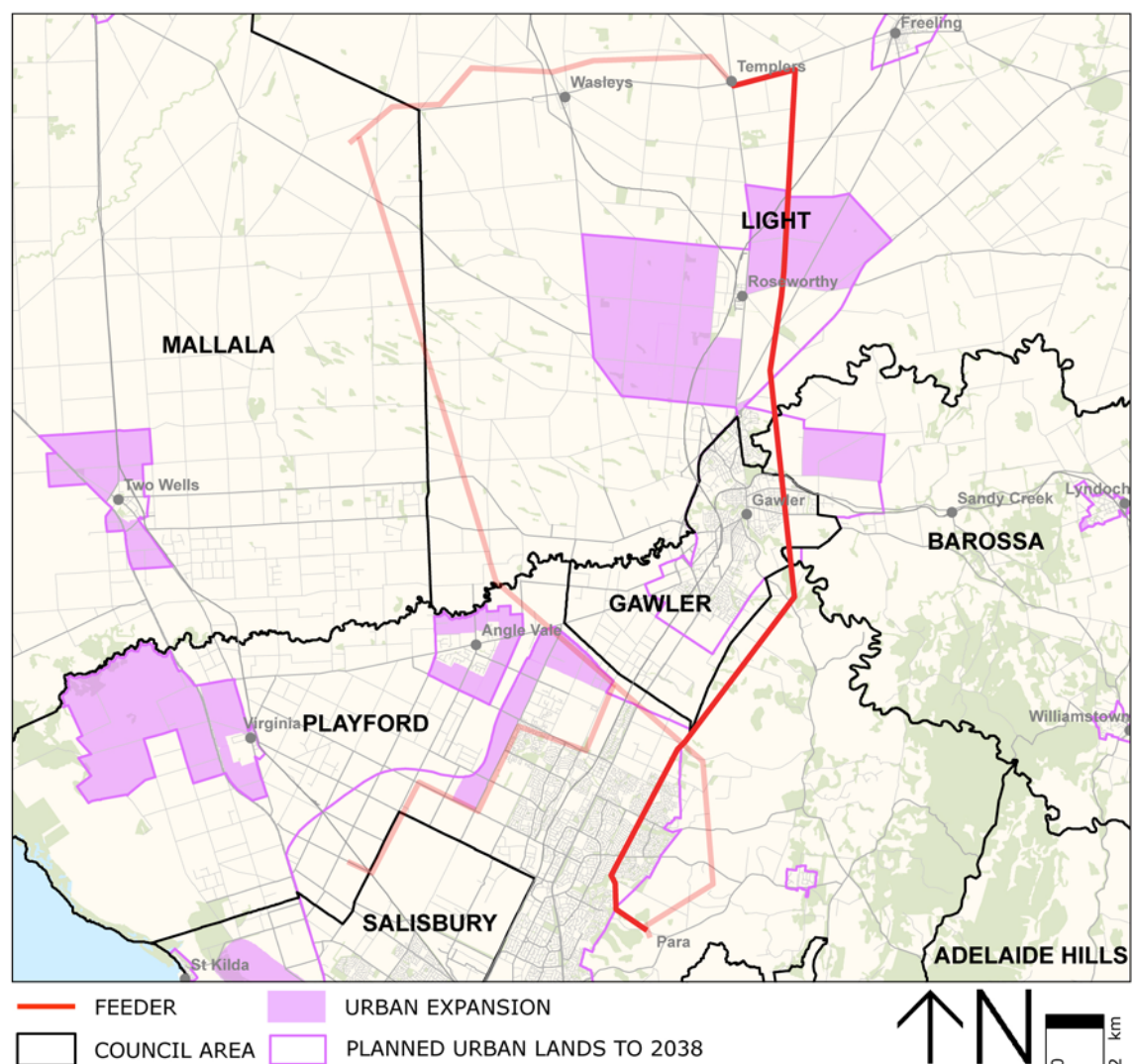
Corridors should be identified as part of the rezoning process and in addition easements secured before key portions of the project area become further urbanised.

22. TEMPLERS TO PARA EASEMENT EXPANSION

22.1 Location

The location of this project area is identified in Figure 20. The project area is located in northern Adelaide, extending from Templers to Para, north of Roseworthy.

Figure 20: Templers to Para Project Area



22.2 Project Description

Residential load increases in the vicinity of Munno Para and Roseworthy or the significant development of generation around Mallala will trigger the need to rebuild the Templers West to Para 275 kV line as a double circuit 275 kV line.

This need to reinforce the backbone network is anticipated to occur by the early 2020s, though this could be realised earlier if the rate of urban development increases.

This project deals specifically with the easements needed to enable the rebuild of the existing single circuit 275 kV line between Templers and Para to a high capacity double circuit line – a distance of approximately 37 km.

Whether the existing easement is widened or an alternate alignment is sought, the proposed residential expansion through Roseworthy and Kingsford and the existing settled areas of Gawler, Concordia and Gawler East increase the risk and urgency associated with this project.

Detailed corridor investigations and negotiations with stakeholders will be required to ensure that the space needed for the line reconstruction is still available when the network event triggers the line requirement. The need to pass through residential and urban growth areas increases the risk and complexity of obtaining Development Approvals required for the line construction project.

This is likely to involve extensive community consultation and liaison with stakeholders. In this regard long lead times will be required to deliver an accessible line corridor in time to meet the network trigger dates. Early commencement and action is recommended.

The rebuild of transmission lines through settled and urban growth areas carries an elevated risk of community opposition and outrage.

The high density of residential land uses and the high values associated with urban land increases each stakeholder's interest in opposing development that are perceived to diminish the value of their land holding.

22.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

State Government Region:	Barossa
Region Plan:	30 Year Plan for Greater Adelaide
Local Government Area:	Light Regional Council
Development Plan:	Light
Zones:	Primary Industry, Primary Production, Residential (Gawler East), Industry (Kingsford Regional Estate), Hills Face, Residential Playford, Residential Hills

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure

Policies

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

The project area is identified in the 30 Year Plan.

Portion of the project area is located within the proposed Barossa Character Preservation Area, which increases the potential sensitivity for new infrastructure proposals.

22.4 Consultation and Conclusions

Whilst the project area is identified in the 30 Year Plan this is only of relevance to rezoning proposals and does not guarantee land being set aside for infrastructure purposes.

The project area extends northward from Para, passing through the northern Adelaide Plains (Blakeview and Gawler East) before passing through Roseworthy.

Blakeview, Gawler East and Roseworthy are locations where extensive urbanisation is expected to occur.

Blakeview has been the subject of recent rezoning proposals and an Urban Renewal Authority led Structure Plan process. Development of Blakeview is underway (houses established) and the development area will extend northward over the next few years.

Gawler East was the subject of a Ministerial DPA which rezoned land for residential purposes. The need for a transmission corridor was identified as part of that rezoning process, however the sensitivities of imminent urban development remain. First stages of the land division have been approved.

Roseworthy is presently the subject of comprehensive structure planning process, presently focussed to the west of Main North Road. The proposed alignment extends through land on the eastern side of which is also within planned urban land. Expectations are that proposals will be put forward to seek rezoning and urbanisation of that land sooner rather than later.

The project area is considered to be highly sensitive, with urbanisation and competing land uses imminent.

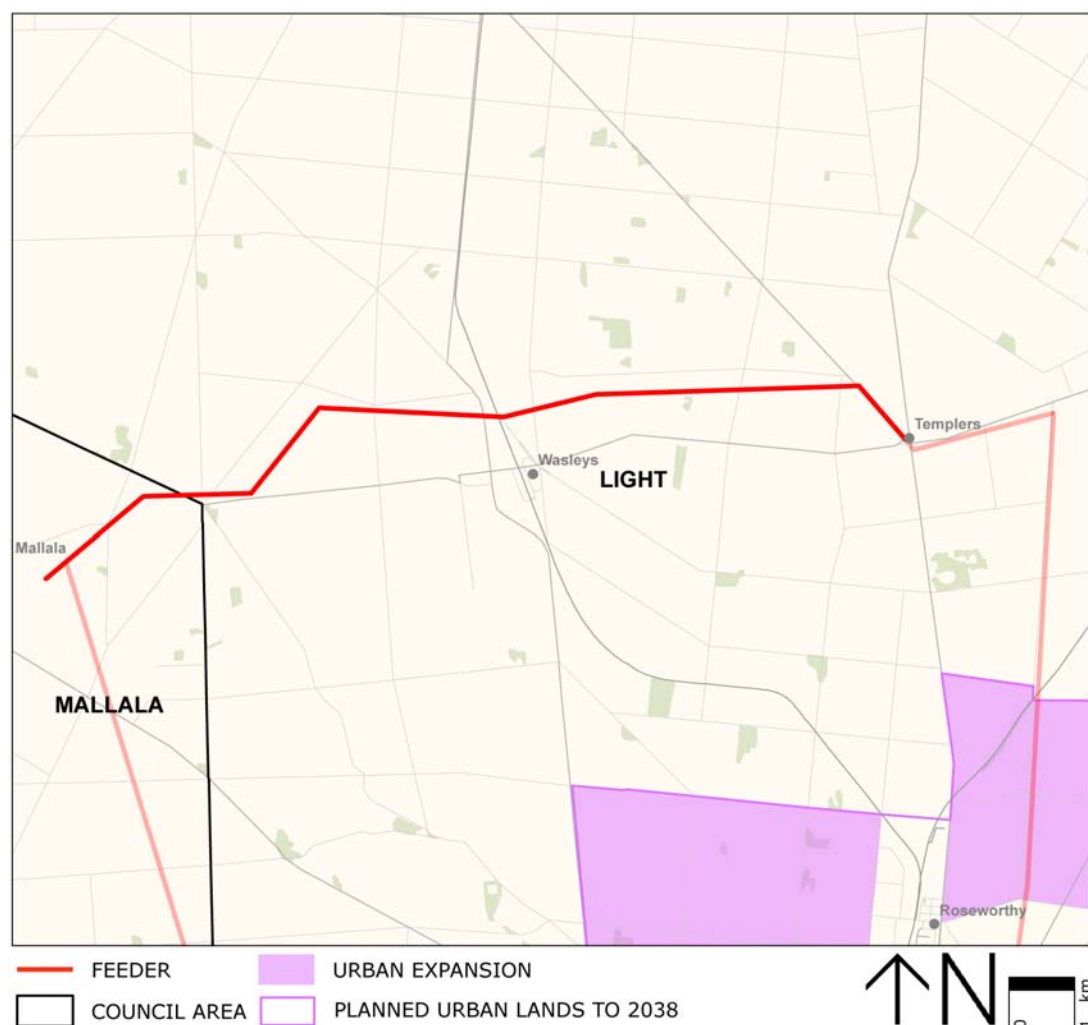
Corridors should be identified as part of any structure planning and rezoning process. In addition land should be secured ahead of further urbanisation and the associated pressures this brings.

23. MALLALA TO TEMPLERS WEST LAND AND EASEMENT ACQUISITION

23.1 Location

The location of this project area is identified in Figure 21. It extends from Mallala to the west and Templers to the east.

Figure 21: Mallala to Templers West Project Area



23.2 Project Description

Templers West is an existing site. Mallala is a new site situated near a road and proposed power station.

This project provides for the acquisition of approximately 5 hectares of land at Mallala together with easements to permit the construction of a 275 kV line from Mallala to Templers West a distance of approximately 18 km.

The Mallala site is considered a strategic node and there are efficiencies to be obtained in securing the site in an optimal location for development of the network.

The construction of a transmission line and substation in a green field location carries with it the risk of community opposition or outrage bringing development to a halt.

23.3 Strategic and Statutory Planning Considerations

The following provides a snapshot of the project area, in terms of state and local government jurisdictions.

State Government Region:	Barossa
Region Plan:	30 Year Plan for Greater Adelaide
Local Government Area:	Light Regional Council, District Council of Mallala
Development Plan:	Light, Mallala
Zones:	Primary Industry, General Farming

Relevant extracts from the 30 Year Plan for Greater Adelaide is provided as follows.

Role and function of The 30-Year Plan for Greater Adelaide

The Plan's key functions will be to:

- *provide a dynamic spatial expression of South Australia's Strategic Plan targets*
- *provide the strategic directions and land-use policies that will be incorporated into local Development Plans and Structure Plans*
- *provide specific regional targets for housing and population growth*
- *provide related targets for the number of jobs needed to support population growth*
- *provide specific advice on where employment lands should be set aside*
- *identify and prioritise the major transport corridors and growth precincts*
- *drive better infrastructure planning by describing the type of infrastructure that will be needed over the long term.*

Infrastructure

Policies

4. *Identify and preserve critical infrastructure corridors (including major transmission lines, substations, water and gas pipelines, and new utility corridors) through Structure Plans for new growth areas, transit corridors and transit-oriented developments.*

Electricity

1. *Future Redbanks – Templers 275 kV transmission line*

The project area is identified in the 30 Year Plan, with it notated:

'future redbanks-templers 275kV transmission line'.

23.4 Consultation and Conclusions

Whilst the project area is identified in the 30 Year Plan for Greater Adelaide this is only of relevance to future rezoning proposals and does not guarantee land being set aside for infrastructure purposes.

Submissions should be made in respect to the Council Section 30 Review (just underway) to ensure that the Council Development Plan identifies the indicative route.

The Council has recently undertaken a Better Development Plan DPA (presently on public exhibition) and this also presents an opportunity to seek refinement to the Development Plan in respect to this issue.

Whilst not as sensitive as some other project sites in the Northern Adelaide and Barossa Region, risks associated with green field development in reasonable proximity to existing settlements means acquisition should be pursued.