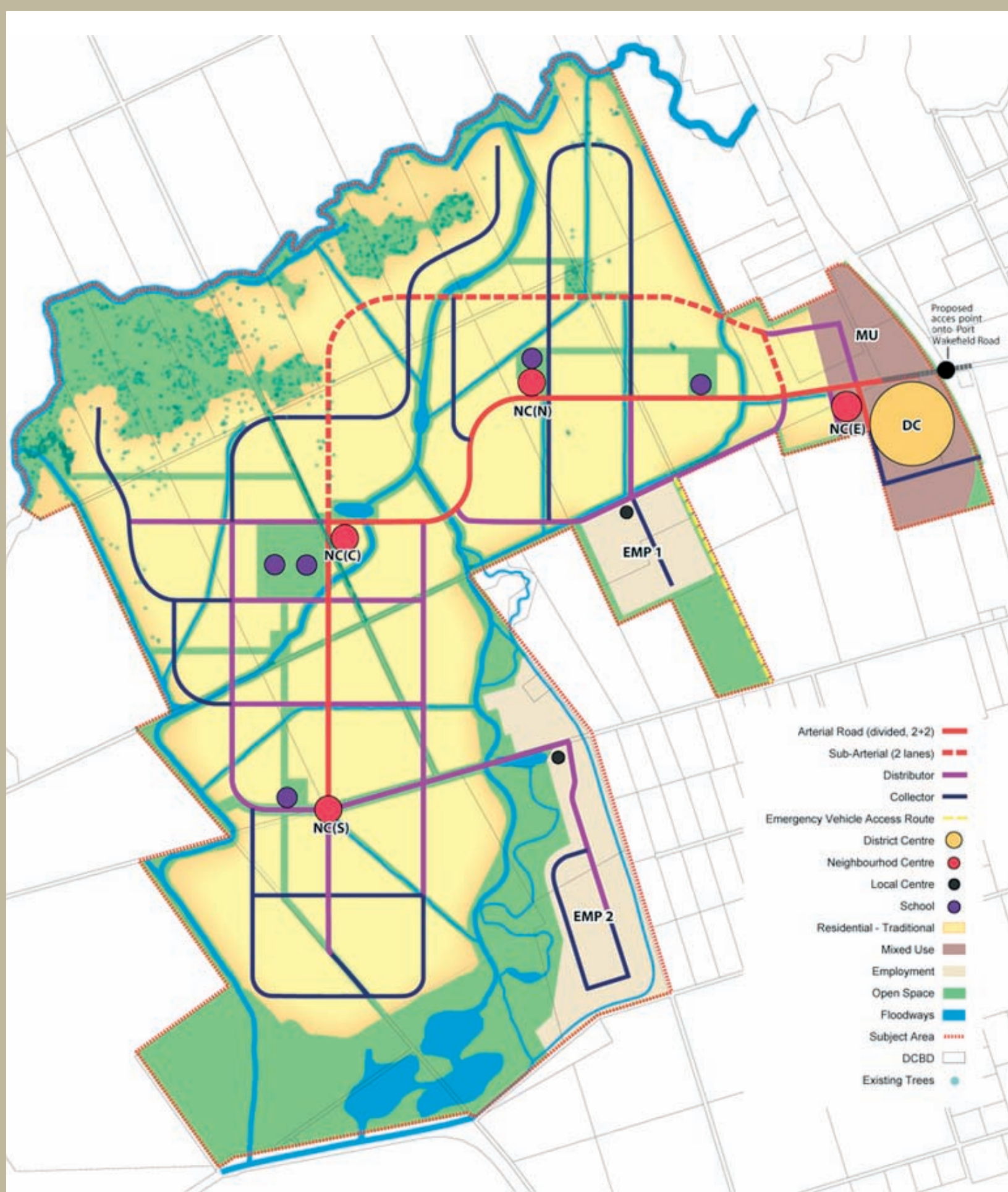


Buckland Park



What's planned?



▲ The Master Plan.



▲ Stage 1

In a nutshell

- Buckland Park will be built slowly over 25 years, until 2036.
- Residential areas for up to 12,000 new houses.
- Neighbourhood centres for shops, community facilities, primary schools and high schools.
- A District Centre on Port Wakefield Road, for shops, offices and government services that may be needed, like police, ambulance and the fire brigade. The District Centre won't be built for another 12 or 13 years.
- Industrial areas for businesses and industry.
- Open space for landscaping, bikeways, walking trails, ovals and protecting native plants and animals. Some of the open space will also be used for storm and flood water channels and basins, and wetlands.

Stage 1 is planned to have

- 616 new house allotments.
- A Neighbourhood Centre with a small supermarket and 6 shops for cafes, doctors or dentists. The centre is planned to be expanded if the new residents need more shops.
- Land for a public or private Primary School.
- Parks with walking trails and bikeways, which can channel storm and flood water when needed.
- Two parks amongst the houses for landscaping.
- A Display Village which could eventually have 32 houses on display.
- A Community Centre.
- A community bus.
- A community worker who will help new residents settle in, and answer questions from neighbours.



Buckland Park



Wise use of water

Planning for recycled and waste water

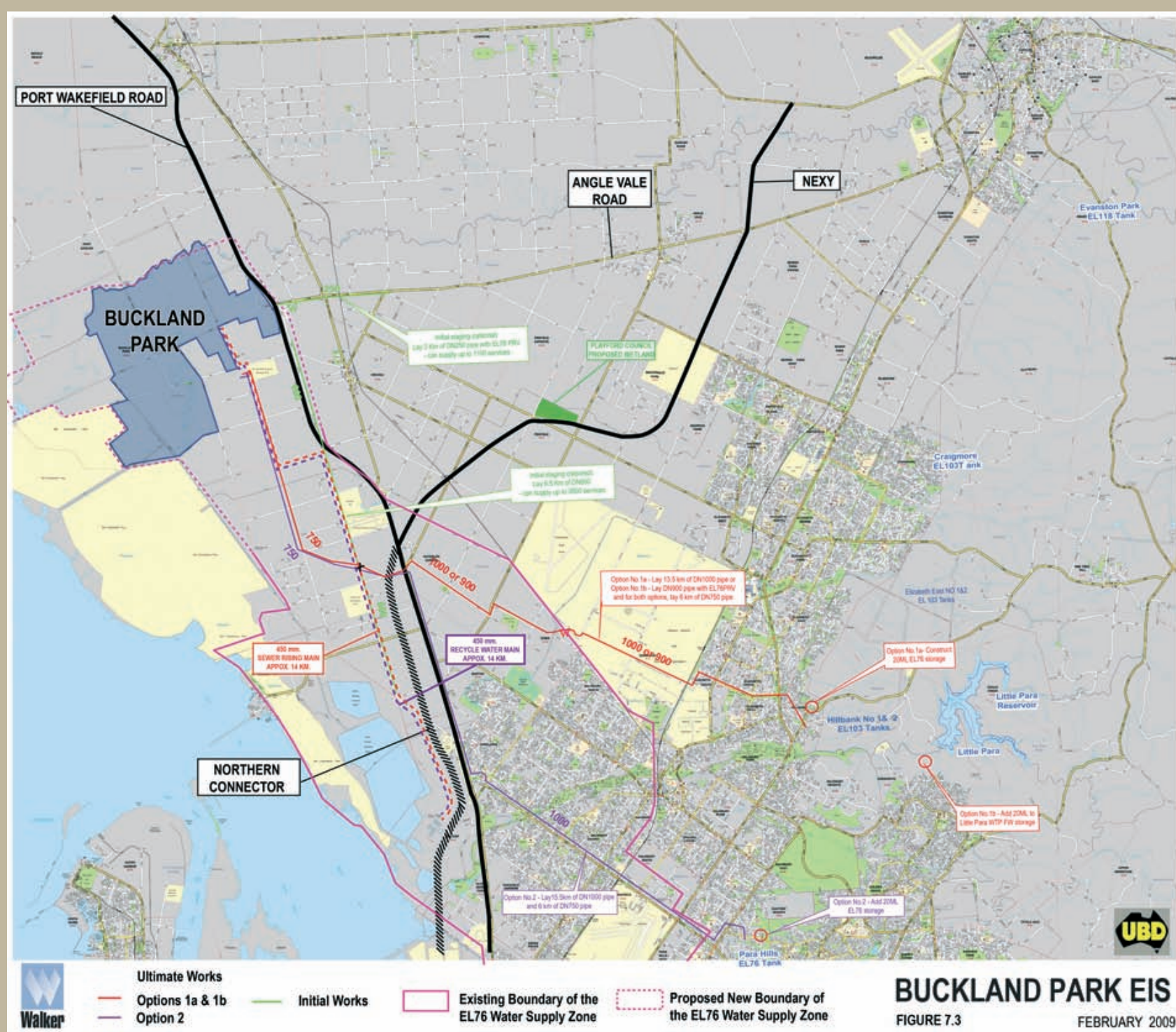
- Buckland Park's waste water will be sent to the Bolivar Waste Water Treatment Plant.
- Recycled water will come back to Buckland Park for watering gardens and public parks.

Planning for stormwater

- Stormwater will be channelled through pipes and parks and captured in a basin near Thompson Outfall Channel.
- Most stormwater can be used in other areas, for example by Playford City Council, local industry or farmers and market gardeners.
- Remaining stormwater will be allowed to go out to sea as it does now.
- Stormwater will be cleaned using 'water sensitive design' techniques— for example:
 - man-made wetlands
 - planted roadside areas
- Only small amounts of treated stormwater can be stored in the underground aquifer. It can be used for irrigating parks.

Planning for Drinking Water

- Drinking water will eventually come from Little Para Reservoir via new pipes and equipment.
- In the early years water can come from existing pipes in Angle Vale Road or Waterloo Corner.
- Water supply pipes and equipment can be made larger, and eventually supply water to areas around Buckland Park and Waterloo Corner.



▲ Regional water infrastructure.



▲ Example of water sensitive design.



▲ Example of park with channels.



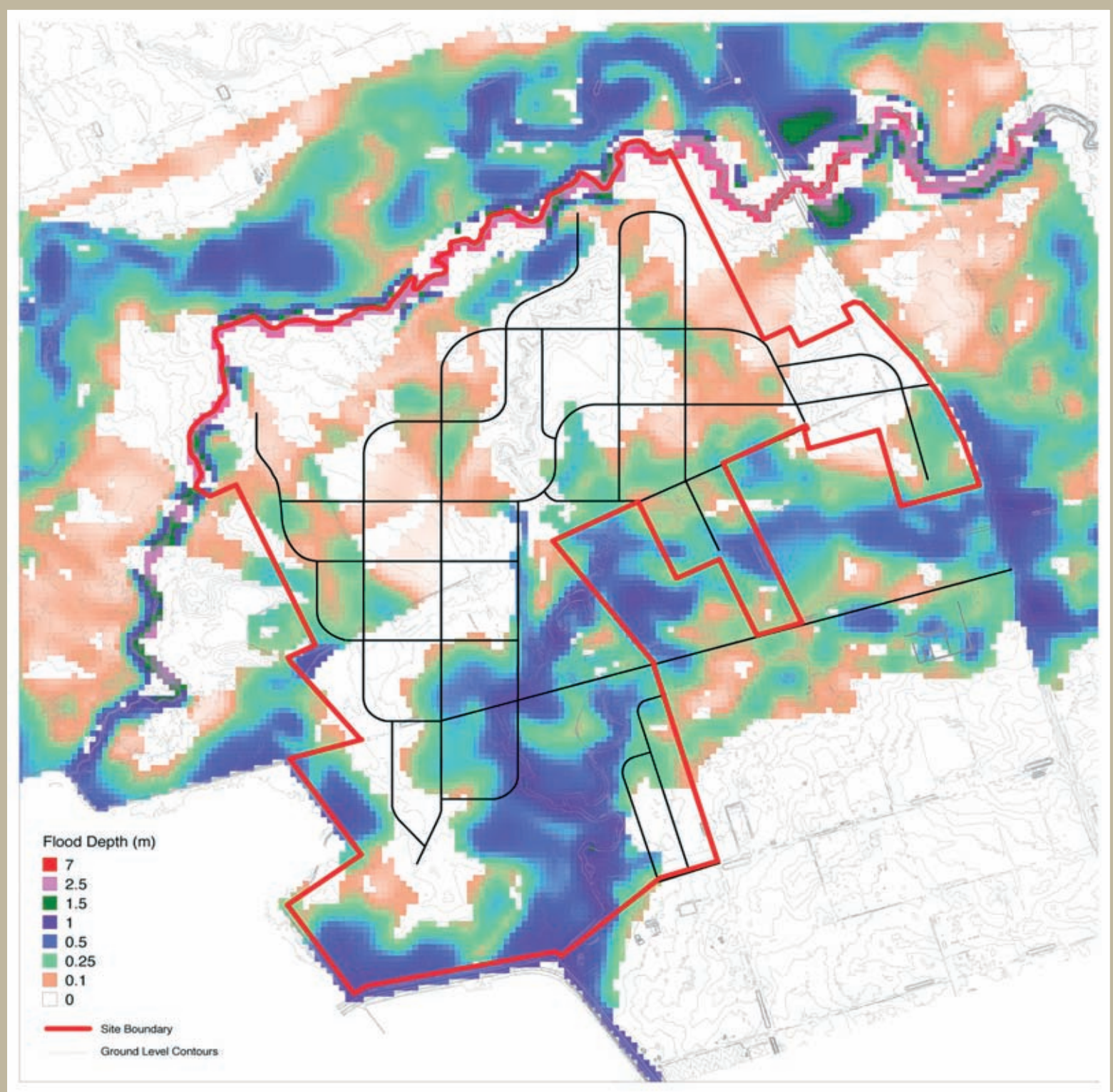
Buckland Park



Flood protection



▲ Gawler River.



▲ Current flood impacts.



▲ Channels and detention basis.

Planning for Gawler River floods

New houses will be protected from floods during a 1 in 100 year flood when the Gawler River breaks its banks.

- Floodwater will be channelled through a series of parks.
- It will then flow out to the Gulf St Vincent from the Thompson Outfall Channel, as it does now.

The channels and basin have been designed to take account of:

- Gawler River being blocked, for example by a fallen tree.
- Climate change and sea level rise.

Planning for shallow groundwater and salinity

Groundwater is relatively shallow and flows from the north to the south west across the site. Potential changes to groundwater have been investigated and it was found:

- Buckland Park will cause minimal falls in ground water levels.
- Any wetlands or permanent ponds will have to be carefully located and designed. They may need to be lined.
- The management of salinity has been considered. It can be addressed by:
 - Using fill to raise the ground level.
 - Using plants in gardens that don't need a lot of watering.
 - Using water wisely.
 - Using salt resistant building materials.
 - Using good stormwater management.
- Groundwater and salinity will be investigated in greater detail in locations for new buildings and infrastructure. Any required engineering works will be put in place during construction.



Buckland Park



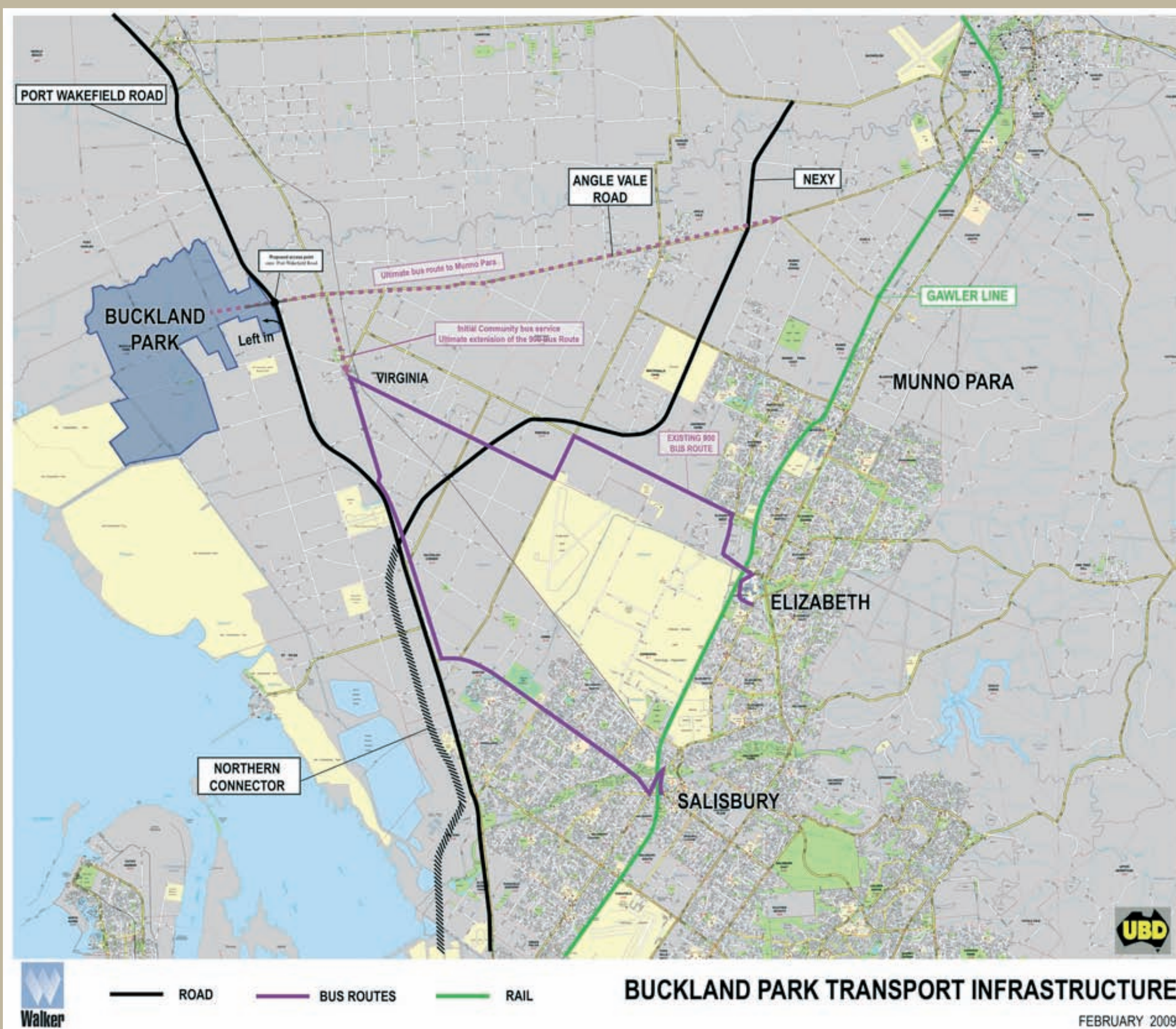
Planning for transport

Planning for roads

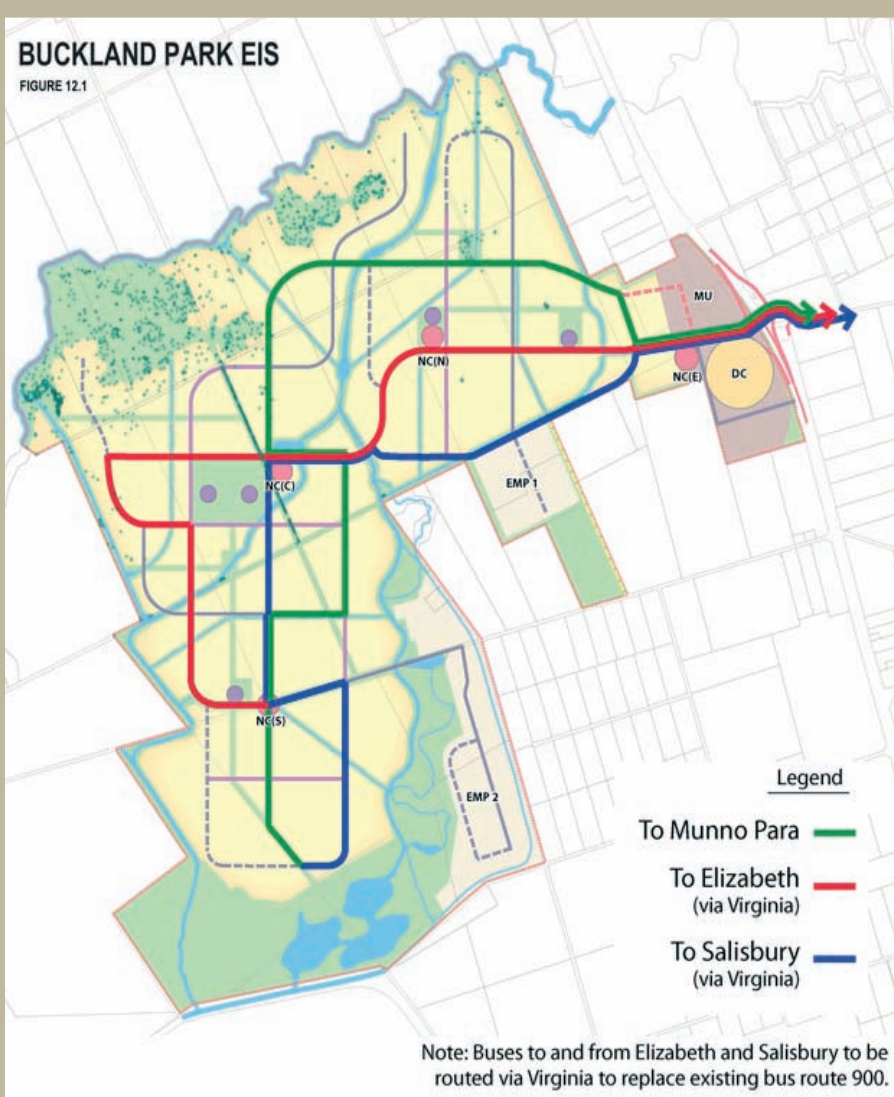
- A new intersection will be needed at the corner of Port Wakefield Road, Angle Vale Road and Legoe Road.

Planning for public transport

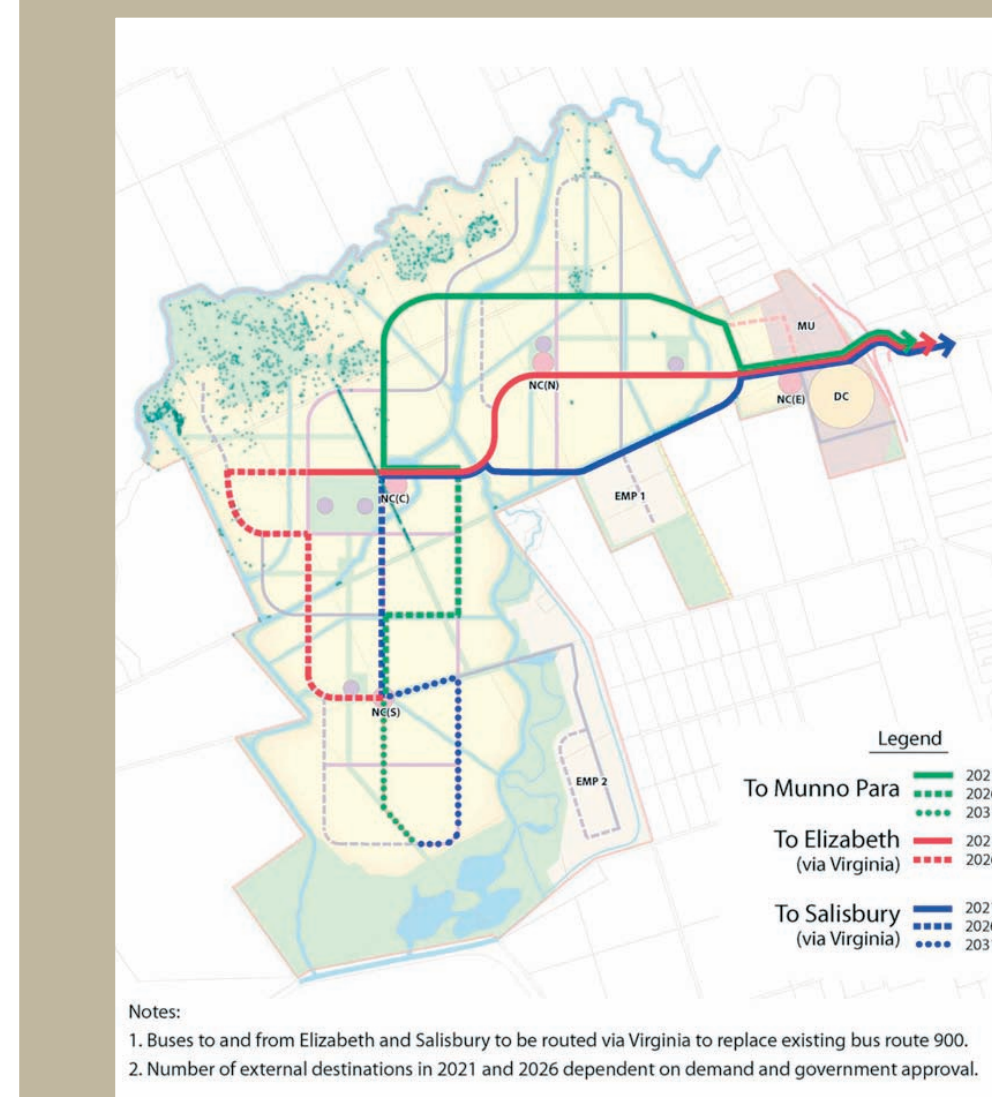
- An 18 seater community bus will be provided for new residents. It will take them to the Route 900 bus stop at Virginia, so they can travel to work in Salisbury and Elizabeth, or catch the train to the city.
- It will take children to school in the area.
- It will be available for other trips during the day, for example, to baby health clinics or for shopping.
- Later, as Buckland Park grows, there will be regular public bus services.
- Buckland Park's road layout has been planned to cater for buses.



▲ Transport Infrastructure.



▲ Planned bus routes.



▲ Staging.



Buckland Park



Housing and community



▲ Employment opportunities.



▲ A range of housing designs.



▲ Schools.

A wide range of housing is planned

- Family housing—small and large allotments.
- Townhouses and apartments around centres and public transport.
- Housing for the government's Affordable Housing scheme.

Planned schools and community centres

- 4 primary schools and 2 high schools by 2036.
- Until the first primary school is built, children will go to other schools in the area, for example Virginia Primary School.
- A community centre will be built in Stage 1.
- A community worker will help new residents settle in and build a community.

Sports and recreation facilities are planned

- An extensive network of public parks.
- There will be bicycle and footpaths, and sporting facilities.
- Some of the open space will be set aside for regenerating bushland.

New job opportunities are planned

- Jobs will be generated from constructing roads, parks, new houses, community facilities, industrial buildings and shopping centres.
- Shopping, commercial, industrial areas, schools and community facilities are planned for businesses and government services.
- Jobs will be available to everyone in the locality, not just to people who live in Buckland Park.



Buckland Park



Planning for the environment

Native plants and animals

Important areas of native plants and trees have been identified including:

- River red gums along the Gawler River and in the site's north.
- Sapphire in the site's south west.
- Scrub areas along Thompson Creek.

Most of Buckland Park is cleared farm land, used for grazing over many years.

Some areas with important native trees and plants have been included in planned open space areas, and will be weeded and replanted over time.

Some areas are included in planned neighbourhoods. Where possible these areas will be kept in neighbourhood parks. To achieve an improved environment overall, areas of native trees and plants in open space can be weeded and replanted, or new areas can be planted with the same native species.

The Gawler River will be weeded and replanted over time, and some areas may eventually be public open space. New residents will be encouraged to be involved in planting and weeding natural areas near their homes and will be provided with information on native plants and animals in the area.

Buckland Park Lake, Gawler Conservation Park and the Dolphin Sanctuary

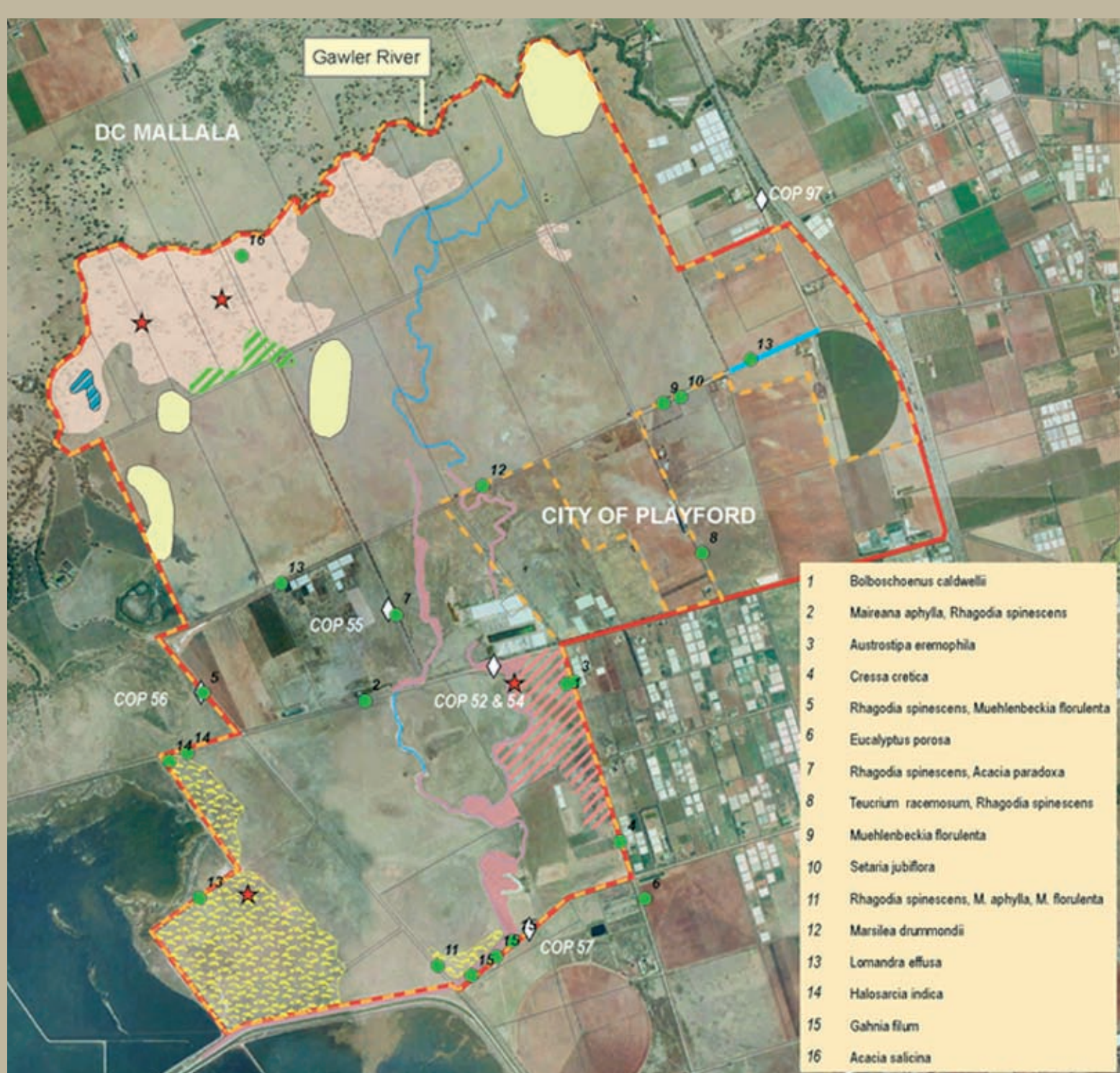
These areas are 2 to 4 kilometres from Buckland Park.

Stormwater leaving Buckland Park will be treated to meet the EPA's strict standards, before it flows out Thompson Outfall Channel to the Gulf St Vincent.

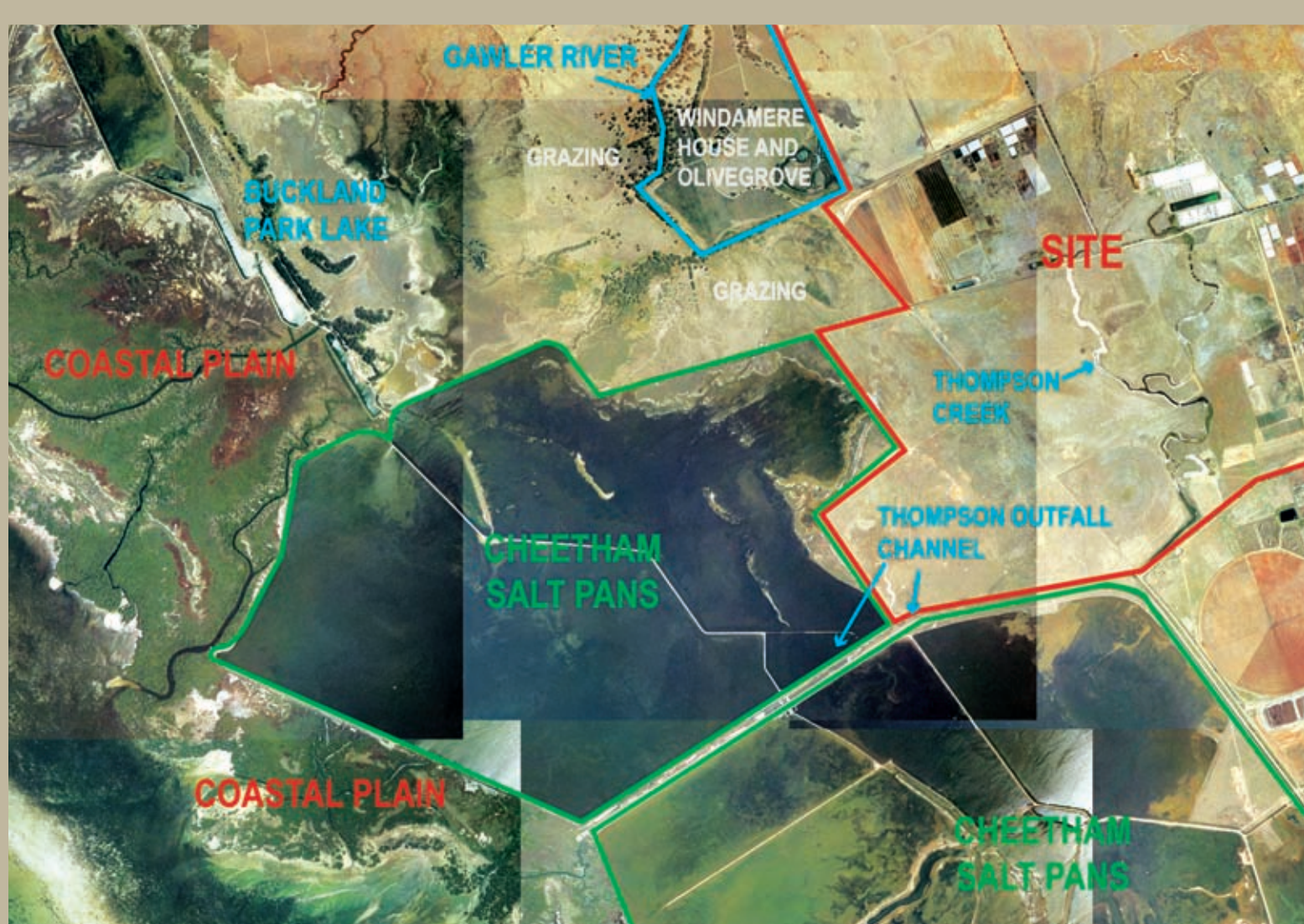
Because the site slopes away from the Gawler River, it's unlikely stormwater runoff from new neighbourhoods will flow into the river, and then to Buckland Park Lake.

There are no direct roads from Buckland Park to the Buckland Park Lake or the coast. To walk there new residents would have to trespass over private property, or walk along Port Wakefield Road and down Port Gawler Road.

Environmental awareness programs will be run for new residents. For example, there will be community planting days, and information on pet control and the value of the local environment.



▲ Flora Survey.



▲ The coastal area.



Buckland Park



Planning for utilities

Planning for gas

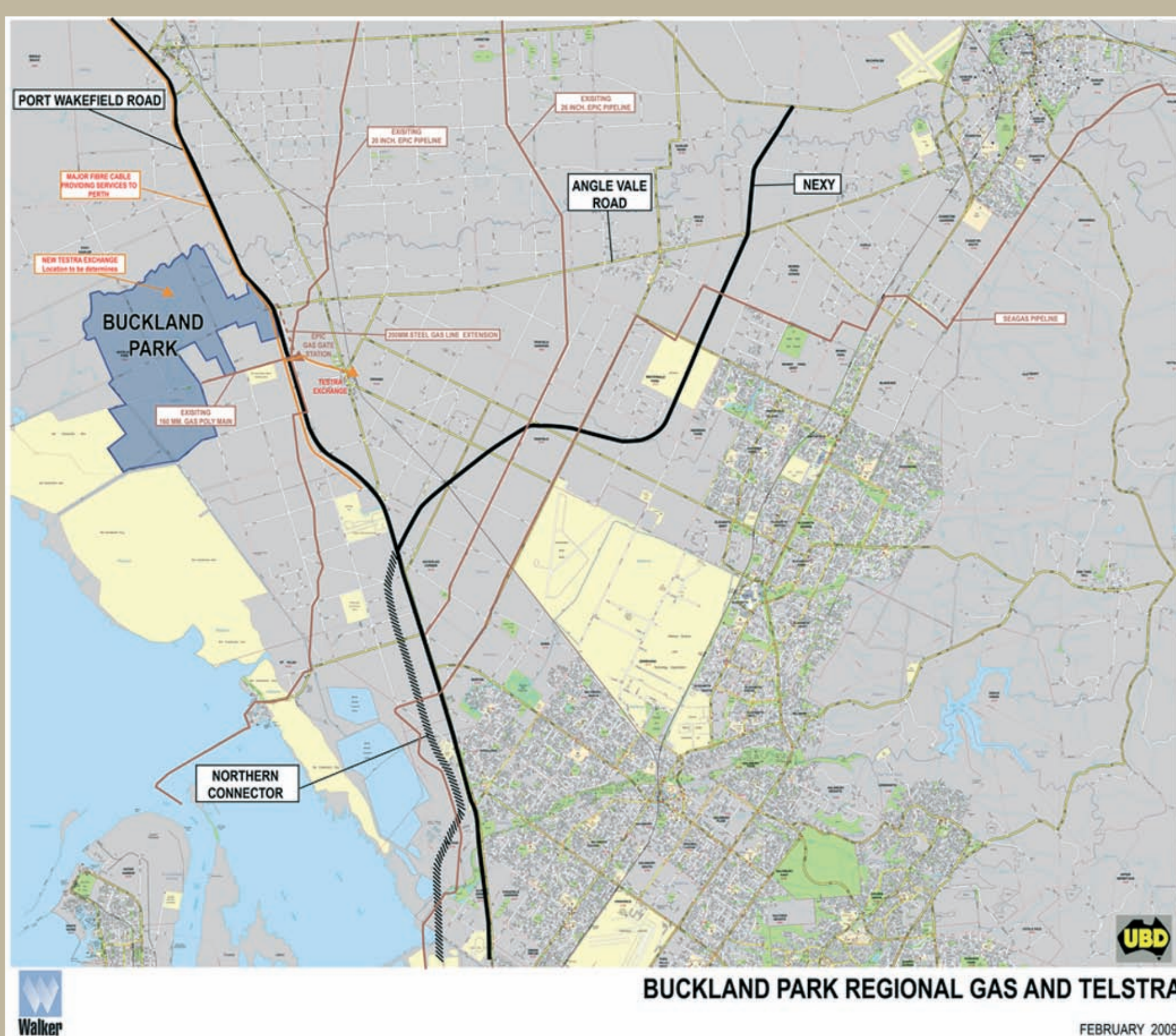
- All the new house allotments will be connected to natural gas.

Planning for telephone and internet

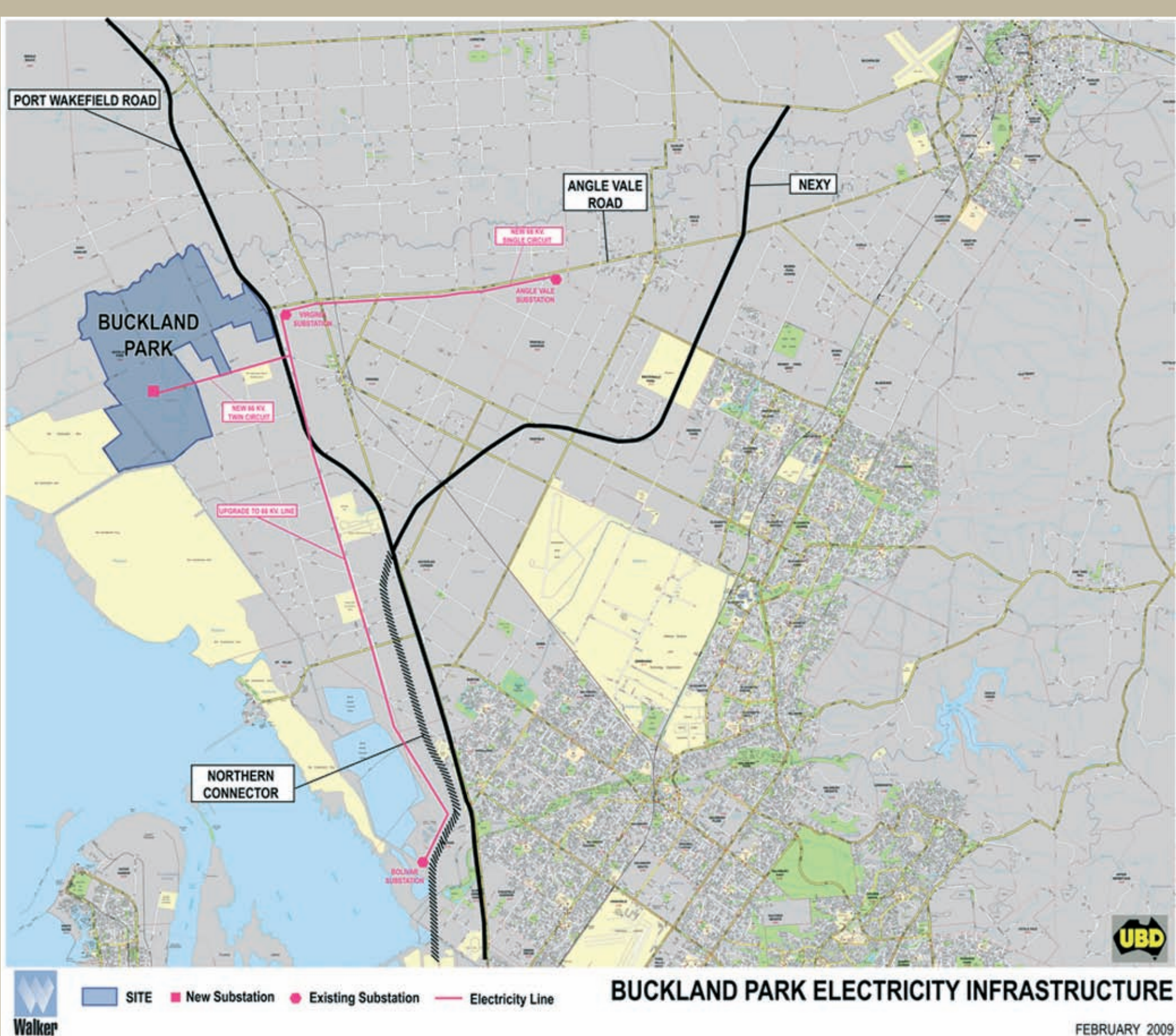
- Telstra will connect all the new house allotments to their network.

Planning for electricity

- The Virginia Substation will be upgraded and new lines provided to the Angle Vale Substation.
- New lines will be needed from Port Wakefield Road into a new Buckland Park substation.
- This will secure the electricity supply to Virginia and Two Wells. At the moment, if a problem occurs there's a black out until it's fixed.



▲ Regional gas and Telstra infrastructure.

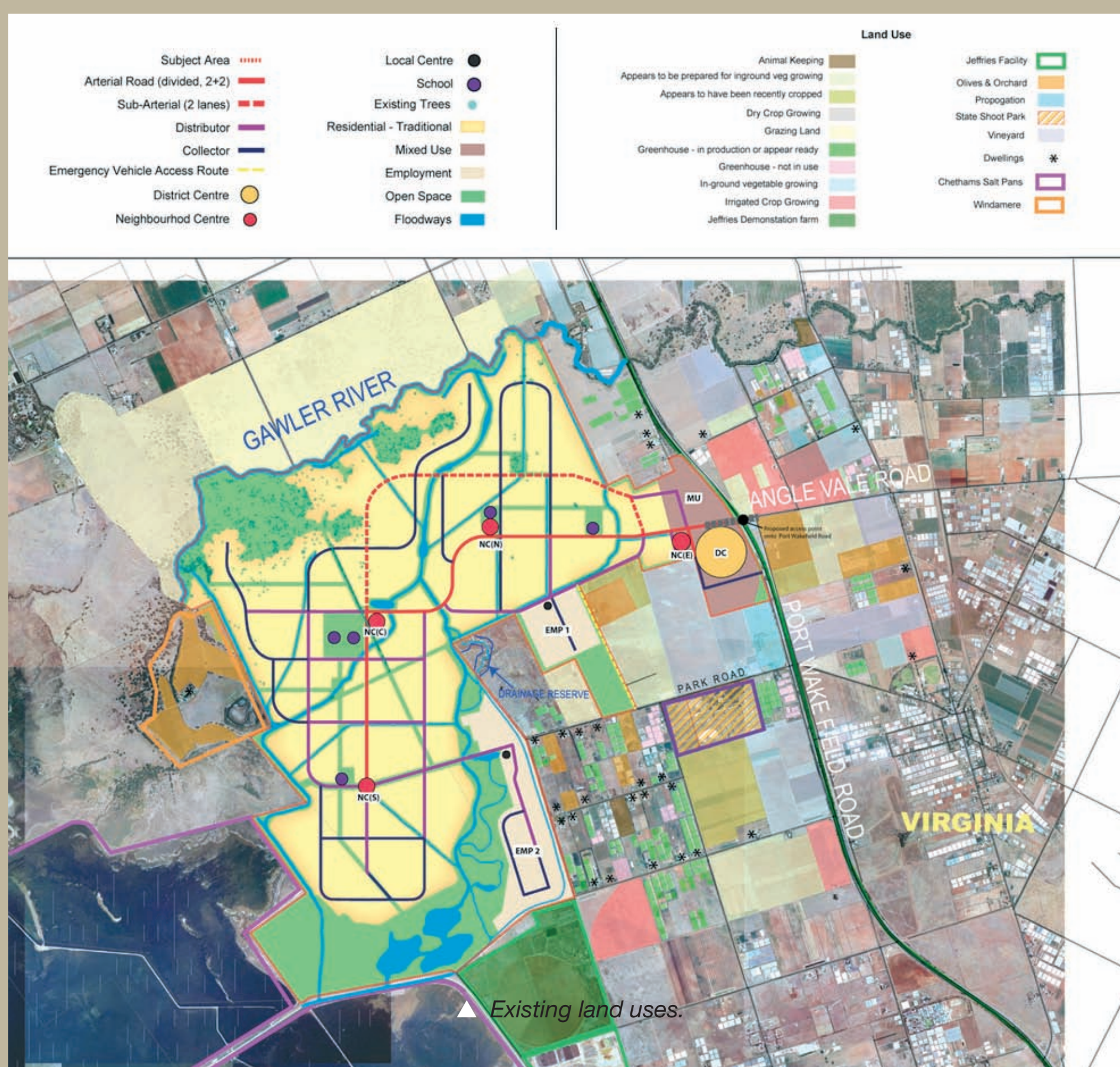


▲ Electricity infrastructure.

Buckland Park



The local community



Planned local benefits

- Locals can live close to their families.
- More workers can live close to local farms and businesses.
- Some Affordable Housing available under \$213,000 for house and land.
- Water supply for more areas, outside of the site.
- Electricity supply to Virginia and Two Wells will be secured.
- Recycled stormwater will be available for local farms and industry.
- The route 900 bus will have more passengers, and therefore may be able to run more services.
- Over time there will be better bus services to the area.
- Local schools will have more students so may be able to put on new teachers and provide new resources.
- Over time, there will be more schools for local children to choose from.
- Local business and industry will benefit from construction spending and new residents.
- Construction jobs over 25 years.
- Land for new businesses and industry which will provide jobs for everyone.
- Land for new shops, businesses and services which will be available to everyone.
- Land for new parks and facilities, and natural areas along the Gawler River that everyone will be able to enjoy.

What are we committed to?

- Public road access and utilities will not be interrupted.
- A consultation plan will be put in place to keep neighbours informed and involved in construction. You will be able to contact the project manager to sort out any problems.
- During construction there will be regular consultation with neighbours.
- Landscape buffers and roads will separate new areas from farms and market gardens in the area.
- Capturing stormwater for use in the area, by Council, local farmers or businesses.
- During construction, noise, dust, weeds, soil erosion, water runoff, rubbish, and traffic will be strictly managed and public safety will be the top priority.



Buckland Park



Planning process



- The Planning Minister declared Buckland Park a Major Development Area in January 2007.
- A Development Application was submitted in May 2007.
- The Development Assessment Commission decided an Environmental Impact Statement was needed, with over 100 questions to answer.

What's happening now?

- Walker lodged an EIS and the Minister for Planning placed it on public exhibition until 15 June 2009.
- If you want to make a submission, write to:
The Minister for Urban Development and Planning
Attention: Manager Assessments Branch
Department of Planning and Local Government
136 North Terrace, Adelaide, SA 5001
- Submissions may provide information, options, comments or suggestions, or identify errors or omissions in the information presented by the proponent. Providing sources of alternative information is helpful.
- The EIS can be downloaded from the Department's website: www.planning.sa.gov.au/go/major-developments
- Or you may wish to phone the Assessment Branch: (08) 8303 0745.
- If you have any questions for Walker, email: bucklandpark@walkercorporation.com.au

What will happen then?

- The Department will collect all the comments from the public and from government.
- They will ask us to respond to those comments. We may have to change our plans.
- The Minister will prepare a report for the Governor, which explains the EIS, the comments and our responses and recommends a decision.
- The Governor will then review the assessment and decide whether or not to approve Buckland Park.



**NOTES FROM DEPARTMENT PUBLIC MEETING
Virginia Horticultural Centre, Virginia
May 13 2009**

1. Owner lot on Legoe Road, adjoining Stage 1.

What's happening with the road in front of my house? How will we get from my house to Port Wakefield Rd? Will I be cut off? Why are there plans for Legoe Rd to be closed?

Walker response

The property was identified on the plan.

The road outside the house would not be closed, and Walker is committed to ensuring all properties outside the site maintain their road access.

New traffic lights would be provided at the corner of Legoe Road (currently unmade) and Port Wakefield Road.

Legoe Road would be well sign posted, and emergency vehicles would be able to find their way in.

The Construction Management Plan would include provisions to ensure road access was not interrupted during construction.

Dept.'s response

The Government won't allow any road to be closed before satisfactory alternatives were provided.

2. 1st Playford Councillor

The flood of 1992 was made much worse when branches blocked the Gawler River. Gawler Council are not interested in taking responsibility and after the 2005 flood not one thing was cleared up in the Gawler River. Who is going to do it?

Wallbridge and Gilbert response

What would happen if a tree blocked the river was modelled. Because most of the water breaks out upstream, it was found that a blockage doesn't make any difference, and the proposed channels will work.

Stuart's response

As part of the proposal, land along the River would become public land which would allow Council to take responsibility for clearing snags and blockages.

3. 1st Local business man

Does flood management take into account the 1 in 100 year flood?

Wallbridge and Gilbert response

It does. To give perspective, the creek at Mawson Lakes is comparable. The flood water entering the site is about as deep and moving as fast.

4. 1st Member of the public

How many people will staff the community centre, for how long and will that be paid for by Walker?

Walker's response

There will be one full time worker in the first stage, five years. Details will be arranged with Council and it may continue.

5. 1st Member of the public

What about groundwater, the salt pans and sea level rise?

Walker's response

That's a very technical question.

Connor Holmes' response

The consultants looked at it, and found that sea level rise would only have a minor impact and this is capable of being dealt with at design stage.

6. Rep. of Friends of Parafield Airport

Who is Walker Corporation? How did it get the land? How much Crown land is there? Why is this project State Government lead and how did Walker get into bed with the State Government?

I think this is a gross desecration of the area.

I'm also concerned about the impact of Parafield flying school on the community, and Walker's involvement in development at the Airfield.

Why didn't you build a community between Smithfield Plains and Angle Vale? There's lots of land there.

Walker's response

Walker Corporation is a family owned company, with headed up by Lang Walker, who started out with an excavating business 40 years ago. His father originally started the company, and his children work in the company.

We have projects all over Australia, with 3 in South Australia, a residential project in Mt Barker, we're building an industrial project at Direk, and this one which we're seeking approval for.

The site is privately owned. There is a small parcel of crown land, (pointed out) but it is not included in the site or the proposal.

Connor Holmes' response

We've looked at the impact of airfields and the site is not affected. The height limit here is 90 metres.

There are no contractual or business agreements in place between Walker and the Government, and the Government is not a party to this proposal.

Dept.'s response

The government has not approved anything yet, we're at the assessment stage.

7. Owner lot on Legoe Road, adjoining Stage 1.

What is going to happen to my sunrises and my sunsets? I am going to have kids stealing my horses or letting them loose. I am up in arms about the whole thing.

Walker response

We can talk to you about your property individually.

Dept.'s response

We can sit down with you and you can dictate your concerns to us.

8. 2nd Playford Councillor

What does PIRSA say about all this? I know when there are other small land divisions, PIRSA opposes them because it would affect agriculture. Does the land contain fertile ground that is being used for agricultural purposes.

Walker's response

The Virginia Horticulture Centre's Blueprint for this area, identifies this land as having lower value.

Connor Holmes' response

The land has lower horticultural value.

Dept.'s response

PIRSA will be consulted as part of this exhibition period and will be given a chance to provide comments.

9. 1st Playford Councillor

Jeffries moved out there because of the impact it would likely have on neighbouring communities and their odour problems. They're doing a sterling job, but it's incredible that community is being constructed nearby. The government put them there because there wouldn't be any houses for 25 years.

Walker response

Our odour modelling has confirmed that as long as houses were 1.7 kilometres away, they'd be alright.

10. 2nd Community Member

What will happen to Park Road?

Connor Holmes' response

Part of Park Rd extends into the site, and improving the quality of the road could possibly be a consideration later as the development progresses.

That section of Park Road which is to be retained will be reconstructed to Council standards as part of the development.

11. 3rd Community Member

You've got 40 pretty angry people here and I am wanting to know how you advertised this meeting, because I think more people would've turned up if they knew.

Dept.'s response

There was an add in the Advertiser which complied with statutory requirements, and there were articles in the Bunyip and Messenger that explained the meeting was on.

Walker's response

We did community consultation in March and April. There were half page adds in the Messenger, the Bunyip and the Plains Producer.

We put posters up in local shops and letter box dropped. We had 2 four hour sessions in Virginia, one in Two Wells and one in Angle Vale. We were there to answer questions and explain things.

3rd Community Member's response

Oh, I don't live in the local area.

4th Community Member's response

I'm not angry.

5th Community Member's response

Neither am I.

12. 6th Community Member

I'm curious whether our submissions will have any impact on the final outcome.

Dept.'s response

That's what tonight is all about, nothing's been approved yet. We will ask Walker to respond to all the issues, and then consider them.

13. 7th Community Member

Getting an EIS is a big issue. Where do I get it? I don't want to print it. It's expensive.

Dept.'s response

The EIS is available at our offices, and (other places, which he listed) and can be viewed there.

But you can have a copy of the CD now.

14. Salisbury Council Town Planner

Buckland Park will increase Playford's population by 50%, what is it, 35,000 people. Will there be provision for light rail?

Walker's response

We're projecting a population of 33,000 people.

Light rail was not considered, but if government plans for a railway to Virginia, we'd be very happy. This is a long term project, and there is potential for considering corridors in the future.

Connor Holmes' response

A rail line to Virginia was considered in modelling, and was found not to be viable. If in the long term commuter rail is provided to Virginia than a shuttle service to Buckland Park could be considered.

15. **8th Community Member**

How about the channels? What will they look like? Will they be deep?

Wallbridge and Gilbert's response

They will not be old fashioned concrete channels. They will be landscaped and in parks.

Connor Holmes' response

The channels will be broad and shallow, with recreation trails along them.

16. **9th Community member**

What about emergency services, how will they respond? Will they be based out at the site?

Walker's response

We talked to all the agencies and they have facilities in the area. There is room in the Masterplan centres for the sorts of facilities they might need, with road access.

Connor Holmes' response

They will provide facilities as Buckland Park grows, they're required to.

17. **10th Community member**

Will it be a private or public school?

Walker's response

It could be either.

18. 2nd Adjoining businessman

What sort of industry do you think will go in that employment area (the one on Park Road to the south)

Connor Holmes' response

We prepared the Masterplan, we're anticipating a range of industry, it could be anything, warehousing, light manufacturing, and industries supporting the horticulture sector such as transport, logistics, packing, metal fabrication, irrigation equipment and the like.

19. 2nd Adjoining businessman

What about aerial spraying?

Walker's response

We looked at that in the EIS, and it's not expected to be an issue.

20. 11th Community member

Will there be affordable housing? Will there be trust housing?

Walker's response

We will be providing the affordable housing required by the government, it's sold on the market to private purchases. No public housing's planned.

21. 12th Community member

What are the block sizes? What are the prices?

Walker's response

It's too early to judge prices yet, blocks won't be on sale for a number of years. We're planning for an average size of 500 square metres, but there will be larger lots and smaller lots.

22. 13th Community member

Will there be any gated communities in the development?

Walker's response

No.

23. Local nearby resident

What about dust from the roads? We've been asking Council to seal the road outside our house for 9 years. Will this be fixed up?

Walker's response

We'll have a construction management plan to make sure there's no dust problem during construction, and we'll be sealing roads in the site.

24. 14th Community member

How will you make sure all that infrastructure will be provided?

Dept.'s response

Nothing will be recommended on this application unless there are letters from all the agencies saying there are arrangements in place for the infrastructure.

25. 2nd Playford Councillor

Will PIRSA be providing a letter?

Dept.'s response

Only if they are involved in providing infrastructure.

**BUCKLAND PARK
COMMUNITY CONSULTATION RESULTS
SUMMARY
MARCH AND APRIL 2009**



| Date | Location | Team Members | Estimate of visitor nos. |
|---------------|----------------------------|---|--------------------------|
| 28 March 2009 | Virginia Shopping Centre | Natalie Fuller - community consultant Sally Lewis – Walker Corporation Stuart Mosley - Connor Holmes Jessica Elliot – Wallbridge & Gilbert | 110 |
| 31 March 2009 | Two Wells Community Centre | Natalie Fuller - community consultant Sally Lewis – Walker Corporation Stuart Mosley - Connor Holmes Jessica Elliot – Wallbridge & Gilbert | 30 |
| 1 April 2009 | Angle Vale Shopping Centre | Natalie Fuller - community consultant Sally Lewis – Walker Corporation Jeremy Woods - Connor Holmes Damien Byrne – Wallbridge & Gilbert | 20 |
| 2 April 2009 | Virginia Shopping Centre | Natalie Fuller - community consultant Sally Lewis – Walker Corporation Jeremy Woods - Connor Holmes Jessica Elliot – Wallbridge & Gilbert | 80 |

COMMENTS FROM THE COMMUNITY

- I'm excited about the project.
- A transition to Year 12 school would be good. I live in Two Wells, and there aren't many high schools, and I don't want my boys starting at high school, and then having to change schools when they go to Year 11.
 - There are plenty of child care centres, but all the kids are growing up and more schools will be needed.
- The building work will be good for my business on Angle Vale Road.

- The new residents will be good for my cat boarding business in Port Gawler Road.
- I have a nursery on Port Wakefield Road, and would like to work with Walker supplying plants to the site. We can supply indigenous plants.
- It would be better planning if my land was included.
- I'm a councilor on Malalla Council.
 - You should look at Buckland Park Lake and the coastal area along to the north. It's absolutely beautiful, and would be great for recreation – canoeing, boating and walking.
 - People from Buckland Park will definitely come there.
 - But, it's also an important environment. There's unique plants and animals – there's a type of samphire that doesn't grown anywhere else.
 - But the area is neglected. People are walking and driving through vegetation, the Port Gawler Boat Ramp is pretty poor. There's no proper road access to the area, or proper trails and parking areas.
 - The area would be great for recreation, but it has to be properly managed to protect the environment.
 - Buckland Park is a chance to get the state government to consider providing resources for upgrading facilities, and environmental works.
 - We should work with Council staff on this.
- I live near Jefferies, and I don't smell anything.
- My boys will be the right age to buy houses there.

ISSUES OF INTEREST TO THE COMMUNITY

- Where is it?
- Do I live near the site?
- Is my land included?
- Can my land be included?
- Will my land be affected?
- What's happening near my land?
- When will it happen near my land?
- When will building start?
- Where will building start?
- How long will it take?
- When will there be houses there?

- How much will the houses cost?
- When will they come on the market?
- Where will the entrance be?
- When will the district centre open?
- Where will the other shops be?
- How many houses will there be?
- Is it a new city?
- What else will be there?
- How big will the blocks be?
- How big will the blocks be along the Gawler River?
- When are the schools going to be built?
- Where is the drinking water coming from?
- Will I be able to connect my house to the water?
- Where is the gas and electricity coming from?
- Is there going to be a nursing home?
- When will the buses start?
- Will there be places for worship?
- What are the sustainability measures to be included?
- Can I have more information?
- What about the deer?
- Why can't the train come to Virginia?
- What will happen with the buses?
- What about fire and evacuation?
- We live in Thompson Road.
 - Will we be able to see it?
 - Will there be extra traffic in my street?
 - Will there be noise?
 - How will it affect our property?
 - Will there be more rezoning closer to our house?
 - What is the timing?

COMMUNITY CONCERNS

- Flood water will be forced back up the Gawler River, and make flooding worse in Virginia and Two Wells, or north of the river.
- I live next door, will I be able to spray my crops?
- The blocks seem small.
- The new houses may be affected by Jefferies.
- The new houses may be affected by noise from the speedway park.
- It's a bad idea (no explanation given)
- I'm a councilor on Playford Council
 - This is bad planning.
 - Development should start on the eastern side of Port Wakefield Road.
 - The site is set up for agriculture, the Virginia pipe line has been built through it and can supply recycled water for farming.
 - What about the land left between the site and the Gawler River on Port Wakefield Road?
 - What will happen to those people's businesses?
 - There are already closed shops in Virginia Shopping Centre.
- What will happen to Virginia Shopping Centre?
- What will happen to my business in Virginia Shopping Centre?
- The bus service from Virginia is only a couple of times a day, and it's not enough.
- We live at the Palms retirement village on Port Wakefield Road, and there's no bus service for the people who don't drive.
- We can't get from Two Wells anywhere on the bus.
- There shouldn't be any access across the Gawler River to the north.
- We live in Thompson Road.
 - Will we be able to see it?
 - Will there be extra traffic in my street?
 - Will there be noise?
 - How will it affect our property?
 - Will there be more rezoning closer to our house?
 - What is the timing?
- We live next door.
 - Will we be able to spray our crops?

Our Ref: 09022a

13 Aug 2009

Mr Damien Byrne
WALLBRIDGE AND GILBERT CONSULTING
ENGINEERS
60 Wyatt Street
ADELAIDE SA 5000



ABN 17 485 960 719

1 – 198 Greenhill Road
EASTWOOD SA 5063

Phone: 08 8378 8000
Fax: 08 8357 8988

Dear Damien,

Re: Buckland Park Supplementary Information Flood Hazard and Mapping

Thank you for the opportunity to provide further information with regard to flood inundation and flood mapping for the proposed Buckland Park development.

The further information you requested related to:

- Frequency of overtopping of the banks of the Gawler River;
- Flow depths, hazard ratings and duration of overtopping of the main Port Wakefield Road Highway; and
- Flood depths and hazard ratings associated with the channels within the development.

The results of this work are summarised in the summary of the results below and the three maps which are enclosed.

Break out frequency of the Gawler River

The expected breakout frequency for the Gawler River has been estimated from the channel capacity and by completing a partial flow series analysis for the Gawler River. The analysis utilised historical data for the Gawler River at Virginia Park Gauging Station. The analysis therefore does not allow for the impacts of the flood control dam, but given the small flow rates involved this is not considered to be an unreasonable approach. (The flood control works are expected to be more effective for larger flow rates). This is also a conservative (ie likely over estimate the frequency) approach.

The estimated flow rates for the 1, 2 and 5 year ARI events were as follows:

- 1 yr ARI flow – 2000 ML/d
- 2 yr ARI flow – 3000 ML/d
- 5 yr ARI flow – 6000 ML/d.

Breakouts to the south could be expected from the 2 year ARI in some sections, but in the main the channel capacity appears to meet a 5 year ARI standard (assuming it is not blocked). There is a short section of river to the far west that could be expected to over top its banks on an annual basis.

Port Wakefield Road - flood depth, hazard rating and duration of over topping

Water could be expected to cover the road for nearly three days during the 100 year flood.

At the peak of the flood there could be a continuous length of 800 metres with water over the road. Of this 500 metres is predicted to be in the 100 to 250 mm depth range with the remaining 300 metres expected to be less than 100mm.

The absolute maximum depth expected over the Port Wakefield Road for the 100 year flood event is expected to be around 250 mm.

The hazard rating is medium across the carriage way but high to extreme on either side (due to the depth of water either side of the carriageway).

Whilst the hazard rating is medium, velocities are relatively low - they only need to be above 0.25 m/s to attract a medium hazard rating. The largest maximum velocity across the carriage way for the duration of the flood is expected to be around 0.7 m/s with an average maximum of around 0.45 m/s.

Emergency vehicles and four wheel drives should be able to gain safe although inhibited access provided that the road way was clearly delineated and did not suffer too much damage from the inundation process. Normal vehicles should also be able to gain access provided this was done in a managed and controlled way although it is at the upper limit of recommended flow depths for normal two wheel drive vehicles.

Flood Hazard Ratings in the Channels within the Development

The flood hazard rating for the channels that collect and transfer runoff through the development is expected to vary from high to extreme. Most of the channels would be in the in the extreme rating, primarily due to flood depth.

Median flow depth (spatially) in the channels is 1.2 metres and median velocities are 0.8 m/s. The 80th percentile velocity (spatially) is 1m/s and 80th percentile flow depth in the channel is 1.36 metres.

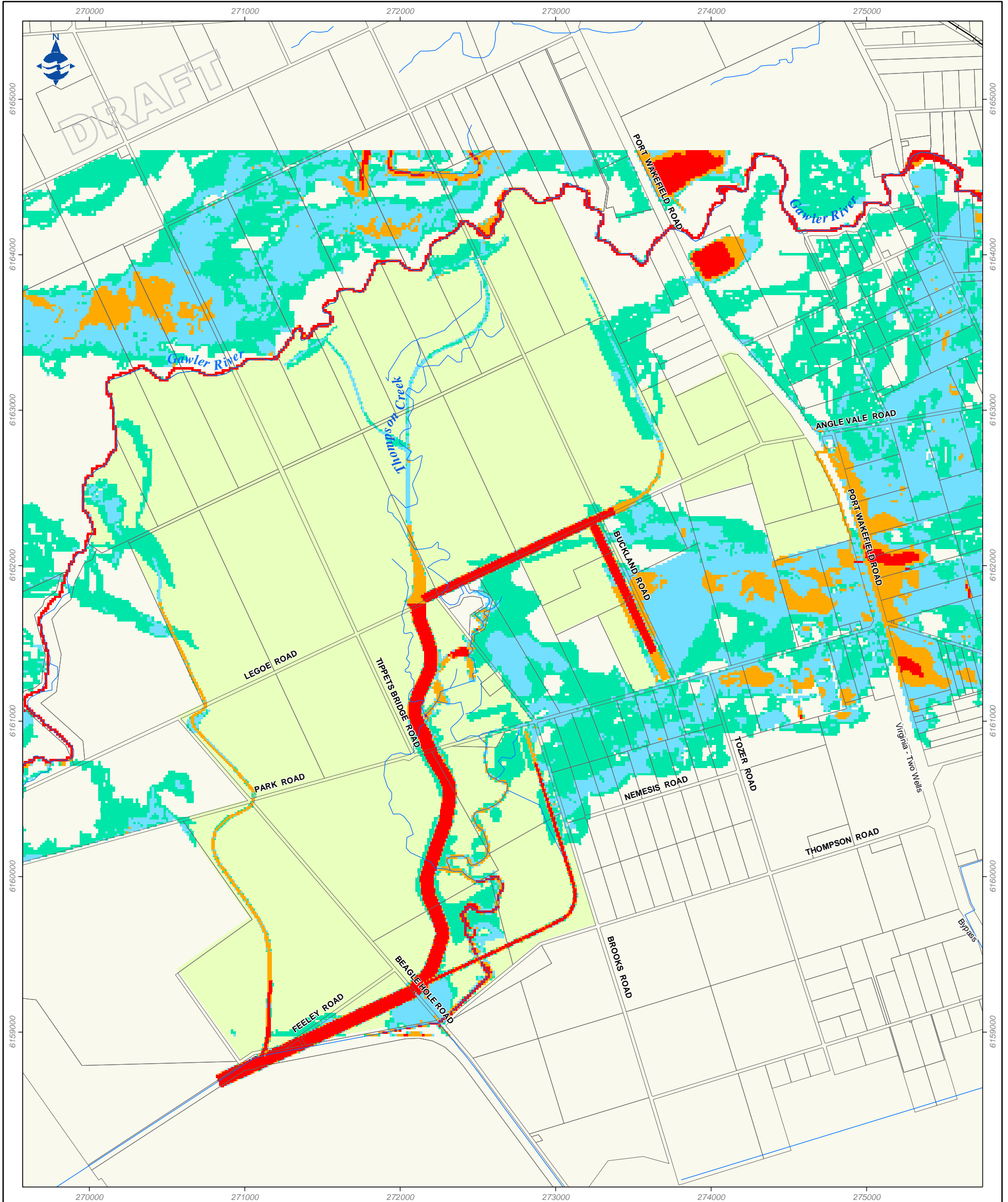
We trust the above information will be of assistance to you. Please do not hesitate to contact me should you have further queries.

Yours sincerely,



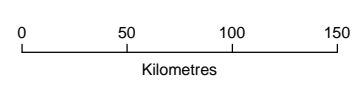
Geoff Fisher
Director
Australian Water Environments Pty Ltd

Enc: Flood maps x 3



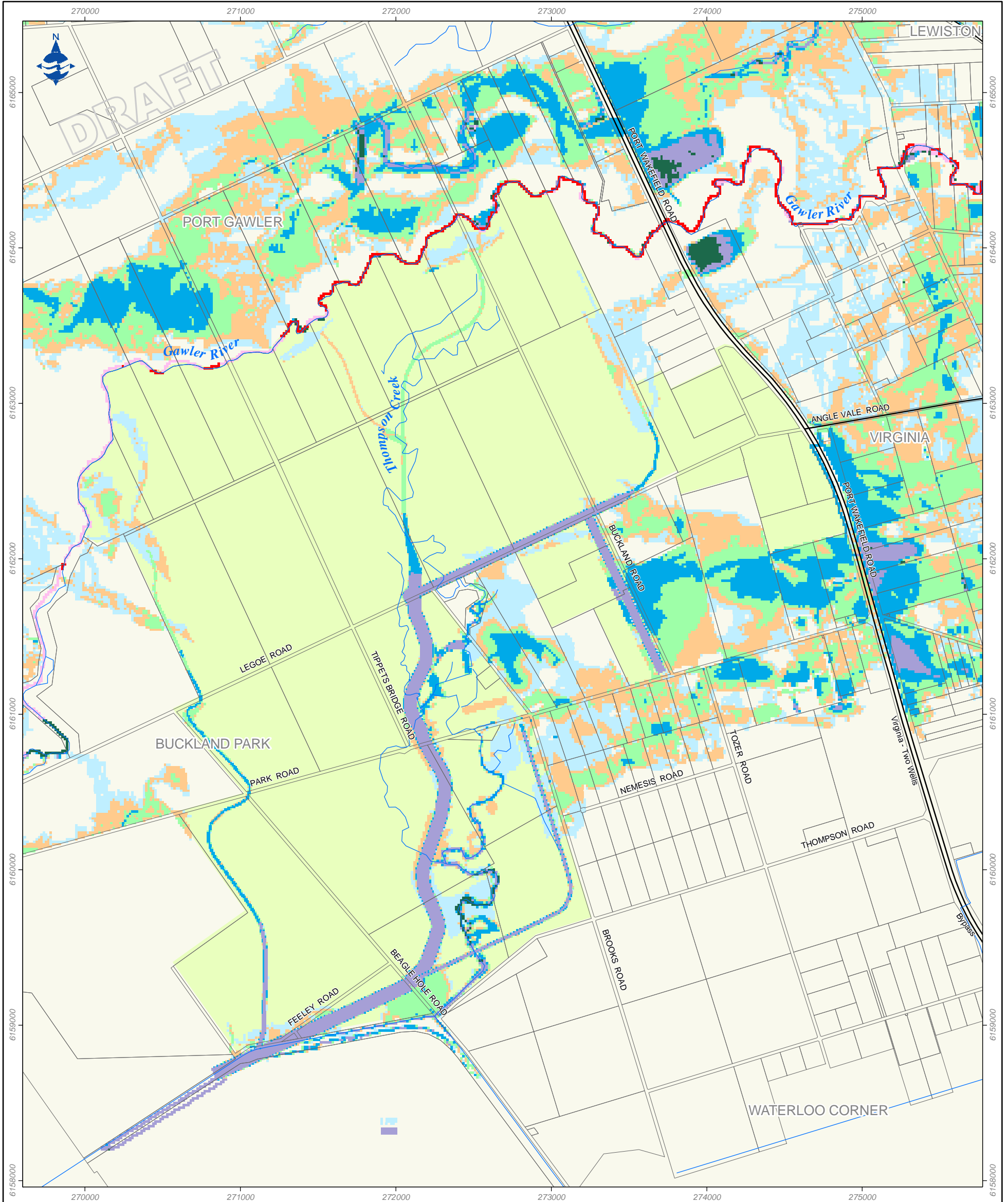
- LEGEND**
- Watercourse
 - Cadastre
 - Flood Hazard Rating**
 - Low
 - Medium
 - High
 - Extreme
 - Buckland Park Estate

Data Source:
 Flood Analysis data supplied by Water Technology
 Cadastre, Watercourses and Suburbs supplied by
 the City of Playford



Buckland Park Housing Estate

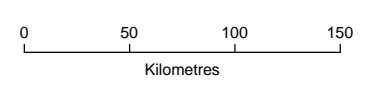
Flood Hazard



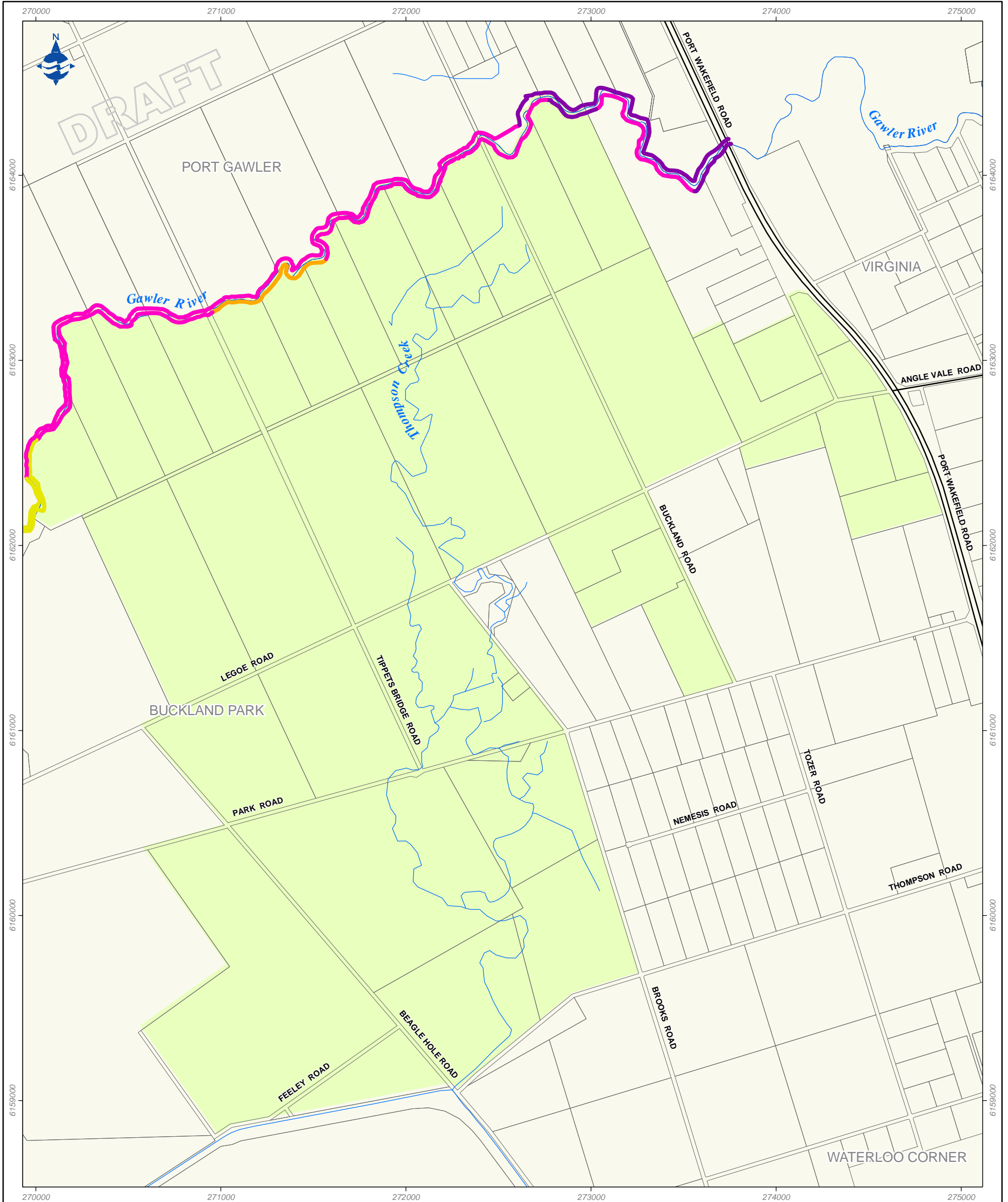
LEGEND

| | | | | | |
|--|-------------|--|-----------------|--|----------------------|
| | Watercourse | | Flood Depth (m) | | 1.001 - 1.50 |
| | Cadastre | | 0.000 - 0.10 | | 1.501 - 2.50 |
| | | | 0.101 - 0.25 | | 2.501 - 5.00 |
| | | | 0.251 - 0.50 | | > 5.00 |
| | | | 0.501 - 1.00 | | Buckland Park Estate |

Data Source:
 Flood Analysis data supplied by Water Technology
 Cadastre, Watercourses and Suburbs supplied by the City of Playford



Buckland Park Housing Estate
Flood Depth



- LEGEND**
- RiverBreakoutSplit**
- Average Recurrence Interval**
- Less than 1 yr ARI
 - 1 to 2 yr ARI
 - 2 to 5 yr ARI
 - 5 to 10 yr ARI
 - Watercourse
 - Cadastre
 - Buckland Park Estate

Data Source:
 Flood Analysis data supplied by Water Technology
 Cadastre, Watercourses and Suburbs supplied by the City of Playford



Buckland Park Housing Estate

**Average Recurrence Interval
 River Breakout**



Coastal Gardens

A planting guide



local

style

water-wise

habitat



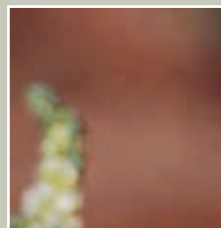
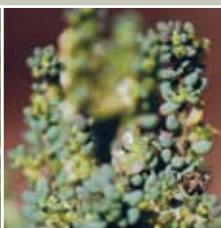
Government of South Australia

Adelaide and Mount Lofty Ranges Natural Resources Management Board

Healthy & attractive urban landscapes

This guide provides simple yet inspiring garden advice for people living in the coastal suburbs of Adelaide and beyond. Water-wise local native plants are suggested as attractive replacements for introduced plants that are harmful to our local coastal landscapes.

- 1 Using this planting guide
- 2 Discovering local plants
- 4 Garden escapes
- 6 Trees & tall shrubs
- 8 Medium shrubs
- 10 Ground covers, herbs & small shrubs
- 14 Grasses & sedges
- 16 Climbers
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- 20 Formal garden design
- 22 Japanese style garden design
- 24 Contemporary garden design
- 26 Growing local coastal plants
- 28 Sourcing local coastal plants
- 29 Useful resources





Using this planting guide

Getting started

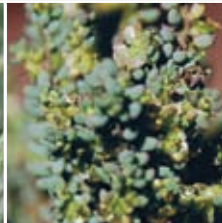
Our gardens are challenged with long-hot-dry summers, drought, water restrictions, and a changing climate. As a coastal resident you may also have to tackle salt spray, sand blasting, sandy or saline soils.

However, there is good news! You *can* have a garden that copes with our tough climate without compromising on style, by using resilient, local native coastal plants.

This guide shows you how to utilise the fantastic variety of native plants available to make a stunning garden. Taking you through step by step, you will learn what plant works best for a given area or need, how to incorporate them in different landscaping styles, how to maintain them, and where to buy.

You will learn about plants to avoid which are known for becoming serious weeds in natural coastal environments. When buying future plants, you will be prepared to consider natives for the benefits they provide. You may also identify invasive plants growing in your garden and decide to replace them with recommended alternatives.

Using local native plants in your coastal garden benefits your wallet. Its an easy, rewarding way to look after our environment. We hope you enjoy discovering local coastal plants. Happy gardening!





Discovering local plants

What is a local plant?

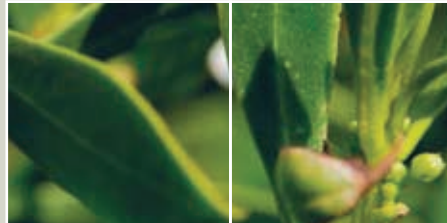
Local plants are species that would naturally occur in your neighbourhood so they have evolved to suit local conditions. They are also called 'indigenous plants'.

Why use local plants?

Local plants have a huge range of benefits.

- Low maintenance.
- Drought tolerant.
- Require minimal watering = conserves our water supplies.
- Don't need fertilisers or pesticides.
- Provide habitat, food and shelter for local fauna such as birds, butterflies and small lizards.
- Save you money and time.
- Adaptable for various landscaping styles, producing striking results.
- Native plants flower at different times of the year so you can have a flowering garden all year round.

Local plants are a great option for residents of coastal areas. They have adapted to survive the harsh conditions of sand and salt blasting, prolonged sun exposure, nutrient-depleted soils, and limited water availability. They are the best plants for your neighbourhood and the environment.





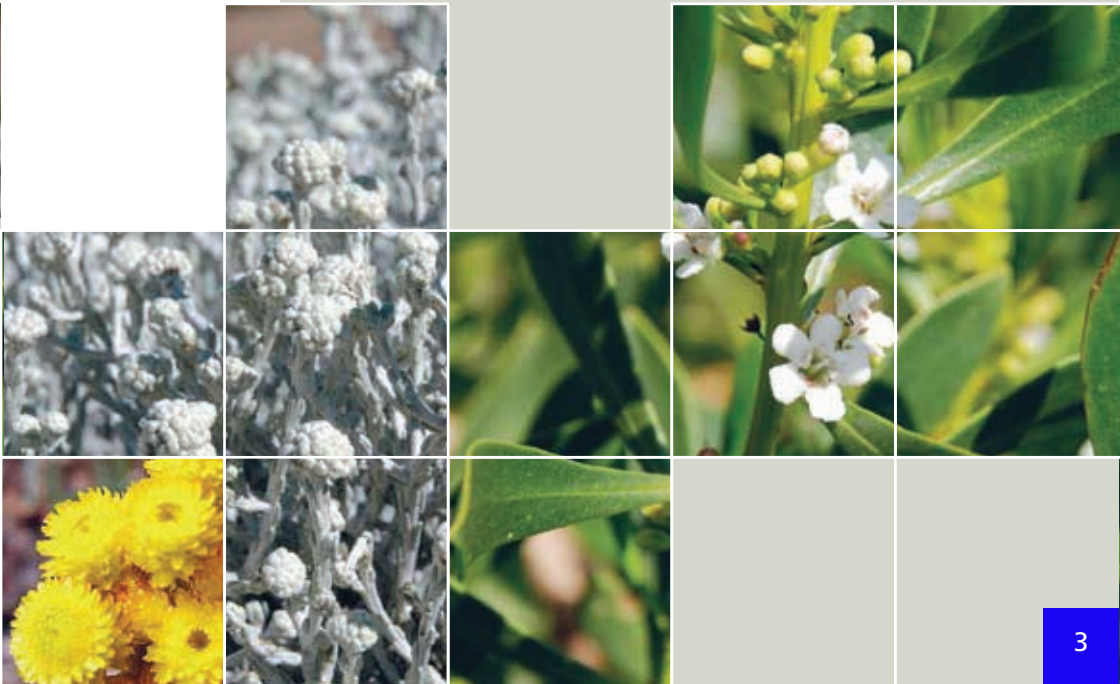
How to use local plants

Local plants can be incorporated into your garden the same way as exotic plants. They are suited to all landscaping styles, from formal to Japanese, contemporary to natural cottage, to courtyards and pots.

As you will discover throughout this guide, there is a local coastal plant for most garden situations. Plants featured include striking ground-covers, low shrubs, structured sedges and grasses, flowering creepers and trailers, bird-attracting shrubs and screening trees.

This guide also shows you which local species to use for particular effects, and makes friendlier recommendations for replacing plants known to become invasive coastal weeds.

Information on caring for local plants is provided on pages 26–27.





Garden escapes

Are you harbouring known villains?



How do garden plants become coastal invaders?

Weeds are plants growing where they aren't wanted, and they aren't just sour sobs and thistles! Some plants escape from gardens and become serious environmental weeds which pose a major threat to the health and value of our natural environments.

Environmental weeds are trouble!

- They threaten our local native plants and environment.
- Can reduce habitat, shelter and food for native fauna.
- Can alter soil conditions.
- Clog up waterways and effect water quality entering the gulf.
- Harbour pest animals such as foxes, feral cats and rats which prey on native wildlife.
- Can alter coastal dune shape.
- Garden escapes are very costly to control and take resources away from other important issues.

Plants that cause problems often originate from regions with similar climates, such as the Mediterranean and South Africa. Thriving in similar conditions, they out-compete local natives as they don't have the pests and diseases that controlled them in their original environment.

You might not realise you're harbouring garden escapes, or might not know they 'jump the fence' to become problems. Garden plants can escape into natural environments naturally, accidentally and deliberately:

- Seeds can be spread by birds and other animals, wind, water (including stormwater) or humans (on clothing, shoes etc).
- Dumped garden waste containing seeds or plant cuttings can grow even several months later.
- Sometimes people deliberately plant garden plants in our natural coastal environments.
- Garden plants can grow through fences directly on the coast.





You can help!

Have a good look through this guide to check which common garden plants are nasties in the coastal environment. You might like to remove any you have and replace them with the indigenous plants suggested. Take this guide with you when you are making new plant purchases and don't buy plants which are known to be a problem.

Here are some other easy things you can do.

- Use local native species in your garden.
- Dispose of your garden waste responsibly.
- Check with your local council before you plant into natural coastal environments .
- Join a local Coastcare group to learn more about our coast and lend a hand! Call the NRM Board on 8273 9100 or go to www.amlrrnm.sa.gov.au for information on how to get involved.



Trees & tall shrubs



DON'T PLANT a garden escape!



Western Coastal Wattle

Acacia cyclops

(Far west coast of SA)

Flowers: early spring to late autumn

Reproduces: seed pod



Century Plant *Agave americana*

(origin unknown)

Flowers: summer

Reproduces: seed, vegetative production



Mirror-bush *Coprosma repens* ^

(New Zealand)

Flowers: summer

Reproduces: orange-red berries
autumn to winter (seed)



Coast Tea-tree

Leptospermum laevigatum

(East coast Australia & Tasmania)

Flowers: August to November

Reproduces: seed (woody capsule)



White Weeping Broom

Retama raetam

(Mediterranean)

Flowers: winter/late spring

Reproduces: seed pods shed late spring to early summer



Gorse *Ulex europaeus*

(Western Europe)

Flowers: autumn to spring

Reproduces: seed

Olive *Olea europaea*

(Mediterranean)

Flowers: spring

Reproduces: dark purple
fruit autumn-winter (seed)



Blowfly Bush *Rhamnus alaternus*

(Mediterranean)

Flowers: winter to early spring

Reproduces: fleshy black fruits,
will reshoot from base if damaged



GROW ME *instead*



Drooping Sheoak *Allocasuarina verticillata*

Tree growing between 5–8 m. Long weeping branchlets, grey-green. Interesting cone-like fruit. Well suited to Japanese gardens. Use as feature tree or for screening. Birds such as parrots and cockatoos are attracted to fruit. Does not tolerate direct coastal exposure.



Common Boobialla *Myoporum insulare*

Large shrub to small tree, grows 2–5m. Thick light green fleshy leaves, white flowers winter to spring, purple berry fruit. Good screening qualities. Attracts birds and butterflies. Full-sun.



Mallee Box *Eucalyptus porosa*

Tree to 10m, usually single stemmed. Bright green 'gum' leaves, white flowers from October to March. Great plant for wildlife, provides food, shelter and nesting sites. Use in natural cottage garden setting. Minimum 3.5m set-back from property and sewage pipes. Does not tolerate direct coastal exposure.



Sticky Hop-bush *Dodonaea viscosa* ssp. *spatulata*

Erect shrub to 3m, bright green sticky leaves. Green flowers in winter turn to striking red seed pods in spring. Great for hedging or screening. Responds to pruning. Attracts butterflies in summer. Does not tolerate direct coastal exposure.



Southern Cypress-pine *Callitris gracilis* (formerly *Callitris preissii*)

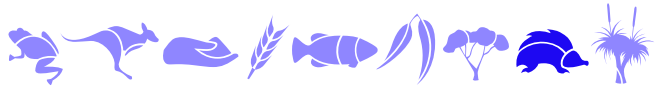
Cylindrical-shaped tree to 5m. Green foliage. Fruit is a dark brown cone. Great for formal gardens. Attractive foliage. Use as a replacement plant for conifers, as singular feature plant, line driveway or for screening. Responds well to pruning. Attracts birds. Does not tolerate direct coastal exposure.



Silver Banksia *Banksia marginata*

Feature tree grows 3–5m. Leaves green on top, silver under. Large yellow flowers spring to autumn. Interesting foliage and seed pods. Attracts birds and butterflies. Full-sun. Does not tolerate direct coastal exposure.

Medium Shrubs



DON'T PLANT a garden escape!



Teneriffe Daisy

Argyranthemum frutescens ssp. *foeniculaceum*

(Canary Islands)

Flowers: spring

Reproduces: seed



Tufted Honey-flower

Melianthus comosus

(South Africa)

Flowers: late spring to mid summer

Reproduces: seed



Myrtle-leaf Milkwort

Polygala myrtifolia

(South Africa)

Flowers: spring

Reproduces: seed



Boneseed

Chrysanthemoides monilifera ssp. *monilifera*

(South Africa)

Flowers: late autumn to winter

Reproduces: fleshy fruit (seed)



GROW ME *instead*



Coast Daisy Bush *Olearia axillaris*

Shrub to 3m. Leaves dark blue-green above, white below. White, daisy-like flowers occur along stems in summer and autumn. Benefits from pruning. Screening plant, foliage contrast. Full-sun to semi-shade.



Small-leaved Blue-bush *Maireana brevifolia*

Shrub to waist high. Succulent, small green-red leaves. Fruit has five paper-like wings. Food source for birds and small lizards. Great colour contrast. Tolerates saline conditions, but not direct coastal exposure.



Lavender Grevillea *Grevillea lavandulacea*

Variable shrub to 1m high. Grey-green foliage resembles lavender, pink to red flowers produced winter to spring. Suitable for small gardens. Attracts birds. Well drained soil. Full-sun to shade. Does not tolerate direct coastal exposure.



Cushion Fanflower *Scaevola crassifolia*

Spreading robust shrub to 1.5m high, 2m wide. Bright green slightly serrated leaves, flowers bright blue to pale purple, fan-shaped, occur spring to early summer. Attractive flowers. Full-sun.



Round Leaf Wattle *Acacia acinacea*

Shrub to 2m. Small rounded green leaves (phyllodes). Bright yellow wattle flowers from May to September. Provides burst of colour over winter. Weeping habit, well-suited to Japanese style garden. Lives 8–10 years. Does not tolerate direct coastal exposure.

Ground covers, herbs & small shrubs



DON'T PLANT a garden escape!



Beach Daisy *Arctotheca populifolia*

(South Africa)

Flowers: winter to summer

Reproduces: seed



White Arctotis *Arctotis stoechadifolia*

(South Africa)

Flowers: spring to summer

Reproduces: seed



Hottentot Fig *Carpobrotus edulis*

(South Africa)

Flowers: late summer to winter

Reproduces: fleshy fruit in summer,
also spreads by vegetative production



Gazania *Gazania sp.*

(South Africa)

Flowers: most of year, mainly spring to autumn

Reproduces: seed, vegetatively



Succulents

(tropical & sub-tropical dry regions)

Flowers: various

Reproduces: Most species will also spread
by vegetative growth, some set seed



GROW ME *instead*



Austral Trefoil *Lotus australis*

Spreading herb to 30cm. Pale green leaves, white to pink pea flowers occur in clusters, spring to summer. Pretty plant, suits cottage or bushland garden. Can plant in pots. Prune after flowering. Full-sun to semi-shade.



Coast Bonefruit *Threlkeldia diffusa*

Small shrub or groundcover to 20cm high, 1m wide. Small fleshy leaves, green with purple tinge. Soil stabiliser. Tolerates saline conditions, clay. Full-sun.



Creeping Boobialla *Myoporum parvifolium*

Ground runner growing shin high to 5m wide. Small green leaves, dainty white or pale purple flowers in spring or summer. Good soil stabiliser. Space filler. Trail down rock walls. Lawn replacement (where no foot traffic). Attracts butterflies, provides shelter for small lizards. Does not tolerate direct coastal exposure.



Native Bluebell *Wahlenbergia sp.*

Delicate herb to 30cm, pretty blue flowers in winter and spring. Dies back over summer. Very pretty, delicate plant. Suitable pot-plant. Great in cottage or bushland gardens. Can plant in drifts. Responds well to pruning.



Common Everlasting *Chrysocephalum apiculatum* (*Helichrysum apiculatum*)

Herb to knee high. Silver-grey leaves, clusters of bright-yellow daisy flowers, October to January. Works well in natural cottage and contemporary gardens. Long-lasting flower, looks great as a cut flower, can also be dried. Butterfly food source. Does not tolerate direct coastal exposure.

Ground covers, herbs & small shrubs

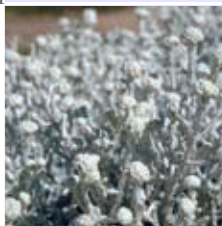


GROW ME instead



Muntries *Kunzea pomifera*

Ground-hugging shrub with branches extending over several metres. Thick bright green leaves, showy white fluffy flowers in spring and early summer. Purple berries. Space filler. Suitable for pots and hanging baskets. Full-sun to semi-shade. Ripe fruits are edible.



Cushion Bush *Leucopyhta brownii*

Compact, rounded shrub to 1m. Silver-grey foliage, pale yellow ball-shaped flowers in summer. Great structural form, colour contrast. Responds well to regular pruning. Contrast plant. Full-sun.



Native Pelargonium *Pelargonium australe*

Herb to knee high. Large green velvety leaves, pale pink flowers with purple stripe occur spring to summer. Pretty plant, great in cottage or bushland garden. Can plant in pots. Prune after flowering. Full-sun to semi-shade.



Native Fuchsia *Correa reflexa*

Small shrub with dark green leaves, pink bell flowers in winter and spring. Attractive flowers, great in formal, cottage or bushland garden settings. Attracts birds. Full-sun to shade. Does not tolerate direct coastal exposure.



Native Pigface *Carpobrotus rossii*

Thick, fleshy ground cover. Green leaves triangular in cross-section, large bright pink flowers occur in spring. Attractive ground-cover, soil stabiliser. Suitable as trailing plant for pots or down walls. Ripe fruits are edible.



Woolly New-Holland Daisy *Vittadinia gracilis*

Perennial daisy to 30cm high. Purple, pink or white daisy flowers mainly in spring, turn to fluffy seed heads. Pretty flowering plant. Suits small, cottage & bushland gardens. Attracts butterflies. Full-sun to semi-shade.



Round-leaf Pigface *Disphyma crassifolium*

Succulent ground-running plant. Green leaves round in cross section, bright pink flowers in spring. Attractive ground-cover, soil stabiliser. Trail over rock walls. Tolerates saline soils. Full-sun to shade.



Ruby Saltbush *Enchylaena tomentosa*

Low shrub to 1m. Leaves small, blue-green, fleshy. Yellow to red fleshy fruits produced through-out the year. Attracts native wildlife. Responds well to pruning (can prune seasonally if starts to dominate garden bed). Full-sun to semi-shade. Ripe fruits are edible.



Running Postman *Kennedia prostrata*

Prostrate runner to 2m. Leaves pale green, bright red pea-flowers winter to summer. Eye-catching flowers, use as an attractive ground cover or plant in small to large garden pots (looks great in a feature urn). Light-shade preferred.

Grasses & Sedges



DON'T PLANT a garden escape!



Couch Grass *Cynodon dactylon*

(tropics world-wide)

Flowers: late spring to early summer

Reproduces: sets seed in summer, also spreads vegetatively (including lawn clippings)



GROW ME instead



Coast Spear-grass *Austrostipa* spp.

Tussock grass species of varying heights, with flowering stems to 1m. Use coastal species *A. flavescens* (tall) and *A. elegantissima* (small and compact). Plant in clumps, suitable for mass plantings. Showy when in flower. Fill in spaces or border plantings. Attracts butterflies.



Wallaby Grass *Austrodanthonia* sp.

Clumping grass to knee high, fluffy white seed heads in summer. Plant in clumps, good in bush garden setting. Attracts wildlife including butterflies.



Knobby Club-rush *Isolepis nodosa*

Attractive evergreen clumping plant to 1m high. Leaves dark-green, cylindrical & up-right. Flower heads brown ball-shaped, occur all year. Versatile plant. Use as accent, group plantings, pot-plants, around ponds. Tolerates salt spray & wet zones. Attracts butterflies. Full-sun to semi-shade.



Fountain Grass

Pennistenum setaceum

(East Africa & Middle East) Flowers: summer to autumn. Reproduces: via seed.

Kikuyu

Pennisetum clandestinum

(East Asia) Flowers: summer to autumn. Reproduces: vegetative reproduction (eg. lawn clippings)



Flat-sedge *Cyperus vaginatus*

Clumped sedge to 1.5m high. Bright green stems with brown flower spikes at the tip. Elegant plant. Plant in pond or wet areas, can tolerate dry conditions for several seasons. Looks great in clumps or solitary. Suits Japanese style gardens. Does not tolerate direct coastal exposure.



Sword Sedge *Lepidosperma gladiatum*

Sedge to 1m high with wide, flat leaves (like a gladiator's sword!) Brown flower heads present winter to summer. Plant in large or small clumps. Good accent plant, use in borders, foliage contrast. Suitable pot-plant.



Short-stem Flax-lily *Dianella brevicaulis*

Small clumping plant to knee high. Leaves strappy & stiff, blue-green. Blue flowers produced on narrow stalks within foliage line, spring. Flowers above the foliage line on wiry stalks to 1m (does not tolerate direct coastal exposure). Great for borders, large or small group plantings, pots & indoors. Full-sun to shade.



Coast Tussock-grass *Poa poiformis*

Tussock grass growing to knee high. Thin blue-green leaves, brown-yellow flower heads. Tight foliage. Great in small or large group plantings, also rockeries, borders. Good table pot-plant. Full-sun.

Climbers



DON'T PLANT a garden escape!



Bridal Creeper *Asparagus asparagoides*

(South Africa)

Flowers: spring

Reproduces: red berries late spring, also spreading underground root system (rhizomes)



Lavatory Creeper *Dipogon lignosus*

(South Africa)

Flowers: spring

Reproduces: seed pods in summer, also spreads by underground root system (rhizomes)

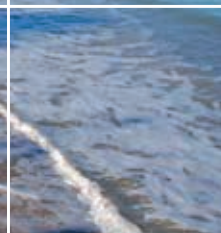
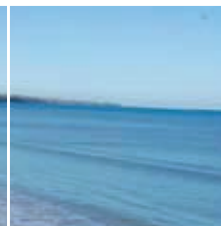
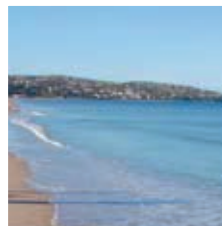


Bridal Veil *Asparagus declinatus*

(South Africa)

Flowers: winter

Reproduces: green/blue berries late winter/early spring, also spreading underground root system (rhizomes)





GROW ME *instead*



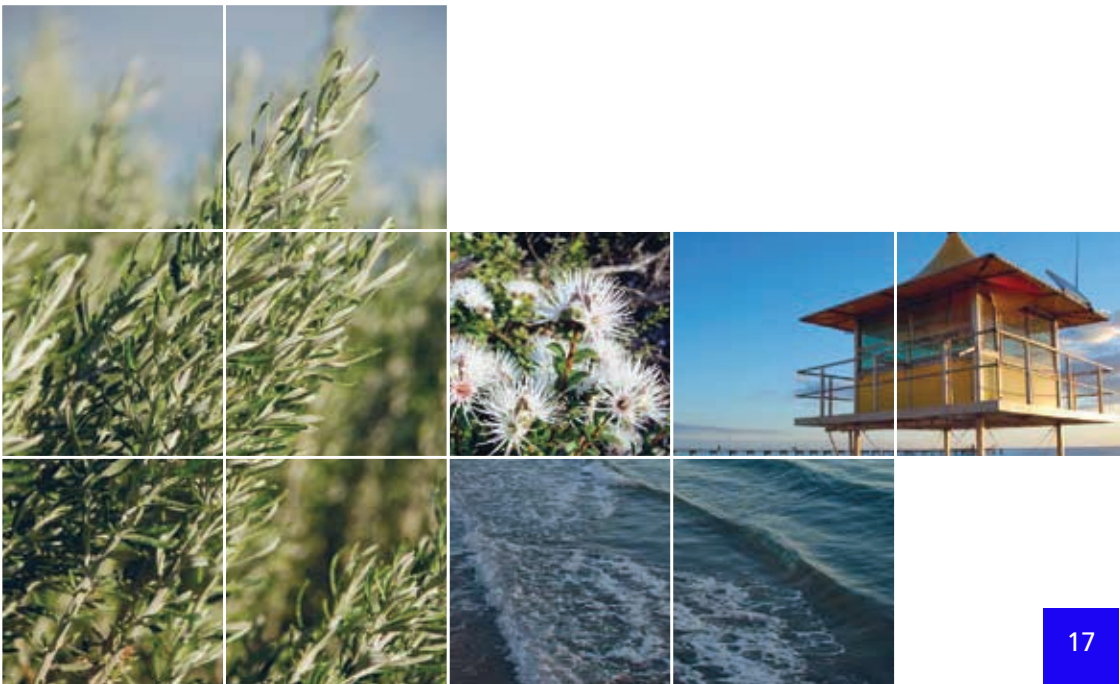
Native Lilac *Hardenbergia violacea*

Climber or shrub with trailing & twining stems. Dark green leaves, clumps of bright purple pea flowers in winter. Attractive climber, trailing pot-plant or small shrub. Attracts butterflies. Full-sun to shade. Does not tolerate direct coastal exposure.



Sweet Appleberry *Billardiera cymosa*

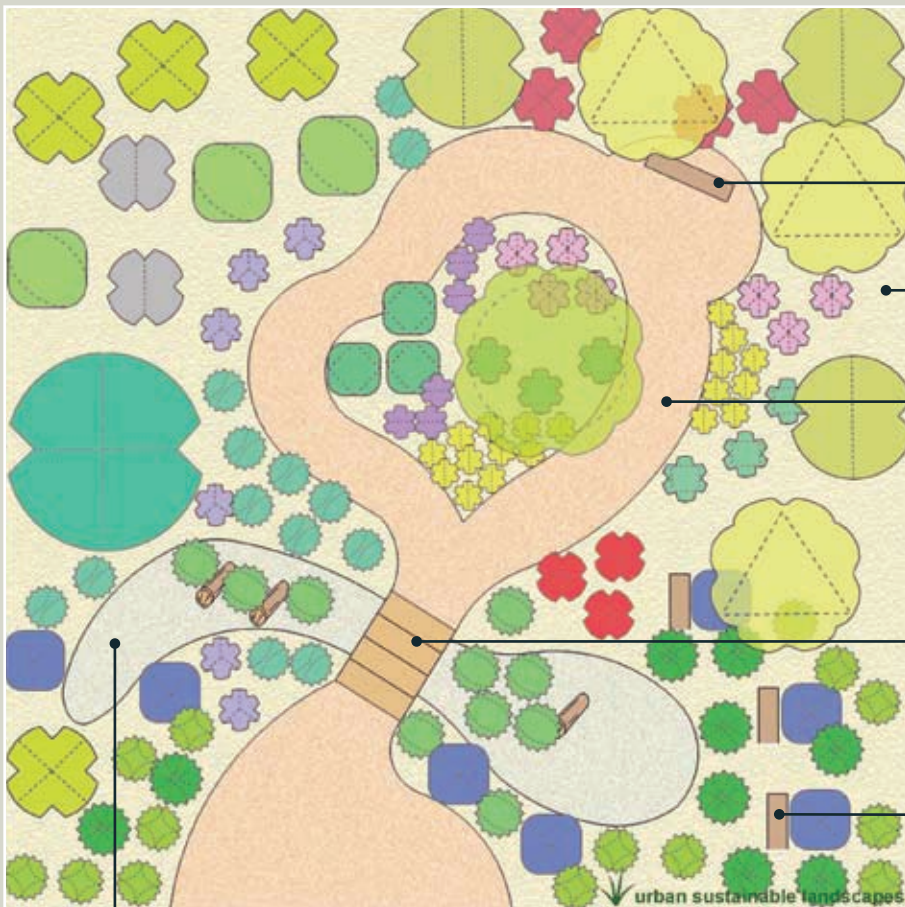
Climber or small shrub to shin high. Dark green leaves, striking purple to blue flowers in spring, red/purple berries in summer. Attracts butterflies. Full-sun to semi-shade. Does not tolerate direct coastal exposure.





Natural cottage garden design

A natural cottage garden is easy to achieve with local coastal plants as many species flower in winter, providing a colourful garden year-round. These gardens are relaxed and flowing, and are a wonderful place for local wildlife. To achieve a natural cottage garden, mimic the flow and mix of plant species in natural coastal areas. Allow plants to cascade over paths and lace through one another. Utilise weaving paths and rustic furniture. Add bird-baths, hollow logs, and nesting boxes to attract and support local wildlife.



Swale with 14mm quartzite gravel and habitat logs





Trees & tall shrubs



Mallee Box



Common Boobiolla



Sticky Hop-bush



Silver Banksia

Medium Shrubs



Coast Daisy-bush



Lavender Grevillia

Bench

Mulch

Ground covers, herbs & small shrubs



Cushion Bush

White wash sustainable pebble



Native Fuchsia



Austral Trefoil



Common Everlasting



Native Pelargonium



Ruby Saltbush



Muntries



Woolly New-Holland Daisy



Native Bluebell

Flat sleepers set in gravel to give boardwalk appearance

Grasses & sedges



Wallaby Grass



Short-stem Flax-lily



Coast Spear-grass



Knobby Club-rush

Recycled hardwood timber post, upright 2m high

Climbers

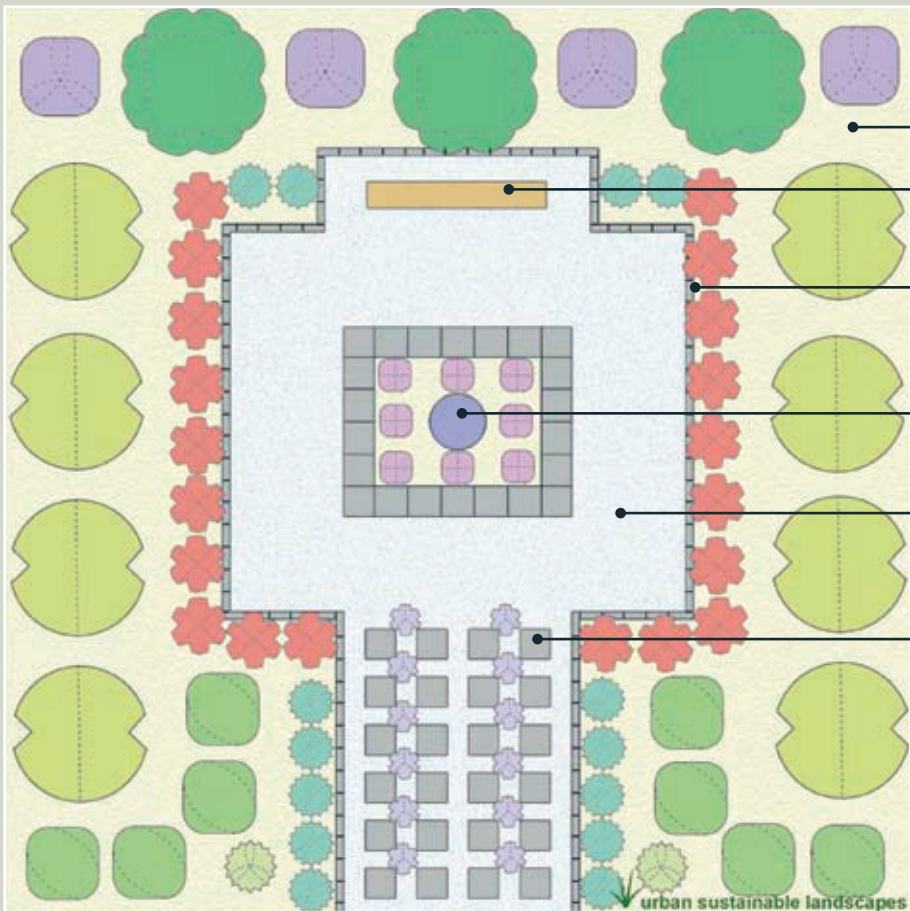


Native Lilac



Formal garden design

A number of local coastal plants can be grown into clipped hedges or shapes to form the basis of the formal garden. Sedges and grasses can be used in mass plantings and accent borders. Use local climbers or trailing plants in a feature urn, terrace or retaining wall. To achieve a formal garden style, emphasise symmetry and borders and use gravel or sustainable pebbles to create and highlight landscaping features.





- Mulch
- Bench
- 110mm x 220mm linear paver divider
- Birdbath feature
- 14mm dolomite gravel
- 500mm x 500mm charcoal pavers

Trees & tall shrubs



Southern
Cypress-pine



Sticky
Hop-bush

Medium Shrubs



Cushion
Fanflower

Ground covers, herbs & small shrubs



Ruby
Saltbush



Native
Fuchsia



Native
Pelargonium



Native
Pigface

Grasses & sedges



Sword Sedge

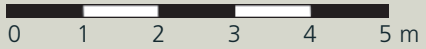


Short-stem Flax-lily



Japanese style garden design

Local coastal plants are well suited to the minimalist style and reflective feeling of Japanese gardens. Aim to create a garden that mimics the natural balance and flow of nature. Clumps of local grasses can be used to compliment raked gravel areas. Incorporate natural elements such as plants with graceful habit, water features, stepping stones and gravel areas to achieve your Japanese-style garden.





- Mulch
- Recycled wooden bench
- 110mm x 220mm linear paver divider
- Feature sculpture
- Clay or plastic lined wet/dry stormwater fed pond coated with quartzite gravel at a maximum of 200mm depth
- 14mm quartzite gravel
- Table & chairs
- 400mm x 400mm charcoal pavers

Trees & tall shrubs



Drooping Sheoak

Medium Shrubs



Round Leaf Wattle

Ground covers, herbs & small shrubs



Native Pelargonium



Cushion Bush



Muntries



Round-leaf Pigface



Creeping Boobialla

Grasses & sedges



Flat Sedge



Knobby Club-rush



Short-stem Flax-lily



Sword Sedge



Coast Tussock-grass

Climbers



Sweet Appleberry

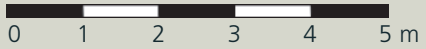
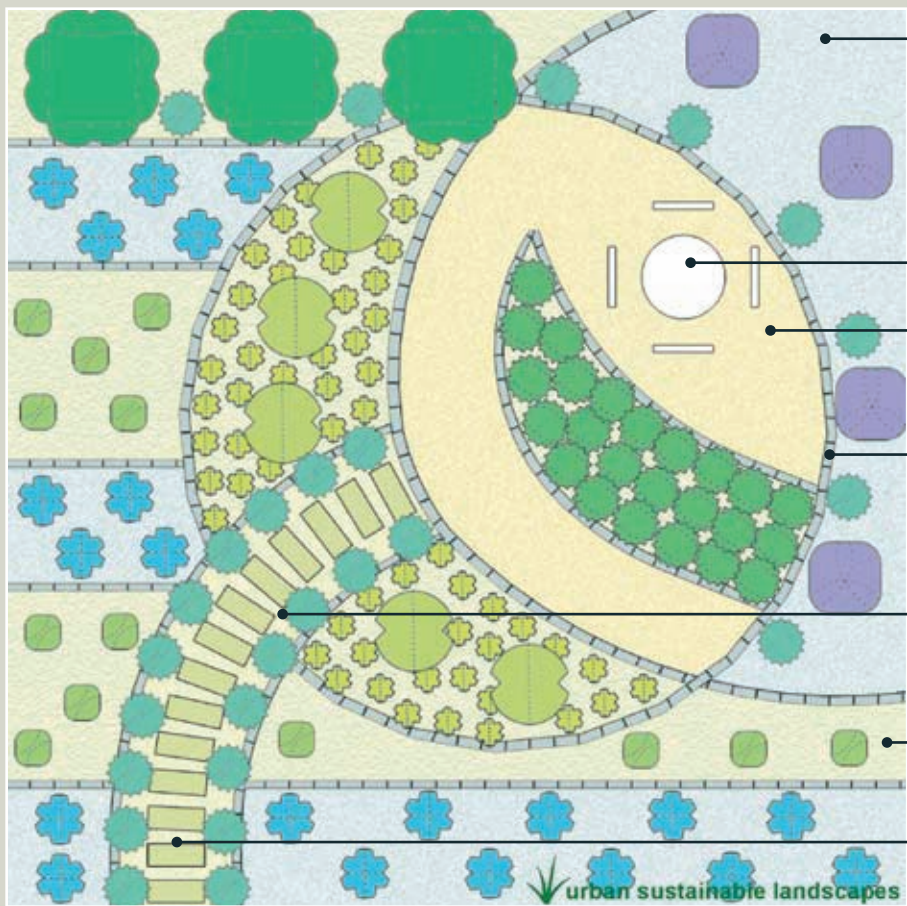


Native Lilac



Contemporary garden design

Contemporary gardens feature bold modern designs, with an emphasis on contrasts of colour, texture and form. Many local coastal plants offer excellent colour and texture for these bold designs. To develop your own contemporary garden, create interesting garden bed shapes using a mix of plants and landscaping materials that provide strong contrasts. A simple outdoor setting suits the contemporary garden design.





Trees & tall shrubs



Southern
Cypress-pine



Sticky
Hop-bush

Medium Shrubs



Cushion
Fanflower



Small-leaved
Bluebush

Ground covers, herbs & small shrubs



Common
Everlasting



Round-leaf
Pigface

Grasses & sedges



Short-stem
Flax-lily



Knobby
Club-rush

Dolomite gravel

Table & chairs

White wash
sustainable pebble

110 x 220mm
linear paver divider

14mm quartzite
gravel

Mulch

800mm x 300mm
paver stepping
stones



Growing local coastal plants

When to plant

Planting is best done in the cooler months through autumn and winter. The ideal time is after the autumn opening rains when the soil is moist, and plants have ample time to establish roots before the warm weather kicks in.

Watering

Water-in your new plants. Over the first summer they may need an occasional deep watering, but no more than once a week. After their first summer, they should cope on rainfall alone. Prior to severe heat waves, give your plants a thorough watering, so water penetrates deep into the soil.

Your aim is to establish strong, deep root systems which are water-efficient and drought tolerant. Over-watering leaches nutrients from the soil creating excessive growth, less flowering and shorter-lived plants.

Be mindful of current water restrictions and the prescribed times allocated to gardeners for watering.

Mulch & gravels

A layer of mulch added to your garden can reduce evaporative water loss by more than 70%!¹ Organic mulch keeps soil temperatures down, which benefits root density, suppresses weed growth, and helps to promote good soil structure and productivity.

Apply 5–10 cm of mulch or gravel, creating a bowl shape around the plant to help retain water. To avoid plant disease, keep mulch away from plant stems.

¹SA Department for Environment & Heritage – www.backyards4wildlife.com.au





Fertilising

Fertilisers aren't usually needed with local native plants. If you decide to fertilise, seek advice from your local nursery, as products with high levels of phosphorus can harm some local native plants. You'll want to avoid rapid growth that makes your local plants leggy, weak and short-lived.

Maintaining your local plants

Pruning is beneficial for many local plants. Most species will appreciate a light trim to keep their shape, promote new growth and encourage flowering. Pruning is best done after flowering, usually late spring or early summer. Young plants can be pruned lightly and regularly. Older plants can be refreshed with a more extensive prune after flowering. Replace old plants that die or become straggly.

Potted local plants need a little more care than those planted out in gardens. Water your pot plants more regularly in summer, and apply a low-phosphorus fertiliser in spring and summer (check with your local nursery which product is best). Don't over-apply fertiliser as it can harm local native plants. Some plants may need re-potting in the future.

Sustainable landscaping

You can help the environment by using sustainable and locally sourced materials, and avoid materials taken from natural ecosystems, such as moss rocks, river stones, fallen logs and red gum mulch. More information on sustainable landscaping can be found on the Botanic Gardens website. <http://www.environment.sa.gov.au/botanicgardens/programs/landscapes.html>

More information

For further information on establishing local native plants and how you can make your garden wildlife friendly, visit the Urban Forest Biodiversity Program website www.backyards4wildlife.com.au





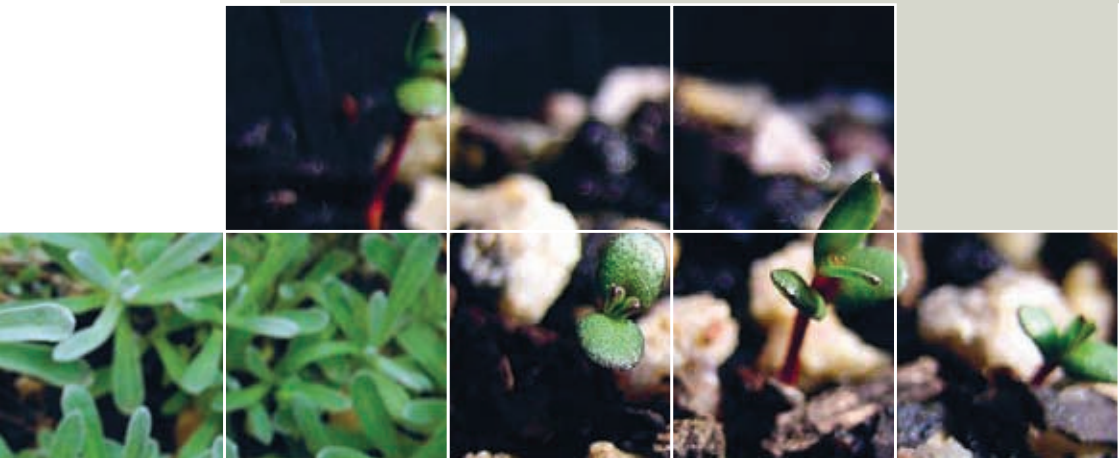
Sourcing local coastal plants

Unfortunately, not all nurseries around Adelaide stock local coastal plants. Native plant nurseries can be found at www.backyards4wildlife.com.au Alternatively, contact your local council's Environmental Officer or phone the Adelaide and Mount Lofty Ranges Natural Resources Management Board on 8273 9100.

Ask your local plant nursery for plants that are of 'local provenance' meaning plants grown from seeds or cuttings collected from your local area, catchment or neighbourhood. These plants have adapted to local conditions, so are the best plants for your garden.

You can often place orders in advance with local nurseries in late spring – early summer to collect for late autumn planting. Advance orders are recommended if you want larger quantities of plants, or don't want to substitute if species aren't available. Many growers are also able to supply plants for commercial orders such as councils, schools, other nurseries, industries and landscapers.

Keep an eye out for local plant giveaways which are sometimes run by your council in winter – these will be advertised in your local Messenger and are extremely popular!



Useful resources

These resources are complementary to this guide. From picturesque images of our local coastline, to more in depth gardening resource material, they may provide further inspiration and information. Happy planting!

Internet

- Adelaide and Mount Lofty Ranges coastal photo gallery 'the local natives' www.flickr.com/photos/amlrnm
- Backyards for Wildlife www.backyards4wildlife.com.au
- Your local council's website
- Garden Plants that are Known to Become Serious Coastal Weeds www.environment.sa.gov.au/coasts/pdfs/no34.pdf
- Sustainable Landscapes Project www.environment.sa.gov.au/botanicgardens/sustainable.html
- Sustainable Gardening Australia website www.sgaonline.org.au

Books

- The Native Plants of Adelaide – Phil Bagust and Lynda Tout-Smith

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**Government
of South Australia**

Adelaide and
Mount Lofty Ranges
Natural Resources
Management Board

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Residential Design Guidelines



25 February 2009

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Appendix 1 External Building Colours Palette

1 Introduction

1.1 Preamble

Bluestone is a prestigious new residential community at Mount Barker situated in the picturesque Adelaide Hills. This 100 Hectare development includes over 16 Hectares of public open space with over 4km of pathways and has been developed to ensure the character of Mount Barker is not forgotten.

At Bluestone we believe good design is essential for good living. After consulting Adelaide's best town planners and home builders we have developed design guidelines that embrace the concept of hills living.

These Design Covenants are in place to ensure that once you've found your ideal location, your new neighbourhood lives up to expectations.

They act to achieve a thoughtful blend of innovation and contemporary architecture whilst working to complement the natural environment. They also ensure the overall character and high quality of the address, protecting your investment now and into the future.

1.2 Purpose of the Residential Design Guidelines

These Guidelines are intended to assist owners, designers and builders when designing homes, and to provide greater certainty about the quality of homes that will be built within Bluestone.

The Guidelines form part of the Encumbrance attached to the Certificate of Title on all allotments and therefore all purchasers will be contractually required to comply with them.

1.3 The Approval Process

All dwellings, outbuildings, landscaping of front yards and other structures as detailed in these Guidelines will require an Encumbrance Approval prior to seeking the approval of Council.

The design and approval process is illustrated on the following page.

The attached checklist will provide some assistance to you when preparing an application. Generally, the following information will be required when submitting a new dwelling application for the approval of the Encumbrance Manager:

- Site plan(s) showing dwelling location, boundary set backs of single and two-storey components, north point, scale, driveway location and width, street and park frontages (where applicable).
- Building design plans showing detailed room layouts, doors, windows and eaves.
- Elevations of all building facades.
- Building heights and site coverage areas.
- Garage set-backs, driveway and crossover locations.
- Building materials and external colours (including garage if separate).
- Section of driveway or design levels on site plan.
- Septic tank location.
- Landscaping plans for front gardens.
- Fencing details.
- Domestic outbuilding details (where applicable).
- Energy Star Rating Certificate.
- Insulation specifications for walls and ceilings.
- Owner acknowledgement letter (attached to checklist).

The Encumbrance Manager or agent may agree to approve proposals that do not conform entirely with the Guidelines, provided that the non-compliance is considered to be minor, that the quality and character of Bluestone is not detrimentally affected, and that Mount Barker Council has no objection. Reasons for non-compliance with any of the **required** Guidelines must accompany the application.

Plans of the proposed dwelling must be lodged with the Encumbrance Manager no later than 18 months after settlement of the purchase of the allotment. Commencement of construction will be no later than 24 months after settlement of the purchase of the allotment, with commencement deemed to be the placement of footings/foundations on the allotment.

Once the submitted plans have been approved by the Encumbrance Manager they will be stamped and returned to the registered applicant. **Only when plans have been stamped and approved by the Encumbrance Manager should they be submitted to the Mount Barker Council for assessment against the Development Act 1993.**

These Guidelines may be updated without notice.

Payment of the Encumbrance Management Fee must be received in full by the Encumbrance Manager prior to approval.

1.4 Encumbrance Manager Contact Details

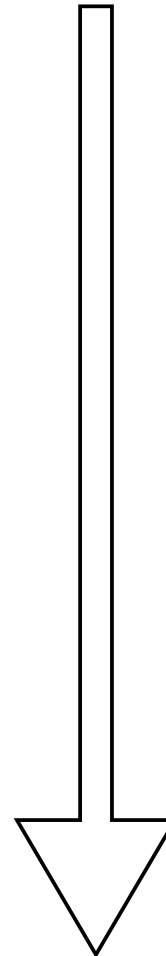
The Encumbrance Manager's contact details are:

Stephen Leybourne
Leybourne Collaborative Pty Ltd
PO Box 1817
GAWLER SA 5118

Ph: 08 8524 5569

Fax: 08 8524 5589

Email: leycol@chariot.net.au



Review Guidelines

Review the Guidelines and check if there are any specific provisions for your site.

Preliminary Design (optional)

Prepare a site analysis plan to identify the features and opportunities for your site. Work with your designer or builder to prepare a preliminary site and house plan. Discuss your preliminary design with the Encumbrance Manager who can help you to address any matters in the Guidelines prior to undertaking final design.

Prepare Final Design

Prepare Application

Prepare and submit an Application Form together with your house and landscape design plans and payment to the Encumbrance Manager for approval. Refer to the attached checklist. Generally within 10 working days the Encumbrance Manager will confirm that the application is acceptable or advise of any items that require further consideration.

Encumbrance Approval

Once approved by the Encumbrance Manager, the plans will be stamped and forwarded to the registered applicant.

Council Approval

Lodge your stamped plans for Development Approval (Planning & Building) with the Mount Barker Council. Once Development Approval has been issued by the Council you may commence building your home.

Construction

Must commence no later than 24 months after settlement.

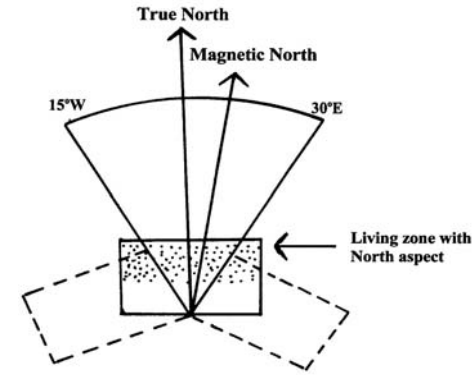
Inspection

Once construction is completed the Encumbrance Manager may inspect the works to ensure compliance with the approved plans.

2 Orientation, Setbacks and Building Envelope

2.1 Orientation of Dwellings and Private Open Space

Dwellings should have a north-facing room (i.e. between 30° east and 15° west) capable of being used as a living area.



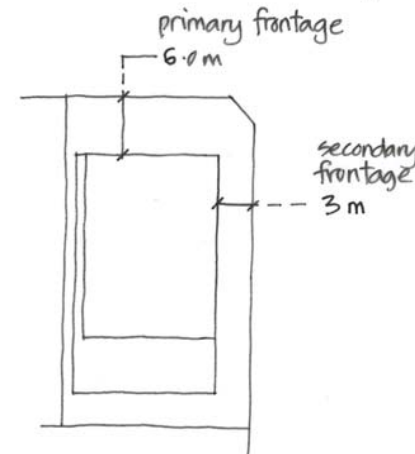
2.2 Setbacks* from Streets

- Except for dwellings on allotments with frontage to Hurling Drive, dwellings and other buildings should be set back:
 - from the primary street frontage^{**}: 6 metres minimum;
 - from the secondary street frontage^{***}: 3 metres.
- For dwelling on allotments 58 - 79 inclusive, which have frontage to Hurling Drive, dwellings and other buildings should be set back 8 metres from the primary street frontage.

- * The following may encroach beyond the setbacks referred to in these guidelines:
 - fascias, gutters, downpipes and eaves up to .45m;
 - masonry chimneys, flues and pipes;
 - unroofed balconies, landings, steps or ramps not more than 1m in floor level height;

^{**} The 'primary street frontage' is the frontage having the lesser length;

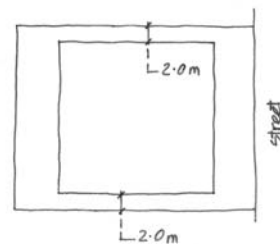
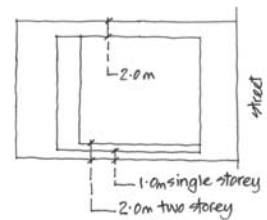
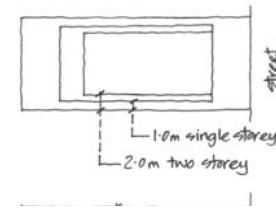
^{***} The 'secondary street frontage' is the frontage having the greater length, but not including a rear lane.



2.3 Setbacks from Side Boundaries

The setback of dwellings from side boundaries (except side boundaries that abut a public road), including attached carports, garages and verandahs (but excluding outbuildings), should be as follows:

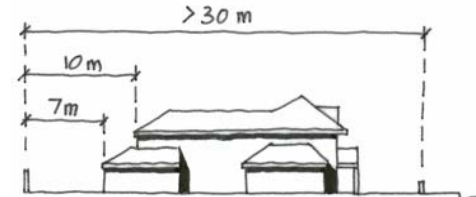
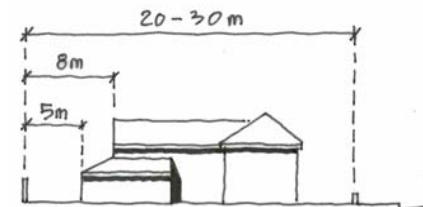
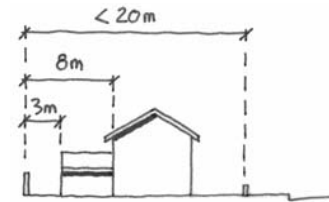
| Allotment Frontage Width | Minimum Side Boundary Setbacks |
|--------------------------|---|
| <18m | <p>Applicable to both boundaries</p> <p>1m for single storey dwellings.</p> <p>2m for two storey dwellings with maximum wall height of 6m.</p> <p>2m plus the increase in wall height above 6m for side walls greater than 6m.</p> |
| 18m - 25m | <p>From one boundary</p> <p>1m for single storey dwellings.</p> <p>2m for two storey dwellings with maximum wall height of 6m.</p> <p>2m plus the increase in wall height above 6m for side walls greater than 6m.</p> <p>From the other boundary</p> <p>2m and if the side wall is greater than 6m in height, then 2m plus the increase in wall height above 6m.</p> |
| >25m | <p>Applicable to both boundaries</p> <p>2m and if the side wall is greater than 6m in height, then 2m plus the increase in wall height above 6m.</p> |



2.4 Setbacks from Rear Boundaries

The setback of dwellings, attached carports, garages and verandahs (but excluding outbuildings) from rear boundaries should be as follows:

| Allotment Depth | Minimum Rear Boundary Setback (except if the rear boundary is a public road) |
|-----------------|---|
| < 20m | 3m for single storey dwellings. 8m for two storey dwellings. |
| 20m - 30m | 5m for single storey dwellings. 8m for two storey dwellings. |
| > 30m | 7m for single storey dwellings. 10m for two storey dwellings. |



Rear boundary setback requirements for different allotment depths

2.5 East Parkway Allotments

- Allotments that have their 'frontage' as East Parkway and their street access from an alternative road should satisfy the setback requirements referred to above, assuming that the East Parkway boundary constitutes the 'primary street frontage'.
- Garages and carports located on allotments that have their 'frontage' to East Parkway should be set back a minimum of 5.5 metres from the 'rear' street boundary.

2.6 Setbacks of Garages/Carports Relative to Main House

Garages and carports should be setback at least 1 metre from the main façade of the associated dwelling.

2.7 Site Coverage

Site coverage should not exceed the following:

| Allotment Area (square metres) | Maximum Site Coverage (%)* |
|--------------------------------|----------------------------|
| 0 - 250 | 50 |
| 251 - 800 | 40 |
| 801 - 1200 | 35 |
| Greater than 1200 | 25 |

* Site coverage represents the proportion of the site covered by the ground floor of a building including the dwelling, garage and carport, and outbuildings, but excludes unroofed balconies, verandahs and pergolas.

2.8 Protection of Trees

- Trees identified on Building Envelope Plans must not be removed or pruned without the prior approval of the Encumbrance Manager and Council.
- Trees identified on Building Envelope Plans must be retained and protected during construction by:
 - Erecting prior to any construction activity on the site a fence or barrier around the perimeter of the Tree Protection Zone (TPZ) to prevent vehicle or machinery access or parking or the storage of materials;
 - Providing a 100mm thick layer of organic mulch over the ground within the TPZ to assist with moisture retention. Supplementary watering may be required during any dry periods; and
 - Complying with any other conditions imposed by the Encumbrance Manager and/or Council.

3 Building Height

All dwellings should have a maximum building height of 9 metres (measured from natural ground level to the highest point of the building).

4 Vehicle Parking and Access

4.1 Number of Spaces

Two on-site resident parking spaces per dwelling should be provided, one of which is undercover (the second parking space can be tandem).

4.2 Size of Spaces

Uncovered car parking spaces should measure at least 5.5 metres by 3 metres.

4.3 Design of Garages and Carports

- Garages and carports should have a roof form and pitch, building materials and detailing that complement the associated dwelling.
- Garages and carports should have a maximum width of 50% of the allotment or building site frontage width.
- Double garage or carport doors should;
 - consist of two separate doors with a distance of not less than 300 millimetres between them; or
 - consist of a double tilt-up door with moulded door panels of a maximum width of 5 metres.



Double garage doors should consist of double tilt up doors (left) or two single doors separated by a 300mm column (right)

4.4 East Parkway Allotments

There will be no vehicular access from East Parkway where rear access is provided.

4.5 Hurling Drive Allotments

Allotments with frontage to and vehicle access from Hurling Drive must allow sufficient space on-site to allow vehicles to enter and leave the allotment in a forward direction.

4.5 Recreational / Commercial Vehicles

Recreational vehicles (e.g. caravans, boats, camper trailers) and commercial vehicles must not be parked on properties forward of any part of the dwelling, including on the street or the footpath, and should be screened from the street.

5 Vehicle Access to Allotments and Position of Crossovers

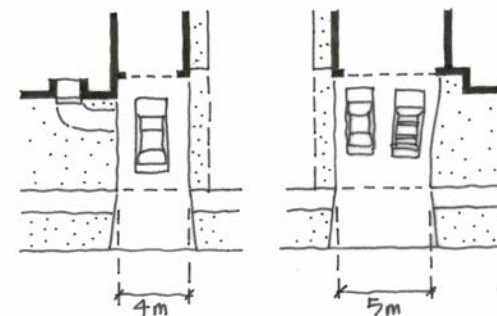
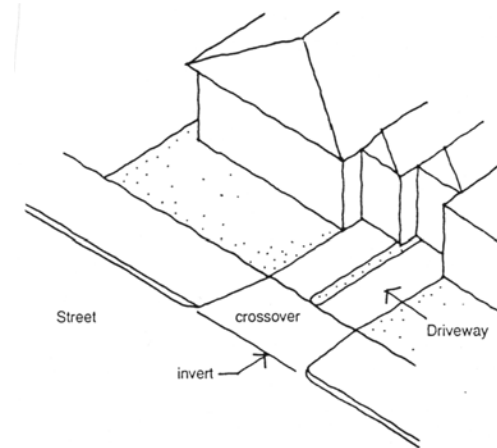
5.1 Definitions

For the purpose of these guidelines:

- an 'invert' is the point where the 'crossover' adjoins the kerb line of the roadway;
- a 'crossover' is that part of the driveway constructed between the kerb line and the private property boundary; and
- a 'driveway' is that part of the vehicle access located within the private property (see adjacent Figure).

5.2 Location and Width

- Where included on Building Envelope Plans, driveways are required to be located in the positions shown.
- Driveways should:
 - Have a maximum width of 4 metres for single driveways and 5 metres for double driveways; and
 - be set back 1 metre from the side boundary.



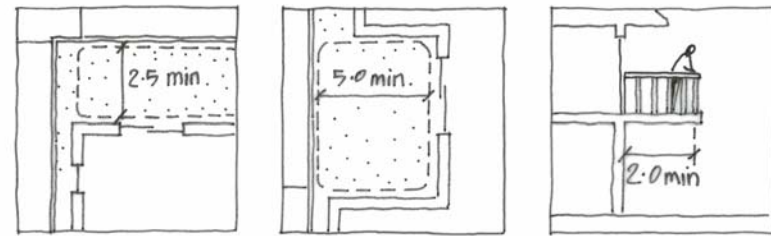
Single and double driveway widths

5.3 Crossover Width and Materials

- Crossovers should be a maximum width of 5 metres.
- Crossover materials are required to be the same as those of the footpath located within the street.

6 Private Open Space and Impermeable Surfaces

- Each allotment should include private open space in accordance with the following:
 - a minimum of 15 percent of the site area;
 - a minimum dimension of 2.5m;
 - balconies, roof patios etc can comprise part of this area provided it has a minimum area of 10 square metres and minimum dimension of 2m;
 - one part of the private open space must be directly accessible from a living room and have a minimum dimension of 5m and a maximum gradient of 1 in 10; and
 - the private open space is screened from adjoining properties and public areas by a solid fence of at least 1.8m in height (except where stated in Section 12 of these Guidelines).
- No more than 30% of the total area of private open space should be covered by roofs or other impermeable structures or surfaces.

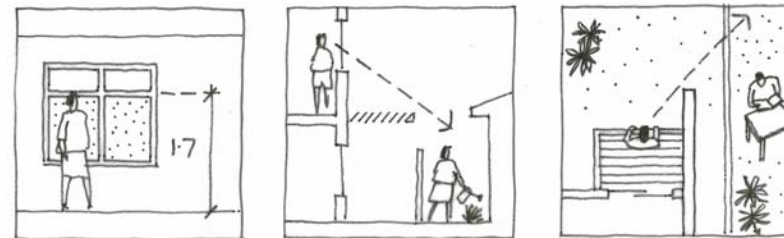


Minimum private open space and balcony dimensions

7 Privacy

Direct overlooking from upper level habitable room windows and external balconies, terraces and decks to habitable room windows and the useable private open spaces of other dwellings should be minimised by providing:

- permanently fixed translucent glazing in that part of the window below 1.7m above floor level;
- window sill heights of a minimum of 1.7m above floor level; or
- permanently fixed external screens, including wing walls, solid or translucent panels and planter boxes to restrict site lines.



Techniques for minimising overlooking into adjacent properties

8 Building Appearance and Roof Form

8.1 Building Appearance

The appearance of dwellings, particularly two-storey dwellings, should be enhanced through architectural detailing and articulation of walls to avoid bulky, bland facades. Owners and designers should consider:

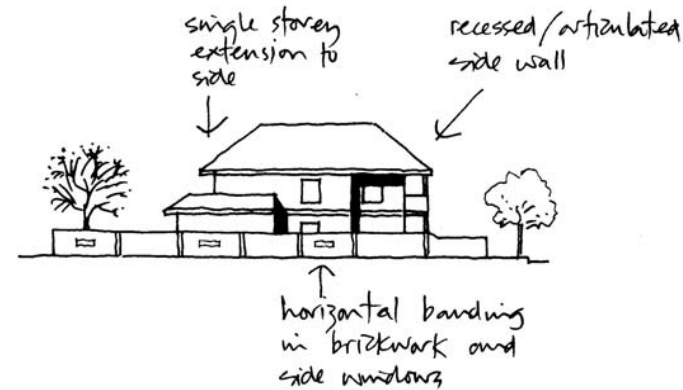
- various balcony forms projecting from the facade;
- projecting entry porches;
- recessed balconies, verandahs and porticos;
- single storey components that are visible from the street;
- window shade treatments.

8.2 Corner Allotments

- Where a dwelling is to be built on a corner allotment, a minimum of three of the following design elements are to be included in the building facade facing the secondary street:
 - veranda;
 - gable;
 - vertical elements to reduce the horizontal emphasis of the facade;
 - windows;
 - entry feature or portico; and
 - balcony / window boxes or similar elements.
- The material selection for the primary frontage of a dwelling should be extended along all elevations of the dwelling visible to the public.



Single storey elements help to reduce the bulk of predominantly two storey dwellings (left) while bay windows and verandahs introduce interest to facades (right)



Corner house addressing both street frontages

8.3 East Parkway and Park Frontage Allotments

- Dwellings located on allotments that have their 'frontage' as East Parkway and their street access from an alternative road are required to orientate the dwelling so that the front of the dwelling addresses East Parkway. The elevation of the dwelling facing the 'rear' access road, including garages and carports, should also present an attractive and varied building elevation to achieve an attractive streetscape appearance;
- On allotments that share a rear boundary with a public reserve:
 - dwellings should present an attractive and varied building elevation to the public reserve frontage;
 - internal living areas should be located on the side of the house facing the public reserve, with utility rooms such as bathrooms and laundries located so that they are not visible from public areas;
 - service items such as clothes lines, garden sheds, external heating and cooling units, hot water systems etc should be located and screened from public view.

8.4 Roof Forms

- A roof form providing articulated shapes is required and, where appropriate, the use of dormers, verandahs, porticos, balconies or other decorative architectural elements are also encouraged.
- All roofs should include eaves of a minimum width of 450mm.
- Pitched roofs are required to be constructed with a minimum pitch of **25°**. Flat, contemporary roof forms will be considered subject to design merit.
- Garage roofs (associated with two-storey dwellings) which incorporate parapet walls and a roof not visible from adjacent public streets may be approved subject to design merit.

- In order to provide opportunities now and in the future for the use of solar energy collection, an area of north-facing roof without direct orientation to the public street is encouraged (i.e. consider the location of the hot water unit for ease of future solar connection).



Eaves shade windows and assist in reducing the visual bulk of houses

9 Building Materials

9.1 Walls

Dwellings and outbuildings should be clad in materials that:

- minimise glare and reflection;
- blend with the natural environment and minimise the visual obtrusiveness of buildings and structures; and
- with regard to dwelling elevations visible to the public, include at least two of the following and of colours consistent with those contained in Appendix 2:
 - Exposed, bagged or rendered brick;
 - cement rendered concrete or cement rendered block work;
 - stone;
 - lightweight construction with a rendered effect;
 - tilt-up concrete slab panels (painted, rendered or faced);
 - feature areas utilising painted weatherboard, cement sheet, and stucco, subject to design merit.

9.2 Roofs

- Roof materials are required to be selected from either pre-painted galvanised corrugated steel, tiles, slate or cement shingles (flat).
- Lighter roofing colours that minimise heat absorption are encouraged.

9.3 Garages and Carports

- Building materials for garages and carports are required to conform to the same predominant materials used in the construction of the walls and roofs of the associated dwelling.
- All supports to carports should be of substantial size (minimum 90mm diameter or 90mm x 90mm).



Use a mix of external materials to add visual interest to dwellings

10 Building on Sloping Sites

10.1 Minimising Cut and Fill

- The vertical distance between any lower floor of a building and natural ground level should not exceed 1.5 metres at any point (see adjacent Figure).
- Any exposed areas below the finished floor level should be screened by landscaping or appropriate physical screening.
- Embankments should have a maximum grade of 1-in-4 and be suitably landscaped to protect the embankment from erosion.



Minimise cut and fill, exposed areas and the slope of embankments

10.2 Retaining Walls

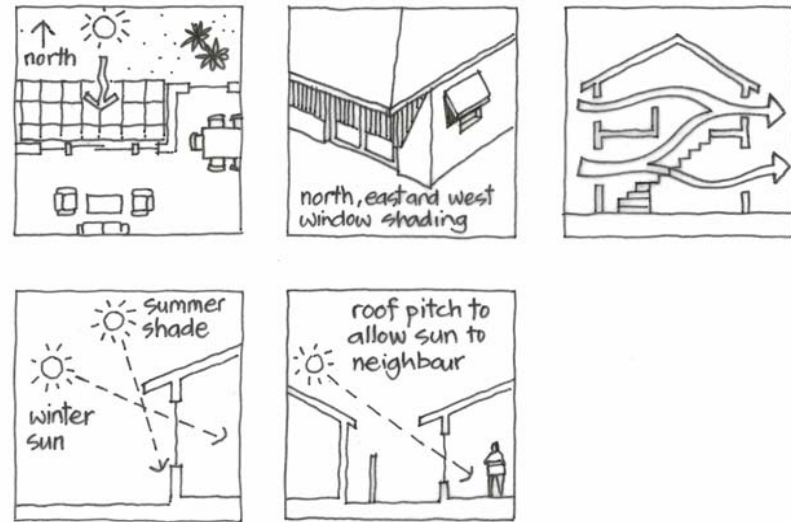
- Retaining walls (other than those constructed by the Developer) should be set back at least 1 metre from a reserve or secondary street frontage boundary and should be screened with suitable landscaping.
- Retaining walls visible from public areas should have a maximum height of 1 metre and be constructed of stone, quarry rock, 'Allen Block' or similar block walling or rendered masonry.
- In rear private yards (other than those visible from public areas such as reserves) retaining walls may be increased to a maximum height of 1.5 metres.
- Where retaining of land greater than 1 metre in height is desired, the retaining wall should be tiered, with a minimum distance of 1 metre between the tiered retaining walls to be used for landscaping.
- Retaining walls on boundaries shared with neighbouring properties should have a maximum total height of 1 metre and the written approval of the relevant neighbouring owner(s). Where approval has not been given and has not been unreasonably withheld, no retaining wall may be constructed on the relevant boundary.



Minimise the height of retaining walls and use materials that blend with the natural environment

11 Energy Efficiency

- Homes within Bluestone should minimise energy requirements and maximise efficient use of energy through the following siting and design techniques:
 - locate habitable living areas and private open space on the northern side of the allotment;
 - 'zone' house layouts to enable main living areas to be separately heated and cooled;
 - locate, size and shade windows to reduce summer heat loads and permit entry of winter sun;
 - allow for cross ventilation to enable cooling breezes to reduce internal temperatures in summer;
 - use low embodied energy materials and materials which maximise efficient thermal performance;
 - design roof orientation and pitch to enable effective use of solar collectors; and
 - ensure the ability of adjacent properties to continue or adopt similar design strategies referred to above.
- To assist in saving energy, reducing greenhouse gas emissions, reduced ongoing costs, and in accordance with State Government requirements, all dwellings should achieve a **5-Star Energy Rating**. It is a requirement that, when lodging your plans with the Encumbrance Manager, you provide a **5-Star Energy Rating Certificate** from an authorised agent.
- As part of achieving a **5-Star Energy Rating**, the following two requirements must be met:
 - All external walls and inaccessible parts of the ceiling of homes must be insulated at the time of construction. Insulation shall not be less than:
 - **R1.5** rated insulation material in external walls;
 - **R3** rated insulation material in ceilings; and
 - Exposed hot water pipes are to be well insulated, with minimum insulation of 10mm.



Design techniques to maximise energy efficiency

- If solar hot water systems are to be used:
 - they should be split system with the tank located within the roof space or on the ground;
 - the solar collector panels should be located so that they are not highly visible from any public street or thoroughfare. Where visible from public areas, solar panels will be assessed on their merits with regard to scale, form and colour; and
 - solar collector panels should be supported on the roof and not on a separate frame.
- If reticulated gas is available, gas water heating (or solar hot water system with gas backup) and a gas cook top are to be installed.

12 Water Conservation

12.1 Fittings and Fixtures

It is a requirement that the following products have a minimum **AAA rating**:

- shower heads (maximum flow rate of 9 litres/minute)
- toilet suites (must be dual flush), and
- taps and tap outlets.

12.2 Rainwater Tanks

- A minimum of a 2,200 litre (standard 4 module) capacity rainwater tank is required to be installed and be plumbed to a toilet, water heater and/or to all cold water outlets in the laundry of the dwelling.
- The following requirements for rainwater tanks must be met:
 - the maximum height of any rainwater tank is 2.4 metres and it must not be visible from the street or any other public area;
 - the overflow from all rainwater tanks must be directed via underground stormwater pipes to the street or a suitably constructed and dimensioned soakage well or trench.

12.3 Landscaping

- Landscaping of private gardens should involve the selection of:
 - species that are indigenous or suited to the geographic area;
 - suitable species taking into account the eventual size, spread and root system of plants when mature;
 - water efficient plants that will require minimal irrigation once established;
 - plants that provide shade for dwellings and outdoor private open space during summer and allow solar access during winter (e.g. deciduous trees or vines).
- A suggested species list is available from the District Council of Mount Barker.

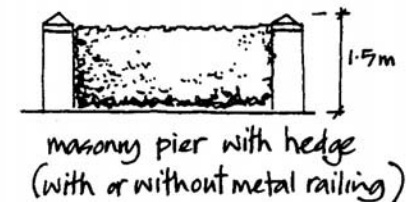
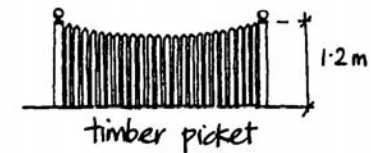
13 Fencing

13.1 Fencing Forward of the Building Line

If fencing is provided forward of the building line for allotments having a primary frontage to a public road, the following requirements apply:

- front and side fences forward of the building line must be of open style in nature to enable views into front gardens;
- the maximum fence height permitted forward of the building line is 1.5 metres with a minimum height of 0.9 metres;
- materials should conform to the following Table and the adjacent figure:

| Height | Material |
|------------------|---|
| 0.9 - 1.2 metres | Picket (timber, steel, aluminium with minimum 50mm separation between uprights). A hedge planted at a minimum 600mm height is a suitable alternative. |
| 1.2 - 1.5 metres | Piered brick or masonry posts with steel, timber or aluminium uprights (minimum 50mm separation). |

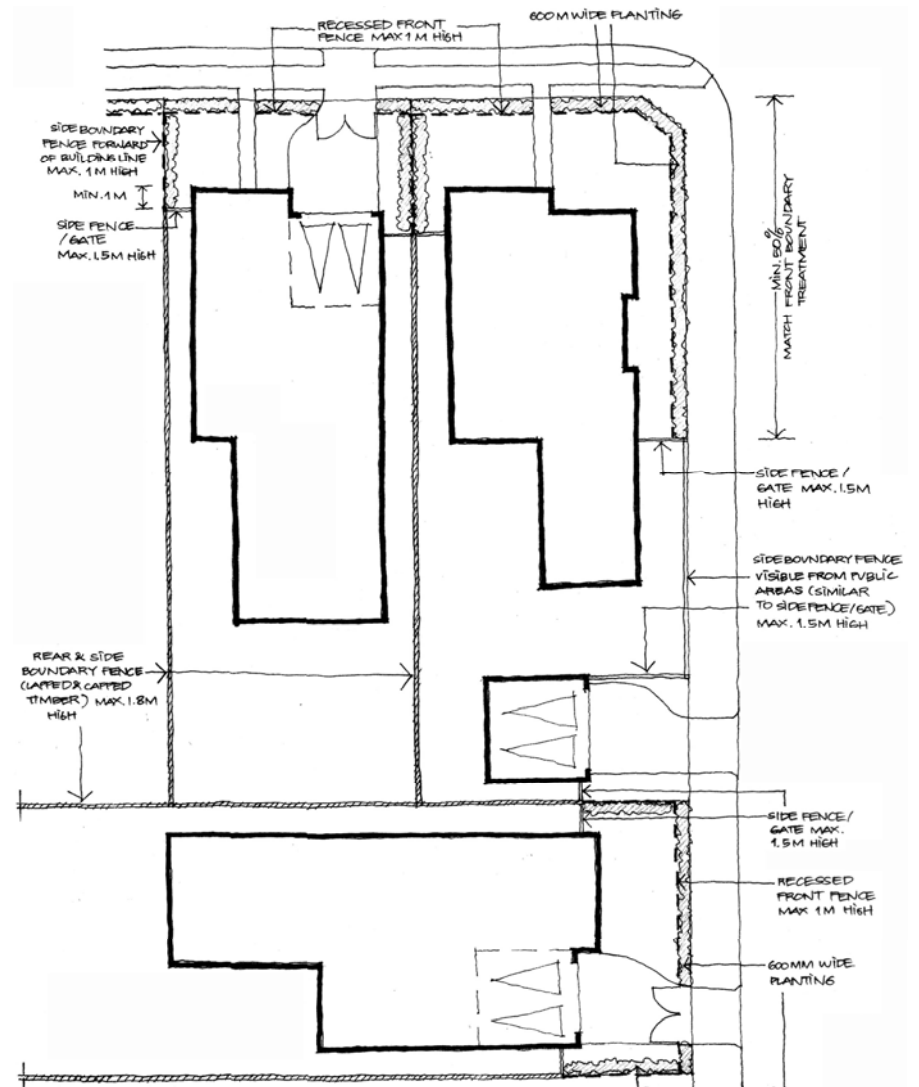


Note: Minister's Specification SA 76C requires that:

- A new brush fence (or a rebuild of an existing brush fence) will not be allowed within three metres of an existing or proposed dwelling, and
- Dwellings will not be able to be constructed within three metres of an existing brush fence, unless the dwelling materials meet certain fire resistance measures.

13.2 Side and Rear Fencing

- Side fences along common property boundaries should be located 1 metre behind the front building alignment. Any fencing forward of this point should be visually permeable and not greater than 1 metre in height.
- Side and rear boundary fences behind the building alignment are required to be constructed from Colorbond® or equivalent in one of the following colours (or equivalent):
 - Bluestone®
 - Grey Ridge®
 - Hedge®.
- For corner allotments, a minimum of 50% of the length of the secondary frontage is required to have the same fencing as the primary frontage.
- All side and rear fencing (except as referred to above) is required to be 1.8 metres in height.
- The maximum 'build-up' of fencing along the side and rear boundaries is 2 metres, comprising a 1.8 metre high fence and a 200 mm built-up area (i.e. retaining wall).



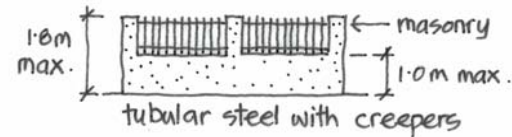
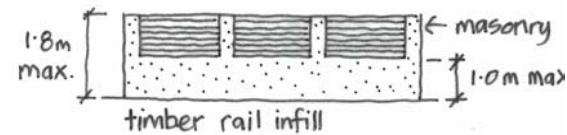
For corner allotments, continue the same front fence for 50% of the secondary frontage

13.3 East Parkway Allotments

- The developer will be responsible for fencing along the boundaries that abut East Parkway on allotments identified in Section 2.5 of these Guidelines.
- For allotments identified in Section 2.5 of these Guidelines, the 'rear' fencing along property boundaries should:
 - be set back a minimum of 1 metre from the 'rear' property boundary and this setback area should be landscaped with appropriate species;
 - extend for a maximum of 50% along the property boundary;
 - be consistent with the fencing described in Section 13.4 below.



Fence requirements for 'rear' boundaries of allotments fronting East Parkway



Required fencing types along boundaries adjacent to public reserves



Fence type for Lots 145 - 153 and 181 - 191 inclusive

13.4 Fencing Adjacent to Reserves

- When housing has a boundary adjacent to a public reserve special fencing is required that creates a reasonable level of privacy while retaining some outlook to the reserve. Such fencing should generally be in accord with the options shown in the adjacent figure (except for the specific allotments identified below).
- For allotments 145 - 153 inclusive and 181 - 191 inclusive, the public reserve boundary fence must consist of a black metal post and railing (level plug) type fence of a maximum height of 1.2 metres above ground level (see adjacent figure and photo).
- Lockable gates that match the design and appearance of the fence will be allowed along the reserve frontage.

Note: Gates and fences built by the developer cannot be removed, relocated or replaced without prior written consent from the Encumbrance Manager.

14 Domestic Outbuildings

Domestic out-buildings, such as garden sheds, workshops, free standing garages, aviaries and other similar buildings, are required to comply with the following:

| Size of Allotment | Maximum Dimensions of Out-Building | Maximum Wall Height (m) | Maximum Ridge Height (m) |
|---------------------------------------|------------------------------------|-------------------------|--------------------------|
| >500m ² | 7m x 6m | 2.4 | 2.7 |
| 400m ² - 500m ² | 5m x 3m | 2.4 | 2.7 |
| <400m ² | 3m x 3m | 2.4 | 2.7 |

- Domestic out-buildings should:
 - not overshadow or block light from the windows of an adjoining dwelling;
 - have no wall located closer than 0.6m to a property boundary unless located on an allotment greater than 500 square metres in area in which case the set back shall be 1 metre;
 - not impinge on the required minimum area of private outdoor open space for the dwelling; and
 - be finished in materials and colours to match with fencing materials or materials or colours of the associated dwelling; or
 - be finished in Bluestone, Grey Ridge or Hedge Colorbond® or equivalent.
- Where more than one outbuilding is proposed, the total area of all outbuildings should not exceed the area specified in the above table.

15 Landscaping

15.1 Front Gardens

- Landscaping of front gardens should:
 - screen or soften the appearance of storage, service and parking areas;
 - generally be in scale with the buildings on the site;
 - allow surveillance of entry points to dwellings;
 - provide protection from sun and wind, while ensuring reasonable solar access to dwellings and private open space;
 - minimise impermeable paved surfaces;
 - use plant species suited to the site which minimise the need for maintenance;
 - avoid interference with utility services; and
 - not unreasonably affect adjacent properties through overshadowing or intrusive root systems .

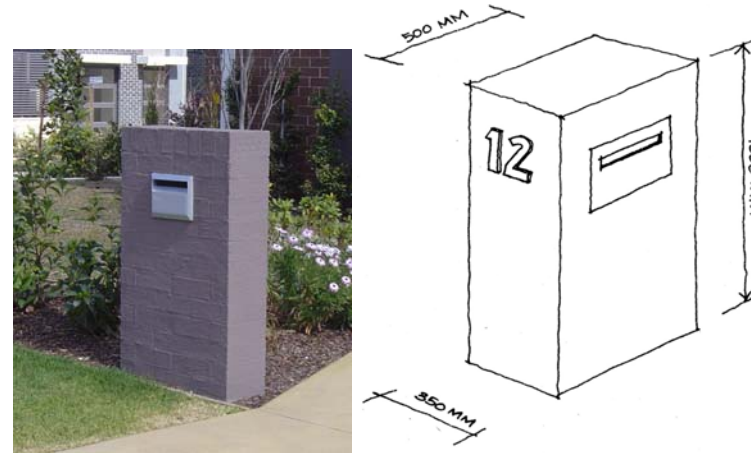
- Landscaping of front gardens is required to be established within 3 months of occupation of the associated dwelling.



Landscaping of front yards can improve the appearance of dwellings and reduce the visual impact of garages and driveways

16 Clotheslines, Letterboxes, Bin Receptacles and Meters

- Clotheslines, bin receptacles and service meters should be sited unobtrusively and away from public views.
- Letterboxes should be integrated with the fence, gate or retaining wall located along the front property boundary.
- Where no front fence is to be provided, a stand alone letter box should be located within a masonry pier of maximum 350mm x 500mm footprint and maximum height of 1 metre.



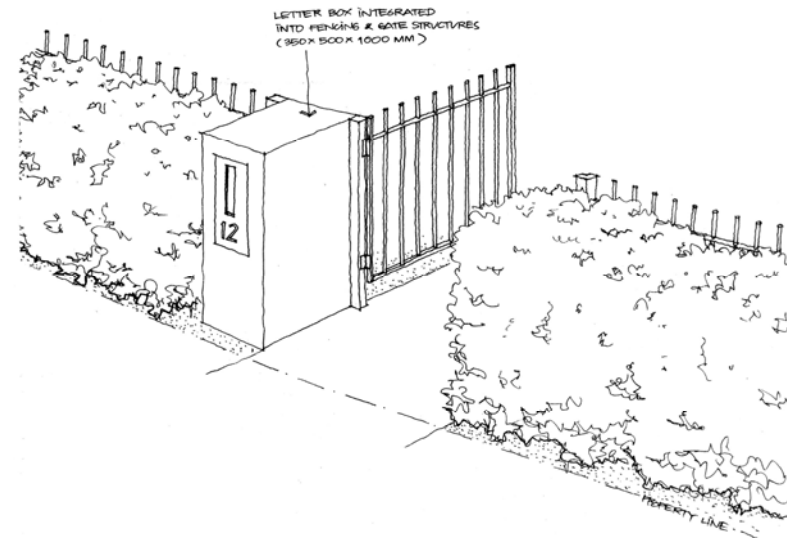
Typical stand alone letter box

17 Elements Attached to Roofs

Attachments located on the roof of dwellings above the eaves line should generally be located so as to be unobtrusive when viewed from any public area.

17.1 Air Conditioners

- Air conditioners can cause discomfort to neighbours, therefore their location should be chosen with care. Evaporative air conditioners should be low profile, located below the ridge line and be of neutral colour or painted to match the roof. They should be located so as not to be visible from the street.
- 'Dropper boxes' (the interface material between the cooling unit and roof of the dwelling) should be painted to match the roof colour of the dwelling. Winter covers for evaporative air conditioners should be of neutral colour or in shades to match the roof.



Letterbox integrated into a front fence and gate structures

17.2 Antennae or Satellite Dishes

Antennae are **required** to be located within the roof space. External antennae will not be permitted unless it is demonstrated that reception is adversely affected. If antennae or other appurtenances (e.g. satellite dishes) are located outside of the roof space, they are **required** to be located so as not to be visible from the street. Satellite dishes are **required** to be painted or pre-coated to match the colour of the roof.

18 Signage

No signage should be erected on any part of an allotment other than for the temporary purposes of selling or leasing the subject property.

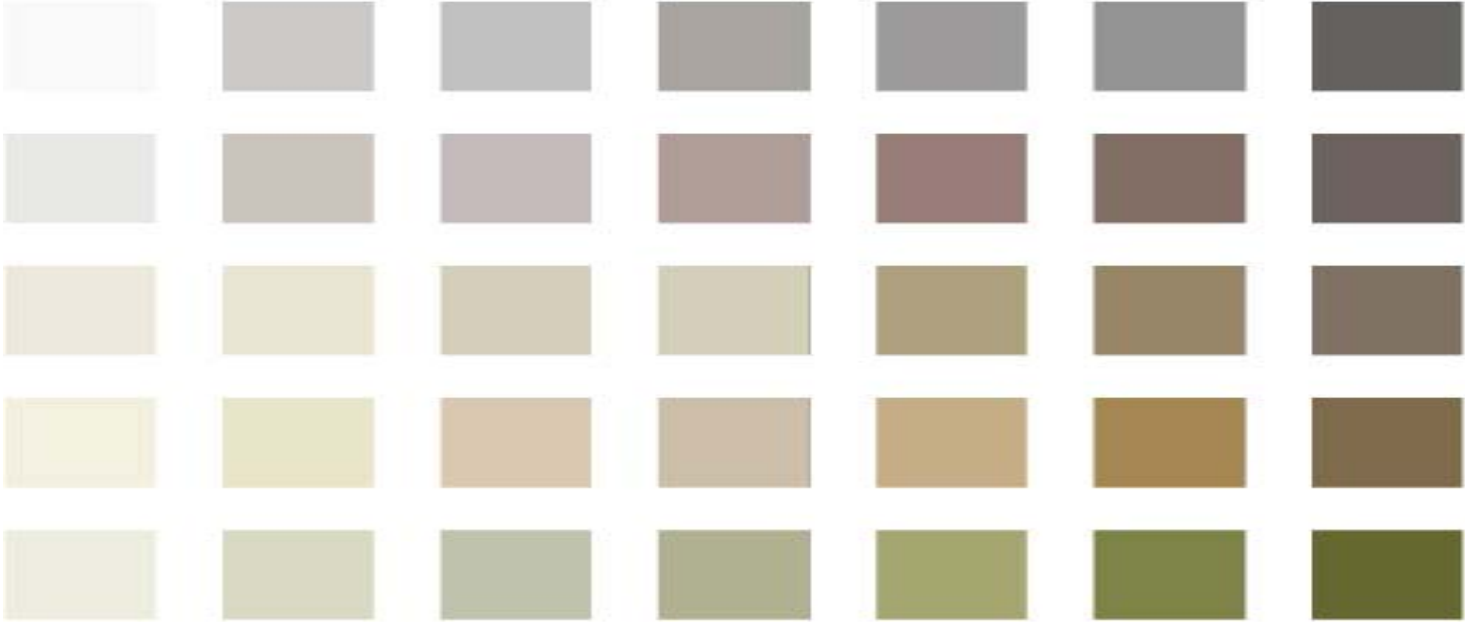
19 Telstra Velocity

Bluestone is a Telstra Velocity (Fibre to the Home) estate, which means that every home requires specific wiring guidelines. Please consult www.telstrasmartcommunity.com and view the 'My Builder' page to access these guidelines in order to understand the minimum wiring requirements that need to be adhered to in order for residents to utilise their telecommunications services.

Note: *The Telstra Velocity network delivers Digital Free to Air TV, Foxtel, Broadband and fixed telephone lines with no requirement for the installation of antennas and satellite dishes within the estate.*

Appendix

1 External Building Colours Palette



Encumbrance Approval Application Checklist

Plan Details and Information Required

In order to avoid delays in the Encumbrance Approval process it is important to provide all the plan design details and specifications required to assess the application against the Residential Design Guidelines Checklist (see next page), including:

For Provisional Development Plan Consent

Site Plan (3 x A4 or A3 copies drawn to scale of not less than 1:500)

- Allotment boundaries, dimensions, easements, contours and roads;
- Location and dimensions of all existing and proposed building(s), structures, driveways, fencing, trees, retaining walls and the Waste Control System;
- Plans, specifications and cross sections of earthworks (excavation and/or fill);
- Distance between the proposed building(s) and all other buildings on site and all boundaries.
- Method and direction of disposal of roof and storm water;
- Approximate north point;
- Site levels in relation to finished floor levels;
- Location of septic tank;
- Section of driveway or design levels; and
- The purpose for which any existing building(s) on the site is to be used and the proposed use of any new building(s).

Elevations (3 x A4 or A3 copies drawn to scale of not less than 1:100)

- Elevation drawings of all sides of the proposed dwelling;
- All dimensions of proposed building(s) (length, width and height);
- Proposed exterior colours and materials of construction;
- Site level differences from the boundaries of the site.

Floor Plans (3 x A4 or A3 copies drawn to scale of not less than 1:100)

- A floor plan of proposed building(s) and structures showing dimensions, intended use of rooms, existing floor areas (if applicable), window and access arrangements.

Landscaping Plan and Fencing Details

- Plan showing species, number and location of plants for front gardens.
- Fencing details.

Energy Efficiency Information

- Energy Star Rating Certificate.
- Insulation specifications for walls and ceilings.

Other

- Power line Clearance Declaration (if applicable).
- Owner Acknowledgment Letter.
- Encumbrance Manager Application Fee: \$350 (incl GST).

Note: Please contact the District Council of Mount Barker for details on the information required to obtain Provisional Building Rules Consent.

Bluestone Residential Design Guidelines Summary Checklist

Name of Applicant:

Address of Property:

| Design Issue | Complies | Does Not Comply | Reasons for Non-compliance |
|--|----------|-----------------|----------------------------|
| 2.1 Orientation of Dwelling and Private Open Space | | | |
| 2.2 Setbacks from Streets | | | |
| 2.3 Setbacks from Side Boundaries | | | |
| 2.4 Setbacks from Rear Boundaries | | | |
| 2.5 East Parkway Allotment Setbacks | | | |
| 2.6 Setbacks of Garages/Carports Relative to Main House Facade | | | |
| 2.7 Site Coverage | | | |
| 2.8 Protection of Trees | | | |
| 3 Building Height | | | |
| 4.1 Number of Car Parking Spaces | | | |
| 4.2 Size of Car Parking Spaces | | | |
| 4.3 Design of Garages and Carports | | | |
| 4.4 East Parkway Allotments | | | |
| 4.5 Hurling Drive Allotments | | | |
| 4.6 Recreational / Commercial Vehicles | | | |
| 5.2 Location and Width of Crossovers | | | |
| 5.3 Crossover Width and Materials | | | |
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| 17.2 Antennae and Satellite Dishes | | | |



Be inspired!

There are currently more than 6000 volunteers caring for our parks, gardens and reserves. Every year these dedicated people donate around 20,000 days of work. Many of these volunteers are associated with a park that holds some personal significance to themselves or to their community. There are over 140 Friends of Parks Groups aligned with various parks throughout the state.

If you would like to discuss upcoming volunteer projects or register your interest in becoming a volunteer, we can assist you to find an activity that works for you.



Make a difference

Become an environment and heritage volunteer



Department
for Environment
and Heritage

For more information

Contact the Volunteer Support Unit,
Department for Environment and Heritage

Telephone - (08) 8124 4784

Email – DEHVolunteers@saugov.sa.gov.au

Visit www.environment.sa.gov.au



Government
of South Australia

www.environment.sa.gov.au

It's fun,
rewarding
and you will
help make
a difference.



Enjoy working outdoors? Have a green thumb? Are you passionate about the environment or built heritage? Like meeting new people?

Why not become involved in one of the many volunteer projects conducted by the Department for Environment and Heritage? You'll feel great helping to conserve the natural environment or a heritage site for future generations to enjoy.

Volunteering can make a difference to the whole community. You can share your knowledge and skills with others and often learn something along the way.

The Department for Environment and Heritage offers volunteers a range of projects in rewarding landscapes, heritage sites and specialist work areas to assist in safeguarding and enhancing our natural and cultural assets.

There is
something
for everybody,
and new
volunteers
are always
welcome

Even if you only have a small amount of time to spare, there are plenty of amazing ways that you can help. Opportunities vary from all-year round projects to seasonal or once-off activities. Popular volunteer projects include:

- Caring for habitats by undertaking planting projects or controlling weeds
- Undertaking annual wildlife and/or vegetation surveys
- Learning and helping to restore fragile heritage sites
- Leading tours, guided nature walks or becoming a campground host



Volunteer Registration of Interest

Name:

Address:.....

.....

.....

Telephone:.....

Email:.....

Is there a specific Park, activity or project that you would like to be involved in?.....

.....

.....

If you have a particular skill or interest, please let us know by ticking the relevant boxes below.

- | | |
|---|--|
| <input type="checkbox"/> Administration | <input type="checkbox"/> Horticulture |
| <input type="checkbox"/> Botany | <input type="checkbox"/> Landscaping |
| <input type="checkbox"/> Bushwalking | <input type="checkbox"/> Map Reading |
| <input type="checkbox"/> Carpentry | <input type="checkbox"/> Photography |
| <input type="checkbox"/> Conservation | <input type="checkbox"/> Public Speaking |
| <input type="checkbox"/> Data Bases | <input type="checkbox"/> Research |
| <input type="checkbox"/> Driving | <input type="checkbox"/> Supervising |
| <input type="checkbox"/> Education | <input type="checkbox"/> Teaching |
| <input type="checkbox"/> First Aid | <input type="checkbox"/> Writing |
| <input type="checkbox"/> GIS | <input type="checkbox"/> Web Design |
| <input type="checkbox"/> Gardening | <input type="checkbox"/> Zoology |

Other

I am interested in the following:

- | | |
|--|---|
| <input type="checkbox"/> One-off project | <input type="checkbox"/> Ongoing projects |
| <input type="checkbox"/> Joining a volunteer group | |

Detach this section and drop off to your local Park Office or send to the Volunteer Support Unit, GPO Box 1047, Adelaide SA 5001.

Department
for Environment
and Heritage



Government
of South Australia

BACKYARDS FOR WILDLIFE

CREATING A WILDLIFE FRIENDLY GARDEN



Department
for Environment
and Heritage



Government
of South Australia



Goodenia albiflora (photo Ben Moulton)
Front cover: Blue Wren (photo SATC)

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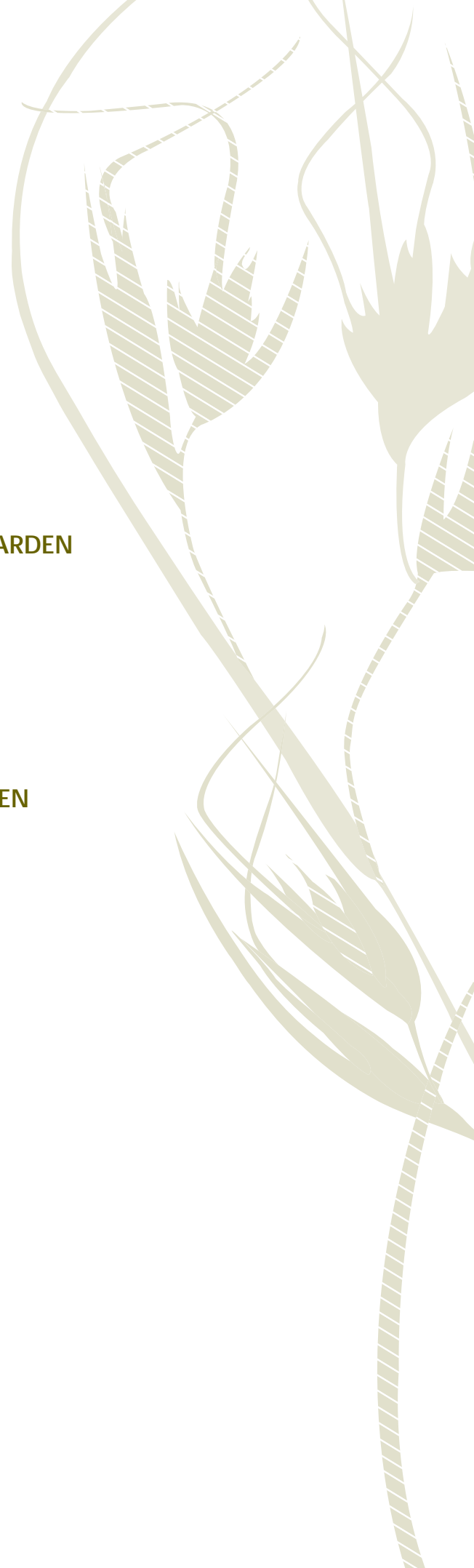
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BACKYARDS FOR WILDLIFE



Native Geranium (photo Ben Moulton)

WHAT IS A BACKYARD FOR WILDLIFE?

This booklet describes how you can attract native fauna to your garden and create a 'Backyard for Wildlife'.

Gardening is one of our favourite pastimes and is a great way to stay active and healthy. What we do in our gardens has the potential to benefit or harm the natural environment. By choosing to develop and maintain a garden in a wildlife-friendly way it is possible to:

- reduce your garden maintenance costs and time commitment;
- conserve local native plants and animals; and
- make our urban areas more ecologically sustainable

If we can learn how to lessen our *ecological footprint* in our own backyards then we can apply those same skills and knowledge to improve the natural environment in our suburb or local district.

The need to conserve water is making us more aware that what we do in our gardens and homes has the potential to have an impact on the wider natural environment. The plants we choose to grow, how we structure our garden and the pest control methods we embrace will determine whether our gardens are friendly to visiting wildlife or not.

Establishing a *Backyard for Wildlife* means that you will encourage a host of native animals - birds, butterflies, lizards, frogs, insects - to your garden. Enjoying them in your garden is a real pleasure and providing habitat for our unique and precious wildlife in the urban landscape is a generous gift to the future.

Read on and discover how to create a wildlife-friendly garden and become an environmental volunteer in your own backyard!



WHAT SORT OF GARDEN WILL YOU CREATE?

Having built or bought your new home you are faced with deciding what to do in the garden. Many homeowners will opt for a conventional garden with an area of lawn surrounded by garden beds containing hardy exotic plants such as roses, agapanthus, dwarf conifers and shrubs. While these types of gardens are popular, they can be expensive to maintain with high water use, mowing costs and the need to apply fertilisers and sprays. In addition, they generally offer little to our native wildlife in terms of food or habitat.

Backyards for Wildlife offers an alternative. One that both looks back to our past as well as forward to a more environmentally sustainable future. No matter how big or small your backyard, you can create an environmentally-friendly garden that will provide a home for our native animals and plants. So why not create a special garden that will enable you to experience nature and the changing seasons?

Plant a native garden using local species and help to grow a greener future for all of us.

ADELAIDE'S ORIGINAL BUSHLAND

The next time you are in your garden try to imagine what your suburb might have been like prior to European settlement. What kind of plants would have grown there and what native animals might have lived in your area?

The early European settlers of Adelaide encountered an array of different environments - Red Gum forests, Mallee and Grey Box eucalypt woodlands, shrublands, grasslands, swamps and wetlands as well as coastal sand dunes and mangrove forests. These different environments provided niches that supported a wide variety of plants and native wildlife. The Adelaide Plains were one of the most biologically diverse regions in South Australia.

Since 1836 around 97% of the region has been cleared for agriculture and urban development. Of the original 850 native plant species, 20% are now locally extinct and over 50% are rarely seen.

Protecting areas of remnant native vegetation is essential to preserve and maintain biodiversity. You too can help by planting local native species in your garden.



Display garden at Cleland Wildlife Park

HOW TO CREATE A BACKYARDS FOR WILDLIFE GARDEN

Do you have a good variety of native animals visiting your garden or just a few?

In a good habitat garden you could expect to see a wide variety of animals such as birds, butterflies, moths, lizards, frogs and insects either living in your garden or visiting it from time to time.

You can encourage native wildlife to return to our urban environments by creating gardens that offer shelter, breeding sites and food throughout the year.

By following some basic principles for creating a *Backyard for Wildlife* you will see how easy it is to turn your backyard into a wildlife-friendly habitat garden.

GROWING LOCAL PLANTS

How many native plants do you have in your garden? How many of those are local natives, that is, native species that occur (or would have occurred) in your local area?

Planting local native species is a key factor in creating a wildlife-friendly garden. These species will help to recreate the relationships that originally existed between plants and the local native wildlife. Local native species are naturally adapted to the soils, rainfall and climate of your area. This means they will be hardy and drought tolerant in your garden.

With many hundreds of plants to choose from there is a local native species suited to every garden situation across Adelaide. They come in a large variety of forms, flower colours and foliage types.

FLOWERS THROUGHOUT THE YEAR

No matter what the season, there is always something flowering in the bush. This feature provides a food source for local wildlife all year round. By mimicking nature and choosing plants for your garden that flower across the seasons you will encourage wildlife to visit your garden throughout the year.

Autumn and winter-flowering plants are often missing from our gardens, so try to include some of these in your plant selection. Native plant guides will indicate the flowering time and the mature size of plants. Visit the *Backyards for Wildlife* web site at www.urbanforest.on.net to discover suitable flowering plants for your habitat garden.

PLANT SIZE

The original bushland of the Adelaide Plains contained many different types of plants of varying shapes and sizes. Different animals feed or shelter in different layers of vegetation with some species feeding in one level and sheltering in another. By planting a variety of different sized plants you will attract a wider variety of wildlife.

In natural bushland there are five main structural layers (or storeys) where wildlife feed, shelter or breed. Four of the layers comprise vegetation cover and the fifth is the leaf litter, logs and rocks found on the ground. In developing your garden, try to mimic these different layers.

| Layer | Layer Description | Examples |
|---------------|--|--|
| Upper Storey | tall trees (> 5m) | eucalypts, large wattles (acacias) |
| Middle Storey | smaller trees/tall shrubs (to 5m) | wattles, banksias, sheoaks, tea trees, bottlebrushes, native pines |
| Under Storey | shrubs that range from about 0.5 to 1 metre in height | Bush wattles, correas, hop-bushes, hakeas, bush peas |
| Ground Layer | small shrubs and herbs (< 0.5m) | sedges, lilies, grasses, creepers, orchids, saltbushes, ferns, fungi, lichen |
| Litter Layer | ground elements that provide habitat and where animals can forage or shelter | leaf litter, twigs, fallen branches, logs and rocks |

CREATING WILDLIFE HABITAT

While choosing the right local native species to plant will help to attract wildlife to your garden, there are a number of landscaping elements that can increase the range of wildlife that will use your habitat garden (remember that the availability of food, water and shelter are critical to all animals).

Rocks, logs and mulch

Hollow or rotten logs, rocks and branches are important in bushland and provide a refuge for frogs, reptiles, echidnas and insects. Adding logs and rocks to your garden is a great way to create habitat and encourage wildlife to visit. Surface mulch will ensure that there are plenty of worms and insects to provide food for native birds and animals.

Always obtain your logs, mulch and rocks from a reputable supplier. They should not be sourced from bushland areas where they are already providing habitat.

Birdbaths and ponds

We all know that our supply of freshwater is under increasing pressure as climate change and drought reduce the inflows that our catchments and rivers receive. In response to this, we have to change the way we use water, in our homes and gardens. As we feel the pinch, spare a thought for the water needs of our native wildlife. You can provide a source of water for wildlife and, at the same time, add an attractive element to your garden.

Birdbaths are a simple way to attract birds to your garden, especially during hot weather. Birds will become familiar with a regular source of water and keeping it topped up

and clean will enhance its attractiveness to them.

Locate the birdbath in an open area where birds will be safe from predation by other animals. A prickly shrub nearby can also help provide protection.

Ponds can support a range of local native plants both aquatic and semi aquatic that will remain green all year round and also provide habitat for frogs and invertebrates. Ponds can be big or small. By adding native fish you can control breeding mosquitoes as well as add colour and movement to your pond.

Nesting boxes

The removal of mature trees, logs and fallen limbs from suburban areas has resulted in the loss of natural hollows. This has affected many bird, possum, bat and reptile species that rely on hollows for shelter and breeding.

Australia's wildlife has the highest rate of hollow dependency in the world with twice the number of native bird species nesting in hollows compared with Europe, Southern Africa and North America. Every attempt should be made to conserve existing hollows, and as new ones take many decades to form, an alternative is required.

Artificial nesting boxes can help recreate homes for birds and mammals. When installing a nest box always locate it high above the ground (4-8m) to avoid predation by dogs, cats, rats and foxes. The box entrance should face away from the hot westerly aspect but also be positioned to avoid the wind and wet (in Adelaide a north-easterly direction is preferable). Nesting boxes should be checked occasionally to make sure they have not been occupied by introduced species including non-native bees.



Australian Magpie



PLANNING AND PLANTING YOUR NATIVE GARDEN

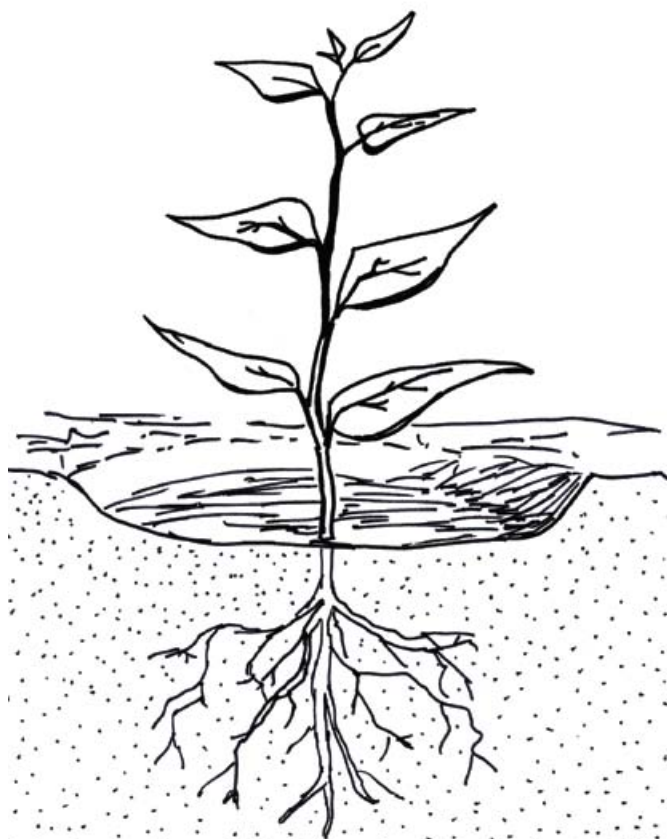
WATER WISE AND DROUGHT TOLERANT GARDENS

Water is a valuable and increasingly scarce natural resource - we all need to use it wisely! Before water restrictions came into effect some people were using up to 70% of household water on their garden. The new water regulations mean that we need to consider how to better plan and manage our gardens. Using local native plants will help to drought proof your garden, save water and attract local wildlife.

LOCAL PROVENANCE

The plants you buy from a nursery will have been grown either from a seed or a cutting. The source of that seed or cutting is referred to as a plant's provenance. Local forms have, over many millennia, adapted to local conditions. The best native plants for your garden are those grown from seeds or cuttings with a local provenance.

A list of native plant nurseries can be found at www.urbanforest.on.net.



Create a bowl around the plant to help capture rainfall

PLANNING YOUR GARDEN

To achieve a natural look for your garden avoid planting in neat rows, mix different species together and, on occasions, clump some plants of the same species together. A planting of this type will look more natural and has greater habitat value.

Create a variety of plantings, for example a shrubby area, a grassland area and a wetland area. A patch of densely planted prickly shrubs is great for wildlife to shelter in or under. This is particularly important for small birds.

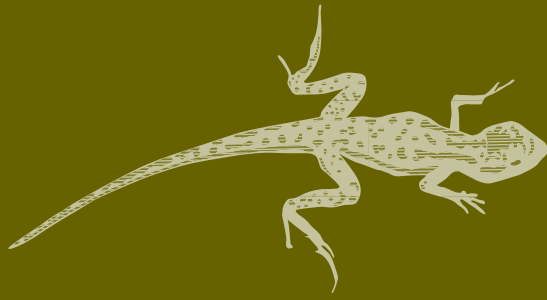
Many native plants are sensitive to water logging. Determine where your soil drains freely or poorly and locate plants accordingly. For example, place your pond or wetland features in a naturally damper area of the garden and clump plants with similar watering needs together as this will help to reduce water use.

PLANTING OUT

To plant native seedlings in Autumn and Winter is a good rule. Planting at this time will give plants a chance to get established using natural rainfall. Water your new plants about once a week during their first Summer.

Native plants can be slow to adjust after being transplanted from a pot. To increase the success and encourage healthy growth of your new seedlings follow the following steps when planting out:

- (1) Soak the soil around the root ball by placing the pot or tube in a bucket of water for a few minutes.
- (2) While the pot is soaking prepare the hole. The ideal hole is the same depth as the pot and about two times as wide to allow roots to become established. Fill the hole with water and allow it to soak into the ground. In compacted soils or soils with high clay content it is important to avoid glazing, that is creating a hole with hard, smooth sides with an almost polished look. The glazed surface will restrict root growth and causing the plant to become 'hole-bound'. Use a garden fork to loosen the soil around the walls and base of the hole.



- (3) Remove the plant from the pot being careful not to disturb the roots any more than necessary. The soil and root ball should come away easily, if not tap the pot lightly with a small garden tool. Supporting the base of the seedling with one hand and use your other hand to hold the roots and soil together as you place it in the hole. If the roots are coiled tightly tease them out gently from the sides and base.
- (4) Backfill soil and tamp firmly without compacting the soil, allow for a small depression around the plant to hold water. Once planted give the seedlings a good watering to settle the soil and reduce transplant shock. Newly planted seedlings need to be soaked - not sprinkled with water. A good soaking reduces evaporation and encourages the roots to grow deeper to seek moisture.
- (5) Soaking once a week in summer (depending on weather conditions) is better than a daily spray. Watering should also be done in the cool of the morning or evening to reduce loss through evaporation.

Helpful Hints

Small tubestock seedlings will generally establish faster and quickly outgrow those planted using more advanced (and expensive) plants.

Also adding a layer of mulch to the surface of your soil can reduce evaporative water loss by over 70%. A thick layer of mulch (>10 cm) will also reduce weed growth and increase the number of soil invertebrates and microbes that maintain soil structure and productivity. It will also reduce stress to plants by keeping soil temperatures lower and provide habitat for small insects that can be food for native animals.

SMALL GARDENS

A collection of potted plants can work well in small yards. There are many wonderful local native species that are suitable for growing in pots (see list). Be sure you use a potting mix that is suitable for native plants.

| Suitable Native Pot Plants |
|---|
| Low plants |
| White Fan-flower (<i>Scaevola albida</i>) |
| Tall Bluebell (<i>Wahlenbergia stricta</i>) |
| Black-anther Flax Lily (<i>Dianella revoluta</i>) |
| Trailing plants |
| Native Lilac (<i>Hardenbergia violacea</i>) |
| Kakalla (<i>Carpobrotus rossii</i>) |
| Tom Thumb (<i>Dichondra repens</i>) |
| Australian Bindweed (<i>Convolvulus erubescens</i>) |
| Grasses |
| Kangaroo Grass (<i>Themeda triandra</i>) |
| Windmill Grass (<i>Chloris truncata</i>) |
| Bushes and trees |
| Wreath Wattle (<i>Acacia acinacea</i>) |
| Southern Cypress (<i>Callitris gracilis</i>) |
| Beaked Red Mallee (<i>Eucalyptus socialis</i>) |
| Native Apricot (<i>Pittosporum phylliraeoides</i> var. <i>microcarpa</i>) |
| Senna (<i>Senna artemisioides</i>) |
| To attract butterflies |
| Common Tussock Grass (<i>Poa labillardieri</i>) |
| Pale Rush (<i>Juncus pallidus</i>) |
| Scented Matt-rush (<i>Lomandra effusa</i>) |
| Knobby Club-rush (<i>Isolepis nodosa</i>) |

CARING FOR THE ENVIRONMENT

Here are some simple things you can do to improve your local environment.

RESPONSIBLE PET MANAGEMENT

It is estimated that around 70% of Australian households have one or more pets. Whilst pets are great companions we should be mindful that they can disturb or kill our native wildlife. If you own a dog or cat make sure that it is not a predator in your garden or neighbourhood.

Cats are natural hunters and even those that are well fed are capable, when allowed to roam, of killing large numbers of birds, lizards, frogs and insects. Dogs will kill lizards, possums and small mammals. They can also chase ground and water birds away from their nests, disturb wildlife, introduce weed seeds (attached to their coats) and their droppings can introduce nutrients that encourage the growth of weed species. (Keeping cats indoors or confined to a caged outdoor area is recommended).

Only walk your dog in designated areas and keep to tracks. Keep your dog on a lead and pick up its droppings (this is required under the *Dog and Cat Management Act 1995*). Dogs need space to run and an option in a garden is to fence off a section for your dog. The remaining area can then be turned into a wildlife-friendly space for visiting animals.

Do not feed stray cats and get your pets desexed to avoid unwanted litters. It is thoughtless to release animals 'into the wild' as they become pests that kill or compete with our native wildlife.



Cats are natural hunters

SAFE CHEMICAL USE

If chemical sprays (herbicides, pesticides and fungicides) are not used with due care they can have deadly effects on organisms other than those you wish to control. This is known as *off-target damage*. Many beneficial predatory insects can be affected.

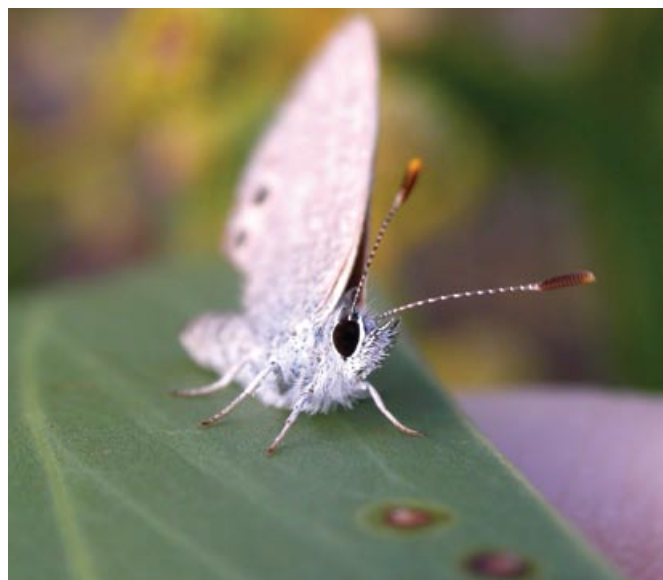
For the safe use of chemicals:

- Read and understand the label, taking special note of the rate of application, preparation instructions and safety directions.
- Do not use any chemical for purposes other than for which it is legally registered (as stated on the label).
- Do not spray in adverse weather conditions, e.g. on very hot and/or windy days.
- Avoid spraying when fatigued to ensure careful and purposeful application.
- Be particularly careful when using chemicals near waterways or storm-water drains to prevent runoff and harmful contamination.
- Take appropriate personal safety precautions.
- Store your chemicals in a dry, cool shed or cupboard dedicated to that purpose. Chemicals must be kept in sound original containers that are fully labelled and tightly sealed.

Seeking alternatives

There are alternative means for controlling weeds and other pests. There are a range of 'eco-friendly' sprays on the market. Non-chemical approaches to weed control include the use of:

- Hand-weeding
- Plant competition
- Mulching
- Biological control agents
- Hoeing, cultivation or other mechanical methods
- Rotation of garden beds
- Grazing, mowing or slashing
- Quarantine or sanitation practices (e.g. to prevent seed-set).



Long-tailed Pea-blue (photo Ben Moulton)

CONTROLLING WEEDS

A weed is any plant growing in an area where it does not naturally occur or is not wanted. Weeds compete with native plants for water, light and nutrients. Most have few natural pests or diseases that would have kept them under control in their natural environment. Many of South Australia's weeds originated from areas with a similar climate such as Southern Africa, Central America and the Mediterranean.

Not all of our weed species are from overseas. Some are from other parts of Australia. Many bushland weeds are species that have escaped from suburban gardens. Weeds are one of the most significant threats facing Australia's biodiversity; they invade bushland and displace native species thus depriving native fauna of a source of food and habitat. They also require costly control programs.

What you can do

- Avoid purchasing species known to be environmental weeds.
- Do not plant introduced species that have berries or fruits that are readily distributed by birds.
- Dispose of garden weeds by placing them in a green waste or compost bin.
- Find out if any of your garden plants are environmental weeds and replace them with suitable local native species.

ATTRACTING WILDLIFE TO YOUR GARDEN



Boobook Owl

What do native animals need from my garden?

The best way to attract native wildlife to your garden is to provide the plants and habitat that native animals prefer to live, feed or breed in. It is best not to artificially feed native wildlife. After a time they may become dependent on you as a food source and may starve if feeding ceases. An artificial diet may not provide the nutrients they require. Planting a variety of native plants will provide adequate food and habitat resources.

The following pages give a brief outline of how to attract particular types of wildlife to your garden. More detailed information is available on the *Backyards for Wildlife* website at www.urbanforest.on.net.

BIRDS

Over 270 bird species have been recorded in the Adelaide region, of which 16 are introduced and 76 have conservation significance (meaning they are rare, endangered or threatened).

Common birds of the Adelaide parks and suburbs include the Australian Magpie, Magpie Lark and Lorikeets. By providing the habitat needs for local birds you will be rewarded with their presence and will be helping to play an important role in the conservation of Adelaide's native birdlife.

The provision of a water source is essential to encourage birds to visit your garden, especially during the warmer months when water is scarce. A pond or birdbath is an easy way in which to provide water. Both should be located so that birds feel safe and are able to seek shelter from predators. Ensure that the water is kept clean and is topped up regularly.

By planting local native plant species you will encourage local birds to visit your garden. Ideally, your garden should include a variety of plants with differing structures to ensure that all the habitat requirements are provided. Each bird species has its specific dietary requirements so it is important to incorporate a wide variety of local native plants that will provide an assortment of food sources.

Hollows provide important habitat for many native birds for shelter and nesting. Nesting boxes can help recreate homes for hollow-nesting birds and bats.

BUTTERFLIES

Butterflies enhance any landscape with movement and colour. They play an important role in the local ecosystem as a pollinator. About 20 butterfly species are commonly encountered in suburban gardens.

The loss of a particular plant species from an area is often directly responsible for the disappearance of butterflies dependent upon that plant. Specific native species play key roles in the stages of a butterfly's lifecycle. You can attract butterflies by incorporating food plants for the larvae (caterpillars) and the adult butterfly in your garden.

Provide a source of water, such as a moist area with wet sand or mud, and do not spray pesticides when caterpillars or butterflies are around.

FROGS

Frog populations in urban and non-urban areas are in decline. Human activities are thought to be largely responsible. The use of insecticides and herbicides, the loss of habitat through the drainage of wetland areas and the degradation of watercourses have affected frog populations. Frogs are highly sensitive to chemicals and pollutants that make their way into the environment.

Native frogs can be attracted to your backyard by building a pond where they can feed and breed. Ponds do not need to be large as frogs only use them as a place to lay their eggs and will spend a lot of their time hiding in your garden. Provide a mulched or densely planted area that will keep the frogs moist and attract insects for food.

The booklet *Frog Ponds for Gardens: How to setup a pond that provides suitable conditions for local frogs in South Australia* provides comprehensive details on how to create a frog pond and is available from the Environment Protection Authority (EPA).

BATS

Adelaide has nine bat species. They are either active at night (nocturnal) or active during twilight at dawn or dusk (crepuscular).

The presence of native bat species will be affected by the availability of food sources (mainly insects) and shelter (roosts). Under natural conditions, bats seek shelter in tree hollows or under bark. Nesting boxes can provide homes for birds, bats and possums. Bat boxes are especially designed to accommodate roosting. Keep an eye on nesting boxes to ensure that invasive species such as starlings, sparrows, feral wasps and honeybees have not taken up residence.

NATIVE FISH

Most of our native fish species are small and are ideally suited to aquariums and backyard ponds. Native fish are an excellent alternative to ornamental and exotic species some of which have established in our watercourses with devastating impacts on native aquatic species.

There are no breeding programs for pond stocking and native fish are currently brought in from interstate. Some species to consider include Murray Rainbow Fish (*Melanotaenia fluviatilis*) and Gudgeons.

Ensure that your pond does not flow into a waterway (directly or indirectly) before stocking it with fish.



Marbled Gecko (photo Ben Moulton)

LIZARDS

A rustling in your garden probably means that a lizard is about looking for a sunny spot or foraging for food. Lizards are popular visitors to many suburban gardens. Species commonly found in suburban gardens include Eastern Bluetongue and Sleepy Lizard as well as smaller species such as Skinks and Geckos.

By providing food and habitat (especially cover) you will encourage lizards to visit your garden. Lizards require debris that provides shelter and retreat from predators through camouflage. Cover includes leaf mulch, hollow logs, bark, rocks, and vegetation such as groundcovers or small shrubs where lizards can also forage for food.

For a lizard-friendly garden avoid using pesticides that will kill insects, snails and slugs. Lizards may be killed if they consume snail bait or through eating insects affected by such chemicals. Both juvenile and adult lizards are subject to predation by domestic cats and dogs.

LIVING WITH NATIVE ANIMALS

POSSUMS

Possoms are the only native marsupials that have survived in our urban environment. Originally four types of possum were present in Adelaide, however today only two species remain - Common Brushtail Possum (Brushtails) and Common Ringtail Possum (Ringtails). It is their arboreal (tree living) habit and their adaptability that has made this transition possible.

Most people do not deliberately attract possums to their garden, so how do we live with them? Possums have most of their food, water and shelter requirements met by their arboreal territories. Brushtails will occasionally venture to the ground to feed, however Ringtails rarely move down from the safety of the tree. Both species are principally leaf-eaters in the wild, but suburban gardens have allowed them to significantly expand their dietary range to include many fruits, vegetables and ornamental shrubs. Their feeding habits can bring possums (particularly Brushtails) into conflict with suburban residents.

Possum populations have increased in some areas due to the availability of food, either from deliberate feeding, access to rubbish bins or discarded organic waste.



Common Ringtail Possum

Therefore, to avoid attracting unnaturally high numbers of possums, supplementary feeding, either direct or indirect, needs to be eliminated altogether.

Planting native species that are preferred by possums is likely to reduce the impact on certain garden plants and support a smaller number of animals. Eucalypts provide an important source of food and shelter (including hollows). This is especially true in winter when many introduced species are dormant and other food may be scarce.

The installation of nesting boxes is unlikely to increase the possum population in your area but may reduce the likelihood of one taking up residence in the ceiling of your house.

Pets, particularly dogs, will annoy possums and the lack of vegetated corridors will reduce the possum's ability to travel safely throughout their territory and avoid possible conflicts. Responsible pet ownership – ensuring dogs and cats are confined over night (in secure runs or inside) - is important for possums as well as domestic pets, and will reduce the level of noise associated with any nocturnal visits.

SNAKES

Snakes are uncommon in most suburban areas unless your home is on the margins of the urban area adjoining bush or farmland. How do we learn to live with snakes and at the same time protect their habitat?

The most common species in the Adelaide and Mount Lofty Ranges are the Red-bellied Black Snake and the Eastern Brown Snake. Black Snakes are generally associated with streams and swamps, while Brown Snakes occur more widely. Both species feed on small animals, including frogs and introduced mice and rats. They are naturally timid animals and are rarely aggressive unless threatened. Your best protection from snakes is to be aware and observant at all times when you are in your garden or in the bush. Do not have dense undergrowth near to buildings or areas where your children play and undertake regular vermine (mouse and rat) control to remove this food source.

If at any time you have a problem with snakes, contact a licenced snake control company.



ECHIDNAS, KOALAS AND KANGAROOS

These three animals are commonly encountered at the margins of our urban area. How do we learn to live with them and at the same time protect their habitat?

Echidnas largely lead solitary lives within a home range of about 50 hectares. During the mating season (June to September) 'echidna trains', that is, a procession of males following a scent-trailing female, may be seen. Echidnas are generally active during the day but during hot weather are active in the cooler evening. Seeing an echidna in the wild is great, but do not attempt to handle the animal.

Historically, **koalas** only occurred in the south-east of South Australia but in the 1920s fears of their demise led to their introduction to other areas including the Adelaide Hills. Koalas have adapted well and their numbers have been steadily increasing. If a koala turns up in your garden enjoy the unique encounter that some people travel across the globe to experience; do not attempt to handle it. Koalas will generally move on within a few days.

Kangaroos are becoming a more common sight in parts of the outer areas of Adelaide. Western Grey Kangaroos are grazing animals with a preference for grasses and herbs but they will also browse on leaves from bushes and trees. While not being strictly nocturnal they will spend most daylight hours sheltering in the bush only moving out into open grazing areas in the late afternoon through to early morning. This is when they run the risk of being hit by vehicles as they cross roads or feed on the roadside.

Habitat loss poses the greatest threat to echidnas, koalas and kangaroos. Protecting remnant habitat and planting native vegetations will help keep these animals a part of our urban environment. If you live close to a population of any of these animals you can contribute to their well-being. For example, practice responsible pet ownership and take an active role in protecting remnant native vegetation on your property, local reserves and roadsides.



Southern Brown Bandicoot (photo Kirstin Long, DEH)

BANDICOOTS

Eight species of bandicoots and bilby once occurred in South Australia. Of these, only the Southern Brown Bandicoot remains in naturally occurring populations. In the Mount Lofty Ranges this species lives in mainly Stringybark eucalypt forests where there is very dense understorey vegetation.

Southern Brown Bandicoots forage for food mainly by digging in the leaf litter and soil to find insects, fungi, plant root nodules and bulbs. They will also eat fruit, seeds and other plant material found above ground. Bandicoots are active during the day and night.

The biggest threat to bandicoots is the loss or modification of their habitat due to urban and agricultural development. Clearance and modification of dense vegetation has exposed them to introduced predators, such as foxes and feral and domestic cats and dogs.

If you live close to a population of bandicoots you can contribute to the well-being of this species. For example, by not letting your pet cats and dogs roam in native bushland.

MORE INFORMATION

Backyards for Wildlife is an initiative of the Department for Environment and Heritage.

For more information on *Backyards for Wildlife*, or to access pre-European vegetation maps and information on Adelaide's biodiversity please contact the office or visit our website.

Urban Biodiversity Unit
Department for Environment and Heritage

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BLACKWOOD SA 5051
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Regional Conservation
Delivery
Adelaide Region.

Southern Lofty District Office
Cleland Conservation Park
Summit Road CLELAND

PO Box 783
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Australia

Ph: +61 8 8130 9050
Fax: +61 8 8339 7070

www.environment.sa.gov.au

Dear New Resident

Congratulations on your new home at Aldinga.

You may be aware that your home lies adjacent to one of the most important areas of remnant vegetation in the southern suburbs - Aldinga Scrub Conservation Park. You are fortunate to live next to this relatively undisturbed park which conserves just a small but valuable remnant of the coastal woodlands and heathy shrublands that once spread across Adelaide's coastal plains. Sadly, it conserves the last such piece of vegetation remaining between Port Gawler in the north and Normanville in the south.

You are well placed to make the most of its wonderful features. Perhaps it is even one of the reasons you chose this location for your new home. It is however, a fragile environment, and some things you do both in the Park and around your home may unintentionally threaten its long-term viability.

When establishing a new home, there are many decisions to be made, some of which may have long term implications for the Park, for example, what sort of garden will you have and how you manage your pets.

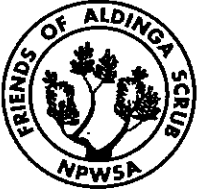
We have put together this information package to help you better understand how to tread lightly on the local environment, and to look after this special Park. What you choose to do in your garden and around your home can make a real difference to its future, and I encourage you to read the information and to consider what you may be able to do to help conserve the Park.

I hope you find this information package useful, and it will assist you to help keep the Park and the local environment healthy so they can both be enjoyed by you and your family now, and by many generations to come.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'James Crocker', written over a horizontal line.

James Crocker
DISTRICT RANGER
SOUTHERN LOFTY DISTRICT



Friends of Aldinga Scrub

PO Box 33 Aldinga Beach SA 5173

March 2009

To all new residents of Aldinga Beach

Welcome to our beautiful area of white sands, ochre cliffs and unique bushland!

We would like to introduce ourselves and explain a little of what we do.

Aldinga Scrub was proclaimed a Conservation Park in 1985 in order to protect the plants and animals that make up the only remaining example of coastal bushland along the Adelaide shoreline.

The Conservation Park shows us a little of what the coastline would have looked like before European settlement and agriculture.

The Friends of Aldinga Scrub are volunteers who meet regularly to help conserve and promote the long term health of the flora and fauna in this fragile sandy environment.

Through informative monthly meetings we strive to heighten awareness of the importance of the Park; and at our weekly working days we physically remove invasive pest plants. This encourages natural regeneration of the indigenous vegetation. We also grow and plant seedlings of local species each year to support the natural regeneration.

The Friends of Aldinga Scrub is a member of the statewide Friends of Parks Incorporated network, and we work closely with National Parks and Wildlife South Australia.

Want to know more? Come and join us! Please see the enclosed pamphlets and/or contact us. You might like to visit our website at www.angelfire.com/journal/aldingascrub to find out more about Aldinga Scrub and our group.

Yours sincerely

Julie Burgher
President
Phone: 8556 5782

Visit our website at www.angelfire.com/journal/aldingascrub

ABN 69 271 550 351

Department for Environment and Heritage

Aldinga Scrub Conservation Park



Government
of South Australia



www.environment.sa.gov.au

Aldinga Scrub Conservation Park

Aldinga Scrub Conservation Park has been recognised as a significant area for nature conservation and protection of many rare plants. Covering an area of 300 hectares, its natural features include sand dunes, sand blows, mallee scrub, remnant red gums and Lacy Coral Lichen.

In such a fragile sand environment people can easily disturb the natural balance causing erosion and damage to vegetation. Please tread carefully and keep on the designated walking trails as you discover Aldinga Scrub's plant communities and the wildlife within.

Yurrebilla

Aldinga Scrub Conservation Park is part of the Greater Mount Lofty Parklands – Yurrebilla. The parklands contain around 40 000 hectare of lands managed by the Department for Environment and Heritage, ForestrySA, SA Water and Planning SA. www.yurrebilla.parklands.sa.gov.au

How to get to the park

Aldinga Scrub is situated on the coastline of Gulf St Vincent between the townships of Aldinga Beach and Sellicks Beach, 46 kilometres south of Adelaide. From Adelaide, take Main South Road and turn right at Aldinga Beach Road or Norman Road. Bitumen and gravel roads provide conventional vehicle access to the park boundary.

Visitors cannot drive into the park. Walkers can enter via stiles or gates at various locations shown on map. A small car park is located on the corner of Fraser and Dover Streets.

On **TOTAL FIRE BAN DAYS** the park is closed for safety reasons.

Facilities

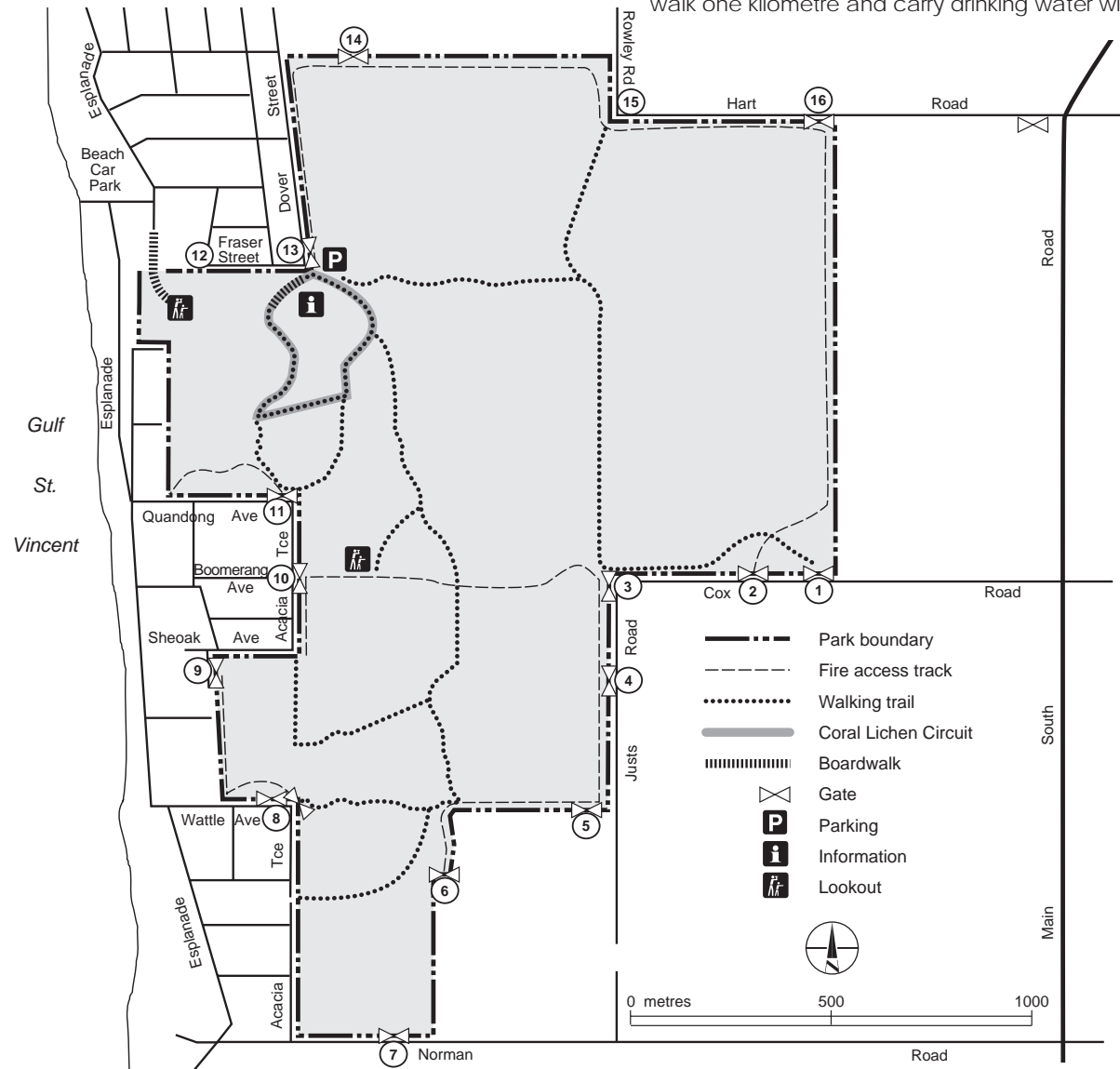
Visitors to the park must be self-sufficient as there are no facilities provided.

Camping is not permitted and all types of fires including gas barbecues are prohibited.

Accommodation is available close to the park at Aldinga Beach and Sellicks Beach.

Things to do

Walking trails provide the opportunity to explore the park's natural features. Take the time to stop, look and listen for animals and birdlife. You will hear a wide range of sounds and see a variety of plants. During spring the park is ablaze with wildflowers making any walk an enjoyable experience. Allow 20 minutes to walk one kilometre and carry drinking water with you.



Geology

Aldinga Scrub is situated in an area known as the Willunga sub-basin. This was formed by red clays being washed down from the Willunga Hills over several thousand years. Sands from the ocean floor have been deposited over the clays and an older red marine sand deposit.

Mobile sand dunes known as 'sand blows' occur along the western boundary of the park. These are backed by semi-stabilised sand dune ridges which reach up to 35 metres high. Further inland, stabilised dunes up to ten metres high alternate with swales to form an undulating sand plain.

History

Aldinga Scrub was part of the traditional lands of the indigenous Kurna (Gar-na) Aboriginal people who used the area during the summer months. The area yielded a rich and bountiful supply of food and materials used for utensils. Shellfish, fish, animals, reptiles, birds and plant foods such as nardoo, muntries, yams and quandongs were abundant.

The first Europeans settled in the area in 1857. Before World War I, the scrub was subdivided and several attempts were made to farm the area. Farming did not prove viable, due to the sandy soils.

In the 1960s the Willunga Council became concerned that subdivision of the area would cause erosion. Between 1965 and 1982, 300 hectares were purchased at Aldinga to be managed by the State Planning Authority as an Open Space Reserve. In 1985 the reserve was declared Aldinga Scrub Conservation Park.

Plants

Aldinga Scrub Conservation Park contains diverse plant communities from sedgelands and closed heaths to Pink Gum woodlands and mallee scrub. These communities have adapted to sandy soils, aiding in the stabilisation of sand dunes and prevention of sand blows.

Low woodlands and heath communities cover most of Aldinga Scrub. In the north-east and far eastern sections of the scrub, a low woodland of Mallee Box trees grows on brown sandy loam soils. Sedgelands grow in areas where the watertable is close to the surface and the soil is semi-permanently waterlogged. Tall shrublands of Drooping Sheoak give way to low-growing coastal dune vegetation on the western side of the scrub.

Several rare species of plants are found in the park. They include Lacy Coral Lichen, Nardoo, Hairy Sedge and several species of orchids.

Animals

More than 166 different bird species can be seen and heard in Aldinga Scrub Conservation Park. Some are migratory and visit the area for only a few months each year. If you watch quietly you may spot Mistletoebirds, Brown Goshawks, Golden Whistlers, Grey Fantails with Grey Shrike-thrush.

The park's vegetation provides a variety of host plants for 18 species of butterflies and 540 species of other insects.

Common Brushtail Possums, Short-beaked Echidnas, bats, geckoes and skinks live in the park. Aldinga Scrub also provides a home for Eastern Brown Snakes and Red-bellied Black Snakes.

The National Parks Code

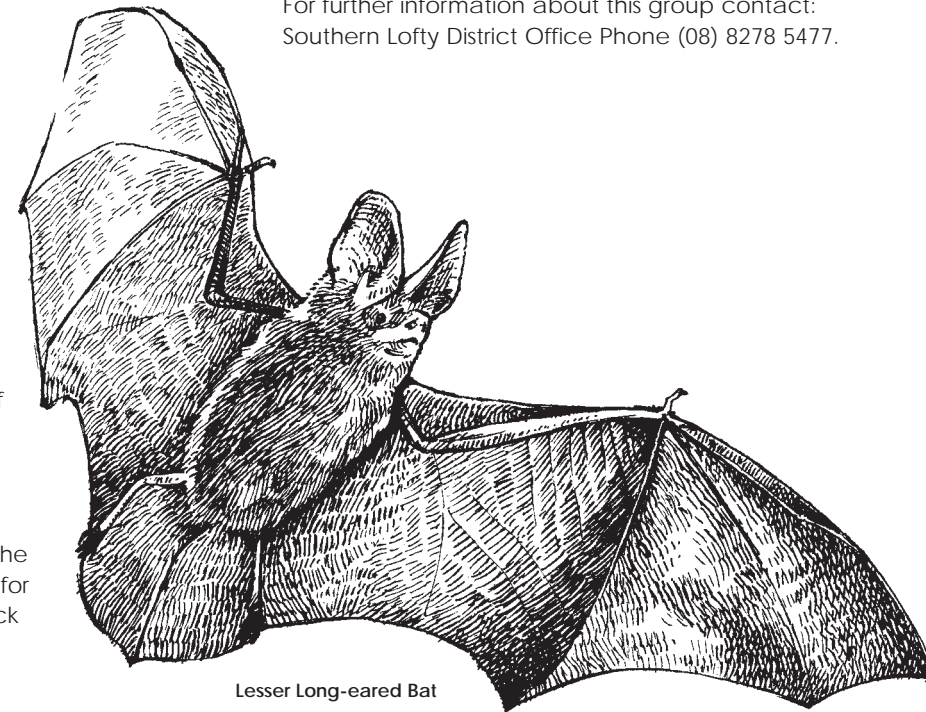
Help protect your national parks by following these guidelines:

- leave your pets at home
- take your rubbish with you
- all fires including gas barbecues are prohibited
- respect geological and heritage sites
- keep our wildlife wild – do not feed or disturb animals, or remove native plants
- keep to defined vehicle tracks and walking trails
- be considerate of other park users

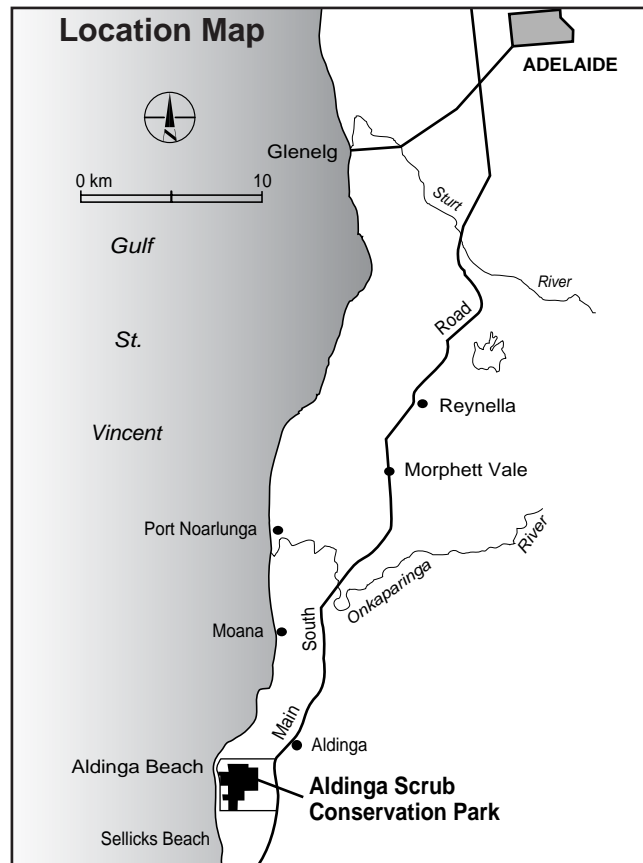
Thank you for leaving the bush in its natural state for the enjoyment of others.

Friends of Aldinga Scrub

This is a local group of the statewide Friends of Parks. For further information about this group contact: Southern Lofty District Office Phone (08) 8278 5477.



Lesser Long-eared Bat



For further information

Please contact:

Department for Environment and Heritage
Southern Lofty District Office
PO Box 2 Belair SA 5052
Phone: (08) 8278 5477
Fax: (08) 8278 8587

8.30 am to 4.30 pm Monday to Friday
9 am to 4.30 pm Saturday, Sunday & Public Holidays

Phone Information line: (08) 88204 1910
Email: dehinformation@saugov.sa.gov.au

Emergency Duty Officer Contact (24 hour service):

Phone 1300 650 411 & quote pager No. 46 52 83

www.environment.sa.gov.au/parks

Cats and Wildlife - how you can protect both



*Where is your cat at the moment?
Could it be harming native wildlife?
Is it crossing a busy road?*

*The information in this brochure will help you better
protect and enjoy your cat and our native wildlife.*



Government
of South Australia



What YOU can do to help

If we are to continue to enjoy Australia's unique wildlife we need to reduce our impact on the environment. You can reduce the effect cats have on wildlife and better care for your pet cat by simply:

- Identifying your cat as a pet not a stray
- Desexing your cat
- Never dumping unwanted cats or kittens
- Preventing your cat from roaming

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Photo credits: Cat; Jones Creative Media. Southern Brown Bandicoot, Southern Brown Tree Frog, Western Pygmy Possum, Peninsula Dragon, White's Skink, Marbled Gecko, Painted Quail; Department for Environment and Heritage, SA (D. Harley, K. Long, T. Robinson & J. Van Weenen). Lesser Long-eared Bat; L. Lumsden



**Government
of South Australia**

Department for
Environment and Heritage

Adelaide and Mount Lofty
Natural Resource
Management Board



Australian Government

<NRMjobs>

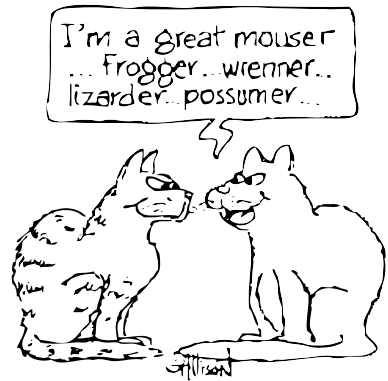




Cats are both pets and predators

Cats are present throughout South Australia, as domestic pets, free-living strays, and as feral animals. As pets, cats are wonderful companion animals. However, they are also very efficient predators of our native wildlife.

Australia's unique wildlife evolved in an environment that did not include cats. The relatively recent introduction of cats to Australia has added a predator with new hunting techniques that has changed the natural balance.



Well fed cats still instinctively hunt

Cats that live close to remnants of bush are likely to kill a wide range of native wildlife. Cats in suburbia can also have a large effect because cat numbers in these areas are high and numbers of native animals are generally low.

Wildlife that feed or nest on or near the ground is most at risk. For example, in the Adelaide Hills the Endangered Southern Brown Bandicoot lives on the ground and is often found in patches of bush near houses where cat numbers are high. This species is known to be killed by cats.

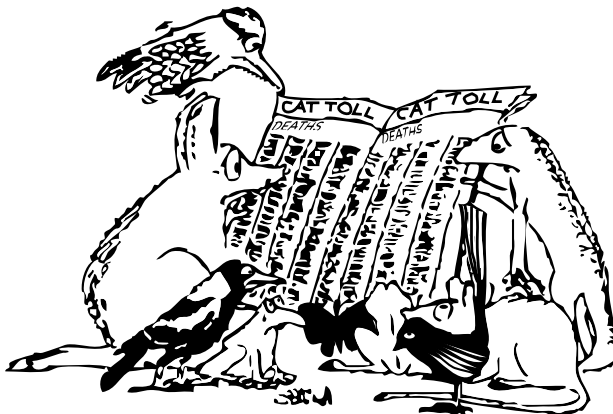
Even cats that are well fed will instinctively hunt. Prey that is not killed is likely to die later from shock or infection.

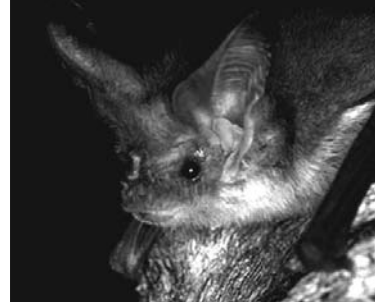
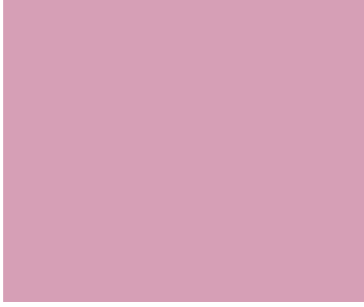


Scientists tell us cats threaten wildlife

CAT FACT: Cats are known to prey on more than 186 kinds of native Australian bird, 64 mammals, 87 reptiles, 10 species of amphibian, and numerous invertebrates.

- The stomach of a single feral cat shot in arid South Australia contained the remains of one house mouse, three striped skinks, one lined earless dragon, one smooth earless dragon, three bearded dragons, twenty-four painted dragons and a zebra finch....that was from just one day's hunting!
- On average, a domestic cat kills 16 mammals, 8 birds and 8 reptiles a year according to an Australia-wide survey.
- In Australia, cats are listed as a potential threat to the survival of at least 58 native species that are considered at risk of extinction (under the EPBC Act 1999).
- Research shows cats with bells on their collars still catch wildlife.
- Cats are the host of a blood disease called Toxoplasmosis which can cause sickness and death in some species of wildlife.





Four ways you can better care for your cat and protect wildlife

CAT FACT: Desexed pet cats that are prevented from roaming live four times longer on average!

Here are four things you can do to provide safer conditions for both your pet cat and for native wildlife.

- Desex your cat
- Identify your cat as a pet, not a stray
- Never dump unwanted kittens or cats
- Keep your cat close to home

...and encourage your neighbours to do the same

1) Desex your cat

- A desexed cat typically lives longer and is less territorial. It will wander, fight, and spray-mark its territory less, and in general makes a better pet.
- Desexing also prevents unwanted litters of kittens that contribute to the stray and feral cat populations and to the ongoing demise of native wildlife.

2) Identify your cat as a pet, not a stray

- Pet cats that are micro-chipped can be identified from stray cats by local councils and can be returned safely to their owners if they get lost or wander onto neighbouring properties.

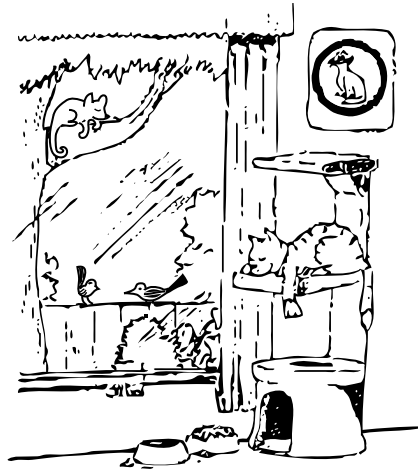
3) Never dump your unwanted kittens or cat

- Dumped cats are likely to become stray and rely more on wildlife as a food source. Unwanted cats and kittens should be given away to a good home or humanely euthanased. Contact your local vet or animal welfare shelter for assistance.



4) Keep your cat from roaming

- Pet cats that are prevented from roaming are protected from being hit by cars and from being injured or catching diseases from stray cats. In fact pet cats that are prevented from roaming have been found to live longer than those that are allowed to range freely.



- Cats kept indoors or in a specially designed "cat yard" won't prey on wildlife. You will get to enjoy their company more too! Cat yards can provide cats with access to your house and to an enclosed outdoor area. Enrich their environment to ensure they get enough exercise and don't get bored.



Cat fact or fiction?

It is cruel to confine my cat. **FICTION**

Urban and rural environments pose many risks to pet cats. If cats roam they can catch diseases and be injured by stray and feral cats. They can also be injured or killed on the road.

Cats live very contently in a suitable enclosed area.



Cats are necessary to control mice and rats. **FICTION**

Cats will kill some mice and rats, but careful use of commercially available rodenticides is a more effective way of controlling introduced rodents.

Cats and wildlife can live together. **FICTION**

While the impact cats have on wildlife will vary between individual cats and locations, in general, cats reduce wildlife populations through predation, disease, and competition for food. When combined with threats like habitat loss, Australia's native wildlife is struggling to survive.

Some people keep their cats confined only at night. This may reduce the impact they have on nocturnal wildlife but not on wildlife that is active during the day, such as lizards and birds.

Cats in the suburbs, away from bushland are not a risk to wildlife. **FICTION**

Cats, especially males, can travel many kilometers and in doing so may hunt wildlife. Remember that wildlife isn't restricted to parks; many species of birds, bats and lizards can still be found in suburban areas.

Further information

- **Your local Council may require you to manage your cat.**
Contact them to find out about policies or bylaws that encourage responsible cat ownership. Councils can also provide information on what to do if you have a stray, wandering or feral cat on your property.
- **Cat Yards.** Contact details for commercial suppliers of cat enclosures can be found on the internet. Or, for guidance on building your own cat proof fencing or cat yard go to:
<http://www.pets.info.vic.gov.au/community/catenclosure.htm>

For additional information please contact

Department for Environment and Heritage

Ph: (08) 8204 1910

Online information available at: <http://www.environment.sa.gov.au>

The Dog and Cat Management Board

Ph: (08) 8124 4962

Online information available at: <http://www.dogsncats.asn.au>

RSPCA

Ph: (08) 8231 6931

Online information available at: <http://www.rspca.org.au>

Acknowledgements and further reading

'Cats and wildlife – how you can protect both' was prepared by the Mount Lofty Ranges Southern Brown Bandicoot Recovery Program, Department for Environment and Heritage, in consultation with the Dog and Cat Management Board, SA, based on a fact sheet of the same name produced by the Victorian Department of Sustainability and Environment (DSE). Cartoon images have been reproduced with permission from the Department of Sustainability and Environment, VIC (© State of Victoria Department of Sustainability and Environment 2003). Supporting information used in this fact sheet was sourced from the following places:

Department of the Environment and Heritage (2004). Protecting our Wildlife: Responsible pet ownership. www.deh.gov.au/biodiversity/threatened/publications/responsible.html.

Dickman, C. (1993) Raiders of the lost ark: Cats in inland Australia. Australian Natural History, 24 (5), 44-52.

Environment Australia (1999) Threat Abatement Plan for Predation by Feral Cats. Biodiversity Group, Environment Australia, Canberra.
www.environment.gov.au/biodiversity/threatened/publications/tap/cats/index.html

Paton, D.C. (1993) Impacts of domestic and feral cats on wildlife In G. Siepen and C. Owens (eds) 'Cat Management Workshop: Proceedings 1993', Queensland.

Read, J and Bowen, Z (2001) Population dynamics, diet and aspects of the biology of feral cats and foxes in arid South Australia. Wildlife Research, 2001, 28, 195-203

Temby, I. (2005). Wild Neighbours: The humane approach to living with wildlife. Citrus Press, NSW.



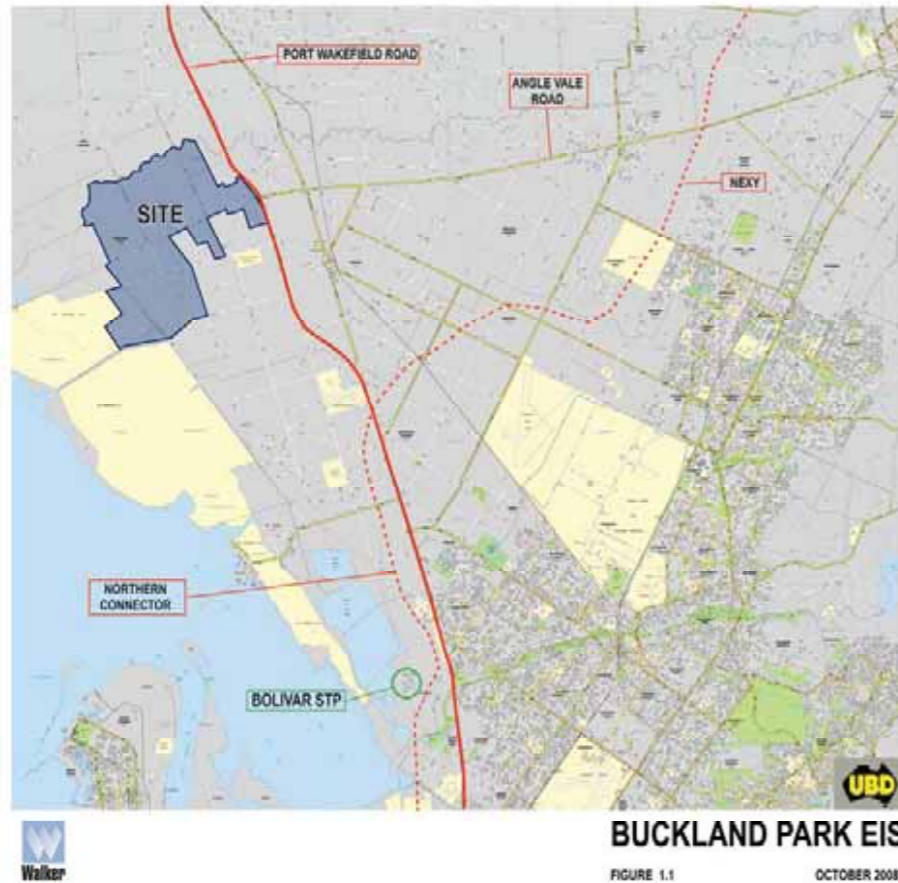
PROPOSAL COMPONENTS

MASTERPLAN

- 5 implementation stages
- 12,000 residential allotments x 500m2 (average)
- District Centre
- 3 Neighbourhood Centres
- 2 x Employment Precincts
- 1 x Mixed Use Precinct
- Open Space
- 4 x primary schools
- 2 x high schools
- Storm and flood water management
- Major road hierarchy
- Bus routes
- Walk and bicycle network

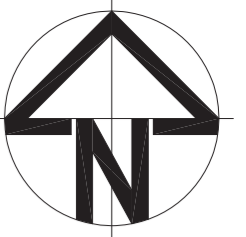
STAGE ONE

- 614 residential allotments
- 4 balance allotments
- Neighbourhood Centre and associated landscaped entry and signs
- Display Village of 32 Dwellings and associated signs
- Community Space
- Sales Office and associated signs
- Primary school
- Open Space
- Main Entry Boulevard and local roads
- Storm and flood water management
- Walk and bicycle network



PROPOSAL DRAWINGS

| REF | REV | AUTHOR | TITLE | DATE |
|--------------|-------------|---|--|-------------------|
| | Revision 2 | Walker Corporation | Cover Sheet | 30 September 2009 |
| 19000PO1-r3 | Issue 4 | Fyfe Engineers Surveyors | Super Lot Land Division | 10 August 2009 |
| 19000PO2-r5 | Issue 5 | Fyfe Engineers Surveyors | Stage 1 Concept Land Division– Sheets 1 to 4 | 10 August 2009 |
| VERSION 6 | Revision 12 | Connor Holmes | Buckland Park Master Plan | 22 September 2009 |
| VERSION 6 | Revision 12 | Connor Holmes | Buckland Park Residential Staging Plan | 22 September 2009 |
| | | Wallbridge and Gilbert | Buckland Park – Drainage Channel Layout | September 2009 |
| | | Wallbridge and Gilbert | Buckland Park – MUSIC Model Layout Diagram | September 2009 |
| VERSION 6 | Revision 12 | Connor Holmes | Buckland Park Pedestrian and Cycle Network | 22 September 2009 |
| 2112592A-001 | | Parsons Brinkerhoff | Proposed Road Hierarchy | 1 April 2009 |
| 2112592A-002 | | Parsons Brinkerhoff | Proposed Staged Development of Bus Route Strategy 2020 - 2031 | 1 April 2009 |
| 2112592A-003 | | Parsons Brinkerhoff | Proposed Bus Route Strategy 2031 | 1 April 2009 |
| 2112592A-004 | | Parsons Brinkerhoff | Bus Route Catchment Area 2031 | 1 April 2009 |
| VERSION 1 | Revision G | Connor Holmes | Buckland Park Stage 1 Residential Allotment Mix | 22 September 2009 |
| VERSION 1 | Revision G | Connor Holmes | Buckland Park Stage 1 Land Use Plan | 22 September 2009 |
| VERSION 1 | Revision G | Connor Holmes | Buckland Park Stage 1 Pedestrian and Cycle Network | 22 September 2009 |
| VERSION 1 | Revision G | Connor Holmes | Buckland Park Stage 1 Special Fencing Control | 22 September 2009 |
| CMS-01 | Revision 1 | Walker Corporation | Concept Neighbourhood Centre | February 2009 |
| CMS-02 | Revision 1 | Walker Corporation | Display Village Location | February 2009 |
| 071315 SK29 | Revision 0 | Swanbury Penglase | Stage 1 Neighbourhood Centre Landscape Concept | 5 March 2009 |
| | Revision 0 | Fyfe Engineers Surveyors and Dr Robert Anderson | Flora Constraints – Sector 1 | 25 September 2009 |
| | Revision 0 | Fyfe Engineers Surveyors and Dr Robert Anderson | Flora Constraints – Sector 2 | 25 September 2009 |
| | Revision 0 | Fyfe Engineers Surveyors and Dr Robert Anderson | Flora Constraints – Sector 3 | 25 September 2009 |
| | Revision 0 | Fyfe Engineers Surveyors and Dr Robert Anderson | Flora Constraints – Sector 4 | 25 September 2009 |
| | | Walker Corporation and ETSA Utilities | Buckland Park Regional Electricity Infrastructure | February 2009 |
| | | Walker Corporation and APA and Telstra | Buckland Park Regional Gas and Telecommunications Infrastructure | February 2009 |
| | | Walker Corporation and DTEI | Buckland Park Regional Transport Infrastructure | February 2009 |
| | | Walker Corporation and SA Water | Buckland Park Regional Water Infrastructure | February 2009 |

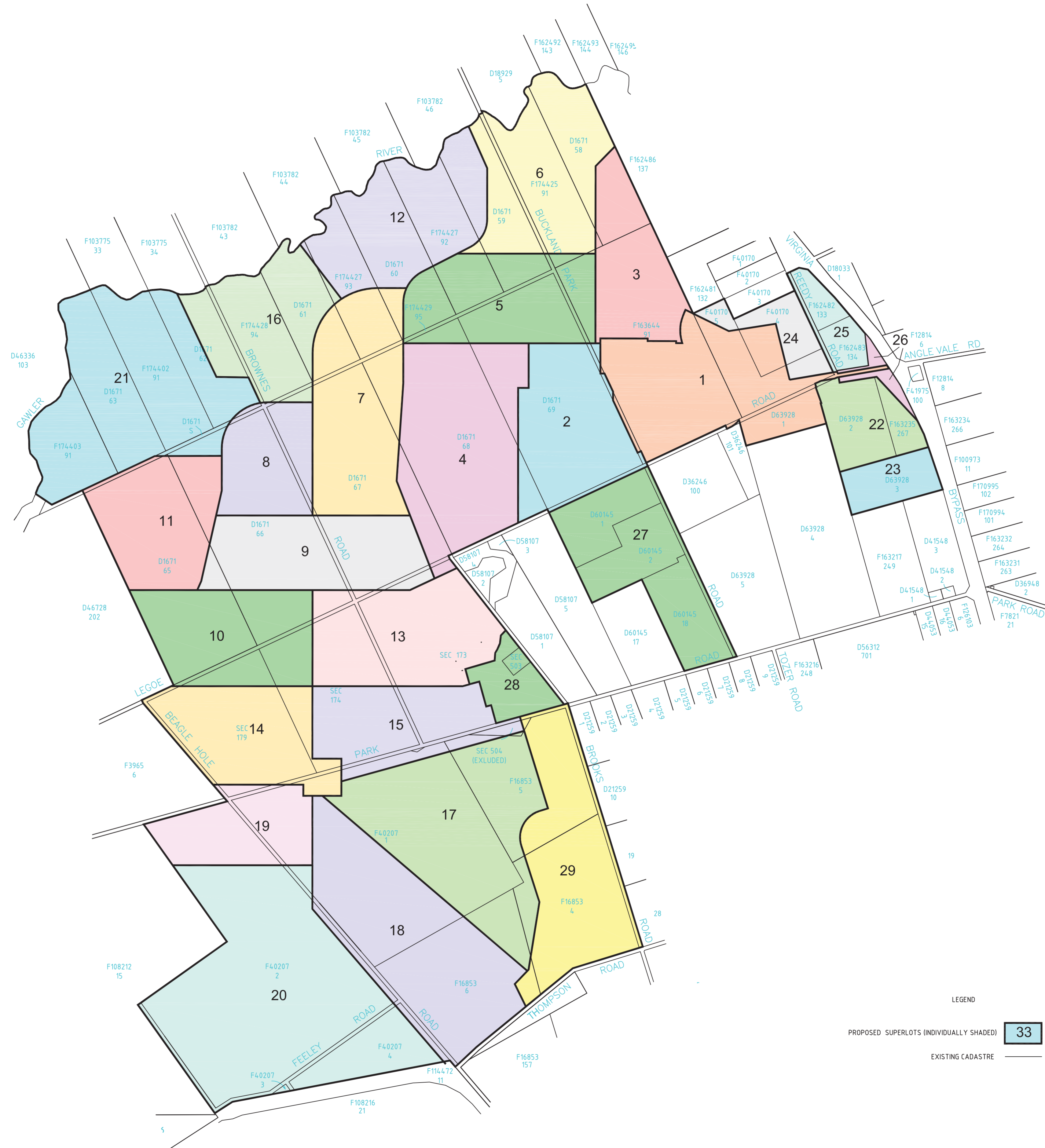


CITY OF PLAYFORD

Dev No: ___ / D___ / 08

| CT | Plan Type | Plan No | Parcel Type | Parcel No | Area (ha) | |
|----------|------------------|---------|--------------------------------|-----------|-----------|--------|
| 5868/779 | F | 174402 | Allotment | 91 | 25.6 | Approx |
| 5868/784 | D | 1671 | Block | 63 | 26.6 | Approx |
| 5868/773 | F | 174403 | Allotment | 91 | 19.7 | Approx |
| 5868/777 | D | 1671 | Block | 62 | 21.9 | Approx |
| 5868/776 | F | 174428 | Allotment | 94 | 19.9 | Approx |
| 5868/783 | D | 1671 | Block | 61 | 20.2 | Approx |
| 5868/771 | F | 174427 | Allotment | 93 | 17.6 | Approx |
| 5868/782 | D | 1671 | Block | 60 | 27.7 | Approx |
| 5868/780 | F | 174426 | Allotment | 92 | 24.3 | Approx |
| 5868/770 | D | 1671 | Block | 59 | 25.5 | Approx |
| 5868/774 | F | 174425 | Allotment | 91 | 24 | Approx |
| 5868/785 | D | 1671 | Block | 58 | 26.6 | Approx |
| 5868/772 | D | 1671 | Block | 65 | 57.15 | |
| 5868/778 | D | 1671 | Block | 66 | 65.46 | |
| 5868/767 | D | 1671 | Block | 67 | 65.19 | |
| 5868/766 | D | 1671 | Block | 68 | 65.33 | |
| 5868/768 | D | 1671 | Block | 69 | 65.3 | |
| 5868/769 | F | 163644 | Allotment | 91 | 66.58 | |
| 5399/95 | HD PORT ADELAIDE | | Section | 179 | 40 | Approx |
| 5399/96 | HD PORT ADELAIDE | | Section | 174 | 44.9 | Approx |
| 5909/380 | HD PORT ADELAIDE | | Section | 503 | 1.189 | |
| 5909/379 | HD PORT ADELAIDE | | Section | 173 | 57.87 | |
| 5883/977 | D | 60145 | Allotment | 1 | 15.4 | |
| 5883/978 | D | 60145 | Allotment | 2 | 15.24 | |
| 5883/980 | D | 60145 | Allotment | 18 | 15.49 | |
| 5916/59 | D | 63928 | Allotment | 1 | 7.487 | |
| 5916/60 | D | 63928 | Allotment | 2 | 15.46 | |
| 5916/61 | D | 63928 | Allotment | 3 | 12.22 | |
| 5303/891 | F | 163235 | Allotment | 267 | 6.737 | |
| 5755/199 | F | 162483 | Allotment | 134 | 6.611 | |
| 5763/970 | F | 162482 | Allotment | 133 | 4.937 | |
| 5228/167 | F | 40170 | Allotment | 4 | 12.6 | |
| 5424/348 | F | 40170 | Allotment | 5 | 17.3 | |
| 5875/910 | F | 40207 | Pieces Comprising an Allotment | 1,2,3&4 | 240.3 | |
| 5447/579 | D | 16853 | Allotment | 5 | 38.97 | |
| 5447/585 | D | 16853 | Allotment | 6 | 44.78 | |
| 5447/581 | D | 16853 | Allotment | 4 | 39.66 | |
| 5868/775 | F | 174429 | Allotment | 95 | 3.44 | |
| 5868/781 | D | 1671 | Block | S | 2.157 | |
| | | TOTAL | | | 1307 | Approx |

Note: Sec 504 is excluded from the development



| Issue | Description | Drwn | Ckd. | Date |
|-------|---|------|------|----------|
| 4 | Access Road, 25 & 26 changed | RIT | RAF | 10.08.09 |
| 3 | Superlots 1 & 2 changed | RIT | RAF | 02.03.09 |
| 2 | Road Network deleted, Superlots changed | RIT | RAF | 27.02.09 |
| 1 | Road Network updated | RIT | RAF | 19.12.08 |
| 0 | Issued for review | RIT | RAF | 11.11.08 |

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 Fax: (08) 82329099

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WALLBRIDGE & GILBERT
 60 Wyatt Street
 Adelaide SA 5000
 Tel: (08) 8223 7433
 Fax: (08) 8232 0967

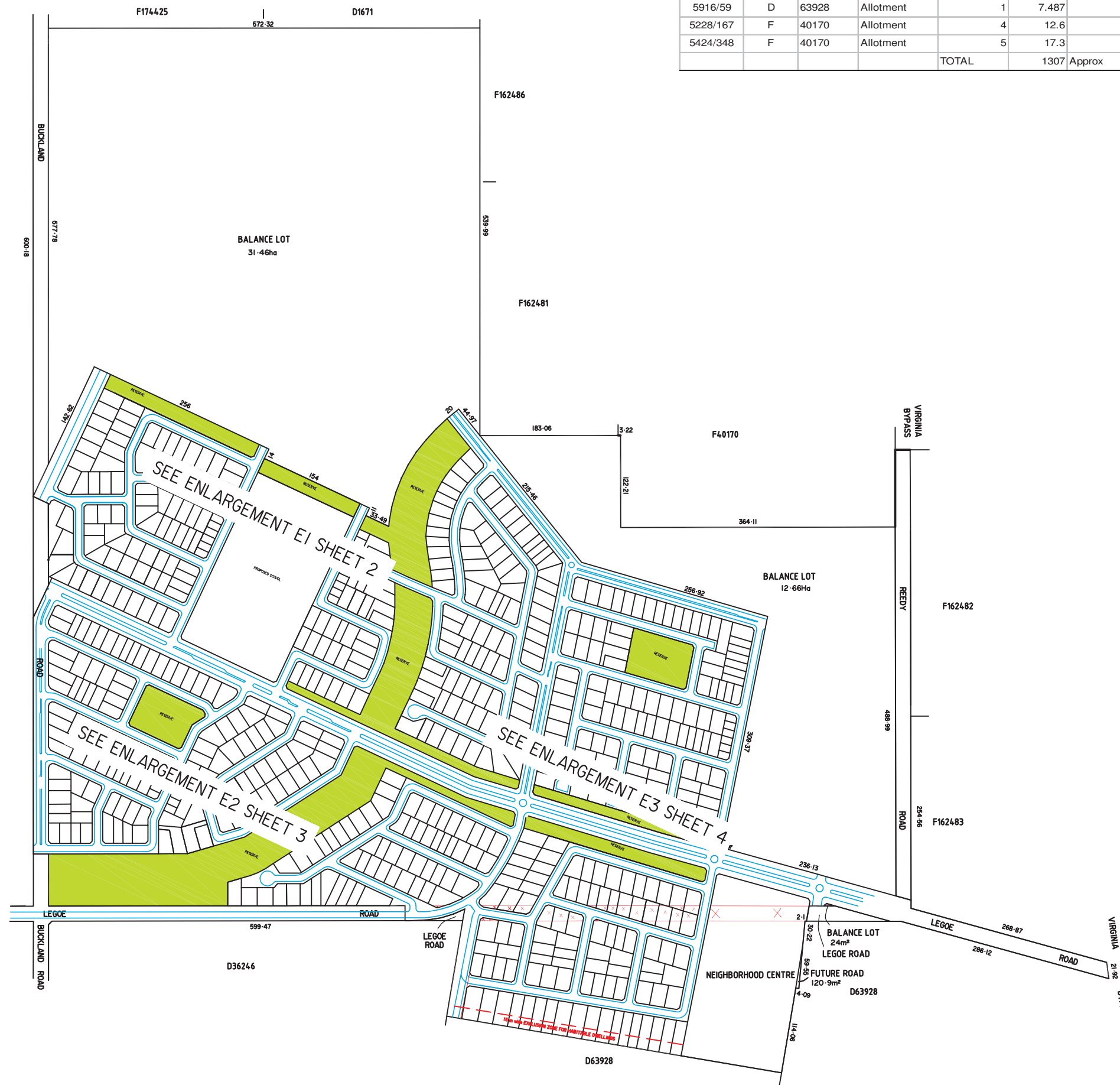
Title
BUCKLAND PARK

Status
CONCEPT PLAN - Superlots

| | | | |
|------------|---------|----------|-----|
| Scale (A1) | 1:12500 | Datum | AHD |
| Drawn | RIT | Designed | MP |

| | | |
|--------------------------|-------------|-------|
| Project Code | Drawing No. | Issue |
| 19000/1/8 19000PO1-r3 | 001 | 4 |

| CT | Plan Type | Plan No | Parcel Type | Parcel No | Area (ha) | |
|----------|-----------|---------|-------------|-----------|-----------|--------|
| 5868/768 | D | 1671 | Block | 69 | 65.3 | |
| 5868/769 | F | 163644 | Allotment | 91 | 66.58 | |
| 5916/59 | D | 63928 | Allotment | 1 | 7.487 | |
| 5228/167 | F | 40170 | Allotment | 4 | 12.6 | |
| 5424/348 | F | 40170 | Allotment | 5 | 17.3 | |
| | | | | TOTAL | 1307 | Approx |



CITY OF PLAYFORD

Dev No: ___ / D___ / 08

LEGEND

- EXISTING ROAD TO BE CLOSED
- PROPOSED RESERVE

| Issue | Description | Drwn | Ckd. | Date |
|-------|-------------------|------|------|----------|
| 5 | Layout Revised | RIT | | 10/08/09 |
| 4 | Layout Revised | RIT | | 04/03/09 |
| 3 | Layout Revised | SRH | | 23/02/09 |
| 2 | Layout Revised | SRH | | 20/02/09 |
| 1 | Redesign | RIT | | 17.12.08 |
| 0 | Issued for review | RIT | | 17.11.08 |


| Issue | Description | Drwn | Ckd. | Date |
|-------|-------------|------|------|------|
|-------|-------------|------|------|------|

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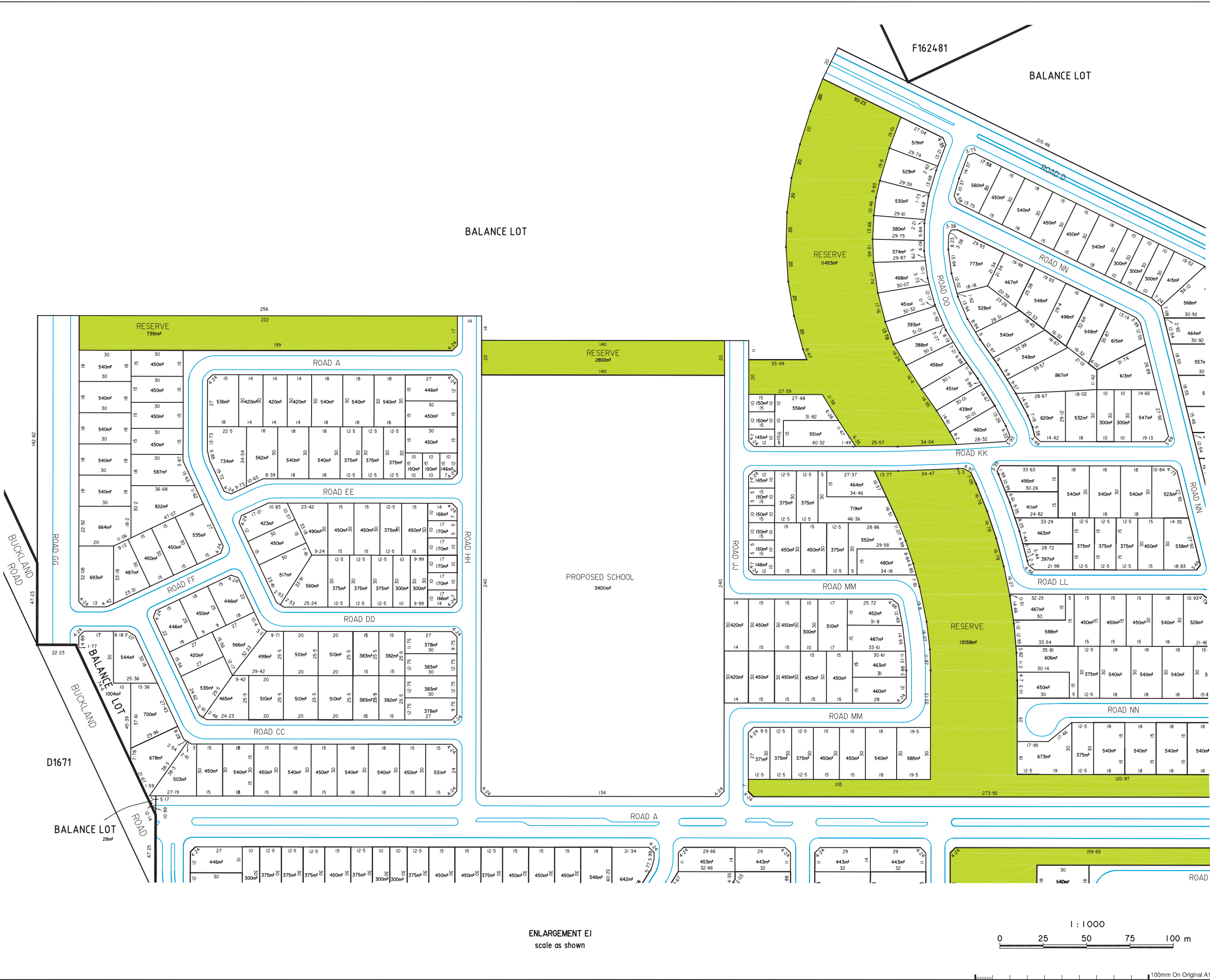
Title
BUCKLAND PARK STAGE 1
 Sheet 1 of 4 Sheets

Status
CONCEPT PLAN - DA

| | | | |
|------------|--------|-------|-----|
| Scale (A1) | 1:3000 | Datum | AHD |
|------------|--------|-------|-----|

| | | | |
|-------|-----|----------|----|
| Drawn | RIT | Designed | MP |
|-------|-----|----------|----|

| | | | | | |
|--------------|-------------|-------------|-----|-------|---|
| Project Code | 19000/1/8 | Drawing No. | 001 | Issue | 5 |
| | 19000PO2-r5 | | | | |



CITY OF PLAYFORD

Dev No: ___ / D___ / 08

LEGEND

EXISTING ROAD TO BE CLOSED

PROPOSED RESERVE

| | | | |
|---|-------------------|-----|----------|
| 5 | Layout Revised | RIT | 10/08/09 |
| 4 | Layout Revised | RIT | 04/03/09 |
| 4 | Layout Revised | SRH | 23/02/09 |
| 3 | Layout Revised | SRH | 20/02/09 |
| 1 | Redesign | RIT | 17.12.08 |
| 0 | Issued for review | RIT | 17.11.08 |

| Issue | Description | Drwn/Ckd. | Date |
|-------|-------------|-----------|------|
|-------|-------------|-----------|------|


Client



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 Fax: (08) 8232 0967

Title
BUCKLAND PARK STAGE 1
 Sheet 2 of 4 Sheets

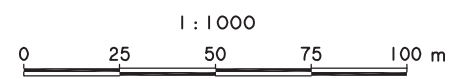
Status
CONCEPT PLAN - DA

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|------------|--------|-------|-----|
| Scale (A1) | 1:1000 | Datum | AHD |
|------------|--------|-------|-----|

| | | | |
|-------|-----|----------|----|
| Drawn | RIT | Designed | MP |
|-------|-----|----------|----|

| | | | | | |
|--------------|-------------|-------------|-----|-------|---|
| Project Code | 19000/1/8 | Drawing No. | 001 | Issue | 5 |
| | 19000PO2-r5 | | | | |

ENLARGEMENT E1
 scale as shown



100mm On Original A1



ENLARGEMENT E2
scale as shown

CITY OF PLAYFORD

Dev No: ___ / D ___ / 08

LEGEND

- EXISTING ROAD TO BE CLOSED
- PROPOSED RESERVE

| Issue | Description | Drwn/Ckd. | Date |
|-------|-------------------|-----------|----------|
| 5 | Layout Revised | RIT | 10/08/09 |
| 3 | Layout Revised | SRH | 04/03/09 |
| 3 | Layout Revised | SRH | 23/02/09 |
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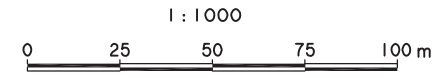
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Adelaide SA 5000
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Fax: (08) 8232 0967

Title
BUCKLAND PARK STAGE 1
Sheet 3 of 4 Sheets

Status
CONCEPT PLAN - DA



| | | | |
|------------|--------|----------|-----|
| Scale (A1) | 1:1000 | Datum | AHD |
| Drawn | RIT | Designed | MP |

| | | |
|--------------------------|-------------|-------|
| Project Code | Drawing No. | Issue |
| 19000/1/8 19000PO2-r5 | 001 | 5 |



100mm On Original A1

LEGEND

- EXISTING ROAD TO BE CLOSED 
- PROPOSED RESERVE 

| Issue | Description | Drwn Ckd. | Date |
|-------|-------------------|-----------|----------|
| 5 | Layout Revised | RIT | 10/08/09 |
| 4 | Layout Revised | SRH | 04/03/09 |
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Title
BUCKLAND PARK STAGE 1
 Sheet 4 of 4 Sheets

Status
CONCEPT PLAN - DA

Scale (A1) 1:1000 Datum AHD

Drawn RIT Designed MP

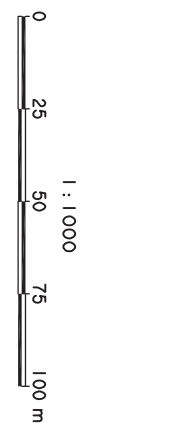
Project Code 19000/1/8 19000PO2-r5 Drawing No. 001 Issue 5



D36246

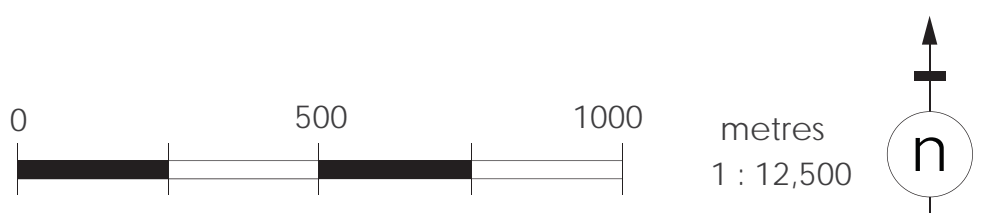
ENLARGEMENT E1
 SCALE AS SHOWN

D63928



LEGEND

- Arterial Road (divided, 2+2)
- - - Sub-Arterial (2 lanes)
- Distributor
- Collector
- - - Emergency Vehicle Access Route
- District Centre
- Neighbourhood Centre
- Local Centre
- School
- Residential - Traditional
- Mixed Use
- Employment
- Open Space
- Floodways
- Subject Area
- DCBD
- Existing Trees



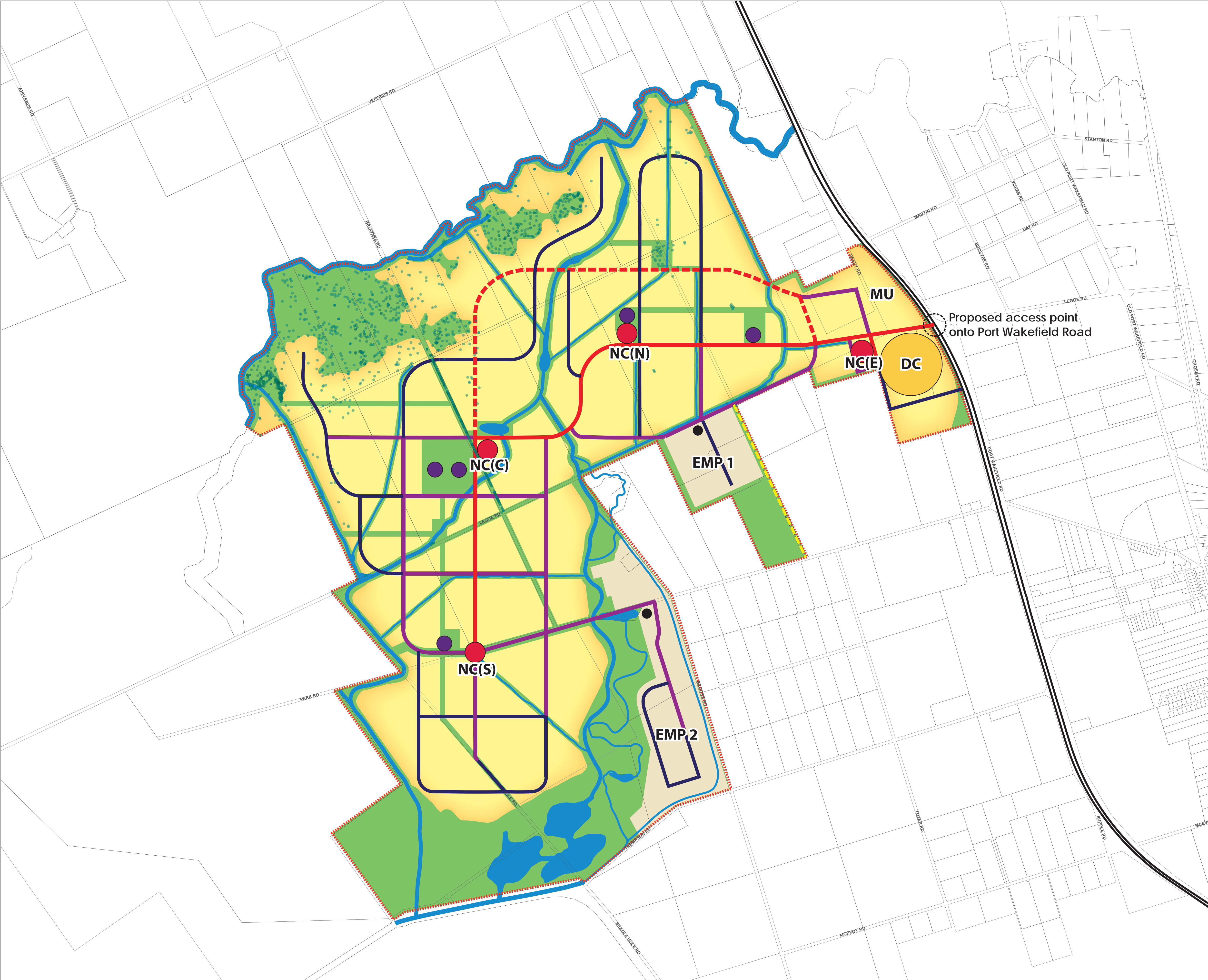
CLIENT:
WALKER CORPORATION

TITLE:
MASTER PLAN

PROJECT:
BUCKLAND PARK

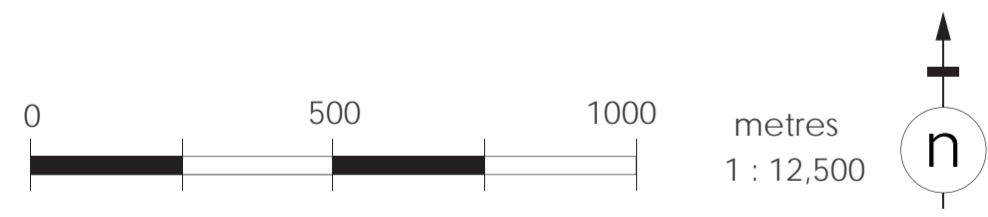
DATE CREATED: 7 AUGUST 2008 PROJECT NUMBER: 992

REVISION: v6 r12 AMENDMENT DATE: 22 SEPTEMBER 2009



LEGEND

- 2010 - 2016
- 2017 - 2021
- 2022 - 2026
- 2027 - 2031
- 2032 - 2036
- Precinct Boundary
- Non Residential Precincts



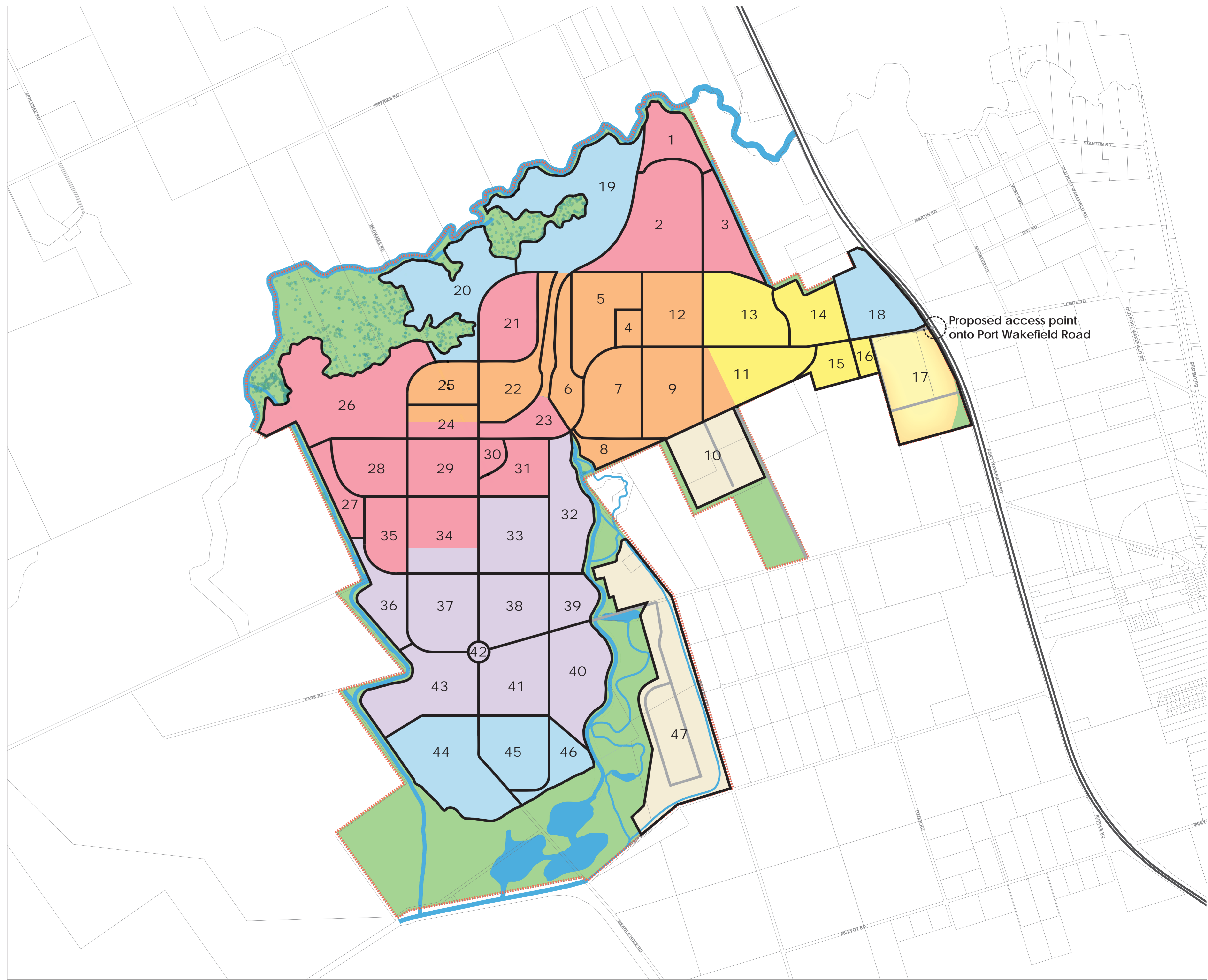
CLIENT:
WALKER CORPORATION

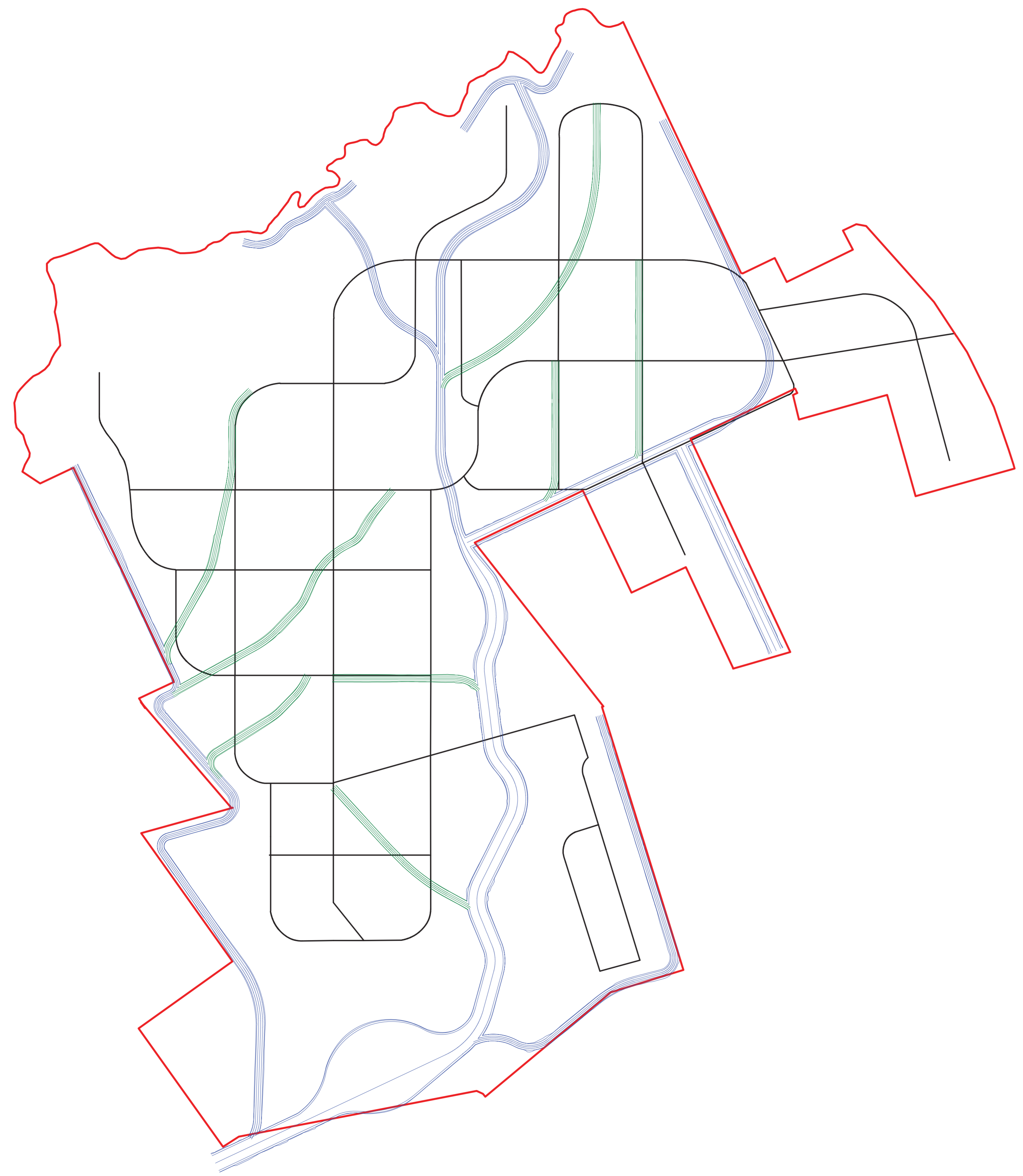
TITLE:
RESIDENTIAL STAGING

PROJECT:
BUCKLAND PARK

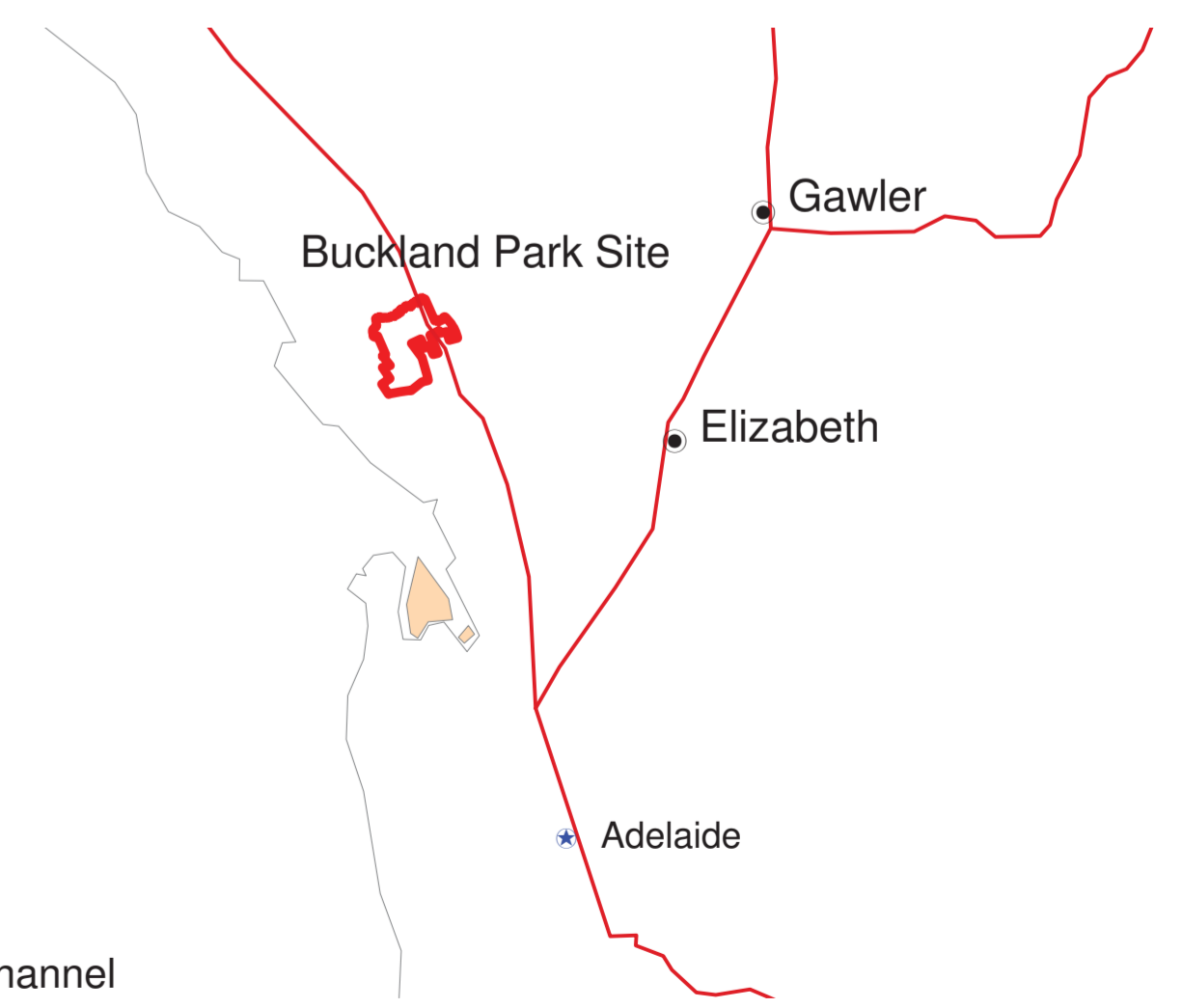
DATE CREATED: 7 AUGUST 2008 PROJECT NUMBER: 992

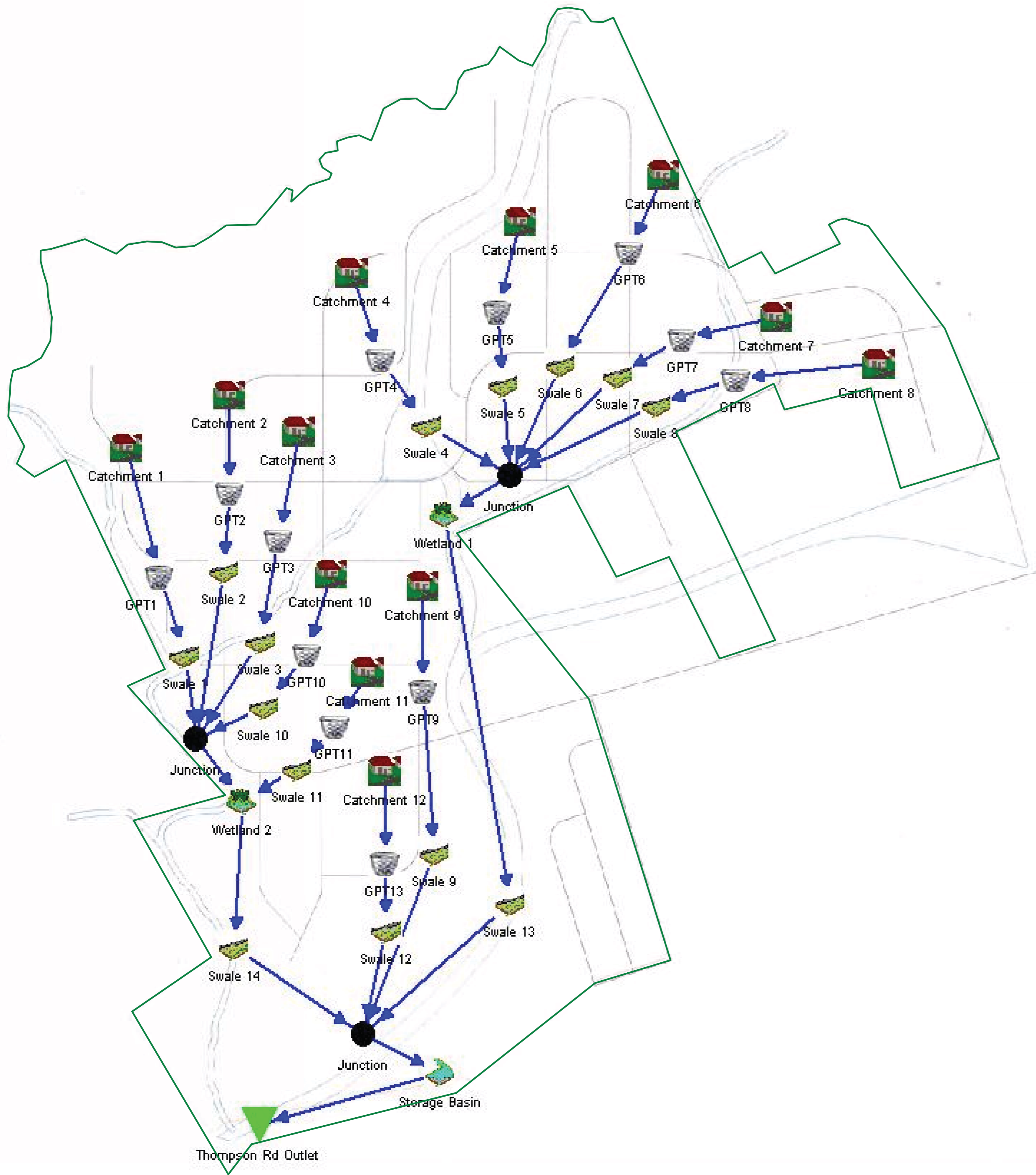
REVISION: v6 r12 AMENDMENT DATE: 22 SEPTEMBER 2009






- LEGEND**
- Drainage Channel
 - Site Boundary
 - Stormwater Open Channel
 - Flood and Stormwater Open Channel





LEGEND

-  Capture/Storage Basin
-  Gross Pollutant Trap
-  Catchment
-  Swale
-  Wetland
-  Direction of Water Flow
-  Site Boundary

LEGEND

----- Pedestrian and Cycling Network



CLIENT:
WALKER CORPORATION

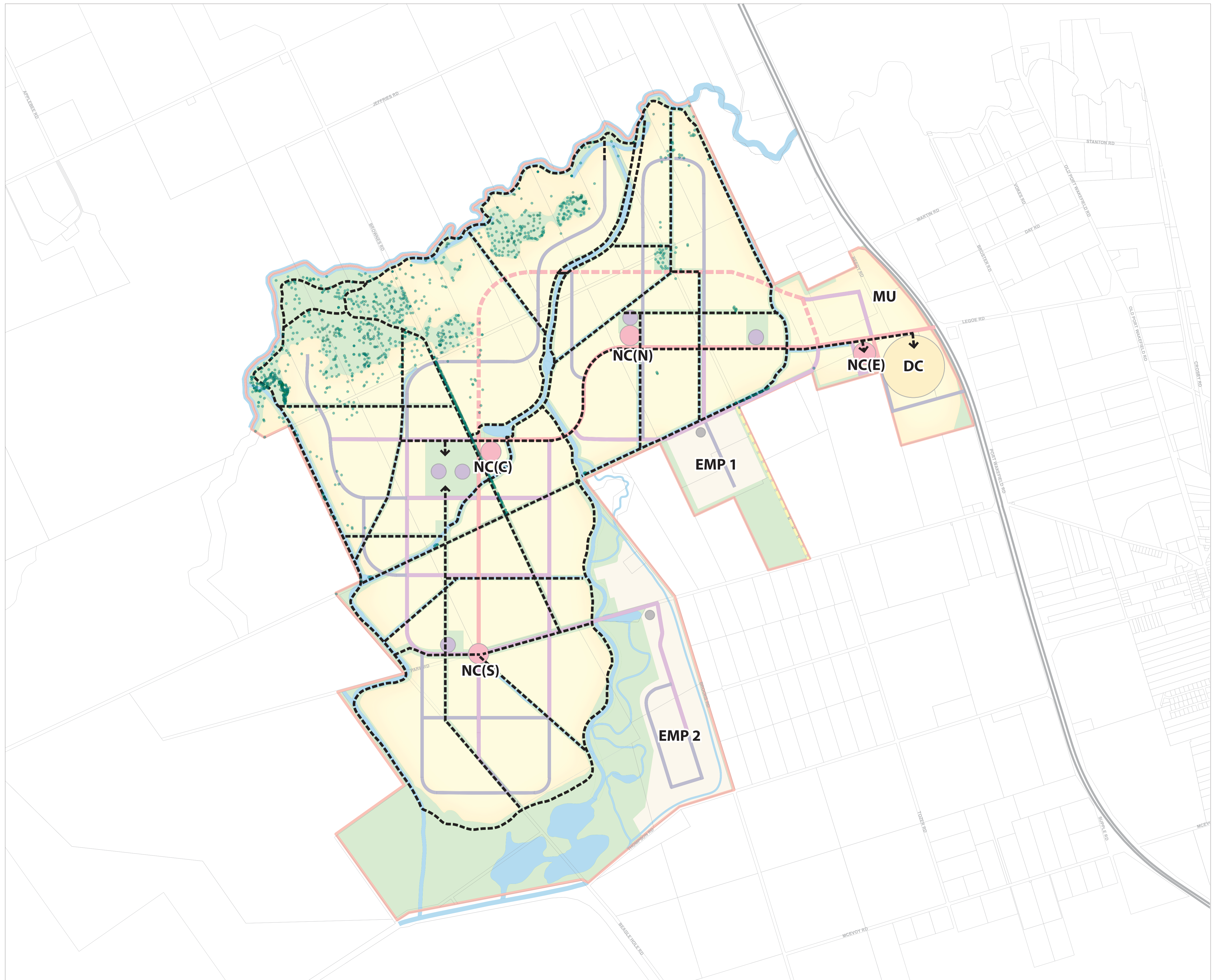
TITLE:
**PEDESTRIAN AND
CYCLING NETWORK**

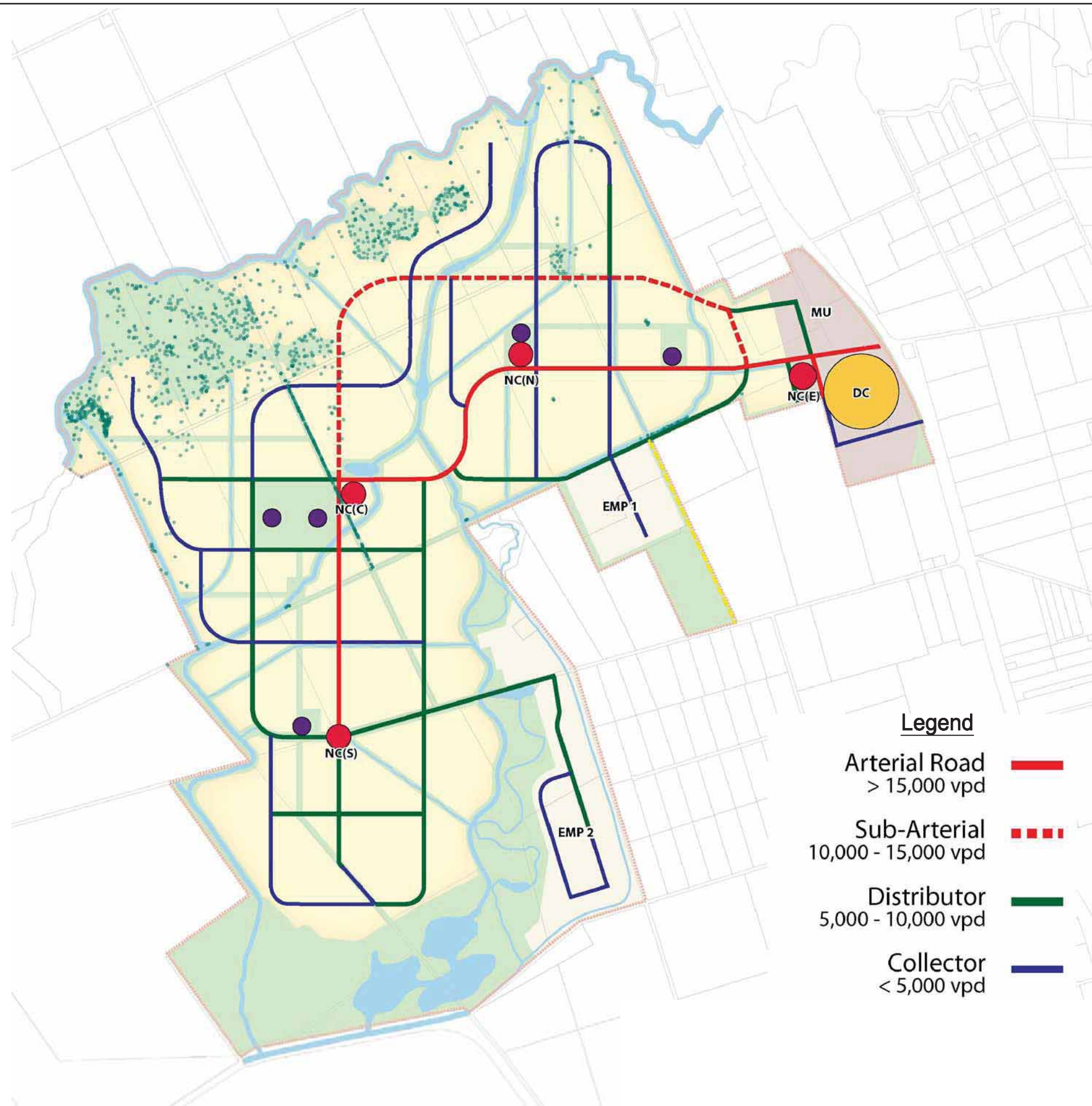
PROJECT:
BUCKLAND PARK

DATE CREATED: 7 AUGUST 2008 PROJECT NUMBER: 992

REVISION: v6 r12 AMENDMENT DATE: 22 SEPTEMBER 2009

**CONNOR
HOLMES**





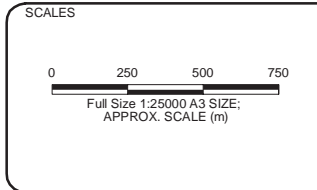
Legend

- Arterial Road
> 15,000 vpd —
- Sub-Arterial
10,000 - 15,000 vpd - - - -
- Distributor
5,000 - 10,000 vpd —
- Collector
< 5,000 vpd —

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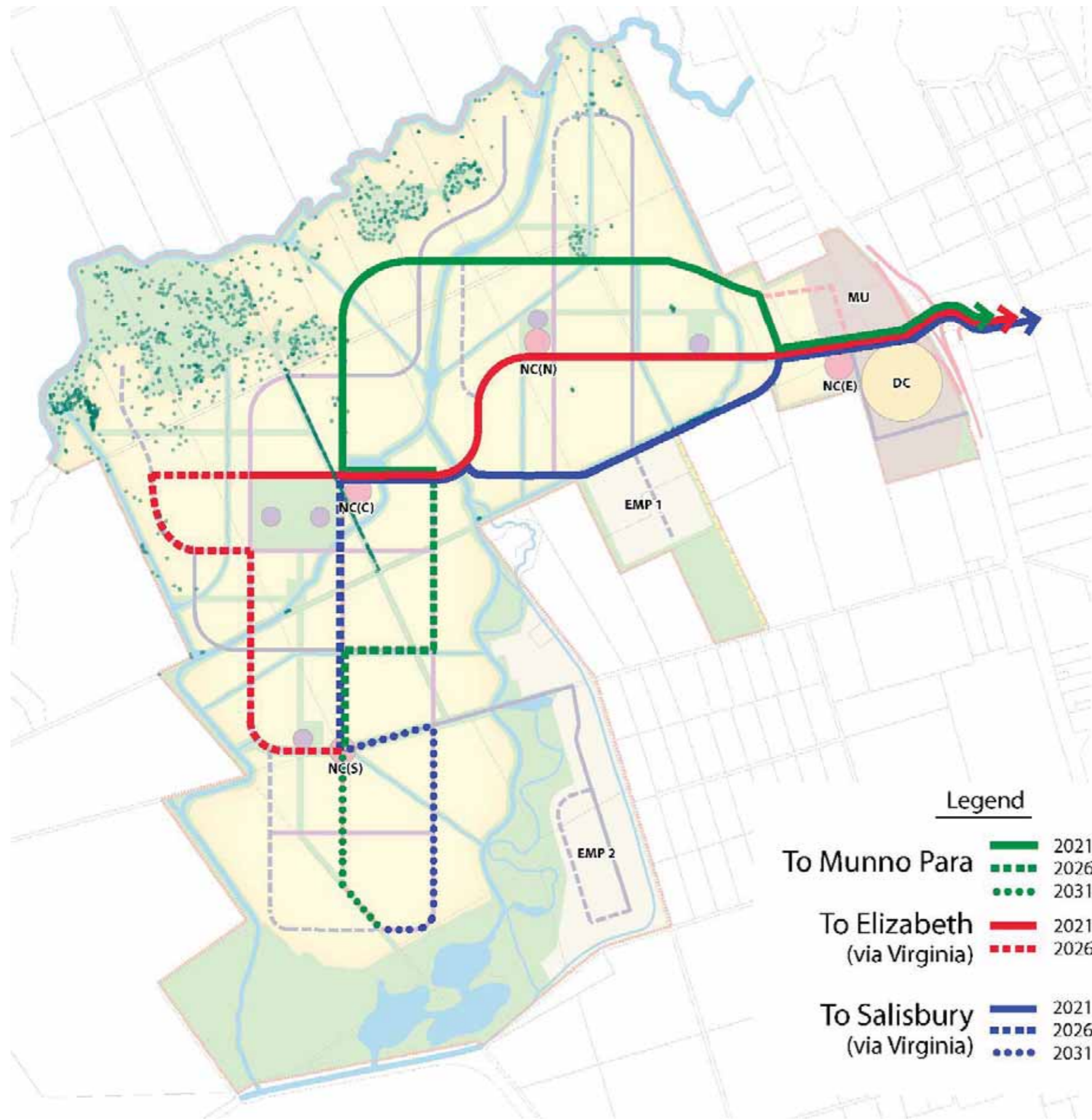
CLIENT

Walker Corporation

PROJECT

BUCKLAND PARK
PROPOSED ROAD HIERARCHY
01 APRIL 2009

| PROJECT No. | DISCIPLINE | NUMBER | REV. |
|-------------|------------|--------|------|
| 2112592A | - FIG - | 0001 | |



Notes:
 Buses to and from Elizabeth and Salisbury to be routed via Virginia to replace existing bus route 900.
 Number of external destinations in 2021 and 2026 dependent on demand and government approval.

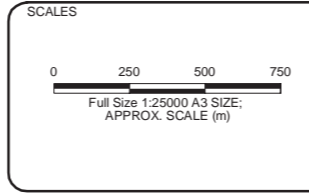
Legend

- To Munno Para
 - 2021 (Solid Green)
 - 2026 (Dashed Green)
 - 2031 (Dotted Green)
- To Elizabeth (via Virginia)
 - 2021 (Solid Red)
 - 2026 (Dashed Red)
- To Salisbury (via Virginia)
 - 2021 (Solid Blue)
 - 2026 (Dashed Blue)
 - 2031 (Dotted Blue)

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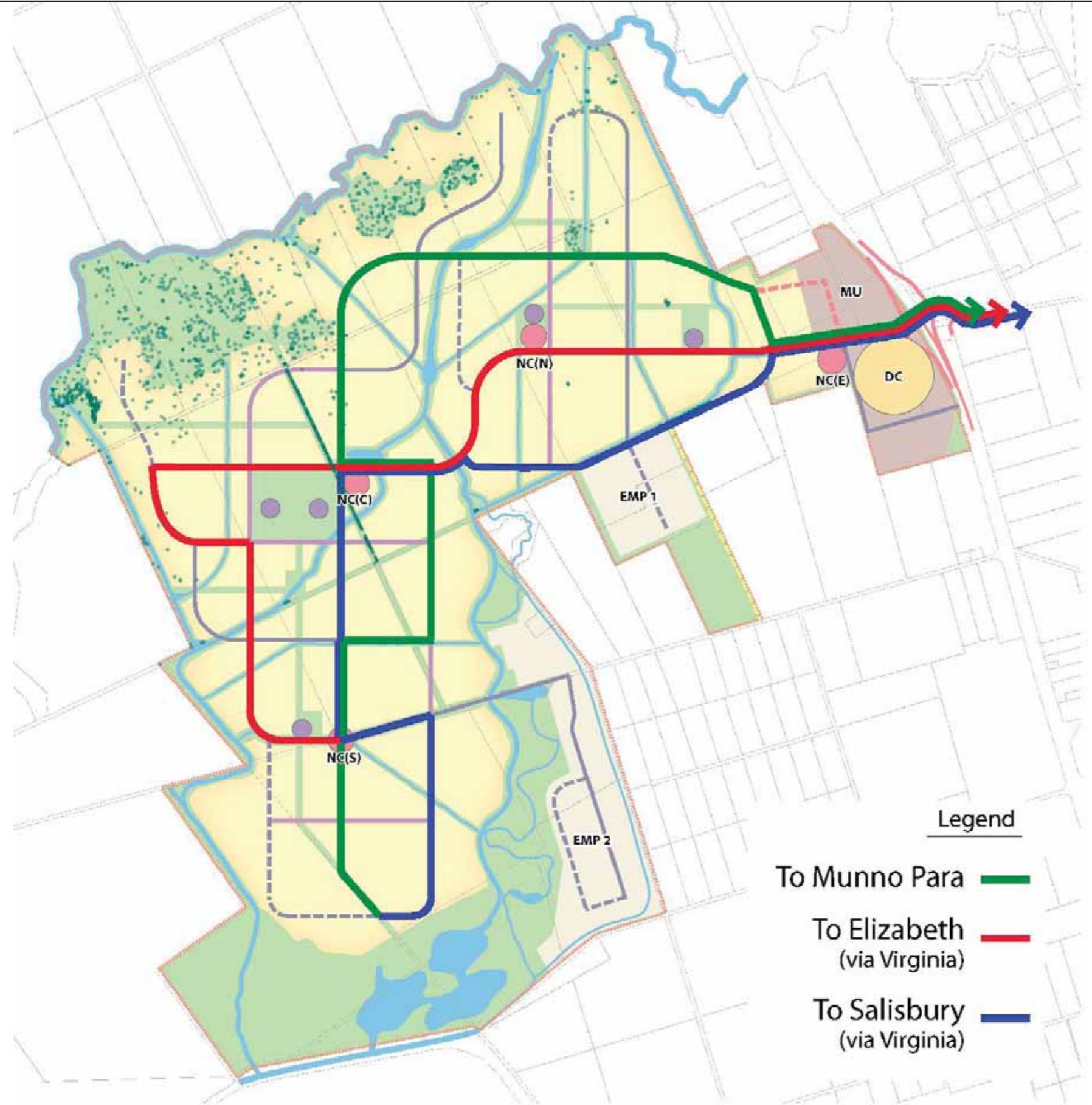
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 Australia

Telephone +61 8 8405 4300
 Facsimile +61 8 8405 4302
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CLIENT

Walker Corporation

| | | | |
|---|------------|--------|------|
| PROJECT | | | |
| BUCKLAND PARK | | | |
| PROPOSED STAGED DEVELOPMENT OF BUS ROUTE STRATEGY 2020 - 2031 01 APRIL 2009 | | | |
| PROJECT No. | DISCIPLINE | NUMBER | REV. |
| 2112592A | - FIG - | 0002 | |



Legend

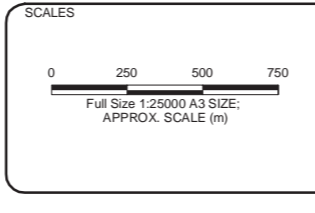
- To Munno Para —
- To Elizabeth (via Virginia) —
- To Salisbury (via Virginia) —

Note: Buses to and from Elizabeth and Salisbury to be routed via Virginia to replace existing bus route 900.

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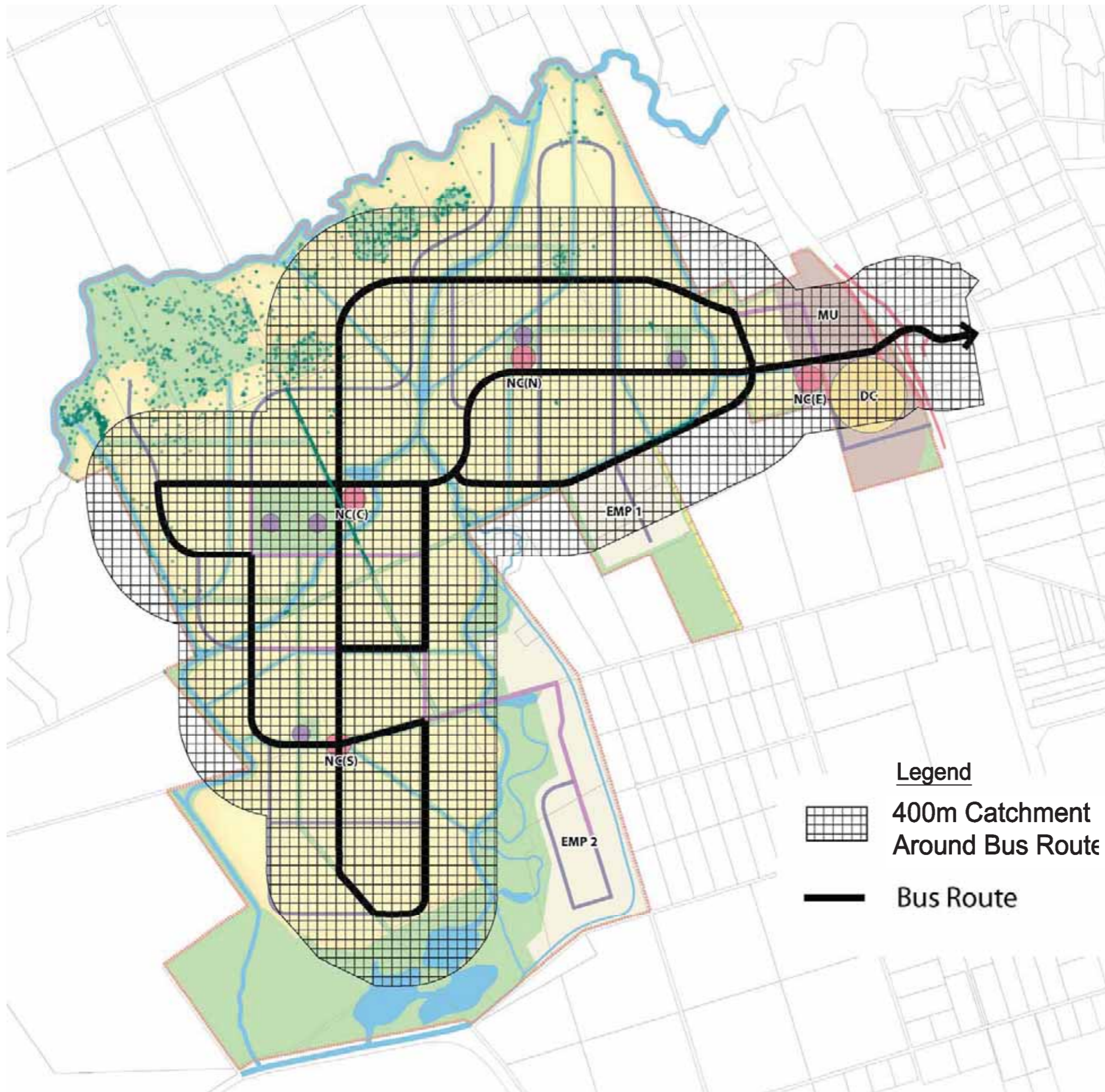
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| | | | |
|--|------------|--------|------|
| PROJECT | | | |
| BUCKLAND PARK PROPOSED BUS ROUTE STRATEGY 2031 01 APRIL 2009 | | | |
| PROJECT No. | DISCIPLINE | NUMBER | REV. |
| 2112592A | - FIG - | 0003 | |



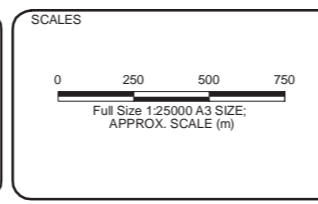
- Legend**
- 400m Catchment Around Bus Route
 - Bus Route

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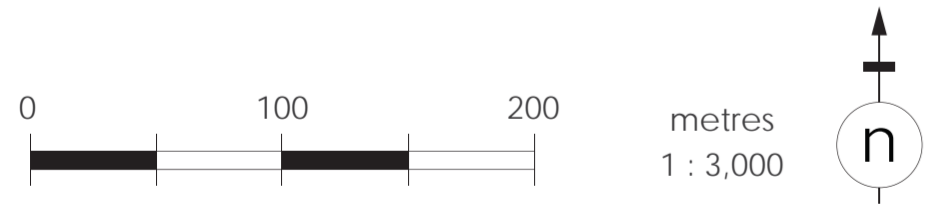
CLIENT

Walker Corporation

| | | | |
|--|------------|--------|------|
| PROJECT | | | |
| BUCKLAND PARK | | | |
| BUS ROUTE CATCHMENT AREA 2031 01 APRIL 2009 | | | |
| PROJECT No. | DISCIPLINE | NUMBER | REV. |
| 2112592A | - FIG - | 0004 | |

LEGEND

| Lot Type | Dwelling Count |
|-------------|----------------|
| Premium | 285 |
| Courtyard | 177 |
| Large Villa | 90 |
| Small Villa | 32 |
| Gatehouse | 30 |
| 614 | TOTAL |



CLIENT: WALKER CORPORATION

TITLE: **STAGE 1 RESIDENTIAL ALLOTMENT MIX**








PROJECT: BUCKLAND PARK

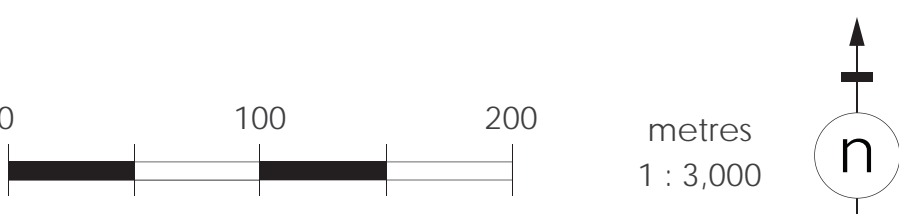
DATE CREATED: 27 JULY 2009 PROJECT NUMBER: 992

REVISION: G AMENDMENT DATE: 22 SEPTEMBER 2009



LEGEND

-  Stormwater Channel
-  Storm and Flood Water Management Channel
-  Display Village
-  Main Entry Boulevard
-  School and Oval
-  Neighbourhood Centre
-  Possible Future Road Connection



CLIENT:
WALKER CORPORATION

TITLE:
**STAGE 1 RESIDENTIAL
LAND USE PLAN**

PROJECT:
BUCKLAND PARK

DATE CREATED: 27 JULY 2009 PROJECT NUMBER: 992

REVISION: G AMENDMENT DATE: 22 SEPTEMBER 2009



LEGEND

----- Pedestrian and Cycling Network



CLIENT:
WALKER CORPORATION

TITLE:
**STAGE 1 RESIDENTIAL
PEDESTRIAN AND CYCLING
NETWORK**

PROJECT:
BUCKLAND PARK

DATE CREATED: 27 JULY 2009 PROJECT NUMBER: 992

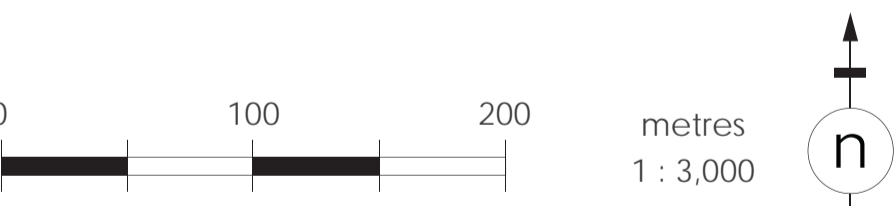
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**CONNOR
HOLMES**



LEGEND

 Areas of Special Fencing Control



CLIENT:
WALKER CORPORATION

TITLE:
**STAGE 1 RESIDENTIAL
SPECIAL FENCING CONTROL**

PROJECT:
BUCKLAND PARK

DATE CREATED: 27 JULY 2009 PROJECT NUMBER: 992

REVISION: G AMENDMENT DATE: 22 SEPTEMBER 2009

**CONNOR
HOLMES**





ROAD D ELEVATION - SALES OFFICE
1:300 @ A3

SITE ANALYSIS

| | |
|--|--------------------|
| SITE AREA | 3.15 ha |
| PHASE 1 | |
| SUPERMARKET | 1500 sq m |
| SPECIALTY SHOPS 1-6 | 600 sq m |
| COMMUNITY SPACE | 200 sq m |
| CARPARKING - 200 car spaces | 6000 sq m |
| TOWN SQUARE | 500 sq m |
| SALES OFFICE (2 levels 450 sq m total floor area) | 225 sq m |
| Sub-total | 9,025 sq m |
| PHASE 2 | |
| SUPERMARKET | 1000 sq m |
| SPECIALTY SHOPS 7-10 | 400 sq m |
| COMMUNITY SPACE | 200 sq m |
| Sub-total | 1600 sq m |
| TOTAL | 10,625 sq m |
| NEIGHBOURHOOD CENTRE EXTENSION SITE AREA | |
| -CHILDCARE CENTRE | |
| -RESIDENTIAL | |
| -PRIVATE RECREATIONAL | 10,500 sq m |
| OPEN SPACE | 10,375 sq m |
| TOTAL NEIGHBOURHOOD CENTRE | 31,500 sq m |



PLAN - NEIGHBOURHOOD CENTRE 1:1000 @ A3

NEIGHBOURHOOD CENTRE EXTENSION AREA

10,500 sq m

POTENTIAL

- CHILDCARE CENTRE
- RESIDENTIAL
- PRIVATE RECREATION



ELEVATION - STAGE 1 & STAGE 2

1:300 @ A3



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www.walkercorp.com.au

Buckland Park - CONCEPT NEIGHBOURHOOD CENTRE

OPEN SPACE by -
swanbury penglase
architects of human space

| | | | |
|-------------|----------------------|-------------------|-------------------------|
| drawn GC | scale 1:1000 @ A3 | date Feb. 2009 | drawing no. CMS - 01 |
|-------------|----------------------|-------------------|-------------------------|





Buckland Park - DISPLAY VILLAGE LOCATION



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 Level 50, Governor Phillip Tower, 1 Farrer Place, Sydney NSW 2000
 Telephone (02) 8273 9600 Facsimile (02) 9252 7400
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OPEN SPACE by -
swanbury penglase
 architects of human space


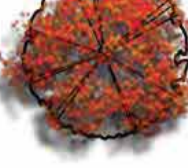















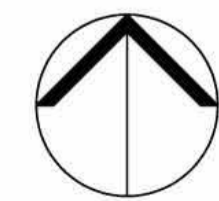
| | | | |
|-------------|----------------------|-------------------|-------------------------|
| drawn GC | scale 1:1500 @ A3 | date Feb. 2009 | drawing no. CMS - 02 |
|-------------|----------------------|-------------------|-------------------------|





PLAN SCALE 1:500 @A1

- LEGEND**
-  PROPOSED EVERGREEN TREE
 -  PROPOSED DECIDUOUS TREE
 -  PROPOSED GARDEN BED
 -  PROPOSED IRRIGATED GRASS
 -  PROPOSED NON-IRRIGATED GRASS
 -  PROPOSED GRAVEL
 -  PROPOSED RAINGARDEN/
BIORETENTION SWALE
 -  PERMANENT WATER FEATURE
 -  EPHEMERAL WETLAND
 -  EPHEMERAL SWALE
 -  PROPOSED FEATURE PAVING
 -  FEATURE WALL
 -  TIMBER DECK
 -  FEATURE MOUNDING
 -  SHADE SHELTER





Legend

- ▭ Site Boundary
- ▭ Open Space
- ▭ Vegetation Potentially Affected (Ha)
- ▭ Vegetation in Open Space (Ha)
- ▭ Gawler River Corridor Rehabilitation (Ha)
- ▭ *Atriplex paludosa* +/-
Halosarcia pergranulata +
Suaeda and *Galenia*
- ▭ Blackbox Woodland
- ▭ *Atriplex Paludosa* +/-
Halosarcia Pergranulata Low
Shrubland (intact stratum)
- ▭ *Maireana Aphylla*
Low Shrubland
- ▭ River Redgum +/-
Black box (intact stratum)

| 0 | ISSUED FOR REVIEW | KXJ | RAF | 25/09/09 | |
|-------|-------------------|------|-----|----------|------|
| Issue | Description | Drwn | Ckd | Appd | Date |

Client



Walker Corporation Pty Ltd
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 Web walkercorp.com.au

Surveyor



FYFE PTY LTD
 143 Fullarton Road
 Rose Park SA 5067
 Tel: (08) 8364 1000
 Fax: (08) 8364 0904

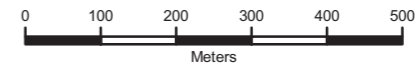
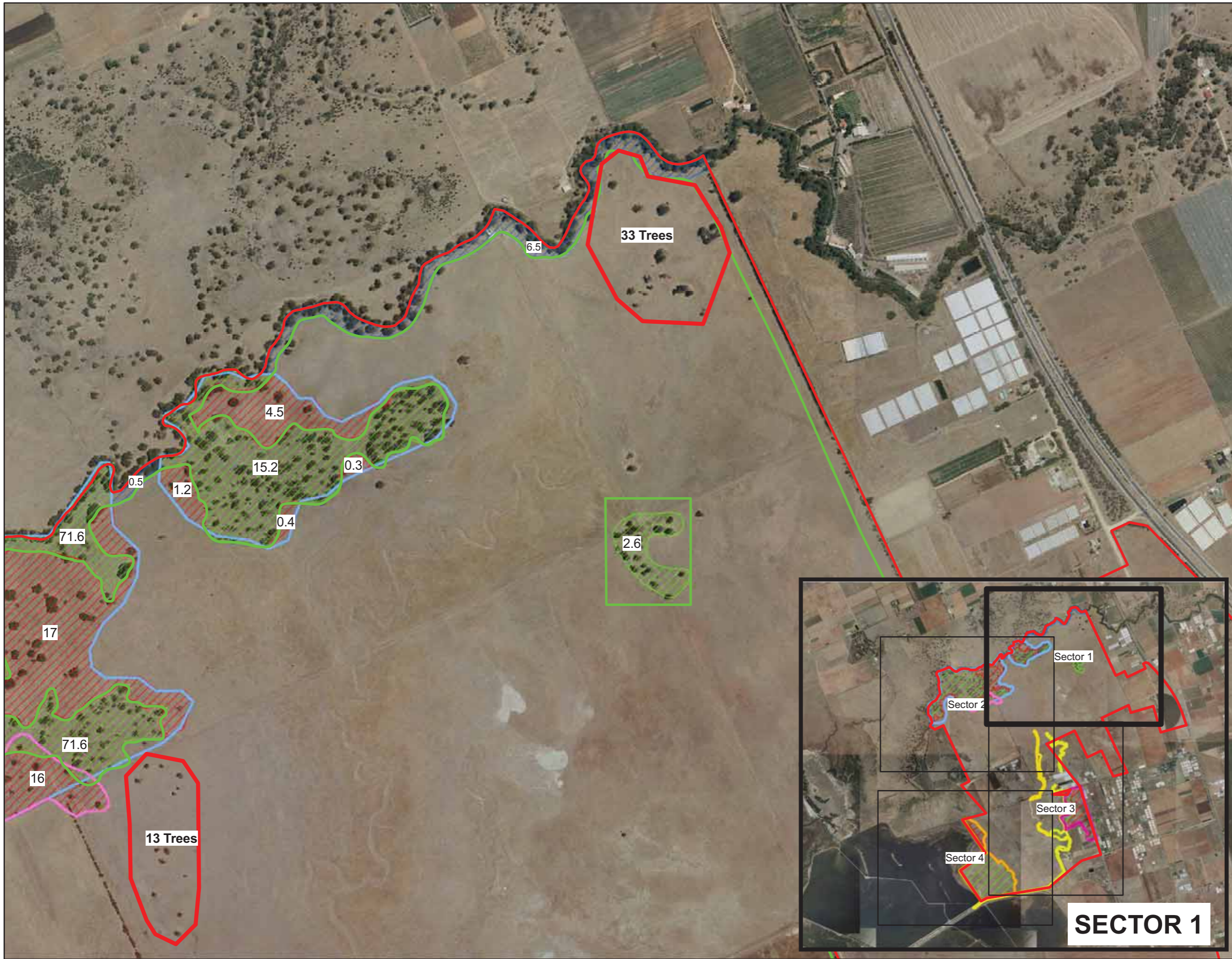
Title
**Buckland Park Master Plan
(Version 6)**

Status
Flora Constraints

Scale (A1) 1 : 10,000 Datum GDA 94

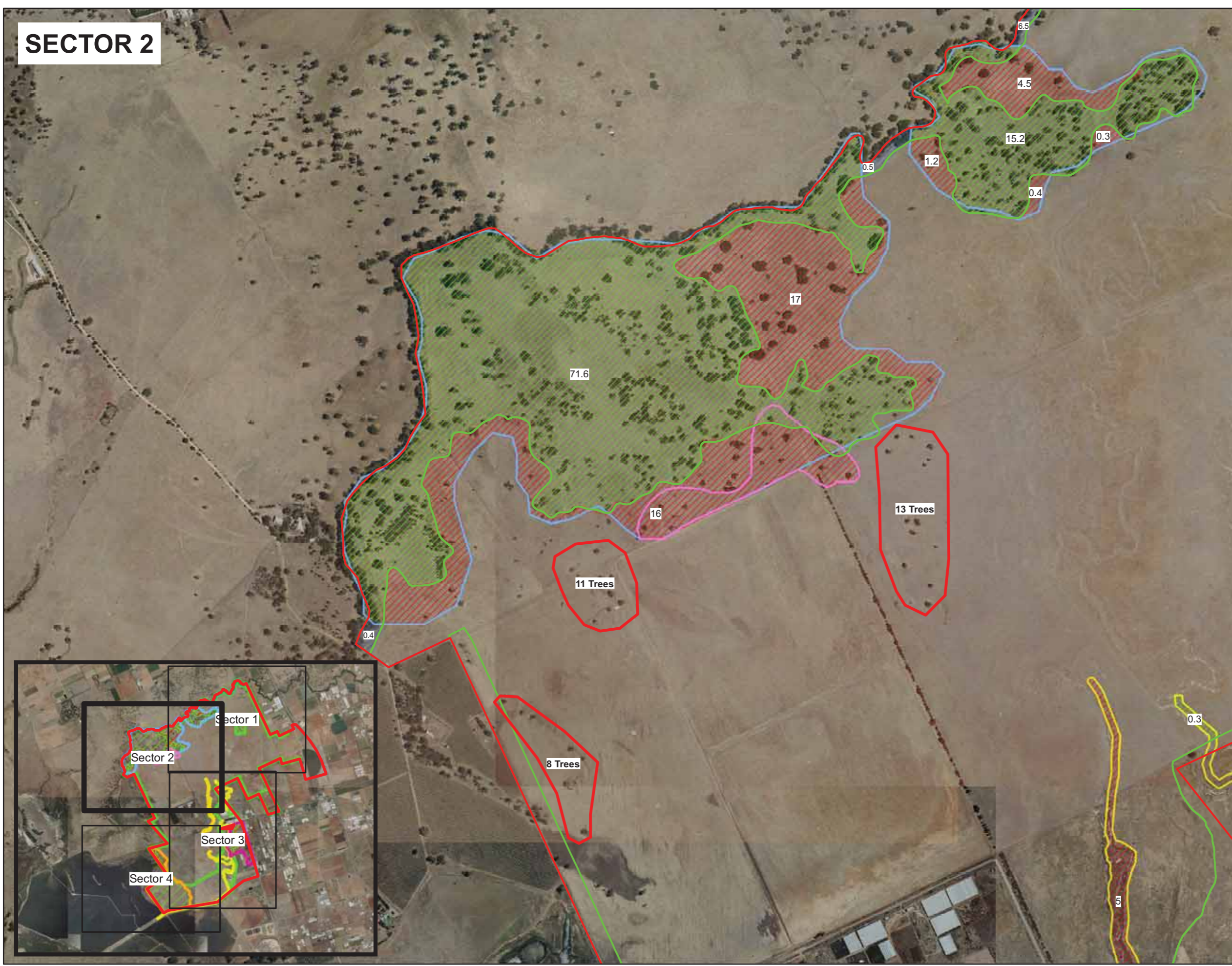
Drawn KXJ Designed

Project Code Drawing No. Issue
0



100mm On Original A1

SECTOR 2



CITY OF PLAYFORD

- Legend**
- Site Boundary
 - Open Space
 - Vegetation Potentially Affected (Ha)
 - Vegetation in Open Space (Ha)
 - Gawler River Corridor Rehabilitation (Ha)
 - Atriplex paludosa* +/- *Halosarcia pergranulata* + *Suaeda* and *Galenia*
 - Blackbox Woodland
 - Atriplex Paludosa* +/- *Halosarcia Pergranulata* Low Shrubland (intact stratum)
 - Maireana Aphylla* Low Shrubland
 - River Redgum* +/- *Black box* (intact stratum)

| | | | | |
|---|-------------------|-----|-----|----------|
| 0 | ISSUED FOR REVIEW | KXJ | RAF | 25/09/09 |
|---|-------------------|-----|-----|----------|

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Title

**Buckland Park Master Plan
(Version 6)**

Status

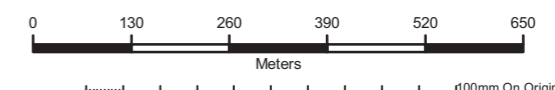
Flora Constraints

Scale (A1) 1 : 10,000 Datum GDA 94

Drawn KXJ Designed

Project Code Drawing No. Issue

0





CITY OF PLAYFORD

Legend

- Site Boundary
- Open Space
- Vegetation Potentially Affected (Ha)
- Vegetation in Open Space (Ha)
- Gawler River Corridor Rehabilitation (Ha)
- Atriplex paludosa +/- Halosarcia pergranulata + Suaeda and Galenia
- Blackbox Woodland
- Atriplex Paludosa +/- Halosarcia Pergranulata Low Shrubland (intact stratum)
- Maireana Aphylla Low Shrubland
- River Redgum +/- Black box (intact stratum)

| | | | | |
|---|-------------------|-----|-----|----------|
| 0 | ISSUED FOR REVIEW | KXJ | RAF | 25/09/09 |
|---|-------------------|-----|-----|----------|

| Issue | Description | Drawn | Ckd. | Appd. | Date |
|-------|-------------|-------|------|-------|------|
| | | | | | |

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Title

**Buckland Park Master Plan
(Version 6)**

Status

Flora Constraints

Scale (A1) 1 : 10,000 Datum GDA 94

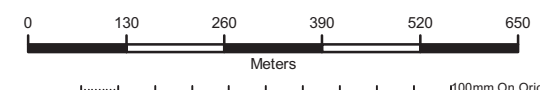
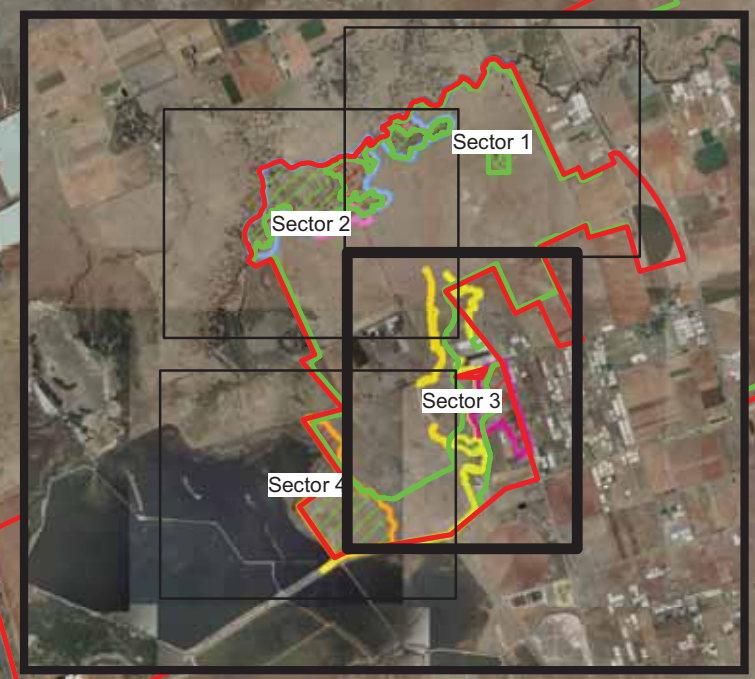
Drawn KXJ Designed

Project Code Drawing No. Issue

0



SECTOR 3





CITY OF PLAYFORD

Legend

- Site Boundary
- Open Space
- Vegetation Potentially Affected (Ha)
- Vegetation in Open Space (Ha)
- Gawler River Corridor Rehabilitation (Ha)
- Atriplex paludosa* +/-
Halosarcia pergranulata +
Suaeda and *Galenia*
- Blackbox Woodland
- Atriplex Paludosa* +/-
Halosarcia Pergranulata Low
Shrubland (intact stratum)
- Maireana Aphylla*
Low Shrubland
- River Redgum* +/-
Black box (intact stratum)

| 0 | ISSUED FOR REVIEW | KXJ | RAF | 25/09/09 |
|-------|-------------------|-------|------|----------|
| Issue | Description | Drwn. | Ckd. | Appd. |

Client

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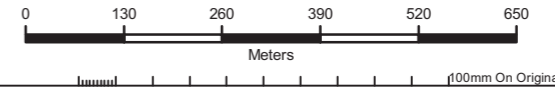
Surveyor

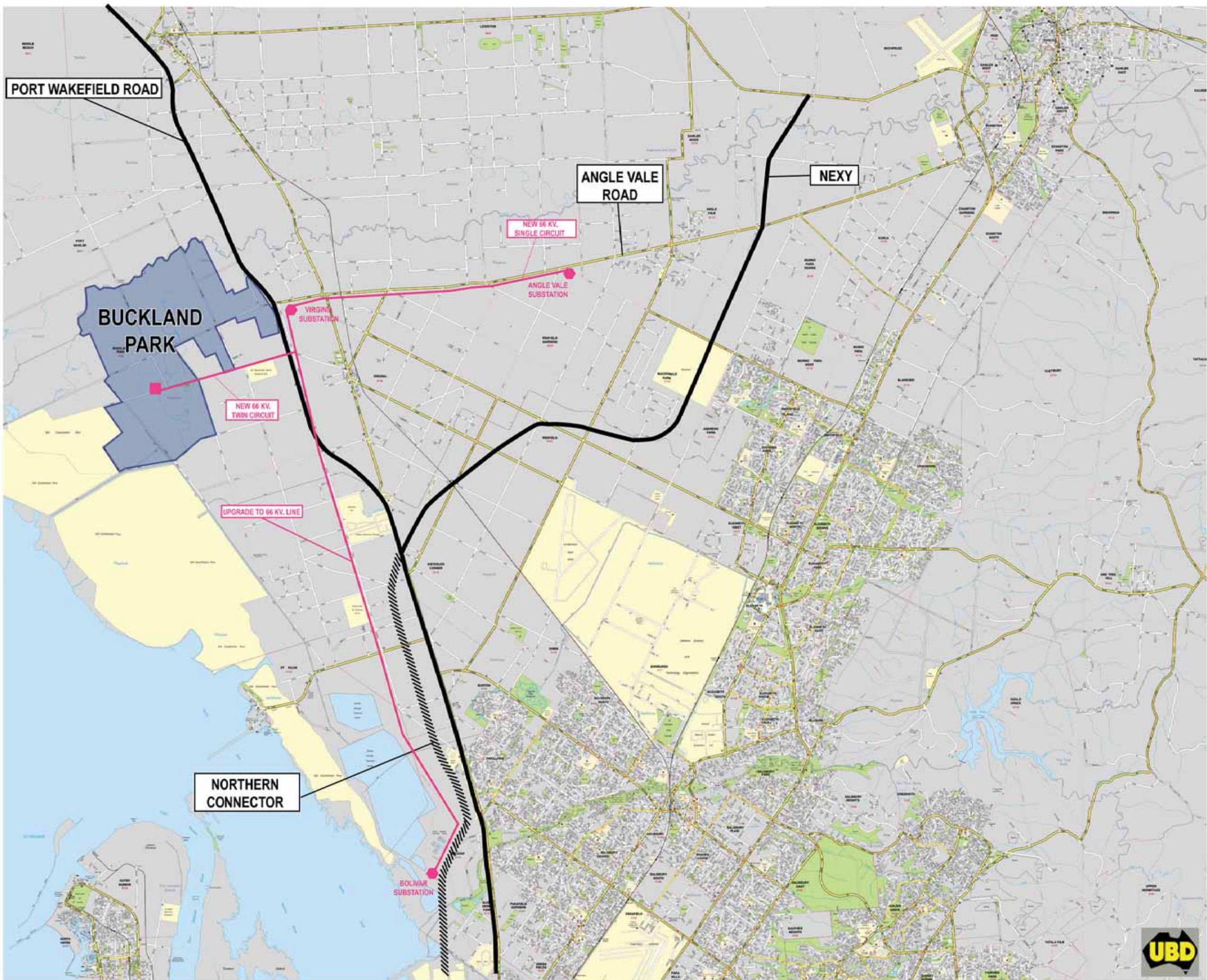
FYFE PTY LTD
 143 Fullarton Road
 Rose Park SA 5067
 Tel: (08) 8364 1000
 Fax: (08) 8364 0904

Title
**Buckland Park Master Plan
(Version 6)**

Status
Flora Constraints

| | |
|-----------------------|--------------|
| Scale (A1) 1 : 10,000 | Datum GDA 94 |
| Drawn KXJ | Designed |
| Project Code | Issue 0 |





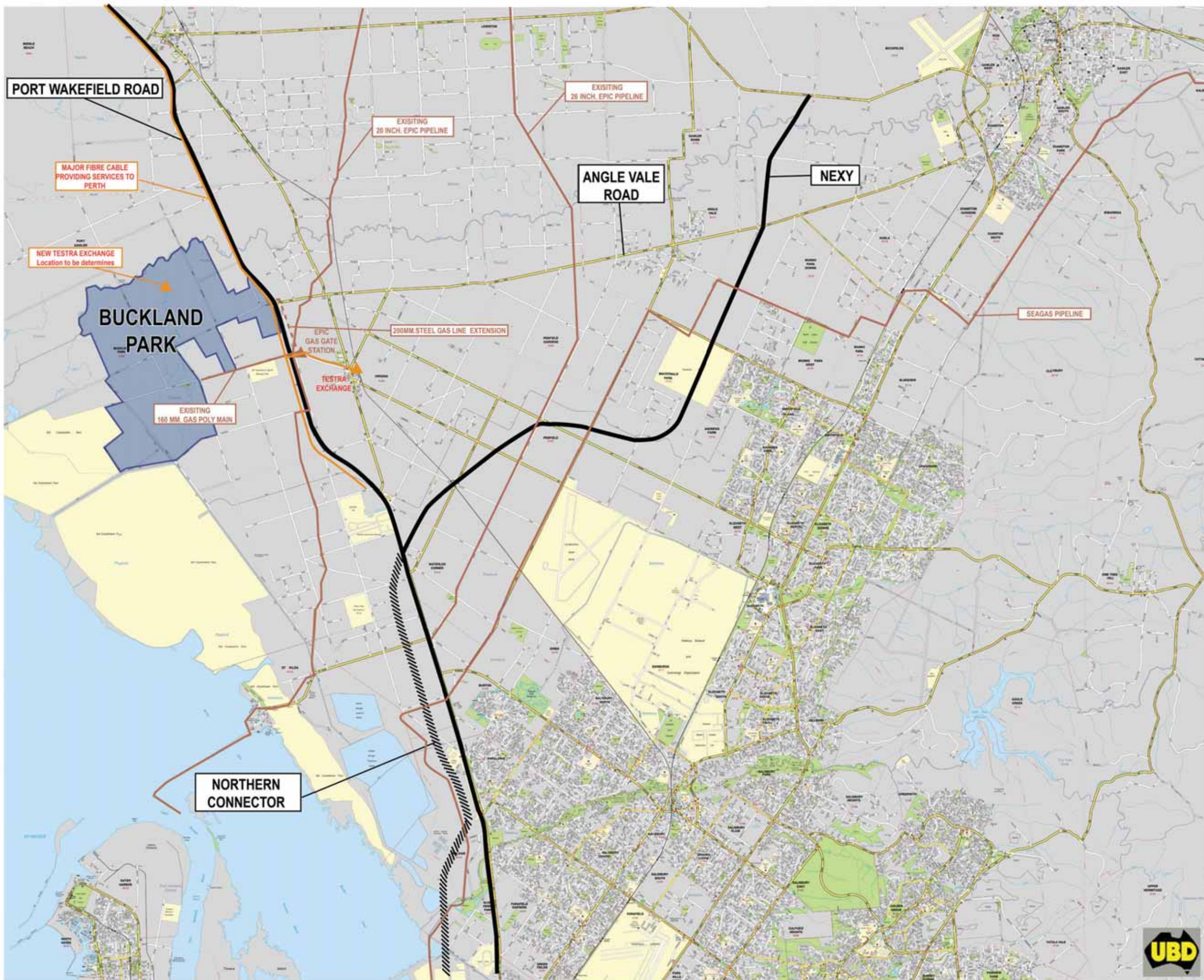
SITE
 New Substation
 Existing Substation
 Electricity Line

BUCKLAND PARK ELECTRICITY INFRASTRUCTURE

SCALE APPROX 1 : 11,000 @ A3

FEBRUARY 2009



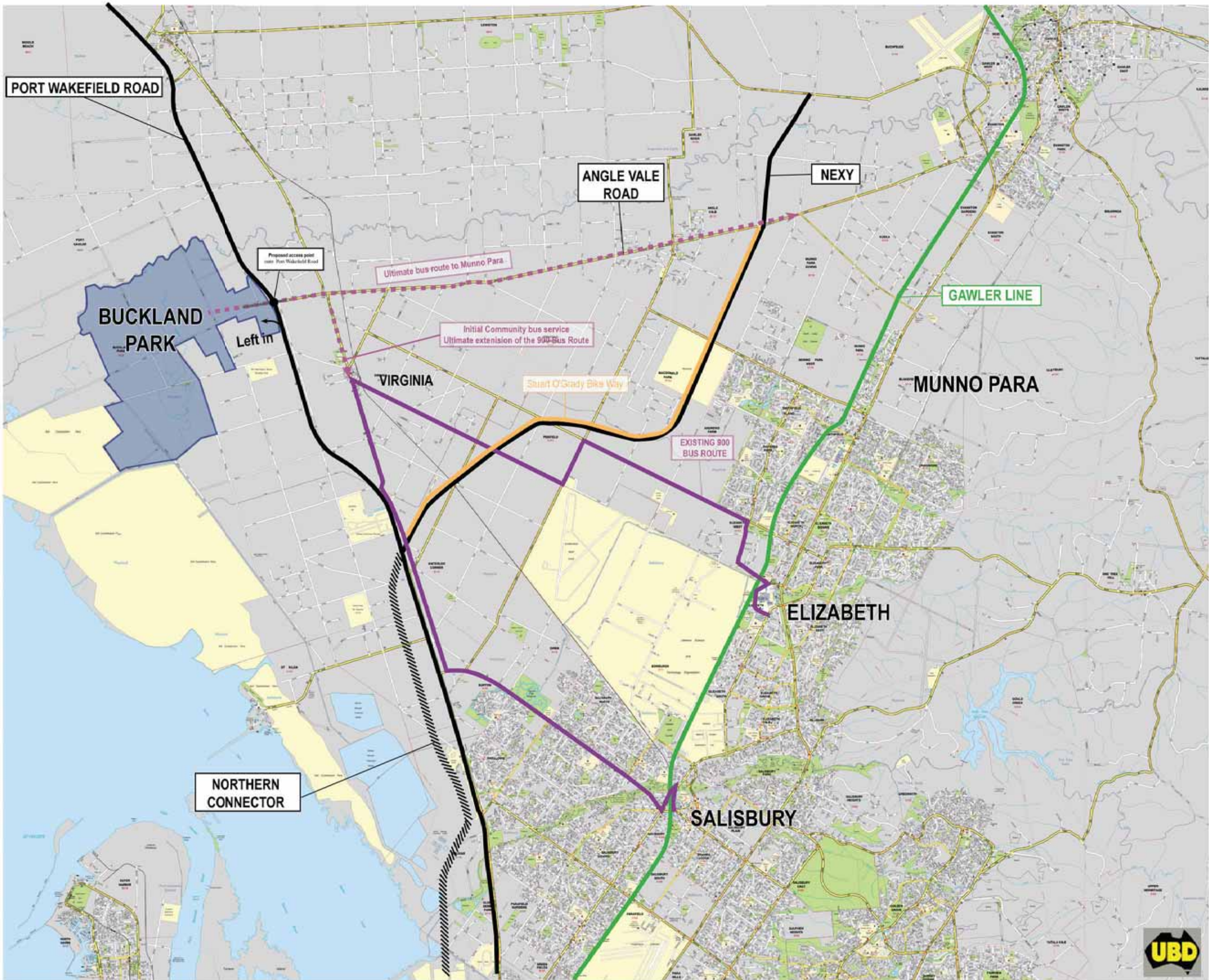


BUCKLAND PARK REGIONAL GAS AND TELSTRA

SCALE APPROX 1 : 11,000 @ A3

FEBRUARY 2009





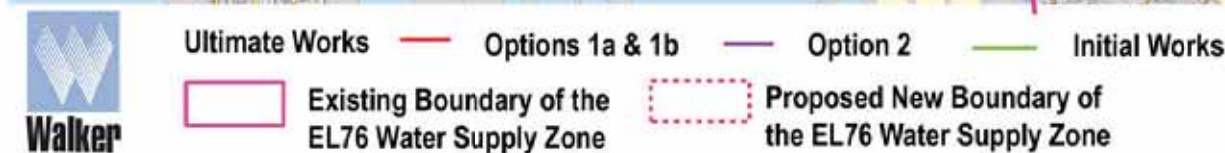
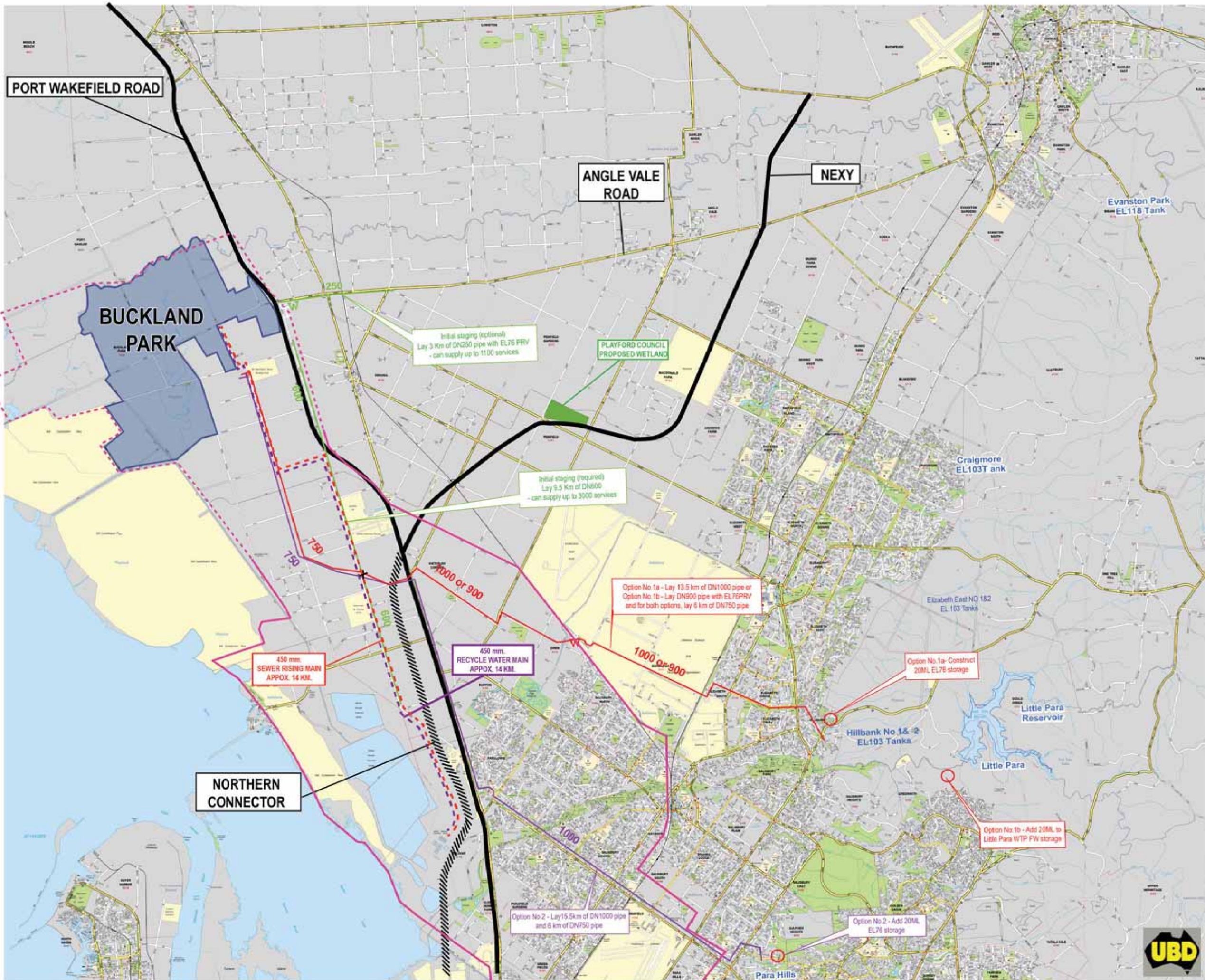
ROAD
 BUS ROUTES
 RAIL

BUCKLAND PARK REGIONAL TRANSPORT INFRASTRUCTURE

SCALE APPROX 1 : 11,000 @ A3

FEBRUARY 2009





BUCKLAND PARK REGIONAL WATER INFRASTRUCTURE

SCALE APPROX 1 : 11,000 @ A3

FEBRUARY 2009

