



## APPLICATION ON NOTIFICATION – IMPACT ASSESSED DEVELOPMENT

<b>Type of development:</b>	Section 114 of the <i>Planning, Development and Infrastructure Act 2016</i> : variation to a previously approved Major Development and current development authorisation, with an amendment to the Environmental Impact Statement (EIS).
<b>Applicant:</b>	Walker Buckland Park Developments Pty Ltd
<b>Nature of Development:</b>	Revised stormwater and flood mitigation strategy comprising a saltwater lake system, a revised road network pattern, land division layout and staging plan, and related infrastructure for Precinct 2.
<b>Subject Land:</b>	Riverlea Boulevard, Legoe Road, Port Wakefield Road Riverlea Park
<b>Original Development Authorisation:</b>	4 February 2010
<b>Current Development Authorisation:</b>	28 April 2023
<b>Contact Officer:</b>	Greg Ahrens
<b>Phone Number:</b>	(08) 7133 2361
<b>Consultation Start Date:</b>	14 June 2023
<b>Consultation Close Date:</b>	26 July 2023
<p><b>During the notification period, the application documentation can be viewed on the SA Planning Portal: <a href="https://plan.sa.gov.au/en/state_developments">https://plan.sa.gov.au/en/state_developments</a>.</b></p>	

Written representations must be received by the close date (indicated above) and can either be posted, hand-delivered, or emailed to the Department. An online submission form is also available on the Plan SA website (from link above).

**Any representations received after the close date will not be considered.**

Postal Address:

Minister for Planning  
Attention: Robert Kleeman, Manager -Crown and Impact Assessment  
Planning and Land Use Services  
Department for Trade and Investment  
GPO Box 1815 ADELAIDE SA 5000

Street Address:

Planning and Land Use Services  
Level 9, 83 Pirie Street  
ADELAIDE SA 5001

\*\*Please call 1800 752 664 (Plan SA Help desk) beforehand to confirm access and visitation arrangements.

Email Address: [spcreps@sa.gov.au](mailto:spcreps@sa.gov.au)



## **PLANNING, DEVELOPMENT AND INFRASTRUCTURE ACT 2016**

### **BUCKLAND PARK 'RIVERLEA' (TOWNSHIP) DEVELOPMENT – RIVERLEA PARK**

#### **RELEASE OF AN AMENDMENT TO THE EIS FOR PUBLIC COMMENT**

The Buckland Park Township development (now known as Riverlea) was granted a provisional Development Authorisation by the Governor of South Australia on 4 February 2010. The development was assessed and determined under the former *Development Act 1993* (having previously undergone an Environmental Impact Statement (EIS) level of assessment).

Pursuant to Section 114(2)(b) of the *Planning, Development and Infrastructure Act 2016*, **Walker Buckland Park Developments Pty Ltd** has lodged a request with the Minister for Planning for a variation to their current development authorisation seeking an amendment to the EIS.

The amendment seeks to introduce a revised stormwater and flood mitigation strategy comprising a saltwater lake system, a revised road network pattern, land division layout and staging plan, and related infrastructure for Precinct 2.

The proponent has prepared an Amendment to the EIS, which is now released for public consultation from 14 June 2023 until 26 July 2023.

#### **Obtaining a copy of the Amendment to the EIS**

The Amendment to the EIS is available online, without cost, via the following link: [plan.sa.gov.au/en/state\\_developments](http://plan.sa.gov.au/en/state_developments)

Hard copies are available for viewing at the locations listed below:

- Planning and Land Use Services,  
Department for Trade and Investment,  
Level 9, 83 Pirie Street, Adelaide.  
Please call 1800 752 664 (Plan SA Help desk) beforehand to confirm access and visitation arrangements to our Pirie Street offices.
- City of Playford - Playford Civic Centre  
10 Playford Blvd, Elizabeth.

Upon request from Plan SA, hard copies can also be purchased for \$150.

The full background to the Buckland Park development is available online:

[plan.sa.gov.au/development\\_applications/state\\_development/impact-assessed-development/majors/major\\_projects/majors/buckland\\_park\\_township](http://plan.sa.gov.au/development_applications/state_development/impact-assessed-development/majors/major_projects/majors/buckland_park_township)

#### **Submissions**

Public submissions on the Amendment to the EIS are invited until 26 July 2023.

Online submissions can be made using the electronic submission form available at [plan.sa.gov.au/en/state\\_developments](http://plan.sa.gov.au/en/state_developments)

**Written submissions** should be addressed to:

Minister for Planning  
Attention: Robert Kleeman, Manager -  
Crown and Impact Assessment  
Planning and Land Use Services  
Department for Trade and Investment  
GPO Box 1815 ADELAIDE SA 5000

Or via email to: [spreps@sa.gov.au](mailto:spreps@sa.gov.au)

Public submissions will be made available to the proponent to prepare a Response Document, with redacted submission details released for public information at a later date.

#### **Next Steps**

Following submission of the Response Document, an Amendment to the Assessment Report will be prepared by the State Planning Commission, which would then be provided to the Minister for Planning for consideration and decision on the proposed changes.

# RIVERLEA MAJOR DEVELOPMENT

## DEVELOPMENT APPLICATION AMENDMENT TO THE EIS

### **Principally – Alteration to the Precinct 2 Subdivision:**

Altered stormwater and floodwater mitigation strategy

Altered road network pattern and subdivision layout

Altered Precinct Staging Plan

### *RIVERLEA, RIVERLEA PARK*

APRIL 2023

PREPARED BY WALKER BUCKLAND PARK DEVELOPMENTS PTY LTD

PO BOX 3665, ADELAIDE SA 5000

LEVEL 2, 2 KING WILLIAM STREET, ADELAIDE SA 5000

---

**We acknowledge the Traditional Owners of the many lands on which we live and work. We pay respect to First Nations Elders past and present and thank them for their continuing care of Country, culture and community.**

---

This document has been prepared by:

Patrick Mitchell  
Principal Planner, Walker Corporation

Reproduction of this document or any part thereof is prohibited without prior permission from Walker Corporation Pty Ltd.

<b>Version No.</b>	<b>Date of Issue</b>	<b>Revision</b>	<b>Prepared &amp; approved by</b>
Final	December 2022	1	Patrick Mitchell
Final	April 2023	2	Patrick Mitchell

# Contents

---

<b>Executive Summary</b> .....	<b>1</b>
<b>1.0 Introduction</b> .....	<b>3</b>
Background .....	3
Objectives for the altered design .....	5
The Proponent .....	5
Staging and timing .....	6
Legislation.....	7
<b>2.0 EIS Amendment Process &amp; Guidelines</b> .....	<b>9</b>
EIS Amendment Process .....	9
Guidelines.....	10
Water Management and the Riverlea Lakes .....	10
Traffic Management .....	11
Environment .....	11
Economics.....	12
Need and objectives of the altered proposal .....	12
Infrastructure .....	14
Urban Design .....	14
Effects on Communities .....	14
Risk Hazard & Construction Effects .....	15
Legislation.....	15
<b>3.0 Current Status</b> .....	<b>17</b>
Residential Land Releases .....	17
Road Closures.....	18
Planning, Development and Infrastructure Act 2016 – Planning & Design Code Assessment .....	18
Riverlea Park .....	18
Convenience Shopping Precinct .....	19
Riverlea Sales and Discovery Centre .....	20
<b>4.0 Location, existing environment &amp; nature of the proposal</b> .....	<b>22</b>
Location.....	22
Existing environment .....	23
Nature of the Proposal.....	24
<b>5.0 The EIS Amendment</b> .....	<b>26</b>
The Revised Stormwater and Floodwater Mitigation Strategy .....	27
Stormwater .....	30
Water Quality .....	31
Flooding from the Gawler River .....	32
Potable and Recycled Water .....	33
Saltwater Lakes .....	33
Crown Application - Seawater Intake System and pipe network.....	39

Revised Precinct 2 – Land Division Layout.....	40
Bicycle and Pedestrian Network 1 .....	46
Community Infrastructure.....	47
Affordable Housing .....	49
Infrastructure.....	49
Landscape Quality and Public Domain .....	49
Environment and Heritage .....	52
Riverlea Precinct Refinement .....	58
<b>6.0 Planning Analysis.....</b>	<b>61</b>
The 30-Year Plan for Greater Adelaide.....	61
Playford Community Vision 2043 – Looking Forward 30 Years.....	70
The Planning and Design Code .....	70
Master Planned Neighbourhood Zone and Emerging Activity Centre Subzone Provisions .....	73
Open Space Zone Provisions .....	75
Overlay Provisions .....	75
<b>7.0 Conclusion .....</b>	<b>77</b>

# List of Figures

---

- Figure 1 - Riverlea – Masterplan
- Figure 2 - The new suburb boundaries of Riverlea Park.
- Figure 3 - The Palms Village Stage 1 Retail – Riverlea (Site Plan – Ground Level)
- Figure 4 - Precinct 2 boundaries
- Figure 5 - Precinct 2 (Approved Subdivision Layout Plan)
- Figure 6 - Precinct 2 (Altered Subdivision Layout Plan)
- Figure 7 - Riverlea - Concept Masterplan
- Figure 8 - Concept Plans – Original Open Linear Swales & Proposed Riverlea Lakes
- Figure 9 - Approved Stormwater Management and Floodwater Mitigation Infrastructure
- Figure 10 - High-Level Stormwater and Floodwater Mitigation Plan
- Figure 11 - Conceptual Seawater Circulation Strategy Layout Plan (Phases 1, 2 & 3)
- Figure 12 - Conceptual Lake Circulation System Phasing Plans
- Figure 13 - Saltwater Lakes Outlet Plan
- Figure 14 - Previously Revised Riverlea Precinct 1 & 2 Revised Concept
- Figure 15 - Approved Precinct 2 Land Division Layout Plan
- Figure 16 - Revised Overall Concept Plan (detailing Precincts 1 & 2)
- Figure 17 - The Altered Precinct 2 Land Division Layout Plan
- Figure 18 - Previous Masterplan Bus Routes
- Figure 19 - Bus Routes Concept Plan
- Figure 20 - Precinct 2: Bicycle and Pedestrian Network
- Figure 21 - Future Neighbourhood Centre
- Figure 22 - Indicative School Sites & Open Space Playing Fields
- Figure 23 - Affordable Housing
- Figure 24 - Special Fencing Control Locations
- Figure 25 - Site Layout Plan – Shed Location
- Figure 26 - Extent of impact to trees resulting from the Precinct 2 boundary change
- Figure 27 - Approved Concept Plan (Superlots)
- Figure 28 - Proposed Precinct Stage Detail
- Figure 29 - Activity Centres and Mass Transport Routes (30 Year Plan for Greater Adelaide)
- Figure 30 - Designated Urban Areas and Township Boundaries (30 Year Plan for Greater Adelaide)
- Figure 31 - Current and Proposed Fixed Line and High Frequency Bus Routes (30 Year Plan for Greater Adelaide)
- Figure 32 - Elements that contribute to a healthy place to live (30 Year Plan for Greater Adelaide)
- Figure 33 - Biodiversity (30 Year Plan for Greater Adelaide)
- Figure 34 - The desired land uses within Precincts 1 and 2
- Figure 35 - Concept Plan 14 – Buckland Park (Planning and Design Code)

## List of Tables

---

Table 1 - Land Division Statistics for Precincts 1 & 2 (and Estimates for Precincts 3 & 4)

Table 2 - Master Planned Neighbourhood Zone and Emerging Activity Centre Subzone provisions

Table 3 - Relevant Open Space Zone Provisions (Planning and Design Code)

Table 4 - Relevant Overlays - Desired Outcomes (Planning and Design Code)

## List of Photos

---

Photo 1 - Open Space and Recreation Facilities in Precinct 1

Photo 2 - Riverlea Boulevard

Photo 3 - Precinct 1 - Dwelling Construction (Drone Image Captured July 2022)

Photo 4 - The Riverlea Sales and Discovery Centre

Photo 5 - The Riverlea Sales and Discovery Centre

Photo 6 - The Riverlea Sales and Discovery Centre

Photo 7 - Open grassland with scatterings of remnant trees

Photo 8 - Areas of woodland vegetation

## Appendices

---

Appendix A - WGA - Stormwater Management - Water, Wastewater and Recycled Water

Appendix B - Stantec Report – Riverlea – Precinct 2 Land Division Masterplan – Traffic Assessment

Appendix C - EBS Ecology – Flora and Fauna Management Plan – Precinct 2

Appendix D - LBW Co Pty Ltd, 2022 - Precinct 2 - Preliminary Site Investigations

Appendix E - Riverlea Landscape Master Plan

Appendix F - Hudson Howells - Salt Water Lakes System, Economic & Social Impacts - Online Survey

Appendix G - Conceptual Master Plans – Original Open Linear Swales & Proposed Riverlea Lakes

Appendix H - Riverlea, Salt Water Lakes, Phase 3 Report

Appendix I - Conceptual Lake Circulation System Phasing Plans

Appendix J - Saltwater Lakes Outlet Plan

Appendix K - Native Vegetation Council – Approval

Appendix L - Proposed Plan of Division

Appendix M - Pedestrian and Cycling Network Plan

Appendix N - Affordable Housing Plan

Appendix O - Special Fencing Control

Appendix P - Residential Allotment Mix Plan

Appendix Q - Overall Concept Plan

Appendix R - Native Vegetation Council – Precinct 2 Approval



# Executive Summary

---

This application follows Section 114 (1)(c) of the *Planning, Development and Infrastructure Act 2016* to take account of an alteration to the original (approved) proposal for the Precinct 2 residential subdivision at Riverlea Park.

## BACKGROUND

The Minister for Urban Development and Planning made a major development declaration (in June 2003) for the subdivision and development of land at Buckland Park (now named Riverlea Park). Riverlea Park is the most recent suburb in South Australia, resulting from a boundary realignment and name change of a portion of Buckland Park (gazetted in February 2022). Riverlea Park is within the City of Playford local government area, located approximately 30 kilometres north of the Adelaide CBD.

In May 2007, Walker Corporation Pty Ltd (Walker) lodged a major development application to develop a substantial staged residential and commercial development that was the subject of an Environmental Impact Statement (EIS). In February 2010, the Governor approved various components, including eight superlots comprising five residential land division stages, employment lands, recreation/water management and transport infrastructure. The Precinct 1 land division application (Superlot 1 under the land division application) comprised 614 residential allotments over 62.23 hectares.

Numerous variations occurred from 2010 until November 2014, when Walker submitted a further application (resulting in an EIS amendment) to facilitate the Precinct 2 subdivision at Riverlea Park to create approximately 2,740 residential allotments. The Governor approved the application in February 2017.

## PROPOSED ALTERATION - REASONS AND BENEFITS

Walker has reviewed Precinct 2 land division as part of an alteration to the original (approved) proposal triggering a further application/EIS amendment. The alteration seeks a similar Precinct 2 land area and lot yield. Additionally, it will introduce a saltwater lake system commencing with the Precinct 2 project area as part of an altered stormwater and floodwater strategy.

The approved stormwater and floodwater strategy currently include over 80 hectares of linear drainage channels to address regional stormwater and flooding from the Gawler River. These linear drainage channels average approximately 50 metres in width and equate to over 13.5 km of open drains that flow into the Thompson Creek outfall (to the southwestern aspect of the site).

Since commencing the development in 2021, Walker has started implementing Channel 1 of the approved drainage channel system. At the commencement of the channel construction, Walker became concerned that the extensive channel system did not provide the level of urban amenity a project of this scale and calibre warrants. To address this issue, Walker will incorporate a saltwater lake system (Riverlea Lakes) that will form part of an altered stormwater and floodwater strategy. Accordingly,

the Riverlea Lakes will serve a dual function, firstly, to mitigate stormwater and flooding issues and secondly to create enhanced urban amenities and a salient focal point for the Riverlea community.

A result of introducing the Riverlea Lakes is an altered road alignment and subdivision layout. The road hierarchy, subdivision lot numbers, open space areas, affordable housing provision, etc. will change, but not significantly from that previously approved. Moreover, the refinements will improve the subdivision pattern and create a more orderly and decipherable road network. In addition, public open space reserves are consolidated and more centralised, providing more extensive open space areas rather than scatterings of pocket parks. The altered proposal/EIS amendment will (amongst other matters) formalise these secondary effects as part of that process. Again, while Walker seeks to alter the layout across these stages marginally, the amendments are minor alterations to the initially approved proposal (albeit a significant improvement to the urban amenity).

A suite of land division plans for the revised Precinct 2 layout, prepared by Alexander Symonds – Surveying Consultants, incorporating the new road network and subdivision pattern, staging plans, affordable housing plans, allotment mix plans, pedestrian and cycling network, and fencing control plans accompany the application.

Undertaking the amendment to Precinct 2 also creates the opportunity to refine the number of residential land division stages across the Riverlea development from five residential Precincts to four Precincts (supported by the community and commercial facilities). The Precinct alterations primarily relate to updating, consolidating, and simplifying all Precincts in a logical sequence.

Accordingly, the alterations to the original development proposal / EIS amendment and associated land division applications are for the following:

- The introduction of a saltwater lakes system to enhance the urban amenity and form part of the revised stormwater and floodwater strategy;
- An altered land division plan for Precinct 2 (superseding the previously approved subdivision);
- An altered Precinct staging / Concept Plan.

# 1.0 Introduction

---

## Background

---

- 1.1 Riverlea Park is within the City of Playford local government area, located approximately 30 kilometres north of the Adelaide CBD. Riverlea Park is the most recent suburb in South Australia, resulting from a boundary realignment and name change of a portion of Buckland Park.
- 1.2 Gawler River bounds the Riverlea development site to the north, Port Wakefield Highway to the east, horticultural land uses to the south and Buckland Dry Creek Pty Ltd salt lakes to the west. The site is approximately four kilometres east of the St Vincent Gulf coastline.
- 1.3 In June 2003, the Minister for Urban Development and Planning made a major development declaration for the subdivision and development of land at Buckland Park (now Riverlea Park).
- 1.4 In January 2007 and June 2008, the earlier declaration from 5 June 2003 was varied to expand the major development area to include some extra land parcels within the major development area.
- 1.5 In May 2007, Walker Corporation Pty Ltd (Walker) lodged a major development application for a staged residential and commercial development. This application was subject to an Environmental Impact Statement (EIS). In February 2010, provisional approval was granted for the following components:
  - Land Division creating eight super lots, including the five residential land division stages, employment lands, recreation/water management, and transport infrastructure;
  - Stage 1 land division (Precinct 1 under the land division application) comprising 614 residential allotments, a school site, a display centre and a shopping /community centre over 62.23 hectares;
  - The partial closure of Legoe Road under the Roads (Opening and Closing Act 1991); and
  - Construction of a Neighbourhood Centre;
- 1.6 Future Precincts of the development were to be determined when detailed applications for these Precincts were made and considered.
- 1.7 Many variations took place from 2010 until November 2014, when Walker made an application (EIS Amendment) to facilitate the Precinct 2 residential land division that proposed the following:
  - An amended Superlot Plan (Precinct 1)
  - Land Division plan for Precinct 2;
  - Land Division for Precinct 2C (referred to as Stage 6 in Precinct 1);
  - Notification of Closure for the northern (unmade) part of Buckland Road (18 December 2017); and

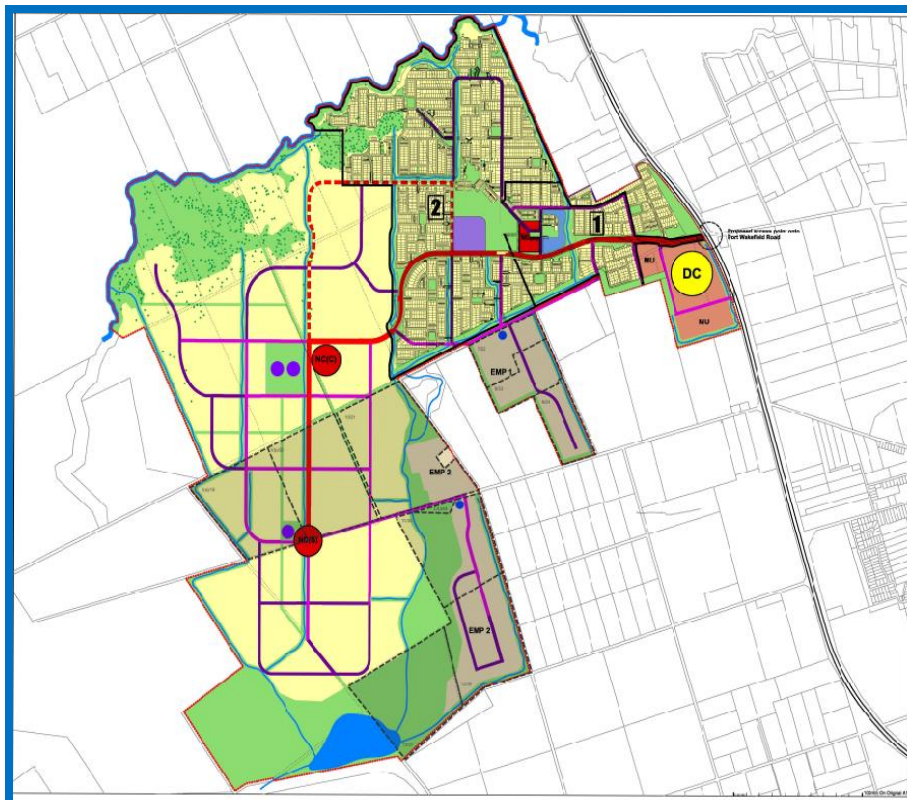
- Extension of time for 'substantial commencement' of the intersection of Port Wakefield Highway.

1.8 The amended approval changed the Precinct 1 Land Division, including a Waste Water Treatment Plant, compliance with Reserved Matters and extended the date for substantial commencement. The approval also included the Precinct 2 Land Division encompassing approximately 2,740 residential allotments (including a range of allotment sizes and locations) and a school site for a potential birth to year 12 school. Various open space areas that could have multiple uses and nature areas, including the mature red gum trees along the Gawler River, were included as future open space reserves for preservation. On 16 February 2017, the Governor issued the authorisation and notified the Road Closure for Buckland Road's northern (unmade) part.

1.9 The Riverlea major development site now comprises an area of approximately 1,340 hectares of former cropping and grazing land and has approval for over 3,300 residential allotments across Precincts 1 and 2 combined. The Riverlea development is a master-planned community that will deliver up to 12,000 residential properties, supported by open space, schools, centres and public transport, for a new community of approximately 33,000 residents.

1.10 Given the Riverlea major development will be developed over 25 years, the later Precincts have no detailed designs to allow for the future adoption of technology and planning evolutions. Further applications will be made over the remaining residential Precincts as the Project evolves.

1.11 **Figure 1** below details the current approved Riverlea Masterplan.



**Figure 1 - Riverlea – Masterplan**

## Objectives for the altered design

---

- 1.12 The Riverlea development's primary objective is to create a supply of housing allotments with integrated services and community facilities over 25 years. Achieving this objective will contribute significantly to South Australia's economic and social well-being by accommodating some of the projected population growth for northern metropolitan Adelaide.
- 1.13 This application's objective is to consider the alteration to the original (approved) Precinct 2 subdivision proposal to incorporate a saltwater lake system (the Riverlea Lakes) to enhance the urban amenity of the area. The Riverlea Lakes will establish a more liveable urban environment with significantly improved urban amenities and recreation opportunities while accommodating a more appealing stormwater and floodwater strategy for the Riverlea development.
- 1.14 Adopting the Riverlea Lakes will alter the approved road alignment and subdivision layout pattern. The amendment will maintain a similar Precinct 2 land area and dwelling yield. The road hierarchy, subdivision lot numbers, open space areas, affordable housing provision, etc. will not alter significantly from what was previously approved.
- 1.15 The altered Precinct 2 subdivision layout provides a more orderly and decipherable road network. In addition, the public open space reserves are more consolidated and centralised, providing more extensive open space areas rather than scatterings of pocket parks. The enhanced vistas, water views and streetscapes will improve the urban amenity for occupants and visitors. The altered application seeks to formalise these secondary effects as part of the approval process.
- 1.16 Undertaking the alterations to Precinct 2 also creates the opportunity to further refine the number of Walker-delivered residential Precincts across the Riverlea development area from five to four (supported by the community and commercial infrastructure). The Precinct refinement primarily relates to updating, consolidating, and simplifying all precincts logically.

## The Proponent

---

- 1.17 The proponent is Walker Buckland Park Developments Pty Ltd, a subsidiary of Walker Corporation Pty Ltd, a Sydney-based developer of master-planned residential communities and retail, commercial and industrial projects. The company has specialist expertise in planning, project management, finance, joint venture and development structures, infrastructure construction and project marketing. Access to Walker's urban development history and current pipeline of projects is via the following web link: [Walker Corporation – Award Winning Creative Property Solutions](#)

1.18 The proponent's details are as follows:

<b>Applicant:</b>	Walker Buckland Park Developments Pty Ltd
<b>Address:</b>	Riverlea Sales and Discovery Centre 9 Bonnin Crescent, Riverlea Park, SA 5120
<b>Postal Address:</b>	PO Box 522, Virginia, SA 5120
<b>ABN:</b>	62 133 365 723

## Staging and timing

---

- 1.19 The Precinct 2 subdivision previously received development authorisation. However, the altered proposal incorporating the Riverlea Lakes and altered subdivision layout requires an amended approval following Section 114 (1)(c) of the *Planning, Development and Infrastructure Act 2016* (PDI ACT). Accordingly, the concept planning for Precinct 2, and subsequent stage releases of land, are contingent on the design and approval of the revised stormwater and floodwater strategy, most notably the Riverlea Lakes and the altered subdivision layout.
- 1.20 Given Walker's success with delivering the Riverlea project so far (harnessing significant investment interest and momentum over the past 18 months), the State must be conscious of the importance of maintaining the impetus for the remaining early phases of the project.
- 1.21 The approval for the Riverlea Lakes is becoming critical, given that all stages in Precinct 1 have sold. Approval is commencing on the Precinct 2 stages, and the uptake of the initial stage releases is also high (akin to Precinct 1). Accordingly, land sales at Riverlea have proceeded to a point where demand for allotments significantly exceeds supply. There are limitations on how many stages within the approved Precinct 2 Master Plan can progress without relying on the approval for the revised stormwater and floodwater strategy. Present forecasts indicate that supply issues could become critical in early 2023.
- 1.22 Walker knows there are considerable lead times for interested parties to review the altered proposal and for authorities to determine the application/EIS amendment. As an interim measure and to maintain the Riverlea development project's momentum, Walker pursued the release and approval of revised subdivision stages within Precinct 2 that do not rely on the Riverlea Lakes for stormwater management but rely on the stormwater management philosophy approved for Precinct 1.
- 1.23 The City of Playford (the Council) and the Planning and Land Use Services (PLUS) | Department for Trade and Investment were provided with a Precinct 1 + 2 Plan Comparison that illustrated that the amendments were essentially minor (albeit a significant improvement) to that previously approved.

- 1.24 With the PLUS and Council's support, the amendments primarily refined the allotment configurations toward the north eastern and southern aspects of Precinct 2. While the marginal changes included Stages 8, 10, 11, 12, 40 and 41, comprising approximately 620 residential allotments, the overall intent of the approved subdivision did not alter. As with the broader Precinct 2 proposal, the road configuration changed, but not the road hierarchy and results in a more legible and subdivision pattern.
- 1.25 This interim measure (to maintain the Riverlea development project's momentum) has restrictions because there are limited stages that rely on the existing approved stormwater management philosophy before the altered Precinct 2 proposal is approved and the Riverlea Lakes comes online. The remaining areas within the Precinct 2 subdivision that do not rely on saltwater lakes for stormwater management include Stages 15, 16, 38 & 39 and comprise approximately 450 allotments.
- 1.26 Walker only pursued the interim measure to fulfil market demand until the EIS amendment was progressed and approved. Accordingly, Walker would like to be in a position where the altered stormwater and floodwater strategy (including the Riverlea Lakes) for Precinct 2 can begin construction in mid-2023.

## Legislation

---

- 1.27 While the application seeks to alter the approved Precinct 2 land division layout, the affected area has marginally increased from that previously approved. The additional land comprises cleared grazing land for housing as well as woodland areas that will be dedicated open space (as is the present situation). Walker is aware that legislative requirements are still relevant for the altered proposal, most notably compliance with the *Aboriginal Heritage Act 1988* and the *Native Vegetation Act 1991* (akin to the previous Precinct 2 approval).
- 1.28 Similarly, adding the Riverlea Lakes will require a bulk earthworks operation that might necessitate dewatering exercises. Erosion and sediment management are necessary to ensure no impacts on downstream environments. Walker is aware that authorisation from Green Adelaide / the Minister for Environment and Water under the *Landscape South Australia Act 2019* for dewatering activities will still be required. Walker knows it must comply with relevant *Environment Protection Act 1993* requirements, including compliance with the Environment Protection (Water Quality) Policy 2015 and applicable Environment Protection Authority Water Quality Guidelines, such as *Environmental management of dewatering during construction activities*.
- 1.29 Many subsequent construction activities (housing, buildings, bridges, ancillary playground structures and signage, etc.) will require approval under the PDI Act via the City of Playford's Planning and Engineering Departments. Similarly, street naming, property numbering and works within Council road reserves will require authorisation by the City of Playford under the *Local Government Act 1999*.

- 1.30 Legoe Road was partially closed via the original application/EIS process and the *Roads (Opening and Closing) Act 1991*. The partial closure of an unmade portion of Buckland Road followed a similar approach as part of the Precinct 2 application/EIS amendment. Walker is not proposing to close any other roads within the Precinct 2 boundary area.
- 1.31 In addition, Walker has been extensively engaging with various State Government agencies concerning the 'essential infrastructure' requirements for the saltwater lakes system beyond the Riverlea project area.
- 1.32 Walker has applied for the necessary planning approvals for the essential intake and pipework infrastructure (following Section 131(2)(c) of the PDI Act). This application is on hold, pending consideration of the altered Precinct 2 application/EIS amendment.
- 1.33 While this matter is discussed further in the Crown Application – Seawater Intake System and pipe network section on page 39 of this report, Walker knows it must apply for a license under Section 46 of the *Crown Land Management Act 2009* to allow construction activities for the seawater intake and pipe network system. Ultimately, Walker will need to also secure longer-term tenure by easement (in favour of the Council) following Section 28 of the *Crown Land Management Act 2009* after construction commences.
- 1.34 As highlighted previously, Walker knows that authorisations must be secured from Green Adelaide / the Minister for Environment and Water following the *Landscape South Australia Act 2019* to undertake any de-watering activities associated with infrastructure construction and seawater extraction.
- 1.35 Walker has already secured approval from the Native Vegetation Council (under the *Native Vegetation Regulations 2017*) to undertake the necessary vegetation clearance required to locate the intake pump station and associated pipework and power supply components.



## 2.0 EIS Amendment Process & Guidelines

---

### EIS Amendment Process

---

- 2.1 As stated previously, in 2003, the Minister declared Riverlea a major development and later requested the preparation of an EIS. That EIS was submitted in 2009 and subsequently approved in 2010. Since more than five years had elapsed since the original application, the Precinct 2 subdivision proposal required an EIS amendment following the now-repealed *Development Act 1993*.
- 2.2 While the approval of the Precinct 2 subdivision occurred in 2017, the PLUS advised the alteration to the original subdivision must be subject to a further EIS amendment process (following the PDI Act).
- 2.3 The altered proposal/EIS amendment requires the following:
- referral to any prescribed authority or body and other relevant authorities or bodies for comment;
  - public exhibition for at least fifteen business days, during which time written submissions are invited;
  - a public meeting may be held in the locality by the Minister's nominee (typically PLUS) to provide information on the development or project, explain the EIS document and processes, and assist interested persons with making submissions;
  - copies of submissions are given to Walker to respond to any matters raised by the Minister, prescribed agencies and members of the public;
  - an Assessment Report to be prepared concerning any submissions, Walker's response and comments from any other authority or body considered necessary.
- 2.4 The Assessment Report is to be available for inspection and purchase at a place and period determined by the Minister. The Minister notifies the availability of each document through advertisements in the local press. The purpose of the EIS is to:
- provide a description of the proposal, the environment, and issues relevant to the proposal;
  - detail the expected environmental, social and economic effects of the development;
  - consider the extent to which the expected effects of the development are consistent with the provisions of the Planning and Design Code, the 30-Year Plan for Greater Adelaide and any matter prescribed by the PDI Act;
  - set out the proponent's commitments to meet conditions (if any) to avoid, mitigate or manage any potential impacts of the development on the environment; and
  - address any other information required by the Minister.

- 2.5 The aims of the EIS and the public consultation review are to provide the following:
- a source of information from which interested individuals and groups may gain an understanding of the proposal, the need for the proposal, the consequences of not proceeding, the environment that would be affected, the effects that may occur and the measures to be taken to minimise those effects;
  - a forum for public consultation and informed comment on the proposal;
  - a framework within which decision-makers may consider the environmental aspects of the proposal in parallel with social, economic, technical and other factors.

## Guidelines

---

- 2.6 The Amended Guidelines for the preparation of an Environmental Impact Statement - August 2008 (the Guidelines) were formulated for the entire Buckland Park Country Township Proposal (the Riverlea major development). These Guidelines set out the major issues associated with the development and their degree of significance determined by the former Development Assessment Commission.
- 2.7 A review of the Guidelines recognises that those matters are still relevant to the entire Riverlea major development and that the Buckland Park Environmental Impact Statement previously addressed the issues specified in those Guidelines. Precinct 2 forms a portion of the whole Riverlea major development. Many broader topics within those guidelines do not expressly or solely target individual smaller Precincts within the more general project area.
- 2.8 Additionally, the Buckland Park (Riverlea) Major Development – development application/EIS amendment for the Precinct 2 subdivision (November 2014) addressed the issues pertinent to that application. Those issues are equally relevant to the matters subject to this amendment, given the similar nature of both proposals. Both proposals are over the same land and pursue residential, commercial, and community uses that maintain vegetation corridors, open space areas, and a comparable road hierarchy.
- 2.9 Notwithstanding, matters concerning altered stormwater management, flood mitigation strategy, traffic management, and environment and heritage were investigated further by Walker, as briefly described below.

## Water Management and the Riverlea Lakes

---

- 2.10 The primary change to the altered proposal relates to the introduction of the Riverlea Lakes. It forms the only significant difference between the two Precinct 2 applications and the basis for the altered application/EIS amendment. Accordingly, matters relating to stormwater management, floodwater management, and water quality, including the introduction of the Riverlea Lakes, are most pertinent. Wallbridge Gilbert Aztec (WGA) consulting engineers have further reviewed such issues and updated their previous 2009 Technical Paper concerning

stormwater management and flooding (amongst other matters), which is discussed further in the Revised Stormwater and Floodwater Mitigation Strategy on page 27 of this report.

- 2.11 WGA's updated Technical Paper, titled Riverlea Park - Stormwater Management - Water, Wastewater and recycled water, dated December 2022, is in **Appendix A**.

## Traffic Management

---

- 2.12 The secondary effect of introducing the Riverlea Lakes resulted in a revised subdivision pattern and altered road network. The alterations resulted in a more orderly, decipherable road layout and an improved, more efficient, and legible subdivision pattern. Notwithstanding this, Stantec reviewed the previous assessment reports and undertook further assessment and reporting on the revised land division layout and road configuration. Stantec produced its findings in the Riverlea – Precinct 2 Land Division Masterplan – Traffic Assessment report in October 2022 (updated in April 2023), as discussed in more detail on page 44 of this report and in **Appendix B**.

## Environment

---

- 2.13 The land use, area and location for the altered proposal are similar to that previously approved. Accordingly, matters associated with flora and fauna impacts are akin to those considered earlier for the Precinct 2 application/EIS amendment. Notwithstanding this, Walker has engaged the valued professional advice and experience of EBS Ecology, a Native Vegetation Council (NVC) - Accredited Consultant, to undertake additional assessments for native vegetation removal approvals (as discussed further commencing on page 55 of this report). EBS Ecology also prepared a Flora and Fauna Management Plan (FFMP) for Precinct 2 in **Appendix C**.
- 2.14 Equally, cultural heritage issues have not changed due to the altered proposal. Notwithstanding this, Walker is proactively managing indigenous and cultural heritage issues associated with Precinct 2 and the entire Master - planned site. In this regard, Walker engaged the services of Neal Draper and Associates (a recognised cultural heritage expert) to further the cultural heritage work undertaken by Australian Cultural Heritage Management in 2013. A brief discussion outlining ND&A's additional cultural heritage work, including application requirements following the *Aboriginal Heritage Act 1988*, is summarised on page 54 of this report.
- 2.15 Similarly, other than cattle grazing no additional activities have occurred on the subject land since the initial approval for Precinct 2. Notwithstanding, Walker commissioned LBWco Pty Ltd (LBWco) to further the work reference in the 2014 application/EIS amendment document. Connell Wagner (2008) identified Precinct 2's southern part as having a 'low to moderate risk' of contamination associated with previous grazing and agricultural activities. LBWco undertook preliminary site investigations (PSI), comprising a site history for all stages within Precinct 2 of the Riverlea Development. LBWco findings are discussed further on page 52 of this report, with their Preliminary Site Investigations report in **Appendix D**.

## Economics

---

- 2.16 The estimated capital investment for the altered subdivision layout is comparable to the approved subdivision layout, given the similar scale and similarity of both subdivision layouts. Notwithstanding this, as the project delivers a staged physical development and community infrastructure program, it significantly invests in northern Adelaide. The economic repercussions of Riverlea will be an investment of \$3.2 billion over 25 years, with the flow-on economic benefits to the State likely to be even more significant.
- 2.17 This investment is a direct consequence of long-term residential construction and other employment-generating activities from several schools, retail centres, restaurants, cafes, and community centres throughout the project's life. The Riverlea Lakes will further promote the project as a destination point and attract a variety of residential, commercial, recreation, social, and business pursuits for years to follow.
- 2.18 Notwithstanding the above, market expectations demand the delivery of an aesthetically pleasing level of community amenity a project of this scale and calibre warrants. Accordingly, the economic effects should not be considered in isolation from the broader benefits of enhanced urban amenities and a more aesthetically pleasing stormwater and floodwater strategy while providing an important focal point for the Riverlea community.

## Need and objectives of the altered proposal

---

- 2.19 The alteration to the approved Precinct 2 residential subdivision is driven to accommodate the Riverlea Lakes to improve community amenities for Riverlea and enhance the project's marketability.
- 2.20 Riverlea is perceived as visionary and more inspiring than any other residential development in South Australia. Walker is pursuing the provision of community infrastructure assets, where open space, recreation areas, and the Riverlea Lakes and waterways, when complete, will ensure there is nowhere else like it across greater metropolitan Adelaide. Riverlea seeks to set a new standard for master-planned community living.
- 2.21 The objectives to meet market expectations are apparent, particularly given Riverlea is South Australia's fastest-selling master-planned community. The level of superior aesthetic amenities is already evident. One must only appreciate the vision and drive through the project's early stages to realise the vast investment in public and community amenities the project is already delivering.



**Photo 1 – Open Space and Recreation Facilities in Precinct 1**

2.22 The State has trusted Walker to deliver the Riverlea development, given its ability to capitalise on its proven expertise in development, construction, land development, and property and asset management. Walker commits to the highest standards and delivers a diverse range of outstanding developments, which continue to set new standards in the industry.



**Photo 2: Riverlea Boulevard**

2.23 Accordingly, market expectations demand an unparalleled level of aesthetically pleasing community amenities that promote an identifying feature for the Riverlea community. The broader benefits of the Riverlea Lakes through enhanced urban amenities and a more aesthetically pleasing stormwater and floodwater strategy are essential to delivering on the vision.

## Infrastructure

---

- 2.24 The land area, allotment/dwelling yield, road hierarchy, etc., are comparable with the previously approved Precinct 2 proposal, as will be the required infrastructure and utilities to support new housing and community infrastructure. Further, the master-planned approach facilitates the orderly rollout of stages within each precinct, allowing for coordinated and efficient infrastructure provision. As each stage progresses, Walker and the relevant Utility authorities will continue to work collaboratively to coordinate service infrastructure provision across Precincts 1 and 2.

## Urban Design

---

- 2.25 As with the residential development presently underway in Precincts 1 & 2, the encumbered Riverlea Urban Design Guidelines and Building Envelope Plans must be adhered to before seeking consent for dwellings from the Council. These include special fencing controls for particular properties fronting public open space areas and acoustic requirements established for dwellings potentially prone to noise conflict (although these primarily relate to some housing in Precinct 1 near the Port Wakefield Road Highway).
- 2.26 Matters concerning a potential conflict between the project's residential amenity and commercial components are to be considered as each detailed application progresses. For example, detailed reports accompanied the previous application for a new shopping, community and retail centre and specifically contained information handling matters such as traffic management, light spills and potential noise issues. The draft Riverlea Landscape Master Plan also addresses matters of public open spaces and is further elaborated on page 49 of this report and is in **Appendix E**.

## Effects on Communities

---

- 2.27 Matters concerning the effects on the community were described previously in the original EIS document. Given that the alterations to the previously approved Precinct 2 subdivision design do not alter, the effects on communities do not differ apart from the enhanced amenity the Riverlea Lakes will provide.
- 2.28 Notwithstanding this, several matters concerning the review and updating (where necessary) of the affordable housing plan, aboriginal heritage and flora and fauna investigations/ applications, etc., have occurred, as detailed further in Section 5.0 of this report.
- 2.29 In addition, to better understand the level of community support for the saltwater lakes, Walker commissioned Hudson Howells Strategic Management Consultants in July 2022 to study a broad cross-section of the community as potential future residents and visitors to, Riverlea.

- 2.30 The study intended to ascertain the community's response to two options for the public realm design outcome within Riverlea. The first included the previously mooted proposal for a small lake and a network of floodways for stormwater management and flood mitigation across the Riverlea project site. The second had the saltwater lake incorporating a system of parkland links containing shallow overland flow pathways and minimal floodways for stormwater management and flood mitigation within the project.
- 2.31 Research methodologies focused on an empirical study using a quantitative approach. An online survey yielded 692 responses, with 342 responses drawn from the Riverlea database and 350 from surrounding communities. The result of the study was overwhelming community support (93%) for the saltwater lake system. A copy of the presentation detailing the survey findings is in **Appendix F**.

## Risk Hazard & Construction Effects

---

- 2.32 Risk hazard management is addressed in the same manner undertaken with Precinct 1 via implementing a Construction and Environmental Management and Monitoring Plan (CEMMP) for all subdivision construction works undertaken. The CEMMP for Precinct 2 has adopted the previously approved Precinct 1 CEMMP format and seeks to ensure public safety, pollution, noise, impact on flora and fauna, cultural heritage and stormwater management are managed appropriately.

## Legislation

---

- 2.33 While most legislation and policies referenced in the Guidelines apply to the altered Precinct 2 proposal, a few acts, policies, and guidelines have been rescinded, replaced by more contemporary versions, or become obsolete.
- 2.34 For instance, the Urban Growth Boundary was re-considered some years ago. Previously Buckland Park, including the new suburb Riverlea Park (formerly within Buckland Park until February 2022), fell outside the Adelaide metropolitan area. Now both suburbs fall within the boundaries of the greater metropolitan Adelaide area rather than outside it.
- 2.35 In addition, the repealed *Development Act 1993* and its associated regulations were substituted by the *Planning, Development and Infrastructure Act 2016* and related regulations. Notwithstanding this, the EIS process and, specifically, an amendment to an EIS are fundamentally the same. Likewise, all council development plans across Greater Metropolitan Adelaide were cancelled in March 2021 and substituted with the Planning and Development Code (P&D Code). The P&D Code is now considered the single source of planning policy for assessing development applications. The transition to the P&D Code acknowledged the previous zoning and policies applicable to Riverlea and essentially transferred similar zoning and applicable policies at the changeover.

- 2.36 Similarly, since preparing the initial Guidelines, some policies and guidelines have been reviewed and updated but principally remain the same. Examples include the Environment Protection (Water Quality) Policy 2015 and the Water Quality Guideline - *Environmental management of dewatering during construction activities (updated 2021)*.
- 2.37 South Australian strategic plans are constantly under examination, including the 30-Year Plan for Greater Metropolitan Adelaide, presently commencing review. Such reviews and strategic directions typically build on the previous plans' successes, articulate priorities for the following years, and describe the strategies and actions that will progress to shape the future.
- 2.38 Conversely, some new legislation was introduced, including the *Landscape South Australia Act 2019*, for water-affecting activities requiring authorisation from the Minister for Environment and Water.



## 3.0 Current Status

---

### Residential Land Releases

---

- 3.1 In January 2021, Walker commenced constructing the first stages of the Riverlea master-planned community. This investment included delivering strategic State-owned stormwater infrastructure (external to the site) to address floodwater issues that affect traffic flows along Port Wakefield Highway. The investment also provided significant transport infrastructure, including a four-way signalised intersection at the Port Wakefield Highway, Riverlea Boulevard & Angle Vale Road junctions, and Riverlea Boulevard, a four-lane distributor road servicing the development.
- 3.2 Precinct 1 comprises a seven-stage residential allotment land release. All stages within Precinct 1 have been released and sold to purchasers. Since the commencement of the Project in January 2021, over 1100 residential allotments have been sold or are under contract.
- 3.3 Civil design approval and civil construction works are well underway. Dwelling construction is rapidly progressing throughout several stages in Precinct 1. Photo 3 illustrates dwelling construction underway throughout the initial residential land releases within Precinct 1.



**Photo 3 - Precinct 1 - Dwelling Construction (Drone Image Captured July 2022)**

- 3.4 The first stages of Precinct 2 have also begun to be approved and sold. For example, four stages situated in Precinct 2 recently obtained approval and were sold immediately. The forecast releases of the remaining available residential allotment stages within Precincts 1 and 2 combined will total more than 1,300 residential allotments since the commencement of the Project.

- 3.5 While further stages in Precinct 2 are planned for release in 2023 (where these Stages do not interfere with the approved stormwater and floodwater management strategy), current predictions indicate demand will still exceed supply.

## Road Closures

---

- 3.6 Consistent with the original approval in 2007, a portion of Legoe Road was closed and transferred to Walker in 2021 to implement Precinct 1. In addition, the part of the unmade Buckland Road reserve (between Legoe Road and the Gawler River) was closed and transferred to Walker to facilitate the implementation of early stages within Precinct 2 (consistent with the Precinct 2 approval in 2017).

## Planning, Development and Infrastructure Act 2016 – Planning & Design Code Assessment

---

- 3.7 In 2021, Walker initiated the Buckland Park Suburban Activity Centre Zone Code Amendment (the Code Amendment). It decreased the size of the District Centre by confining it to the southern side of Riverlea Boulevard. The northern side of Riverlea Boulevard (the remainder of the affected area) now reflects a residential area within the Master Planned Neighbourhood Zone.
- 3.8 The Code Amendment responded to changes in retail/commercial demand and service delivery and facilitated the development of additional residential allotments to support the proposed activity centre. After considering the limited issues raised during the Code Amendment consultation process, the Minister for Planning and Local Government adopted the Code Amendment in December 2021.

## Riverlea Park

---

- 3.9 In 2021, submissions were made under the *SA Geographical Names Act 1991* to the Council and Surveyor-General to create a new suburb boundary and name for the Riverlea development.
- 3.10 The intent was to foster a strong sense of community. New residents in Riverlea will want their home to be a unique 'place', distinguished by a new and permanent urban identity and differentiated from the balance of the historical rural/agricultural character of Buckland Park. In February 2022, the Minister approved the boundary realignment and name change from Buckland Park to Riverlea Park. **Figure 2** details the suburb boundaries of Riverlea Park.

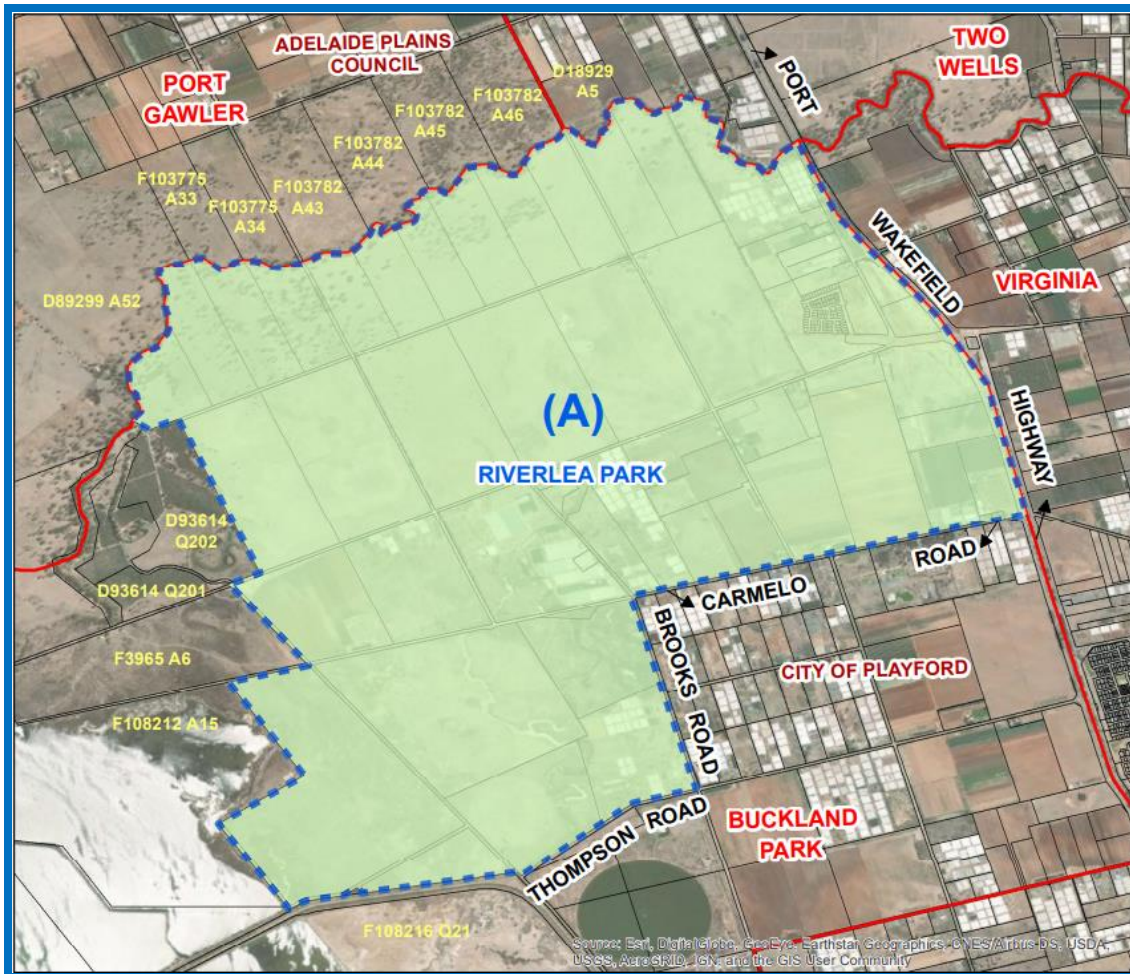


Figure 2 – The new suburb boundaries of Riverlea Park.

## Convenience Shopping Precinct

3.11 In June 2022, Council approved a new shopping, community and retail centre (The Palms Village Stage 1 Retail – Riverlea), including:

- Supermarket
- Childcare centre
- Medical facilities
- Library / Community facilities space
- Numerous speciality shops
- Cafes and restaurants
- Visitor parking and other ancillary infrastructure

3.12 The proposal demonstrates Walker's commitment to delivering on its obligation of fulfilling the delivery of community infrastructure and convenience shopping. **Figure 3** details The Palms Village – Stage 1 Retail – ground-level site plan's approved plan.

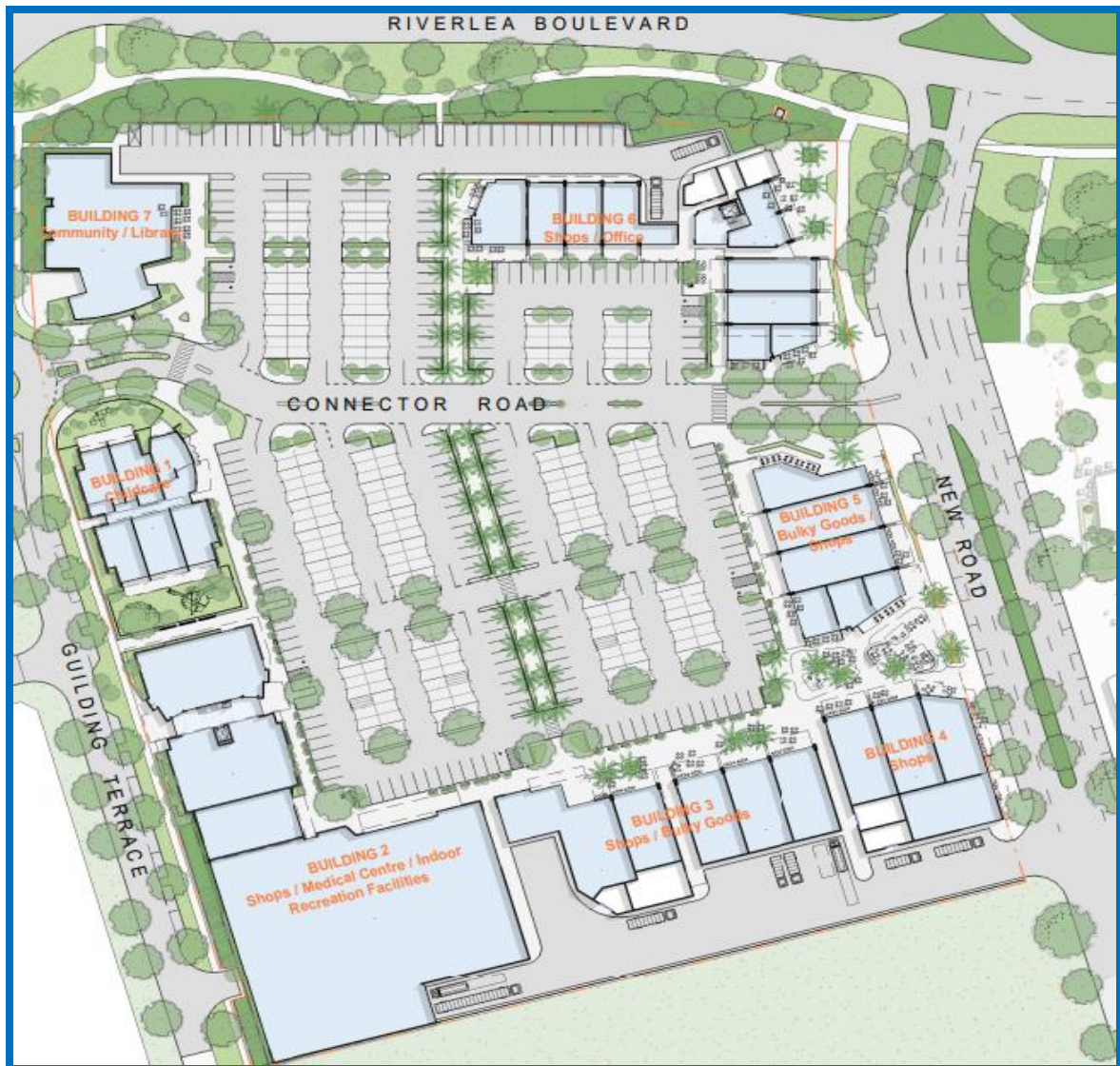


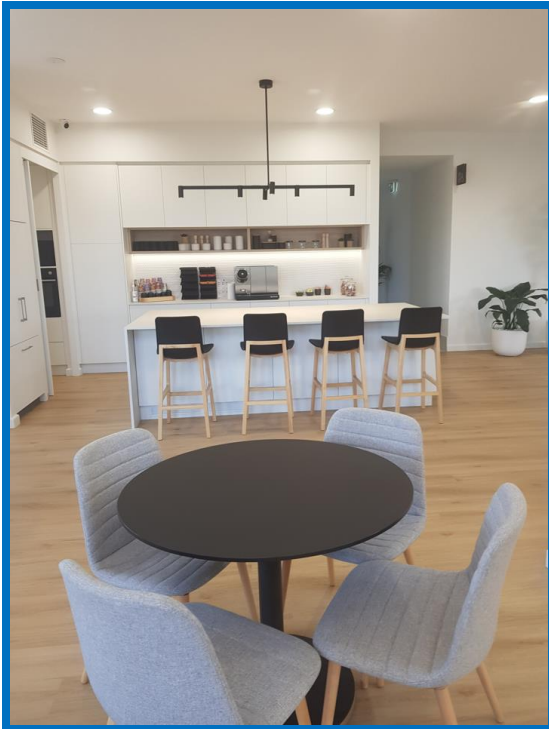
Figure 3 - The Palms Village Stage 1 Retail – Riverlea (Site Plan – Ground-Level)

## Riverlea Sales and Discovery Centre

- 3.13 In May 2022, Walker opened the Sales and Discovery Centre on Riverlea Boulevard, Riverlea Park. This building accommodates the Riverlea Project team and includes a separate area for use by the Riverlea Community as a community facility. The Riverlea Community Facility has individual amenities, including kitchen and catering facilities, public toilets, indoor/outdoor furniture, the latest technology, and is supported by a Community Liaison/Services Officer. Photos of the Sales and Discovery Centre are in the images below.



Photos 4, 5 & 6 – The Riverlea Sales and Discovery Centre



## 4.0 Location, existing environment & nature of the proposal

### Location

- 4.1 The northern aspect of the Precinct 2 site abuts the Gawler River, a perched river system edged by countless *Eucalyptus camaldulensis* (River Red Gums). Beyond the Gawler River to the north, other rural and horticultural pursuits are undertaken on the adjacent land. A recently constructed drainage channel now separates the eastern boundary of Precinct 2 from other horticultural uses. A portion of the eastern aspect of Precinct 2 abuts Precinct 1 of the Riverlea development. A sizeable stormwater drainage channel constructed along the site's southern boundary (extending east to west adjacent to the Legoe Road reserve) physically separates the area from adjoining horticultural activities undertaken on the adjacent land. The western aspect of Precinct 2 abuts the future Precinct 3 area, which the owner presently uses for cattle grazing.
- 4.2 The aerial image below shows the Precinct 2 boundaries, their relationship to Precincts 1 and 3 and adjoining rural activities to the north and south.

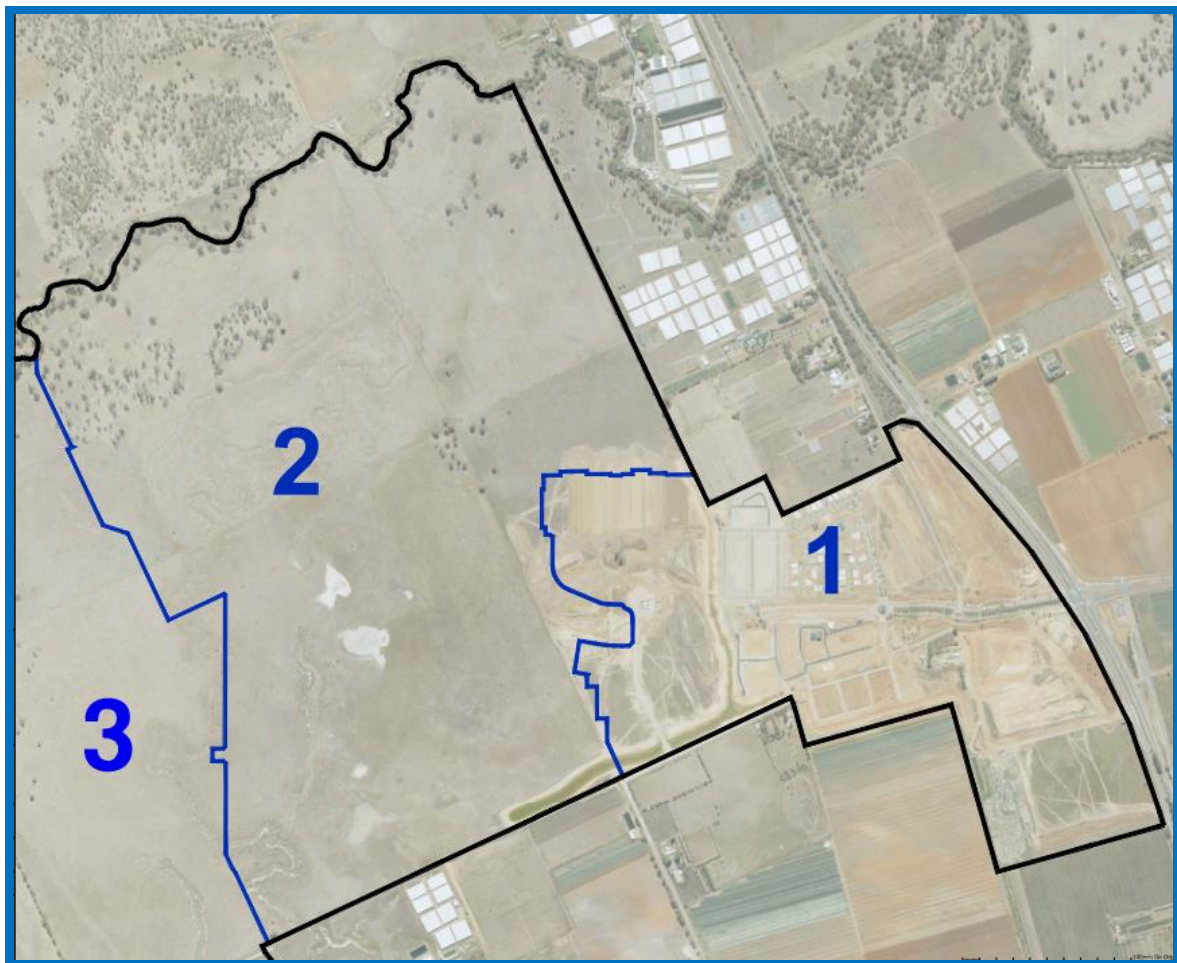


Figure 4 - Precinct 2 boundaries

## Existing environment

---

- 4.3 The Precinct 2 land was previously used for broad-acre cropping (barley and mixed pasture) and grazing but has recently been used solely for cattle grazing. Consequently, the majority of Precinct 2 is situated over previously cleared land that now encompasses open exotic grasslands with scatterings of remnant trees, mostly *Eucalyptus camaldulensis* (River Red Gums). Toward the north-western aspect of Precinct 2, a sizeable woodland cluster and open space area comprising approximately 13 hectares exist, with smaller groups of scattered trees located across the Precinct 2 area. Box thorn and wild artichoke infestations occur in some locations across the site.



**Photo 7 - Open grassland with scatterings of remnant trees**



**Photo 8 - Areas of woodland vegetation.**

- 4.4 The site is generally flat with a slight slope towards the southwest and has an elevation of approximately 10m Australian Height Datum (AHD). A shallow ephemeral creek, about 1 m deep, meanders across the northern and southwestern portions of the Precinct 2 site.
- 4.5 Except for a makeshift shed and a large concrete water tank towards the northern boundary (adjacent to the Gawler River), no other structures exist in the Precinct 2 site area.

## Nature of the Proposal

---

- 4.6 The nature of the proposal is essentially the alteration to the approved Precinct 2 residential subdivision at Riverlea Park to introduce a saltwater lake system commencing within the Precinct 2 project area. The saltwater lakes will provide enhanced community amenities and form part of an altered stormwater and floodwater strategy.
- 4.7 Understanding the significant challenges associated with developing the land is essential to make it suitable for long-term urban purposes. The site borders the Gawler River (a perched river system). The wider area has historically been prone to flood waters associated with significant rainfall events within the Gawler River catchment. Accordingly, ground levels must be raised to address the threat of floodwater breakouts from the Gawler River and ensure residential land has finished site levels higher than predicted flood levels.
- 4.8 Similarly, to service the development with appropriate sewer, stormwater connections, etc., the land needs to be raised and graded to achieve the necessary falls to divert stormwater and greywater to their respective treatment systems.
- 4.9 Accordingly, both the approved and altered subdivision layouts require bulk earthworks exercise to address servicing and potential flooding issues. Precinct 2 subdivision layout plan and altered subdivision layout plan are in **Figures 8 and 9** for comparison.



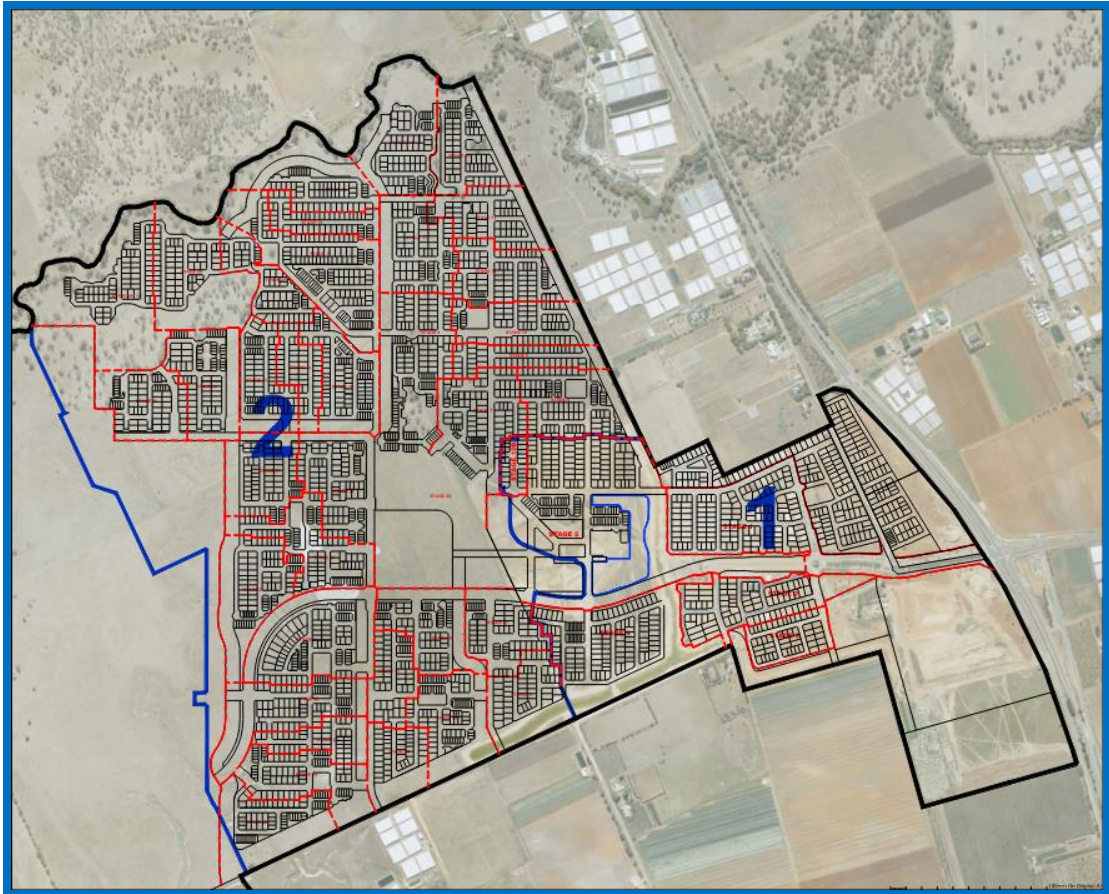


Figure 5 – Precinct 2 (Approved Subdivision Layout Plan)

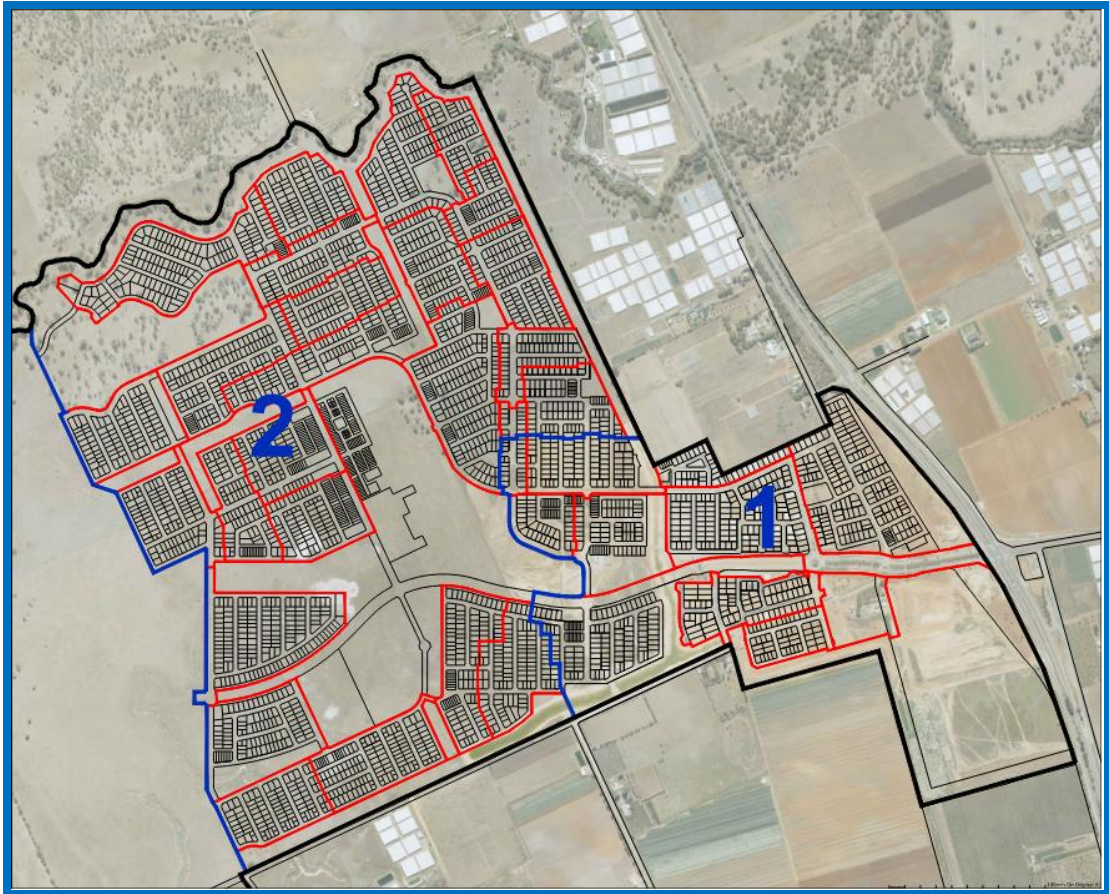


Figure 6 – Precinct 2 (Altered Subdivision Layout Plan)

## 5.0 The EIS Amendment

- 5.1 **Figure 7** below details the Riverlea - Concept Masterplan, the latest iteration of the Riverlea Master-planned development. As illustrated, the Riverlea Lakes system alters the road and allotment layout pattern configuration but significantly enhances the area's amenities.



Figure 7 - Riverlea - Concept Masterplan

## The Revised Stormwater and Floodwater Mitigation Strategy

- 5.2 The EIS amendment primarily seeks to alter the Precinct 2 subdivision layout to accommodate a revised stormwater and floodwater strategy for the Riverlea development.
- 5.3 In 2009, Wallbridge & Gilbert (Consulting Engineers) prepared a Technical Paper for managing stormwater and floodwater across the Riverlea major development site. The stormwater and floodwater mitigation strategy included over 80 hectares of linear drainage channels that flowed towards the southwestern aspect of the site to the Thompson Creek outfall. These linear drainage channels averaged approximately 50m in width, equating to over 13.5 km of open drains to deal with regional stormwater and flooding.
- 5.4 Since commencing the development in 2021, Walker started implementing Channel 1 of the approved drainage channel system to cater for Precinct 1 and portions of Precinct 2. At the commencement of the channel construction, Walker became concerned that the extensive channel system did not provide the level of urban amenity a project of this scale and calibre warrants. To address this issue, Walker seeks to alter the initial approval to incorporate a saltwater lake system (Riverlea Lakes) that now forms part of the stormwater and floodwater strategy. Accordingly, the Riverlea Lakes will serve a dual function: first, stormwater management and floodwater mitigation; second, to create significantly enhanced urban amenities and a critical focal point for the Riverlea community.
- 5.5 Concept plans detailing the approved stormwater and floodwater strategy comprising open drainage channels and the proposed Riverlea Lakes concept are illustrated below and in **Appendix G**.

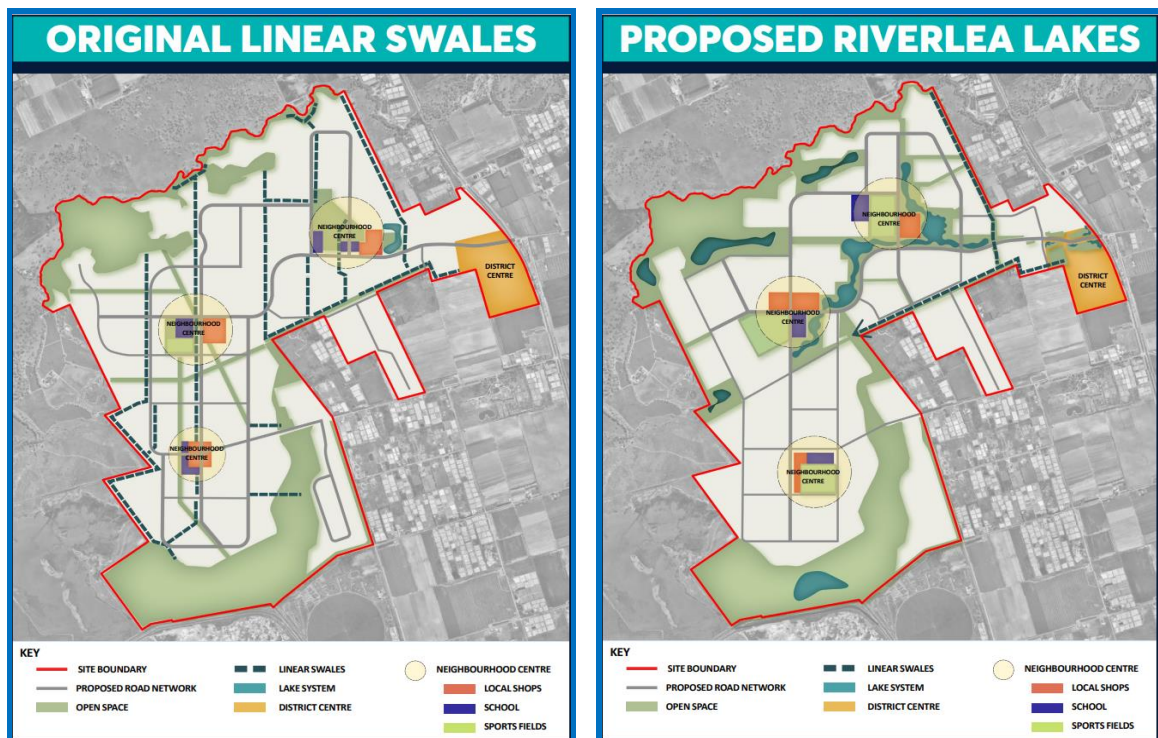
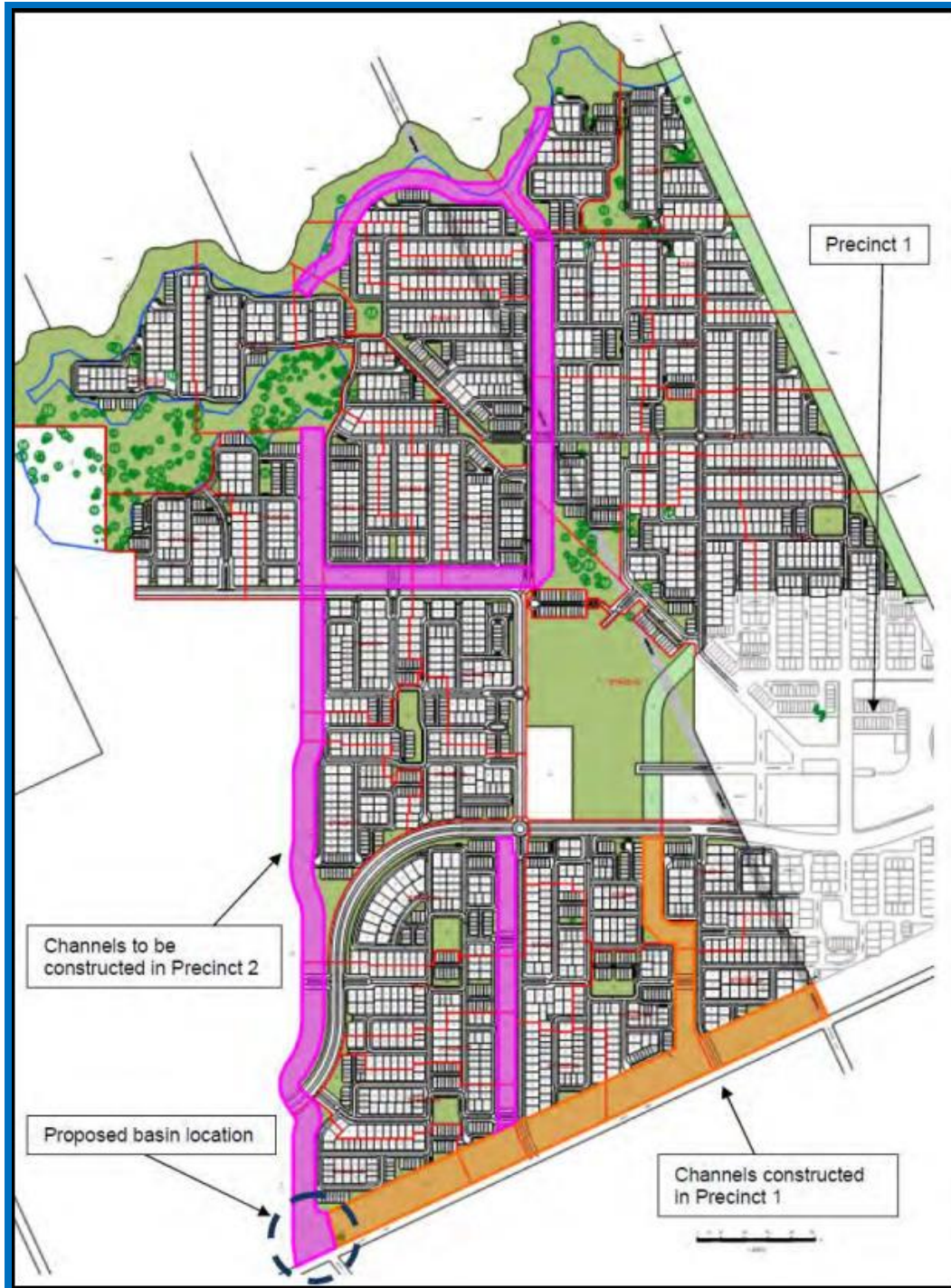


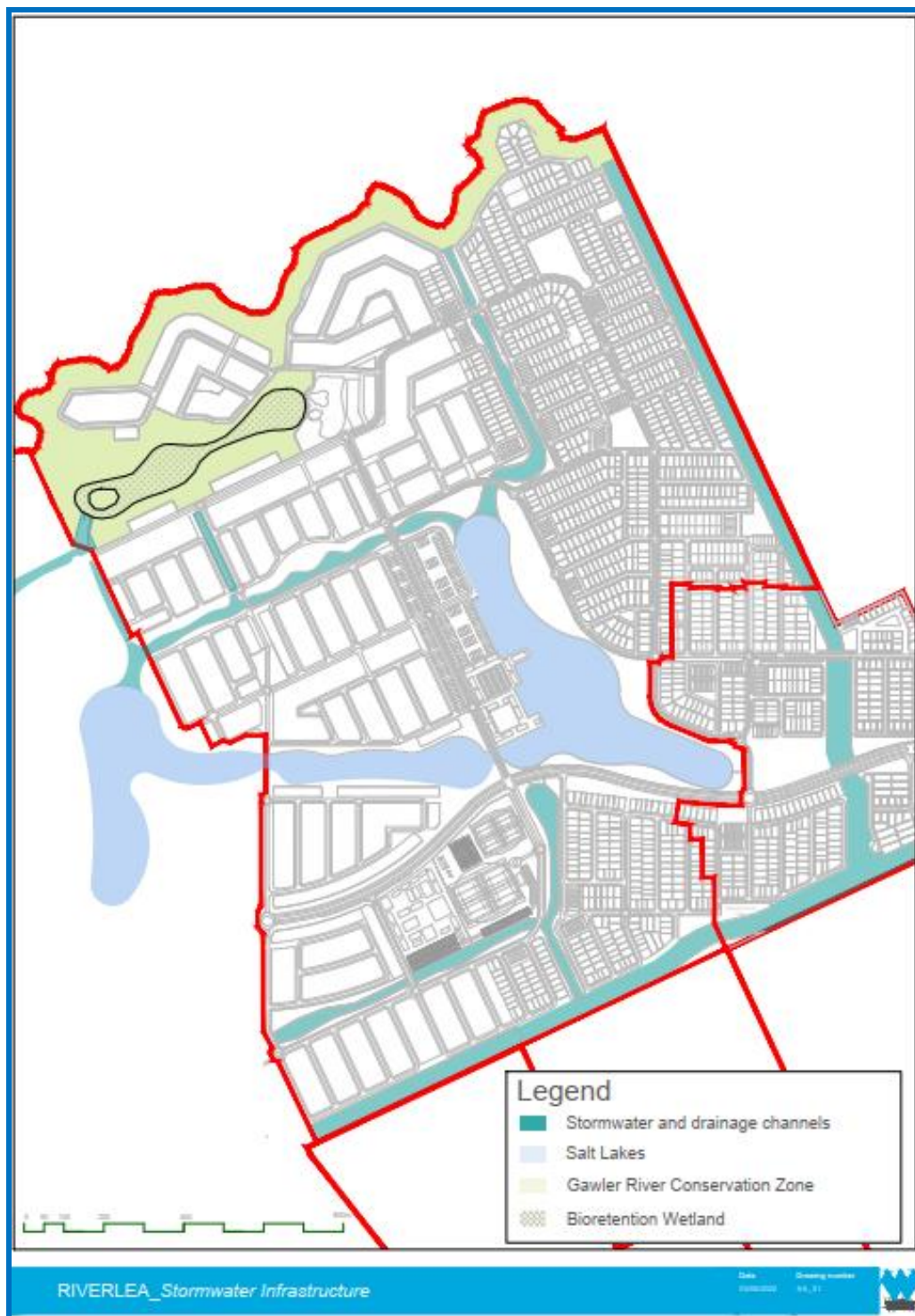
Figure 8 – Conceptual Master Plans – Original Open Linear Swales & Proposed Riverlea Lakes

5.6 In 2014, Wallbridge & Gilbert (consulting engineers) prepared a detailed design strategy for managing stormwater and floodwater mitigation for the initial Precinct 2 application. The subdivision design linked the two Precincts' drainage channels, swales and detention facilities. **Figure 9** below details the initial Stormwater Management and Floodwater Mitigation Concept for Precinct 2.



**Figure 9 – Approved Stormwater Management and Floodwater Mitigation Infrastructure**

5.7 In 2022, Wallbridge Gilbert Aztec (WGA) updated their initial 2009 Technical Paper - *Riverlea Park, Stormwater Management - Water, Wastewater and Recycled Water* to accommodate the altered stormwater and floodwater strategy. The altered plan changes the alignment of some drainage channels for Precinct 2 but, most notably, incorporates stormwater systems directed to the Riverlea Lakes system. The adjusted high-level stormwater management and floodwater mitigation plan shown in **Figure 10** is further described in the WGA updated Technical Paper in **Appendix A**.



**Figure 10 – High-Level Stormwater Management and Floodwater Mitigation Plan**

5.8 The future design of the saltwater lakes will consider the following key aspects in its operations and maintenance:

- Residence time and circulation
- Lake bathymetry
- Vegetation – submerged, marsh and floating treatment wetland
- Inflow Water Quality – upstream treatment
- In-lake Water Quality and pre-treatment of inflow
- Surrounding open space
- Top up water
- Groundwater interaction

5.9 WGA's updated Technical Paper outlines the formulation of the concepts as they relate to the Riverlea proposal and how they influence the recommendations for water infrastructure and the layout of the proposal's Master Plan – particularly the location and configuration of stormwater management facilities:

- Stormwater capture, treatment and reuse (minor flow management)
- Stormwater Management (major flow management)
- Flood protection from Gawler River
- Sewerage reticulation systems
- Potable water supply
- Provision of Recycled Water (NAIS) to the site

### Stormwater

5.10 Section 2 of WGA's updated Technical Paper focuses on stormwater management.

5.11 WGA identifies that Riverlea Park predominantly drains away from the Gawler River in a south-westerly direction towards the Thompson Creek Outfall Channel. Stormwater infrastructure in Riverlea Park is limited to a system of natural open creeks, roadside open channels, and culverts that move stormwater runoff through the catchment and discharge it to the ocean via the Thompson Creek Outfall Channel.

5.12 Upon completion of the Riverlea development, the catchment will produce a significantly larger volume of stormwater runoff than its pre-developed state. Stormwater must be captured, cleaned and discharged into St Vincent Gulf in an environmentally conscious manner, ensuring that the impacts from increased flows are appropriately managed. Accordingly, WGA recognises that a more structured stormwater management system is required.

- 5.13 The Technical Paper considers the alterations to the proposal – most notably, the introduction of the saltwater lake scheme within the development to provide amenity and stormwater detention for a significant component of the site.
- 5.14 WGA undertook stormwater modelling using rainfall data and recent reports prepared by the CSIRO to factor in climate change projections. That modelling suggested that the stormwater runoff from the developed catchment is significantly greater than the pre-developed peak flow rate and must be detained following Council's requirements.
- 5.15 To achieve Council's requirements that peak stormwater flows discharged from Riverlea Park do not exceed the pre-developed discharge rate, and considering the capacity of the Thompson Creek Outfall Channel, onsite detention is required within the proposal's masterplan.
- 5.16 Stormwater detention will be provided by two means: firstly, the saltwater lakes will provide stormwater detention approximately 0.5m above the lake's water level for those catchments draining to the lakes and secondly, for the southernmost catchments and parts of Precinct 1, a detention basin/wetland will be constructed at the southernmost portion of the site before discharging to the Thompson Creek Outfall Channel.

### Water Quality

- 5.17 Section 3 of WGA's updated Technical Paper focuses on water quality issues. Treatment of stormwater runoff at Riverlea must satisfy the *South Australian Environmental Protection Authority (SAEPA) – Environment Protection (Water Quality) Policy 2015*, given that stormwater will ultimately be discharged to receiving aquatic environments.
- 5.18 Accordingly, WGA adopted water sensitive urban design (WSUD) approach at both a masterplan and a detailed design level. It emphasised stormwater treatment and peak flow mitigation would adopt a multi-objective approach to stormwater management. The strategy adopts the Environment Protection Act principles and the framework associated with Australian and New Zealand Environment and Conservation Council (ANZECC) water quality guidelines. The strategy adopts a treatment train approach and complies with the WSUD targets for pollutant reduction.
- 5.19 WGA referenced the *SAEPA Water Quality Policy Guidelines*, which details concentration levels that pollutants should not exceed when discharging stormwater into aquatic environments, to assess the outcomes of its water quality strategy. Further, WGA used a MUSIC (Model for Urban Stormwater Improvement Conceptualisation) model in developing the proposed water quality treatment strategy to achieve the *SAEPA Water Quality Policy Guidelines*.
- 5.20 Further, WGA focussed on treatment performance targets before discharging stormwater into the saltwater lakes as they can be negatively affected by poor-quality stormwater inflows from local catchments. Modelling results reported have been at the outlets to the saltwater lakes. The stormwater treatment strategy adopts the saltwater lakes as the receiving environment to ensure

the appropriate quality enters the lake and that the saltwater lakes can be largely self-sustaining. The strategy does not rely on saltwater lakes to treat stormwater.

- 5.21 WGA's assessment of the stormwater treatment train approach adopts the framework associated with the ANZECC water quality guidelines for Riverlea. It shows that stormwater quality discharging from the site will meet the treatment performance targets defined in the EPA water quality policy and Greater Adelaide Region's Water Sensitive Urban Design (WSUD) pollutant reduction targets. Similarly, the assessment indicates that the treatment strategy achieves the stormwater treatment targets for discharging into the proposed saltwater lakes without affecting the water quality within the lakes.

### Flooding from the Gawler River

- 5.22 Section 4 of the Technical Paper considers the changes to the Gawler River Flood Model and updating the 100-year ARI floodplain mapping based on the updated model and introduction of the saltwater lakes.
- 5.23 As previously stated, the lower reaches of the Gawler River adjacent to Riverlea Park is a perched river system. The wider area has historically been prone to flooding following significant rainfall events within the Gawler River catchment. Some relatively minor breakouts enter the site when water breaks the banks of the Gawler River. While the breakout floodwaters are typically shallow and of low velocity, the breakouts pose some risks to the site. Accordingly, breakouts must be managed by elevating earthworks in residential areas within Riverlea and controlling floodwater pathways via open drainage channels to direct flows out to St Vincent Gulf.
- 5.24 The flood management strategy proposed for the site involves a series of flood drainage channels rather than a levee system that could cause forced breakouts in other areas, potentially adversely affecting adjoining properties. The drainage channel system proposed for Riverlea Park consists of several drainage channels directed through the site. These channels capture the breakout flows from the Gawler River and direct floodwaters through to the southern aspect of the site to Thompson Creek outfall (adjacent to the Bolivar Wastewater Treatment Plants outfall) and flowing to out St Vincent Gulf.
- 5.25 The flood performance modelling of the Gawler River breakouts led to the proposal's preferred solution. The modelling confirmed that the open channel drainage system could capture and pass the 1%AEP event Gawler River breakouts through the site.
- 5.26 Walker has invested significantly in delivering strategic State-owned stormwater infrastructure (external to and within Riverlea) to address flooding issues affecting traffic flows along Port Wakefield Highway. This infrastructure included the extensive drainage culverts under Port Wakefield Highway (and Angle Vale Road) that ultimately divert and detain floodwater flows through the Riverlea site (via a comprehensive drainage channel system) and releases to Thompson Creek towards its outfall at St Vincent Gulf.



- 5.27 The altered Precinct 2 proposal will not impact the drainage of Port Wakefield Highway, including any changes resulting from the revised stormwater management strategy. Precinct 2 is approximately 1.5 kilometres west of the Port Wakefield Highway. Pre-development and post-development conditions essentially result in floodwater flows within the immediate Riverlea catchment extending south-westerly (away from Port Wakefield Highway) towards Thompson Creek and its outfall adjacent to the Bolivar Waste Water Treatment Plant outfall. Stormwater will be directed to the existing channel system or the revised stormwater and floodwater mitigation strategy incorporating the saltwater lakes and channel systems (please refer to the detailed WGA Stormwater Report in Appendix A).
- 5.28 Accordingly, the revised stormwater and floodwater mitigation strategy will not compromise Walker's significant investment in providing the necessary infrastructure to address the pre-development flooding issues concerning Port Wakefield Highway.

### Potable and Recycled Water

- 5.29 The Technical Paper also provides updates by SA Water regarding the potable water supply to the development and updates concerning the provision of irrigation (recycled water) to the site as a result of the recent construction of the Northern Adelaide Irrigation Scheme (NAIS).

### Saltwater Lakes

- 5.30 The now proposed Riverlea Concept Plan foresees the creation of a saltwater lakes system comprising a total surface area of over 40 hectares once fully completed.
- 5.31 In the updated December 2022 – *Riverlea, Salt Water Lakes, Phase 3 Report (Appendix H)*, Walker intends to stage the construction of the saltwater lakes system over approximately 15 years, with each phase delivered at about 5-year intervals. This means that the saltwater lakes phases will be designed to operate independently of one another.
- 5.32 Phase 1 of the saltwater lakes system is scheduled to commence in mid-2023 to take advantage of the drier and warmer months from October to April. Construction will begin upon the Council's approval of the detailed engineering design and specifications.
- 5.33 Although estimated to be at five-year intervals, the actual timing of construction for Phases 2 and 3 will depend on the rate of the residential subdivision areas driven by marketplace sales rates. **Figures 11 and 12** detail the conceptual seawater circulation strategy layout and phasing plans.

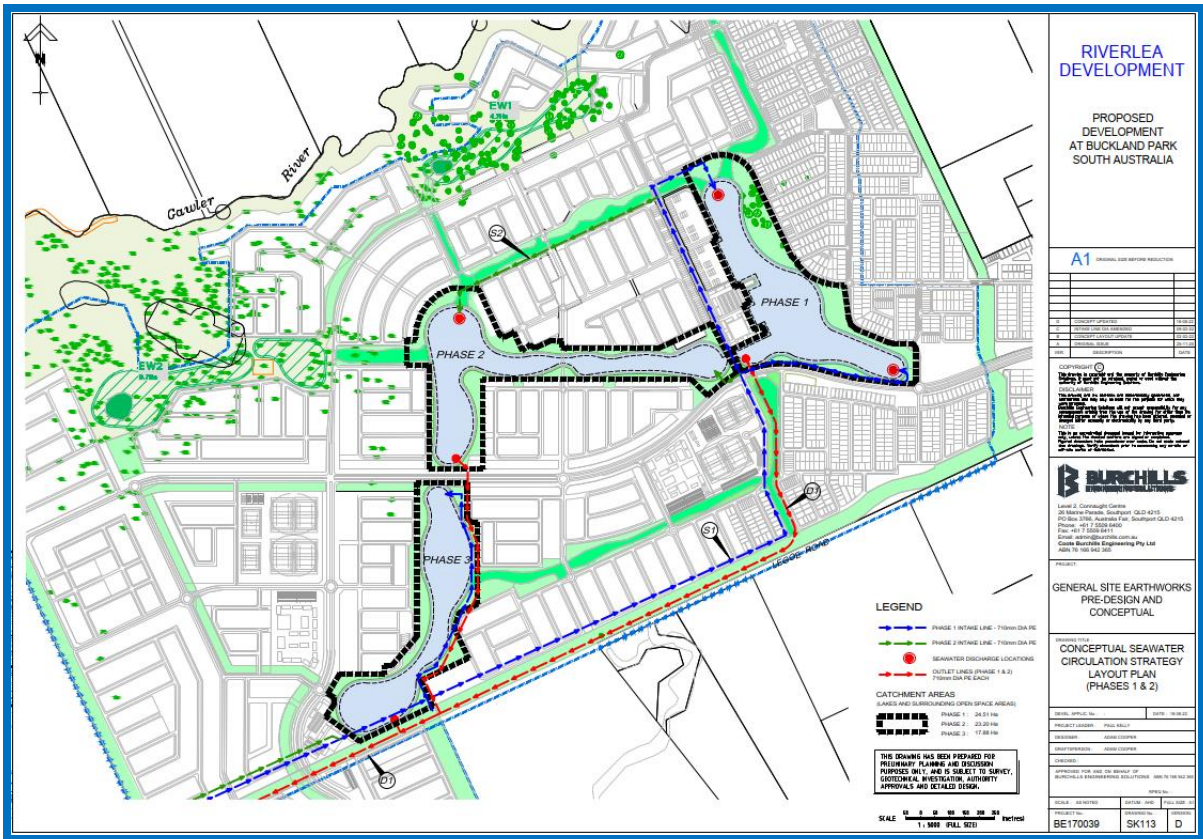


Figure 11 – Conceptual Seawater Circulation Strategy Layout Plan (Phases 1, 2 & 3)



Figure 12 - Conceptual Lake Circulation System Phasing Plans (also Appendix I)

5.34 Introducing the Riverlea Lakes system provides a less impactful solution to stormwater and floodwater management and significantly improves public realm amenities more than extensive drainage channels. In addition, seawater is readily available, reliable, and a constant water source that will maintain a consistent water level whilst ensuring continuous water circulation via a pumped intake system that promotes better water quality.

### *Construction Methodology*

5.35 Construction of the saltwater lakes will comprise a bulk earthworks operation excavating the lakes to an average depth of 2.0m below standing water level, loading, carting, spreading, and compacting the excavated material around the lake's perimeter to create an elevated landform. The actual base level of the lakes compared to the adjacent water table will vary between 2.5m (Saltwater Lake 1) and 1.5m (Saltwater Lake 3). The quantity of earthworks material to be excavated and relocated to complete the landform works is approximately 6,350,000m<sup>3</sup>.

5.36 The dominant substrate soil type within the broad footprint of the Riverlea site is clay material with medium to high plasticity. Given that significant quantities of suitable medium to high plasticity clay liner material are readily available, a 500mm thick clay liner will line the saltwater lakes. The clay liner will be ideal for the containment of the saline water (preventing the egress of saltwater from the lakes or groundwater ingress into the lake system). It will be an engineering deliverable that the clay liner is certified as impermeable.

5.37 As stated previously, the construction of the saltwater lakes will be in three (3) phases:

- Saltwater Lakes 1 (the eastern lake)
- Saltwater Lakes 2 (the central lake)
- Saltwater Lakes 3 (the southern lake).

5.38 The saltwater lakes will be constructed as a system of compartments (and a series of bays within each compartment) comprising an area of approximately 2.0 hectares (200m x 100m), progressing north to south and east to west (generally matching the progression of the land development).

5.39 The compartments within each saltwater lakes phase will follow the construction works sequencing highlighted in the *Riverlea Salt Water Lakes, Phase 3 Report* dated December 2022 in **Appendix H** and broadly described below.

5.40 Construction progression from one bay to the next will proceed as follows:

1. Half-depth excavation of the lake footprint.
2. Installation of groundwater seepage lines and dewatering system.
3. Full-depth excavation of the lake.
4. Installation of the clay liner.
5. Installation of compartment containment bunding in the bay under construction.
6. Removal of the containment bunding in the previously completed compartment.
7. The completed compartment will be part-filled with groundwater or managed stormwater runoff to ensure the clay liners are maintained in a 'wet state'.

- 5.41 The replication of the above methodology for Saltwater Lakes 2 and 3 will match the progression of the staging of the development.
- 5.42 All water quality treatment of site stormwater run-off from the development will be undertaken at the source (or the head of the stormwater piped network). The stormwater lines will out-fall to parkland areas adjacent to the lakes at approximately lake level.
- 5.43 The Precinct 2 lake (eastern lake) filling will commence immediately after construction. The filling rate is based on the part-system turnover rate (noting the compartmentalisation), with a target timeframe of 10 to 20 days. The filling rate can accelerate using the additional 33% pumping capacity under heightened conditions (contingency capacity).
- 5.44 The ultimate staging of the saltwater lakes circulation system will be the subject of detailed design.

#### *Management of Groundwater in the Construction of the Saltwater Lake*

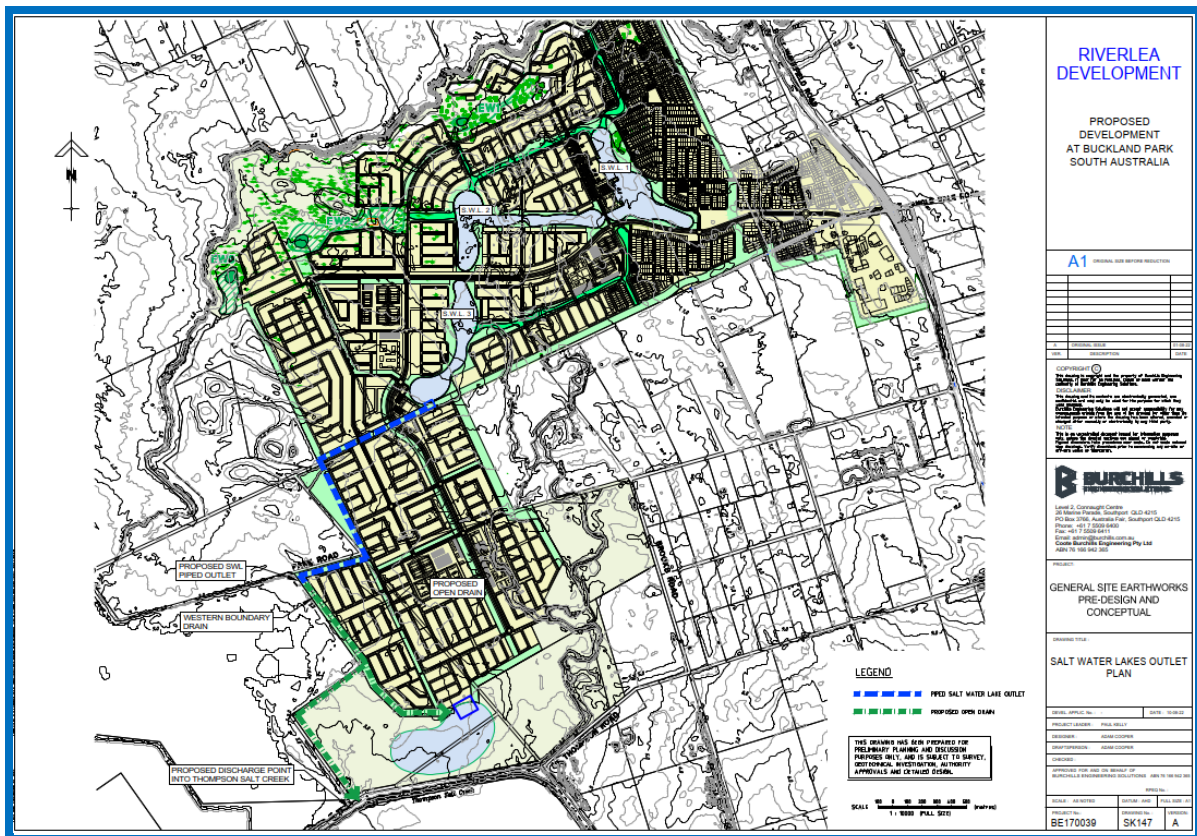
- 5.45 The Riverlea Lakes excavation will extend into the zone of the shallow groundwater system onsite, including the unconfined perched zone of saturation. It may include some intersection of the underlying and semi-confined upper quaternary aquifer (Q1). The shallow groundwater is present within relatively thin lenses of sand or gravelly sand through a typically high-plasticity clay substrate.
- 5.46 The presence of groundwater in thin permeable lenses within a generally impervious substrate has important implications for dewatering management during excavations onsite. Localised excavations have progressed piecemeal (sometimes on a large scale) without significant dewatering requirements. The groundwater cannot exit the substrate quickly in large volumes due to the small cross-sectional area of saturation exposed, allowing excavations to progress steadily.
- 5.47 The base of the saltwater lakes will be below the depth of groundwater saturation zones at all three of the saltwater lakes phases. As stated earlier, the level of the base of the Saltwater Lakes will vary between 2.5 m (Saltwater Lakes 1) and 1.5 m (Saltwater Lakes 3) below the top of the groundwater-saturated zone. It is important to recognise that the ground formation from the top of groundwater down to the base of the lakes excavations is not fully saturated, with most of the formation comprising high plasticity clay.
- 5.48 A dewatering operation must accompany the earthworks to maintain a dry lake construction zone. It will follow the Environment Protection Authority guideline, *Environmental management of dewatering during construction activities* (June 2021) and the requirements for taking groundwater according to the *Landscape South Australia Act 2019*. Walker is aware of its obligations under the *Environment Protection Act 1993* and the *Environment Protection (Water Quality) Policy 2015* concerning environmental management of dewatering during construction activities, regarding both groundwater and stormwater. Dewatering wastewater will be reused to 'condition' soils as they are compacted in the lake floor before the placement of the clay

liner. Once this process is completed, the clay material must be 'conditioned' to achieve optimum moisture content before placement and compaction. Accordingly, dewatering wastewater is not expected to be discharged directly or indirectly to surface waters, including the stormwater system, inland, or marine waters.

- 5.49 Walker will seek relevant authorisations to undertake dewatering activities to construct the saltwater lakes and drainage channels following the *Landscape South Australia Act 2019* and *Environment Protection Act 1993*. In this regard, Walker has engaged a specialist consultant (LBWco) to undertake appropriate technical investigations and to prepare a Dewatering Management Plan (DMP), which will also support an application for the necessary regulatory approvals. The DMP will provide an assessment of estimated groundwater inflows to the lake's excavations based on a hydrogeological model for the site and the proposed construction methodology. An iterative review process will be undertaken to optimise the construction methodology to help ensure the proposed dewatering wastewater management strategy can be practicably implemented for conservatively estimated dewatering flow rates. Contingency measures will be included in the DMP to account for the scenario of higher than estimated dewatering flow rates required. The DMP will form part of the Construction Environment Monitoring and Management Plan (CEMMP). The CEMMP also includes a Stormwater Management Plan (amongst other management plans) to ensure potential interactions between the two documents, including any management measures and monitoring, are considered in parallel.
- 5.50 A preliminary methodology for construction sequencing and dewatering has been prepared for the lakes, linking the existing shallow groundwater system around the lake footprints by installing trenches backfilled with permeable media to coincide with the saturated lenses. Groundwater dewatering will occur via pumping groundwater from these trenches to prevent groundwater from flowing into the open lake's excavations. Dewatering may be supplemented with extraction bores within the lakes' excavations, depending on the radius of pumping influence required to achieve the necessary groundwater control.
- 5.51 Following the construction of lakes liners and filling the lakes with saltwater, the permeable trenches around the lakes will provide a preferential pathway for the lateral flow of natural shallow groundwater around the lakes. This technique will assist with maintaining the natural groundwater gradient and flow direction while minimising the potential for mounding on the upgradient sides of the lakes. The pressure head between the filled saltwater lakes and the shallow groundwater is anticipated to be approximately equal on either side of the liner, indicating no or limited pressure driver for water movement across the liner in either direction.
- 5.52 Walker expects LBWco and any sub-consultants to liaise with the EPA and DEW concerning the expectations of these agencies in preparing the Dewatering Methodology, Management Plans and any necessary documentation for pending applications, as required.

*Outflows (Discharge from the lake)*

- 5.53 The seawater will be circulated through the lake system by gravity and discharged to a channel that discharges to the Thompson Creek Outfall Channel (again by gravity). The Thompson Creek Outfall Channel is next to the Bolivar channel that releases non-saline water (treated effluent) from the Bolivar Wastewater Treatment Plant. Both water sources will ultimately discharge into the ocean. Sampling points in Thompson Creek and the Outfall Channel have indicated very high Total Nitrogen, Total Phosphorous and chlorophyll 'a' concentrations. The water quality discharged from the saltwater lakes into Thompson Creek is expected to be significantly better than the current water quality. Mixing water downstream of both channels will likely result in a higher quality of water in the nearshore region than currently occurs, allowing the development to provide a net benefit for receiving waters. Ultimately, the outfall from the lake system could improve the current nearshore conditions in St Vincent Gulf.
- 5.54 A pipe and channel (about 30m wide) system along the western boundary of the southern peninsular of the development will receive and direct flows from the Lakes to Thompson Creek Outfall. The channel will be contained by the existing edge of the adjacent Buckland Dry Creek Pty Ltd salt lakes to the west and the residential landform to the east in a highly saline environment (refer to **Figure 13** below and **Appendix J**).



**Figure 13 – Saltwater Lakes Outlet Plan**

## Crown Application - Seawater Intake System and pipe network

- 5.55 The Riverlea Lakes system requires essential infrastructure outside the major development declaration area to enable a seawater intake and pipe network system to pump seawater to the saltwater lakes system.
- 5.56 The infrastructure consists of an intake pump station, pipe network and power supply that will lie within an unmade portion of Legoe Road until it reaches Crown Land and then diverts to the Chapman Creek intake location adjacent to St Vincent Gulf.
- 5.57 Walker submitted a separate Crown application for essential infrastructure (the seawater intake and pipe network system) to be considered concurrently with this application/EIS amendment request (following Section 131 *PDI Act*).
- 5.58 The simultaneous lodgement of the two applications has several advantages, being (amongst other matters):
- The relevance and nature of the proposed development (the delivery of essential stormwater and flood mitigation infrastructure for the area);
  - It efficiently addresses issues requiring approval both within and outside the declared area; and
  - The Minister for Planning (or delegate) would be the relevant authority for determining both applications (providing consistency and transparency).
- 5.59 Walker engaged extensively with various State Government agencies concerning the 'essential infrastructure' requirements for the saltwater lakes system beyond the Riverlea project area.
- 5.60 The Department for Environment and Water (DEW) Crown Lands Program has assisted Walker with identifying the required Crown Land processes and the relevant stakeholder interests.
- 5.61 Part of the land on which the infrastructure will traverse is Crown Lands and dedicated for fish culture purposes under the care, control and management of the Minister for Primary Industries and Regional Development (PIRSA). The land is also subject to a Mining Lease in favour of Buckland Dry Creek Pty Ltd (BDC), which the Department for Energy and Mining (DEM) manages.
- 5.62 As discussed previously, Walker will apply for a license under Section 46 of the *Crown Land Management Act 2009* to allow construction activities once the Crown application is approved (as required by the Crown Lands Program). Walker has engaged with DEM, PIRSA, DEW and BDC as interested parties to date and will work in good faith to engage with these parties to seek their consent before the license is requested.
- 5.63 Ultimately, Walker will secure longer-term tenure by easement (in favour of the Council) following Section 28 of the *Crown Land Management Act 2009* after construction commences.
- 5.64 Walker is aware that authorisations are required from Green Adelaide / the Minister for Environment and Water under Section 105 of the *Landscape South Australia Act 2019* to

undertake de-watering activities associated with infrastructure construction and seawater extraction.

- 5.65 Walker has secured approval from the Native Vegetation Council (under the *Native Vegetation Regulations 2017*) to undertake the necessary vegetation clearance required to locate the intake pump station and associated pipework and power supply components. A copy of that approval is in **Appendix K**.

## Revised Precinct 2 – Land Division Layout

- 5.66 The altered Precinct 2 proposal does not seek to change the intent to deliver on any of the community infrastructure or amenities previously proposed. The altered Precinct 2 proposal seeks to further enhance the urban amenity by adopting the Riverlea Lakes as part of a stormwater and floodwater mitigation strategy and an important focal point for the development.

### *Previous subdivision proposal*

- 5.67 The existing approval for the Precinct 2 land division comprises about 2,740 residential allotments of various sizes. Residential neighbourhoods were supported by facilities with a community focus, schools, neighbourhood centres, local and sub-arterial roads, and local, district and regional open space. The previously revised Riverlea Precinct 1 & 2 Revised Concept (**Figure 14**) and approved Precinct 2 Land Division Layout Plan (**Figure 15**) are below.

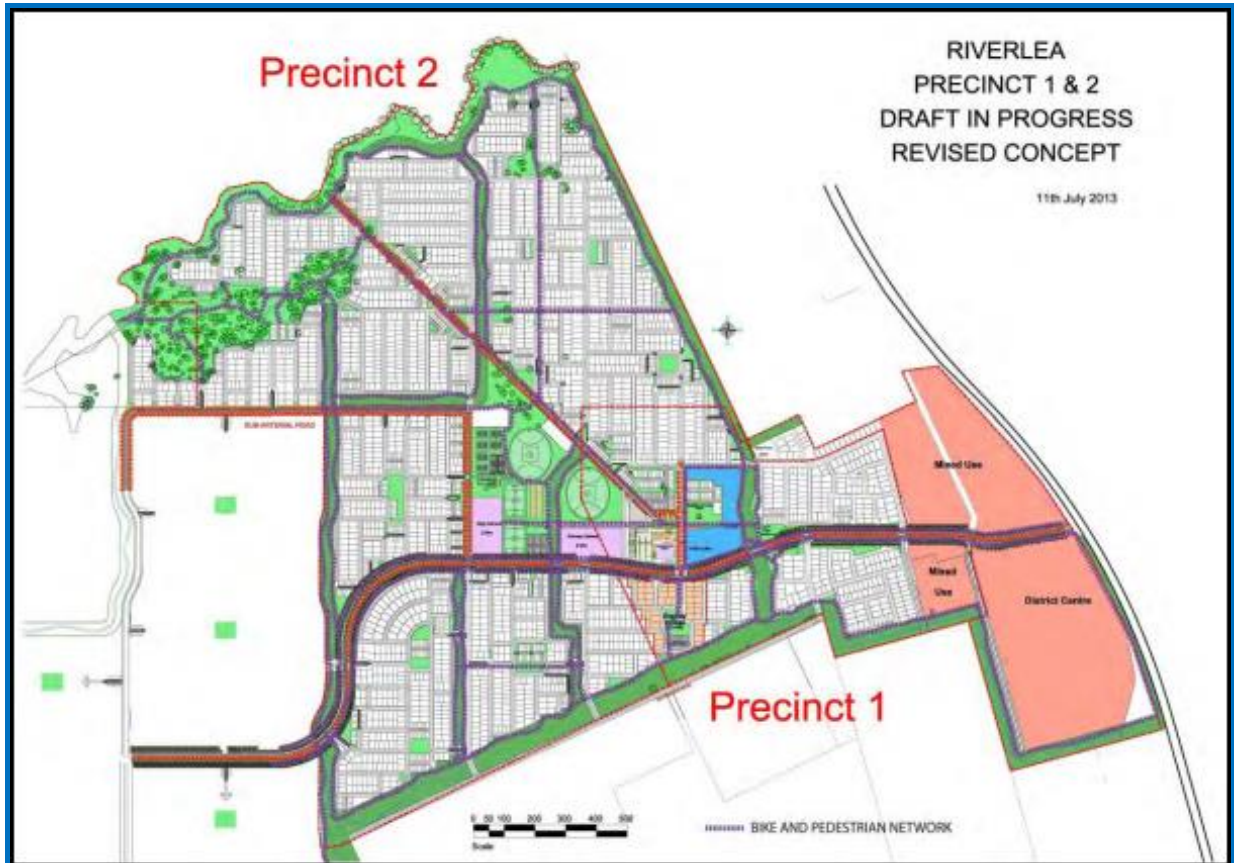
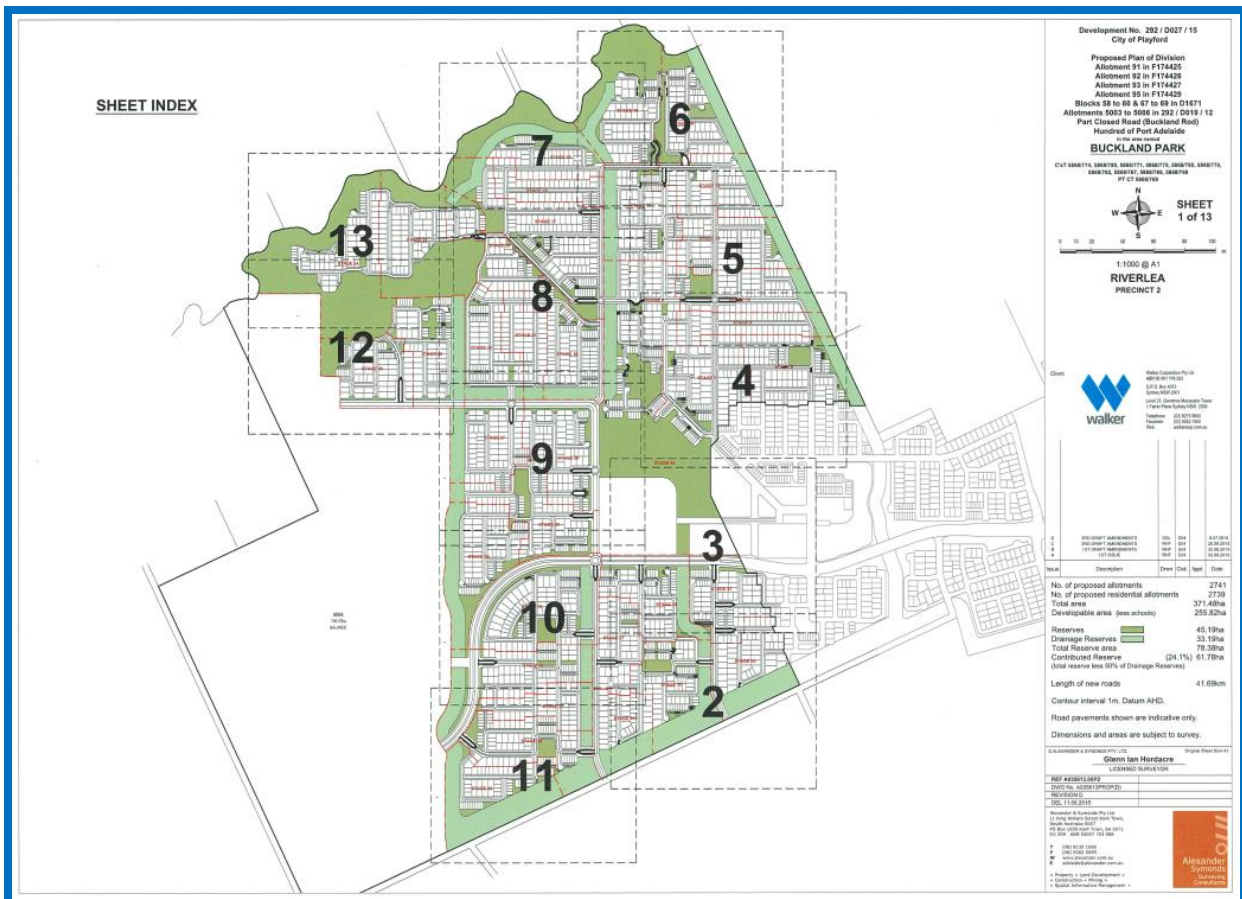


Figure 14 - Previously Revised Riverlea Precinct 1 & 2 Revised Concept





**Figure 15 - Approved Precinct 2 Land Division Layout Plan**

5.68 The Riverlea Concept Plan and approved Precinct 2 Land Division Layout Plan were designed to include the following features:

- Residential areas accommodate up to 2,740 dwellings in various forms, densities and distinct neighbourhoods.
- A road hierarchy comprising the main arterial road (Riverlea Boulevard), sub-arterial and collector roads.
- Roads designed to connect centres and housing to accommodate regional and local bus routes.
- A District Centre and neighbourhood centres located near bus routes and close to the residential or employment areas they will serve.
- Employment, commercial and mixed-use precincts accessible to the principal roads shown in the road hierarchy and adjoining horticulture land outside the site boundaries.
- Open space to provide passive and active recreation facilities and incorporate stormwater and floodwater management systems, including a lake and significant indigenous vegetation.
- Primary and secondary schools located close to centres and bus routes.
- Separation from existing non-residential activities (future Employment Lands) in the locality.

### Revised Precinct 2 land division pattern

- 5.69 The revised stormwater and floodwater strategy (primarily the Riverlea Lakes system) will alter the approved road network layout and subdivision pattern (including its stages). The altered proposal does not seek to significantly change the Precinct 2 total land area or the number of residential allotments proposed from that previously approved (although it must be recognised there will be marginal adjustments). The revised Concept Plan is shown in **Figure 16** below.
- 5.70 The revised layout will alter the location of community infrastructure such as the future Neighbourhood Centre, future school sites and open space areas dedicated to future sports playing fields. The revised proposal will also remove the proposed freshwater lakes to create the saltwater lake system. The proposal does not seek to remove this community infrastructure but merely relocate it within the revised Precinct 2 layout.
- 5.71 The altered Precinct 2 proposal does not seek to change the intent to deliver on any of the above features. The revised Riverlea Precinct 2 Land Division Layout Plan, including the lake system, is provided in **Figure 17**.

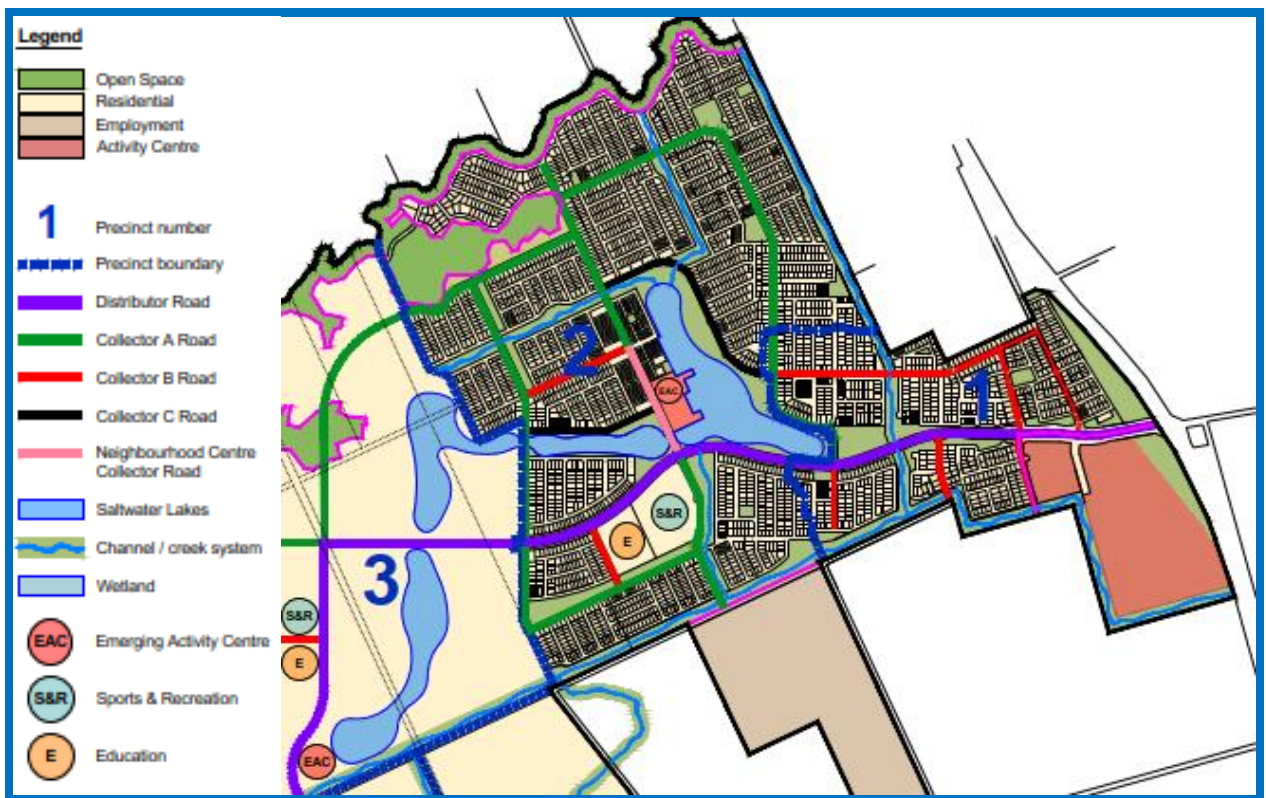


Figure 16 - Revised Concept Plan (detailing Precincts 1 & 2)

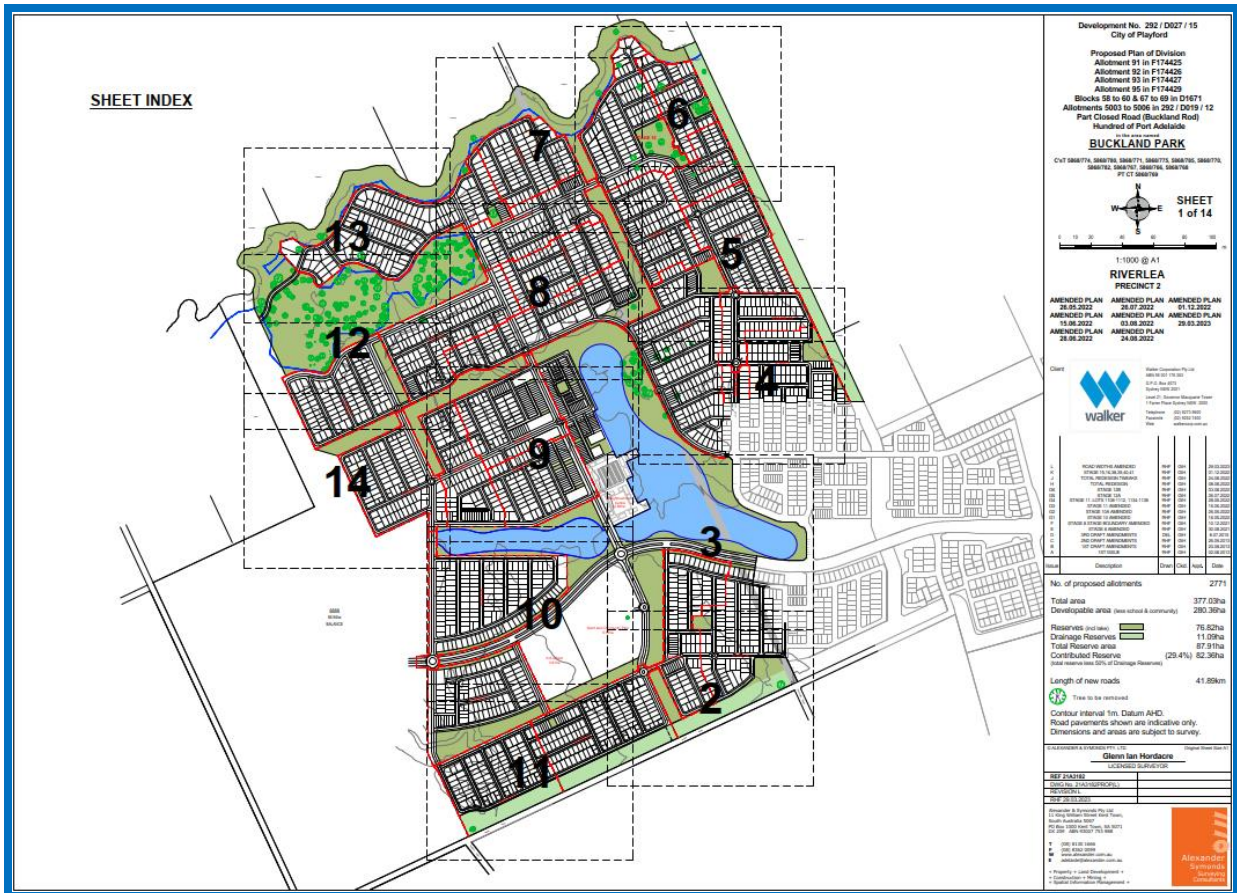


Figure 17 – The Altered Precinct 2 Land Division Layout Plan

5.72 The broader Land division Statistics for Precincts 1 and 2 and the overall Project are in Table 1.

	Precinct 1		Precinct 2		Precinct 3		Precinct 4		TOTAL	% of Total Site Area
<b>TOTAL PRECINCT AREA</b>	<b>125.35</b>		<b>289.37</b>		<b>350.04</b>		<b>462.9</b>		<b>1227.7</b>	<b>100%</b>
<b>Net Residential Saleable Area</b>	<b>38.5</b>	31%	<b>118.5</b>	41%	<b>128.3</b>	37%	<b>128.8</b>	28%	<b>414.1</b>	<b>34%</b>
<b>Apartment sites</b>			<b>2.6</b>		<b>7.1</b>		<b>5.6</b>		<b>15.3</b>	<b>1%</b>
<b>Road reserve</b>	<b>20.0</b>	16%	<b>62.2</b>	21%	<b>60.4</b>	17%	<b>57.0</b>	12%	<b>199.6</b>	<b>16%</b>
<b>Boulevard reserve</b>	<b>9.0</b>	7%	<b>5.6</b>	2%	<b>10.4</b>	3%	<b>9.4</b>	2%	<b>34.4</b>	<b>3%</b>
<b>Boulevard Landscape</b>	<b>12.4</b>	10%	<b>0.6</b>	0.2%					<b>13.0</b>	
<b>Neighbourhood Park</b>	<b>4.7</b>	4%	<b>6.6</b>	2%	<b>2.8</b>	1%	<b>3.2</b>	1%	<b>17.3</b>	
<b>Lakeside Park</b>			<b>8.9</b>	3%	<b>11.0</b>	3%			<b>19.8</b>	
<b>Linear Park</b>			<b>7.7</b>	3%	<b>1.6</b>	0%			<b>9.3</b>	
<b>Drainage</b>	<b>14.2</b>	11%	<b>17.9</b>	6%	<b>17.5</b>	5%	<b>22.6</b>	5%	<b>72.1</b>	
<b>Lake</b>			<b>19.1</b>	7%	<b>21.2</b>	6%			<b>40.3</b>	
<b>Recreation (sports fields)</b>			<b>6.3</b>	2%	<b>9.6</b>	3%	<b>9.8</b>	2%	<b>25.8</b>	
<b>Gawler River Conservation</b>			<b>27.2</b>	9%	<b>72.8</b>	21%			<b>100.0</b>	
<b>Southern Conservation</b>							<b>170.1</b>		<b>170.1</b>	
<b>Southern Drainage basins</b>							<b>47.19</b>		<b>47.2</b>	
<b>TOTAL OPS per precinct</b>	<b>31.2</b>	25%	<b>94.3</b>	33%	<b>136.5</b>	39%	<b>252.9</b>	55%	<b>514.9</b>	<b>42%</b>
<b>School</b>			<b>3.7</b>		<b>5.1</b>		<b>4.9</b>		<b>13.7</b>	<b>1%</b>
<b>Retail</b>	<b>22.7</b>	18%	<b>2.6</b>	1%	<b>2.3</b>	1%	<b>4.3</b>	1%	<b>32.0</b>	<b>3%</b>
<b>Mixed Use</b>	<b>4.0</b>	3%							<b>4.0</b>	<b>1%</b>
<b>Yield residential</b>	<b>808</b>		<b>2779</b>		<b>3209</b>		<b>3220</b>		<b>10016</b>	<b>dwelling</b>
<b>Yield apartments</b>	<b>0</b>		<b>387</b>		<b>1061</b>		<b>840</b>		<b>2288</b>	<b>apartments</b>
<b>Net density dw/ha</b>	<b>21</b>		<b>23</b>		<b>25</b>		<b>25</b>			
<b>Gross density dw/ha</b>	<b>9.6</b>		<b>14.4</b>		<b>15.9</b>		<b>16.2</b>			

Table 1 – Land Division Statistics for Precincts 1 & 2 (and Estimates for Precincts 3 & 4)

- 5.73 The revised Precinct 2 land division now comprises approximately 2,770 residential allotments of various sizes. Residential neighbourhoods are still to be supported by community infrastructure, such as schools, neighbourhood centres, local and sub-arterial roads, and local, district and regional open spaces (albeit enhanced with the Riverlea Lakes), as shown in **Figure 16** above.
- 5.74 The altered Precinct 2 proposal plans (including the Proposed Plan of Division, Affordable Housing Plan, Pedestrian and Cycling Network Plan, Residential Allotment Mix Plan, and Residential Special Fencing Control Plan) and the Overall Concept Plans are in **Appendices L to Q**, respectively.

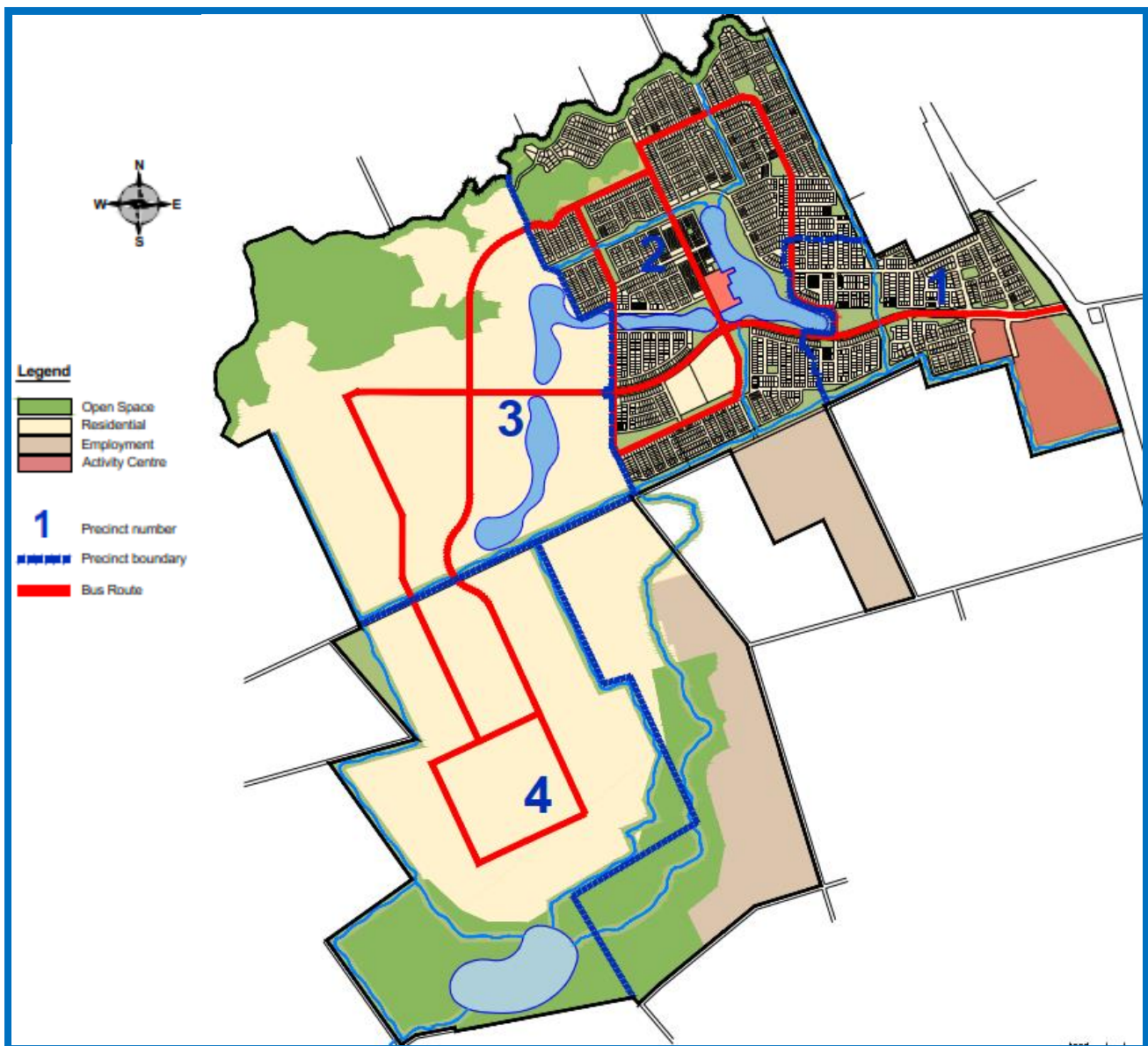
### *Road Network and Bus Routes*

#### **Road Network**

- 5.75 Key to the development is a street and road network that provides access to the daily services and needs of the community. In 2009, Parsons Brinckerhoff (PB) prepared the initial Traffic Impact Assessment for the Township Masterplan. GTA Consultants (Stantec) undertook a subsequent Traffic Assessment for Precinct 2 in 2015.
- 5.76 Stantec was requested to review the following:
- Buckland Park Traffic Impact Assessment prepared by Parsons Brinckerhoff in 2009; and
  - Riverlea Precinct 2 Traffic Assessment undertaken by GTA Consultants in 2015; and
  - The altered Precinct 2 masterplan.
- 5.77 Riverlea Park's primary regional road connection is via Port Wakefield Highway. Consistent with the masterplan was upgrading the Port Wakefield Highway, Angle Vale Road and Riverlea Boulevard intersection, as was the provision of road infrastructure for the Precincts 1 and 2 subdivisions.
- 5.78 Given that the proposed road layout has been altered to accommodate the Riverlea Lakes design within the Riverlea development, Stantec was engaged again to review the previous assessment reports and undertake further assessment and reporting on the revised land division layout and road configuration. That Assessment Report is in **Appendix B**.
- 5.79 Stantec concluded that the revised 2022 analysis and reporting indicate that Precincts 1 and 2 will generate up to 26,000 vehicle trips per day, consistent with the PB Traffic Impact Assessment prepared for the master plan in 2009 and Stantec's Precinct 2 Traffic Assessment in 2015.
- 5.80 Stantec's review of the proposed intersections (specifically for Riverlea Boulevard) identified that the initial layouts would cater for Precinct 2 interim traffic demands. Further assessment will be made concerning the ultimate intersection layouts required to cater for future traffic demands at Riverlea as it develops further to the west into Precinct 3.



5.85 The amended Super lot staging retains the logical arrangement of major roads and bus routes (refer to **Figure 18** for the previous Masterplan Bus Routes and **Figure 19** for the proposed Bus Routes Concept Plan).



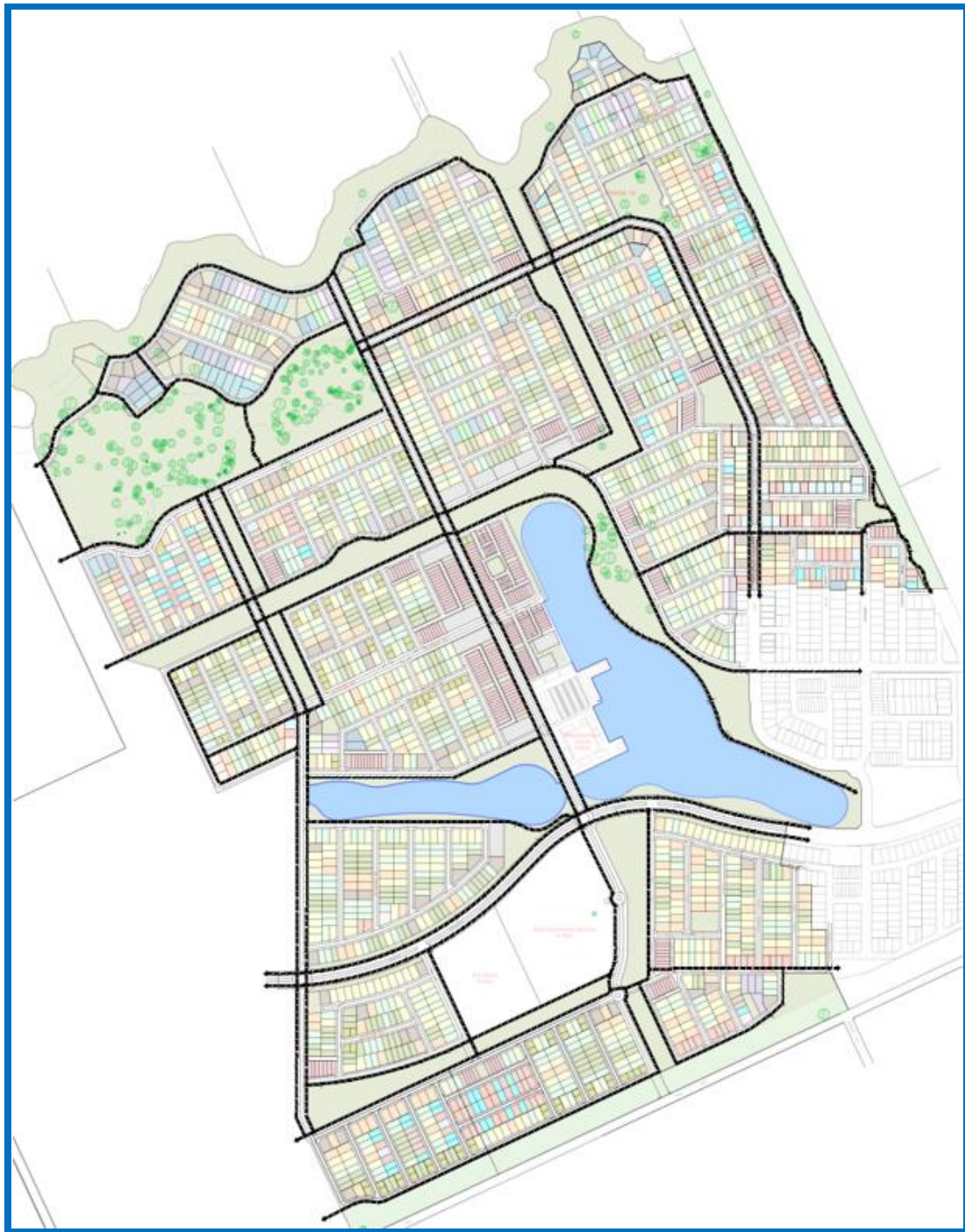
**Figure 19 - Bus Routes Concept Plan**

5.86 While Riverlea has yet to reach critical thresholds for implementing formalised public transport, the predicted community focus is undertaken in consultation with the SA Public Transport Authority.

### Bicycle and Pedestrian Network 1

5.87 Precinct 2 includes an extensive Pedestrian and Cycle Network consisting of a hierarchy of pedestrian paths along the main arterial roads to local roads, landscaped open space channels, connections to local parks and reserves, including the Gawler River Nature Trail, connections to Neighbourhood and other centres as well as to other community infrastructure like schools, sporting fields, etc.

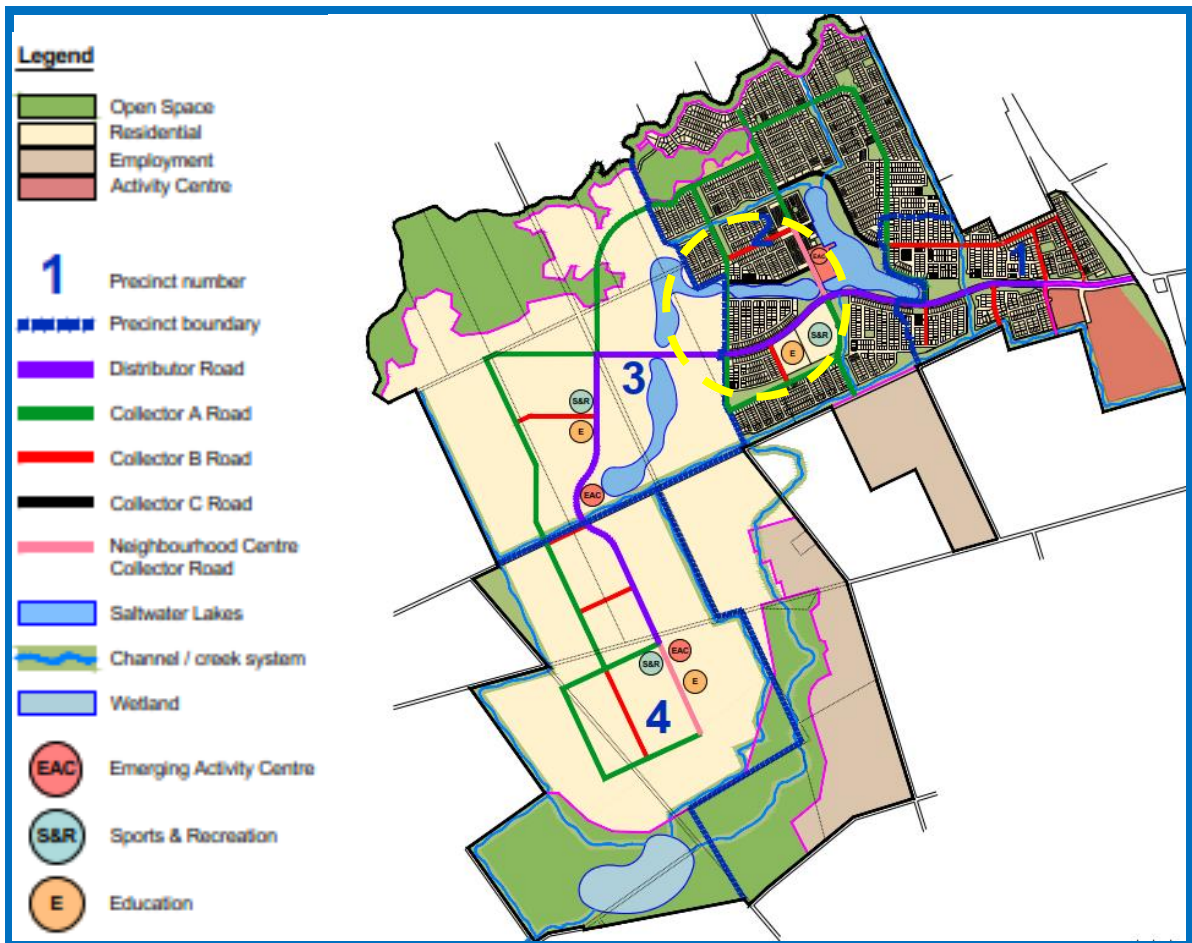
5.88 Accordingly, the Bicycle and Pedestrian infrastructure will create a clear, distinct and coordinated network across and between Precincts 1, 2, 3 and 4 as the Project rolls out and expands (refer to **Figure 20** for a high-level conceptual layout of the network).



**Figure 20 - Precinct 2: Bicycle and Pedestrian Network**

### Community Infrastructure

5.89 Precinct 2 accommodates various community infrastructure, including schools, Neighbourhood Centres, reserves, nature trails, a comprehensive Pedestrian and Cycle Network, landscaped streets, and the Riverlea Lake system. As highlighted in Table 1 above, the Neighbourhood Centre comprises an area of 2.6 hectares that will provide for a wide range of retail shopping. **Figures 21 & 22** below detail the location of the proposed future Precinct 2 Neighbourhood Centre & indicative concepts for a school site and open space playing fields.



Figures 21 & 22 – Future Neighbourhood Centre & Indicative School Sites & Open Space Playing Fields





## Affordable Housing

- 5.90 15% of Precinct 2's residential properties have been nominated as Affordable Housing and will be uploaded on the Homeseeker SA website for purchase by eligible home buyers (either vacant land or house and land packages). This component includes a range of allotment sizes and locations, as shown in the Affordable Housing Master Plan at Figure 23 below and Appendix N.
- 5.91 Walker continues to liaise with the South Australian Housing Authority (SAHA) concerning providing Affordable Housing throughout the Riverlea development. Walker has submitted an Affordable Housing Plan (AHP) covering Precincts 1 & 2 to the Affordable Housing and Market Solutions branch within SAHA for review. While SAHA has recently approved the AHP, the AHP will be reviewed and updated every six months, as appropriate.
- 5.92 Walker is also working with SAHA to execute a legally binding agreement to dedicate additional properties in Precinct 2 for affordable housing, ensuring that Precincts 1 and 2 combined achieve the 15% 'affordable housing criteria'.

## Infrastructure

- 5.93 As with the previously approved proposal, infrastructure and utilities will be required to support new housing and community infrastructure within the altered subdivision. In addition, the master-planned approach facilitates the orderly rollout of stages within each precinct, allowing for coordinated and efficient infrastructure provision.
- 5.94 As documented in the previous Precinct 2 development application/EIS amendment, the relevant infrastructure authorities confirmed their respective services would be available. Given that the nature of the development and the number of residential allotments have not altered significantly, the service infrastructure requirements have not changed.
- 5.95 Nonetheless, Walker and the relevant Utility authorities will continue to work collaboratively to coordinate service infrastructure provision across Precincts 1 and 2 as each stage progresses.

## Landscape Quality and Public Domain

- 5.96 Walker has updated the landscape master plan following an assessment of the open space and the incorporation of the lakes network. Walker has reviewed the locations, hierarchies, walking catchments, and the design intent to maximise community benefit and provide an appropriate and enjoyable public realm for many years.
- 5.97 The updated masterplan responds to different areas of the project through theming and precincts, such as 'The Rivers' and 'The Lakes' precincts, with the use of specific materials and planting palettes as well as considerations of individual characteristics. Precinct 2 is marked by variety, incorporating four themes from north to south and features the district-level Lakes Park, which will become an attraction for the entire project and beyond.



**Figure 23 - Affordable Housing Master Plan**

- 5.98 Facilities for each park demonstrate a distribution of a variety of public spaces that incorporate play and non-play-based elements to cater to all age groups. Playgrounds, bike and skate facilities, water play, boardwalks, exercise stations and bbq/picnic facilities are just some of the amenities available within this extensive network, providing all options. The cycling network within the precinct is intended to comprise bike lanes, green streets and off-road shared user paths that seamlessly connect.
- 5.99 With the site's natural Kaurna connections, the conservation areas will incorporate cultural and biodiversity educational signage that will connect people to the history of the area as well as its surrounds in the present day.

5.100 The latest iteration of the Riverlea Landscape Master Plan is currently with the City of Playford for approval following a previous review. The draft document is in **Appendix E** for information.

**Special fencing controls**

5.101 Residential allotments with fencing to open spaces or significant roads will be subject to special fencing controls imposed via the 'Walker Residential Design Guidelines to address public domain appearance and potential vandalism. A copy of the Special Fencing Control Plan that details the properties and locations subject to fencing controls is in **Figure 24** below and in **Appendix O**.



**Figure 24 - Special Fencing Control Locations**

## Environment and Heritage

### *Contamination*

5.102 As detailed in the 2014 EIS amendment document, Connell Wagner (2008) identified Precinct 2's southern part as having a 'low to moderate risk' of contamination associated with previous grazing and agricultural activities. After preliminary soil and groundwater sampling, Connell Wagner concluded there were 'no major signs of contamination across the site' (2008). Notwithstanding this, Walker commissioned LBW co Pty Ltd (LBWco) in October 2022 to undertake preliminary site investigations (PSI), comprising a site history for all stages within Precinct 2 of the Riverlea Development. Further, to meet the requirements of the new planning system (implemented since the previous 2008 report), Walker requested an updated PSI report. The objectives of the preliminary site investigation were to:

1. Prepare a site history report to:
  - Assess the historical land use and identify potentially contaminating activities (PCAs) that may have occurred onsite and on adjacent land, supplementing information previously reported by Connell Wagner (2008) with relevant information relating to the period from 2008 to the present.
  - Review the PCAs relative to the activity class defined in Practice Direction 14 – Site Contamination Assessment 2021 (PD14) following the PDI Act and the land use sensitivity hierarchy.
2. Advise on whether additional site assessment is required to support a statement of site suitability for the proposed land use.

5.103 LBWco's findings of the October 2022 report summarise that most of the subject site comprised open grassland used for cropping and grazing. No obvious evidence of contamination or environmental impact was observed during the site inspection, except for a very small area of localised oil staining at the ground surface near a shed at the northern site boundary. Class 1 and Class 2 PCAs identified at the site were limited to an aboveground diesel storage tank (AST) and the mixing of herbicides near the shed.



**Figure 25 – Site Layout Plan – Shed Area**

- 5.104 This area is within the Open Space Zone, flanking the Gawler River, adjacent to Stage 20 in the Precinct 2 residential subdivision and the Master Planned Neighbourhood Zone.
- 5.105 Given the issue outlined above, Walker will undertake intrusive soil investigation works to assess the possible complete source pathway receptor linkages identified concerning the diesel AST and the mixing of herbicides in the vicinity of the shed. Once the complete source pathway receptor linkages are known, Walker will commission the necessary remediation to ensure adjacent uses will be suitable for future residential purposes (following the PDI Act). Walker will confirm, via a suitably qualified environmental auditor, that the land is fit for residential purposes before seeking the issue of titles for the Stage 20, Precinct 2 allotments.

#### **Noise & Air Quality – Jefferies facility**

- 5.106 As covered in the previous Precinct 2 application/EIS amendment, noise and air quality issues related to the Jefferies facility do not apply to Precinct 2, given that the Jefferies facility is situated more than 2 kilometres from the boundary of Precinct 2.
- 5.107 Further, the northern, eastern and southern boundaries of Precinct 2 are sufficiently setback and physically separated from adjoining horticultural uses by the Gawler River 50m buffer to the north and the 40-50m wide Drainage Channel 1 to the east and south.

### *Actual or Potential Acid Sulphate Soils*

- 5.108 As discussed in the previous Precinct 2 application/EIS amendment, Golder and Associates (2009a & b) found no issues related to geotechnical conditions concerning actual Acid Sulphate Soils (ASS), ASS indicators or Potential ASS (PASS) within Precinct 2's boundaries. The southern part of Precinct 2 might have a medium risk of encountering ASS. Notwithstanding this, none ASS or ASS indicators have been uncovered during the construction of Drainage Channel 1. Notwithstanding, detailed geotechnical investigations will inform Precinct 2's civil engineering and landscaping designs.

### *Indigenous Heritage*

- 5.109 Walker is taking a proactive approach to managing indigenous heritage and cultural issues associated with Precinct 2 and the entire Master Planned site. In late 2012, detailed surveys of the Master Plan site and Precinct 2 were undertaken by Australian Cultural Heritage Management (ACHM), with the close involvement of the traditional Kurna owners (ACHM, 2013).
- 5.110 Applications following Sections 21 and 23 of the *Aboriginal Heritage Act 1988* (AHA) were submitted to the Minister for Aboriginal Affairs and Reconciliation, as discussed in the previous application/EIS amendment. These applications sought to undertake archaeological investigations in locations across the Master - planned site and to salvage items if required. The Minister for Aboriginal Affairs approved the applications on 1 August 2014, subject to conditions. Since the August 2014 approval, no site characteristic changes have occurred, but the Ministerial authorisations expired in December 2015, and Walker is now seeking new approvals.
- 5.111 Accordingly, in 2020, Walker commissioned Neale Draper & Associates Pty Ltd (ND&A) to develop and deliver a Cultural Heritage Management Plan (CHMP) #1 for the initial residential development stages at Riverlea Park. ND&A was again engaged in 2022 to prepare a Cultural Heritage Assessment Report (CHAR) and a CHMP #2 for Precinct 2 of the Riverlea Park development.
- 5.112 The CHAR presents the outcomes of archaeological site inspections and anthropological consultation with Kurna representatives in August and November 2022. The assessed areas incorporate significant areas of the Riverlea development, encapsulating the entire Precinct 2 area to the north and a portion to the south required for stormwater management. The CHAR provides risk assessments for potential archaeological deposits (PAD) areas and recommendations for mitigating heritage risks via Section 21/23/29 authorisations and associated archaeological salvage work following the AHA.
- 5.113 Two recorded archaeological sites (6628-7788 and 6628-7792), PAD sites 3 and 5, and two registered scar trees (6628-7791 and 6628-7793 ) fall within the assessed area. All sites listed above are significant archaeological sites that will require authorisation following the AHA for disturbance and substantial archaeological mitigation work if the authorisations are granted.

- 5.114 Further archaeological site inspections and anthropological consultation over the land identified for future residential development (the northern area) were undertaken with Kaurna representatives in August 2022. Additional archaeological inspections and anthropological consultation were undertaken with Kaurna representatives in November 2022, as the stormwater outflow from the residential development will be channelled south along Tippets Bridge Road and into Thompson Creek on the southern side of Carmelo Road (the southern area). The area where this stormwater will flow has been recorded as PAD6 and is included in the CHAR, CHMP#2 and future applications following the AHA to manage the cultural-heritage risks of any potential earthworks that might be required to manage stormwater.
- 5.115 In the northern area, the investigations revealed archaeologically exposed features/artefacts typical of repeatedly used campsites and seven culturally modified trees (CMTs) not previously identified in the initial cultural heritage surveys. The heritage inspection of the southern area (PAD 6) did not identify any archaeological sites or features along Thompson Creek where there could be minor impacts from stormwater management works.
- 5.116 Notwithstanding this, the CHAR, CHMP#2 and applications following Sections 21, 23 and 29 of the AHA will present the results of the archaeological site inspections, heritage management recommendations and mitigation measures for both the northern and southern areas as a precautionary measure.
- 5.117 Before finalising the CHAR and CHMP, Walker, in conjunction with ND&A, will undertake Kaurna cultural heritage consultation via RAWsa/Kaurna Yerta Aboriginal Corporation (KYAC), representing the Kaurna native title holders and Traditional Owners of the Adelaide region
- 5.118 ND&A, on behalf of Walker, is acutely aware of the requirements for preparing and submitting applications under the AHA and will consult with the Attorney General's Department - Aboriginal Affairs and Reconciliation Division, as required regarding:
1. the organisation and content of applications;
  2. the processing requirements; and
  3. the need to involve RAWsa/Kaurna Yerta Aboriginal Corporation (representing the Kaurna native title holders and Traditional Owners of the Adelaide region).

### *European Heritage*

- 5.119 As highlighted in the original EIS document and again within the amendment to the EIS, no matters of European Heritage are associated with Precinct 2 (refer to SASH Consulting Services (2008)).

### *Gawler River Corridor and Significant Trees*

- 5.120 EBS Ecology previously mapped the vegetation within Precinct 2's boundaries, updating flora work undertaken by Dr Bob Anderson in 2009 for the Buckland Park EIS. To ensure that the woodland vegetation along the Gawler River corridor and other substantial clusters of woodland

vegetation be retained, Walker based its altered design on the original work undertaken by these professionals.

5.121 **Figure 26** shows the previous Precinct 2 boundary and the existing scattered trees compared to the altered Precinct 2 boundary. It illustrates how the altered boundary has no effect on existing trees.



**Figure 26 – Extent of impact to trees resulting from the Precinct 2 boundary change**



- 5.122 It is essential, however, to understand the significant challenges associated with developing the land to make it suitable for long-term urban purposes and the practicality of tree retention. As previously stated, the site borders the Gawler River to the north (a perched river system). The site and broader area have historically been prone to flood waters associated with significant rainfall events within the Gawler River catchment.
- 5.123 Accordingly, ground levels must be raised to address possible floodwater breakouts from the Gawler River to ensure residential land has finished site levels higher than predicted floodwater flows. In addition, to service the development with appropriate sewer, stormwater connections, etc. the land needs to be raised and graded to achieve necessary falls to divert stormwater and greywater to their respective treatment systems.
- 5.124 The filling of land near trees and the resulting changes to soil air, moisture, nutrient balance, and acidity would harm the healthy growth of trees. Reaching a balance to ensure the subdivision can be appropriately serviced and made safe from potential floodwaters whilst accommodating appropriate natural ground-level footprints for the trees' long-term survival is necessary.
- 5.125 In this scenario, the minimal loss to amenities and environmental performance resulting from the tree removal is likely to be overshadowed by the social and economic benefits the proposed development may provide to the local community. Further, the long-term viability of retaining some scattered trees is compromised when considering a realistic approach to managing the realities of delivering a significant master-planned residential development (including servicing requirements and floodwater management from the Gawler River).
- 5.126 The altered Precinct 2 subdivision has balanced retaining as many trees as possible (noting the valued professional advice and experience of NVC - Accredited Consultants) and the reality of undertaking a significant residential sub-division development on former grazing land. Therefore, retaining clusters of mature trees within newly formed parks and nature reserves is favoured over keeping some individual scattered trees.
- 5.127 The revised subdivision plans include measures to avoid clearance of native vegetation, including retaining a 50-metre-wide buffer along the Gawler River corridor and woodland/open space area comprising over 13 hectares. Further, three areas containing clusters of trees (40 trees in total) will be kept in future nature reserves. These future nature reserves comprise a combined area of over 3 ha and contribute to the area's biodiversity.
- 5.128 There are scattered trees that, given their location within the development, might be suitable for retention in larger residential allotments, pocket parks and more extensive road reserves. These larger areas should accommodate appropriate tree protection zones and filling/grading requirements to address the realities of floodwater protection.

5.129 Notwithstanding the above, the previous Precinct 2 application/EIS amendment set the tone for the development. While many scattered trees were identified for retention in road reserves or smaller pocket parks, the practicalities of filling the land for floodwater management and servicing requirements were not adequately considered at that time.

5.130 The reality is that Walker made an application for the removal of some scattered trees to enable channel construction, raising ground levels to protect the development from significant flood events from the Gawler River and for servicing requirements. That application was subsequently approved, and the decision to enable tree removal (if required) is in **Appendix R**.

## Riverlea Precinct Refinement

5.131 The EIS amendment seeks to refine and consolidate the Precincts across the Riverlea major development from five to four. The primary Precinct refinement relates to merging and updating the intent of the previous Concept Superlot Plan as shown in **Figure 27** below.

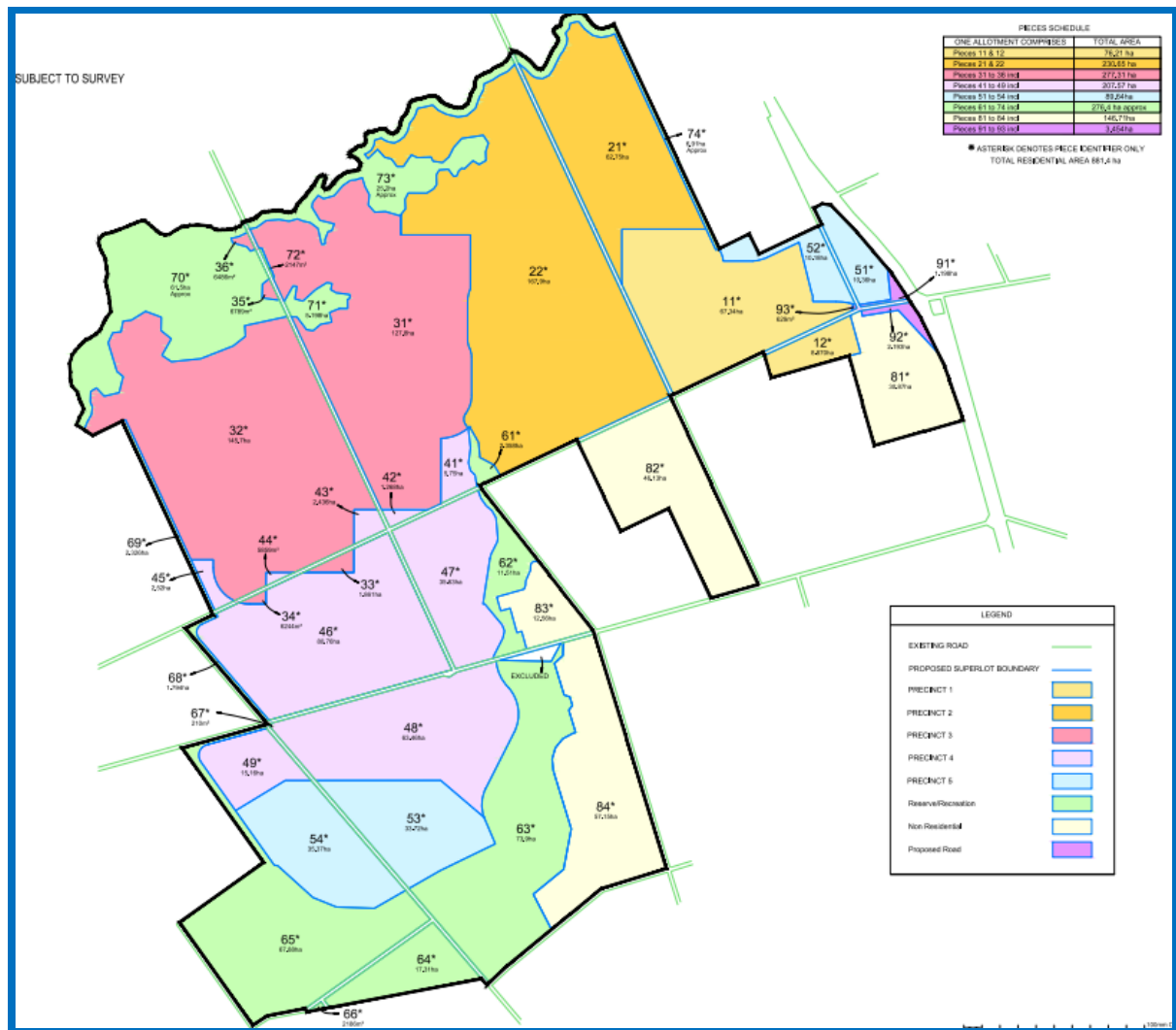
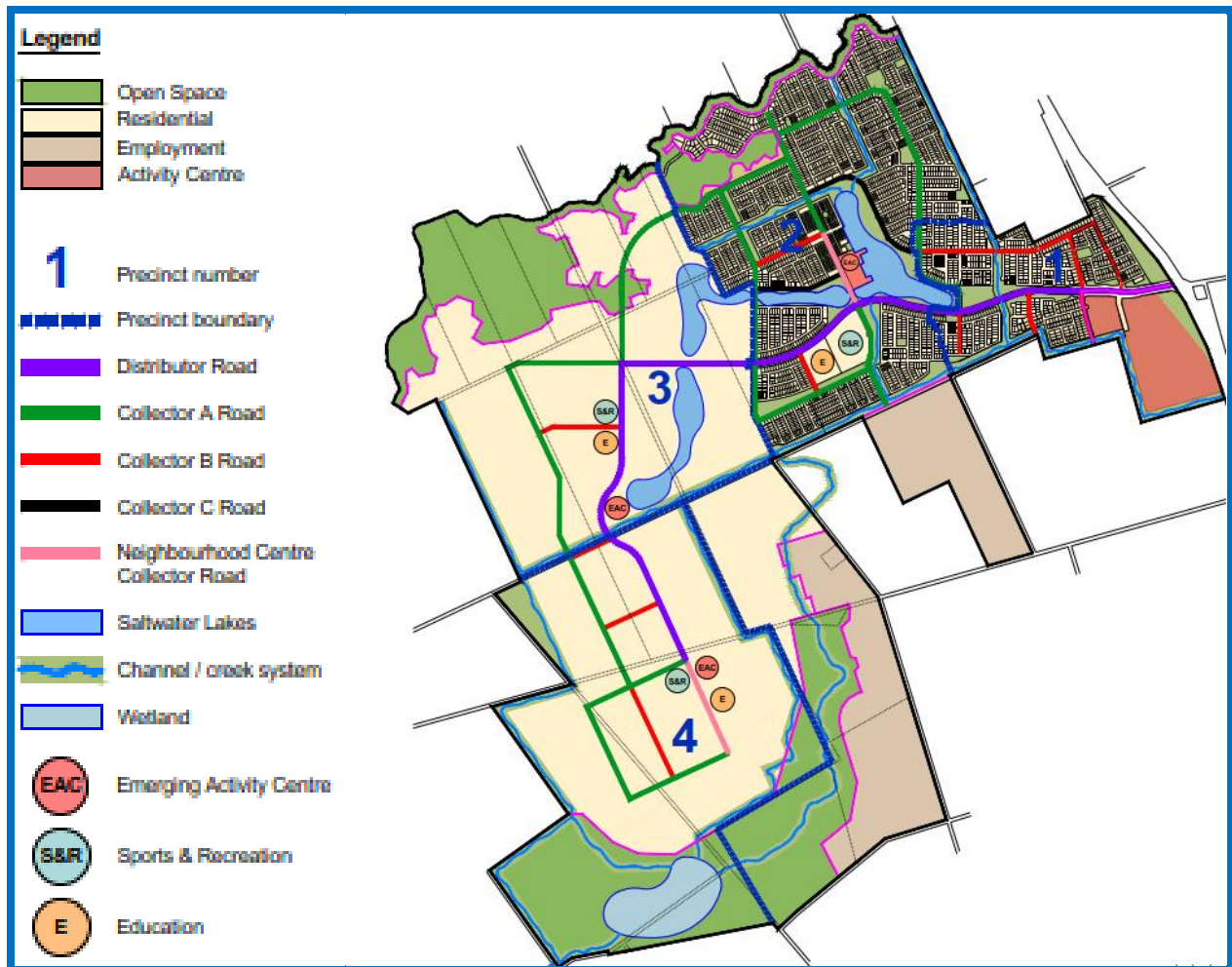


Figure 27 – Approved Concept Plan (Superlots)

5.132 The primary Precinct refinement involves merging former parcels and updating existing or contiguous uses to create entire Precincts. For example:

- Within Precinct 1, parcels 51 & 52 (presently identified as being within Precinct 5) have recently been re-zoned and approved for residential purposes. It makes sense to alter the Plan to identify these areas to be within Precinct 1, given they are contiguous with residential Stages 1 and 6 within Precinct 1. Similarly, a portion of parcel 12 and parcel 81 are both within the Surban Activity Centre Zone, and former parcels 91, 92 & 93 form part of the Precinct 1 Riverlea Boulevard entry statements. It is rational that all these former parcels be linked based on contiguous uses within the same Precinct.
- Precinct 2 largely maintains the status quo by following the previously approved Precinct 2 boundaries. The only exception is the western side boundary of Precinct 2, which slightly extends into part of the existing Precinct 3 area. The change is required to accommodate the revised Precinct 2 design, which marginally increases the total land area of Precinct 2 by approximately 40 hectares. The new Precinct boundary forms a distinct and logical line or 'edge' between Precincts boundaries by following significant roads, water bodies, drainage channels and open space. It provides a clearly defined land division pattern where residential development is consolidated in contiguous blocks to give a uniform Precinct 2 / Precinct 3 boundary alignment. Similarly, the vast woodland open space area (toward the Gawler River) has been included entirely within Precinct 2 boundary.
- Similarly, Precinct 3 maintains the status quo, although its southern boundary now follows and directly aligns with the Legoe Road boundary, rather than zig-zagging along this aspect.
- The remainder of Precinct 5 is to merge with Precinct 4, which is now more uniform in its precinct pattern. The northern boundary of Precinct 4 will also follow and directly align with the Legoe Road boundary, rather than zig-zag along this aspect with Precinct 3.



**Figure 28 - Proposed Precinct Stage Detail**

5.133 The primary purpose behind the proposed Precinct refinement and rationalising is to update Precincts targeted for future residential and urban development. The following, including **Figure 29** above, summarises the revised Precinct Staging detail.

- **Precinct 1** is to merge the former eastern portion of Precinct 5 (now Stage 7 of Precinct 1), the Riverlea Boulevard entry statements and the future District Centre activities;
- **Precinct 2** essentially maintains the status quo (albeit with an adjustment between the Precinct 2 & 3 boundaries);
- **Precinct 3** essentially maintains the status quo, although its southern boundary now follows and directly aligns with the Legoe Road boundary;
- **Precinct 4** is to consolidate the remaining southern portion of the former Precinct 5; and
- **Precinct 5** is to be removed (combined within Precinct 1 and 4, respectively).

## 6.0 Planning Analysis

---

- 6.1 Several strategic and planning policy documents were reviewed, including the 30-Year Plan for Greater Adelaide, Playford Community Vision 2043 and the Planning and Design Code. The following policies from those documents are considered relevant to the altered proposal/EIS amendment.

### The 30-Year Plan for Greater Adelaide

---

- 6.2 The 30-Year Plan for Greater Adelaide (the 30-Year Plan) was first prepared in 2010 and then updated in 2017 to respond to new challenges and opportunities. The 2017 update kept what was contemporary about the Plan and updated, as required, based on feedback from local councils, State government agencies and key industry and community stakeholders.
- 6.3 The 30-Year Plan describes the SA Government's Plan for how Adelaide should grow to become more liveable, competitive and sustainable. The 30-Year Plan will guide the city's long-term growth and surroundings over the next 30 years. The "Greater Adelaide" represents more than Adelaide's CBD, as shown in **Figures 29-31** below, and incorporates the Riverlea major development area.
- 6.4 The Precinct 2 land division is consistent with the 30-Year Plan, which suggests the Riverlea Park site would accommodate the significant amount of the new housing required in northern Adelaide over the coming decades.
- 6.5 The following policies are considered relevant to the altered Precinct 2 proposal.

#### **Transit corridors, growth areas and activity centres - Relevant Policies**

**P2. Increase residential and mixed-use development in the walking catchment of:**

- **strategic activity centres\***
- **appropriate transit corridors**

\* **In Outer Metropolitan Adelaide, this would focus on Regional and District centres serviced by existing or proposed high-frequency public transport - Map 2 (Figure 30) and Map 15 (Figure 32), below.**

**P4. Ensure that the bulk of new residential development in Greater Adelaide is low to medium rise with high rise limited to the CBD, parts of the Park Lands frame, significant urban boulevards, and other strategic locations where the interface with lower rise areas can be managed.**

**P5. Encourage medium rise development along key transport corridors, within activity centres and in urban renewal areas that support public transport use.**

**P11. Ensure new urban fringe growth occurs only within designated urban areas and township boundaries and outside the Environment and Food Production Areas, as shown on Map 3 (Figure 31), below.**

Map 2 — Activity centres and mass transit routes

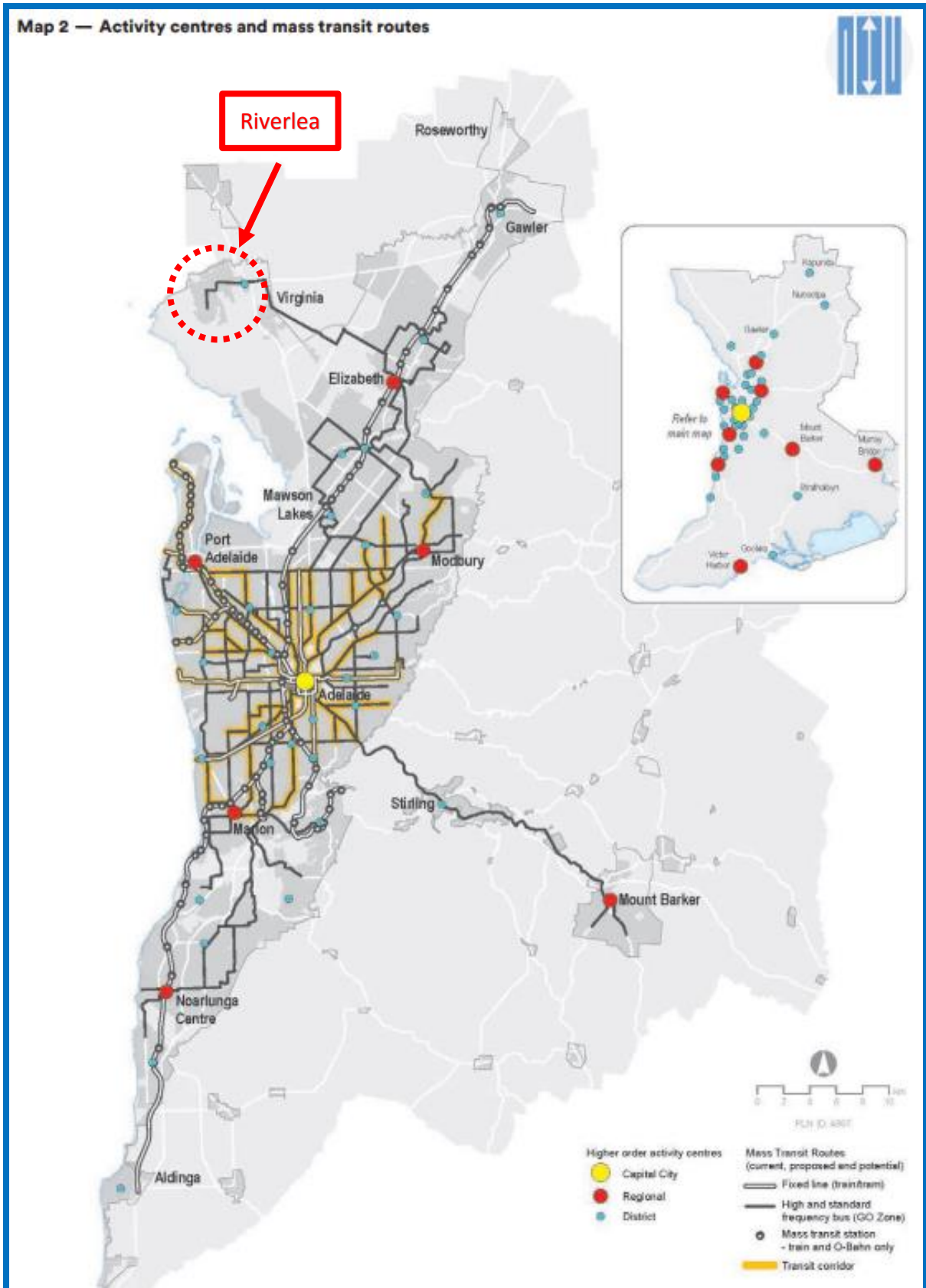


Figure 29 - Activity Centres and Mass Transport Routes  
(30-Year Plan for Greater Adelaide)

Map 3 — Designated urban areas and township boundaries

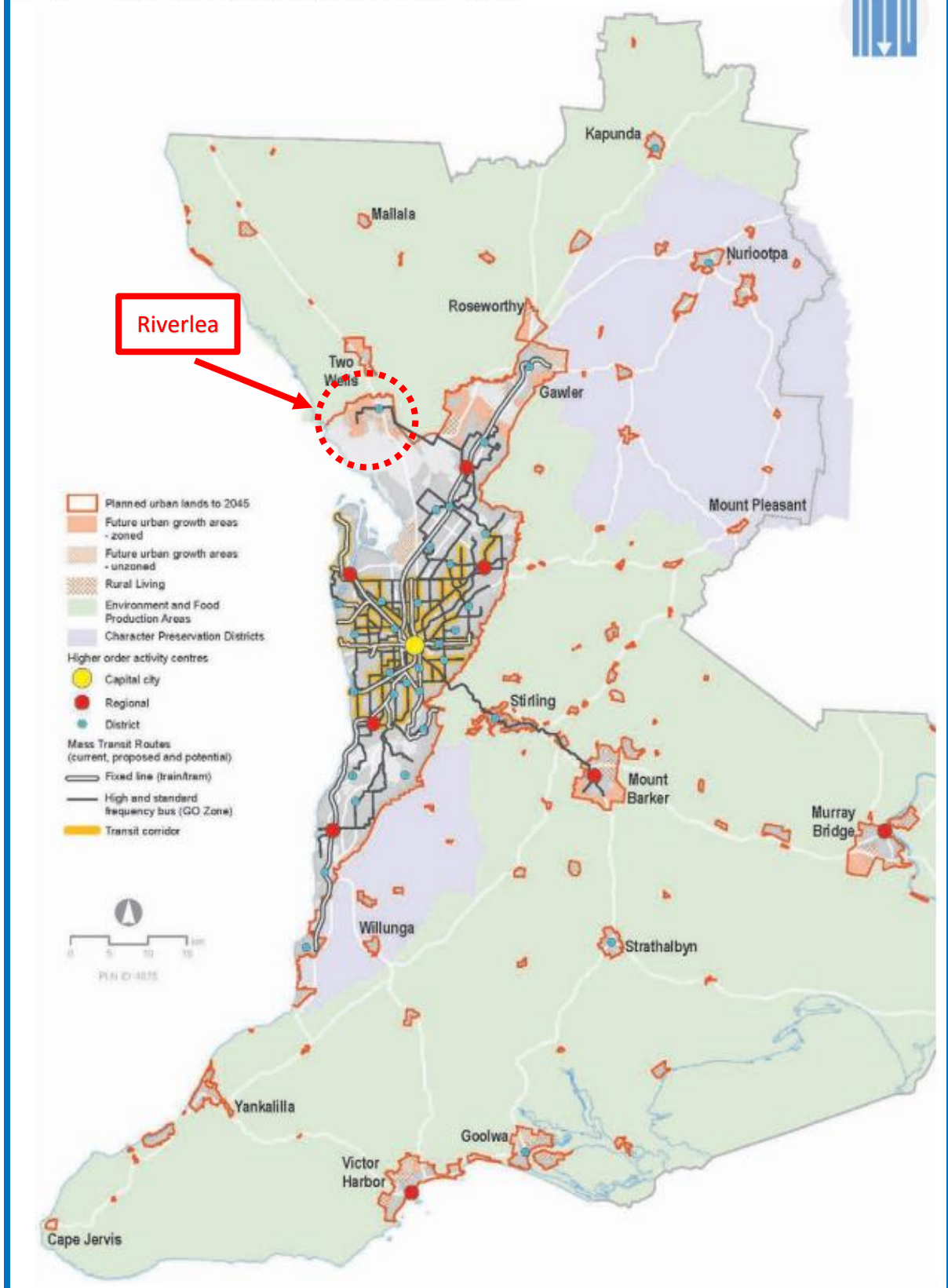


Figure 30 - Designated Urban Areas and Township Boundaries  
(30-Year Plan for Greater Adelaide)

Map 15 — Current and proposed fixed line and high frequency bus routes

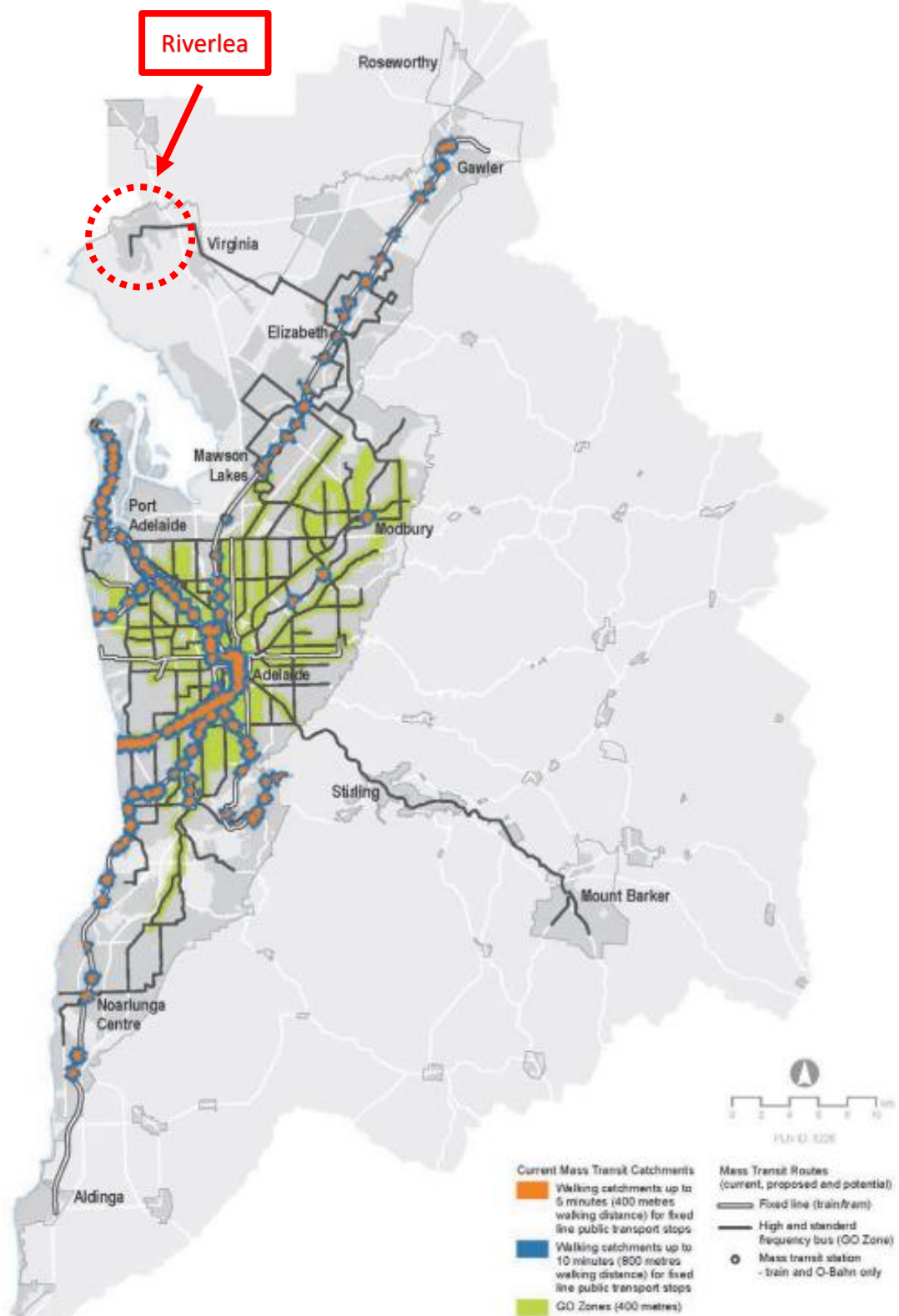


Figure 31 - Current and Proposed Fixed Line and High-Frequency Bus Routes (30-Year Plan for Greater Adelaide)



6.6 **Figures 29-31** show the altered Precinct 2 subdivision/EIS amendment is consistent with the 30-Year Plan. Riverlea will encourage new residential development in strategic locations, planned emerging activity centres and areas identified to be serviced by future high-frequency public transport<sup>1</sup>.

#### **Housing mix, affordability and Competitiveness - Relevant Policies**

**P36. Increase housing supply near jobs, services and public transport to improve affordability and provide opportunities for people to reduce their transport costs.**

**P43. Increase the supply of affordable housing through the provision of 15 per cent affordable housing in all new significant developments. These developments include surplus and residential government land projects; declared major developments and projects; and re-zoned land that increases dwelling yield (including all new growth areas).**

**P44. Enable and encourage the provision of affordable housing through linking incentives, including the benefits of re-zoning such as planning policy bonuses or concessions to new affordable housing supply.**

**P46. Ensure an adequate land supply is available to accommodate housing and employment growth over the longer term (at least a 15 year supply).**

6.7 The proposal is consistent with the above policies concerning affordable housing provision and long-term land supply delivering a diverse housing mix as demonstrated in Appendix P - Residential Allotment Mix Plan. Riverlea is a significant development, declared a major development and re-zoned accordingly. It will increase dwelling yield, a new and rapidly evolving growth area that will deliver adequate residential and commercial land supply for employment growth over the next 20+ years.

#### **Health, wellbeing and inclusion - Relevant Policies**

**P47. Plan future suburbs and regenerate and renew existing ones to be healthy neighbourhoods that include:**

- **diverse housing options that support affordability**
- **access to local shops, community services and facilities**
- **access to fresh food and a range of food services**
- **safe cycling and pedestrian friendly streets that are tree-lined for comfort and amenity**
- **diverse areas of quality public open space (including local parks and playgrounds)**
- **sporting and recreation facilities**
- **walkable connections to public transport and community infrastructure.**

**P48. Create greenways in transit corridors, along major watercourse linear parks, the coast and other strategic locations to provide walking and cycling linkages.**

**P49. Encourage more trees (including productive trees) and water sensitive urban landscaping in the private and public realm, reinforcing neighbourhood character and creating cooler, shady and walkable neighbourhoods and access to nature.**

6.8 The altered Precinct 2 subdivision will deliver diverse housing options, including a minimum of 15% of affordable housing. Precinct 2 will also provide local shops, community services and facilities with safe access via the extensive Pedestrian and Cycle network, as shown in **Figure 20**.

---

<sup>1</sup> Note: The Maps from the 30-Year Plan for Greater Adelaide do not show the Northern Connector.

6.9 The development within Precinct 2 will also have diverse areas of quality public open space, including local parks, playgrounds, major watercourse, linear parks and sporting and recreation facilities. Further, the development will achieve most of the elements shown in **Figure 32** - Elements that contribute to a healthy place to live and the cooling effects of large water bodies, such as the Riverlea Lakes and tree canopy.



**Figure 32 - Elements that contribute to a healthy place to live  
(30-Year Plan for Greater Adelaide)**

## **The Economy and Jobs - Relevant Policies**

### ***P56. Ensure there are suitable land supplies for the retail, commercial and industrial sectors.***

- 6.10 The altered Precinct 2 plan provides land dedicated to a future Neighbourhood Centre that will offer a diverse range of land supplies, specifically dedicated to the retail and commercial sectors. Precinct 1 has suitable land set aside for a future District Centre. The Council recently approved a new convenience shopping facility over 4 hectares within land adjacent to the future District Centre.

## **Infrastructure - Relevant Policies**

### ***P86. Ensure that new urban infill and fringe and township development are aligned with the provision of appropriate community and green infrastructure, including:***

- ***walking and cycling paths and facilities***
- ***local stormwater and flood management, including water-sensitive urban design***
- ***public open space***
- ***sports facilities***
- ***street trees***
- ***community facilities, such as childcare centres, schools, community hubs and libraries.***

### ***P87. Encourage the early provision of community infrastructure in fringe and township growth areas to assist in creating a sense of belonging and building community wellbeing.***

### ***P88. Design and locate community infrastructure to ensure safe, inclusive and convenient access for communities and individuals of all demographic groups and levels of ability.***

### ***P89. Integrate and co-locate different community infrastructure and services in community hubs to maximise their use and enhance their economic feasibility.***

- 6.11 The altered proposal seeks to incorporate green infrastructure within Precinct 2 of the Riverlea development. The Riverlea Lakes is a strategically planned and managed network of water assets combined with open space parks and linear pedestrian and cycle networks. These assets provide social benefits, including enhanced liveability, improved energy efficiency, reduced flooding risk, cooling effects, and social and recreational opportunities.
- 6.12 These community infrastructure assets are unparalleled for fringe and township development and include open waterways for recreation, urban amenity, stormwater, and floodwater mitigation. Riverlea, when completed, will comprise over 400 hectares of green open space containing parks, a 40-hectare saltwater lake system, reserves, playgrounds and sporting fields, nature trails along the Gawler River and over 35 kilometres of bicycle and walking trails.
- 6.13 Further, the delivery of community infrastructure in Precinct 1, such as convenience shopping, childcare, community centre/library, health and medical facilities, etc., is planned for the new Palms Village Stage 1 Retail facility. Similarly, Stages within Precinct 1 have included open space reserves, playgrounds, landscaping and the start of the formalised pedestrian and cycle network. Precinct 2 will add to these same themes, creating pedestrian and cycle linkages to the Gawler River and around the saltwater lakes, the new Neighbourhood Centre, and new schools proposed within the early stages of Precinct 2.

#### **Biodiversity - Relevant Policies**

**P90.** *Delineate and maintain areas with significant environmental values to protect landscape health, conserve biodiversity, and improve development certainty and transparency (in Map 10 –Biodiversity - (Figure 33).*

**P92.** *Support the enhancement of the urban biodiversity of metropolitan Adelaide through the development of greenways in transit corridors, along major watercourses, linear parks and the coast and in other strategic locations.*

#### **Open space, sport and recreation - Relevant Policies**

**P98.** *Provide for a Greater Adelaide open space framework that builds on the Metropolitan Open Space System (MOSS) to create quality open space across the region. The open space will feature urban forests and parks, watercourse and coastal linear parks, trails, greenways, shared-use paths and green buffers, and sustainable recreation and sporting facilities.*

**P99.** *Ensure quality open space is within walking distance of all neighbourhoods to:*

- *link, integrate and protect biodiversity assets and natural habitats*
- *provide linkages to encourage walking and cycling to local activities, local activity centres and regional centres*
- *be multi-functional, multi-use (including the shared use of strategically located school facilities) and able to accommodate changing use over time.*

**P102.** *Strategically locate sports and recreational facilities to cater for community needs.*

**P103.** *Ensure that public open space is adequately greened and irrigated (where appropriate) to act as a natural cooling system to reduce heat island effects in urban areas.*

**P104.** *Investigate opportunities to increase the amount and/or quality of public open space provision in areas of low open space provision and areas of increasing population growth.*

#### **Climate change - Relevant Policies**

**P111.** *Create a more liveable urban environment through establishing a network of greenways, bicycle boulevards, tree-lined streets and open spaces, which will have a cooling effect on nearby neighbourhoods and buildings.*

#### **Water - Relevant Policies**

**P115.** *Incorporate water-sensitive urban design in new developments to manage water quality, water quantity and water use efficiency and to support public stormwater systems.*

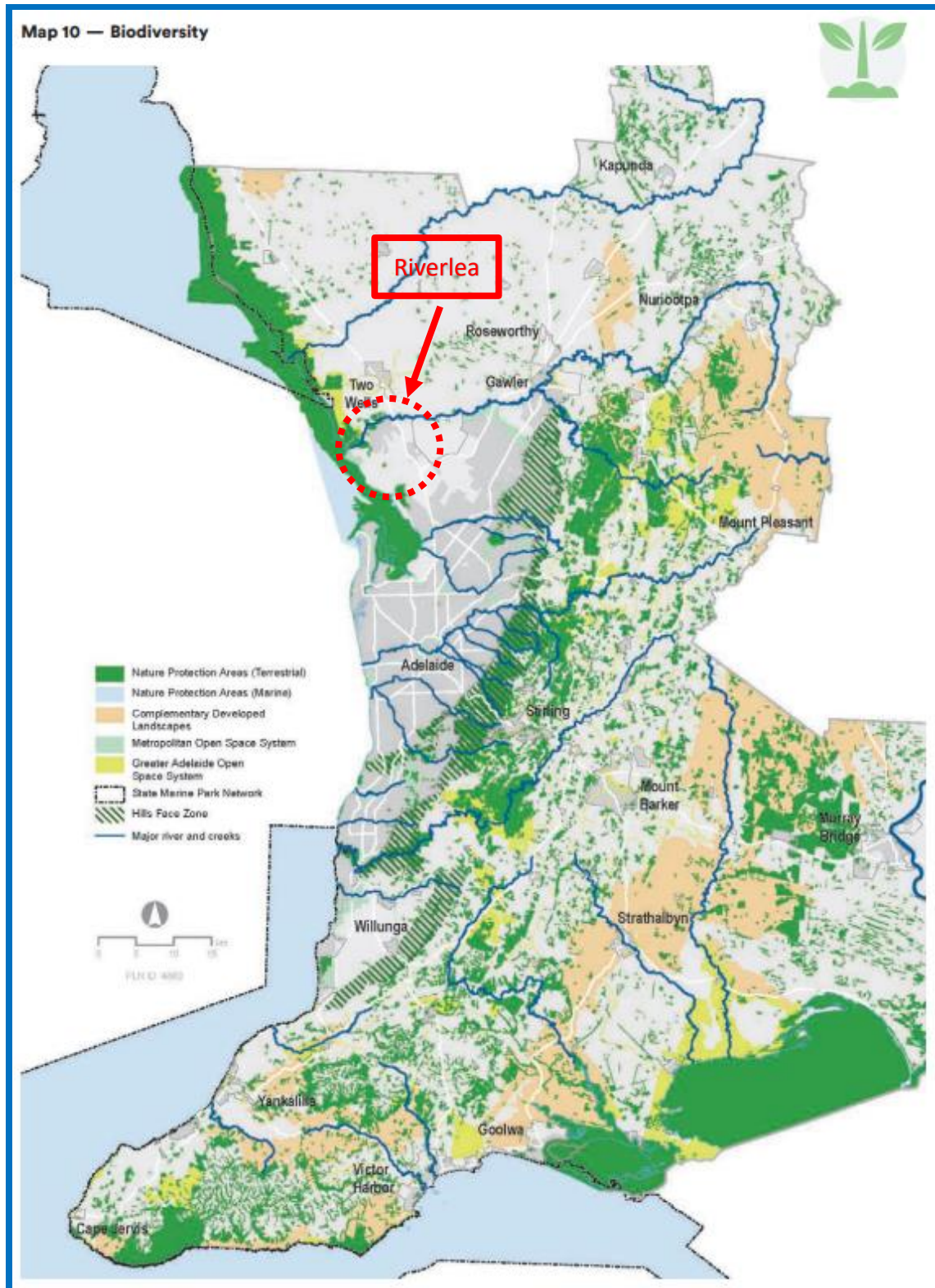
**P117.** *Increase the provision of stormwater infrastructure (including water sensitive urban design) to manage and reduce the impacts of:*

- *runoff from infill development*
- *urban flooding from increased short-duration intense rainfall events associated with climate change*
- *pollution from roads and other developed areas.*

6.14 The altered Precinct 2 proposal seeks to specifically address the enhanced aesthetic amenity of the stormwater management infrastructure by incorporating a multi-tiered stormwater management and floodwater system with the introduction of the Riverlea Lakes.

6.15 The Riverlea Lakes will establish a more liveable urban environment with enhanced urban amenities and recreation opportunities. Riverlea Lakes will establish a network of waterways, greenways, pedestrian and cycle networks, tree-lined streets and public open space reserves, resulting in cooling effects on nearby neighbourhoods and buildings.

6.16 As with the previous Precinct 2 approval, areas within the new concept layout seek to delineate and retain areas comprising remnant vegetation along the Gawler River corridor and the large clusters of woodland adjoining. Maintaining and protecting these areas will promote landscape health and conserve biodiversity while improving development certainty for other less-sensitive sites.



**Figure 33 – Biodiversity  
(30-Year Plan for Greater Adelaide)**

## Playford Community Vision 2043 – Looking Forward 30 Years

---

6.17 Playford's Community Vision recognises its future will realise significant changes for the North of Adelaide in the next 30 years, determined through state government policy like the 30-Year Plan and feedback from the Playford Council's communities.

6.18 These significant changes include (amongst other matters) the realisation of the following:

- A mix of housing densities and types to suit changing community needs;
- Plentiful open space;
- World-class shopping, entertainment and business hub, making Playford Adelaide's northern CBD;
- Walkable village communities with integrated and accessible community facilities and services;
- Development of Buckland Park (now Riverlea Park) to a population of 32,000; and
- Mass transit connection between Buckland Park (now Riverlea Park), Virginia and Elizabeth.

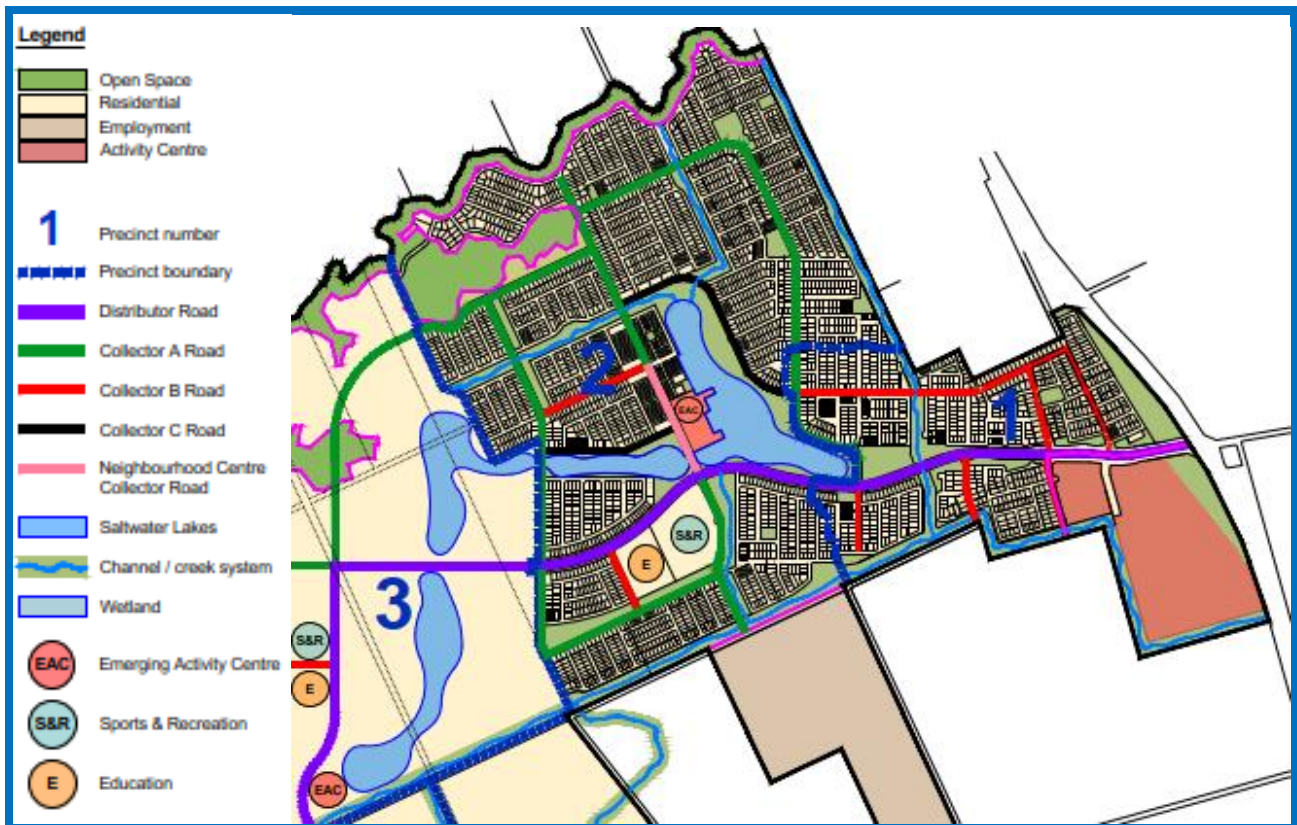
6.19 Playford's Community Vision is consistent with the 30-Year Plan. It recognises the Riverlea major development explicitly as forming a vital component of Playford's strategic future growth for the northern region of Adelaide.

## The Planning and Design Code

---

6.20 The existing Precinct 2 boundaries are mainly within the Master Planned Neighbourhood Zone (MPNZ) and partly the Open Space Zone (OSZ). The Emerging Activity Centre (EAC) Sub Zone is pertinent to those aspects within the MPNZ as detailed in the Planning and Design Code (P&D Code). The altered proposal will not change this, nor will the marginal change in the Precinct 2 boundaries.

6.21 The altered Precinct 2 subdivision layout pattern and land use locations are consistent with the desired outcomes for those zones. **Figure 34** details the desired land uses within Precincts 1 and 2.



**Figure 34 – The desired land uses within Precincts 1 and 2**

6.22 The Precinct 2 land division amendment is consistent with the Planning and Design Code – Concept Plan 14 – Buckland Park in **Figure 35** below. In particular, it incorporates the following broad principles from that Concept Plan:

- A legible road network providing an orderly decipherable layout and hierarchy of roads;
- The incorporation of floodwater mitigation;
- Residential neighbourhoods, connected by a defined road hierarchy, linear parks and an open space corridor along the Gawler River;
- Integration within and between the Riverlea Park Precincts and neighbourhoods; and
- Provision of centres and community facilities accessible by bus, foot, bike or car.

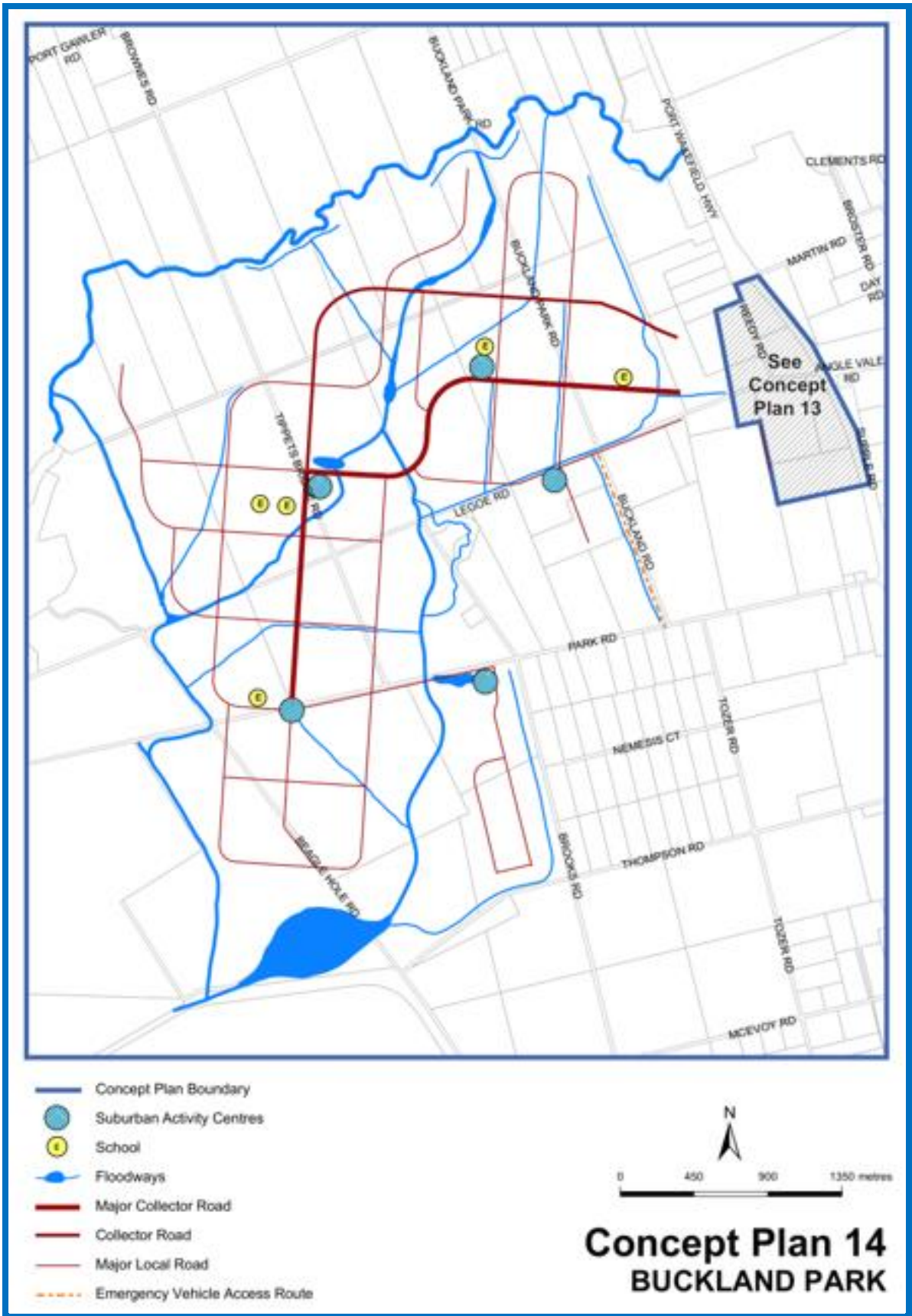


Figure 35 - Concept Plan 14 – Buckland Park (Planning and Design Code)



## Master Planned Neighbourhood Zone and Emerging Activity Centre Subzone Provisions

6.23 **Table 2** details the relevant Zone and Subzone provisions, Desired Outcomes (DO) and Performance Outcomes (PO) from the P&D Code. In addition, a comment regarding the altered Precinct 2 subdivision layouts (including the Riverlea Lakes) consistency with those provisions is presented.

**Table 2 – Master Planned Neighbourhood Zone and Emerging Activity Centre Subzone provisions**

Master Planned Neighbourhood Zone (MPN)		
Desired Outcome   Performance Outcome		Comment
DO1	A new or expanding community with a diverse range of housing that supports a range of needs and lifestyles located within easy reach of a diversity of services, facilities and open space.	Precinct 2 provides for a diversity of residential housing options, access to a diversity of open space networks, cycle & pedestrian networks, community and sports facilities, schools and a Neighbourhood Centre offering a range of facilities & services.
Land Use and Intensity		Comment
PO 1.1	Diverse housing choices and a wide range of complementary recreational, community services and other activities to support a growing community and create a pleasant place to live.	Precinct 2 is to provide a diversity of allotment sizes to encourage a range of housing choices. Precinct 2 will cater to complementary recreational, community services and other facilities to support the evolving community.
PO 1.2	Land division results in a low-to-medium density neighbourhood that contains a diverse range of housing types and allotment sizes.	The staged land releases within Precinct 2 will provide a range of residential densities to promote multiple housing types and medium-density housing opportunities in key, well-serviced locations.
PO 1.3	Residential development at increased densities close to open space, public transport, activity centres and community facilities to enhance community access to community services.	The Precinct 2 plan will encourage increased residential densities close to open space, public transport routes, activity centres and community facilities to enhance access to services, facilities and community infrastructure.
Coordinated and Orderly Development		Comment
PO 2.1	Land division and infrastructure occur in a coordinated manner and orderly sequence.	The rollout of Precinct 2 and related service infrastructure will occur in a coordinated and staged manner to support the orderly economic expansion of evolving urban areas within the Riverlea development.
PO 2.2	Development and infrastructure are staged and provided to support the orderly expansion of urban areas and the economic provision of infrastructure and services.	
Community Facilities		Comment
PO 3.1	Community facilities such as schools, community centres, recreation centres and public open space are co-located within activity centres or co-located with complementary uses to reinforce their role as a focal point for community.	Precinct 2 proposes locating schools, community facilities, recreation areas, and public open spaces within proximity of the proposed Neighbourhood Centre area.
PO 3.2	Community facilities are located and designed to maximise accessibility by public transport, walking and cycling.	The pedestrian and cycle network will connect these uses and areas to further reinforce them as community focal points for Riverlea's surrounding communities.
Open Space		Comment
PO 4.1	The size and distribution of open space encourages recreation and healthy lifestyles.	Precinct 2 (and indeed the development site more broadly) seeks to provide an unparalleled diversity of open spaces of exceptional quality to encourage recreation and healthy lifestyles. Various attractive open space features have been catered for, including extensive walking and cycling trails (a formal pedestrian and cycle network), play spaces, the Riverlea Lakes as an iconic water and recreation feature, and recreation spaces, including sporting infrastructure.
PO 4.2	The quality of open space encourages recreation and healthy lifestyles by including a variety of attractive features such as walking and cycling trails, play spaces, water features, irrigated recreation spaces, sporting infrastructure or public art.	

Master Planned Neighbourhood Zone (MPN)		
Site Dimensions and Land Division		Comment
PO 11.1	Allotments created for residential purposes are of a suitable size and dimension and accommodate various housing choices.	Precinct 2 will create a range of suitable-sized and dimensioned residential allotments to accommodate various housing styles and choices, including affordable housing opportunities.  All residential stages within Precinct 2 will be consistent with the authorised plans of the division proposed in <b>Appendix L</b> .
PO 11.2	Allotments created for residential purposes are a suitable size and dimension to accommodate functional dwellings and provide a high standard of residential amenity for occupants.	
PO 11.3	Sites for residential purposes are consistent with an authorised plan of division or master plan.	
Land Division Pattern		Comment
PO 12.1	Street patterns and pedestrian and cycle connections designed to reduce travel distances to open space, public transport, activity centres and community facilities and assist to create low speed environments in local streets.	The altered Precinct 2 subdivision layout creates a more legible road network while maintaining a similar road hierarchy. Street patterns and connections are more orderly and decipherable. The movement network is designed around user amenity, access to open space, public transport, activity centres and community facilities, and low-speed environments in local streets.
Concept Plans		Comment
PO 14.1	Development is compatible with the outcomes sought by any relevant Concept Plan contained within Part 12 – Concept Plans of the Planning and Design Code to support the orderly development of land through staging of development, provision of infrastructure and the location of new activity centres.	Precinct 2 is compatible with the outcomes of Concept Plan 14 - Buckland Park (the relevant Concept Plan in Part 12 of the P&D Code). Precinct 2 provides a road hierarchy similar to that displayed in Concept Plan 14 and accommodates a neighbourhood centre and education facilities generally within the locations shown.
Emerging Activity Centre Subzone		
Desired Outcome   Performance Outcome		Comment
DO 1	Activity centres, employment, and community services make neighbourhoods a healthy and convenient place to live.	Precinct 2 accommodates a Neighbourhood Centre and education facilities generally following the locations shown in Concept Plan 14 - Buckland Park.
Land Use and Intensity		Comment
PO 1.1	Activity centres within master-planned communities include a range of land uses to provide services at the local and Neighbourhood level.	Similarly to the above, Precinct 2 accommodates a Neighbourhood Centre that will offer a range of facilities and services following the locations shown in Concept Plan 14.
PO 1.2	Land division design designates land for activity centres that is: <ol style="list-style-type: none"> <li>distributed to maximise convenient access to shopping and services</li> <li>of sufficient size to cater for the anticipated catchment and future population.</li> </ol>	The altered Precinct 2 design shown in <b>Appendix L</b> designates land for activity centres - precisely a Neighbourhood Centre conveniently located having an awareness of the proposed Convenience Shopping Retail centre in Precinct 1, providing easy access to convenient shopping and services of sufficient sizes to cater to the future population.
PO 1.3	Land division design ensures activity centres are located to maximise accessibility by public transport, walking and cycling.	The altered Precinct 2 land division has ensured that activity centres and active open space areas maximise accessibility by public transport, walking and cycling.
PO 1.4	Land division design ensures activity centres are established in locations that improve accessibility and exposure such as: <ol style="list-style-type: none"> <li>at an intersection of higher-order roads and main movement routes</li> <li>locations that have the highest residential density and pedestrian catchment; or</li> <li>adjacent high-frequency public transport.</li> </ol>	Further, activity areas such as the Neighbourhood Centre and active open space areas have typically been situated on higher-order roads to be highly visible and legible in terms of their function within the broader residential development.  The Neighbourhood Centre has been located centrally within Precinct 2 to take advantage of Riverlea Lake amenities, higher-order roads and future public transport services.

## Open Space Zone Provisions

**Table 3 – Relevant Open Space Zone Provisions (Planning and Design Code)**

Open Space Zone		
Desired Outcome   Performance Outcome		Comment
<b>DO1</b>	Areas of natural and landscaped open space provide for biodiversity, tree canopy cover, urban cooling and visual relief to the built environment for the health and enjoyment of the community.	The altered Precinct 2 subdivision layout has avoided development within the Open Space Zone to ensure the natural and landscape amenity of the area is maintained. This is most relevant to land adjoining the Gawler River linear corridor. The land division layout promotes passive connections to the Gawler River corridor via the pedestrian and cycle network, given it is an important location of natural beauty, amenity and interest.  Further, this open space corridor, including a few 'break-out' areas, will assist with maintaining biodiversity, tree canopy cover, urban cooling and visual relief to the built environment for the health and enjoyment of the community.
Land Use and Intensity		Comment
<b>PO 1.1</b>	Development is associated with or ancillary to the provision of unstructured outdoor passive and active recreation facilities.	Precinct 2 proposes limited residential development within the Open Space Zone, which is dedicated open space for conservation or active or passive recreation.
Land Division		
<b>PO 3.1</b>	Land division supports the provision of public open space.	Land divisions within the Open Space Zone will be for either boundary realignments to create public open space or road reserves to be easily accessible to the public and vested to Council for long-term ownership. Significant trees, trees with habitat value, River Red Gums, and remnant vegetation is generally contained in areas that will be free of development, such as within the Open Space Zone, proposed open space reserves or road reserves, resulting in the preservation of existing stands of native vegetation, habitat or biodiversity
<b>PO 4.1</b>	Development is compatible with the outcomes sought by any relevant Concept Plan contained within Part 12 – Concept Plans of the Planning and Design Code to support the orderly development of land through staging of development, provision of infrastructure and the location of new activity centres.	Precinct 2 is compatible with the outcomes of Concept Plan 14 - Buckland Park (the relevant Concept Plan in Part 12 of the P&D Code). Precinct 2 provides a road hierarchy similar to that displayed in Concept Plan 14 and accommodates a neighbourhood centre and education facilities generally within the locations shown.

## Overlay Provisions

**Table 4 – Relevant Overlays - Desired Outcomes (Planning and Design Code)**

Overlays		
Desired Outcome		Comment
Affordable Housing Overlay		
<b>DO1</b>	Affordable housing is integrated with residential and mixed use development.	Precinct 2 will incorporate a minimum of 15% affordable residential allotments and affordable house and land packages to cater to various household structures and be widely distributed throughout the development to avoid over-concentration.
<b>DO2</b>	Affordable housing caters for a variety of household structures	
Defence Aviation Area Overlay (All structures over 90 metres)		Comment
<b>DO 1</b>	Management of potential impacts of buildings on the operational and safety requirements of Defence Aviation Areas.	Not Applicable to Precinct 2, as no buildings or structures will be over 90m in height.

Overlays		
Hazards (Bushfire - Urban Interface & General Risk) Overlays		Comment
DO 1	<p>Urban neighbourhoods that adjoin areas of General, Medium and High Bushfire Risk:</p> <ol style="list-style-type: none"> <li>allow access through to bushfire risk areas</li> <li>are designed to protect life and property from the threat of bushfire and the dangers posed by ember attack</li> <li>facilitate evacuation to areas safe from bushfire danger.</li> </ol>	<p>The Precinct 2 land division concepts provide continuous street patterns to facilitate safe movement and evacuation of emergency vehicles, residents, occupants and visitors.</p> <p>Further, the land development will provide all-weather access roads for evacuation and access to bushfire risk areas for fighting purposes.</p>
Hazards (Flooding & Flooding General) Overlays		
DO 1	<p>Impacts on people, property, infrastructure and the environment from high flood risk are minimised by retaining areas free from development, and minimising intensification where development has occurred.</p> <p>Impacts on people, property, infrastructure and the environment from general flood risk are minimised through the appropriate siting and design of development.</p>	<p>Development is sited and designed to minimise exposure of people and property to unacceptable flood risk.</p> <p>All development will have minimum ground and floor levels above the 1:100 ARI flood event. Precinct 2 finished ground levels will exceed 10m AHD and, therefore, will be safe from the long-term impacts of sea level rise on account of climate change and global warming.</p>
Native Vegetation Overlay		Comment
DO 1	<p>Areas of native vegetation are protected, retained and restored in order to sustain biodiversity, threatened species and vegetation communities, fauna habitat, ecosystem services, carbon storage and amenity values.</p>	<p>Development avoids, or where it cannot be practically avoided, minimises the clearance of native vegetation considering the siting of buildings, access points, bushfire protection measures and building maintenance. The land division will not result in the fragmentation of land containing native vegetation or necessitate the clearance of native vegetation (unless clearance is considered minor and approved by relevant authorities), considering the location of allotment boundaries, access ways, etc.</p>
Prescribed Watercourses Overlay		
DO 1	<p>Prescribed watercourses are protected by ensuring the taking of water from such watercourses is avoided.</p>	<p>Not Applicable to Precinct 2</p>
Prescribed Wells Area Overlay		Comment
DO 1	<p>Sustainable water use in prescribed wells areas.</p>	<p>Not Applicable to Precinct 2</p>
Regulated and Significant Tree Overlay		Comment
DO 1	<p>Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss.</p>	<p>Significant trees and remnant vegetation with habitat and amenity values will be retained in areas free of development, such as within the Open Space Zone or open space reserves. Approval for removing some trees has been authorised by the NVC, subject to satisfying a Significant Environmental Benefit Offset.</p>
Water Resources Overlay		
DO 2	<p>Maintain the conveyance function and natural flow paths of watercourses to assist in the management of floodwaters and stormwater runoff</p>	<p>The altered Precinct 2 precinct should not adversely affect the conveyance function and natural flow paths of any watercourses and will assist in managing floodwaters and stormwater runoff.</p>

6.24 The altered proposal does not contradict the relevant Master Planned Neighbourhood Zone and Open Space Zone, Desired Outcomes, and applicable Performance Outcome provisions. The altered Precinct 2 design is consistent with the Overlays, where applicable.

## 7.0 Conclusion

---

- 7.1 The Precinct 2 EIS amendment seeks to provide a more contemporary and aesthetically pleasing stormwater and floodwater management strategy to enhance opportunities to create superior urban amenity outcomes for future communities and generations. These methodologies align with many 30-Year Plan objectives and are consistent with the intent of relevant Master Planned Neighbourhood Zone and Open Space Zone, Desired Outcomes, and applicable Performance Outcome provisions.
- 7.2 The Riverlea Park major development is explicitly acknowledged as a vital component of the City of Playford's strategic future growth for the northern region of Adelaide. The altered Precinct 2 proposal seeks to further build upon and strengthen that future growth for Adelaide's north.
- 7.3 The altered Precinct 2 proposal incorporating the start of the Riverlea Lakes system for a more aesthetically pleasing stormwater management and floodwater mitigation strategy demonstrates considerable merit in enhancing urban amenities. The Saltwater Lakes will reduce ongoing maintenance costs, promote urban cooling effects, provide unique open space recreation opportunities and significantly improve public realm urban amenities for the broader community. The Riverlea Lakes system will become a valued community asset and destination maker for recreation and lifestyle amenities in an iconic northern metropolitan suburb that is rapidly evolving.
- 7.4 The secondary consequences (as a result of introducing the Saltwater Lakes) will alter the land division layout and road network pattern to a minor degree. However, the revised concept will not substantially change the proposed road network hierarchy or the number of allotments. Precinct 2 will still comprise much the same land area and will retain the fundamental nature of the site for a large-scale residential development supported by a wide range of complementary recreational, community infrastructure and other service activities to support a growing community. Accordingly, the revised land division conceptual layout does not significantly deviate from the previously approved.
- 7.5 The revisions to the current Precinct staging merely acknowledge and update the Precincts to incorporate previously approved land division staging whilst adopting the current delivery rationale. While these are not significant changes, it is an opportune time to revisit and update the Precinct boundaries given the EIS amendment.
- 7.6 For the reasons highlighted above (and throughout this document), the application to amend the EIS warrants authorisation to enable:
- The introduction of a more aesthetically pleasing stormwater and floodwater management strategy incorporating a saltwater lakes system;
  - A revised land division plan for Precinct 2 (including stages within it – superseding DA 292/D027/15);
  - An amended staging Precinct Plan.

## References

- Anderson, B. (2009a), Buckland Park Flora Technical Report. Prepared for Walker Corporation Pty Ltd.
- ACHM (2013) Draft Buckland Park Development Area - Precinct 2: Proposed development and applications for Walker Corporation
- City of Playford Playford, 2013 - Community Vision 2043 – Looking Forward 30 Years
- Connell Wagner (2008a) Preliminary Site Contamination Investigation: Buckland Park Proposal
- Creber, J (2022), Preliminary Site Investigation - Precinct 2, Riverlea Development, Riverlea Park, South Australia. Report by LBW co Pty Ltd for Walker Buckland Park Developments Pty Ltd.
- Department of Planning, Transport and Infrastructure, 2017 - The 30-Year Plan for Greater Adelaide, 2017 Update
- Department for Trade and Investment, South Australia's Online Planning & Design Code
- Development Assessment Commission (DAC), 2008 Amended Guidelines for the preparation of an Environmental Impact Statement: Buckland Park Country Township Proposal
- Draper, N. 2020 Riverlea Park Development: Kurna Cultural Heritage Management Plan. Version 3.1. CHMP developed by ND&A in conjunction with RAWsa and Kurna Yerta for Walker Corporation, Adelaide.
- Draper, N. 2022 Riverlea Park CHMP#2 Area: Kurna Cultural Heritage Assessment. CHMP developed by ND&A in conjunction with RAWsa and Kurna Yerta for Walker Buckland Park Developments Pty Ltd, Riverlea Park.
- Environment Protection Authority, *Environmental management of dewatering during construction activities* (Updated June 2021)
- Golder and Associates (2009a) Preliminary Geotechnical Investigation: Buckland Park, South Australia, for Walker Corporation Pty Ltd.
- Golder and Associates (2009b) Preliminary Acid Sulphate Soil Investigation: Buckland Park, South Australia, for Walker Corporation Pty Ltd.
- Government of South Australia, *Aboriginal Heritage Act 1988*.
- Government of South Australia, *Development Act 1993 (now repealed)*
- Government of South Australia, *Crown Land Management Act 2009*
- Government of South Australia, *Environment Protection Act 1993*.
- Government of South Australia, *Environment Protection (Water Quality) Policy 2015* (Water Quality Policy).
- Government of South Australia, *Landscape South Australia Act 2019*.
- Government of South Australia, *Local Government Act 1999*.
- Government of South Australia, *Native Vegetation Act 1991*.
- Government of South Australia, *Native Vegetation Regulations 2017*.
- Government of South Australia, *Planning, Development and Infrastructure Act 2016*.
- Government of South Australia, *Roads (Opening and Closing) Act 1991*.
- Government of South Australia, SA Housing Authority, [Welcome to HomeSeeker SA | HomeSeeker SA](#)
- GTA Consultants, 2015 – Precinct 2 Traffic Assessment. Issue 3. For: Walker Buckland Park Developments

How, T. (2020) Riverlea Park Flora and Fauna Management Plan: Precinct 1. Report prepared by EBS Ecology for Walker Corporation Pty Ltd.

Hudson Howells, 2022 – Riverlea – Salt Water Lakes System, Economic & Social Impacts – Online Survey Report

Merigot, H. 2022 Native Vegetation Clearance Riverlea Residential Subdivision, Data Report. Clearance under the Native Vegetation Regulations 2017. Report by EBS Ecology for Walker Buckland Park Developments Pty Ltd.

Merigot, H. (2022) Riverlea Park Flora and Fauna Management Plan: Precinct 2. Report prepared by EBS Ecology for Walker Corporation Pty Ltd.

Parsons Brinckerhoff Australia Pty Ltd, 2009 - Buckland Park Traffic Impact Assessment.

SASH Consulting Services (2008) European Heritage Assessment Report: Buckland Park for Walker Corporation.

Stantec, 2022, Riverlea – Precinct 2, Land Division Masterplan - Traffic Assessment. Issue 1. Prepared for: Walker Buckland Park

State Planning Commission – Practice Direction 14 – Site Contamination Assessment, 2021 - pursuant to section 52(1) of the *Planning, Development and Infrastructure Act 2016*

Wallbridge Gilbert Aztec, November 2022 – Riverlea Park, Stormwater Management - Water, Wastewater and Recycled Water – Updated Technical Paper

Wallbridge & Gilbert, 2009 - Stormwater Management, Water, Wastewater and Recycled Water – Technical Paper, prepared for the Buckland Park Environmental Impact Assessment

Wallbridge and Gilbert Consulting Engineers, 2013 - Buckland Park Development – Precinct 2 Stormwater Management. For: Walker Buckland Park Developments

Walker, 2009 – Buckland Park, Environmental Impact Assessment March 2009

Walker Buckland Park Developments, 2014 – Buckland Park Major Development – Development Application / Amendment to the EIS - Precinct 2 Land Division Riverlea

Water Sensitive South Australia, 2021. South Australian MUSIC Guidelines, Adelaide, South Australia.