

# Austral and Leppington North Precincts Infrastructure Delivery Plan

Final Report

September 2012

Prepared for



Prepared by



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# Contents

	Page Number
<b>Summary of infrastructure requirements</b>	<b>iii</b>
<b>1 Introduction</b>	<b>1</b>
1.1 What is urban infrastructure?	1
1.2 The infrastructure challenge	1
1.3 Purpose of the Infrastructure Delivery Plan	3
1.4 The Austral and Leppington North development	4
1.5 Assumptions and limitations	5
1.6 List of acronyms and abbreviations	6
<b>2 Infrastructure planning, funding and delivery</b>	<b>7</b>
2.1 State infrastructure	7
2.1.1 Principles	7
2.1.2 The Government's objectives for greenfield infrastructure delivery	7
2.1.3 State infrastructure planning agenda	8
2.1.4 State infrastructure funding arrangements	9
2.2 Local infrastructure	10
2.2.1 Local infrastructure and councils	10
2.2.2 Contribution caps	11
2.2.3 Opportunities to address the local infrastructure funding gap	11
<b>3 Infrastructure requirements</b>	<b>15</b>
3.1 Water supply and waste water treatment	15
3.1.1 Sydney Water asset creation process	15
3.1.2 Sydney Water South West Growth Centre planning	17
3.2 Stormwater and drainage	22
3.3 Electricity	23
3.3.1 Endeavour Energy asset creation process	23
3.3.2 Endeavour Energy South West Growth Centre planning	24
3.4 Gas	25
3.5 Roads, public transport, cycling and walking	27
3.6 Rail	28
3.7 Health	28
3.8 Education	29
3.9 Emergency services and justice	30
3.10 Community and cultural	30
3.11 Open space and recreation	31
<b>4 Infrastructure sequencing, coordination and next steps</b>	<b>33</b>
4.1 Link between development-enabling infrastructure and development sequencing	33

## **Austral and Leppington North Precincts Infrastructure Delivery Plan**

4.2	Initial development areas	34
4.3	Local infrastructure delivery strategy for the Precincts	37
4.4	Next steps in infrastructure delivery	37
	<b>References</b>	<b>39</b>

## Summary of infrastructure requirements

The Austral and Leppington North Precincts, with a projected total of more than 16,000 new homes and including a new major centre, are a critical part of the Metropolitan Plan's greenfield release strategy.

This Infrastructure Delivery Plan provides an overview of the urban infrastructure requirements for the Austral and Leppington North Precincts, and how those requirements will be met.

The Plan, among other things, provides a basis for both ongoing discussion between planning and infrastructure agencies to inform for the refinement and iteration of infrastructure delivery plans. It also serves the purpose of acquainting owners and developers of land in the Precincts with how and when infrastructure is likely to be provided.

Development of the Precincts, including the Leppington Major Centre, is likely to occur over a period of 20-30 years. The Plan shows that infrastructure can be delivered to adequately service early and later stages of the Austral and Leppington North Precincts. However, successful and efficient delivery will require staged development in specific areas. It is not feasible or necessary to provide infrastructure to all of the study area at the one time.

Also essential for commencement of development is effective cooperation between landowners, infrastructure providers, developers and both local and State governments.

The table on the following pages summarises the infrastructure required to meet the needs of urban development in the Precincts.

Maps showing the preliminary infrastructure plans for the Precincts follow the table. The maps are:

- Figure A Utility Services Infrastructure
- Figure B Major Road Infrastructure
- Figure C Social Infrastructure

**Austral and Leppington North Precincts Infrastructure Delivery Plan**

<b>Infrastructure type</b>	<b>Provider of the infrastructure</b>	<b>Particular requirements for the Austral and Leppington North Precincts</b>	<b>Timing / staging considerations</b>	<b>Next steps for planning and delivery of the infrastructure</b>
<b>Water</b> Lead in mains Trunk water mains Water reservoirs	Sydney Water, developers (for reticulation)	New reservoirs will be required as part of the servicing strategy for the release areas. Some interim development can be served by extensions of the surrounding system.	Initially reliance on connection to existing systems where available. Height of development (therefore insufficient pressure) may be a limitation until the ultimate infrastructure is available.  Short term solutions such as water booster pumps are not preferred but can enable release of land otherwise not serviceable depending on location of land to be serviced.	Confirm Sydney Water as the water servicing authority for these Precincts and work closely with Sydney Water to determine feasible potable water and wastewater servicing strategies for initial development .Clearly identify the development catchment to enable Sydney Water to determine best immediate solution and associated costs.
<b>Wastewater</b> Sewage pumping stations Trunk sewers Sewage treatment plants	Sydney Water, developers (for reticulation)	Proposed Kemps Creek STP, situated to the north of the Austral Precinct, to ultimately serve the Precincts. Investment in a new STP is significant and Sydney Water is currently investigating options to service the Precincts while deferring this investment, until a critical mass of development is reached to generate reasonable return on this investment.  Sydney Water has advised that there may be interim capacity within the Liverpool and Glenfield Sewer systems for up to 4,000 lots depending on the take up of other developments within the systems.	STPs are major items requiring time to design and construct. It is therefore preferable to develop within one catchment of an STP to maximise the usage of that asset although pumping from adjoining catchments (temporarily) is possible.  While not favoured by Sydney Water or Camden Council due to cost and risk of overflows, a temporary procedure of pumping out from a collection point is an option where no alternative is available	Confirm Sydney Water as the water servicing authority for these Precincts and work closely with Sydney Water to determine a feasible wastewater servicing strategy for initial development, based on utilising existing capacity in the Liverpool/Glenfield networks.
<b>Drainage/Stormwater</b> Detention basins and water quality facilities Reticulation pipes	Councils, developers (for reticulation)	Integrated strategy to manager stormwater includes: <ul style="list-style-type: none"> <li>▪ Rainwater tanks</li> <li>▪ Reserved drainage corridors</li> <li>▪ Retarding basins off-line from riparian corridors</li> <li>▪ Gross pollutant traps</li> </ul>	Councils responsible for trunk infrastructure; developers responsible for reticulation.  All works during the early construction stages is usually undertaken by developers as councils often do not have sufficient section 94 contributions to forward fund works.	Undertake works as development occurs, in accordance with findings of the WSUD Strategy.  Temporary (site specific) solutions implemented by the developer may be needed to be considered in this fragmented land context.

## Austral and Leppington North Precincts Infrastructure Delivery Plan

Infrastructure type	Provider of the infrastructure	Particular requirements for the Austral and Leppington North Precincts	Timing / staging considerations	Next steps for planning and delivery of the infrastructure
<p><b>Electricity</b></p> <p>Feeder mains, substations and distribution network</p>	Endeavour Energy, developers (for reticulation)	<ul style="list-style-type: none"> <li>▪ Bio-filters, wetlands, open ponds integrated with open space and recreation areas where appropriate</li> </ul> <p>Connection of substations to Hoxton Park substation.</p>	<p>Fragmentation may make it difficult to identify a developer prepared to undertake major work.</p> <p>Substation in Austral and moveable substation in North Leppington are required to enable development to commence. Connections to existing supply networks in adjoining areas may be possible along Fifteenth Avenue to service initial development (up to 1400 lots), subject to development demand.</p>	Identify sites for substations and plan for connection to feeder mains. The degree of land fragmentation may necessitate greater involvement by Endeavour Energy than typically occurs to stimulate development by way of provision of these connections.
<p><b>Gas</b></p> <p>Feeder mains and distribution network</p>	Jemena, developers (for reticulation)	No specific requirements identified at this stage of planning.	Advice from Jemena is that area can be serviced as it develops based on augmentation of the existing network.	Provide information to Jemena on first development areas and subsequent staging as soon as available.
<p><b>Telecommunications</b></p> <p>Cable and distribution network</p>	NBN plus retail providers such as Telstra and Optus, developers (for reticulation)	No specific requirements identified at this stage of planning.	<p>To be provided as development occurs.</p> <p>NBN requires a minimum number of lots before it will provide new optic fibre. May be necessary to use existing copper services in the interim.</p>	Provide information to telecommunication providers on first development areas and subsequent staging as soon as available. Ensure coordination between service providers and other infrastructure authorities regarding construction/delivery of key road/infrastructure corridors.
<p><b>Roads</b></p> <p>Arterial Roads</p>	Roads and Maritime Services	<p>Camden Valley Way upgrade.</p> <p>Two east-west high order roads:</p> <ul style="list-style-type: none"> <li>▪ Fifteenth Avenue</li> <li>▪ Bringelly Road</li> </ul> <p>Two key north-south routes:</p> <ul style="list-style-type: none"> <li>▪ Edmondson Avenue-Rickard Road corridor</li> </ul>	<p>Arterial roads constructed to meet demands of area in line with the RMS program.</p> <p>Certain road upgrades have been identified as being funded using Special Infrastructure Contributions (SIC). SIC roads can be delivered by subdividers of larger parcels of land by negotiating a works-in-kind agreement with the State</p>	RMS works program to be confirmed and updated as the initial stages of the development take place.

## Austral and Leppington North Precincts Infrastructure Delivery Plan

Infrastructure type	Provider of the infrastructure	Particular requirements for the Austral and Leppington North Precincts	Timing / staging considerations	Next steps for planning and delivery of the infrastructure
		<ul style="list-style-type: none"> <li>▪ Fourth Avenue-Dickson Road Corridor. This corridor is a primary link to Oran Park Town Centre, Austral Town Centre and Leppington Major Centre and contains a two lane transit boulevard and will be a strategic bus connection.</li> </ul>	Government.	
Local Roads	Councils and developers	An overall road hierarchy is set out with heavy goods vehicles restricted to principal arterial roads, sub-arterials and transit boulevards with smaller vehicles also permitted on collector roads and local streets.	Local roads will be constructed by developers as development occurs. Higher order (sub-arterial, collector) roads can be delivered by subdividers of larger parcels of land by negotiating a works-in-kind agreement with the local council. Some sections of roads will be delivered by Council and funded by section 94 contributions, where it is not practical or reasonable for developers to construct these roads.	Certain sub-arterial and collector roads and crossings of riparian corridor corridors that are needed to facilitate development of fragmented land will be identified in local council contributions plans.
<b>Public Transport</b>				
Rail	Transport for NSW	The South West Rail Link which includes a new 11.4-kilometre rail line from Glenfield to Leppington, two new stations located at Edmondson Park and Leppington, a train stabling facility at Rossmore, an upgrade of the existing Glenfield Station and bus/rail interchange, and construction of Glenfield North and Glenfield South rail flyovers.	Rail link to Leppington Major Centre scheduled for 2016.	Glenfield Station is currently the focus of activity with a temporary footbridge opened in July to enable major work on the station concourse. Glenfield Junction flyovers are also currently under construction.
Buses	Transport for NSW	The proposed bus route network will, where possible, provide direct links with key corridors along the high order roads, and will focus on the Leppington Major Centre interchange. Roads will be designed to	Desirable to implement bus services early. Limited capacity to do so until road network develops.	Confirm location of Leppington Major Centre bus interchange.  Prepare/confirm bus servicing strategy for the Precincts.



**Austral and Leppington North Precincts Infrastructure Delivery Plan**

<b>Infrastructure type</b>	<b>Provider of the infrastructure</b>	<b>Particular requirements for the Austral and Leppington North Precincts</b>	<b>Timing / staging considerations</b>	<b>Next steps for planning and delivery of the infrastructure</b>
<b>Pedestrian and Cycle Paths</b>	Roads and Maritime Services (for facilities that are part of arterial roads); Councils paths that are within open space, or on roads to be funded by section 94; developers for paths along roads that are developer constructed.	facilitate bus movements by having two lanes in each direction or one lane with a parking lane for a bus stop.  A comprehensive walking and cycling network is proposed with options for cyclists including off-road (shared path), on-road (cycle lane) and on road (signed route).	Both on road and off road links to be provided as development proceeds.	
<b>Emergency Services</b>				
Police	Police NSW	Police station to be located adjacent to future court house (not yet determined). Further assessments will be needed as timing and staging of development becomes known	Area is currently already serviced but will require additional facilities as population increases.	Provide information to Police NSW on first development areas and subsequent staging as soon as available so that planning of new and augmented facilities can be firmed up.
Ambulance	Ambulance Service	Broad locational criteria for stations identified. No specific facility requirements identified at this stage of planning.	Early stages of development will be served by existing installations.	Provide information to Ambulance NSW on first development areas and subsequent staging as soon as available so that planning of new facilities can proceed.
Fire	Fire and Rescue NSW	Broad locational criteria for stations identified. No specific facility requirements identified at this stage of planning.	Early stages of development will be served by existing installations.	Provide information to Fire and Rescue NSW on first development areas and subsequent staging as soon as available so that planning of new facilities can proceed.

**Austral and Leppington North Precincts Infrastructure Delivery Plan**

Infrastructure type	Provider of the infrastructure	Particular requirements for the Austral and Leppington North Precincts	Timing / staging considerations	Next steps for planning and delivery of the infrastructure
<b>Education</b>				
Schools, Colleges of TAFE	Department of Education and Communities, private school providers	<p>No new facilities in early stages – adjoining areas will need to cater for residents’ needs.</p> <p>Ultimately the development is likely to require:</p> <ul style="list-style-type: none"> <li>▪ 6-7 government primary schools</li> <li>▪ 1-2 government high schools</li> <li>▪ Private schools as the need arises</li> <li>▪ TAFE facility in Major Centre</li> </ul>	<p>Use of existing facilities where possible during the initial stages of the development with planning of schools to be undertaken as lot production rates becomes clearer.</p> <p>Leppington Primary School will not continue in the longer term but has capacity to meet initial needs in the short term. Austral Primary School (in the Precinct), John Edmondson High School and Hoxton Park High School (both east of the Precincts) will also have capacity to meet initial demand.</p> <p>Delivery of TAFE facility to respond to establishment of significant residential catchment.</p>	<p>Provide information to Department of Education and Communities and TAFE on first development areas and subsequent staging as soon as available so that planning of new and augmented facilities can proceed.</p>
<b>Health</b>				
<p>Team General Practices</p> <p>Primary Care Clinics</p> <p>Regional Integrated Primary Care Centre</p>	<p>Department of Health, South Western Sydney Local Health Network, private sector</p>	<p>A hierarchy of integrated primary and community care centres is required across the SW Growth Centre.</p> <p>Integrated Primary Care Centres are proposed for Leppington, Oran Park and Bringelly. The largest and most comprehensive centre will be located in the Leppington Major Centre and will require funding by the Department of Health..</p> <p>Proposed Major Centre multi-purpose community facility to provide supplementary health services - i.e. office space for a community development worker, and for other human service providers or rooms for the delivery of services such as baby health clinic, counselling or family support services.</p>	<p>First facilities will require a minimum population – approximately 5,000 people for a team general practice of up to 5 general practitioners.</p> <p>Primary care clinics of 6-8 general practitioners require 18,000 population.</p> <p>Regional IPCC requires catchment population of 75,000 to 100,000 population.</p>	<p>Provide information to Department of Health on first development areas and subsequent staging as soon as available so that planning of new and augmented facilities can proceed. Consideration of staged delivery of Regional IPCC as residential catchment evolves.</p>

**Austral and Leppington North Precincts Infrastructure Delivery Plan**

Infrastructure type	Provider of the infrastructure	Particular requirements for the Austral and Leppington North Precincts	Timing / staging considerations	Next steps for planning and delivery of the infrastructure
<b>Community Facilities</b>	Councils, private sector and non government providers	<p>Regional level 'civic precinct' to be provided in Leppington Major Centre including:</p> <ul style="list-style-type: none"> <li>▪ A multi-purpose community centre to be built in stages and co-located with a library. The first stage should provide for a population of 10,000-15,000</li> <li>▪ A major performing arts and cultural centre</li> </ul> <p>Local and district level community facilities include:</p> <ul style="list-style-type: none"> <li>▪ 1 large multi-purpose community centre in the Austral town centre</li> <li>▪ 3 smaller multi-purpose community centres elsewhere in the Precincts.</li> <li>▪ Community services for families and individuals in leasehold accommodation</li> <li>▪ Private and non-government sector child care, entertainment and leisure facilities, and places of worship</li> </ul>	<p>Existing surrounding facilities offer opportunities to meet some interim needs either in their current form or through expansion.</p> <p>Higher order facilities will not be warranted until the population reaches a certain threshold. Facilities should therefore be built in stages with expansions occurring incrementally as the population grows.</p>	<p>Further planning of facilities should concentrate on combination and co-location options. Only broad design parameters of facilities known at this stage. The evolution of design of facilities will depend upon the availability of funds, the aspirations of the responsible council, evolving best practice, etc.. Detailed needs and feasibility assessments need to be undertaken as the population of the area grows.</p> <p>Schedule of land for public facilities to be detailed in council contributions plans. Funding strategy for capital costs of facilities to be determined by the relevant councils.</p>
<b>Open Space and Recreation</b>	Councils, private sector and non government providers	<p>Regional needs to be met by:</p> <ul style="list-style-type: none"> <li>▪ Indoor sports and aquatic centre</li> <li>▪ Western Sydney Parklands</li> </ul> <p>Local and district needs to be met by:</p> <ul style="list-style-type: none"> <li>▪ Approximately 149 ha of local and district open space</li> <li>▪ Local parks (minimum 0.2 ha) to be provided within walking distance of most dwellings</li> <li>▪ 6-7 larger district (key suburb parks) with minimum size of 3 ha</li> </ul>	To be provided as development proceeds.	Schedule of land and works requirements for public facilities to be detailed in council contributions plans. Funding strategy for meeting costs of regional indoor sports facility (apart from land costs) to be determined between the relevant councils and IPART. Delivery of regional sports facility in the Western Sydney Parklands to be determined by the Parklands Trust in consultation with Councils and other agencies.

**Austral and Leppington North Precincts Infrastructure Delivery Plan**

Infrastructure type	Provider of the infrastructure	Particular requirements for the Austral and Leppington North Precincts	Timing / staging considerations	Next steps for planning and delivery of the infrastructure
		<ul style="list-style-type: none"><li>▪ Regional, district and local playgrounds and play spaces</li><li>▪ 8 local sports parks containing double playing fields and multi-purpose courts</li><li>▪ 1 district sports park accommodating a variety of sporting codes</li></ul>		



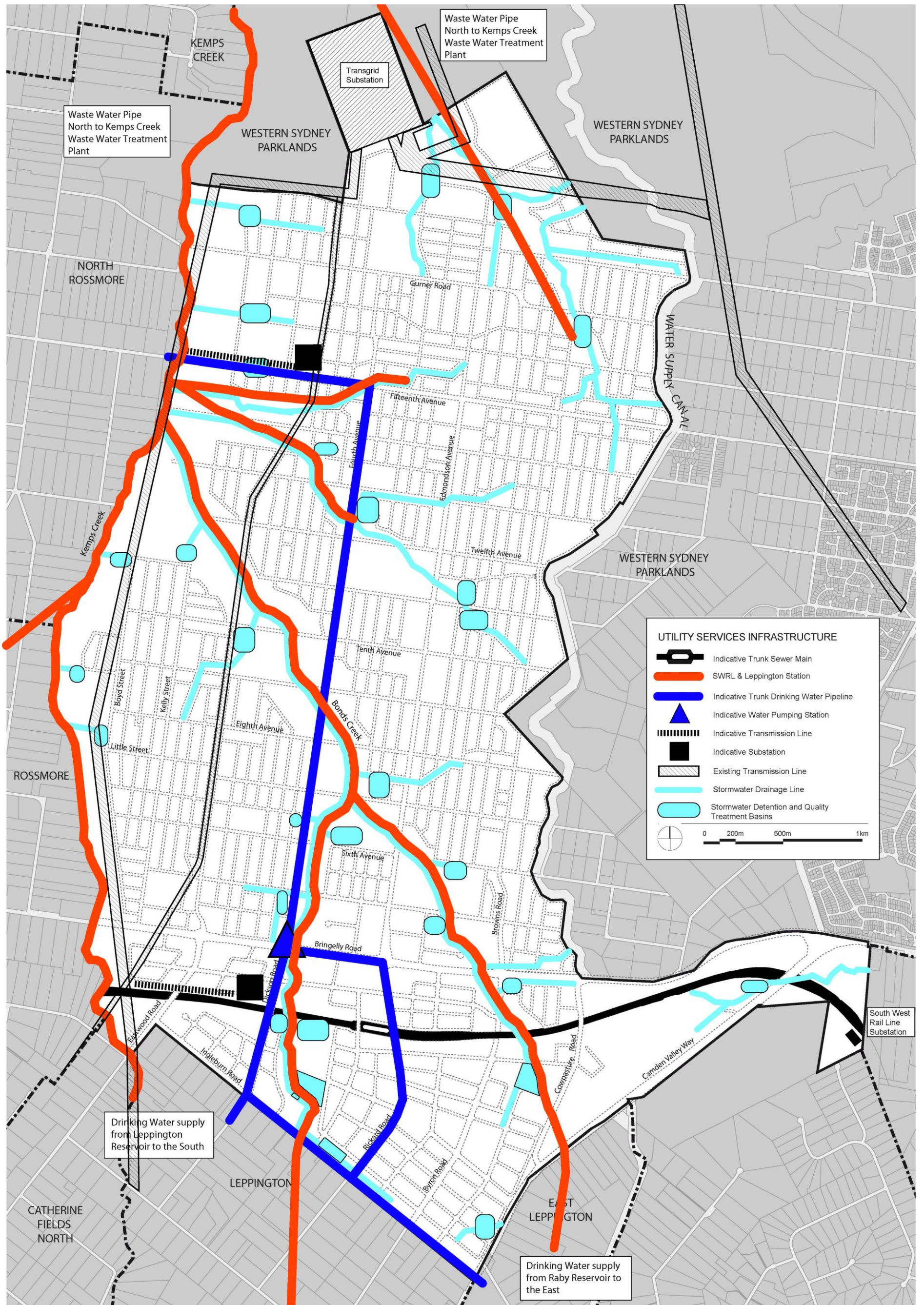


Figure A Utility Services Infrastructure



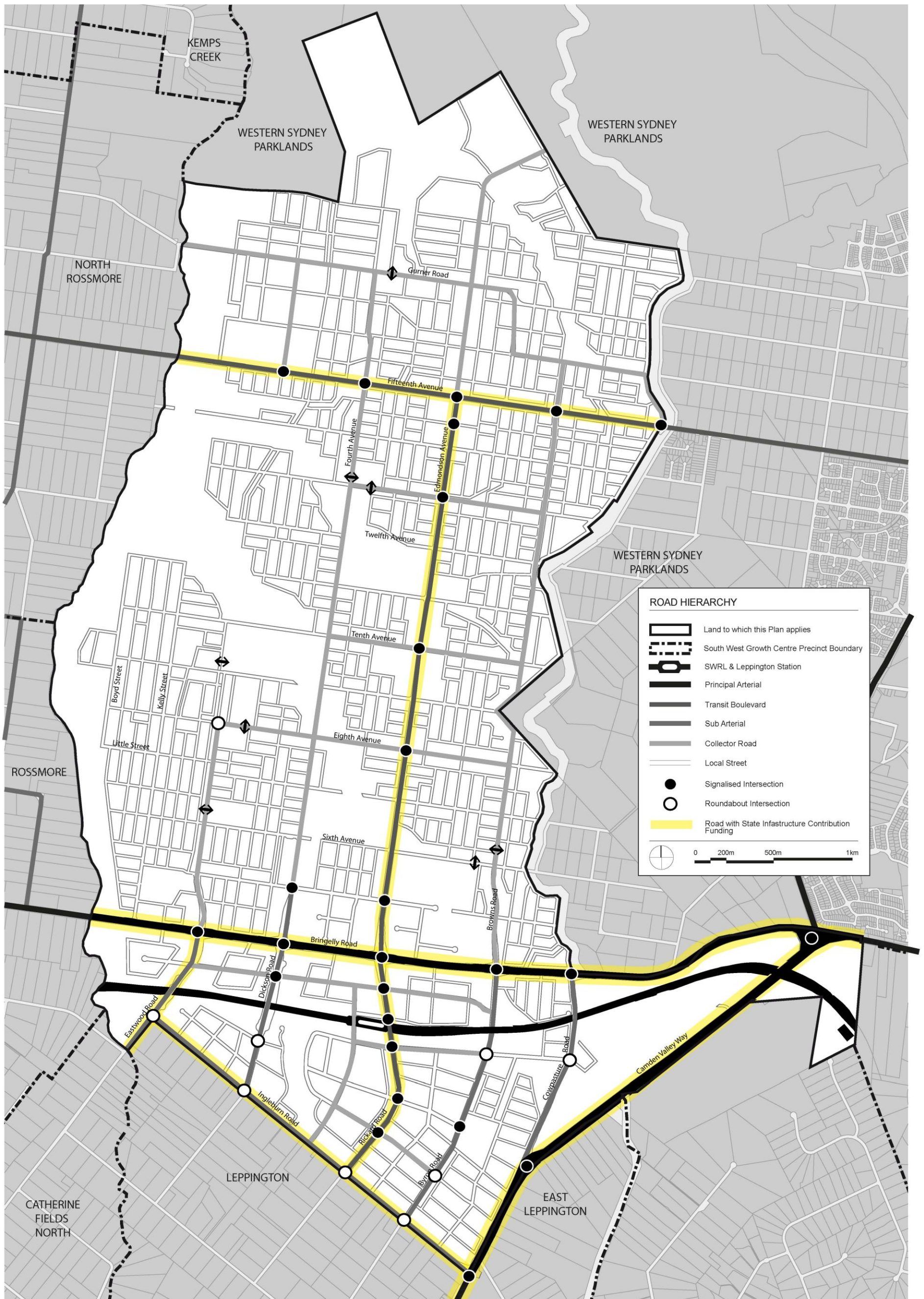


Figure B Major Road Infrastructure



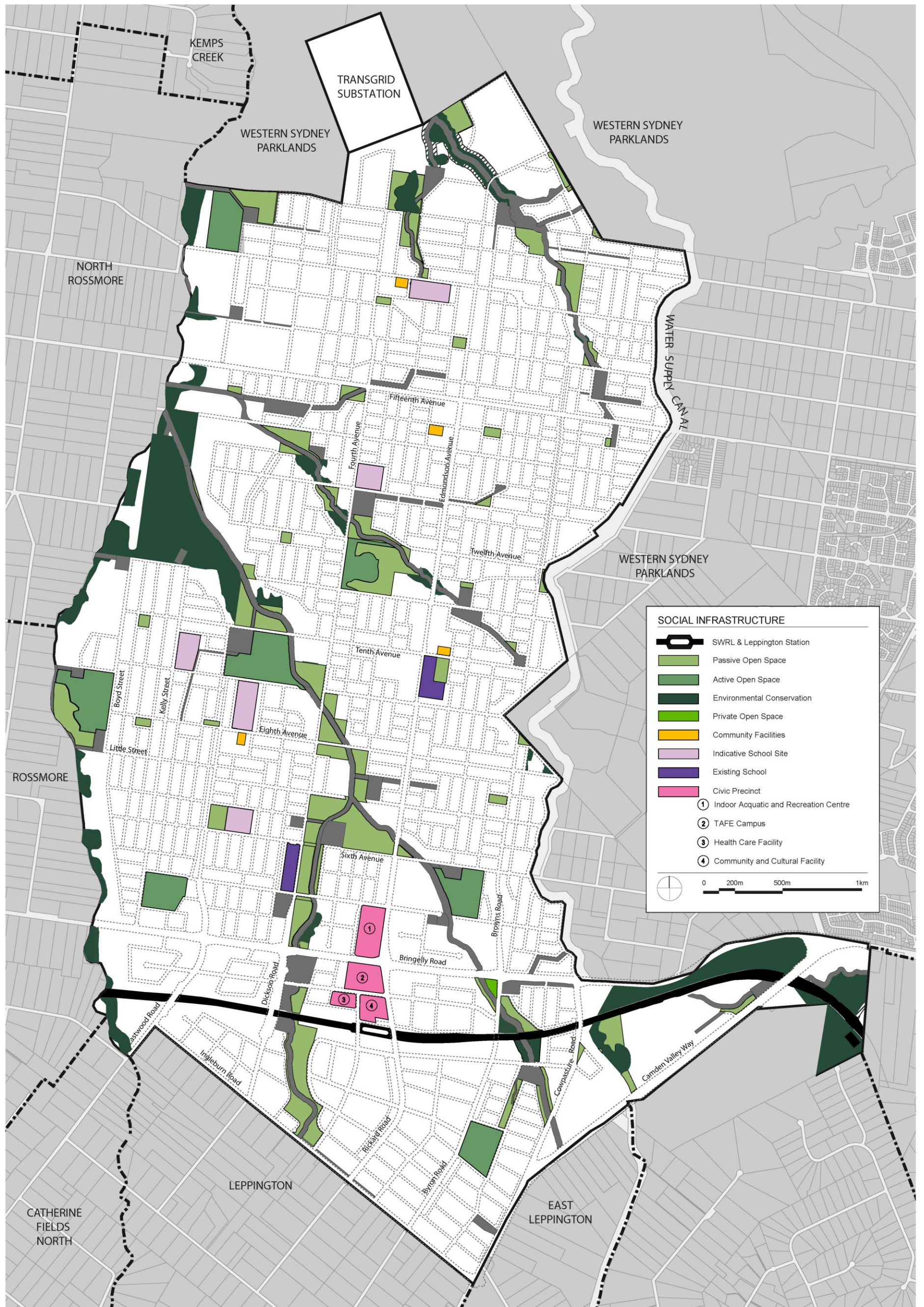


Figure C Social Infrastructure







# 1 Introduction

This section of the IDP establishes the key delivery challenges, the purpose of the IDP and the Government’s planning objectives.

## 1.1 What is urban infrastructure?

The *Metropolitan Plan for Sydney 2036* defines infrastructure as follows:

*Infrastructure comprises the physical assets required to satisfy the public’s need for access to major economic and social facilities and services.*<sup>1</sup>

Broadly, there are two types of infrastructure - economic and social infrastructure:

<p>Economic infrastructure, such as:</p> <ul style="list-style-type: none"> <li>▪ roads</li> <li>▪ railways</li> <li>▪ ports</li> <li>▪ airports</li> <li>▪ dams and reservoirs</li> <li>▪ water related headworks, treatment and reticulation facilities</li> <li>▪ telecommunications and post facilities</li> <li>▪ electricity generation facilities</li> </ul>	<p>Social infrastructure, such as:</p> <ul style="list-style-type: none"> <li>▪ schools and other education facilities</li> <li>▪ hospitals, clinics and other health facilities</li> <li>▪ housing</li> <li>▪ recreational and sporting facilities, stadia</li> <li>▪ arts and cultural facilities, entertainment venues</li> <li>▪ law and order facilities</li> <li>▪ cemeteries</li> </ul>
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The principal characteristics of infrastructure facilities include:

- they have high initial capital costs
- they have long construction times
- they have long lives
- they exist to support other economic and social activities
- they are not merely an end in themselves

## 1.2 The infrastructure challenge

The *Metropolitan Plan for Sydney 2036* establishes a need for around 170,000 new homes in greenfield areas of Sydney.<sup>2</sup> The Austral and Leppington North Precincts, with a projected total of more than 16,000 new homes and including a new major centre, are a critical part of the Metropolitan Plan’s greenfield release strategy.

Each home creates the need for new or upgraded infrastructure including roads, water and sewer, drains, public transport, health and community facilities and parks. Utility providers, State Government agencies, councils and the developers of greenfield areas each have a role in delivering the necessary infrastructure that will sustain these new communities.

<sup>1</sup> NSW Government, *Metropolitan Plan for Sydney 2036*, December 2010, p218

<sup>2</sup> NSW Government, *Metropolitan Plan for Sydney 2036*, December 2010, p115

The task of infrastructure planning, funding and delivery to support the development of new urban areas is substantial and continues over many years. The delivery of the required infrastructure must be rolled out in an orderly and efficient way to ensure new communities get the infrastructure when and where it's needed.

This Infrastructure Delivery Plan has been prepared to assist the orderly and economic development of the Precincts.

### **Austral and Leppington North Precincts face particular challenges**

There is limited existing infrastructure available in the Precincts to facilitate new urban development. Critical infrastructure such as water, sewer and electricity can be provided to the early stages, however there will need to be commitments to further and substantial investment in the short, medium and long term.

Public trading enterprises<sup>3</sup> that deliver key urban infrastructure rely on a range of funding sources including their capital works budgets, capital contributions from developers and fees and charges on end-users. Whether they are private infrastructure companies such as Jemena, State Owned Corporations (SOCs) such as Sydney Water or Endeavour Energy or other government authorities such as the Roads and Traffic Authority there is a common element, to varying degrees, of infrastructure providers operating on business principles of efficiency, value for money and return on investment.

In terms of the private sector and SOCs in particular, there will be reluctance to invest in an area unless there is evidence of future returns based on strong and steady development.

Developers are also likely to be cautious in buying and developing land if there is limited existing major infrastructure. Obtaining finance for urban development projects is currently very difficult and there is no certainty that this will change in the foreseeable future. The planning system is highly complicated and time consuming. While the current review of the planning legislation is timely, this will take some time to implement and in the meantime, unfortunately, creates another level of uncertainty. While the development industry, for obvious reasons, prefers cost to be kept low, uncertainty in both infrastructure provision and in the planning approvals system is probably a greater factor in discouraging development activity in Sydney's urban release areas.

It would be preferable if developers were prepared to take more risks and a longer term view for recovery of investment but they are only likely to do so if there are assurances by Government and agencies that supporting infrastructure will be delivered in a timely fashion.

Commitments to infrastructure delivery are particularly important in Precincts like Austral and Leppington North, with many small land holdings and hundreds of land owners. There are no major land holdings located in the areas which can be readily serviced or are suitable for the first stages of development. Many landholders appear to have expectations for the sale price of their land which are simply too high for the development potential of the land.

Landowners also need to understand that their active involvement is essential for the initiation of development of the Precincts. The most obvious type of involvement would be working with adjoining owners to consolidate a number of landholdings into viable parcels for development. This is only likely to happen however if people are ready to develop their land; and have a sound understanding of the general development process and the costs involved.

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<sup>3</sup> [http://www.treasury.nsw.gov.au/data/assets/pdf\\_file/0020/4538/bp4-2.pdf](http://www.treasury.nsw.gov.au/data/assets/pdf_file/0020/4538/bp4-2.pdf)

This Plan is part of the response by the Department of Planning & Infrastructure to assist land owners to better understand development processes and finances.

Active involvement may also require reasonable expectations of land values, based on a general understanding of development costs and processes, and understanding that some land areas will be worth more than others so recent sales are not always a true indication of the value of all land in the vicinity. At the same time, not all land such as future open space is necessarily of lesser value than residential land based upon the principles of the *Land Acquisition (Just Terms Compensation) Act 1991*.

Explanation of these concepts so that landowners feel confident that they understand the full picture and are not being taken advantage of, will need open communication between all parties concerned.

There is a key role for government to be involved in ongoing communication and facilitation. In the early planning stages, the Department of Planning and Infrastructure is likely to be involved. Landcom is another agency which has traditionally played key roles in developing difficult areas. While not currently a land owner in the Precincts, Landcom could play either a direct or a facilitating role with developers and landowners, most particularly in the early development stages.

In short, while not insurmountable, there needs to be willingness and cooperation between agencies, landowners and developers for the Austral and Leppington North developments to proceed in an orderly and economic way. This will require a joint approach and communication and understanding of the issues which are touched upon in this Infrastructure Delivery Plan.

### **1.3 Purpose of the Infrastructure Delivery Plan**

The primary purpose of the Infrastructure Delivery Plan (or IDP) is to document the urban infrastructure requirements for the Austral and Leppington North Precincts, and how those requirements will be met.

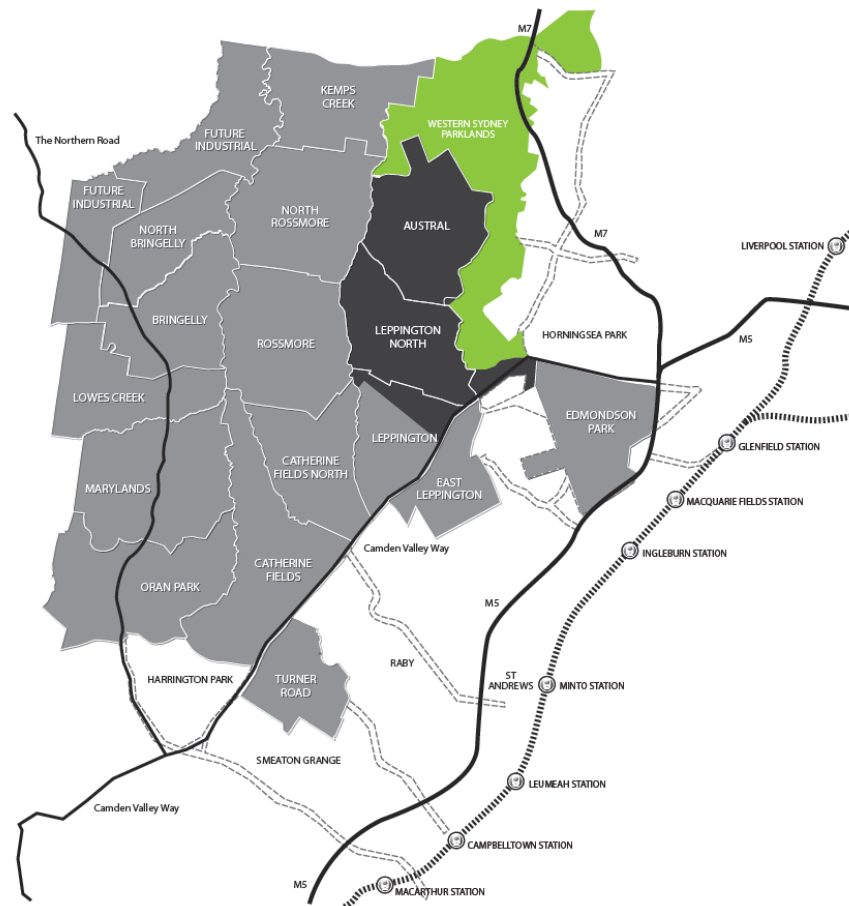
Other purposes of the IDP are as follows:

- Provide an information source for infrastructure providers and encourage the coordination of infrastructure provision between providers.
- Provide a basis for both ongoing discussion between the Department of Planning and Infrastructure and the infrastructure agencies, and for the refinement and iteration of infrastructure delivery plans of those agencies.
- Discuss the funding, planning and delivery issues affecting infrastructure roll-out.
- Consider the relationship between projected staging of development and planned infrastructure provision.
- Define responsibilities for the provision of infrastructure.
- Provide a basis for efficient allocation of resources towards infrastructure that is to meet the Precincts' development demands.
- Inform land owners, developers, the community and other stakeholders about the Precincts' infrastructure imperatives, development sequencing issues, and the role that land owners must play in enabling development to occur.

## 1.4 The Austral and Leppington North development

The Austral and Leppington North Precincts were released by the Minister for Planning in October 2009. They are part of a second round of Precincts that have been released by the Government in the Growth Centres. The release program is coordinated and staged to ensure an appropriate supply of land for urban development, and to ensure that urban land can be serviced with essential infrastructure within a reasonable timeframe and cost. Other Precincts released to date in the South West Growth Centre are Oran Park, Turner Road and Edmondson Park. Precinct Planning for those Precincts has been completed and development has commenced. Precinct Planning is also underway in two further Precincts – East Leppington and Catherine Fields (Part).

The location of the Austral and Leppington North Precincts is shown in Figure 1.1. The Precinct boundaries have been amended to include land extending south to Ingleburn Road, and to include land that was formerly part of the Western Sydney Parklands, south of Bringelly Road and east of Cowpasture Road. The total area of land covered by the Austral and Leppington North Precincts Plan is approximately 2,025 hectares.



**Figure 1.1 Austral and Leppington North Precincts**

The *Growth Centres Structure Plan* (along with the associated Explanatory Notes)<sup>4</sup> provides guidance for Precinct Planning by establishing the general pattern of development, constraints to development such as flood prone land, and targets for the number of dwellings and the size of town centres. The draft Precinct Plan for Austral and Leppington North has been prepared

<sup>4</sup> Accessed at <http://www.gcc.nsw.gov.au/maps-29.html>

with reference to the Structure Plan and the indicative dwelling and town centre targets, and achieves the following outcomes:

- Approximately 17,300 dwellings and a population of approximately 54,000.
- A Town Centre in Austral with retail floor space in the order of 30,000 square metres.
- Three Neighbourhood Centres each with retail floor space in the order of 10,000 square metres.
- 5 primary schools and 1 high school.
- 85 hectares of light industrial land for local jobs and local services.
- Leppington Major Centre, with capacity for up to 13,000 jobs in retailing, light industrial, business park, human services and entertainment sectors.
- A new TAFE college and Regional Integrated Primary Health Care centre located in Leppington Major Centre.
- Regional level community and cultural facilities in Leppington Major Centre.

Development in the residential areas will predominantly be low density dwellings with an average dwelling density of 15 dwellings per hectare, which equates to blocks of land that are on average 450-500 square metres. The planning controls will allow a range of dwelling types and sizes to be constructed throughout the Precincts, to encourage housing choice and affordability for a broad range of purchasers. Medium density residential areas, with dwelling densities in the order of 25-30 dwellings per hectare (or higher) are proposed near the centres, and mixed use development (e.g. residential and retail/commercial) will be permitted in all centres, particularly Leppington Major Centre. Some areas of the Precincts are affected by flooding or are visually prominent, and lower density housing on larger lots within an Environmental Living zone is proposed in these areas.

## **1.5 Assumptions and limitations**

This IDP brings together currently available information on proposed scale, type and timing of development. The planning for the Precincts is at the preliminary stage, but is sufficiently advanced to seek initial advice from key infrastructure agencies regarding the infrastructure needs of the Precincts.

It is important to note the following assumptions and limitations in discussion of this infrastructure.

- Costings are not yet available for infrastructure, apart from estimates for local infrastructure to be provided through section 94 (these costs are contained in the draft contributions plans being prepared by the Department of Planning and Infrastructure on behalf of the councils). While such information is critical to the planning process, the first step is to ensure that it is even feasible to provide for the first stages and ongoing development. This sequential approach whereby further refinement occurs after exhibition of the Indicative Layout Plan (ILP) ensures that all stakeholders are not locked in to a path of development which is impractical, costly or wasteful in the use of scarce resources.
- While there is a range of facilities and a large number of service providers to consider, there are some practical considerations of fundamental infrastructure which must be considered of highest priority, namely water, waste water and electricity. This should not be construed as diminishing the importance of the other services which are essential for creation of viable and liveable communities. Nor is it assumed that the other services can be automatically provided within the preferred timeframe which will require commitment by the Department of Planning and Infrastructure and the various agencies involved.

The conclusions reached in this report are that servicing of both Austral and Leppington North Precincts is possible, however there are a number of clear steps and processes which will need to be followed so that infrastructure is delivered in an orderly and cost efficient manner.

## **1.6 List of acronyms and abbreviations**

**DEC** means Department of Education and Communities

**DP&I** means Department of Planning and Infrastructure

**GIP** means Growth Infrastructure Plan

**GSP** means Growth Servicing Plan

**IDP** means Infrastructure Delivery Plan

**ILP** means Indicative Layout Plan

**IPART** means the Independent Pricing and Regulatory Tribunal

**IPCC** means integrated primary and community care centre

**LIRS** means Local Infrastructure Renewal Scheme

**MDP** means Metropolitan Development Program

**PPP** means Public Private Partnership

**Precincts** means the Austral and Leppington North Precincts within the South West Growth Centre

**PTE** means Public Trading Enterprise

**RMS** means Roads and Maritime Services

**SIC** means Special Infrastructure Contribution

**SOC** means State Owned Corporation

**SPS** means sewage pumping station

**STP** means sewage treatment plant

**TAFE** means Technical and Further Education

**UAP** means Urban Activation Precinct

**WSUD** means water-sensitive urban design

## 2 Infrastructure planning, funding and delivery

This Section of the IDP provides an overview of how infrastructure is typically delivered by both State and local government for greenfield development areas in Sydney.

### 2.1 State infrastructure

#### 2.1.1 Principles

The State Government's infrastructure planning, delivery and funding system is based on the following principles:

- integrate land use planning and infrastructure;
- reflect the Government's economic, social and environmental goals;
- meet community needs;
- deliver transparency;
- provide more certainty for investors, agencies and the community;
- ensure resources are used efficiently, and
- provide a climate that encourages private sector investment and innovation.

#### 2.1.2 The Government's objectives for greenfield infrastructure delivery

The State Government is committed to the timely and efficient provision of utility, transport, community, recreation and communications infrastructure for developing 'greenfield' urban release areas, including the Austral and Leppington North Precincts.

The Metropolitan Development Program (or MDP) is the Government's key program for managing land supply and assisting infrastructure coordination. The MDP is the main mechanism used to match rezoning of land to the timing and sequencing of new and upgraded urban infrastructure, and to inform infrastructure agencies in planning their budget programs for future infrastructure works. In turn, infrastructure agencies have a major input into the Government's decisions on land release and when release areas are included on the land release program.

The Government will meet the growing needs of the community through a wide range of measures including provision of essential new infrastructure, using existing assets more productively and ensuring regulatory settings do not discourage private investment in infrastructure.<sup>5</sup>

The infrastructure identified in this IDP is in addition to the State Government's current program of major infrastructure that will serve the South West Growth Centre. Projects which are in the planning stage or are currently underway, of benefit to the South West Growth Centre, include the following:

- Major redevelopment of Liverpool Hospital
- South West Rail Link - Glenfield to the new Leppington Major Centre (to be completed by 2016)

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<sup>5</sup> NSW Budget Paper No. 4 - 2010-11 Infrastructure Statement, p2-2

- Glenfield rail junction upgrade and Glenfield railway station commuter car park
- Kingsgrove to Revesby rail quadruplication
- Widening of Camden Valley Way from Bernera Road, Prestons to Cowpasture Road, Edmondson Park
- Widening of Camden Valley Way from Cowpasture Road, Edmondson Park to Cobbitty Road, Harrington Park
- Widening of Hoxton Park Road between Banks Road and Cowpasture Road, Hoxton Park
- Planning and pre-construction works for the widening of Bringelly Road
- Widening the F5 Freeway between Ingleburn and Campbelltown, jointly funded with the Australian Government
- M5 widening, Camden Valley Way, Prestons to King Georges Road, Beverly Hills

### **2.1.3 State infrastructure planning agenda**

The State's infrastructure investment program is currently guided by NSW 2021 Plan (*NSW 2021 - A Plan to Make NSW Number One*) and the Budget Papers.

Budgeting recognises the need to deliver infrastructure in a way that is fiscally sustainable. New South Wales holds a Triple A credit rating. Maintaining the rating is important for budgetary flexibility and business and investor confidence, and is one of the targets of the NSW 2021 Plan.

The Government is developing three significant long-term plans to inform future Budget priorities:

- A new Metropolitan Strategy for Sydney
- NSW Long Term Transport Master Plan
- 20-year NSW State Infrastructure Strategy (SIS).

Infrastructure NSW (INSW) is the authority charged with coordinating the planning and delivery of major infrastructure in NSW. One of the objectives of the *Infrastructure NSW Act 2011* is 'to secure the efficient, effective, economic and timely planning, coordination, selection, funding, implementation, delivery and whole-of-lifecycle asset management of infrastructure required for the economic and social wellbeing of the community'<sup>6</sup>.

INSW is preparing the SIS. The SIS will identify long-term infrastructure priorities across the State; will be aligned with the NSW 2021 Plan, the Long Term Transport Master Plan, the new Metropolitan Strategy and national priorities.

Other roles of Infrastructure NSW include:

- the preparation of five-year infrastructure plans which set out the details of projects and sequencing and funding arrangements in the NSW Budget from year to year for the delivery of those projects consistent with the SIS.
- the preparation of sectoral SIS statements that will set out a clear analysis of long-term requirements for a sector (for example, transport, water, ports) and a transparent road map for infrastructure needs; and
- the oversight and monitoring of the delivery of specified major infrastructure projects, through preparation of project implementation plans.

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<sup>6</sup> *Infrastructure NSW Act 2011* clause 3(a)



## 2.1.4 State infrastructure funding arrangements

### Infrastructure agencies

The Government's infrastructure funding decisions take place within a budgetary framework that responds to types of services provided by its agencies, and the ability of those agencies to charge for those services.

Government infrastructure agencies fall into two main types; general government agencies and public trading enterprises (PTEs). General government agencies provide essential public services such as health, education, roads and police, typically with minimal user charges. Most general government agencies are dependent on the budget for funding. They are required to follow a Total Asset Management approach as set out by NSW Treasury.

PTEs provide commercial and social services, including electricity, water, ports, housing and public transport. Most PTEs have a commercial charter and generate revenue through user charges. Some PTEs also receive budget funding because they do not fully recover their costs when providing services required by the Government.

Each agency has its own processes for planning and provision of capital works and recurrent expenditure. Often lengthy lead times are involved with a range of competing pressures for expenditure which can change over time. While most agencies would wish to lock in longer term commitments, the State budget cycle and need to meet immediate community needs and expectations has not always enabled such commitments to be made. Infrastructure and services are provided but over a period of time within shorter term planning cycles.

### User charges

For some PTE infrastructure (such as electricity and water) there is some scope for commercial investments (i.e. debt financing) in new infrastructure to be repaid through user charges. The total level of debt that the State can prudently adopt is limited by the investment risks, and the Government's obligation to fund general government services. If PTE debt levels become too high, this limits the State's ability to use debt to fund infrastructure investment.<sup>7</sup>

Users are charged for Government services where they are of significant direct benefit to the users and they are in a position to pay. The payment may not always be for the full cost of the service, which allows for the financial circumstances of individual users, and benefits received by the wider community, to be taken into account. Prices charged by the majority of commercial PTEs (such as electricity networks and water) are set by independent regulators which allow for a commercial rate of return on efficient capital expenditure.<sup>8</sup>

### Special Infrastructure Contributions

The State Government requires developers of land in Sydney's North West and South West Growth Centres to make monetary contributions toward the provision of State and regional infrastructure through Special Infrastructure Contributions (SICs).

State and regional infrastructure funded by the contributions includes roads; land for education, health and emergency service facilities; environmental conservation purposes; and planning delivery. SICs are intended to meet 75 percent of the cost of these infrastructure items, with the Government meeting the balance (i.e. 25 percent) of the cost. However, a discounted

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<sup>7</sup> *State Infrastructure Strategy 2008-2018*, page 13

<sup>8</sup> *Ibid.*, page 14

development contribution equivalent to 50 percent of the infrastructure cost (and increased Government contribution to 50 percent of the infrastructure cost) is currently in place.

The costs of other State and regional infrastructure required in the Growth Centres, i.e. the construction and operation of rail infrastructure, bus subsidies as well as social infrastructure facilities such as schools and TAFEs, hospitals, justice and emergency services will be borne by the Government.

The requirements for SICs in respect to the development of land in the South West Growth Centre are contained in the *Environmental Planning and Assessment (Special Infrastructure Contribution - Western Sydney Growth Areas) Determination 2011*.

### **Private sector partnerships**

The State Government works with the private sector, where appropriate, to introduce new investment and deliver new and improved infrastructure and services. Public Private Partnerships (PPPs) that have been executed for a range of service sectors have realised major operational savings and increased quality of service delivery. The Government proceeds with a PPP only where it provides the best value for money for the service outcomes required. PPPs focused on the augmentation of urban infrastructure of the type found in greenfield areas have in the past included new public hospitals and public schools.

## **2.2 Local infrastructure**

### **2.2.1 Local infrastructure and councils**

Councils play a number of roles in the effective management of development growth, primarily facilitator, regulator, advocate and service provider.

Councils have prepared community strategic plans as the key documents guiding Councils' activities in the coming decades. This is now the mandated way for councils in NSW to undertake and report their resource planning and the delivery of services and facilities to their communities. Supporting the implementation of the strategic plans are resourcing strategies, delivery plans and operational plans.

Council community strategic plans have been prepared with due consideration of the various strategies and policies that impact on the local area from both the State (including the forthcoming Metropolitan Strategy and the NSW 2021 Plan) and Federal Government levels.

The effective management of development growth will require a significant ongoing commitment from the State Government, particularly in the delivery of infrastructure and services. State Government's role will span a range of agencies, and joint commitment and action through the Metropolitan and Subregional Strategy will be required to ensure consistent, timely and quality delivery of infrastructure and services to this part of the South West Growth Centre.

In particular, councils have an important role to play in the provision of infrastructure to serve local communities. Councils fund the construction and operation of infrastructure in new urban areas including:

- Local roads, cycle paths and footpaths.
- Drainage and flood works.
- Local open space.

- Local community facilities and civic services, such as libraries and community centres.

Councils typically fund local infrastructure through a combination of general revenue (from rates and other charges), developer contributions under section 94 of the *Environmental Planning and Assessment Act 1979*, and grants from the State or federal government. Much of the capital cost of local infrastructure in new urban areas is funded by section 94 contributions as there is a clear relationship between the need for new or upgraded infrastructure and population growth attributable to new development. Recently, the State Government has imposed restrictions on the amount of monetary contributions councils can impose on residential developments (see Section 2.2.2 below).

Draft section 94 contributions plans have been prepared for the Austral and North Leppington Precincts. Those plans define the local infrastructure required as a result of urban development and the contributions rates that relate to such infrastructure.

### 2.2.2 Contribution caps

As part of the State Government's strategy to stimulate housing construction, increase housing supply and improve housing affordability in NSW, in June 2010 a direction was issued to all councils that set the maximum section 94 contribution residential development at \$20,000 for each individual lot or dwelling in that development.

Further Ministerial directions were issued in September 2010 and March 2011 that set a maximum section 94 contribution of \$30,000 per residential lot or dwelling in a number of declared 'greenfield areas', in recognition of the extra costs associated with providing baseline infrastructure in those areas. It is expected that Austral and Leppington North Precincts will be declared greenfield release areas for purposes of the contributions caps policy.

The Government has also given authority to IPART to review section 94 contributions plans:

- that propose a contribution above the relevant cap, where the council that prepared the plan is seeking top-up State Government funding or a special variation to rates revenue to meet the residual cost of 'essential infrastructure' above the cap; or
- that have been referred to IPART by the Minister for Planning.

The draft contributions plans that have been prepared for the Precincts are currently going through the IPART review process.

### 2.2.3 Opportunities to address the local infrastructure funding gap

The draft section 94 contributions plans being reviewed by IPART include a range of both 'essential infrastructure' and infrastructure that is not regarded as essential infrastructure.

Essential infrastructure includes:

- land for open space (for example, parks and sporting facilities) including 'base level embellishment';
- land for community services (for example, childcare centres and libraries);
- land and facilities for transport (for example, road works, traffic management and pedestrian and cyclist facilities), not including car parking; and
- land and facilities for stormwater management.<sup>9</sup>

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<sup>9</sup> Local Development Contributions Practice Note for the assessment of contributions plans by IPART, page 7

Examples of non essential infrastructure that has been identified as being required to meet the demands of the Austral and Leppington North development (or development more broadly across the South West Growth Centre) include the following:

- A central library and a cultural and performing arts centre in the Leppington Major Centre;
- Up to 4 multi-purpose community centres;
- A regional stadium and sporting facility (possibly in the Western Sydney Parklands in the Bringelly Precinct); and
- An indoor sports and aquatic centre in the Leppington Major Centre.

The State Government and Councils need to work in partnership to access, develop and implement funding strategies to meet the cost of (a) essential infrastructure that cannot be met by section 94 contributions (because those contributions are capped) and (b) 'non-essential' infrastructure. Potential funding mechanisms are discussed below.

### **Special variations to rate income**

A special variation allows councils to increase rates above the rate peg percentage, which has been set at 3.6% for 2012/13.<sup>10</sup>

There are two types of special variations:

- Section 508(2) of the Local Government Act allows a council to seek an increase in rates above the rate peg amount in one year.
- Section 508A of the Local Government Act allows a council to seek an increase in rates above the rate peg amount for a period of 2 to 7 years consecutively.

IPART is responsible for assessing and determining special variation applications. IPART assesses applications against the criteria that are set out in the Guidelines for Special Variations that have been published by the Division of Local Government, Department of Premier and Cabinet. Copies of the Guidelines are available on IPART's website.<sup>11</sup>

### **Contributions gap funding for essential infrastructure**

The State Government has in place a funding mechanism to assist councils to meet the costs of development-generated essential infrastructure that exceed the funding provided by capped section 94 contributions.

The Priority Infrastructure Fund (PIF) that was established in 2010/11 for this purpose is to continue.

Councils are able to recover the difference between the contributions rate contained in a contributions plan (that is assessed as being reasonable by IPART) and the relevant cap. Councils can apply for this funding if they have:

- contributions plans including a section 94 contribution level per residential lot or per dwelling that exceeds the relevant contributions cap;
- submitted relevant contributions plans to IPART for review (see Section 2.2.2 above); and
- received IPART's advice on the appropriate contribution level.

A council cannot apply for funding in instances where a special rate variation is being collected to recover the costs of essential infrastructure included in a contributions plan to the extent that the costs exceed the relevant cap.

<sup>10</sup> Accessed at the IPART website on 18 July 2012: [http://www.ipart.nsw.gov.au/Home/Industries/Local\\_Govt/Rate\\_Peg](http://www.ipart.nsw.gov.au/Home/Industries/Local_Govt/Rate_Peg)

<sup>11</sup> [http://www.ipart.nsw.gov.au/Home/Industries/Local\\_Govt/Application\\_Forms\\_Guidelines/Special\\_Variations](http://www.ipart.nsw.gov.au/Home/Industries/Local_Govt/Application_Forms_Guidelines/Special_Variations)

## Other funding programs

The funding and delivery framework for State, regional and local infrastructure is evolving.

The Government recently announced \$50 million to fund planning and infrastructure delivery in Urban Activation Precincts (UAPs).

Growth Infrastructure Plans (GIPs) are to be developed for UAPs. A GIP will include coordination of agency plans, identification of requirements, and delivery program. GIPs will focus on coordination and delivery of all levels of infrastructure. The \$50 million funding comprises the UAP Support Scheme and will include payments to councils for 'local infrastructure a local council may need to provide' and upgrades that are required to sustain housing and jobs growth. The Support Scheme is intended to be a pilot program with potential for broader roll out; comprises annual funding – with the amount based on recent dwelling yield; and is funding that will be additional to developer levies.<sup>12</sup>

At this early stage it appears the GIPs and UAPs are to be focused on infill development areas, although it is conceivable that Leppington Major Centre may meet the criteria for qualification as a UAP.

Another possible funding source for local infrastructure is the Local Infrastructure Renewal Scheme (LIRS).

LIRS:

- is an incentive to councils to make greater use of debt funding to accelerate investment in infrastructure backlogs and augment funding options already available to councils;
- is a loan subsidy scheme that meets the first 4% interest rate on loans that councils take out specifically to pay for large infrastructure projects such as roads, community halls, libraries, paths, parks, sports fields and water facilities;
- implements the Local Infrastructure Backlog Policy, but in addition to renewals the works may include facility upgrades; and
- is intended to provide loan subsidies to projects derived from 10 year Asset Management Plans prepared by councils under the Integrated Planning and Reporting framework.

The first round of subsidies was announced in March. The Government recently announced:

- a reduction in the subsidy rate from 4 per cent to 3 per cent for successful applications beyond the first round of the LIRS; and
- an additional eligibility criterion, that infrastructure directed to enabling new housing be given priority.<sup>13</sup>

## Evolving funding regime for higher order community facilities

While this information on funding sources is current, many of the higher order local infrastructure items (such as major community and cultural facilities in Leppington Major Centre, or a regional sporting complex in the Western Sydney Parklands) will not be required until a significant proportion of the area is developed to the population size that viably supports such infrastructure. Over the development timeframe (perhaps 25 years or more) there will be a number of revisions of funding mechanisms and so it is not possible to be definitive about the funding sources available for the Precincts' local infrastructure requirements.

<sup>12</sup> *Precinct Support Scheme for Urban Activation Precincts*, Factsheet issued by Department of Planning and Infrastructure, June 2012, accessed at

<http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=iHRVuKfPpHQs%3d&tabid=205&mid=1081&language=en-US>

<sup>13</sup> *Infrastructure Statement 2012-13 - Budget Paper No. 4*, page 2-8

Larger, 'regional' community facilities such as arts and cultural centres have been traditionally provided using a range of funding sources (particularly grants), and with less reliance on section 94 contributions. Examples in growth areas include the Joan Sutherland Performing Arts Centre in Penrith CBD, the Casula Powerhouse at Casula, and the Max Webber Library in Blacktown CBD.

It is unreasonable, impractical and inconsistent with current Government policy to expect section 94 contributions to fully fund higher order community facilities intended to serve the Precincts and the wider South West Growth Centre. That is, the contribution would be too great thus affecting viability of the development; and the facilities could not be provided in a reasonable time as all of the contributions (from the wider service area) would take too long to collect. Therefore, various alternative funding mechanisms such as State or Federal grants, sponsorship and community fund raising are all opportunities which must be pursued.

## 3 Infrastructure requirements

This Section discusses the infrastructure planning issues and requirements for the Austral and Leppington North Precincts. Figures A, B and C in the front of this report show the infrastructure referred to in this section.

### 3.1 Water supply and waste water treatment

#### 3.1.1 Sydney Water asset creation process

Sydney Water Corporation (Sydney Water) prepares annual Growth Servicing Plans<sup>14</sup> (GSPs) setting out their plans for water and wastewater infrastructure to service urban growth 5 years in advance. Sydney Water's web site sets out the details of the decision making process for Sydney Water to invest in infrastructure. The following provides a brief overview of the current GSP principles.

Sydney Water invests in new assets based on assessment of the need for those assets. The primary influence is the forecast lot and dwelling production targets set out in the MDP.

Sydney Water also considers other factors such as:

- Broad macro economic trends
- NSW government benchmarks for zoned and serviced land
- Sub regional analysis of greenfield areas
- Comparison of previous MDP data with current data
- Comparison of new connection rates to corresponding lot production forecasts
- New connection rates across Sydney
- Capacity of existing infrastructure
- Consultation with the Department of Planning and Infrastructure and the development industry
- Level of land fragmentation in greenfield areas

The process is shown in Figure 3.1 over page.

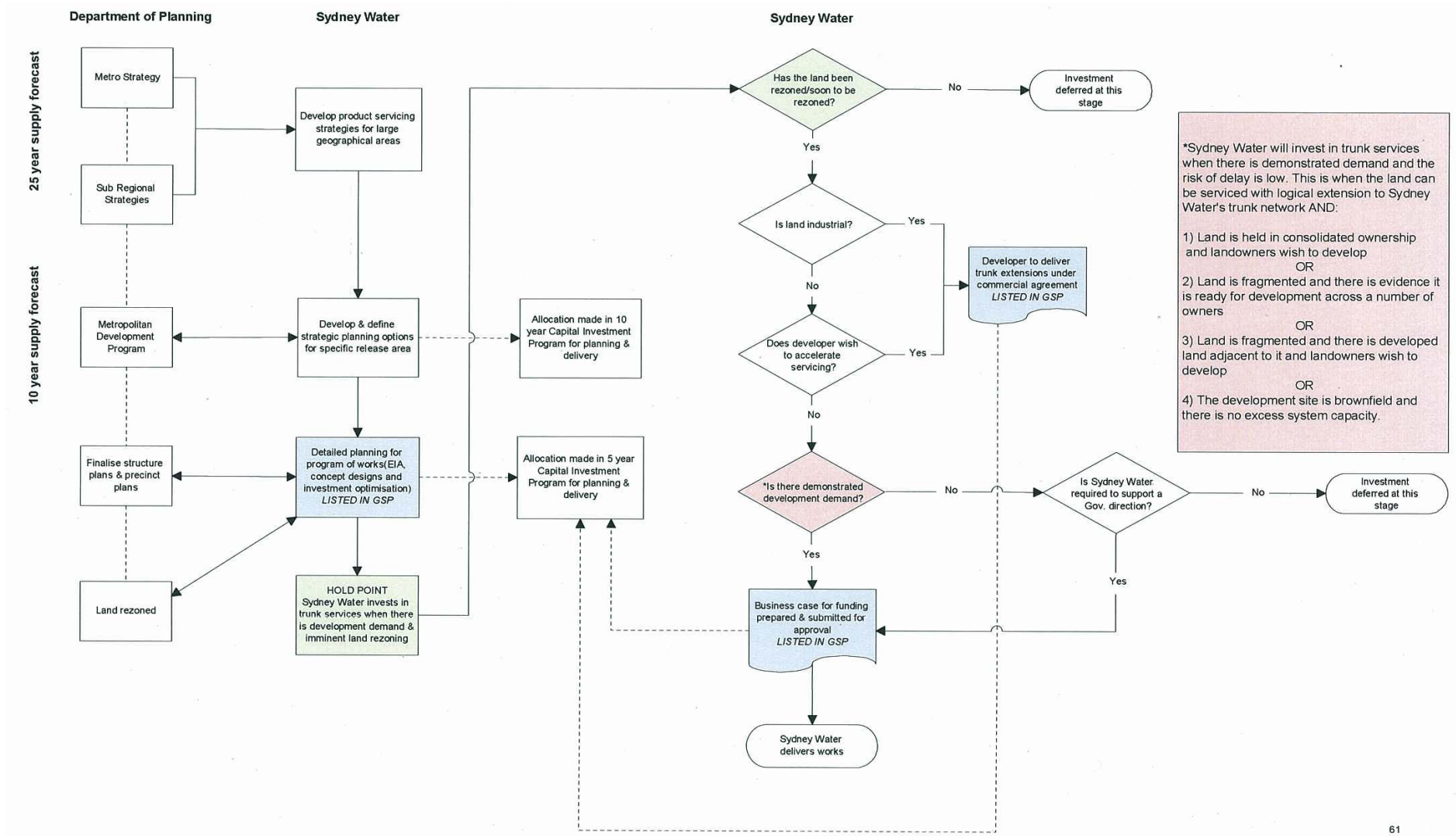
Sydney Water's policy is that it will invest in trunk services when there is demonstrated demand and the risk of delay is low. This is when the land can be serviced with logical extension to Sydney Water's trunk network AND:

1. Land is held in consolidated ownership and landowners wish to develop; OR
2. Land is fragmented and there is evidence it is ready for development across a number of owners; OR
3. Land is fragmented and there is developed land adjacent to it and landowners wish to develop; OR
4. The development site is brownfield and there is no excess system capacity.

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<sup>14</sup> <http://www.sydneywater.com.au/BuildingDeveloping/GrowthServicingPlan/index.cfm>

### Austral and Leppington North Precincts Infrastructure Delivery Plan



**Figure 3.1 Sydney Water's decision-making framework for investing in urban growth**



Based on its process and in consideration of the above factors, Sydney Water will plan for the provision of those assets it considers essential in the following five years.

Timing is critical for Sydney Water as its pricing regulator, IPART, will consider 'efficiency tests' in reaching its determination. In essence this means that Sydney Water will provide funding for infrastructure only when it is certain that it will be required upon completion. Sydney Water usually does not provide funding for infrastructure in anticipation of future demand.

If a developer believes its land is able to be developed prior to the time frame set out by the Developer Servicing Plan and Sydney Water's GSP, the developer may enter into a commercial agreement with Sydney Water to construct the major infrastructure, the cost of which may be refunded by Sydney Water at a future date.

Note that in all cases, Sydney Water's policy is to provide only the trunk infrastructure. Developers in greenfield development areas are expected to provide and pay for reticulation works within the development. Developers are also required to provide lead-in works which connect the trunk systems to the reticulation systems. Lead-in mains above a certain minimum size may constitute trunk infrastructure. Trunk mains are also eligible for refunds of the reasonable and efficient cost of these works.

### **3.1.2 Sydney Water South West Growth Centre planning**

Sydney Water is currently preparing a water and sewer servicing strategy for the South West Growth Centre.

Figure 3.2 over page shows Sydney Water's indicative strategy for provision of both water supply and wastewater sewers and treatment facilities for the South West Growth Centre.

#### **Wastewater**

Figure 3.3 shows the same ultimate wastewater system only, in the context of existing release areas and sewers to the south.

In terms of wastewater, Sydney Water is considering provision of three sewage treatment plants (STPs) to service the Growth Centre located at Kemps Creek, Lowes Creek and South Creek.

This is a major long term strategy requiring considerable investment over a lengthy time period. Sydney Water will not construct this infrastructure until it is confident that its investment will be viable and there is credible evidence of a critical mass of development. Using the factors listed in Section 3.1.1, Sydney Water will be looking to triggers of critical mass for construction of such major assets.

Prior to such trigger points, Sydney Water will consider interim servicing strategies, possibly short term solutions which require lesser investment and defer the substantial investment required for the ultimate system. These could include a range of options for managing waste water in the interim such as small package treatment plants, temporary sewage pumping stations (SPSS), or irrigating playing fields with recycled water as opposed to discharging into creeks.

### Austral and Leppington North Precincts Infrastructure Delivery Plan

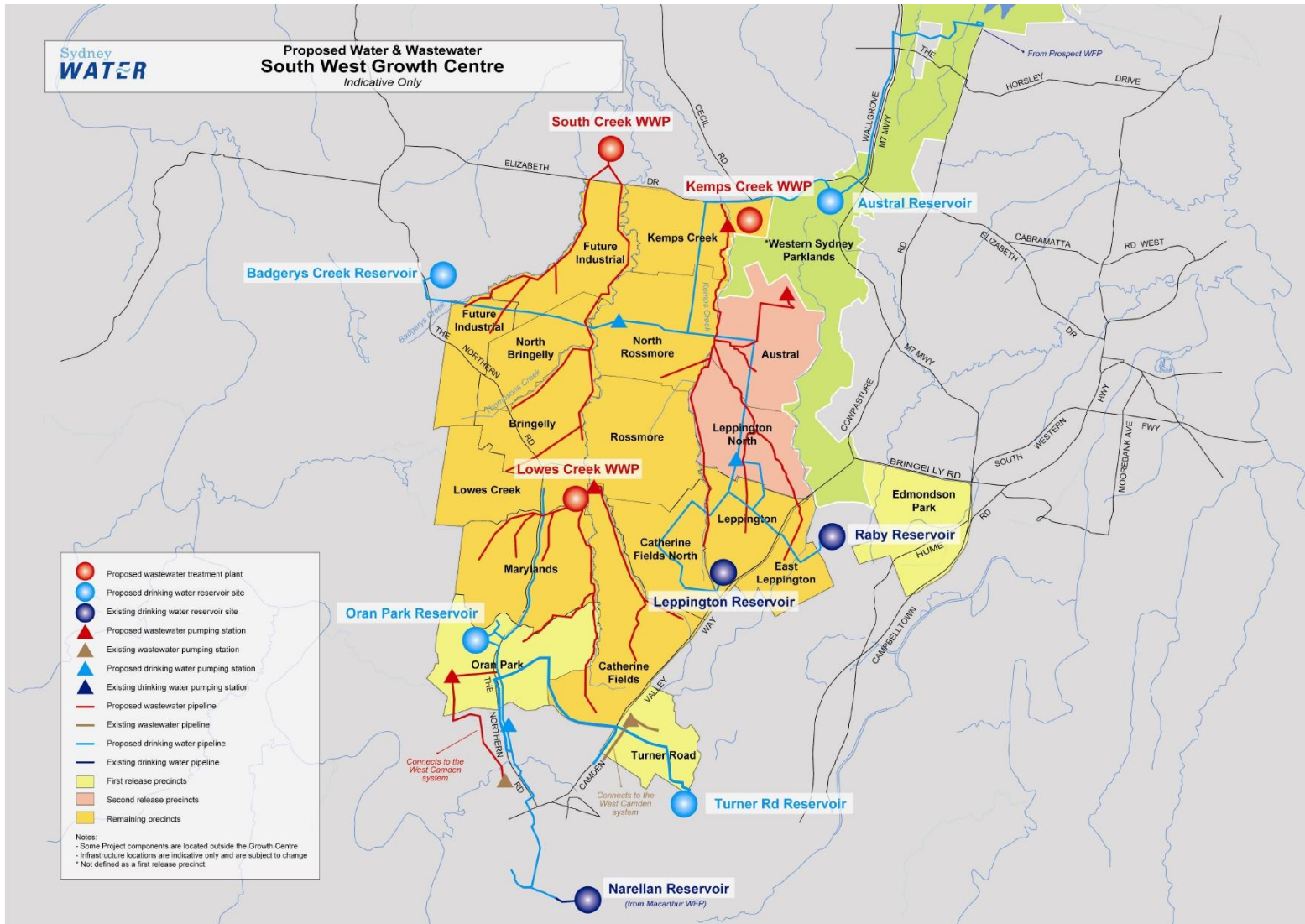
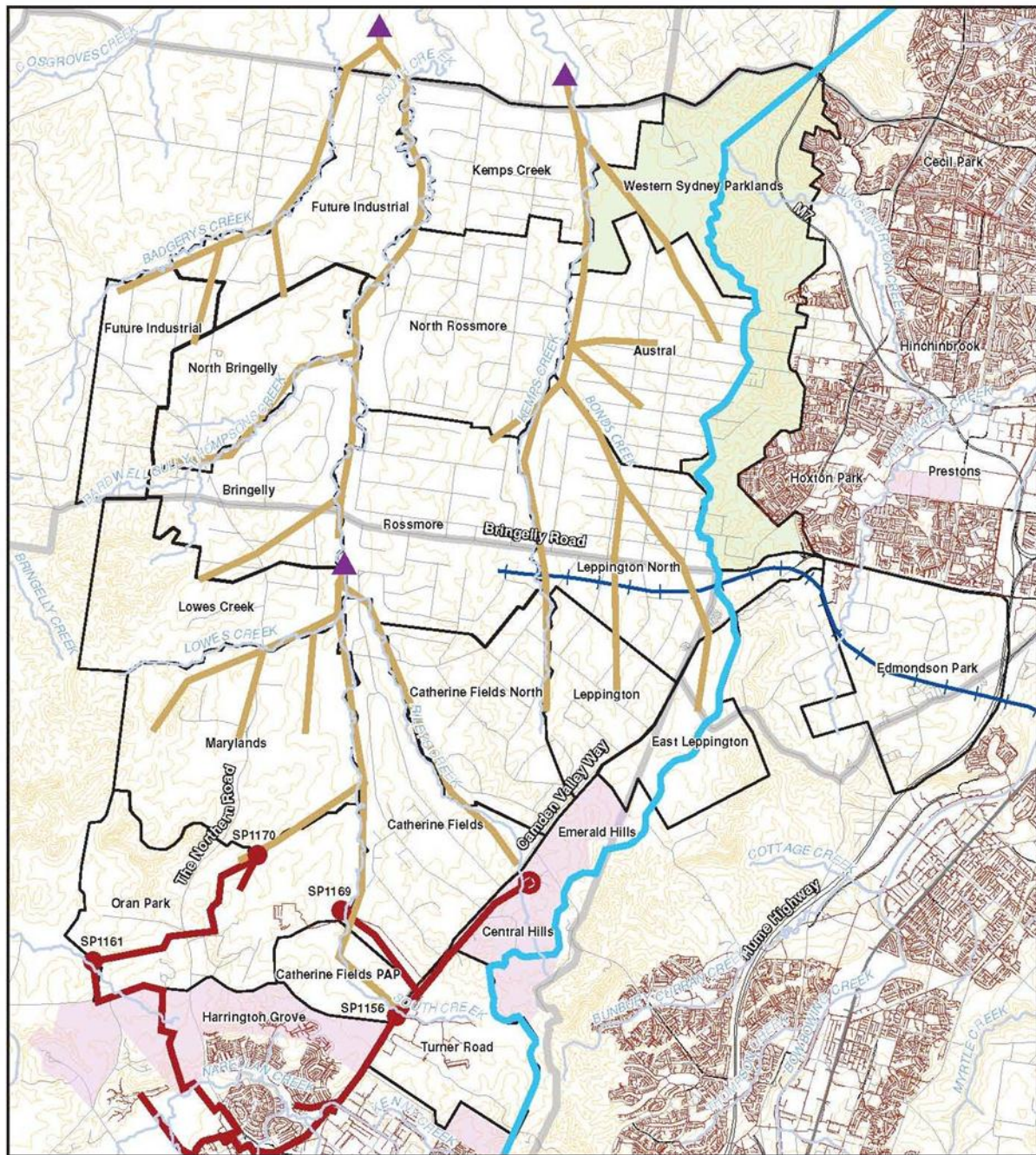


Figure 3.2 Sydney Water’s indicative strategy - water supply and waste water facilities - South West Growth Centre



Austral and Leppington North Precincts Infrastructure Delivery Plan



LEGEND

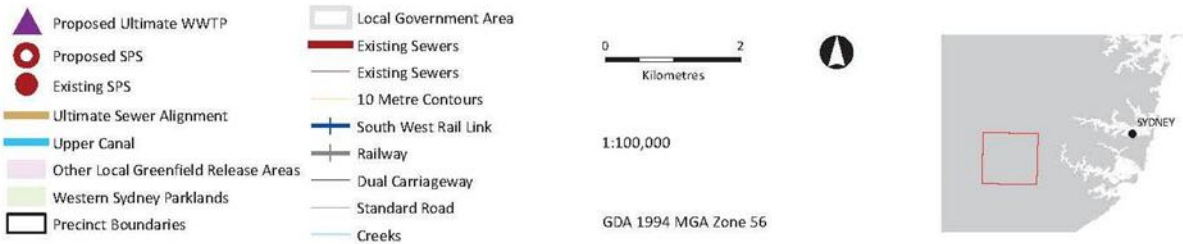


Figure 3.3 Detailed Ultimate Proposed Wastewater Network

The strategy for the first stages of Austral and Leppington North, is proposed by Sydney Water in Figure 3.4 (Short Term Wastewater Strategy) shown on the following page. This strategy which services East Leppington and Leppington in addition to early stages of Leppington North and Austral, provides sewage transfer capacity up to 2021. The effluent will be transferred to the existing Liverpool treatment system which has capacity for an additional 4,000 lots. Sydney Water has used information from various sources including the Metropolitan Development Program, local councils and developers to plan this interim solution.

There will need to be further work on the ultimate strategy as to which of the three STPs - South Creek STP, Kemps Creek STP or Lowes Creek STP - will be provided first.

Previously Lowes Creek was scheduled for commissioning by 2018. In its ongoing review of the overall strategy for the South West Growth Centre Sydney Water's modelling has shown that, due to reduced flows and lower infiltration of groundwater into the newer improved sewage systems, the capacity of existing treatment plants will not be reached in the time frame anticipated when these facilities were originally commissioned. This means, for example, that the West Camden STP can service areas outside the natural catchment, such as parts of Oran Park, for longer than originally planned, further deferring the need for the permanent Lowes Creek STP.

### **Potable Water**

In terms of potable water, Sydney Water advises that the Precincts could initially be served by the existing Carnes Hill Reservoir with an indicative capacity for 600 lots. The longer term solution would involve provision of a new reservoir adjacent to the existing reservoirs at Leppington and ongoing use of the Leppington and Raby reservoirs. Exact timing and staging of the longer term solution has not yet been provided.

Sydney Water no longer provides dual reticulation water systems (potable and recycled water) to the Growth Centres.

### **Summary**

Sydney Water has prepared an ultimate proposed wastewater network which will service the Precincts after 2021 but without specific timing or staging. It has also prepared a short term strategy for water and wastewater to two indicative areas identified by the DP&I as possible first stages in Austral and the future major centre in Leppington North.

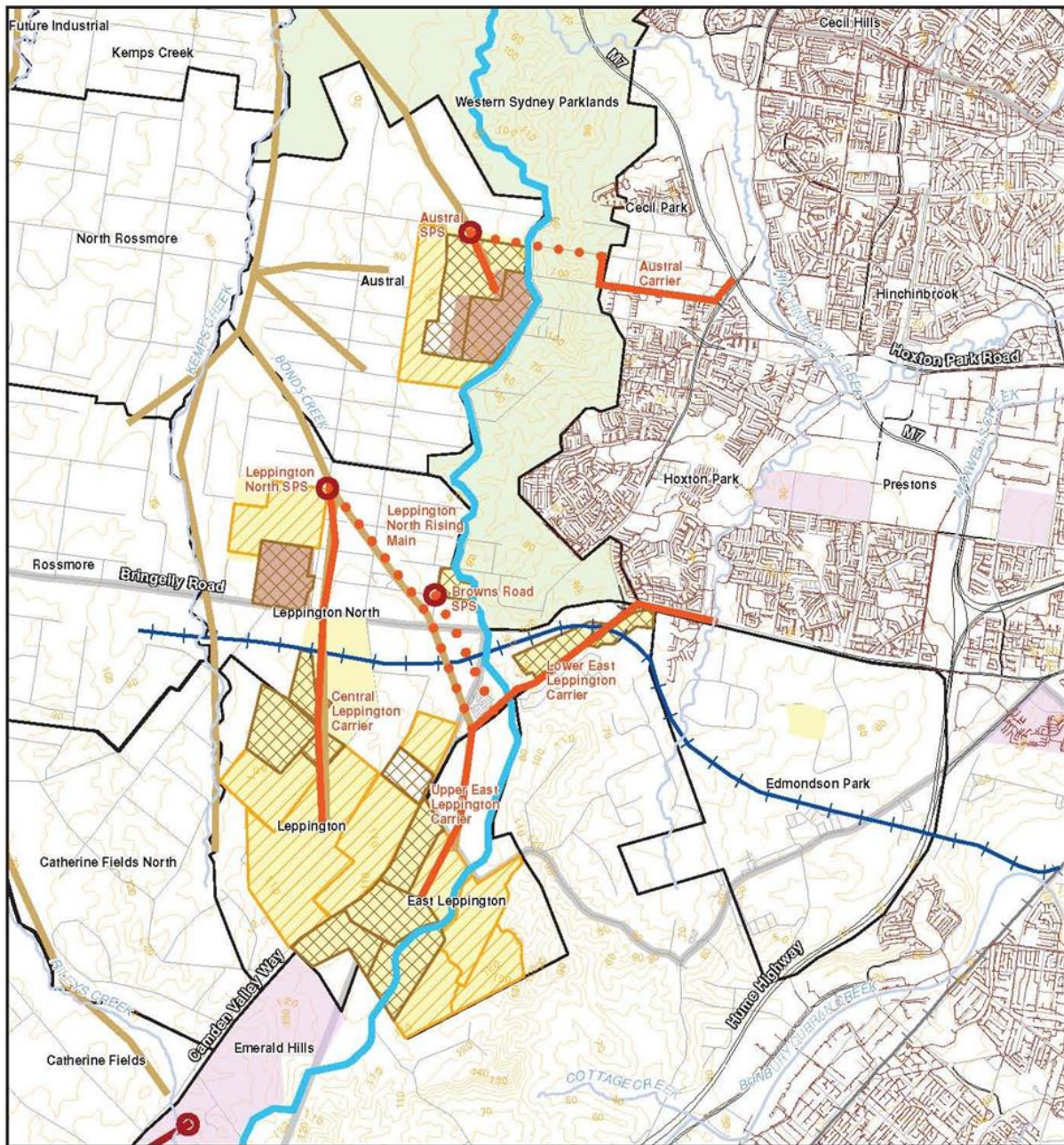
While this is helpful for these areas, it is of limited value for other areas within the Precincts, other than demonstrating that interim solutions are possible.

For example, potential developers are likely to consider early development outside the indicative areas, such as the larger existing parcels to the north which, because of their scale, may show greater viability for early development.

However the information currently provided by Sydney Water does not assist developers in undertaking their feasibility studies. At best the information they have is that there will be services available by 2021 but exactly where and when is unknown. Developers will also need to fund and provide connections to the trunk system but they currently have no way of realistically estimating these costs.



Austral and Leppington North Precincts Infrastructure Delivery Plan



LEGEND

- Proposed SPS
- Upper Canal
- Ultimate Sewer Alignment
- Stage 1 Proposed Rising Main
- Stage 1 Proposed Sewer
- Other Local Greenfield Release Areas
- Western Sydney Parklands
- Precinct Boundaries
- Local Government Area
- Existing Sewers
- Existing Sewers
- 10 Metre Contours
- South West Rail Link
- Railway
- Dual Carriageway
- Standard Road
- Creeks
- Development Area 2021-22
- Development Area 2016-17
- Growth Area 2021-22
- Growth Area 2016-17

0 2  
Kilometres

1:65,000

GDA 1994 MGA Zone 56



Figure 3.4 Short Term Wastewater Strategy

Given the ten year time frame for the ultimate system currently indicated by Sydney Water, it is highly unlikely that anyone, either small landowners or larger developers will even consider developing outside the first stage areas indicated. Even these are problematic as the developer costs for these temporary works are also unknown.

For the servicing of Austral and Leppington North to actively support development a more definitive approach is required by Sydney Water. While developers are able to approach Sydney Water to discuss options, it can take some considerable time to arrive at meaningful answers which adequately address timing and cost issues. Few, if any, developers are able to afford the time and cost of working through this process.

**It is recommended that Sydney Water immediately continue its work on servicing of the Precincts to provide a model which is able to quickly identify servicing solutions including costs and timing of any developable areas within the Precincts. Such a detailed servicing solution is critical to both providing a positive investment signal for developers, and to enable the early commencement of development within the Precincts that is desired by both the market and the NSW Government.**

## 3.2 Stormwater and drainage

Most of the land in the Precincts drains towards the north-west and is situated within the Kemps Creek catchment. The exception is a relatively small development area situated in the eastern part of the Leppington North Precinct, which drains eastwards towards the Cabramatta Creek catchment.

The proposed stormwater management scheme for the Precincts is outlined in the report *Austral & Leppington North Precincts WSUD Strategy*, prepared by Cardno (NSW/ACT) Pty Ltd (the 'WSUD Strategy').

The WSUD Strategy is a water cycle management strategy for the Austral and Leppington North developments that addresses water conservation, efficiency, stormwater management, drainage and flooding in an integrated manner.

The Strategy's objectives include:

- Collection of rainwater from roofs to reduce runoff volumes particularly for small rainfall events.
- To ensure, as far as possible, that peak flows downstream of the development will be no greater than peak flows under existing conditions.
- To achieve stormwater pollutant reductions according to best management practices.

Features of the WSUD Strategy include:

- Rainwater tanks to capture initial / small volume run-off.
- Reservation and dedication of land in drainage corridors to enable construction of drainage facilities and effective ongoing management of those facilities.
- Implementation of a series of retarding basins to manage stormwater flows. The basins are generally positioned adjacent to, but off-line from, the Category 1 and 2 streams that traverse the Precincts.
- Implementation of a combination of measures in conjunction with the retarding basins to manage the quality stormwater runoff, including gross pollutant traps, bio-filters, wetlands, and/or open water ponds.

- Integration of water management facilities with open space and recreation areas where appropriate.

The drainage infrastructure described in the WSUD Strategy is trunk infrastructure to support the development. The local council is responsible for the trunk infrastructure, while land developers will be required, through conditions of consent, to provide reticulation works within the development.

The land corridors and works associated with the trunk infrastructure will be included in section 94 contributions plans prepared by the local councils. There will likely be opportunities in the subdivision of larger parcels for developers to deliver both reticulation and trunk infrastructure by negotiating a works-in-kind agreement with the local council in lieu of payment of drainage section 94 contributions. Where there is no major lead developer, councils will be responsible for providing the infrastructure over time. As income from section 94 contributions is likely to be sporadic and slow in the initial stages, councils will need to stage works and may require on site temporary stormwater management arrangements to be in place until the ultimate systems are provided.

## 3.3 Electricity

### 3.3.1 Endeavour Energy asset creation process

Endeavour Energy (formerly Integral Energy) is the agency most likely to provide electricity to the Precincts. As stated in its Annual Planning Statement Endeavour Energy investigates both supply-side and demand side solutions to ensure the optimisation of energy supply.<sup>15</sup> Endeavour Energy publishes annual planning statements into these investigations.

Endeavour Energy's 2011 *Electricity System Development Review* contains plans for the network based on local government areas and is intended to:

- provide details and information on network constraint areas in accordance with the *Demand Management Code of Practice*;
- invite stakeholder input and feedback on the review, particularly in relation to suggesting alternative proposals to relieving specific network constraints;
- outline actions taken and results achieved as a result of feedback received since the last Planning Statement was issued; and
- explain Endeavour Energy's energy efficiency strategy.<sup>15</sup>

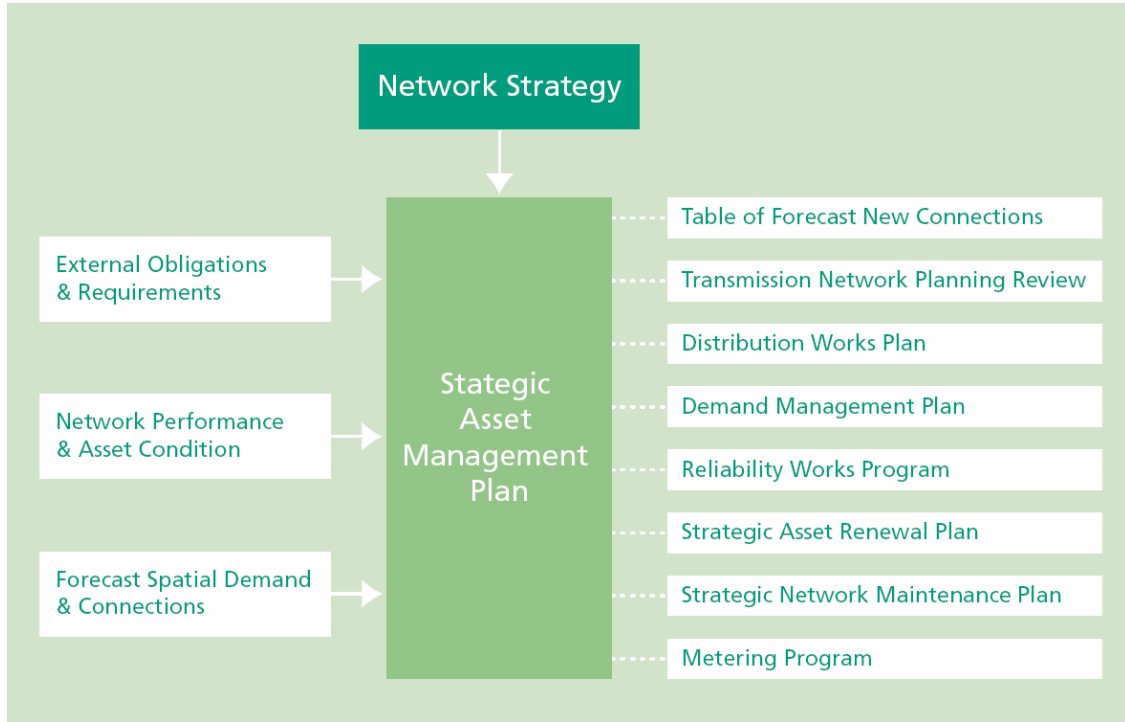
This document describes in some detail a range of planning processes with the Strategic Asset Management Approach containing a ten year capital works program and drawing together a variety of 'strategic initiatives' shown in Figure 3.5 below:

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<sup>15</sup>

<http://www.endeavourenergy.com.au/wps/wcm/connect/71b185804701aace8c29cf23afe1452b/2011+Endeavour+Energy+Electricity+System+Development+Review.pdf?MOD=AJPERES>, p1





**Figure 3.5 Endeavour Energy strategic initiatives**

It is important to note that Endeavour Energy operates in a competitive environment and as such servicing decisions involving substantial investment are also based on effective returns on investment. Where such returns are not evident, a developer may be required to fund capital works.

### 3.3.2 Endeavour Energy South West Growth Centre planning

The Austral Precinct has between 700 to 1,400 lots interim electricity capacity available via a connection to the new substation to the east at Hinchinbrook. This connection would most likely need to be developer-funded.

Beyond this initial capacity, a substation would be required on Fifteenth Avenue with a favourable site being on the corner of the light industrial zoning within close proximity to the existing transmission line easement as shown on the ILP map.

Responsibility for acquisition of the land required for the substation is currently unclear. Where a major developer is involved, Endeavour Energy generally expects the land to be made available free of charge. Fragmented land ownership in these Precincts means Endeavour Energy will have little choice but to purchase the land itself. In other development areas with fragmented ownership, Endeavour Energy has acquired land where necessary to secure a substation site.

The Leppington North Precinct has effectively no capacity in terms of interim works. Express feeders as proposed in Austral are not possible as new Edmondson Park developments and other existing uses will be using all available capacity. A new substation is required in the vicinity of Bringelly and Dickson Roads intersection as shown on the ILP map. The transmission lines from the existing high tension lines would be above ground and all distribution from the substation to residential and commercial users would be underground.

To meet the time frames for the first stages of development in Leppington North within the next 3 - 5 years the most likely solution would be to install a moveable substation, possibly on the



site for the ultimate permanent station. A one hectare site in the vicinity of the corner of Dickson and Bringelly Roads, or further south on surplus South West Rail Link land, would be an appropriate location.

The issue of easements for high voltage transmission lines must also be addressed during the next stages of planning for the Precincts. Treatment of these is crucial in terms of meeting the needs of Endeavour Energy and its customers but careful planning is required in order to avoid substantial land take. Having lines congruent with a major road such as Bringelly Road or the South West Rail Line corridor for example, would be desirable in this respect but power lines over extended private back yards is not acceptable to Endeavour Energy.

The situation for timely provision of electricity supply is similar to that for water and wastewater services described in Section 3.1. Endeavour Energy has provided sufficient information to demonstrate that servicing options are available to identified areas but any developer looking outside these areas will again encounter uncertainty of cost and timing.

As with Sydney Water, it is recommended that Endeavour Energy work on a strategy which is able to provide servicing solutions for any developable areas within the Precincts. This is considered essential for early commencement of development within the Precincts.

## **3.4 Gas**

Jemena has been aware of the proposed development in the South West Growth Centre from the initial planning stages and has advised that it is able to provide the gas distribution network to service the area. The map shown in Figure 3.6 over page shows Jemena's current planning for the South West Growth Centre.

While Jemena is a private company and operates on a commercial basis, it is unlikely to require any capital contributions for infrastructure augmentation as investment is recouped from user charges.

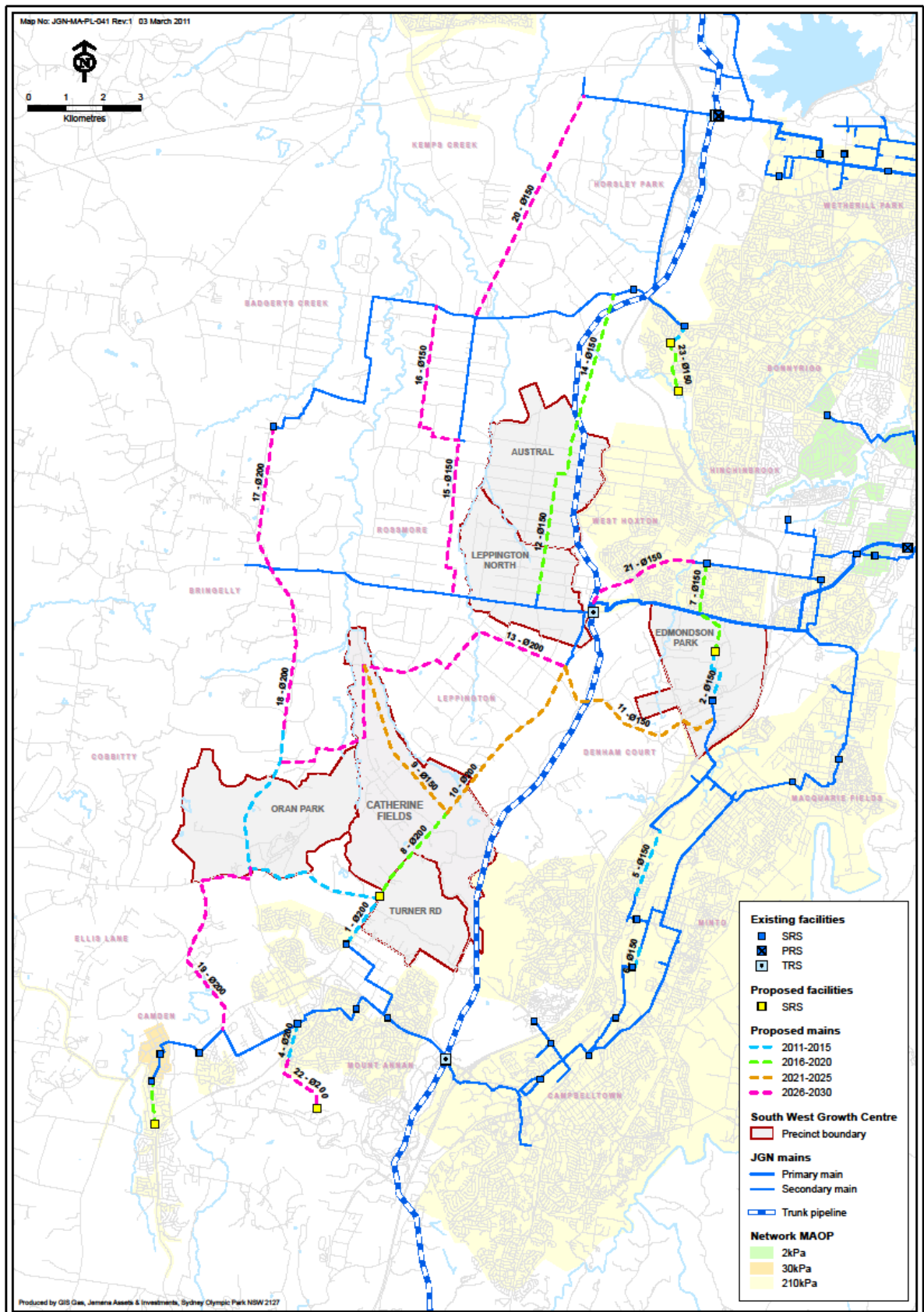


Figure 3.6 South West Growth Centre gas network planning

### 3.5 Roads, public transport, cycling and walking

The transport and access issues are addressed in the *Austral and Leppington North (ALN) Precincts Transport Assessment* prepared by AECOM. The report assesses a range of transport options including the road network both external to and within the precincts and also covers public transport, walking and cycling.

Upgrading of Camden Valley Way is under way, as announced by the Premier on 17 January 2012:

*The upgrade is being delivered in four sections, two of which have already been completed, with the third section to be completed this year and the final section to be delivered in three stages by the 2016 deadline.*

*The section of upgrade between the M5/M7 interchange and Bernera Road was completed in 2005 and the second section between Bernera Road and Cowpasture Road opened to traffic in July 2011. Work is progressing on the third section, between Narellan and Cobbitty Roads, which is expected to be completed around June this year, weather permitting. The final section is more than 10 kilometres long and runs between Cowpasture Road and Oran Park Drive.*

*The remaining two-lane sections of Camden Valley Way between Narellan Road and the M5-M7 interchange will be upgraded by the end of 2016.<sup>16</sup>*

In the medium term, two major east–west high order roads are required to serve the Precincts. These are Bringelly Road and Fifteenth Avenue, linking Camden Valley Way, Cowpasture Road, M5 and M7 Motorways and The Northern Road. Fifteenth Avenue is also proposed as a high frequency bus corridor with bus priority and dedicated travel lanes at intersections.

There are also two key north-south routes required, namely the Edmondson Avenue-Rickard Road corridor and the Fourth Avenue-Dickson Road corridor.

Edmondson Avenue-Rickard Road corridor is important as a primary link to Oran Park Town Centre, Austral Town Centre and Leppington Major Centre, and as such is proposed to contain a four lane transit boulevard and will be a strategic bus connection.

An overall road hierarchy is set out in the AECOM report with heavy goods vehicles restricted to principal arterial roads, sub-arterials and transit boulevards with smaller vehicles also permitted on collector roads and local streets.

Section 2.1.3 explains Special Infrastructure Contributions which are intended to provide at least majority funding for higher order roads that will serve the Precincts.

The following roads in the vicinity of the Precincts (and also shown in Figure 3.5) are intended to be funded using SICs:

- Bringelly Road (Items R4 and part Item R5 in SIC Schedule<sup>17</sup>);
- Camden Valley Way (part Item R1 and part Item R2);
- Rickard Road (part Item R26);
- Eastwood Road (part Item R28);

<sup>16</sup> Media Release, The Hon Barry O'Farrell, Premier, Minister for Western Sydney 17 January 2012

<sup>17</sup> *Environmental Planning and Assessment (Special Infrastructure Contribution - Western Sydney Growth Areas) Determination 2011*, page 21

- Ingleburn Road (part Item R29);
- Edmondson Avenue (Item R22); and
- Fifteenth Avenue (part Item R8).

Higher order roads not covered by the SIC or separately under construction by the RMS are provided by councils, as set out in Section 2.2.1. They are funded either through section 94 contributions and are often constructed as works in kind by the developer. Collector roads are generally delivered by a mix of section 94 contributions and by developers. The majority of all new roads - i.e. the lowest order local roads in land subdivisions - are funded and constructed by the developer at the time of subdivision and dedicated to council as public roads once constructed.

The proposed bus route network will, where possible, provide direct links with key corridors along the higher order roads mentioned above. Roads will be designed to facilitate bus movements by having two lanes in each direction or one lane with a parking lane for a bus stop. A focus for the local bus network will be the Leppington Major Centre and rail station. A rail-bus interchange will be developed at that location to meet this need.

A comprehensive walking and cycling network is proposed with options for cyclists including off-road (shared path), on-road (cycle lane) and on road (signed route).

### 3.6 Rail

The South West Rail Link, when completed, will connect the Precincts' population, particularly the Leppington North Precinct with the regional passenger rail network.

Transport for NSW has responsibility for rail and bus transport. The Transport Construction Authority is responsible for constructing the South West Rail Link which includes:

- A new 11.4-kilometre rail line from Glenfield to Leppington,
- two new stations located at Edmondson Park and Leppington Major Centre, including commuter car parking,
- a train stabling facility at Rossmore,
- an upgrade of the existing Glenfield Station and bus/rail interchange, including new commuter car parking and
- construction of Glenfield North and Glenfield South rail flyovers.<sup>18</sup>

Construction of the rail link to Leppington Major Centre has commenced and is proposed to be completed by 2016.

### 3.7 Health

This summary of proposed health services and facilities is derived from the *Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment* prepared by Elton Consulting and information from the South Western Sydney Local Health Network.

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<sup>18</sup> <http://www.tca.nsw.gov.au/Our-Projects/Current-Projects/South-West-Rail-Link/Project-Profile/Project-profile/default.aspx>

The capacity of major existing hospital facilities within the region, namely Liverpool, Campbelltown and Camden Hospitals will need to be increased to provide for the increased population.

The health development strategy recommends provision of a hierarchy of integrated primary and community care centres (IPCC) across the South West Growth Centre. An IPCC contains multidisciplinary and specialist medical ambulatory care that will potentially include a day surgery with attached or incorporated primary care clinics.

These IPCCs are proposed for Leppington, Oran Park and Bringelly. The largest and most comprehensive IPCC in the South West Growth Centre is envisaged for the Leppington Major Centre with a projected catchment population of approximately 150,000. The South Western Sydney Local Health Network has indicated to the Department that it will commit to acquisition of land for the future construction of the Leppington IPCC.

Location of this centre in the Major Centre is important for access to other amenities including childcare, public transport and car parking.

In addition, Council facilities also provide local services. In particular a multi-purpose community facility can provide office space for a community development worker, and for other human service providers or rooms for the delivery of services such as baby health clinic, counselling or family support services. A multi-purpose facility of this type is proposed for the Leppington Major Centre, although the funding source is yet to be determined.

### **3.8 Education**

The NSW Department of Education and Communities (DEC, formerly Department of Education and Training) is responsible for public primary and secondary schools and TAFE colleges.

The strategy for school locations throughout the Precincts will be developed as the planning for the area evolves. The DEC aims to make best use of existing facilities while recognising that communities value proximity to local schools for the sense of community which they can generate. Hence the DEC adopts a staged approach which balances community needs and cost considerations.

The existing Austral Public School is anticipated to be retained for the long term, to cater for future growth in the residential population in surrounding areas. The existing Leppington Primary School is likely to continue to operate until such time as development in Leppington Major Centre necessitates relocation of the school. Additional new school sites throughout the Precinct are shown on the ILP. However, DEC has indicated that the capacity of existing schools in the Precinct and in adjoining areas, e.g. John Edmondson High School and Hoxton Park High School, is sufficient to cope with initial demand, with new schools unlikely to be required within the next 10 years. DEC will continue to monitor population growth and re-assess the need for new schools as development occurs.

Various private sector organisations including the Catholic and Anglican churches have recently been active in developing school education facilities in the South West Growth Centre. The Precincts are likely to cater for further school facilities by non government providers.

Short term demand for TAFE facilities from the South West Growth Centre will be met through the four existing TAFE colleges in Liverpool and Campbelltown. TAFE is continuing to plan for longer term demand generated by the South West Growth Centre development with Leppington Major Centre a preferred location for a new TAFE campus. TAFE NSW – South Western

Institute has recently advised that a 2-3 hectare site be recognised in the Leppington Major Centre as part of their Total Asset Management Strategy. The request is for acquisition of the site only with building development not commencing until sometime after the completion of the South West Rail Link (2016) when the population is sufficient to support the facility.

### 3.9 Emergency services and justice

Emergency services requirements are identified in the *Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment* prepared by Elton Consulting and were subject of discussions with emergency services agencies in early 2011.

Typically, NSW Police would not build a facility ahead of the community being present but could land bank a site for future use. One key factor influencing such an acquisition is the location of a courthouse. The Department of Justice and Attorney-General is considering a future courthouse in Leppington Major Centre but no decision has yet been reached. Should the courthouse be located in Leppington Major Centre, NSW Police would seek an adjacent site of approximately 1.25 hectares for a facility with a built area of about 5,000 square metres.

Fire and Rescue NSW and Ambulance NSW rely on being able to respond to emergency situations in the shortest possible time. As such, such agencies are only able to identify particular site requirements once the road network has been confirmed. Broad locational criteria for new sites for these services include those which:

- provide ready access to the road network and preferably away from areas which are likely to become congested;
- provide ready access to both commercial and residential areas;
- minimise noise impacts on residential areas;
- are large enough to accommodate garaging and maintenance of vehicles, and
- allow for some expansion as needs grow.

### 3.10 Community and cultural

The Precincts' community and cultural infrastructure requirements are outlined in the report *Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment*, prepared by Elton Consulting.

The Leppington Major Centre will be the South West Growth Centre's regional centre. As such it will, in time, accommodate a range of community and civic facilities meeting local, district and regional needs.

Infrastructure required in Leppington Major Centre that will need to serve a surrounding population of around 120,000 includes the following:

- Spaces for large community events, gatherings, celebrations and civic functions
- Meeting spaces for community organisations and groups and for human services that have a district or regional focus
- Large spaces for private functions, such as weddings, conventions, conferences
- Spaces for adult education, workplace training and community learning programs
- A central library



- Spaces for staging major entertainment events or performing arts, spaces for visual arts, and spaces to display and celebrate the cultural heritage of the area

Facilities should be clustered together or co-located in a 'Civic Precinct' in the town adjacent to open space. There are multiple ways to arrange the spaces and further planning should concentrate on combination and co-location options.

Design of facilities will depend upon a variety of factors, including the availability of funds, the aspirations of the responsible council, and evolving best practice. Detailed needs and feasibility assessments need to be undertaken as the population of the area grows.

Existing facilities in the surrounding region offer opportunities to meet some interim needs either in their current form or through expansion (for example, the Casula Powerhouse).

The higher order civic and cultural facilities will not be warranted until the population reaches a threshold of about 50,000 people or more. Larger, more specialist facilities, in turn, will not be justified until the surrounding population has reached 100-150,000 people. Facilities should therefore be built in stages with expansions occurring incrementally as the population grows.

A multi-purpose community centre, capable of meeting the needs of a population of up to 10-15,000 people initially, could be provided on the future site of the major community facility.

Apart from facilities in the Major Centre, the following facilities will be required in the Precincts to serve more localised need:

- 1 large multi-purpose community centre in the Austral town centre.
- 3 smaller multi-purpose community centres elsewhere in the Precincts.
- Community services for families and individuals in leasehold accommodation.
- Private and non-government sector child care, entertainment and leisure facilities, and places of worship.

### **3.11 Open space and recreation**

The Precincts' open space and recreation infrastructure requirements are outlined in the report *Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment*, prepared by Elton Consulting.

As for community and cultural facilities, the Leppington Major Centre will be the South West Growth Centre's regional centre and it will need to accommodate regional open space and recreation needs. Some higher order recreation facilities are required in a highly accessible location in or near the Leppington Major Centre so as to effectively serve a surrounding regional catchment. These include:

- A regional stadium and sporting facility (possibly in the Western Sydney Parklands in the Bringelly Precinct) to serve the entire Growth Centre population of around 300,000.
- An indoor sports and aquatic centre on a 4 hectare site in the Major Centre.
- Open space in the Major Centre to cater for the needs of residents, workers and visitors, including a town square, informal recreation space for children and youth, areas for lunchtime use, a network of cycling and walking paths, informal water play park, and regional private sector recreation facilities (e.g. tenpin bowling).

The Western Sydney Parklands immediately to the east of the Precincts will serve the regional open space needs of the population. Open space serving a local and district function - and

meeting both active and passive recreation needs - will be provided throughout Precincts at a rate of around 2.9 hectares per 1,000 population (or approximately 149 hectares).

Local parks (i.e. parks up to 0.5 hectare in size) within walking distance of 90% of all dwellings and 6-7 district parks each with a minimum size of 3 hectares will comprise the passive open space provision. Approximately 24 playgrounds and playspaces will be provided within these areas.

Eight local double playing fields (comprising fields, outdoor courts, amenities and parking) each on a 4-5 hectare site, plus 1 district sports park with provision for multiple sports facilities on a 6-10 hectare site will comprise the active open space provision.

Further recreation opportunities will be available on flood prone land, drainage areas, conservation areas, open space under transmission lines, and playing fields within schools.

Planning consideration will also be given to provision by non-government or commercial providers of 'specialist recreation facilities' (e.g. BMX tracks, skate parks, golf course, equestrian centre).

A network of walking and cycling tracks which link with a regional path network will be required adjacent to riparian corridors and conservation zones. Primary responsibility for planning and provision of these tracks will be the responsibility of councils and may be funded through section 94 contributions. In many cases, developers would construct these facilities as works in kind at the time of undertaking their development.

At a regional level, the RMS is implementing the Metro Sydney Bike Network which will connect Sydney's major centres with continuous off-road shared paths or traffic-free bicycle paths along quiet local streets. There may be opportunities to link this network with the local cycling tracks.



## 4 Infrastructure sequencing, coordination and next steps

Earlier Sections of this IDP identified various infrastructure elements which are to be coordinated, delivered and funded by a number of infrastructure providers. Because of the broad range of agencies with responsibilities for infrastructure provision, the IDP is intended to assist in the coordination of funding arrangements from a range of sources.

The State Government is in the process of rezoning the land to enable urban development of the Precincts to occur. However, the Government is also mindful that zoning alone will not enable development. Infrastructure investment and coordination is the vital next step that converts greenfield sites to urban development.

Key infrastructure funding and coordination issues are discussed in this Section.

### 4.1 Link between development-enabling infrastructure and development sequencing

Sequencing of development - i.e. which areas should and/or can proceed before other areas - is dictated largely by the availability of water, waste water and electricity.

In areas where a large parcel of land is held in single ownership, a developer will often provide up-front funding for this key infrastructure. Because many developable parcels in the Precincts are relatively small, the opportunity for single developer sponsorship of key infrastructure is not currently available in the Precincts.

Accordingly Sydney Water and Endeavour Energy will play key roles in determining where development commences. Government funding limitations mean that planning for major trunk works and lead-in mains will be targeted at specific areas and in particular where it is anticipated that appropriate returns on capital investment are more likely to be achieved. While infrastructure will be provided to keep pace with demand, it will be staged and will not be available to much of the area for a number of years.

The following discussion relates to the example of staging of waste water services in the Precincts, but is also applicable to water supply.

Sydney Water has indicated that for the north eastern parts of the South West Growth Centre there is existing waste water capacity available for up to 4,000 lots. The challenge will be to provide trunk carriers, lead in mains, pumping stations and rising mains to provide access to the existing capacity.

Currently Sydney Water generally provides only trunk services and amplification of STPs where demand is evident. Lead-in mains, pumping stations and rising mains are generally provided by a lead developer, and subject to approval, with the cost refunded by Sydney Water at an agreed time. Refund of costs may be upon completion or upon a certain proportion of development within the catchment for that facility being achieved.

In this area, there is no obvious lead developer. It may therefore be necessary for Sydney Water to provide a greater proportion of the waste water system upfront than it typically does. As developer-constructed assets are handed over to Sydney Water in any case, this is seen as entirely appropriate. As has been mentioned, Sydney Water is reluctant to invest in assets

where there is not a demonstrated demand. In these highly fragmented Precincts the initial demand may need to be stimulated by Sydney Water providing more than the trunk services it usually provides. Given the Precincts' role as a priority development area in the South West Growth Centre, the expectation that Sydney Water invests to encourage development, which will use and pay for those assets, is not unreasonable.

Similarly, Endeavour Energy relies on lead developers providing land for substations where that developer has significant land holdings. As for Sydney Water, given the land fragmentation issues Endeavour Energy will likely need to play a more proactive role in identifying and acquiring land for temporary or permanent substations. In addition feeder mains will also need to be provided by Endeavour Energy rather than relying on developers.

Upfront provision of higher level, lead-in infrastructure by both Sydney Water and Endeavour Energy can only serve to stimulate further activity by landowners and potential investors and developers.

Decisions by Sydney Water and Endeavour Energy about the infrastructure sequence will be influenced by both the location and extent of existing capacity in their current networks and the extent of interest in development of different parts of the area. Sequencing is therefore informed by genuine developer interest. This underlines the need for landowners to partner with Government and with each other in assembling 'development-ready' land parcels attractive for infrastructure investment.

## **4.2 Initial development areas**

The availability of interim water and waste water services and the planned 2016 completion of the South West Rail Link are key drivers for the initial development areas.

The State Government is making a substantial multi-billion investment in the improvement of Sydney's rail system that will drive economic growth in the entire Sydney Region. A major component of this investment is the South West Rail Link to the future Leppington Major Centre.

The Government wants the benefits of this investment to be maximised through:

- early urban development of the lands surrounding the new railway stations; and
- early and coordinated development of businesses, employment areas, and community facilities in the Leppington Major Centre - the regional centre that is planned to serve the South West Growth Centre.

Residential and town centre development in the Austral and Leppington North Precincts would support the investment in the rail line by increasing rail patronage and creating a new focus for employment, retailing and entertainment at Leppington. However, for this to occur, development-enabling infrastructure will need to be provided to stimulate developer interest in the Precincts. To be effective, this approach is likely to require interim works (for sewer and electricity in particular) to match infrastructure investment with likely returns through user charges. Investment in trunk infrastructure is likely to achieve a better return if lead-in works are also provided to locations that 'unlock' fragmented development areas. DP&I will continue to work with development-enabling infrastructure agencies to identify a servicing strategy for the early stages of development.

Early development of a major town centre in a greenfield area can provide some stimulus for nearby residential development but will not occur unless commercially viable.

The Leppington area is also one of the few localities in the Precincts which contains more significantly sized land parcels.

There are therefore sound reasons for initial development to occur in and around the Leppington Major Centre.

Secondary development areas adjacent to the Major Centre include:

- the eastern 'wedge' area that is bounded by Camden Valley Way and Bringelly Road and a smaller development area adjacent to the eastern boundary of the Precinct; and
- land north and south of the Major Centre in the vicinity of Dickson Road, Fifth Avenue and Sixth Avenue.

Another initial development area is located north and south of Fifteenth Avenue on the eastern edge of the Austral Precinct. Water, waste water and electricity facilities from the West Hoxton / Middleton Grange areas can be extended to meet some limited development in this area. This 'second front' provides an alternative choice for developers.

The initial development areas are shown in Figure 4.1 - Indicative Initial Development Areas and Interim Servicing Strategy.

While development typically commences slowly in new estates, it can accelerate depending upon market demand and infrastructure availability. Current estimates suggest that the 4,000 lot capacity identified by Sydney Water could be used within six years by the development within Austral and Leppington North alone. If some of this existing capacity is also used by development in adjoining areas such as the Edmondson Park Precinct, for example, then naturally the time for this capacity to be used shrinks, bringing forward the need for major new infrastructure.

**Although the initial development areas have been identified as areas more likely to develop, it is stressed that any land within the precincts is available for development.**

There should not be any assumption that services are 'reserved' for particular areas in the early stages. If owners and developers of land located outside the initial development areas consult and work cooperatively with infrastructure providers and owners of adjacent land, there is no reason why those lands could not also be developed. If owners of land in certain areas are the first to take up any existing water, waste water and electricity capacity, this could have short term implications for other areas which might have to make alternative servicing arrangements.



Austral and Leppington North Precincts Infrastructure Delivery Plan

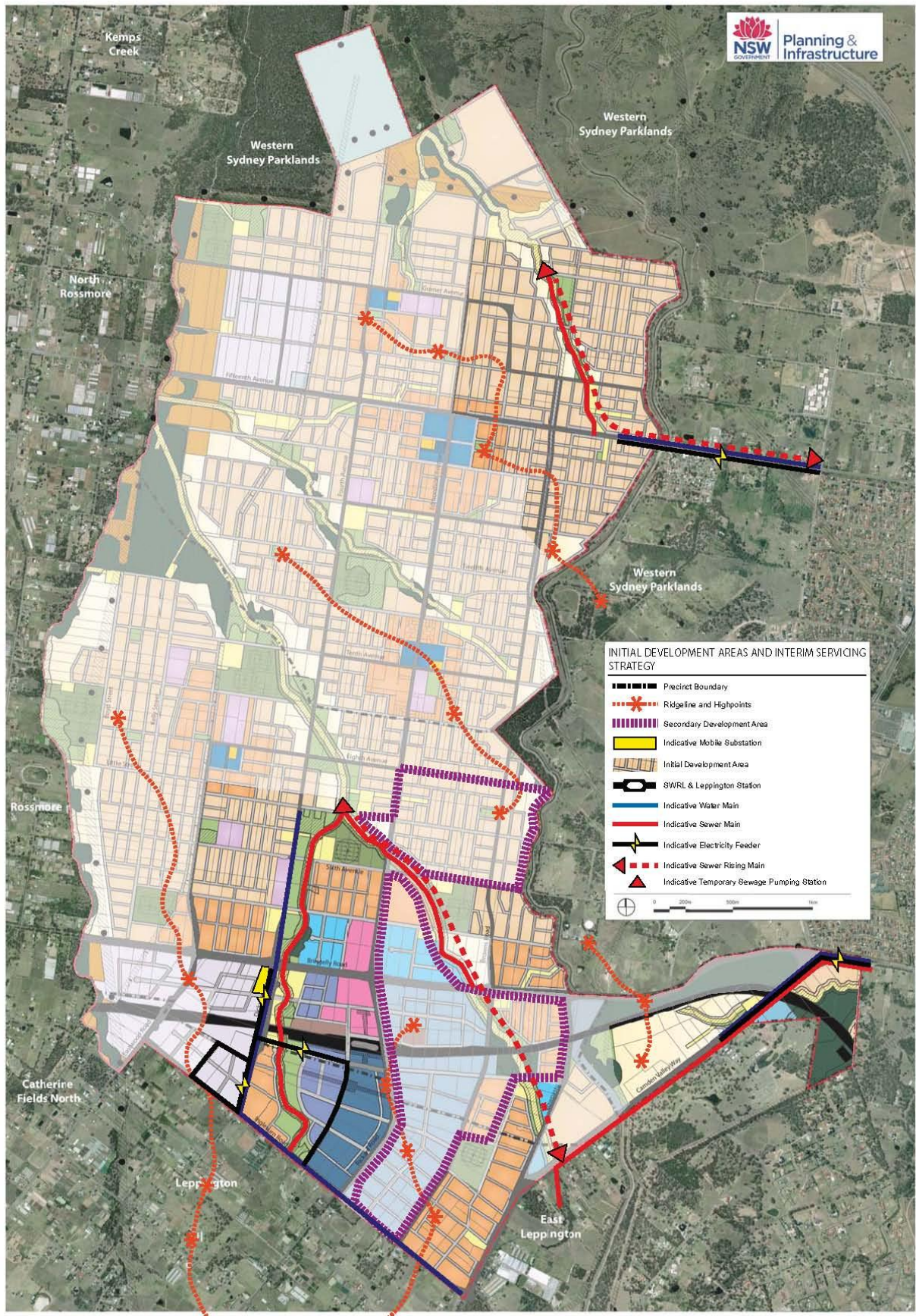


Figure 4.1 Indicative Initial Development Areas and Interim Servicing Strategy

## 4.3 Local infrastructure delivery strategy for the Precincts

Camden and Liverpool Councils are preparing section 94 contributions plans to address the local infrastructure requirements for the Precincts. These plans will include essential and non-essential infrastructure. The staging plans for this infrastructure should accord with the indicative priority development areas identified in this IDP.

Under current Government policy, funding for essential infrastructure equivalent to \$30,000 for each new residential lot can be required from the developers of residential land. However, as total local infrastructure costs for the Precincts are likely to be higher than the likely contribution receipts, the councils will need to secure other sources of funding. This is particularly the case for the community facilities buildings such as libraries and the higher order recreation facilities.

Section 2.2.3 of this report elaborates on the funding alternatives and the role of other agencies such as IPART. Concurrently, because of the prevailing environment of scarce and uncertain funding sources particularly for higher order community facilities, the councils, in partnership with the State Government, should also explore avenues for facility provision by the private sector and not-for-profit providers such as community clubs, schools and religious organisations.

Each council should update its community strategic plan and associated resourcing strategy, delivery plan and operational plan to address the delivery of local infrastructure to the Precincts. As part of this strategy it may be appropriate or necessary for the councils to enter into joint funding arrangements for key community facilities serving a regional catchment which are located in or near the Leppington Major Centre. A joint section 94 contributions plan is an example of a joint arrangement. A joint Section 94 Contributions Plan is not proposed as part of the precinct planning that has been carried out, as this would require substantial negotiation with the Councils based on more detailed understanding of the scope and cost of the facilities, which is outside the realm of Precinct Planning.

The development contribution limits and the existing constraints on the Councils' abilities to fund infrastructure means that even greater emphasis should be placed on partnering with developers to provide the necessary local infrastructure. Such arrangements must be consistent with the contributions plan and the constraints set by the cap and could include mechanisms such as planning agreements and works-in-kind agreements. The Councils, with assistance from the State Government, should consider preparing infrastructure strategies, oriented toward making it easier for developers and other parties to deliver local infrastructure to a satisfactory standard on behalf of the future communities without unduly burdening the future communities with significant costs.

## 4.4 Next steps in infrastructure delivery

It is intended that the process for infrastructure delivery in the Austral and Leppington North Precincts is clear, open and informative and supports its timely development in accordance with the ILP.

During the ILP exhibition period, there will be opportunities for interested parties to view the various studies, plans and to discuss infrastructure servicing issues with representatives of the Department of Planning and Infrastructure. Landowners are particularly encouraged to take this opportunity to learn as much as possible about the issues surrounding, and the opportunities available for, the future development of land within the Precincts.



Infrastructure agencies will also commence more targeted planning and detailed design of infrastructure to specific timeframes and prepare preliminary costs for the works. Sydney Water, for example, should:

- include provision of initial infrastructure to serve the Precincts in its Growth Servicing Plan for 2011 – 2016 that is currently under preparation; and
- in light of the fragmented array of landholdings in the Precincts, consider a more active role in the provision of lead-in water and waste water infrastructure in the early stages of the development in the Precincts.

The Department of Planning and Infrastructure and other relevant Government agencies, must take an active role in brokering discussions with landowners and infrastructure agencies about the timing and location of future development. The recent announcement by the NSW Planning and Infrastructure Minister Brad Hazzard that a new organisation, UrbanGrowth NSW, will be set up to ‘...drive investment in key locations in NSW...’ is particularly pertinent to this issue. UrbanGrowth NSW is likely to be a key player in these processes.<sup>19</sup>

Work will continue on clearly identifying the location of the first stages of development. To assist this process, land owners should:

- actively involve themselves in understanding the planning and development processes to be confident in their dealings with infrastructure agencies and developers;
- clarify their own goals in respect to the development of their land; and
- organise themselves and form development consortia or joint venture relationships to create land units that can be viably serviced by the key infrastructure agencies.

In partnering with their neighbours or developers to facilitate development, land owners will also need to have realistic expectations and show willingness to compromise where necessary. There are provisions in NSW legislation such as creation of development corporations or development plans for paper subdivisions<sup>20</sup> which are intended to facilitate development where fragmentation and lack of coordination appear to be hindering progress.

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<sup>19</sup> Media Release, Minister Brad Hazzard, ‘New State Body Urbangrowth NSW to drive growth’, 12 June 2012

<sup>20</sup> <http://www.legislation.nsw.gov.au/maintop/view/inforce/act+36+2008+cd+0+N>

## References

AECOM Australia Pty Ltd (2011), *Austral and Leppington North (ALN) Precincts Transport Assessment*, prepared for NSW Department of Planning and Infrastructure, July

Cardno (NSW/ACT) Pty Ltd (2011), *Austral & Leppington North Precincts Water Cycle Management WSUD Report*, prepared for NSW Department of Planning and Infrastructure, April

Commonwealth Department of Regional Australia, Regional Development and Local Government, *Agency resources and planned performance*

Elton Consulting (2011), *Austral and Leppington North Precincts - Demographic and Social Infrastructure Assessment*, July

Endeavour Energy Australia (2011), *2011 Electricity System Development Review*, June

*Environmental Planning and Assessment (Special Infrastructure Contribution - Western Sydney Growth Areas) Determination 2011*

*Infrastructure NSW Act 2011*

NSW Department of Planning (2010), *Local Development Contributions Practice Note for the assessment of contributions plans by IPART*, November

NSW Government (2010a), *Metropolitan Plan for Sydney 2036*, December

NSW Government (2010c), *Investing in a Better Future NSW State Plan*, March

NSW Government (2012), *NSW Budget Paper No. 4 - 2010-11 Infrastructure Statement*

NSW Treasury (2008), *State Infrastructure Strategy 2008-09 to 2017-18 New South Wales*, June

*Precinct Support Scheme for Urban Activation Precincts*, Factsheet issued by Department of Planning and Infrastructure, June 2012

Sydney Water Corporation (2010), *Sydney Water's Growth Servicing Plan July 2010 to June 2015*

The Hon Barry O'Farrell, Media Release, Premier, Minister for Western Sydney 17 January 2012

The Hon Brad Hazzard, Media Release, 'New State Body Urbangrowth NSW to drive growth', 12 June 2012