CONFIDENTIAL AGENDA

FOR POLICY AND PLANNING MEETING TO BE HELD ON

18 JULY 2022 AT 6.30 PM

IN LITTLE PARA CONFERENCE ROOMS, SALISBURY COMMUNITY HUB, 34 CHURCH STREET, SALISBURY

MEMBERS

Deputy Mayor, Cr C Buchanan (Chairman)
Mayor G Aldridge
Cr M Blackmore (Deputy Chairman)
Cr L Braun
Cr B Brug
Cr A Duncan
Cr K Grenfell
Cr N Henningsen
Cr D Hood
Cr P Jensen
Cr D Proleta
Cr S Ouk
Cr S Reardon
Cr G Reynolds
Cr J Woodman

REQUIRED STAFF

Chief Executive Officer, Mr J Harry
General Manager Business Excellence, Mr C Mansueto
General Manager City Infrastructure, Mr J Devine
General Manager Community Development, Mrs A Pokoney Cramey
General Manager City Development, Ms M English
Manager Governance, Mr R Deco
Team Leader Council Governance, Ms J O'Keefe-Craig
Governance Support Officer, Ms K Boyd

APOLOGIES

REPORTS

CLOSE

ITEM	1.4.1
	POLICY AND PLANNING
DATE	18 July 2022
PREV REFS	Policy and Planning Committee 1.1.1 19/04/2022
HEADING	Strategic Growth Framework Waterloo Corner and Bolivar Corridor
AUTHORS	Leandro Lopez Digon, Manager Economic Development & Urban Policy, City Development Chris Zafiropoulos, Assessment Manager, City Development
CITY PLAN LINKS	3.3 Our infrastructure supports investment and business activity 3.4 Our urban growth is well planned and our centres are active 4.4 We plan effectively to address community needs and identify new opportunities
SUMMARY	The *Strategic Growth Framework – Waterloo Corner and Bolivar Corridor* has been prepared to provide Council with the necessary strategic background to provide clear direction regarding future development in the area. It will also provide direction to State Government and the private sector regarding potential development within the Study Area in the short, medium and long term and thus provide a framework to influence and/or direct rezoning initiatives to provide a coordinated and staged approach where the necessary infrastructure can be delivered to support the growth in a planned manner. This framework has been informed by the consultation conducted during April-May 2022. This report is seeking Council approval for the adoption of the framework and next steps.

RECOMMENDATION

That Council:

1. Approves the Strategic Growth Framework Waterloo Corner and Bolivar Corridor as included in Attachment 1 (Policy and Planning Committee, 18 July 2022, Item 1.4.1) to:
    a. Close the loop with the community and other stakeholders, and report back on the outcomes of the investigations, inviting further submissions on land owner interest for development, in accordance with the Strategic Growth Framework Waterloo Corner and Bolivar Corridor.
    b. Inform the two proponents seeking proponent led code amendments for precincts 1 and 2 that are subject to infrastructure agreements with Council for the necessary infrastructure in accordance with the Strategic Growth Framework Waterloo Corner and Bolivar Corridor.
    c. Engage with the Department of Infrastructure and Transport on network opportunities that have been identified as providing regional benefit.

d. Engage with the City of Playford to identify key principles to inform regional growth.

e. Engage with SA Water and Department of Infrastructure and Transport on strategic land requirements for road and stormwater network.

f. Engage with the State Planning Commission and Planning and Land Use Services on how the Framework can inform the review of the 30 Year Plan for Greater Adelaide.

2. Notes that Administration will provide a report to Council on the outcomes of the further consultation with land owners and other stakeholders, together with recommended actions for precincts 3 to 8 of the Strategic Growth Framework Waterloo Corner and Bolivar Corridor (Attachment 1, Policy and Planning Committee, 18 July 2022, Item 1.4.1)

3. Approves that, pursuant to Section 91(7) of the Local Government Act 1999, the report, attachments, presentation, discussion, recommendations, decision and minutes for this item will remain confidential and not available for public inspection until 30 June 2023.

4. Approves that, pursuant to Section 91(9)(c) of the Local Government Act 1999, the power to revoke the order under Section 91(7)(a)&(b) prior to any review or as a result of any review is delegated to the Chief Executive Officer.

ATTACHMENTS

This document should be read in conjunction with the following attachments:

1. Attachment 1 - Strategic Growth Framework - Waterloo Corner anda Bolivar Corridor
2. Attachment 2 - Engagement Outcome Summary Report
3. Attachment 3 - Map

1. BACKGROUND

1.1 The City of Salisbury City Plan 2035 identifies the need for strategic planning of the area west of Port Wakefield Road in response to infrastructure and land use planning changes within and surrounding this land in recent years.

1.2 This Strategic Growth Framework Waterloo Corner and Bolivar Corridor (Framework) has been prepared to provide Council with the necessary strategic background to provide clear direction regarding future development in the area. It will also provide direction to State Government and the private sector regarding potential development within the Study Area in the short, medium and long term and thus provide a framework to influence and/or direct rezoning initiatives to provide a coordinated and staged approach where the necessary infrastructure can be delivered to support the growth in a planned manner.

2. CITY PLAN CRITICAL ACTION

2.1 Develop a structure plan for the land west of Port Wakefield Road to open up new development opportunities while preserving the existing character of Globe Derby and St Kilda.

3. CONSULTATION / COMMUNICATION

3.1 Internal

3.1.1 The whole Framework has been supported with a working group of staff from Infrastructure Management, Development Services and Urban Policy.

3.2 External

3.2.1 Department of Infrastructure and Transport

3.2.2 SA Water

3.2.3 City of Playford

3.2.4 Community members, including land owners.

4. REPORT

4.1 The purpose of this Framework is to:

4.1.1 Present a fully informed, consolidated and coordinated growth framework to inform future Council decisions relating to infrastructure planning and funding and the orderly sequencing and management of Council and/or Proponent led Code Amendments.

4.1.2 Take both a long term 30-year perspective on development potential and forward planning, within a flexible framework that can support existing or short-term development interest within a coordinated and orderly development pattern.

4.1.3 Produce a framework that appreciates the regional context with a level of investigation and regional coordination to be used to directly inform the upcoming State Government's Regional Planning process.

4.1.4 Promote and encourage economic growth and job creation for the City of Salisbury community.

4.1.5 Identify infrastructure delivery mechanism options that could support an intensification of development while ensuring fair apportionment of costs between the landowners, developers, City of Salisbury, adjacent councils and State Government.

Consultation Process

4.2 To inform the development of the Strategic Growth Framework consultation was undertaken with the community and key stakeholders.

4.3 Engagement activities were conducted over a 4-week period from 29 April to 27 May in a manner that aligns with both the Planning and Land Use Services Community Engagement Charter and the City of Salisbury's consultation policy.

4.4 The following stakeholders were engaged during a 21-day period from 2 May to 27 May:

4.4.1 Owners and occupiers of the land within the study area and owners and occupiers of adjacent land to the study area boundaries and within the broader planning areas, with a direct letter sent to all owners/occupiers.

4.4.2 Planning and Land Use Services

4.4.3 City of Playford

4.4.4 Relevant Government Departments

4.4.5 Relevant Service Infrastructure Providers

4.5 The wider community located outside Study Area was also able to participate in the consultation process with information being made available on the website.

4.6 State Government departments were contacted directly in writing (via letter or email) and invited to provide feedback. In addition, meetings were held with Planning and Land Use Services, the Department of Infrastructure and Transport and the City of Playford.

Consultation Outcomes

4.7 There was strong engagement and interest in the Framework from landowners during the engagement period, with a high attendance rate at the two drop-in sessions.

4.8 Feedback was collected via verbal feedback (27 individuals), online survey responses (38 individuals), written letters and via two community drop-in sessions held at the Bagster Road Community Centre and the St Kilda Progress Association Hall.

4.9 A total of 65 submissions were received, with 72% of respondents being landowners within the study area, 22% being residents and 6% being business owners.

4.10 Strong interest was received from some land owners to commence code amendment processes. The key concern by survey respondents was the lack of infrastructure in the study area and the need for additional provisions including road infrastructure, sewer and wastewater before any commitment to development related investment in the area could be made.

4.11 The consultation process has identified that while there were some different views, there was a majority view that the area does require detailed planning to investigate rezoning, with some areas and landowners, specifically those either directly fronting or immediately adjacent to Port Wakefield Road who are looking to redevelopment in the immediate term.

4.12 The process has identified:

4.12.1 Areas of the study area where there are discreet groups of landowners with common views on redevelopment and timing that could form a precinct that could potentially proceed through a rezoning process early in the Strategic Growth Framework Timeline.

4.12.2 Other sections of the study area, where the landowner views are more mixed, with interspersed owners who both want intensification of development in the short term and landowners who want no change. These mixed areas will likely require Council to take a more leading role to form a view on the future direction and likely lead any required Code Amendments.

4.13 More detailed outcomes of the engagement can be found in Attachment 2.

4.14 A high-level summary of the key engagement findings is included in the final Strategic Growth Framework in Attachment 1, which will be made publicly available.

4.15 Feedback was also received from Planning and Land Use Services, the Department of Infrastructure and Transport and the Office of Recreation, Sport and Racing. Additional consultation will be required with these agencies and other infrastructure providers as part of any future code amendment processes.

4.16 The community and stakeholder feedback has been used to inform the recommended precinct plans and staging for the development of the area.

4.17 It is proposed that a letter to 'close the loop' be sent to all individuals and agencies that participated in the engagement process to advise them that the Strategic Growth Framework has been adopted by Council including contact details should they wish to make further inquiries.

Infrastructure Coordination

4.18 The planning system seeks to have infrastructure and rezoning process run in parallel. A coordinated approach provides for orderly development outcomes. As there are some 300-separate allotments in the Growth Framework study area, this coordination is paramount.

4.19 Concurrent with this consultation, high level infrastructure requirements have been identified to inform future rezoning of land. It is of high importance to coordinate infrastructure requirements with rezoning, in order to appropriately apportion costs. There are a number of infrastructure delivery mechanisms analysed in the Framework to fund and deliver infrastructure to support new development.

4.20 A hybrid approach is recommended as funding infrastructure is highly dependent on the willingness of land owners. Where there is agreement, an Infrastructure Deed is likely to be used. In these circumstances, these owners may undertake a proponent led code amendment. At this stage, this option is recommended for those precincts where land owners are able and willing to work cooperatively.

4.21 Where a land owner interest is low or unwilling to fund infrastructure, a Separate Rate could be used to facilitate the orderly development of the area. Council will have to lead a code amendment process in this circumstance.

4.22 Infrastructure Deeds are the preferred mechanism, with the use of a Separate Rate in circumstances where orderly development may not otherwise be possible. Council funding should be considered where development provides broader community benefit. E.g. resolving wider flooding risk issues in a catchment.

4.23 Further advice will be provided to Council on the hybrid of mechanisms, where land owners do not agree to Infrastructure Deeds.

4.24 The Framework has also identified infrastructure that will provide regional benefit and is not attributed specifically to an area. Given the beneficiaries for these works are not the land owners within a specific precinct, Council will need to engage with the City of Playford and relevant State Government agencies. It is proposed to include within the *Infrastructure Deed* agreements and Code amendments adequate reservation of land for future infrastructure needs.

Land Supply and Industry Market Overview

4.1 An industrial market overview and analysis has been undertaken to inform the Framework. The analysis has found the market is currently in strong upswing with

a lack of supply of market ready industrial and commercial land being widely reported.

4.2 Transport, storage and logistic facilities have been strong performers since the advent of COVID-19, albeit this growth was already emerging prior to the pandemic driven by online shopping, which are well suited to the highly accessible land located within the area given the transport infrastructure that is available to service this precinct.

4.3 Other sectors including Defence and related support activities are particularly pertinent to the area and could represent an opportunity for Council to use the Strategic Growth Framework to promote a Defence cluster as part of the existing Federal Government investment.

4.4 There are a range of factors which limit the supply of land to the market, and which suggest more rather than less land should be suitably zoned for future use.

4.5 Multiple land ownerships and the need to deliver key infrastructure to render land developable are potentially limiting factors in the take up of opportunities in the area.

4.6 The analysis for the purpose of informing the staging and forecast timeframes for the potential land available within the Strategic Growth Framework suggests a take up rate of 15-25 hectares per annum and a development timeline of between 20-35 years.

Next Steps

4.7 An intended outcome of this Framework is to have a strategic background to provide clear direction regarding future development in the area, including to provide guidance and make informed decisions on code amendment proposals with all stakeholders. Eight (8) indicative Code Amendment Precincts have been identified to facilitate the orderly development. The precincts reflect respective infrastructure requirements and land owner feedback to this point, noting a development timeline of between 20-35 years.

4.8 Council has already been advised of two land owner groups who have prepared or are in the process of preparing proponent led code amendments. Refer to map in Attachment 3.

4.8.1 Precinct 1 – these three land owners have engaged a planning consultant to commence a proponent led code amendment process. The findings from the Framework suggests the infrastructure for this group of allotments could progress as a discreet precinct, subject to an *Infrastructure Deed* agreement.

4.8.2 Precinct 2 – this group comprises up to eight allotments and Council has received submissions from three separate consultants expressing interest in rezoning land. Given the general willingness of all these land owners to progress code amendments, it is proposed that all these land owners are advised to coordinate a single submission for a proponent led code amendment process, together with *Infrastructure Deed* agreements. This precinct has specific Council infrastructure requirements that will provide broader community benefit, therefore Council may also need to

consider allocating additional funding. Further advice will be provided to Council as this precinct is further explored.

4.9 While Council is not required to agree to proponent led code amendments (the *Planning, Development and Infrastructure Act 2016* now provides that a land owner can seek rezoning directly with the Minister for Planning), the Framework provides a solid basis for informed decisions by proponents and the Minister for Planning. Preliminary discussions with the proponents and PLUS, have revealed a willingness for the owners and the Department to collaborate with Council on a coordinated code amendment and infrastructure deed agreements for these precincts. It is recommended that Council endorses this approach as it will provide a template for the orderly development of the area.

4.10 In respect to the other precincts, it is recommended that Council close the loop with the community and report back on the outcomes of the investigations. It is likely that further precincts may be identified through this process. In addition, there are policy recommendations arising from the report that will need to be reported back to Council for further consideration. It is proposed that a further report be presented to Council following further investigation and land owner consultation.

4.11 The Framework also identifies issues and further investigations that are required at a regional scale. It is recommended that Council use the Framework to further engage with:

4.11.1 The Department of Infrastructure and Transport (DIT) on network opportunities that has been identified as providing regional benefit.

4.11.2 The City of Playford to identify key principles to inform regional growth.

4.11.3 SA Water and DIT on strategic land requirements for road and stormwater networks.

4.11.4 State Planning Commission and PLUS on how the Framework can inform the pending review of the 30 Year Plan for Greater Adelaide.

5. CONCLUSION / PROPOSAL

5.1 The Strategic Growth Framework Waterloo Corner and Bolivar Corridor presents a fully informed, consolidated and coordinated growth framework to inform future Council decisions relating to infrastructure planning and funding and the orderly sequencing and management of Council and/or Proponent led Code Amendments.

5.2 It is envisioned that the Strategic Growth Framework will be made publicly available on Council's website, and will be regularly updated to remain current and relevant and inform Council's decision making.

STRATEGIC GROWTH FRAMEWORK

Waterloo Corner and Bolivar Corridor

Reference document summarising the preliminary investigations completed to support orderly development across the Study Area. Information and direction outlined in this document is subject to regular change and evolution through detailed technical investigations. Please contact the City of Salisbury to confirm currency of information before use.

JULY 14, 2022

City of Salisbury

HOLMES DYER

Document Control

Revision	Description	Author	Date
v1	Draft – Distributed to Council	CM	27.06.2022
v2	Final – For Council Endorsement	CM	08.07.2022
v3	Final – For Committee Report	CM	14.07.2022

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Executive Summary

The City of Salisbury City Plan 2035 includes a critical action to develop a comprehensive 25-year Growth Framework for the land west of Port Wakefield Road. Over the last few years and, since the opening of the North South Motorway, Council has been fielding an increasing volume of enquiries from landowners and potential developers for rezoning and intensification of land uses in this precinct. Across 2021, Council staff undertook a high-level planning exercise which identified 10 key planning areas for the entire area west of Port Wakefield Road to guide a set of complementary investigations for this western area of Council.

The City of Salisbury engaged Holmes Dyer Pty Ltd to produce the Strategic Growth Framework - Waterloo Corner and Bolivar Corridor (Strategic Growth Framework). Holmes Dyer has partnered with Greenhill Engineers and Cirqa Traffic Consultants to produce this Strategic Growth Framework, which specifically addresses Planning Area 1, 2 and part of Area 7, covering land from the Little Para River through to the Playford Council boundary of approximately 950 hectares. This land is currently zoned Rural, Open Space, Caravan and Tourist Park, Deferred Urban and Rural Horticulture and contains some 300-separate allotments.

The purpose of this Strategic Growth Framework is to:

- Present a fully informed, consolidated and coordinated growth framework to inform future Council decisions relating to infrastructure planning and funding and the orderly sequencing and management of Council and/or Proponent led Code Amendments.
- Take both a long term 30-year perspective on development potential and forward planning, within a flexible framework that can support existing or short-term development interest within a coordinated and orderly development pattern.
- Produce a framework that appreciates the regional context with a level of investigation and regional coordination to be used to directly inform the upcoming State Government's Regional Planning process.
- Promote and encourage economic growth and job creation for the City of Salisbury community.
- Identify infrastructure delivery mechanism options that could support an intensification of development while ensuring fair apportionment of costs between the landowners, developers, City of Salisbury, adjacent councils and State Government.

This Strategic Growth Framework has been developed and informed by key inputs, as set out in the chapters of this report including:

- Site Constraint Assessment, Economic and Demographic Profiling.
- Employment Land Market Review.
- Forecast Economic and Employment development and job targets, based on recommended highest and best land uses and associated zoning changes over the short, medium and long term to align with land supply demands.
- Land Capability Assessments, including service and traffic infrastructure.

- Consultation with key State Government Departments, Service and Infrastructure Providers.
- Engagement with all landowners within the study area to identify future development intent of individual owners to inform staging and precinct boundaries to support orderly delivery and coordination.
- Eco Industrial Park Case Study investigations.
- Analysis of different Infrastructure Delivery Mechanisms to identify solutions that Council could consider to support the significant infrastructure investment that will be required to support future growth.

The recommendation section of this report presents a consolidated Strategic Growth Framework Bolivar and Waterloo Corner that includes a Study Area wide Structure Plan and set of individual development precinct plans, recommendations relating to infrastructure agreements and components at a precinct level, zoning and Code Amendment priority and responsibility.

On evaluation of the State Government Land Supply Reports, there is currently an assumption in employment land modelling that large sections of the study area would remain in their current land use, with only the Deferred Urban sections assumed to be part of the future employment land supply. The Strategic Growth Framework Bolivar Waterloo Corner has identified a significant additional area of potential future land supply, that may be able to be brought online to meet future demand needs for the Adelaide Metropolitan Area, however the realisation of this opportunity would likely require State Government, Authorities, Council and Private Landowner investment to deliver the necessary infrastructure upgrades to support this development intensification. Once endorsed at a strategic level the Strategic Growth Framework Bolivar Waterloo Corner will inform the next iteration of the State Government Regional Planning and subsequent land supply report modelling. This opportunity has the potential to provide Salisbury with a mix of new land supply to meet the needs of their community and drive economic growth over 35 years.

The recommendations are written to provide Council and the landowners within this study area with a consolidated growth framework that can be used to inform regional planning and guide future development decisions, timing, responsibility and the further investigations that will be a part of any future Code Amendments. However, there are many factors impacting upon that demand prediction and, accordingly, the monitoring of demand levels should be undertaken by Council regularly as a means of informing the decision-making processes that will deliver the supply of land to the market, and flexibility should be built into the Strategic Growth Framework, to enable the City of Salisbury to pivot and respond to any new market demand or opportunities that may arise, with decisions on any individual site or development proposal able to be informed by the overall structure presented in this Strategic Growth Framework.

Terminology

The below definitions are summarised as part of the Strategic Growth Framework to provide clarity of terms used in the balance of the document to assist with interpretation and coordination of this framework with broader planning occurring across the balance of the land West of Port Wakefield Road.

Concept Plan – A statutory plan, that can be established as part of the Planning & Design Code via Code Amendment to give visual expression to a desired development outcome over time, that can be referenced in relevant zone policies and contained within Part 12 of the Code.

Infrastructure Sub-Areas – A granular set of Infrastructure Sub-Areas, across the Structure Plan that can be used for more detailed infrastructure planning and order of cost development as will be required for any future infrastructure agreement, typically drawn to reflect the stormwater infrastructure boundaries, considerate of land fall and catchments.

Planning Area – One of 10 Planning Areas identified by the City of Salisbury across all land holdings west of Port Wakefield Road in the Planning Areas and Opportunities Plan dated September 2021, identified with the plan provided as Figure 1.

Precinct Plans – A set of indicative precinct boundaries, that identify future Code Amendment responsibility and/or coordination that may be required to deliver orderly development that may involve multiple landowners. The final boundaries of the precincts may change, based on landowner interests and as further technical investigations are provided.

Structure Plan – A land use plan prepared for the entire Strategic Growth Framework Bolivar and Waterloo Corner, identifying the key connections, including environmental, transport, land use and pedestrian networks. This plan includes consideration of connections to adjacent land holdings outside the Strategic Growth Framework – Bolivar and Waterloo Corner area.

Study Area - The total study area of the Strategic Growth Framework prepared by Holmes Dyer 2022, which included Planning Area 1, 2, 6 and part of Planning Area 7 as shown in Figure 2.

Transport Sub-Area – Transport Sub-Area boundaries that were created, based on the Yield Catchments in order to provide the inputs necessary into the Department for Infrastructure and Transport traffic model to inform future intersection and road upgrade requirements.

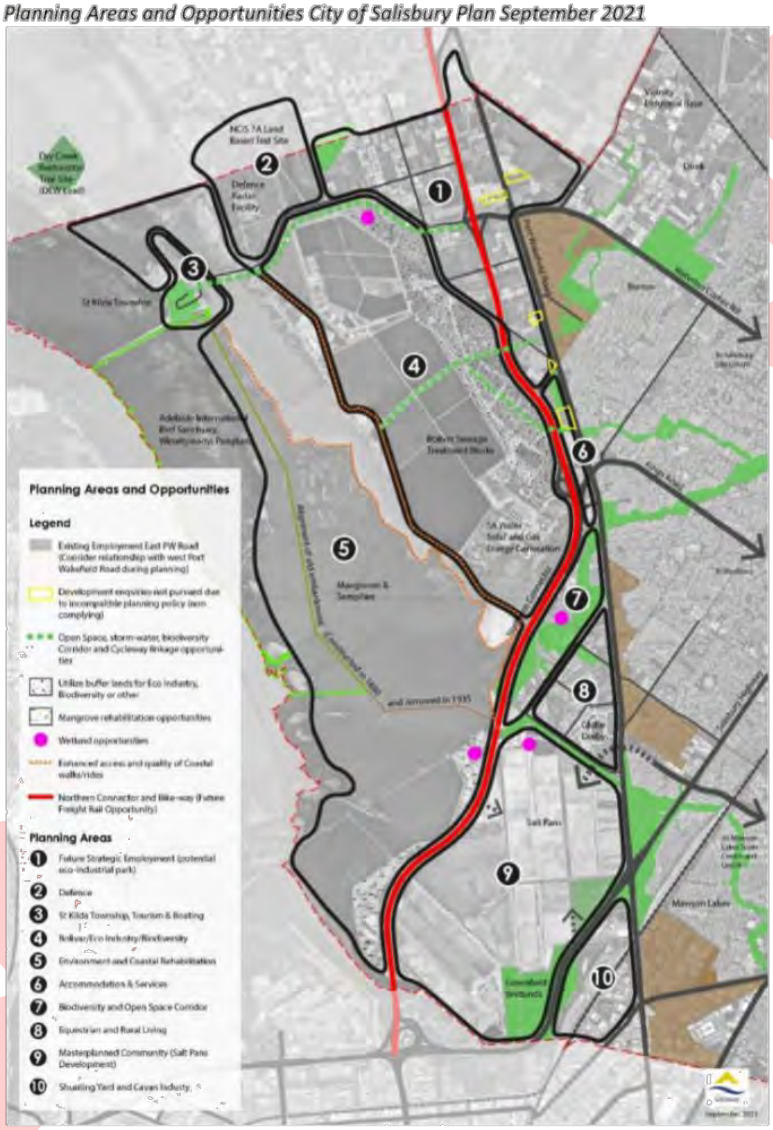
Yield Catchment – Four catchment areas within the Strategic Growth Framework Study Area. The catchment areas provide a potential development capacity yield for all developable land parcels (excluding recent developments), for the purpose of high-level infrastructure planning required by the service authorities.

1. Background

1.1. Project Context

The City of Salisbury City Plan 2035 has a critical action to open new economic growth and development opportunities in a coordinated manner for the land west of Port Wakefield Road. Across 2021, Council staff undertook a high-level planning exercise which identified 10 key planning areas for the area west of Port Wakefield Road as identified on Figure 1.

Figure 1. Planning Areas and Opportunities City of Salisbury Plan September 2021



The Strategic Growth Framework seeks to build on the high-level planning work already completed by the City of Salisbury to develop a structure plan at a precinct-by-precinct level for a priority target area of the overall planning area, being specifically:

- Planning Area 1 – Future Strategic Employment (potential for an eco-industrial park)
- Planning Area 2 – Defence
- Planning Area 6 – Accommodation and Services
- Part Planning Area 7 – Biodiversity and Open Space Corridor lands north of the Little Para River (sites fronting Port Wakefield Rd will be considered for employment)

The planning area covers a total land area in the order of 950 hectares and approximately 300 individual land parcels. The Study Area for the Strategic Growth Framework – Waterloo Corner and Bolivar Corridor is shown in Figure 2.

Figure 2. Strategic Growth Framework Investigation Scope Map – City of Salisbury September 2021

The City of Salisbury City Plan 2035 identifies the need for strategic planning of the area west of Port Wakefield Road in response to infrastructure and land use planning changes within and surrounding this land in recent years. Specifically, the following influences were identified by the City of Salisbury as part of the early project scoping:

- The North South Motorway was completed in 2020 which created a major road bypass and change of traffic movement patterns on Port Wakefield Road.
- The Rural Aircraft Noise Development Plan Amendment (DPA) which previously sought to rezone the existing Rural zone at Diment Road to Industry was discontinued due in part to the infrastructure costs required to facilitate bringing this land to market.
- Increasing volumes of private sector enquiries to develop parcels within the study area for industry and commercial rather than horticultural uses due to the proximity to the North South Motorway and a perception of increased access options for land fronting Port Wakefield Road.
- Increasing enquiries from planning consultants on behalf of landowners in relation to rezoning multiple land parcels within the Study Area.
- Pressure for intensification of existing land uses with increasing unauthorised development of land in the area for non-horticultural uses
- Significant increase in sales and development activity within Edinburgh Parks and the Vicinity Industrial Base demonstrating the strength of the employment offer in northern Adelaide in the current economic climate in part because of the significant infrastructure investments in the North South Motorway.
- No immediate plans to develop the Dry Creek Salt Fields land which may have included commercial activities requiring alternate land offerings to be identified to meet this potential demand.
- Planning for the Globe Derby Park commercial development initiatives has commenced that will need to be coordinated with recommendations across the broader precinct.

1.2. Strategic Alignment

State Government

The Strategic Growth Framework will consider the direction as set out within the State Planning Policy and 30 Year Plan for Greater Adelaide volume of the Planning Strategy. The current 30 Year Plan for Greater Adelaide (2017) identifies the area west of Port Wakefield Road should provide for:

- Future urban growth area (unzoned) on the Dry Creek Salt Fields (Planning Area 9 outside the scope of the Strategic Growth Framework).
- Rural Living at Globe Derby (Planning Area 8 outside the scope of the Strategic Growth Framework)
- Future freight railway link along the Northern Connector Corridor (Traverses Planning Area 1, 6, 7 and 9 including land within the Strategic Growth Framework Scope.
- Terrestrial Nature Protection Area encompassing the mangrove and Barker Inlet (Planning Area 5 and 7 including land within the Strategic Growth Framework in respect to the bio-diversity corridors that connect to this significant State Protection Area.
- Ensure land use planning in and around the district aligns with projects for industry growth and revitalisation and anticipated by the Northern Economic Plan.

The State Government have announced the new Regional Plans will start being developed in 2022 and will replace the current 30 Year Plan for Greater Adelaide. At this stage it is unclear what the timing for the metropolitan regional plans will be, but likely they will be developed after areas outside metropolitan Adelaide. It is assumed based on the available information that the metropolitan Regional Plan is likely to be completed in 2023/24.

The Strategic Growth Framework will be a key input to the regional planning process. By proactively preparing the Strategic Growth Framework in 2022, Council will be able to inform the scoping and background investigation for the Greater Adelaide Planning Region. In addition, the precinct planning, technical investigations, infrastructure requirements and final land use recommendations can directly inform the precinct level recommendations within the Greater Adelaide Regional Plan and "streamline" future Code Amendments.

Local Government

- City Plan 2035, Council's Lead Strategic Plan identifies as a critical action for a Structure Plan across the land west of Port Wakefield Road to open new development opportunities, while preserving the existing character of Globe Derby and St Kilda. This Strategic Growth Framework forms a critical input to this Structure Plan for four of the key planning areas and how surrounding planning areas may need to interface and coordinate for open space and infrastructure corridors and connections.

- Bio-Diversity Corridors Action Plan – Produced by the City of Salisbury 2009, includes background information on the environmental and ecological corridors that run through the study area and unique environmental areas that require protection as part of future planning and development.

- Northern Connector Land Use and Transport Study (Draft) was prepared by InfraPlan for the former Department of Planning, Transport & Infrastructure in 2016. This document was never finalised but is useful to the context of the Study Area providing background investigations that include some investigations relating to existing conditions, previous consultation, land use scenario modelling, industrial land supply and demand, land preparation requirements including some modelling and infrastructure analysis.

  Much of this work is still relevant and was considered as part of the preparation of the Strategic Growth Framework. Noting that further detailed investigations relating to traffic, infrastructure servicing, environmental and land development suitability will be required to support future Code Amendments, building on the work completed as part of the Strategic Growth Framework.

- Greater Edinburgh Parks and St Kilda Stormwater Management Plan – a joint study produced in 2020 between City of Salisbury and City of Playford relating to current and future stormwater management that includes parts of the northern section of the Study Area. This report has been considered by Greenhill as part of the Service Infrastructure investigations that have informed this Strategic Growth Framework as set out in Appendix 1.

- Economic Vision for City of Salisbury – Deloitte study dated 2019, contains a range of economic and demographic profiles for the Salisbury Employment Land Market, and identifies the criticality for forward planning for consistent and coordinated development for the land west of Port Wakefield Road, part of which is the subject of this Strategic Growth Framework to fill a void left by the discontinuation of the Northern Adelaide Economic Plan. Given the alignment of this recent work to the recommendations and approach adopted in the Strategic Growth Framework, the following section pulls out the key findings and implications of the Deloitte Study in the context of the Strategic Growth Framework

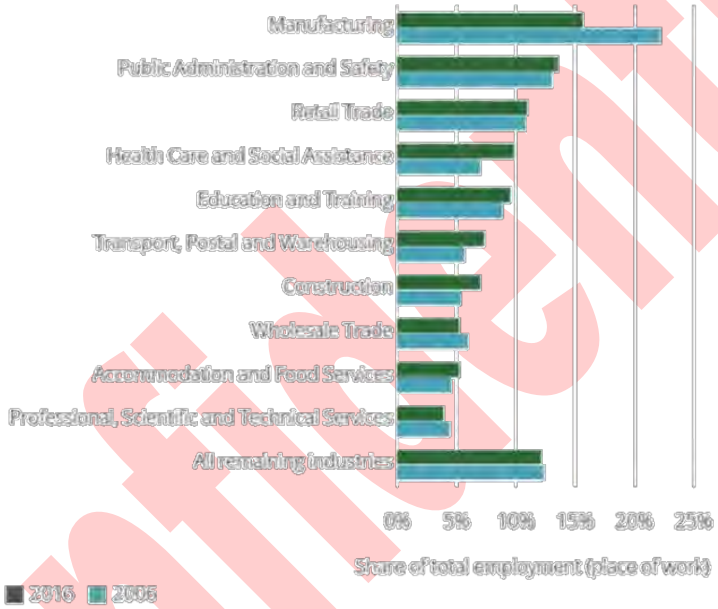
1.3. Economic Development Profile (Deloitte 2019)

1.3.1. Salisbury's Current Economic Market

Salisbury is the fourth largest regional economy, with its annual growth overtaking South Australia as a whole. A positive trend in gross regional product (GRP) has been associated with strong growth in workforce numbers. In 2017 Salisbury saw 66% of workforce aged residents with some form of employment.

Mirroring the changes that have been observed Australia wide, Salisbury's primary industries of employment have shifted from the traditional manufacturing roles to advanced manufacturing, requiring fewer but more skilled workers. A structural change observed in the decade between 2006-2016 also saw significant growth in defence related industries, construction, and logistics, reflecting Salisbury's competitive advantage in these industries.

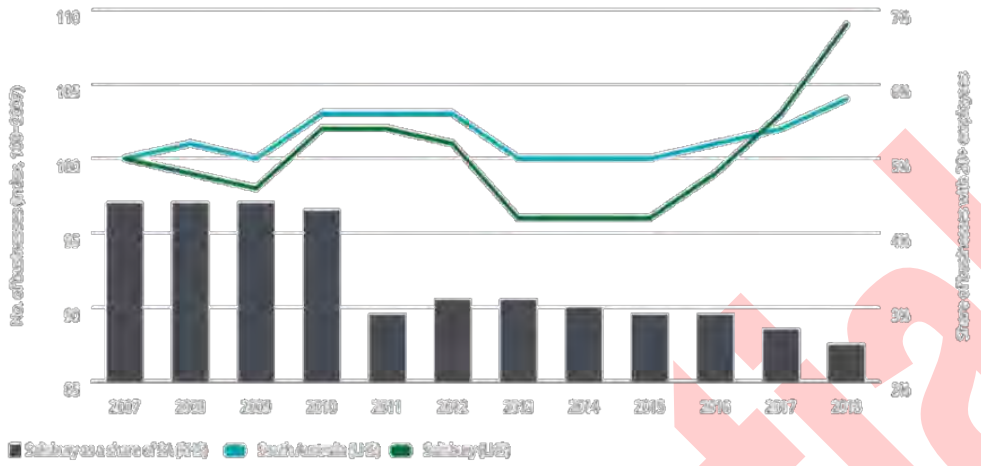
Table 1. Industry composition of the Salisbury economy, 2006 and 2016



Source: ABS, Deloitte Access Economics

Salisbury has seen a loss in larger employers, following the move away from traditional manufacturing. Conversely, smaller and single owner-operator businesses have fuelled the majority of the business formulation, increasing at an average annual rate of 3.3%. This has placed downwards pressure on local employment opportunities for Salisbury residents. Despite this, 36% of residents are still employed within the LGA and travel to work via car. The Salisbury economy also relies heavily on neighbouring LGAs such as Tea Tree Gully and Port Adelaide Enfield for employment opportunities. Likewise, Salisbury draws on skilled workers from the surrounding areas to fill job positions.

Table 2. Count of businesses (indexed) – Salisbury and South Australia, 2007 to 2018

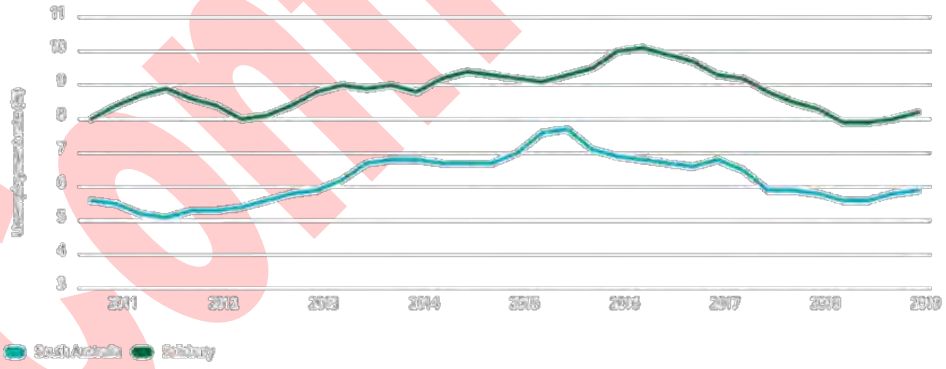


Source: ABS, Deloitte Access Economics

1.3.2 Disadvantage Measures

Notwithstanding the economic strengths that Salisbury has experienced in recent years, there are still considerable challenges faced by residents, as demonstrated across a variety of measures of disadvantage experienced within the community. Comparatively, Salisbury has a higher proportion of residents receiving government benefits, particularly benefits associated with disability and labour market marginalisation than that of South Australia. The Local Government Area is placed in the second worst decile for disadvantage in the SEIFA Index, however with higher levels of severity located in small and specific pockets of the population. This disadvantage rate is accompanied by a higher-than-average unemployment rate of approximately 2%.

Table 3. Unemployment rate – Salisbury and South Australia, 2010 to 2019

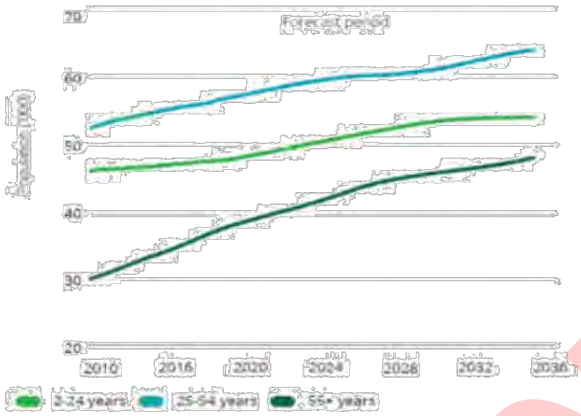


Source: ABS, Deloitte Access Economics

1.3.3 Disadvantage Measures

Salisbury's population is anticipated to grow at a greater rate than the rest of South Australia (0.86% per annum). The population is set to reach 166,000 people by 2036. In addition to a total growth in population, Salisbury is set to experience a shift in population distribution. Currently a relatively youthful population, with an average age of 37 years, the LGA also has a culturally diverse population with first generation migrants accounting for 31%.

Table 4. Population size by age demographic – Salisbury, 2010 to 2036

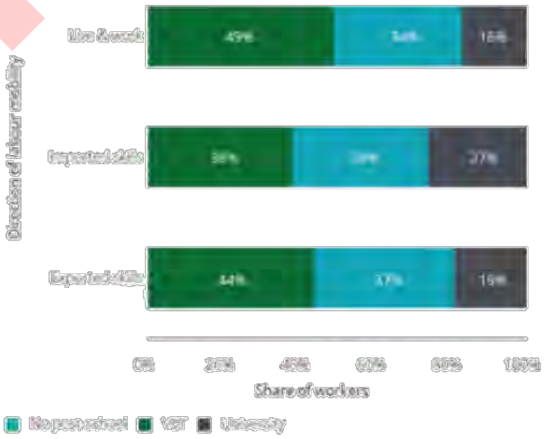


Source: ABS, Deloitte Access Economics

1.3.4 Education and Skills

Underpinning a productive and high value add economy is skill workers and education. Currently Salisbury residents have relatively low rates of post-school education attainment, particularly at the university level. Without significant change, relatively low educational outcomes will continue, effecting employment opportunities for residents. Remarkably, the LGA has a high demand for professional, managerial and technician and trades operations despite the relatively poor socioeconomic and employment outcomes amongst residents.

Table 5. Education attainment (highest level) by place of work – Salisbury, 2016



Source: ABS, Deloitte Access Economics

1.3.5 Key Findings Relevant to the Strategic Growth Framework

The Deloitte Report (2019) identified a set of opportunities and future outcomes that would strengthen Salisbury's economic market and increase the number and quality of jobs for the community. These actions identified sought to generate prosperity for the Salisbury community, key opportunities included:

- Leveraging Salisbury's existing endowments and strategic assets
- Grow Salisbury's existing industry base by ensuring that Salisbury's investment attraction plan targets industries and activities that complement and intensify existing activities in the region.
- Create commercial spin-offs from the defence industry by striking a Memorandum of Understanding between key defence stakeholders.
- Develop a 30 Year Development Plan to prepare for the future development of the area west of Port Wakefield Road.

Leveraging Salisbury's existing endowments and strategic assets is Salisbury's existing industry base, and locational advantage to grow the City's business activity and create job opportunities. Advanced manufacturing, food processing, product manufacturing, transportation, warehousing, distribution, and logistics were identified as industries with a strong basis for future growth. These industries rely on high quality, fast and convenient road access and have a strong link with the defence industry and have potential to facilitate cross pollination and skill and resource sharing.

The current availability of underdeveloped land to the west of Salisbury was acknowledged by Deloitte as an attractive location for large scale commercial and industrial development due to its strategic location along the key road infrastructure of the North South Motorway. Due to this recent investment by State Government, land use planning and zoning changes to support the highest and best use of this land should be considered as a required outcome of a renewed investment attraction plan, to support varying industry uses and more intensive activities.

Salisbury has several distinctive precincts, where economic and employment activities cluster. Private sector precincts are areas zoned for commercial and industrial processes and located around key infrastructure and transport corridors. Similarly, informal industry clusters are business ecosystems that have organically formed due to the benefit of co-location. The opportunities for action to strengthen Salisbury's connectivity is greatly related to the promotion of, and investment in, precincts that support like or compatible businesses that was considered in the development of the Strategic Growth Framework and associated recommendations.

The Holmes Dyer review of the Deloitte 2019, *Economic Vision for the City of Salisbury* has confirmed that this report provides robust demographic and employment statistics that demonstrate a growing appetite for employment generating industry and business development. The Strategic Growth Framework has been aligned to this report's outcomes and actions, particularly in relation to the expansion of business clusters and the unlocking of land potential in preparation for future industry.

2. Site Analysis

The following section sets out the various information that forms up a site analysis of the study area as a basis for understanding opportunities and constraints of the land to inform the Strategic Growth Framework.

2.1. Site Photo Survey by Planning Area

Photo 1 – Planning Area 7 City of Salisbury Soil Transfer Site view looking west across North South Motorway.

Photo 2 – Planning Area 7 City of Salisbury Soil Transfer Site view looking east across Little Para River Corridor.

Photo 3 – Planning Area 6 Existing pull-over space to land north of Highway 1 Caravan Park view looking North.

Photo 4 – Planning Area 6 Existing pull-over space to land north Highway 1 Caravan Park view looking South

Photo 5 – Planning Area 1 Rural Land uses off Summer Road

Photo 6 – Planning Area 1 Existing employment land uses occurring on Summer Road

Photo 7 – Planning Area 1 Existing Flood Way to Summer Road

Photo 8 – Planning Area 1 Existing Rural Residential Housing on Summer Road with Flood Warnings

Photo 9 – Planning Area 1 Undo Road and Port Wakefield Road Intersection looking east.

Photo 10 – Planning Area 1 Existing Horticultural Land Uses on Undo Road, with road infrastructure no kerb/gutter

Photo 11 – Planning Area 1 View of Dunn Road and example of existing infrastructure provision

Photo 12 – Planning Area 1 View of existing Horticultural activities at Davey Road

Photo 13 – Planning Area 1 Calvengrove Road, with existing Horticultural Activities

Photo 14 – Planning Area 1 Mill Road with existing Horticultural Activities

Photo 15 – Planning Area 1 Open Space Zone near South Go Kart Club

Photo 16 – Planning Area 1 Robinson Road turn around looking over Port Wakefield Road

Photo 17 – Planning Area 1 Informal Road Corridors off St Kilda Road in Horticultural Land

Photo 18 – Planning Area 12 Defence Signal Facility under construction on left and Coleman Road Waste site on right.

2.2. Topography and Soils

The land within the study area is almost flat, generally grading down from east to west towards the coast at a gradient of approximately 0.3% - 0.5%. This means the whole area is well suited to large industrial and commercial footprints, but also means that gravity-based services (stormwater and sewerage) are more problematic, requiring larger pipes or drains and possibly reliant upon pumping in some instances to overcome the lack of fall. Sites and roads are likely to require some filling to enable minimum gradients to be achieved for new roads and gravity pipe systems, refer to Figure 3: Topography.

The western edge of the site (in the Department of Defence land) located within Planning Area 2, is only about 2m above sea level and is therefore at risk of sea level rise and storm surges. Beyond the Defence land, the elevation is typically around 6 – 10m above sea level and therefore at lower risk. The second low point is the western reaches of the Little Para River and adjacent land at around 4m above sea level. As a result, the raising of land levels around future building footprints may be necessary in the areas of lowest elevation.

Due to the low-lying nature of the topography, proximity to the coast and high-water table, all land within the Study Area west of Port Wakefield Road, will likely hit ground water during trenching especially during high tide. This water table level may also impact on the width and depth of open swales and the associated land area that may be required to deliver a suitable stormwater infrastructure to service an intensification of development.

The land contained within the study area has two main physiography zones. The first is the coastal plain which contains dunal formations, estuarine areas, mangrove swamps, samphire flats and the older dune formations. The second zone is the Lower Alluvial Plan, which contains the outwash fans of the Little Para River and is characterised by fertile red brown earths.

A review of publicly available soil information suggest that the underlying soils would likely comprise the following:

- Hard loamy sand over red clay
- Loam over poorly structured red clay
- Calcareous, gradational clay loam
- Estuarine Marine Sediments (EMS) layered sediments of mixed marine and river origin-sands, silts clays and organic deposits

The investigations undertaken to inform the site analysis contained within this Strategic Growth Framework has not included a detailed assessment of environmental or geotechnical conditions within the Study Area. Environmental and geotechnical investigations will be required to understand any constraints upon future development that may be associated with the underlying soils; including identification of topsoil depth, groundwater level, areas of unstable soils, uncontrolled fill, extent of calcrete and strength of underlying subgrade (CBR testing) for pavement design purposes.

Figure 3. *Topography*

2.3. Vegetation

Most of the study area has been cleared of its original remnant vegetation. Some areas of remnant vegetation remain, most notably along the alignment of the Little Para River corridor, refer to Figure 4: Vegetation.

There are two existing biodiversity corridors that traverse the Study Area; the Little Para River Corridor and the Helps Road Drain Corridor, although little vegetation is evident along the Helps Road Drain that traverses land.

The Little Para River Corridor connects through all of Salisbury. West of Port Wakefield Road the corridor flows through a series of constructed wetlands prior to traversing the samphire flats and mangroves to the sea. There are known areas of remnant vegetation downstream of Port Wakefield Road, that are protected under the *Native Vegetation Act 1991* (SA), contained within the existing Open Space Zone.

The Helps Road Drain Corridor is an engineered drainage system that travels from Edinburgh North through the RAAF Base land, across the suburbs of Direk, Burton and Waterloo Corner before entering the SA Water Bolivar Treatment Plan. The drain is punctuated by several artificial constructed wetlands east of Port Wakefield Road, with no native remnant vegetation within the drain corridor. In 2016, the Australian Government Department of Defence commenced detailed environmental investigations to identify the nature and extent of per and poly-fluroalkyl substances (PFAS) in the vicinity of the RAAF Edinburgh Base. PFAS monitoring sites extend along the Helps Road Drain, connecting wetlands and into the Study Area along this corridor.

While outside the study area, the Strategic Growth Framework has an adjacency to the sensitive Coastal Mangrove and Samphire biodiversity corridor that extends along the coast of the planning area that will be a consideration in the design of infrastructure and open space corridors.

Outside the identified biodiversity corridors there are distinct areas of vegetation evident east of the North – South Motorway alignment from south of Hodgson Road to Summer Road. Buffer planting is also evident along the site's interface within the Bolivar Treatment Works as part of the buffer established and maintained by SA Water. Vegetation west of the Highway One Caravan & Tourist Park has biodiversity value and should be retained.

The study area also contains areas of orchard and vine and some plantings associated with homesteads or boundary plantings. Overall vegetation coverage is low and has limited implications for future development. Encouragement of additional planting in association with new development, road upgrades incorporating street tree plantings, additional vegetation around stormwater infrastructure, open space corridors and within detention basins and biofiltration basins is warranted.

The investigations undertaken to inform the site analysis for the Strategic Growth Framework have not included detailed vegetation studies to identify any national or state protected flora under the *Environment Protection and Biodiversity Conservation Act 1999* or *National Parks and Wildlife Act 1972* (SA). It is considered unlikely that any national protected flora would be located within the study area, given that the known plant species in Salisbury rated as Vulnerable under this legislation is the Bead Samphire that would occur along the salt scalds in Planning Area 3, 5 and 9 outside the scope of the Strategic Growth Framework.

Figure 4. *Vegetation*

2.4. Hydrology / Stormwater

The Waterloo Corner and Bolivar Corridor Growth Area lies within two surface water catchments, these being the Little Para River and the Smith & Adams Creeks. The Little Para Catchment component is located at the southern extremity of the Study Area, generally south of Bolivar Road. The component within the Smith & Adams Creeks catchment extends north from Bolivar Road across the remainder of the Study Area. This catchment is split by a series of minor ridges and as such numerous natural outlets exist for water to enter the Barker Inlet / Gulf St Vincent.

The Bolivar Wastewater Treatment Plant (WWTP) Lagoons, now require stormwater from this dispersed catchment to be funnelled through limited, specific drainage pathways that traverse the SA Water land holdings. As such, all newly generated stormwater runoff from future development within the Study Area will be required to direct stormwater to these existing drainage pathways and limit their discharge such that the capacity of these outfalls is not exceeded.

Generally, there are seen to be three available discharge / drainage pathways for the Study Area the subject of this Strategic Growth Framework, as detailed in the Greenhill Preliminary Service Infrastructure Report provided in Appendix 1.

- The Little Para River
- Helps Road Drain Corridor – 'The Gap'
- The St Kilda Road Channel (partially constructed in late 2018)

The Little Para River and existing drains to the south of the Study Area will need augmentation and supplementation to handle the intensification of development within the study area and will be expected to convey flows from upstream outside of the study area. Control of upstream flows to pre-development levels should be a key objective for Council. Stormwater detention is likely to be required at points immediately upstream of the culvert crossings to Port Wakefield Road and to the North South Motorway to control the extent of flows.

The capacity of the stormwater outflow known as 'The Gap', being the Helps Road Drain Outflow that connects between SA Water treatment ponds is limited and, hence, management of flows through this outfall will be critical.

The St Kilda Road Channel is seen to extend from the North South Motorway / Waterloo Corner Interchange, northwest around the northern Bolivar WWTP Lagoons. It connects into the Bolivar stormwater drainage system, which discharges via the two existing Bolivar Outfall Channel syphons, one located within the SA Water site and the second just north of Symes Road.

The Greater Edinburgh Parks and St Kilda Catchment, Stormwater Management Plan (May 2020), suggested that new syphon(s) be constructed under the Bolivar Outfall Channel, thereby discharging stormwater to the Barker Inlet between the Ridley Salt Ponds. The cost of a new syphon may be prohibitively expensive and discharging

stormwater into the Bolivar Outfall directly may be a more cost-effective option. However, this option requires further technical investigation as well as consultation with SA Water.

Due to the low-lying landform, minimal grades and ground water as identified in Section 2.2 combined with the identified constraints on the existing capacity of the stormwater outfalls to support the intensification of development, a Stormwater Management Plan should be developed for the Strategic Growth Framework Study Area to inform detailed stormwater infrastructure, timing, responsibility and cost considerations.

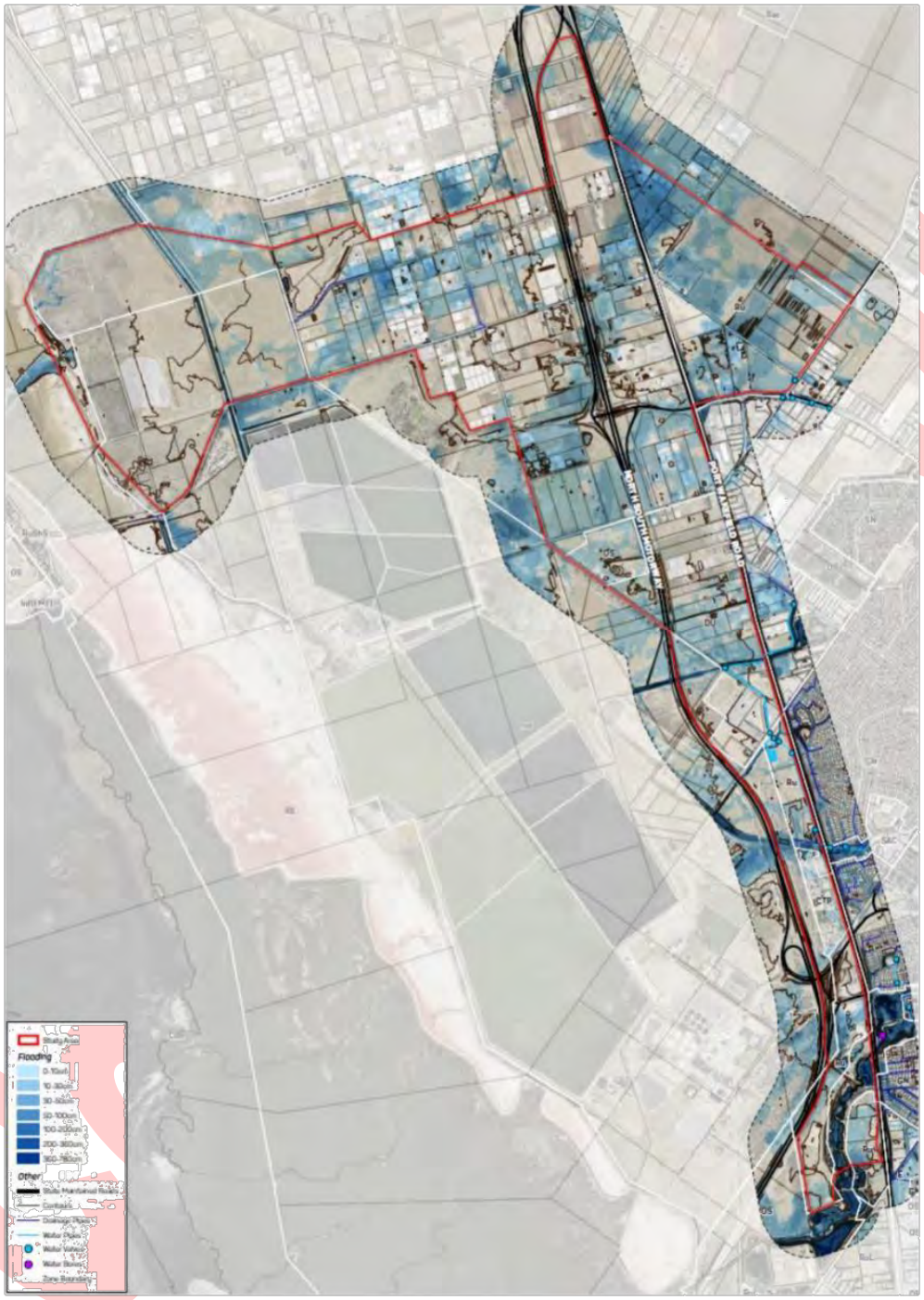
The opportunity exists to establish a series of stormwater catchment areas which can operate relatively independently and thereby share responsibility for the delivery of outcomes for the benefit of those catchments. These are discussed later in the Greenhill Preliminary Service Infrastructure Report. Council could take overall responsibility for delivery and management of these systems, but with funding contributions and land commitments to underpin the networks.

A further opportunity given the City of Salisbury industry leading approach to the management, treatment and reuse of stormwater could be for a larger network of wetlands and swales, in substitution of large underground pipes and on-site detention be created, with infrastructure contributions potentially received from developers via a stormwater contribution model. This could facilitate an expansion of the existing capacity of the Salisbury Water business and a contribution to innovative and industry leading green initiatives, but would need to be subject to further detailed feasibility by the City of Salisbury and may only be applicable to select precincts across the broader Study Area.

Flood risk in the Study Area is significant, as identified in Figure 6, which identifies areas of inundation during the 1% Annual Exceedance Probability (AEP) rainfall event, however the flood mapping predates the construction of the North South Motorway, which has altered the local topography and stormwater pathways. The flood mapping should be updated to reflect this substantive change to the stormwater pathways. This updated flood mapping will subsequently inform flood overlays and development responses that may be required as part of any future Code Amendment.

Figure 5. *Hydrology*

Figure 6. *Flood Risk Inundation Mapping, prior to construction of the North South Motorway*



2.5. Site Contamination

Two sites within the study area have known contaminated land, these being land immediately north of the Little Para River where it crosses Port Wakefield Road and the former landfill site off Coleman Road. The Coleman Road landfill closed in 1997 and ongoing management of the site is required relating to groundwater monitoring, minimisation of landfill gas emissions and improvement of on-site drainage to protect the groundwater system and increasing the cap coverage to the landfill which has an ongoing capital cost to Council. Opportunities for alternate use of this site, to harness energy from the methane extraction or another form of eco-industrial outcome could be explored by Council as part of the Strategic Growth Framework, with consideration of any vegetation buffers that may be required to existing or future intended land uses on the immediate adjacent sites.

There are also several EPA licenced facilities located throughout the study area including petrol station sites and various agricultural and industrial activities. These sites are identified on Figure 7.

In 2016, the Australian Government Department of Defence commenced detailed environmental investigations to identify the nature and extent of per and poly-fluroalkyl substances (PFAS) in the vicinity of the RAAF Edinburgh Base. PFAS monitoring sites extend along the Helps Road Drain, connecting wetlands and into the Study Area along this drainage corridor. The Department of Defence have a PFAS Management Area Plan that informs the activities they are required to undertake to manage, monitor and reduce the risks of PFAS exposure. The land within the study area, east of Port Wakefield Road and north of Waterloo Corner Road, are within the management area that has several ground water and surface water sample locations. As this is an ongoing situation being monitored by the Department of Defence, the impact (if any) of any proposed land use changes will need to be monitored based on the most current information available at the time.

The investigations undertaken to inform the site analysis for the Strategic Growth Framework has not included detailed site contamination investigations. Under the *Planning, Development and Infrastructure Act* 2016, the planning system is required to assess and manage risks posed by known or potential site contamination to enable the safe development and use of land. A more comprehensive set of investigations will likely be required as part of a future Code Amendment that could include the following investigations:

- Landfill risk assessment for any rezonings within 500m of the Coleman Landfill site, or area as required by the relevant auditor.
- Investigation of interface issues relating to noise, odour, dust, chemical spray, drift and identify any necessary buffers or separation distances
- Undertaking a desktop site history analysis for possible contaminating activities on the land proposed for rezoning, subject to the outcomes of site contamination investigations, prepared by an environmental consultant in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999.*
- Ground water contamination analysis

Figure 7. *Site Contamination & EPA Licensed Facilities*

2.6. European and Aboriginal Heritage

2.6.1. European Heritage

There are no identified sites of European Heritage within the Study Area.

2.6.2. Aboriginal Heritage

The study area is located within the traditional lands of the Kaurna with the *Aboriginal Heritage Act 1988* (Act) protecting all Aboriginal sites within South Australia. A search of the Aboriginal Affairs and Reconciliation Division, Department of the Premier and Cabinet was undertaken for the Study Area. The search identified one archaeological and two burial sites within the Study Area. While not formally registered, AARD also identified that there is a further burial site discovered in 2019 and a repatriation burial site near Waterloo Corner which are protected under the Act.

AARD will not provide details of the individual titles of land for the registered sites, however an indicative location has been included on the attached Figure 8, with a further register search by individual titles proposed to be included in any future Code Amendment required.

The Adelaide Plains area of Salisbury is recorded as offering a diverse range of high resource habitats to the Kaurna including open grasslands, densely wooded alluvial wetlands and watercourses. This environment combined with the proximity to the coast and river corridors suggests that there is potential for further unknown aboriginal heritage sites to be discovered within land contained within the study area. AARD advised that due to the significant number of Aboriginal ancestral remains in the Northern Suburbs, it would be reasonable to consider that the extent of discoveries indicates a high risk that further evidence of Aboriginal occupation of the area could be discovered under the disturbed topsoil through project delivery within the Study Area.

The Department of Transport as part of the Northern Expressway Environmental Report undertook cultural mapping 1 km either side of Port Wakefield Road which demonstrates areas of high and medium sensitivity within the Study Area, as demonstrated on their sensitive area map provided as Figure 9.

Given the history of cultural discoveries in Salisbury and the river corridors and landforms that exist across this area, it is recommended that a Cultural Heritage Assessment be undertaken as part of any proposed Code Amendment or major infrastructure works involving significant excavations that would extend below the existing disturbed surfaces, with cultural heritage inductions included as part of any public works contract. This Cultural Heritage Assessment will involve engagement with the *Kaurna Yerta Aboriginal Corporation (KYAC)* and any other local Aboriginal Groups, organisations or traditional owners that may be identified by the cultural heritage advisor as having an interest in lands within the Study Area.

Figure 8. *Aboriginal Affairs and Reconciliation Division Register Search Results*

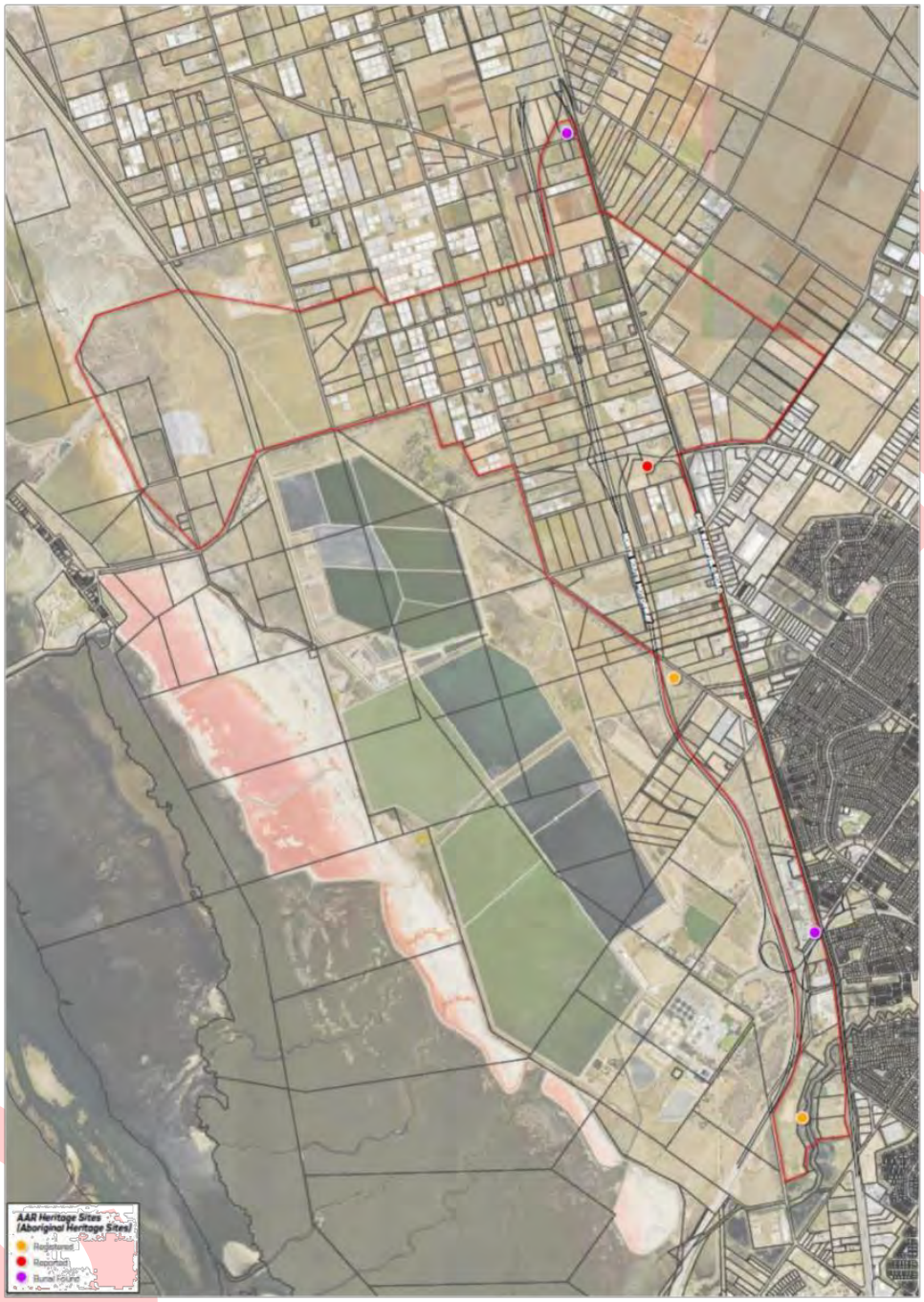
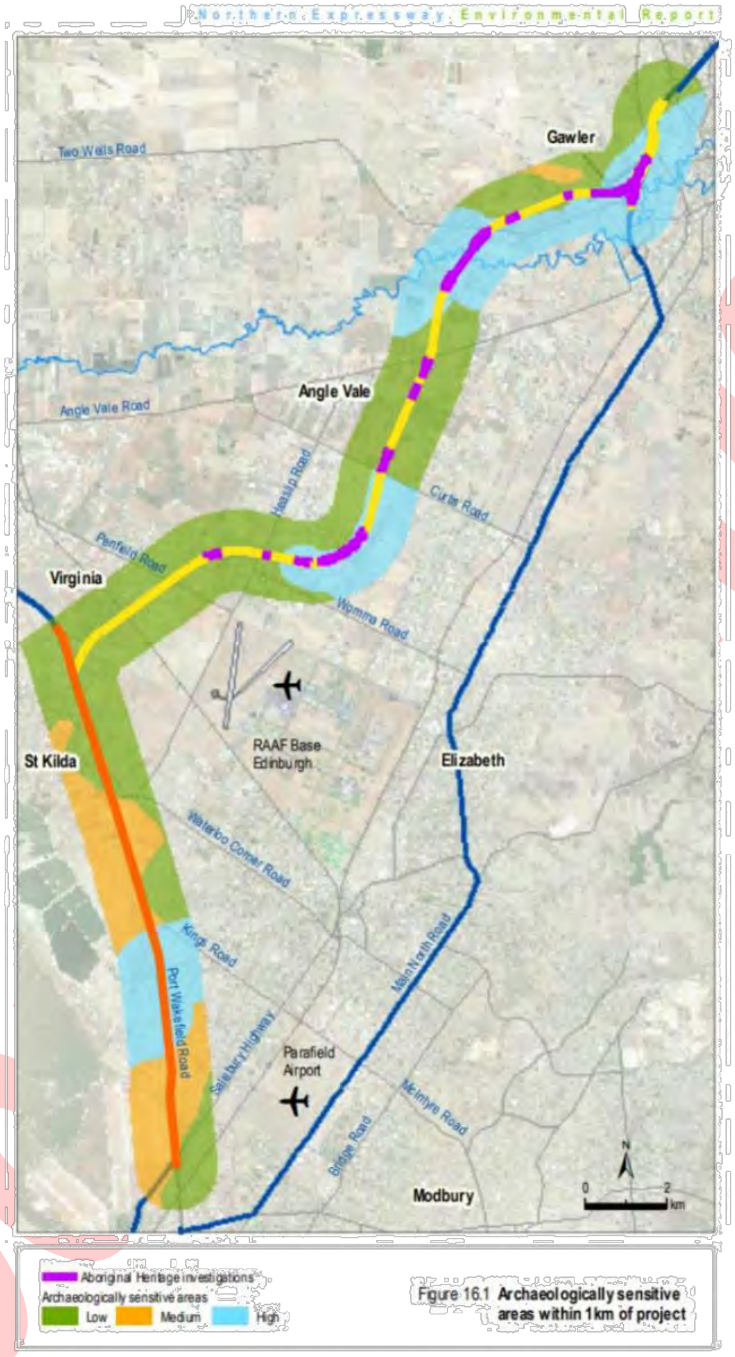


Figure 9. Archaeological Sensitive Areas within 1km of Port Wakefield Road, Department of Transport Northern Expressway Environmental Report



2.7. Service Infrastructure

Parts of the Study Area are well served by service infrastructure, notably the area south of Waterloo Corner Road and land extending along Port Wakefield Road. The planning areas north of Waterloo Corner Road and particularly lands west of the North South Motorway are generally poorly served by service infrastructure and can anticipate the need for significant augmentation of capacity through to total network construction to support any significant intensification of development or land use change.

The implication for development is that it is critical that a logical progression of development from south to north and from east to west occur. Where landowners are prepared to fund required infrastructure, sequencing of development becomes less critical, assuming that a clear understanding of all infrastructure upgrade requirements is known for negotiation with the landowners.

Greenhill Engineers undertook detailed *"before you dig"* investigations and had discussions with planning representatives in the service authority organisations and have compiled a preliminary service investigation report included within Appendix 1. A summary of the findings by service infrastructure type is presented below.

2.7.1. Sewer

SA Water has an extensive gravity sewer system to the south-east of the Growth Area, generally to the east of Port Wakefield Road and south of Waterloo Corner. The Bolivar Sewage Treatment Works is located to the west and south-west of the Growth Area, which incorporates the plant itself, pumping mains and wastewater treatment lagoons.

To the north of Waterloo Corner, and generally to the west of Port Wakefield Road, there is very little existing SA water sewer infrastructure.

An assessment by SA Water is underway, to investigate and to provide further information relating to the future servicing of the Study Area contained within this Strategic Growth Framework to identify areas of constraint or where upgrades are required. However, due to the complexity of this assessment it is anticipated it will take several months to complete and once available will form a future chapter to the Strategic Growth Framework to inform future Code Amendments and infrastructure timing, coordination and prioritisation. In addition, SA Water is also currently completing master planning works as part of SA Water's Regulatory Determination 2024, which in part includes the Waterloo Corner and Bolivar Planning Areas.

Due to the scale and anticipated timing of development it is anticipated SA Water will address development through individual site investigations as parcels of land within the Strategic Growth Area proceed to development and/or Code Amendment in the immediate short term. Once the outcomes of the above studies are available a more strategic planning approach will be able to be undertaken.

2.7.2. Potable Water

Potable water is available to service the Strategic Growth Area by SA Water, generally via mains located within Port Wakefield Road and Waterloo Corner Road.

An assessment by SA Water is underway, to investigate and to provide further information relating to the future servicing of the Study Area contained within this Strategic Growth Framework to identify areas of constraint or where upgrades are required. However, due to the complexity of this assessment it is anticipated it will take several months to complete and once available will form a future chapter to the Strategic Growth Framework to inform future Code Amendments and infrastructure timing, coordination and prioritisation. In addition, SA Water is also currently completing master planning works as part of SA Water's Regulatory Determination 2024, which in part includes the Waterloo Corner and Bolivar Planning Areas.

Due to the scale and anticipated timing of development it is anticipated SA Water will address development through individual site investigations as parcels of land within the Strategic Growth Area proceed to development and/or Code Amendment in the immediate short term. Once the outcomes of the above studies are available a more strategic planning approach will be able to be undertaken.

2.7.3. Recycled Water

Several recycled / reclaimed water mains are located from the Bolivar WWTP site, connecting to the north of the Study Area. These mains are connected to the Bolivar treatment works and the Virginia Pipeline Scheme (VPS). SA Water has advised that there may be an option for mains extensions off the Bolivar Treatment Plant infrastructure. However, to the north of the Growth Area, the VPS network is currently at full allocation.

In addition to the SA Water recycled water network, Salisbury Water operates a recycled water network managed by the City of Salisbury as a separate business unit. Salisbury Water infrastructure within the Study Area includes:

- Within the study area at Jobson Road, Salisbury Water own and operate a bore extraction site and has land holdings that may be surplus to the requirements of the Salisbury Water operations that could be explored for alternative development.
- A 150mm diameter PVC distribution main which extends from the Burton Wetlands at Burton Road, through to the reserve at Liberator Drive on the eastern side of Port Wakefield Road.
- A 180mm diameter distribution main located at the intersection of Waterloo Corner Road and Heaslip Road.
- A recycled water system is located on the eastern side of Port Wakefield Road opposite Hodgson Road located in the reserve at Walpole Road reserve and wetlands. This system feeds recycled water to the Willowbrook Reserve approximately 200m to the north of Walpole Road wetlands.
- The City of Salisbury operates a bore at the Little Para River Linear Park on the eastern side of Port Wakefield Road.

Further discussion with SA Water and/or Salisbury Water would be required by developers or landowners to explore the opportunity for recycled water for a future development. If reserves are provided as part of future

development, which include water quality treatment systems such as wetlands, then there may be the opportunity to store water for reuse for irrigation of open space or industry or for Salisbury to incorporate these holding wetlands into the existing Salisbury Water network operations.

The Norther Adelaide Irrigation Scheme (NAIS) network is in proximity and there may be an opportunity to provide recycled water via this network. However, further assessment of this option will need to be undertaken relating to feasibility versus the broader benefit to Salisbury Water of extending their network to service the area with the associated ongoing potential to charge for the supply of recycled water through the Salisbury Water Business Unit.

2.7.4. Groundwater Wells

There are a significant number of ground water wells within the Study Area. Existing ground water wells are managed by the Government of South Australia's Department for Environment and Water. Information on existing bores has been obtained from the WaterConnect, groundwater database, with the bore map locations included within the Greenhill Preliminary Service Infrastructure Report within Appendix 1.

Future development may need to consider removal of existing bores or there may be the potential to retain existing wells if accompanied with a suitable licence for use of the water. Further discussions with the Department for Environment and Water would be required to confirm the potential for use of ground water.

2.7.5. Electrical Supply

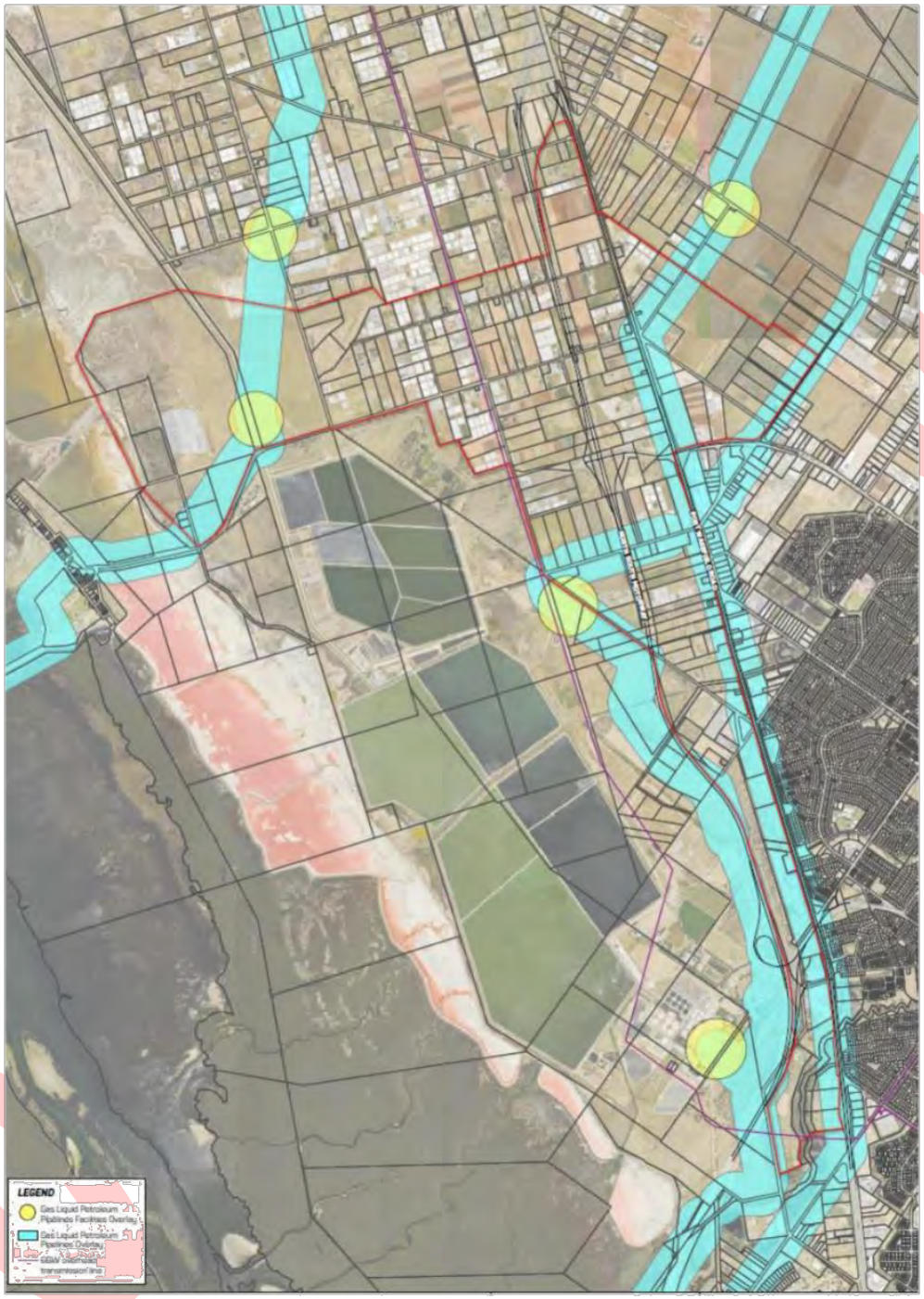
Both SAPN and ElectraNet were contacted, with regards to providing feedback to inform the sequencing of development within the Study Area. At the time of writing, only SAPN had responded, however it is understood that ElectraNet is still progressing a review of its infrastructure that will be provided to the City of Salisbury separately to inform future planning within the study area. A 66KV High Voltage above ground power line dissects part of Planning Area 4 along Supple Road, which would require minimum safety clearances to the nearest conductor at maximum swing of the power lines, typically 5.5 metres to the nearest structure or as required by the Office of the Technical Regulator in the location identified in Figure 10.

SAPN has advised that 'The Waterloo Corner and Bolivar Corridor Growth Area' is supplied by four sub-stations; at Direk, Paralowie, Parafield Gardens and Cavan. The corridor is currently being serviced by an existing 11 kV high voltage network. However, the study area is located at the far extent of the substation areas, which results in network constraints due to end of line voltage drop. The existing feeder network therefore will require extension and 'strengthening' to supply any significant additional load because of the intensification of development or zoning changes for employment lands within the Study Area.

Due to the scale and anticipated timing of development it is anticipated SAPN will address development through individual site investigations as parcels of land within the Strategic Growth Area proceed to development and/or Code Amendment in the immediate short term. Once the outcomes of the above studies are available a more strategic planning approach will be able to be undertaken.

The cost of new electricity infrastructure that is provided by development may be rebated by SAPN if it will benefit other uses, which would be determined at the time of application by SAPN. It should be assumed in any road network planning that any new electrical infrastructure installed within the Study Area would be installed as an underground electrical reticulation and lighting scheme as part of a common services trench along with telecommunications and gas services as required, in line with standard delivery of new infrastructure. Existing above ground infrastructure would not be undergrounded unless funded by the development and/or Council to realise improvements in amenity and/or land development capacity.

Figure 10. Major Gas Pipelines and Electricity Transmission Lines



2.7.6. Gas Supply

The Study Area is traversed by several high pressure liquified gas pipelines including the Port Campbell to Adelaide SEAGas Pipeline and high voltage transmission lines. These facilities are unlikely to impact most commercial and industrial development that may be proposed other than along the direct alignments and easements required to support this infrastructure. The gas pipelines, in particular, give rise to restrictions on activities that deliver high population densities and vulnerable populations (e.g., aged care, childcare, schools etc) in close proximity and will require the preparation of Safety Management Studies to establish appropriate safety requirements. Notification requirements to the licensee are typically required within 560 / 585m of the pipelines which are identified on Figure 10: Major Gas Pipelines and Electricity Transmission Lines.

Consideration of Epic Energy and SEAGAS mains will need to be made when considering the type of development proposed within proximity to distribution mains and the provision of new infrastructure that may cross the existing distribution mains.

It is anticipated that a gas network may be extended to service the Growth Area. Further information is required to be provided by AGN/APA to confirm the requirements for gas networks to service the Growth Area. Due to the scale and anticipated timing of development it is anticipated that AGN / APA will address development through individual site investigation as parcels of land within the Growth Area proceed to development. New gas infrastructure for the growth areas is assumed to be installed as an underground scheme as part of a common services trench along with electrical and telecommunications services as required.

2.7.7. Telecommunication Supply

There is existing Telstra / NBN infrastructure within Port Wakefield, St Kilda and Robinson Roads. Both Telstra and NBN Co, were contacted, with regards to providing feedback to inform the outcomes of this Strategic Growth Framework.

Telstra advised that it was unable to provide further advice and to refer to Telstra Infraco Network Integrity Section for retention, protection or relocation of existing Telstra infrastructure, if required.

NBN Co. has advised that generally it have access to sufficient network duct capacity via the Telstra Network to service any intensification or new development that may be deliver within the Study Area.

Any development that would occur west of Port Wakefield Road would be required to install new NBN pit and pipe infrastructure to connect to the existing network. It is also an expectation of NBN that as part of any new road creation, within the Growth Area, an NBN pit and pipe installation would be incorporated as part of the overall services to ensure continuity of service pathways.

It is anticipated that a telecommunications network may be extended to service the Growth Area. Further information is required to be provided by NBN Co. or other service providers to confirm the requirements for telecommunications networks to service the Growth Area. Due to the scale and anticipated timing of development it is anticipated telecommunication providers will address development through individual site investigation as parcels of land within the Growth Area proceed to development.

New telecommunications infrastructure for the growth areas is assumed to be installed as an underground scheme as part of a common services trench along with electrical and gas services as required.

2.8 Transport Infrastructure

The Study Area is traversed by two major north-south transport routes of strategic importance, these being the North South Motorway which provides continuous expressway conditions from South Road, Thebarton to its connection to Port Wakefield Road and the Sturt Highway via Northern Expressway and Port Wakefield Road which connects with Main North Road at Gepps Cross and to the National Highway One route north of Adelaide. Both roads are very important freight links for existing and future development.

Major east-west connections include Waterloo Corner Road, which connects to Robinson Road and then St Kilda Road to the west and Heaslip Road to the northeast, as well as to Port Wakefield Road and the North South Motorway, and Bolivar Road which also connects to Port Wakefield Road and the North South Motorway. These routes provide important connectivity to both industrial areas (especially Edinburgh) and to the large residential population to the east. Figure 11: identifies the major road networks, pedestrian / cycle routes and existing public transport routes within and adjacent to the study area.

While the North South Motorway provides for the movement of large volumes of traffic, it has effectively dissected the Study Area and only provides for connectivity to the west via Waterloo Corner Road. All other east west roads have been truncated. Therefore, while the Study Area provides employment land that is positioned to capitalise on access to these key transport linkages to Port Adelaide, Edinburgh Airbase, the Intermodals at Dry Creek and Penfield and to intrastate and interstate markets, it is nevertheless constrained in terms of local access to individual sites and will require a new internal connecting road network and new access options to Port Wakefield Road, in terms of signalised right hand turns and / or U-Turn opportunities to access south towards the Adelaide CBD.

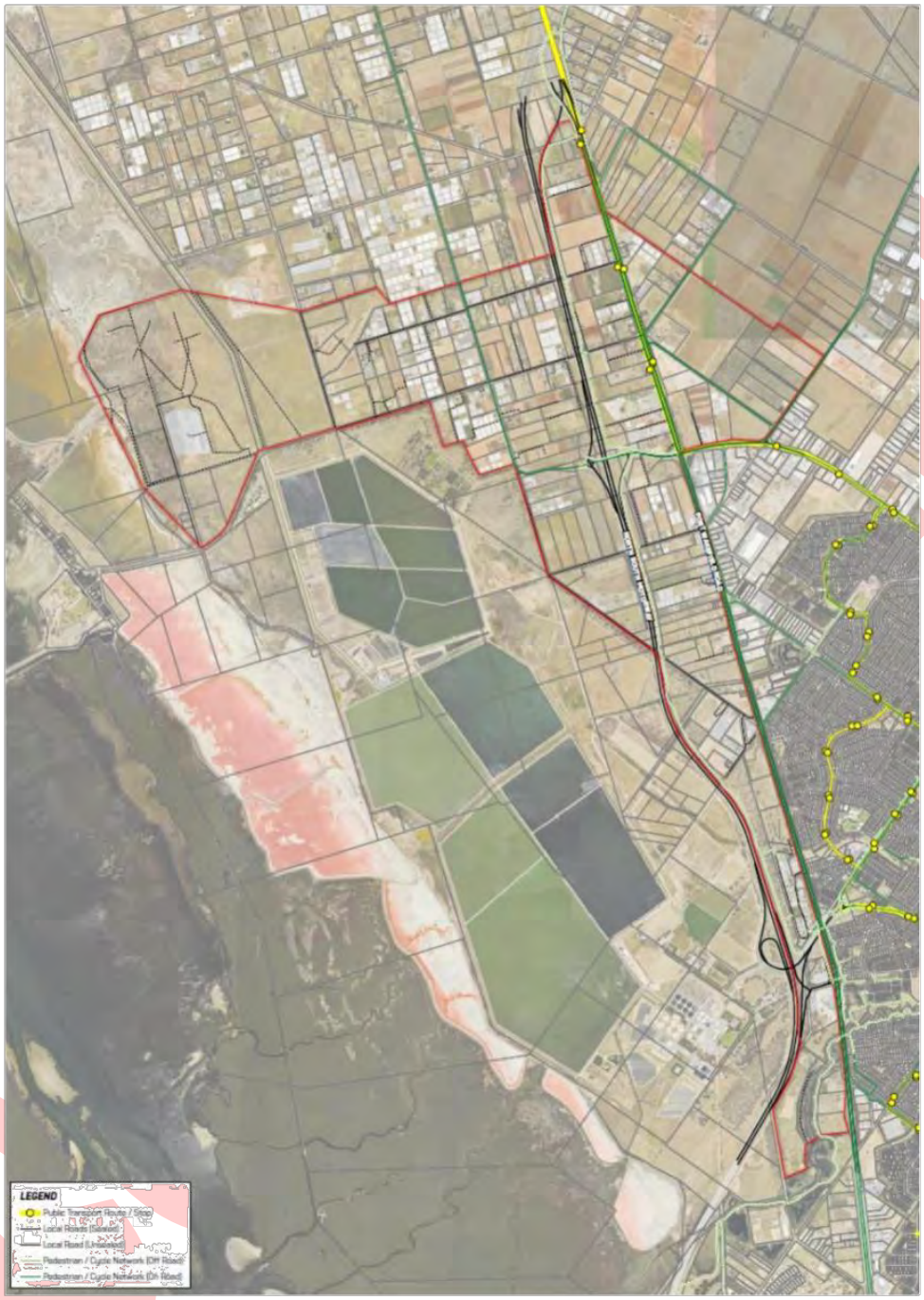
The existing local and collector roads have been delivered to service a low intensity rural horticultural land use, which typically provides a road corridor without kerb and gutter, footpaths, streetlights and other street infrastructure and verges that are more typical within more intensely developed neighbourhoods. The changes to the local collector road to St Kilda because of the truncations from the North South Motorway has changed traffic patterns and introduced corner intersections that are not lit. Further the collector road network required to support the Strategic Growth Framework needs to be agreed, and the necessary road widening to deliver the full infrastructure road corridor preserved, either through land acquisition or at a minimum requiring a building setback that preserves this potential into the future for early site delivery. This requirement will need to be considered as part of any future Code Amendment and an appropriate policy position adopted to ensure the required road corridors are created.

The Study Area is not directly serviced by rail, albeit connectivity to intermodal freight services is good. The Study Area, as well as future residential areas to the south (the Salt Pans) and to the north (Riverlea) could be connected to the suburban rail network via a new alignment off the main Gawler Line at Dry Creek. While this may be highly problematic, the time to preserve a long-term future rail corridor is at the strategic planning stage, which is occurring now, and Council should advocate to State Government for this forward planning as part of the North South Motorway land holdings to preserve this long-term corridor.

Public transport options in the Study Area are limited and future demand for public transport to service workers within industrial and commercial development is only likely to be modest. However, should higher intensity activities emerge, then a review of public transport services may be warranted and / or consideration of additional public transport corridors connecting east/west specifically in the northern section of the Study Area, that could include reservation of an east/west future transport corridor connecting Salisbury City Centre via Waterloo Corner Road through to St Kilda.

Several walking / cycling connections exist within the Study Area, notably along the North South Motorway corridor and a major east-west connection to St Kilda which should be strengthened as part of this strategic planning exercise.

Figure 11. Transport (Vehicle, Bus Route and Cycling Networks)



2.9. Existing Zoning

Under the Planning & Design Code, the Study Area currently contains the following zones as identified on Figure 12:

- Rural Zone
- Rural Horticulture Zone
- Open Space Zone
- Deferred Urban Zone
- Infrastructure Zone
- Caravan and Tourist Park Zone

Two of the existing zones are appropriate for the long term intended use, notably the Infrastructure Zone which is applied to the SA Water Wastewater Treatment Plant and parts of the North South Motorway and the Caravan and Tourist Park Zone which applies to the existing Highway One Caravan and Tourist Park.

The findings of this Strategic Growth Framework indicate that much of the balance of existing zones within the Study Area will not be appropriate for a future intensification of land-uses and will require comprehensive rezoning at some point in the future.

The Rural and Rural Horticulture Zones are intended for primary production. This zone is not intended to support any form of industrial and commercial development or other forms of urban development, except where the development is ancillary or in direct support of the predominant horticultural activities. There has been increasing demand and enquiries for employment land and examples of unapproved industrial and warehousing activities occurring within the horticultural zone.

The Open Space Zone is intended for passive recreation, open space use and protection of important biodiversity corridors. This zone while appropriate for the biodiversity and open space corridors likely to be required through the Study Area, is not considered to be suitable for the ongoing support and expansion of the 'noisy recreation' activities that are occurring on Driver Road, and a Recreation Zone, with the opportunity for increased commercial activities in conjunction with Recreation Use may be better suited to capture the locational opportunities of this recreation site and current operation by the Southern Go Kart Club and Gun Club.

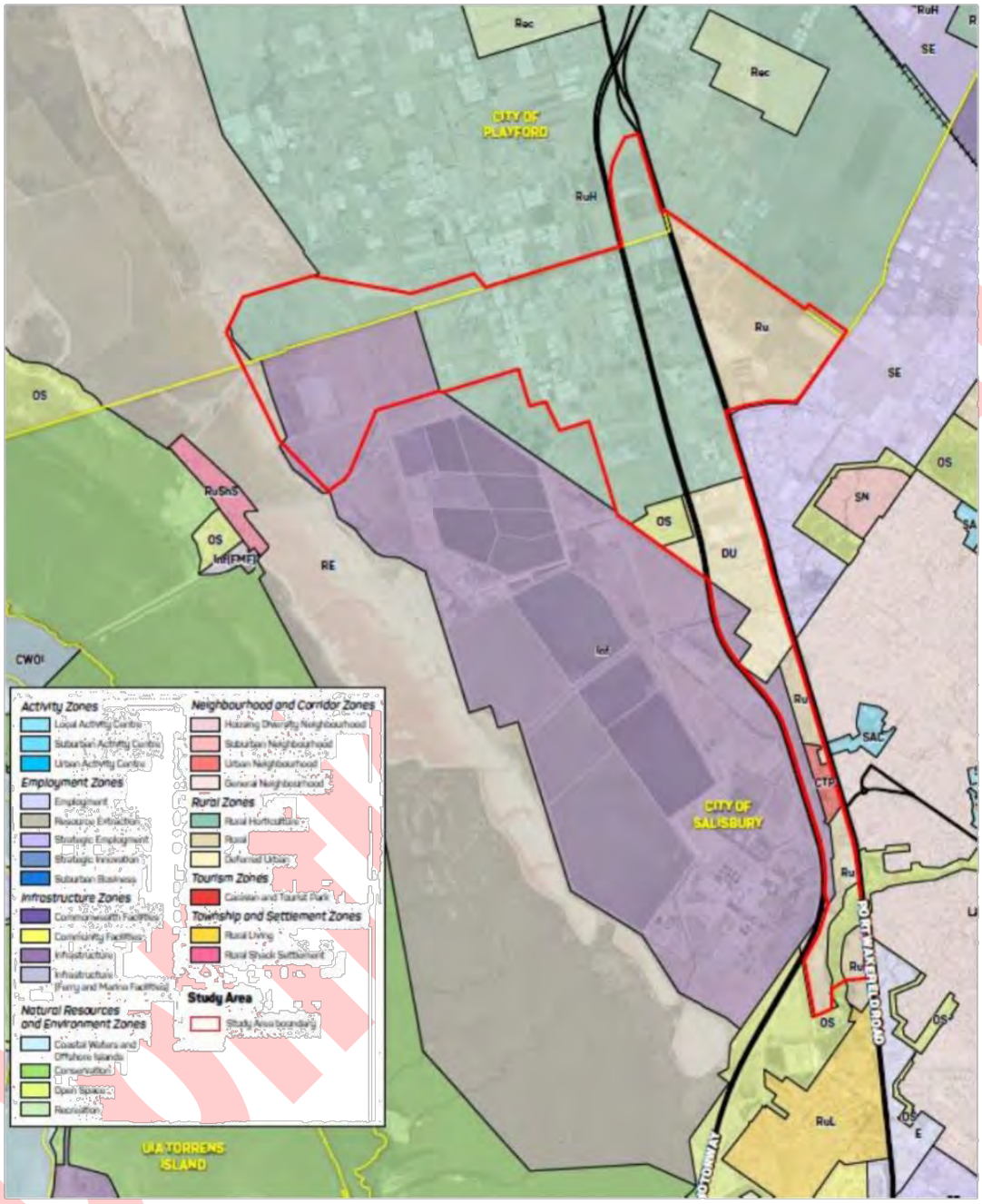
The Deferred Urban Zone is a holding zone, pending determination of a suitable land use outcome and release timing. This Strategic Growth Framework has identified that this land is ideally positioned and service for use for a range of employment lands into the future. Substantial development pressure in the form of applications and Code Amendment requests has already occurred within the Deferred Urban Zone, demonstrating that the market is seeking direction of the future zoning for this land to secure investment.

The analysis undertaken as part of the development of this Strategic Growth Framework has clearly demonstrated that the market considers that parts of the land within the Study Area should support a more intense or varied form of development to capture the locational advantages for employment and commercial land within proximity

of the Adelaide CBD and inner Northern Suburbs. Demonstrating this current market demand, is the number of Proponent-led Code Amendment proposals in the system or being formulated at the present time that have been identified through the engagement and investigations undertaken by the City of Salisbury prior to and as part of the development of this Strategic Growth Framework.

Consequently, this Strategic Growth Framework will provide Council with the necessary strategic background to provide clear direction to the State Government and the private sector regarding its intentions relating to development type within the Study Area in the short, medium and long term and thus provide a framework to influence and/or direct these rezoning initiatives to provide a coordinated and staged approach where the necessary infrastructure can be delivered to support the growth in a planned manner.

Figure 12. Zoning



2.10. Land Use

In general alignment with the current zoning, described in Section 2.9, the existing land uses within the Study Area are mapped in Figure 13 and involve:

- A combination of agricultural and horticultural activities in the north and west, including extensive glasshouse construction,
- Open space associated with the Little Para River and the stormwater drains and the buffers to the North South Motorway,
- Recreational activities, notably shooting and go-karting west of the North South Motorway,
- Defence facilities off St Kilda Road / Coleman Road to the west,
- A range of commercial and industrial activities, interspersed with vacant and agricultural land along Port Wakefield Road, including petrol filling stations, motels, retailing, storage, transport depots and small scaled service and manufacturing,
- A small number of dwellings, typically associated with the agricultural land, or on larger rural residential allotments.

Notable land uses outside the Study Area, but potentially influencing activities within the area, include the buffer to the SA Water Treatment Plan (and the plant itself) and extensive industry east of Port Wakefield Road and along Waterloo Corner Road, many of which include noise generating activities such as Concrete Batching and Wrecking Yards, that would likely impact on the form of land use and level of sensitivity proposed for the northeast section of Planning Area 4.

Port Wakefield Road and the North South Motorway generate considerable noise and odours and have consequences for the need to avoid sensitive future land uses near those roads as part of future strategic planning.

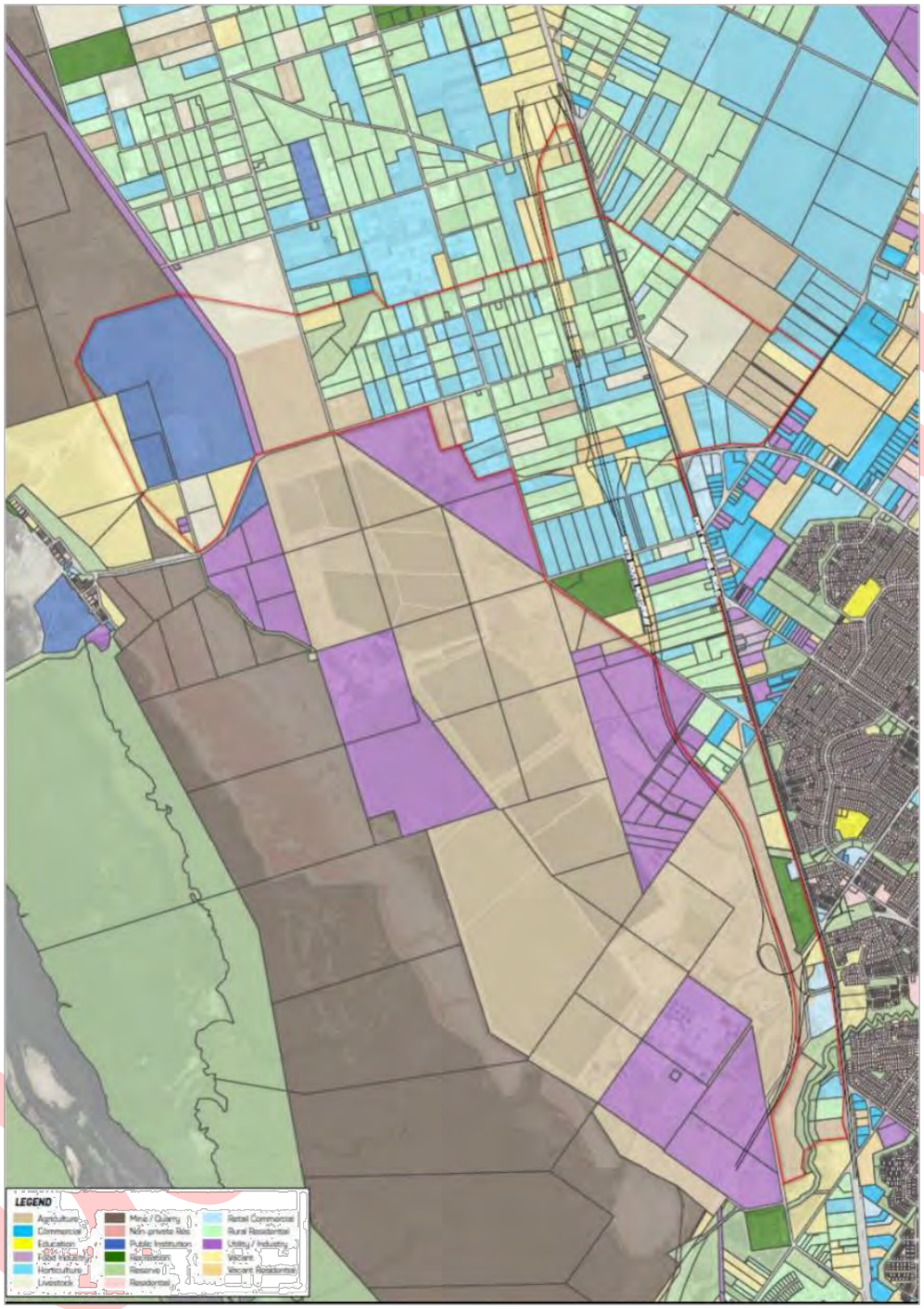
The buffers to the SA Water Treatment Plant provide opportunities for landscaping, vegetation, stormwater detention and channels and pedestrian / cycle corridors, all subject to SA Water agreement to the positioning of those facilities on their land and require early consultation with SA Water to inform the final alignment of these critical corridors as part of the adopted Strategic Growth Framework.

The existing shooting club and go-karts are also major noise producers that require separation from sensitive receivers and could provide opportunities for a further intensification of this form of recreational activity that can be difficult to locate within proximity of urban areas.

Having regard to the foregoing, most of the Study Area is suitable for industrial, commercial and other non-sensitive employment land uses. The only area of the Study Area that may be suitable for more sensitive land uses, would be the area north of Waterloo Corner and west of the North South Motorway, which is characterised by horticultural uses, that have not been diluted by employment activities and the configuration could support reasonable separation for any possible future sensitive land uses. A staged approach to rezoning of this Study

Area could propose to protect this area from any creep from employment activities, such as to protect a future decision in the medium to long term for the highest and best use of this land, either for further employment land or for a more sensitive land use such as residential. This decision does not need to be made in the short term if the existing land use is reinforced and protected.

Figure 13. Land Use



2.11. Capital Value to Site Value Ratio

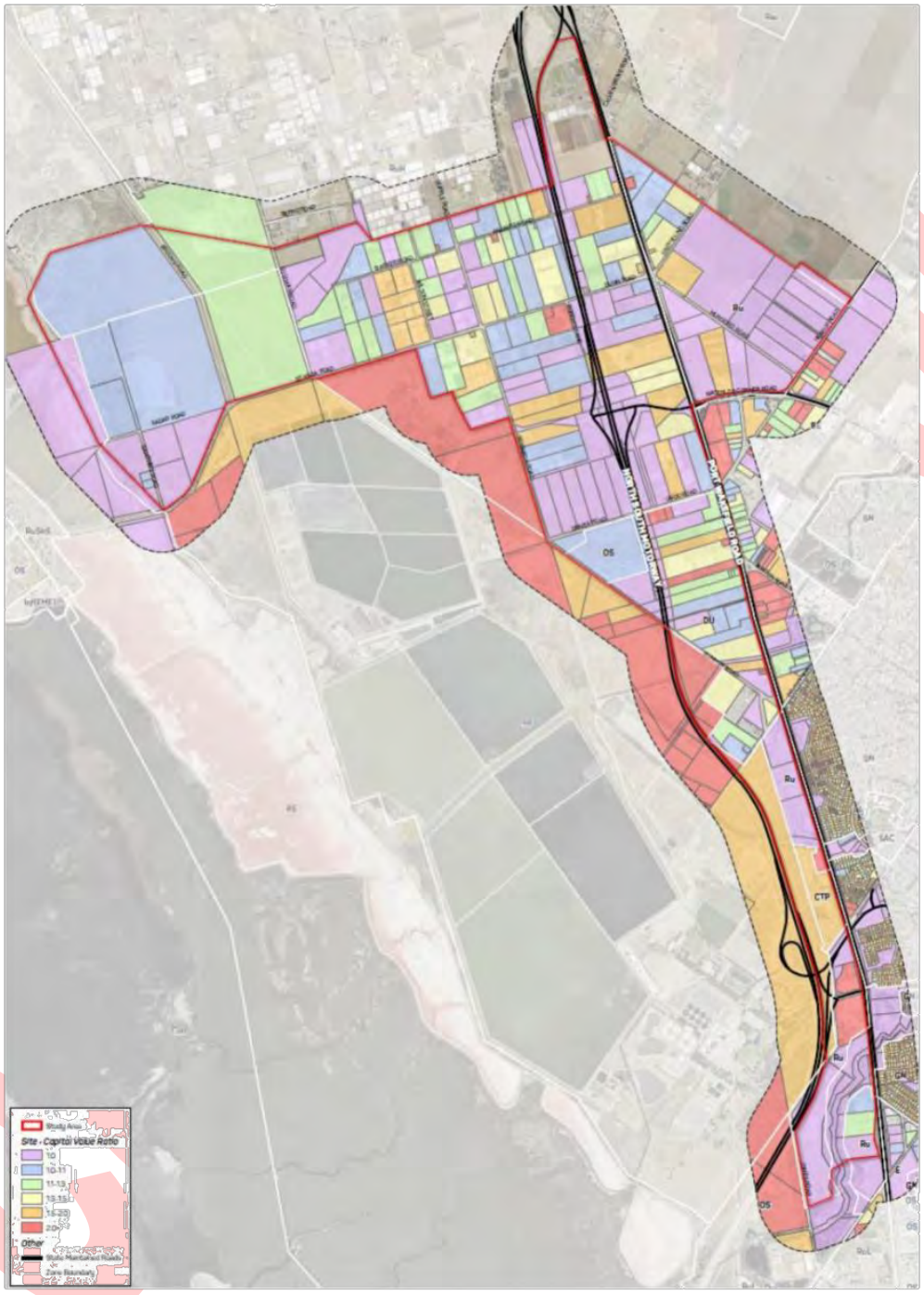
The capital value to site value ratio identifies the value of improvements on individual land parcels relative to the unimproved value of the site. Where the value is low (approaching 1.0), there are no (or little) improvements of value on the site and therefore are, at least theoretically, a greater likelihood of being redeveloped.

The following plan presented in Figure 14 identifies large areas of unimproved land in the following locations:

- Vacant land west of the Little Para River;
- Vacant land south of Jobson Road, along Port Wakefield Road;
- The area between Port Wakefield Road, Heaslip Road, the Council boundary and Greyhound Road; and
- A scattering of properties east and west of the North South Motorway.

The highest Capital Value to Site Value Ratios are typically, though not exclusively, associated with the improved land parcels near Port Wakefield Road, small residential properties, the Caravan Park and a selection of agricultural / horticultural properties with extensive glasshouses where the landowner's investment in their land may identify that further redevelopment in the short term may be unlikely.

Figure 14. Capital Site Value Ratios

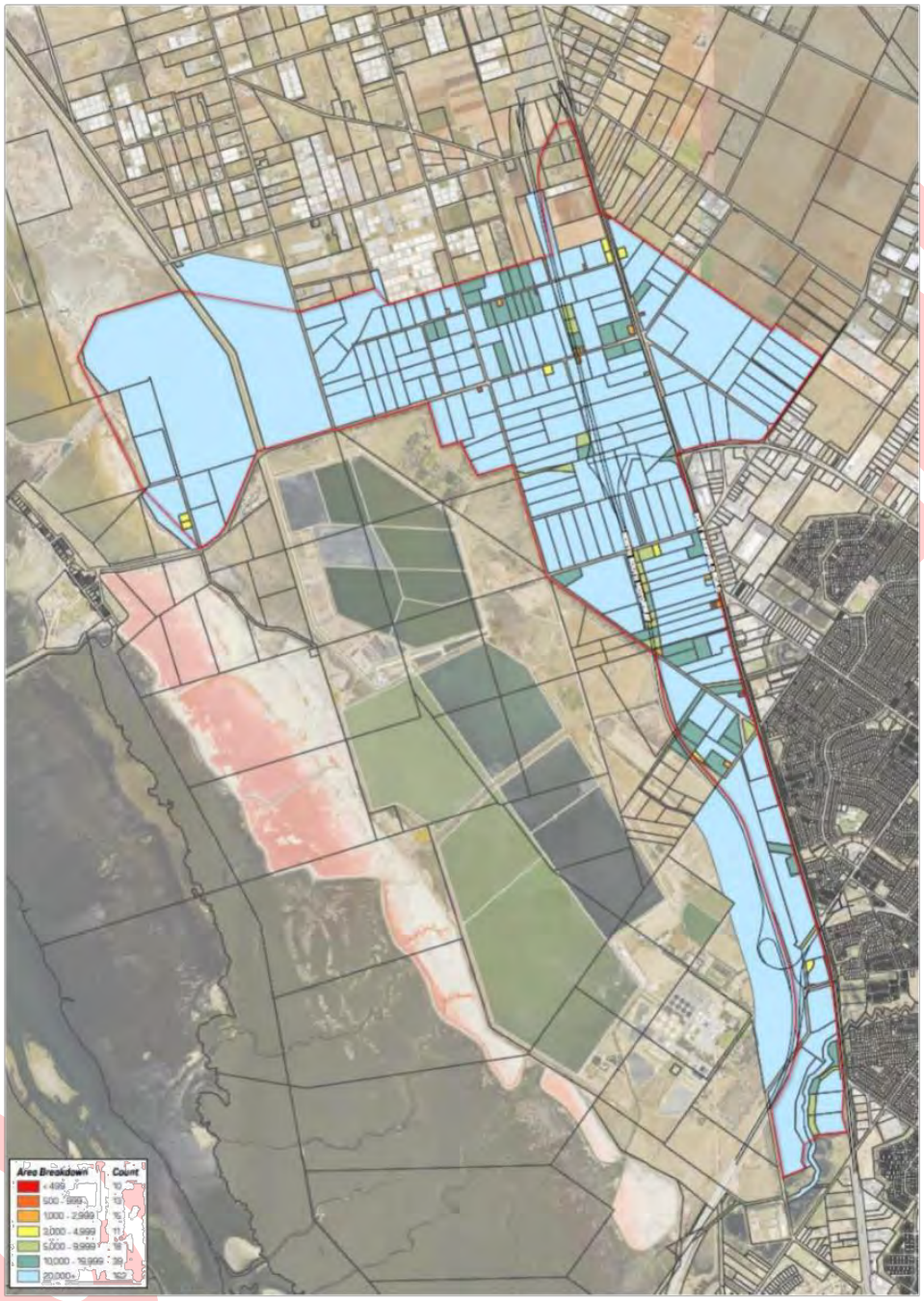


2.12. Property Size

The vast majority of the Study Area comprises lots greater than 2 hectares in area, with many approaching 4 hectares. This existing property size provides sites suitable for large scale commercial or industrial development or the propensity for subdivision into smaller parcels as part of a comprehensive redevelopment, to support a transition to a more intense employment land use.

The long narrow nature of many allotments and the undesirability of creating a series of narrow cul-de-sac to serve these properties lends strong weight to the need for comprehensive planning of a new public road network that facilitates consolidated access to existing roads rather than individual road access to every allotment, which is a key consideration of the recommendations section of this Strategic Growth Framework

Figure 15. Property Size



2.13. Commercial Exposure

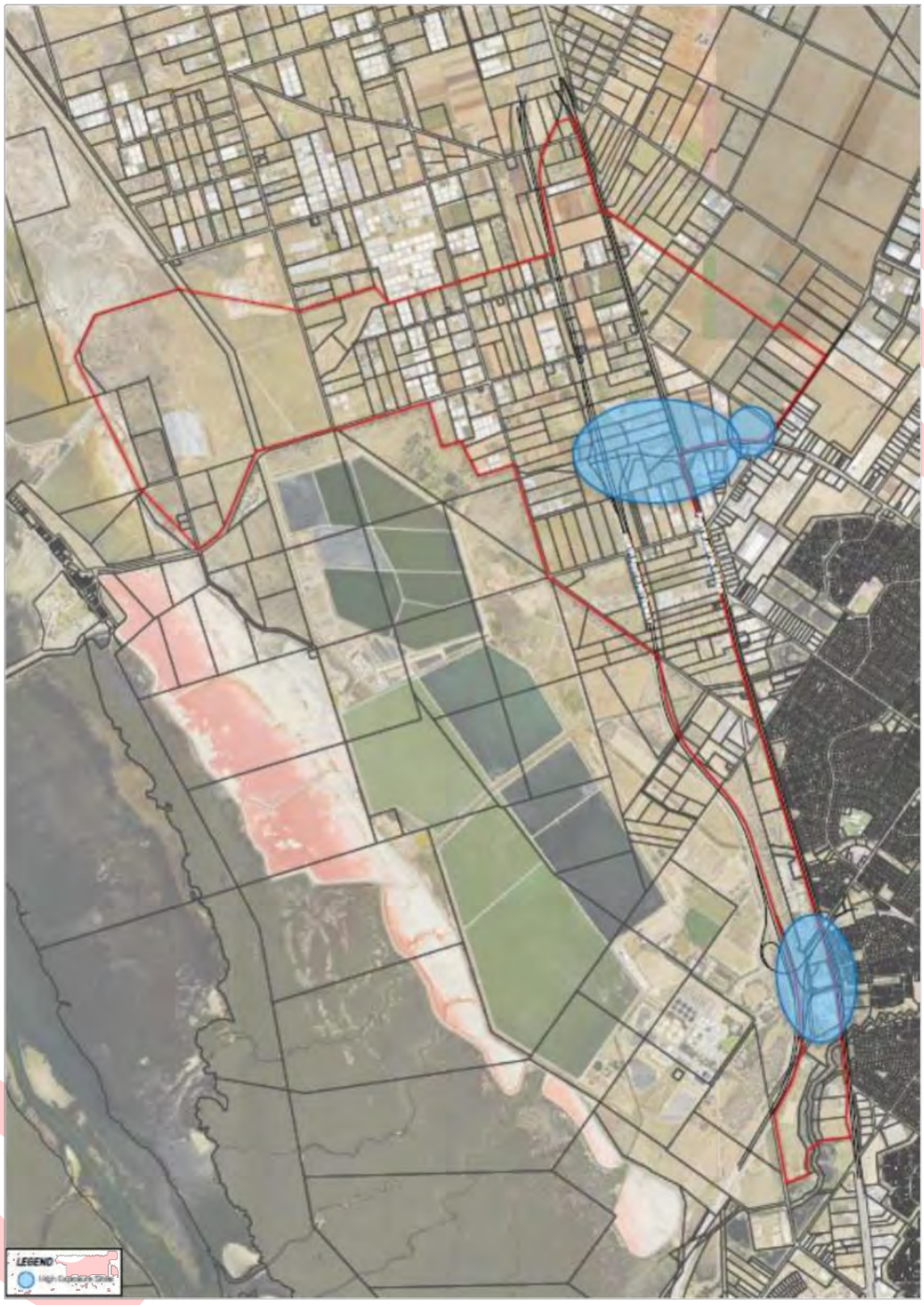
Many properties within the Study Area have strong visual exposure to the high traffic volumes along the North South Motorway and Port Wakefield Road. Heaslip Road, Waterloo Corner Road and Bolivar Road also provide good exposure but to lower volumes of traffic.

High visual exposures, combined with high accessibility to the major network occur at the following intersections:

- North South Motorway – Waterloo Corner Road
- North South Motorway – Bolivar Road – Hodgson Road – Port Wakefield Road; and
- Waterloo Corner Road – Heaslip Road.

These locations provide increased potential for higher intensity commercial development reliant upon good exposure and accessibility, identified in the following figure.

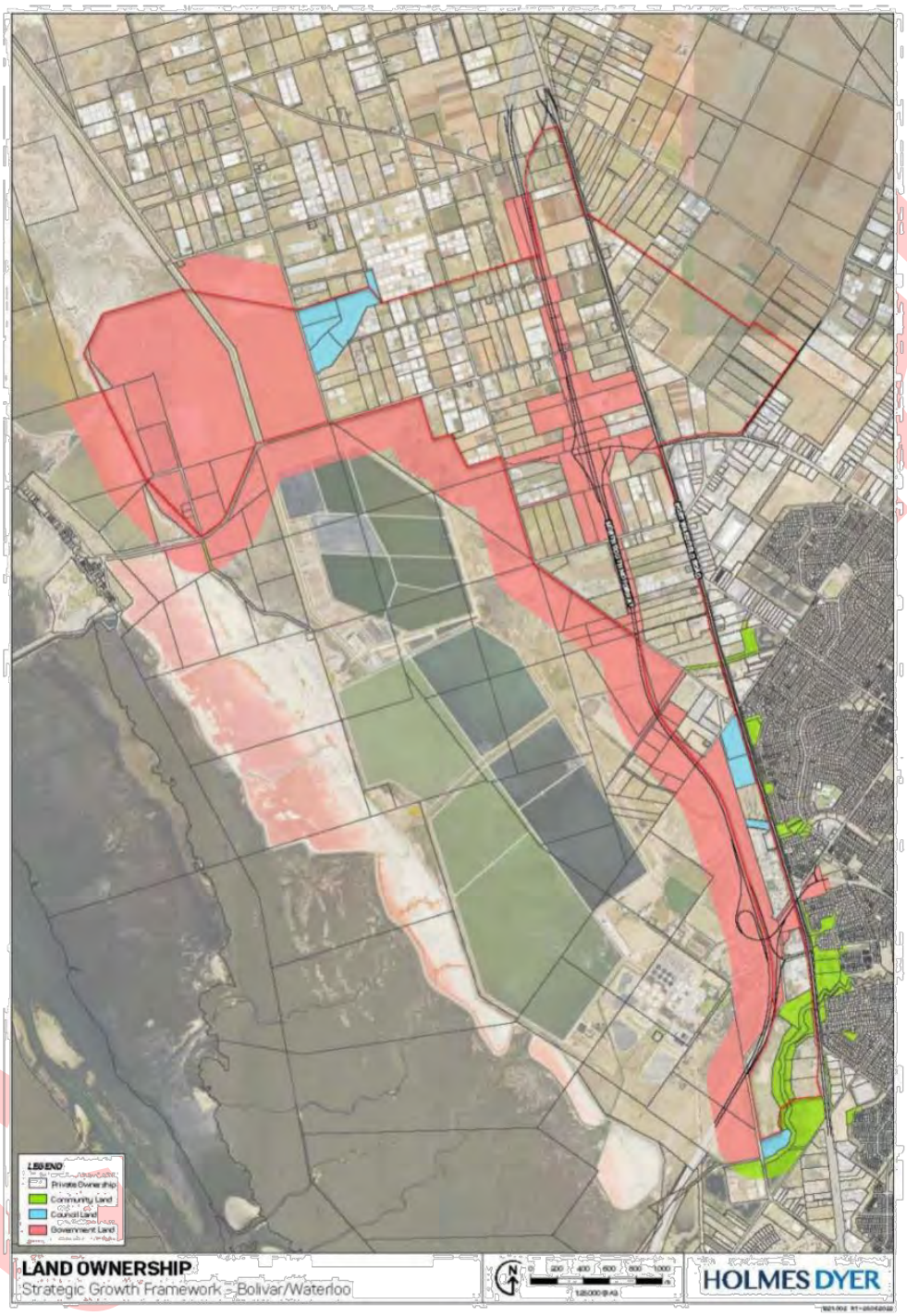
Figure 16. Commercial Exposure



2.14. Land Ownership

An analysis of land ownership at a high level has been undertaken over the Study Area. As a result of the recent construction of the North South Motorway that effectively dissected a number land parcels and road corridors along the length of the study area which with the compulsory acquisition process that has been undertaken by the Department of Transport there are a significant number of part parcels within Government Ownership. The land ownership mapping has also identified Council owned land, including any Council land that has a community land classification which places some limitations on development.

Figure 17. Land Ownership Plan



3. Metropolitan Adelaide Employment Land Market

To inform the highest and best use of land, timing and staging of land use proposed within the Strategic Growth Framework, Holmes Dyer has undertaken a comprehensive review of the employment land market, at a regional level, with key findings as they relate to the recommendations within the Strategic Growth Framework set out in the following section.

3.1. Economic and Market Overview

Adelaide and South Australian markets in all property sectors have traditionally operated on a low growth but low volatility basis, providing for predictability in investment activities. Growth levels have been impeded by relatively low population growth rates and, particularly the net out migration of young professional workers to the Eastern States (albeit, that population has continued to grow and has accelerated in recent years). Higher yields have tended to offset the lower capital growth rates.

Emerging from a period of uncertainty because of the COVID19 pandemic, many sectors have undergone a rapid shift in business activity due in part to rising costs and changes to consumer behaviour. Retail most notably experienced a sharp move away from bricks and mortar at the beginning of 2020, as purchasing trends increasingly shifted online. In an industrial context traditional manufacturing sectors in Adelaide have shrunk over the last few years, however a surge in logistics, technology and value add based industries for local manufacture has seen a peak in industrial land sales and leasing rates, following a nationwide trend. The *Colliers 2022 Industrial Investment Review* shows a re-weighting of capital towards the industrial and logistics industry with groups looking to capitalise on geographically constrained markets near densely populated areas. This is a locational advantage characteristic that the land west of Port Wakefield Road is closely aligned with.

There are several Federal or State Government initiatives expected to stimulate economic activity in Adelaide, within the industrial sector, these include:

- The submarine and ship building programs, creating opportunities for professional services, construction, precision manufacturing and supply chain support activities,
- The establishment of the Australian Space Agency with potential for professional, research and technology services,
- the Adelaide City Deal, with a review of the implementation plan due in 2022 which is intended to grow Adelaide's innovation economy and promote population growth,
- The medical sector and the renewable energy sector represent further growth opportunities.

3.2. Industrial and Economic Trends

For several years there has been a clear shift occurring away from Australia's traditional forms of industrial industries including manufacturing and low-productivity primary activities towards advanced manufacturing and knowledge intensive activities which have contributed to the sustained productivity gains that characterise

Adelaide's economic development over the last decade. Rapid growth in technology and e-commerce has reshaped the demand for industrial real estate in Adelaide. The South Australia Land Supply Report, 2021 is the most current data available that forecasts the likely trend in employment by industry out to 2030, by Australian New Zealand Standard Industrial Classification (ANZSIC). The key forecast tables have been reproduced below, that demonstrates the forecast increase in manufacturing, construction, retail trade, transport and warehousing activities.

Figure 18. Employment by Industry 2020 – 2030

Source: South Australia Land Supply Report, 2021

Logistics, transportation, and warehousing require large storage locations to hold, process and distribute greater quantities of products. Smaller allotment sizes provide co-location opportunities for supporting operators that realise benefit from shared infrastructure. Salisbury has a significant supply of well-located future employment land, much of which is contained within Bolivar and Waterloo Corridor the subject of this Strategic Growth Framework that could provide traditional warehousing, last mile hub, retail processing and storage locations capitalising on Salisbury's locational advantage with access to major transport infrastructure.

The widespread scarcity of well serviced and well located commercial and industrial real estate paired with tight vacancy rates has driven up land values and rental rates in Adelaide, with nationwide industrial rental values at their highest rate in 25 years, according to reports by JLL (Industrial Market Overview, 2022).

The evolution of traditional manufacturing estates is the development of eco industrial parks. In Australia cluster based eco industrial parks are being considered by government bodies as tools to achieving competitive and

sustainable economic development. Industrial parks simultaneously support various industrial and commercial activities by providing centralised infrastructure, capitalising on the co-location of businesses and operations. Industrial parks are often blends of various typologies such as technology, innovation, research, higher education, manufacturing, transport and industrial processes. The potential for creation of an eco-industrial park, was identified by the City of Salisbury as a specific area of interest within the study area. As a result, a specific chapter on this opportunity is included within this framework, within the following Section 4 - Eco-Industrial Park (EIP).

Industrial demand in Metropolitan Adelaide is strongly influenced by locational and site characteristics, namely:

- Access to superior transport connectivity, particularly road transport
- Large site availability and economies of scale
- Vacant land that can support development of new, custom premises providing operational optimisation
- Flat land
- Land affordability
- Service infrastructure capacities and cost-effective augmentation charges
- 24/7 operation capability
- Agglomeration of vertically linked industries and 'like' industries
- Avoidance of conflict with non-industrial activities that may impact on operational efficiency.

3.3. Adelaide Industrial Property Market

The Strategic Growth Framework Bolivar and Waterloo Corner Study Area is located primarily within the Inner North Market *(City of Port Adelaide (part), City of Salisbury, City of Tea Tree Gully)* with the part of the Study Area land falling within the City of Playford considered part of the Outer North Market *(City of Playford (part), Town of Gawler, Barossa Council (part) and Adelaide Plains (part).*

The Inner North Market and Adelaide West Market *(City of Charles Sturt, City of Port Adelaide Enfield (part) and City of West Torrens)* are widely recognised as the primary industrial markets of metropolitan Adelaide. The following table summarises average land costs, rents and yields for each of the major industrial markets in metropolitan Adelaide, as of March 2020. This is the most current report available at the time of writing. While sales values and rentals may have increased since then, the percentage difference between different market locations would be expected to be maintained.

Table 6. Land Costs, Rents and Yields for Major Industrial Markets

	Locations					
Metric	Adelaide West	Inner North	Outer North	LeFevre Peninsula	Inner South	Outer South
			Land			
Avg <5,000 sqm	$433/m2	$233/m2	$81/m2	$110/m2	$383/m2	$98/m2
Avg 1-5 ha	$270/m2	$145/m2	$61/m2	$83/m2	$253/m2	$60/m2
			Rents			
Avg Prime	$122/m2	$97/m2	$71/m2	$100/m2	$115/m2	$75/m2
Avg Secondary	$77/m2	$70/m2	$48/m2	$70/m2	$75/m2	$50/m2
			Yields			
Avg Prime	6.50% - 7.25%	6.50% - 7.25%	7.50% – 8.25%	7.00% - 8.00%	6.75% - 7.50%	7.75% - 8.75%
Avg Secondary	8.00% – 8.50%	7.75% - 8.75%	8.75% - 9.75%	8.75% - 9.75%	8.00% - 9.00%	9.00% - 10.00%

Source: Knight Frank, Adelaide Industrial Market Report, 2020

The Outer North market delivers the greatest potential for future floorspace growth, due to the significant volume of greenfield industrial land and deferred industrial land that could be bought to market through rezoning across Greater Edinburgh Parks. This Outer Northern land would be especially suited for large scale logistics facilities, with direct Expressway access to the Port and to the railway freight yards (at Dry Creek) and the intermodal at Penfield.

The land within the Strategic Growth Framework represents a significant opportunity to bring new employment land supply to market within the Inner North. However, given the extent of employment land within the Outer North, there is an opportunity for the City of Salisbury to consider the 'highest and best use' of land within the study area that could, if interfaces can be appropriately managed, include consideration of alternate land uses.

3.4. Industrial Land Demand and Supply

In terms of the overall theoretical supply of employment land identified within the Land Supply Report, there is ample land for anticipated demands and growth of Metropolitan Adelaide over the next twenty years. However, as one introduces the potential constraints on that land including, but not limited to:

- Land ownership pattern that is not always conducive to optimising development yields,
- The withholding of land parcels from the market by individuals who have alternative land use intentions,
- The domino effect that may have on constraining access to adjacent land parcels, the lack of availability of key trunk infrastructure, notably stormwater and road access,
- The need to reserve space for future infrastructure
- The need for buffers to be created to more sensitive land uses or activities that may interface,

These factors result in this theoretical land supply being reduced to a smaller practical land supply. It is a widely held industry view that around twice the area required for a particular land use should be zoned for that purpose to make suitable allowance for all the constraints acting upon the release and development of that land.

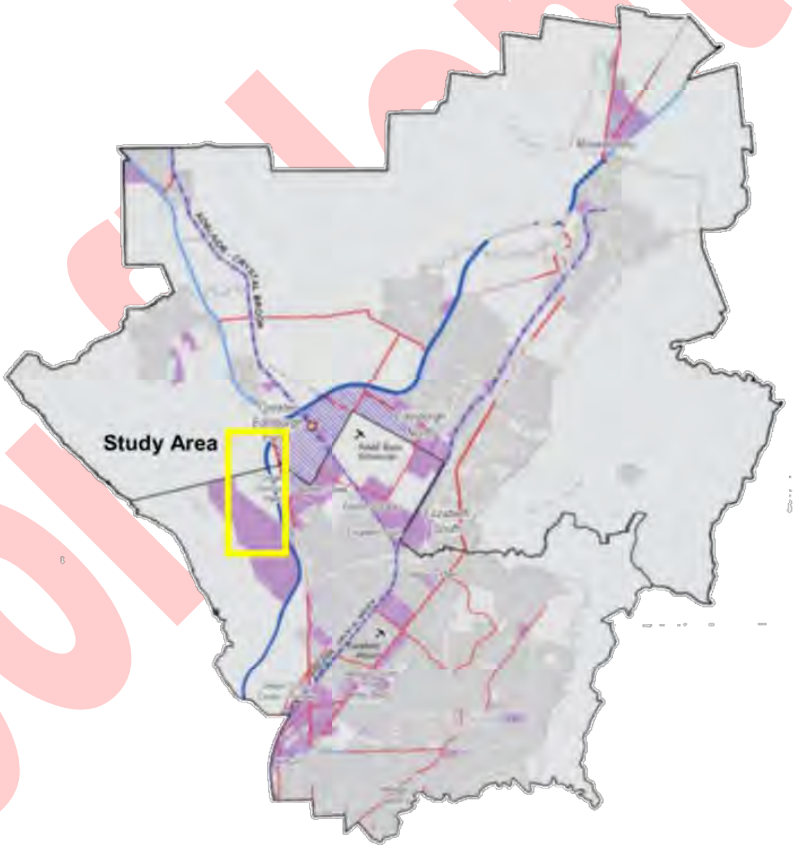
The need for additional land is exacerbated by any imposition imposed by either the developer or because of the adopted zoning, that may constrain development of this land for a specific market segment purpose. For example, Technology Park at Mawson Lakes being delivered by Renewal SA has a strict employment land target market limited to innovative, high technology organisations. Within the Adelaide market, there are only limited companies that meet these criteria and as such the timeframes for delivery of this land to market typically extend out from more open employment land areas without these constraints. In the case of the Strategic Growth Framework Bolivar Waterloo Corner, there is a potential for Council to consider the business case to specifically differentiate and limit sites for a specific type of use, timing for rezoning as part of considering the highest and best use of the land to return job growth and economic benefit to the Salisbury Community across the next 10-20 years. Some market segments that Council could consider may include:

- Defence related industry focus

- Noise generating and risk-taking recreation activities, building on established recreation activities within the Open Space Zone that could expand to attract complementary commercial components
- An Eco-industry Park
- Further, the zoning and precinct planning that is adopted as part of the Strategic Growth Framework could support the attraction of employment clustering of activities, such as:
    - Offices, knowledge workers, high commercial content activities and support services
    - Transport, warehousing, distribution, logistics
    - Service trade premises, petrol filling stations
    - Showrooms, quasi-retail activities, bulky goods
    - Open yards, storage areas

Similarly, land supply should be monitored to ensure that demand is being met and that prices are not rising because of a scarcity factor and that blockages in the supply chain are being identified and rectified expeditiously.

Figure 19. Outer and Inner Northern Employment Lands Supply from Land Supply Report 2020



On evaluation of the State Government Land Supply Reports, there is currently an assumption in employment land modelling that large sections of the study area would remain in their current land use, with only the Deferred Urban sections assumed to be part of the future employment land supply. The Strategic Growth Framework Bolivar Waterloo Corner has identified a significant additional area of potential future land supply, that may be able to be bought online to meet future demand needs for the Adelaide Metropolitan Area, however the realisation of this opportunity would likely require State Government, Authorities, Council and Private Landowner investment to deliver the necessary infrastructure upgrades to support this development intensification. Once endorsed at a strategic level the Strategic Growth Framework Bolivar Waterloo Corner will inform the next iteration of the State Government Regional Planning and subsequent land supply report modelling. This opportunity has the potential to provide Salisbury with a mix of new land supply to meet the needs of their community and drive economic growth over 35 years.

There are many factors impacting upon that demand prediction and, accordingly, the monitoring of demand levels should be undertaken by Council regularly as a means of informing the decision-making processes that will deliver the supply of land to the market, and flexibility should be built into the Strategic Growth Framework, to enable the City of Salisbury to pivot and respond to any new market demand or opportunities that may arise, with decisions on any individual site or development proposal able to be informed by the overall structure presented in this Strategic Growth Framework.

3.5. Analysis of Trends and Prediction of Demand

To predict the demand for employment land and as a result the staging, timing and total years of supply for the land identified within the Strategic Growth Framework, Holmes Dyer has analysed the commercial and business property sale data and vacant land sale data dating back to 2008 up until January 2022 for the turnover and value of property in the Inner and Outer Northern Markets of Adelaide. The Outer Northern Market has been included in this analysis as it is considered to form the available land supply market, noting that the locational advantages of Salisbury with its proximity to the Adelaide CBD and Port Adelaide, major workforce markets and transport infrastructure would likely make this land more attractive and as such be consumed at a faster rate, subject to land pricing, land sizing, development cost and configuration. However, this investment decision would be ultimately informed by the individual business needs and timing for rezonings of employment land in the outer north.

The combined inner and outer northern markets have seen a total of 1,297 properties sold within the last 15-year period with generally an even turnover of commercial and business properties compared to vacant land. The following tables summaries sales activity over the period 2008-2022 (January) for the following sectors, separated by year of sale and size of land parcel:

- Improved land sales (commercial and business sales)
- Activity within Edinburgh Parks, Vicinity and Greater Edinburgh Parks
- Significant individual site sales

Data includes commercial, industry and business sales across both vacant and improved between the years 2008 to January 2022. For this analysis, commercial activity that includes retail trade, sales within residential zoned locations or retail shopping locations have been removed. Holmes Dyer has excluded sales that do not appear to have occurred through standard commercial negotiation, for example non-monetary transactions or sales with a value of less than $10,000 and therefore would not be market representative of real land value however, there remain disparities in the values of some land and improved land property transactions.

Table 7. Salisbury and Playford Commercial and Industrial Sales by Year 2008 – 2022

Commercial and Industrial Sales in Salisbury and Playford 2008 - 2022 (Jan) by Year			
Year	Count	Median Land Size (m²)	Median Sale Price
2008	46	2,131	$594,644
2009	46	2,866	$437,000
2010	52	1,758	$657,250
2011	62	1,821	$403,750
2012	52	1,598	$605,000
2013	73	2,887	$632,500
2014	73	2,503	$621,500
2015	94	2,010	$592,000
2016	109	2,143	$623,333
2017	102	2,126	$591,750
2018	115	2,665	$660,000
2019	133	2,655	$660,000
2020	133	3,673	$570,000
2021	197	2,941	$730,000
2022 (Jan)	9	2,000	$1,050,000
Total	1297	2,330	$623,333

Source: CoreLogic, 2022

The above analysis has confirmed that the commercial and industrial sales have been relatively consistent in median land size and sale price; however, the total number of sales has increased over the last 5 years.

To better understand if this sales growth trends has occurred equally across the Inner and Outer North or can be identified to a specific Local Government Area, the data has been split in the following tables to break out the commercial and industrial sales in the City of Salisbury and then the City of Playford.

Table 8. Commercial and Industrial Sales in Salisbury 2008 – 2022 (Jan) by Year

Commercial and Industrial Sales in Salisbury 2008 - 2022 (Jan) by Year			
Year	Count	Median Land Size (m^2)	Median Sale Price
2008	34	2,186	$665,000
2009	38	3,383	$467,500
2010	40	1,803	$676,000
2011	47	2,002	$505,000
2012	35	2,999	$600,000
2013	47	2,424	$648,000
2014	51	2,628	$825,000
2015	67	2,518	$750,000
2016	78	2,271	$800,000
2017	71	2,350	$715,000
2018	87	2,717	$675,000
2019	103	2,717	$675,000
2020	104	4,440	$629,750
2021	148	2,985	$880,000
2022 (Jan)	6	1,822	$1,295,344
Total	957	2,503	$700,000

Source: CoreLogic, 2022

Table 9. Commercial and Industrial Sales in Playford 2008 – 2022 (Jan) by Year

Commercial and Industrial Sales in Playford 2008 - 2022 (Jan) by Year			
Year	Count	Median Land Size (m²)	Median Sale Price
2008	12	2,041	$366,000
2009	8	1,923	$252,500
2010	12	1,621	$241,227
2011	15	1,700	$253,275
2012	17	300	$907,500
2013	26	3,164	$553,750
2014	22	1,820	$336,450
2015	27	1,522	$287,500
2016	31	2,000	$340,000
2017	31	1,780	$375,000
2018	28	2,076	$590,000
2019	30	3,572	$770,000
2020	29	1,683	$770,000
2021	49	2,453	$435,000
2022 (Jan)	3	2,000	$450,000
Total	340	1,905	$387,500

Source: CoreLogic, 2022

The comparison between the sales in Salisbury and Playford indicate that there has been strong growth in commercial and industrial sales activity in Salisbury since 2019 with a notable lift in median sale price in recent years. Median land sizes have remained relatively constant peaking in 2020 at 4,440m². Salisbury has recorded more commercial and industrial sales during this period and consistently larger sites at higher values than sales recorded in the City of Playford.

Holmes Dyer has further broken down the available data to separate out the sales across this 15-year period that have occurred within the Strategic Growth Framework Study Area, as outlined within the following Table 10

Table 10. Commercial and Industrial Sales in Study Area 2008 – 2022 (Jan) by Year

Commercial and Industrial Sales in Strategic Growth Framework Study Area 2008 - 2022 (Jan) by Year			
Year	Count	Median Land Size (m^2)	Median Sale Price
2008	3	10,190	$400,000
2009	1	12,140	$100,000
2010	3	39,500	$650,000
2011	4	33,640	$1,150,000
2012	2	1,397	$240,000
2013	4	17,115	$263,500
2014	4	22,165	$462,500
2015	6	30,415	$530,000
2016	6	11,450	$487,500
2017	7	26,200	$525,000
2018	8	29,040	$432,500
2019	7	20,230	$461,000
2020	5	28,300	$460,000
2021	9	20,230	$700,000
2022 (Jan)	-	-	-
Total	69	20,590	$487,000

Source: CoreLogic, 2022

This study area, which covers a total area of 950 hectares has seen 69 commercial and industrial sales. The sales vary greatly in median land size and median sale price with this fluctuation created by the low sale count. Typical lot sizes are around 2-3 hectares with little subdivision occurring which would be a result of the current zoning provisions and land use patterns. Significant amounts of vacant land along the North-South Motorway and Port Wakefield Road and landowner and future developers speculating on the locational advantages of this land and potential for alternate zoning to support an intensification of development has contributed to the sale of large areas of land in the Study Area. This analysis demonstrates that there is continued turnover of property in the identified study area, within the current zoning configurations which would be expected to significantly increase once a future strategic direction and zoning framework is put in place by the City of Salisbury to provide increased investment certainty for potential developers and current landowners.

Holmes Dyer has also considered the land size for commercial and industrial sales across both the Local Government Area (LGA) of Salisbury and Playford which identified a positive skewed distribution, meaning that majority of sales across the 15-year period were within the middle or lower quartile or low range of the spread of land size values, reflected on the three different tables below.

Table 11. Commercial and Industrial Sales in Salisbury and Playford 2009 – 2022 (Jan) by Land Size

Commercial and Industrial Sales in Salisbury and Playford 2008 - 2022 (Jan) by Land Size			
Land Size Categories (m2)	Count	Median Land Size (m2)	Median Sale Price
<1999	569	699	$335,000
2000 - 4999	346	3,016	$728,750
5000 - 9999	132	6,634	$1,003,250
10,000 - 19,999	107	13,000	$1,579,600
20,000 +	143	35,270	$2,105,263
Total	1297	2,330	$623,333

Source: CoreLogic, 2022

Table 12. Commercial and Industrial Sales in Salisbury 2008 – 2022 (Jan) by Land Size

Commercial and Industrial Sales in Salisbury 2008 - 2022 (Jan) by Land Size			
Land Size Categories (m^2)	Count	Median Land Size (m^2)	Median Sale Price
<1999	392	535	$385,000
2000 - 4999	271	3,005	$780,000
5000 - 9999	118	6,579	$1,008,250
10,000 - 19,999	79	12,830	$1,716,000
20,000 +	97	32,060	$3,025,000
Total	957	2,503	$700,000

Source: CoreLogic, 2022

Table 13. Commercial and Industrial Sales in Playford 2009 – 2022 (Jan) by Land Size

Commercial and Industrial Sales in Playford 2008 - 2022 (Jan) by Land Size			
Land Size Categories (m2)	Count	Median Land Size (m2)	Median Sale Price
<1999	177	965	$269,000
2000 - 4999	75	3,026	$550,000
5000 - 9999	14	6,807	$942,387
10,000 - 19,999	28	13,500	$818,500
20,000 +	46	40,490	$1,105,750
Total	340	1,905	$387,500

Source: CoreLogic, 2022

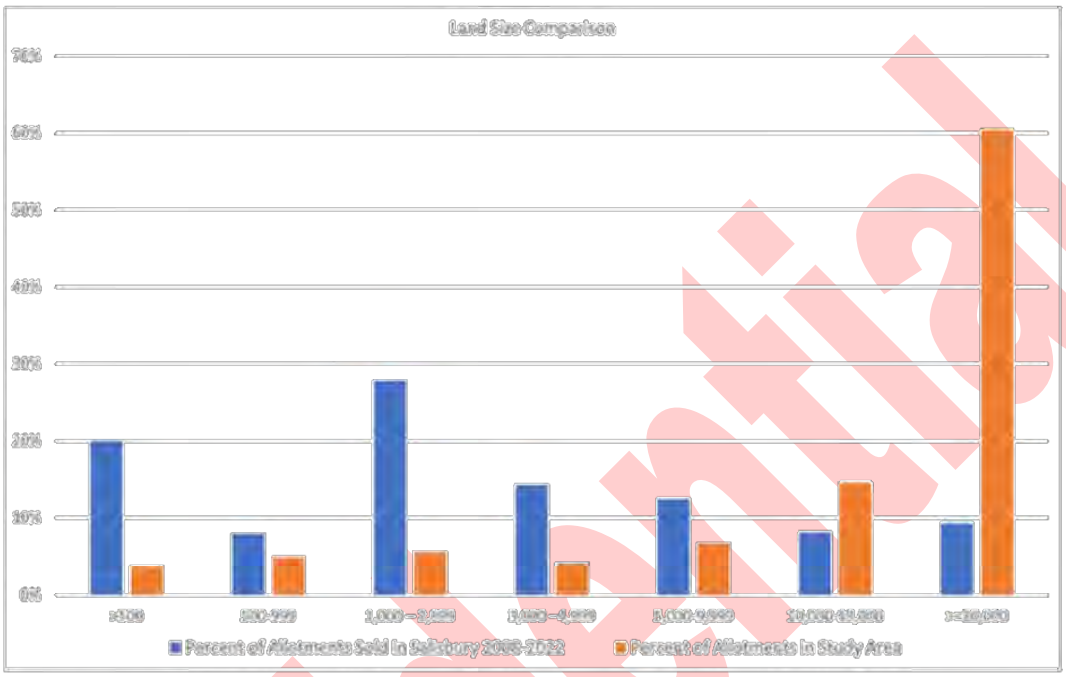
This finding is similar for both LGAs when looked at exclusively which show most sales being on lots of less than 5000m^2. The median sale price per square metre from commercial and industrial sales across both City of Salisbury and City of Playford was $268/per sqm when you divide the Median Sales Price with the Median Land Size. This figure is notably higher than the $253/per sqm in the Inner North and $86/ per sqm for the Outer North as quoted by Knight Frank in their 2020 Adelaide Industrial Market report presented in Table 6 of this report. This variation may be due to the inclusion of commercial sales during 2020 and 2021 which saw an increase in total sale numbers retaining a high median sale price.

This analysis identifies that the City of Salisbury saw a large proportion of sales on land parcels less than 5000m^2 in size, accounting for 70% of all commercial and industrial sales during the period of 2008 to January 2022. Over 10% of sales were for lots greater than 2 hectares in area. Sales greater than 2 hectares accounted for significantly more land than the combined land size of all sales under 2 hectares.

Current market demand, from analysing the sales data over the last 15 years, identified demand for both large and smaller sites to accommodate the diversity of commercial and industrial uses and activities. Therefore, the ongoing provision as part of any zoning change within the Strategic Growth Framework to deliver a mix of land sizes will be necessary to meet market demand. The locality of the Study Area, along key transportation routes and within rural horticulture and infrastructure zoned areas saw significantly more sales of sites 20,000m^2 or greater, potentially suitable for warehousing and distribution centres. The analysis of the same figures for the City of Playford demonstrate significantly lower transaction volumes and sales relative to Salisbury but a similar cross-section of allotment sizes is apparent.

The figure below provides a comparison between the size of commercial and industrial allotments sold in the whole of Salisbury and that transacted in the Study Area over the period 2008-2022.

Figure 20. Land Size Comparison between City of Salisbury and Study Area



Source: CoreLogic, 2022

Not surprisingly, improved employment land in Salisbury has been subdivided into smaller lots than currently exist in the study area. The number of larger allotments in the Study Area provides opportunities for a future intensification of activity in the Study Area through increased subdivision support while the existing large allotments will provide the ability to attract the larger scale developments requiring larger landholdings.

3.6. Demand Forecast in the Study Area

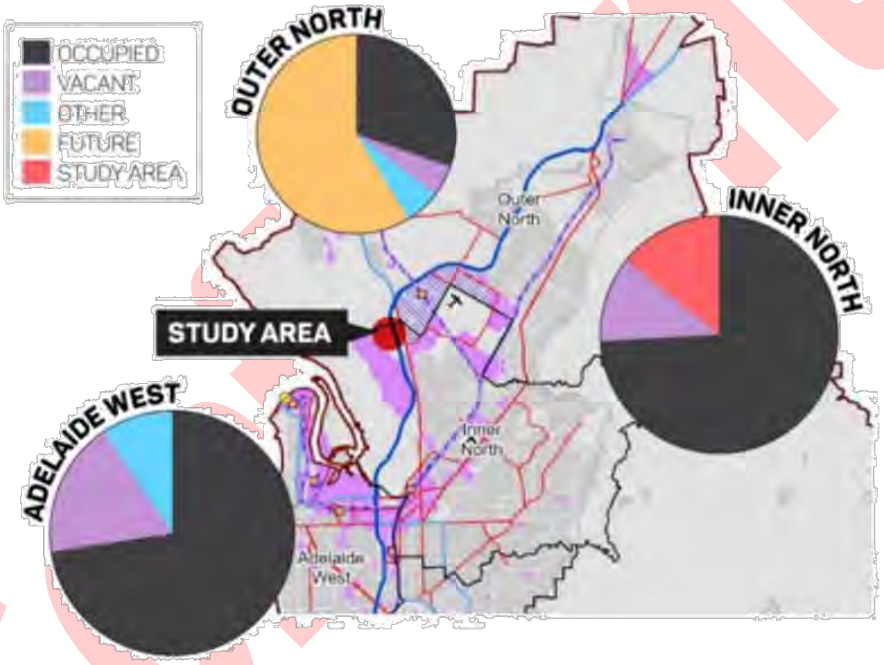
In the last 5 years, 76 hectares of land within the Study Area for the Strategic Growth Framework has seen development applications or development enquiries. This enquiry can be extrapolated to represent a likely ongoing demand for approximately 15 gross hectares per annum of employment land within the Study Area could be conservatively forecast.

The total Study Area covers an area of 950 hectares of land. If you exclude transport corridors, open space, the caravan & tourist park zone and those individual sites with existing commercial improvements (i.e., petrol stations and major commercial buildings), approximately 508 hectares of potential developable land could be available for rezoning for employment/commercial land use. Using the estimated annual demand within this area of the City

of Salisbury of 15 hectares per annum, this would equate to a land supply of 34 years. However, the impact of a one-off major development could change this timing equation as a major development could act as an anchor attractor to bring forward further commercial and industrial businesses and encourage the take up of land in the City of Salisbury and potentially broader inner and outer north market dependent on the type of major business.

Also of note is that the transaction of vacant commercial and industrial land in Salisbury over the period 2008-2022 (January) which, as evidenced by CoreLogic, has averaged around 18 ha per annum, but with a significant upsurge in 2020 (22ha) and 2021 (38ha), acknowledging that 18 ha of net land could require up to 30 hectares of gross land to allow for roads, stormwater, open space and infrastructure delivery to serve the resulted allotments. Counterbalancing this demand is the potential for new (and less expensive) employment land supply in future Strategic Employment land in areas to the north of the Study Area within the City of Playford that will likely be bought to the market across a similar period to the Strategic Growth Framework Bolivar and Waterloo Corner. The following figure highlights the scale of the unused Strategic Employment land in the Outer North, refer to the orange colour in the below pinwheels.

Figure 21. Regional Context, Employment Land



Source: Holmes Dyer, 2022

Holmes Dyer also consider it likely that following the adoption of the Strategic Growth Framework and any associated Code Amendments to rezone the land there would be initial surge in applications and development activity reflecting the pent-up demand currently constrained by the existing restrictive zoning. There is a high

degree of confidence that this surge would likely occur, given the existing level of speculative investment and proponent led Code Amendments that Council is seeing, with the market already identifying the significant locational advantages that this land provides.

Additionally, as the availability of existing employment zoned land holdings in other areas of Salisbury is expended, this should focus greater attention and development within the Study Area in the latter timeframe of the Strategic Growth Framework. This is considered as part of the staging and prioritisation of the recommendations section of the Strategic Growth Framework

Having regard to the above analysis for the purpose of informing the staging and forecast timeframes for the potential land available within the Strategic Growth Framework forgoing matters, we anticipate a take up rate of 15-25 ha/pa and a development timeline of between 20-35 years.

3.7. Economic & Market Review Key Findings to inform the Strategic Growth Framework

The industrial market overview and analysis set out in Section 3.0 highlights the following key points:

- The market is cyclical and has traditionally demonstrated long periods of low demand and low growth interspersed with periods of high demand and rapid price growth, with one of these cycles of increased demand being experienced across the last five years.
- The market is currently in strong upswing with a lack of supply of market ready industrial and commercial and being widely reported.
- Current market statistics show a demand for mixed allotment sizes with 70% of commercial and industrial sales in Salisbury on lots less than 5000m^2 and 10% for lots greater than 2 hectares.
- Transport, storage and logistic facilities have been strong performers since the advent of Covid 19, albeit this growth was already emerging prior to the Pandemic driven by online shopping, which are well suited to the highly accessible land located within the Study Area given the transport infrastructure that is available to service this precinct.
- Other sectors including Defence and related support activities are particularly pertinent to the Study Area and could represent an opportunity for the City of Salisbury to use the Strategic Growth Framework to promote a defence cluster as part of the existing Federal investment.
- There are many large-scale future land supply opportunities in the Outer North. These sites do not have the same commercial locational advantages of the Study Area, but do provide some key advantages including lower land prices, larger consolidated landholdings and direct access to an intermodal facility and to an airbase.
- There are a range of factors which limit the supply of land to the market, and which suggest more rather than less land should be suitably zoned for future use.

- Multiple land ownerships and the need to deliver key infrastructure to render land developable are potentially limiting factors in the take up of opportunities in the Study Area.

4.0 Eco-Industrial Park (EIP)

In the early investigations into the Planning Areas west of Port Wakefield Road undertaken by the City of Salisbury in 2021, the potential opportunities for an Eco-Industrial Park were included in the consideration. This specific land configuration has been researched as part of the Strategic Growth Framework, to review relevant case studies, Council's role and other considerations to inform a future decision about the inclusion and ideal position of land holdings within the Strategic Growth Framework, the outcomes of the Holmes Dyer research is captured in the following section.

4.1 EIP Background

In September 2020, Business SA Independent Chamber of Commerce and Industry South Australia released their 9-point Plan to Skyrocket SA setting out their economic development initiatives for the South Australian economy as it transitions out of the impacts from the Covid-19 pandemic.

Of specific relevance to the City of Salisbury Strategic Growth Framework was key recommendation 5:

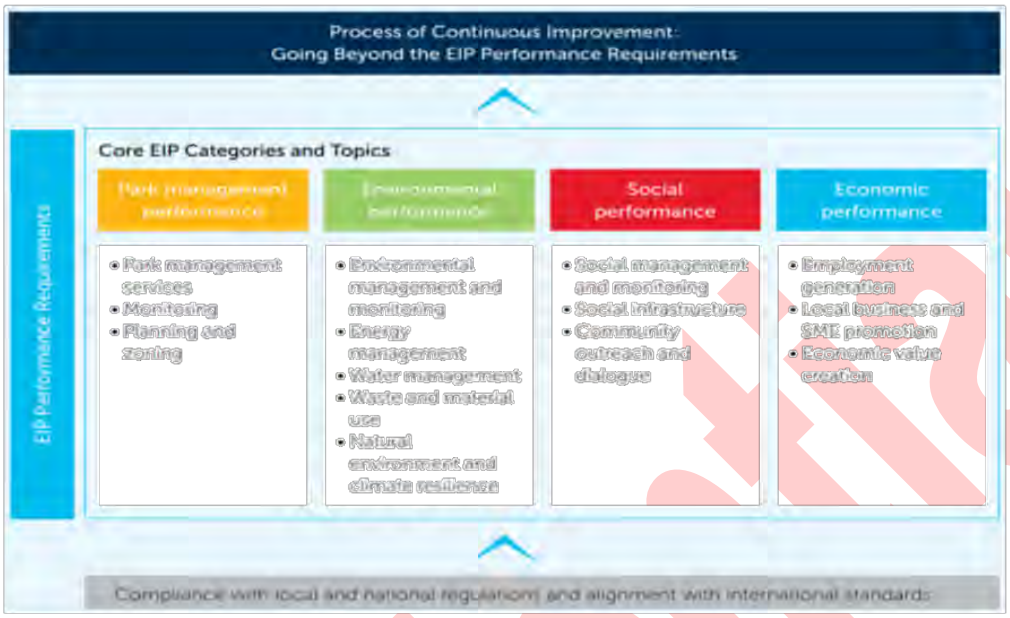
> *Key Recommendation 5 – Kickstarting the development of a holistic eco-industrial park*
>
> *Kickstart the development of a comprehensive low carbon/low emissions and circular economy business/industrial park to enable local and interstate/international businesses an option to meet all aspects of their sustainability needs*

Within this advocacy document, Business SA is calling on the State Government to consider supporting the development of a holistic low emissions industrial park to showcase South Australia as the most environmentally and technologically advanced state in Australia.

The concept of an Eco-Industrial Park typically incorporates environmental and technologically advanced industries that are significantly advanced to differentiate the business offer in the market. These differentiating factors typically include locations that can provide access to renewable energy, recycled water, green hydrogen, best-practice standards in energy-efficient building design and co-location of activities that have an identified industrial symbiosis / circular economy relationship.

In December 2017, the World Bank Group, United Nations Development Organization (UNIDO) developed a joint international framework on EIP which defines a set of minimum parameters for parks to meet this definition by demonstrating performance across four main categories as represented in the framework below.

Figure 22. Overall Framework for Performance Requirements for Eco-Industrial Parks



Source: - World Bank Group 2017.

This report provides key performance indicators and benchmarks that could be adopted against each category to ensure a proposed eco-industrial park meets the minimum expected criteria. These standards could be used as a starting position for a local context review of the minimum standards that should be part of a future eco-industrial park within the specific context that it is proposed.

While aspirational, the Business SA advocacy for a showcase eco-industrial park identifies that the identified site must be grounded in sound economic principles, profitable for all parties and in this respect, specified the symbiosis of tenants that can create this environment will be critical. Business SA identifies two different forms for a potential showcase EIP;

- The minimum requirements are embedded into a new industrial zone that sits over the identified precinct or;
- A suitable existing zone is supplemented by specific encumbrance or design principles as part of a separate development/infrastructure agreement.

4.2 EIP Case Studies

Australian examples delivered to date have focused primarily on environmental initiatives, the following case studies are considered the most relevant to the potential opportunities within the City of Salisbury.

Dandenong LOGIS EIP (Vic)

Photo 1 - Logis Eco-Industrial Park Source GLBA

Partnership: Private Public Partnership with Melbourne Water

Site Size: 154 hectares of redeveloped employment land over the former Southern Waste Treatment Plant.

Attributes: Recycled water, rainwater tanks, solar hot water, sustainability design guidelines for development. Initial development included the remediation of the highly contaminated site former Southern Water Treatment Plant. Retail, commercial, and large format supermarket space available for rent and purchase, ranging from 170m^2 to 930m^2
Diverse mix of current occupiers includes Ashfords pre-eminent financial and business advisory firm, Bolton Clarke independent living service provider and Mercury Marine motor manufacturing.

Distance: 30km to CBD or 35 minutes by Train from Dandenong Railway Station

Steel River Eco Industrial Estate (NSW)

Partnership: BHP and Baulderstone Hornibrook Pty Ltd.

Site Size: 104 hectares of industrial land, adjacent the Pacific Highway

Attributes: 28MW, two-hour battery system for energy storage, Remediation Action Plan, Environmental Impact Statement, enforceable guidelines in respect to contaminant management for leasers, eco-industrial services trench for the reuse of waste products, water quality ponds.
Sites at the Eco Estate range from 4,000m^2 to 17,000 m^2, current occupiers include CSIRO Energy Research Centre and ALS Environmental Services Laboratory

Distance: 7km from Newcastle CBD approximately 20-minute car journey.

Sydney Business Park Marsden Park (NSW)  *Photo 2 - Sydney Business Park, 2020*	Site Size: 255-hectare campus style Business Park is the largest employment area in North Western Sydney Attributes: Incorporates 27 hectares of high-quality landscaped parks and recreational facilities, playgrounds and picnic areas for public use as well as processes of rainwater harvesting, solar farms and implementing ongoing sustainability initiatives. Sydney Business Park has established the Marsden Park Local Employment & Education Initiative to coordinate a range of employment and educational support opportunities in and around the Marsden Park area The site offers colocation of business needs, adaptable working spaces with tenancies available from 166 sqm to 1,459 sqm. Major tenancies at the park include ASICS, IKEA, Costco, Coles, Bunnings Wearhouse and ALDI. Distance: Sydney Business Park is 38km from Sydney CBD or a 35–45-minute drive by car on the M7.
Quarry at Greystanes Dexus (NSW)  *Photo 3 - UDIA NSW 2020*	Site Size: 340,000 sqm fully leased estate Attributes: The site employs rooftop solar PV panels, achieving energy and operational cost savings through renewables, rainwater harvesting from rooftops combined with high water efficient fixtures in bathrooms and irrigation and translucent roofs and wall sheeting for improved natural daylight linked to smart lighting. Tenancies at the site include Beaumont Tiles, Orora, Coco Republic, Bunnings Trade, Toshiba, HelloFresh and Symbion. Distance: 26 km from Sydney CBD or a 45-minute drive along the M.

Tonsley Innovation District (SA)  *Photo 4 - Renewal SA 2021*	Partnership: Renewal SA Site Size: 61-hectare site located on the former Mitsubishi Motors Plant Attributes: 6-star Green Star Communities Project, completion of project will include 20,000 solar panels providing 6MW power to onsite businesses, solar garage for electric vehicles, adaptive reuse of buildings, on-site rain gardens, use of recycled water from the Oaklands Wetland, District Energy Scheme. Freehold land allotments from 1,000m2 to 10,000m2 Industry partners include Tafe SA, Flinders University, Siemens, Signostics and Zen Energy Distance: 10km from Adelaide CBD or an 18-minute drive
Mitchell Enviro Industrial Estate (QLD)  *Photo 5 - Google Earth, 2022*	Partnership: Mitchell Builders Site Size: 42,000m2 in Queensland's Yatala Industrial Precinct Attributes: Onsite sewage treatment and water collection and storage via wetland and underground tanks (4 megalitre dam), utilises passive solar principles and natural ventilation, thermal wall technology, allocating a substantial area of land for communal green space. Sites within the estate range from 400m^2 to 4,000m^2 with tenants including Anika Products, Yatala Environmental Solutions, Solar Green and Eco-kinetics. Distance: 40km from Brisbane CBD and 45km from Gold Coast CBD or an approximately 40-minute drive.

Kalundborg Eco Industrial Park (Denmark)	
 *Photo 6 - Symbiosis Centre, 2014*	Partnership: Partnership and industrial network between 13 private and public companies located in Kalundborg Attributes: Kalunborg Eco Industrial Park follow the symbiosis model where companies work together across sectors to share excess energy and resources in including water, materials and waste products. DONG energy power plant located in Kalundborg converts municipal solid waste from the surrounding businesses and other sources into biofuel that powers the surrounding region. The site includes enterprises such as an oil refinery, insulin-producing plant, factories making enzymes for use in bioenergy to textiles and the largest sewage treatment plant in northern Europe. Distance: Located just outside Kalundborg town centre (3km) or 100km from Copenhagen

4.3 City of Salisbury – EIP Locational Advantages

No specific site is identified in the Business SA Advocacy Document for the proposed showcase EIP; however, a few proximity opportunities were identified relating to Gillman and Adelaide Airport. These two sites were identified due to their proximity to industry, stormwater harvesting/re-use Schemes, wastewater treatment plants and critical logistic transport infrastructure.

These locational advantages can be demonstrated by land within the City of Salisbury Strategic Growth Framework due to the proximity to SA Water Waste Treatment Plan, existing Salisbury Water Recycled Water Network and Infrastructure and critical logistics by road, rail, and air.

Proximity to Defence could also have advantages in the areas of research, technology, and precision manufacturing, which, in turn, are activities likely to be attached to an eco-industrial business park.

Facilities that serve a more intensive and sophisticated workforce, such as retailing, banking, café, bars, accommodation, and business services are a desirable adjacent to an eco-industrial business park. Main road frontages and key intersections have a potential to provide this support infrastructure and, while currently limited in the City of Salisbury Strategic Growth Framework, several locations lend themselves to the development of these services.

4.4 Barriers

The barriers to attracting an eco-industrial park within the Strategic Growth Framework Waterloo/Bolivar Road area of Salisbury would be considered to include:

- Regulatory barriers relating to a lack of suitable policies to encourage EIP development
- Competitive disadvantage because of initial set-up cost to achieve agreed performance requirements, if the business model does not make competitive sense from initiation
- High upfront capital costs with extended returns on investment limit the depth of the market and require a specific alignment of business operations, to realise a competitive advantage even with these upfront costs
- Potential requirement for financial support/subsidies to deliver the required infrastructure
- Risks around new infrastructure technology and delivery approaches that are outside the current regulatory environment, requiring duplicated service provision of both an innovative infrastructure delivery scheme and a 'typical' infrastructure servicing backup redundancy
- Clarity on ongoing maintenance and management of the eco-industrial park
- Lack of business capabilities, understanding and skills.

As a result of these challenge, EIP development is typically underpinned by State Government or key agencies with a broader remit than commercial profit. Council involvement and investment could be sufficient to attract private sector investment in the initiative.

4.5 Council's Role

The role the City of Salisbury might play would be determined by their attitude towards risk and reward and levels of funding the Council is prepared to contribute towards infrastructure. It will also be determined by access to suitable land holdings via purchase or agreement with existing landowners.

Essentially, there is a spectrum of involvement from low risk/low reward to high risk/high reward (where reward might be measured in development outcomes rather than pure return on investment). The options for Council could therefore include the following range of involvement;

- Broker: where Council provides encouragement and momentum for key investors, landowners and Government to deliver the EIP.
- De-risker: where Council undertakes rezoning, delivers key enabling roads and stormwater infrastructure and/or offers rate holidays or other benefits in return for private investment in the EIP, secured by Deeds/Agreements.
- Landowner: where Council offers its own land and potentially acquires additional land with the specific intention of taking an EIP proposal to the market for private sector delivery, which is secured by Deeds/Agreements.

- Developer: where Council either in partnership or alone, assembles the site, zones the land, delivers the infrastructure and sells the product to the market with suitable caveats on the performance of purchasers.

These options reflect the impact on investment decision making of relatively low land values associated with industrial land in this locality, the higher costs associated with delivering an EIP relative to a traditional industrial subdivision and the plethora of supply alternatives for industrial land consumers in the north and, thus, the anticipated need to incentivise developers/investors to contemplate establishment of an EIP.

The suggested actions to advance Council's consideration of the position it would seek to take in the delivery of an EIP are outlined as follows:

- Identification of State or Council held land that could form a nucleus for the establishment of an EIP;
- Detailed investigation of required infrastructure upgrades in preferred EIP locations and their overlap with other required infrastructure initiatives;
- Investigate the attractiveness of linking rezonings that generate a real uplift in value with agreements to develop an EIP, thereby providing an incentive for private sector involvement (for example, colocation with Activity Centre rezoning);
- Development of a business case to call attention to the benefits and rewards of an EIP while addressing management of the inherent risks;
- Approach State and Federal Governments regarding potential involvement and/or grant funding for specific works;
- Approach key commercial and industrial players and fund managers to establish whether there is an interest in establishing an EIP and what, if any, inducements would be required to attract their investment in such a project;
- Consider the role Salisbury Water might play in the delivery of stormwater outcomes in the area which can stimulate surrounding development.

5.0 Study Area Economic and Employment Forecasts

Based upon assumptions regarding development staging, likely land take-up and type of land use, the following development timeframe, floorspace construction and workforce numbers were developed. This information was used by Holmes Dyer and the subconsultant team Greenhill and Cirqa to inform preliminary engagement with service authorities and infrastructure upgrade assumptions that are used in the recommendations section.

Based on Holmes Dyer estimates for conservative demand for about 14-15 gross hectares per annum for the take-up of land within the study area, this is assumed to be split across four yield catchments within the Study Area defined by Holmes Dyer for the purpose of this strategic planning as per Figure 23.

Table 14. Forecast Activity – Timeframe for Development Activity in Study Area

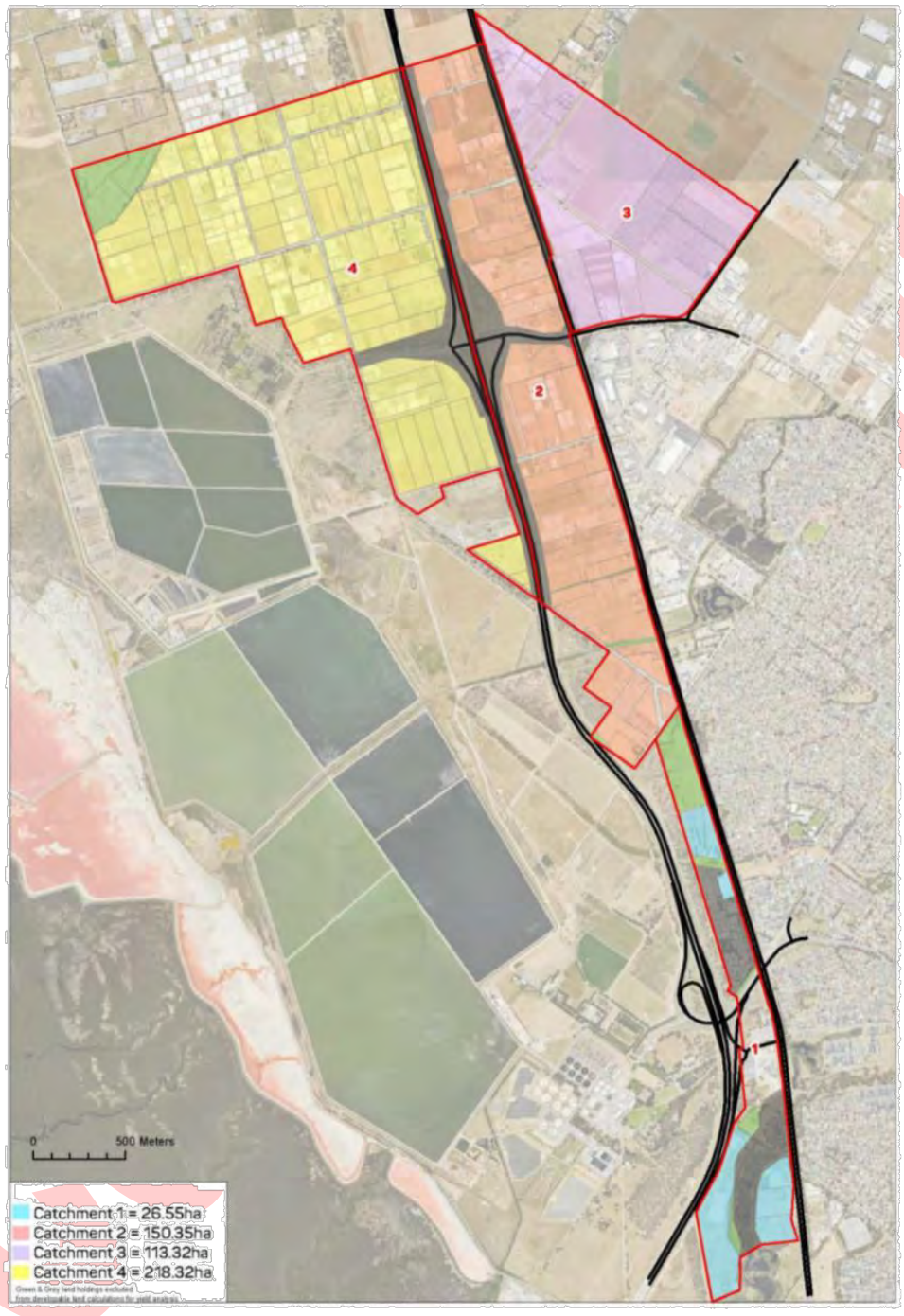
Total Activity					
Catchment	Development Timeframe (years)	Development Area (ha)	Developable Area (ha)	Floorspace (m2)	Workforce (pax)
1	1 – 5	26.6ha	16.0ha	48,000m2	400
2	1 – 15	150.4ha	90.2ha	270,000m2	2,235
3	10 – 20	113.3ha	68.0ha	204,000m2	1,685
4	20 – 35	218.3ha	131.0ha	393,000m2	2,395
Total	1-35	508.6 ha	305.2 ha	915,000m2	6715

Source: Holmes Dyer, 2022

When reading the above table, the following key assumptions needs to be considered:

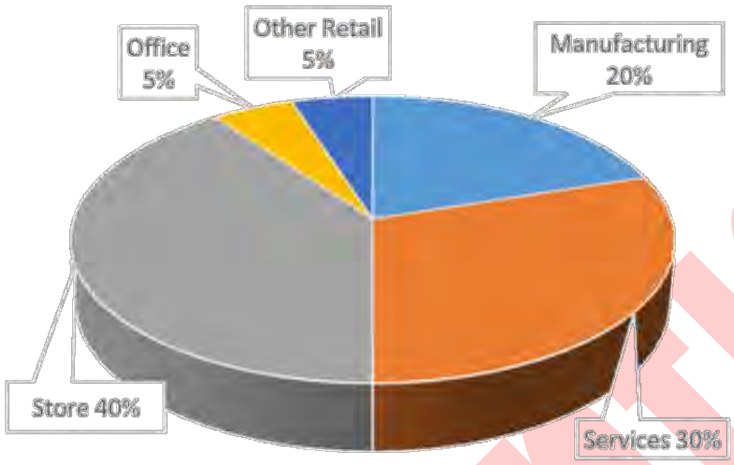
- Development Timeframe: Holmes Dyer conservative prediction of the market take up rate, as outlined within Section 3.6 of this report.
- Development Areas: Study Area available after allowing for existing development and major road infrastructure and buffers are removed, as outlined within Section 3.6 of this report.
- Development Area: Assume 40% of gross area required for roads, stormwater, open space and infrastructure (consistent with existing employment development within the surrounding areas)
- Floorspace: Assume 30% site coverage of individual allotments (consistent with Vicinity and Edinburgh Park Estates)
- Workforce: Based on workforce numbers per square metre generated by the Perth and Peel Land Use and Employment Survey, Department of Planning, Lands and Heritage and the Western Australian Planning Commission, 2017

Figure 23. Yield Catchment Plan developed by Holmes Dyer for Strategic Growth Framework Forecasts



Accordingly, the projected floorspace mix predicted by Holmes Dyer, having regard to the composition of similar precincts, is summarised in the following figure.

Figure 24. Projected Floorspace Typology



Source: Holmes Dyer, 2022

The above figure uses five floor space typology groups, identified by the Perth and Peel Land Use and Employment Survey, each typology assumes the below interpretation and distribution of employment land uses taken from the Western Australian Planning Land Use Category (PLUC) provided for clarity and comparison to the South Australian System. Unfortunately, there is no similar tool or data set available in South Australia that supports a similar analysis.

Manufacturing – This category includes land use activities involving the manufacture, processing and fabrication of all general goods. Both the scale and associated environmental impact of these activities separate them from other land use categories.

Store – Any land use activity which involves the storage, warehousing or wholesaling of goods usually conducted from large structures, or involving large bulky goods, but does not include activities that attract the general retail trade activities.

Service – This category includes service industries offering a range of services. The scale and environmental impact of such activities require their separation from other land uses. These services could include film processing, cleaning, motor vehicle and other repair services and other servicing activities, including some construction activities.

Office – Administrative, clerical, professional and medical offices are activities which do not necessarily require the land area/floor space or exposure of other land uses. Although office require building and parking facilities, these needs are quite distinct from those of commercial uses and service industries.

Other Retail – Many of these activities are not normally accommodated in a shopping centre. By virtue of their scale and special nature the goods of these activities separate them from the general the standard activity centre shop/retail category such as car sales yard or carpet showroom.

Using the above information Homes Dyer has forecast a projected annual average development activity by each catchment, assuming that development would be occurring in all catchments at the same time. Council may choose to defer a decision on rezoning within one of the catchment areas given the long-term timelines, to protect a future decision to secure the highest and best use of this land. A high-level prioritisation and assumption have been made by Holmes Dyer with Catchment 3 and 4 times to enter the market in the latter years of the 30-year study. However, it is anticipated that these timelines would adjust based on future investigations and the level of interest for an intensification of development by landowners, that would adjust timing of the below, but the overall floor space and workforce assumptions will likely remain valid unless a significant change to the forecast land-use is adopted.

Table 15. Projected Annual Average Development Activity in Study Area by Yield Catchment

Annual Activity in Study by Precinct					
Yield Catchment	Years of Development (years)	Average Broad hectare land Requirements	Average Net Area of Lots Developed (ha)	Average Area of Floorspace (m²)	Workforce (pax)
1	1 – 5 (2023 – 2028)	5.3 ha	3.2ha	9,600m²	80
2	1 – 15 (2023 – 2038)	10.0 ha	6.0ha	18,000m²	150
3	10 – 20 (2033 – 2043)	11.3 ha	6.8ha	20,400m²	170
4	20 – 35 (2043 – 2058)	14.6 ha	8.7ha	39,300m²	160
All Catchments	1 – 35 (2023 – 2058)	14.5 ha	8.7ha	26,160m²	190

Source: Holmes Dyer, 2022

Table 16. Projected Floorspace Typology from employment land benchmarking

Projected Floorspace Typology and Workforce for Study Area		
	Floorspace Typology (m²)	Workforce (pax)
Manufacturing 20%	183,000	965
Service 30%	254,850	1,855
Store 40%	405,300	940
Office 5%	35,925	1,715
Retail 5%	35,925	1,240
Total	915,000	6,715

Source: Holmes Dyer, 2022

Based upon assumptions and analysis outlined above, the development of the Study Area is forecast to deliver approximately, over a delivery timeline of 35 years.

- 915,000m² of employment floorspace
- 6,715 employees (FTEs)

Holmes Dyer notes that the amount of floorspace and number of employees achieved could increase subject to the level of intensity of activity delivered over the subject land determined by subsequent Code Amendments and technical investigations and the investment decisions of the market.

6.0 Infrastructure Funding Options and Mechanisms

6.1 Policy Context

Intensification or new development activity in Greenfields locations, such as that within the Strategic Growth Framework Study Area typically require the expansion of a range of infrastructure to serve that development, notably, stormwater, roads, water, sewer, power and telecommunications.

Specifically for the Study Area, there is a need for substantial stormwater infrastructure investment in the locality given the standards of existing service provision. Further, progressive intensification of activity in the wider area will lead to the need for road infrastructure improvements, including Department for Infrastructure and Transport road upgrades (especially intersections) and local Council roads. In addition, increased capacity and an expanded network of water, sewer, power, telecommunications and possibly gas services will also be required.

Over the past decade, new urban release areas have been increasingly encumbered with financial obligations to deliver a fair share of the cost of this infrastructure. In the case of water, sewer and power, this typically involves the developer negotiating directly to pay for the infrastructure required to serve that land, and where a new development tips the demand for infrastructure to require new approach mains or other external headworks, the subject developer is typically responsible for that cost (in addition to internal distribution and connection costs). In some circumstances, augmentation charges have been set by the infrastructure provider for these external headworks requirements so that the cost is distributed among all beneficiaries, not just the first developer. This is a preferred arrangement, but does not currently exist in respect of the land under investigation, nor are the infrastructure providers required to provide an augmentation option.

Telecommunication infrastructure typically involves a cost per lot basis which does not penalise individual developers.

Gas is typically delivered at no cost to the developer by the infrastructure provider, but is subject to the provider's business case confirming that future returns will justify the initial spend.

The consequence of this is that infrastructure funding mechanisms are likely to be required to deliver shared stormwater and road solutions and that a cooperative approach to negotiation of shared outcomes for water, sewer and power within the Study Area will be highly desirable.

6.2 Infrastructure Funding and Delivery Mechanisms

There are several mechanisms available to fund and deliver infrastructure to support new development. These include:

- Execution of an Infrastructure Deed between relevant parties which guarantees the funding and delivery of nominated infrastructure.
- Implementation of an Infrastructure Scheme under the PDI Act. This could be a Basic Infrastructure Scheme or a General Infrastructure Scheme.

- Establishment of a Precinct Authority and Precinct under the Urban Renewal Act to raise funds and deliver infrastructure.
- Establishment of a separate rate to fund infrastructure.
- Negotiations with the applicants at Development Application stage, with reliance placed upon the policies within the Code and clearly defined infrastructure requirements captured within a Concept Plan within the Code.
- Direct funding or contributions by Council, State and/or Federal Government via works program, grants funding or similar.

Each of these mechanisms are discussed further below.

6.2.1 Infrastructure Deeds

Infrastructure Deeds are legal agreements between the parties to the agreement (typically landowners, Council and sometimes State Government) which seek to facilitate the delivery of common or shared infrastructure, and which typically seek to define:

- The geographic extent of the Deed;
- The landowners captured by the Deed;
- The nature of the interventions required to be delivered;
- The estimated cost of those interventions;
- The timing of delivery of those interventions or the development trigger points (e.g., number of allotments or hectares of land delivered);
- The proportional responsibility of parties for the funding of that infrastructure;
- The manner in which the intervention will be procured, including the opportunity for funding contributions and/or in-kind delivery of the infrastructure;
- The need or otherwise for appointment of an Infrastructure Coordinator;
- The ultimate ownership of the completed infrastructure works;
- The timing of payment of the ascribed financial contributions; and
- Various operational and administrative matters.

Infrastructure Deeds are typically secured by the impost of a Land Management Agreement over the relevant Land Titles. They cannot be forcefully imposed on landowners and therefore require a level of cooperation between parties. Essentially, the landowners need to recognise that there is a benefit derived from entering into such an agreement. This is usually the recognition that the up zoning of their land is dependent upon the collective funding of infrastructure delivered by the Deed. (This incentive is diminished where the up zoning delivers relatively little additional value to the land, which is sometimes the case with the conversion of prime horticultural land to employment land.)

6.2.2 Infrastructure Schemes under the Planning Development and Infrastructure (PDI) Act

The PDI Act creates two alternative approaches to the creation of an infrastructure funding mechanism, namely:

- Basic Infrastructure Scheme, which is essentially limited to the funding of roads and stormwater infrastructure within a designated growth area and does not require the agreement of affected landowners; and a,
- General Infrastructure Scheme, which can fund a wide range of infrastructure within a contribution area but requires the agreement of all affected landowners.

As the General Infrastructure Scheme is not yet available as the relevant legislative provisions have not commenced, this option is not explored further in detail within this report.

A proposal to proceed with either scheme may be initiated by either the Minister or at the request of another person or body interested in the provision or delivery of infrastructure. The Council would therefore qualify as an interested body which could initiate such a proposal. It is then the responsibility of the Minister, acting on the advice of the State Planning Commission, to draft the subject scheme and to determine to proceed with the scheme.

There are many steps in the process of establishing an infrastructure scheme and, to date, no such schemes have been created. Indeed, the pilot scheme run by the (then) DPTI resulted in none of the three selected infrastructure schemes proceeding.

Should Council wish to pursue this approach then it would be logical to initiate a Basic Infrastructure Scheme for two fundamental reasons. Firstly, such a scheme will cover the two key infrastructures of interest to Council, namely roads and stormwater. Secondly, it is not realistic to expect all landowners to agree to the instigation of the scheme and, hence, only the Basic Infrastructure Scheme, which does not require the agreement of all landowners, could proceed under such circumstances.

The key actions required to pursue a Basic Infrastructure Scheme can be summarised as follows:

- Initiation of scheme and identification of the designated growth area (it could involve a series of designated growth areas);
- Identify the need for the introduction of a scheme to coordinate the delivery of the basic infrastructure;
- Preparation of a draft outline of the scheme that:
  - a) *Provides detailed information – about*
    - i) *The nature and intended scope of the basic infrastructure; and*
    - ii) *Any related development that is proposed to be undertaken as part of the scheme; and*
  - b) *Identifies the proposed designated growth areas; and*
  - c) *Provides information about the proposed timing or staging of the various elements of the scheme; and*
  - d) *Assess the costs and benefits of the scheme; and*

e) *Outlines a funding arrangement for the scheme, including whether it is proposed to impose a charge under Subdivision 7; and*

f) *Provides information about the person or body that will be carrying out the work envisaged by the scheme (to the extent that is known); and*

g) *Identifies any basic infrastructure or other assets that might be expected to be transferred to another entity when the scheme has been completed; and*

h) *Provides such other information as the Minister thinks fit after consultation with the Commission.*

- The infrastructure must be:
  a) *Fit for purpose; and*
  b) *Capable of adaptation of standards or technology change over time (insofar as is reasonably practicable or appropriate in the circumstances; and*
  c) *Capable of augmentation or extension to accommodate growth or changing circumstances over time (insofar as is reasonably practicable or appropriate in the circumstances; and*
  d) *Where appropriate, designed to build capacity for the future, including by allowing for connections, extensions or augmentation by others who are able to leverage off the initial investment in the basic infrastructure; and*
  e) *Designed and built to a standard that is appropriate taking into account the nature and extent of development that is proposed to be undertaken within the relevant designated growth area; and*
  f) *Capable of being procured and delivered in a timely manner to facilitate and promote orderly and economic development.*
- The designated growth area must be:
  a) *The area or areas which will benefit from any basic infrastructure to be provided under the proposed scheme; and*
  b) *The extent to which it is possible to establish an area that will provide fair and sufficient funds over time with respect to the provision of the basic infrastructure under the proposed scheme; and*
  c) *The extent to which the designated growth area may overlap with a contribution area under Subdivision 3.*
- Any imposition of a charge must take account of:
  a) *The extent that is reasonable that other sources of funding be used instead; and*
  b) *Any schemes or arrangements (including with respect to the imposition of separate or other rates or charges) that are already in place, or already planned (and known to the Minister) with respect to the provision of basic infrastructure or the undertaking of works in the designated growth area (or in an adjacent or related area).*
- The Minister must seek the advice of the Commission and have regard to any relevant state planning policy and regional plan and relevant provisions of the Code (or the intended amendments to the Code;
- The Minister must consult with:
  a) *Take reasonable steps to consult with -*
     i) *The owners of land within the proposed designated growth area; and*
     ii) *The person or persons who are intending to undertake any relevant development within the proposed designated growth area; and*
  b) *Take reasonable steps to consult with the council within whose area the proposed designated growth area is situated,*

  And may consult with any other person or body as the Minister thinks fit.
- The Minister must then publish the draft outline in the Gazette and on the SA Planning Portal;
- A Scheme Coordinator must then be appointed by the CEO (of PLUS);

- The Scheme Coordinator must then:
    1. *Prepare scoped and costed proposals for the scheme that accord with any relevant design stands;*
    2. *Develop a work program for the scheme;*
    3. *Undertake consultation in relation to the scheme in accordance with any requirement under the Community Engagement Charter;*
    4. *If it is proposed that a funding arrangement should be established under this Division – develop the funding arrangement;*
    5. *Such other functions assigned by the Minister after consultation with the Chief Executive.*
- Identify the basis upon which charges under the scheme will be triggered;
- Identify the funding proportions to be paid by the scheme beneficiaries;
- The Scheme Coordinator will then provide a report on all relevant matters, which the Minister then determines whether or not to proceed with the scheme and publish the scheme on the SA Planning Portal.

As can be gleaned from the above, the preparation of an Infrastructure Scheme under the PDI Act is complex and requires extensive coordination with the Minister, albeit that many of the investigations are likely to be required to be undertaken by Council (and the landowners) to progress the scheme.

This means that there are unlikely to be cost advantages to attempting to develop such a Scheme, particularly given that the cost of the Scheme Coordinator must be considered. Council would also potentially lose control of the administration of the delivery of infrastructure as a scheme was implemented. The fact that no scheme has yet been implemented nor the process of delivering a scheme completed, gives cause for considerable concern regarding the timing and costs associated with implementing such a mechanism.

At this stage, where landowners are cooperative, it would likely be more efficient for Council to utilise Infrastructure Deeds instead of a scheme under the *Planning, Development and Infrastructure Act*.

6.2.3 Declaration of a Precinct under the Urban Renewal Act

The *Urban Renewal Act 1995*, as amended, intends to provide for the planning and redevelopment of specific areas through their declaration as Precincts and involving the creation of a Precinct Authority to administer a Precinct Plan and a Precinct Implementation Plan.

The Precinct Authority may exercise a range of powers including acting as the planning authority in respect of a specified area, but more particularly, may provide infrastructure and may impose rates, levies or charges to fund that infrastructure (as well as various administrative functions).

The Minister may establish a precinct at the request of a Council (or others) and a precinct authority could be a Council through appointment by the Minister.

The process of establishment of a Precinct and Precinct Authority has been notionally usurped by the Joint Planning Boards and Infrastructure Schemes introduced by the PDI Act in 2016.

The process of establishment of a Precinct is possibly more complex that the process previously described in respect of the introduction of an Infrastructure Scheme under the PDI Act. Moreover, while there have been several attempts to establish precincts over the last decade, none have progressed to formal declaration. These attempts have been very costly and ultimately thwarted by the uncertainty of implementing an unproved mechanism. As with our commentary in respect of Infrastructure Schemes, where the cooperation of landowners can be obtained, an Infrastructure Deed represents a less costly, less complicated and familiar mechanism for infrastructure delivery.

6.2.4 Code Amendment and Development Application Negotiations

Logically, any Code Amendment introducing new zoning over the subject area, would be linked to the introduction of an Infrastructure Scheme or the execution of Infrastructure Deeds (and LMAs) by relevant parties, which secure the financial contribution of the benefitting landowners.

In some instances, this may not be of sufficient attraction for some landowners to encumber their land with the obligations arising from any Infrastructure Deeds, given the limited uplift in land values derived from rezoning in some instances (recognising under a Basic Infrastructure Scheme, landowners would not have the option to opt out).

While perhaps not ideal, an alternative is to proceed with the Code Amendment irrespective of Infrastructure Deeds and wait for the market to provide a delivery solution. Council would then rely upon the development approval process to manage traffic and stormwater solutions. This ability would be enhanced by the inclusion of a Concept Plan within the Code Amendment which clearly identifies the infrastructure triggers required prior to the development of the land. Proponents would then have to demonstrate their ability to appropriately address any traffic and stormwater management issues prior to gaining Development Approval. As supply of employment land tightens and prices rise, solutions to traffic and stormwater infrastructure requirements are likely to become increasingly tenable to landowners.

Council can play a pro-active role in defining infrastructure needs, logical landowner groupings and delivery management mechanisms. However, this option carries additional risks. Applications may have relevant authorities unrelated to Council (the State Commission Assessment Panel or Minister, or Minister in the case of Crown development, for example), and this could result in the loss of control concerning orderly and coordinated delivery of infrastructure. Infrastructure may proceed in a fragmented fashion or may be of a different order to that which Council had envisaged. There is also a risk that applicants for development may only be required to deliver infrastructure that benefits their sites alone.

Council should also consider whether once an area is rezoned it is likely that a developer may seek to change that zoning through their own future code amendment. With the passage of time, the change of governments in power and shifting priorities of the State, it is possible that plans of individual developers may erode any code provisions including with respect to infrastructure. Further, it is possible that the State could compulsorily acquire land

subject to an Infrastructure Deed and LMA, so frustrating the full delivering of infrastructure and/or the financial contributions related to such.

6.2.5 Separate Rate

Council may be able to apply a separate rate imposed under the *Local Government Act 1999*, across the rezone area, either as a mechanism to directly collect contributions towards the delivery of infrastructure that benefits the rezone area, or, more probably, as a mechanism (with associated rebates) to entice landowners to enter into Infrastructure Deeds, where such landowners are seeking to develop under the new zoning. Council could also consider using rating mechanisms to encourage development.

In this way, a separate rate can be used in conjunction with Infrastructure Deeds as a 'backstop' in a scenario where there is majority support in a particular precinct, albeit that a minority of landowners are not prepared to enter Infrastructure Deeds.

Under the *Local Government Act*, declaration of a separate rate is not a straightforward process. If the Council is interested in pursuing this further, separate legal advice may assist to better understand the process and potential cost, administrative and risk implications.

Furthermore, introduction of a separate rate will typically seek to collect the required funds over an extended period in order to "manage" the financial burden on landowners, particularly those not wishing or able to develop their land in the short to medium term. It is unlikely to generate sufficient funds in the short term to fully fund the required infrastructure interventions.

However, it can act as an equalisation mechanism by its application only to properties which refuse to commit to a broader infrastructure scheme which benefits those properties. For example, the separate rate could apply to all properties in a declared area and would be progressively lifted as the infrastructure contribution is paid by a landowner undertaking development but remains in place over those parcels that are not developed.

6.2.6 Council Funds Infrastructure

Council may wish to consider whether it would be beneficial for infrastructure to be funded or partly funded by a means external to the landowners, particularly if landowners indicate an unwillingness to develop, enter Infrastructure Deeds or make landowner contributions. Council may consider the rate revenue increase as a sufficient offset to warrant the investment in infrastructure. Alternatively, Council may be able to secure other funding sources such as from the State Government or Federal Government, particularly given the current emphasis on grants and infrastructure generally. Indeed, an argument could be mounted that infrastructure requirements cross Council boundaries and are of regional significance.

This mechanism places a substantial financial burden on Council, albeit that its implementation could be the means of unlocking State or Federal funding assistance. That is, a project that is fully documented and underway will demonstrate the level of commitment often sought by other funding authorities when determining their grants priorities.

A Council funding approach may also be identified as most suitable for some infrastructure where the investment is in all, or part, fixing an existing infrastructure gap. It is foreseen that some of the necessary infrastructure identified in the Strategic Growth Framework recommendations, is required not only because of the new development proposed but to address existing stormwater and traffic (intersection and road upgrades) for the existing land uses. This analysis would need to be undertaken on an intervention-by-intervention level.

As a subset of this option, Council could commit to a partial funding of the infrastructure as a means of sharing the financial burden of infrastructure delivery with the landowners and use this as an incentive to obtain landowner buy in to another funding mechanism e.g., Infrastructure Deeds or separate rating.

6.3 Infrastructure Delivery Method Comparison Analysis

The following table seeks to summarise the advantages and disadvantages of the alternative approaches to infrastructure delivery for consideration of the City of Salisbury to inform the approach for the orderly and coordinated delivery of infrastructure across the Strategic Growth Framework.

The table has not attempted to weight the criteria; however, it is apparent that some criteria could be more important than others.

Table 17. Infrastructure Delivery Mechanism Comparison Analysis

	Infrastructure Delivery Method						
Evaluation Criteria	Infrastructure Deeds and LMA	Basic Infrastructure Scheme under PDI Act	General Infrastructure Scheme under PDI Act	Precinct Declaration	Rezone and Negotiate of DA Stage	Separate Rate	Council Funding
Ease of implementation	o	o	+	-	+	-	o
Able to address roads and stormwater	+	+	+	+	+	+	+
Acceptance by Landowners / Developers	o	o	-	o	+	o	+
Delivery of required Infrastructure Outcomes	+	+	+	+	o	+	+
Delivers Council control	+	o	o	+	-	+	+
Financial certainty for Council	+	+	+	+	o	+	+
Time required to implement	o	-	-	-	+	o	o
Flexibility to apply to Discrete Areas	+	+	+	+	+	+	+
Structuring and staging of development and infrastructure outcomes	+	+	+	+	-	+	+
Flexibility to address changing circumstances	-	-	-	-	+	-	+
Initial cost to establish	-	-	-	-	+	o	o
Requires cooperation of Landowners / Developers	-	+	+	o	+	-	+
Cost for an external Scheme coordinator	o	-	-	-	+	+	+
Equitable sharing of costs	+	+	+	+	o	+	+
Cost to Council	+	+	+	+	+	+	-

The symbols in the table are generally intended to imply the following:

- \+ Readily achievable; relatively low cost; timely
- o Involves some difficulties in achieving; moderate cost; moderate timeframe to implement
- \- Very difficult to achieve; high cost; long timeframe to implement

6.4 Regional Infrastructure Funding

Another consideration is that some of the required infrastructure likely to be required as part of the Strategic Growth Framework will provide regional benefit and as such the cost of this infrastructure delivery should not be attributed solely to the immediate affected allotments or even the City of Salisbury. This regional infrastructure that would likely include signalised intersections and stormwater channels at Port Wakefield Road that will service the Greater Edinburgh Parks area will need an infrastructure mechanism that also involve negotiation with the City of Playford and the relevant State Agencies.

The timing and trigger for this regional infrastructure will be complex as it may be triggered by development of land within the adjacent Council area. Accordingly, it will be important that adequate reservation of land is made for this future required infrastructure within any negotiated infrastructure deed agreements and Code Amendments.

6.5 Summary and Recommendations

Having regard to the foregoing discussion and analysis, we believe that a hybrid approach which focusses upon the preparation of Infrastructure Deeds supported by the introduction of a separate rate and Council funding (notably through grants) represents the most appropriate approach considerate of there being some 300-separate allotments in the growth framework Study Area.

This approach is proposed because it delivers the following:

- Council is in the strongest position to ensure the delivery of the required infrastructure;
- Council can manage its level of financial contribution;
- The creation of a separate rate over the land to be rezoned can be used as an incentive for landowners to agree to the Infrastructure Deed by rewarding those who sign up to the Deed and penalising those that do not;
- The landowners are encouraged to commit to the Infrastructure Deeds by Council's willingness to fund a proportion of the infrastructure costs and to actively seek grant funds to improve the overall infrastructure delivery outcome;
- Infrastructure Deeds are reasonably well understood and not subject to the uncertainty associated with a new process under the PDI Act or an unused process under the Urban Renewal Act;
- The total package of Infrastructure Deeds, introduction of a separate rate and Council funding contributions should provide a comprehensive basis for attracting grant funding to mitigate overall costs to Council.

While this maybe the preferred approach, it does come with its challenges, the most serious being the requirement for landowners to willingly encumber their landholding with a Land Management Agreement, which requires adherence to a Deed that requires contributions towards infrastructure delivery.

Should landowner interest be low, then the option is available to introduce a higher separate rate across a wider area to capture funds to be held exclusively to fund key Council headworks infrastructure, which would then hopefully trigger new development that would, in turn, deliver additional infrastructure outcomes. Alternatively, Council could be the first entity to pursue a Basic Infrastructure Scheme under the PDI Act.

7.0 Stakeholder Consultation

To inform the Strategic Growth Framework a stakeholder consultation process was undertaken to secure an understanding of the likely plans and development intentions of the approximately 300 landowners within the Study Area.

Ultimately, any zoning or land use changes that may be proposed by the Strategic Growth Framework, will be enacted through a future Code Amendment(s), that may be either Proponent or Council led. This future Code Amendment process will involve additional legislated community engagement delivered in accordance with the Community Charter under the *Planning, Development and Infrastructure Act.*

The engagement methodology adopted for the recent consultation sought to build open communication channels between Council staff and the landowners, identifying that there needs to be ongoing and more detailed communication between affected landowners as the detailed planning to guide delivery of any components of the Strategic Growth Framework progresses.

7.1 Engagement Planning

A comprehensive engagement plan was developed by Holmes Dyer to inform the scope and method of consultation undertaken to inform this Strategic Growth Framework.

The engagement plan was developed to align with the standard template and content required by the State Government Planning and Land Use Services for planning the consultation activities required for any future Code Amendment in line with the Community Engagement Charter as set out in the PDI Act.

While it was not necessary, for the purposes of the Strategic Growth Framework, to have a detailed engagement plan compliant with the charter, this was developed irrespective, with the intention by the City of Salisbury that this would form a starting template for any future Code Amendment Engagement Plans to ensure consistency and alignment with the identified stakeholders and methods for consistency and clarity of all parties. For this reason, a full copy of the adopted engagement plan for this project is provided in Appendix 4, for future reference of Council and planning consultants engaged to work on any subsequent Code Amendments that may follow.

7.2 Engagement Approach

The following stakeholders were engaged during the 21-day engagement period from the 2nd of May to the 27th of May;

- Owners and occupiers of the land within the Study Area and owners and occupiers of adjacent land to the Study Area boundaries and within the broader planning areas, with a direct letter sent to all owners/occupiers.
- Planning and Land Use Services
- City of Playford
- City of Salisbury

- Staff
- Elected Members
- Other relevant City of Salisbury Interest Groups

- Relevant Government Departments
- Relevant Service Infrastructure Providers

The wider Salisbury and Playford Community outside of the Study Area were able to participate with information being made available on the City of Salisbury website relating to the project scope. Due to the specific objectives of the engagement approach, widespread promotion was not undertaken. Relevant bodies, community members and groups were engaged on one of four different levels, including;

- Inform
- Consult
- Involve
- Collaborate

Responses from the consulted groups were collected via three primary means including verbal feedback, online survey response, two community drop-in sessions and written letters.

Relevant Government Departments were contacted by written correspondence in either a letter or email form with details of the proposal and an invitation to provide feedback. Feedback provided by Service Authorities who were directly contacted, are referenced in the Greenhills Service Investigation Report.

A workshop was coordinated by the Holmes Dyer team for both Planning and Land Use Services, Department of Infrastructure & Transport, and the City of Playford to secure early feedback and share outcomes and technical investigations where applicable based on the preliminary information available at the time.

A drop-in session was held during week 2 and week 4 of the consultation period was held at the Bagster Road Community Centre and St Kilda Progress Association Hall. These sessions which were held during an evening timeslot providing owners and occupiers and State and Federal Members of Parliament an opportunity to speak the City of Salisbury staff and a Holmes Dyer representative regarding the proposal, clarify questions and impact, and provide direct feedback.

Owners and occupiers of the land within the Study Area and owners and occupiers of adjacent land to the Study Area boundaries and within the broader planning areas were contacted via written correspondence providing information about the Strategic Growth

300+ Letters Sent

27 individuals provided verbal feedback

38 individuals completed an online survey

Framework. Correspondence directed people to a website where additional project information could be found, providing opportunities to provide feedback through an online survey and with a City of Salisbury contact to approach for further information. Alternatively, some individuals chose to contact the Council via phone and verbally provide responses to a set of questions about the proposal.

Prior to and during the consultation period, any planning consultants or landowners who had previously demonstrated interest in developing land within the Study Area were contacted by a City of Salisbury representative to draw attention to the consultation process and secure direct feedback such as to inform the development of the precincts, development timeline estimates and land use preferences.

The wider Salisbury and Playford community outside Study Area were made aware of the proposal via an information page accessible on Council's website, inclusive of the same information sent to stakeholders within the Study Area. The webpage included next steps and future opportunities for involvement in consultation activities.

7.3 Outcomes of the Engagement

This engagement report provides a high-level summary of the input received from various online survey response, verbal feedback, written submissions, drop-in session, workshops, and additional commentary from the engagement period of the 29th of April to the 27th of May 2022.

7.3.1 Confidentiality

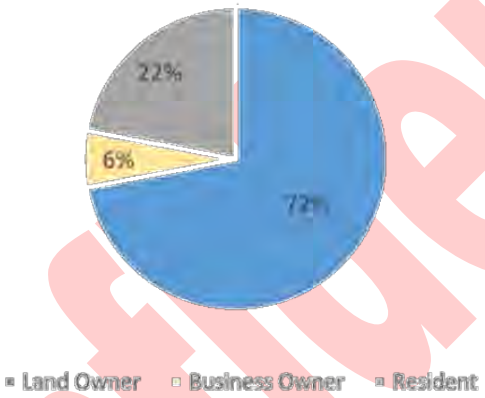
A full consultation summary report, including mapping of the development intentions of each individual landowner who responded during the consultation period has been provided to the City of Salisbury as a confidential document. This development intention information contained within this full document has 'commercial in confidence' elements for the individual property owners and was provided to Council in good faith to inform the strategic planning as part of this Strategic Growth Framework.

It is critical for the ongoing investigation and planning work that will be required to implement the Strategic Growth Framework that open communication channels are established and maintained between Council and the landowners relating to planning and development intentions, and it is appropriate that this early communication is able to be undertaken in a confidential manner to protect the identify and commercial interests of any individual party. While confidentiality had to be managed, it is possible to summarise the general attitude and concerns that were expressed during the engagement period which is summarised in the following sections for general information.

7.3.2 Engagement Survey Outcomes

There was strong interest in the project during the engagement period, and varied views on development timelines and priorities were shared by landowners within the study area. The online and verbal feedback survey tool generated a total of 65 responses. Of the survey responses received, 72% of respondents were landowners within the identified study area. The remaining 28% of respondents either operated a business or were tenants within the study area.

Figure 23. Survey respondent connection to Study Area



Most survey respondents detailed that land within the study area should be used for a wider range of business activities, including industry, warehousing or commercial. Of the 37 respondents, 10 specified that broader business activities should be introduced along Port Wakefield Road, whereas 17 stated that business activities should be introduced across the entirety of the study area and 10 did not specify a preferred land use in their response.

Seventeen (17) survey respondents (26%) recorded that land in the study area should be used for residential purposes, with three of these respondents supporting both employment and residential development opportunities.

The City of Salisbury received a 'standard form response' with sixteen (16) signatories by residents, objecting to the interference to the existing rural residential area with potential industrial or commercial operations and proposing that no change is required to the zoning or land use.

7.3.3 Issues for Consideration

Issues that were raised through the survey as critical considerations for Council to consider as part of the future planning of the study area included;

- Rezoning of land for residential, commercial, or industrial uses;
- Encourage more business growth, new and existing;
- Development of commercial buildings and warehousing;
- Infrastructure provision and/or upgrade including:
  - Access to arterial roads, including Port Wakefield Road;
  - Upgrade road services;
  - Sewer/wastewater/stormwater;
  - Street lighting;
  - Power supply;
  - Green space;
- Increase housing provisions, residential development opportunities;
- Retain residential land
- Business and development support from Council to landowners; and
- Water allocation licenses.

25% of respondents identified some form of infrastructure upgrade was required for the future planning of the Study Area. Another 23% of respondents specifically identified a need for rezoning of land within the Study Area. Some respondents did not provide an answer, or were unsure at the time.

7.3.4 Landowner Development Intentions

Survey respondents were asked if they were planning on establishing or expanding a business in the area. 43% answered yes, 37% no and 19% maybe. One respondent did not answer. Of those who responded yes, 22 stated they would proceed with a development in relation to their business "as soon as possible," and six stated within a 2–5-year period.

7.3.5 Agency Responses

Environment Protection Authority (EPA)

The EPA provided a written response during the engagement period and highlighted that potential intensification of development in the Study Area should have consideration for:

- The interface with the Norther Connector
  - Require sensitive land uses to be appropriately separated from the Northern Connector to manage noise and other environmental impacts.

- Stormwater management
  - Due to the locality of the site, stormwater should be upgraded, and Water Sensitive Urban Design (WSUD) should be implemented (e.g., detention ponds, landscaping, infiltration).
- Interface with EPA licensed activities
  - EPA regulated industries and activities (e.g., Bolivar Wastewater Treatment Plant and a Landfill Depot) should be considered in any intensification of development and it is recommended that a gas assessment is undertaken in relation to landfill sites prior to any development proposals or rezoning within the affected land parcel.

The EPA further stated that more targeted feedback would be provided during the designated public consultation period for future Code Amendments.

Federal Department of Defence

The Department of Defence provided feedback on the Strategic Growth Framework. They outlined their support of urban growth and development, however made note that development must be strategically located as to not affect Defence facilities. Any development within proximity to a defence facility should therefore consider:

- Aircraft noise
  - A reference to the ANEF system and AS2021 be included in the Strategic Growth Framework.
- Bird strike
  - Avoid land uses that attract wildlife
- Extraneous lighting and glare
  - Any future developments are to be comprised of non-reflective building materials
  - Any future development of the land complies with the extraneous lighting controls detailed in NASF Guideline E
- Defence (Aviation Area) Regulations
  - Building height control for aircraft safety
- Navigational, Communication and flight procedures
  - Defence will need to assess the proposal for any impact on Defence navigational aids, Air Traffic Control communications and radar operations and any impact on IFR procedures.

7.3.6 Agency Workshops

Department for Infrastructure and Transport (DIT)

On 12 May 2022, a workshop was held with representatives from Department for Infrastructure and Transport (Andrew Excell and Marc Hycicuk), City of Salisbury, Cirqa and Holmes Dyer to discuss the strategic growth

framework Study Area. The key position points represented by Department for Infrastructure and Transport as part of this meeting are summarised below:

- No more interchanges are proposed to this section of the North South Motorway.
- Port Wakefield Road will continue to serve as a through road and critical local area connectivity. The changes to traffic volume and type may support consideration of new signalised intersections, where demand required for right turn out to access the CBD. Department for Infrastructure and Transport will not support them in multiple locations and need to be strategically planned for where the broad network best requires this infrastructure.
- No immediate plan to consider a speed limit reduction, however as development intensity increases there may be some potential to explore a reduction to 80km p/h.
- General likelihood that existing service roads will be maintained.
- No scenario where a light rail tram between St Kilda and Salisbury would be supported, however a future public transport corridor to space allowance could be identified in the strategic framework to support future infrastructure in the long term.
- The PWR weigh bridge at the south of the Study Area, is historic infrastructure however the space is still required for other SAPOL road safety activities.
- More detailed Growth Modelling linked to Code Amendments will be required to inform Department for Infrastructure and Transport position on infrastructure funding. Agreement that this strategic framework, with additional analysis based on growth scenarios and associated traffic movements being provided by Cirqa could be used as an early test case for the Department for Infrastructure and Transport modelling. With initial outcomes likely to be able to be provided to CoS in June/July to inform future detailed planning post resolution of the high-level strategic growth framework.

Office of Recreation Sport and Racing

A meeting was held on 10 May 2022 with David Nash from Office Recreation Sport & Racing (ORSR), City of Salisbury and Holmes Dyer Representatives to discuss potential opportunities and any state alignment for zoning as part of the Strategic Growth Framework for a recreation zone to reinforce existing noisy sport activities relating to the Southern Go Kart Club and South Australian Gun Club and explore future land uses that are aligned to this general activity.

General support by ORSR to the concept, with confirmation that they receive regular enquiries from sports associations and clubs linked to motorcycling, motorsport, field archery and shooting that are difficult to locate in metropolitan locations and could be suited to this location and form of recreation zoning, with the benefit of improved access because of the North South Motorway.

There is no specific demand or initiative within the ORSR 4-year Infrastructure Plan, but grant funding may become available and a supportive zone to capture this opportunity may assist Council to attract further investment into this precinct.

Planning and Land Use Services

A presentation to the Code Control Group (Meeting 2022.15 – Item 2) was held on 11 May 2022, involving City of Salisbury and Holmes Dyer representatives. The key discussion items from this meeting are summarised below:

- Support the coordination discussions that have occurred to date with the City of Playford on the growth framework and strategic employment planning and encourage this to continue to present a regional perspective to planning that will inform the Regional Planning to commence in 2022.
- PLUS acknowledged the challenges with multiple proponents led Code Amendments within the Study Area and agreed that there needs to be a collective agreement of which ones are positioned such as they are generally aligned with this strategic work and could proceed independent and which ones require wider coordination.
- PLUS confirmed that appropriate measures would be required to provision for infrastructure to the satisfaction of all relevant parties (including Council) prior to any Code Amendment Initiation.
- PLUS, preferred solution for multiple Code Amendment coordination would be either for the landowners to join together into coordinated precincts or Council to lead the Code Amendment. Alternative options, including government involvement and fee waivers would be open to discussions subject to regional perspective, timing and further detailed negotiations with PLUS following the finalisation of the initial Strategic Growth Framework to establish Council's preferred strategic position, staging and prioritisation.

7.3.7 Summary Findings

While there were different views, there was a majority view that the area does require detailed planning to investigate rezoning, with some areas and landowners, specifically those either directly fronting or immediately adjacent to Port Wakefield Road who are looking to redevelopment in the immediate term. The process has identified;

1. Areas of the Study Area where there are discreet groups of landowners with common views on redevelopment and timing that could form a precinct that could potentially proceed through a rezoning process early in the Strategic Growth Framework Timeline.
2. Other sections of the Study Area, where the landowner views are more mixed, with interspersed owners who both want intensification of development in the short term and landowners who want no change. These mixed areas will likely require Council to take a more leading role to form a view on the future direction and likely lead any required Code Amendments.

The feedback relating to development intentions and those landowners, who have already committed resources to the technical investigations and consultants required to lead a proponent led Code Amendment has been used by Holmes Dyer to inform the recommended precinct plans and staging as set out in the recommendations section of this report.

There was strong engagement and interest in the Strategic Growth Framework from landowners during the engagement period, with a high attendance rate at the two drop-in sessions. This level of interest was likely in part a result of the same group of land holders having been affected by the compulsory acquisitions process undertaken to establish the North South Motorway corridor. It will be important that regular communication be continued with the landowner group, as detailed planning progresses.

The key concern by survey respondents was the lack of infrastructure in the Study Area and the need for additional provisions including road infrastructure, sewer and wastewater before any commitment to development related investment in the area could be made.

It is recommended that any future Code Amendment Engagement Plan should extract and update as appropriate, the community and stakeholder mapping and engagement approaches included within the engagement plan provided in Appendix 4. A register has been created from this engagement process of all participants, ranging from those who lodged formal submissions to those who made telephone enquiries during the engagement period with this database enabling Council to keep people informed of the project outcomes and the future consultations activities.

It is recommended that Council retain the information on the City of Salisbury Major Projects website with all existing material. The outcomes of the Study Area and any additional information that may become available should be uploaded onto this website, to enable landowners and any consultants who may be working with them to have access to the most current information and contact details for the nominated City of Salisbury representative.

8.0 Strategic Growth Framework Recommendations

As has been set out in the previous sections of this Strategic Growth Framework, there are several key considerations and inputs that need to be balanced to define the Strategic Growth Framework overall structure, definition of individual precincts and the linked infrastructure and staging assumptions. Holmes Dyer, with key inputs from Greenhill and Cirqa have developed a set of recommendations based on the current available information to provide a coordinated baseline that can be used by landowners, Council and State Government, when considering individual proposals within this area to deliver an orderly development outcome.

Importantly, as more detailed investigations are completed, further discussions are held with landowners and State Government agencies, assumptions set out below may need to change or evolve to capture current development opportunities, balancing the requirement for infrastructure investment and orderly development that will need to be considered on a case-by-case basis.

8.1 Strategic Growth Framework – Study Area Structure Plan

A high-level structure plan for the entire Study Area has been developed by Holmes Dyer. This structure plan has been informed by the below key inputs:

- The findings from the site analysis investigations set out in Section 2.0 of this report
- The technical investigations completed by Greenhill relating to stormwater and service infrastructure provided in Appendix 1
- The transport infrastructure investigations completed by Cirqa provided in Appendix 2
- The agency feedback returned as part of the engagement process set out in Section 7.0 of this report.

For legibility the full Study Area Structure Plan is presented as Figure 24, with the full Study Area broken down to provide additional detail into a southern, central and northern area in the subsequent Figure 25, 26 and 27. For full legibility of these plans, A3 versions are provided in Appendix 5 as a consolidated plan set for reference.

It is anticipated that this Strategic Growth Framework Structure Plan will be used for the following purposes:

- Inform the scope and coordination of stand-alone Code Amendments or infrastructure projects within this area that could include investment by Salisbury Water, landscape and road upgrades, future infrastructure corridors and individual development applications.
- Inform critical negotiations required to be undertaken with adjacent landowners including SA Water to secure access for the open space, pedestrian network and drainage corridors and drainage outflow required to facilitate development across the Study Area in a planned and coordinated manner that maximises development capacity.
- Identify cross precinct connections that may be required at an all of study level to ensure delivery of orderly development. This will be critical to enable informed decision making, where an individual

precinct rezoning may proceed prior to final detailed infrastructure planning or rezoning having occurred across the balance of the Study Area.

- Inform ongoing negotiations with the City of Playford to inform service infrastructure location and connection points, capacity and design, specifically relating to stormwater and road infrastructure that will have a regional benefit.
- Inform the upcoming Regional Planning process due to commence in 2022 by Planning and Land Use Services, to support Council to advocate to State Government the development capacity of the Study Area to provide additional employment land to that forecast within current land use planning models and seek the associated State support and investment to upgrade the critical infrastructure that will be required to realise this opportunity.
- Inform the City of Salisbury Long Term Financial Plan and future detailed planning and technical investigations that are still required to realise the development potential for for the land west of Port Wakefield Road in line with the City Plan 2035 key action.

It is anticipated that the Structure Plan will be updated regularly across the 35-year development timeline anticipated for the land within the Study Area based on current market assumptions. Accordingly, Council should establish a regular review cycle for this strategic work, linked with the 4-year City Plan cycle, to ensure currency of information is available to inform the Long-Term Financial Plan, Asset Management Planning and yearly budget cycle processes.

8.1.1 Recommended Land Use & Zoning Changes

The analysis undertaken by Holmes Dyer as set out in Section 3.0 Economic & Market Overview and Section 7.0 Stakeholder Consultation along with our professional opinion on best practice employment growth area planning recommends a staged land use transition be adopted as part of the Strategic Growth Framework.

As indicated in Section 5.0 the forecast uptake for employment lands across the Study Area will occur over an extended period out to 35 years, this level of development uptake will support Council transitioning to a more intensive employment land-use in stages over an extended timeframe, as infrastructure investment required to support this growth can be designed and delivered based on the infrastructure governance mechanism selected for any individual precinct within the Study Area.

This extended timeline will also allow staged Code Amendments to deliver the Strategic Growth Area that is likely to be a mix of proponent led Code Amendments and Council or State Government led changes to the zoning across the Study Area. From a land-use zoning perspective, there are a range of options relating to the zoning, subzones and overlays that could be applied as part of future Code Amendment(s) that could support the recommended land uses. Further the Code addresses pre-existing use rights for existing established land-uses, which can legally continue to operate within current facilities and intensity irrespective of any proposed zoning change. However, the zoning change may impact on pre-existing land use rights to expand or change operations which would be assessed against the new zoning.

Holmes Dyer has reviewed the current template zoning options under the Planning & Design Code. However alternate zoning, overlay or Technical and Numerical Variations (TNV) that can still achieve the recommended Land Use and overall strategic growth framework objectives, while managing any relevant interfaces to existing or future planned land-uses should be considered by Council on merit at the time of an individual Code Amendment and are not intended to be overly prescriptive given development proposals and the market response to this land will evolve over the full development timeline.

The high-level land use and recommended policy for the Strategic Growth Framework Structure Plan is summarised below.

8.1.1.1 Strategic Growth Framework Concept Plan

The Planning & Design Code supports the use of Concept Plans where a specific spatial area requires a visual expression of the desired development over time. Planning and Land Use Services consider that concept plans are specifically appropriate where:

- Policy and zoning tools available in the Code cannot adequately address the development outcomes envisaged in the concept plan; and
- The subject concept plan has an active policy role in the future staging of development and provision of infrastructure.

Holmes Dyer considers that the Strategic Growth Framework would meet these criteria, and a concept plan for the extent of the Study Area would assist Council to secure the critical drainage infrastructure corridors and detention basins, open space corridors and road widening identified with the Strategic Growth Framework to support the ultimate development configuration and intensification.

The Figure 25 Strategic Growth Framework Bolivar Waterloo Corner – Full Study Area Structure Plan would provide the key inputs that Council would require to create a concept plan as part of a future Code Amendment and should be an early discussion point with Planning and Land Use Services.

8.1.1.2 Employment Land

The economic and market overview and the Strategic Growth Framework Study Area economic and employment forecasts justify the orderly and staged transition of the Rural, Rural Horticulture (part) and Deferred Urban Zone to an employment focussed zone that would primarily support a wide range of commercial, industrial activities, and other employment generating land uses. This land is identified in purple on the Structure Plan provided in Figure 25 Strategic Growth Framework Bolivar Waterloo Corner – Full Study Area Structure Plan.

It is not envisaged that a one size fits all strategic employment or employment zone would be created across all land holdings through a single Code Amendment with a more nuanced

approach, aligned to the development staging and infrastructure delivery likely to result in the best outcome for Council and landowners to secure the highest and best use of the land and realise the associated economic benefit.

The structure plan generally identifies how the land holdings across the Study Area can be clearly divided into discrete precincts by the existing road networks and open space corridors. The existing and future required infrastructure corridors provides clear breaks where different employment focussed areas could be created. This nuanced approach will support a wider variety of employment generating activities, providing opportunities to create areas with a specific focus that could support business clusters, support gateway quality outcomes at key junctions such as the interchange ramps at Waterloo Corner or provide buffers or transition of lower impact employment land uses to an existing more sensitive land use or an area that may have a more sensitive land use in the future.

As set-out in Section 5.0 Holmes Dyer has forecast that approximately 80% of the employment land identified within the Study Area is forecast to include stores, services, office and other retail (including bulky goods) and commercial activities that would typically be considered a low-impact light industrial land-use that would be most closely aligned with an Employment Zone.

The forecasting identified approximately 20% of the employment land demand could be required for manufacturing, which would be considered a Strategic Employment land use with a higher level of noise and other impacts. With the separation opportunities linked to the road and stormwater infrastructure corridors this can be easily catered for within several areas of the Study Area, depending on individual landowner or development outcomes. However, it is Holmes Dyer's view that this would be ideally located within the northern sector of the Study Area, east of Port Wakefield Road and north of Mumford Road. This area will share a boundary with the City of Playford future employment lands, the land holdings are larger and there is less rural residential housing and there is an existing character of established Strategic Employment east of this precinct, that includes several noise generating manufacturing operations that make this area of the Study Area unsuitable for any sensitive land uses.

The transition to employment zoning will likely be delivered by a mix of proponent led and Council Code Amendments and given the disparate land ownership across the Study Area, there will be an ongoing character of horticultural activities and residential uses operated under pre-existing land use rights that will require consideration at a Code Amendment level to ensure the road and infrastructure investment can be delivered to support the employment activity. Further details regarding how the Study Area could be divided into discreet precincts to support this transition is detailed in Section 8.2.

8.1.1.3 Commercial Land

The Bolivar and Waterloo Corner North South Motorway Interchanges provide a unique gateway opportunity into both the Study Area and also the City of Salisbury that could support a more commercial focussed activity centre, such as a roadside service centre or eco or traditional commercial business park. This sort of land use would typically be supported by a standard employment zone, as described in the previous Section 8.1.1.2, but a higher proportion of retail or commercial activity would be ideally suited on these gateway interchange sites.

Individual proponents may propose a more specific land use such as a roadside service centre through a proponent led Code Amendment that Council may wish to consider a roadside service centre or alternate subzone, depending on the alignment of the proposal to the general principles of this Strategic Growth Framework

These commercial gateway opportunities are specifically identified on the structure plan in Figure 25 Strategic Growth Framework Bolivar Waterloo Corner – Full Study Area Structure Plan in a blue colour. Ultimately the boundary between the blue and purple land uses, will be flexible to respond the individual development opportunity and market demand.

8.1.1.4 Recreation Zone

Bordered by Driver Road, Robinson Road and the North South Motorway is a triangle of land that is currently a mix of zones including Open Space land containing the Southern Go Kart Club, Rural Horticulture containing the South Australian Gun Club and a Deferred Urban parcel with a single private owner and land owned by Department for Infrastructure and Transport acquired as part of the North South Motorway. This parcel is identified in dark green on Figure 25 Strategic Growth Framework Bolivar Waterloo Corner – Full Study Area Structure Plan.

The City of Salisbury and Office of Recreation Sport & Racing during the stakeholder consultation identified that there may be a potential in this precinct to reinforce and strengthen the existing 'noisy recreation' land uses, to provide a unique recreation offering in metropolitan Adelaide, to cluster this activity within an inner metropolitan location that is highly accessible while not creating impacts on sensitive land uses. This direction would be further strengthened by establishing a recreation zone over these land holdings that could better support the establishment of ancillary retail/commercial clubrooms and ancillary entertainment venues linked to the recreation uses that could strengthen the economic benefits that could be realised from this unique location.

8.1.1.5 Open Space Zone

The existing open space zone within the Study Area may need to be expanded to reflect the network of open space and drainage corridors identified as part of the Strategic Growth Framework to support both passive and active recreation and the critical stormwater channels

and wetland areas. Extension of the Open Space Zone via future Code Amendment may be appropriate where the Open Space Zone aligns with a boundary cadastre and should be considered by Council as part of all future Code Amendments within the Study Area. Timing for this change to an Open Space Zone would be less critical, if a concept plan as identified in Section 8.1.1.1 is established to guide the necessary provision of land for the drainage and open space corridors through individual development application throughout the Study Area.

8.1.1.6 Rural Horticultural Zone

The area of existing rural horticultural zone, bounded by the City of Playford boundary to the north, North South Motorway to the east, Coleman Road to the west and the Waterloo Corner Interchange Connector to the south, has a strong existing character of rural horticulture with many properties operating intensive horticultural activities, with significant investment in greenhouses and other infrastructure. This area, of all parts of the Study Area has not experienced the same level of pressure for commercial or employment activities as the land parcels fronting Port Wakefield Road. This parcel is identified in light green on Figure 25 Strategic Growth Framework Bolivar Waterloo Corner – Full Study Area Structure Plan.

It is anticipated that any land use transition within this precinct would be later in the overall 35-year development timeline, and there is no immediate pressure to change the current land use operations. Given this situation, and that long term forecasting of demand for land-use is challenging out beyond 10 years, it is recommended that this land and any decision on its highest and best use in the future, whether that be for further employment land or an alternative more sensitive land use (that could include consideration of residential), be deferred and ongoing land use operations continue under the current zoning, with encouragement for value-add horticultural options to develop and expand on the existing established operations to ensure viability.

To ensure that a wide range of land-use options remain a viable consideration into the future, it will be important that this area is protected from more intensive land-use creep and that approval of any land-use that may prevent future sensitive land-uses be discouraged. To further support future options, it is recommended that tight subdivision controls be established to prevent any further fragmentation of land holdings through exploration of a Limited Land Division Overlay.

The community consultation that has informed this Strategic Growth Framework, identified existing infrastructure challenges relating to road widths and road infrastructure and lighting and stormwater management. Traffic movement through this area, to the major tourist precinct of St Kilda has changed as a result of the North South Motorway construction and the truncation of the previous direct route via St Kilda Road. It is likely that road infrastructure

investment to this St Kilda route will be required, including upgrade of lighting at key corners for safe vehicle movement across the short to medium term. As a result, it would be prudent for Council to complete a road cross section study and design for the major traffic routes and intersections/corners and if additional land is likely to be required consider establishing a Local Road Widening Overlay as part of a future Code Amendment to preserve the required road corridors that can support both the current and future demands within this precinct.

8.1.1.7 Infrastructure Zone

The existing Infrastructure Zone has been appropriately established over the SA Water Bolivar Wastewater Treatment Plant (WWTP) and Federal Defence landholdings, and no change is required to this zoning framework.

There are two localised exceptions that are recommended to be picked up as part of a future Code Amendment. The first is an area of WWTP buffer land that was dissected from the main site as part of the North South Motorway. The majority of this land is required for a drainage corridor to connect development run-off from both the north and south to the existing outfall channel and this land could be transitioned to Open Space Zone in Council ownership. Areas of this land that are potentially surplus to drainage requirements (subject to confirmation as part of the future stormwater study discussion in Section 8.1.3) could be rezoned for either Caravan and Tourist Park (if adjacent to the existing caravan park) or as employment land (in the northern part of the site adjacent the City of Salisbury's Recycled Water Site) when the immediate adjacent Rural Zone is rezoned.

A second exception, is that while the SA Water Bolivar Wastewater Treatment Plant is technically outside the Strategic Growth Framework Study Area, Figure 25 Strategic Growth Framework Bolivar Waterloo Corner – Full Study Area Structure Plan has identified an opportunity to use of part of the buffer lands owned by SA Water for drainage and open space pedestrian corridors. This intent maximises the development capacity and potential for the adjacent employment land and increases the likelihood that Council can secure the full corridor required early in the study deliver timeline, as negotiation to access this corridor only needs to occur with a single State Government agency. If this access can be negotiated, it is not considered that the zoning would necessarily need to change, however limitations on land division within an Infrastructure Zone may make handover of the land to Council on a separate title more difficult, and access may need to be secured via rights of way or other form of easements or a special approval sort for any land divisions that may be required.

8.1.1.8 Caravan and Tourist Park Zoning

The existing Caravan and Tourist Park Zoning is not recommended to change, as the current zone is suitable for the current use and future proposed use. Any adjacent land zone changes

specifically to the north will need to consider the sensitive nature of this existing land use and would likely result in this land being more suitable for a light industry or commercial land use, noting that the existing tourist park is impacted by the current traffic noise from both the North South Motorway and Port Wakefield Road.

8.1.1.9 Coleman Road Waste Transfer Station

The City of Salisbury has taken over ownership and the ongoing management of the former Coleman Road land-fill site in the northern section of the study area, currently zoned Rural Horticulture. This requires Council to undertake groundwater monitoring, minimisation of landfill gas emissions and improvement of on-site drainage to protect the groundwater system and increasing the cap coverage to the landfill which has an ongoing capital cost to Council. Opportunities for alternate use of this site, to harness energy from the methane extraction or another form of eco-industrial outcome could be explored by Council. A landfill site would typically be in a resource extraction or infrastructure zone that would not normally support innovative employment activities.

Any innovative solution to the ongoing operation will need to considered the existing and future buffers required to adjacent horticultural activities within the balance of the Rural Horticultural Zone that should be identified on a Concept Plan created as outlined within Section 8.1.1.1.

There is no existing sub-zone within the Code Library Framework, that specifically supports this sort of opportunity, and the best policy approach and timing would need to be negotiated on an individual basis with Planning and Land Use Services.

8.1.2 Recommended Transport Initiatives (Cirqa)

Cirqa have completed a traffic infrastructure assessment, of existing and planned development capacity proposed as part of the Strategic Growth Framework, to inform the development content of the Structure Plan. The full report can be view in Appendix 2 – Cirqa Transport Investigations.

The key principles and planning policy controls that informed the Structure Plan are reproduced below:

- New connections to the North-South Motorway, as an established non-stop transport corridor, are not supported.
- Access between development precincts and arterial roads such as Port Wakefield Road and Waterloo Corner Road should be facilitated via service roads and not direct access to those arterial roads.
- Service roads should be left-in/left-out only and equipped with acceleration/deceleration lanes (designed in accordance with relevant Austroads' criteria, relative to the posted speed limit).
- Consideration by the Department Infrastructure & Transport of a reduction of the Port Wakefield Road speed limit would assist in reducing the level of infrastructure improvement required on Port Wakefield Road, as well as assisting in achieving better safety outcomes (i.e., for uncontrolled right turns from side/service roads) and should be an advocacy position that the City of Salisbury adopt as an outcome of the Strategic Growth Framework.
- U-turn lanes may be used to facilitate turning in Port Wakefield Road where right turns are not supported at intersections and two have been identified on the structure plan in locations recommended to service traffic movements as intensification of development occurs across the Study Area.
- The typical road hierarchy within the Study Area will provide Sub-arterial or Collector Road access to Port Wakefield Road and Waterloo Corner Road. Collector Roads would then link to Local Roads. Securing the corridors for these roads, through individual land ownership in some precincts may impact on the timing and form of development, especially where a central landowner whose land provides a critical connection is not part of the initial development scheme. As one potential solution in some locations, Council should advocate to the Department for Infrastructure and Transport for the handover of land holdings that run parallel along the North South Motorway, for the potential delivery of a local road network that can service an individual precinct as an alternate to a slip lane or central road corridor that may be limited by land holding and development timing. The ultimate cost to construct this local road network would still be shared by the property owners.
- Shared Use Pedestrian/Cyclist network should align with stormwater and open space corridors and adjacent arterial corridors to maximise the efficiency of the space.

- Collector Roads should be designed with facilities for pedestrians and cyclists and for future public transport provision.
- Port Wakefield Road is gazetted for road trains, so consideration should be given to extending road train access to designated precincts of land within the Employment zoning. The precinct bounded by Heaslip Road, Waterloo Corner Road and the North-South Motorway may be most suitable for provision of new road train gazettal.
- Consideration should be given to the increase in public transport services throughout the study area, noting existing services are limited. Alternate transport offering (to motor vehicle) is likely to assist in reducing associated traffic volumes on the surrounding road network. Further, future east west transit corridors that could connect Salisbury City Centre to St Kilda and the ultimate development delivered through the Study Area should be considered and consideration of reserving a corridor included as part of the Structure Plan.

The planning policy controls to facilitate implementation of the general principles above could include:

- Future Local Road Widening Overlay (applicable to Council-owned roads);
- Future Road Widening Overlay (applicable to Department for Infrastructure and Transport owned roads);
- Major Urban Transport Routes;
- Non-stop Corridor Overlay;
- Traffic generating development Overlay; and
- Major urban transport routes.

Additional legislative requirements may also be applied as needed to ensure adequate land is available. This includes the Metropolitan Road Widening Plan (MARWP) which is typically reflected on land titles.

8.1.3 Recommended Infrastructure Initiatives (Greenhill)

Greenhill has completed a preliminary service infrastructure assessment of existing infrastructure and likely additional augmentation and infrastructure as part of the Strategic Growth Framework to inform the development content of the Structure Plan. The full report can be view in Appendix 1 – Greenhill Preliminary Service Infrastructure Report.

A challenge in respect to infrastructure planning is that the service authorities, specifically SA Power Networks (SAPN) and SA Water require an advanced level of planning and forecast development capacity in order to be able to provide information on augmentation costs and staging. While preliminary feedback has been provided to date, ongoing negotiation following finalisation of the Strategic Growth Framework is required with the key service authorities to secure this more detailed information and inform the staging and costing for any required infrastructure agreements. Typically, this level of detail would be finalised as part of further investigations undertaken to inform a Code Amendment. Greenhill, at the request of the City of Salisbury, has requested that SA Water and SAPN continue with their internal planning and investigation over the Study Area, to communicate the likely solutions for servicing the precincts direct to City of Salisbury and to inform any future Code Amendment investigations, outside the timeline available to complete this Strategic Growth Framework.

The requirement for a detailed stormwater solution through the Study Area was a major focus of the Greenhill investigations, considerate of the existing low nature and flooding risk of the Study Area and the lack of major stormwater infrastructure in this precinct. A preliminary stormwater layout, including a network of storage wetlands/ponds and drainage swales/underground pipe networks has been developed and has informed the Structure Plan set out in Figure 26.

More detailed stormwater investigation modelling, including negotiations with the City of Playford, is required to develop a stormwater management plan and stormwater infrastructure to inform the roll-out of development within the Study Area. The further detailed stormwater investigations would enable Council to investigate the business case to expand the Salisbury Water network west of Port Wakefield Road, and the linked approach to stormwater capture and treatment whether this be at an individual site or all of catchment level. While the delivery of catchment wide stormwater solutions, owned and managed by the City of Salisbury and joint funded by developers either as a cost per hectare charge paid into a stormwater fund or as part of the broader infrastructure agreements, individual site management to pre-development flows may be required for early project delivery until the downstream system can be constructed to manage any short-term flooding risks. This interim solution could be transitioned to further development potential on these sites as part of a future expansion once the downstream system is in place or be a permanent solution of the overall stormwater system subject to negotiation with each individual party.

Ultimately, the feedback from the service authorities relating to capacity and augmentation charges and the additional stormwater investigations will need to be advanced by the City of Salisbury to allow the associated cost charges and frameworks to be identified at either a precinct or individual site level to inform the negotiation of infrastructure agreements as part of either a future Code Amendment or an individual development proposal.

Figure 25. Strategic Growth Framework Bolivar Waterloo Corner – Full Study Area Structure Plan

(Full Resolution Version available in Appendix 5 (click here) for legibility of notes/legend)

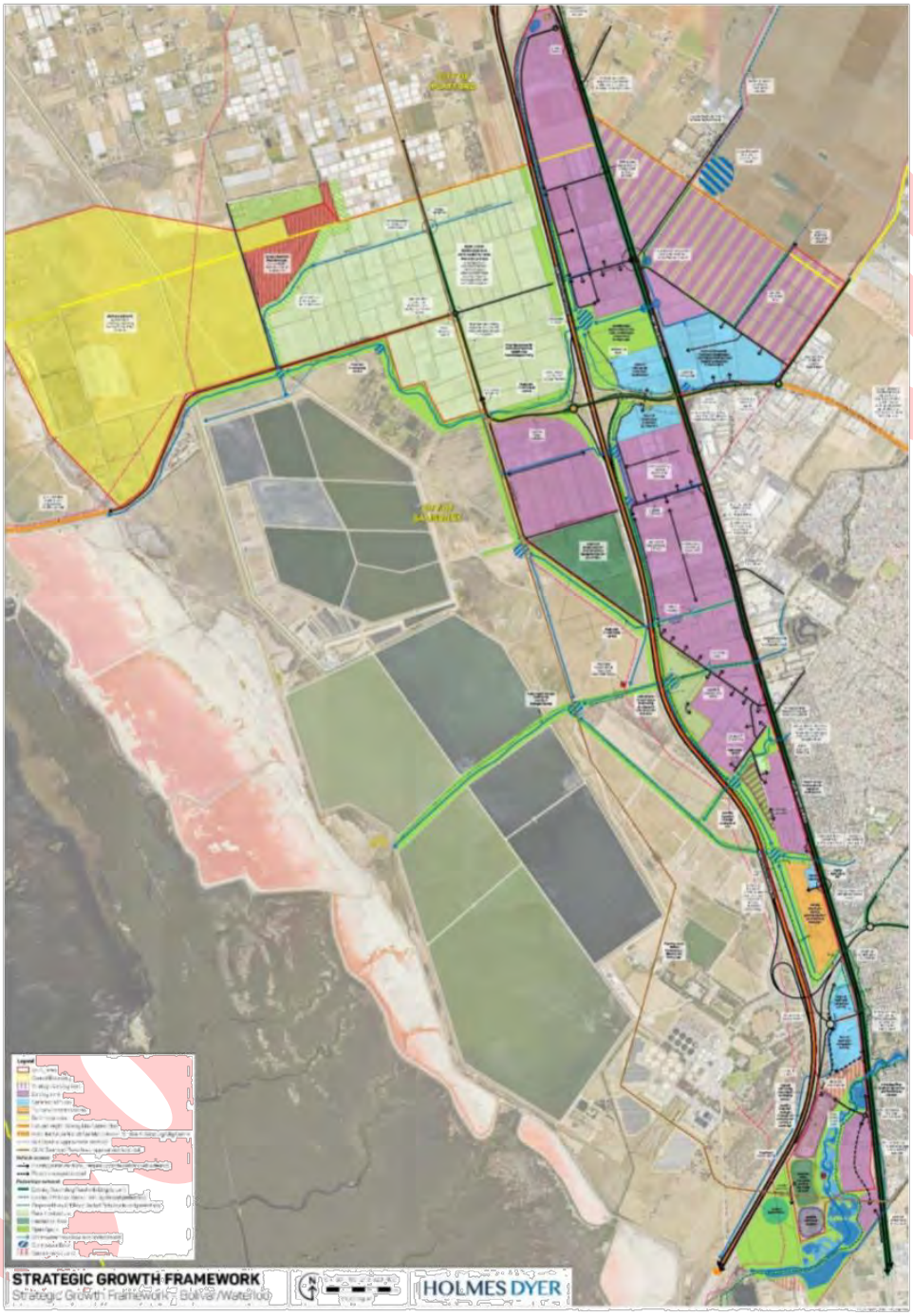


Figure 26. Strategic Growth Framework Bolivar Waterloo Corner– Structure Plan South
(Full Resolution Version available in Appendix 5 (click here) for legibility of notes/legend)

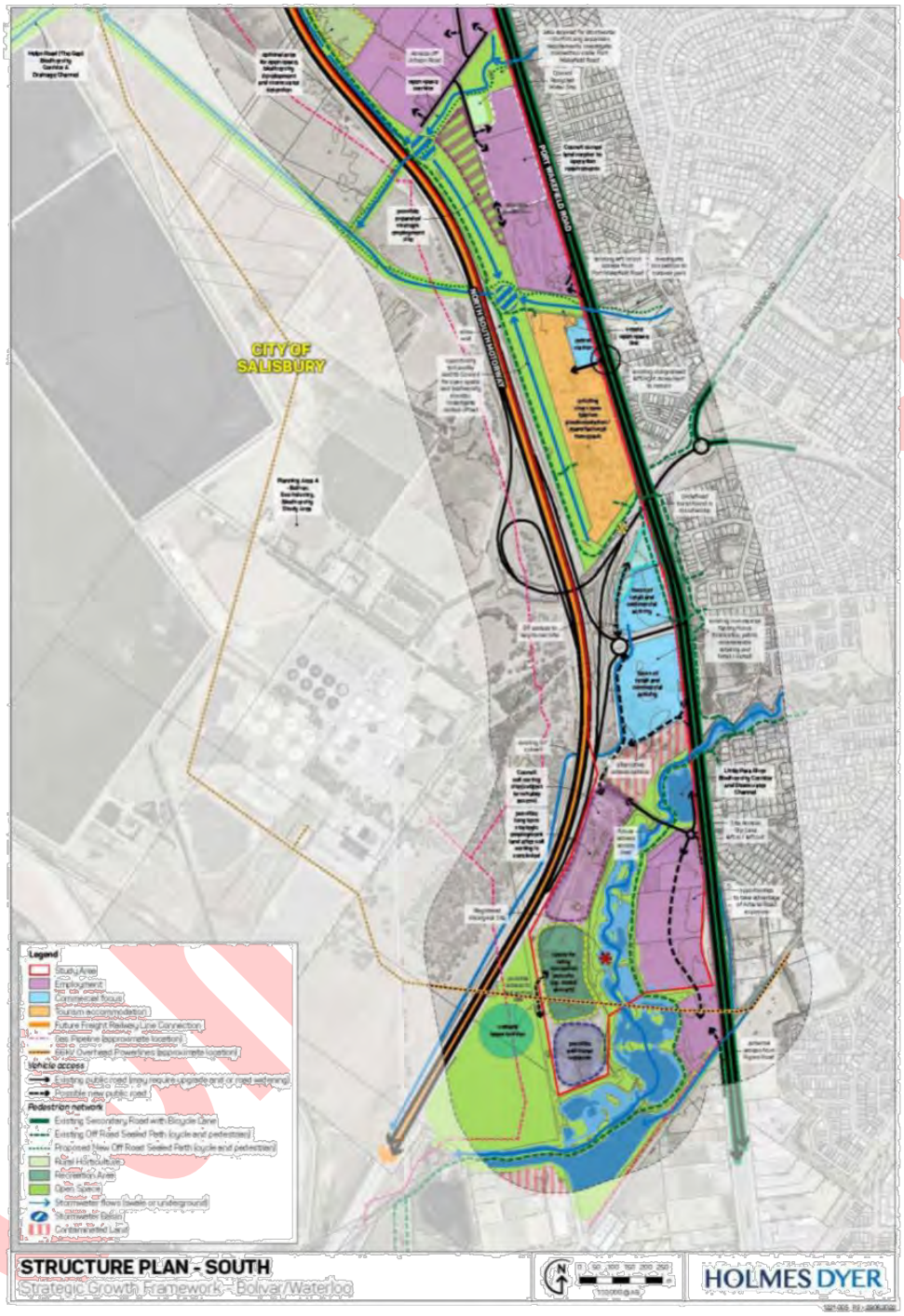


Figure 27. Strategic Growth Framework Bolivar Waterloo Corner – Structure Plan Central
(Full Resolution Version available in Appendix 5 (click here) for legibility of notes/legend)

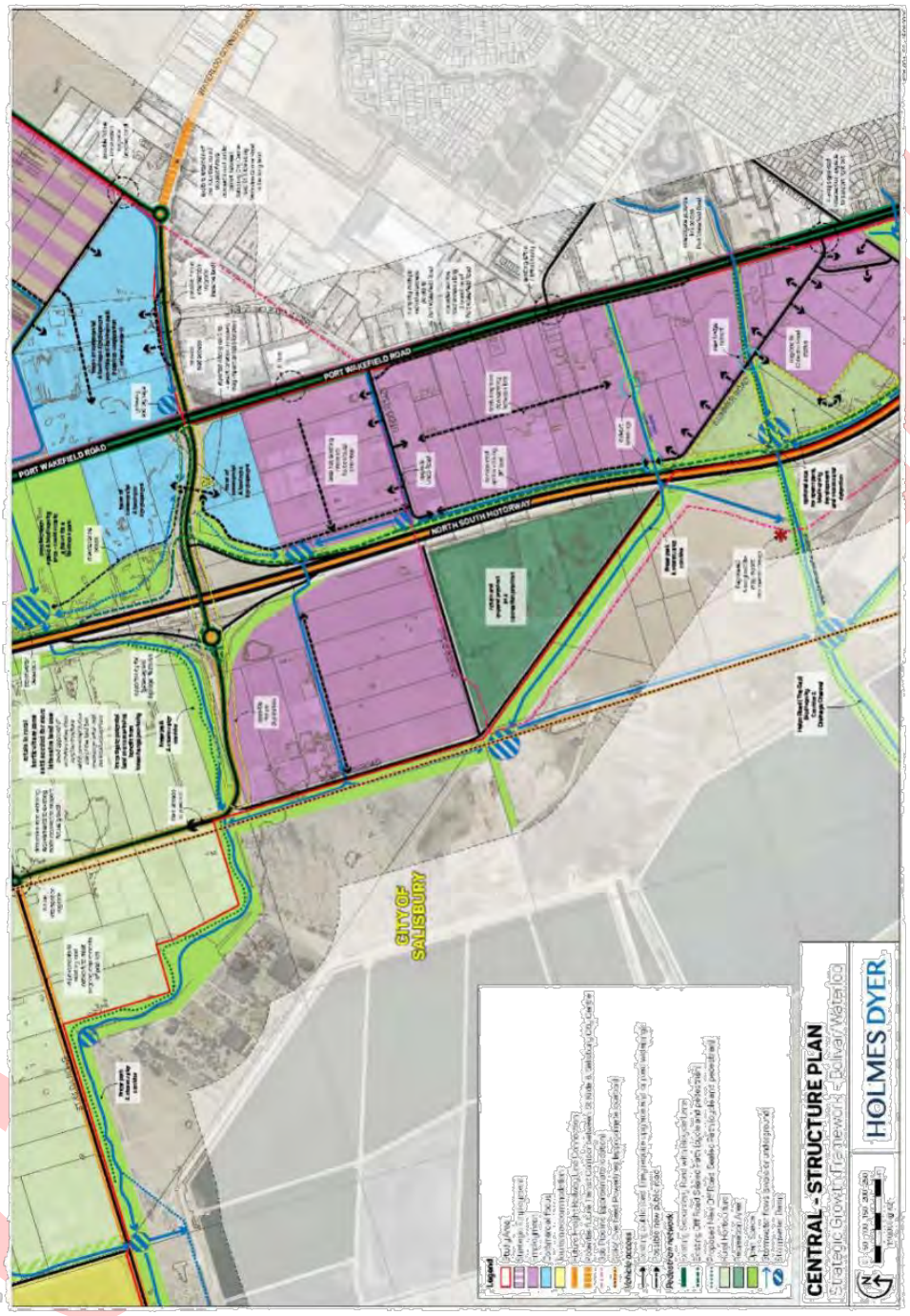
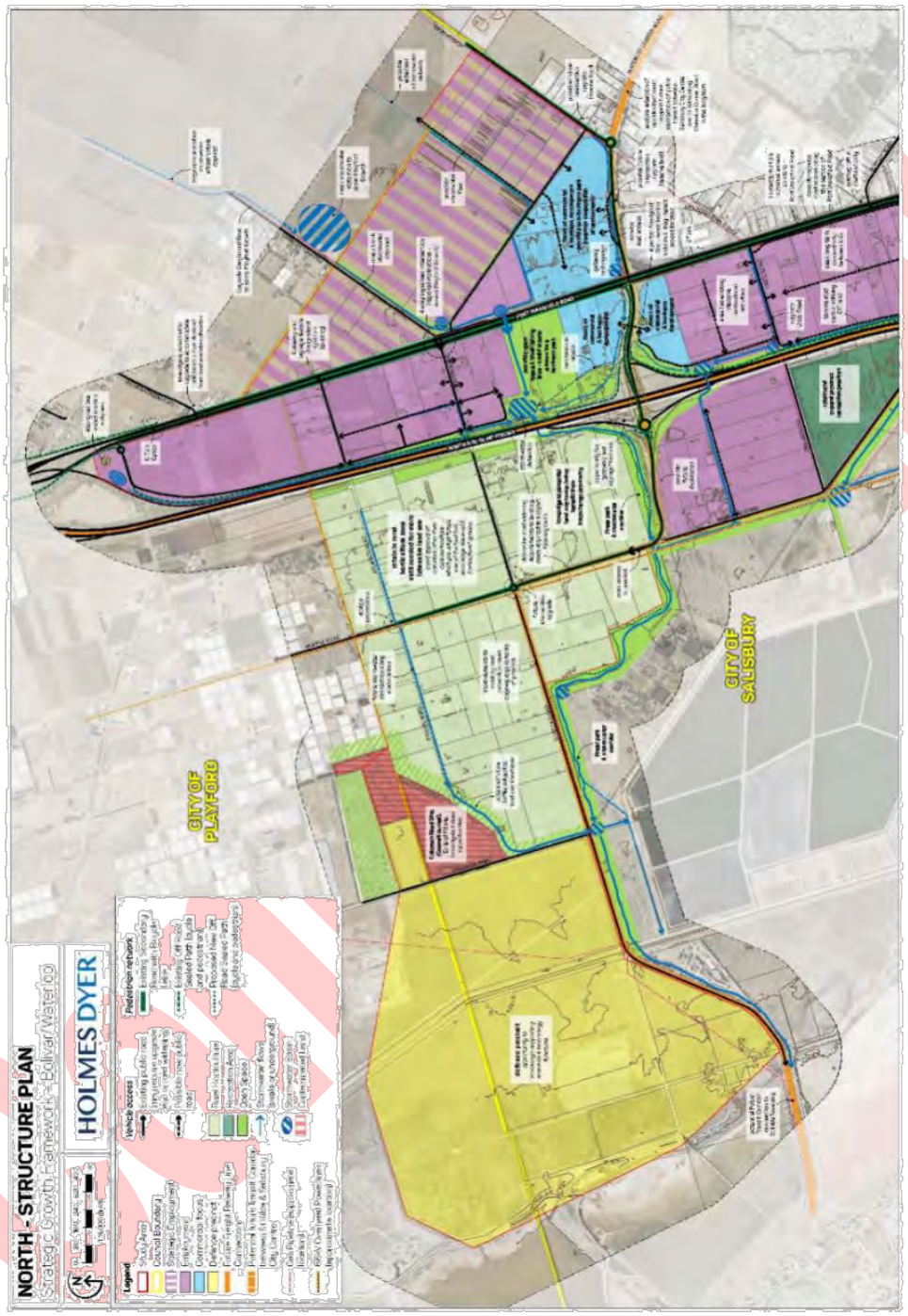


Figure 28. Strategic Growth Framework Bolivar Waterloo Corner – Structure Plan North
(Full Resolution Version available in Appendix 5 (click here) for legibility of notes/legend)



8.2 Precinct Approach & Infrastructure Planning Sub Areas

While there is a logic to the division of the subject land into Code Amendment areas that would be either Council or Proponent Led, dependent on development readiness within the overall Structure Plan developed for the Strategic Growth Area, infrastructure planning and delivery will need to be developed at a sub-area level.

Ultimately, Council should ensure a flexible approach is adopted to ongoing planning that could support the programming of Code Amendments to capture existing developer interest and economic development in an orderly manner, with the infrastructure investigations continuing at a more sub-area granular level that can be linked to the selected infrastructure agreement model to maintain flexibility for boundaries to change as will be required as the delivery of this area evolves.

Infrastructure sub-areas by their nature are required to be more granular linked to landform and stormwater directions and do not always align neatly with a boundary linked to landowners and responsibility for future Code Amendments. As a result, there are different boundaries that have had to be drawn for Code Amendment responsibility precincts, Infrastructure Precincts and Traffic Modelling Precincts that are set out on the following pages. To facilitate cross tabulation a table is reproduced below that identifies the relevant sub areas that are set out in this section of the report.

To assist Council with the immediate planning and consideration of Proponent led Code Amendments that are already proposed, Holmes Dyer has split the Strategic Growth Framework Structure Plan into eight indicative Code Amendment Precincts which consider the area of land required to be considered to ensure orderly development.

For some precincts, further consultation is required to identify development interest timing given the extended delivery timeline of the Strategic Growth Framework and high level of consultation being able to be undertaken to date. It is anticipated that some of these precincts, specifically Precinct 4 Bolivar Centre could be broken into smaller sub-precincts should a group of landowners seek to proceed ahead of a broader rezoning process that Council may explore over the Study Area. This should be informed by the granular sub area infrastructure and transport modelling areas to determine if this sub-precinct delivery is orderly within the context of the broader Strategic Growth Framework.

Land within the City of Playford both above Coleman Road and between the North South Motorway and Greyhound Road, has been included as part of the Figure 25 Strategic Growth Framework Bolivar Waterloo Corner Full Study Area Structure Plan to ensure coordination with planning underway by the City of Playford to the North. Given this land and timing and decisions relating to its delivery will be the responsibility of the City of Playford this land has not been identified as a precinct.

Should Council and Planning Land Use Services agree to the inclusion of a concept plan within the Planning and Design Code to align with the Strategic Growth Framework, Holmes Dyer would recommend that the minor changes required to protect the Rural Horticulture land identified as Precinct 5 be undertaken by Council as a Code Amendment to set the overall structure and protection measures, early in the overall delivery timeline.

Holmes Dyer has produced the following table, identifying those sub-areas that apply to each individual precinct as set out in the table below and the boundaries and set out on the subsequent pages. Section 8.3 provides additional details for each Precinct on the assumptions relating to delivery timing and infrastructure.

Table 18. Strategic Growth Framework -Precinct Cross Tabulation

Recommended Code Amendment Precincts*	Predicted Code Amendment Responsibility*	Priority*	Stormwater Infrastructure Sub-Area	Transport Modelling Sub-Area
Precinct 1 – Little Para River (South)	Proponent Led	Immediate	1A (part)	1.3 (part)
Precinct 2 – Waterloo Corner Interchange	Proponent Led	Immediate	3 (part)	3.3, 2.4
Precinct 3 – Waterloo Corner Triangle	Proponent Led	Medium	3 (part)	3.1
Precinct 4 – Employment Land Balance Areas	Council Led	Medium	2A, 2B, 2C (part), 1A (part)	4.2, 2.5, 2.6, 2.7, 2.8, 2.9, 1.1, 1.2, 1.3 (part)
Precinct 5 – Rural Horticulture Protection Measures and Concept Plan	Council Led	Short	4	4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10
Precinct 6 – Recreation Area	TBD	Long	2C (part)	4.1
Precinct 7 – Strategic Employment Balance Areas	TBD	Long	3 (part)	3.2
Precinct 8 – Coleman Road	Council Led	Long	4	N/A

** Subject to change in respect to individual developer interest and future Council decisions*

The priority category in the above table is considered to have the following timelines:

- Immediate – Work to commence immediately, with landowners and their nominated planning consultants to consider a Proponent Led Code Amendment, subject to required investigations being provided by the landowners, where aligned with the general framework set out in this document.
- Short – Work to commence within the next 12-24 months
- Medium – Work to commence within the next 3-10 years, however subject to the detailed investigations being completed and the level of land-owner interest, full precincts or sub-precincts could be bought forward.
- Long Term – No interest identified, likely to be out beyond 10 years, unless new interest is identified.

Figure 29. *Precinct Boundaries*

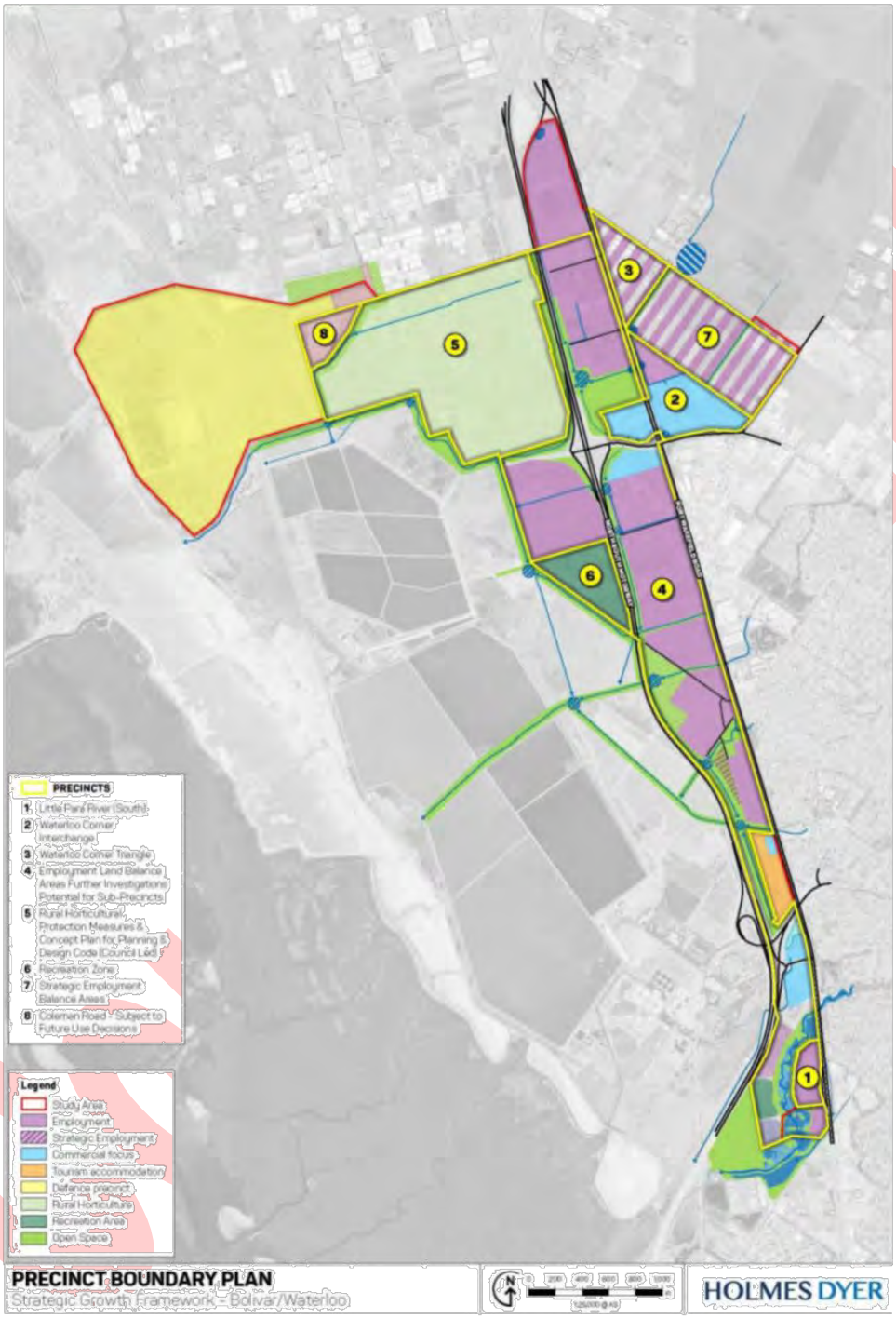


Figure 30. Stormwater Funding Sub-Areas (Greenhill)

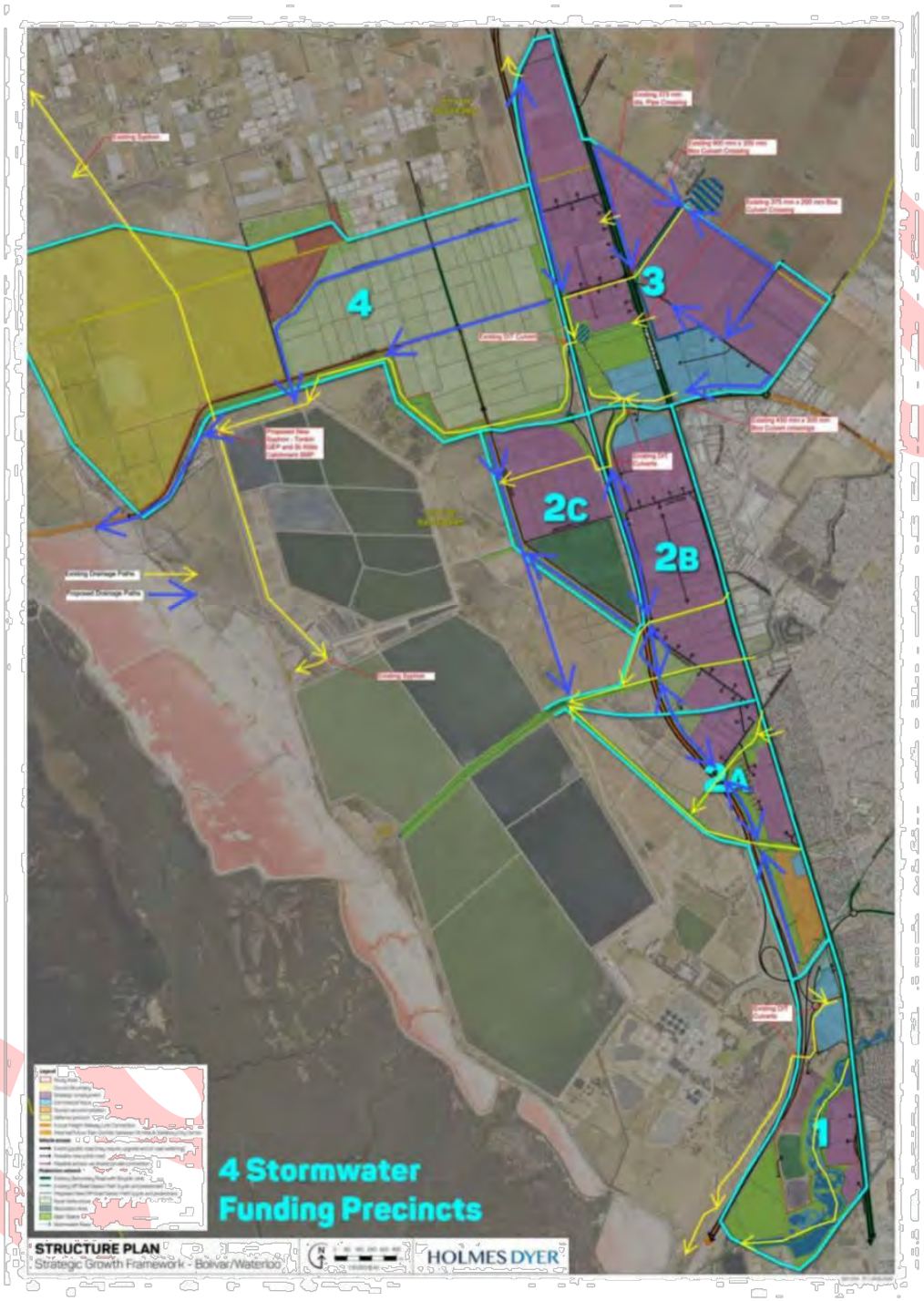
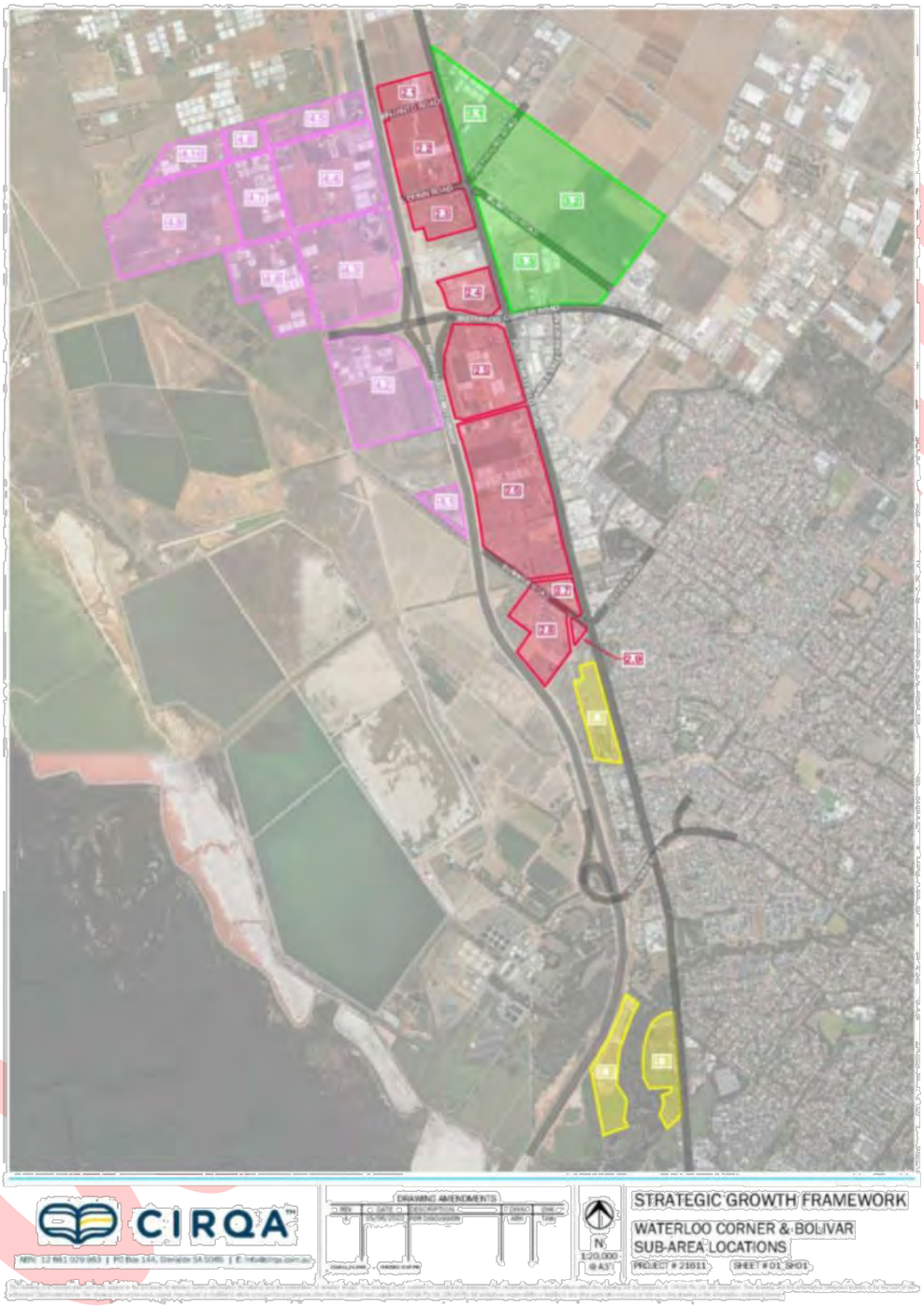


Figure 31. Traffic Modelling Sub-Areas (Cirqa)



8.3 Recommended Code Amendment Precincts

8.3.1 Precinct 1 – Little Para River (South)

Precinct 1 is envisaged under the Structure Plan to be used for employment uses, capitalising on its exposure and direct access to Port Wakefield Road.

This discrete development parcel containing three titles sits at the far southern section of the Study Area and requires access from Port Wakefield Road via a left in / left out arrangement at the northern end of the precinct positioned to avoid the existing Department for Infrastructure and Transport Weighing Station.

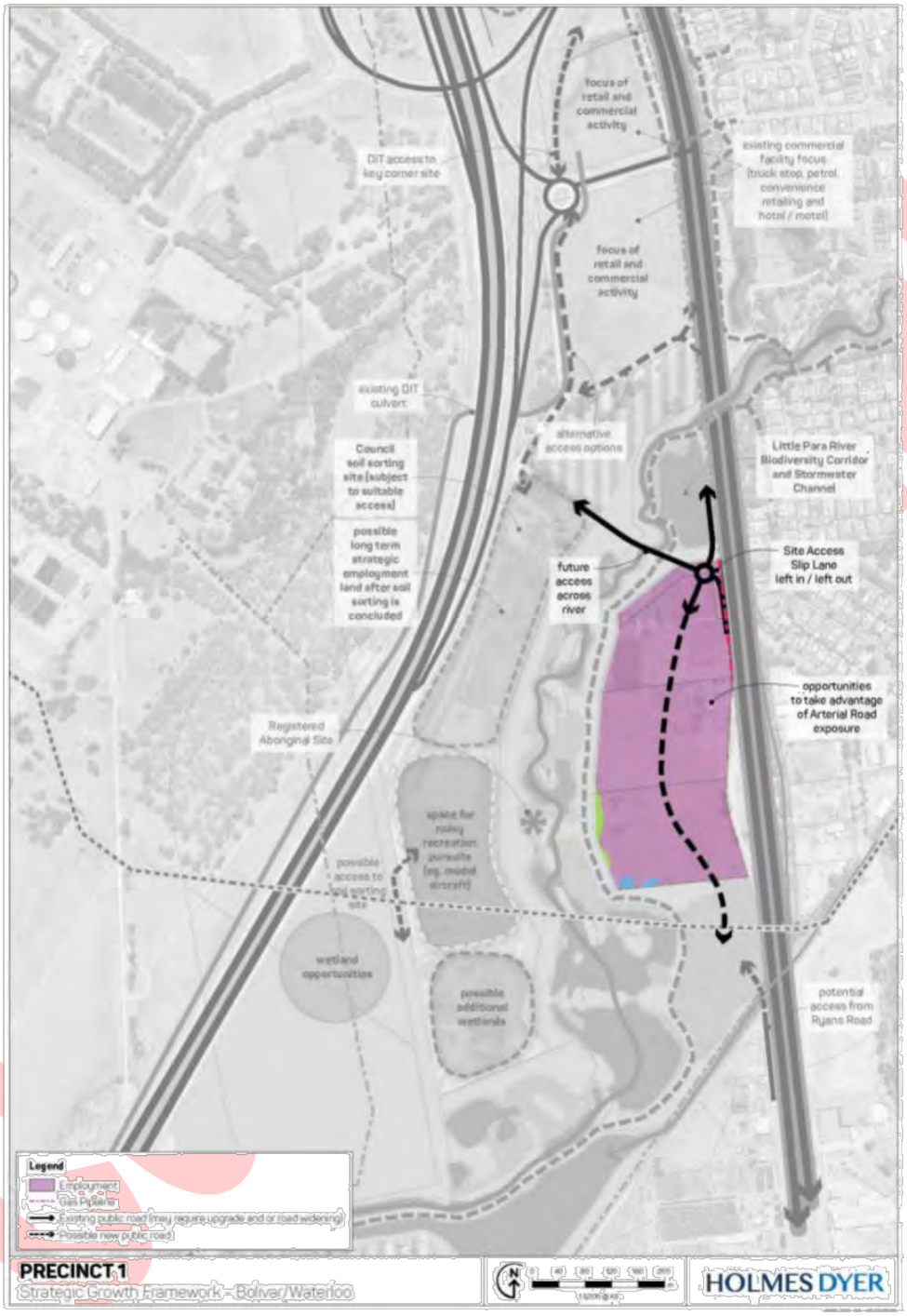
This new access point needs to be designed to not only provide internal circulation to these three titles but also a future connection point to the City of Salisbury land on the western side of the river corridor that is currently land locked. While Department for Infrastructure and Transport has granted the City of Salisbury temporary access immediately north of the Little Para River Corridor in the left slip lane for the OTR, this access approval is provisional for Council use only and a more permanent access to the eastern land holdings must be provided through this precinct as part of a future Code Amendment, with construction of the required bridge over the river not required until a future land use is determined for Council's interim soil sorting use.

Current flood mapping for this land holding identifies inundation during the 1% Annual Exceedance Probability (AEP) rainfall event, with flood mitigation and development floor levels required to be developed prior to rezoning of this land to ensure developability.

Stormwater outflow volumes and the necessary quality controls (reed beds, gross pollutant traps etc) will be required but logically water should be directed into the Little Para River without detention, given the site's location close to the river's outfall.

Holmes Dyer understands that there is interest in a Proponent Led Code Amendment for this parcel to be developed in the short term. Given the clear infrastructure requirements, it is anticipated that this could be negotiated directly with the proponents as part of the Code Amendment with any infrastructure contribution or road connection corridors negotiated at this point and secured via an infrastructure deed. Given the discrete location of this development parcel, if the traffic connection to the eastern sites can be secured, this precinct could proceed ahead of broader planning across the balance of the Strategic Growth Area Framework Study Area.

Figure 32. Precinct 1 – Little Para South Detail Plan



8.3.2 Precinct 2 – Waterloo Corner Interchange

This precinct is envisaged under the Structure Plan to be used for employment commercial uses, linked to the Gateway position of the precinct on the Waterloo Corner Interchange. Strategic Employment uses to the back of the precinct fronting Mumford Road are envisaged that will mirror that uses proposed for the north side of Mumford Road into the future.

This precinct will be predominantly accessed via Waterloo Corner Road and Mumford Road and will serve as a major Gateway to Waterloo Corner Road and the North South Motorway. New access points and configurations will need to be negotiated with Department for Infrastructure and Transport both east, and west of Port Wakefield Road will provide an opportunity for a new local access / maintenance road within Department for Infrastructure and Transport land which connects all properties north of this point. To the east, site access might be via a left in / left out slip road or a roundabout / traffic signals at the corner of Waterloo Corner Road and Angle Vale Crescent, with existing traffic volumes on this section of Waterloo Corner Road and Angle Vale Crescent, requiring local traffic planning to inform the final intersection design and distribution of costs.

The junction between Greyhound Road and Port Wakefield Road has been identified in the Structure Planning as a location for a future 4-way signalised intersection, that could service primarily regional growth in the City of Playford and development parcels to the north of this precinct. Precinct 2 is not considered to contribute traffic of a volume that would trigger upgrade to this intersection, but any connections to Mumford Road will need to consider this future infrastructure.

Current flood mapping for this land holding identifies inundation during the 1% Annual Exceedance Probability (AEP) rainfall event. Greenhill's preliminary investigations have identified that flood waters are ponding to the eastern side of Port Wakefield Road within this precinct with stormwater overland flows being blocked and stored in local depressions. Flood mitigation and development floor levels are required to be developed prior to rezoning of this land to ensure developability given the current flood mapping pre-dates the North South Motorway delivery.

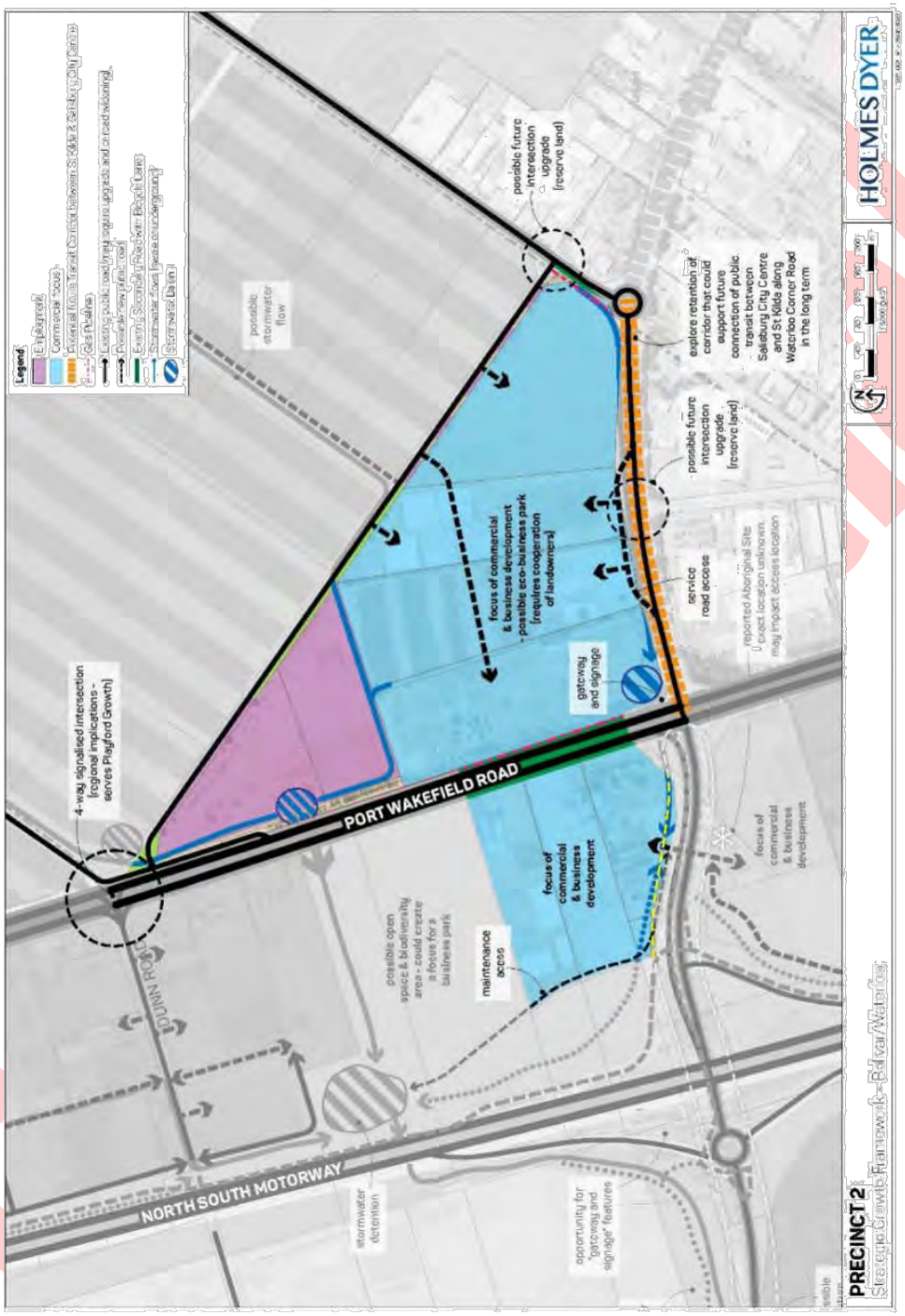
Land acquisition for stormwater detention would logically occur immediately east of the North South Motorway, just north of Waterloo Corner Road, where a Department for Infrastructure and Transport channel provides an outfall to the west of the North South Motorway on Department for Infrastructure and Transport land, which should be acquired by Council to provide critical drainage and open space land required to support both this precinct and regional stormwater flows from the City of Playford once Greater Edinburgh Parks is developed. This open space land transfer should be confirmed ahead of the Code Amendment for Precinct 2, as alternatively a larger volume of on-site detention would be required.

Stormwater detention will be critical for this precinct, combined with Precinct 3 and 4 and the future development capacity of the City of Playford land to the immediate north so as not to exceed the capacity of the existing St Kilda Road channel and downstream channel limitations of Helps Road Drain (the Gap) through the Bolivar Wastewater Treatment Plant.

A detention basin connected to stormwater channels along Waterloo Corner Road will be required to temporarily hold water in major flood events until it can pass under Port Wakefield Road in the existing 450mm x 300mm box culvert. Stormwater channels will be required to direct flows to these key road culverts and to make provision for upstream flows as indicated on the Structure Plan.

Holmes Dyer understands that there is interest in a Proponent Led Code Amendment for part of this precinct to be developed in the short term, with landowner coordination and a planning consultant already engaged. As part of a Proponent Led Code Amendment flood modelling, stormwater infrastructure design, informed by Council's acquisition of the land immediately east of the North South Motorway from the Department for Infrastructure and Transport will need to be resolved, along with the traffic access points identified within the Structure Plan. If these investigations are completed, the infrastructure funding to support the rezoning of this land could likely be agreed ahead of broader planning across the balance of the Strategic Growth Framework and contributions secured via an Infrastructure Deed.

Figure 33. Precinct 2 – Waterloo Corner Interchange



8.3.3 Precinct 3 – Waterloo Corner Triangle

This precinct is envisaged under the Structure Plan to be used for Strategic Employment uses given there are no sensitive land uses within proximity of this precinct, aligning to the established character of Strategic Employment Zone in this part of Salisbury east along Waterloo Corner.

Road access in this precinct will be from Greyhound Road and Port Wakefield Road. Future subdivision and development should be coordinated to minimise access points to Port Wakefield Road. Ideally, a slip road would be provided. The possible upgrade of Port Wakefield Road / Dunn Road / Greyhound Road intersection would directly serve this precinct along with the demand from the north into the City of Playford, which results in this intersection serving both a local precinct and broader regional demand. The split will need to be calculated based on traffic modelling along with further traffic investigations to confirm a trigger for this intersection to be delivered in the future, likely to be beyond any development capacity delivered within Precinct 3 in isolation.

Stormwater will require channelling to existing 900mm x 300mm culverts under Port Wakefield Road. Dunn Road reserve provides an alignment to channel stormwater west to proposed future Council detention in Precinct 2, however until this full channel connection down Dunn Road can be delivered stormwater would simply spill across private landholdings west of Port Wakefield Road, making it more problematic as a stormwater channel route. Stormwater will need to be detained to pre-development flows in order to manage flows into Dunn Road if this precinct is delivered ahead of this part of Precinct 4.

Current flood mapping for this land holding identifies inundation during the 1% Annual Exceedance Probability (AEP) rainfall event. Greenhill's preliminary investigations have identified that flood waters are ponding to the eastern side of Port Wakefield Road within this precinct with stormwater overland flows being blocked and stored in local depressions. Flood mitigation and development floor levels required to be developed prior to rezoning of this land to ensure developability given the current flood mapping pre-dates the North South Motorway delivery.

Stormwater detention will be critical for this precinct, combined with Precinct 3 and 4 and the future development capacity of the City of Playford land to the immediate north, so as not to exceed the capacity of the existing St Kilda Road channel and downstream channel limitations of Helps Road Drain (the Gap) through the Bolivar Wastewater Treatment Plant.

Holmes Dyer understands that there has been some interest from landowners in this precinct however, there is no coordinated approach or planning consultant currently engaged. Further detailed consultation should be undertaken by Council with landowners in this precinct prior to a timeline for any rezoning being confirmed.

Figure 34. Precinct 3 – Waterloo Corner Triangle

8.3.4 Precinct 4 – Employment Land Balance Areas

This precinct is made up of most of the employment land identified west of Port Wakefield Road, in the Deferred Urban and Rural Zones. This precinct is likely to be separated into several smaller sub-precincts as individual landowner interest in rezoning becomes apparent; divisible using the existing and proposed road network and drainage corridors. Alternatively, Council may wish to explore undertaking a broader Council Led Code Amendment to bring this part of the city into alignment with the structure and zoning proposed as part of the Strategic Growth Framework once the infrastructure investigations and costings and approach to contribution is fully resolved and can be implemented as part of the future Code Amendment.

Development of land within this precinct relies upon a combination of upgraded access to Port Wakefield Road and internal collector road network that provides options for accessing and egressing the precinct internally through new local Council owned, or connecting private roads, without the need for multiple access point to Port Wakefield Road which would not be supported by Department for Infrastructure and Transport.

Access to / from Port Wakefield Road is proposed via a 4-way signalised intersection at Summer Road, retention of the left in / left out at Undo Road, but supplemented with a U-Turn capacity to the north, existing unsignalised left / right movement into the Caravan Park and the existing left in / left out movement to serve land north of the Caravan Park are the proposed traffic arrangements to service the central part of this precinct.

The area of the precinct north of the Waterloo Interchange will rely upon connections to Port Wakefield Road via Dunn Road (possible 4 way signalised that provides regional benefit as discussed within Precinct 3) and via Anjanto Road (existing unsignalised right turn into Anjanto Road and left in / out from Port Wakefield Road), with internal connectivity via a collector road parallel to the North South Motorway and within the Department for Infrastructure and Transport road reserve linking Dunn Road to Anjanto Road (and further north and south). A U-Turn option north of Anjanto Road would facilitate southerly movement along Port Wakefield Road from Precinct 4.

Part of the new road network through this precinct anticipates a new collector road within the Department for Infrastructure and Transport North South Motorway Road reserve running parallel from Summer Road to Waterloo Corner Road, and access south off Jobson Road also parallel to the North South Motorway, thereby providing options for almost every property to access Port Wakefield Road via the nominated intersections. Further mid-block connectivity would also be desirable as part of the subdivision of the landholding to provide for additional interconnectivity to supplement the new road corridor, if access to these landholdings owned by Department for Infrastructure and Transport and cost for construction can be negotiated with Salisbury, which would include landowner contribution through an infrastructure deed or similar.

Access to land west of the North South Motorway would be from the existing Robinson Road and Driver Road, with a mid-block east-west link possible between Driver Road and Waterloo Corner Road at the likely point of stormwater flow from the outfall under the North South Motorway, south of Waterloo Corner Road.

The structure plan identifies a potential upgrade of the intersection at Summer Road/ Port Wakefield Road to a 4-way signalised intersection, to support improved right turn out access for the land within Precinct 4. The ultimate location of a 4-way signalised intersection will be subject to negotiation with Department for Infrastructure and Transport and detailed traffic investigations to assess the broader regional benefit of this intersection, which should include consideration of relocating this 4-way intersection to Burton Road, dependent on the broader benefit this may provide to the new and existing road network.

This Precinct has several key locations where the capacity of stormwater infrastructure is limited or constrained, including the North South Motorway culvert crossings as well as the capacity for the Helps Road Drain 'The Gap' stormwater channel.

Provision of stormwater detention measures are critical for 'The Gap', which is known to have capacity limitations. Stormwater detention measures are also critical to control stormwater flows arriving at existing major road culverts (North South Motorway and Port Wakefield Road) and Helps Road Drain that will require a combination of on-site detention to pre-development flows and collection of linked detention basins and stormwater channels developed and maintained by the City of Salisbury. Stormwater quality treatment measures will also be required and integrated with development, to treat the quality of stormwater runoff prior to discharge into the Barker Inlet. The details of this stormwater design will be required to be evolved through more detailed stormwater and flooding modelling, considering the impact of the North South Motorway.

While already predominantly established, the zoning for the land surrounding the existing Bolivar 'On the Run' and Whitehorse Inn currently sit in Rural Zoning with the zoning to support the development of the balance of sites around this precinct and future expansion corrected as part of a broader Code Amendment if delivered by the City of Salisbury. Access to the existing commercial development (On the Run and other tenancies) is via a left-hand slip lane off Port Wakefield Road and all way movement via Hodgson Road. The Whitehorse Inn is accessed via Hodgson Road. Hodgson Road provides all way movement onto Port Wakefield Road and left on / off connections to the North South Motorway. Bolivar Road provides north and south movement options onto the North South Motorway from Port Wakefield Road, providing the locality with exceptional strategic connectivity.

The southern portion of Precinct 4, is effectively land-locked, requiring a connection across the Little Para River from Precinct 1 and / or connection through the On the Run site. While this latter connection could occur largely through Department for Infrastructure and Transport land, it would need to cross the On the Run site to make a safe access point to Hodgson Road. The northern tip of the precinct is a site with high exposure (surplus Department for Infrastructure and Transport land), which could have commercial value. Again, access to this site can be largely via Department for Infrastructure and Transport land but needs a safe access point onto Hodgson Road.

Stormwater management for the southern half of the precinct is expected to be via direct disposal into the Little Para River (after appropriate treatment). The northern commercial area is served by an existing stormwater

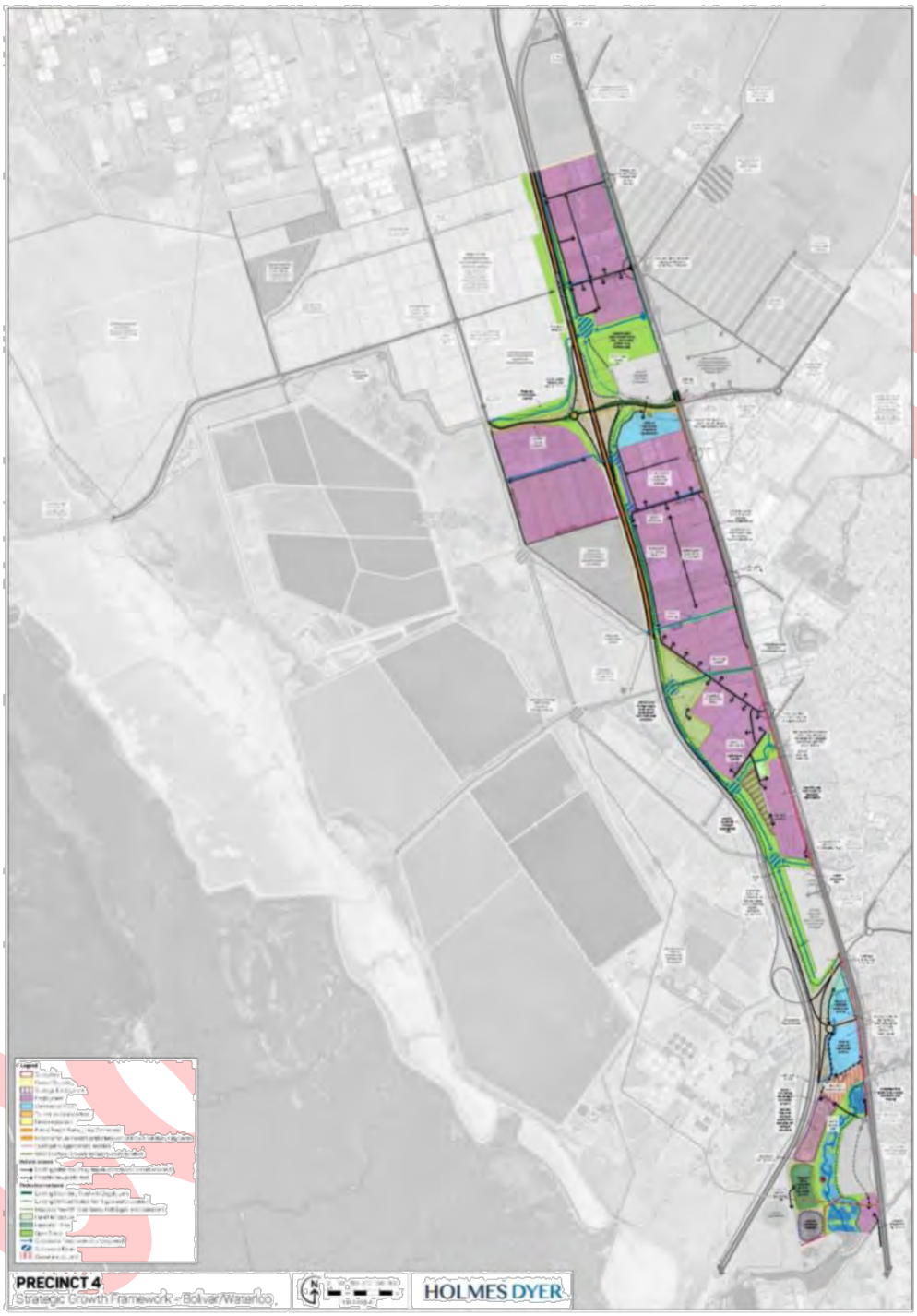
system which utilises an existing Department for Infrastructure and Transport culvert under the North South Motorway and then travels south towards the Little Para River outfall.

There is a Council owned, land parcel immediately south of the Study Area on the Little Para that has community land classification and may be surplus to need. This should be reviewed in light of the planning for Precinct 4 and any rezoning addressed.

As identified in Section 8.1.1.4, refinement of the Open Space Zone and finalisation of the network of drainage corridors required to service the greater Study Area, and access to the SA Water buffer land could be part of a broader Council Code Amendment over this employment land balance, west of Port Wakefield Road.

The landowner intentions survey and discussions undertaken as part of the Strategic Land Review, as set out in Section 7.0, demonstrated a mixed interest for more intensive employment land zoning across this precinct. Further discussions will need to be held with the landowners, to identify any discreet sub precincts that could be supported to proceed. Given the current mixed interest and overall size and infrastructure challenges through this area, it is likely that Council will need to lead the development of additional technical investigations including flooding modelling, stormwater management plans and design concepts, negotiation for acquisition of surplus Department for Infrastructure and Transport Parcels for road and stormwater infrastructure adjacent the North South Motorway and access to the SA Water buffer land. While there is interest in some landowners developing land within this precinct currently, it is critical for orderly development that these technical investigations and land acquisition negotiations proceed prior to any Council or Proponent Led Code Amendments being considered.

Figure 35. Precinct 4 – Employment Land Balance Areas



8.3.5 Precinct 5 – Rural Horticultural Protection Measures & Concept Plan

Precinct 5 comprises land located on the western site of the North South Motorway, which would have previously been accessed via local roads connecting St Kilda to Port Wakefield Road prior to the North South Motorway's construction. This land has an existing strong character of rural horticultural land activities, and minimal interest was raised by landowners in this precinct for a more intensive employment land use in the short term.

As set out in Section 8.1.1.6, it is anticipated that any land use transition within this precinct would be later in the overall 35-year development timeline, and there is no immediate pressure to change the current land use operations. Given this situation, and that long term forecasting of demand for land-use is challenging out beyond 10 years, it is recommended that this land and any decision on its highest and best use of land in the future, whether that be for further employment land or an alternative more sensitive land use, that could include consideration of residential, be deferred and ongoing land use operations continue under the current zoning, with encouragement for value-add horticultural options to develop and expand on the existing established operations to ensure viability.

To ensure that a wide range of land-use options remain a viable consideration into the future, it will be important that this area is protected from more intensive land-use creep and that approval of any land-use that may prevent future sensitive land-uses be discouraged. To further support future options, it is recommended that tight subdivision controls be established to prevent any further fragmentation of land holdings through exploration of a Limited Land Division Overlay.

The 'spine' road network within Precinct 5 is generally considered appropriate to facilitate vehicle access to the various allotments throughout. However, both Robinson Road and St Kilda Road will also likely require upgrade from a 'collector road' classification to a 'sub-arterial road' or 'arterial road' (dependent on final development traffic volume outcomes). This will involve a widening of the existing carriageways to provide additional trafficable width in line with the City of Salisbury's standard road cross-section. The intersection of Robinson Road and St Kilda Road will also likely require upgrade to increase its operational capacity. Given that property boundaries are currently located within very close proximity to the roundabout, a road widening layer at this intersection will be required (detail on the extent of this corridor will be required to be determined with further detailed traffic modelling analyses).

The Code Amendment will need to identify the road widening and intersection designs required to support existing traffic movements through to the St Kilda township and future development scenarios, which should consider a wide range of potential options to retain flexibility for a future land use decision.

Detailed traffic modelling analyses and monitoring will be required to be undertaken for Waterloo Corner Interchange to ensure its continued satisfactory operation. This is particularly relevant to the roundabout on the western side of the motorway and the T-intersection on the eastern side of the motorway. At the point of consideration of a more intensive land use in Precinct 5, forecast volumes would be expected to trigger upgrade

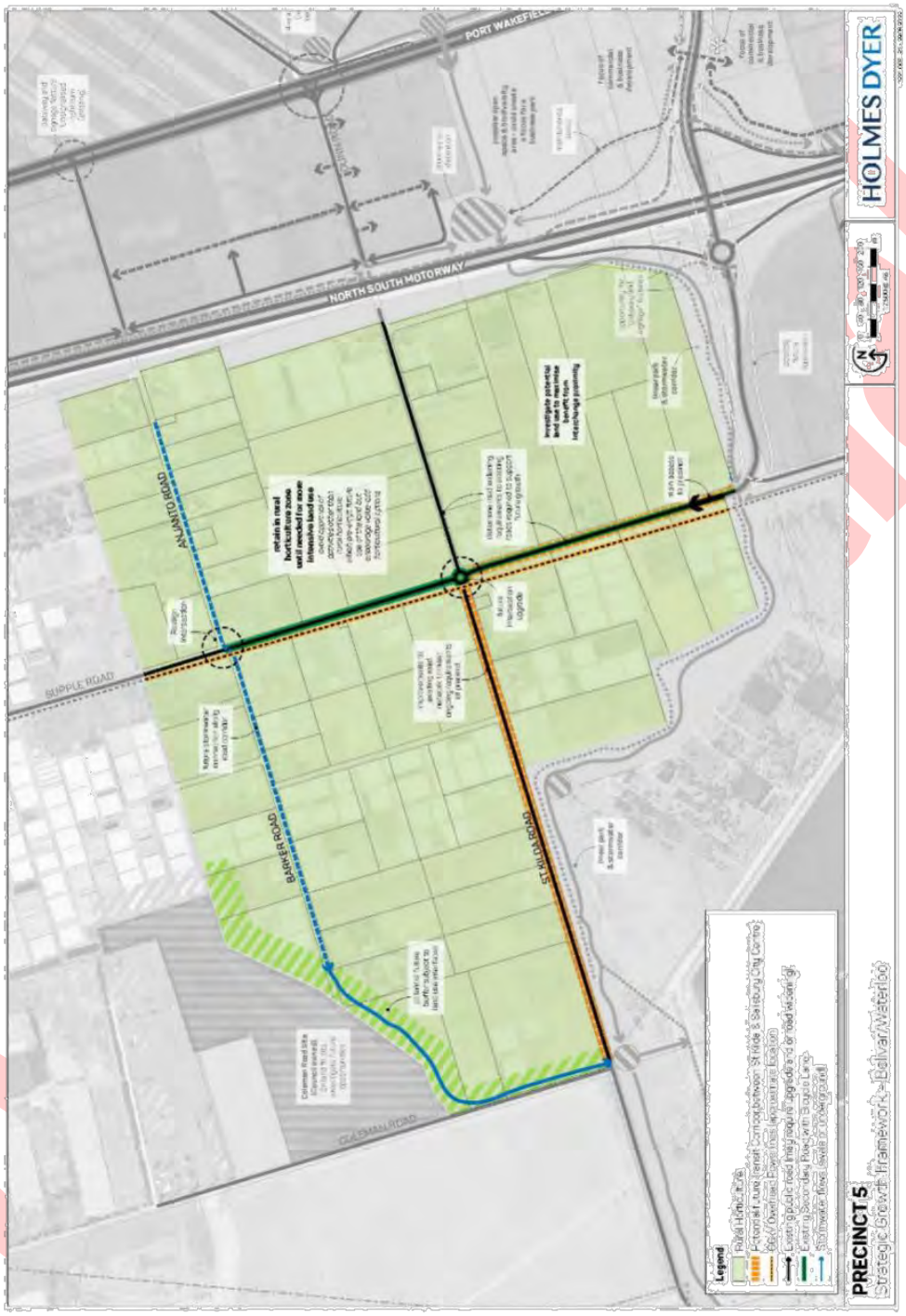
of Waterloo Corner Road (across the North South Motorway) beyond its current single-lane (in each direction) configuration.

The existing stormwater infrastructure in this precinct predominantly consists of shallow roadside swales with the occasional small culvert road crossing. On the southern extents of Precinct 5, the St Kilda open drain has recently been constructed with large culverts under Robinson Road discharging into the SA Water Bolivar WWTP land towards the west. The recently constructed St Kilda Road drain on the northern western corner of the North South Motorway, at the intersection with Waterloo Corner Road, may have also reduced the incidence of flooding at this location. Stormwater management measures provided as part of the development east of the North South Motorway may alleviate some of the overland stormwater flows into this Precinct.

Tonkin indicated in the Greater Edinburgh Parks and St Kilda Catchment Stormwater Management Plan, that the St Kilda channel outfall is restricted to the capacity of the syphon under the Bolivar treatment plant outfall channel. Upgrading the capacity of the system would require significant capital expenditure including a new larger syphon under the Bolivar channel and significant widening of almost 2km of open channel through the salt fields.

It is anticipated new trunk open channels would capture stormwater flows in this precinct and direct them to the St Kilda drain. A precinct solution for stormwater detention may be provided adjacent the outlet of the catchment. This would significantly impact the land available for development as they would be in the form of large shallow basins and should be negotiated by Council with SA Water in the short to medium term to support the more intensive development of Precinct 5 in the latter years of the Strategic Growth Framework.

Figure 36. Precinct 5 – Rural Horticulture & Concept Plan



8.3.6 Precinct 6 – Recreation Zone

Bordered by Driver Road, Robinson Road and the North South Motorway is a triangle of land that is currently a mix of zones including Open Space land containing the Southern Go Kart Club, Rural Horticulture containing the South Australian Gun Club and a Deferred Urban parcel with a single private owner and land owned by Department for Infrastructure and Transport acquired as part of the North South Motorway. Access to this precinct would be reliant on the transport infrastructure upgrades within Precinct 4, as set out in Section 8.3.4.

The City of Salisbury and Office of Recreation Sport & Racing during the stakeholder consultation identified that there may be a potential in this precinct to reinforce and strengthen the existing 'noisy recreation' land uses to provide a unique recreation offering in metropolitan Adelaide and to cluster this activity within an inner metropolitan location that is highly accessible while not creating impacts on sensitive land uses. This direction would be further strengthened by establishing a recreation zone over these land holdings that could better support the establishment of ancillary retail/commercial clubrooms and ancillary entertainment venues linked to the recreation uses that could strengthen the economic benefits that could be realised from this unique location.

A zoning change within this precinct would likely be driven by the individual landowners and no specific interest was raised as part of the Strategic Growth Framework. Holmes Dyer recommends that this is an opportunity for the City of Salisbury to advocate for this unique economic generating activity with State Government and landowners as a long-term goal within the City's broader Recreation Planning and proceed with ongoing negotiations with all land holdings in this precinct to explore this opportunity.

Figure 37. Precinct 6 – Recreation Zone

8.3.7 Precinct 7 – Strategic Employment Balance Area

Precinct 7 comprises the balance land located on the eastern site of Port Wakefield Road, not covered by Precinct 2 and 3. This precinct is made up of most of the strategic employment land identified east of Port Wakefield Road that could support more intensive employment activities connected to the existing zoning and land use character established in this part of the City of Salisbury. The consultation that occurred as part of the Strategic Growth Framework to date has not identified any landowner interest in rezoning in the short to medium term. The future land zoning will be partially informed by structure planning work that needs to be completed by the City of Playford, in the land to the immediate north of the City of Salisbury Council boundary, and the associated stormwater management plan, flood modelling and traffic connection investigations that will be required and partially informed by the work required to be undertaken for Precinct 2 and 3 and by the City of Playford.

Precinct 7 will be accessed via Mumford Road and Greyhound Road, with Mumford Road and Mill Road (outside the Study Area) providing links to Heaslip Road. The proximity of the Mumford Road / Heaslip Road intersection to the Waterloo Corner Road / Heaslip Road intersection is problematic. The upgrade of Port Wakefield Road / Dunn Road / Greyhound Road intersection into a 4-way signalised intersection provides an alternative access to / from this precinct as described within Precinct 3.

Mumford Road and Greyhound Road will require upgrading. An additional internal local road can provide access to allotments fronting Heaslip Road. Stormwater will need to be detained prior to crossing various Port Wakefield Road culverts, north of Waterloo Corner Road, south of Dunn Road and at Dunn Road. Coordination with Precincts 2 and 3 would be appropriate. Stormwater flows need to be accommodated along Mumford Road, Greyhound Road and across existing allotments.

While this precinct has been indicatively timed to be considered for rezoning in the latter stages of the Strategic Growth Framework, this timing may shift informed by landowner interest and the resolution of the stormwater and traffic interfaces with the City of Playford above. Given the relative containment of this parcel, retiming to earlier in the Strategic Growth Framework timespan with the appropriate infrastructure agreements should be considered by the City of Salisbury.

Figure 38. Precinct 7 – Strategic Employment Balance Areas

8.3.8 Precinct 8 – Coleman Road

The City of Salisbury has taken over ownership and the ongoing management of the former Coleman Road land-fill site in the northern section of the Study Area, currently zoned Rural Horticulture. This requires Council undertake groundwater monitoring, minimisation of landfill gas emissions and improvement of on-site drainage to protect the groundwater system and increasing the cap coverage to the landfill which has an ongoing capital cost to Council. Opportunities for alternate use of this site, to harness energy from the methane extraction or other form of eco-industrial outcome could be explored by Council. Any innovative solution to the ongoing operation will need to consider the existing and future buffers required to adjacent horticultural activities within the balance of the Rural Horticultural Zone that should be identified on a Concept Plan created as outlined within Section 8.1.1.1.

There is no existing sub-zone within the Code Library Framework that specifically supports this sort of opportunity. Holmes Dyer investigations have identified that land fill sites across Adelaide are in a mix of Resource Extraction, Infrastructure Zone or specialist precincts such as Gillman in respect to the Wingfield Site. As a result, the best policy approach to support the intended activities and timing would need to be negotiated on an individual basis with Planning and Land Use Services by the City of Salisbury.

Figure 27. Precinct 8 – Coleman Road

9.0 Risk Management

The Strategic Growth Management Framework carries a degree of risk due to the political and community interest in changing the land use and future direction for such a large parcel of land within the City of Salisbury, that impacts over 300 different landowners.

Key risks were considered up-front to guide refinement of the approach adopted for the Strategic Growth Framework and key mitigations and priorities to minimise the risk adopted are set out below.

Risk Identification	Risk Analysis and Mitigation
Securing authority advice on augmentation charges and future service capacity	The service authorities, specifically SA Water and SA Power Networks, need a level of planning detail akin to that developed as part of this document to provide augmentation and capacity feedback that is required to directly inform the development capacity and sequencing. This information would subsequently change the recommendations within the report. To resolve this timeline, the sub-consultant team engaged to produce the Strategic Growth Framework has provided the draft Structure Plan as set out in Figure 25 to the authorities and requested that they continue planning works to inform the more detailed infrastructure investigations, that will be received outside the timeline to deliver this report. The ongoing follow-up of this additional information will need to be managed by City of Salisbury, and the outcomes and conversations may result in changes to the precinct plan staging and issues as set out in Section 8.0. The Strategic Growth Framework has been developed to be flexible to enable the incorporation of additional technical information as it arises, however this follow-up needs to be proactively managed within City of Salisbury to ensure the outputs are received and analysed across the balance of 2022.
Strategic Growth Management outcomes creating concerns or expectations in the community in respect to timing and triggers for future zoning changes.	Strategic planning work can be difficult for the community to comprehend, as it is not yet detailed down to the individual opportunities, impacts and costs at an individual property level. While the Strategic Growth Framework engagement approach achieved a high level of engagement from the affected landowners, there were still large numbers of landowners who did not choose to directly participate. Ultimately the recommendations set out in Section 8.0 of this Strategic Growth Framework, seek to establish a land use direction, but will not create immediate changes to land use zoning or opportunities, which all need to proceed through a standard Code Amendment process that will involve additional community consultation activities. It is important that Council maintains an open communication channel with the landowners in this precinct and provides updates and opportunities to brief them on findings from this study. It is recommended that the project website be retained, and new information be shared through this platform, to provide a single

	source of information available to both landowners and their consultants. To support a consistency of approach, a Community Engagement Plan, generally aligned with the Community Charter from Planning and Land Use Services was prepared for this project and is provided as Appendix 4. While this level of engagement plan is not normally required for a strategic investigation, its preparation was to establish a common set of stakeholders and clarity of information that can be built on for all future Code Amendments and consultation activities as may impact this precinct. As each precinct is advanced, Council will need to undertake direct engagement with all affected landowners to inform the direction, staging and approach to any land use change.
SA Water and Department for Infrastructure and Transport negotiations for land acquisition and drainage/ open space corridors	The Structure Plan presented in Figure 25, assumes that the City of Salisbury proceed with negotiations with both the Department of Transport and SA Water in respect to access and or site acquisition to key land parcels along the North South Motorway and SA Water Waste Water Treatment Plan for critical stormwater basins and channels, required to support the intensity of development outlined with the Strategic Growth Framework. The Department for Infrastructure and Transport land corridors along the North South Motorway, also provide an opportunity for a local road network to be delivered to support several the potential sub-precincts within Precinct 4 that could provide flexibility not requiring all landowners to develop at the same time to create a road corridor connection. If access to these land parcels cannot be secured the overall structure and impact on the timing, staging and development capacity of the private landholdings will need to be reviewed. It is recommended that Council as a priority seek to negotiate access to these areas with both SA Water and Department for Infrastructure and Transport to inform any Code Amendments outside Precinct 1 and 2 which are generally unaffected or where an interim solution can be put in place to enable the Proponent Led Code Amendments to proceed.
Infrastructure Funding Mechanism and Estimated Costs	As part of the Strategic Growth Framework infrastructure investigations have been completed that enable an appreciation that a significant amount of investment into infrastructure will be required over the next 35 years to support the delivery of a more intense development across this precinct. The investigation work to date has been able to identify a likely land take and corridor for stormwater and traffic works, however detailed costings will only be able to be undertaken following the completion of more technical investigations relating to flood mitigation, stormwater management planning, environment and geo-technical investigations. Augmentation costs and more detailed technical investigation and infrastructure upgrades need to be further evolved to enable a cost arrangement to be identified. While a range of infrastructure funding models has been proposed in this document for Council's consideration and a recommended

	approach identified, the final figures for each precinct will need to be developed through the next tier of technical investigations at a precinct level either as part of a proponent led Code Amendment or further Council investigations.
Technical Investigation Gaps	The desktop analysis completed as part of Section 2.0 of this report has identified additional technical studies that will be required to be undertaken as part of refining the precincts within the Strategic Growth Framework . These studies are detailed in Section 10.1 of this report and Council should give consideration on timing and approach to fill these information gaps, aligned with broader Council planning and assignment of responsibilities with any proponent led Code Amendment that may proceed ahead of further investigations being able to be completed by Council.
Cultural Heritage Survey	As identified in Figure 8, the Study Area is at medium/high risk of cultural heritage discoveries. This risk relates not only to private development within land in the Study Area but also any excavation works that Council may be required to undertake as part of the road and stormwater drainage required to support the intensification of development. Given this risk, and to ensure that Council demonstrates a proactive approach to the risk of cultural discoveries, it is recommended that Council undertake a desktop cultural survey by a qualified aboriginal heritage advisor which may include analysis of geo-technical or bore logs that may be available as part of other technical investigations. Council should also ensure that the discovery protocols under the Aboriginal Heritage Act are included as part of any consultant or contract works package in this area and that a rolling program of staff and contractor training into Aboriginal Heritage discoveries is undertaken.
Maintaining the currency of the Strategic Growth Framework document across and extended delivery timeline	This document has a forecast delivery timeline out 35 years, based on current employment land take-up. The Strategic Growth Framework has been written to provide a degree of flexibility for both landowners and Council, to capture the 'highest and best use' of land and the private market interest while ensuring orderly development within an overall agreed Structure Plan. Given the number of ongoing landowner discussions, technical investigations and negotiations to secure land holdings that needs to occur, it would be recommended that the Strategic Growth Framework be reviewed on a regular basis as set out in Section 10.4, to maintain relevance, currency and evolve as landowner and economic climate changes, on a minimum 4-year cycle linked to Council's Annual Plan Update, so as to enable direct informing of Council's Long Term Financial Plan.

10.0 Further Investigations & Next Steps

10.1 Additional Technical Studies

The desktop analysis completed as part of Section 2.0 of this report, combined with the preliminary service investigations completed by Greenhill provided as Appendix 1 and Cirqa Traffic Investigations provided as Appendix 3, have identified additional technical studies that will be required to be undertaken as part of refining the precincts within the Strategic Growth Framework and to inform future staging and Code Amendments.

Council should give consideration on timing and approach to fill these information gaps, aligned with broader Council planning and assignment of responsibilities with any proponent led Code Amendment that may proceed ahead of further investigations being able to be completed by Council.

- Update of the existing Flood Modelling to respond to the changing landforms and path networks created because of the North South Motorway Construction, noting that large portions of the Study Area are currently identified as experiencing inundation during the 1% Annual Exceedance Probability (AEP) rainfall event.
- Cirqa has been engaged by the City of Salisbury, concurrent with the development of this report to work with Department for Infrastructure and Transport staff on TAM traffic modelling, to produce the intersection and traffic data required to be entered as a trial project into the new TAM modelling system. The outcomes of this modelling are not available at the time of finalising this report with the outputs required to inform the traffic infrastructure requirements and triggers for each identified precinct.
- Greenhill has advised that the desktop analysis has identified that more detailed stormwater management plans need to be produced for the Study Area. This will need to include modelling of the expected flows and be informed by the City of Playford's development intent north of the council boundary. While the overall network of basins and swales has been able to be identified, the triggers, size and costs for this infrastructure would be informed by this advanced stormwater modelling that will be required to input into future infrastructure deeds.
- It is recommended that Council consider undertaking CBR studies, groundwater levels, topsoil depth, uncontrolled fills and testing across the Study Area to inform pavement design and road construction costs assumptions for any Council Road upgrade or stormwater infrastructure delivery.
- The investigations undertaken to inform the site analysis for the Strategic Growth Framework have not included detailed site contamination investigations. Under the *Planning, Development and Infrastructure Act 2016*, the planning system is required to assess and manage risks posed by known or potential site contamination to enable the safe development and use of land. A more comprehensive set of investigations will likely be required as part of future Code Amendments.

- Finalisation of negotiations with the service authorities in order to secure the extent of augmentation works or infrastructure upgrades as to inform the Infrastructure Cost Deeds, specifically SA Water and SA Power Networks, which were not available at the time of writing this report.
- As identified in the previous risk section, given the location of the Study Area and risk of cultural heritage discoveries, Council should consider engaging an archaeologist to prepare a desktop cultural heritage survey for the precinct as a risk mitigation strategy and to demonstrate best practice approach to managing the risk of Aboriginal Discoveries under the *Aboriginal Heritage Act 1993*.

10.2 Site Acquisition and Amalgamation Opportunities

The Structure Plan presented in Figure 25, assumes that the City of Salisbury will proceed with negotiations with both the Department of Transport and SA Water in respect to access and or site acquisition to key land parcels along the North South Motorway and SA Water Waste Water Treatment Plan for the critical stormwater basins and channels that are required to support the intensity of development outlined with the Strategic Growth Framework. The Department for Infrastructure and Transport land corridors along the North South Motorway also provide an opportunity for a local road network to be delivered to support a number of the potential sub-precincts within Precinct 4. This could provide flexibility by not requiring all landowners to develop at the same time to create a road corridor connection.

If access to these land parcels cannot be secured the overall structure and impact on the timing, staging and development capacity of the private landholdings will need to be reviewed. It is recommended that Council as a priority seek to negotiate access to these areas with both SA Water and Department for Infrastructure and Transport to inform any Code Amendments outside Precinct 1 and 2 which are generally unaffected or where an interim solution can be put in place to enable the Proponent Led Code Amendments to proceed.

10.3 Advocacy

The outcomes of this Strategic Growth Framework should be presented by the City of Salisbury to Planning and Land Use Services to inform both a common approach to the coordination and management of any Proponent Led Code Amendments and the upcoming regional planning process.

Holmes Dyer understands that the City of Playford is about to commence a similar strategic planning exercise for the land immediately north of the Salisbury Strategic Growth Framework and that regular meetings are held between City of Salisbury and Playford in respect to these study areas. This existing coordination is a positive process and should continue to ensure that both councils have developed a common approach to the infrastructure planning required across this common boundary, and that wherever possible alignment is achieved to inform orderly development and to advocate for State Government support to achieve this outcome and

regional infrastructure outcomes, such as the Greyhound/Port Wakefield Road intersection that will open up development potential for this entire northern region.

10.4 Regular Review & Update

The Strategic Growth Framework, as set out in this document, is a point-in-time output.

This document has a forecast delivery timeline out to 35 years, based on current employment land take-up. The Strategic Growth Framework has been written to provide a degree of flexibility for both landowners and Council, to capture the 'highest and best use' of land and the private market interest while ensuring orderly development within an overall agreed Structure Plan.

Given the number of ongoing landowner discussions, technical investigations and negotiations to secure land holdings that needs to occur, it is recommended that the Strategic Growth Framework be reviewed on a regular basis, to maintain relevance and currency to evolve as landowner and economic climate changes. The review should occur on a minimum 4-year cycle linked to Council's Annual Plan Update to enable direct informing of Council's Long Term Financial Plan.

This regular review will ensure that the prioritisation and projects are adjusted to respond to;

- Changes to the Council's strategic agenda
- Outputs from the State Government Regional Planning process
- Community and Landowner Feedback relating to development intentions
- Market force changes
- New technical information that may become available, specifically flood modelling, stormwater management plans and traffic infrastructure
- Completion and update of any order of infrastructure costs required to inform the Infrastructure Funding Delivery and a fair and equitable cost sharing between landowners/developers, Council, State Government and any other party (i.e., City of Playford)
- Any new funding or grant opportunities that may be identified as an opportunity for State or Federal Government investment to realise the economic potential of this Study Area.
- Opportunities from changes to the State Government strategic agenda.

APPENDICES

Appendix 1. Greenhill Preliminary Service Infrastructure Report

GREENHILL

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Preliminary Infrastructure and Servicing Report

Waterloo Corner & Bolivar Corridor - Growth Framework

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Revision B

12 July 2022

21289B

Preliminary Infrastructure and Servicing Report

Reference No.: 21.2894

Prepared by: Jason Winter

Reviewed by: Cindy Oliver

Revision History

Revision:	Date:	Details:	Approved by:	Signed:
A	20 June 2022	Issue for Comment	Cindy Oliver	
B	12 July 2022	Final	Cindy Oliver	

Contents

1. Introduction

The City of Salisbury's City Plan 2035 (June 2020) has a critical action to develop a structure plan for the land west of Port Wakefield Road, to open up new development opportunities. Holmes Dyer were appointed as the lead planning consultant to prepare a Strategic Growth Framework that supports and guides a staged (infrastructure sub-area based) Code Amendment rollout, which could be initiated by State Government, Council or the private sector. The strategic Growth Area extents are shown in Figure 1 below.

Figure 1: Strategic Growth Area - Bolivar/Waterloo

Meetings were held with the Strategic Growth Framework project team, including staff of the City of Salisbury, Holmes Dyer, CIRQA and GREENHILL. To discuss the project objectives, share information and review the site. Based on this information, Holms Dyer prepared a series of Structure Plans to assist with the investigations based on those discussions, these plans are included in Appendix A. These plans were used as the basis for the investigations.

Holms Dyer have identified four major infrastructure sub-areas within the greater strategic growth area and analysed the potential yield and development timings. The result of this work giving estimates on developable area, anticipated mix of likely land uses, potential floorspaces, consequent workforce generation and likely development timings, this breakdown is included in Appendix B. While the market will determine the ultimate development yield, for the purposes of this report, Holms Dyer's land use mix, development timings and yield analysis has been assumed.

2. Previous Investigations

Tonkin have undertaken stormwater management investigations for both the City of Salisbury and the City of Playford that encompass portions of the strategic growth area and prepared reports. These reports are entitled "Greater Edinburgh Parks Stormwater Management Strategy, 2011 & December 2016" and "Greater Edinburgh Parks and St Kilda Catchment Stormwater Management Plan, May 2020". Additionally, InfraPlan developed a Northern Connector study for the Department of Infrastructure and Transport, entitled "Northern Connector Land Use & Transport Study" The key findings or recommendations of the study are summarised below:

- A significant portion of the northern suburbs of Adelaide drain into Gulf St Vincent via the Little Parra River and Helps Road Drain.
- North of the Helps Road Drain, stormwater runoff enters the Growth Area via the Greater Edinburgh Parks and St Kilda sub-catchments.
- There are limited opportunities for discharging stormwater runoff to the Barker Inlet/Gulf St Vincent with existing outlets including:
    - The Little Para River
    - The Gap outfall channel
    - Existing syphons under the Bolivar Outfall Channel (located at the Bolivar WWTP and north of Symes Road).
- The Growth Area is flat, which presents difficulty in constructing channels with a grade sufficient to the drain water.
- Drain alignments may be constrained by alignments of existing services infrastructure within the area, particularly SEA Gas and Epic Energy.
- The depth to groundwater is very shallow in the Growth Area which is likely to limit excavation depths for stormwater infrastructure.
- Given the largely undeveloped nature of the study area and lack of existing infrastructure, there is an opportunity to enhance water quality within the catchment through water sensitive urban design (WSUD). The incorporation of new WSUD measures can potentially treat a significant portion of the site.
- It is anticipated that individual developments will undertake site specific water quality control measures, such as installing oil and grit separators, prior to discharging water from their site.
- Several detention basins have been proposed to the north-west of the Growth Area. The final two of which are proposed to be located within the Growth Area at the intersection of Port Wakefield, Greyhound and Mumford Roads. These detention basins would help manage the stormwater runoff entering the Growth Area from the Greater Edinburgh Parks and St Kilda sub-catchments. None of these basins are yet to be constructed.
- The proposed stormwater channel, extending west from the North-South Motorway/Waterloo Corner interchange and running around the northern end of the Bolivar WWTP Lagoons, has been constructed but stops short of the Bolivar Outfall Channel.

- Additional Syphon(s) under the Bolivar Outfall Channel were proposed, due to the limited capacity of the existing syphons but are yet to be constructed.
- Eight bridges/culverts were constructed as part of the North South Motorway project. Allowing locations for stormwater to pass under this raised carriageway.

The City of Salisbury have provided the following reports:

- City Plan 2035;
- Biodiversity Corridors Action Plan;
- North Western Sustainable Precincts Plan;
- Precinct Plan West Port Wakefield Road; and
- The 30-Year Plan for Greater Adelaide report.

We have referred to the above reports and utilised as a basis for discussions with relevant service authorities. Advice received from authorities is as outlined below.

3. Infrastructure Review and Assessment

The following provides a summary of the existing infrastructure and advice in relation to likely new infrastructure required for the purpose of servicing the proposed development.

3.1 Existing Infrastructure

Information in relation to the existing infrastructure has been sought directly with the relevant authorities, including an assessment of the additional infrastructure likely to be required for the proposed growth area development.

The existing infrastructure includes the following:

- Sewer (SA Water);
- Potable water (SA Water);
- Recycled Water (SA Water and Salisbury Water)
- Stormwater (Local Government);
- Telecommunications (NBN Co and Telstra);
- Gas (Epic Energy, SEA Gas and AGN/APA Group); and
- Electrical (SAPN and ElectraNet).

DBYD information of the above services is included in Appendix D. Authority responses to requests for infrastructure advice are included in Appendix E.

3.2 Growth Area Topography & Soils

3.2.1 Topography

In general, the natural site topography of the growth area falls from east to west, with multiple 'high-points' located along the Port Wakefield Road corridor. From the publicly available State Government contour data the Growth Area is seen to have grades generally between 0.2% and 0.4%. Some steeper grades are seen locally; however, the general gradient is very flat.

Due to the very flat existing gradients, it is anticipated that any new development will require filling to enable minimum gradients to be achieved for construction of new roads and gravity pipe systems, such as stormwater and sewer. Filling may also be required to protect new properties from inundation of flood waters. Opportunities within development sites for quarrying of material may be limited and it is anticipated that most development sites will require importation of suitable material for filling.

3.2.2 Underlying Soils

A review of publicly available soil information suggest that the underlying soils would comprise of the following:

- Hard loamy sand over red clay

- Loam over poorly structured red clay
- Calcareous, gradational clay loam
- Layered sediments of mixed marine and river origin-sands, silts clays and organic deposits.

In general, the soils are expected to be more "clayey" away from the Barker Inlet/Little Para and transitioning to sandy soils approaching the Barker Inlet/Little Para.

Natural vegetation is expected to be found throughout the Growth Area, and this vegetation may be re-used in the wetland or open space areas of reserves.

Our investigation does not include an assessment of environmental or geotechnical conditions within the Growth Area. Environmental and geotechnical investigations will be required to understand any constraints upon future development that may be associated with the underlying soils; including identification of topsoil depth, groundwater level, areas of unstable soils, uncontrolled fill, extent of calcrete and strength of underlying subgrade (CBR testing) for pavement design purposes.

3.3 Stormwater Drainage

3.3.1 Waterloo Corner & Bolivar Corridor Stormwater Catchments

The Waterloo Corner & Bolivar Corridor Growth Area lies within two surface water catchments, these being the Little Para River and the Smith & Adams Creeks as shown in Figure 2 below. The Little Para Catchment component is located at the southern extremity of the Growth Area, generally south of Bolivar Road. The component within the Smith & Adams Creeks catchment extends north from Bolivar Road across the remainder of the Growth Area. This catchment is split by a series of minor ridges and as such numerous natural outlets exist to the Barker Inlet/Gulf St Vincent.

Figure 2: Watercourses and Catchments (Nature Maps 25/05/2022)

The Bolivar WWTP Lagoons, now require stormwater from this dispersed catchment to be funnelled through limited, specific drainage pathways.

As such, all newly generated stormwater runoff from future development within the Growth Area will be required to direct stormwater to these existing drainage pathways and limit their discharge such that the capacity of these outfalls is not exceeded.

Generally, there are seen to be three available discharge/drainage pathways for the Growth Area.

- The Little Para River
- 'The Gap'
- The St Kilda Road Channel (partially constructed in late 2018)

The St Kilda Road Channel is seen to extend from the North South Motorway/Waterloo Corner Interchange, northwest around the northern Bolivar WWTP Lagoons. It connects into the Bolivar stormwater drainage system, which discharges via the two existing Bolivar Outfall Channel syphons, one located within the Bolivar site and the second just north of Symes Road. The Greater Edinburgh Parks and St Kilda Catchment, Stormwater Management Plan (May 2020), suggested that new syphon(s) be constructed under the Bolivar Outfall Channel, thereby discharging stormwater to the Barker Inlet between the Ridley Salt Ponds.

The cost of a new syphon may be prohibitive expensive and discharging stormwater into the Bolivar Outfall directly may be the better option. However, this option requires further investigation as well as consultation with SA Water.

The Growth Area was divided into Stormwater Infrastructure Sub-Areas (refer Figure 3 below), each with differing stormwater management measures or strategies.

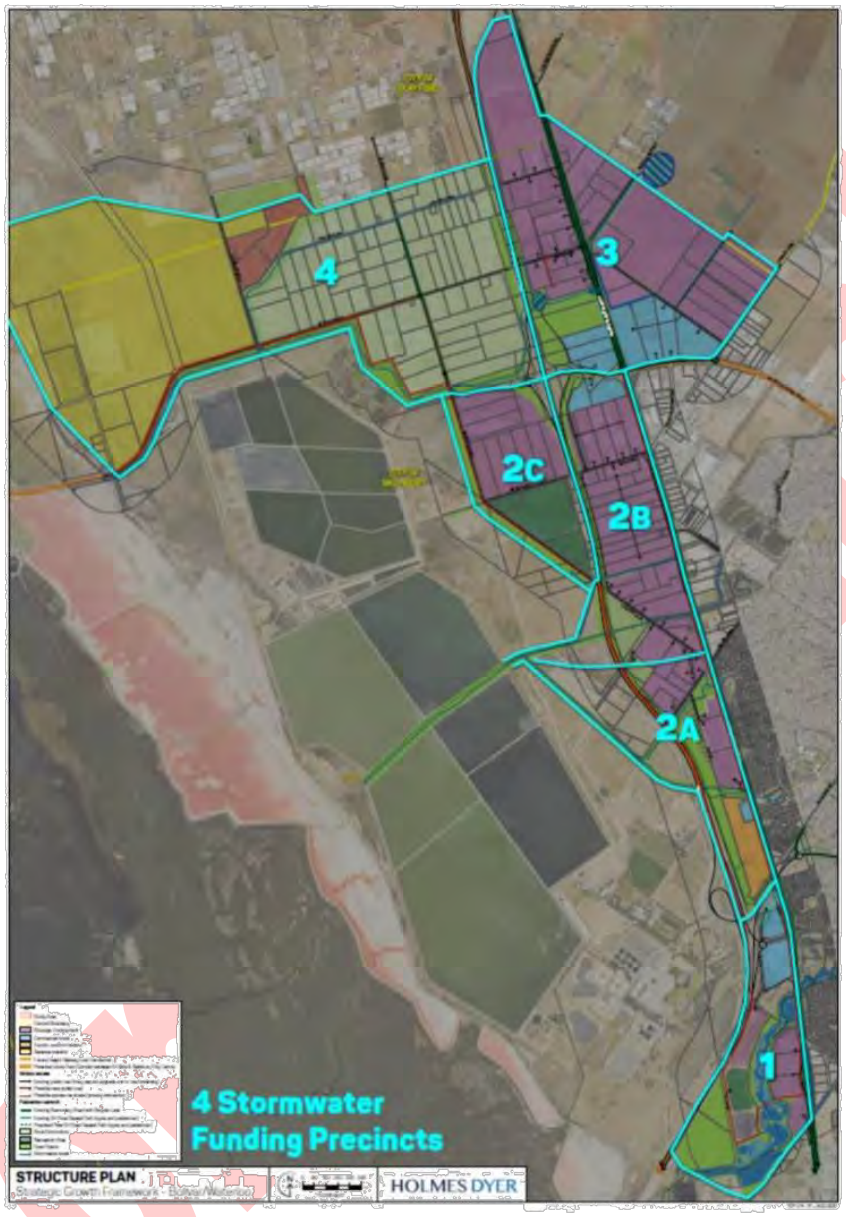

Figure 3: Stormwater Funding Infrastructure Sub-Areas

3.3.2 Stormwater Infrastructure Sub-Area 1

Stormwater Infrastructure Sub-Area 1 makes up the southern extent of the Bolivar/Waterloo Strategic Growth Area, bounded by Bolivar Road to the north, Port Wakefield Road to the east and the North-South Motorway to the west. The Little Para River runs through the infrastructure sub-area from the north-east to the south-west.

As can be seen from the currently available flood mapping (refer figure 4 below), Stormwater Infrastructure Sub-Area 1 is subject to inundation during the 1% Annual Exceedance Probability (AEP) rainfall event. However, it should be noted that this flood mapping pre-dates the construction of the North-South Motorway, which has altered the local topography and stormwater pathways within the immediate area.

Figure 4: Stormwater Infrastructure Sub-Area 1 Flood Inundation Mapping

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The existing Port Wakefield Road stormwater crossings are located at natural ground level, at several locations within this sub-area. The formalisation and continuation of these drainage paths through the infrastructure sub-area to the Little Para River, will likely lessen the flooding impact currently predicted.

Two main drainage paths are noted within this infrastructure sub-area. The first is the Little Para River itself, and the second is an open channel system, extending from the Hodgson Road Services, crossing under and then running along, the western side of the North South Motorway, before connecting with the Little Para River at its outlet. Refer figure 5 below for existing and proposed stormwater drainage paths and figure 6 for existing stormwater infrastructure.

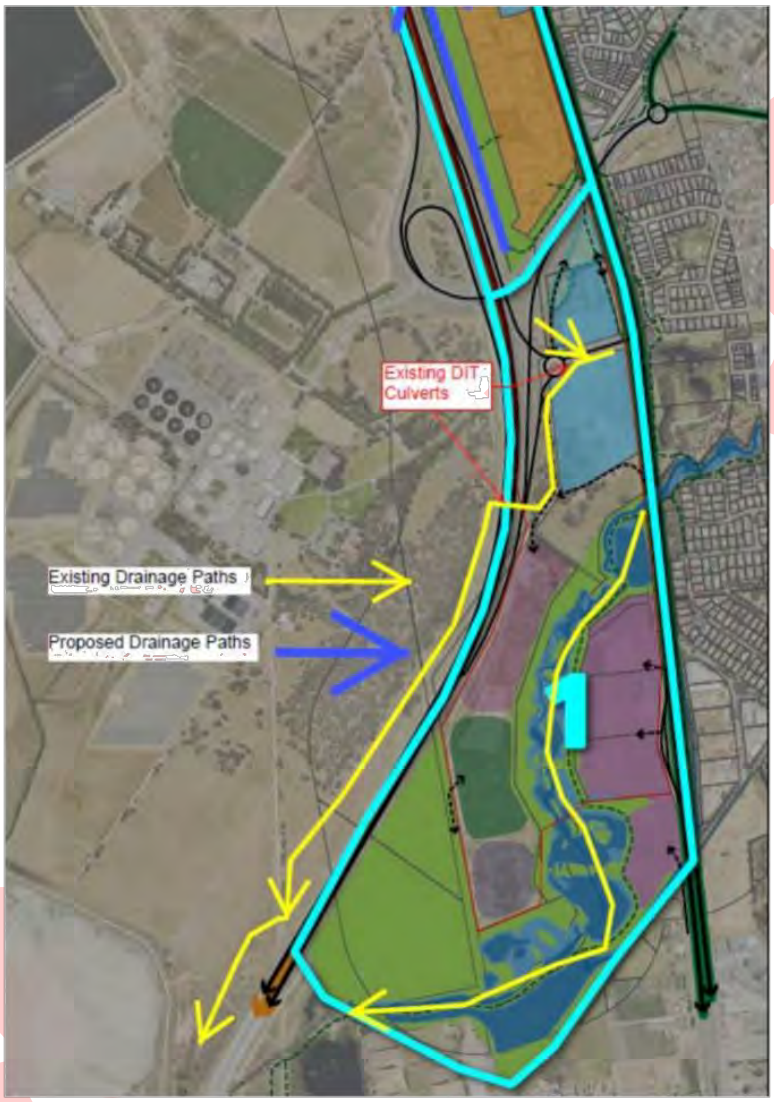

Figure 5: Stormwater Infrastructure Sub-Area 1 Drainage Paths

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Figure 6: Stormwater Infrastructure Sub-Area 1 Existing Stormwater Drainage Infrastructure

With the major stormwater drainage path/outlet of the Little Para River through this Stormwater Infrastructure Sub-Area, stormwater management in the form of detention storage is seen to be less critical. Due to the disproportionate shape of the Little Para Catchment, with the majority of its surface area at the upstream end, tapering to a relatively thin corridor through its suburban section, peak flows within the river are expected to be the result of longer duration storm events. Therefore, it may be preferable to allow stormwater runoff from the Growth Area to flow unconstrained to the stormwater outlets and the Little Para River.

Stormwater quality treatment measures will still be required however. It is critical to improve the quality of stormwater runoff, prior to outlet into the Little Para River/Barker Inlet. A combination of Sub-Area scale vegetated open channels, wetlands, biofiltration basins and street scale raingardens and gross pollutant traps will likely be required to meet South Australia's state-wide performance targets for stormwater runoff quality.

A wholistic approach would see stormwater quality treatment measures, including wetland/s or the equivalent, constructed to the south of Stormwater Infrastructure Sub-Area 1, near the unmade Whites Road Reserve. The western drainage channel's catchment is mostly developed with the Hodgson Road Services and Whitehorse Inn Hotel. Therefore, the use of GPT's and other commercially available water treatment systems are likely more practical for any further development in this area.

Conversely, individual treatments could be designed and constructed, as each land parcel is developed. This would likely be a less optimised solution, however may prove the more practical as intermittent development is likely to occur.

3.3.3 Stormwater Infrastructure Sub-Area 2

Stormwater Infrastructure Sub-Area 2 makes up the central portion of the Bolivar/Waterloo Strategic Growth Area. Bounded by Waterloo Corner to the north, Port Wakefield Road to the east the Robinson Road/North South Motorway to the west and Bolivar Road to the south.

As for Sub-Area 1, it can be seen from the currently available flood mapping (refer figure 7 below) that portions of Sub-Area 2 are also subject to stormwater inundation during the 1% Annual Exceedance Probability (AEP) rainfall event, although, once again this flood mapping pre-dates the construction of the North South Motorway.

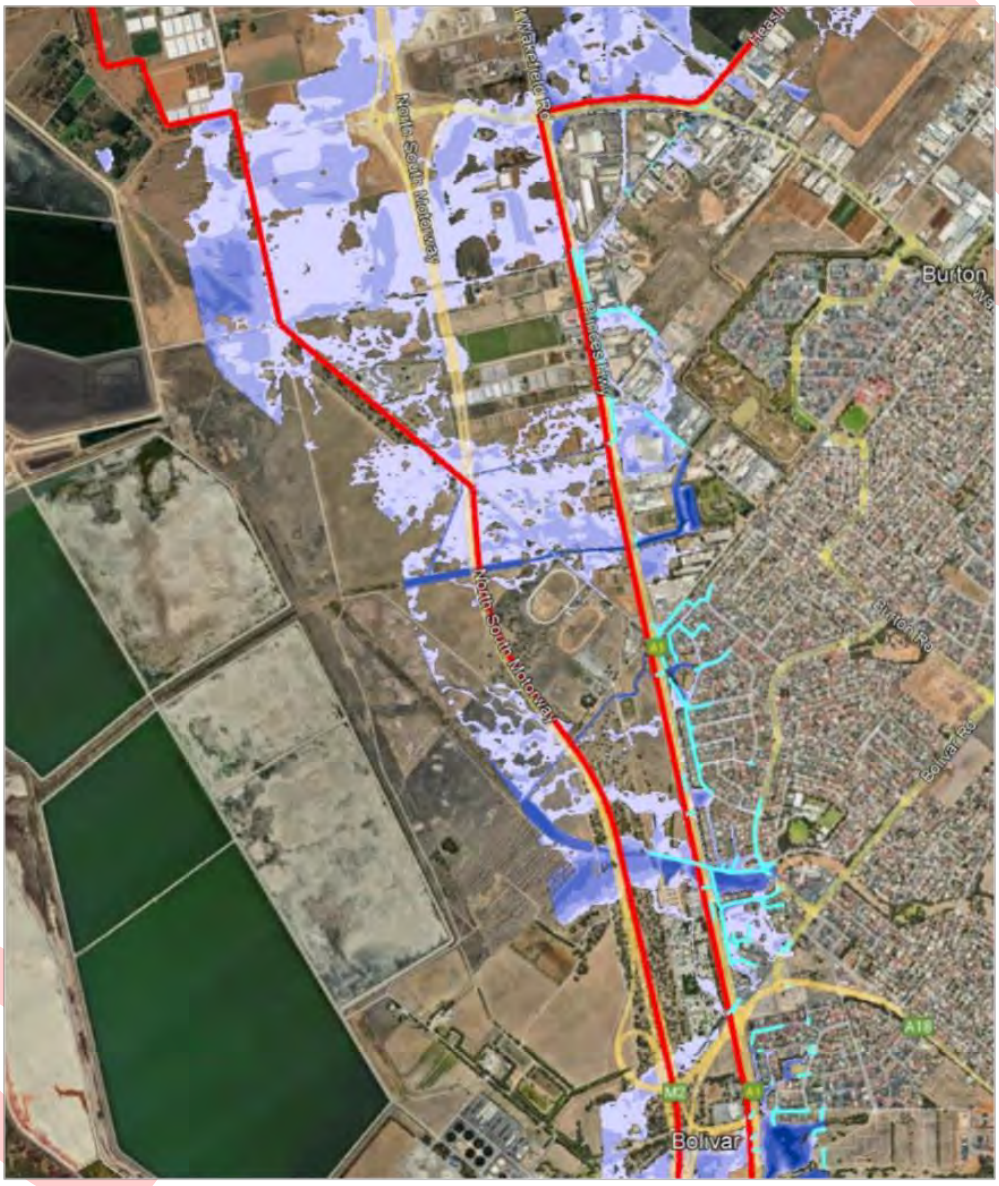

Figure 7: Stormwater Infrastructure Sub-Area 2 Flood Inundation Mapping

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Existing Port Wakefield Road stormwater crossings, outlet into a number of existing open drainage channels across this Infrastructure Sub-Area. The two larger of these channels, the Little Para Overflow channel and the Helps Road Drain, converge at 'The Gap' stormwater channel located between Bolivar Waste Water Treatment Plant (WWTP) Lagoons. The smaller stormwater channels within this Infrastructure Sub-Area take flows into the Little Para Overflow/Helps Road Drain, prior to 'The Gap'. These existing channels have been provided with stormwater culvert crossings as part of the North South Motorway project.

Additional open channel and culvert crossings, to the north of the Stormwater Infrastructure Sub-Area 2, were also constructed as part of the North South Motorway works. The channel extending south from Infrastructure Sub-Area 3, crossing the Waterloo Corner Interchange Connector Road, crosses the Motorway and then continues west. A culvert crossing under Robinson Road was constructed, but past this point, stormwater is seen to be allowed to sheet across Bolivar WWTP/SA Water land. This channel should be extended south to 'The Gap', its primary outfall location. Refer figure 8 below for existing and proposed stormwater drainage paths and figure 9 for existing stormwater infrastructure.

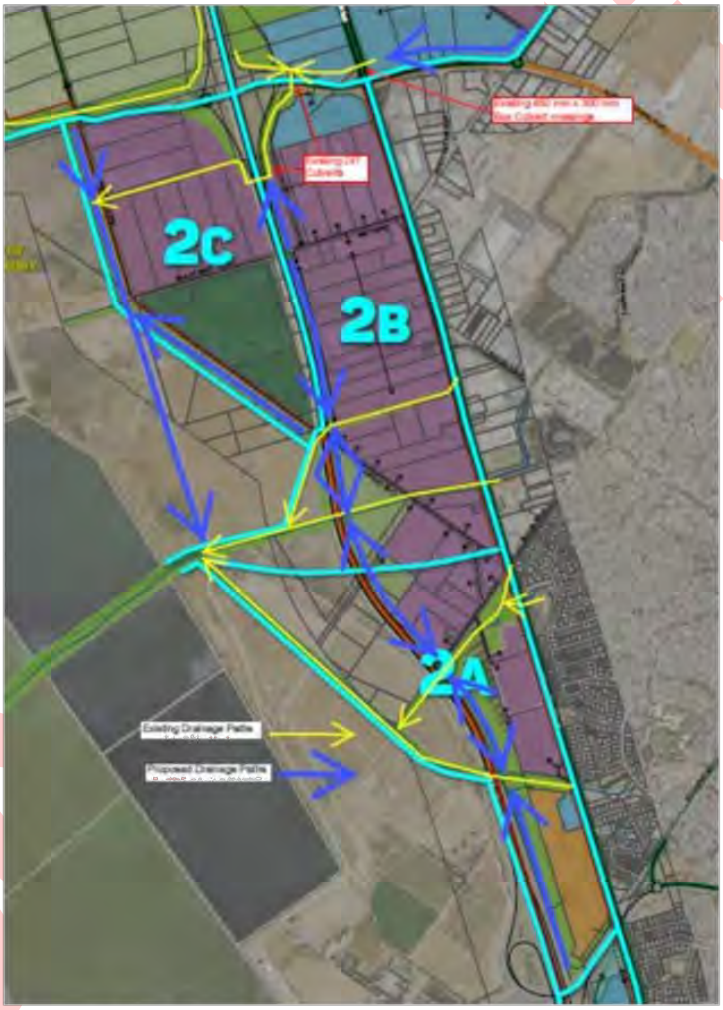

Figure 8: Stormwater Infrastructure Sub-Area 2 Drainage Paths

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Figure 9: Stormwater Infrastructure Sub-Area 2 Existing Stormwater Drainage Infrastructure

This Infrastructure Sub-Area has a number of key locations where the capacity of stormwater infrastructure is limited or constrained, including the North South Motorway culvert crossings as well as 'The Gap' stormwater channel itself.

Provision of stormwater detention measures are critical for 'The Gap', which is known to have capacity limitations. Stormwater detention measures will also critical to control stormwater flows arriving at existing major road culverts (North-South Motorway and Port Wakefield Road)

As for Infrastructure Sub-Area 1, stormwater quality treatment measures will also be required and integrated within future development, to treat the quality of stormwater runoff prior to discharge into the Barker Inlet.

3.3.4 Stormwater Infrastructure Sub-Area 3

Stormwater Infrastructure Sub-Area 3 makes up the north eastern portion of the Bolivar/Waterloo Strategic Growth Area and is bounded by Waterloo Corner to the south, Heaslip Road and Mill Road to the east and the North-South Motorway to the north and west. The existing stormwater infrastructure in this Infrastructure Sub-Area predominantly consists of roadside swales.

It is seen from the currently available flood mapping (refer figure 10 below); portions of Stormwater Infrastructure Sub-Area 3 are also subject to stormwater inundation in the 1% Annual Exceedance Probability (AEP) rainfall event, although once again, this flood mapping pre-dates the construction of the North-South Motorway.

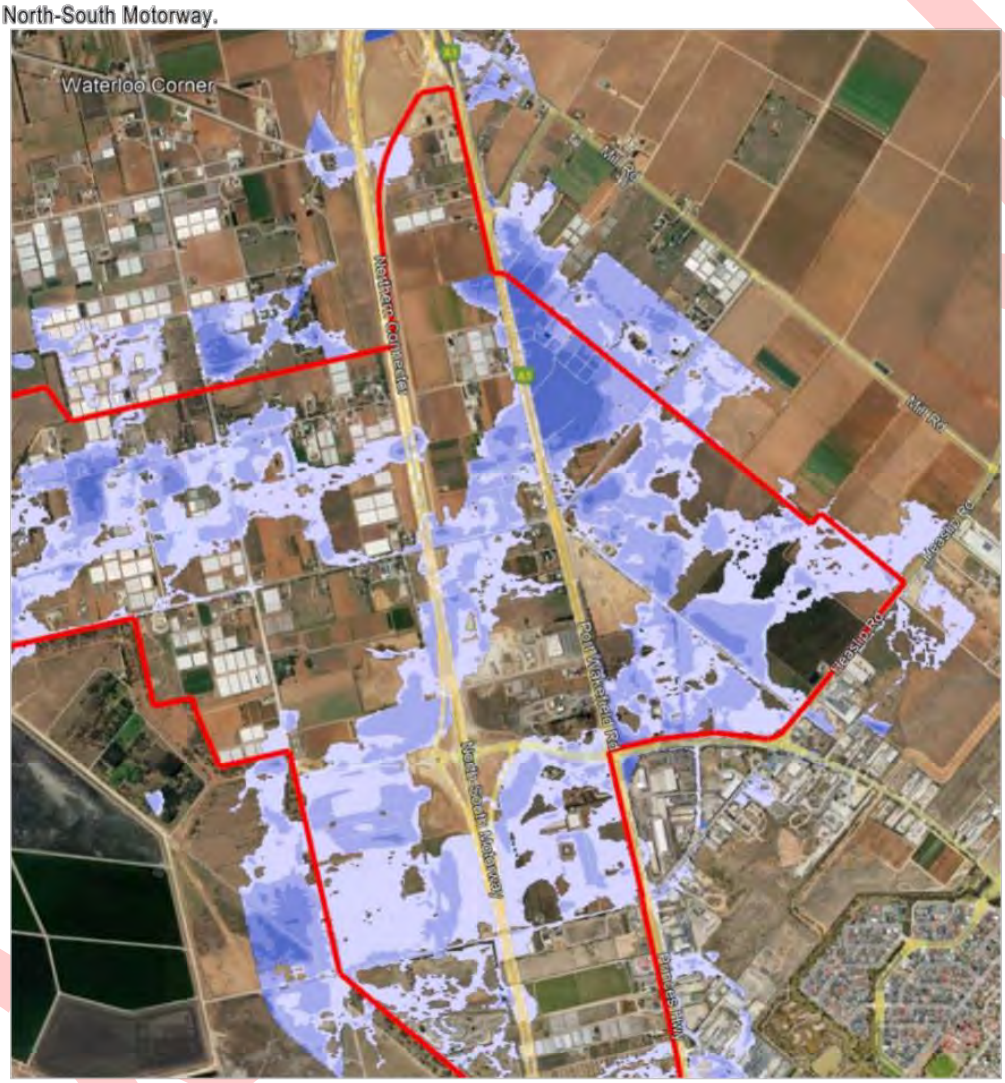

Figure 10: Stormwater Infrastructure Sub-Area 3 Flood Inundation Mapping

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The flood mapping indicates that stormwater overland flows arrive at the eastern side of Port Wakefield Road and results in significant inundation of low-lying areas between Anjanto Road and St Kilda Road. There are roadside swales at Greyhound Road and St Kilda Road, and roadside channels on Port Wakefield Road that outlet to the St Kilda Road drain. The flood mapping suggests that upgrades to these channel systems in conjunction with stormwater detention would be required to intercept and alleviate flooding.

Similarly, flood waters appear to be ponding on the eastern side of Port Wakefield Road, Mumford Road and Waterloo Corner Road, with stormwater overland flows being blocked and stored in local depressions.

Provision of stormwater detention is critical for these Infrastructure Sub-Area's, so as not to exceed the capacity of the existing St Kilda Road Channel, because 'The Gap' located downstream, is known to have capacity limitations. Stormwater appears to discharge to Barker Inlet via the Smith Creek's outlet. Stormwater detention and swales to intercept stormwater overland flows from upstream of the Infrastructure Sub-Area boundary should also be considered.

Refer figure 11 below for existing and proposed stormwater drainage paths and figure 12 for existing stormwater infrastructure.

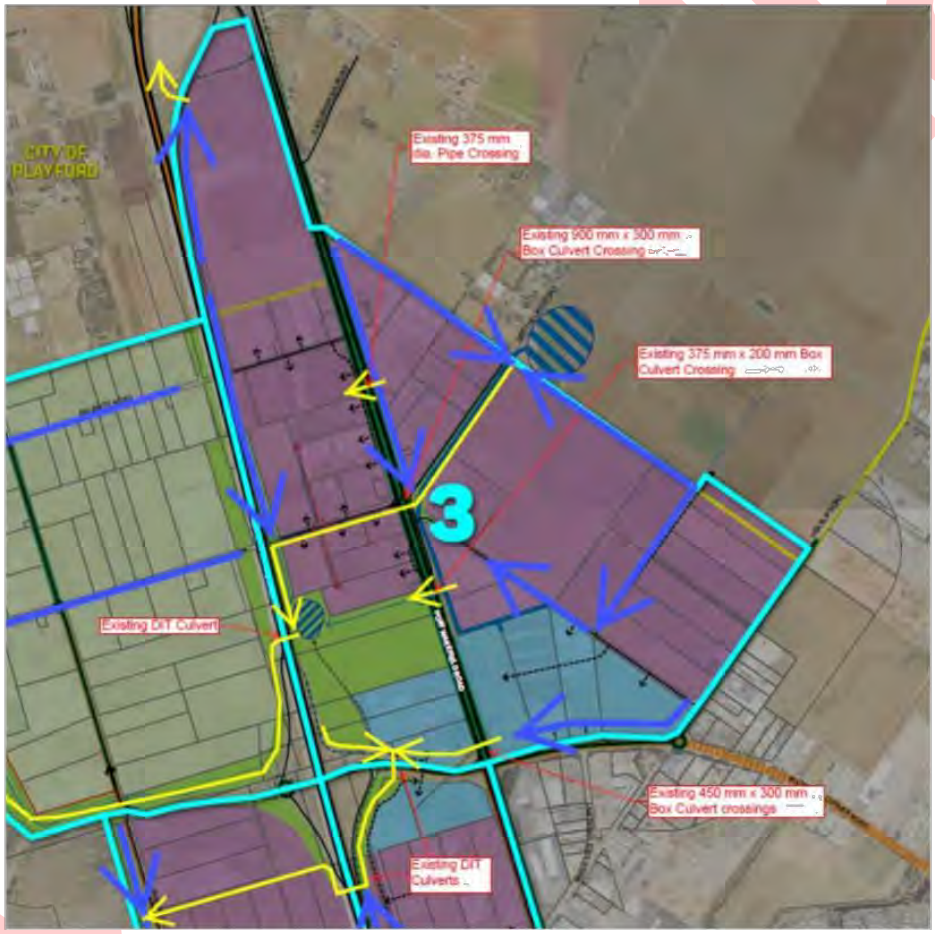

Figure 11: Stormwater Infrastructure Sub-Area 3 Drainage Paths

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Figure 12: Stormwater Infrastructure Sub-Area 3 Existing Stormwater Drainage Infrastructure

3.3.5 Stormwater Infrastructure Sub-Area 4

Stormwater Infrastructure Sub-Area 4 makes up the north western portion of the Bolivar/Waterloo Strategic Growth Area. It is bounded by Waterloo Corner and St Kilda Road to the south, the North-South Motorway to the east, Defence land to the west, and existing horticultural lands to the north.

The currently available flood mapping (refer figure 13 below) show portions of Stormwater Infrastructure Sub-Area 4 are subject to stormwater inundation in a 1% Annual Exceedance Probability (AEP) event, although again, this flood mapping pre-dates the construction of the North South Motorway.

Figure 13: Stormwater Infrastructure Sub-Area 4 Flood Inundation Mapping

Stormwater inundates low lying areas, generally to the south of Barker Road and Anjanto Road, and north of St Kilda Road. There is also inundation to a portion of the northern western area adjacent the existing drain from the Bolivar Waste Water treatment plant and to the northern western side of the North South Motorway. The flooding appears to be the result of insufficient stormwater infrastructure within the local catchment on the western side of the North-South Motorway.

The existing stormwater infrastructure in this Infrastructure Sub-Area predominantly consists of shallow roadside swales with the occasional small culvert road crossing. On the southern extents of Infrastructure Sub-Area 4, the St Kilda open drain has recently been constructed with large culverts under Robinson Road discharging into the SA Water Bolivar WWTP land towards the west. The recently constructed St Kilda Road drain on the northern western corner of the North South Motorway, at the intersection with Waterloo Corner Road, may have also reduced the incidence of flooding at this location.

Stormwater management measures provided as part of Infrastructure Sub-Area 3 may alleviate some of the overland stormwater flows into this Infrastructure Sub-Area.

Tonkin indicated in the Greater Edinburgh Parks and St Kilda Catchment Stormwater Management Plan, that the St Kilda channel outfall is restricted to the capacity of the syphon under the Bolivar treatment plant outfall channel. Upgrading the capacity of the system would require significant capital expenditure including a new larger syphon under the Bolivar channel and significant widening of almost 2.0 km of open channel through the salt fields.

It is anticipated new trunk open channels would capture stormwater flows in this Sub-Area and direct to the St Kilda drain. A wholistic Sub-Area solution for stormwater detention may be provided adjacent the outlet of the catchment. This would significantly impact the land available for development as they would be in the form of large shallow basins.

Alternatively, new development may provide on-site detention storage so that the discharge from each development side does not overload the capacity of the proposed truck drainage system.

Refer figure 14 below for existing and proposed stormwater drainage paths and figure 15 for existing stormwater infrastructure.

Figure 14: Stormwater Infrastructure Sub-Area 4 Drainage Paths

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Figure 15: Stormwater Infrastructure Sub-Area 4 Existing Stormwater Drainage Infrastructure

3.3.6 Growth Area Stormwater Management Outcomes

Further investigation would be required to develop a stormwater management plan for stormwater infrastructure for the Strategic Growth Area. Given the very flat grades of the existing land it is anticipated that grassed swales/channels would be the most appropriate form of stormwater infrastructure as it would be difficult to achieve minimum grade on stormwater pipes.

All stormwater pathways/corridors will require detailed investigation to ensure future capacity is provided for a developed catchment.

It is anticipated that any development within the strategic growth area would be required to meet with the Environmental Protection Authorities (EPA) water quality reduction targets. Water quality measures would include grasses swales, biofiltration systems, water treatment ponds, and wetlands. Opportunities for storage and reuse may also be considered if the need is of a scale that would be beneficial.

Consideration of catchment wide solutions such as detention and wetlands should be made at key locations to reduce the reliance on developments providing individual stormwater management systems. This will provide the opportunity for less constrained developable land within each of the Infrastructure Sub-Area's.

Stormwater runoff from the Growth Area is anticipated to be managed as outlined below:

- Individual land development allotments are to drain into a road drainage system within the proposed road network.
- The road drainage system will flow into stormwater swales, channels, or floodway, within public road or public open space areas.
- A network of stormwater channels will convey the stormwater flows towards a detention basin and water treatment system.
- WSUD principles are to be incorporated in the drainage network in accordance with best engineering practice

A layout plan of the proposed stormwater management outcomes for the Growth Area is included in Appendix C.

3.4 Sewer

SA Water have an extensive gravity sewer system to the south-east of the Growth Area, generally to the east of Port Wakefield Road and south of Waterloo Corner. The Bolivar Sewage Treatment Works is located to the west and south-west of the Growth Area, which incorporates the plant itself, pumping mains and waste water treatment lagoons.

To the north of Waterloo Corner, and generally to the west of Port Wakefield Road, there is very little existing SA Water sewer infrastructure.

SA Water were contacted and provided an 'interim response' on key existing infrastructure, based on the 'Northern', 'Central' and 'Southern' Road Infrastructure Sub-Area's. SA Waters response is included in Appendix E.

An assessment by SA Water is now underway, to investigate and to provide further information relating to the future servicing of the Growth area to identify areas of constraint or where upgrades are required. However, due to the complexity of this assessment it is anticipated it will take a number of months to complete. In addition, SA Water are also currently completing master planning works as part of SA Water's Regulatory Determination 2024, which in part includes the Waterloo Corner & Bolivar Corridor Growth Area.

SA Water provided a plan of the existing waste water infrastructure within the strategic growth area, as well as a summary within each of the nominated Infrastructure Sub-Area s, as described below:

3.4.1 Infrastructure Sub-Area Area 1 - Southern

There is a 1000 mm diameter PVCu trunk sewer from Bolivar Road to the Bolivar Road Waste Water Treatment Plant (WWTP).

There is an existing 675 mm diameter PVCu trunk sewer from Victoria Drive Parafield Gardens, running north across Port Wakefield Road via easement, to the WWTP.

Refer to figure 16 below for locations of existing sewer infrastructure within Infrastructure Sub-Area 1.

Figure 16: Infrastructure Sub-Area Area 1 - Southern - Existing SA Water Wastewater Infrastructure

3.4.2 Infrastructure Sub-Area Areas 2 & 4 - Central

There is limited infrastructure in this area with some smaller 150 mm and 225 mm diameter mains on the eastern side of Port Wakefield Rd in the Burton area; however, this network has capacity constraints.

It is likely that a catchment pump station will be required to service this area.

Refer to figure 17 below for locations of existing sewer infrastructure within Infrastructure Sub-Area 2 & 4

Figure 17: Infrastructure Sub-Area Areas 2 & 4 - Central - Existing SA Water Wastewater Infrastructure

3.4.3 Infrastructure Sub-Area Areas 2, 3 & 4 - Northern

There is no wastewater network currently available in this area. SA Water is currently completing the Virginia Trunk Sewer network, which includes a re-lift Waste Water Pump Station (WWPS) being constructed within the SA Water Bolivar WWTP site, near the south-eastern corner of St Kilda Road and Coleman Road. There is currently no capacity allowance in this WWPS for development in the surrounding area; however, there may be an opportunity for upgrades of this station to occur to accommodate additional discharge. This would need to be assessed.

Refer to figure 18 below for locations of existing sewer infrastructure within Infrastructure Sub-Area 2, 3 & 4

Figure 18: Infrastructure Sub-Area Areas 2, 3 & 4 – Northern - Existing SA Water Wastewater Infrastructure

The Growth Area shall generate additional wastewater that will ultimately have to be catered for within the Bolivar Sewerage Treatment Works. We have used the Water Service Association of Australia (WSA) Sewerage Code of Australia, to estimate the Average Dry Weather Flow (ADWF) generated from the development. The ADWF does not account for peak dry weather flow, groundwater infiltration or the peak inflow and infiltration into the sewerage system.

We have used the 'Yield Analysis' undertaken by Holms Dyer to estimate the Equivalent Persons (EP) generated by the anticipated development activity composition. The following assumptions have been made:

Classification	Unit	EP per Unit	Quantity
Local Commercial	Gross Hectare	75	Floorspace for Service, Store, Office and Retail activities as estimated by Holms Dyer
Future Industrial Areas	Gross Hectare	*150*	Floorspace for Manufacturing activities as estimated by Holms Dyer

As prescribed by the WSA Sewerage Code, an average daily sanitary flow of 180 L/d/EP was applied to the EP generated from the development. This resulted in an ADWF of approximately 150 ML/day generated by the total Growth Area.

It is anticipated that SA Water's waste water network may be extended to service the development and may require a system of both gravity and pumped network solutions. Due to the anticipated high ground water table, pressure or vacuum sewer systems may also be considered, particularly for the areas west of Port Wakefield Road.

3.4.4 Growth Area Sewer Outcomes

Further information is required to be provided by SA Water to confirm the requirements for sewer networks to service the Growth Area. Due the scale and anticipated timing of development it is anticipated SA Water will address development though individual site investigation as parcels of land within the Growth Area proceed to development.

3.5 Potable Water Supply

Potable Water is able to be supplied to the Strategic Growth Area, by SA Water, generally via mains located within Port Wakefield Road and Waterloo Corner Road.

SA Water were contacted and provided an 'interim response' on key existing infrastructure, based on the 'North', 'Central' and 'South' Road Infrastructure Sub-Area's. SA Waters response is included in Appendix E.

An assessment by SA Water is now underway, to investigate and to provide further information relating to the future servicing of the Growth area to identify areas of constraint or where upgrades are required. However, due to the complexity of this assessment it is anticipated it will take a number of months to complete. In addition, SA Water are also currently completing master planning works as part of SA Water's Regulatory Determination 2024, within which the Waterloo Corner & Bolivar Corridor Growth Area form's part.

SA Water provided a plan of the existing potable water infrastructure within the strategic growth area as well as a summary within each of the nominated Infrastructure Sub-Area s as described below:

3.5.1 Infrastructure Sub-Area Area 1 - Southern

Dual 150 Asbestos Cement (AC) mains are located within Port Wakefield Road. A 600 m section has been upsized to a single 200 AC main, located approximately between Victoria Drive and the northern end of Ryans Road/Port Wakefield service road.

A 200 AC main is located to the west of the North-South Motorway. Connection under the Motorway would be required to provide a supply from this main.

Refer to figure 19 below for locations of existing water infrastructure within Infrastructure Sub-Area 1

Figure 19: Infrastructure Sub-Area Area 1 - Southern - Existing SA Water Potable Water Infrastructure

3.5.2 Infrastructure Sub-Area Areas 2 & 4 - Central

Dual 150 AC mains are located on both the western and eastern sides of Port Wakefield Road, between Summer Road and Burton Road.

A 150 AC and 200 AC mains are located on the western and eastern sides of Port Wakefield Road respectively, between Burton Road and Undo Road/Angle Vale Crescent.

A single 200 AC main heads north, on the western side of Port Wakefield Road from Undo Road too Dunn/Mumford Roads.

A 450 Mild Steel Cement Lined (MSCL) main and a 100 DICL (Ductile Iron Cement Lined) are both located within Driver/Undo Roads, crossing the Motorway.

Refer to figure 20 below for locations of existing water infrastructure within Infrastructure Sub-Area 2 & 4

Figure 20: Infrastructure Sub-Area Areas 2 & 4 - Central - Existing SA Water Potable Water Infrastructure

3.5.3 Infrastructure Sub-Area Areas 2, 3 & 4 - Northern

Dual 150 AC mains are located on both the western and eastern sides of Port Wakefield Road, between Dunn Road and Symes Road.

A 300 DICL main is located within Mumford Road for its full length.

Dual 150 AC and 100 polyethylene (PE) mains extend west from Port Wakefield Road along Dunn Road and continue, crossing the Motorway, along St Kilda Road. The 100 PE main terminates just west of Wilson Street.

A 150 PE main, extends north from St Kilda Road and terminates near Berno Road.

A 100 AC main extends west from Port Wakefield Road along Anjanto Road, crossing the Motorway, and continuing west into barker road.

Refer to figure 21 below for locations of existing water infrastructure within Infrastructure Sub-Area 2, 3 & 4

Figure 21: Infrastructure Sub-Area Areas 2, 3 & 4 - Northern- Existing SA Water Potable Water Infrastructure

SA Water also advised that an assessment was completed in the St Kilda area for the Defence site, on the corner of St Kilda and Coleman Roads. This assessment identified constraints within the network should further development occur, with SA Water advising that 2.3 km of DN250 mains would be required to be re-laid in Dunn Road.

3.5.4 Growth Area Water Supply Outcomes

It is anticipated that SA Waters potable water network may be extended to service the development. Further information is required to be provided by SA Water to confirm the requirements for potable water networks to service the Growth Area. Due the scale and anticipated timing of development it is anticipated SA Water will address development though individual site investigation as parcels of land within the Growth Area proceed to development.

3.6 Recycled Water Supply

A number of recycled/reclaimed water mains are located throughout the Bolivar WWTP site, as well as to the north of the Growth Area. These mains being associated with the treatment works and the Virginia Pipeline Scheme (VPS).

SA Water have advised that there may be an option for mains extensions, off the Bolivar Treatment Plant infrastructure. However, to the north of the Growth Area, the VPS network is currently at full allocation.

With the Northern Adelaide Irrigation Scheme (NAIS) network being in close proximity, there may be an opportunity to provide recycled water via this network. However, further assessment of this option will need to be undertaken.

SA Waters response to our request for information is included in Appendix E.

SA Water provided a plan of the existing recycled water infrastructure within the strategic growth area as shown below in figure 22, 23 and 24:

Figure 22: Infrastructure Sub-Area Area 1 – Southern - Existing SA Water Recycled Water Infrastructure

Figure 24: Infrastructure Sub-Area Areas 2 & 4 - Central - Existing SA Water Recycled Water Infrastructure

Figure 23: Infrastructure Sub-Area Areas 2, 3 & 4 - Northern- Existing SA Water Recycled Water Infrastructure

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In addition to the SA Water's recycled water network Salisbury Water also operate a recycled water network within the area. A recycled water network is located within Infrastructure Sub-Area 2 (areas 2A and 2B). A 150 mm diameter PVC distribution main extends from the Burton Wetlands at Burton Road, through Infrastructure Sub-Area 2 to the reserve at Liberator Drive on the eastern side of Port Wakefield Road as shown in figure 25 below.

Figure 25: Infrastructure Sub-Area Area 2 (2A & 2B) - Existing Salisbury Water Recycled Water Infrastructure

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A 180 mm diameter distribution main located the intersection of Waterloo Corner Road and Heaslip Road intersection. The main is located on the south eastern extent of Infrastructure Sub-Area 3 as shown in figure 26 below.

Figure 26: Infrastructure Sub-Area Area 3 - Existing City of Salisbury Recycled Water Infrastructure

A recycled water system is located on the eastern side of Port Wakefield Road opposite Hodgson Road located in the reserve at Walpole Road reserve and wetlands. This system feeds recycled water to the Willowbrook Reserve approximately 200 m to the north of the Walpole Road wetlands as shown in figure 27 below.

Figure 27: Infrastructure Sub-Area Area 1 - Existing City of Salisbury Recycled Water Infrastructure

Salisbury Water operates a bore at the Little Para River Linear Park on the eastern side of Port Wakefield Road adjacent Infrastructure Sub-Area 1 as shown in figure 28 below.

Figure 28: Infrastructure Sub-Area Area 3 - Existing City of Salisbury Community Bore

3.6.1 Growth Area Recycled Water Supply Outcomes

Further discussion with SA Water and/or Salisbury Water would be required to explore the opportunity for recycled water for a future development. If reserves are provided as part of future development, which include water quality treatment systems such as wetlands, then there may be the opportunity to store water for reuse for irrigation of open spaces or industry.

3.7 Groundwater Wells

There are a significant number of ground water wells within the strategic growth area as shown below in figures 29, 30 and 31. Existing ground water wells are managed by the government of South Australia's Department for Environment and Water. Information on existing bores has been obtained from the WaterConnect, groundwater database. Future development may need to consider removal of existing bores. There may be the potential to retain existing wells if accompanied with a suitable licence for use of the water. Further discussions with the Department for Environment and Water would be required to confirm the potential for use of ground water.

Figure 29: Infrastructure Sub-Area Area 1 (left) and Infrastructure Sub-Area Area 2 (right) - Existing groundwater wells

Figure 30: Infrastructure Sub-Area Area 3 - Existing groundwater wells

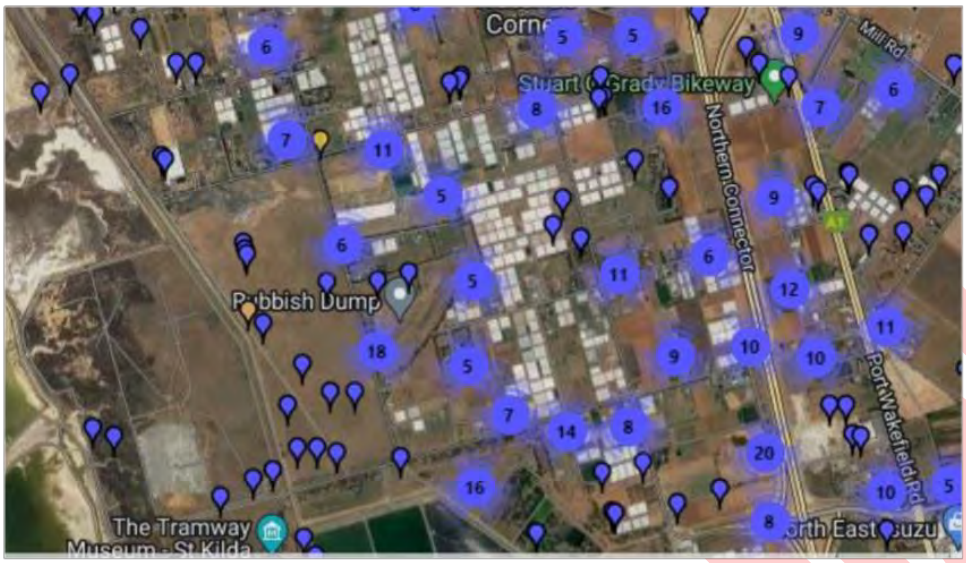

Figure 31: Infrastructure Sub-Area Area 4 - Existing groundwater wells

3.8 Electrical Supply

3.8.1 All Infrastructure Sub-Area's

Both SAPN and ElectraNet were contacted, with regards to providing feedback and influencing desired outcomes, if any. At the time of writing, only SAPN have responded; however, it's understood that ElectraNet are still progressing a review. SAPN's response is included in Appendix E.

SAPN have advised that 'The Waterloo Corner and Bolivar Corridor Growth Area' is currently supplied by four sub-stations; at Direk, Paralowie, Parafield Gardens and Cavan as shown in figure 32 below:

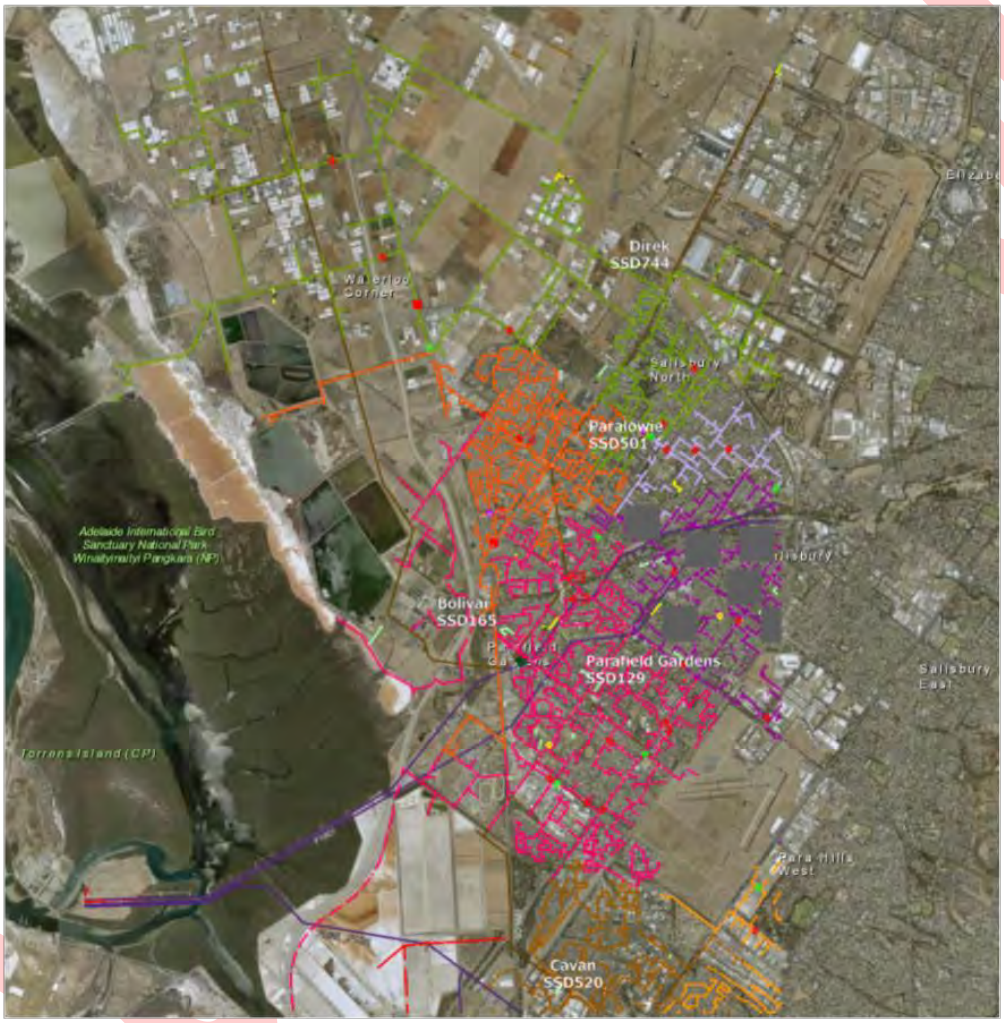

Figure 32: SAPN Substation Network

The corridor is currently being serviced by an existing 11 kV high voltage network. However, the corridor is also seen to be located at the far extent of the substation areas, which results in network constraints due to end of line voltage drop. The existing feeder network therefore will require extension and 'strengthening' to supply any significant additional load.

SAPN have provided additional detail relating to the corridor's 'Road Infrastructure Sub-Area's, as follows.

3.8.2 Detail Area North & Central – Infrastructure Sub-Area's 3B – 9

This area will require a new 11kV Feeder(s) from a nearby substation(s) as existing infrastructure in the area is already constrained by thermal/voltage limits and the existing load is approaching capacity limits. Feeder backbone upgrades are also likely to be required if demand for future strategic employment area increases. Substation capacity is also forecasted to be exceeded due to the increase in number and size of generation and load connections. This capacity limit, will impact project timing and the balance between Infrastructure Sub-Area development and substation upgrade works will need to be considered.

3.8.3 Detail Area South – Infrastructure Sub-Area's 1A – 2C

Existing feeders within this area are seen to have spare capacity for increased demand. However, voltages will require management for 'end of the line' connections, especially on the weaker section of the feeders. SAPN suggests the available capacity would permit preliminary establishment of the Infrastructure Sub-Area before new feeder extension would be required.

3.8.4 Salt Pans Master Planned Development & Shunting Yard and Cavan Industry Additional Comments

SAPN also provided comment on the area bounded by Globe Derby Drive, Port Wakefield Road, Churchill Road, Salisbury Highway and the North South Motorway. Stating that this area will require new 11kV feeder(s) or possibly a new zone substation to service this large a scale of residential development.

3.8.5 Growth Area Electrical Supply Outcomes

It is anticipated that SAPN's electricity network may be extended to service the Growth Area. Further information is required to be provided by SAPN to confirm the requirements for electricity networks to service the Growth Area. Due the scale and anticipated timing of development it is anticipated SAPN will address development though individual site investigation as parcels of land within the Growth Area proceed to development. The cost of new electricity infrastructure that is provided by development may be rebated by SAPN if it will benefit other uses and would be determined at the time of application.

New electrical infrastructure for the growth areas is assumed to be installed as an underground electrical reticulation and lighting scheme as part of a common services trench along with telecommunications and gas services as required.

3.9 Telecommunication Supply

3.9.1 All Infrastructure Sub-Area's

There is existing Telstra/NBN infrastructure within Port Wakefield, St Kilda and Robinson Roads.

Both Telstra and NBN Co. were contacted, with regards to their providing feedback and influencing desired outcomes, if any.

Telstra advised that they were unable to provide further advice and to refer to Telstra Infraco Network Integrity Section for retention, protection or relocation of existing Telstra infrastructure, if required.

NBN Co. have advised that generally they have access to sufficient network duct capacity via the Telstra Network. The entire strategic growth area is available for service as shown shaded in purple in figure 33 below:

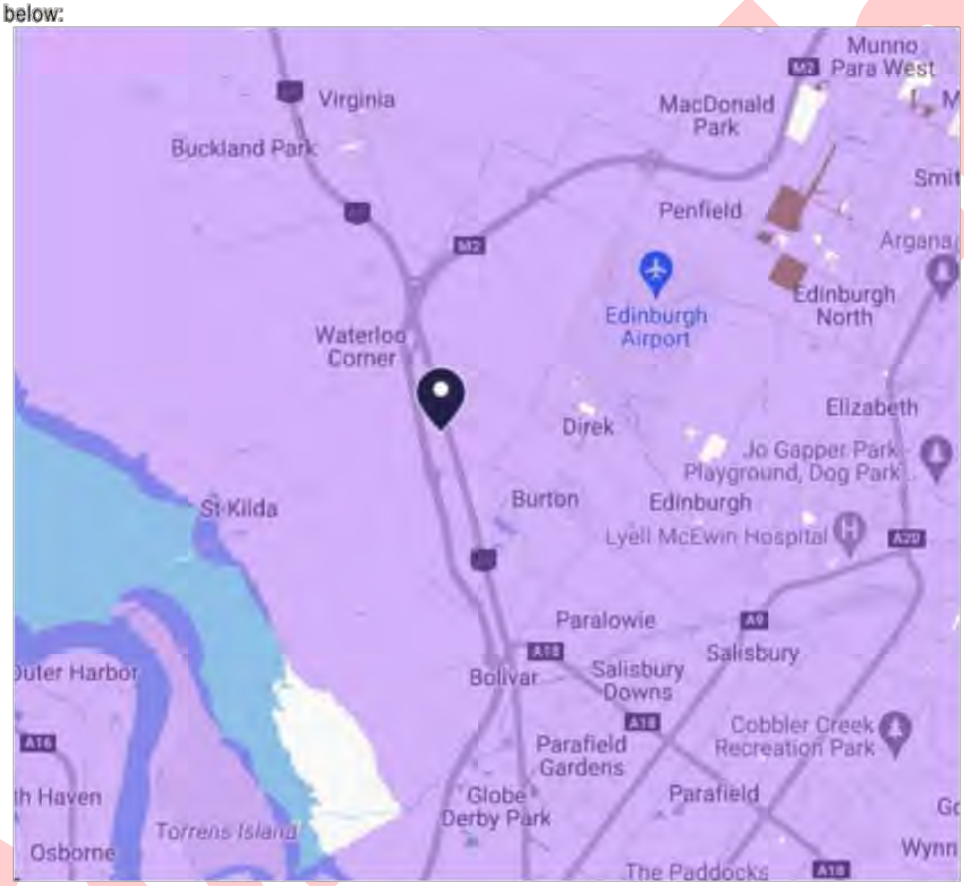

Figure 33: Strategic Growth Area, NBN Co. Service Available Area (Source: NBN rollout Map, nbnco.com.au)

Any development that would occur west of Port Wakefield Road would be required to install new NBN pit and pipe infrastructure to connect to the existing network. It is also an expectation of NBN that as part of any new road creation, within the Growth Area, an NBN pit and pipe installation would be incorporated as part of the overall services to ensure continuity of service pathways.

NBN Co. and Telstra's response is included in Appendix E.

3.9.2 Growth Area Telecommunications Supply Outcomes

It is anticipated that a telecommunications network may be extended to service the Growth Area. Further information is required to be provided by NBN Co. or other service providers to confirm the requirements for telecommunications networks to service the Growth Area. Due the scale and anticipated timing of development it is anticipated telecommunication providers will address development though individual site investigation as parcels of land within the Growth Area proceed to development.

A typical underground pit and pipe system for telecommunications infrastructure is assumed to be required for development within the growth area.

New telecommunications infrastructure for the growth areas is assumed to be installed as an underground scheme as part of a common services trench along with electrical and gas services as required.

3.10 Gas Supply

3.10.1 All Infrastructure Sub-Area's

AGN/APA, Epic Energy and SEA Gas were all contacted to provide feedback and input regarding the Strategic Growth Area.

Three major gas transmission pipelines extend through the Waterloo Corner & Bolivar Corridor Strategic Growth Area. The Moomba to Adelaide Pipeline System (MAPS), the Wasleys Loop, which is a loop line of the MAPS pipeline both of which are operated by Epic Energy and the Port Campbell to Adelaide (PCA) pipeline, operated by SEA Gas. As shown in the figure 34 below:

Figure 34: Strategic Growth Area existing gas networks

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Epic Energy and SEAGas, as operators of major gas transmission pipelines, rather than consumer gas reticulation networks, have been made aware of the potential for future development within the area, and have provided mapping and GIS data of their assets. However, they did not provide comment or feedback on the potential rezoning/code amendment.

SEAGas advised as follows:

> The Port Campbell to Adelaide Pipeline (PCA) currently delivers approximately 50% of the State's gas demand on average. South Australia relies heavily upon natural gas for power generation, for industrial and commercial application and for domestic use. As such, the PCA meets the definition of 'essential infrastructure' in the Act and is also considered by the State to be 'critical infrastructure.
>
> The design, construction and maintenance of high-pressure gas transmission pipelines in Australia (of which the PCA is typical) is required by legislation to be governed by Australian Standard (AS) 2885. A licence is required to construct and to operate a high-pressure gas transmission pipeline (in South Australia, the PCA is licensed under the *Petroleum and Geothermal Energy Act 2000* (P&GE Act)).
>
> For any new development a detailed Safety Management Study in accordance with AS2885 would need to be undertaken at the design stage to ensure the risk to the pipeline (and therefore the population around the pipeline) will remain acceptable. This is to determine any further controls or design changes to the development that may be required. Road crossings, changes to drainage patterns, and placement of fill over the pipeline or reduction of cover are all key issues that would need to be considered in addition to land use change and service crossings.
>
> The existing pipeline would typically be located in a 15- 20 m wide easement, but may be as a fee simple ownership, lease or as provision for access through a license agreement. Limited third-party activity is allowed within the easement in order to ensure physical protection of the pipeline. Where no easement exists (e.g. in roads), consistent with AS2885.3, encroachment should be controlled within 6m of the pipeline centreline.
>
> The type of development may also be constrained within a nominated distance of the existing gas pipeline. Development within the *Measurement Length* of High-Pressure Gas Pipelines may increase the risk to public safety or introduce a threat to both pipeline integrity and the security of the state's gas supply. The consequences of a pipeline failure may have implications for life, property, the environment and the State's economy. The Measurement Length, as defined in AS 2885, is a width that is measured laterally from the axis of the pipeline and is defined as the radial distance within which a person would be unlikely to survive for more than 30 seconds, without severe injury in the highly unlikely event of a full-bore rupture from a High-Pressure Gas Pipeline. For example, In the case of the 450 mm diameter, 15,300 kPa pressure PCA, the Measurement Length is 585 metres (or an overall width of 1170 metres). Industrial land uses need to be considered for increased population density as well as event escalation resulting from a pipeline failure.
>
> Relocation of the main would be extremely costly and would take in the order of 18 months to facilitate. For this reason, this is not considered a potential option and other solutions would be required to be considered that would not require relocation of the existing gas pipeline. SEAGAS advised that other services may cross the existing gas pipeline but would be preferred to pass over the main. A minimum of 500 mm separation to other services is required, however, there may be circumstances where greater separation is required (e.g., large 2 m by 1 m concrete

stormwater culvert). A case-by-case assessment would need to be undertaken. It is preferable for service crossings to be as close as possible to perpendicular, with number of service crossing points minimised. Physical protection in the form of concrete or HDPE protection slabs above the pipeline would be required at service locations.

The existing main is located at a depth of approximately 1 m which will likely coincided with any proposed stormwater infrastructure. This is of particular concern for the southern areas of the growth area and may prove challenging for new gravity infrastructure if required to cross the existing gas pipeline.

In 2021, two overlays relating to High Pressure gas Pipeline were introduced under the South Australia's Planning and Design Code, being:

- The Gas and Liquid Petroleum Pipeline Overlay; and
- The Gas and Liquid Petroleum Pipeline (Facilities) Overlay

The desired planning outcome from these overlays aligns with the objectives of both the Planning Policy and the PGE Act, which is to manage the risk to public safety, the environment and security of energy supply from the encroachment of development on strategic gas and liquid petroleum pipelines.

For the PCA, within built up areas, the pipeline overlay varies between 115m and 160m which corresponds to the 4.7kW/m^2 radiation contour for the largest credible hole for the PCA based on current risk assessment work and largest credible threat to the pipeline. It should be noted that this distance is currently smaller than the measurement length, however changes in the threat profile to the pipeline may change the size of these overlays in the future.

The overlays contain deemed to satisfy (DTS) criteria that need to be satisfied for new developments within this area, otherwise the development will trigger a referral to the Department for Energy and Mining (DEM) for further assessment. The DTS criteria limits land uses around the pipeline, including industrial uses such as fuel depots.

Consumer gas reticulation infrastructure, owned and operated by AGN/APA is seen to exist to the east of the Growth Area, within the existing developed areas. When contacted, it was advised that additional information would be required to undertake a meaningful investigation, this information including:

- Required gas loads;
- Specific load locations;
- What the loads would be required for; and
- Timing of when individual loads would be required.

At a broader perspective it was advised that gas infrastructure could be extended into the Growth Area. The eventual timing and loadings would determine the cost of this infrastructure; however, it is expected that an indicative cost to service the Growth Area would be in the order of $10 million.

SEAGAS, Epic Energy and APA Group's response is included in Appendix E.

3.10.2 Growth Area Gas Supply Outcomes

It is anticipated that a gas network may be extended to service the Growth Area. Further information is required to be provided by AGN/APA to confirm the requirements for gas networks to service the Growth Area. Due the scale and anticipated timing of development it is anticipated AGN/APA will address development though individual site investigation as parcels of land within the Growth Area proceed to development. New gas infrastructure for the growth areas is assumed to be installed as an underground scheme as part of a common services trench along with electrical and telecommunications services as required.

Consideration of Epic Energy and SEAGAS mains will need to be made when considering the type of development proposed within proximity to distribution mains and the provision of new infrastructure that may cross the existing distribution mains.

4. Order of Cost

An order of cost is contingent upon the nature of the proposed Development within the Growth Area.

An order of cost for the infrastructure required to support development of the growth area has not been able to be determined. Further analysis is required from each of the authorities to enable the extent of augmentation works or infrastructure upgrades to be defined.

Further discussions with Authorities when the nature of the proposed development has been defined.

Appendix A - Strategic Growth Framework Plans

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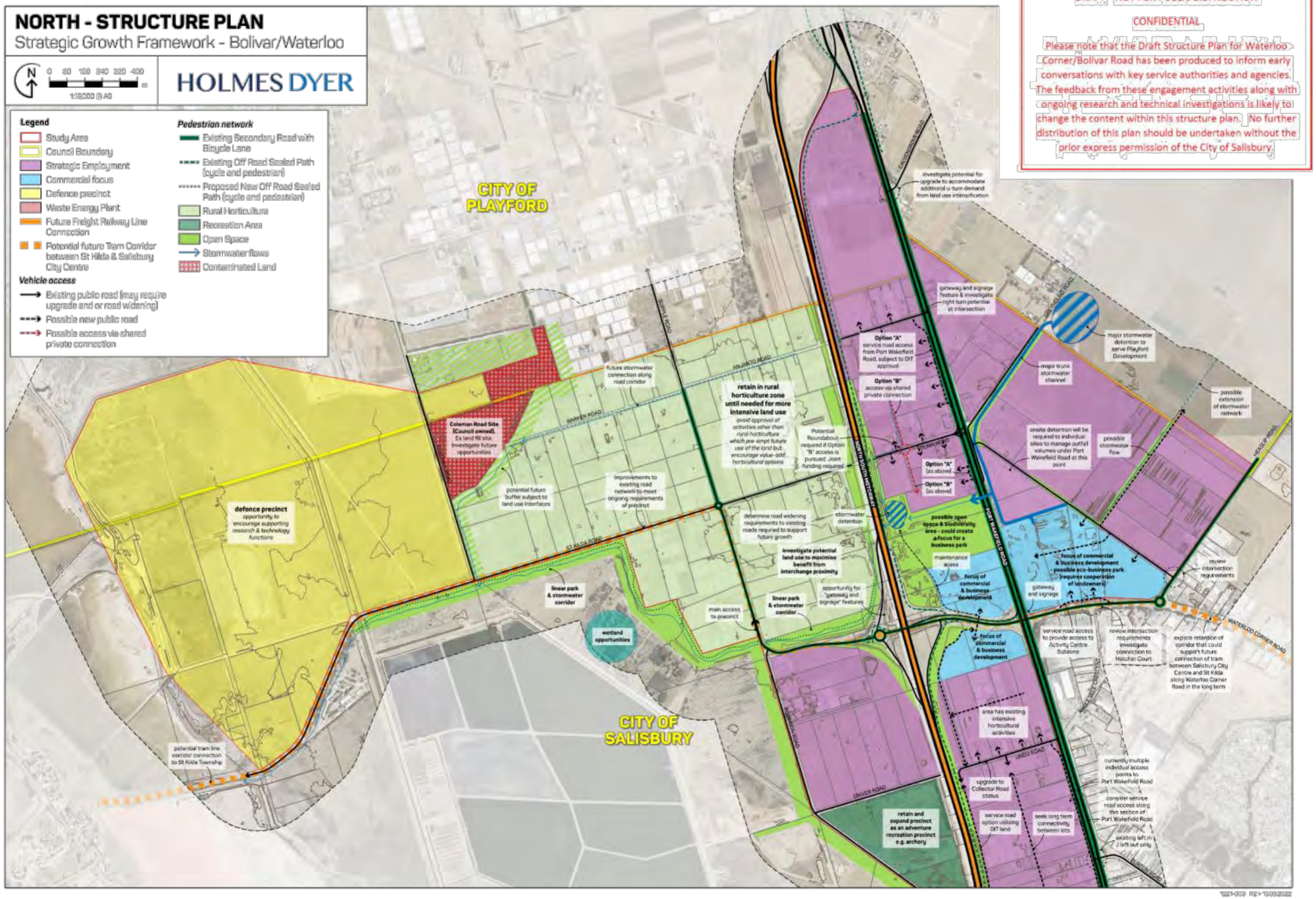

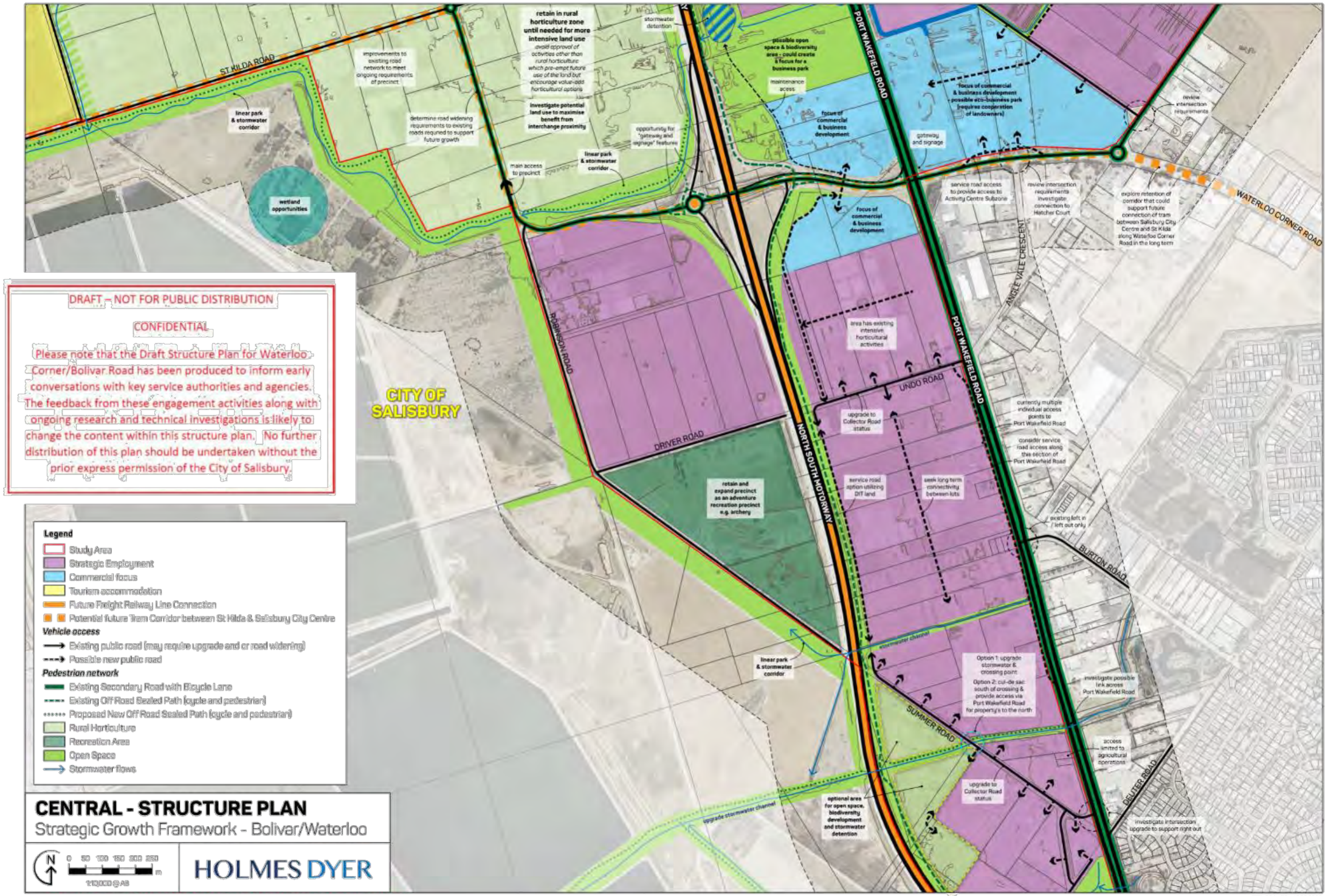
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CONFIDENTIAL
Please note that the Draft Structure Plan for Waterloo Corner/Bolivar Road has been produced to inform early conversations with key service authorities and agencies. The feedback from these engagement activities along with ongoing research and technical investigations is likely to change the content within this structure plan. No further distribution of this plan should be undertaken without the prior express permission of the City of Salisbury.
ST KILDA ROAD
linear park & stormwater corridor
wetland opportunities
improvements to existing road network to meet ongoing requirements of precinct
determine road widening requirements to existing roads required to support future growth
retain in rural horticulture zone until needed for more intensive land use
avoid approval of activities other than rural horticulture which pre-empt future use of the land but encourage value-add horticultural options
investigate potential land use to maximise benefit from interchange proximity
stormwater detention
opportunity for "gateway and signage" features
main access to precinct
linear park & stormwater corridor
possible open space & biodiversity area - could create a focus for a business park
maintenance access
focus of commercial & business development
PORT WAKEFIELD ROAD
gateway and signage
focus of commercial & business development - possible eco-business park (requires cooperation of landowners)
review intersection requirements
service road access to provide access to Activity Centre Subzone
review intersection requirements investigate connection to Hatcher Court
explore retention of corridor that could support future connection of tram between Salisbury City Centre and St Kilda along Waterloo Corner Road in the long term
WATERLOO CORNER ROAD
ANGLE VALE CRESCENT
focus of commercial & business development
area has existing intensive horticultural activities
UNDO ROAD
upgrade to Collector Road status
currently multiple individual access points to Port Wakefield Road
consider service road access along the section of Port Wakefield Road
ROBINSON ROAD
DRIVER ROAD
CITY OF SALISBURY
retain and expand precinct as an adventure recreation precinct e.g. archery
NORTH SOUTH MOTORWAY
service road option utilising Diff land
seek long term connectivity between lots
existing left in / left out only
BURTON ROAD
linear park & stormwater corridor
stormwater channel
Option 1: upgrade stormwater & crossing point
Option 2: cul-de sac south of crossing & provide access via Port Wakefield Road for property's to the north
investigate possible link across Port Wakefield Road
SUMMER ROAD
access limited to agricultural operations
DEUTER ROAD
upgrade to Collector Road status
optional area for open space, biodiversity development and stormwater detention
upgrade stormwater channel
investigate intersection upgrade to support right out
Legend
Study Area
Strategic Employment
Commercial focus
Tourism accommodation
Future Freight Railway Line Connection
Potential future Tram Corridor between St Kilda & Salisbury City Centre
Vehicle access
Existing public road (may require upgrade and or road widening)
Possible new public road
Pedestrian network
Existing Secondary Road with Bicycle Lane
Existing Off Road Sealed Path (cycle and pedestrian)
Proposed New Off Road Sealed Path (cycle and pedestrian)
Rural Horticulture
Recreation Area
Open Space
Stormwater flows
CENTRAL - STRUCTURE PLAN
Strategic Growth Framework - Bolivar/Waterloo
N
0 50 100 150 200 250 m
1:10,000 @ A3
HOLMES DYER
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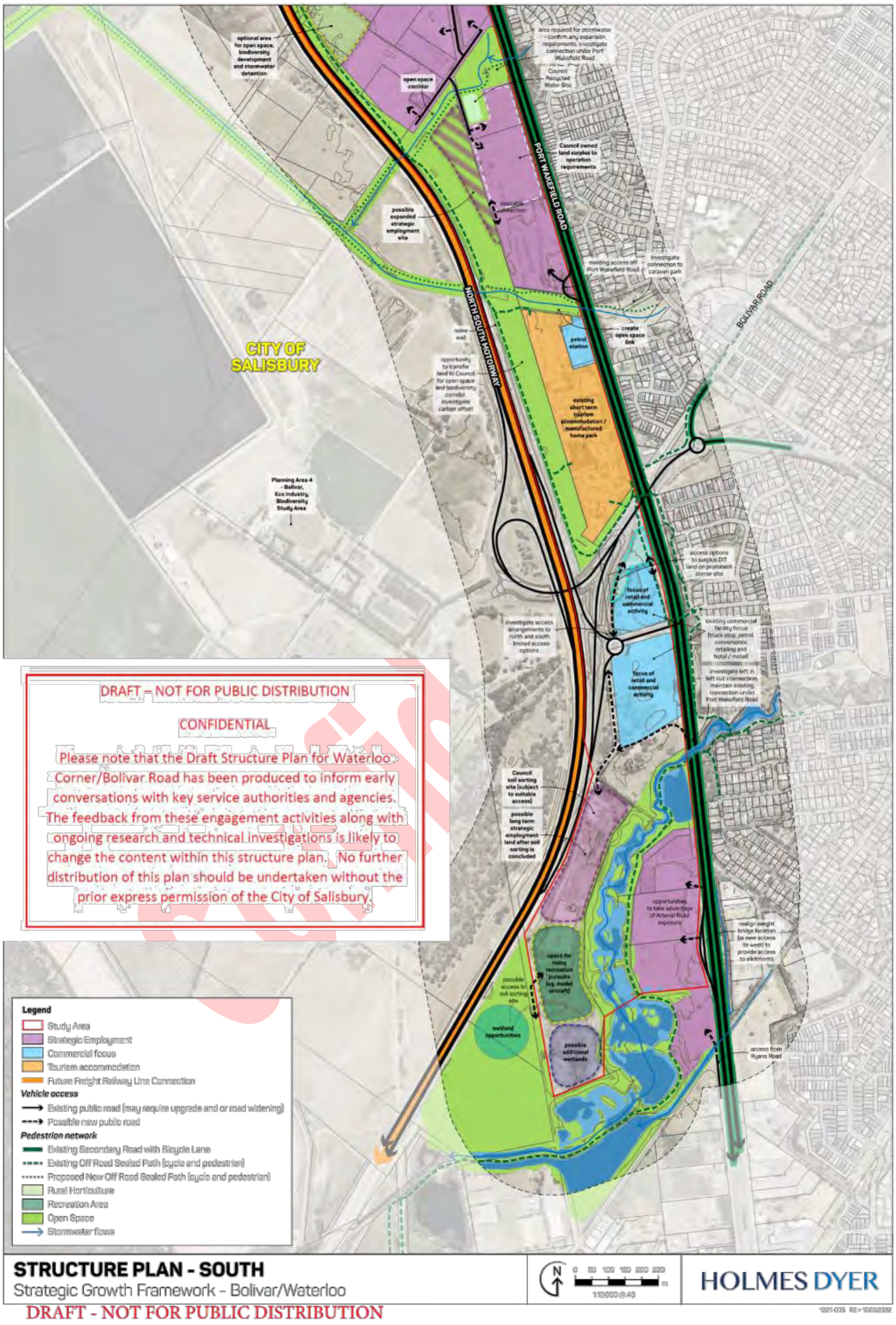
optional area for open space, biodiversity development and stormwater detention
open space corridor
area required for stormwater - confirm any expansion requirements, investigate connection under Port Wakefield Road
Council Recycled Water Site
Council owned land surplus to operation requirements
PORT WAKEFIELD ROAD
possible expanded strategic employment site
existing access off Port Wakefield Road
investigate connection to caravan park
BOLIVAR ROAD
CITY OF SALISBURY
NORTH SOUTH MOTORWAY
noise wall
petrol station
create open space link
opportunity to transfer land to Council for open space and biodiversity corridor investigate carbon offset
existing short term tourism accommodation / manufactured home park
Planning Area 4 - Bolivar, Eco Industry, Biodiversity Study Area
access options to surplus DIT land on prominent corner site
focus of retail and commercial activity
investigate access arrangements to north and south - limited access options
existing commercial facility focus (truck stop, petrol, convenience retailing and hotel / motel)
investigate left in left out intersection, maintain existing connection under Port Wakefield Road
focus of retail and commercial activity
Council soil sorting site (subject to suitable access)
possible long term strategic employment land after soil sorting is concluded
opportunities to take advantage of Arterial Road exposure
realign weight bridge location (or new access to west) to provide access to allotments
space for noisy recreation pursuits (eg. model aircraft)
possible access to soil sorting site
wetland opportunities
possible additional wetlands
access from Ryans Road
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Legend
Study Area
Strategic Employment
Commercial focus
Tourism accommodation
Future Freight Railway Line Connection
Vehicle access
Existing public road (may require upgrade and or road widening)
Possible new public road
Pedestrian network
Existing Secondary Road with Bicycle Lane
Existing Off Road Sealed Path (cycle and pedestrian)
Proposed New Off Road Sealed Path (cycle and pedestrian)
Rural Horticulture
Recreation Area
Open Space
Stormwater flows
STRUCTURE PLAN - SOUTH
Strategic Growth Framework – Bolivar/Waterloo
0 50 100 150 200 250 m
1:12000 @ A3
HOLMES DYER
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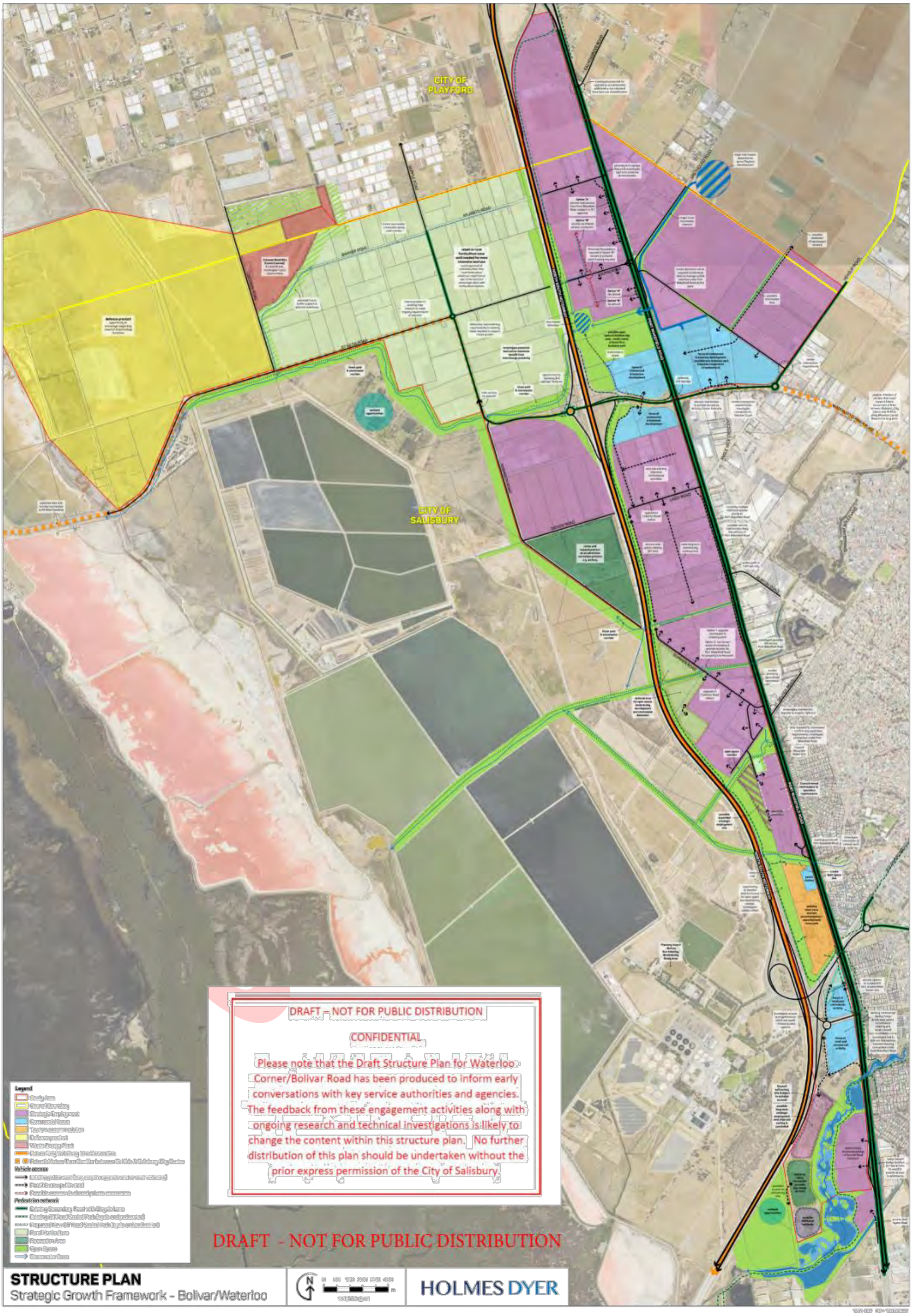
CITY OF PLAYFORD
CITY OF SALISBURY
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STRUCTURE PLAN
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER

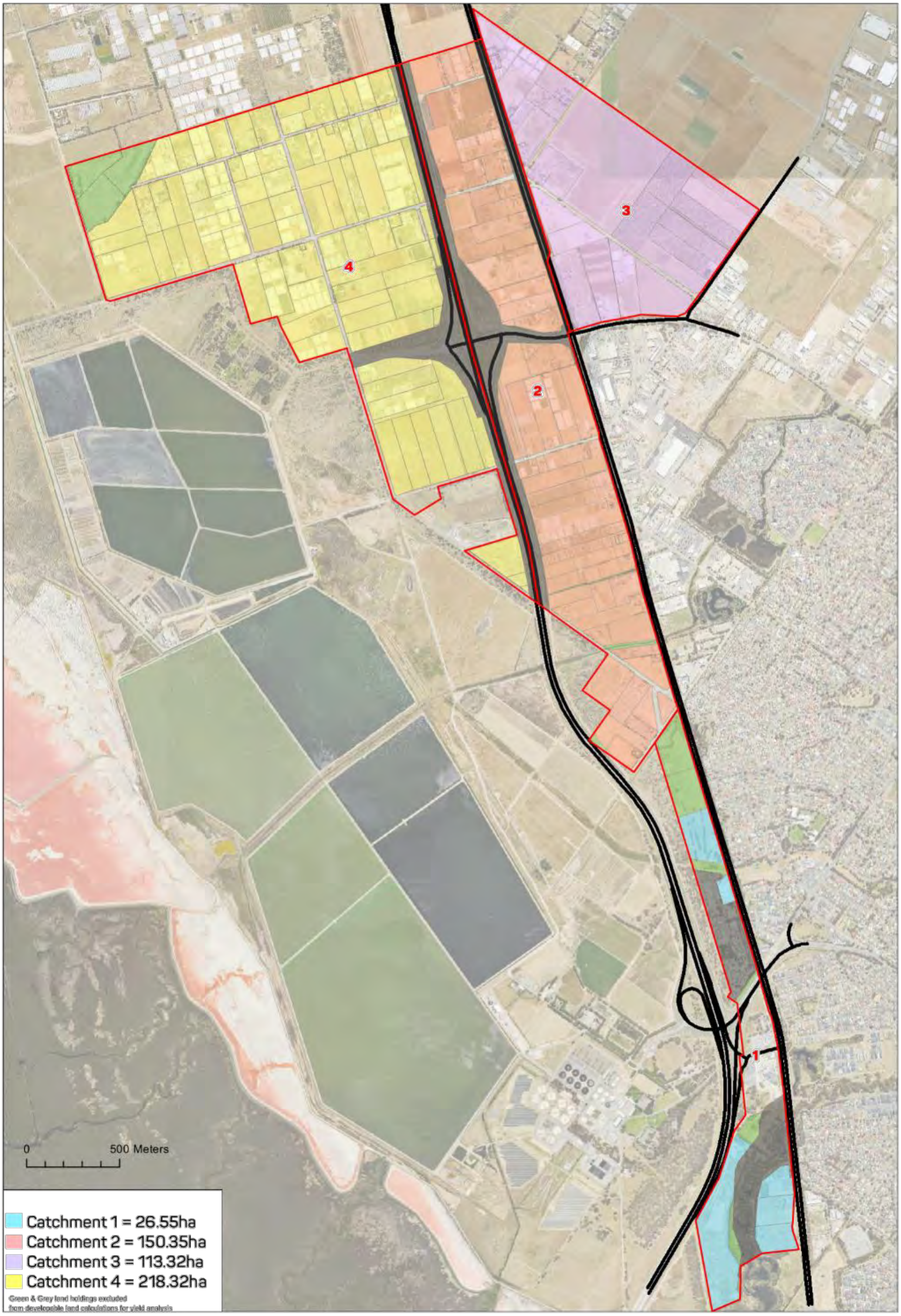
Appendix B - Proposed Development Yield

Development Activity Composition and Workforce

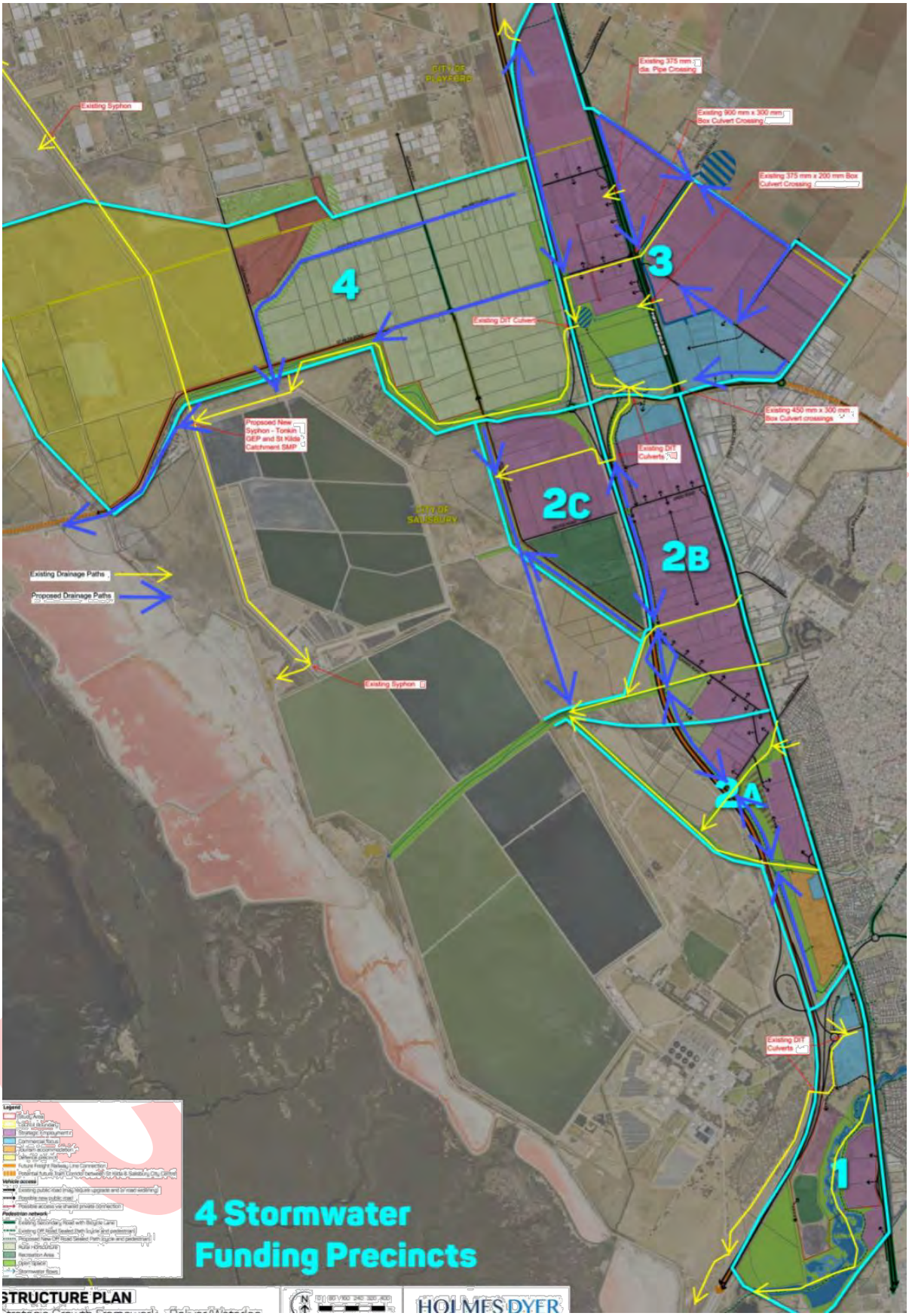
Precinct	Development Timeframe (years)	Development Area (ha)	Developable Area (ha)	Floorspace (m^2)	Floorspace Typology (m^2)	Workforce (pax)
1	1 – 5	26.6ha	16.0ha	48,000m^2	Manufacturing 20% 9,600m^2	50
					Service 30% 14,400m^2	105
					Store 40% 19,200m^2	45
					Office 5% 2,400m^2	115
					Retail 5% 2,400m^2	85
						400
2	1 – 15	150.4ha	90.2ha	270,000m^2	Manufacturing 20% 54,000m^2	285
					Service 30% 81,000m^2	590
					Store 40% 108,000m^2	250
					Office 5% 13,500m^2	645
					Retail 5% 13,500m^2	465
						2,235
3	10 – 20	113.3ha	68.0ha	204,000m^2	Manufacturing 20% 40,800m^2	215
					Service 30% 61,200m^2	445
					Store 40% 81,600m^2	190
					Office 5% 10,200m^2	485
					Retail 5% 10,200m^2	350
						1,685
4	20 – 35	218.3ha	131.0ha	393,000m^2	Manufacturing 20% 78,600m^2	415
					Service 25% 98,250m^2	715
					Store 50% 196,500m^2	455
					Office 2.5% 9,825m^2	470
					Retail 2.5% 9,825m^2	340
						2,395

Annual Average Development Activity

Precinct	Years of Development (years)	Average Net Area of Lots Developed (ha)	Average Area of Floorspace (m^2)	Workforce (pax)
1	1 – 5 (2023 – 2028)	3.2ha	9,600m^2	80
2	1 – 15 (2023 – 2038)	6.0ha	18,000m^2	150
3	10 – 20 (2033 – 2043)	6.8ha	20,400m^2	170
4	20 – 35 (2043 – 2058)	8.7ha	39,300m^2	160
All Precincts	**1 – 35 (2023 – 2058)**	**8.7ha**	**26,160m^2**	**190**


4
3
2
1
0
500 Meters
Catchment 1 = 26.55ha
Catchment 2 = 150.35ha
Catchment 3 = 113.32ha
Catchment 4 = 218.32ha
Green & Grey land holdings excluded
from developable land calculations for yield analysis

Appendix C - Preliminary Stormwater Management Options


4
3
2C
2B
2A
1
Existing Drainage Paths
Proposed Drainage Paths
4 Stormwater
Funding Precincts
STRUCTURE PLAN
HOLMES DYER

Appendix D - Dial Before You Dig Information

Due to size, Dial Before You Dig information has been provided separately.

Appendix E - Authority Responses

Cindy Oliver

From:	Snoswell, Debbie <Debbie.Snoswell@sawater.com.au>
Sent:	Monday, 25 April 2022 3:39 PM
To:	Min Soo Lee
Cc:	Cindy Oliver; chantal@homesdyer.com.au; Grapentin, Corey
Subject:	FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice - SA Water Ref: H0129685
Attachments:	24022022 _ Area Calcs - Updated Legend Colour.pdf; Catchment 1 Existing Water Infrastructure.pdf; Catchment 1 Existing Wastewater Infrastructure.pdf; Catchment 1 Existing Recycled Water Infrastructure.pdf; Catchments 2,4 Southern Sections Existing Water Infrastructure.pdf; Catchments 2,4 Southern Sections Existing Wastewater Infrastructure.pdf; Catchment 2,4 Southern Sections existing Recycled Infrastructure.pdf; Catchments 2,3,4 Northern Section Existing Water Infrastructure.pdf; Catchments 2,3,4 Northern Section Existing Wastewater Infrastructure.pdf; Catchments 2,3,4 Northern Section Existing Recycled Water Infrastructure.pdf
Importance:	High

Hi Min Soo,

Thanks for your email. For us to undertake this very complex assessment it will take a number of months to complete and it is not going to meet the timeframe requested below. Unfortunately due to the extreme workload of assessments being investigated at the moment for active development sites this will not be prioritised. I have requested our Network Planning Team to investigate this request at a very high level and identify areas of constraint and where network upgrades are likely to be required.

As an interim response I have created some maps of the catchment areas as identified in your attached 'Area Calcs' plan. Below I have noted some general information of the infrastructure in these catchments and any other info available that might also assist.

CATCHMENT 1

Water

- 200AC main to the West of the Northern expressway. Connection under the Expressway would be required to provide a supply from this main.
- 150AC main in Port Wakefield Road with a 600m section that has been upsized to a 200AC.

Recycled Water

- There is a recycled water network to the West of the expressway abutting the Bolivar Wastewater Treatment Plant.

Wastewater

- 1000PVCU trunk sewer from Bolivar Road to the WWTP.
- 675PVCU trunk sewer from Victoria Drive Parafield Gardens running north across Port Wakefield Road via easement to the WWTP.

CATCHMENTS 2 AND 4 – SOUTHERN

Water

- 150AC water mains on both the Western and Eastern sides of Port Wakefield Road
- 450MSCL main and a 100DICL in Driver/Undo Road
- 200AC main heading North along Port Wakefield Road

Wastewater

- There is limited infrastructure in this area with some smaller 150mm and 225mm mains on the Eastern Side of Port Wakefield Rd in the Burton area, however this network has capacity constraints.
- It is likely that a catchment pump station will be required to service this area.

Recycled Water

- There are recycled water mains with the Bolivar Treatment plant area and there may be an option for mains extensions off these mains to this area.

CATCHMENTS 2,3 AND 4 NORTHERN AREA

Water

- 300DICL in Mumford Road through the middle of catchment 3
- 200AC Main on the Western side of Port Wakefield Road
- 150AC along Dunn Rd continuing west along St Kilda Road
- 100PE main along Dunn Road terminating just past Wilson St.
- 100AC main in Anjanto Road continuing West along Barker Road.
- 150PE main in Coleman Road

** An assessment was completed on the St Kilda area for the defence site on the corner of St Kilda Road and Coleman Rd which identified constraints within this network should further development occur. It was advised that a 2.3km of DN250 mains to be relayed in Dunn Rd.**

Wastewater

- There is no wastewater network currently available in this area.
- SA Water is currently completing the Virginia Trunk Sewer network which includes a relift WWPS being constructed within the SA Water Bolivar WWTP site near the South Eastern corner of St Kilda Road and Coleman Road. There is currently no capacity allowance in this WWPS for development in the surrounding area, however there may be an opportunity for upgrades of this station to occur to accommodate additional discharge. This will need to be assessed.

Recycled Water

- There are a number of mains in this area that are part of the Virginia Pipeline Scheme (VPS). The VPS network is currently at full allocation, however with the Northern Adelaide Irrigation Scheme (NAIS) network in close proximity there may be an opportunity to provide recycled water to this area. This will need to be assessed.

Please note the above information is just advising what is currently on site and what information we already know of the network. An assessment is now underway to investigate and to provide more information however as previously advised this will take considerable time as it is complicated. In addition we are currently completing master planning works as part of preparing for our Regulatory Determination 2024 and this area forms part of the master planning work.

I hope this helps in the interim and Corey will be your point of contact for this work moving forward.

Kind Regards

Debbie Snoswell
Account Manager, Development Services
Debbie.Snoswell@sawater.com.au • 7424 1133 • 0416 245 296
250 Victoria Square/Tarntanyangga ADELAIDE SA 5000

4

sawater.com.au

SA Water respects and acknowledges the deep spiritual connection, knowledge and relationship Aboriginal and Torres Strait Islander people have to land and water.

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Thursday, 14 April 2022 8:40 AM
To: Snoswell, Debbie <Debbie.Snoswell@sawater.com.au>
Cc: Grapentin, Corey <Corey.Grapentin@sawater.com.au>; Majorld <majorld@sawater.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice
Importance: High

External sender
Think before you click, open with caution

Hi Debbie / Corey,

Following up on the progress of below, how are you going with it?

Please acknowledge receipt of the email and confirm this is being looked after?

Look forward to hearing from you soon.

Any questions, please let me know.

Regards,

Min Soo Lee
Graduate Engineer
GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Cindy Oliver
Sent: Thursday, 24 March 2022 2:42 PM
To: Majorld <majorld@sawater.com.au>
Cc: 'Chantal Milton' <chantal@holmesdyer.com.au>

5

Subject: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice
Importance: High

COMMERCIAL IN CONFIDENCE

ATTENTION: Debbie and Corey

Dear Debbie and Corey,

We have been engaged by the City of Salisbury to undertake an investigation of the preliminary servicing requirements as part of the City's Strategic Growth Framework. The aim of the Strategic Growth Framework is to understand the opportunities for economic growth and development for the land west of Port Wakefield Road within the City of Salisbury to inform the development of a structure plan for the City to 2035.

We provided for your refence the following:

- Proposed Structure Plans *(15.03.22 Consolidated -Strategic Growth Framework Plans.pdf)*
- Strategic Growth Framework Waterloo Corner and Bolivar Corridor Stakeholder Engagement Plan *(0749 Strategic Growth Framework Waterloo Bolivar Engagement Plan - ENDORSED 09.03.pdf)*.
- Anticipated yield and use analysis including
    - Development Activity Composition and Workforce (*01032022 _ Development Activity Composition and Workforce.pdf*),
    - Annual Average Development Activity (*01032022 _ Annual Average Development Activity.pdf*)
    - Areas plan *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf)*.

The subject area has been divided into 4 precincts *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf)*. Areas of existing development, roads, stormwater and open space and selected zonings have been excluded from this area to establish a new developable area.

A range of factors have been applied to establish the residual development area (after allowing for subdivision, roads, stormwater, infrastructure and open space), anticipated levels of floorspace construction on those lots, the mix of likely land uses and the consequent workforce likely to be generated by those uses. This is summarised in the table *01032022 _ Development Activity Composition and Workforce.pdf*.

A likely timing of development within each precinct and an overall rate of land, floorspace and workforce development on an annual basis has been applied. Refer to table *01032022 _ Annual Average Development Activity.pdf*.

For service infrastructure purposes, this assumes the consumption of 14.5 gross hectares of land per annum over 35 years, which equates to 8.7 net hectares of actual allotments, delivering 26,000 m² of floorspace and 190 workers per annum.

These numbers are underpinned by a range of research investigations and assumptions that will be detailed in a future document. However, given the urgency of service investigations, we have provided you with the anticipated outcomes for now.

Based on the above we request preliminary advice for sewer and water servicing for the following:

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

In order to meet the timeframe for presentation of a final report to the City of Salisbury and elected members by the end of June 2022 we request a response be provided by **2 May 2022** or earlier if possible.

Additionally, we request a meeting with SA Water together with the representatives of Holmes Dyer, City of Salisbury and ourselves to provide an overview of the project. Can you please confirm availability so that we can convene a meeting as soon as possible.

We look forward to hearing from you soon.

Should you require any clarification of the above please do not hesitate to contact me.

Regards,

Cindy Oliver
Principal Engineer
BE(Civil) (Hons), MIEAust, CPEng, NPER
GREENHILL

Engineers | Landscape Architects

T 08 8406 1300
M 0419 808 810
E cindy@greenhillaustralia.com.au

Level 1, 178 Fullarton Road
Dulwich SA 5065
www.greenhillaustralia.com.au

Be green - read on the screen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SOUTH AUSTRALIAN WATER CORPORATION
GPO Box 1751
Adelaide SA 5001
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Facsimile: + 61 8 7003 3329
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AquaMap Comment
Scale 1: 10,000 (@A3)
SA Water Depots
Suburbs
Reservoirs
National Parks
Wastewater Gravity Labels
Wastewater Pumping Labels
Wastewater Low Pressure Lab
Wastewater Vacuum Labels
Wastewater Mains Planning La
Wastewater Gravity Mains
Wastewater Vacuum Mains
Wastewater Pumping Mains
Standard
Sludge
Effluent Outfall
Special Use
Wastewater Low Pressure
Wastewater Ancillary Pipes
Wastewater Mains Planning
Wastewater Maintenance Hole
Wastewater Maintenance Shaf
Wastewater Inspection Openin
Wastewater Valves
Wastewater Attachments
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ST HILDA
BOLIVAR
BOLIVAR WASTEWATER TREATMENT AREA
BOLIVAR WWTP WORKSHOP
BURTON
PARALOWIE
SALISBURY DOWNS
PARAFIELD GARDENS
GLORE DERBY PARK
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Suburbs
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National Parks
Water Mains
Potable System
Non-Potable System
Non-Potable System (Raw Water)
Potability Not Allocated
Air Gap
Private Ownership
Water Mains Planning
Water Network Links
Water Pumps
Water Valves
Other
Isolation Normally Open
Isolation Normally Closed
Water Hydrants
Water Pillar Hydrants
Water Attachments
Water Access Openings
Water References
Water Structures
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BOLIVAR WWTP WORKSITE
BOLIVAR STORAGE AREA
BURTON
PARALOWIE
SALISBURY DOWNS
PARAFIELD GARDENS
GLORE DERBY PARK


ST KILDA
BOLIVAR
BOLIVAR WASTEWATER TREATMENT AREA
BOLIVAR WWTP WORKSHOP
BURTON
PARALOWIE
SALISBURY DOWNS
PARAFIELD GARDENS
GLYNDE DERBY PARK
SA Water
SOUTH AUSTRALIAN WATER CORPORATION
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Adelaide SA 5001
Telephone: 1300 650 950
Facsimile: + 61 8 7003 3329
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Scale 1: 10,000 (@A3)
SA Water Depots
Suburbs
Reservoirs
National Parks
Recycled Water Main Labels
Recycled Water Mains
In Service Mains
Private Ownership
Recycled Water Mains Plannin
Recycled Water Valves
Recycled Water Junctions
Recycled Water Structures
Bore
Control Installation
Chamber
Disinfection
Dissipator
PumpStation
Storage
TreatmentPlant
Recycled Water References
Recycled Water Mains (Decor
Recycled Water Structures (D
Contours 2m
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Wastewater Pumping Labels
Wastewater Low Pressure Lab
Wastewater Vacuum Labels
Wastewater Mains Planning La
Wastewater Gravity Mains
Wastewater Vacuum Mains
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Wastewater Ancillary Pipes
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Wastewater Maintenance Hole
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Wastewater Valves
Wastewater Attachments
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450MSCL
100DICL
SA Water
SOUTH AUSTRALIAN WATER CORPORATION
GPO Box 1751
Adelaide SA 5001
Telephone: 1300 650 950
Facsimile: + 61 8 7003 3329
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SA Water Depots
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Reservoirs
National Parks
Water Mains
Potable System
Non-Potable System
Non-Potable System (Raw Water)
Potability Not Allocated
Air Gap
Private Ownership
Water Mains Planning
Water Network Links
Water Pumps
Water Valves
Other
Isolation Normally Open
Isolation Normally Closed
Water Hydrants
Water Pillar Hydrants
Water Attachments
Water Access Openings
Water References
Water Structures
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Adelaide SA 5001
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Non-Potable System
Non-Potable System (Raw Water)
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Cindy Oliver

From: Tim Adams <Tim.adams@sapowernetworks.com.au>
Sent: Thursday, 12 May 2022 10:22 AM
To: Min Soo Lee
Cc: Cindy Oliver; Frank Greco
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SAPN for Infrastructure Advice

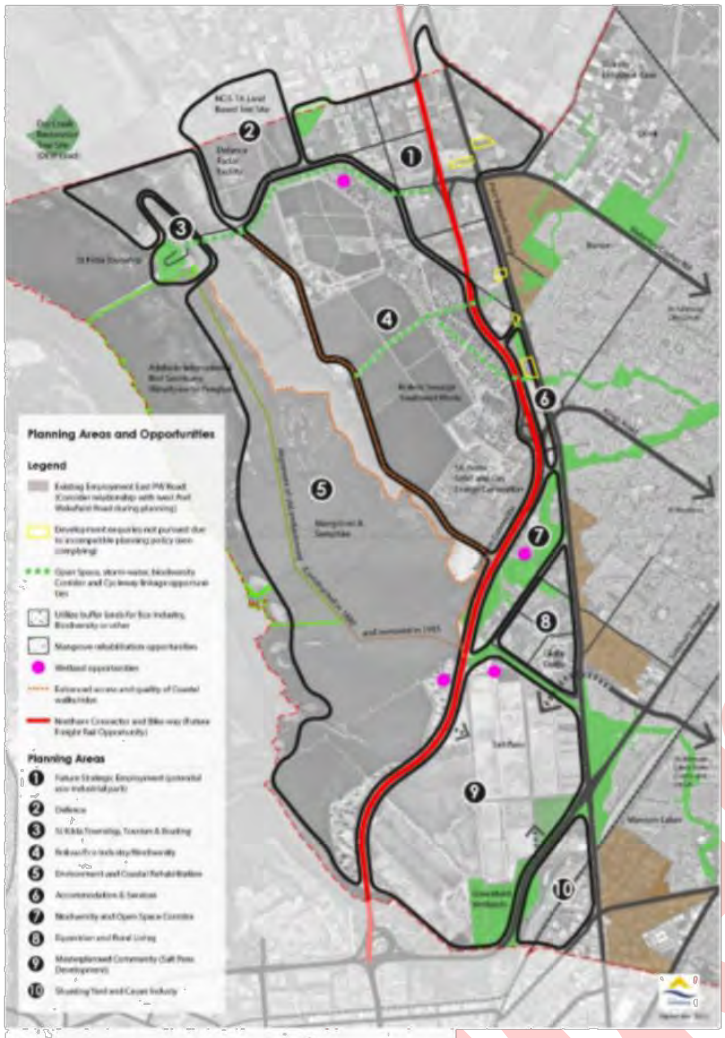
Hi Min

The engineering team have provided the following information in relation to your enquiry. It is very difficult to provide meaningful advice when the enquiry is as such high level but we have tried to give some insight for you.

The Waterloo Corner and Bolivar Corridor is currently being supplied by Direk, Paralowie, Parafield Gardens and Cavan Substations as seen in the image below (right hand side). The corridor is currently being serviced by the existing 11kV high voltage network, however the corridor is also located at the extent of the substation areas which results in network constraints due to end of line voltage drop.

At the very least, the existing feeder network will need to be extended and strengthened to supply any significant additional load. The image on the left identifies planning areas that were previously supplied by the local authorities as we have seen this enquiry before. We have given more detail against these areas in an effort to make our response specific and meaningful. To provide greater detail will require you to be more specific on load impacts.

- **Planning Areas 1 – 3:** will require a new 11kV feeder (s) from a nearby substation as existing infrastructure in the area is already constrained (thermal and voltage) and existing load is approaching capacity limits. Feeder backbone upgrades are also likely to be required if demand for future employment area increases. Substation Capacity is forecasted to be exceeded due to the increase number and size of generation and load connections which will impact project timing and should be considered.
- **Planning Areas 4 – 5:** has little to no existing infrastructure and thus any significant increase in demand for this horticultural area will require feeder extension assets to be constructed which will have significant cost impacts for the project.
- **Planning Areas 6 – 8:** existing feeders has spare capacity for increase demand however voltages will need to be managed for end of line connection especially on the weaker section of the feeders. Suggest the capacity would permit preliminary establishment of the precinct before new feeder extensions would be required.
- **Planning Areas 9 – 10:** will require new 11kV feeder(s) or possibly a new zone substation to service this large residential development.



2

Regards

Tim Adams
Large Embedded Generation Manager

Direct: 08 8404 4628
Mobile: 0400 582 146
tim.adams@sapowernetworks.com.au

1 Anzac Highway Keswick SA 5035
sapowernetworks.com.au

SA Power Networks Empowering South Australia

3

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Thursday, 12 May 2022 8:18 AM
To: Tim Adams <Tim.adams@sapowernetworks.com.au>
Cc: Cindy Oliver <Cindy@greenhillaustralia.com.au>; Frank Greco <Frank.Greco@sapowernetworks.com.au>
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SAPN for Infrastructure Advice

External email! - Think before you click.

Hi Frank / Tim,

Hope you have been well.

I'm currently in the process of summing up all the infrastructure advice, can you please advise on the status of below?

I look forward to hearing from you soon.

Any questions, give me a call.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Tim Adams <Tim.adams@sapowernetworks.com.au>
Sent: Thursday, 14 April 2022 12:33 PM
To: Michael Lee <MLee@greenhillaustralia.com.au>
Cc: Cindy Oliver <Cindy@greenhillaustralia.com.au>; Frank Greco <Frank.Greco@sapowernetworks.com.au>
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SAPN for Infrastructure Advice

Hi Min

FYI, have set a meeting on the 26th April 2022 with the planning Engineer who is managing the area at present, to keep our engineers on track mainly.

Frank Greco is managing the area at present in my old role and either Frank or I will come back to you.

We are working towards getting you a response by the end of the month as identified earlier.

Cheers

Tim Adams
Large Embedded Generation Manager

4

Direct: 08 8404 4628
Mobile: 0400 582 146
tim.adams@sapowernetworks.com.au
---
1 Anzac Highway Keswick SA 5035
sapowernetworks.com.au

From: Min Soo Lee
Sent: Thursday, 14 April 2022 8:56 AM
To: Tim Adams
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SAPN for Infrastructure Advice
Importance: High

External email! - Think before you click.

Hi Tim,

Apologies, I have overlooked the email you have sent through regarding the response on this project, thank you for sending that through.

Please ignore my previous email.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Min Soo Lee
Sent: Thursday, 14 April 2022 8:41 AM
To: 'tim.adams@sapowernetworks.com.au' <tim.adams@sapowernetworks.com.au>
Cc: Cindy Oliver <Cindy@greenhillaustralia.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SAPN for Infrastructure Advice
Importance: High

Hi Tim,

Following up on the progress of below, how are you going with it?

Please acknowledge receipt of the email and confirm this is being looked after?

Look forward to hearing from you soon.

Any questions, please let me know.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Cindy Oliver
Sent: Wednesday, 30 March 2022 2:36 PM
To: Tim.adams@sapowernetworks.com.au
Cc: Min Soo Lee <MLee@greenhillaustralia.com.au>; 'Chantal Milton' <chantal@holmesdyer.com.au>
Subject: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SAPN for Infrastructure Advice
Importance: High

COMMERCIAL IN CONFIDENCE

Dear Tim

We have been engaged by the City of Salisbury to undertake an investigation of the preliminary servicing requirements as part of the City's Strategic Growth Framework. The aim of the Strategic Growth Framework is to understand the opportunities for economic growth and development for the land west of Port Wakefield Road within the City of Salisbury to inform the development of a structure plan for the City to 2035.

We provide for your refence the following:

- Proposed Structure Plans *(15.03.22 Consolidated -Strategic Growth Framework Plans.pdf)*
- Strategic Growth Framework Waterloo Corner and Bolivar Corridor Stakeholder Engagement Plan *(0749 Strategic Growth Framework Waterloo Bolivar Engagement Plan - ENDORSED 09.03.pdf).*
- Anticipated yield and use analysis including
  - Development Activity Composition and Workforce (*01032022 _ Development Activity Composition and Workforce.pdf),*
  - Annual Average Development Activity (*01032022 _ Annual Average Development Activity.pdf)*
  - Areas plan *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf).*

The subject area has been divided into 4 precincts *(Refer 24022022_ Area Calcs - Updated Legend Colour.pdf)*. Areas of existing development, roads, stormwater and open space and selected zonings have been excluded from this area to establish a new developable area.

A range of factors have been applied to establish the residual development area (after allowing for subdivision, roads, stormwater, infrastructure and open space), anticipated levels of floorspace construction on those lots, the mix of likely land uses and the consequent workforce likely to be generated by those uses. This is summarised in the table *01032022_ Development Activity Composition and Workforce.pdf*.

A likely timing of development within each precinct and an overall rate of land, floorspace and workforce development on an annual basis has been applied. Refer to table *01032022_ Annual Average Development Activity.pdf*.

For service infrastructure purposes, this assumes the consumption of 14.5 gross hectares of land per annum over 35 years, which equates to 8.7 net hectares of actual allotments, delivering 26,000 m^2 of floorspace and 190 workers per annum.

These numbers are underpinned by a range of research investigations and assumptions that will be detailed in a future document. However, given the urgency of service investigations, we have provided you with the anticipated outcomes for now.

Based on the above we request preliminary advice for electrical servicing for the following:

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

In order to meet the timeframe for presentation of a final report to the City of Salisbury and elected members by the end of June 2022 we request a response be provided by **2 May 2022** or earlier if possible.

Additionally, we request a meeting with SAPN together with the representatives of Holmes Dyer, City of Salisbury and ourselves to provide an overview of the project. Can you please confirm availability so that we can convene a meeting as soon as possible.

We look forward to hearing from you soon.

Should you require any clarification of the above please do not hesitate to contact me.

Regards,

Cindy Oliver
Principal Engineer
BE(Civil) (Hons), MIEAust, CPEng, NPER

GREENHILL
Engineers I Landscape Architects

T 08 8406 1300
M 0419 808 810
E cindy@greenhillaustralia.com.au

Level 1, 178 Fullarton Road
Dulwich SA 5065
www.greenhillaustralia.com.au

Cindy Oliver

From: Emmanuel Chalacas <emmanuelchalacas@nbnco.com.au>
Sent: Monday, 11 April 2022 2:52 PM
To: Kamie Ang; Michael Lee
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

NBN Classification - Commercial

Hi Min Soo,

Having a look at the zone in question, I can advise that **nbn** has access to plenty of network duct capacity via the Telstra network from Port Wakefield road, st Kilda road and robinson road

Any development that would occur west of Port Wakefield road would simply need **nbn** pit and pipe installed to join up to this existing network

As part of any new road installations in this area, we would expect **nbn** pit and pipe to be installed as part of overall services to ensure continuity of service pathway

Please let me know if you have any specific questions/concerns over a specific area and I will be able to assist in more detail

Kind regards,

Emmanuel Chalacas
New Developments and Relocation Works Projects

M 0457 313 729 | **E** emmanuelchalacas@nbnco.com.au
81 Greenhill Road, Wayville SA

nbn acknowledges and pays respects to the traditional custodians of all the lands upon which we work.

From: Kamie Ang
Sent: Monday, 11 April 2022 10:23 AM

1

To: Michael Lee ; Emmanuel Chalacas
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice
Importance: High

NBN Classification - Commercial

Hey Min Soo,

I might ask you to liaise directly with Emmanuel (copied) regarding your DBYD enquiry as he's more across the network assets that I am.

@Emmanuel Chalacas can you please assist Min Soo with the below?

K

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Thursday, 7 April 2022 7:31 AM
To: Kamie Ang <kamieang@nbnco.com.au>
Subject: [External] FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Hi again Kamie,

Hope response to previous email is going okay.

To avoid confusion, please ignore the section asking for "preliminary advice for sewer and water servicing" but instead, please subject it to the service which NBN provide.

i.e., it should read as below:

Based on the above we request preliminary advice for the following from NBN

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

Also, not sure if you can assist with this but I have requested DBYD documents for NBN, and received pdfs with hundreds of pages of plans.

Given the big site, it will be of a great inconvenience to locate services through hundreds of pages, can NBN assist in some way to make this easier? Say send DWGs for the site? If you can help with this in addition to above request, that will be great!

Please confirm whether this request has been received and let me know if you have any questions.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Min Soo Lee
Sent: Wednesday, 6 April 2022 10:51 AM
To: 'Kamie Ang' <kamieang@nbnco.com.au>
Cc: Cindy Oliver <Cindy@greenhillaustralia.com.au>
Subject: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

COMMERCIAL IN CONFIDENCE

Hi Kamie,

We have been engaged by the City of Salisbury to undertake an investigation of the preliminary servicing requirements as part of the City's Strategic Growth Framework. The aim of the Strategic Growth Framework is to understand the opportunities for economic growth and development for the land west of Port Wakefield Road within the City of Salisbury to inform the development of a structure plan for the City to 2035.

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    - Annual Average Development Activity (*01032022 _ Annual Average Development Activity.pdf)*
    - Areas plan *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf).*

The subject area has been divided into 4 precincts *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf)*. Areas of existing development, roads, stormwater and open space and selected zonings have been excluded from this area to establish a new developable area.

A range of factors have been applied to establish the residual development area (after allowing for subdivision, roads, stormwater, infrastructure and open space), anticipated levels of floorspace construction on those lots, the mix of likely land uses and the consequent workforce likely to be generated by those uses. This is summarised in the table *01032022 _ Development Activity Composition and Workforce.pdf*.

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These numbers are underpinned by a range of research investigations and assumptions that will be detailed in a future document. However, given the urgency of service investigations, we have provided you with the anticipated outcomes for now.

Based on the above we request preliminary advice for sewer and water servicing for the following:

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

In order to meet the timeframe for presentation of a final report to the City of Salisbury and elected members by the end of June 2022 we request a response be provided by **2 May 2022** or earlier if possible.

We look forward to hearing from you soon.

Please also confirm the receipt of this email so we can keep track of the progress.

Should you require any clarification of the above please do not hesitate to contact me.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL
Engineers | Landscape Architects

T 08 8406 1300
E mlee@greenhillaustralia.com.au

Level 1, 178 Fullarton Road
Dulwich SA 5065
www.greenhillaustralia.com.au

Cindy Oliver

From: Carter, Murray <Murray.L.Carter@team.telstra.com>
Sent: Thursday, 7 April 2022 8:04 AM
To: Min Soo Lee
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice SALA

Hello Min Soo Lee, unfortunately we are unable to advise regarding "sewer and water servicing", but regarding Telstra Infraco please refer to the Telstra Infraco Network Integrity Section for Retain/ Protect/ Relocate of these items.
More info is available at the link ... https://www.telstra.com.au/consumer-advice/digging-construction

Also Telstra Ductco would wish to be considered for receipt of Developer/Council provided secondary communications conduits/pits in areas where none exist and they are required to be Provided by the Developer/Council.

Thanks

Murray Carter
Capacity Planner – Pit Pipe and Duct.
Telstra InfraCo
E Murray.L.Carter@team.telstra.com
W www.telstra.com

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Wednesday, 6 April 2022 11:16 AM
To: ! InfraCo Pit, Pipe and Duct Planning <F1901142@team.telstra.com>
Cc: Carter, Murray <Murray.L.Carter@team.telstra.com>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice

Hi,

Can you please confirm the receipt of previous email and let me know whether this is currently being looked after?

Hope to hear from you soon

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

1

From: Min Soo Lee
Sent: Thursday, 31 March 2022 1:33 PM
To: 'F1901142@team.telstra.com' <F1901142@team.telstra.com>
Cc: 'Carter, Murray' <Murray.L.Carter@team.telstra.com>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice

COMMERCIAL IN CONFIDENCE

To Whom it may concern,

We have been engaged by the City of Salisbury to undertake an investigation of the preliminary servicing requirements as part of the City's Strategic Growth Framework. The aim of the Strategic Growth Framework is to understand the opportunities for economic growth and development for the land west of Port Wakefield Road within the City of Salisbury to inform the development of a structure plan for the City to 2035.

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A range of factors have been applied to establish the residual development area (after allowing for subdivision, roads, stormwater, infrastructure and open space), anticipated levels of floorspace construction on those lots, the mix of likely land uses and the consequent workforce likely to be generated by those uses. This is summarised in the table *01032022 _ Development Activity Composition and Workforce.pdf*.

A likely timing of development within each precinct and an overall rate of land, floorspace and workforce development on an annual basis has been applied. Refer to table *01032022 _ Annual Average Development Activity.pdf*.

For service infrastructure purposes, this assumes the consumption of 14.5 gross hectares of land per annum over 35 years, which equates to 8.7 net hectares of actual allotments, delivering 26,000 m² of floorspace and 190 workers per annum.

These numbers are underpinned by a range of research investigations and assumptions that will be detailed in a future document. However, given the urgency of service investigations, we have provided you with the anticipated outcomes for now.

Based on the above we request preliminary advice for sewer and water servicing for the following:

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

In order to meet the timeframe for presentation of a final report to the City of Salisbury and elected members by the end of June 2022 we request a response be provided by **2 May 2022** or earlier if possible.

We look forward to hearing from you soon.

Should you require any clarification of the above please do not hesitate to contact me.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Carter, Murray <Murray.L.Carter@team.telstra.com>
Sent: Thursday, 31 March 2022 12:37 PM
To: Min Soo Lee <MLee@greenhillaustralia.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice

Hello, If you have any documentation regarding your planning activities, please send them through our mailbox
To: ! InfraCo Pit, Pipe and Duct Planning <F1901142@team.telstra.com>;

Thanks

Murray Carter
Capacity Planner – Pit Pipe and Duct.
Telstra InfraCo

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Wednesday, 30 March 2022 2:40 PM
To: Perriton, Kevin <Kevin.Perriton@team.telstra.com>
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice

Hi Kevin,

Thank you for your response.

Yes it will be for future works. In terms of timing, it is currently uncertain but should anything arise that requires your attention, we will let you know.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Perriton, Kevin <Kevin.Perriton@team.telstra.com>
Sent: Wednesday, 30 March 2022 3:05 PM
To: Min Soo Lee <MLee@greenhillaustralia.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice

Min,

I have forward you email on to one of the Telstra fundamental planner that may better suited to assist you.

Could I just confirm we are taking about future service requirement within the City of Salisbury area and not the existing Telstra communication network.

Kevin Perriton
Field Operative: SA /Vic
Design & Construct / InfraCo Operations / Network Integrity
P : M 0417 861 748 E Kevin.Perriton@team.telstra.com W www.telstra.com

Network Restriction 2022 13/04 to 28/04

(Up and coming leave: 1st of August to the 19th August 2022)

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Wednesday, 30 March 2022 1:51 PM
To: Perriton, Kevin <Kevin.Perriton@team.telstra.com>
Subject: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request to SA Water for Infrastructure Advice

COMMERCIAL IN CONFIDENCE

Hi Kevin,

We have been engaged by the City of Salisbury to undertake an investigation of the preliminary servicing requirements as part of the City's Strategic Growth Framework.

Are you the best person to speak to from Telstra regarding above? If it should be enquired to someone else, please direct me to them.

Hope to hear from you soon.

Regards,

Min Soo Lee
Graduate Engineer
GREENHILL

4

Engineers | Landscape Architects

T 08 8406 1300
E mlee@greenhillaustralia.com.au

Level 1, 178 Fullarton Road
Dulwich SA 5065
www.greenhillaustralia.com.au

Cindy Oliver

From: Peter Faunt <Peter.Faunt@epic.com.au>
Sent: Monday, 2 May 2022 9:21 AM
To: Min Soo Lee
Cc: Brian OCallaghan
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice
Attachments: Wasleys Loop and MAP Pipe Alignments 2nd May 2022.zip

Min Soo Lee

Attached are the Epic pipe alignments in your study area. For accurate locations and depth of cover of our Gas pipelines, you will be required to submit a DBYD request, for sight verification. This data is for your use only, and is not to be shared.

Regards

Peter Faunt
Asset Awareness Officer

epic energy

Epic Energy South Australia Pty Ltd
26 High Street Dry Creek SA 5094

T +61 8 8343 8182 **F**+61 8 8349 6493 **M** +61 419 802 134
E Peter.Faunt@epic.com.au

epicenergy.com.au

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Friday, 29 April 2022 1:00 PM
To: Peter Faunt <Peter.Faunt@epic.com.au>
Cc: Brian OCallaghan <brian.ocallaghan@epic.com.au>; Adrian Tero <Adrian.Tero@epic.com.au>; Cindy Oliver <Cindy@greenhillaustralia.com.au>
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Hi Peter,

See attached.

Please confirm receipt and let me know if you have any other questions.

Hope to hear from you soon 😉

Regards,

Min Soo Lee
Graduate Engineer

1

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Peter Faunt <Peter.Faunt@epic.com.au>
Sent: Friday, 29 April 2022 10:41 AM
To: Min Soo Lee <MLee@greenhillaustralia.com.au>
Cc: Brian OCallaghan <brian.ocallaghan@epic.com.au>; Adrian Tero <Adrian.Tero@epic.com.au>; Cindy Oliver <Cindy@greenhillaustralia.com.au>
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Min Soo Lee

There needs to be more files supplied, not just a shp file (should have files with .prj, .sdn, .sbx, .shp and .shx)

Regards

Peter Faunt
Asset Awareness Officer

epic energy

Epic Energy South Australia Pty Ltd
26 High Street Dry Creek SA 5094

T +61 8 8343 8182 **F**+61 8 8349 6493 **M** +61 419 802 134
E Peter.Faunt@epic.com.au

epicenergy.com.au

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Wednesday, 27 April 2022 9:32 AM
To: Peter Faunt <Peter.Faunt@epic.com.au>
Cc: Brian OCallaghan <brian.ocallaghan@epic.com.au>; Adrian Tero <Adrian.Tero@epic.com.au>; Cindy Oliver <Cindy@greenhillaustralia.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

> **CAUTION:** This email originated from outside the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is safe.

Hi Peter,

Hope you had a good long weekend.

How are you going with this?

If you can keep me updated, that will be greatly appreciated.

Hope to hear from you soon 😉

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Min Soo Lee
Sent: Wednesday, 20 April 2022 2:04 PM
To: 'Brian OCallaghan' <brian.ocallaghan@epic.com.au>
Cc: Peter Faunt <Peter.Faunt@epic.com.au>; Adrian Tero <Adrian.Tero@epic.com.au>; Cindy Oliver <Cindy@greenhillaustralia.com.au>
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Hi all,

Apologies for delayed response, please see attached shp file for your perusal.

Please review and let me know if you have any questions.

Hope to hear from you soon 😊

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

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From: Brian OCallaghan <brian.ocallaghan@epic.com.au>
Sent: Monday, 11 April 2022 3:04 PM
To: Min Soo Lee <MLee@greenhillaustralia.com.au>
Cc: Peter Faunt <Peter.Faunt@epic.com.au>; Adrian Tero <Adrian.Tero@epic.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Hi Min,

See message below from Peter Faunt. If you can provide the information in either format we can assist.

Cheers

Brian

From: Peter Faunt <Peter.Faunt@epic.com.au>
Sent: Monday, 11 April 2022 1:10 PM
To: Brian OCallaghan <brian.ocallaghan@epic.com.au>; Adrian Tero <Adrian.Tero@epic.com.au>
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Brian

For me to overlay the MAP onto their layout, I need their data in Geo format, either shp or TAB. Once I have this geo data, I will be able to overlay our pipeline.

Regards

Peter Faunt
Asset Awareness Officer

epic energy

Epic Energy South Australia Pty Ltd
26 High Street Dry Creek SA 5094

T +61 8 8343 8182 **F**+61 8 8349 6493 **M** +61 419 802 134
E Peter.Faunt@epic.com.au

epicenergy.com.au

From: Brian OCallaghan <brian.ocallaghan@epic.com.au>
Sent: Monday, 11 April 2022 12:59 PM
To: Peter Faunt <Peter.Faunt@epic.com.au>; Adrian Tero <Adrian.Tero@epic.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Hi Pete,

Adrian has asked if we can overlay our MAP at Port Wakefield Road (Greyhound Rd, Port Wakefield Road) in response to the request from Min Soo working on behalf of Salisbury Council. Proposed stormwater treatment affecting our pipeline.

Cheers

Brian

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Thursday, 7 April 2022 8:19 AM
To: Brian OCallaghan <brian.ocallaghan@epic.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Hi again Brian,

Hope this response is going okay.

To avoid confusion, please ignore the section asking for "preliminary advice for sewer and water servicing" but instead, please subject it to the service which Epic Energy provide.

i.e., it should read as below:

4

Based on the above we request preliminary advice for the following from Epic Energy:

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

Please confirm whether this request has been received and let me know if you have any questions.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Min Soo Lee
Sent: Wednesday, 6 April 2022 11:24 AM
To: 'Brian OCallaghan' <brian.ocallaghan@epic.com.au>
Cc: Cindy Oliver <Cindy@greenhillaustralia.com.au>
Subject: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

COMMERCIAL IN CONFIDENCE

Hi Brian,

Thanks for the call earlier.

Please forward to relevant person to address below.

We have been engaged by the City of Salisbury to undertake an investigation of the preliminary servicing requirements as part of the City's Strategic Growth Framework. The aim of the Strategic Growth Framework is to understand the opportunities for economic growth and development for the land west of Port Wakefield Road within the City of Salisbury to inform the development of a structure plan for the City to 2035.

We provide for your refence the following:

- Proposed Structure Plans *(15.03.22 Consolidated -Strategic Growth Framework Plans.pdf)*
- Strategic Growth Framework Waterloo Corner and Bolivar Corridor Stakeholder Engagement Plan *(0749 Strategic Growth Framework Waterloo Bolivar Engagement Plan - ENDORSED 09.03.pdf)*.
- Anticipated yield and use analysis including
    - Development Activity Composition and Workforce (*01032022 _ Development Activity Composition and Workforce.pdf*),
    - Annual Average Development Activity (*01032022 _ Annual Average Development Activity.pdf*)
    - Areas plan *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf)*.

The subject area has been divided into 4 precincts *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf)*. Areas of existing development, roads, stormwater and open space and selected zonings have been excluded from this area to establish a new developable area.

A range of factors have been applied to establish the residual development area (after allowing for subdivision, roads, stormwater, infrastructure and open space), anticipated levels of floorspace construction on those lots, the mix of likely land uses and the consequent

workforce likely to be generated by those uses. This is summarised in the table *01032022 _ Development Activity Composition and Workforce.pdf*.

A likely timing of development within each precinct and an overall rate of land, floorspace and workforce development on an annual basis has been applied. Refer to table *01032022 _ Annual Average Development Activity.pdf*.

For service infrastructure purposes, this assumes the consumption of 14.5 gross hectares of land per annum over 35 years, which equates to 8.7 net hectares of actual allotments, delivering 26,000 m² of floorspace and 190 workers per annum.

These numbers are underpinned by a range of research investigations and assumptions that will be detailed in a future document. However, given the urgency of service investigations, we have provided you with the anticipated outcomes for now.

Based on the above we request preliminary advice for sewer and water servicing for the following:

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

In order to meet the timeframe for presentation of a final report to the City of Salisbury and elected members by the end of June 2022 we request a response be provided by **2 May 2022** or earlier if possible.

We look forward to hearing from you soon.

Please also confirm the receipt of this email so we can keep track of the progress.

Should you require any clarification of the above please do not hesitate to contact me.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Brian OCallaghan <brian.ocallaghan@epic.com.au>
Sent: Wednesday, 6 April 2022 11:20 AM
To: Min Soo Lee <MLee@greenhillaustralia.com.au>
Subject: Information request

Hi Min-Su,

Please send your request to me. I will forward it on.

Cheers

Brian

Brian OCallaghan
Pipeline and Community Awareness Officer

epic energy

Epic Energy South Australia Pty Ltd
26 High Street Dry Creek SA 5094

T +61 8 8343 8166 **F**+61 8 8349 6493 **M** +61 407 610 198
E brian.ocallaghan@epic.com.au

epicenergy.com.au

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Cindy Oliver

From: Michael Jarosz <Michael.Jarosz@seagas.com.au>
Sent: Friday, 17 June 2022 6:04 PM
To: Cindy Oliver
Subject: RE: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice
Attachments: SEA Gas response.docx

Hi Cindy,

The attachment should provide good context and answer most of your questions.

I have also provided responses to your questions below in red.

Please note that for any new development a detailed Safety Management Study in accordance with AS2885 would need to be carried out at the design stage to ensure the risk to the pipeline (and therefore the population around the pipeline) will remain acceptable and what further controls or design changes to the development may need to occur. Road crossings, changes to drainage patterns, and placement of fill over the pipeline or reduction of cover are all key issues that would need to be considered in addition to land use change and service crossings as you note below.

Happy to discuss on Monday.

Cheers,
Michael

Michael Jarosz
Senior Pipeline Engineer

SEA Gas
Level 4, 70 Hindmarsh Square Adelaide SA 5000
T 08 8236 6836 I M 0477 112 463 I Michael.Jarosz@seagas.com.au
www.seagas.com.au

From: Cindy Oliver Cindy@greenhillaustralia.com.au
Sent: Friday, 17 June 2022 4:36 PM
To: Michael Jarosz Michael.Jarosz@seagas.com.au

1

Subject: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice
Importance: High

Hi Michael

You may recall we spoke to you 19 April 2022 regarding the proposed strategic growth areas proposed at the Waterloo Corner & Bolivar Corridor.

At the meeting we discussed the minimum buffer clearances, easement widths etc. I am writing to confirm the information provided during that meeting, which I appear to have misplaced. It would be greatly appreciated if you could confirm the following:

- Minimum buffer distance for development to the main depending on the type of development. Refer Attached.
- Minimum clearance for services to cross the main. Minimum of 500mm separation to foreign services is required however there may be circumstances where greater separation is required (e.g. large 2m by 1m concrete stormwater culvert) so case by case assessment always applies. It is preferable for crossings to be as close as possible to perpendicular and number of service crossing points should be minimised. Physical protection in the form of concrete or HDPE protection slabs above the pipeline will be required at service location drawings.
- New services preferred to cross over or under the existing main. Foreign crossings to go over SEA Gas is preferred.
- Minimum easement width to the existing main. Refer Attached.

I am attempting to finalise a report this weekend, and would appreciate if you could respond to this email or call me to discuss as soon as possible.

Regards,

Cindy Oliver
Principal Engineer
BE(Civil) (Hons), MIEAust, CPEng, NPER
GREENHILL

Engineers | Landscape Architects

T 08 8406 1300
M 0419 808 810
E cindy@greenhillaustralia.com.au

Level 1, 178 Fullarton Road
Dulwich SA 5065
www.greenhillaustralia.com.au

2

1. SIGNIFICANCE OF THE PORT CAMPBELL TO ADELAIDE PIPELINE

The Port Campbell to Adelaide Pipeline (PCA) currently delivers approximately 50% of the State's gas demand on average. South Australia relies heavily upon natural gas for power generation, for industrial and commercial application and for domestic use. As such, the PCA meets the definition of 'essential infrastructure' in the Act and is also considered by the State to be 'critical infrastructure[1]'.

2. SEA GAS LAND INTEREST

SEA Gas has interests in the pipeline land typically in the form of an easement, or in some instances fee simple ownership, leases or has provision for access through a license agreement. The pipeline easement is typically 15-25m wide.

Within that easement area there is limited third party activity allowed in order to ensure the physical protection of the pipeline. Where no easement exists (e.g. road crossings), consistent with AS2885.3 (see Section 3 below) encroachment should be controlled within 6m of the pipeline centreline.

3. PIPELINE REGULATIONS

The design, construction and maintenance of high-pressure gas transmission pipelines in Australia (of which the PCA is typical) is required by legislation to be governed by Australian Standard (AS) 2885. A licence is required to construct and to operate a high-pressure gas transmission pipeline (in South Australia, the PCA is licensed under the *Petroleum and Geothermal Energy Act 2000* (P&GE Act)).

4. POTENTIAL RISK

Under AS2885, the licensee must ensure the safety of the pipeline and of the public and this responsibility extends well beyond the easement width. The licensee is required to consider the land use within the *Measurement Length* of the pipeline. The *Measurement Length, as* defined in AS 2885, is a width that is measured laterally from the axis of the pipeline and is defined as the radial distance within which a person would be unlikely to survive for more than 30 seconds without severe injury in the highly unlikely event of a full bore rupture from a High Pressure Gas Pipeline. In the case of the 450 mm diameter, 15,300 kPa pressure PCA, the *Measurement Length* is 585 metres (or an overall width of 1170 metres).

Development within the *Measurement Length* of High Pressure Gas Pipelines may increase the risk to public safety or introduce a threat to both pipeline integrity and the security of the state's gas supply. The consequences of a pipeline failure may have implications for life, property, the environment and the State's economy.

In higher population density locations, there is increased likelihood of pipeline damage from external interference, simply because of the activity associated with servicing the needs of that population. Should damage result in a loss of containment, the increased population density increases the

[1] *Those physical facilities, supply chains, information technologies and communication networks, which, if destroyed, degraded or rendered unavailable for an extended period, would significantly impact on the social or economic well-being of the State, or affect the State's contribution to national security or defense.*

consequence of that loss of containment, such as harm to people and their assets. This combination of likelihood and severity increases the risk.

Industrial land uses need to be considered for increased population density as well as event escalation resulting from a pipeline failure.

A natural gas pipeline is always designed to contain the pressure of the gas inside the pipeline. For a new pipeline, it is relatively easy to apply a conservative design in higher population density locations that also reduces the likelihood that damage to the pipe will result in loss of containment.

For an existing pipeline, it is necessary to ensure that pipeline safety is consistent with the safety obligations for a change in location classification when development occurs.

5. PIPELINE OVERLAYS

In 2021, two overlays relating to High Pressure gas Pipeline were introduced under the South Australia's Planning and Design Code, being:

- The Gas and Liquid Petroleum Pipeline Overlay; and
- The Gas and Liquid Petroleum Pipeline (Facilities) Overlay

The desired planning outcome from these overlays aligns with the objectives of both the Planning Policy and the PGE Act, which is to manage the risk to public safety, the environment and security of energy supply from the encroachment of development on strategic gas and liquid petroleum pipelines.

For the PCA, within built up areas, the pipeline overlay varies between 115m and 160m which corresponds to the 4.7kW/m2 radiation contour for the largest credible hole for the PCA based on current risk assessment work and largest credible threat to the pipeline. It should be noted that this distance is currently smaller than the measurement length, however changes in the threat profile to the pipeline may change the size of these overlays in the future.

The overlays contain deemed to satisfy (DTS) criteria that need to be satisfied for new developments within this area, otherwise the development will trigger a referral to the Department for Energy and Mining (DEM) for further assessment. The DTS criteria limits land uses around the pipeline, including industrial uses such as fuel depots.

Cindy Oliver

From: David.Holden@agig.com.au
Sent: Thursday, 14 April 2022 9:52 AM
To: Min Soo Lee
Cc: khalee.field@apa.com.au; greg.taylor@agig.com.au
Subject: FW: [EXTERNAL] FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice
Attachments: 15.03.22 Consolidated -Strategic Growth Framework Plans.pdf; 0749 Strategic Growth Framework Waterloo Bolivar Engagment Plan - ENDORSED 09.03.pdf; 01032022 _ Development Activity Composition and Workforce.pdf; 01032022 _ Annual Average Development Activity.pdf; 24022022 _ Area Calcs - Updated Legend Colour.pdf

Hi Min Soo Lee

Thank you for your enquiry.

To answer this question, details on what is required would need to be provided. This information would include; what gas loads are required at what specific locations, what the loads would be required for and timing of when would individual loads be required.

However on a broader perspective I can advise there is gas infrastructure that could be extended to the area in question. Depending on what is required and when would determine the cost although I would expect and indicative cost to service this area would be in the order of $10m

AGN could prepare a formal offer however this would require significant input from others to provide required information in relation to specific loads, locations and timing.

Regards

David Holden

David Holden
Business Development Manager (South Australia)
M +61 408 456 684 T +61 8 8418 1165
E David.Holden@agig.com.au

Australian Gas Infrastructure Group
Hydrogen Park · Dampier Bunbury Pipeline · Multinet Gas Networks · Australian Gas Networks

330 Grange Road, Kidman Park, SA 5025

1

From: Min Soo Lee <MLee@greenhillaustralia.com.au>
Sent: Thursday, 14 April 2022 8:38 AM
To: David Holden <David.Holden@agig.com.au>
Subject: [EXTERNAL] FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

WARNING: This is an email from an external source. Think before you click.

Hi,

Following up on the progress of below, how are you going with it?

Please acknowledge receipt of the email and confirm this is being looked after?

Look forward to hearing from you soon.

Any questions, please let me know.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Min Soo Lee
Sent: Thursday, 7 April 2022 8:21 AM
To: 'David.Holden@agig.com.au' <David.Holden@agig.com.au>
Subject: FW: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

Hi again David,

Hope response to previous email is going okay.

To avoid confusion, please ignore the section asking for "preliminary advice for sewer and water servicing" but instead, please subject it to the service which AGIG provide.

i.e., it should read as below:

Based on the above we request preliminary advice for the following from AGIG

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

Please confirm whether this request has been received and let me know if you have any questions.

Regards,

Min Soo Lee
Graduate Engineer

GREENHILL

Level 1, 178 Fullarton Road, Dulwich SA 5065
T 08 8406 1300 | www.greenhillaustralia.com.au

From: Min Soo Lee
Sent: Wednesday, 6 April 2022 10:54 AM
To: 'David.Holden@agig.com.au' <David.Holden@agig.com.au>
Cc: Cindy Oliver <Cindy@greenhillaustralia.com.au>
Subject: 21.2894 - Waterloo Corner & Bolivar Corridor, Growth Framework - Request for Infrastructure Advice

COMMERCIAL IN CONFIDENCE

Hi David,

We have been engaged by the City of Salisbury to undertake an investigation of the preliminary servicing requirements as part of the City's Strategic Growth Framework. The aim of the Strategic Growth Framework is to understand the opportunities for economic growth and development for the land west of Port Wakefield Road within the City of Salisbury to inform the development of a structure plan for the City to 2035.

We provide for your refence the following:

- Proposed Structure Plans *(15.03.22 Consolidated -Strategic Growth Framework Plans.pdf)*
- Strategic Growth Framework Waterloo Corner and Bolivar Corridor Stakeholder Engagement Plan *(0749 Strategic Growth Framework Waterloo Bolivar Engagement Plan - ENDORSED 09.03.pdf)*.
- Anticipated yield and use analysis including
    - Development Activity Composition and Workforce *(01032022 _ Development Activity Composition and Workforce.pdf)*,
    - Annual Average Development Activity *(01032022 _ Annual Average Development Activity.pdf)*
    - Areas plan *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf)*.

The subject area has been divided into 4 precincts *(Refer 24022022 _ Area Calcs - Updated Legend Colour.pdf)*. Areas of existing development, roads, stormwater and open space and selected zonings have been excluded from this area to establish a new developable area.

A range of factors have been applied to establish the residual development area (after allowing for subdivision, roads, stormwater, infrastructure and open space), anticipated levels of floorspace construction on those lots, the mix of likely land uses and the consequent workforce likely to be generated by those uses. This is summarised in the table *01032022 _ Development Activity Composition and Workforce.pdf*.

A likely timing of development within each precinct and an overall rate of land, floorspace and workforce development on an annual basis has been applied. Refer to table *01032022 _ Annual Average Development Activity.pdf*.

For service infrastructure purposes, this assumes the consumption of 14.5 gross hectares of land per annum over 35 years, which equates to 8.7 net hectares of actual allotments, delivering 26,000 m² of floorspace and 190 workers per annum.

These numbers are underpinned by a range of research investigations and assumptions that will be detailed in a future document. However, given the urgency of service investigations, we have provided you with the anticipated outcomes for now.

Based on the above we request preliminary advice for sewer and water servicing for the following:

- Servicing requirements for the growth area based on the above and attached;
- Existing capacity issues or constraints;
- The critical point at which additional development may be sustained before augmentation of existing infrastructure is required,
- Any augmentation charges that may apply; and
- Any foreseeable headworks.

In order to meet the timeframe for presentation of a final report to the City of Salisbury and elected members by the end of June 2022 we request a response be provided by **2 May 2022** or earlier if possible.

We look forward to hearing from you soon.

Please also confirm the receipt of this email so we can keep track of the progress.

Should you require any clarification of the above please do not hesitate to contact me.

Regards,

Min Soo Lee
Graduate Engineer

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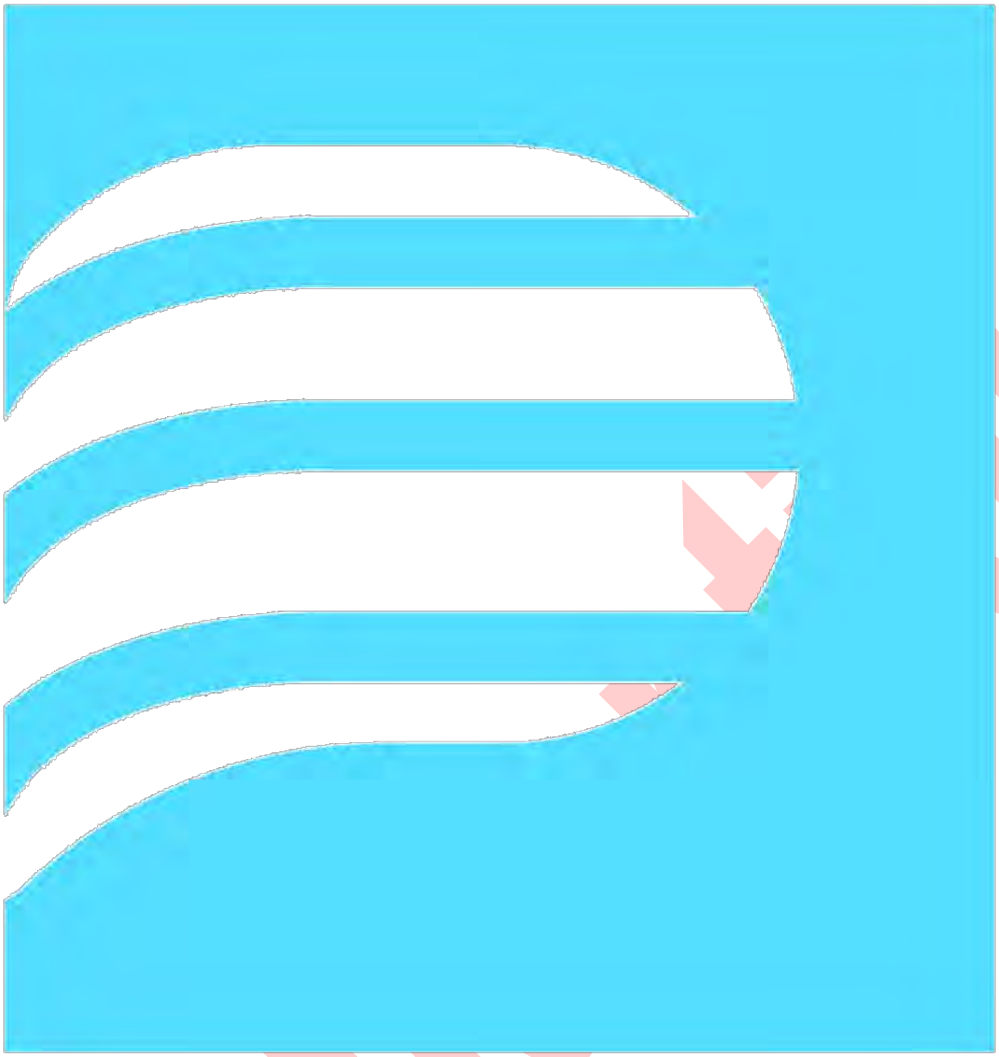
Appendix 2. Cirqa Transport Investigations



STRATEGIC GROWTH FRAMEWORK
TRANSPORT INVESTIGATIONS
WATERLOO CORNER & BOLIVAR

CITY OF SALISBURY

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DOCUMENT CONTROL

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Client contact:	Chantal Milton

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CONTENTS

1. EXECUTIVE SUMMARY

CIRQA has been engaged by the City of Salisbury (through Holmes Dyer Pty Ltd) to provide transportation advice for the development of a Strategic Growth Framework (herein referred to as the "Framework") for the Waterloo Corner and Bolivar areas. The intention of the Framework is to provide Council and key Stakeholders with a suite of documentation to assist with the future release of land supply (via rezoning and redevelopment) within the Waterloo Corner and Bolivar suburban areas.

The Study Area is entirely located within the City of Salisbury's Local Government Area (LGA), and comprises some 1,085 hectares of land, predominantly bound between Port Wakefield Road and the North–South Motorway, with additional land extending to the east and west at the Study Area's northern end.

The Study Area's current zoning predominantly facilitates low-intensity development, with localised pockets of higher-intensity development scattered throughout. However, key north–south roadways running adjacent and through the Study Area place restrictions on how current and future development is accessed from the wider transport network.

Liaison with key stakeholders (Department for Infrastructure and Transport (DIT) and City of Salisbury) has identified the strategic importance of key roads within the Study Area, with desire expressed to preserve their current function and hierarchy. This is particularly relevant to Port Wakefield Road, which despite the recent construction and opening of the North–South Motorway to provide a higher order non-stop roadway, remains a route of strategic importance.

Taking into account feedback received, consideration was given to the Study Area, its existing road network and associated intersections to develop a desired infrastructure framework for the continued management of road assets. The framework seeks to provide direct allotment access via a combination of local and collector roads, with connectivity then provided via intersections with higher-order roads. Such intersection treatments should be managed appropriately with treatment to minimise impact on the operation of strategic roads, taking into consideration both existing and future traffic volumes, as well as geometric and operational characteristics (such as speed limit).

The framework also presents an opportunity to provide regional benefits to areas outside of the Study Area within both the City of Salisbury's LGA as well as the City of Playford's LGA. As such, continued liaison between both parties (as well as DIT) is considered crucial to ensure that appropriate infrastructure is provided to service the needs and demands associated with 'unlocking' future land supply.

Plans have been developed by Holmes Dyer in conjunction with the Project Team and City of Salisbury, to assist in providing guidance with regard to infrastructure requirements deemed appropriate to satisfactorily manage traffic volumes anticipated to be associated with future development.

On going liaison with DIT is also being undertaken concurrently (at the time of writing) in relation to the use of their Tactical Adelaide Model (TAM). The use of TAM will assist in ensuring the appropriate intersection arrangements are adopted within the Study Area without detrimentally impacting upon the operation of the existing road network.

Investigation of crash data has also identified existing crash issues at several key intersections adjacent the Study Area. Upgrades to such intersections may be required in order to ameliorate crash risks evident with existing traffic volumes as well as potential risks associated with increased development volumes.

In addition, development of the Study Area may also increase demands for public transport services. Further investigation into the potential for new and increased services are recommended.

Investigations into existing active transport networks have identified that key open space and north–south transport corridors within and adjacent the development have been provided within and adjacent the Study Area. It is recommended that future development includes connections to these corridors to ensure pedestrian and cyclist connectivity between the Study Area and the wider network.

2. BACKGROUND

The City of Salisbury's "*City Plan 2035*" identifies an action to develop a Structure Plan for a large portion of land (approximately 1,085 ha) located approximately 20 km north of the Adelaide Central Business District. The land is generally bound between Port Wakefield Road and the North–South Motorway (the Study Area).

The intention of the Structure Plan is to enable its future rezoning to increase the supply of employment land within the outer north-west region of Adelaide. The proposal aligns with "*The 30 Year Plan for Greater Adelaide*", which identifies a portion of the Study Area as 'New Strategic Employment Lands'.

A significant factor relating to the need for a Structure Plan is the recent South Australian and Federal Government investments in the construction of the North–South Motorway (which was opened to traffic in 2020). The construction of the Motorway has dissected a number of local and collector roads with the City of Salisbury's Local Government Area (LGA), resulting in a redistribution of existing vehicle movements.

The Motorway also poses issues relating to the future development of land within the Study Area, given the newly introduced limitations associated with direct vehicle access and lack of connectivity with the remnants of the local road network (i.e. a number of roads are now cul-de-sacs).

Through preliminary investigations, the City of Salisbury has therefore identified the need for a 'Structure Plan' to define a suitable strategy for development staging and infrastructure improvements to support the viable and sustainable development of the Study Area. A plan illustrating the Study Area is attached to this report in Appendix A.

The land within the Study Area comprises the following zones as identified by the Planning and Design Code:

- Rural Zone;
- Deferred Urban Zone;
- Open Space Zone;
- Infrastructure Zone;
- Caravan and Tourist Park Zone; and
- Rural Horticulture Zone.

As noted above, portions of the Study Area are identified to be 'New Strategic Employment Lands' by "*The 30 Year Plan for Greater Adelaide*". Government,

Council and privately initiated Code Amendments are therefore anticipated to facilitate 'manufacturing', 'service', 'store', 'office' and 'retail' type activities. For the purposes of this report, the following total development yields are envisaged within the Study Area:

- **Manufacturing** – 183,000 m² of total floor area;
- **Service** – 254,850 m² of total floor area;
- **Store** – 405,300 m² of total floor area;
- **Office** – 35,925 m² of total floor area; and
- **Retail** – 35,925 m² of total floor area.

3. EXISTING TRANSPORT NETWORK

3.1 ROAD NETWORK

The existing road network within the Study Area comprises motorway, arterial, collector and local roadways. The roadways vary with regard to road authority, function, geometry and posted speed limit along with a range of other construction characteristics (i.e. seal type, drainage, roadside vegetation and environment etc.).

3.1.1 KEY ROADS

The Study Area includes the following key roads:

- The **North–South Motorway** is identified as a freeway under the care and control of DIT. Adjacent the Study Area, the North–South Motorway comprises three traffic lanes in each direction, with sealed shoulders on each side. Traffic data obtained from DIT indicates that this section of the North–South Motorway has an Annual Average Daily Traffic (AADT) volume in the order of 51,600 vehicles per day (vpd), of which approximately 15% are commercial vehicles. A 110 km/h speed limit applies on this section of the North–South Motorway.
- **Port Wakefield Road** is identified as a highway under the care and control of DIT. Adjacent the Study Area, Port Wakefield Road comprises two traffic lanes and a bicycle lane in each direction, with sealed/unsealed shoulders on each side. Traffic data obtained from DIT indicates that this section of Port Wakefield Road has an AADT volume in the order of 19,900 vpd, of which approximately 15% are commercial vehicles. A 90 km/h speed limit applies on this section of Port Wakefield Road.
- **Waterloo Corner Road** is identified as an arterial road under the care and control of DIT. Adjacent the Study Area, Waterloo Corner Road comprises a mixture of one to two traffic lanes in each direction, with sealed/unsealed shoulders on each side. Traffic data obtained from DIT indicates that this section of Waterloo Corner Road has an AADT volume in the order of 18,400 vpd, of which approximately 17.5% are commercial vehicles. A 70 km/h speed limit applies on this section of Waterloo Corner Road.
- **Heaslip Road** is identified as an arterial road under the care and control of DIT. Adjacent the Study Area, Heaslip Road comprises a single traffic lane in each direction, with sealed shoulders on each side. Traffic data obtained from DIT indicates that this section of Heaslip Road has an AADT volume in the order of 15,600 vpd, of which approximately 16.5% are commercial vehicles. A 70 km/h speed limit applies on this section of Heaslip Road.

- **St Kilda Road** is identified as a sub-arterial road under the care and control of the City of Salisbury. St Kilda Road comprises a single travel lane in each direction. An 80 km/h speed limit applies on St Kilda Road

It should be noted that, under the Integrated Transport and Land Use Plan for SA, the North–South Motorway is one of Adelaide's most important transport corridors. Recent investment by DIT has been focused on reinforcing and expanding the route as a non-stop corridor. Accordingly, no new intersections or interchanges along the North–South Motorway are envisaged (nor likely to be permitted) by DIT.

The North–South Motorway through the Study Area replaces Port Wakefield Road as the priority north–south corridor in this area. However, Port Wakefield Road remains an important arterial road and will remain listed as a 'controlled access road'. Such roads have implications for new site access arrangements, with intersection treatments requiring higher order treatments than typical lower order roads (particularly noting the current speed limit).

The new section of North–South Motorway through the Study Area has also severed a number of the existing east–west roads (including St Kilda Road), which further impacts upon permeability between the Study Area and the wider transport network.

Relevant to the Study Area, Table 1 illustrates the existing function of the key roads identified above, their respective theoretical capacity, existing daily traffic volumes and respective commercial vehicle percentages.

Table 1 – Designated function and capacity of key roads within the Study Area

Road Name	Designated Function	Theoretical Capacity	Existing Daily Traffic Volume	Commercial Vehicle %
North–South Motorway *(South of Bolivar Int.)*	Motorway	50,000+	53,900 *(2020)*	14%
North–South Motorway *(Bolivar Int.)*	Motorway	50,000+	46,200 *(2020)*	15%
North–South Motorway *(Bolivar Int. to Waterloo Int.)*	Motorway	50,000+	51,600 *(2020)*	15%
North–South Motorway *(Waterloo Int.)*	Motorway	50,000+	46,400 *(2020)*	14%
North–South Motorway *(North of Waterloo Int.)*	Motorway	50,000+	45,400 *(2020)*	14%
Port Wakefield Road *(South of Bolivar Rd)*	Highway	35,000+	25,800 *(2020)*	12.5%

Road Name	Designated Function	Theoretical Capacity	Existing Daily Traffic Volume	Commercial Vehicle %
Port Wakefield Road *(Bolivar Rd to Burton Rd)*	Highway	35,000+	19,900 *(2020)*	15%
Port Wakefield Road *(Burton Rd to Waterloo Cnr Rd)*	Highway	35,000+	15,800 *(2020)*	15%
Port Wakefield Road *(North of Waterloo Cnr Rd)*	Highway	35,000+	13,400 *(2020)*	14.5%
Bolivar Road *(East of Pt Wakefield Rd)*	Arterial	20,000+	21,200 *(2020)*	3%
Bolivar Int. Connector Road *(West of Pt Wakefield Rd)*	Major Collector	6,000 to 10,000	14,400 *(2020)*	6.5%
Waterloo Corner Road *(East of Heaslip Rd)*	Sub-Arterial	10,000 to 20,000	11,600 *(2020)*	8%
Waterloo Corner Road *(Heaslip Rd to Pt Wakefield Rd)*	Sub-Arterial	10,000 to 20,000	18,400 *(2020)*	17.5%
Waterloo Corner Road *(West of Pt Wakefield Rd)*	Major Collector	6,000 to 10,000	9,600 *(2020)*	19%
Heaslip Road *(North of Waterloo Cnr Rd)*	Sub-Arterial	10,000 to 20,000	15,600 *(2019)*	16.5%
St Kilda Road	Collector	<6,000	N/A	N/A
Dunn Road	Collector	<6,000	N/A	N/A
Summer Road	Collector	<6,000	N/A	N/A
Robinson Road	Collector	<6,000	N/A	N/A
Anjanto Road	Local	<2,000	N/A	N/A

As illustrated in Table 1, key roads within the Study Area (for which traffic data is available and has been obtained) are generally operating within their respective capacities, relative to listed road function.

However, it is noted that the Bolivar Interchange Connector Road (Bolviar Road west of Port Wakefield Road) is identified as a collector road, albeit has an existing daily traffic volumes of 14,400 vpd. The general configuration of this section is akin to that of a sub-arterial road and therefore, the road is considered to currently operate satisfactorily.

Given the impacts of the North–South Motorway on the Study Area (dissecting a number of Council-owned roads), traffic data provided by Council is now largely

out of date (collected pre-North–South Motorway construction) and considered unsuitable.

It should also be noted that due to the location of the Study Area and the existing development composition (generally agricultural/horticultural and light industrial/ commercial), key arterial roads generally comprise large percentages of commercial vehicles (illustrated in Table 1). Above-average commercial vehicle percentages typically impede a road's ability to accommodate standardised traffic volumes (i.e. a road is unable to operate as satisfactorily as a road with a lower commercial vehicle percentage).

3.1.2 KEY INTERSECTIONS

The Study Area includes the following key intersections:

- the intersection of Port Wakefield Road, Bolivar Road and the Bolivar Interchange Connector Road is a four-way signalised intersection;
- the Bolivar Interchange facilitates both northbound and southbound entry and exit movements via the North–South Motorway, with appropriate acceleration and deceleration (on and off) ramps;
- the intersection of Port Wakefield Road and Summer Road is a standard T-junction in which Summer Road terminates. Movements into and out of Summer Road are restricted to left-in/left-out and are treated with acceleration and deceleration lanes on Port Wakefield Road. Prior to the upgrade of Port Wakefield Road in 2009, this intersection operated as a priority-controlled five-way intersection between Port Wakefield Road, Summer Road, Jobson Road and Deuter Road in which Port Wakefield Road was assigned traffic priority;
- the intersection of Port Wakefield Road and Undo Road is a standard T-intersection in which Undo Road terminates. Movements into and out of Undo Road are restricted to left-in and left-out. Prior to the upgrade of Port Wakefield Road, all movements were permitted into and out of Undo Road (i.e. right-turns were permitted);
- the intersection of Port Wakefield Road, Waterloo Corner Road and the Waterloo Corner Interchange Connector Road is a four-way signalised intersection;
- the Waterloo Corner Interchange facilitates exit and entry movements to and from (respectively) the northbound carriageway of the North–South Motorway, whilst only southbound entry (on) movements are permitted (i.e. no provision has been made at the interchange for exit movements from the southbound carriageway);

- the intersection of Port Wakefield Road and Dunn Road is a standard T-intersection in which Dunn Road terminates. All movements are permitted into and out of Dunn Road (including right-turn movements);
- the intersection of Port Wakefield Road and Anjanto Road is a standard T-junction in which Anjanto Road terminates. Movements into and out of Anjanto Road are restricted to left-in, left-out and right-in;
- the intersection of Robinson Road and St Kilda Road are controlled by a single lane roundabout. This was installed as part of the North–South Motorway project;
- the intersection of Robinson Road and Barker Road is a standard T-intersection in which Barker Road terminates. All movements are permitted into and out of Barker Road;
- the intersection of Robinson Road and Anjanto Road is a standard T-intersection in which Anjanto Road terminates. All movements are permitted into and out of Anjanto Road. This intersection is located approximately 16 m north (centre to centre) of the intersection of Robinson Road and Barker Road; and
- the intersection of St Kilda Road and Coleman Road is a standard T-intersection in which Coleman Road terminates. All movements were permitted into and out of Coleman Road.

3.1.3 CRASH DATA (2016 TO 2020)

Crash data has been obtained from DIT for the five-year period from 2016 to 2020 (inclusive). The data indicates numerous crashes through the Study Area, with the far majority occurring on Port Wakefield Road. Notably, the data indicates that the following locations had the highest reported number of crashes of all key locations within the Study Area:

- Bolivar Road and Port Wakefield Road intersection (75 crashes);
- Waterloo Corner Road and Port Wakefield Road intersection (50 crashes); and
- Heaslip Road and Waterloo Corner Road roundabout (21 crashes).

Due to the recent opening of the North–South Motorway redistributing a high number of vehicle movements from Port Wakefield Road, it is anticipated that a large portion of these crashes would have occurred prior to the Motorway's opening in 2020. Notwithstanding, the redistribution of traffic is considered to only reduce the number of crashes (which have since occurred annually), but not impact upon the types of crashes relative to traffic scenario. Specifically, further review of available crash data found that:

- 'right-angle' crashes were predominantly reported at locations where uncontrolled (i.e. priority controlled) right-turns are permitted;
- a large number 'rear end' crashes were observed to be reported on approaches to signalised intersections and/or roundabouts (where the major traffic movements are required to slow or stop); and
- 'side swipe' and 'hit fixed object' crashes were the predominant crash type reported at midblock locations between intersections and access points.

The predominant cause of all crashes is anticipated to be 'inattention', particularly due to the relatively simple nature of the existing road network throughout the Study Area.

3.2 PUBLIC TRANSPORT NETWORK

The following bus routes operate within or adjacent the Study Area (within 400 m):

- Route 900 – (Elizabeth Interchange to Salisbury);
- Route 411 – Salisbury to Mawson Interchange; and
- Route 411U –Salisbury to UniSA Mawson Lakes Campus.

The anticipated patronage along these routes is anticipated to be relatively low due to low density development and limited connections along the routes.

The nearest rail services are the Mawson Lakes, Greenfields and Parafield Gardens stations along the Gawler Rail Line (approximately 2–3 kilometres from the Study Area).

No (public) light rail services operate in the vicinity of the Study Area. The Adelaide Tram Museum operates historic tram carriages along 2 km of track at St Kilda on Sundays.

3.3 ACTIVE TRANSPORT NETWORK

Minimal footpath infrastructure is provided throughout the Study Area, with most roads having no pedestrian infrastructure at all. This is reflective of existing land uses within the Study Area, which generate relatively low levels of pedestrian activity.

Off-road shared use pedestrian and cyclist paths are provided along the Little Para River Trail (alongside Little Para River) and the Tapa Martinthi Yala path alongside the North–South Motorway.

Bicycle lanes are provided on both sides of Port Wakefield Road, Waterloo Corner Road and Robinson Road. No other on-street bicycle infrastructure is provided within the Study Area.

Strava heat mapping for all activities (including running and cycling) shows that the Little Para River Trail, Tapa Martinthi Yala path and Waterloo Corner Road–Robinson Road–St Kilda Road link to St Kilda are the most utilised pedestrian and cyclist routes within the Study Area. The Strava heat map is included in Figure 1.

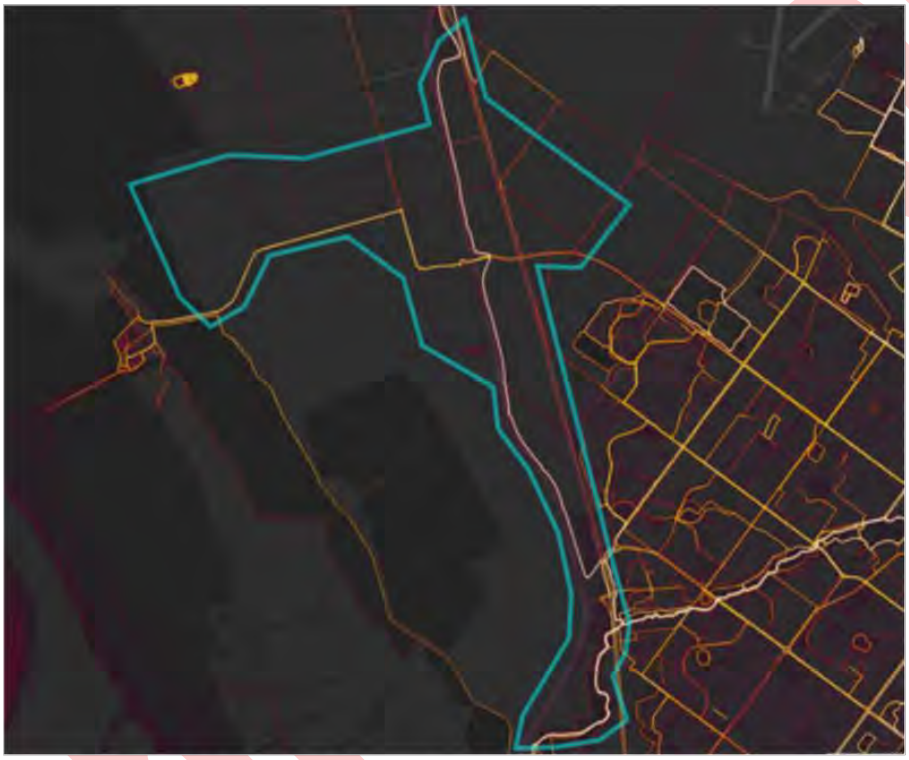

Figure 1 – Strava (all activities) heat map for the Study Area (outlined in blue) (Source: Strava Inc.)

4. FUTURE STUDY AREA DEVELOPMENT

4.1 ANTICIPATED DEVELOPMENT YIELD

For the purposes of the Strategic Growth Framework, the Study Area has been broken into four (4) catchments. Based upon information provided by Holmes Dyer, the catchments and their respective development areas are as follows:

- **Catchment 1** *(southern)* – 26.6 ha development catchment area;
- **Catchment 2** *(central)* – 150.4 ha development catchment area;
- **Catchment 3** *(north-eastern)* – 113.3 ha development catchment area; and
- **Catchment 4** *(north-western)* – 218.3 ha development catchment area.

A plan illustrating the four key catchment areas (prepared by Holmes Dyer) is attached in Appendix A.

In order to facilitate future development, allowance had been made within each catchment area for ancillary/supportive services such as road and stormwater infrastructure (both upgraded and new infrastructure). The allowance within each catchment area has been determined to equate to approximately 40% of the total development catchment area (based upon information provided by Holmes Dyer).

In addition, it is recognised that the remaining 'developable area' cannot be developed entirely as floor area as each site will require associated vehicle access, circulation, parking, and loading/service area. For the purposes of this assessment, the developable floor area has been assumed to be 30% of the developable site area.

As highlighted in Section 2, the Study Area is anticipated to be rezoned to primarily facilitate 'manufacturing', 'service', 'store', 'office' and 'retail' type activities. In order to enable high-level analyses of potential future traffic impacts and associated infrastructure requirements, anticipated land use floor areas have been divided between catchments.

Table 2 illustrates the breakdown of future development land uses between each of the four (4) key catchment.

Table 2 – Anticipated future developable floor area relative to catchment

Land Use	Catchment 1 (m²)	Catchment 2 (m²)	Catchment 3 (m²)	Catchment 4 (m²)	Total (m²)
Manufacturing	9,600	54,000	40,800	78,600	183,000
Service	14,400	81,000	61,200	98,250	254,850
Store	19,200	108,000	81,600	196,500	405,300
Office	2,400	13,500	10,200	9,825	35,925
Retail	2,400	13,500	10,200	9,825	35,925
Total (m²)	**48,000**	**270,000**	**204,000**	**393,000**	**915,000**

Further information has also been provided by Holmes Dyer in regard to envisaged timeframes associated with the development of each catchment. Development timeframes are as follows:

- **Catchment 1** *(southern)* – 1 to 5 years (2023 to 2028);
- **Catchment 2** *(central)* – 1 to 15 years (2023 to 2038);
- **Catchment 3** *(north-eastern)* – 10 to 20 years (2033 to 2043); and
- **Catchment 4** *(north-western)* – 20 to 35 years (2043 to 2058).

The above development timeframes are particularly important in relation to the upgrade of existing and installation of new infrastructure. The staggering of development by catchment areas will allow funds to be allocated to infrastructure appropriately as required, rather than a large quantity of infrastructure requirements simultaneously.

4.2 POTENTIAL TRAFFIC GENERATION AND DISTRIBUTION

Using the development yields identified in Table 2, potential traffic generation forecasts have been derived for each catchment area. The traffic forecasts have been developed based upon the following traffic generation rates:

- **Manufacturing** *(factory)* – 5 daily trips per 100 m² of developable floor area;
- **Service** *(bulky goods)* – 17 daily trips per 100 m² of developable floor area;
- **Store** *(warehouse)* – 4 daily trips per 100 m² of developable floor area;
- **Office** *(office)* – 11 daily trips per 100 m² of developable floor area; and
- **Retail** *(retail)* – 67.4 daily trips per 100 m² of developable floor area.

It should be noted that the daily traffic generation rates applied to manufacturing, service, store and office activities have been adopted from the NSW Roads and Maritime Services' *"Guide to Traffic Generating Developments"* (and its subsequent updates). The retail daily traffic generation rate has been adopted based upon am and pm peak hour traffic generation data obtained from sites within South Australia, and assuming that a typical peak hour equates to 10% of the daily traffic generation.

Based upon the above, the following daily traffic generations are forecast for each catchment within the Study Area:

- **Catchment 1** *(southern)* – 5,580 daily vehicle movements;
- **Catchment 2** *(central)* – 31,388 daily vehicle movements;
- **Catchment 3** *(north-eastern)* – 23,715 daily vehicle movements; and
- **Catchment 4** *(north-western)* – 36,205 daily vehicle movements.

In total, complete development and occupation of the Study Area as envisaged above (Section 4.1) is forecast to generate in the order of 97,000 daily vehicle movements.

However, it should be noted that not all vehicle movements will utilise the existing external (arterial) road network. In reality, a portion of vehicle movements will be 'internal trips' within a catchment area (i.e. from one local development site to another development site within the same catchment area) and therefore will not result in an increase in movements on the external road network. For the purposes of this assessment, this has been referred to as a 'shared trip' factor.

Similarly, where a catchment has alternate access via means of a local and/or collector road (instead of the external arterial road network), vehicle movements may be redistributed. For the purposes of this assessment, this has been referred to as a 'local trip' factor.

As the land use mix and local road network connectivity varies by catchment, the shared and local trip factors will also vary by catchment. The degree of variation is however dependent on a number of catchment -specific variables including (but not limited to):

- the size of the catchment and potential development yield, considering composition and variety of land uses, both existing and future;
- existing frontage roads surrounding and dissecting the catchment;
- road network connectivity beyond the catchment, external to the Study Area;

- existing land uses and development sites captured within the various catchment areas; and
- location of the catchment relative to residential areas.

Based upon these variables, 'shared trip' and 'local trip' factors have been developed and applied to each catchment in order to forecast likely daily traffic volumes anticipated to utilise the external arterial road network. The varying factors applicable and resultant daily vehicle movements forecast relative to each catchment are illustrated in Table 3.

Table 3 – Daily vehicle movements taking into account 'shared trip' and 'local trip' factors

Catchment	Shared Trip Factor	Local Trip Factor	Daily Vehicle Movements
Catchment 1	5%	0%	5,300
Catchment 2	15%	0%	26,675
Catchment 3	15%	20%	16,125
Catchment 4	15%	10%	27,700
Total			**75,800**

Due to the location of the Study Area and the adjacent road network, vehicle movements generated by the Study Area's redevelopment are forecast to be distributed largely to the existing arterial road network. While a piece of local road network will be utilised (whether new or existing within each catchment) during a vehicle trip, vehicle movements will ultimately utilise the existing arterial network for some portion of a trip.

Primarily due to the nature of the envisaged land uses and the location of the Study Area in relation to Adelaide's CBD and broader metropolitan Adelaide (i.e. located to the north of the CBD), vehicle movements are expected to generally occur in a north–south direction, utilising either Port Wakefield Road and/or the North–South Motorway. Appropriate vehicle access to and from these roads is therefore considered crucial to enable the Study Area's successful redevelopment.

To further assist with analyses of each catchment, for the purposes of a high-level traffic assessment, each catchment has been broken down into 'transport infrastructure sub-areas'. The transport infrastructure sub-areas boundaries have generally been adopted based upon existing road alignments

and newly developed sites (providing further dissection of the catchments). A plan illustrating the transport infrastructure sub-areas adopted is attached in Appendix B.

Based upon approximate areas of each transport infrastructure sub-areas, traffic generated by a given (whole) catchment has been further refined and 'allocated' to transport infrastructure sub-area parcels (based upon transport infrastructure sub-area percentages). Consideration has also been given to the likely type of land use within each transport infrastructure sub-areas, based upon indicative zoning identified by Holmes Dyer. Traffic forecasts associated with each transport infrastructure sub-areas are illustrated in Table 4.

Table 4 – Transport infrastructure sub-area traffic generation

Catchment	Transport Infrastructure Sub-Area	Daily Vehicle Movements
Catchment 1	1.1	1,925
	1.2	2,065
	1.3	1,310
Catchment 2	2.1	5,085
	2.2	5,025
	2.3	3,145
	2.4	3,200
	2.5	3,390
	2.6	1,635
	2.7	1,600
	2.8	1,895
	2.9	1,700
Catchment 3	3.1	5,210
	3.2	4,460
	3.3	6,455
Catchment 4	4.1	600
	4.2	4,680
	4.3	4,715
	4.4	4,385
	4.5	1,510
	4.6	2,900
	4.7	2,070
	4.8	615
	4.9	5,055
	4.10	1,170
Total		75,800

4.3 STAKEHOLDER DISCUSSIONS

4.3.1 DEPARTMENT FOR INFRASTRUCTURE AND TRANSPORT (DIT)

DIT has care and control of a number of roads within the Study Area. As such, DIT has been identified as a key stakeholder in relation to the subject Strategic Growth Framework.

As identified in Section 4.2, redevelopment of the Study Area is forecast to generate in the order of 75,800 new daily vehicle movements on the existing road

network. These movements will predominantly occur on DIT roads and, in particular, Port Wakefield Road due to it acting as a 'spine' through the Study Area.

Discussions with DIT staff were held on Thursday, 12 May 2022, where a number of factors relating to the long-term vision of key DIT roads were discussed. Of note, a number of key outcomes were determined from the meeting including:

- despite the recent construction and opening of the North–South Motorway, Port Wakefield Road remains a critical piece of DIT's road network for both general vehicle access as well as freight connectivity. As such, it is understood that DIT has no intention to downgrade its current status as a 'highway' or 'controlled access road';
- Port Wakefield Road is currently subject to a speed limit ranging from 80 km/h to 90 km/h. Due to the current status of Port Wakefield Road and its current function as a 'highway', speed limit reductions below 80 km/h will not be considered;
- vehicle access to individual allotments should be sought by service, local and/or collector roads independent of Port Wakefield Road where possible. It is understood that new intersections with Port Wakefield Road will be considered where providing access to multiple allotments (i.e. not for the sole purpose of serving single allotments) and where appropriate traffic control is provided (relative to traffic volume and speed limit) in line with relevant Australian Standards and Guidelines;
- right-turn movements at new and existing uncontrolled intersections should be limited/restricted in order to maximise safety of both the intersection and arterial road in which it intercepts. Such movements will typically only be considered where appropriate traffic control is provided (i.e. traffic signals, roundabout etc.) relative to traffic volume and vehicle fleet composition;
- direct access to/from the North–South Motorway will not be permitted in any form (including a new interchange);
- the changing of road ownership (i.e. from a Council-owned road to a DIT-owned road) will be considered on a case-by-case basis. However, traffic volumes should not form the sole basis of justification for the transfer of ownership and other factors (such as function and connectivity within DIT's network) should also be considered. Current transfer of ownership processes should also be adopted and followed should such an outcome be sought;
- as a result of the North-South Motorway's construction, a large quantity of surplus land (located directly adjacent the road corridor) s currently not being utilised. It is understood that DIT are open to negotiations in regard to the acquisition of such land, particularly for the purposes of constructing collector and/or local access roads.

Due to the size of the Study Area and potential traffic implications which could be created from its redevelopment, DIT staff also recommended use of their newly developed Tactical Adelaide Model (TAM) to assist with the development of the Strategic Growth Framework. The use of TAM aims to test development and access scenarios in conjunction with the operation of the existing road network. However, due to the limited timeframe available, TAM was unable to be utilised to assist with development of the Framework at the time of writing.

Notwithstanding, due to the potential benefits in which TAM may provide, the City of Salisbury has agreed to continue investigations using TAM concurrently with development of this Framework report. A supplementary report outlining the TAM findings will be provided at a later date once analyses have been completed.

4.3.2 CITY OF SALISBURY

The City of Salisbury recognise the need to develop a strategy to manage road infrastructure upgrade requirements arising from development of the Study Area (and hence the engagement of CIRQA to assist in the development of the subject Strategic Growth Framework). This is predominantly driven by the complexities associated with the numerous land titles throughout the Study Area as well as the strategic importance of State infrastructure assets (such as the North–South Motorway and Port Wakefield Road).

Throughout numerous meetings with City of Salisbury staff, concerns were raised in regard to the suitability of the existing Council-owned road network and its ability to sufficiently service future development within the Study Area. Similarly, a site visit to the Study Area was also undertaken to highlight key areas of concern as well as commonalities of road infrastructure.

Discussions held with Council have identified the preference to rehabilitate and reuse existing road infrastructure where possible, rather than construct entirely new infrastructure (in particular, in relation to large infrastructure items such as intersections with DIT's road network and stormwater infrastructure). Consideration has therefore been given to this preference in the preparation of the Strategic Growth Framework.

Council also recognises the importance of maintaining the functionality and hierarchy of the arterial road network dissecting the Study Area. Where possible, it has therefore been sought to provide access to the arterial road network via the use of local and/or collector road intersections (predominantly existing intersections) with access to allotments consolidated to such roads.

4.3.3 CITY OF PLAYFORD

The City of Playford borders the northern boundary and north-eastern corner of the Study Area (Catchment Area 3). Of particular relevance to this project is the potential for the future rezoning and development of land within the City of Playford LGA, to which vehicle access is also restricted. It is understood that this land comprises part of the area known as 'Greater Edinburgh Parks'.

The key Playford land is located within the suburb of Waterloo Corner and is bound by the Northern Expressway to the north, the Adelaide–Port Augusta Rail Line to the north-east, Heaslip Road to the south-east and Catchment Area 3 to the south-west. Should rezoning of this land be undertaken, traffic generated by its future redevelopment would likely be distributed to Heaslip Road (via either Huxtable Road or Mill Road, the latter of which bounds the north-eastern edge of Catchment Area 3), and through Catchment Area 3 via Greyhound Road.

It is understood that the City of Playford was contacted for comment in relation to the intention and timeframe for future development of this portion of land ('Greater Edinburgh Parks'). However, it is also understood that the City of Playford is (at the time of writing) still undertaking investigative works in relation to potential development yields. As such, comment in relation to traffic generated by the land's potential redevelopment could not be made, nor could discussion with respect to potential road and intersection upgrades be undertaken. On this basis, it is recommended that future liaison with the City of Playford be undertaken once further vision for the land has been developed.

4.4 GENERAL DISCUSSION

Following liaison with key stakeholders, CIRQA and Holmes Dyer (in conjunction with Greenhill Engineers) met to develop a series of road and stormwater infrastructure concept plans to form the basis of Strategic Growth Framework and guide development of the Study Area. The plans prepared by Holmes Dyer (attached in Appendix C) illustrate various intersection arrangements with key DIT road infrastructure as well as new and upgraded internal service roads (within the various catchment areas) to provide direct access to development allotments.

Commentary in relation to the development of the concept plans relative to each catchment area is outlined in Sections 4.4.1 to 4.4.4 below. Further discussion regarding DIT's arterial road network and potential public and active transport opportunities has also been provided.

4.4.1 CATCHMENT 1

As illustrated in Appendix C, Catchment Area 1 is bound by Port Wakefield Road to the east, Globe Derby Park and the Little Para River to the south, the North–

South Motorway to the west and Catchment 2/Jobson Road to the north. Both Bolivar Road and Hodgson Road dissect through the centre of Catchment 1, with existing development (such as the Bolivar OTR and Highway 1 Caravan & Tourist Park) creating further segregation and limiting the ability to consolidate access along site frontages.

Catchment 1 is also generally narrow, with allotments ranging from 170 m to 200 m (approximate) in depth. The shallow allotment depth creates further implications with achieving access via lower order roads (i.e. lower than Port Wakefield Road, such as Hodgson Road) due to the proximity of intersections and their associated treatments (i.e. the separation distance between existing intersections is inadequate to facilitate large intersections associated with new development parcels).

Due to the combination of factors above, vehicle access to Catchment 1 will largely be required to be provided directly via Port Wakefield Road. Where possible and appropriate, access should be consolidated between development sites (both existing and new development).

Vehicle access to Catchment 1 (via Port Wakefield Road) will also need to consider its interaction with existing intersections on the eastern side of Port Wakefield Road. While there is expected to be a strong demand for vehicle movements to/from the south, new access/intersections should generally be restricted to left-in and left-out only in order to minimise their impact on the operation of Port Wakefield Road.

Associated commercial movement demands for movements to/from the south are expected to be low from development located within Catchment 1. As such, the formalisation of movements directly from the catchment in order to travel south (i.e. right-turn movements onto Port Wakefield Road) can be accommodated via the use of the existing road network's permeability (i.e. a driver exiting from the southern portion of Catchment 1 could utilise the Bolivar Interchange roundabout to undertake a U-Turn to head south on Port Wakefield Road or, alternatively, use the North–South Motorway).

Of particular note, transport infrastructure sub-areas 1.2 and 1.3 should be accessed via a sole access point on Port Wakefield Road (with connectivity to transport infrastructure sub-area 1.2 is provided across 1.3 and a future connection across Little Para River). This is due to the location of the 'heavy vehicle checking station' on Port Wakefield Road directly adjacent transport infrastructure sub-area 1.3 and DIT's desire to retain this land for its continued use.

The location of the nearby OTR deceleration lane, Little Para River culvert (beneath Port Wakefield Road) and Globe Derby Park acceleration lane further restrict available access opportunities.

With regard to transport infrastructure sub-area 1.1, access may be achieved via the existing left-in/left-out on Port Wakefield Road (with retention of existing turning restrictions), currently providing access to the adjacent parking bay. Further access may also be provided via connectivity to Jobson Road (north of transport infrastructure sub-area 1.1), particularly with reference to right-turn movements for southbound traffic (generated within transport infrastructure sub-area 1.1).

4.4.2 CATCHMENT 2

Similarly to Catchment 1, Catchment 2 is bound by Port Wakefield Road to the east and the North–South Motorway to the west. At its southern end, Catchment 2 borders with Jobson Road (and Catchment 1 beyond), while its northern end is defined by the City of Salisbury's LGA boundary with the City of Playford.

It should be noted that the City of Playford's land immediately north of Catchment 2 is also 'land locked' by Port Wakefield Road and the North–South Motorway, albeit also to the north. As such, access is only possible via the east (Port Wakefield Road) or the south (Catchment 2).

As above in Section 4.2, for the purpose of this assessment, Catchment 2 has been divided into transport infrastructure sub-areas, with associated boundaries predominantly defined by existing roads dissecting the parcel. However, unlike Catchment 1, vehicle access to multiple transport infrastructure sub-areas is able to be consolidated in several locations in order to minimise impacts upon the operation of Port Wakefield Road. This is due to sub-areas only being dissected by local ('No Through') roads as opposed to major arterial roads.

The consolidation of vehicle access between transport infrastructure sub-areas will however rely upon interconnectivity being created in a general north–south direction, enabling the provision of localised access to individual allotments. This is proposed to be achieved via the creation of a new local collector road parallel to the North–South Motorway, directly adjacent (and potentially utilising a portion of) its road reserve (i.e. a new local collector road will act as a 'service road' immediately alongside the road corridor). The concept of a new local collector road is predominantly applicable to interconnectivity between transport infrastructure sub-areas 2.1, 2.2 and 2.3, and 2.5 and 2.6 whereby existing local road connections facilitate access to/from Port Wakefield Road.

While a traditional service road directly adjacent Port Wakefield Road would also facilitate access to multiple allotments, the ability to utilise left over lands from

the North-South Motorway project may enable complete north-south connectivity in the event that one land parcel cannot be redeveloped in an initial stage. The use of a traditional service road would also require larger intersection treatments in order to achieve appropriate separation from Port Wakefield Road (particularly with reference to commercial vehicles).

With regard to the transport infrastructure sub-areas 2.1, 2.2 and 2.3 'bundle', vehicle access would be provided via the intersection of Anjanto Road with Port Wakefield Road in its current form (priority-controlled intersection, facilitating left and right-turn movements into Anjanto Road, and left-turn movements onto Port Wakefield Road).

Vehicle access would also be provided via the intersection of Dunn Road with Port Wakefield Road. This intersection is currently priority-controlled, at which all turning movements are permitted. However, with further development within Catchment 3 on the eastern side of Port Wakefield Road (further discussion below), opportunity would exist to install a signalised four-way intersection in this location (connecting with Greyhound Road east of Port Wakefield Road).

The installation of a signalised intersection would provide for the safe accommodation of right-turn movements from transport infrastructure sub-areas 2.1, 2.2 and 2.3, and the Playford LGA land to the north of Catchment 2, as well as to and from Catchment 3. In addition, whilst detailed information is unknown, the installation of a signal in this location would provide opportunity for connectivity between the Playford LGA land north-east of Catchment 3 (which otherwise would be accessed via Heaslip Road) and a major arterial road (to which access is ultimately desired).

Further adding emphasis for the benefit of a signalised intersection is the ability for land to be developed (as intended) for commercial/light industrial uses, where higher commercial vehicle volumes are expected. The installation of a signalised intersection would readily increase the ability to access the broader road network directly (particularly in relation to right-turn movements), without reliance upon its permeability which would otherwise be relied upon (i.e. without redistributing traffic via adjacent intersections and, potentially, creating additional traffic impacts).

The installation of this infrastructure would also allow right-turn movements at the Anjanto Road intersection to be removed at a future point in time, in the event that the movement became oversaturated by development. The signalised intersection would therefore 'future proof' access to this area of the Study Area.

With regard to transport infrastructure sub-areas 2.5 and 2.6, a similar (new) local collector road (adjacent the North–South Motorway) would provide connectivity

between individual allotments and existing local roads connecting to Port Wakefield Road (such as Undo Road and Summer Road). Such an option is again considered to be beneficial over that of a traditional service road directly adjacent Port Wakefield Road.

Subject to the new local collector road being created, the intersection of Undo Road with Port Wakefield Road would be proposed to be retained in its current left-in/left-out only form, albeit supplemented with a U-turn facility (for northbound traffic to undertake a U-turn to travel south). Further access to transport infrastructure sub-areas 2.5 and 2.6, as well as 2.7, 2.8, 2.9 and 1.1 would then be provided via the installation of a second signalised intersection at Summer Road (with Port Wakefield Road).

While the installation of an additional signalised intersection would have less regional benefit than the proposed signalised intersection of Dunn Road and Greyhound Road (due to the limitation of developed land on the eastern side of Port Wakefield Road, and boundaries between Strategic Employment and General Neighbourhood Zones where vehicle permeability is not considered appropriate), the signal would facilitate right-turn movements to and from the subject land enabling its successful redevelopment. This is again particularly relevant to commercial vehicle movements which would otherwise be unable to successfully (and safely) undertake right-turn movements to/from Port Wakefield Road.

It should however be noted that a new 'collector road' could be located directly opposite the intersection of Port Wakefield Road and Burton Road, with a signalised intersection facilitating access accordingly (i.e. a four-way intersection with Burton Road). This would then negate the need for the signalisation of the Port Wakefield Road/Summer Road intersection (which would otherwise remain a left-in/left-out intersection). The locating of the signalised intersection with Burton Road may deliver broader network benefits (beyond the extent of the Study Area), however would rely upon the new 'collector road' being able to be constructed through sub-area 2.6.

With regard to transport infrastructure sub-areas 2.4 and 2.5, it is recognised that such areas may be developed with higher-intensity land uses (such as retail and bulky goods uses). In order to further facilitate vehicle movement (and reduce dependency on Port Wakefield Road intersections), additional left-in and left-out access points could be considered on Waterloo Corner Road (noting an average allotment depth of 400 m to 480 m within Catchment 2). However, due to the proximity of Waterloo Corner Interchange and the Waterloo Corner Road/Port Wakefield Road intersection, additional vehicle movements (i.e. right-turns) in this location should not be permitted.

4.4.3 CATCHMENT 3

The Study Area also incorporates a portion of land located on the eastern side of Port Wakefield Road, referred to as Catchment 3. The land is bound by the City of Salisbury's northern LGA boundary (with the City of Playford), Heaslip Road to the south-east, Waterloo Corner Road to the south and Port Wakefield Road to the west.

The land is generally undeveloped (used for horticultural purposes) and is dissected by Mumford Road and Greyhound Road (creating transport infrastructure sub-areas 3.1, 3.2 and 3.3). Allotments located within Catchment 3 are generally substantially larger than all other catchments within the Study Area, thereby enabling the consolidated access with the existing road network.

As noted above in Section 4.4.2, development of the subject area would significantly benefit from the installation of a signalised intersection with Port Wakefield Road where Dunn Road and Greyhound Road intersect. This would also result in broader regional benefit to development within the City of Salisbury (particularly Catchment 2) and the City of Playford.

Via the use of Mumford Road and/or Mill Road (or potential internal road connections within Catchment 3 allotments), the signalised intersection may also assist to alleviate existing traffic pressures at surrounding arterial road intersections. Of note, the Heaslip Road/Waterloo Corner Road roundabout is understood to currently be operating at capacity (or very close to), with an above average percentage of commercial vehicles traversing through on a daily basis. An additional signalised intersection on Port Wakefield Road (with appropriate connectivity to Heaslip Road) may therefore assist in improving its operation.

Similar to transport infrastructure sub-areas 2.4 and 2.5, sub-area 3.3 is also expected to comprise higher intensity land uses (such as retail, office and bulky goods), resulting in the potential generation of large traffic volumes. Vehicle access to this sub-area should also be supplemented via additional connectivity to Waterloo Corner Road (in addition to Port Wakefield Road). This could be either in the form of a service road (with ingress at the western end and egress at the eastern end of the site's Waterloo Corner Road frontage) or a new controlled four-way intersection with Angle Vale Crescent on the southern side of Waterloo Corner Road (either an additional roundabout or signalised intersection). A service road adjacent the site's Port Wakefield Road frontage may also provide beneficial, however will be subject to achieving appropriate (and compliant) geometric design outcomes.

With regard to the former option, utilisation of a service road access arrangement would likely place increased reliance upon the Heaslip Road/Waterloo Corner Road roundabout in the form of U-turn movements (i.e. eastbound movements

on Waterloo Corner Road undertaking a U-turn in order to access Port Wakefield Road). Such an arrangement may therefore not be desirable from a capacity perspective, with further modelling analyses required.

While the proposal to construct a controlled four-way intersection on Waterloo Corner Road would require further liaison with DIT (due to proximity between the intersections with Port Wakefield Road and Heaslip Road), the intersection would provide benefit to sub-areas 3.2 and 3.3, whilst also decreasing reliance upon the Heaslip Road/Waterloo Corner Road roundabout. A four-way intersection would also assist in providing additional access opportunities for existing allotments south of Waterloo Corner Road, and increasing safety at the intersection with Angle Vale Crescent (as opposed to the current priority-controlled T-Intersection).

It is however understood that additional access (particularly ingress) may be desired directly from Port Wakefield Road for development within sub-area 3.3 (due to the higher intensity land uses envisaged). Additional access provisions directly via Port Wakefield Road should be considered on a case-by-case basis, with access points consolidated where possible.

4.4.4 CATCHMENT 4

Catchment 4 comprises land located on the western site of the North–South Motorway, which would have previously been accessed via local roads connecting to Port Wakefield Road prior to the Motorway's construction. The catchment is bound by the City of Salisbury's northern LGA boundary, the North–South Motorway to the east, land use by SA Water to the south-west, and Defence land to the west (with St Kilda beyond).

The land within Catchment 4 is predominantly used for agricultural and horticultural purposes, resulting in comparatively low levels of existing traffic generation relative to land sizes.

Of particular note, vehicle access to and within Catchment 4 is predominantly provided via a 'spine' road network comprising of Robinson Road (north–south) and St Kilda Road (east–west). The two roads intersect at a four-way roundabout constructed as part of the North–South Motorway project.

Due to the alignment of the North–South Motorway, connectivity to Catchment 4 is limited with major access provided only via the Waterloo Corner Interchange. Minor (local) vehicle access is also provided via Robinson Road, Coleman Road and Brooks Road to the north of Catchment 4, however provides minimal connectivity to major arterial roads (particularly for southbound vehicles). Use of access options to the north of Catchment 4 is considered circuitous and illogical to support development envisaged.

Due to the size of Catchment 4 and the anticipated generation of 27,700 daily vehicle movements, detailed traffic modelling analyses will be required to be undertaken for the Waterloo Corner Interchange to ensure its continued satisfactory operation. This is particularly relevant to the roundabout on the western side of the motorway and the T-intersection on the eastern side of the motorway.

The addition of such forecast volumes would be expected to trigger upgrade of Waterloo Corner Road (across the North–South Motorway) beyond its current single-lane (in each direction) configuration.

The 'spine' road network within Catchment 4 is generally considered appropriate to facilitate vehicle access to the various allotments throughout. However, both Robinson Road and St Kilda Road will also likely require upgrade from a 'collector road' classification to a 'sub-arterial road' or 'arterial road' (dependant on final development traffic volume outcomes). This will involve widening of the existing carriageways to provide additional trafficable width in line with the City of Salisbury's standard road cross-section.

The intersection of Robinson Road and St Kilda Road will also likely require upgrade to increase its operational capacity. Give that property boundaries are currently located within very close proximity to the roundabout, compulsory land acquisition will be required (detail on the extent of acquisition will be required to be determined with further detailed traffic modelling analyses).

4.4.5 EXTERNAL ROAD NETWORK

Through continual development and intensification of land uses within the various catchments and transport infrastructure sub-areas, continually increased traffic volumes will be realised on the existing 'spine' road network dissecting the Study Area. In particular, Port Wakefield Road will likely experience a large increase in traffic volumes upon full development of the Study Area as envisaged by the Strategic Growth Framework. However, Port Wakefield Road is a major arterial road (classified as a 'highway') with adequate capacity to accommodate additional volumes (taking into account the likely dissipation of volumes via the permeability of the network).

Lower order roads such as Waterloo Corner Road, Heaslip Road and Bolivar Road are expected to be more heavily impacted with regard to percentage growth of traffic volumes, despite their location relative to the Study Area being at the extremities. This may result in the need for road carriageway upgrades (i.e. additional lanes) to accommodate the future growth.

Of key importance are the various intersections on the external road network, via which direct access to/from the Study Area is not provided albeit related vehicles will utilise. Such intersections include:

- Waterloo Corner Road Interchange;
- Bolivar Interchange;
- Port Wakefield Road/Waterloo Corner Road;
- Port Wakefield Road/Bolivar Road;
- Port Wakefield Road/Hodgson Road;
- Waterloo Corner Road/Heaslip Road; and
- St Kilda Road/Robinson Road.

In the event that the capacity of any of the above intersections is exceeded (particularly the interchanges and those with Port Wakefield Road), the road network will likely 'throttle' vehicle movements. This will not only impact upon Study Area-related vehicles, but also regional (external) movements passing through the Study Area. Given the importance of the strategic routes within the Study Area, detailed analyses of external intersections will be required to be undertaken in addition to directly impacted intersections as development of the various catchments occurs.

Due to time constraints associated with the delivery of the Strategic Growth Framework, detailed intersection analyses have not been undertaken by CIRQA. However, as noted in Section 4.3.1, the City of Salisbury has agreed to use DIT's newly created TAM to determine potential traffic impacts and possible external (arterial) road upgrade requirements arising from the realisation of development within the Study Area.

It is reiterated that DIT's 'TAM' is being utilised concurrently with the preparation of this report, however modelling output is not yet available. An iterative process between CIRQA and DIT will be undertaken to ensure that key objectives of the Strategic Growth Framework are achieved (i.e. unlocking future development land supply) whilst maintaining the satisfactory operation of DIT's road network. A supplementary report outlining the findings and outcomes of the TAM analyses will be provided at a later date once complete.

Notwithstanding the need for analyses, direct access to the Study Area has been determined with the intention to minimise impact upon the operation of the strategic road corridors and arterial roads based upon the best available data and knowledge at the time of writing.

4.4.6 PUBLIC TRANSPORT OPPORTUNITIES

There is currently low demand for public transport services due to low density of development within the Study Area. Future demand may increase as development intensifies, however the expected increase in demand is relatively low because the land uses proposed within the Study Area are not typically associated with high public transport patronage.

It is recommended that public transport services are reviewed as development progresses to minimise private vehicle dependence, particularly for employees and customers of commercial sites. Further to this, it is recommended that these services focus on arterial corridors to maximise patronage.

4.4.7 ACTIVE TRANSPORT OPPORTUNITIES

Similar to the above discussion on public transport, there is currently low demand for active transport facilities due to low density of development within the Study Area. Future demand for walking and cycling infrastructure will likely increase as development intensifies, however demand may be limited as land uses proposed for the Study Area are not associated with high levels of walking and cycling activity.

There are a number of corridors within the Study Area that cater for pedestrian and cycling demand from outside the Study Area (i.e., St Kilda Road) and it is recommended that improvements to walking and cycling infrastructure along these routes are undertaken as development progresses. It is also recommended that localised bicycle treatments (i.e., bike lanes) be provided on arterial roads within the Study Area to strengthen cycling connections for recreational, commuter and customer use.

New walking and cycling paths through the Study Area should follow linear open space (i.e., waterways) and motor vehicle corridors to provide continuous connections.

5. TRANSPORT NETWORK PRINCIPLES AND PLANNING POLICY CONTROLS

The general principles for access between the Study Area and the existing road network are as follows:

- New connections to the North–South Motorway, as an established non-stop transport corridor, are not supported.
- Access between development transport infrastructure sub-areas and arterial roads such as Port Wakefield Road and Waterloo Corner Road should be facilitated via collector and/or local/service roads and not direct access to those arterial roads.
- Service roads should be left-in/left-out only and equipped with acceleration/deceleration lanes (designed in accordance with relevant Austroads' criteria, relative to the posted speed limit).
- Consideration by DIT of a reduction of the Port Wakefield Road speed limit would assist in reducing the level of infrastructure improvement required on Port Wakefield Road, as well as assisting in achieving better safety outcomes (i.e., for uncontrolled right-turns from side/service roads).
- U-turn lanes may be used to facilitate turning in Port Wakefield Road where right-turns are not supported at intersections.
- The typical road hierarchy within the Study Area will provide sub-arterial or collector road access to Port Wakefield Road and Waterloo Corner Road. Collector roads would then link to local roads.
- Shared use pedestrian/cyclist network should align with stormwater and open space corridors and adjacent arterial corridors in order to maximise the efficiency of the space.
- Collector roads should be designed with facilities for pedestrians and cyclists and for future public transport provision.
- Port Wakefield Road is gazetted for road trains and, as such, consideration should be given to extending road train access to designated transport infrastructure sub-areas with Strategic Employment zoning. The catchments bounded by Heaslip Road, Waterloo Corner Road and the North-South Motorway may be most suitable for provision of new roads for gazettal.
- Consideration should be given to the increase in public transport services throughout the Study Area, noting existing services are limited. Alternate transport offerings (to motor vehicles) are likely to assist in reducing associated traffic volumes on the surrounding road network.

The planning policy controls to facilitate implementation of the general principles above are as follows:

- Future Local Road Widening Overlay (applicable to Council-owned roads);
- Future Road Widening Overlay (applicable to DIT-owned roads);
- Major Urban Transport Routes;
- Non-stop Corridor Overlay;
- Traffic generating development overlay; and
- Major urban transport routes.

Additional legislative requirements may also be applied as needed to ensure adequate land is available. This includes the Metropolitan Road Widening Plan (MARWP) which is typically reflected on land titles.

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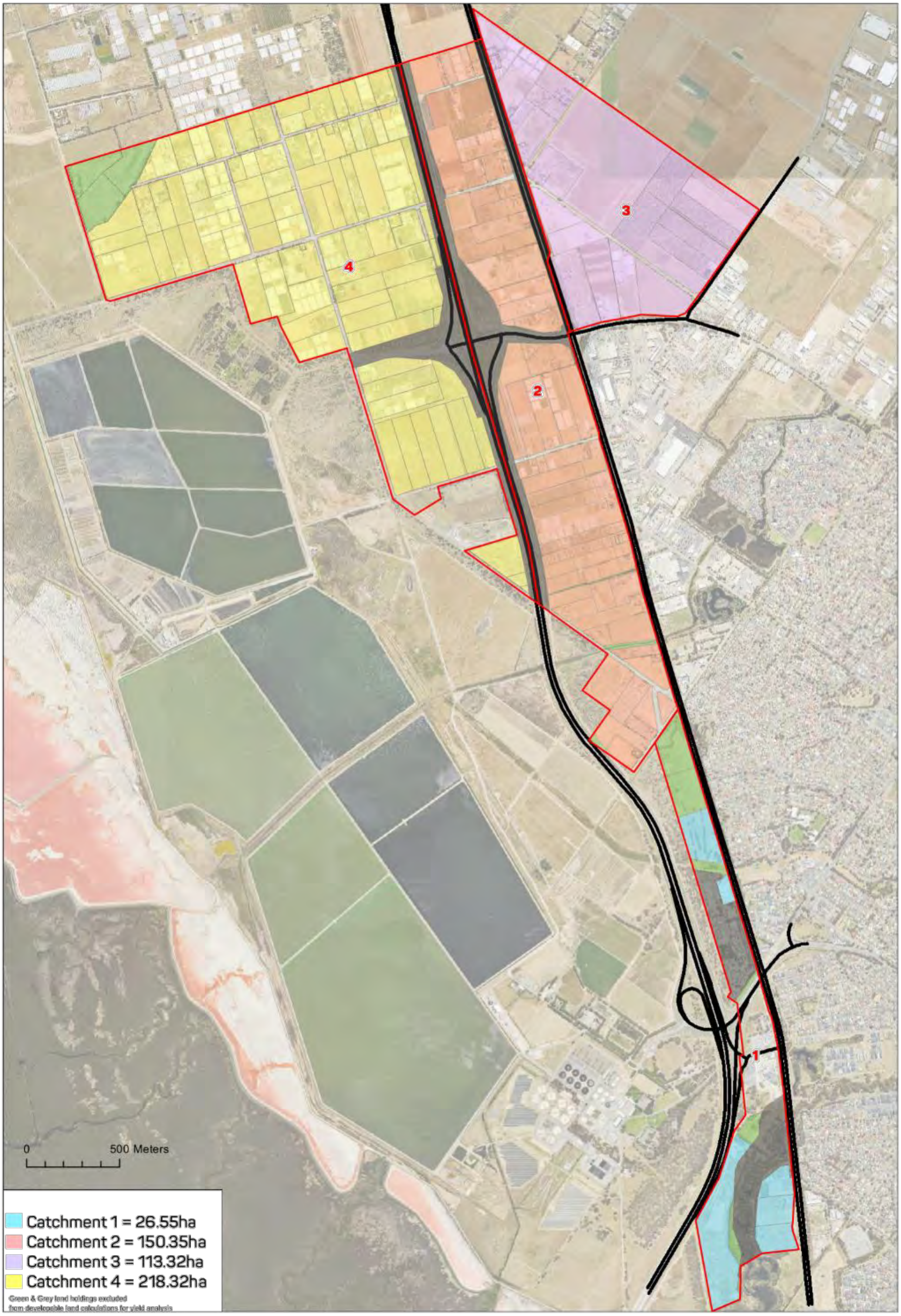
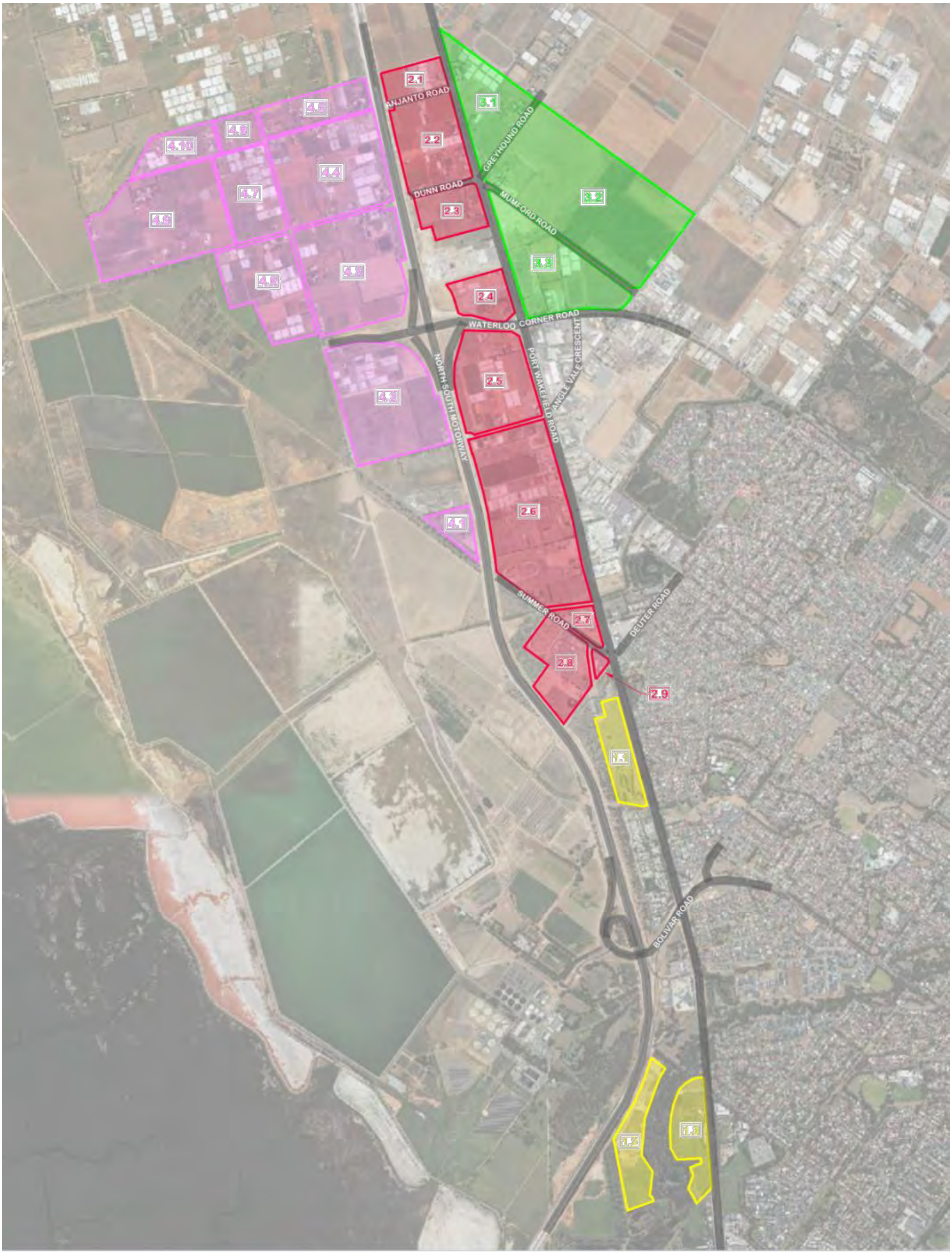
APPENDIX A

STUDY AREA AND CATCHMENT PLAN


4
3
2
1
0
500 Meters
Catchment 1 = 26.55ha
Catchment 2 = 150.35ha
Catchment 3 = 113.32ha
Catchment 4 = 218.32ha
Green & Grey land holdings excluded
from developable land calculations for yield analysis

APPENDIX B

TRANSPORT INFRASTRUCTURE SUB-AREAS ADOPTED FOR TRAFFIC ANALYSES



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DRAWING AMENDMENTS

REV	DATE	DESCRIPTION	DWN	CHK
A	15/06/2022	FOR DISCUSSION	ABH	TAW

N
1:20,000
@ A3

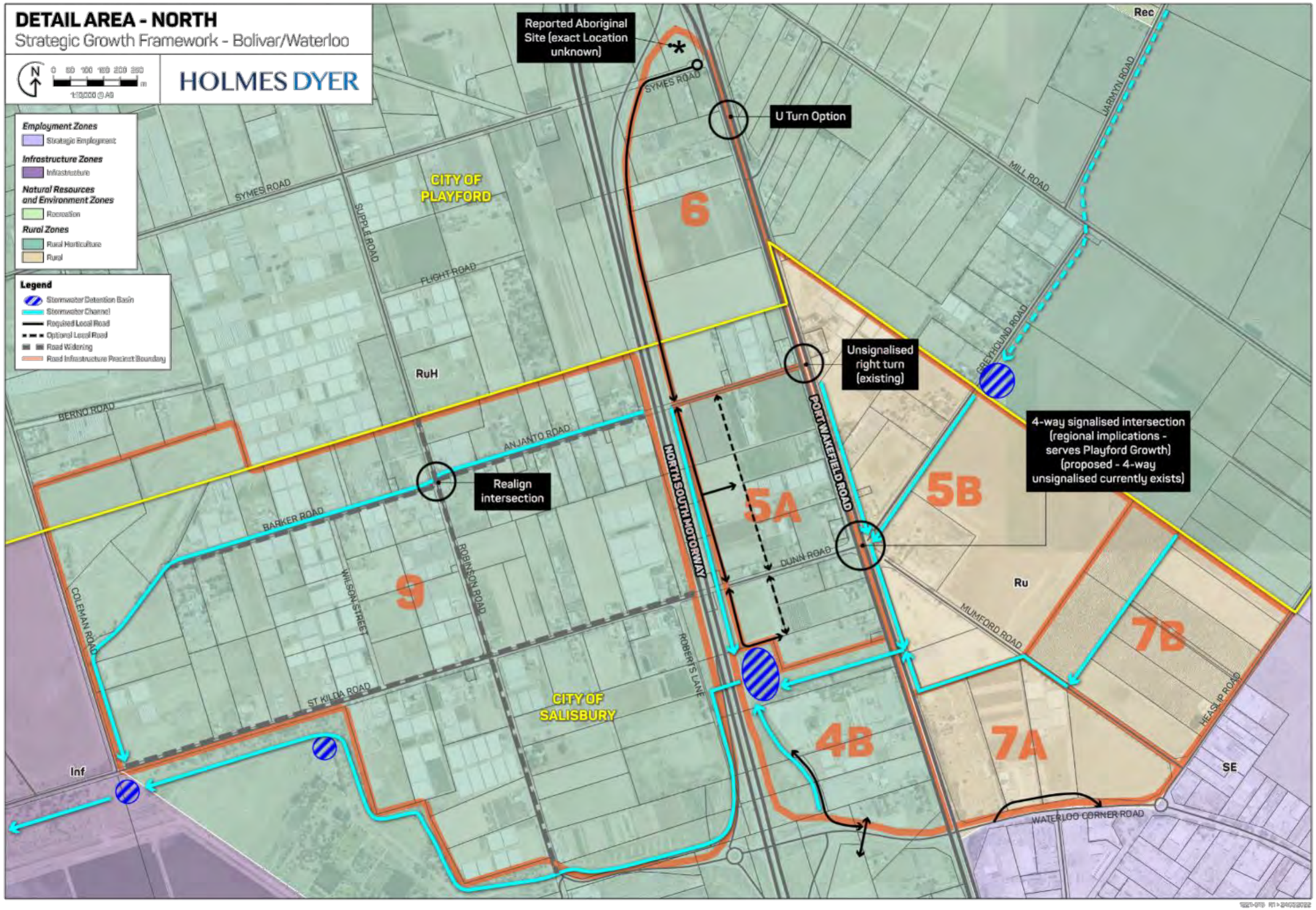
STRATEGIC GROWTH FRAMEWORK

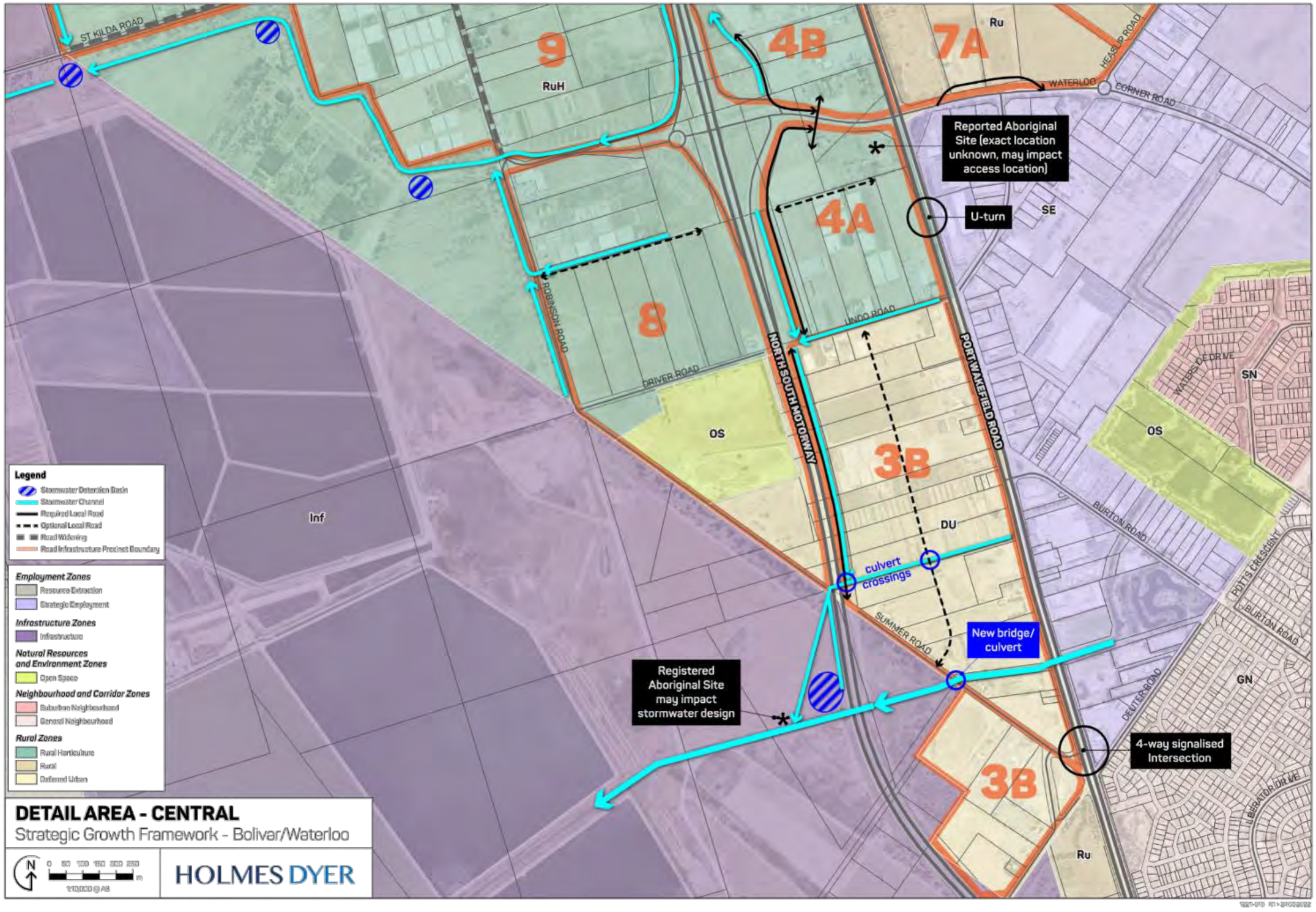
WATERLOO CORNER & BOLIVAR SUB-AREA LOCATIONS

PROJECT # 21611 SHEET # 01_SH01

APPENDIX C

STRATEGIC GROWTH FRAMEWORK INFRASTRUCTURE PLANS


DETAIL AREA - NORTH
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER
Employment Zones
Strategic Employment
Infrastructure Zones
Infrastructure
Natural Resources and Environment Zones
Recreation
Rural Zones
Rural Horticulture
Rural
Legend
Stormwater Detention Basin
Stormwater Channel
Required Local Road
Optional Local Road
Road Widening
Road Infrastructure Precinct Boundary
Reported Aboriginal Site (exact Location unknown)
U Turn Option
Unsignalised right turn (existing)
4-way signalised intersection (regional implications - serves Playford Growth) (proposed - 4-way unsignalised currently exists)
Realign intersection
CITY OF PLAYFORD
CITY OF SALISBURY
SYMES ROAD
SUPPLE ROAD
FLIGHT ROAD
BERNO ROAD
BARKER ROAD
ANJANTO ROAD
COLEMAN ROAD
WILSON STREET
ROBINSON ROAD
ST KILDA ROAD
ROBERTS LANE
NORTH SOUTH MOTORWAY
PORT WAKEFIELD ROAD
DUNN ROAD
MILL ROAD
JARMYN ROAD
GREYHOUND ROAD
MUMFORD ROAD
HEASLIP ROAD
WATERLOO CORNER ROAD
6
9
5A
5B
4B
7A
7B
RuH
Ru
Inf
SE
Rec


ST KILDA ROAD
9
RuH
4B
7A
Ru
HEASLIP ROAD
WATERLOO CORNER ROAD
Reported Aboriginal Site (exact location unknown, may impact access location)
*
4A
U-turn
SE
8
ROBINSON ROAD
DRIVER ROAD
UNDO ROAD
NORTH SOUTH MOTORWAY
PORT WAKEFIELD ROAD
WATERS DRIVE
SN
OS
3B
DU
culvert crossings
BURTON ROAD
POTTS CRESCENT
SUMMER ROAD
New bridge/ culvert
Registered Aboriginal Site may impact stormwater design
GN
DEUTER ROAD
4-way signalised Intersection
LIBERATOR DRIVE
Inf
Legend
Stormwater Detention Basin
Stormwater Channel
Required Local Road
Optional Local Road
Road Widening
Road Infrastructure Precinct Boundary
Employment Zones
Resource Extraction
Strategic Employment
Infrastructure Zones
Infrastructure
Natural Resources and Environment Zones
Open Space
Neighbourhood and Corridor Zones
Suburban Neighbourhood
General Neighbourhood
Rural Zones
Rural Horticulture
Rural
Deferred Urban
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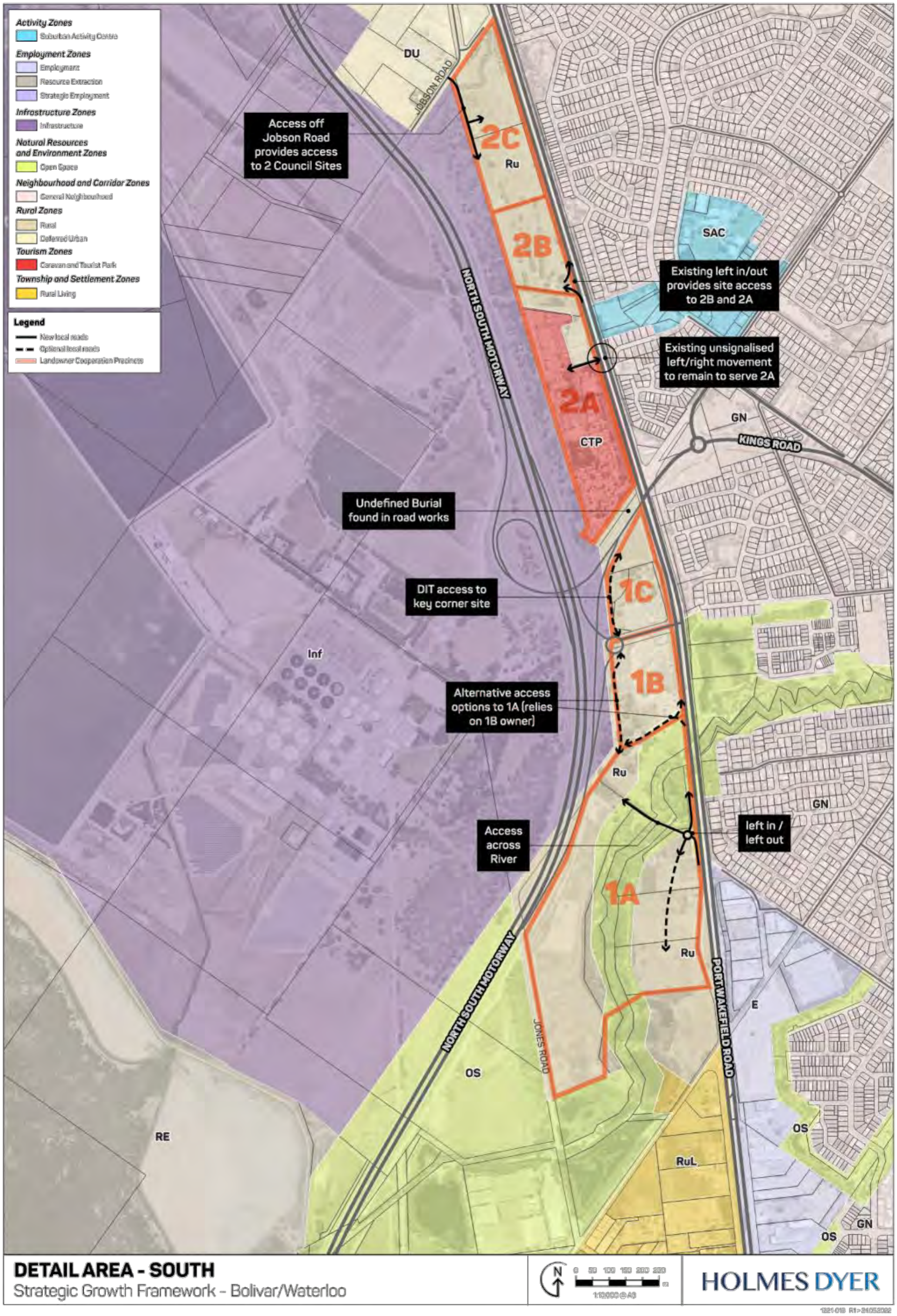
Activity Zones
Suburban Activity Centre
Employment Zones
Employment
Resource Extraction
Strategic Employment
Infrastructure Zones
Infrastructure
Natural Resources and Environment Zones
Open Space
Neighbourhood and Corridor Zones
General Neighbourhood
Rural Zones
Rural
Deferred Urban
Tourism Zones
Caravan and Tourist Park
Township and Settlement Zones
Rural Living
Legend
New local roads
Optional local roads
Landowner Cooperation Precincts
Access off Jobson Road provides access to 2 Council Sites
DU
JOBSON ROAD
2C
Ru
2B
SAC
NORTH SOUTH MOTORWAY
Existing left in/out provides site access to 2B and 2A
Existing unsignalised left/right movement to remain to serve 2A
2A
CTP
GN
KINGS ROAD
Undefined Burial found in road works
DIT access to key corner site
1C
Inf
1B
Alternative access options to 1A (relies on 1B owner)
Ru
GN
Access across River
left in / left out
1A
Ru
NORTH SOUTH MOTORWAY
JONES ROAD
PORT WAKEFIELD ROAD
E
OS
RE
RuL
OS
GN
OS
DETAIL AREA - SOUTH
Strategic Growth Framework – Bolivar/Waterloo
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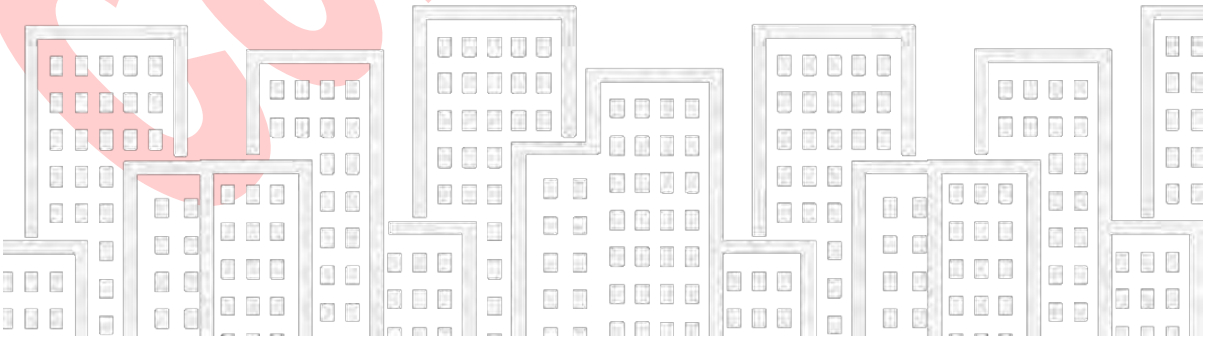
Appendix 3. Deloitte Economic Vision for Salisbury

Contents

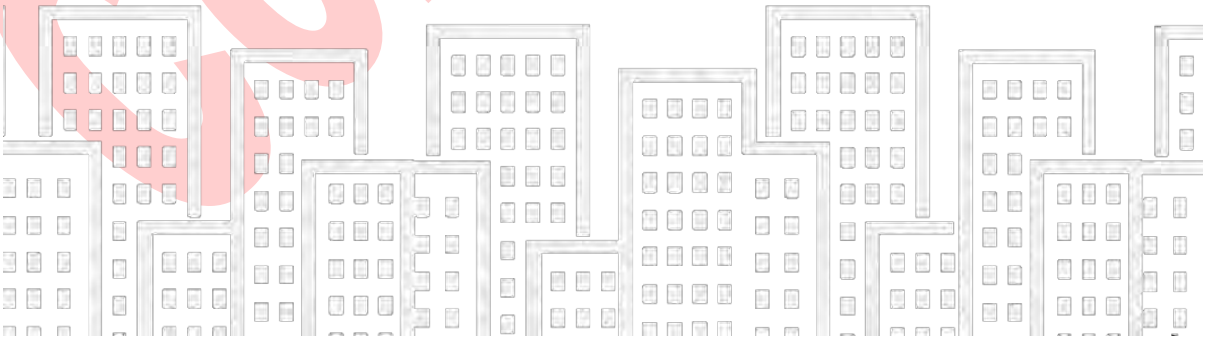
Acknowledgements

Deloitte and the City of Salisbury would like to thank the stakeholders, across government departments and agencies, service providers, education institutions, firms and industry organisations that offered their insights to this report and participated in the development of the economic vision for the City of Salisbury.



Glossary

Acronym	Full name
ABS	Australian Bureau of Statistics (Australian Government)
CBD	Central business district
CRC	Cooperative research centre
DPTI	South Australian Department of Planning, Transport and Infrastructure
DSTG	Defence Science and Technology Group (Australian Government)
GRP	Gross regional product
LGA	Local government area
NBN	National Broadband Network
NESB	Non-English speaking background
OCESA	Office of the Chief Entrepreneur for South Australia
SABRENet	South Australian Broadband Research, Education and Innovation Network
SEIFA	Socio-Economic Indexes for Areas
UniSA	University of South Australia
VET	Vocational education and training



Executive summary

The City of Salisbury is home to a strong and growing regional economy, contributing some $6.5 billion to South Australia's gross state product. The economic success of Salisbury is driven by some 7,200 active businesses, which, in turn, generate some 45,000 jobs for locals and residents of other parts of the metropolitan (and even regional) area. In many respects, Salisbury is a key engine room of economic growth for the South Australian economy, often setting a path for the state to follow.

Key to the city's success is the richness of its strategic assets and endowments. These have helped to attract business investment activity, anchor certain industry sectors, and attract high skill workers. Unlike any other place in South Australia (and most likely Australia), Salisbury is home to two airports, one of Australia's largest defence establishments, as well as TAFE and university campuses. Salisbury also boasts excellent physical and digital connectivity, with key road and rail transport corridors as well as high-speed fibre internet infrastructure straddling the region. As a result, these strategic assets also act as an anchor for several important industry sectors, placing Salisbury at the economic centre of the broader northern Adelaide region.

These assets and talent pools underpin a series of key sectors in the local economy that comprise substantial shares of employment and activity today and which offer significant growth opportunities in the future.

Salisbury's key sectors

- Defence industries
- Higher education and knowledge intensive services
- Advanced manufacturing
- Health care and social assistance services
- Food processing and product manufacturing
- Retail and consumer services
- Transport, storage and distribution

Some 143,000 people – 8.2 per cent of South Australia's population – also call the City of Salisbury home. A relatively youthful population, Salisbury is home to a large intergenerational migrant population drawn from a diverse range of countries and cultures - including England, Italy, Vietnam, China and India. The skills and potential human-capital of Salisbury's population is also one of the city's greatest assets and contributor towards its future economic growth.

The strength of Salisbury's economy is not reflected in the socioeconomic outcomes achieved by its resident population, however. With high unemployment and poor educational outcomes, there remains a disconnect with the socioeconomic outcomes and the level of prosperity experienced by its resident population. It is necessary, therefore, that future economic growth and the measures taken to stimulate growth are inclusive of the local population, and place the economic welfare and prosperity of Salisbury's people at its centre.

With this challenge in mind, this report outlines Deloitte's vision for the future growth of Salisbury's economy – one that looks to lift the trajectory of Salisbury's future economy and works to benefit the existing resident population. Informed by extensive consultations and conversations with local businesses, government policymakers and community leaders, our vision is a distillation of their views and the ideas expressed for Salisbury's future growth.

This document sets a blueprint for economic growth – outlining the key building blocks for this growth – and then attempts to pencil in the steps to be taken to achieve this growth. In addition to outlining four key building blocks, Deloitte also identifies almost 20 opportunities and 39 action points to be undertaken by both the City of Salisbury and other key stakeholders in the short and longer terms.

The proposed set of actions embrace the regions strategic assets and competitive advantages with the aim of increasing investment attraction and promoting the development of wealth generating

-

industries.

Adopted effectively, these actions will increase the productive capacity of the local economy by growing (and improving) the capabilities and capacity of the local labour force and industry. This will create better labour market opportunities for residents, a stronger and more profitable operating environment for businesses, and a more dynamic economy for the community at large.

The actions include both bold aspirational initiatives that have the potential to transform the urban landscape and lift the economic welfare of the City of Salisbury over the longer term, as well as short-term 'low-hanging fruit' opportunities that are achievable immediately and have the potential to make significant gains for relatively minor investment.

A selection of the opportunities across each of the four building blocks are highlighted to provide a flavour of the types of actions where Salisbury can continue to champion the economic development of South Australia in an inclusive manner. Some actions will require minimal effort and are easily achievable in the short-run. Others are more substantive and will require greater consideration and effort to implement. Change will not be instantaneous, either; and, in many instances there are no quick fixes – some of actions, for example, respond to deeply ingrained socioeconomic challenges that may take a generation to unwind and overcome. By taking steps to exact change across each of the four building blocks, however, Salisbury will have taken steps to a brighter future.

Opportunities for action – the highlights

Leveraging Salisbury's existing endowments and strategic assets

- **Grow Salisbury's existing industry base** by ensuring that Salisbury's investment attraction plan targets industries and activities that complement and intensify existing activities in the region.
- **Create commercial spin-offs from the defence industry** by striking a Memorandum of Understanding between key defence stakeholders, government, the local vocational and higher education institutions, and local industry to progress local defence industry development and facilitate the cross-pollination of ideas and expertise.
- Develop a **30 Year Development Plan** to prepare for the future development of the area west of Port Wakefield Road, taking a whole-of-region approach to planning future infrastructure needs.

Growing Salisbury's people

- **Address barriers to post-school education and workforce participation** by strengthening non-school and post-school pathways to vocational and higher education, creating new credit transfer agreements locally between the vocational and higher education sectors to promote up-skilling, facilitating workforce readiness programs for high-school students, and developing a skills map of local industry to improve awareness among teachers, students, and parents of the education pathways from school to vocational and university and then into the workplace.
- **Promote the strengths of Salisbury's migrant population** to better capitalise on the diverse range of migrants' skills and experiences, improve labour market outcomes, and help local employers with their skills needs.
- **Strengthen the connectivity between local industry and university and vocational education institutions** to improve the responsiveness of training to the skills needs of local industry, and to improve the accessibility of local industry to facilitates, expertise, and resources embedded within local tertiary-education campuses.
- **Improve the quality of vocational education infrastructure in northern Adelaide** through the establishment of a new future focussed TAFE campus at Mawson Lakes.

Strengthening Salisbury's connectivity

- Link Salisbury's Technology Park with Adelaide's other technology and innovation precincts into a cohesive network to develop an integrated precinct platform which complement the activities of each other and **be a part of something bigger.**
- **Activate the Technology Park Precinct eco system** to champion innovation-led economic growth across northern Adelaide by establishing a curation function at the precinct and improving the quality of facilities available.
- **Expand Salisbury's digital connectivity and Industry 4.0 capabilities** by expanding and opening up existing SABRENet nodes for private sector use, trailing embedded 5G networks, and establishing a secure high speed network to create 'virtual defence technology precinct'.
- **Connect Salisbury's centres of activity** by improving east-west transport infrastructure linkages, upgrading public transport infrastructure and linkages between education training site, testing innovative on-demand and 'last mile' transport solutions.

Developing places and perceptions

- **Lift the quality of Salisbury's urban amenity** through increased investment in streetscaping and urban landscaping to improve safety and accessibility, as well as shift perceptions to enhance the attractiveness of the region to prospective residents, workers, businesses and visitors.
- **Activate the renewal of Salisbury's CBD** by accelerating existing redevelopment plans and by placing the transformation of the Salisbury Interchange at its centre.

1. Designing a vision

1.1 The purpose and scope of the report

The City of Salisbury and the broader northern region of Adelaide are experiencing a period of economic transition, having recently undergone a significant structural change. Where automotive manufacturing used to dominate the economic landscape, industries such as health, defence and services now provide a breadth of economic diversity. The area has also seen considerable population growth.

This transition and growth supports a range the opportunities for the area, and provides the perfect opportunity for the City of Salisbury to define their economic vision for decades to come.

In this report, we look at developing this vision through three steps:

- First we look at **Salisbury today** – an analysis of the current composition of the local economy and socio-economic factors of the people who live there, with a discussion about the opportunities which lie before us.
- Secondly we define how **Salisbury can position for growth**, identifying building blocks for growth and key metrics for how we can measure the effect of our action for locals.
- Finally, we analyse each of these **building blocks** in details – identifying specific opportunities, and then actions on how they might be delivered.

1.2 The framework for 'inclusive and welfare enhancing' growth

This economic vision is not just a framework to plan for the growth of Salisbury in terms of raw economic activity and output. It's about how we can use that activity to drive improvement in people's lives in terms of their economic welfare.

For the purpose of developing this vision, welfare is defined as the ability to consume that which improves an individuals' material wellbeing, but also to actively participate in society.

Deloitte's report *The Purpose of Place Reconsidered* dissects the role of place in determining and enhancing human prosperity. In this context, place is defined by the physical attributes of an area like climate, geology, topography and accessibility, as well as the indirect effects created, such as the activities, attitudes and character of the people who live there.[1]

As the knowledge economy grows and technology and connectivity becomes increasingly important, the purpose of place changes. Contrary to the belief that place will become less relevant, it is actually becoming more and more important. Economies of agglomeration are occurring and people are choosing to live and work in close proximity to each other. Knowledge workers are congregating in offices or technology precincts.[2] Place is particularly important in facilitating the interaction of these knowledge workers.[3]

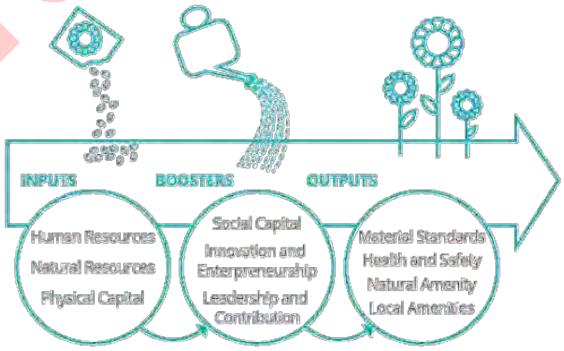
Deloitte's report *The Purpose of Place Reconsidered* identified ten dimensions of prosperity. This set of measures work together to improve economic welfare and the potential for place to generate prosperity, as identified in Figure 1.1.[4]

The first three dimensions are considered 'inputs'; these include human resources, natural resources and physical capital. These operate as building blocks for prosperity.

The second set of dimensions, referred to as 'boosters' include social capital, innovation and entrepreneurship, and leadership and contribution. These factors test the effectiveness of the inputs in how they create prosperity.

The final four dimensions are referred to as 'outputs'. These include material standards, health and safety, natural amenity and local amenities. These are the aspects of place that ultimately create prosperous and flourishing lives for residents.[5]

Figure 1.1 The Prosperity Production Function



Source: Deloitte[6]

1. Deloitte, *Building the Lucky Country: the purpose of place reconsidered* (2015) <https://www2.deloitte.com/au/en/pages/building-lucky-country/articles/purpose-of-place-reconsidered.html>.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Ibid.

With this in mind, the economic vision for Salisbury has been informed by the analysis of the current state of the local community and economy, including the people who live in the region and their economic activities. These features act as inputs which determine the potential for the City of Salisbury. Further, we identified the fundamental aspects of the community that can be leveraged to achieve welfare enhancing growth. These are considered the building blocks of growth and prosperity. These building blocks, that are either existing strengths or opportunities for greater improvement for the region, enable a range of strategic opportunities for the City of Salisbury. Lastly, we identify the actions that need to be taken by local, state and federal government and the private sector to capitalise on these opportunities.

This framework is summarised in Figure 1.2 below.

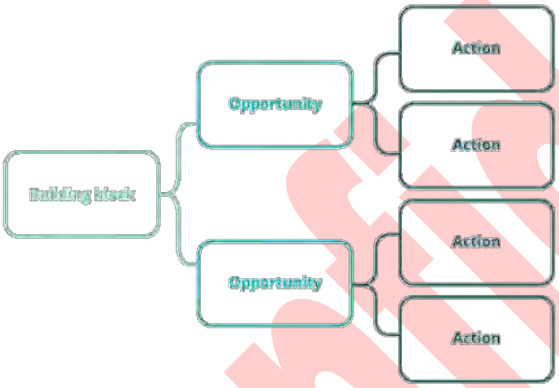
1.3 Our approach

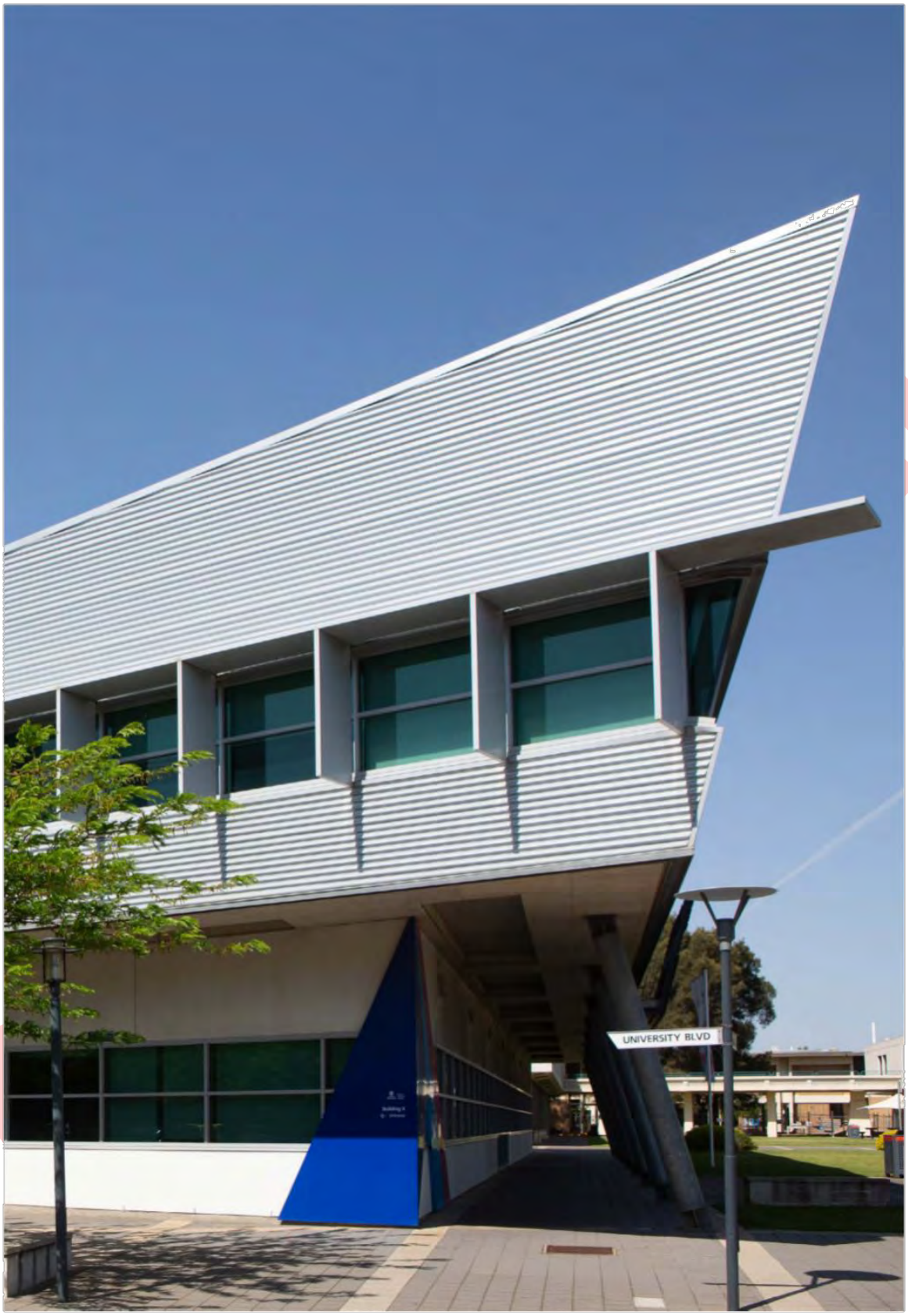
To inform the economic vision for the City of Salisbury, Deloitte undertook a range of statistical analysis to understand the current and emerging economic trends in the City of Salisbury to better understand its growing trajectory, competitive advantages and structural challenges.

Deloitte then undertook a series of consultations with local organisations, including private firms, service providers and government agencies. In addition, a workshop was held with key business leaders. These consultations aimed to capture the insights of businesses and stakeholders across the City of Salisbury, and to test the findings that emerged from the data.

Together, these analysis and conversations informed the building blocks, opportunities actions comprising the economic vision.

Figure 1.2 The framework of the economic vision





2. Salisbury today

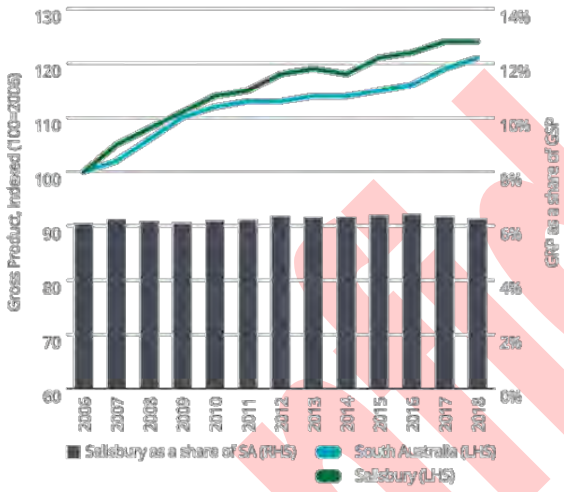
2.1 A changing economy

2.1.1 A significant region, growing faster than the state as a whole

Salisbury's economy is worth approximately $6.5 billion in gross regional product (GRP) terms, equating to approximately 6.2 per cent of the South Australian economy as shown in Chart 2.1. Salisbury is the fourth largest regional economy in the state, trailing only Adelaide, Port Adelaide Enfield and West Torrens. Salisbury's growth in GRP is outpacing South Australia as a whole, growing at an average annual rate of 1.8 per cent – consistently faster than the state average of 1.6 per cent per annum. Salisbury's GRP has increased by 25 per cent since 2006.

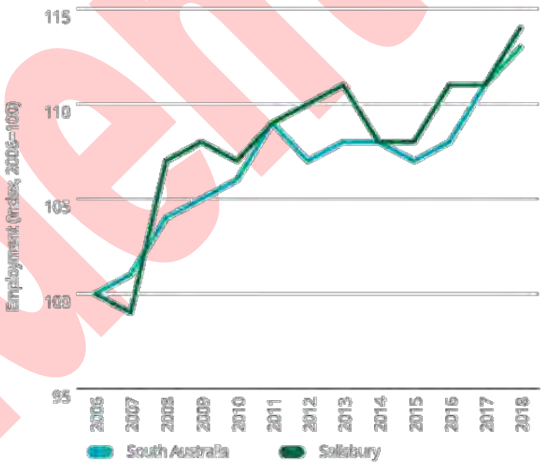
Closely associated with the positive trend in regional economic growth has been strong workforce growth. In 2017, approximately 62,000 Salisbury residents worked, accounting for 66 per cent of the working-age population.[7] Chart 2.2 shows that the number of residents employed in 2017 was 14 per cent greater than in 2006, representing an average annual growth in employment of 1.1 per cent over the decade. Jobs growth in Salisbury is in line with the state more broadly, which averaged a slightly lower rate of 1 per cent per annum.

Chart 2.1. Gross economic product (indexed) – Salisbury and South Australia, 2006 to 2018



Source: National Institute of Economic and Industry Research (NIEIR), Deloitte Access Economics
Notes: Underlying values of past years are adjusted to 2018 values

Chart 2.2. Employment (indexed) – Salisbury and South Australia resident populations, 2006 to 2018



Source: Department of Employment, Skills, Small and Family Business[8], ABS[9], Deloitte Access Economics
Notes: Based on smoothed and trend estimates

7. The working age population is considered to be residents aged 15-64 years.
Department of Employment, Skills, Small and Family Business, *Small Area Labour Market - LGA Data tables*, Australian Government <https://docs.jobs.gov.au/documents/lga-data-tables-small-area-labour-markets-december-quarter-2018>
Australian Bureau of Statistics, *Regional Population Growth, Australia, 2017-18 – ASS.Stat Beta*, cat. no. 3218.0.
8. Department of Employment, Skills, Small and Family Business, *Small Area Labour Market - LGA Data tables*, Australian Government <https://docs.jobs.gov.au/documents/lga-data-tables-small-area-labour-markets-december-quarter-2018>
9. Australian Bureau of Statistics, *Labour Force, Australia, Detailed - Electronic Delivery, Apr 2019 – Data cube LM1*, cat. no. 6291.0.55.001

2.1.2 Shifting industries and demand for workers

The industries which underpin this economic performance have shifted considerably over the last few decades, reflecting the sort of changes that have occurred in industrial economies in Australia and around the world.

Originally a country town, Salisbury experienced significant development in the mid-20th century around traditional manufacturing – although, agribusiness and services have always played a significant role. At that same time the establishment of the Salisbury Explosives Factory in 1940, the Long Range Weapons Establishment in 1947 and the Edinburgh Defence Base in 1955 laid the foundation for today's defence industry.

The dual effects of trade liberalisation and automation have since shrunk the role that manufacturing plays in Salisbury, as it has in most industrialised countries. Manufacturing accounted for 16 per cent of local jobs in 2016, down from 23 per cent a decade earlier - as shown in Chart 2.3. However, that does not mean that Salisbury's economy has shifted away from 'making things' entirely – rather developments in technology and processes has meant that manufacturing requires fewer, but more skilled workers. The manufacturing industry which continues largely in sectors where Australia and South Australia have a competitive advantage - advanced manufacturing comprises 28 per cent of Salisbury's broader manufacturing sector, while food processing and product manufacturing accounts for 32 per cent.

In addition to manufacturing, the industry sectors most closely related to the defence sector – 'Public Administration and Safety' and 'Professional, Scientific and Technical Services' - together account for approximately 17 per cent of local employment in 2016.

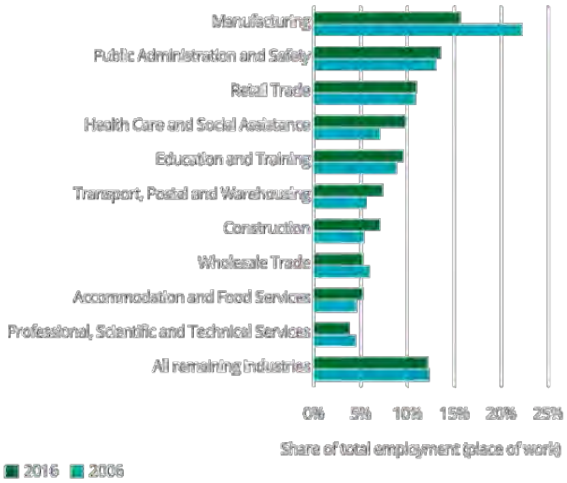
The structural shift in the decade between 2006 and 2016 also resulted in significant growth for a number of industry sectors. Most notable is the growth in the 'Construction', the 'Transport, Postal and Warehousing', and the 'Health Care and Social Assistance' industries, which together contributed some additional 3,800 jobs – approximately two-thirds of the additional jobs created.

On the one hand, growth in construction reflects an increase in economic and infrastructure activity in the region. The growth in transport, postal and warehousing also reflects Salisbury's growing competitive advantage in the logistics sector and value proposition created by its geographic proximity and accessibility to major transport routes. On the other hand, growth in the health care and social assistance sector reflects shifts in the underlying demographics of the area, along with increased public spending on services in this sector.

These economic shifts have meant that the types of jobs which the Salisbury economy creates locally have shifted. Most notable is the slight decline in the share of jobs involving skilled occupations - 'Managers', 'Professionals', and 'Technicians and Trades Workers'. Chart 2.4 shows that while skilled occupations, particularly the professional and technician and trades jobs, still account for a significant share of local employment – approximately 44 per cent or 19,500 jobs in 2016 – each of these categories experienced a slight decline in share over the decade.

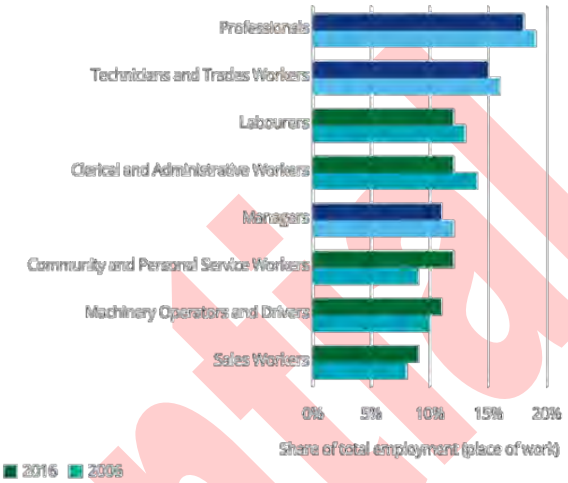
Significant growth has been concentrated in the semi-skilled and unskilled occupations. Those within the 'Community and Personal Service Workers' category, for example, increased by an additional 1,900 jobs (a 59 per cent increase), while those within the 'Machinery Operators and Drivers' category, increased by an additional 1,000 jobs (a 28 per cent increase) between 2006 and 2016. This reflects the rapid growth in the 'Construction', the 'Transport, Postal and Warehousing', and the 'Health Care and Social Assistance' industry categories over the decade.

Chart 2.3. Industry composition of the Salisbury economy, 2006 and 2016



Source: ABS[11], Deloitte Access Economics

Chart 2.4. Occupational composition of the Salisbury economy, 2006 and 2016



Source: ABS[11], Deloitte Access Economics
Note: Blue bars indicate 'skilled' occupation categories

2.1.3 Business formation is strong, but strongest for small businesses

Salisbury is currently home to some 7,200 active businesses, which account for some 5 per cent of the businesses in South Australia.[12] In 2016, for example, local businesses generated some 45,000 jobs – averaging approximately 6.9 workers per business, greater than the state average of 5.1 workers.[13]

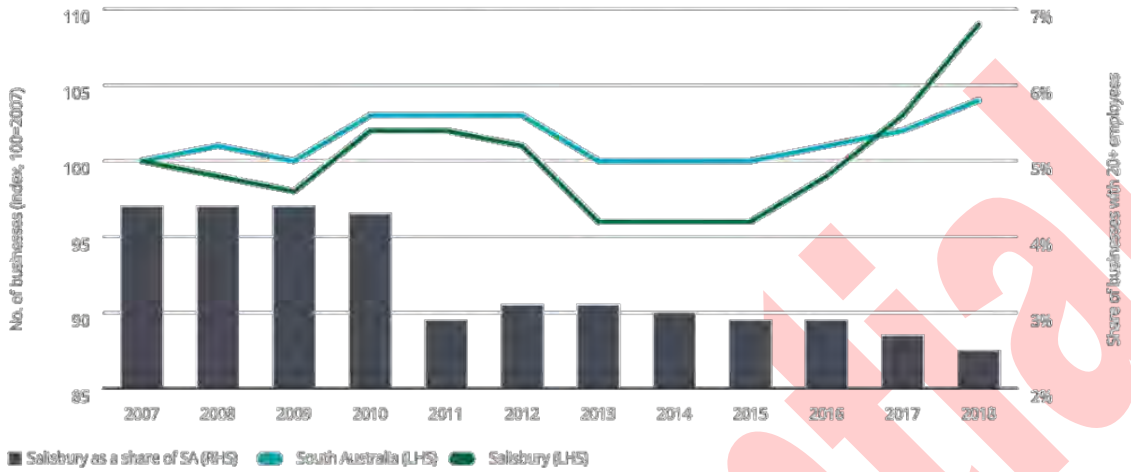
In recent years, Salisbury has experienced strong (net) business formation. As Chart 2.5 illustrates, growth of business formation in Salisbury over the last decade closely mirrored the broader trend in South Australia. Since 2014, however, net business formation in Salisbury has increased rapidly, recovering from a decade low, and outpaced growth at the state level. Between 2014 and 2018, the number of businesses located in Salisbury increased at an average annual rate of 3.3 per cent, triple the state average of 1.1 per cent per annum.

The recent growth in business formation, however, disguises an inverse trend toward smaller and single owner-operator businesses. Chart 2.5 shows that where medium to large businesses (i.e. those with 20 or more employees) once accounted for a 4.5 per cent share of businesses within Salisbury, the number of larger businesses has gradually declined – particularly following 2011. Since 2007, the number of medium to large active businesses in Salisbury has fallen from 291 to 180 in 2018.[14] Today, the share of larger businesses account for only 2.5 per cent of total businesses – almost half of what it was in 2007.

While rapid increases in business formation is indicative of a positive economic trend, the loss of large employers place downward pressure on local employment opportunities for Salisbury residents.

10. Australian Bureau of Statistics, *2016 Census of Population and Housing: TableBuilder Pro, Australia*, cat. no. 2073.0
11. Ibid
12. Australian Bureau of Statistics, *Counts of Australian Businesses*, cat. no. 8165.0, 2014-18, 2010-14, 2007-2011
13. Ibid
    Australian Bureau of Statistics, *2016 Census of Population and Housing: TableBuilder Pro, Australia*, cat. no. 2073.0
14. Australian Bureau of Statistics, *Counts of Australian Businesses*, cat. no. 8165.0, 2014-18, 2010-14, 2007-2011

Chart 2.5. Count of businesses (indexed) – Salisbury and South Australia, 2007 to 2018



Source: ABS[15], Deloitte Access Economics

2.1.4 Persistent socioeconomic challenges

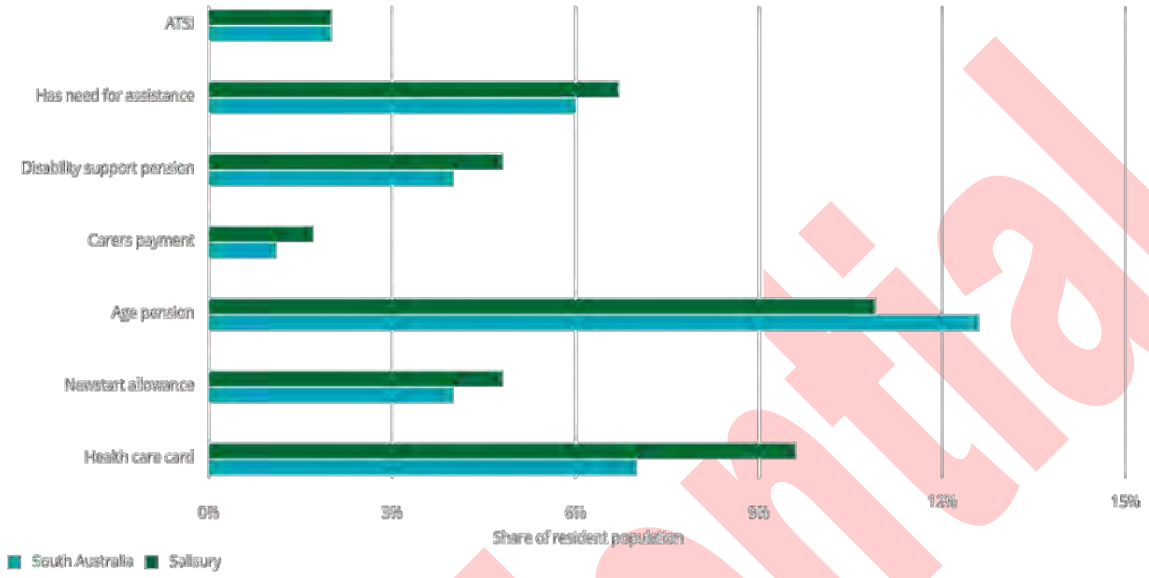
Despite Salisbury's economic strengths, there remains a disconnect with the socioeconomic outcomes and prosperity experienced by its resident population, with Salisbury facing a number of socioeconomic challenges as demonstrated across a variety of measures of disadvantage.

Salisbury has a greater concentration of residents receiving government benefits, particularly benefits associated with disability and labour market marginalisation, relative to South Australia more broadly (Chart 2.6). In 2016, Salisbury had a SEIFA Index score of 917 , ranking it 12th out of South Australia's 70 LGAs and placing it in the second worst decile for disadvantage.[16] This score, however, disguises the fact that within Salisbury the severity of disadvantage is limited and contained to pockets of the local population. While there are disadvantaged pockets of the population living within Salisbury – the lowest index score being 622 –, it is not at the extreme relative to the lower-bound score for South Australia (397).[17] There are also certain pockets with very little disadvantage within Salisbury, the highest score within Salisbury being 1,117 and close to the upper-bound score for South Australia (1,153).[18]

The disconnect between the economic strength of Salisbury as a place and the experiences of segments of the local population is also evident in the higher than average unemployment rate. Chart 2.7 illustrates that rate of unemployment for Salisbury has broadly mirrored the economic fortunes of South Australia over the last decade. The key difference, however, is that the unemployment rate for Salisbury consistently sits about 2 percentage points above the state average. A positive trend to emerge since 2015-16 is the falling rate of unemployment, both in Salisbury and South Australia more broadly.

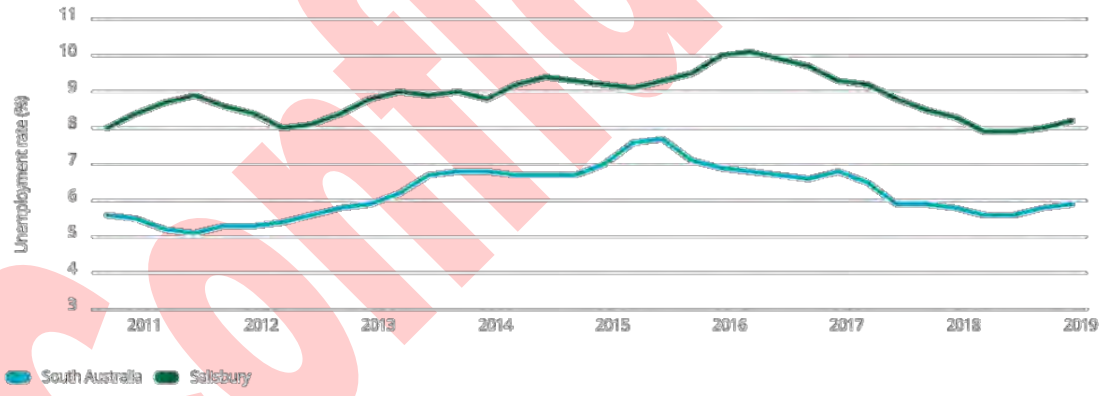
15. Australian Bureau of Statistics, *Counts of Australian Businesses*, cat. no. 8165.0, 2014-15, 2010-14, 2007-2011
16. The level of disadvantaged within Salisbury relative to other local government areas in South Australia is also summarised using the ABS' SEIFA Index of Disadvantage, which is a composite index of different measures of disadvantage.
Australian Bureau of Statistics, *Socio-Economic Indexes for Areas (SEIFA) Australia, 2016*, cat. no. 2033.0.55.001 – Data Cube: Local Government Area, Indexes, SEIFA 2016; Table 2
17. Pockets of disadvantage are SEIFA measures taken at the Statistical Area level 1 (SA1) classification
Australian Bureau of Statistics, *Socio-Economic Indexes for Areas (SEIFA) Australia, 2016*, cat. no. 2033.0.55.001 – Data Cube: Local Government Area, Indexes, SEIFA 2016; Table 2.
18. Ibid.

Chart 2.6. Indicators of disadvantage – Salisbury and South Australia, 2016



Source: PHIDU[19], Deloitte Access Economics

Chart 2.7. Unemployment rate – Salisbury and South Australia, 2010 to 2019



Source: Department of Employment[20], ABS[21], Deloitte Access Economics
Notes: Based on smoothed and trend estimates

19. Public Health Information Development Unit (PHIDU), *Social Health Atlas of Australia: Local Government Areas* <http://www.phidu.torrens.edu.au/social-health-atlases/data>
20. Department of Employment, Skills, Small and Family Business, *Small Area Labour Market - LGA Data tables*, Australian Government <https://docs.jobs.gov.au/documents/lga-data-tables-small-area-labour-markets-december-quarter-2018>
21. Australian Bureau of Statistics, *Labour Force, Australia, Dec 2018 – Table 7*, cat. no. 6202.0

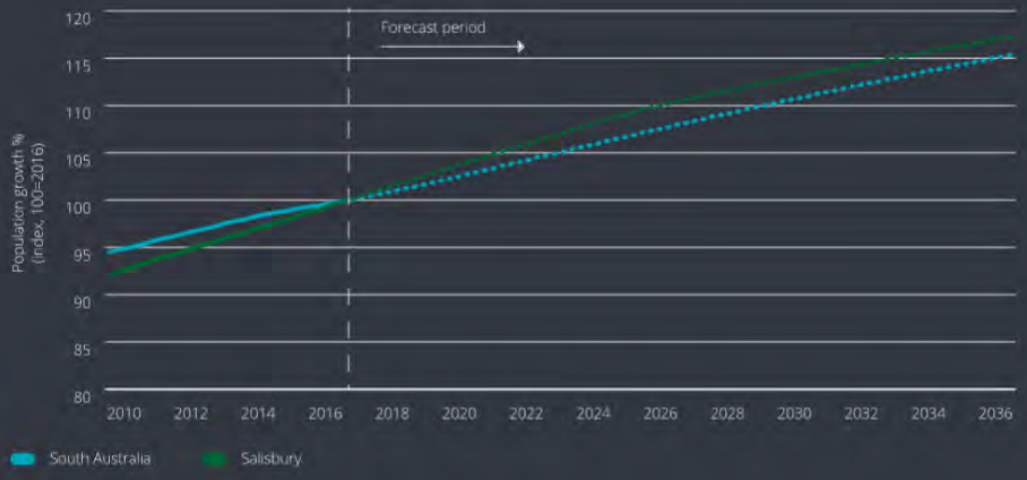
2.2 The need for local employment opportunities

Salisbury is home to a large and growing population. With a current resident population of 143,000 people, the City of Salisbury accounts for approximately 8.2 per cent of the South Australian population.[22] It is important Salisbury's future economic growth benefit the lives of residents by increasing the overall number (and quality) of jobs in our community by improving the skills and broad capacity of residents to obtain secure, high skilled jobs, as well as implementing measures to improve the connection of residents to those types of jobs.

2.2.1 A growing population

Over the next 20 years, Salisbury economy is set to continue to grow at a faster rate than the state average. Where the South Australian population is projected to grow at an average annual rate of 0.75 per cent, Salisbury's population is set to grow at an average rate of 0.86 per cent per annum, and is forecast to reach approximately 166,000 people by 2036.[23]

Chart 2.8. Forecast population size (indexed) – Salisbury and South Australia, 2010 to 2036



Source: ABS; Deloitte Access Economics

22 Australian Bureau of Statistics, Regional Population Growth, 2016-17 (cat. no. 3218.0)

23 The baseline population growth assumptions for the forecast period (September quarter 2017 onwards) are built from the same parameters as the South Australian Department of Planning, Transport and Infrastructure (DPTI) medium series and ABS series B population forecasts, but updated to reflect South Australia's most recent population performance.

24 Australian Bureau of Statistics, 2016 Census of Population and Housing: Table Builder Pro, Australia, (cat. no. 2073.0)

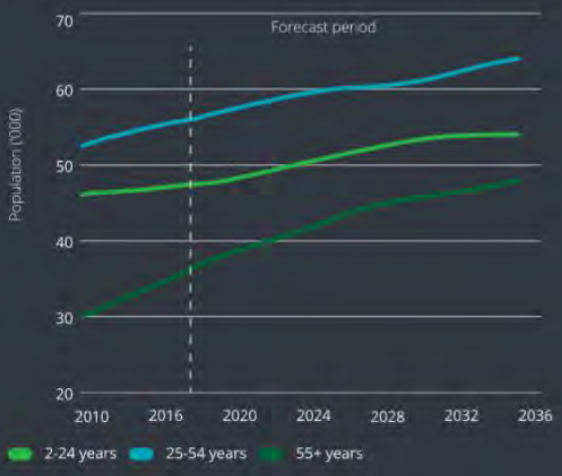
Chart 2.9. Age distribution (broad): Salisbury and South Australia, 2016

2.2.2 Young today, but ageing quickly

Salisbury is also in the advantageous position of having a relatively youthful population in comparison to South Australia. Chart 2.9 shows that Salisbury has higher proportions of both young (0-24 years) and prime-working age (25-54 years) people, as well as a lower share of older and retired residents (55 years or more), than the state more broadly. In 2016, the average age of Salisbury residents was 37 years, 3 years younger than the state average of 40 years.[25]

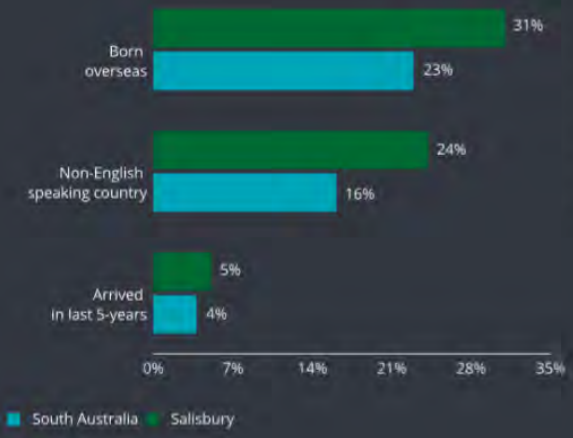
However, over the next 20-years, Salisbury's population is projected to age at a faster rate. Chart 2.10 shows that the difference in the number old and young people is expected to narrow as the number of people aged 55 years or more increases at an average annual rate of 1.4 per cent, while those aged 24 years or less increases at 0.6 per cent per annum. In 2036, the number of older and retired residents (those aged 55 years or more) are expected to account for 48,000 people or 29 per cent of the population.

Chart 2.10. Population size by age demographic – Salisbury, 2010 to 2036



25 Australian Bureau of Statistics, 2075 Census of Population and Housing: Table Builder Pro, Australia, cat. no. 2073.0
26 Ibid.
27 Australian Bureau of Statistics, Population Projections, Australia, 2017 (base) - 2066, cat. no. 3222.0
The baseline population growth assumptions for the forecast period (September quarter 2017 onwards) are built from the same assumptions as the South Australian Department of Planning, Transport and Infrastructure (DPTI) medium series and ABS series B population forecasts, but updated to reflect South Australia's most recent population performance.

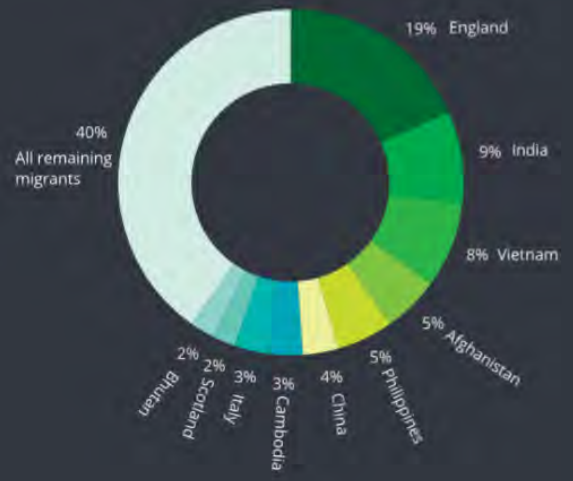
Chart 2.11. Shares of migration, country of birth (NESB), and recent arrivals – Salisbury and South Australia, 2016



2.2.3 A migrant population

Salisbury has a culturally diverse resident population having attracted a disproportionate share of South Australia's permanent overseas arrivals for several decades. Chart 2.11 shows that first generation migrants account for some 31 per cent of Salisbury's resident population, considerably larger than the state average of 23 per cent - a trend that is set to continue, as the share of recent arrivals continues to outpace the state average. Further, the majority of Salisbury's migrant population arrived from non-English speaking background (NESB) countries. Chart 2.12 shows that permanent migrants to Salisbury are from a diverse range of countries – such as, England, Italy, Vietnam, China and India.

Chart 2.12: Top ten migrant countries of birth – Salisbury, 2016



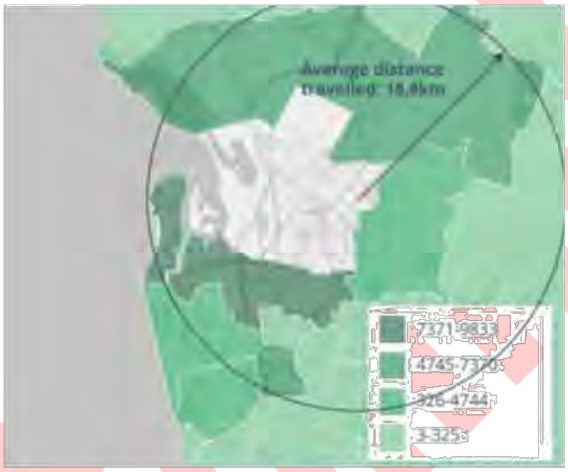
2.2.4 Working closer to home

The Salisbury economy is relatively 'self-sufficient' and 'self-contained' in terms of many of its labour demand and skills needs in comparison to other local government areas across the Adelaide metro area. Approximately 36 per cent of the 45,000 workers employed within Salisbury in 2016 were also local residents, only slightly below the state average of 38 per cent.[30] Likewise, a significant minority of employed local residents, approximately 29 per cent (or 16,500 residents), worked locally within Salisbury.

The Salisbury economy and its resident population is also heavily dependent on the skills and employment opportunities within close proximity to Salisbury across the adjacent local government areas – i.e. the cities of Playford, Tea Tree Gully, and Port Adelaide Enfield. Figure 2.1 highlights that in 2016 approximately 43 per cent of employed Salisbury residents (or 17,600 workers) travelled to work within the northern Adelaide region. Another 8 per cent (or 7,400) commuted to the Adelaide CBD. Likewise, the Salisbury economy drew heavily on skills of workers from the surrounding northern suburbs – particularly from the cities of Playford and Tea Tree Gully – attracting some 16,000 workers and accounting for 36 per cent of employment within Salisbury. To this end, the Salisbury economy is an engine of growth and employment opportunities for both Salisbury residents and those living across the broader northern Adelaide metropolitan region.

Despite the proximity of residents to their place of work, Salisbury is one of the most car dependent local government areas in South Australia. In 2016, for example, there were approximately 86,000 trips to and from Salisbury involving both Salisbury residents and those travelling to Salisbury for work. Of these trips, 81 per cent was by car, motorbike, or truck, equating to some 66,000 vehicles on the roads to and from Salisbury on a daily basis. Only 6 per cent or 5,000 commuters used public transport, of which one-third were Salisbury residents catching the train to the Adelaide CBD. Even fewer (1.2 per cent or 1,000 commuters) used 'active' forms of transport, such as walking and cycling.

Figure 2.1. Places of work for Salisbury residents working elsewhere, 2016



Source: ABS[31], Deloitte Access Economics

Figure 2.2. Places of residence of Salisbury based worked living elsewhere, 2016

Source: ABS[32], Deloitte Access Economics

30. Australian Bureau of Statistics, *2016 Census of Population and Housing: Table Builder Pro, Australia*, cat. no. 2073.0
31. Ibid.
32. Ibid.

2.3 The need for improved education and skills outcomes

Education and skills are at the heart of a highly productive and high value-add economy. In an increasingly competitive global environment, investment by communities and individuals in post-school education – both vocational and university level education – is key to unlocking employment opportunities that offer individuals a pathway to more secure and higher skilled jobs. Likewise, a more educated and skilled population increases the potential productive value of the local economy for firms and entrepreneurs to tap into and establish new businesses.

2.3.1 Preparing for a skilled future

Currently, the rates of post-school education attainment among Salisbury residents are relatively poor in comparison to the state average – particularly at the university level. Chart 2.13 shows that more than half of the local population have not completed a university or vocational level qualification since concluding their secondary education. Further, while the share of Salisbury residents with a vocational level qualification is comparable to the state average, the share of residents with a university level qualification is well-below the South Australian average.

Without significant change, relatively poor education outcomes are also set to continue for the foreseeable future. Chart 2.13 also shows the rates of enrolment in school and post-school education among Salisbury's young (those aged 0-24 years) in 2016. Enrolments at the school and post-school levels remain below the state average.

Chart 2.13 Rates of education attainment (highest level) and enrolment in study – Salisbury, 2016

Source: ABS[33], Deloitte Access Economics

33. Australian Bureau of Statistics, *2016 Census of Population and Housing: Time Series Profile Pro, Australia*, cat. no. 2073.0.

2.3.2 Minimising the 'skills mismatch'

The relatively poor education outcomes among Salisbury residents are in stark contrast to the high proportion of professional, managerial and technician and trades occupations that comprise the local economy described above. This disparity begins to explain why the proportions of skilled occupations in the local economy have slipped over the last decade, and also why a disconnect exists between Salisbury's relative economic strength and the relatively poor socioeconomic and employment outcomes observed amongst its residents.

Chart 2.14 highlights the level of mismatch between the local demand for skills by employers and the type of labour supplied locally. Chart 2.14 shows that the Salisbury economy draws disproportionately on workers living elsewhere for high-skilled workers (based on levels of education attainment), relative to the education distribution of residents who both live and work locally. The practical implication of this is that Salisbury imports more educated workers.

Likewise, Chart 2.15 shows that earnings distribution for imported workers is considerably higher than for residents that live and work locally, as well as those that work elsewhere, reflecting the better employment outcomes for those with higher levels of education and also by working in higher skilled jobs.

Chart 2.14 Education attainment (highest level) of workers by place of work – Salisbury, 2016

Source: ABS[34], Deloitte Access Economics

Chart 2.15 Weekly personal income (gross) of workers by place of work – Salisbury, 2016

Source: ABS[35], Deloitte Access Economics

34. Australian Bureau of Statistics, *2016 Census of Population and Housing: TableBuilder Pro, Australia*, cat. no. 2073.0.
35. Ibid.

3. Positioning for growth

Salisbury is well positioned to take advantage of growth opportunities which South Australia as a whole. As detailed previously, it is a growing city with economic performance which has run ahead of South Australia as a whole for some time.

At the same time, it has real socioeconomic challenges. There is a disconnect between Salisbury's strong economic outcomes in terms of industries and jobs – and the social outcomes of relatively high unemployment and higher than average levels of disadvantage.

There is an opportunity to act to make the most of the economic opportunities created by the future and to use these gains to address some of the challenges faced by the local community.

This will require:

- Building a growing economy that draws upon the strength of Salisbury's existing industrial base to make the most of the future.
- Training a skilled workforce to meet the future skills needs of local industry and that will drive growth as well as give residents the opportunity to connect to jobs wherever they may be.
- Deepening the connections between Salisbury, the rest of Adelaide and the world through greater integration and strengthening of Salisbury's existing precinct eco systems.
- Developing the city and the urban environment to make Salisbury a more attractive and more accessible place to live – and to challenge the perceptions of what can be achieved here.

Each of these ideas forms a building block for Salisbury's future which we explore in more detail in the remainder of this report. These ideas are developed into opportunities for action – by Council, Government and most importantly by business and the community.

Each chapter examines a building block in close detail, exploring the opportunities created and the actions to be taken to realise these opportunities.

The vision for delivering on these objectives would be to build a more prosperous, more outward looking city which has the industries it needs to grow as part of a global economy – but also **a city where the economy delivers more of that prosperity for people who live here.**

3.1.1 How will we know how we are going?

Achieving the objectives identified in this report are likely to deliver outcomes that will manifest physically - new businesses open, an upgraded town centre and new infrastructure. Other outcomes will occur over long periods and be less observable, but nonetheless important - more and better job opportunities, higher incomes and better education outcomes.

To track how progress flows through to the local community, it is important that Salisbury **set benchmarks**. These benchmarks should be used to measure progress relative to comparable population cohorts rather than arbitrary economic growth or production targets. These are measures of progress that capture the improved circumstance of Salisbury's resident population over the short and longer-terms, and will inevitably drive inclusive economic growth in the region.

To complement the objectives set out in this report, Deloitte has identified a set of metrics for Salisbury to benchmark their progress against. Each of these metrics deal with a particular aspect of prosperity for local residents in both the short and longer terms. These metrics are also purposefully benchmarked against regions and population cohorts to which Salisbury should aspire to match – or, better still, outperform!

Rather than match each of the opportunities identified in this report to a specific benchmark, we instead take a whole of economy approach to measuring change and improvement. Realising the opportunities identified in this report should close the 'gaps' on these metrics, and ensure that Salisbury continues to lead the state. Of course, it is not in the power of Council alone to move the dial on these gaps – we need to mobilise the whole community to take action to address progress on each of these fronts. That is why many of the actions which have been identified involve mobilising different decision-makers across the community to act.

In the short-run, the three key metrics are proposed to measure progress amongst factors that will contribute to improved outcomes for Salisbury residents in the short-term. These include:

- **Growing business activity:** measured as increased growth in business revenues across Salisbury's key industry sectors (demonstrating growth in strategically important industries and the creation of new opportunities).
- **Creating a skilled workforce:** measured as an improvement in the rate of enrolments in vocational and higher education amongst Salisbury's young population (demonstrating an increase in the skills base and capacity to participate in higher skilled jobs).[36]
- **Improving labour productivity:** measured as an increase in the value of output produced per unit of labour effort.[37]

In the longer term, three different metrics are proposed to measure progress amongst factors that will improve outcomes over the longer-term – those taking greater investment or more time for results to manifest (likely between generations). These include:

- **Creating job opportunities:** measured as an increase in Salisbury's employment rate.[38]
- **Improving education outcomes:** measured as an increase in the share of post-school education outcomes across Salisbury's resident population.
- **Increasing prosperity:** measured as an increase in the (gross personal) median income of Salisbury's residents.

These short-term indicators will provide a signal of the factors that will create change, while the longer-term indicators will capture the outcome of those changes and, in-turn, the economic fortunes of residents of the City of Salisbury.

The types of actions identified in the subsequent sections of this report will contribute towards this change, building the capacity and capability of local residents and business successfully participate in a dynamic modern economy and improve their welfare in the process.

36. Young people are defined as residents aged 15-19 years.
37. Labour productivity is measured in dollar terms and is defined as the aggregate gross value added (GVA) of local industry divided by the aggregate hours worked locally.
38. Employment rate is defined as the number of employed residents as a share of the eligible working age resident population (15-64 years).

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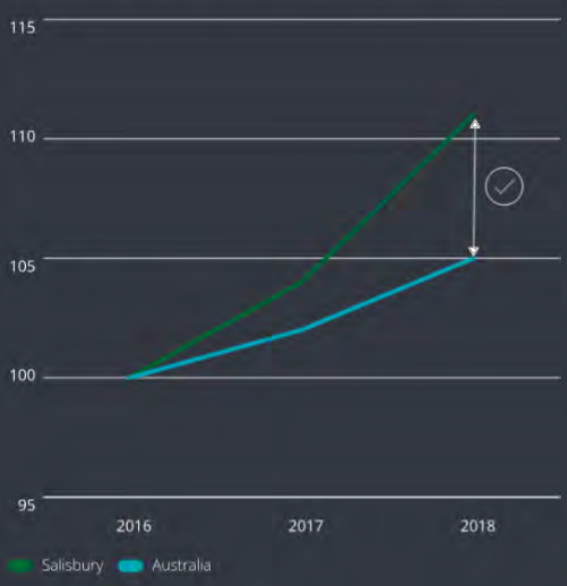
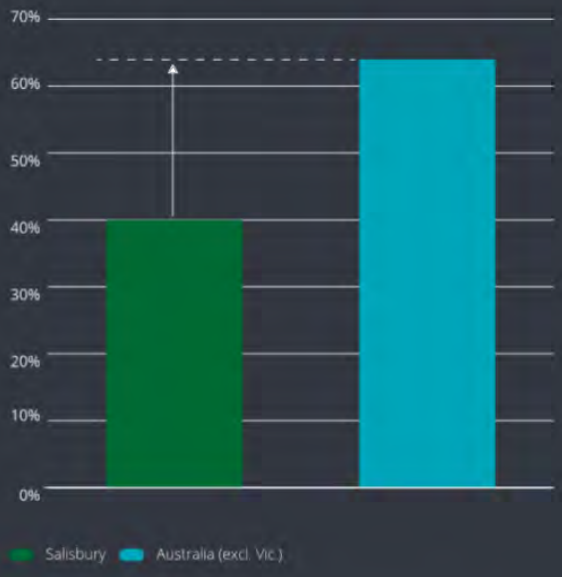
Growing business activity

Chart 3.1: Growth in business revenues across selected industry categories (indexed, 100 = 2016)



Creating a skilled workforce

Chart 3.2: Share of young people enrolled in tertiary education (VET & HE), 2017



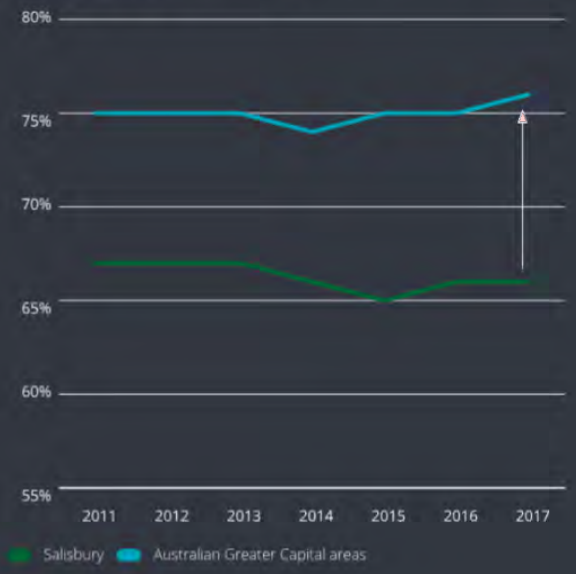
Economic vision for the City of Salisbury | City of Salisbury

Improving labour productivity

Chart 3.3: Growth in local economic output (GVA) per hours worked locally (indexed, 100 = 2010-11)

Creating job opportunities

Chart 3.4: Total employment as a share of residential working-age population (15-64 years)



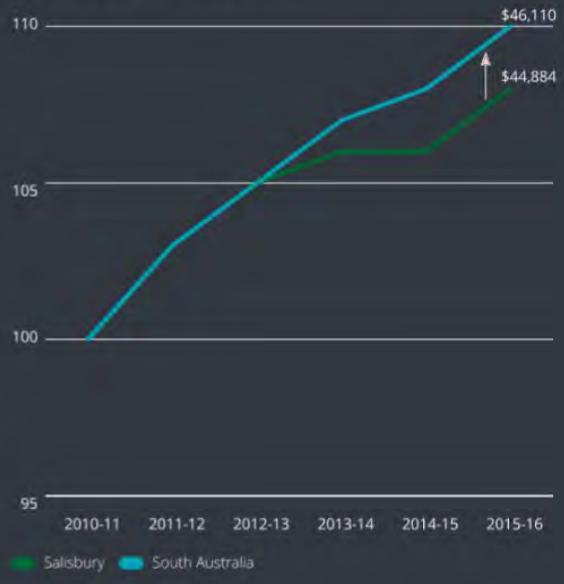
43 Economy.id, Value-added by industry sector
Economy.id, Full-time Equivalent Employment by Industry Sector
<https://home.id.com.au>
44 Australian Bureau of Statistics, *Economy of Industry Multiplier Producing Australia*, cat. no. 5209.0.55.002 – Table 2
45 Department of Employment, Skills, Small and Family Business, *Small Area Labour Markets Publications*, Australian Government
<https://www.employment.gov.au/small-area-labour-markets-publications>
46 Australian Bureau of Statistics, *Labour Force, Australia, Detailed – Electronic Delivery*, Jun 2018, cat. no. 6291.0.55.001 – Data Cube: EM1
Australian Bureau of Statistics, *Australian Demographic Statistics*, Sep 2018, cat. no. 3101.0 – ABS Stat Database

Improving education outcomes

Chart 3.5: Share of local residents (aged 24-64 years) with a post-school education qualification (i.e. VET of University qual.)

Increasing prosperity

Chart 3.6: Growth in the median personal income (all sources, 2015-16 values) of residents (indexed, 2010-11 = 100)



47. Australian Bureau of Statistics, *Census of Population and Housing: Time Series Profile, 2016*, cat. no. 2003.0 – ABS Stat Datasets
Australian Bureau of Statistics, *Census of Population and Housing: Time Series Profile, 2006*, cat. no. 2003.0 – ABS Stat Datasets
Australian Bureau of Statistics, *Australian Demographic Statistics, Sep 2018*, cat. no. 3101.0 – ABS Stat Datasets
48. Australian Bureau of Statistics, *Estimates of Personal Income for Small Areas, 2011-2016*, cat. no. 6524.0.55.002 – Table 1 & Table 5

4. Leveraging existing endowments

4.1 Salisbury's strategic assets

A key competitive advantage for Salisbury are the significant 'strategic assets' that underpin the local economy. Unlike most other local government areas in Australia, Salisbury boasts an array of assets spanning tertiary education institutions, military infrastructure and institutions, transport and digital infrastructure, as well as several industrial and urban precincts, with several of these assets identified in Figure 4.1 below.

In addition to the strategic assets located across the region, Salisbury itself is located at geographically advantageous junction within the South Australian economy – proximate to South Australia's largest seaport at Port Adelaide, the Adelaide CBD, as well as several prime South Australian agricultural regions (i.e. the Barossa and Clare Valleys, the Riverland, and the Adelaide Hills).

These assets and how they are utilised provide a solid foundation for the local economy to continue to grow from.

Figure 4.1 Map of Salisbury's strategic assets

Source: Deloitte Access Economics

4.2 Salisbury's existing industry base

A key advantage of the City of Salisbury is its existing industry base and vibrant private sector economy – home to some 7,200 active businesses. The existing industry base are shaped by many of the businesses that operate in the area – particularly the 180 larger businesses – as well as anchored by the strategic assets located across the region.

These industries provide a strong basis for future economic growth in the local region. The key industries (in terms of the number of businesses and proportion of employment contributed) are:

- **Manufacturing**
- **Public administration and safety (namely defence)**
- **Retail trade**
- **Education and training**
- **Health care and social assistance**
- **Transport, postal and warehousing**

Manufacturing

In 2016, there were approximately 6,790 manufacturing jobs located across Salisbury, accounting for some 15 per cent of employment in the local economy.

Salisbury's manufacturing industry is centred around **Advanced manufacturing**[49] (28 per cent), as well as **Food processing** and **product manufacturing**[50] (32 per cent).

The advanced manufacturing located at Edinburgh Defence Precinct relate primarily to defence activities at RAAF Base Edinburgh and the Defence Science and Technology Group (DSTG), while the activity at Salisbury South relate to the manufacture of medical and pharmaceuticals products, and automotive parts.

Food processing and product manufacturing located at the Direk/ Burton industry clusters includes large national food businesses, such as Ingham's, while the Cavan industry cluster includes SA Produce Markets.

49. Advanced manufacturing is based on the custom Advanced Manufacturing sector classification defined by the Australian Bureau of Statistics in cat. no. 8170.0, *Characteristics of Business in Selected Growth Sectors, Australia, 2013-14*
50. Food processing and product manufacturing is based on the custom Food and Agribusiness sector classification defined by the Australian Bureau of Statistics in cat. no. 8170.0, *Characteristics of Business in Selected Growth Sectors, Australia, 2013-14*

Public administration and safety

In 2016, there were approximately 5,860 public administration and safety type jobs located across Salisbury, representing some 13 per cent of employment locally.

The vast majority of this employment (70 per cent) centres around **military defence activities** located at within the Edinburgh Defence Precinct, which includes:

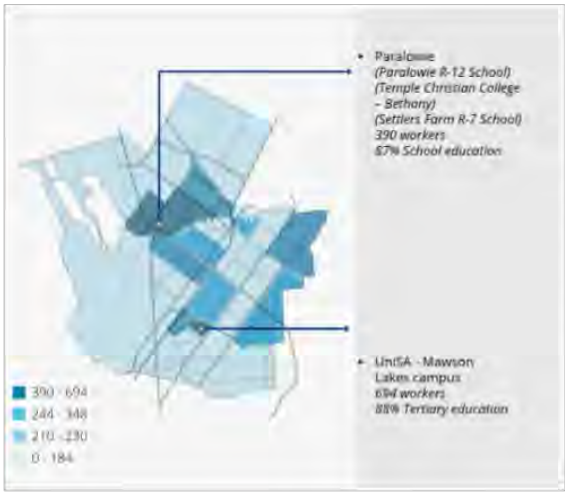
- RAAF Base Edinburgh
- DSTG
- Australian Army 1st Armoured Regiment and 7th Battalion RAR of the 1st Brigade.

There is also a concentration of local and state government employment (10 per cent) within the Salisbury CBD. This area is a public services hub, and is the location of the City of Salisbury's administration centre.

Retail trade

In 2016, there were some 4,730 retail trade jobs located across Salisbury, accounting for some 11 per cent of employment locally.

Although widely distributed across Salisbury, there are concentrations of employment at retail and consumer services hubs located at Salisbury's CBD (11 per cent of retail employment), Ingle Farm (11 per cent), and Salisbury Downs (9 per cent) and Mawson Lakes (6 per cent – not shown). This employment is primarily comprised of supermarket and grocery type retailing (35 per cent).



Education and training

In 2016, there were approximately 4,140 jobs related to education and training located across Salisbury, representing some 9 per cent of employment locally.

Education and training employment includes early, primary, secondary and tertiary levels of education. These jobs are widely distributed across Salisbury reflecting the residential population distribution and the location of schools.

There is a large concentration of almost 700 jobs (or 17 per cent of education and training jobs) relating to tertiary education activities at UniSA's Mawson Lakes campus.

Health care and social assistance

In 2016, health and social assistance jobs represented some 9 per cent (4,050 jobs) of employment within the local economy.

This employment includes activities such as hospital, medical, and allied health services, disability and aged care services, as well as child care and social assistance services. These services are also broadly distributed across Salisbury reflecting the population distribution.

Concentrations of employment located at Ingle Farm (14 per cent) and Salisbury Downs (7 per cent) relate to **residential (aged) care services** and facilities., whereas those concentrated around the Salisbury CBD (7 per cent) relate to **allied health and social services**, further reflecting the nature of Salisbury's CBD as public services, and retail and consumer hub.

Transport, postal and warehousing

In 2016 the transport, postal and warehousing industry employed some 3,160 people within Salisbury, representing 7 per cent of employment in the local economy.

This employment is concentrated around industry clusters at Cavan/Dry Creek (37 per cent), and to a lesser extent at Direk/ Burton (14 per cent).

Employment in this sector primarily relate to **road transport activities** (49%), but also includes **warehousing** (13%) and **logistics and distribution** (9%) activities.

The location of these clusters reflect their proximity and access to major arterial road transport corridors, as well as recent greenfield industrial precinct developments (such as the Vicinity Industrial Base at Direk).

4.1 Land and space to grow

Salisbury has historically benefited from an abundance of affordable and readily developed land, both for residential and industrial/commercial purposes. This has afforded Salisbury a competitive advantage in attracting business investment and increasing its residential population.

Currently, the stock of prepared 'greenfield' land available for development across the City of Salisbury remains significant, with land available for commercial and industrial allotments at:

- **Technology Park** (at Mawson Lakes)
- **Edinburgh Parks** (including the Northern Adelaide Food Park) (adjacent to the Edinburgh Defence Precinct)
- **Vicinity Industrial Base** (at Direk, adjacent to Edinburgh Defence Precinct)
- **Parafield Airport** commercial and industrial land development.

There is also a significant stock of latent 'brownfield' sites located throughout the region – such as large allotments around the former Holden General Motors site, as well as along the existing rail corridors and around the Edinburgh Defence Precinct.

Although typically more expensive to remediate and prepare, brownfield sites are already connected to infrastructure networks such as electricity, gas and water, and are located in areas that are set to become increasingly built-up. Brownfield sites will become increasingly cost-competitive in the longer term, as the availability of existing and affordable greenfield sites are developed and suitable assets, which can be reused with minimal conversion costs, come on to the market.

Looking to the future, there are also large tracts of undeveloped low-lying land along Salisbury's west. These include: Dry Creek, Bolivar, Waterloo Corner and St. Kilda. These areas sit along the key arterial road corridors connecting the prime agricultural regions to Adelaide and Port Adelaide. While unlikely to be developed within the next few years, this huge area has the potential for residential development as well as be attractive for large-scale commercial/ industrial development – particularly for transport, logistics and distribution activities along the Northern Connector corridor, as well as food processing and manufacturing industries.

4.2 Business friendly

The City of Salisbury itself is also perceived as having an excellent reputation among the business and public-sector communities for its proactive approach to supporting investment activity through the development and planning approvals process, and for its service and support to ensure this process is as timely as possible. These perceptions were evident in the consultations with stakeholders undertaken in preparing this report.

The commitment of the City of Salisbury to business development is also evident through the business support services offered at the Council's Polaris Business and Innovation Centre, located at Technology Park, as well as through programs to promote entrepreneurial activity, stimulate innovation, and encourage networking between businesses - particularly targeting small businesses and start-ups.

These attributes are highly valued by those looking for certainty when allocating capital and making large investment decisions. This competitive advantage is an important point-of-difference from other local government jurisdictions in South Australia.

Grow Salisbury's existing industry base

The City of Salisbury has a strong and diverse industry base. There is an opportunity for Salisbury to build on this existing base to promote the creation of skilled jobs in both white and blue collar occupations, and to help ensure that future economic growth is both inclusive and welfare enhancing.

Rather than focus on developing a new industry sector from scratch, a more efficient and effective allocation of resources would involve a focus on growing the key industry clusters already located within Salisbury. This involves targeting and attracting new firms from both interstate and overseas within the industry sectors identified and that would benefit from Salisbury's other strategic assets, as well as supporting growth of existing businesses.

The concept of current economic strengths and attributes laying the foundation for future industry development is well established in economic development literature. In the case of Salisbury, the defence sector and research at UniSA underpin future potential growth in the space and cybersecurity sector. The high level of trade qualifications and the UniSA's Future Industries Institute support future growth in advanced manufacturing including health manufacturing & distribution, building on existing firms operating locally. The existing road network and upcoming opening of the Northern Connector will underpin future investment in transport and logistics.

Action: Evolve and maintain Salisbury's investment attraction plan to target complementary investment

Salisbury's investment attraction plan needs to evolve and become a guide for businesses looking to invest in Salisbury, and a tool for the Council to monitor its engagement with these businesses. Effective implementation of this plan will focus efforts, coordinate activities and enable evaluation of progress.

The purpose of an attraction plan should be twofold. First, it should target prospective firms that align with Salisbury's existing industry base or would benefit from the numerous strategic assets. Second, it should target Salisbury's existing business community, and highlight investment opportunities for these businesses to expand their operations in Salisbury. Recent examples of the latter include:

- the expansion of RM Williams' operations through the relocation of its design and corporate functions to Salisbury from interstate
- the expansion of Bickfords beverage manufacturing production facilities.

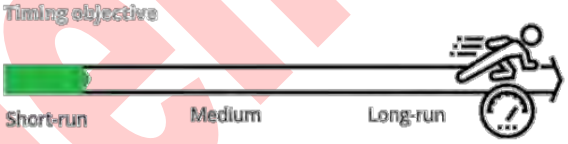
Investment attraction targets should be selected based on their alignment with the areas of competitive advantage identified for the City of Salisbury, and the extent to which their activities complement those of existing businesses in the area, such as addressing gaps in supply chains, servicing existing businesses, or bringing new capabilities to the local area.

The investment attraction plan should also center around the strategic assets and key infrastructure located across the region. An example is the Northern Connector, and the potential value of this key piece of road infrastructure to prospective freight transport and logistic businesses.

Case management functions should be incorporated into these plans to smooth the path for investment by the private sector by aiding facilitation and addressing barriers. Additional actions such as land use planning and zoning, which are explored next in greater details, should also be considered as a part of the investment attraction planning as a way to support varying industry uses and more intensive activities.

These plans would represent an extension of the activities currently performed by the Council.

Timing objective



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Economic vision for the City of Salisbury | City of Salisbury

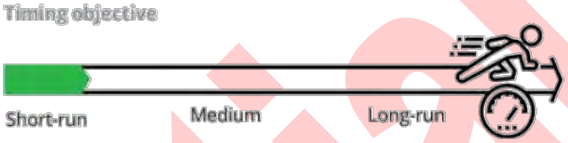
Action: Prepare a scoping study to identify infrastructure and services gaps for the local food processing industry

A common view to be expressed by industry stakeholders is more should be done to support the growth of the food manufacturing industry across the northern Adelaide region. Salisbury and the neighbouring local government areas are home to several large food processing and manufacturing businesses. The firms leverage the region's proximity to transport corridors and export terminals, population centres, and South Australia's prime agricultural regions. A current perception among stakeholders, however, is that beyond these strategic assets, there is very little else anchoring these firms at Salisbury. That is to say, these manufacturers and producers do not perceive there to be any additional benefits or cost savings from being co-located.

More needs to be done to understand what could be done to create a point-of-difference to improve the attractiveness of Salisbury as a destination for food manufacturers. A first step is to prepare a scoping study to identify the existing infrastructure and services gaps, through broad consultation with stakeholders from across the local and national food processing industry. Ideally, this investigation would also seek to identify the emerging needs of this industry, as well as understand what types of shared facilities and infrastructure could stimulate private-sector investment.

The development of a waste-to-energy plant has already received approval, and is expected to reduce both the waste and energy costs of producers located at Salisbury. However, other examples of the types of shared facilities and infrastructure could include a phytosanitary facility for the treatment of fresh fruits and vegetables for export. A scoping study should consider the appetite of producers to share in the investment of the development of such projects.

Timing objective



Create commercial spin-offs from the defence industry

As highlighted earlier, the Edinburgh Defence Precinct located in Salisbury is home to 4,000 defence and military jobs. As a result, Salisbury is also home to a number of private-sector 'defence primes' that provide professional and technical support services in the advanced manufacturing sector, as well as supply goods and equipment to the military. These defence primes include large global names, such as Lockheed Martin, BAE Systems, SAAB Australia, Northrop Grumman and Boeing. These firms employ high-skill workers – particularly STEM workers – to design, build, operate and support the latest in advanced technologies that are developed for the military.

However, there are few firms leveraging these relationships and advanced technical knowledge to apply these technologies to civilian purposes for commercial gain. Many of the innovations and technologies that we take for granted and use in everyday life were initially funded and developed for military purposes. There is an opportunity to encourage the key local defence stakeholders to collaborate with private-sector firms and entrepreneurs to develop and commercialise defence technologies and innovations for civilian use. This could involve the establishment of a new 'secure' innovation precinct at either the existing Edinburgh Defence Precinct or Technology Park at Mawson Lakes, as well as leveraging the local digital infrastructure (such as SABRENet and other secure fibre networks) and university research facilities and capabilities at the UniSA Mawson Lakes campus.

Similar opportunities exist to support the commercialisation of research being undertaken by various Cooperative Research Centres (CRCs) and research institutions at Mawson Lakes such as the Future Industries Institute, the Institute for Telecommunications Research, and research functions of the SmartSat CRC.

Action: Facilitate cross pollination of ideas and expertise between defence companies, UniSA, DSTG and local businesses

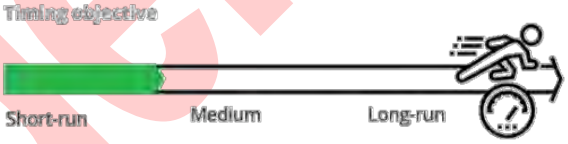
Better use can be made of the technical and industry expertise which exists within the extensive range of organisations engaged in the defence and aerospace industry in the area City of Salisbury through better sharing of information and experience.

While there are a range of considerations that need to be had with respect to security and commercial confidentiality, arrangements can be made to address these matters appropriately.

Specific actions that could be taken to facilitate this cross pollination include:

- Making short-term collaboration spaces available (within secure settings) for project work across organisations, potentially at Endeavour House, Innovation House or the (proposed) Industry Focus Research Hub at UniSA Mawson Lakes campus.
- Working with organisations such as the Defence Teaming Centre to explore opportunities for developing secondment programs across organisations.
- Supporting small-scale and early-stage defence industry businesses in developing their products and cap ability to participate in larger defence project supply chains.

Timing objective



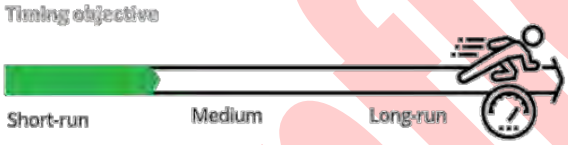
Action: Strike a Memorandum of Understanding to progress local defence industry development

A Memorandum of Understanding (MoU) should be struck between the key defence stakeholders, government, the local vocational and higher education institutions, and local industry to articulate a common commitment and vision, as well as shared responsibilities, for developing the defence and aerospace industry in the local area aligning with the emerging 'defence triangle' concept – i.e. the concept referred to by the State and Australian Government's under the recent City Deal which encompasses both the Edinburgh Defence Precinct and Technology Park, Lot Fourteen and TechPort at Osborne.

Ideally, an MoU would identify and formalise the common priorities between each of the parties, their areas of concern, and set out a pathway for greater collaboration. In doing so, the MoU should reflect and describe signatories' intent and approach across the areas of common interest, where these could potentially include:

- Emerging skills gaps, and how these might be addressed through the creation of local training opportunities.
- Areas of interest in collaborative research, and how these might be prioritised and facilitated.
- The establishment of a network mechanism to facilitate the cross pollination of ideas and expertise across each of the parties, and to encourage an ongoing dialogue and engagement between the parties.
- Planning for future land use requirements across agencies to support growth and development of defence related activities within the defence triangle.

Timing objective



Activate brownfield sites

Historically, a key advantage for Salisbury has been its abundant supply of relatively cheap and easily developed land. This advantage will inevitability decline over time, as areas for new greenfield development become increasingly scarce and more costly to develop, relative to development opportunities in other areas (particularly further to the north) .

Although not a cost-competitive option in the immediate future, many former industrial sites or 'brownfield' sites, are likely to become increasingly attractive in the longer term, as well as for specific developments in the near term. These sites present good opportunities, particularly to businesses in certain industry sectors, because of their existing connections to industry-grade utilities infrastructure, as well as their proximity to densely populated areas and existing transport networks.

These sites offer development opportunities as commercial and retail service precincts, to manufacturing industries with large energy requirements, or digital and IT businesses that require a combination of space, energy and proximity to infrastructure such as SABRENet. Brownfield sites may also be particularly attractive to entrepreneurs or small-to-medium enterprises looking for commercial or industrial spaces to quickly upscale production without needing a large capital outlay. They also offer opportunities for transport and logistics companies to temporarily scale-up their storage capacity in build-up areas with close proximity to road transport corridors, such as the nexus around the Northern Connector, the Port River Expressway and South Road, and Port Wakefield Road and Main North Road.

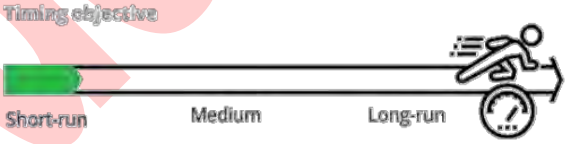
Action: Develop investment attraction plan to activate brownfield sites

While the commercial attractiveness of development uses for brownfield sites should be considered relative to the cost of undertaking greenfield developments (including various connection and fit-out costs), the attractiveness will inevitably begin to shift over time as the supply of available (an suitable) land becomes tighter relative to demand. It is important that the City of Salisbury be prepared to take advantage of these opportunities as they arise, and be just as proactive in attracting investment in brownfield developments as greenfield ones.

A detailed understanding of the brownfield development opportunities in Salisbury is required. This includes identifying sites suitable for re-development, as well as the potential advantages of these sites – including the proximity to strategic assets, and the potential savings on infrastructure capital costs. This should also consider the re-zoning of brownfield site areas for different industrial uses (e.g. to support growth opportunities in the road transport and logistics sector), or for commercial and retail uses. It also necessitates enhancing the current approach of working with property owners and commercial property agents to facilitate investment and job outcomes.

The advantages of brownfields sites and their availability should then be promoted as part of an investment attraction plan or included as a part a broader investment prospectus – such as, *'Salisbury. The Destination to do business'* – and target leasing agents and property developers.

Timing objective



Roll back 'buffer zones'

Currently, there are significant land reserves along road and rail transport corridors - such as the national freight line and the forthcoming Northern Connector at Dry Creek - as well as large protection zones around strategic assets - such as around the Bolivar Wastewater Treatment Plant, Edinburgh Defence Precinct and Parafield Airport. While there may be valid safety, security, or environmental reasons for such 'buffer zones' to exist, particularly around RAAF Base Edinburgh, there is an opportunity to revisit the continuing need for buffer zones, the extent of these zones, and to investigate the possible rezoning of these lands for more productive uses.

Action: Investigate land use opportunities within buffer zones

An investigation of options for alternate land use within existing buffer zones should be undertaken to identify the potential for more productive industrial and commercial uses, as well as to gauge the appetite among existing stakeholders and market participants.

This investigative process would need to involve key landholders including the Commonwealth and State Government stakeholders, as well as non-government and private sector infrastructure and utilities stakeholders. This process should seek to determine the willingness or appetite of these landholders for rezoning and development, as well as consider current safety, security, or environmental regulatory settings. Importantly, the implications for the local residential and business community - for whom 'buffer zones' exist to protect – would also need to be considered.

This process should also test the market to determine the level of demand for these lands from prospective private-sector investors or developers.

Timing objective

Action: Investigate land swaps and strategic sales to make land available to new and growing defence companies

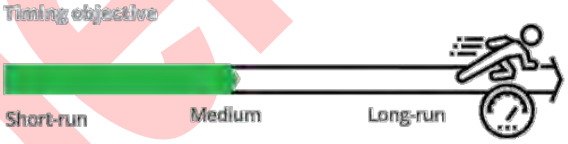
Land swaps and strategic sales of land should be considered to attract new and innovative businesses. Targeting specific parcels of land would complement the implementation of a broader industry investment strategy and tie in with the investigative process for alternative land use within 'buffer zones'. Notwithstanding the safety, security and environmental considerations, land currently embargoed around the Edinburgh Defence Precinct, for example, could be further leveraged to attract high skilled advanced manufacturing firms looking to locate a R&D or production facility immediately adjacent to these defence assets.

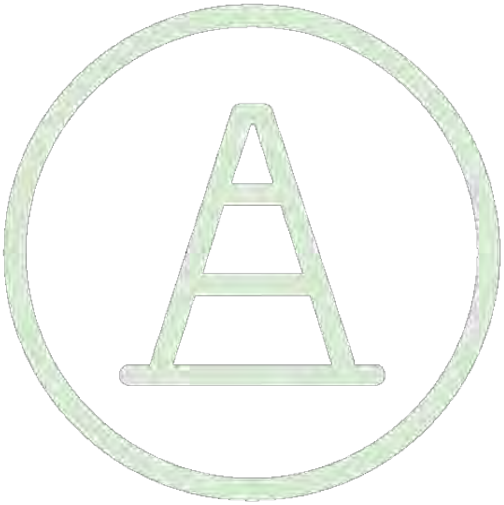
Further sites where land swaps and strategic sales could be possible include:

- Vacant land and ageing building assets proximate to Technology Park and the Mawson Lakes UniSA campus could be repurposed for commercialisation and advanced manufacturing activities.
- Several sites owned by the City of Salisbury located adjacent to Edinburgh Defence Precinct.

The City of Salisbury's role should be to catalyse land swaps and strategic sales as part of a broader industry investment attraction strategy and as a facilitator, but have limited direct involvement.

Timing objective





30 year development plan

One of Salisbury's greatest advantages is the strategic assets located in the region, particularly the road network, as well as its proximity to other major centres of commerce – e.g. Port Adelaide, the Adelaide CBD, and the agricultural production regions to Salisbury's north. The development of low-lying lands at Dry Creek has the potential to be 1.5 times the size of Mawson lakes[51], and the Northern Connector corridor is well placed from a transport infrastructure perspective to house transport and logistics activity in the medium to longer term. This has the potential to vastly increase both the residential population and commercial activity within the City of Salisbury.

While there is an opportunity for this to drive value creation and employment growth for Salisbury's residents, there is significant downside risk that large-scale development, if poorly planned and delivered, will detract from the elements that currently make the area so attractive to business, adversely affecting the operations of the businesses already located in Salisbury.

Action: Undertake structure planning for the area west of Port Wakefield Road

It is vital that future large-scale development west of Port Wakefield Road is planned for and managed effectively. It is important that appropriate investment in road infrastructure is developed in parallel with land releases to ensure that accessibility to key transport corridors for local industry is maintained. Likewise, it is equally important that transport linkages between new residential developments, employment and economic clusters, and retail and consumer hubs are considered. It is not just about the additional number of people likely to move around, but where they will want to travel for work, to shop, to go to school, and how they choose to get there – car, public transport, bike or walk.

The development, planning and infrastructure investment decisions made about these development areas over the next 10 years will determine the locations of economic activity of the local economy for the next 30 years. Taking an active and forward looking approach to long-term planning will ensure that Salisbury maximises its future economic prosperity and deliver higher amenity values to its residents. There is a need to fill in the detail with subsequent planning - such as, precinct development plans and transport corridor planning - and to align these with existing planning processes already underway for other areas across Salisbury.

Timing objective

51. This estimate is based on advice provided to Deloitte Access Economics from the City of Salisbury

Ensure infrastructure continues to serve industry and community needs

Other strategic assets featuring in the Salisbury region are the key road and rail transport infrastructure assets that connect Salisbury to some of South Australia's prime agricultural and food producing regions, the state's key export terminal at Port Adelaide and the Adelaide CBD. Road infrastructure connecting Salisbury is considered by local industry and stakeholders as one of Salisbury's most valuable strategic assets.

Maintaining the quality and effectiveness of these assets as Salisbury's population and economy grow – in terms of suitability, capacity and access for heavy trucks and vehicles – is particularly important to the future growth of local industry. It is also important to existing industry – particularly firms involved in the transport, logistics and distribution industry sectors – that planning for the future growth of the City of Salisbury, and northern Adelaide more broadly, takes into consideration the impact of growth on road and rail assets.

Action: Prepare corridor and precinct plans for strategically important areas and land parcels

Areas within the City of Salisbury have the potential to become medium density, high amenity centres of activity. To support added density and capacity in the region, adequate planning needs to occur.

Potential projects that could create efficiencies or open up new development opportunities, either directly or by facilitating connections to certain parcels of land, include:

- Park Terrace rail-crossing grade separation
- Elder Smith Road duplication (Port Wakefield Road to Salisbury Highway)
- Rail corridor adjacent to Salisbury and Mawson interchanges
- Kings Road rail-crossing grade separation proximate to Parafield Airport and Salisbury South
- Dry Creek railyards and potential interstate rail realignment along the Northern Connector corridor
- Improving connections to the potential O-Bahn extension via The Grove Way and Saints Road
- Increasing density at sites adjacent to existing railway stations
- Improving connections to the Northern Connector at Waterloo Corner.

Timing objective

Maintain Salisbury's relative competitiveness and value proposition

Salisbury has a strong reputation among the business and investor community for being 'business friendly', as evident through consultations undertaken in preparing this report. There are opportunities for the City of Salisbury to improve and leverage its reputation to support economic growth into the future.

These opportunities include:

- Continuing to remain competitive on council rates and costs and maintain (and improving) cost competitiveness for other other ongoing costs incurred by landowners and occupiers.
- Continuing to promote and highlight the inherent strengths and unique value proposition of the area – e.g. Salisbury's 'strategic assets', access to key road and rail transport corridors, and its proximity to local agricultural and food producing regions, Adelaide city centre, as well as Port Adelaide.

Most importantly, the City of Salisbury needs to demonstrate its 'business friendly' credentials to existing and prospective investors.

Action: Benchmark local government rates, fees and charges to track competitiveness

One potential action is for Council to expand and publish a dashboard of benchmarking tools that demonstrate the cost-competitiveness and the value proposition of the City of Salisbury relative to neighbouring local government areas in Adelaide northern suburbs. Benchmarks could comprise existing information and compare:

- council rates, land tax burden, as well as utility costs
- development application approval times
- the value of other services provided by Council to industry, such as infrastructure services, waste management, advocacy and marketing of the region.

Timing objective

Action: Continue, maintain and promote council-led development approvals

Another potential action is for Council to build on the existing efficiency, timeliness and transparency of the planning and development approvals process. Not only is a more efficient and transparent planning and development approvals process likely to create confidence and certainty for prospective businesses and investors, it is also likely to further enhance Salisbury's reputation as an attractive place to invest.

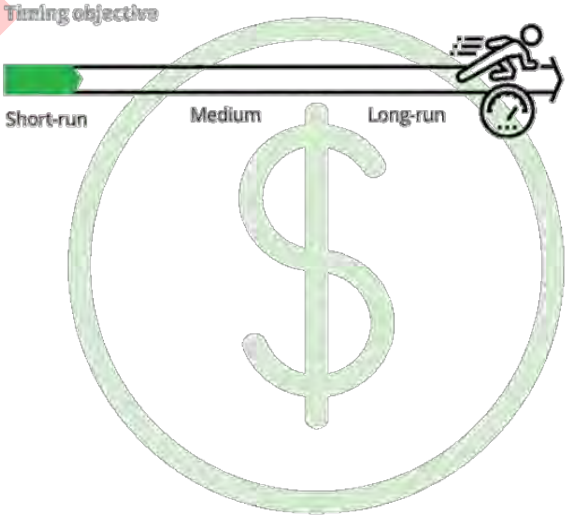
Given the current implementation of the *Planning, Development and Infrastructure Act (2016)* across the state and the imminent release of the Planning and Design Code, actions could include improving the information about:

- the steps involved in the approvals process in a clear and accessible manner
- the rules by which the approvals will be assessed
- the types of information that will need to be provided by applicants
- the costs involved and the timeframes that should be expected based on the complexity of the application.

In addition, real-time status updates about their submissions as it moves through the approvals process, and benchmarked against comparable timeframes, would also help provide greater transparency and certainty.

Further changes to processes for lodging (and approving) applications occur under reforms relating to the Planning and Design Code should contribute towards further improvements in the timing and clarity of submission processes. The City of Salisbury should continue to assist applicants through these processes in order to attract and secure development opportunities in the local area.

Timing objective



5. Growing Salisbury's people

Salisbury's residents are one of its greatest economic resources. Currently, however, there is a disparity between the economic fortunes of the region and the socioeconomic disadvantage of the local population. There is potential for residents to benefit from a greater share in the region's future economic growth. Likewise, the demographics of the local population in terms of its human and social capital stock present a number of opportunities to drive welfare enhancements through economic growth. Much can be done to bridge the disconnect between Salisbury's growing economic prosperity and the socioeconomic outcomes of its people.

5.1 The economic importance of people

The size and skill base of the local workforce is an important factor in encouraging economic growth and the development of industry. Research has found that a skilled workforce is the primary driver of economic growth in regional areas.[52] Firms tend to expand in regions where they can find a skilled and large workforce related to their industry.[53]

Salisbury has a youthful and growing population. The large share of young people in the region provides a solid base for future industry growth, as this cohort has the greatest potential to deliver capacity and productivity gains in the labour force, based on the average number of years left in the workforce. Educating and skilling this young population is essential to the future prosperity of Salisbury and Adelaide's northern suburbs.

Over the next 20-30 years, Salisbury's population is also forecast to age at a relatively fast pace. Ageing populations create a number of economic challenges as well as opportunities. Notwithstanding an eventual decline in the working-age population, the reliance on health care and social assistance services also increase as people age.[54,55] The latter, however, can also be a benefit through the creation of jobs and demand for skills in the medical and health care sectors. Further, older workers have a depth of labour market experience that young people have yet to develop, and can be a rich source of labour supply for employers. Increasingly older people are starting businesses, building on their knowledge, technical skills and networks.

Salisbury is also home to a disproportionate share of South Australia's migrant population – particularly recent arrivals from non-English speaking backgrounds. This provides the region with a competitive advantage. A recent Productivity Commission report found that recent migrants to Australia tend to be more highly educated than native born individuals, and eventually find work in highly skilled occupations.[56] Despite this, migrants often struggle to have their skills and qualifications recognised by Australian employers in the first instance, resulting in the underutilisation of skills and increasing the pool of skilled workers searching for low-skill and entry-level jobs.[57] Beyond being a rich source of skilled labour, recent migration trends to Australia have been more diverse than the traditional Anglo-Celtic countries, bringing with it new cultural and social benefits that provide new entrepreneurial and commercial opportunities.

Across Australia, while humanitarian migrants initially tend to participate in the labour force at lower rates than the broader Australian population (35% compared to 78%), over time, participation rates move towards the Australian average within 20 years – with the children of humanitarian migrants having better than average employment outcomes.[58] While initial participation for humanitarian migrants are low, in part because of barriers to employment including language barriers, poor skills recognition, discrimination and cultural barriers; the participation in education and training among humanitarian migrants is strong. In 2016, 36 per cent of humanitarian migrants were actively engaged in education and training compared to 17 per cent for the broader Australian population.[59] Hence, while labour force participation may be low in the first few years after arrival, participation in education and training is high. Over time, humanitarian migrants begin to transition out of from education and training and into the paid labour force.

52. Randall Eberts, George Erickcek and Jack Kleinhenz, 'Dashboard Indicators for the Northeast Ohio Economy: Prepared for the fund for our economic future' (2006) Working paper 06-05, *Federal Reserve Bank of Cleveland*
53. Nancy Pindus, Brett Theodos and G Thomas Kingsley, 'Place Matters: Employers, low-income workers and regional economic development' (2007) *The Urban Institute*
54. David E Bloom, David Canning and Gunther Fink, 'Implications of Population Aging for Economic Growth' (2011) Working paper 64, *Program on the global demography of aging*. <http://www.bollettinoadapt.it/old/files/document/10774bloom_01_2011.PDF>.
55. Ibid.
56. Productivity Commission, *Economic Impacts of Migration and Population Growth* (2006) <https://www.pc.gov.au/inquiries/completed/migration-population/pdf/migration-population-position.pdf>.
57. Deloitte Access Economics, *Seizing the opportunity: Making the most of the skills and experience of migrants and refugees* (2018) <https://www2.deloitte.com/au/en/pages/economics/articles/making-most-skills-experience-migrants-refugees.html>.
58. Deloitte Access Economics, *Economic and social impact of increasing Australia's humanitarian intake* (report commissioned by Oxfam Australia, August 2019)
59. Ibid.

5.2 The value of education and skills

The relationship between post-school education attainment, both VET and university qualifications, and economic development is well understood. The education sector in itself is also now a key driver of economic growth, with the international education sector contributing some $1.29 billion to South Australia's economy in 2016-17.[60]

Not only are tertiary–education institutions themselves employers of high-skill workers, they are also essential for generating a skilled and knowledgeable workforce. Tertiary education institutions are instrumental in developing a skilled workforce that is *innovative, adaptive* and more *productive* – the types of workers that are increasingly sought by businesses and that drive modern and developed economies.

Salisbury is home to both VET and university education institutions:

UniSA Mawson Lakes – is one of three University of South Australia (UniSA) campuses located across metropolitan Adelaide. It is also UniSA's fastest growing campus, with enrolments of approximately 6,000 students and employing about 500 full-time academic staff. Located adjacent to Technology Park and Mawson Lakes consumer and retail precincts, the campus and its facilities have a science, maths and engineering focus, with industry linkages to the defence and renewable energy sectors.

The Mawson Lakes campus is home to UniSA's largest research institute, the Future Industries Institute, as well as several other research centres including:

- Australian Research Centre for Interactive and Virtual Environments
- Barbara Hardy Institute
- Advanced Computing Research Centre
- Centre for Industrial and Applied Mathematics
- Defence and Systems Institute
- Natural and Built Environments Research Centre
- Institute for Telecommunications Research
- Phenomics and Bioinformatics Research Centre.

The Mawson Lakes campus also houses the Industry 4.0 Testlab, the Industrial AI and Scare Resources and Circular Economy groups, and world-leading laboratory facilities and specialist IT facilities.

TAFE SA Salisbury – is the smallest of three TAFE campuses located across Adelaide's northern suburbs. Located in the Salisbury CBD, the Salisbury campus has capacity for 1,000 students, and is currently at approximately 90 per cent capacity. The Salisbury campus is proximate to two significantly larger TAFE SA campuses located at Elizabeth (7km north of the Salisbury CBD) and Gilles Plains (12km south of the Salisbury CBD).

The principal focus of the Salisbury campus is educating new migrants English language skills, as well as courses focussed around aged and disability care services. A larger offering of technical and vocational courses are available at the neighbouring Elizabeth and Gilles Plains campuses.

Increasingly, the distinction between VET and university education in terms the education pathways from one to the other, and the differences in the employment and occupational outcomes between both, is becoming blurred. TAFE SA and UniSA, for example, currently have 530 credit transfer agreements to provide Diploma and Advanced Diploma graduates with a pathway into a Bachelor degree program.[61] Only two of these agreements currently apply to courses taught at Mawson Lakes. However, as we explore later, this is an initiative that should be expanded.

The number of university qualified South Australians undertaking further study in VET is also increasing, as workers re-skill or employers demand workers broaden their skills. According to the 2016 Census, the number of university graduates in South Australia undertaking further study at the VET level had increased from 2,457 in 2006 to 4,198 – a 71 per cent increase.[62]

5.3 Connecting local university assets and local industry

The contribution of the tertiary education sector to economic growth becomes further amplified as local institutions and industry engage with one another. While traditionally limited to VET institutions tailoring their vocational training programs to meet the skills needs of local industry and employers, engagement between universities and the private sector is increasingly considered an engine of economic growth that goes beyond the provision of training.

Universities are repositories of knowledge and resources, including specialist equipment and infrastructure facilities. Developed economies, such as the U.S., the U.K., Japan and Germany, have had success leveraging their university sectors to generate new ideas and innovations and solve problems for the private sector. While Australia performs relatively poorly by international standards, a recent emphasis on encouraging collaboration between the university and private sectors has had some early success.

UniSA, for example, has had a number of successful commercial 'spinoffs' come out of innovations developed at its Mawson Lakes campus. Most notable of these are Myriota, a satellite communications venture that aims to provide a low-cost global internet of Things (IoT) connectivity platform.[63] UniSA also offers fee-for-service access to its laboratory facilities at its Mawson Lakes campus to private firms. As we explore later, however, there are differing views about the current level of benefits for industry being derived from these initiatives.

5.4 Opportunities for action

Address barriers to post-school education and workforce participation

Promote the strengths of Salisbury's migrant populations

Attract businesses that require growing workforces

Strengthen connectivity between local industry and university and vocational education institutions

Foster a culture of entrepreneurship and upscaling

Improve the quality of vocational education infrastructure in northern Adelaide

60. Deloitte Access Economics, *International education in South Australia* (report commissioned by Department for Trade, Tourism and Investment (SA), July 2018) <https://www2.deloitte.com/au/en/pages/economics/articles/international-education-in-south-australia.html>
61. TAFE SA, unpublished data (provided through consultation)
62. Australian Bureau of Statistics, *2016 Census of Population and Housing: TableBuilder Pro, Australia*, cat. no. 2073.0
63. UniSA, Media Release, *UniSA spin-out, Myriota, named best new business at Telstra 2017 SA Business Awards*, July 12 2017 <http://www.unisa.edu.au/Media-Centre/Releases/2017-Media-Releases/UniSA-spin-out-Myriota-named-best-new--business-at-Telstra-2017-SA-Business-Awards/#.XJ1U86RBWUk>

Address barriers to post-school education and workforce participation

The rates of school completion and subsequent post-school education in the Salisbury area are well below the State average. For a large minority of Salisbury's young, completing Year 10 remains a challenge, let alone to complete Year 12 or to go on to aspire to further education.

Education and skills are essential elements to participation in a modern economy. The high incidence of school non-completion is also likely a symptom of deeper socioeconomic problems, such as intergenerational unemployment and a lack of strong familial support networks. Continuing to resolve deeper social issues through broader government intervention remains important.

But there is a further opportunity to provide more targeted interventions at the school-level to ensure that teachers, parents, and students are adequately informed, resourced and supported through their post-school education pathways and the types of employment opportunities that education leads to.

Action: Strengthen non-school and post-school pathways to vocational and higher education

The poor education outcomes observed among Salisbury's residents are not through a lack of education infrastructure. More needs to be done to strengthen the non-school and post-school pathways to vocational and university level education locally.

For the younger generation, greater support is required to ensure that children complete Year 12 so that they are adequately prepared, in terms of literacy and numeracy, for either vocational or university level education. This could include:

- Ensuring that schools are adequately resourced in terms of equipment and facilities, and that these are readily accessible to students from disadvantaged backgrounds.
- Provide additional free or low-cost tutoring services, particularly to children from disadvantaged households.
- Broaden course offerings in high-schools, including STEM subjects, but also creative arts, music and languages.
- Increase engagement between local industry, tertiary education providers and schools to increase awareness of amongst school students, teachers and parents about the variety of employment opportunities available locally, the skill requirements of jobs and occupations, and the educational pathways necessary to attain certain jobs and occupations.

For older generations, more should be done to increase the availability and accessibility of bridging courses to prepare residents for study at university or TAFE. This should involve local vocational and higher education institutions, as well as local job network agencies and industry to ensure that people learn skills with employment opportunities attached.

While there is limited scope for the City of Salisbury to take direct action, there is scope for the Council to act as catalyst in bringing together the local education institutions and training providers, to continue to monitor and benchmark outcomes, and as an advocate for improved funding and support from both the Commonwealth and State Governments.

Timing objective

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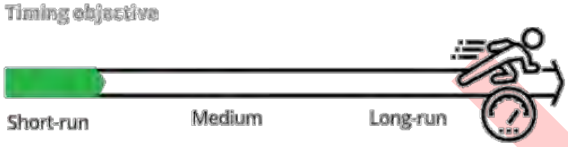
Action: Create new credit transfer pathways between vocational and tertiary qualifications to improve skills transferability development in growth sectors

The linkage across Adelaide's northern suburbs between the vocational and higher education sectors should be strengthened by increasing the number of pathway (credit transfer) agreements available locally. Despite there being strong relations between TAFE SA and UniSA (as well as other university institutions) elsewhere in South Australia, there are currently only two formal agreements that provide a structured education pathway between the vocational courses offered at the Salisbury, Elizabeth and Gilles Plains TAFE SA campuses and the UniSA campus at Mawson Lakes.

Ideally, these agreements would also be expanded and formulated with industry and employment outcomes for students in mind. Not only would this assist with skilling and up-skilling residents, it will also help to meet the skills demand of local employers. Formalising education pathways would also help to make visible to school age children and their teachers and school counsellors the types of education opportunities available and their prospective employment outcomes.

Timing objective



Action: Facilitate workforce readiness programs

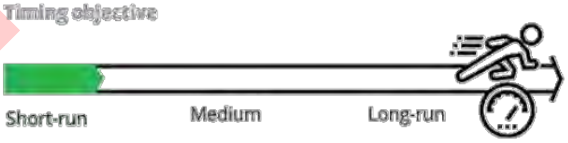
In addition to strengthening the educational outcomes and pathways of school leavers and completers, more should be done to improve to the work-readiness of these new labour market participants. The first years in the labour market for new labour market entrants are some of the most important. These provide valuable on-the-job learnings and formative experiences that are subsequently sought by employers in prospective higher paying jobs.

A reoccurring theme throughout our consultations with local employers, however, is the difficulty that employers have in finding workers with 'work-ready' skills. The types of soft skills necessary for functioning within a workplace, and essential when searching for and then holding-down a job. These include traits such as politeness, punctuality, and personal hygiene, as well as interpersonal and communication skills, and organisational skills.

Failure to master these skills can be a significant, yet poorly acknowledged, barrier for many job seekers, particularly young and new labour market entrants. If not addressed early, may contribute to factors that further diminish a worker's employment prospects – such as, long-term unemployment or, worse still, serious socioeconomic issues such as intergenerational unemployment, drug or alcohol abuse, or criminal activity.

There is an opportunity for local schools and employers to work with job-network and workplace training providers, to help educate high-school students and their parents about appropriate workplace behaviour and norms, and of the expectations of employers. This could include better engagement between local high-schools and employers to provide on-the-job 'work-experience' programs, as well as more formal training related to ethical and professional workplace behaviours, anti-bullying and harassment, and information on worker rights.

Timing objective



Action: Develop a skills map of local industry to identify training opportunities for residents

Employment and occupation-demand forecasting is meaningless without understanding both the skill requirements of these jobs and employers. Skills are so much more than achieving a VET diploma or university degree. While credentials are important for securing a job interview, employers then judge candidates on their human capital – that is, general and technical knowhow, and cognitive abilities used to learn, think and create - as well as their non-cognitive abilities to build social networks and to interact with co-workers and customers. Greater understanding is required about how these skill requirements map to occupations, and then outlining the education pathways most relevant for acquiring these skills.

There is scope to improve the information and awareness about the education pathways and skills required in certain occupations, and the emerging skill demands of employers within the region. This includes:

- Utilising the Council's relationship network with local industry and job-network providers to understand the skill requirements of local employers, and to monitor the regional skill demands on a regular basis.
- Working with the Department of Innovation and Skills and the Department of Jobs and Small Business (Commonwealth) to access data on local job vacancy opportunities and employment forecasts.
- Communicate with local schools - teachers, students, and parents - tertiary education institutions, and job-network providers information about the local employment opportunities available and the skills needs of local employers, and the skill formation pathways required to attain these jobs.

This will help to improve awareness among individuals of the education pathways from school to vocational and university and then into the workplace, particularly for professional occupations where the education pathways are more opaque. It will also help local education providers shape their training and courses to better target the skills sought by local employers.

Timing objective

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Promote the strengths of Salisbury's migrant populations

New migrants to Australia are often highly skilled and experienced workers who frequently go under-utilised in the labour market. Salisbury's disproportionately large migrant population has the potential to provide an economic advantage by making better use of the existing skills base of its migrant population.

While much is already being done locally to prepare new migrants for the labour force – such as, through English language training at the Salisbury TAFE SA - industry stakeholders in the region still express having difficulty when hiring new migrants. The challenges identified by employers include:

- inadequate English-language skills for roles being applied for
- lack of understanding about appropriate workplace behaviour and norms
- a reluctance among migrant employees to accept low-skill entry-level employment.

What is not frequently acknowledged by employers is the mismatch that exists between the high-level of education and qualifications attained by migrants prior to their arrival in Australia and the lack of recognition of this education under Australian accreditation frameworks. Just as there is the expectation amongst local employers for recent migrants to adjust to their new circumstance, there is also scope for local employers to also adjust their expectations about the skills and abilities of migrant workers.

Action: Remove barriers to labour market opportunities for new migrants

There is an opportunity for Salisbury to better capitalise on the diverse range of migrants' skills and experiences by educating employers as to some of the cultural differences which may exist and assisting both migrants and employers to develop strategies to bridge these differences. This could involve educating workers regarding employers' expectations, and employers about the need to assist workers in adjusting to meet these expectations.

Likewise, local employers and tertiary education intuitions should support recently arrived migrants with pre-existing education qualifications to obtain recognition for their prior learning, opening competency based pathways to accreditations and qualifications recognised under the Australian Qualifications Framework.

There is also an opportunity for employers to work more closely with local training providers and job-network agencies to better prepare new migrants for the workplace. This could be an extension of existing English-language training programs offered locally, and incorporate the learnings of local employers about workplace behaviours and expectations.

Timing objective

Attract businesses that require a growing workforces

Salisbury has a relatively large and youthful population, as well as having many experienced workers with existing skill sets. This mix has the potential to be a drawcard for large firms looking to invest in, and retain, a workforce for years to come. The creation of employment opportunities also has the broader social benefit of minimising the incidence of long-term unemployment locally. There is an opportunity to target and attract firms looking for a mix of skilled and unskilled workers.

Action: Target businesses with growing workforce needs

As explored in Section 4, a potential action for the City of Salisbury is to develop an investment attraction plan targeting businesses that complement and expand the existing industry activities within Salisbury. A further refinement of this plan could also consider targeting businesses that have significant labour requirements and are looking to engage larger workforces with a mix of skills.

Examples of the types of businesses likely to be strong candidates include those which are:

- firms undertaking activities servicing the broader northern Adelaide regional population (e.g. health and social assistance services providing in-home care
- firms bidding for substantial defence and related supply-chain contracts, which require a large and skilled workforces rapidly
- food processors and manufacturers, and firms associated with the food manufacturing production supply-chain (e.g. transport, logistics and storage; scientific and biosecurity services; marketing and design services)
- firms seeking to relocate or consolidate their operations on one large site.

This action and the development of an investment attraction plan more broadly, begin to tie in with several other actions that, when undertaken together, will be complementary to one another. These actions include:

- The activation of brownfield sites and, potentially, land currently held within buffer zones.
- Improving the value proposition of Salisbury as a location for business through the benchmarking of council rates and the improved transparency and efficiency of the development approvals process.
- The development of long-term development and infrastructure plans.
- Improved access to suitable work-ready training programs.

Timing objective

Strengthen connectivity between local industry and university and vocational education institutions

Local tertiary education institutions and industry stakeholders share a common view that there is currently a disconnect in their engagement with one another. There is a strong desire among local vocational and higher education providers to better connect with local businesses, particularly in the advanced manufacturing and food manufacturing sectors, while local industry expressed a desire to see the local education institutions offer courses and research services that are more relevant to their needs, as well as more accessible. There is a consensus that the upside potential from working more closely together is significant.

It is important to acknowledge that certain initiatives are already in place. UniSA's Future Industries Accelerator program, for example, aims to connect businesses with the university's researchers and facilities to accelerate company growth through R&D. Further, UniSA has partnered with DXC Technology – one of the world's largest IT companies – to develop a tailored graduate training program. While an important step in the right direction, there remain opportunities for greater engagement between the private-sector and local education institutions, both vocational and university, to deliver both tailored training and research services.

Action: Improve the responsiveness to the training and skill needs of local industry

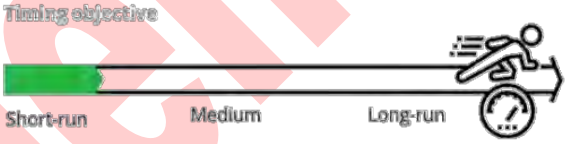
There is scope for local vocational and higher education institutions to develop and flexibly deliver courses and training packages that are tailored to meet the skill demands of local industry, and that enhance the employability of local residents, particularly those struggling to find work. In particular, this should be targeted toward Salisbury's key industry sectors – such as, the defence, advanced manufacturing, and food manufacturing sectors – and its emerging high-growth sectors, specifically the health and social assistance sector.

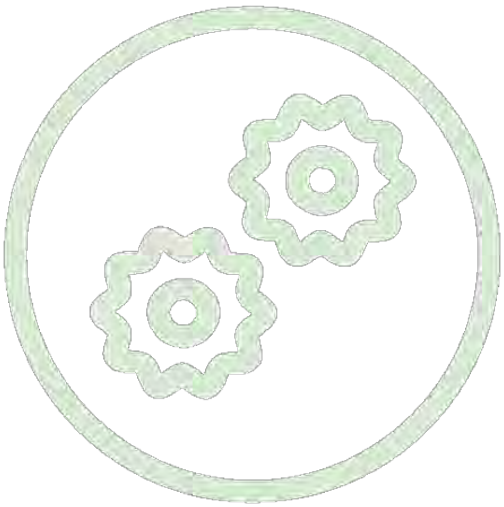
The City of Salisbury should continue to lobby the State Government to improve the breadth of vocational courses offered at Salisbury and to encourage the development of training packages that engage with local industry. The City of Salisbury should also lobby the Commonwealth Government to better resolve current funding arrangements that limit the use of the Salisbury TAFE SA campus almost exclusively to English language training.

There is also scope for higher education provides to deliver vocational courses and qualifications and expand the range of offerings available in Salisbury. For the university sector, this offers the potential to expand and deepen its existing industry network, as well as complement its tertiary qualification offerings by further developing educational pathways between vocational and university education.

Local industry needs to engage with both vocational and higher education providers to effectively articulate what their training and skills requirements actually are to ensure the programs and courses being offered locally meet their needs. This action also links back to the earlier action about developing a skills map linking industry skill needs with education ways.

Timing objective





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Action: Improve accessibility of facilities and resources located at local tertiary-education campuses

There is scope for local vocational and higher education institutions to increase their engagement with local industry by improving certain commercial aspects of their operations.

Several of the modern buildings at UniSA's Mawson Lakes campus, for example, are purpose built research and learning spaces, housing world-leading laboratory facilities and specialist equipment. Mawson Lakes is also home to UniSA's largest research institute and several research centres with a science, technology, engineering and maths (STEM) focus, and industry linkages to the defence and renewable energy sectors. The research concentrations are repositories of knowledge and resources, employing many hundreds of highly-skilled researchers with expertise and capabilities that are not readily available to private-sector firms. The Industry 4.0 Testlab is designed to engage with small and medium enterprises (SMEs) to introduce them to a range of Industry 4.0 strategies, methodologies and approaches.

Aligning the research focus and output of research centres at Mawson Lakes to generate knowledge and expertise that complements and further enhances the activities and value-add of local industries, particularly in the defence and manufacturing sectors, is one example of how the university sector could increase its relevance to local industry. The development of a Defence TestLab and future plans for an Industry Engagement Hub at the Mawson Lakes campus could further provide a physical setting for this to occur, enabling activities such as rapid prototyping and pilot scale manufacturing of technologies like augmented and virtual reality, IoT and digital twins.

Likewise, improving the cost-competitiveness and commercialisation of facilities and R&D services would allow for greater private-sector engagement. Allowing private-RTO's third-party access to use the infrastructure and facilities at local vocational and higher education institutions during evenings or weekends, for example, could help meet the local skill needs of both industry and workers. Similarly, there is potential for local industry to take greater advantage of existing university research knowledge and capabilities, as well as utilise the specialist equipment and facilities available locally to assist with the testing and commercialisation of new innovations.

Timing objective

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Foster a culture of entrepreneurship and upscaling

Salisbury is at the heart of northern Adelaide's regional economy, and home to 5 per cent of the active businesses within South Australia. The proximity to commercial activity across a diverse range of industry sectors is fertile ground for entrepreneurial activity and the development of new and innovative businesses, as well as small business formation providing retail and service offerings to the growing local population and workforce.

There is also an opportunity to further leverage the recent trend in small and owner-operator business formation within Salisbury, and offer support services aimed at helping small businesses make the leap to medium sized firms – those with over 5 employees or revenues above $1 million.

Salisbury's large migrant population – particularly the recently arrived population – could also complement efforts to develop an entrepreneurial culture and innovative business culture within Salisbury. A common and well-worn path for migrants to achieve upward social mobility in their adopted countries is through entrepreneurship and small business – a pattern that has held true at most points in human history. In 2016, for example, almost two-thirds of the self-employed workers with businesses located within Salisbury were either born overseas or a first generation Australian.[64]

Action: Developing entrepreneurial and business support services available via the Polaris Centre

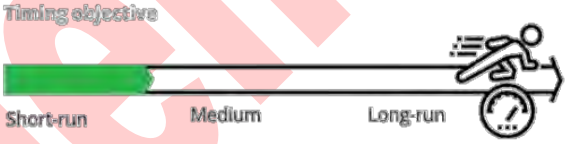
Developing the support services offered by the City of Salisbury's Polaris Centre could foster an environment of entrepreneurship and innovation within Salisbury, as well as help small businesses scale-up to medium sized firms. This could involve improving the quality of the facilities available to nascent entrepreneurs and start-ups at Polaris, as well as expand the training, business start-up and growth support offerings run by Polaris.

The training and business support services offered by Polaris should continue to service residents and local businesses in various locations across the region, with greater focus on raising awareness of these services within migrant and small business communities. Greater utilisation of digital web and virtual resources to deliver training, networking and assistance services should also be considered, alongside the face-to-face services currently available.

Noting the changing needs of industry and communities over time, periodic reviews of the services being offered via the Polaris Centre should continue to ensure the types and models of service delivery remain relevant and effective for the communities being serviced.

Training and support services should also be developed and expanded in collaboration with similar centres across Adelaide. As we explore in the next section, there are several hubs and precincts across metropolitan Adelaide with a focus on entrepreneurship and innovation. In addition to the City of Salisbury, there is scope to link in with the efforts of other state government agencies to help coordinate, disseminate, and leverage the efforts and resources that currently exist and are being developed across South Australia.

Timing objective



64. Australian Bureau of Statistics, 2016 Census of Population and Housing: TableBuilder Pro, Australia, cat. no. 2073.0

Action: Facilitate the 'commercialisation' of university R&D at Mawson Lakes

Building on the earlier call for greater engagement between the university sector and local industry, there is also an opportunity for universities to better utilise the expertise of industry and the facilities at Technology Park, for example, to commercialise innovations and products developed from the research undertaken at UniSA.

As identified earlier, UniSA at Mawson Lakes is home to several research institutions and CRCs with an emphasis on engineering, telecommunications and defence. These disciplines strongly align with some of Salisbury's key local industries – specifically, advanced manufacturing, defence, and food manufacturing – and by their very nature are disciplines with high incidences of patent and product development.

As identified earlier, UniSA has already had some success creating commercial 'spinoffs' from innovations developed at its Mawson Lakes campus. While the creation of spinoffs such as Myriota are rightly applauded, more needs to be done to facilitate the transition of academic or direct R&D activities into commercial and other practical applications.

There are significant examples globally (such as University City Science Center in Philadelphia, and Adlershof Science City in Berlin), where the establishment and growth of spin-off companies from universities has deepened opportunities for graduate employment pathways, facilitated business placements into universities (and vice versa) and fuelled a virtuous cycle of entrepreneurship by having highly visible business success stories.

Ensuring ready and functional access to the commercialisation and entrepreneurial programs currently operated by universities (including those located at campuses within Adelaide's CBD) is critical in this regard.

Efforts to foster an entrepreneurial environment and culture within Salisbury should tie in with and complement the efforts being made within the university sector, as well as the innovation strategies and initiatives being developed and delivered by state government agencies. Again, there is a role for the Polaris Centre to bridge the gap between universities and industry in terms of networking and expertise, and to help to academic researchers and students the next steps involved the commercialisation process.

Timing objective

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Improve the quality of vocational education infrastructure in northern Adelaide

Despite having three TAFE SA institutions located across Adelaide's northern suburbs, there is a view among local stakeholders that these facilities are inadequate to the training needs of both local industry and the local population.

As reported earlier, the TAFE SA campus at Salisbury is relatively small in comparison to its neighbouring campuses at Elizabeth and Gilles Plains, and capacity constraints are a perennial problem. The campus is used almost exclusively for English language training, forcing many local residents wishing to undertake further vocational studies to travel to the neighbouring campuses or to the Adelaide CBD. For many residents, particularly those who are disadvantaged or disabled, this is yet another barrier to further education. There is also a view among local industry stakeholders that the vocational training facilities across the northern suburbs are ageing and now out of step with industry skill needs following the withdrawal of the automotive manufacturing sector from the region.

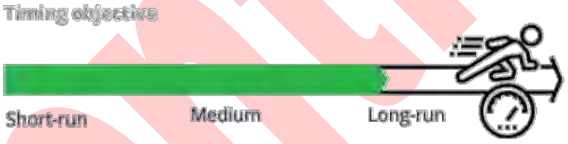
Action: Establish a new future focused TAFE campus at Mawson Lakes

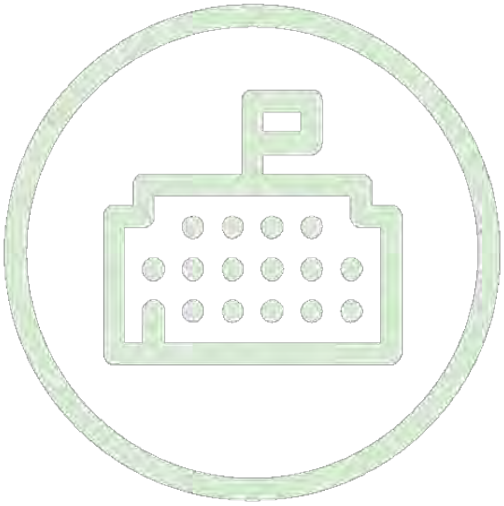
There is a case to be made for a new TAFE campus to be established at Mawson Lakes within the next 10-15 years. A new facility at Mawson Lakes could consolidate the Salisbury campus, and should be purpose built with the future economy in mind – i.e. focus on providing advanced technical skills, alongside the traditional trades training and adult education offering.

Such a facility should be purpose built to assist in the development of technical skills in how to operate and maintain emerging digital, robotic, and electronic technologies that are increasingly used in advanced manufacturing and food manufacturing production processes, as well as systems used in the defence sector. It could also assist the transport and logistics industry to train workers in the use of complex globally integrated operations platforms that are increasingly being used by multinational companies to control their entire distribution, supply and production chains.

The development of a new vocational training facility at Mawson Lakes could also facilitate greater connectivity with local university facilities, allowing for greater collaboration and assist an increase in accreditation pathways between the VET and university sectors. The development of a new vocational training facility is also an example of the type of long-term planning that would need to be integrated with planning of future urban and residential developments at Dry Creek.

Timing objective





6. Strengthening connectivity

6.1 Salisbury's activity precincts

As identified earlier, Salisbury has several distinguishable precincts where economic and employment activity is clustered. These are eco systems of businesses that have agglomerated to take advantage of the proximity to one another, to population centres and consumer activity, or to one of the many strategic assets located within Salisbury.

Within Salisbury, there are several categories of activity precincts that differ in their structure, their purpose, and in the types of businesses and industries they attract. The categories of precincts include:

Formal industry precincts – these are deliberately developed precincts established by the State Government to support industry development and economic growth in the region. These precincts include:

Technology Park is located adjacent to the Mawson Lakes campus of the UniSA and also the retail, consumer and residential hub at Mawson Lakes. Established in 1982 by the State Government as an industry cluster of technology related firms.[65] Today, Technology Park is home to over 100 businesses with global names such as Lockheed Martin, Saab Australia, Codan, Daronmont Technologies, and Tindo Solar.[66] Many of these companies are involved in defence and aerospace technologies, related to the activities at the Edinburgh Defence Precinct, as well as technologies relating to advanced manufacturing, such as IT and telecommunications. Technology Park also has shared collaboration and office spaces at its Innovation House and Endeavour House, suitable for networking conferences and meetings.

Edinburgh Parks is located adjacent to Edinburgh Defence Precinct (which includes RAAF Base Edinburgh and the Defence Science and Technology Group). Established by Renewal SA, Edinburgh Parks is South Australia's largest master planned industrial estate. It is also home to the **Northern Adelaide Food Park**, which is focussed on clustering businesses in food processing and manufacturing, packaging, storage and distribution.

Consumer, retail and service hubs – these are areas deliberately zoned to attract retail and commercial businesses to service the local resident and working populations. The key hubs include:

Salisbury CBD is home to the City of Salisbury council offices and chambers and located on the site of the original Salisbury Township. The CBD is a hub for retail and commercial activity, and connected to public transportation via rail and bus. The local TAFE SA campus along with other social welfare, State and Commonwealth Government service agencies are located within the CBD.

Mawson Lakes is a planned urban residential development with a mix of low and high-density living. Mawson Lakes is centred around an integrated retail and consumer services precinct and public transportation hub for rail and bus. Mawson Lakes is located adjacent to the Technology Park precinct and UniSA campus.

Private-sector precincts – these are private-sector developed areas zoned for commercial and industrial production activities, and are proximate to key infrastructure and transport corridors. The key precincts include:

- **SA Produce Market**, which is strategically located between Main North Road and Port Wakefield Road
- **Parafield Airport Kings Precinct** and Cross Keys Enterprise Park, which are proximate to the Salisbury South industry cluster, as well as key transport corridors
- **Vicinity Industrial Base** located at Direk, and adjacent to the Edinburgh Defence Precinct, and proximate to Edinburgh Parks and key road and rail transport corridors.

65. Technology Park Adelaide, About <https://techpark.sa.gov.au/about/>
66. Technology Park Adelaide, Businesses <https://techpark.sa.gov.au/about/businesses/>

Informal industry clusters – these are industrial zones where business eco systems have formed over time. An example of this cluster is found at Salisbury South:

Salisbury South is an informal industry cluster of manufacturing firms and logistics and distribution centres. This cluster is home to notable businesses such as:

- RM Williams – a luxury footwear manufacturer
- Bickfords Group and Lion Dairy – both beverage manufacturers
- Mayne Pharma – a health and pharmaceutical manufacturer
- Michell Wool – a wool processor and products manufacturer
- Bridgestone, Border Express and Coca-Cola Amatil distribution centres.

6.1.1 Industry precincts as engines of economic growth

When done right, planned industry precincts have the potential to deliver significant economic results in terms of increased value adding and employment creation. Precincts should be integrated environments where businesses and people from numerous, sometimes disparate, sectors and specialisation can connect. Where creative collisions occur and collaboration is encouraged, increasing the likelihood of knowledge spillovers. And, where innovation and new products are generated, tested, and subsequently commercialised with market-based solutions.

Industry precincts may also host 'launching' and 'landing' pads for business, linking the local economy to external markets. Industry precincts provide a platform from which businesses can project themselves beyond the local economy into national and global markets, as well as provide business with linkages to other precincts interstate and overseas. Likewise, precincts have the potential to become the natural location for new firms and firms new to the local market to establish themselves and connect immediately into a mutually beneficial business ecosystem.

The existing industry and activity precincts within Salisbury can be developed as engines of future economic growth in the region. These precincts, particularly Technology Park and Edinburgh Parks, have the potential to generate accelerated growth through investment attraction, increase business formation and employment growth, and deliver higher value-add production through fostering innovation.

6.2 Transport infrastructure

Connecting different regions allows for the efficient exchange of goods and services. Direct road and rail links create vital connections for businesses to access their markets, suppliers and human capital.[67] Improved transport linkages reduce the cost and times associated with travel, and provide individuals and businesses access to market and employment opportunities that would otherwise be unavailable.[68] Salisbury's transport infrastructure, therefore, is considered a crucial element to the future economic growth of the region.

A key competitive advantage of the Salisbury economy is the road and rail infrastructure and transport corridors that traverse the region. The quality of and accessibility to key road transport corridors, in particular, are considered by local industry stakeholders to be one of Salisbury's most valued strategic assets.

6.2.1 Connecting people and places

As identified earlier, Salisbury is one of the most car dependent local economies in South Australia. Only 6 per cent of commuters travelling to and from Salisbury for work use public transport. This is despite key centres within Salisbury – such as Mawson Lakes and the Salisbury CBD – being connected by the Adelaide-to-Gawler commuter rail line – a significant piece of public transport infrastructure. This runs north-south through Salisbury, and provides efficient and direct access to the Adelaide CBD.

Looking forward, the balance between private, public and active forms of transport will need to be recalibrated to ensure residents can access job opportunities, and minimise the downside risks of congestion as both the resident populations of Salisbury and the surrounding local government areas continue to grow.

6.2.2 Connecting business and markets

Fast and efficient rail and road connections are vital for commerce and movement of goods. The overlap between the national rail freight with key road freight transport corridors, place Salisbury at the perfect juncture for transport and logistics, as well as warehousing and distribution industries. The growing number of companies locating their state and national distribution centres at locations such as Direk, Edinburgh Parks, and Salisbury South, are evidence of this.

The completion of the Northern Connector road corridor, connecting the Northern Expressway, the South Road Superway, and the Port River Expressway, will further enhance the value proposition of Salisbury. This road will create a non-stop connection from the northern fringe of outer metropolitan Adelaide through to the inner north-west and northern suburbs, improving the efficiency of freight routes between Salisbury, Port Adelaide and South Australia's northern agricultural and food producing regions.

67. Standing Committee on Infrastructure, Transport and Cities, *Harnessing Value, Delivering Infrastructure (2018)* <https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024018/toc_pdf/HarnessingValue,DeliveringInfrastructure.pdf;fileType=application%2Fpdf>.
68. Vytautas Lingaitis and Gintaras Sinkevičius, 'Passenger Transport by railway: evaluation of economic and social phenomenon' (2013) Vol. 110 *Procedia – Social and Behavioural Sciences* 549-559

6.3 Digital infrastructure

In addition to transport infrastructure assets, Salisbury is also connected by a significant digital infrastructure asset. As shown in Figure 4.1 (above), SABRENet runs directly through the City of Salisbury, offering businesses located along this network access to some of the fastest internet speeds in Australia. The SABRENet infrastructure provides part of the network for the GigCity network. The GigCity network is intended to connect businesses and startups located across Adelaide's 12 innovation and technology precincts – including at Technology Park[69] – with affordable and vastly faster internet connectivity.[70]

This digital infrastructure and the connectivity it affords to other precincts across Adelaide will be a significant drawcard for new and existing businesses wanting access to fibre networks to develop and deploy innovative and technologically advanced services or production process. The region's connectivity through SABRENet and GigCity provides the perfect landscape for businesses that require space to grow as well as connectivity.

What is SABRENet?

SABRENet (South Australian Broadband Research and Education Network) is a fibre optic 'backbone' network, connecting South Australia's education and research centres, as well as linking these centres with the rest of the world.[71] SABRENet is a not-for-profit company jointly owned by the University of Adelaide, Flinders University, the University of South Australia and the South Australian Government.

The network currently runs from the north to the south of Adelaide's CBD. Precincts on the SABRENet line have the opportunity to access internet speeds of up to 100-times the national average and at least ten times the download speed of the National Broadband Network (NBN) for precincts.[72]

Within Salisbury, SABRENet currently connects:

- Mawson Lakes – including: Technology Park, and the UniSA campus, Mawson Lakes Primary School, Endeavour College, Intervolve data centre
- Parafield – including: UniSA's Flight Academy, Flinders University's Airborne Research Unit, Flight Training Adelaide, as well as the Parafield Gardens R-7 and High schools
- Salisbury CBD – including: TAFE SA, the City of Salisbury's Public Library network, and Salisbury High School
- Edinburgh Parks and Defence precincts – including: DSTG, and YourDC.[73]

SABRENet also provides the backbone infrastructure for the 'GigCity' initiative. This initiative is intended to provide the private sector with affordable access to SABRENet. Within Salisbury, GigCity currently has a node at Technology Park in Mawson Lakes.[74] Another node is set to be established at Edinburgh Parks as part of Stage 2 of the initiative.[75]

6.3.1 Embracing digital disruption and Industry 4.0

Industry 4.0, also known as the Fourth Industrial Revolution, is changing the way business is conducted, particularly in the manufacturing industry. In 2013, Deloitte found that one-third of the Australian economy was likely to face substantial disruption by digital technologies over the next five years.[76] The economic change brought about by digital disruption adversely affected Salisbury more than other regional economies, accelerating the withdrawal of traditional heavy manufacturing from the region during this period.

However, with infrastructure such as SABRENet and GigCity, Salisbury also has much to gain from digital disruption. Digital technologies that enable connectivity and Industry 4.0 is expected to have its greatest impact in the manufacturing sector, particularly advanced manufacturing related to defence and food production and distribution.

What is Industry 4.0?

It refers to the transformation of the manufacturing industry driven by the integration of digital technologies, data analytics and specialised capabilities across the entire production process. This involves integrating and connecting discrete digital technologies – such as IoT, robotics and automation, artificial intelligence and machine learning, 3D printing, or augmented and virtual reality – to create more efficient operation, production, and distribution processes. Based on the currently available technologies alone, it is estimated that the digital economy and the application of the Industry 4.0 agenda will contribute between $140 billion and $250 billion to the Australian economy by 2025.[77]

69. GigCity at Technology Park is limited to premises at Innovation House and Endeavour House.
70. GigCity, *What is GigCity?*, <https://gigcity.com.au/about/what-is-gigcity>.
71. SABRENet, About <http://www.sabrenet.edu.au/>.
72. Ibid.
73. SABRENet, 2018 Connected Sites <www.sabrenet.edu.au/downloads/SABRENet%202018%20Connected%20Sites.pdf>
74. GigCity, Locations <https://gigcity.com.au/locations>.
75. SABRENet, Access to GigCity expands across Adelaide - 15 additional precincts for GigCity Stage 2 < http://www.sabrenet.edu.au/news/2018/2/14/access-to-gigcity-expands-across-adelaide-15-additional-prec.html>.
76. Deloitte, *Building the Lucky Country, Digital disruption: Short fuse, big bang?* (2012) <https://www2.deloitte.com/au/en/pages/building-lucky-country/articles/digital-disruption-harnessing-the-bang.html>.
77. McKinsey & Company, *Digital Australia: Seizing opportunities from the Fourth Industrial Revolution* (May 2017) <https://www.mckinsey.com/featured-insights/asia-pacific/digital-australia-seizing-opportunity-from-the-fourth-industrial-revolution>.

Be a part of something bigger
Adelaide is now home to several innovation and technology related precincts. These include:

- **Technology Park,** located at Mawson Lakes in Salisbury
- **Lot Fourteen,** located in the Adelaide CBD
- **Tonsley Innovation Precinct,** located in Adelaide's southern suburbs
- **Techport and the naval defence precinct,** located at Outer Harbor
- **Thebarton Technology Precinct,** located at Thebarton in Adelaide's inner-west.

Despite their ostensible similarities, these precincts often operate as disparate, almost competitive entities. It should be acknowledged that efforts are already underway to get these precincts to work in concert with one another. These efforts include, for example:

- the 'defence triangle' concept being developed by the State and Australian Government's under the recent City Deal to link Edinburgh Defence Precinct, Technology Park, Lot Fourteen, and TechPort
- the 'hub-and-spoke' model being developed by the Office of the Chief Entrepreneur for South Australia, with Lot Fourteen as the hub.

There is an opportunity to build on these efforts and leverage the unique value proposition of each precinct to form an **'integrated precinct platform'** – a cohesive network that complements the activities of one another. Working together to perform different functions of the same production process will make South Australia an attractive proposition internationally to prospective large multinationals, particularly defence primes and industry firms.

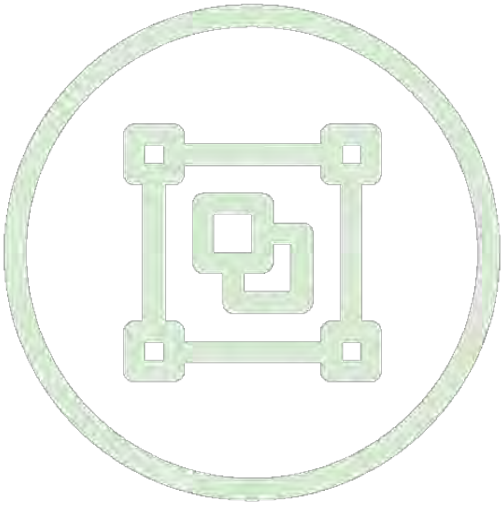
Action: Link with and attract businesses engaged at Lot Fourteen
Technology Park should integrate its functions and capabilities to fit with the activities of other precincts located across Adelaide, particularly the newly established Lot Fourteen. Where particular functions – such as idea formation, design work, and corporate functions – will be best suited to Lot Fourteen, other testing and development functions – such as those that require space for large specialist equipment or machinery, or clean rooms and heavy laboratory facilities – are likely to be best located at Technology Park. The functions at Technology Park should be complementary to the entrepreneurial agenda of Lot Fourteen, and further support the development of innovations at the commercialisation stage and help start-ups to grow into medium to large businesses.

Specific opportunities may include researchers and workers at firms engaged with the SmartSat CRC, attracting firms making use of the Defence Launching Pad, and providing opportunities to interact with the Future Industry Exchange Program.

An investment attraction plan focussing on how Technology Park, with its larger and specialist facilities, can help entrepreneurs and start-ups at Lot Fourteen commercialise their innovations and grow into a sustainable business should be developed. This could involve:

- a negotiated Memorandum of Understanding between key defence stakeholders, state government agencies, and the City of Salisbury to formalise the integration between Technology Park and Lot Fourteen and specify the mechanics of this
- securing strategic partnerships between local university stakeholders, as well as Defence industry primes already located around Salisbury and relevant Commonwealth Government agencies.

Timing objective



Strengthen the Technology Park Precinct eco system

Industry precincts have the potential to deliver significant economic results in terms of welfare gains and employment creation. Business eco system deliver gains through lowering 'transaction costs' (i.e. the costs of doing business) by clustering production activity, as well as consumer and supply chain activities, into the one location. This agglomeration, in turn, generates a range of additional benefits derived from 'positive externalities'. These potential externalities include:

- Spillovers from interactions and sharing of knowledge, technology, and collaborative activities that are less likely to have occurred.
- Innovation and the creation, testing, and commercialisation of new and original products and services.

In addition, formal and curated industry precincts can act as a catalyst for these types of benefits through the provision of shared infrastructure or services that benefit the operation of all businesses within the precinct, or help to further stimulate interaction between businesses. Shared infrastructure within a precinct can also contribute to precincts acting as launching or landing-pads by supporting business to project themselves beyond the precinct or acting as a drawcard to new business, respectively.

Local industry stakeholders perceive Technology Park and Edinburgh Parks (including the Northern Adelaide Food Park) as 'sleeping giants' of the Salisbury economy, and that the full potential of these precincts is not currently being realised. There are several opportunities to act to strengthen Salisbury's precinct eco systems to unlock their potential as engines of economic growth.

There is also a need to significantly improve Technology Park's market positioning. Relative to the Tonsley Innovation Precinct and Lot Fourteen, both of which are marketed and promoted as curated ecosystems with a central narrative and purpose, the promotion of Technology Park focuses heavily on land sales and office leases. The development of a more compelling value proposition is required to reflect the scale and depth of innovative capability within the precinct.

Action: Activate Technology Park to champion innovation-led economic growth in northern Adelaide

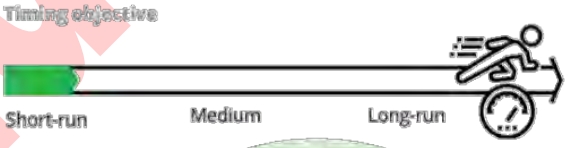
There is an opportunity to renew the purpose of Technology Park and to activate the precinct to become a centre of innovation-led economic growth for northern Adelaide.

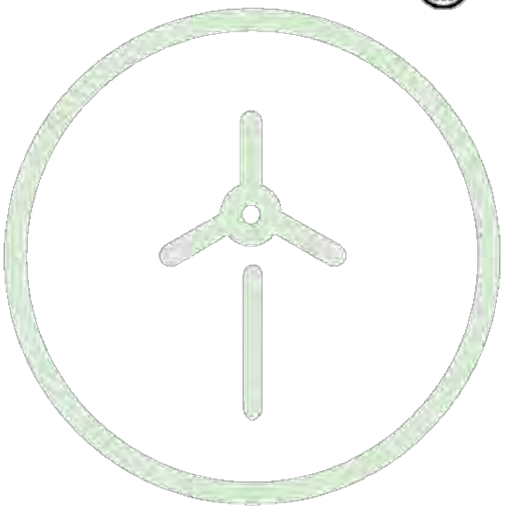
Several stakeholders expressed a view that Technology Park lacks the intentional effort required for a successful precinct environment. Related to this is the fact that after 30-years since its establishment as an industrial park, there is now an opportunity for a renewed focus and coordination effort to truly become a contemporary precinct rather than simply a business park.

Activating Technology Park would involve several inter-related actions. These include:

- Integrate Technology Park within the functions of Adelaide's other innovation and technology precincts (explored previously).
- Establish a curation function at Technology Park to oversee the development of the precinct in-line with its guiding vision, to act as a catalyst for an interactive and collaborative environment, to promote the interests of the precinct, and to establish commercial/research relationships with other firms outside of the precinct (explored further below).
- Ensure Technology Park keeps pace with the expectations of what a world-leading contemporary innovation and technology precinct looks and feels like, and ensure that the precinct's infrastructure and facilities evolve accordingly (explored further below).

Timing objective





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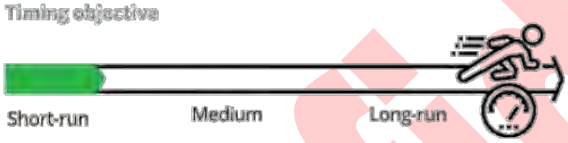
Action: Establish a curation function at Technology Park
Developing a curation function at Technology Park would help to strengthen the focus of the precinct's ecosystem. This curation function would set the vision for the site and then guide the development and evolution of the precinct.

Ideally, a curation function would bring together existing precinct residents, local industry, and government stakeholders to encourage interaction and activity at the precinct, and to improve the awareness about the skills, capabilities and technologies located in and around the precinct. A curation function would also serve to project and promote the interests of the precinct and its residents with other precincts across Adelaide (such as Lot Fourteen and the Tonsley Innovation precincts), interstate and abroad.

The structure of the curation function at Technology Park could take several forms in terms of its governance and authority, with numerous examples internationally to use as templates. The form and suitability of these structures at Technology Park would need further investigation, and likely depend on the existing freehold nature of Technology Park. Further, the development of a curation function should also consider the existing role of the Polaris Centre at Technology Park, and how it could be incorporated with an expansion of its advocacy and entrepreneurial support services (explored as an earlier action).

Timing objective



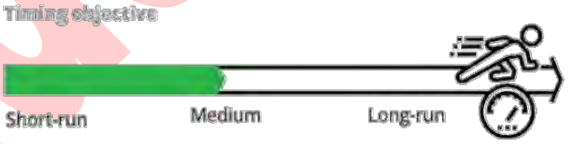
Action: Improve the quality of facilities Technology Park
Increasing the relevance of Technology Park and better integrate with Adelaide's other innovation precincts (including Lot Fourteen and the Tonsley Innovation Precinct) and the surrounding defence assets (including the Edinburgh Defence Precinct and Techport) could also be achieved by improving the quality of the facilities at offerings available at Innovation House and Endeavour House.

More needs to be done to make Innovation House a more flexible and responsive asset. This includes:

- offer shorter lease terms to allow business to 'bump-in' and '-out' on a project basis
- offer a suite of work-space alternatives – ranging from small and private, through to large, open and collaborative spaces
- improve the quality of shared services available at the site to support a temporary workforce, as well as encourage collaborative environment.

Greater investment is also required to improve the overall amenity of the buildings. While Innovation and Endeavour Houses have evolved over the decades, undergoing several renovations and expansions. The buildings are now almost 30 years old. Improvements to the buildings' digital, telecommunications, electrical, and heating and cooling infrastructure are required to bring it up to contemporary standards, make it an attractive location to workers, and to strengthen its general competitiveness as a place to conduct business.

Timing objective



Expand Salisbury's digital connectivity and Industry 4.0 capabilities

As identified, Salisbury already has excellent digital infrastructure credentials with access to the SABRENet and GigCity fibre networks at key precincts within Salisbury. However, there is enormous economic potential for Salisbury to further capitalise on its digital infrastructure assets to embrace the growth of Industry 4.0 and attract businesses that engage in either advanced manufacturing, defence, food production, or distribution operations.

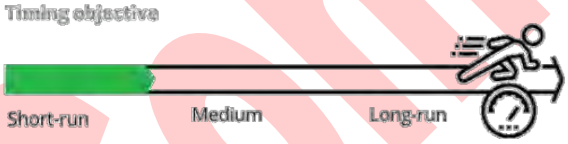
Action: Investigate expanding GigCity nodes along SABRENet within Salisbury

Salisbury currently has several SABRENet nodes connecting Salisbury's schools, tertiary education institutions, public service centres, as well as key precinct sites and strategic assets. However, access to SABRENet for commercial purposes through the GigCity initiative remains limited, with only one node at Technology Park[78] and another node proposed at Edinburgh Parks.

There is scope to better leverage the existing SABRENet nodes – particularly at Mawson Lakes, Parafield, and Salisbury's CBD – as GigCity nodes. Opening these nodes to commercial use would increase the attractiveness of precincts to entrepreneurs and start-ups, as well as to local firms where Industry 4.0 technologies are likely to be of increasing importance to the production process – such as, advanced manufacturing, food manufacturing, and transport and logistics industries.

The City of Salisbury should continue to advocate for increasing the number of GigCity access points across the region and lobby the South Australian Government and SABRENet. The Council should consider developing a business case or development plan to help to demonstrate and articulate the economic growth potential of private-sector access to high-speed internet on the regional economy. The Council should also consider, as part of its longer-term planning, the potential expansion of SABRENet and GigCity to future development areas at Dry Creek and west Salisbury (previously explored).

Timing objective



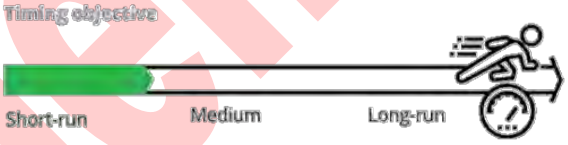
Action: Trial embedded 5G networks within Mawson Lakes and Salisbury CBD

Trialling 5G mobile network technology within Mawson Lakes, Edinburgh Parks and the Salisbury CBD would further enhance Salisbury's digital reputation and Industry 4.0 credentials, as well as increase the attractiveness of Salisbury to digitally intensive industry sectors. 5G at these sites would be complementary to the existing high-speed fibre optic SABRENet and potential GigCity connections.

One of the major benefits of 5G is the future potential it offers to industry to prepare for and adopt Industry 4.0 technologies. 5G, for example, improves the commercial use case for a range of exponential technologies, such as driverless cars in transport, and virtual and augmented reality in education and healthcare. 5G would also complement the broader network ecosystem, working with the latest mobile networks, and broadband infrastructure to create more seamless connectivity.

While large-scale investment in 5G infrastructure should be further investigated, and trialling this infrastructure will be the first step. This should be led by the City of Salisbury in collaboration with the State Government and one or more telecommunications service providers.

Timing objective



78. GigCity at Technology Park is limited to premises at Innovation House and Endeavour house.

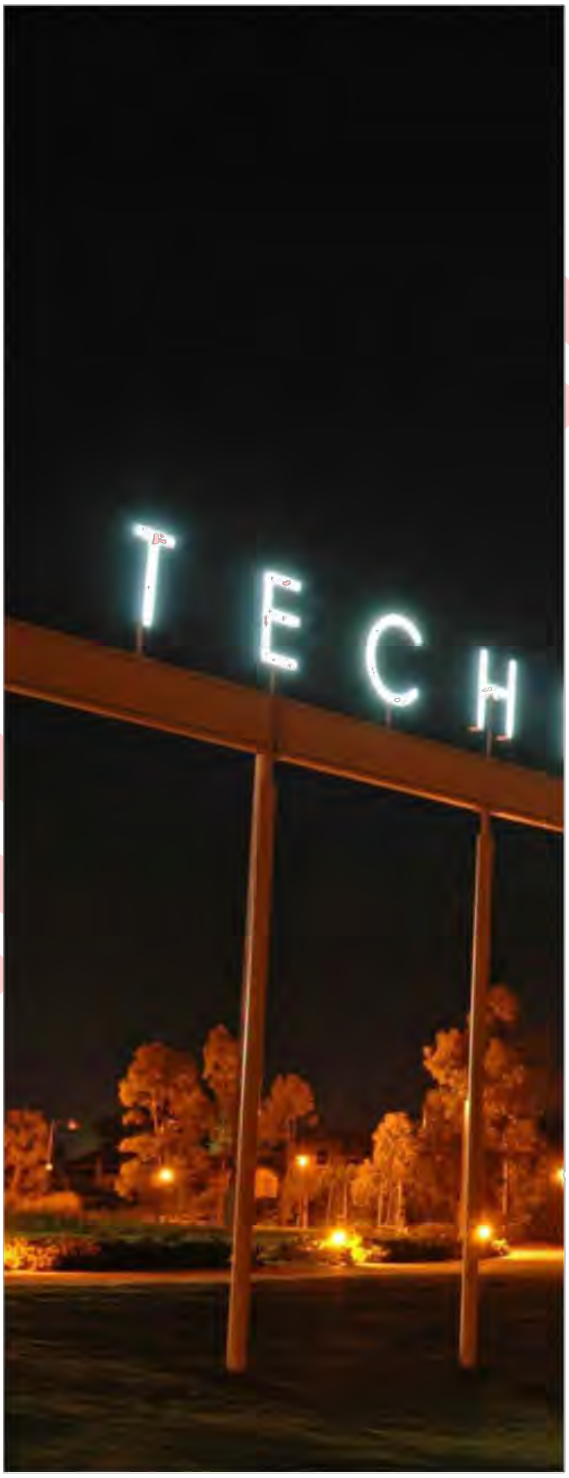
Action: Prepare a business case for developing secure high speed networks within industry precincts

There is also potential for investments in digital connectivity to deepen the capabilities of the defence sector in Salisbury, and to further engage the private sector both as suppliers to the military and as developers of civilian applications for military technologies.

Significant investment could be made in establishing a secure data network to create a 'virtual defence technology precinct' in Salisbury. This secure network would connect RAAF Base Edinburgh and DSTG located at the Edinburgh Defence Precinct to R&D and commercialisation sites at Technology Park, UniSA Mawson Lakes, as well as Lot Fourteen in the Adelaide CBD and Techport naval precinct at Outer Harbor.

This would be a standalone network running parallel to SABRENet, and would facilitate the sharing of large volumes of top-secret and sensitive data in a secure environment. It would also allow for greater integration of the unique capabilities between Adelaide's industry and innovation precincts. It would allow for the design and management functions of defence projects to be carried out at Lot Fourteen, and seamlessly combined with R&D and testing functions at sites in Salisbury.

Timing objective



Connecting Salisbury to centres of activity

A more prosperous population is dependent upon people accessing opportunities. Getting people to the places where such opportunities exist can be a barrier to participation and can be more difficult for certain people to overcome than others, particularly the disabled or those from disadvantaged backgrounds.

Salisbury, however, is a car-dependent region. Salisbury's road and rail transport corridors are oriented around the movement of people and goods north-south, with public-transport connections focussed on getting people to and from Adelaide's CBD. Consequently, Salisbury is poorly serviced with transport infrastructure connecting it to other key population centres, and centres of economic activity and employment, located in the neighbouring Port Adelaide Enfield and Tea Tree Gully local government areas.

The transport challenges for the region are threefold:

- Improve east-west transport corridors to facilitate lateral movements across the region.
- Improve the efficiency of existing public transport infrastructure to reduce car dependency.
- Improve the quality and safety of cycling and walking infrastructure to encourage the use of active and healthy transport options.

Creating better linkages between the centres of activity across the northern Adelaide region will encourage inclusive and welfare enhancing growth for the region by providing greater access to employment opportunities for Salisbury residents, as well as provide the businesses located in Salisbury access to a broader range of skills and consumers.

Action: Improve east-west public transport linkages

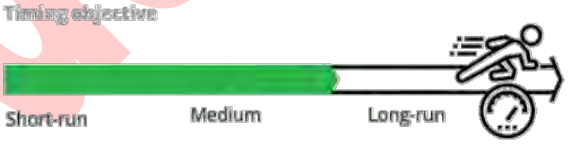
More people commute to and from Salisbury in an east-west direction than those commuting in a north-south direction. For example, in 2016 around 22,620 people commuted laterally between Salisbury and the cities of Port Adelaide Enfield (13,730) and Tea Tree Gully (8,890). By comparison, only 18,760 people commuted north-south between Salisbury and the City of Adelaide (7,660) and the City of Playford (11,100). Despite this, the road and rail commuter transport corridors running through Salisbury is oriented north-south.

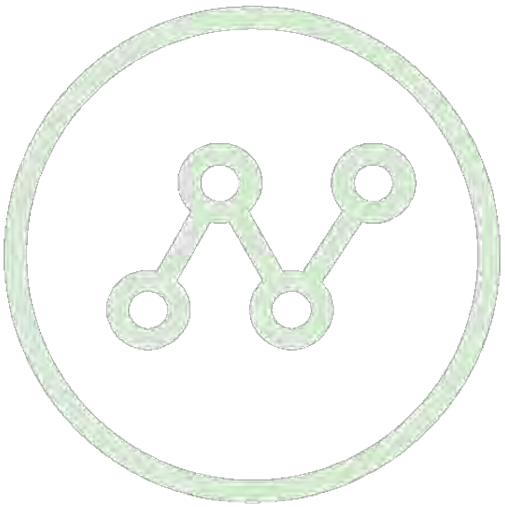
More should to be done to improve Salisbury's public and private transport connections between key employment hubs within Salisbury (such as Edinburgh Parks), in Port Adelaide Enfield and population centres in Tea Tree Gully. Several solutions should be considered for further investigation. These include:

- A dedicated bus rapid transit between Mawson Lakes and Tea Tree Gully.
- Increase in the direct services between City of Salisbury and key employment hubs including Port Adelaide, Osbourne and Wingfield.
- Improved bus connections along Saints Road and The Grove Way to better link Salisbury with Tea Tree Gully via the potential extension of the Adelaide O-Bahn.

These are obviously initiatives that would need be instigated and funded by the State Government, but the City of Salisbury has a key advocacy and facilitation role.

Timing objective





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Action: Upgrade existing public transport infrastructure

A competitive advantage of Salisbury is its existing public transport infrastructure. The Gawler-to-Adelaide rail line, in particular, provides an efficient transport alternative to move between centres of civic and economic activity within Salisbury, as well as Elizabeth in the City of Playford and the Adelaide CBD.

As well as investing in new public transport connections, there is also an opportunity to further leverage the existing transport infrastructure. Better utilisation of this infrastructure could involve:

- The re-development of train and bus stations to make them more safe, inviting and purposeful spaces. Specifically, this includes installing new and better signage, security cameras and emergency stations, upgraded pedestrian crossing, and fencing for safety. These investments are 'low hanging fruit', but would go a long way to improving the perception and, hence, patronage of public transport options.
- Electrification of the Gawler-to-Adelaide rail line to improve the efficiency, safety and amenity of public train travel, as well as increase the patronage along this rail line. This upgrade has been touted for by the State Government for the last decade. It is about time it was just done.
- Ensuring land zoning in the immediate vicinity around key interchanges at Mawson Lakes and the Salisbury CDB remains supportive of medium to high-density mixed-use residential and commercial development. The importance of retaining appropriate zoning around the Salisbury interchange as part of the CBD development is explored in greater detail in the next section.
- Reserving (and in some cases acquiring) strategically important parcels of land to aggregate development blocks to accommodate these types of medium to high density developments.

Timing objective

Action: Improve public transport linkages between education training sites

Improving public transport linkages between the vocational and university education institutions located both in Salisbury and across the northern suburbs would reduce the costs and barriers to post-school education, as well as support educational pathways between vocational and university level education – both explored as opportunities for action.

Improving the frequency and safety of train and bus services linking the Salisbury CBD, Elizabeth and Regency Park campuses of TAFE SA, as well the UniSA campus at Mawson Lakes during the day and night, and on weekends, would help to improve access to higher learning, and expand local course offerings.

The extent to which existing service provision are sufficient in terms of routes and frequency of service should be reviewed through time and movement studies. Passengers' experiences in using these services, and their perceptions of these services, must improve if the services' potential is to be realised and respective service requirements met.

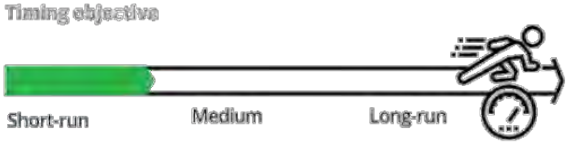
Timing objective

Action: Undertake on-demand transport trials between activity centres

A solution to improving public transport linkages between Salisbury's centres of education could be a trial of 'on-demand' bus services. This could be similar to the types of on-demand public transport bus services are currently being trialled by the NSW Government in parts of Sydney. The success of on-demand bus services in NSW have seen the number of trial sites grow from one in 2017 to four in 2019.[79] These pilot programs have seen the NSW Government partner with private sector operators to deliver on-demand services.

Even more ambitious would be to combine on-demand services with a trial of autonomous bus services. This would also be a practical and worthy application of a trial of a 5G mobile network (explored earlier).

Timing objective



Action: Investigate 'last mile' transport improvement projects

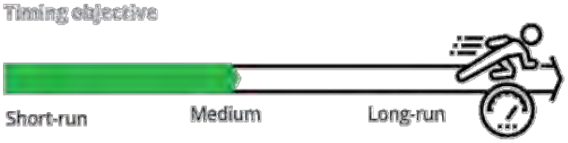
Investment in road infrastructure upgrades could be made to improve private transport options, particularly for freight transport, within Salisbury. While major road infrastructure projects, such as the soon to be completed Norther Connector, are necessary and worthy investments for the future of Salisbury, there are also equally important but smaller-scale improvements that could also be made.

For example, certain stakeholders from the local transport industry expressed a need for several 'last mile' road improvements. These include:

- The grade separation of the Park Terrace rail-crossing located at the Salisbury CBD.
- Duplication of Elder Smith Road, which runs east-west through Mawson Lakes, and connects two main north-south arterials (the Salisbury Highway to Main North Road).
- An extension of Elder Smith Road from the Salisbury Highway, where it currently terminates, through to Port Wakefield Road, with appropriate intersections to be installed.
- An upgrade of the intersection of Waterloo Corner Road and Heaslip Road as well as the intersection of Edinburgh Road and Heaslip Road.
- B-triple access to Edinburgh Parks and the Direk industry cluster from the Northern Expressway and Port Wakefield Road and associated upgrades within Edinburgh Parks to enable B-triple movements.
- Improving road freight access through Green Fields, particularly along Ryans Road, Burton Road and George Street.

These are also examples of the types of access issues that are likely to increasingly arise as Salisbury's economy and population grow. And, as identified earlier, further highlight the need for over the horizon preparation and infrastructure planning to future proof Salisbury's highly prized transport corridors.

Timing objective



79. Transport for NSW, *On Demand pilots enter next phase* (May 2019), NSW Government <https://www.transport.nsw.gov.au/news-and-events/media-releases/on-demand-pilots-enter-next-phase>

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7. Developing places and perceptions

7.1 Shaping perceptions

Although difficult to quantify, perception is one of the most important elements in investment decisions, and therefore economic development. The way in which a region or community is perceived by itself and by others influences all manner of decisions that affect the growth trajectory of an economy. Whether positive or negative, perception plays a vital role in how regions grow. For example, at an individual level perception plays a role in determining people's decision about where they live. For businesses, perception can determine where certain firms choose to invest, and the level of that investment.

Changing the attitudes of others is challenging, as prevailing perceptions are typically grounded in history. Negative perceptions are difficult to shake, even if the underpinning assumptions are no longer accurate. Conversely, positive perceptions can be challenging to cultivate. Perceptions and attitudes have a tendency to be self-fulfilling. Changing the attitudes of others, therefore, begins by improving a region or community's perception of itself.

Consultations undertaken in preparing this report revealed varying perceptions of Salisbury. At a broader Adelaide-level, Salisbury is synonymous with disadvantage. A somewhat parochial perception, this view tends to reflect Salisbury's working-class history more than current realities. More importantly, this view doesn't match the positive lived experience indicated by those who visit and migrate from interstate or overseas. Moreover, parochial viewpoints about Salisbury tend not to go beyond Adelaide. Perceptions held by interstate and overseas investors and decision-makers tend to be more objective in their assessment and based on the prevailing conditions relative to a national or global scale.

The City of Salisbury has a number of positive brand assets (with examples including the reputation of the Council, the Northern Connector, Edinburgh Defence Precinct, SA Produce Markets and Mawson Lakes (both the area and the UniSA campus)) which can be used to shape perceptions and attract investment in the area. To do this, a coordinated marketing strategy is required to target nuanced messages to different stakeholders at a range of different levels.

7.2 The importance of urban amenity

Inextricably linked with perception is the urban environment and amenity. The quality of local amenities, services, and street-scaping all feed in to how residents and businesses consider their local community and, in turn, determines the attractiveness of a region to new residents and firms. With this in mind, the improvement of urban amenity is critical to the economic growth of Salisbury.

Amenities such as quality roads and footpaths, street lights, trees and parks, have the ability to drastically change the experience of local residents and workers. Deloitte's report on reconsidering the purpose of place found that the natural amenity of an area must be a factor if place is to drive the prosperity in a region.[80]

Deloitte identified four dynamic forces that interact to flourish place:

- people
- community
- technology
- governance.

On paper at least, Salisbury currently ticks all the boxes in terms of the urban features required for successful place-making – proximity to schools, shops and health services; access to a range of recreation and sporting facilities; the presence of footpaths, street lighting, and open natural spaces. However, it is not simply about the existence of these attributes at a location that contribute to the amenity of an area. It is about the quality of these attributes, how they interact with one another and their engagement with the local community to create a pleasant and safe environment where people want to live and work.

On the one hand, improving the quality of the urban environment has the ability to instil an increased sense of pride and opportunity among local residents and businesses about their local community. And, shift attitudes about Salisbury as the 'place to be', rather than as a stepping-stone on the way to somewhere else. On the other hand, attractive place-making has the potential to further attract skilled workers and investors to Salisbury. Businesses desire locations that not only benefit their operations but also benefit their workforce. Improving experiences within the physical environment of Salisbury will result in visitors valuing their experiences, potentially leading to investment in the region.

The challenge for the Salisbury region is to establish an urban structure that not only encourages industry development, but also contains attractive residential urban spaces.

80. Deloitte, Building the lucky country: the purpose of place reconsidered (2015) <https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Building%20Lucky%20Country/deloitte-au-purpose-of-place-bltc-5-031015.pdf>

Communicate the positive experiences and success stories
Salisbury is home to some 7,200 active businesses. Many of these are large and well-known global brands that have found success from being located at Salisbury. The positive stories of local firms and the experiences of their workers should be louder and heard more frequently. Of particular interest is how firms within Salisbury's key industry sectors are leveraging local strategic assets to further expand and grow their businesses. Recent examples include:

- The expansion of RM Williams' through the relocation and consolidation of their design and corporate functions with their existing manufacturing operations at Salisbury South.
- The expansion of Bickford's beverage manufacturing operations at Salisbury South.
- The establishment by YourDC of South Australia's most sophisticated Data Centre located at Edinburgh Parks.
- The establishment of Raytheon Australia's Centre for Joint Integration at Technology Park to leverage the local defence assets located at the Edinburgh Defence Precinct as well as at Techport in Port Adelaide.

These stories should be targeted toward the industry sectors where Salisbury has a competitive advantage, as well as those businesses that could benefit from Salisbury's many strategic assets and existing business ecosystems.

Action: Review marketing strategy and media buy
The City of Salisbury already engages in a range of activities to promote local industry and businesses. It produces an extensive range of marketing and promotional materials, along with sponsorships, showcasing the local economy.

Deloitte has not undertaken a detailed review of the City of Salisbury's marketing strategy and the campaigns it undertakes to shape perceptions and attract investment. Consultations with the City of Salisbury suggested the strategy was moving into a second stage to not only focus on the local market but to also grow profile at a national level at the time this report was finalised.

In undertaking this review, considerations should be had regarding the targeting messages and messaging toward different stakeholder groups, with particular emphasis on differentiating between local investors and non-local (i.e. interstate and international) investors who are likely to be working from different sets of starting assumptions.

As an example, non-local investors are unlikely to have the same pre-conceived notions of the level of disadvantage in Salisbury as held by other investors, and may be less familiar with the strategic linkages between the Salisbury area, the Adelaide CBD and other key assets.

Consideration should also be had as to how the City of Salisbury engages digitally, and how it communicates and promotes its message online and through social media.

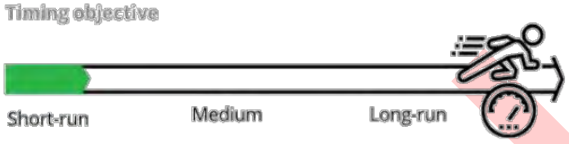
Timing objective

Action: Promote the City of Salisbury's 'business friendly' reputation and credentials

Consultations undertaken in preparing this report suggest the City of Salisbury has a strong reputation among the business community and public-sector as being 'business friendly'. Its consultative, communicative, and efficient approach to development approvals, industry support and advocacy have elevated the reputation of the Council relative to other Adelaide local government jurisdictions, making it a key point-of-difference and drawcard to prospective investors.

There is an opportunity for the City of Salisbury to better leverage its positive reputation and promote the services it offers. This should be considered as part of a review of the Council's marketing and communications strategies (explored earlier). Promotion should target prospective investors and multinationals from interstate and overseas, as well as toward intrastate investors looking to invest in increased capacity in Salisbury (i.e. by businesses with an existing presence in the area) or to consolidate operations in some of the larger greenfield and brownfield developments available in the Council area.

Timing objective



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Lifting the quality of Salisbury's urban amenity

The perception among local community and industry stakeholders is that there are significant differences in the quality of urban amenity across the broader Salisbury region. While certain areas within Salisbury are perceived to have high urban amenity, specifically Mawson Lakes, there are many others that are considered as being unattractive and unsafe. Other areas are perceived to be associated with disadvantage, regardless of whether this is true or not. As a result, this acts as barrier for existing businesses and employers when attracting and retaining skilled workers, as well as a deterrent to new investment.

There are several opportunities for the City of Salisbury to improve the urban landscape, amenity, and liveability both in terms of lifting the level of quality, as well as the consistency of this quality across the Council area.

Action: Improve streetscaping and urban landscaping

Conversations with local industry and community stakeholders consistently identified the quality of streetscaping and the urban landscape across the City of Salisbury as suboptimal. Pleasant and safe urban landscapes were identified as being important for both:

- Firms, when attracting and retaining skilled workers, and when making an impression on visitors, customers, and investors.
- Workers, when determining their mode of transport to and from work (e.g. driving versus catching public transport or using other forms of active transport).

Particularly important is that improvements to streetscaping and urban landscaping extend to industrial areas, rather than just residential, transport, and retail activity precincts, and also consider the amenity and safety for shift workers and those working on weekends.

The type of streetscaping improvements that would be beneficial to particular areas largely depends on the type(s) of activity occurring in that particular precinct, with knowledge-intensive, mixed use precincts typically requiring higher levels of amenity improvements relative to single-use, industrial precincts, which typically require safety, wayfinding and signalling improvements.

Ideally, improvements would be made to achieve consistent levels of streetscaping within precinct categories across the Salisbury area (i.e. a common level achieved by commercial precincts, and another for industrial precincts). This would require the adoption of service standards for amenity levels within different types of commercial and industrial precincts across the Council area.

Suggested improvements (that will be more or less suited to particular types of precinct) include

- Streetscaping to create pleasant urban landscapes and sense of arrival, particularly along key arterial roads.
- Enhanced street lighting and other safety and security features, particularly around public transport stops and industrial precincts.
- Footpaths and curbing to improve safety and accessibility, and to encourage walkability.
- Cycling infrastructure with bike lanes and dedicated bikeways to encourage active transport and recreation in a safe environment.

These improvements could be achieved by reprioritising existing allocations, as well as through existing maintenance programs. Input from local firms in the immediate vicinity and those who are most likely to be affected or benefit from streetscaping should also be sought well in advance.

Timing objective

Action: Investigate the use of 'betterment' levies to fund urban upgrades

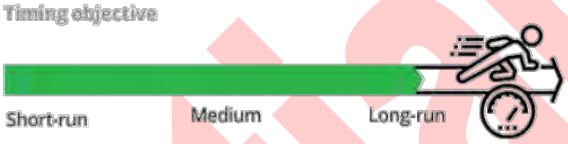
The concept of using 'betterment' levies to fund urban landscaping improvements is another possible solution to help lift the quality of urban amenity in Salisbury. The concept of a betterment levy could vary, ranging from additional funds raised from a specific industry cluster or residential suburb for the purpose of a specific urban project with relevance to that community, to simply identifying the share of funds in the Council rates already paid that go toward streetscaping and urban improvements.

Consultations undertaken in preparing this report noted historic examples of similar initiatives that had been used within the Council area (i.e. special rates levied on properties in the Globe Derby and the Salisbury CBD areas) to fund specific infrastructure and marketing initiatives.

While the concept of raising rates may conflict with efforts to maintain or improve cost competitiveness, certain communities within Salisbury, particularly businesses within the various activity clusters, may be attracted to the concept if it helped to overcome shared problems or to further common interest. Betterment levies would need to be targeted and purposeful, and best suited to communities with a commercial imperative and areas where urban amenity is perceived to be lowest and the ability of levy payers to accrue benefits is highest. Ideally, betterment levies would also be most useful when targeted toward funding projects that promote or facilitate growth in high value-add activities.

The implementation of betterment levies need to be consultative and well-communicated. This would involve Council working hand-in-hand with local industry and business clusters to identify their common and most pressing urban amenity challenges and beneficiaries' willingness to pay. Notwithstanding this, the introduction of such levies typically has the most chance of success when their adoption is championed by the business community that would directly benefit from the additional expenditure, rather than being perceived as imposed by Council.

Timing objective



Activate Salisbury's CBD

In comparison to the more modern and cosmopolitan feel of Mawson Lakes, the Salisbury CBD currently does not contain the same amenity values. Despite this, the Salisbury CBD is the civic centre of the City of Salisbury, serving as an important public services and transport hub, with a range of retail and consumer outlets.

The transformation of the CBD is not dissimilar to other projects across Australia. The rapid population growth of South West Sydney led to the redevelopment of the Campbelltown CBD, with a focus on land use and urban structure. In a CBD redevelopment, public transport improvements must also be complemented by improvements to the road network. These improvements must have a focus on attractive place-making, to ensure walkability in the CBD.

Action: Accelerate the renewal of the Salisbury CBD, with the redevelopment of the Salisbury Interchange at its centre

The City of Salisbury recognises the current investment underperformance and future opportunity of the CBD, having commissioned a Renewal Strategy in 2012 to guide master planning and redevelopment. Early works have been undertaken in implementing this redevelopment strategy, with changes in planning requirements to support greater density, the adoption of an urban design framework to guide future investment, the construction of a new Community Hub and planning for upgrades to John and Church Streets.

Actively pursuing the redevelopment of the CBD should be an ongoing and long-run priority for the City of Salisbury as a mixed use precinct driving commercial, retail, civic and recreational activities amongst the local and surrounding populations.

The recent development of an investment attraction framework by the City of Salisbury is a prudent step towards implementing the broader renewal strategy. This identifies investment opportunities and assess the markets appetite for a redevelopment. Most importantly it provides the Council with a roadmap detailing the steps that need to be taken and the decisions that need to be made. Progressing the framework and actioning the next steps should not be delayed.

Recent work undertaken by Jones Lang LaSalle (provided by the City of Salisbury and sighted by Deloitte) indicate market gaps exist in experiential retail, childcare, aged care and residential development (around the periphery) and this provides opportunities for future investment. Council has the opportunity to influence this by the release of some of its land holdings in the centre to market, either through the sale of individual parcels or the acquirement of a development partner for multiple sites.

Revisiting and refreshing the Renewal Strategy to develop a detailed and unified vision for the future direction of precinct should be developed as a priority. The recent development of urban centres interstate, such as Chatswood or Westmead in Sydney, provide excellent blueprints for building a dense urban residential and commercial environment integrated with public transport connections.

A similar opportunity exists with respect to the redevelopment of the Salisbury Interchange – possibly in conjunction with the Gawler electrification project and surrounding private sector landholders. Improvements to transport connectivity could help to make the Salisbury interchange a focal point of the CBD redevelopment and a significant activity centre in its own right, as well as enabling the movement of people (via the intersection between north-south and east-west public transport corridors connected by bus and train public transport connections) as well as activities within the broader CBD precinct (via additional foot-traffic and activity that an improved interchange could generate).

Infrastructure improvements and service upgrades involving the interchange could include:

- the current Gawler-electrification project
- improved coordination between bus and rail services to reduce waiting and travel times
- reviewing the frequency of non-stop rail services between the Salisbury CBD, Mawson Lakes and Adelaide's CBD, acknowledging potential implications for interactions with road networks
- the realignment of tracks and redevelopment at the Salisbury railway station incorporating:
  - realignment of freight rail lines along the Northern Connector corridor
  - removal of the level crossing at Park Terrace
  - upgrades to the general surrounds of the interchange to improve safety and amenity
  - staged development of multi-storey development adjacent to the Salisbury interchange, with initial stages designed and engineered to allow for subsequent stages
- Improving the infrastructure connections from Tea Tree Gully and the proposed O-Bahn extension to the Salisbury CBD, and incorporate with the existing bus and rail interchange

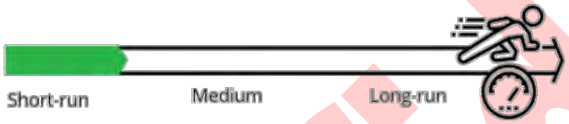
Greater density and amenity supported by this kind of redevelopment around the interchange will support retail and service outlets proximate to the interchange, further enhancing retail and commercial activities in the Salisbury CBD.

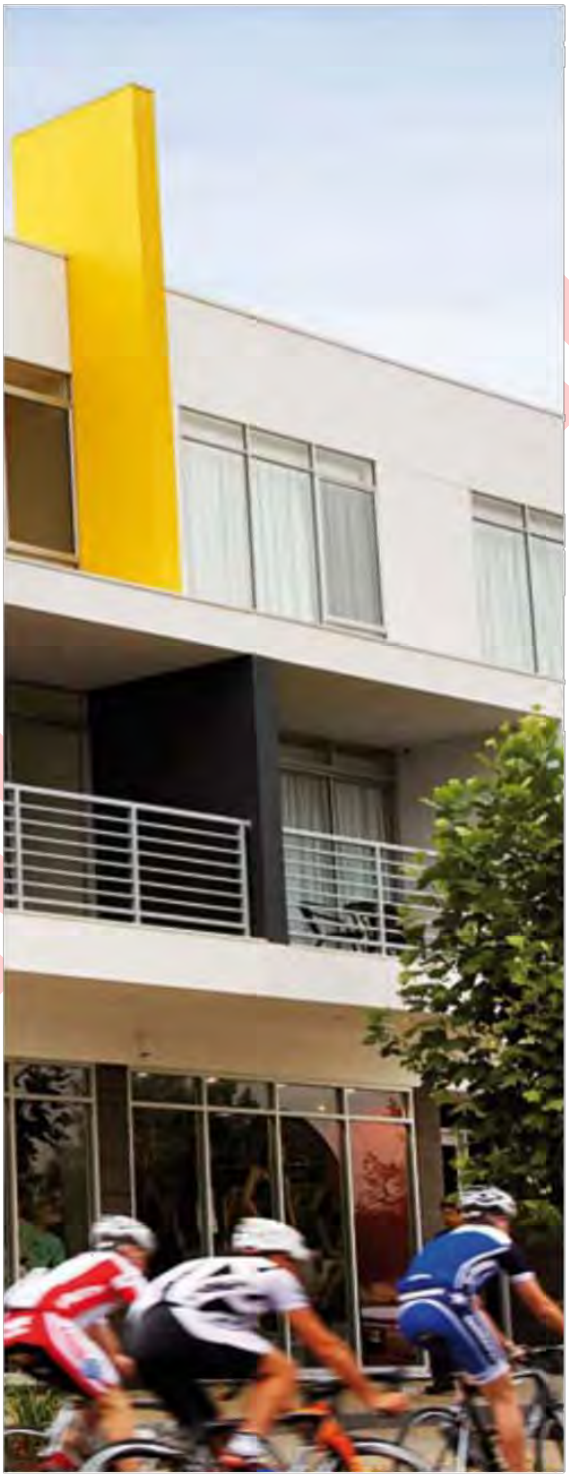
Other actions which could be taken to accommodate broader redevelopment in the Salisbury CBD include:

- Development of an agreed approach with the State Government on upgrades to Commercial Road, Park Terrace, existing TAFE and Police Station sites as well as the interchange (mentioned previously).
- Planning for and decisions to enable zoning, as well as the disposal and swaps of both Council and State Government land assets.
- Market sounding to test investor demand.

Extensive and inclusive consultations with existing local stakeholders, as well as marketing of 'the vision' to external and prospective stakeholders.

Timing objective





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Appendix 4. Strategic Growth Framework Bolivar & Waterloo Corner Engagement Plan

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STRATEGIC GROWTH FRAMEWORK – WATERLOO CORNER AND BOLIVAR CORRIDOR

STAKEHOLDER ENGAGEMENT PLAN

Prepared for:
City of Salisbury

Date:
19/04/2022

create • manage • deliver | land • cities • communities

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Document Control

Revision	Description	Author	Date
v1	Draft	CM	14.02.2022
v2	Final	CM	25.02.2022
v3	Endorsed	CM	11.03.2022
v4	Updates for PPC Report	CM	08.04.2022
v5	Update following EM Feedback	CM	19.04.2022

Approved by: Date:

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Contents

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1 Purpose & Format of the Engagement Plan

This engagement report has been prepared by Holmes Dyer for the City of Salisbury.

The purpose of this engagement plan is two-fold as described below:

- Purpose 1 – The Stakeholder Engagement Plan has been prepared to outline the engagement approach, objectives, scope of influence, key messages and map the stakeholder and affected community for the study area. This engagement plan will be used to manage the consultation and stakeholder input into the preparation of the Strategic Growth Framework – Waterloo Corner and Bolivar Corridor Report.

- Purpose 2 – The Stakeholder Engagement Plan has been prepared in a format that aligns with the Planning & Land Use Services Community Engagement Charter and in a format that will be required as part of any future Code Amendments that may be recommended as an outcome of the Strategic Growth Framework.

  While the engagement plan addresses the standard areas required by the Community Engagement Charter and general requirements as set out in Section 73(7) of the *Planning, Development and Infrastructure Act 2016* (the Act), it is anticipated that any future Code Amendment would have regard to this engagement plan and update as required to respond to the individual Code Amendment, nominated Designated Entity and ensure the legislative compliance under the Act.

  At a minimum, it is recommended that any future Code Amendment Engagement Plan should extract and update as appropriate the community and stakeholder mapping and engagement approaches included within the document. This will ensure a coordinated approach and consistent messaging to key stakeholders is adopted and ensure a high quality, consistent and fully informed engagement outcomes are achieved in guiding redevelopment of the Waterloo Corner and Bolivar Corridor Study Area.

While generally aligned to the *Community Engagement Charter – April 2018* released by the State Planning Commission, the content of this engagement plan has also considered the requirements as set out in the *City of Salisbury - Community Consultation Policy* which has been prepared in accordance with Section 50 of the *Local Government Act 1999*.

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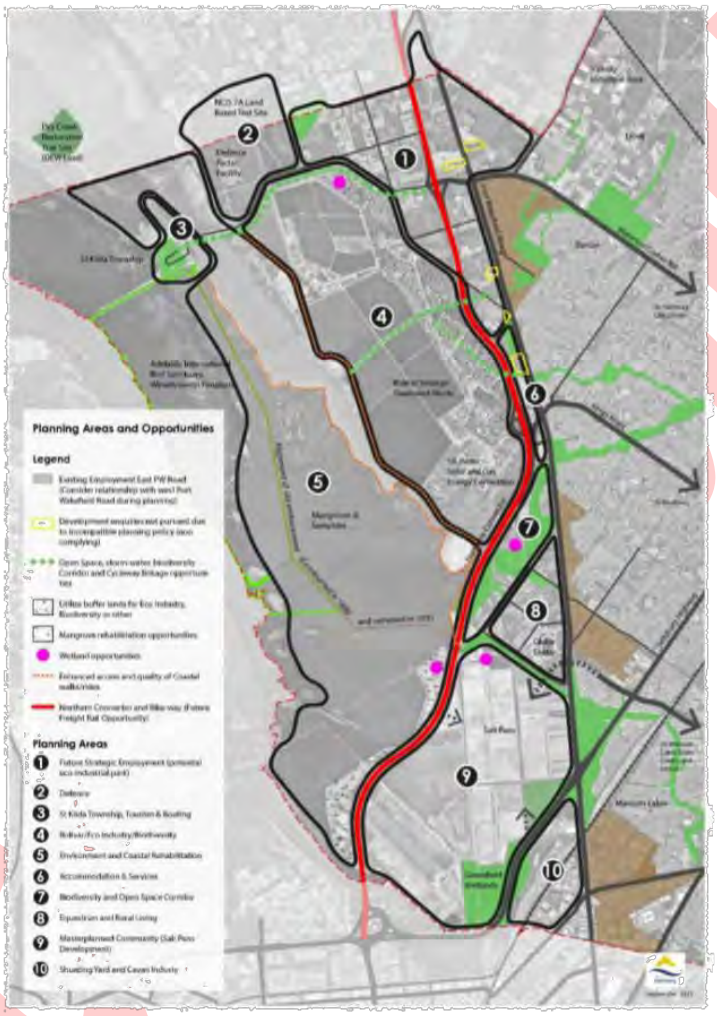
2 Background Information

2.1 What is the Strategic Growth Framework?

The City of Salisbury City Plan 2035 has a critical action to open new economic growth and development opportunities in a coordinated manner for the land west of Port Wakefield Road. Across 2021, Council staff undertook a high level planning exercise which identified 10 key planning areas for the area west of Port Wakefield Road as identified on Figure 1.

Figure 1. Planning Areas and Opportunities City of Salisbury Plan September 2021



The Strategic Growth Framework seeks to build on the high-level planning work already completed by the City of Salisbury to develop a structure plan at a precinct-by-precinct level for a priority target area of the overall planning area, being specifically:

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- Planning Area 1 – Future Strategic Employment (potential for an eco-industrial park)
- Planning Area 6 – Accommodation and Services
- Part Planning Area 7 – Biodiversity and Open Space Corridor lands north of the Little Para River (sites fronting Port Wakefield Rd will be considered for employment)

The planning area covers a total land area in the order of 950 hectares and approximately 280 individual land parcels.

The Study Area for the Strategic Growth Framework – Waterloo Corner and Bolivar Corridor is shown in Figure 2.

Figure 2. Strategic Growth Framework Investigation Scope Map – City of Salisbury September 2021

The balance of the Planning Areas has existing projects/investigations or level of priority that is being progressed outside the Strategic Growth Framework but would likely involve a common set of key stakeholders.

2.2 Why is this Strategic Growth Framework required?

The study area land is currently zoned Rural, Open Space, Caravan and Tourist Park, Deferred Urban and Rural Horticulture.

The City of Salisbury City Plan 2035 identifies the need for strategic planning in this areain response to several infrastructure and land use planning changes within and surrounding this land over recent years. Specifically, the following influences were identified by the City of Salisbury as part of the early project scoping:

- Northern Connector completed in 2020 which improves access to parcels between Summer Road and Council's northern boundary.
- The Rural Aircraft Noise Development Plan Amendment (DPA) which sought to rezone the existing Rural zone at Diment Road to Industry was discontinued due in part to the infrastructure costs required to facilitate bringing this land to market.
- Increasing volumes of private sector enquiries to develop parcels within the area for industry and commercial rather than horticultural uses due to the proximity to the Northern Connector and Port Wakefield Road.
- Increasing enquiries from planning consultants on behalf of landowners in relation to rezoning multiple land parcels.
- Pressure for urban development with increasing unauthorised development of land in the area for non-horticultural uses
- Significant increase in sales and development activity within Edinburgh Parks and the Vicinity Industrial Base demonstrating the strength of the employment offer in Salisbury and Playford in the current economic climate and because of the significant infrastructure investments.
- No immediate plans to develop the Dry Creek Salt Fields land which may have included commercial activities requiring alternate land offerings to be identified to meet this potential demand.
- Globe Derby Park commercial development initiatives (GIC land plus FUG preliminary analysis for South Australian Harness Racing Club (SAHRC)) has commenced that will need to be coordinated with recommendations across the broader precinct.

The City of Salisbury has an objective to transition this area towards employment zoned land (if found appropriate through the Strategic Growth Framework investigations) in a coordinated way through, the forward planning of infrastructure requirements and staged investment that supports orderly land use changes and economic development outcomes.

The current 30 Year Plan for Greater Adelaide (2017) identifies the area west of Port Wakefield Road for:

- Future urban growth area (unzoned) on for the Dry Creek Salt Fields (Planning Area 9 outside the scope of the Strategic Growth Framework).
- Rural Living at Globe Derby (Planning Area 8 outside the scope of the Strategic Growth Framework)
- Future freight railway link along the Northern Connector Corridor (Traverses Planning Area 1, 6, 7 and 9 including land within the Strategic Growth Framework Scope.
- Terrestrial Nature Protection Area encompassing the mangrove and Barker Inlet (Planning Area 5 and 7 including land within the Strategic Growth Framework in respect to the bio-diversity corridors that connect to this significant State Protection Area.
- Ensure land use planning in and around the district aligns with projects for industry growth and revitalisation and anticipated by the Northern Economic Plan.

The State Government have announced the new Regional Plans will start being developed in 2022 and will replace the current 30 Year Plan for Greater Adelaide. At this stage it is unclear what the timing for metropolitan regional plan will be but likely they will be developed after areas outside metropolitan Adelaide, it is assumed based on

the available information that the metropolitan Regional Plan is likely to be completed in 2023/24. The Strategic Growth Framework will be a key input to the regional planning process. By proactively preparing the Strategic Growth Framework in 2022, Council will be in a position to inform the scoping and background investigation for the Greater Adelaide Planning Region. In addition, the precinct planning, technical investigations, infrastructure requirements and final land use recommendations can directly inform the precinct level recommendations within the Greater Adelaide Regional Plan and "streamline" future Code Amendments.

2.3 What does the Strategic Growth Framework hope to achieve?

The Strategic Growth Framework hopes to achieve the following objectives:

- A fully informed, consolidated and coordinated growth framework for the area, to inform future Council decisions relating to more detailed infrastructure planning budget requirements and the orderly sequencing of Council and Proponent led Code Amendments.
- Potential infrastructure agreement requirements
- Economic Growth and Job creation
- A planning framework to inform the State Government's future Regional Plan process

2.4 Are there any existing strategies, reports or plans relating to the Study Area?

There are several existing reports and strategies relating to the affected area, that will be considered and expanded as part of the Strategic Growth Framework, notably.

State Government

- The Strategic Growth Framework will consider the direction as set out within the State Planning Policy and 30 Year Plan for Greater Adelaide volume of the Planning Strategy. Importantly, one of the purposes of the Strategic Growth Framework will be to inform the City of Salisbury advocacy for growth in this sector of the City of Salisbury as part of the update to the 30 Year Plan for Greater Adelaide (new Regional Plans) that will be started in 2022 and led by the State via Planning & Land Use Services.
- The Northern Adelaide Economic Plan and Directions Paper released in 2016 is no longer active and has not been replaced but provides some background information into the regional profile. To fill this void, the City of Salisbury commissioned an independent Economic Vision for Salisbury, referenced below.

Local Government

- City Plan 2035, Council's Lead Strategic Plan that identifies as a critical action a future planning requirement for a Structure Plan across the land west of Port Wakefield Road to open new development opportunities, while preserving the existing character of Globe Derby and St Kilda. This Strategic Growth Framework forms a critical input to this Structure Plan for three of the key planning areas.
- Bio-Diversity Corridors Action Plan – Produced by the City of Salisbury 2009, includes background information on the environmental and ecological corridors that run through the study area and unique environmental areas that require protection.
- Northern Connector Land Use and Transport Study (Draft) was prepared by infraPlan for the former Department of Planning, Transport & Infrastructure in 2016.

  This document was never finalised but is useful to the context of the Study Area providing background investigations that include some investigations relating to existing conditions, previous consultation, land use scenario modelling, industrial land supply and demand, land preparation requirements including some modelling and infrastructure analysis.

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Much of this work is still relevant and will be updated and considered as part of the preparation of the Strategic Growth Framework. Noting that further detailed investigations relating to traffic, infrastructure servicing, environmental and land development suitability, will likely be required to support future Code Amendments, building on the work completed as part of the Strategic Growth Framework Study.

- Greater Edinburgh Parks and St Kilda Stormwater Management Plan – a joint study produced in 2020 between City of Salisbury and City of Playford relating to current and future stormwater management.
- Economic Vision for City of Salisbury – Deloitte Study dated 2019, contains a range of updated economic and demographic profiles for the Salisbury Employment Land, and identifies the criticality for forward planning for consistent and coordinated development for the land west of Port Wakefield Road, part of which is the subject of this Strategic Growth Framework.

2.5 What have any past engagement processes (if known) identified about the Study Area?

There have been no formal engagement consultation processes over the study area to date, however a number of general enquiries relating to both development applications and potential future Code Amendments have been received by the City of Salisbury staff.

The location and type of enquiry received across the last five years has been recorded by the City of Salisbury, with each of these high interest stakeholders to be reapproached as part of this proposed engagement, to understand their intent and potential timing for investment decisions. This will enable clusters of interest to be identified that will directly influence the potential grouping and prioritisation of Code Amendments or infrastructure investment (both private and Council) that may be represented in the Strategic Growth Framework Action Plan, refer to Appendix 1, noting that the information contained within this enquiry mapping should be considered as confidential and not distributed outside the City of Salisbury.

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3 Engagement Approach

3.1. Overview

The engagement approach proposed for the Strategic Growth Framework is to build clarity and consistency of the current state, next steps, and future decision points across the City of Salisbury organisation and amongst the affected landowners.

This engagement plan generally aligns to the format and detail that will be required for any future identified Code Amendments undertaken by a private developer (whether that be an individual landowner or collection of landowners) or the City of Salisbury. Any future processes for amending the Planning and Design Code is set out in the Act. The Act requires public engagement to take place in accordance with the Community Engagement Charter. The engagement plan is required to apply the principles of the Community Engagement Charter and be endorsed by the State Planning Commission/Minister as appropriate prior to implementation.

3.2. Engagement Purpose

With this context the purpose of this engagement can be summarised as per below:

- Raise community awareness on the Council's intent to investigate future growth of the development of land west of Port Wakefield Road.
- Raise community awareness of the process and extended timing for any future proposal to rezone the land and the role that State Government, Council and the Landowner will play in this future process.
- Establish pathways for communication between Council, community and stakeholders, adjacent Councils, State Agencies and Utility providers.
- Provide clarity on the triggers, hurdles and detailed investigations that will be required to support the consideration of a more intense form of development or rezoning to ensure orderly development.
- Inform landowners or developers of the Planning & Design Code process for Code Amendments as it relates to the Strategic Growth Framework
- Provide information about range of rezoning and infrastructure options and what they will enable/mean for the affected locality.
- Enable the community to seek clarification and provide their feedback regarding the proposal at an early strategic level.
- Close the loop for participants of the consultation in how future decisions will be made regarding the Strategic Growth Framework, including how feedback from participants during the consultation process informed the study outcomes.
- Position future Code Amendments to efficiently design and deliver an engagement process that meets the requirements of the Act and the associated Community Engagement Charter.
- Ensure that a coordinated plan for consultation occurs between the Strategic Growth Framework phase and future Code Amendments and avoid duplication or misalignment.

3.3. Scope of Influence

Aspects of the project which stakeholders and the community *can* influence are:

- Provision of feedback on their own personal invesetment timing and intent for consideration in Council's planning for prioritisation and investment within the study area.

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- The land-use and zoning that may be recommended for future implementation, noting that this will be subject to future Code Amendment process and the associated technical investigations.
- Identification of gaps relating to transport, stormwtaer, interface impact, infrastructure, service and augmentation capability that require technical investigation and funding negotiations
- Refinements to the future engagement plan, within the bounds of the legislative Code Amendment Process, as approproate to support the different phases of the study.

Aspects of the project which stakeholders and the community *cannot* influence are:

- The geography of the Affected Area and decision of Council and Service Authorities relating to the invesment of upgraded infrastructure required to support an increased intensity of development (except where the private development proponent is prepared to contribute to all or part of this requried infrastructure to bring forwawrd timing.
- The standard policies and wording contained in Zones and Overlays in the Planning and Design Code as may be recommended for application to part of the study area via a future Code Amendment.
- The timing for investment decisions of adjacent neighbouring land owners investments.

3.4. Key Messages

The following messaging will underpin the engagement regarding the Strategic Growth Framework:

- The Strategic Growth Framework is a high level strategic planning exercise, that will provide guidance to Council, State Government, Service Authorities and Landowners on potential staging of precincts within the study area, infrastructure requirements, a structure plan, economic rationale and a pathway for future rezoning.
- Provide clarity of the timelines and infrastructure agreements that will be involved in any changes to the zoning and/or development capacity of an individual site so as to manage expectations of parties within this area.
- Manage expectations on future development timelines and potential, in line with Council process and upcoming regional planning from the Attorney General's Department.
- Provide clarity for all parties to inform future investment decisions and forward budget estimates.
- A collaborative process, with Council taking a lead strategic planning role to provide a framework that can bring together State Government, Service Authorities and local landowners toensure the highest and best outcome for all involved.
- Provide clarity on the next steps, responsibility and consultation processes that will occur prior to any legal changes being made to the relevant zoning under the Planning & Design Code
- Any individual consultation task set out in this plan will occur for at least 21 days (as per Councils engagement policy) but a period of four (4) calendar weeks, or more is envisaged for the majority of engagement tasks.

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4. Stakeholder and Community Mapping

Stakeholder	Level of interest in the project	Nature of interest in the project and/or the potential impact of the project	Stakeholder needs/expectations for engagement in the project	Level of engagement	Responsibility
Attorney General's Department – Planning and Land Use Services	High	Preservation of the intent of the Planning and Design Code and compliance with *Practice Direction 2 – Preparation and Amendment of Designated Instruments*	Strategic investigation input into the revised 30 Year Plan for Greater Adelaide to start in 2022, given the strategic nature of this employment land and wider relevance to Greater Metropolitan Adelaide. That the investigations and engagement adopted in the Strategic Growth Framework will inform coordinated detailed Community Engagement Plan and process(es) for any future Code Amendments that will achieve the intent of the Community Engagement Charter.	Involve – facilitate a detailed 1 on 1 discussion with PLUS to secure early feedback, and facilitate a planning workshop with PLUS, DIT and CoS as part of the project roll-out.	Workshop coordinated by Holmes Dyer via Nitsan Taylor
City of Playford	Medium	The employment land and sections of the Study Area, extend into the City of Playford with shared obligations relating to transport and stormwater investment. Playford have previously undertaken the Greater Edinburgh Parks (GEP) DPA which needs consideration from a strategic land supply perspective. CoS and Playford have previously partnered to prepare the GEP Storm water management plan which recommend infrastructure effecting this study area.	That Council is made aware of the detail of the strategic framework, have an opportunity to input information in the process and be kept informed.	Consult – Notified in writing or via email of the proposal and invited to provide feedback and share outcomes and technical investigations as applicable to planning at a regional level. Hold a 1 on 1 workshop with key Playford, CoS and HD staff to discuss the draft structure plan and findings of the industry needs analysis.	Workshop coordinated by Holmes Dyer via Chantal Milton
Owners, applicants and/or their consultant representatives who have raised enquiries relating to redevelopment within the Study Area.	High	Have demonstrated interest in investment or redevelopment of land over the last five years or who may have voiced a concern for land use changes.	That their personal investment objectives and timelines are understood and considered as part of the CoS Strategic Growth Framework.	Consult – notify in writing or via email of the proposal and invited to provide feedback. Provide an opportunity for a workshop, one on one meeting with key CoS staff and/or consultant depending on the scale of project. Involve – Opportunity to identify geographical precinct collaborations that could continue to work with Council post the adoption of the Strategic Growth Framework on detailed investigations, Code Amendments, Technical Studies as part of a prioritized development growth area where identified.	Joint branded letter, prepared by Holmes Dyer, distributed to CoS enquiry database via CoS with enquiries and one-one one meetings coordinated by CoS staff.
Owners and occupiers of the land within the study area and owners and occupiers of adjacent land to the study area boundaries and within the broader planning areas.	Medium	Impacts of the proposal on land holdings contained within the Study Area.	Landowners are made aware of the proposal, have an opportunity to input information, raise issues, and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback, with an invitation to attend a drop-in session or to meet 1 on 1 with CoS project staff during the consultation period.	Joint branded letter, prepared by Holmes Dyer, distributed to CoS enquiry database via CoS with enquiries and one-one one meetings coordinated by CoS staff.

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St Kilda and Surrounds Progress & Tourism Association	High	Interest in project given access through area for St Kilda visitors/residents	An opportunity to understand the project scope and timing and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback. Direct invitation to attend the Community Drop-in Session at St Kilda.	CoS – Internal Project Lead
City of Salisbury – Ward Councillors (West & Central) & Mayor	High	Community representatives that will be responsible for future strategic and budget decisions within the precinct	An opportunity to understand the project, next steps and engagement plan for the project ahead of any community information being distributed as part of this consultation strategy	Inform – Briefing of Ward Councillors/Mayor via offer of a project briefing by CoS project lead, if and as required, subject to timing of broader Elected Member engagement.	CoS – Internal Project Lead
City of Salisbury – Elected Members	High	Community representatives that will be responsible for future strategic and budget decisions within the precinct	An opportunity to provide input and understand the opportunities and constraints within the precinct and provide clarity to individual landowners/ community members as necessary.	Involve – Elected Member Informal Strategy Briefing in April during precinct plan development to seek early input. Endorsement of the final Strategic Growth Framework (July). Regular updates as required.	CoS Internal Project Lead with presentation by HD in the Informal Strategy Briefing in April.
City of Salisbury – Internal Staff	Medium	Ensuring individual departments and divisions have an opportunity to identify linking elements within the project leading to coordination and alignment.	Being made aware of the project and offered an opportunity to participate and share relevant material at an appropriate time during the project investigations	Consult – Internal email/workshop opportunity with key technical staff, facilitated by internal CoS staff, to ensure feedback is incorporated at suitable stages of the project	CoS – Internal Project Lead
City of Salisbury – Executive Group	High	Strategic Investigation identified in the City Plan 2035	An opportunity to be regularly briefed as the framework evolves, inform key inputs and strategic direction and sign-off on the engagement plan (this document) prior to engagement activities commencing.	Endorsement of the engagement plan (this document) in March and regular updates and input into the recommendations as the study evolves. Involve- Key advocacy meetings with strategic landowners/stakeholders, as they align to the organisation advocacy document and as may be identified	CoS – Internal Project Lead
Reconciliation Action Plan Working Group - City of Salisbury	High	Protection of registered and unregistered aboriginal heritage sites within the Study Area	Awareness of the project area, investigations being undertaken through AARD and opportunities to provide feedback on behalf of the Kaurna community.	Consult - Briefing to a RAP Working Group during the Strategic Growth Framework Process, including seeking feedback from RAP on how to best seek Aboriginal and Torres Strait Islander feedback as part of the broader Community Engagement Process.	CoS – Internal Project Lead with the support of Julie Kalms.
Defence SA	Medium	Defence land holdings and activities within or adjacent the study area precinct	Awareness of the strategic planning activity.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Australian Government – Department of Defence	Medium	Defence land holdings and activities within or adjacent the study area precinct	Awareness of the strategic planning activity.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Business SA – Chamber of Commerce and Industry South Australia	Low	Business SA has an interest in promoting investment in South Australia and included potential for an eco-industrial park in their 9-point plan to kick-start the South Australian economy	That it be made aware of the proposal, have an opportunity to participate and be kept informed on behalf of its members.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Department of the Premier and Cabinet Aboriginal Affairs and Reconciliation Division (AARD)	Low	Maintains the Aboriginal Affairs Register of sites with the City of Salisbury and areas in and around the river corridors having a high prevalence of Aboriginal Artefacts and Heritage Sites	That the required register searches be undertaken to inform the Strategic Growth Framework, and any future works consider the requirements of the Aboriginal Heritage Act and associated legislation.	Involve – AARD Register Search of Study Area and notification in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD

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Environment Protection Authority	Low	The proposed approach protects sensitive development from noise and air emissions generated from transport corridors and employment generating activities.	The EPA is made aware of the detail in the proposal, have an opportunity to input information in the process and be kept informed including provision of any license and contaminated site registers that may impact on the Study Area.	Involve – seek detail of license and study area contaminated land holdings and be notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Department for Infrastructure and Transport (DIT)	High	Consideration is given to road widening requirements, traffic investigations and Affected Area access arrangement and disposal and transfer of land identified as surplus from the Northern Connector construction. Potential budget discussions for future works identified from study scope.	That DIT is made aware of the detail in the proposal, have an opportunity to input information in the process and be kept informed of decisions relating to Port Wakefield Road access and land holdings around the Northern Connector.	Involve – seek detail on traffic volumes, hierarchy, development site access and future disposal of surplus land holdings from the Northern Connector work through their involvement in key workshops and one on one engagement through the development of the Strategic Growth Framework.	Engagement via Cirqa, and involvement in key workshop facilitated by HD involving CoS nominated representatives
Department for Environment & Water	Low	Impacts of the proposal on areas of State Environmental Significance	Department is made aware of the detail in the proposal, have an opportunity to input information in the process and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Department for Innovation and Skills	Low	Current and future land use changes and employment activities within the Study Area.	Department is made aware of the detail in the proposal, have an opportunity to input information in the process and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Department for Trade & Investment	Low	Current and future land use changes and employment activities within the Study Area.	Department is made aware of the detail in the proposal, have an opportunity to input information in the process and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Department of Primary Industries and Regions	Low	Current and future land use changes and employment activities within the Study Area.	Department is made aware of the detail in the proposal, have an opportunity to input information in the process and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
State Members of Parliament Hon Nick Champion MP, Member for Taylor	Low	The proposal is in the State Electorate of Taylor	They are made aware of the proposal to participate in the process, inform constituents, and be informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Federal Members of Parliament	Low	The proposal is in the Federal Electorate of Spence	They are made aware of the proposal to participate in the process, inform constituents, and be informed.	Consult – notified in writing or via email of the proposal and invited for a briefing post the 2022 Federal Election Result, given there is no sitting member at the time of the consultation with the pending Federal Election campaign.	Joint branded letter, prepared and distributed by HD
Renewal SA	Medium	State Land Holdings within or adjacent to the Study Area	Renewal SA is made aware of the detail in the proposal, have an opportunity to input information in the process and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Electranet	Low	Impacts of the proposal on existing and new infrastructure	They are made aware of the proposal, have an opportunity to participate, influence the outcome and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Service Infrastructure Request via Greenhill

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Epic Energy	Low	Impacts of the proposal on existing and new infrastructure	They are made aware of the proposal, have an opportunity to participate, influence the outcome and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Service Infrastructure Request via Greenhill
APA Group	Low	Impacts of the proposal on existing and new infrastructure	They are made aware of the proposal, have an opportunity to participate, influence the outcome and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Service Infrastructure Request via Greenhill
SEAGAS	Medium	Impacts of the proposal on existing and new infrastructure and existing operations given the major gas line runs through the Study Area.	They are made aware of the proposal, have an opportunity to participate, influence the outcome and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Service Infrastructure Request via Greenhill
SA Water	Medium	Impacts of the proposal on existing and new infrastructure and significant land holdings immediately adjacent to the study area.	They are made aware of the proposal, have an opportunity to participate, influence the outcome and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback. Key landowner Stakeholder, additional approach via senior CoS staff to seek feedback on any property and land opportunities via direct approach.	Service Infrastructure Request via Greenhill HD/CoS Coordinated Direct Approach to Property Section.
Telstra	Low	Impacts of the proposal on existing and new infrastructure	They are made aware of the proposal, have an opportunity to participate, influence the outcome and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Service Infrastructure Request via Greenhill
NBN Co.	Low	Impacts of the proposal on existing and new infrastructure	They are made aware of the proposal, have an opportunity to participate, influence the outcome and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Service Infrastructure Request via Greenhill
Office of Recreation, Sport & Racing	Medium	Potential alignment of recreation uses within the study area to State/Regional Strategies	They are made aware of the proposal, have an opportunity to participate, influence the outcome and be kept informed.	Consult – notified in writing or via email of the proposal and invited to provide feedback.	Joint branded letter, prepared and distributed by HD
Wider Salisbury & Playford Community outside Study Area	Low	Impacts of the proposal on the broader community	They are made aware of the proposal, have an opportunity to provide feedback and understand future consultation opportunities that will be available prior to any changes being implemented as part of the future Code Amendment Process	Inform – project information page on Council website, inclusive of the same information sent to stakeholders within the study area, details of next steps and future consultation activities as part of future Code Amendments.	Content to be produced by CoS and HD, website page managed by CoS during study period and post the completion of this initial phase of work.

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5. Proposed Engagement Techniques -Applying the Charter Principles

Stakeholder	Engagement technique
Attorney General's Department – Planning and Land Use Services	Direct engagement and involvement in a detailed planning workshop to secure PLUS understanding of project and scope and ensure project outcomes align to the strategic investigation input into the 30 Year Plan for Greater Adelaide Revision and future Code Amendments.
City of Playford	Written or email correspondence to the Council (Mayor and Chief Executive) providing information about the Strategic Growth Framework inviting Council to provide feedback on the proposal and share any regional investigations, technical data or advocacy opportunities as may be identified building of their Greater Edinburgh Parks work completed in 2021.
Owners, applicants and/or their consultant representatives who have raised enquiries for re-development within the Study Area.	Direct phone call to each representative, where a contact number is available, by a City of Salisbury staff member to build and maintain the relationship with key stakeholders who have previously indicated interest in the future planning for a landholding within the study area. Written correspondence (direct letter) prepared by HD and distributed via CoS mailing list data to landowners and occupiers to: • Identify the piece or pieces of land about which the specific study area will apply • Describe the project • Indicate the planned engagement and opportunities to provide feedback, both in current process and ongoing. • Provide information about the consultation that is to occur, alignment the Community Engagement Charter, and participation opportunities • Provide contact details of the nominated representative at the City of Salisbury to direct any enquiries or clarifications on the proposal. • Invitation to attend a focused invitation only drop-in session to seek more information and inform the project outcomes, separate to the general community session. Two held across consultation period at the Salisbury Community Hub 34 Church Street, Salisbury.
Owners and occupiers of the land within the study area and owners and occupiers of adjacent land to the study area boundaries and within the broader planning areas.	Written correspondence (email and direct letter co-branded based on the contact details available to the City of Salisbury) providing information about the Strategic Growth Framework, directing people to a website where additional project information can be found, providing opportunities to provide feedback through online survey and who to contact for further information.
St Kilda and Surrounds Progress & Tourism Association	Direct letter to association with invitation to the St Kilda community drop-in session including an option for a specific briefing by CoS and Holmes Dyer Staff to the association at an agreed time during the broader drop-in session time.
City of Salisbury Ward Councillors (Central & West Ward) and Mayor	Briefing of Ward Councillors/Mayor via offer of a project briefing by CoS project lead, if and as required, subject to timing of broader Elected Member engagement and/or specific EM Requests.
City of Salisbury Elected Members	Informal Briefing (April 5) to inform and understand the parameters of the Strategic Growth Framework and provide input and share opportunities for community feedback back into their broader community. Ongoing update reports by City of Salisbury staff as the project and implementation plan evolves reflecting the project being a critical action within the City Plan 2035. Formal decision reports to Council in respect to the Final Strategic Growth Framework (Target date July 2022)
City of Salisbury Internal Staff	Internal workshop opportunity and internal email advising of the project objectives and scope and providing an opportunity for input and coordination areas to be raised to appropriately inform the project outcomes. Ongoing update to internal staff as necessary.
City of Salisbury Executive Group	Report to Strategic Executive for approval of engagement plan (this document) in March 2022and regular updates and input into the recommendations as the study evolves via regular meetings as required, coordinated by internal CoS project lead. Involve executive team in key advocacy meetings with strategic landowners/stakeholders, as they align to the organisation advocacy document as may be identified from time to time.
Reconciliation Action Plan Working Group – City of Salisbury	Attendance and briefing at an available RAP Working Group Meeting, by a relevant City of Salisbury staff member, recommend this session is undertaken post the return of the AARD register search and mapping of these results.
Defence SA	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.

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Australian Government – Department of Defence	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.
Environment Protection Authority	Dual branded written correspondence (email and direct letter) providing information about the Code Amendment, opportunities to provide feedback and who to contact for further information.
Business SA – Chamber of Commerce and Industry South Australia	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.
Department of the Premier and Cabinet Aboriginal Affairs and Reconciliation Division (AARD)	Online register search for registered heritage sites within the study area boundary.
Department for Infrastructure and Transport (DIT)	Direct engagement and involvement in a detailed planning workshop to secure DIT understanding of project and scope and ensure project outcomes align to the strategic investigation input into the 30 Year Plan for Greater Adelaide Revision, road access assumptions, additional investigations required and future Code Amendments. Alignment of separate negotiation process for land acquisition/disposal of surplus land to the Northern Connector corridor.
Department for Environment & Water	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.
Department for Innovation and Skills	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.
Department for Trade & Investment	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.
Department of Primary Industries and Regions	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.
State Member of Parliament Hon Nick Champion MP, Member for Taylor	Dual branded written or email correspondence to the Member of Parliament providing information about the Strategic Growth Framework and opportunities to provide feedback. Correspondence will offer an invitation for a City of Salisbury representative to meet with the Member and/or support staff.
Federal Members of Parliament	Correspondence will offer an invitation for a City of Salisbury representative to meet with the Member and/or support staff following the Federal Election in May 2022
Renewal SA	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.
Utility Providers including but not limited to SA Power Networks, ElectraNet Pty Ltd, SEAGas, APA Group, SA Water, Epic Energy, NBN and other telecommunications providers	Greenhill written correspondence (email and direct letter) providing information about the Strategic Growth Framework, opportunities to provide feedback and who to contact for further information.
Office of Recreation, Sport & Racing	Dual branded written correspondence (email and direct letter) providing information about the Strategic Growth Framework, with a specific query in respect to 'noisy' recreation activities linked to the study area and state/regional opportunities.
Wider Salisbury & Playford Community outside Study Area	• Publication of a 1–2-page fact sheet on the study to a project website page, as part of the City of Salisbury website. • Provision of a next steps information, available on the project website that identifies the process that will follow the Strategic Growth Framework and the separate detailed consultation processes, prior to any legal changes being made to the area.

Note:

- Consideration was given to translation services for material to be used for the landowner engagement. ABS Census Data identified that at the last census the languages spoken at home were
  - English- 74.2%
  - Vietnamese- 8.0%
  - Italian- 2.2%
  - Punjabi- 2.0%
  - Khmer- 2.0%
  - Greek- 1.3%

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- On balance, in discussion with City of Salisbury, based on this data and previous engagement experiences, it was determined that the letter and engagement material, if written in plain simple English, with the use of infographics, would be likely to be understood by most residents, and that for this particular engagement activity translation services would not be required unless specifically requested by a community member, where Council's standard translations services would be made available.

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6. Staging the Engagement

Stage	Objective	Stakeholders	Level of engagement	Timing
Stage 1 March 2022)	Engage key state government agencies, services and infrastructure providers	Attorney General's Department – Planning & Land Use Services	Consult Involve	Letters sent 4 days prior to the first day of the consultation period.
		Department of Infrastructure & Transport		One-one-One detailed discussions during consultation period with PLUS, City of Playford, DIT, SA Water and SAPN.
		City of Playford		Letters to balance Utility Providers including but not limited to SA Power Networks, ElectraNet Pty Ltd, SEAGas, APA Group, SA Water, Epic Energy, NBN and other telecommunications providers
		Service Authorities		
		Office of Recreation, Sport & Racing		Contact with ORSR, in respect to any identified State Gaps in 'noisy' sport that could co-locate with existing recreation activities (go-kart/gun club)
Stage 2 (March/April 2022)	Ensure consultation material is ready to "go live" on City of Salisbury Project website from the date of commencement of the planned consultation, including background material and survey content.	City of Salisbury – Media and Communications Team	Involve	Two weeks before commencement of consultation.
Stage 3 (May 2022)	Inform stakeholders and the community about the Strategic Growth Framework	Owners, applicants and/or their consultant representatives who have raised enquiries for redevelopment within the Study Area.	Consult/involve	Phone call prior to the release of information to the public and distribution of letter of proposal. Opportunity for 1 on 1 meetings or direct engagement with CoS lead staff member/consultant team as required.
Stage 4 (May 2022)	Inform broader stakeholders and the community about the Strategic Growth Framework	Owners and Occupiers of the land and owners and occupiers of adjacent land within the study area.	Consult	Letter/ Email distributed day 1 of consultation to owners/occupiers of the land and immediate adjacent land to the study area boundary. Target date for consultation commencement 02/05 with letters sent by mail 4 days prior.
		Reconciliation Action Plan Working Group		Presentation at RAP Working Group Meeting during the engagement / study period
		State & Federal Departments not listed in Step 2		Individually addressed letter being sent to the CEO of each government department.
		State & Federal Members of Parliament		Drop-in Session week 2 and week 4 one held at the Burton Park Football Centre Salisbury United Footbal Club and one held at St Kilda Progress Association Hall during the consultation period, covering both a week night and weekend morning timeslot hosted by CoS project lead and Holmes Dyer Representative. **Consultation Period closes 27 May 2022**
Stage 5 (June 2022)	Seek feedback on the effectiveness of the engagement process from participants	All participants who made a submission	Consult	As soon as practicable following the close of the consultation period.
Stage 6 (July 2022)	Inform stakeholders and the community about the impact of the engagement and outcome of the proposal	All participants who made a submission	Inform	As soon as practicable following a decision being made on the proposed Strategic Growth Framework by Council.

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7. Measuring Success

At the completion of the engagement, all participants will be invited to assess the success of the engagement against performance criteria one to four, below. The Council and their engaged consultant will assess the success of the engagement against criteria five to nine. This evaluation will be included in the Engagement Summary Outcome Report. The Engagement Outcome Report will review the limitations and successful techniques identified through this Strategic Growth Framework Engagement Period.

It is recommended that the findings in the Engagement Outcome Report be reviewed by any future Designate Entity or their nominated consultant who prepares a Community Engagement Plan for any future Code Amendments.

#	Charter criteria	Charter performance outcomes	Respondent	Indicator [2]	Evaluation tool [3] Exit survey / follow-up survey	Measuring success of project engagement
1	Principle 1 Engagement is genuine	▪ People had faith and confidence in the engagement process.	Community	I feel the engagement **genuinely sought** my input to help shape the proposal	Likert scale - strongly disagree to strongly agree	Per cent from each response.
2	Principle 2 Engagement is inclusive and respectful	▪ Affected and interested people had the opportunity to participate and be heard.	Community	I am **confident my views were heard** during the engagement	Likert scale - strongly disagree to strongly agree	Per cent from each response.
			Project Lead	The **engagement reached** those identified as community of interest.	▪ Representatives from most community groups participated in the engagement ▪ Representatives from some community groups participated in the engagement ▪ There was little representation of the community groups in engagement.	Per cent from each response.
3	Principle 3 Engagement is fit for purpose	▪ People were effectively engaged and satisfied with the process. ▪ People were clear about the proposed change and how it would affect them.	Community	I was given sufficient **information** so that I could take an informed view.	Likert scale - strongly disagree to strongly agree	Per cent from each response.
				I was given an **adequate opportunity to be heard**	Likert scale - strongly disagree to strongly agree	Per cent from each response.
4	Principle 4 Engagement is informed and transparent	▪ All relevant information was made available and people could access it. ▪ People understood how their views were considered, the reasons for the outcomes and the final decision that was made.	Community	I felt **informed** about why I was being asked for my view, and the way it would be considered.	Likert scale - strongly disagree to strongly agree	Per cent from each response.
5	Principle 5 Engagement processes are reviewed and improved	▪ The engagement was reviewed and improvements recommended.	Project Lead	**Engagement was reviewed** throughout the process and improvements put in place, or recommended for future engagement	▪ Reviewed and recommendations made ▪ Reviewed but no system for making recommendations ▪ Not reviewed	Per cent from each response.
6	Engagement occurs early	▪ Engagement occurred before or during the drafting of the planning policy, strategy or scheme when there was an opportunity for influence.	Project Lead	Engagement **occurred early enough** for feedback to genuinely influence the planning policy, strategy or scheme	▪ Engaged when there was opportunity for input into scoping ▪ Engaged when there was opportunity for input into first draft ▪ Engaged when there was opportunity for minor edits to final draft ▪ Engaged when there was no real opportunity for input to be considered	Per cent from each response.
7	Engagement feedback was considered in the development of planning policy, strategy, or scheme	▪ Engagement contributed to the substance of a plan or resulted in changes to a draft.	Project Lead	Engagement **contributed to the substance of the final plan**	▪ In a significant way ▪ In a moderate way ▪ In a minor way ▪ Not at all	Per cent from each response.
8	Engagement includes 'closing the loop'	▪ Engagement included activities that 'closed the loop' by providing feedback to participants/ community about outcomes of engagement	Project Lead	Engagement **provided feedback to community about outcomes** of engagement	▪ Formally (report or public forum) ▪ Informally (closing summaries) ▪ No feedback provided	Per cent from each response.
9	Community Charter is valued and useful	▪ Engagement is facilitated and valued by planners	Project Lead	Identify **key strength** of the Charter and Guide Identify **key challenge** of the charter and Guide		

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8. Closing the loop and reporting back

How will you respond to participants?	Who is responsible?	When will you report back?
Keep a contact register of all participants who lodge formal submissions or make telephone or email enquiries during the engagement period to use to provide feedback on the process and outcomes	City of Salisbury project lead/ Holmes Dyer Consultant	Ongoing across the engagement period
Summarise and sort feedback into a set of key themes and provide to engagement participants for their information.	Engagement Consultant	As soon as practicable post-consultation
Seek feedback on the effectiveness of the engagement process from all participants through an evaluation survey distributed via an online survey platform to all community stakeholders who participated	City of Salisbury project lead/ Consultant	Incorporate outcomes from the online survey platform in the Engagement Summary Report
Request written feedback from the Council (Client) on the process.	Engagement Consultant	Incorporate feedback in the Engagement Summary Report
Prepare an Engagement Outcome Report and make it available to all stakeholders identified in this Engagement Plan.	Engagement Consultant	As soon as practicable post-consultation
Publish Engagement Outcome Report, once presented through Council on the project web page on the City of Salisbury website.	City of Salisbury	As soon as practicable post-consultation
Inform stakeholders and the community of the outcome and next steps of the Strategic Growth Framework.	City of Salisbury	As soon as practicable following a decision being made on the proposed Strategic Growth Framework

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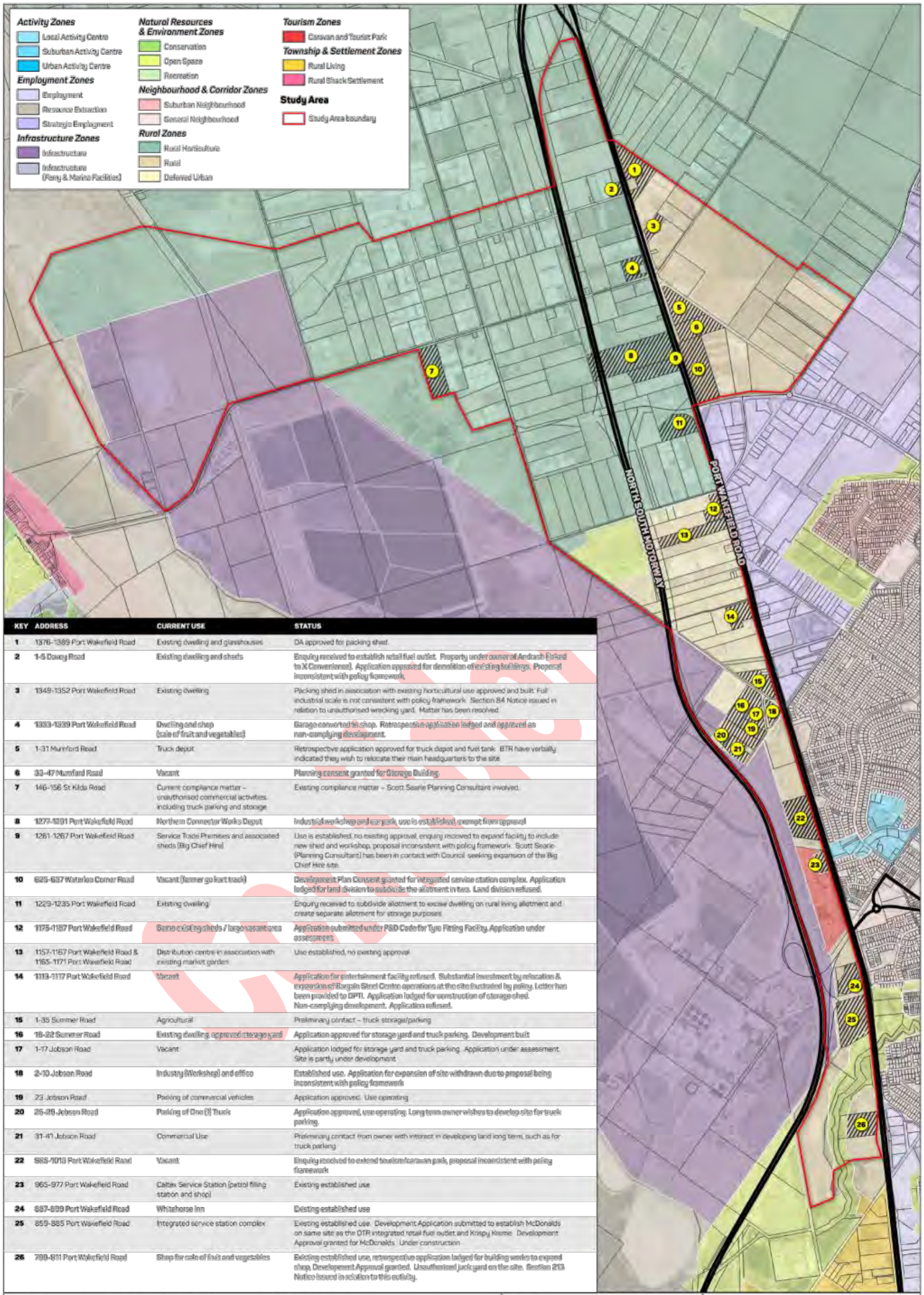
Appendix 1 – Current Development Interest – Enquiry Mapping (CONFIDENTIAL)



KEY	ADDRESS	CURRENT USE	STATUS
1	1376-1389 Port Wakefield Road	Existing dwelling and glasshouses	DA approved for packing shed
2	1-5 Davey Road	Existing dwelling and sheds	Enquiry received to establish retail fuel outlet. Property under owner of Andrash (linked to X Convenience). Application approved for demolition of existing buildings. Proposal inconsistent with policy framework.
3	1348-1352 Port Wakefield Road	Existing dwelling	Packing shed in association with existing horticultural use approved and built. Full industrial scale is not consistent with policy framework. Section 84 Notice issued in relation to unauthorised wrecking yard. Matter has been resolved.
4	1333-1339 Port Wakefield Road	Dwelling and shop (sale of fruit and vegetables)	Garage converted to shop. Retrospective application lodged and approved as non-complying development.
5	1-31 Mumford Road	Truck depot	Retrospective application approved for truck depot and fuel tank. BTR have verbally indicated they wish to relocate their main headquarters to the site.
6	32-47 Mumford Road	Vacant	Planning consent granted for Storage Building.
7	146-156 St Kilda Road	Current compliance matter – unauthorised commercial activities including truck parking and storage	Existing compliance matter – Scott Searle Planning Consultant involved.
8	1277-1281 Port Wakefield Road	Northern Connector Works Depot	Industrial workshop and car park, use is established, exempt from approval
9	1261-1267 Port Wakefield Road	Service Trade Premises and associated sheds (Big Chief Hire)	Use is established, no existing approval, enquiry received to expand facility to include new shed and workshop, proposal inconsistent with policy framework. Scott Searle (Planning Consultant) has been in contact with Council seeking expansion of the Big Chief Hire site.
10	625-637 Waterloo Corner Road	Vacant (former go kart track)	Development Plan Consent granted for integrated service station complex. Application lodged for land division to subdivide the allotment in two. Land division refused.
11	1229-1235 Port Wakefield Road	Existing dwelling	Enquiry received to subdivide allotment to excise dwelling on rural living allotment and create separate allotment for storage purposes.
12	1175-1187 Port Wakefield Road	Some existing sheds / large vacant area	Application submitted under PSD Code for Tyre Fitting Facility. Application under assessment.
13	1157-1167 Port Wakefield Road & 1165-1171 Port Wakefield Road	Distribution centre in association with existing market garden	Use established, no existing approval
14	1113-1117 Port Wakefield Road	Vacant	Application for entertainment facility refused. Substantial investment by relocation & expansion of Bargain Steel Centre operations at the site frustrated by policy. Letter has been provided to DPTI. Application lodged for construction of storage shed. Non-complying development. Application refused.
15	1-35 Summer Road	Agricultural	Preliminary contact – truck storage/parking
16	16-22 Summer Road	Existing dwelling, approved storage yard	Application approved for storage yard and truck parking. Development built
17	1-17 Jobson Road	Vacant	Application lodged for storage yard and truck parking. Application under assessment. Site is partly under development
18	2-10 Jobson Road	Industry (Workshop) and office	Established use. Application for expansion of site withdrawn due to proposal being inconsistent with policy framework
19	23 Jobson Road	Parking of commercial vehicles	Application approved. Use operating
20	25-29 Jobson Road	Parking of One (1) Truck	Application approved, use operating. Long term owner wishes to develop site for truck parking.
21	31-41 Jobson Road	Commercial Use	Preliminary contact from owner with interest in developing land long term, such as for truck parking
22	985-1013 Port Wakefield Road	Vacant	Enquiry received to extend tourist/caravan park, proposal inconsistent with policy framework
23	965-977 Port Wakefield Road	Caltex Service Station (petrol filling station and shop)	Existing established use
24	887-899 Port Wakefield Road	Whitehorse Inn	Existing established use
25	859-885 Port Wakefield Road	Integrated service station complex	Existing established use. Development Application submitted to establish McDonalds on same site as the DTR integrated retail fuel outlet and Krispy Kreme. Development Approval granted for McDonalds. Under construction
26	799-811 Port Wakefield Road	Shop for sale of fruit and vegetables	Existing established use, retrospective application lodged for building works to expand shop. Development Approval granted. Unauthorised junk yard on the site. Section 213 Notice issued in relation to this activity.

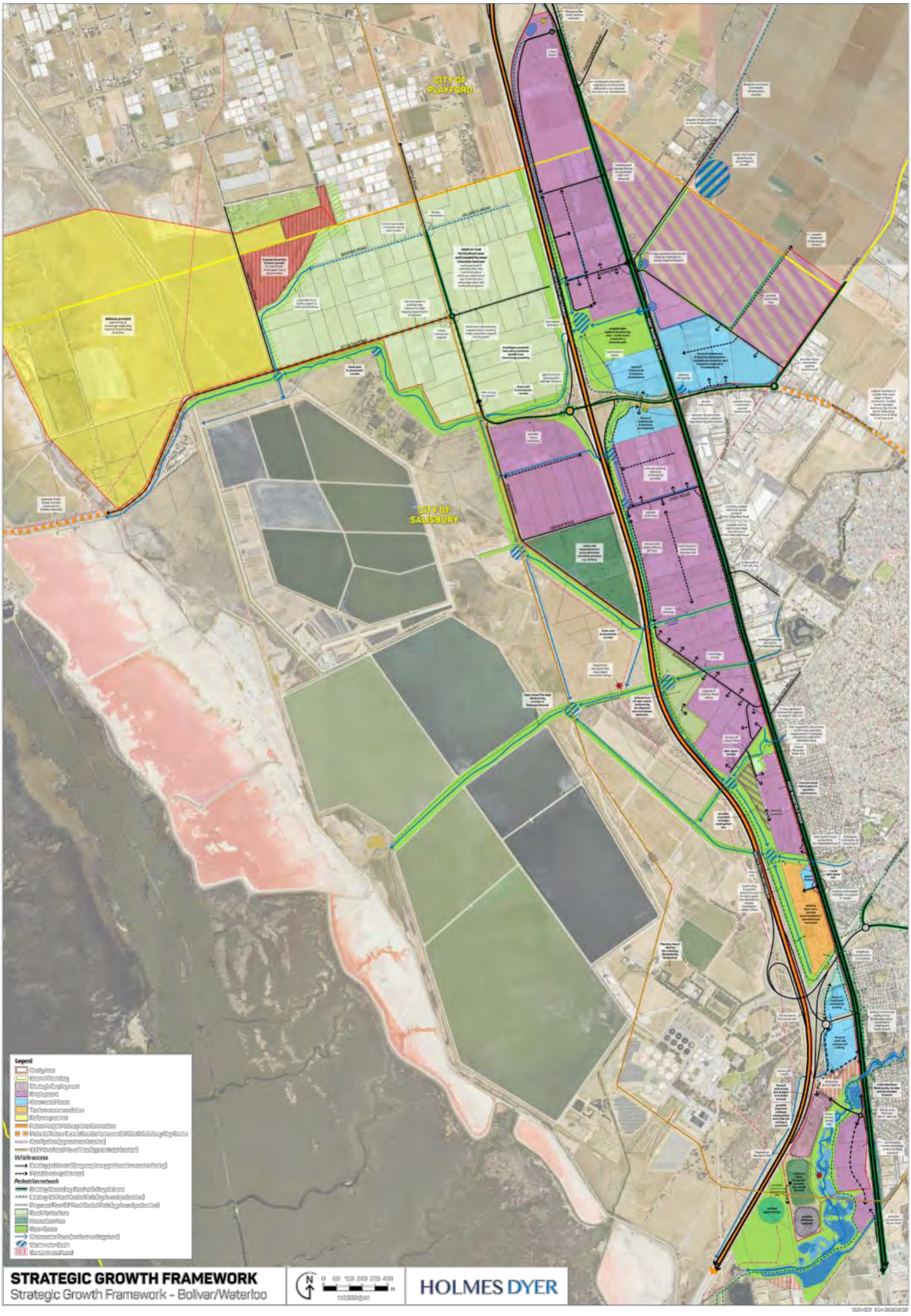
CURRENT DEVELOPMENT INTEREST
Strategic Growth Framework – Bolivar/Waterloo

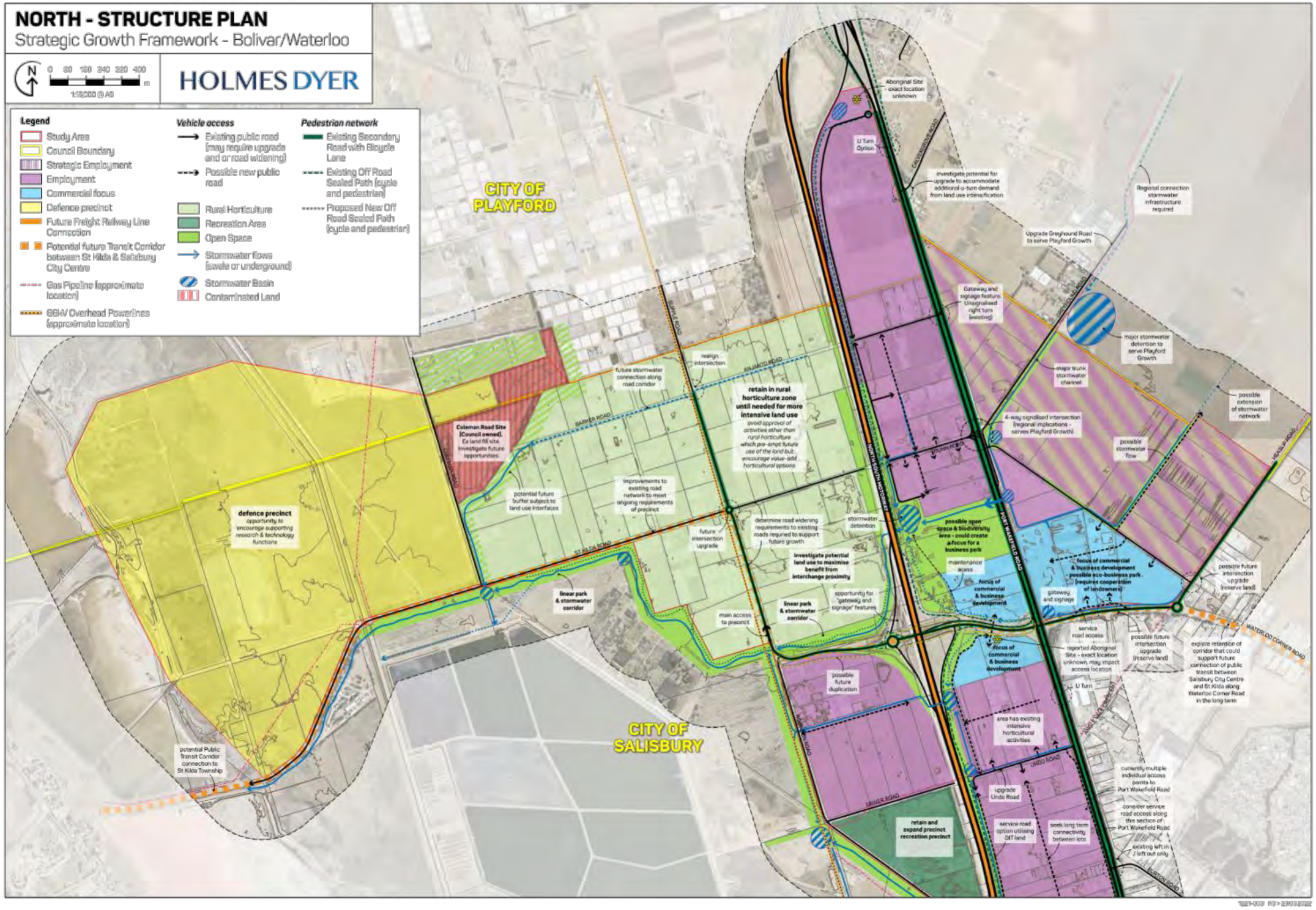
HOLMES DYER

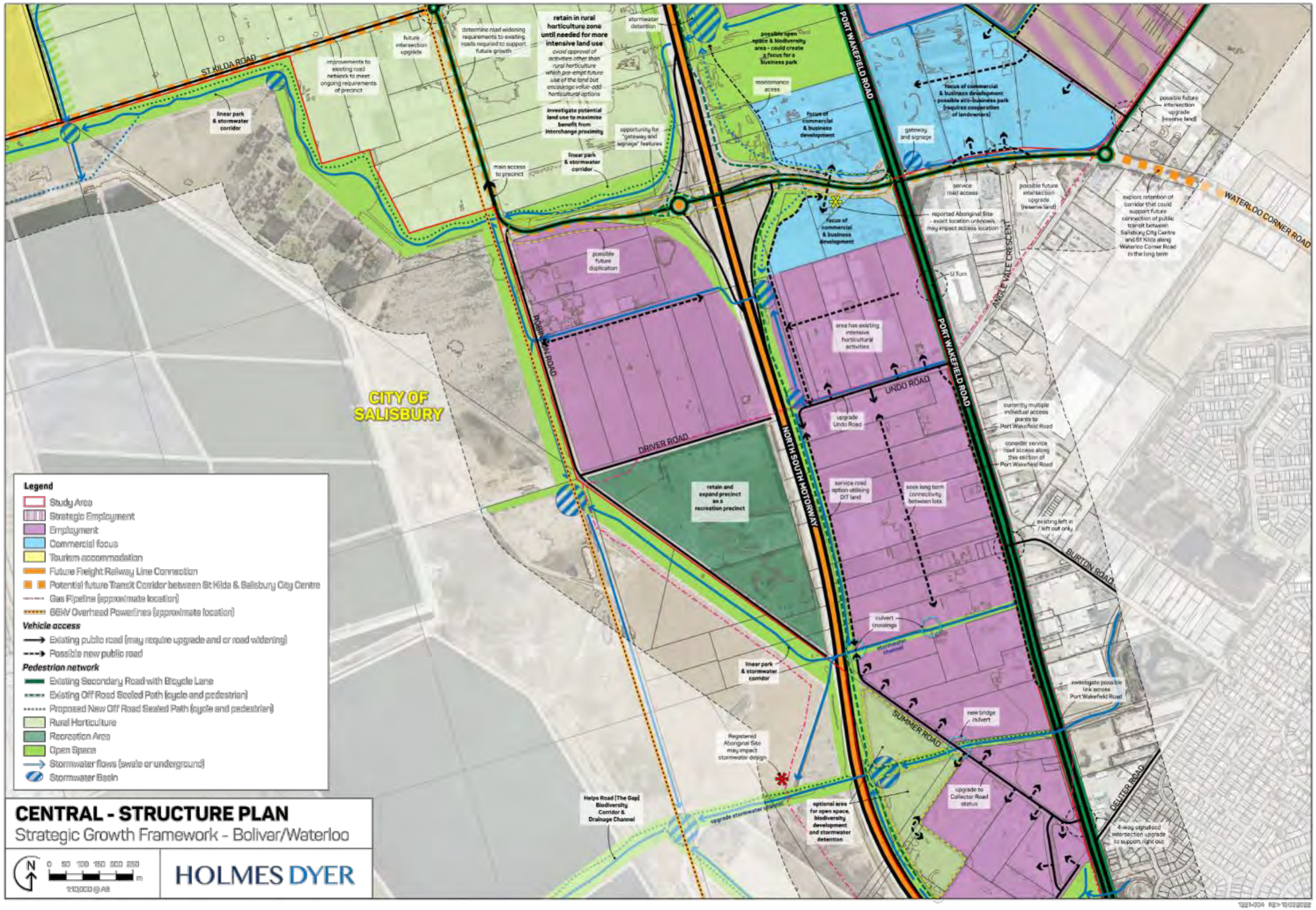
1221003 R1 • 18/02/2022

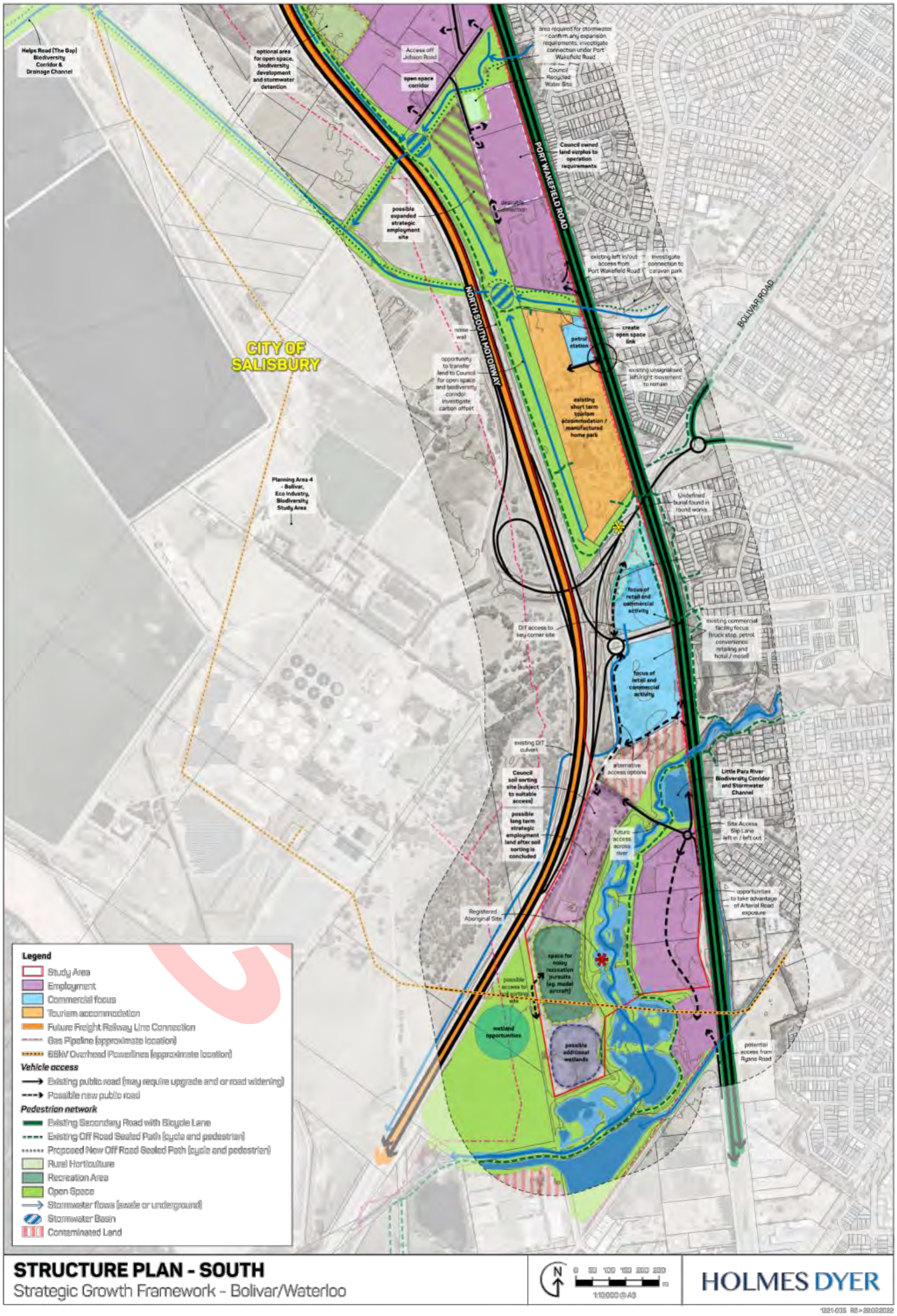
Appendix 5. Strategic Growth Framework Bolivar & Waterloo Corner

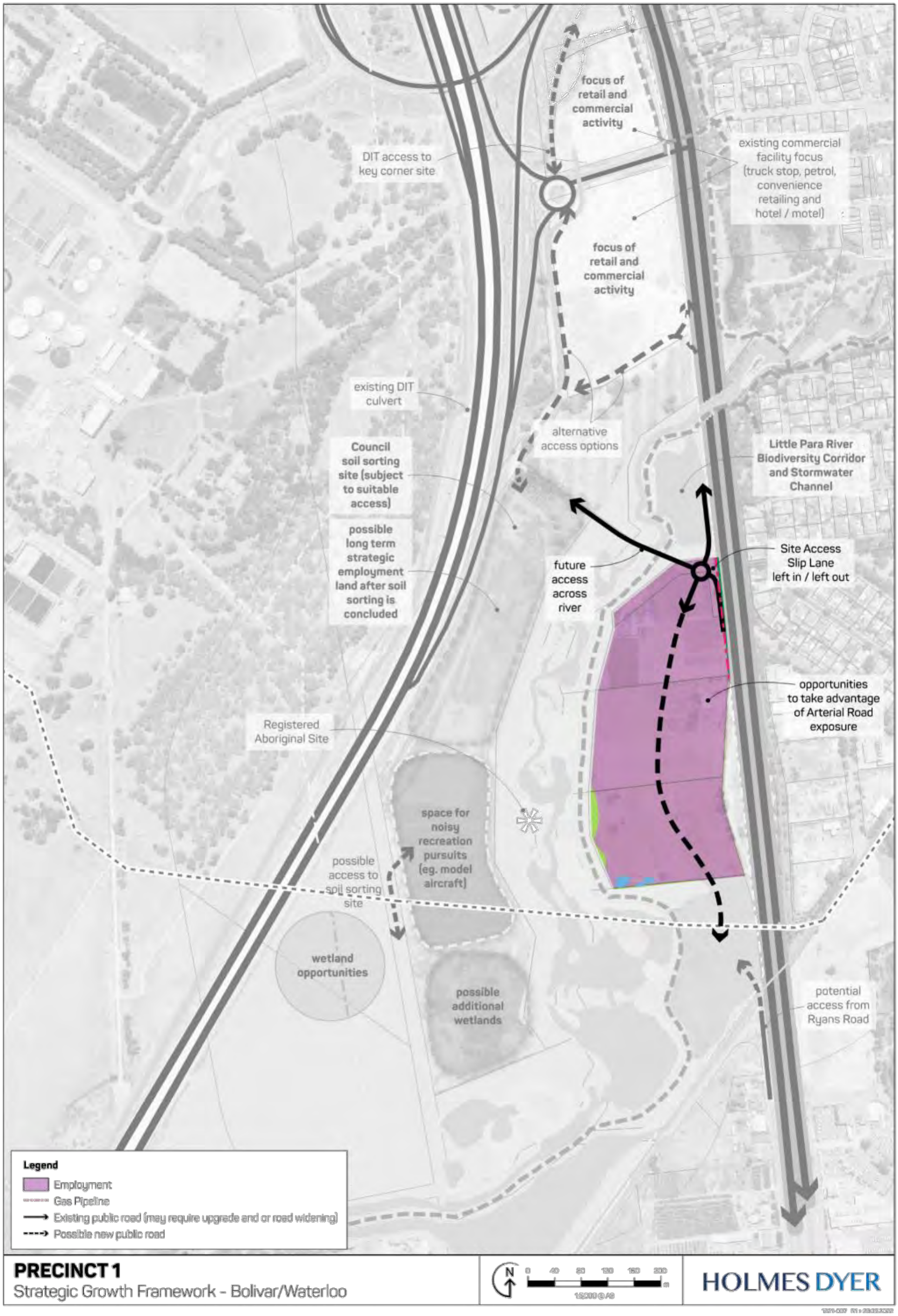
Structure Plan Consolidated Plan Set

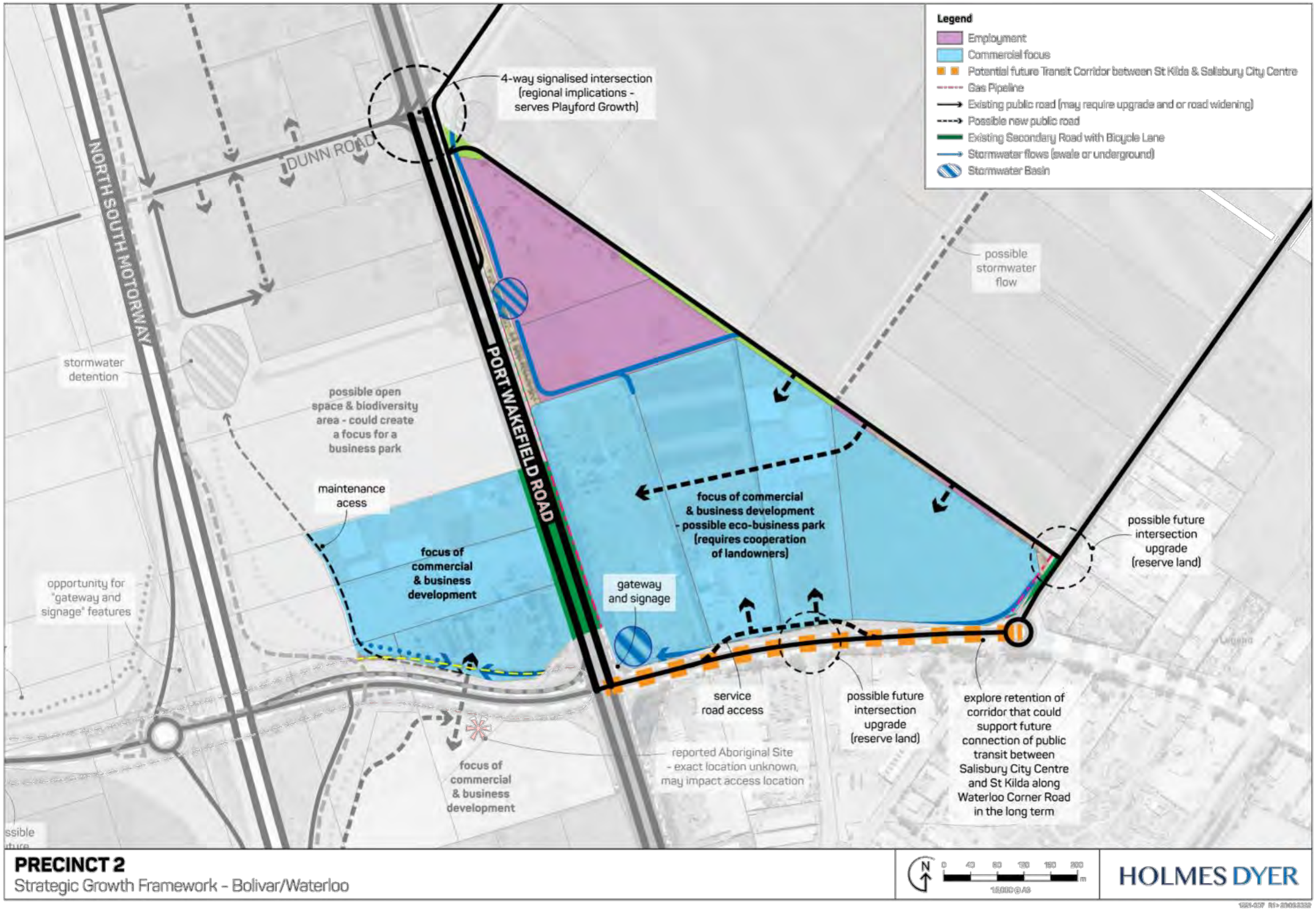

CITY OF PLAYFORD
CITY OF SALISBURY
Legend
STRATEGIC GROWTH FRAMEWORK
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER


NORTH - STRUCTURE PLAN
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER
Legend
Study Area
Council Boundary
Strategic Employment
Employment
Commercial focus
Defence precinct
Future Freight Railway Line Connection
Potential future Transit Corridor between St Kilda & Salisbury City Centre
Gas Pipeline (approximate location)
66kV Overhead Powerlines (approximate location)
Vehicle access
Existing public road (may require upgrade and or road widening)
Possible new public road
Rural Horticulture
Recreation Area
Open Space
Stormwater flows (swale or underground)
Stormwater Basin
Contaminated Land
Pedestrian network
Existing Secondary Road with Bicycle Lane
Existing Off Road Sealed Path (cycle and pedestrian)
Proposed New Off Road Sealed Path (cycle and pedestrian)
CITY OF PLAYFORD
CITY OF SALISBURY
Aboriginal Site - exact location unknown
U Turn Option
investigate potential for upgrade to accommodate additional u-turn demand from land use intensification
Regional connection stormwater infrastructure required
Upgrade Greyhound Road to serve Playford Growth
Gateway and signage feature. Unsignalised right turn (existing)
major stormwater detention to serve Playford Growth
major trunk stormwater channel
possible extension of stormwater network
4-way signalised intersection (regional implications - serves Playford Growth)
possible stormwater flow
realign intersection
future stormwater connection along road corridor
retain in rural horticulture zone until needed for more intensive land use
avoid approval of activities other than rural horticulture which pre-empt future use of the land but encourage value-add horticultural options
Coleman Road Site (Council owned). Ex land fill site. Investigate future opportunities
potential future buffer subject to land use interfaces
improvements to existing road network to meet ongoing requirements of precinct
defence precinct
opportunity to encourage supporting research & technology functions
future intersection upgrade
determine road widening requirements to existing roads required to support future growth
stormwater detention
possible open space & biodiversity area - could create a focus for a business park
investigate potential land use to maximise benefit from interchange proximity
maintenance access
focus of commercial & business development
focus of commercial & business development - possible eco-business park (requires cooperation of landowners)
gateway and signage
possible future intersection upgrade (reserve land)
linear park & stormwater corridor
opportunity for "gateway and signage" features
main access to precinct
service road access
reported Aboriginal Site - exact location unknown, may impact access location
U turn
explore retention of corridor that could support future connection of public transit between Salisbury City Centre and St Kilda along Waterloo Corner Road in the long term
possible future duplication
area has existing intensive horticultural activities
upgrade Undo Road
currently multiple individual access points to Port Wakefield Road
consider service road access along this section of Port Wakefield Road
existing left in / left out only
service road option utilising DIT land
seek long term connectivity between lots
retain and expand precinct recreation precinct
potential Public Transit Corridor connection to St Kilda Township
ST KILDA ROAD
BARKER ROAD
ALAMEDA ROAD
DRIVER ROAD
UNDO ROAD
WATERLOO CORNER ROAD
PORT WAKEFIELD ROAD
NORTH SOUTH MOTORWAY

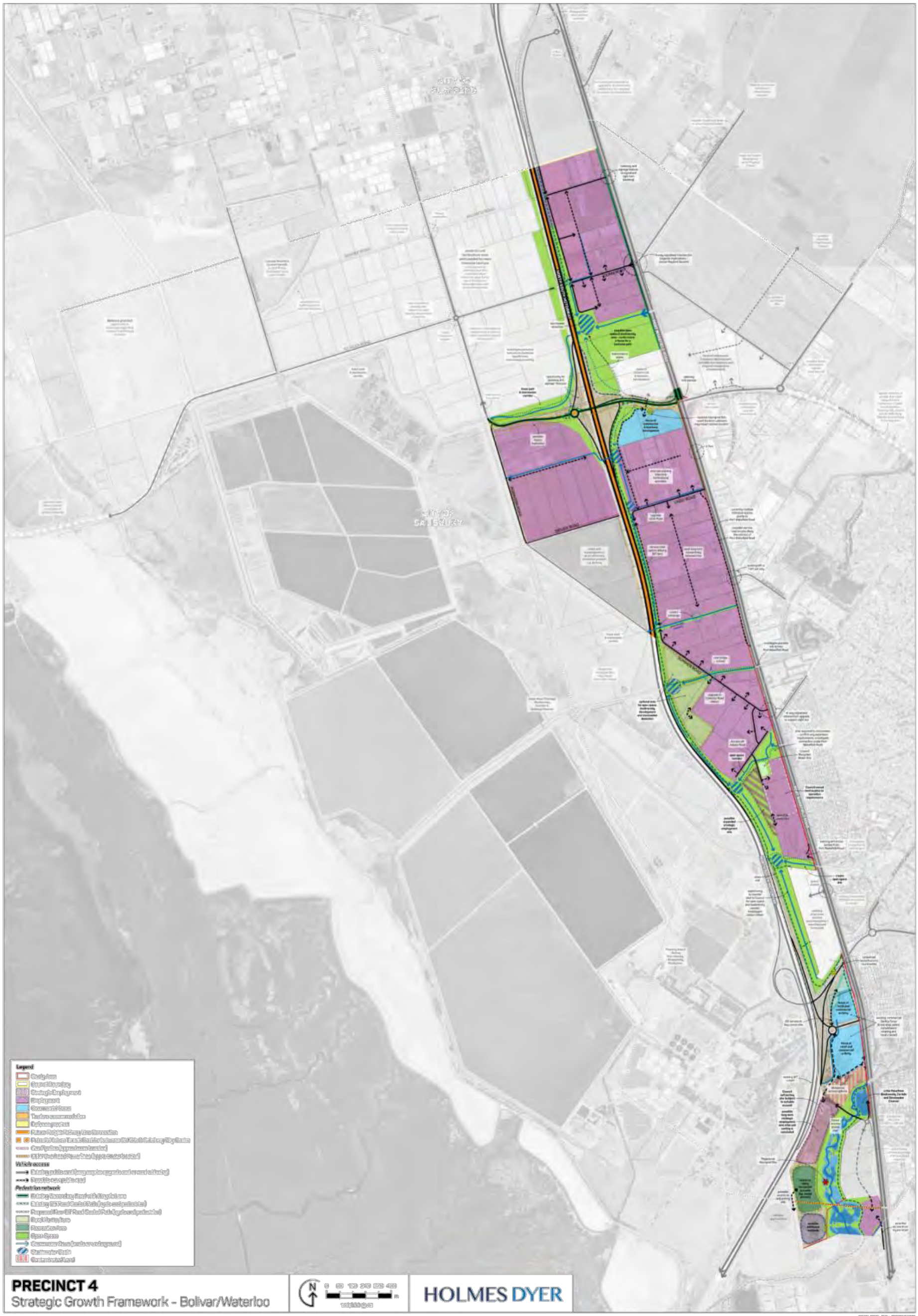

ST KILDA ROAD
linear park & stormwater corridor
improvements to existing road network to meet ongoing requirements of precinct
future intersection upgrade
determine road widening requirements to existing roads required to support future growth
retain in rural horticulture zone until needed for more intensive land use
avoid approval of activities other than rural horticulture which pre-empt future use of the land but encourage value-add horticultural options
stormwater detention
investigate potential land use to maximise benefit from interchange proximity
opportunity for "gateway and signage" features
linear park & stormwater corridor
main access to precinct
possible open space & biodiversity area - could create a focus for a business park
maintenance access
focus of commercial & business development
PORT WAKEFIELD ROAD
focus of commercial & business development - possible eco-business park (requires cooperation of landowners)
gateway and signage
possible future intersection upgrade (reserve land)
service road access
possible future intersection upgrade (reserve land)
WATERLOO CORNER ROAD
explore retention of corridor that could support future connection of public transit between Salisbury City Centre and St Kilda along Waterloo Corner Road in the long term
reported Aboriginal Site - exact location unknown, may impact access location
focus of commercial & business development
possible future duplication
ROBINSON ROAD
U Turn
ANGLE VALE CRESCENT
area has existing intensive horticultural activities
UNDO ROAD
upgrade Undo Road
currently multiple individual access points to Port Wakefield Road
consider service road access along this section of Port Wakefield Road
CITY OF SALISBURY
DRIVER ROAD
NORTH SOUTH MOTORWAY
retain and expand precinct as a recreation precinct
service road option utilising DIT land
seek long term connectivity between lots
existing left in / left out only
BURTON ROAD
culvert - crossings
stormwater channel
linear park & stormwater corridor
investigate possible link across Port Wakefield Road
SUMMER ROAD
new bridge culvert
Registered Aboriginal Site may impact stormwater design
upgrade to Collector Road status
DELFER ROAD
Helps Road (The Gap) Biodiversity Corridor & Drainage Channel
upgrade stormwater channel
optional area for open space, biodiversity development and stormwater detention
4-way signalised intersection upgrade to support right out
Legend
Study Area
Strategic Employment
Employment
Commercial focus
Tourism accommodation
Future Freight Railway Line Connection
Potential future Transit Corridor between St Kilda & Salisbury City Centre
Gas Pipeline (approximate location)
66kV Overhead Powerlines (approximate location)
Vehicle access
Existing public road (may require upgrade and or road widening)
Possible new public road
Pedestrian network
Existing Secondary Road with Bicycle Lane
Existing Off Road Sealed Path (cycle and pedestrian)
Proposed New Off Road Sealed Path (cycle and pedestrian)
Rural Horticulture
Recreation Area
Open Space
Stormwater flows (swale or underground)
Stormwater Basin
CENTRAL - STRUCTURE PLAN
Strategic Growth Framework - Bolivar/Waterloo
0 50 100 150 200 250 m
1:10,000 @ A3
HOLMES DYER

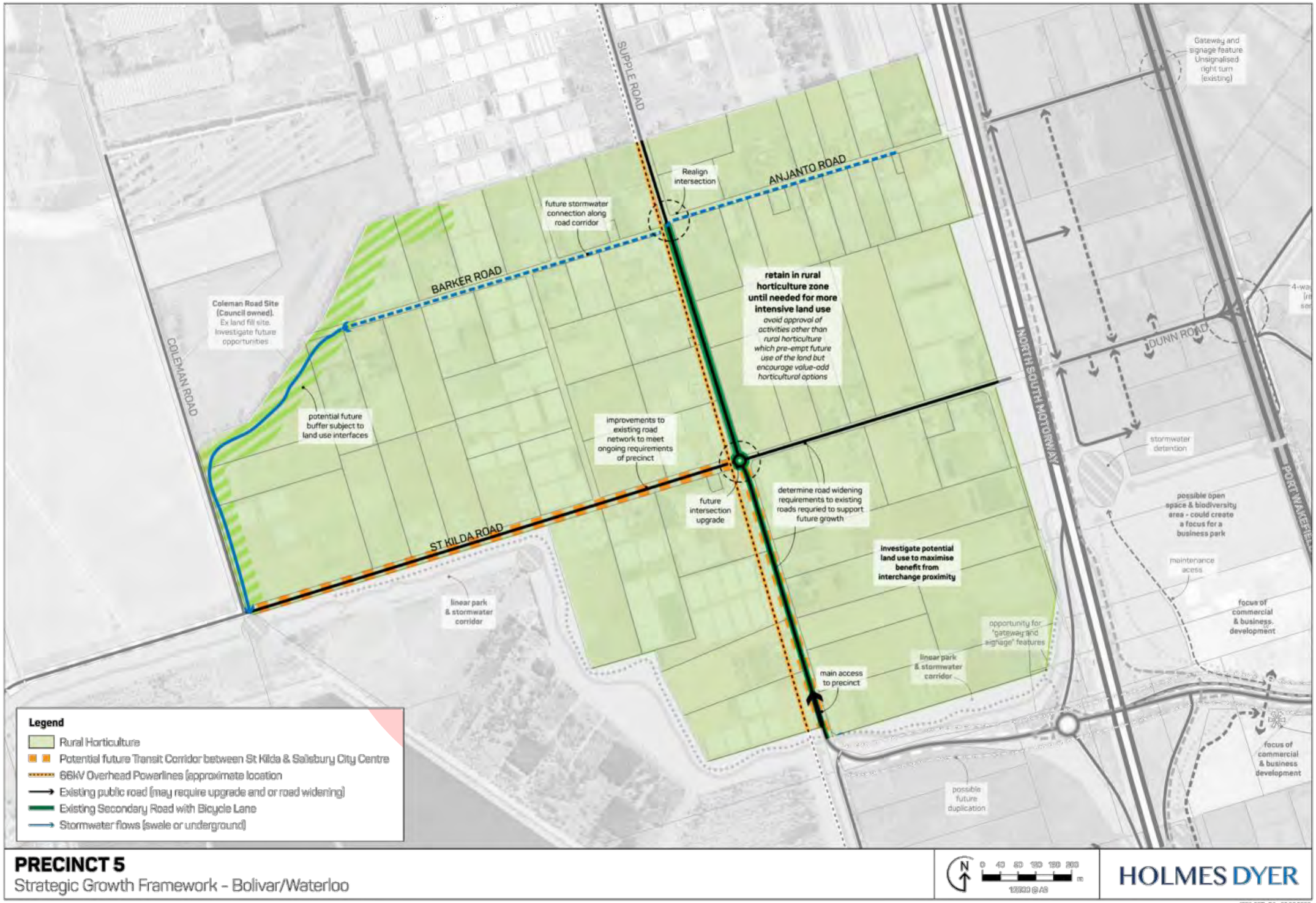

Helps Road (The Gap) Biodiversity Corridor & Drainage Channel
optional area for open space, biodiversity development and stormwater detention
Access off Johson Road
open space corridor
area required for stormwater - confirm any expansion requirements, investigate connection under Port Wakefield Road
Council Recycled Water Site
PORT WAKEFIELD ROAD
Council owned land surplus to operation requirements
possible expanded strategic employment site
existing left in/out access from Port Wakefield Road
investigate connection to caravan park
BOLIVAR ROAD
NORTH SOUTH MOTORWAY
CITY OF SALISBURY
noise wall
opportunity to transfer land to Council for open space and biodiversity corridor. Investigate carbon offset
petrol station
create open space link
existing unsignalised left/right movement to remain
existing short term tourism accommodation / manufactured home park
Planning Area 4 - Bolivar, Eco Industry, Biodiversity Study Area
Underlined burial found in round works
focus of retail and commercial activity
DIT access to key corner site
existing commercial facility focus (truck stop, petrol, convenience retailing and hotel / motel)
focus of retail and commercial activity
existing DIT culvert
alternative access options
Council soil sorting site (subject to suitable access)
possible long term strategic employment land after soil sorting is concluded
Little Para River Biodiversity Corridor and Stormwater Channel
future access across river
Site Access Slip Lane left in / left out
opportunities to take advantage of Arterial Road exposure
Registered Aboriginal Site
space for noisy recreation pursuits (eg. model aircraft)
possible access to soil sorting site
wetland opportunities
possible additional wetlands
potential access from Ryans Road
Legend
Study Area
Employment
Commercial focus
Tourism accommodation
Future Freight Railway Line Connection
Gas Pipeline (approximate location)
66kV Overhead Powerlines (approximate location)
Vehicle access
Existing public road (may require upgrade and or road widening)
Possible new public road
Pedestrian network
Existing Secondary Road with Bicycle Lane
Existing Off Road Sealed Path (cycle and pedestrian)
Proposed New Off Road Sealed Path (cycle and pedestrian)
Rural Horticulture
Recreation Area
Open Space
Stormwater flows (swale or underground)
Stormwater Basin
Contaminated Land
STRUCTURE PLAN - SOUTH
Strategic Growth Framework - Bolivar/Waterloo
N
0 50 100 150 200 250
1:10000@A3
HOLMES DYER


focus of retail and commercial activity
DIT access to key corner site
existing commercial facility focus (truck stop, petrol, convenience retailing and hotel / motel)
focus of retail and commercial activity
existing DIT culvert
alternative access options
Council soil sorting site (subject to suitable access)
Little Para River Biodiversity Corridor and Stormwater Channel
possible long term strategic employment land after soil sorting is concluded
future access across river
Site Access Slip Lane left in / left out
opportunities to take advantage of Arterial Road exposure
Registered Aboriginal Site
space for noisy recreation pursuits (eg. model aircraft)
possible access to soil sorting site
wetland opportunities
possible additional wetlands
potential access from Ryans Road
Legend
Employment
Gas Pipeline
Existing public road (may require upgrade and or road widening)
Possible new public road
PRECINCT 1
Strategic Growth Framework - Bolivar/Waterloo
N
0 40 80 120 160 200 m
1:5,000 @ A3
HOLMES DYER

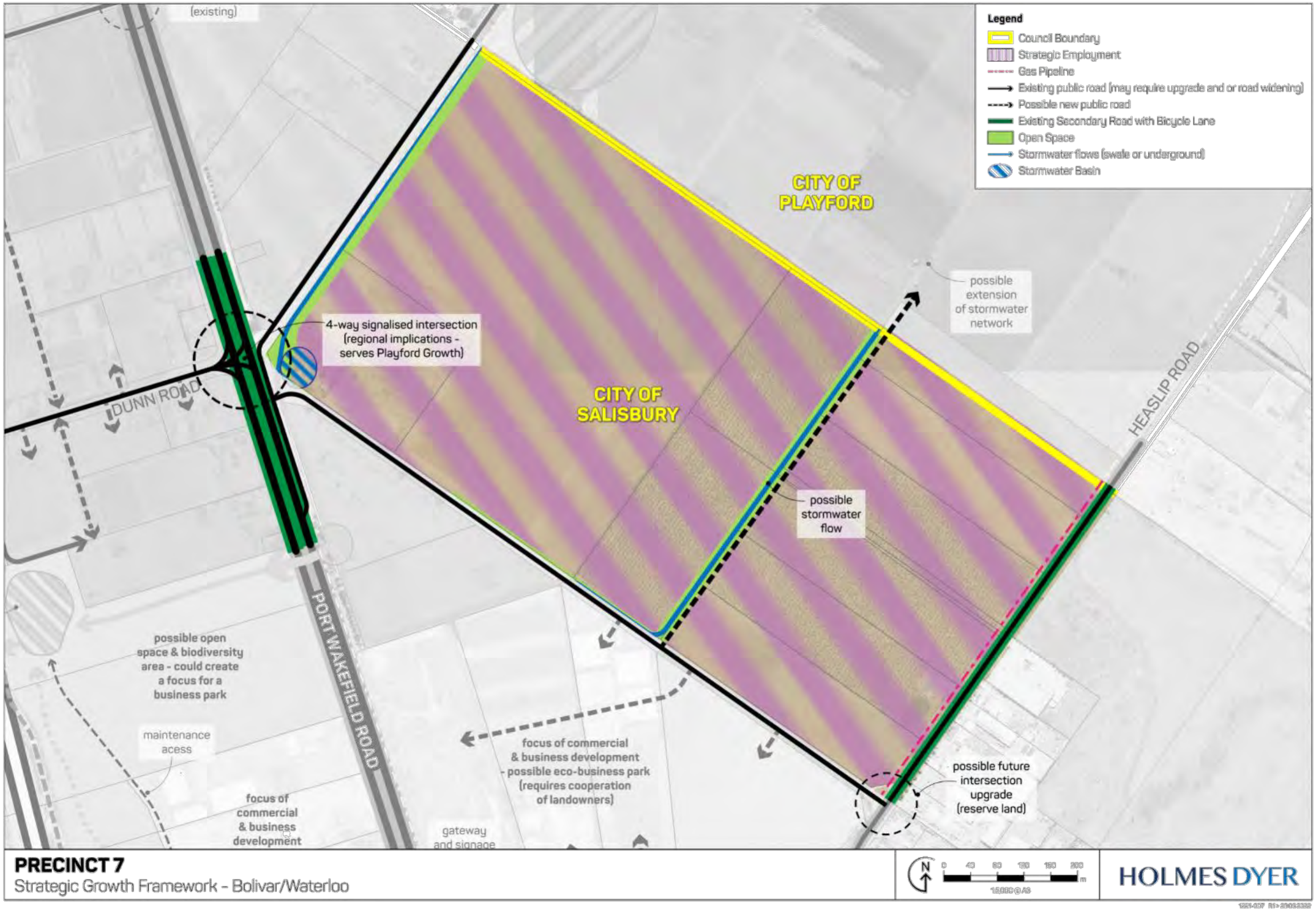

Legend
Employment
Commercial focus
Potential future Transit Corridor between St Kilda & Salisbury City Centre
Gas Pipeline
Existing public road (may require upgrade and or road widening)
Possible new public road
Existing Secondary Road with Bicycle Lane
Stormwater flows (swale or underground)
Stormwater Basin
4-way signalised intersection (regional implications - serves Playford Growth)
DUNN ROAD
NORTH SOUTH MOTORWAY
PORT WAKEFIELD ROAD
possible stormwater flow
stormwater detention
possible open space & biodiversity area - could create a focus for a business park
maintenance acess
focus of commercial & business development
focus of commercial & business development - possible eco-business park (requires cooperation of landowners)
possible future intersection upgrade (reserve land)
opportunity for "gateway and signage" features
gateway and signage
service road access
possible future intersection upgrade (reserve land)
explore retention of corridor that could support future connection of public transit between Salisbury City Centre and St Kilda along Waterloo Corner Road in the long term
reported Aboriginal Site - exact location unknown, may impact access location
focus of commercial & business development
PRECINCT 2
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER

Item 1.4.1 - Attachment 1 - Attachment 1 - Strategic Growth Framework - Waterloo Corner anda Bolivar Corridor


PRECINCT 4
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER


SUPPLE ROAD
ANJANTO ROAD
BARKER ROAD
COLEMAN ROAD
ST KILDA ROAD
DUNN ROAD
NORTH SOUTH MOTORWAY
Realign intersection
future stormwater connection along road corridor
Coleman Road Site (Council owned). Ex land fill site. Investigate future opportunities
potential future buffer subject to land use interfaces
retain in rural horticulture zone until needed for more intensive land use
avoid approval of activities other than rural horticulture which pre-empt future use of the land but encourage value-add horticultural options
improvements to existing road network to meet ongoing requirements of precinct
future intersection upgrade
determine road widening requirements to existing roads requried to support future growth
investigate potential land use to maximise benefit from interchange proximity
linear park & stormwater corridor
main access to precinct
linear park & stormwater corridor
opportunity for 'gateway and signage' features
possible future duplication
Gateway and signage feature Unsignalised right turn (existing)
stormwater detention
possible open space & biodiversity area - could create a focus for a business park
maintenance acess
focus of commercial & business development
focus of commercial & business development
Legend
Rural Horticulture
Potential future Transit Corridor between St Kilda & Salisbury City Centre
66kV Overhead Powerlines (approximate location
Existing public road (may require upgrade and or road widening)
Existing Secondary Road with Bicycle Lane
Stormwater flows (swale or underground)
PRECINCT 5
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER


possible future duplication
focus of commercial & business development
area has existing intensive horticultural activities
ROBINSON ROAD
DRIVER ROAD
UNDO ROA
upgrade Undo Road
retain and expand precinct as a recreation precinct
service road option utilising DIT land
culvert crossings
linear park & stormwater corridor
SUMMER
Registered Aboriginal Site may impact stormwater design
upgrade stormwater channel
optional area for open space, biodiversity development and stormwater detention
Legend
Recreation Area
Gas Pipeline
Existing public road (may require upgrade and or road widening)
PRECINCT 6
Strategic Growth Framework - Bolivar/Waterloo
N
0 40 80 120 160 200 m
HOLMES DYER


(existing)
Legend
Council Boundary
Strategic Employment
Gas Pipeline
Existing public road (may require upgrade and or road widening)
Possible new public road
Existing Secondary Road with Bicycle Lane
Open Space
Stormwater flows (swale or underground)
Stormwater Basin
CITY OF PLAYFORD
CITY OF SALISBURY
4-way signalised intersection (regional implications - serves Playford Growth)
possible extension of stormwater network
possible stormwater flow
DUNN ROAD
HEASLIP ROAD
PORT WAKEFIELD ROAD
possible open space & biodiversity area - could create a focus for a business park
maintenance acess
focus of commercial & business development
focus of commercial & business development - possible eco-business park (requires cooperation of landowners)
gateway and signage
possible future intersection upgrade (reserve land)
PRECINCT 7
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER


BARKER ROAD
COLEMAN ROAD
ST KILDA ROAD
Coleman Road Site (Council owned).
Ex land fill site.
Investigate future opportunities
potential future buffer subject to land use interfaces
linear park & stormwater corridor
Legend
Contaminated Land (ex land fill site)
PRECINCT 8
Strategic Growth Framework - Bolivar/Waterloo
HOLMES DYER