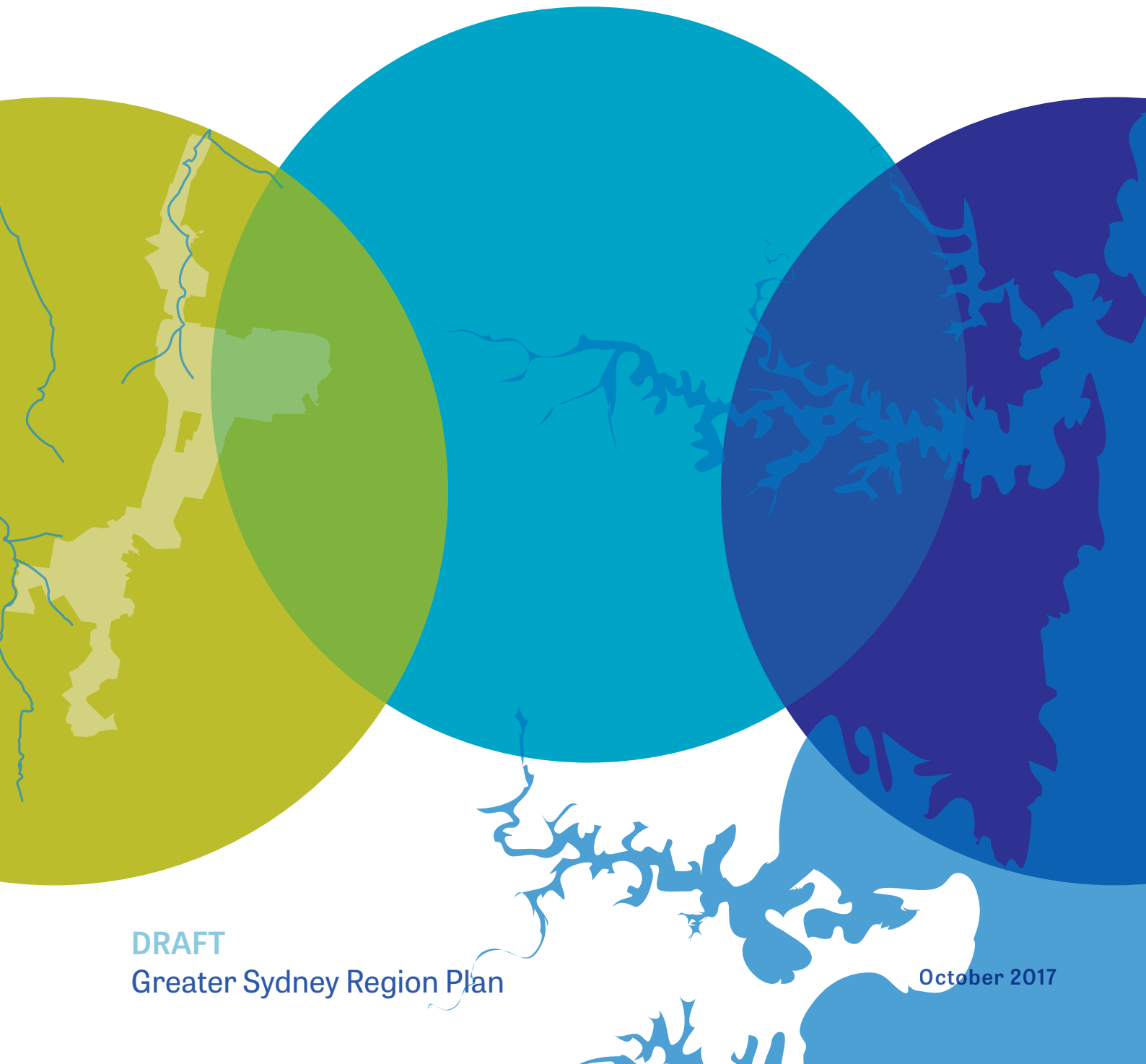


OUR GREATER SYDNEY 2056

# A metropolis of three cities

– connecting people



## How to be involved

The draft *Greater Sydney Region Plan* sets out a vision, objectives, strategies and actions for a metropolis of three cities across Greater Sydney. It is on formal public exhibition until 15 December 2017.

You can read the entire draft Plan at [www.greater.sydney](http://www.greater.sydney)

You can make a submission:

by visiting [www.greater.sydney/submissions](http://www.greater.sydney/submissions)

by emailing [submissions@gsc.nsw.gov.au](mailto:submissions@gsc.nsw.gov.au)

by post to:

Greater Sydney Commission

Draft Greater Sydney Region Plan

PO BOX 257

Parramatta NSW 2124

Before making a submission, please read the Privacy Statement at [www.greater.sydney/privacy](http://www.greater.sydney/privacy). If you provide a submission in relation to this document using any of the above addresses, you will be taken to have accepted the Privacy Statement.

Please note that all submissions and comments will be treated as public and will be published in a variety of mediums. If you would like to make a submission without it being made public or if you have any questions about the application of the Commission's privacy policy, please contact the Commission directly on 1800 617 681 or [submissions@gsc.nsw.gov.au](mailto:submissions@gsc.nsw.gov.au)

# A metropolis of three cities will transform land use and transport patterns and boost Greater Sydney's liveability, productivity and sustainability by spreading the benefits of growth to all its residents.

Chief Commissioner  
Lucy Hughes Turnbull AO



I am delighted to present the Greater Sydney Commission's first draft regional plan to the people of Greater Sydney and the Minister for Planning, Minister for Housing and the Special Minister of State.

The draft Greater Sydney Region Plan is broad in its vision and detailed in its strategies and actions. The vision for a global metropolis of three cities, enabling the majority of people to commute to their nearest city within 30 minutes, will transform Greater Sydney. It is a pivotal structural change that is needed over the next 40 years as the population grows.

This draft Plan is people based. Its strategies will foster jobs, services, cycling and walking paths and quality public spaces within easier reach of people's homes which will ease congestion,

take the pressure off housing affordability and maintain and enhance our natural resources.

This is the first regional plan by the Greater Sydney Commission, an independent agency responsible for leading metropolitan planning for Greater Sydney. It is therefore not Government policy. However it was developed in collaboration with a range of State agencies and councils so that the delivery of new housing and jobs can be supported by transport and local infrastructure.

I encourage the people of Greater Sydney to review this draft Plan and provide us with their comments. Feedback will be integral in the development of a final Plan that meets the needs of current and future generations.

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# Vision to 2056

Greater Sydney is Australia's global city; an economic powerhouse of 4.7 million people, endowed with the natural beauty of its Harbour, bushland, beaches and the Blue Mountains. Greater Sydney's people have embraced this place for its opportunities and its potential.

This draft Plan is built on a vision where the people of Greater Sydney live within 30 minutes of their jobs, education and health facilities, services and great places. This is consistent with the 10 Directions in *Directions for a Greater Sydney* which establish the aspirations for the region over the next 40 years and are a core component of the vision and a measure of the Plan's performance.

The vision seeks to meet the needs of a growing and changing population by transforming Greater Sydney into a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City. It brings new thinking to land use and transport patterns to boost Greater Sydney's liveability, productivity and sustainability by spreading the benefits of growth.

As the population of Greater Sydney grows to 8 million over the next 40 years, and with almost half of that population residing west of Parramatta, this rebalancing will leverage that growth and deliver the benefits more equally and equitably across Greater Sydney.

Residents will have quick and easy access to jobs and essential services, housing will be more affordable and the environment and precious resources will be protected. Importantly, infrastructure will be sequenced to support growth and delivered concurrently with new homes and jobs.

Having three cities will put workers closer to knowledge-intensive jobs, city-scale infrastructure and services, and entertainment and cultural facilities. Residents and businesses in an inclusive Greater Sydney will find that freedom of expression and creativity are

supported and acknowledged as part of the innovation economy.

Walking and cycling will become increasingly important in daily travel arrangements with well-designed and safe paths in popular thoroughfares improving the sustainability of the region and the wellbeing of residents.

Each of the three cities has its own opportunities and challenges.

The emerging **Western Parkland City** with the Western Sydney Airport and Badgerys Creek Aerotropolis as a catalyst for the city cluster will grow a strong trade, logistics, advanced manufacturing, health, education and science economy and be the most connected place in Australia. It will produce knowledge-intensive jobs close to new well-designed neighbourhoods. Liveability for residents will be key – such as more trees to provide shade and shelter and walkable neighbourhoods within easy reach of shops and services.

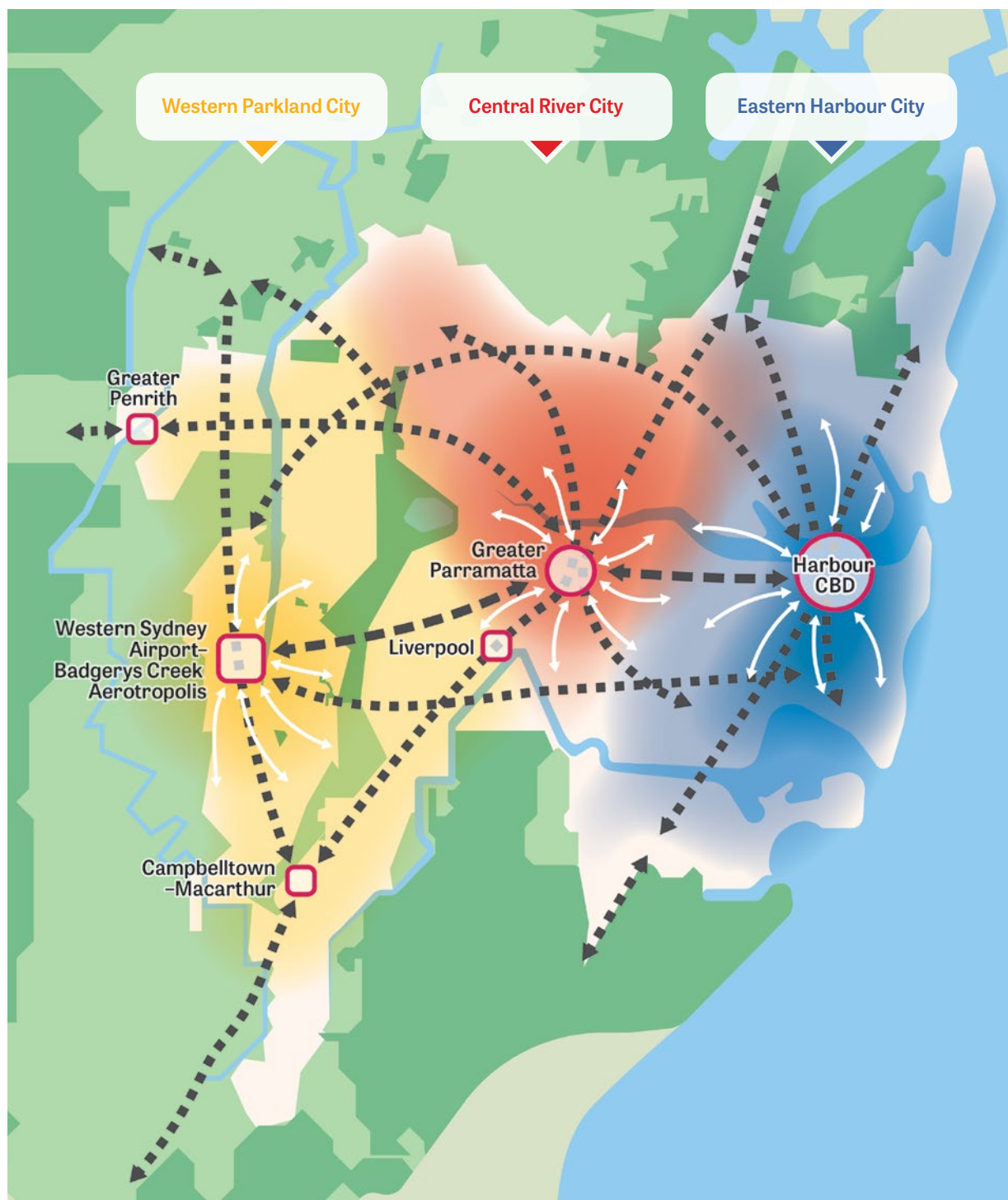
The **Central River City** will capitalise on its location in the centre of Greater Sydney and with enhanced radial transport links will continue developing its world-class health, education and research institutions as well as its finance, business services and administration sectors to drive the economy. High quality urban renewal

and new neighbourhoods will be matched with quality public places, green spaces and infrastructure to attract skilled workers and top 100 businesses.

The **Eastern Harbour City** will build on its credentials and leverage its strong financial, professional, health and education sectors and extend its capabilities with an innovation precinct that will boost productivity and global connections. Large and small scale urban renewal will acknowledge local identity, amenity and the famous Harbour and coastal setting.

The vision for a metropolis of three cities will be achieved by collaborations between all tiers of government, and between governments and key stakeholders including the community, interest groups, businesses, industry groups and non-government organisations.

Greater Sydney is already an outstanding global city with a reputation for liveability and cultural diversity that attracts international investment and appeals to visitors. A metropolis of three cities will build on its economic, social and environmental assets to improve the quality of life for all its residents and to uphold its status as one of the top cities of the world.



	Metropolitan City Centre		Transport Connectivity		Protected Natural Area
	Metropolitan City Cluster		City to City Transport Corridor		Metropolitan Rural Area
	Waterways		CBD Focus Mass Transit		Urban Area

## Snapshot of the Plan

### Why does Greater Sydney need a new plan?

**Eight million people will call Greater Sydney home by 2056. This requires a 40-year vision and 20-year plan that:**

- responds to the unique geography of the Greater Sydney basin
- respects the great places and communities people love in Greater Sydney
- facilitates a minimum of 725,000 dwellings
- generates an extra 817,000 jobs
- takes advantage of changing technological, lifestyle and economic trends.

### What opportunities does the Plan create?

A new plan for Greater Sydney presents opportunities to:

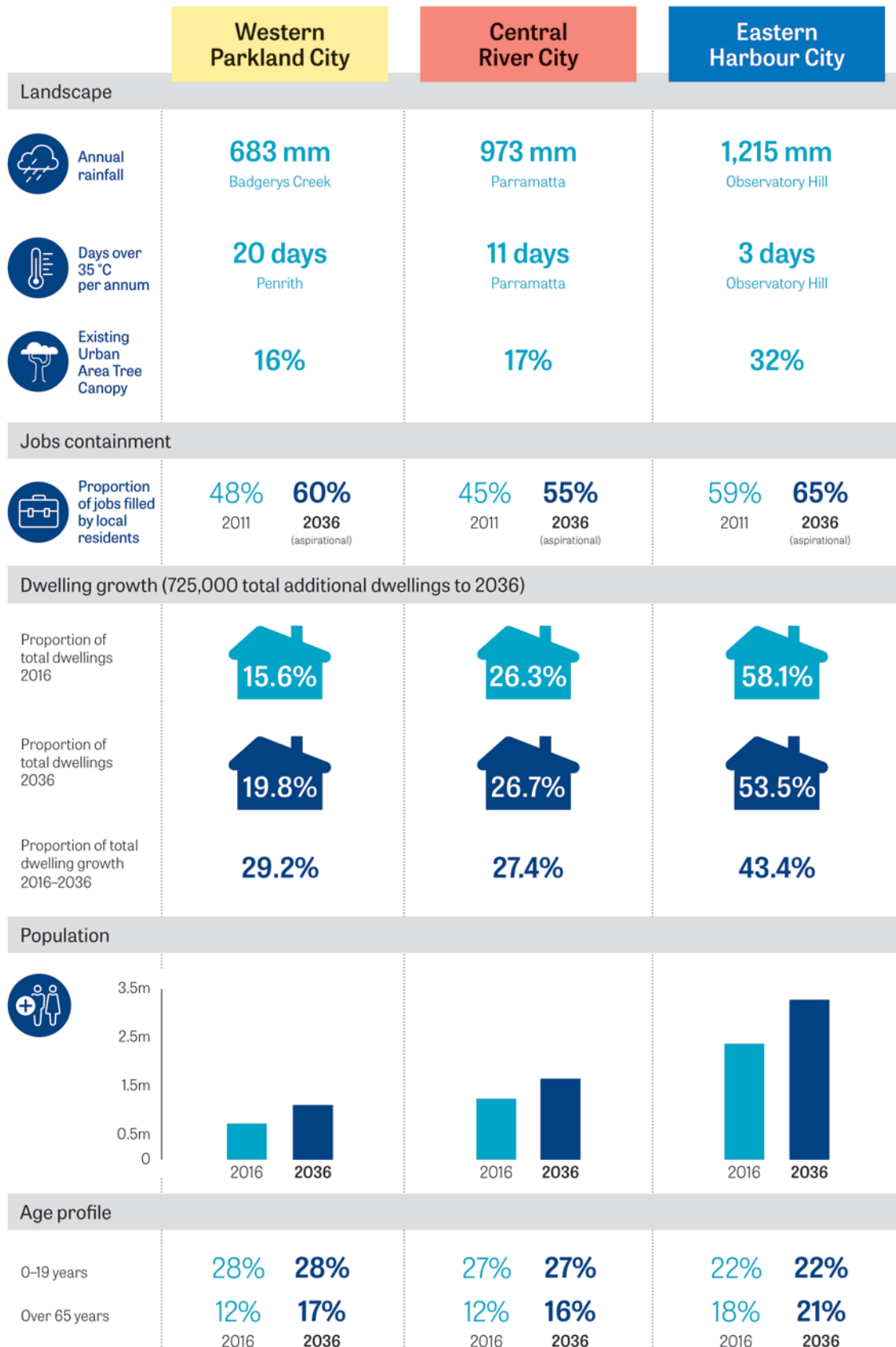
- enhance Greater Sydney's natural and built environment
- create more liveable neighbourhoods and well connected and resilient communities
- better connect people with opportunities for education, housing and jobs across Greater Sydney
- leverage unprecedented infrastructure investment and provide the right transport connections across the city and within neighbourhoods
- elevate Greater Sydney from a top 20 to a top 10 global city.



### What does the Plan deliver?

#### The draft Greater Sydney Region Plan:

- is the first plan concurrently developed with the metropolitan transport plan, *Future Transport 2056*, and the *State Infrastructure Strategy*, meaning better connections for people across Greater Sydney
- creates a metropolis of three cities, rebalancing growth and opportunities for people across Greater Sydney
- uses the airport as a catalyst to generate a diversity of jobs in the Western City
- improves housing affordability and choice aligned with local infrastructure across the city
- plans and prioritises infrastructure early to support a growing Greater Sydney through growth infrastructure compacts
- protects and enhances the city's unique landscape by recognising its environmental diversity
- creates great local places by protecting heritage and biodiversity, while enhancing the Green Grid and tree canopy cover
- uses quality design to create great places, walkable communities and shared spaces
- delivers a 30-minute city to provide better access to jobs, schools, and health care within 30 minutes of people's homes.





## The Plan on a page

Bringing the principal elements together

	Metropolitan City Centre		Protected Natural Area and Open Space
	Metropolitan City Cluster		Metropolitan Rural Area
	Health and Education Precinct		Urban Area
	Strategic Centre		Waterways
	Economic Corridor		Existing Train Link
	Trade Gateway		Committed Train Link
	Western Sydney Employment Area		Mass Transit Investigation
	Land Release Area		Light Rail Existing and Committed
	Urban Renewal Area		Motorway Existing and Committed
	Transit Oriented Development		Road Investigation
	Urban Investigation Area		Freight Rail Investigation
	Priority Growth Area Investigation		

NOTE: Committed projects of: Western Harbour Tunnel & Beaches Link, F6 – WestConnex to President Avenue Kogarah, Parramatta Light Rail Stage 2 and Sydney Metro West are subject to final business case, no investment decision yet. Routes and stops for some transport corridors/projects are indicative only.







# Principal spatial elements

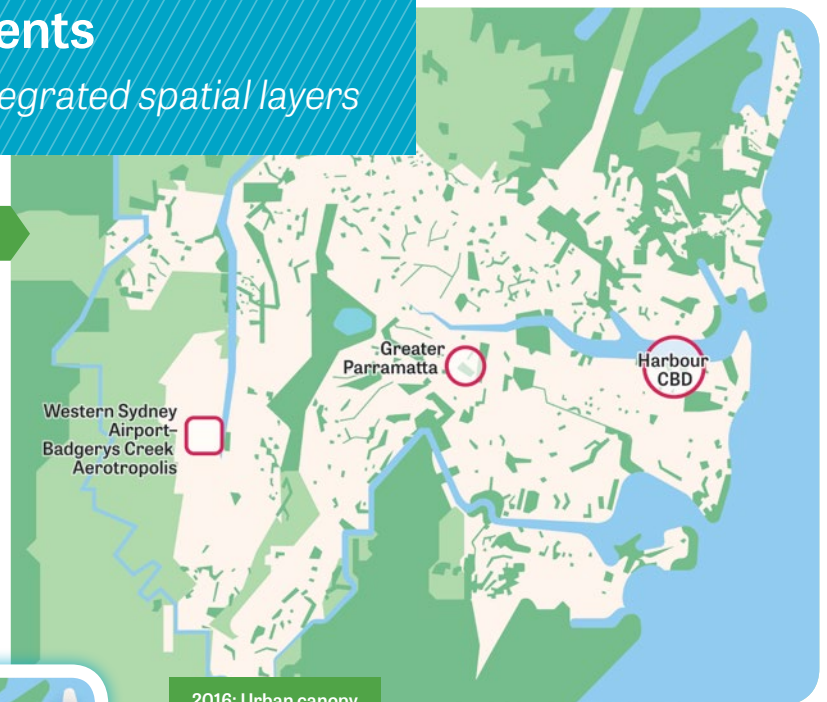
*The Plan is made up of four integrated spatial layers*



## Landscape

A parkland city, a river city and a harbour city with increased urban tree canopy and a network of open space, framed by a protected natural area.

- Waterways
- Metropolitan Rural Area
- Protected Natural Area and Open Space



## Vision to 2056



### 2016: Urban canopy

16%	17%	32%
Western Parkland City	Central River City	Eastern Harbour City

29.2%	27.4%	43.4%
Western Parkland City	Central River City	Eastern Harbour City

### 2036: Share of housing



## Housing + Great Places

An additional 725,000 dwellings creating new communities and urban renewal areas that support new and existing centres and enhance local character.

- Existing Urban Area
- Urban Renewal Area
- Transit Oriented Development
- Land Release Area
- ▨ Priority Growth Area Investigation
- ▨ Urban Investigation Area







## Jobs



Places for 817,000 jobs with a strong focus on economic corridors, health and education precincts and strategic centres.

- Economic Corridor
- Health and Education Precinct
- Strategic Centre
- Western Sydney Employment Area

### 2036: Job containment

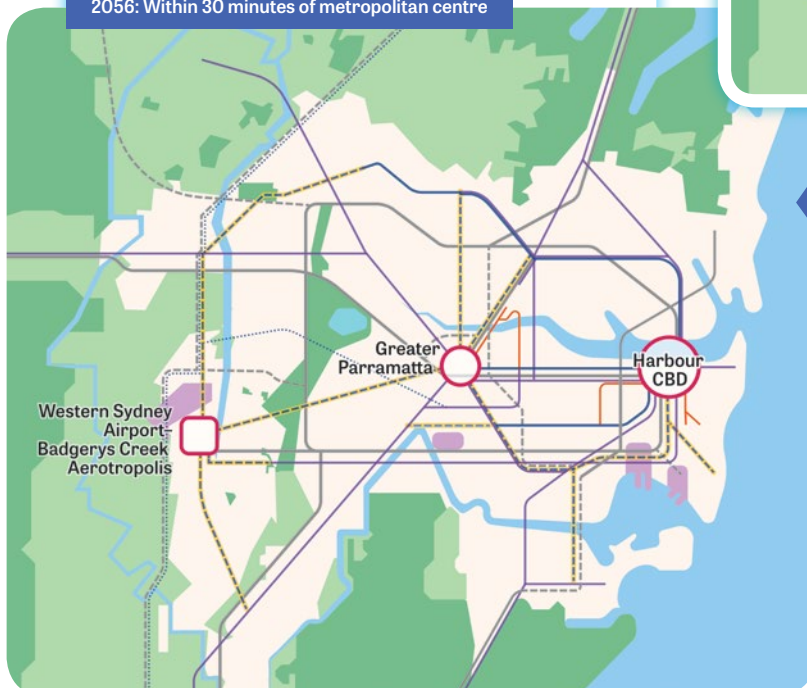
60%	55%	65%
Western Parkland City	Central River City	Eastern Harbour City

### A metropolis of three cities



39%	64%	71%
2016	2036	2056

### 2056: Within 30 minutes of metropolitan centre



## Connectivity








A 30-minute city that connects people to jobs, businesses, schools and services, supporting the economic efficiency of trade gateways.






- Road
- Existing Train Link
- Committed Train Link
- Mass Transit Investigation
- Road Investigation
- ... Freight Rail Investigation
- Trade Gateway

NOTE: Committed projects of: Western Harbour Tunnel & Beaches Link, F6 – WestConnex to President Avenue Kogarah, Parramatta Light Rail Stage 2 and Sydney Metro West are subject to final business case, no investment decision yet. Routes and stops for some transport corridors/projects are indicative only.

# Ten Directions

*Delivering and monitoring the Plan – objectives and metrics*

Directions	A city supported by infrastructure	A collaborative city	A city for people	Housing the city	A city of great places
	<b>Infrastructure supporting new developments</b> 	<b>Working together to grow a Greater Sydney</b> 	<b>Celebrating diversity and putting people at the heart of planning</b> 	<b>Giving people housing choices</b> 	<b>Designing places for people</b> 
Metrics	Number of land use plans supported by infrastructure plans (NSW Department of Planning and Environment, Greater Sydney Commission, Councils)	Proportion of agreed outcomes achieved in Collaboration Areas	Annual survey of community sentiment	<ul style="list-style-type: none"> <li>Number of councils on track to deliver housing targets</li> <li>Number of councils with schemes that implement Affordable Rental Housing Targets</li> </ul>	<ul style="list-style-type: none"> <li>Percentage of dwellings within walking distance of a local or strategic centre</li> <li>Percentage of dwellings within walking distance of open space</li> </ul>
Objectives	<b>Objective 1:</b> Infrastructure supports the three cities  <b>Objective 2:</b> Infrastructure aligns with forecast growth – growth infrastructure compact  <b>Objective 3:</b> Infrastructure adapts to meet future needs  <b>Objective 4:</b> Infrastructure use is optimised	<b>Objective 5:</b> Benefits of growth realised by collaboration of governments, community and business	<b>Objective 6:</b> Services and infrastructure meet communities' changing needs  <b>Objective 7:</b> Communities are healthy, resilient and socially connected  <b>Objective 8:</b> Greater Sydney's communities are culturally rich with diverse neighbourhoods  <b>Objective 9:</b> Greater Sydney celebrates the arts and supports creative industries and innovation	<b>Objective 10:</b> Greater housing supply  <b>Objective 11:</b> Housing is more diverse and affordable	<b>Objective 12:</b> Great places that bring people together  <b>Objective 13:</b> Environmental heritage is conserved and enhanced

A well connected city	Jobs and skills for the city	A city in its landscape	An efficient city	A resilient city
<p><b>Developing a more accessible and walkable city</b></p>  <ul style="list-style-type: none"> <li>Percentage of dwellings located within 30 minutes by public transport of a metropolitan city centre/cluster</li> <li>Percentage of dwellings located within 30 minutes by public transport of a strategic centre</li> </ul> <p><b>Objective 14:</b> A metropolis of three cities – integrated land use and transport creates walkable and 30-minute cities</p> <p><b>Objective 15:</b> The Eastern, GPON and Western Economic Corridors are better connected and more competitive</p> <p><b>Objective 16:</b> Freight and logistics network is competitive and efficient</p> <p><b>Objective 17:</b> Regional transport is integrated with land use</p>	<p><b>Creating the conditions for a stronger economy</b></p>  <ul style="list-style-type: none"> <li>Growth in jobs in targeted metropolitan and strategic centres.</li> <li>Change in number of people employed locally (five yearly)</li> </ul> <p><b>Objective 18:</b> Harbour CBD is stronger and more competitive</p> <p><b>Objective 19:</b> Greater Parramatta is stronger and better connected</p> <p><b>Objective 20:</b> Western Sydney Airport and Badgerys Creek Aerotropolis are economic catalysts for Western Parkland City</p> <p><b>Objective 21:</b> Internationally competitive health, education, research and innovation precincts</p> <p><b>Objective 22:</b> Investment and business activity in centres</p> <p><b>Objective 23:</b> Industrial and urban services land is planned, protected and managed</p> <p><b>Objective 24:</b> Economic sectors are targeted for success</p>	<p><b>Valuing green spaces and landscape</b></p>  <p>Proportional increase in Greater Sydney covered by urban tree canopy</p> <p><b>Objective 25:</b> The coast and waterways are protected and healthier</p> <p><b>Objective 26:</b> A cool and green parkland city in the South Creek corridor</p> <p><b>Objective 27:</b> Biodiversity is protected, urban bushland and remnant vegetation is enhanced</p> <p><b>Objective 28:</b> Scenic and cultural landscapes are protected</p> <p><b>Objective 29:</b> Environmental, social and economic values in rural areas are maintained and enhanced</p> <p><b>Objective 30:</b> Urban tree canopy cover is increased</p> <p><b>Objective 31:</b> Public open space is accessible, protected and enhanced</p> <p><b>Objective 32:</b> The Green Grid links parks, open spaces, bushland and walking and cycling paths</p>	<p><b>Using resources wisely</b></p>  <p>Number of precincts with low-carbon initiatives</p> <p><b>Objective 33:</b> A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change</p> <p><b>Objective 34:</b> Energy and water flows are captured, used and re-used</p> <p><b>Objective 35:</b> More waste is re-used and recycled to support the development of a circular economy</p>	<p><b>Adapting to a changing world</b></p>  <p>Number of local government areas undertaking resilience planning</p> <p><b>Objective 36:</b> People and places adapt to climate change and future shocks and stresses</p> <p><b>Objective 37:</b> Exposure to natural and urban hazards is reduced</p> <p><b>Objective 38:</b> Heatwaves and extreme heat are managed</p>
<p><b>Implementation</b></p> <p><b>Objective 39:</b> A collaborative approach to city planning</p> <p><b>Objective 40:</b> Plans refined by monitoring and reporting</p>				

## 1

# About the draft Plan

**The Greater Sydney Commission** (the Commission) is an independent agency responsible for leading the metropolitan planning for the Greater Sydney Region.

The Commission uses this independence to integrate planning and decision-making across the three tiers of government and NSW Government agencies. The Commission is engaging consistently and transparently with the community, businesses, councils, and State agencies throughout this process.

In line with the Commission's legislative responsibilities and directions from the Minister for Planning, the Commission has prepared a new draft *Greater Sydney Region Plan*. The draft Plan is not Government policy and includes numerous new policy initiatives, such as the growth infrastructure compact, Affordable Rental Housing Targets and an approach to managing industrial land. It is a document by the Commission for consultation and ultimately for the NSW Government's consideration.

## Purpose of the draft Plan

The purpose of the draft Plan is to:

- set a 40-year vision (up to 2056) and establish a 20-year plan to manage growth and change for Greater Sydney in the context of economic, social and environmental matters
- inform district and local plans and the assessment of planning proposals
- assist infrastructure agencies to plan and deliver for growth and change and to align their infrastructure plans to place-based outcomes
- inform the private sector of the vision for Greater Sydney and infrastructure investments required to manage growth

- inform and engage the wider community so the draft Plan can best reflect the values and aspirations of all.

The draft Plan applies to the Greater Sydney Region, as shown in Figure 1 and sets the planning framework for the five districts which make up the region. The local government areas for the five districts are listed in Figure 1.

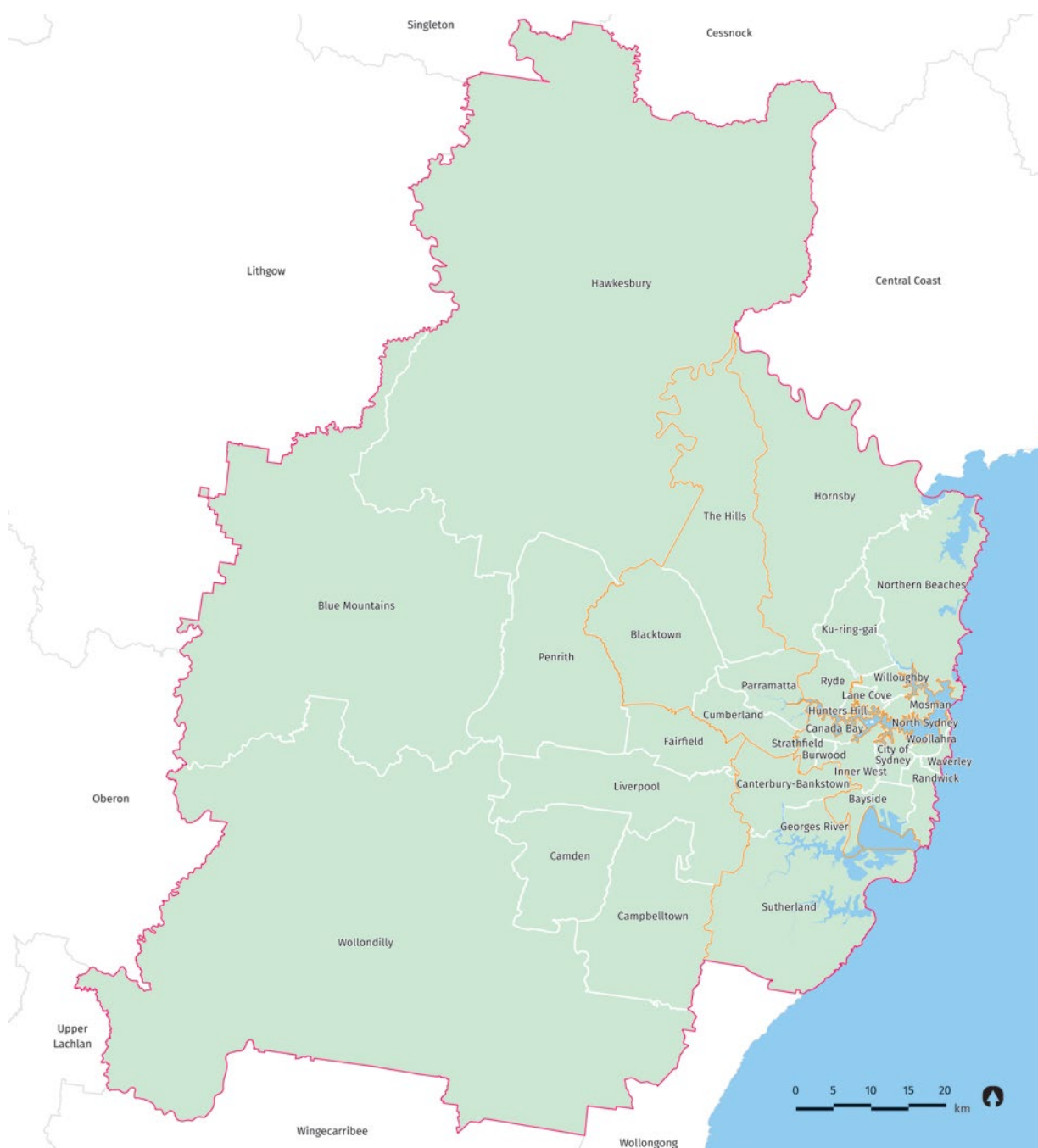
## Integrated planning

The draft Plan has been prepared by the Commission concurrently with the Government's *Future Transport 2056* and Infrastructure NSW's *State Infrastructure Strategy* to align land use, transport and infrastructure outcomes for Greater Sydney for the first time in a generation. In this context all the transport initiatives outlined in this draft Plan are sourced from *Future Transport 2056*. The transport initiatives are divided into four categories: committed, investigation 0–10 years, investigation 10–20 years and visionary 20+ years. The latter three categories require further investigation and ultimately decisions of Government on commitments to funding; none have funding commitments.

**All data in this draft Plan is based on current Government approved and published data sourced from the relevant State agency. Housing targets are as per the November 2016 Draft District Plans. However, Central City and North Districts now reflect changes to council boundaries.**

The draft Plan also outlines how the 10 Directions identified in *Directions for a Greater Sydney* are the starting point for delivering integrated planning and how this alignment moves from setting directions to implementing directions. This relationship is shown in Figure 2.

**Figure 1:** Greater Sydney Region



	Region Boundary
	District Boundary
	Local Government Area (LGA)
	Waterways

#### DISTRICTS

<b>Central City</b>	Blacktown, Cumberland, Parramatta, The Hills
<b>Eastern City</b>	Bayside, Burwood, Canada Bay, City of Sydney, Inner West, Randwick, Strathfield, Waverley, Woollahra
<b>North</b>	Hornsby, Hunters Hill, Ku-ring-gai, Lane Cove, Mosman, North Sydney, Northern Beaches, Ryde, Willoughby
<b>South</b>	Canterbury - Bankstown, Georges River, Sutherland
<b>Western City</b>	Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith, Wollondilly



## The requirements of the draft Plan

The draft Plan has been prepared in accordance with section 75AC of the *Environmental Planning and Assessment Act 1979* which requires the draft Plan to include or identify: the basis for strategic planning in the region, having regard to economic, social and environmental matters; a vision statement; objectives consistent with that vision; strategies and actions for achieving those objectives; as well as an outline of the basis on which the implementation of those actions will be monitored and reported.

In line with legislative requirements, the Commission has prepared a review of the current regional plan for Greater Sydney, *A Plan for Growing Sydney* (2014). The review outlines changes in policy, trends and the relevance of the directions and actions in that plan to inform a new Greater Sydney Region Plan. The review identified that while the directions in *A Plan for Growing Sydney* are still relevant to regional planning, they require updating or strengthening, to respond to new challenges for planning Greater Sydney to 2056. The review is available on the Commission's website at [www.greater.sydney](http://www.greater.sydney).

The draft Plan complements a range of existing State and Australian Government requirements for managing growth and change across Greater Sydney, such as State Environmental Planning Policies and the *Heritage Act 1977 (NSW)*.

This draft Plan incorporates feedback from community and stakeholder engagement. It incorporates submissions to the draft amendment to *A Plan for Growing Sydney*, called *Towards*

*Our Greater Sydney 2056* and draft District Plans exhibited from November 2016 – March 2017.

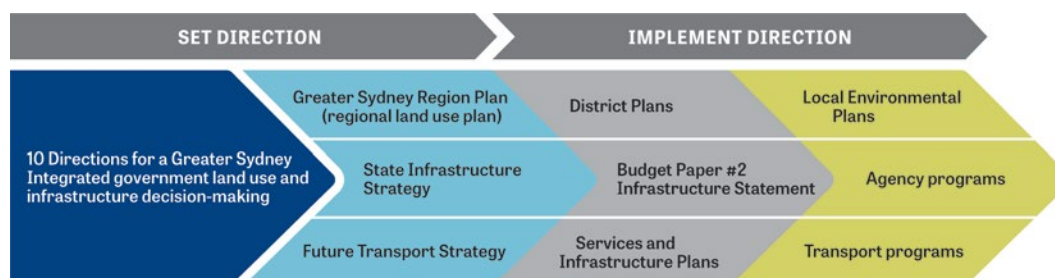
During the exhibition period the Commission received 2,341 formal submissions and engaged with over 7,750 people via deliberative workshops, community meetings, roundtables, forums, technical working groups and on-line chats. A submissions report is available on the Commission's website.

Submissions indicated support for the three cities concept, the protection of the existing Metropolitan Rural Area, the protection and expansion of open space, and the concept of affordable housing targets. The submissions also identified the need to plan for, commit to and provide infrastructure and services when planning for additional housing.

Submissions to this draft Plan will inform finalisation of the Plan.

The source of population, dwellings and household data in this draft Plan is from the NSW Department of Planning and Environment, 2016 NSW State and Local Government Area Population and Household Projections and Implied Dwelling Requirements 2016 to 2036. Population projections provide an indication of the size and age-sex structure of the future population if specified assumptions about future fertility, mortality and migration are realised. The projections are based on final 30 June 2011 Estimated Resident Populations (ERPs) supplied by the Australian Bureau of Statistics (ABS). Finalised ERPs incorporating the 2016 Census of Population and Housing are not expected from the ABS until mid-2018.

Figure 2: State plans working together for Greater Sydney



## 2

# Past, present and future

Greater Sydney has grown from the home of Aboriginal peoples to an internationally-significant economic metropolis.

In the past 25 years, it has grown by 1.3 million to reach 4.7 million people today (refer to Figure 3).

Its evolution, through population growth, urbanisation and technological advances, can be traced through seven major planning strategies since 1909. This draft Plan represents another quantum shift in driving Greater Sydney's future as a successful economy and one of the world's most beautiful and liveable places.

In looking to the future, many of the lessons of the past remain relevant today.

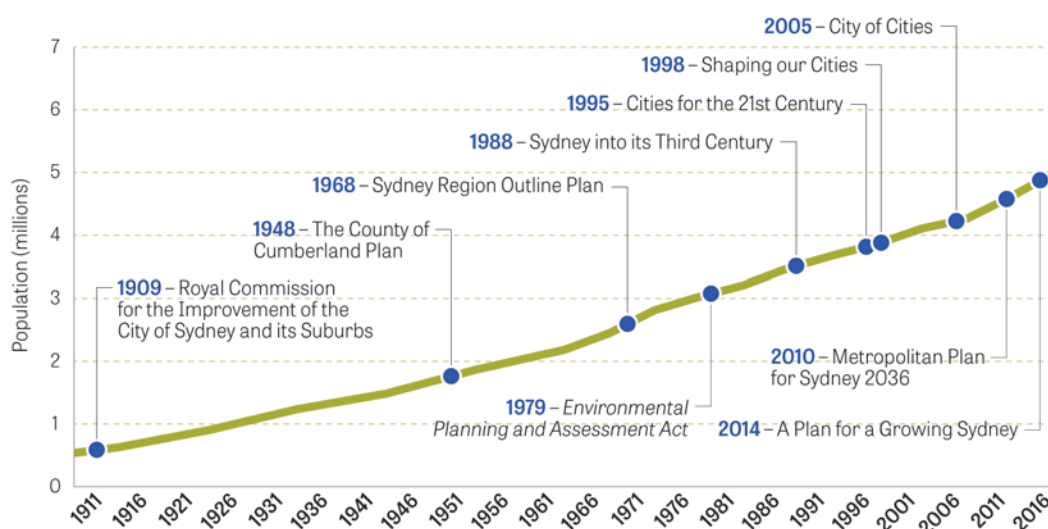
## Greater Sydney's past

Rapid population growth in Greater Sydney, by the turn of the 20th century, led to the 1909 Royal Commission for the *Improvement of the City of Sydney and its Suburbs*. Its emphasis was on providing basic sanitation and improved living standards for the working class, and to beautify the city. At the time, growth followed the tram and rail corridors.

The 1948 *County of Cumberland Plan* moved families from inner-city slums to the west, along new rail lines radiating from what is now the Eastern Harbour City, and established the first green belt.

In the 1960s, post-war immigration, the baby boom and falling household occupancy rates were addressed in the 1968 *Sydney Region*

**Figure 3:** Greater Sydney Region population growth and metropolitan planning



*Outline Plan* which promoted new centres within the metropolitan area, each planned for growth along road and rail corridors. It embraced connections to Newcastle and Wollongong and had a stronger focus on the areas now referred to as the Central River and Western Parkland cities.

Four subsequent plans – *Sydney into its Third Century* (1988), *Cities for the 21st Century* (1995), *City of Cities* (2005) and *A Plan for a Growing Sydney* (2014), differed from the earlier plans by focusing on economic issues as well as the physical form of growing a polycentric city and urban renewal.

The 1988 Plan was designed in collaboration with a transport strategy and was the first to recommend higher development densities in established and greenfield areas, a policy that continues to evolve today, and saw development densities in greenfield areas increase from eight lots per hectare in 1988 to close to 20 lots per hectare today.

The 1988 Plan included a new airport in Greater Sydney's West, reinstated in the 2014 Plan and was the first to introduce sub-regional (district) planning together and a strong focus on urban design. The 2005 and 2014 plans continued to refine the framework of Greater Sydney as a series of sub-regions and promote the role of centres across Greater Sydney.

## Greater Sydney's present

Greater Sydney's most pressing challenge today is to support population growth and demographic change, while improving liveability.

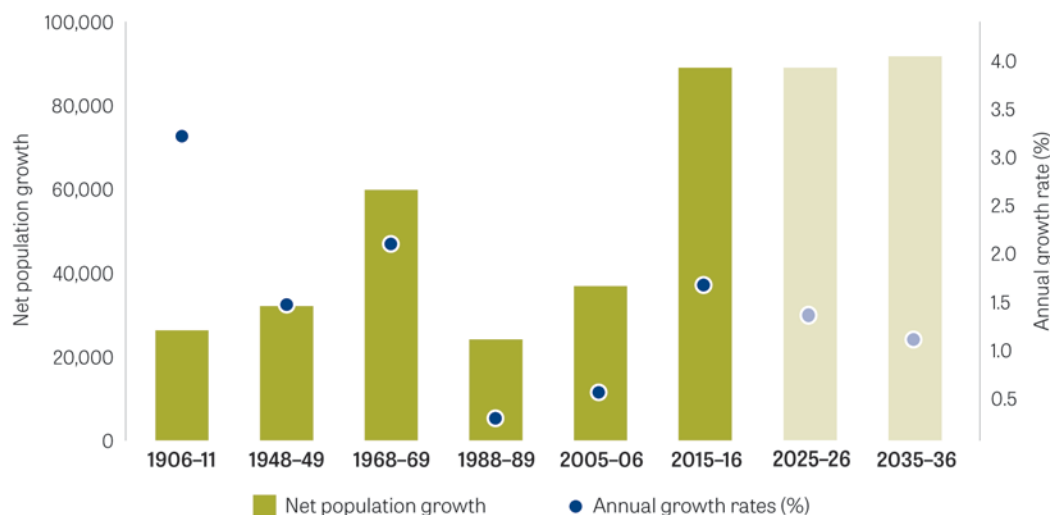
For most of the 20th century, Greater Sydney's population grew at an annual rate of around 2.5 per cent (refer to Figure 4).

Today, Greater Sydney is one of the top 10 fastest-growing regions in the Western world and by 2036 will be home to another 1.7 million people, or 3.2 million more people by 2056.

Greater Sydney's footprint has grown not only through an increasing population, but a decline in dwelling occupancy rates; down from 5.24 and 6.08 people per dwelling in 1909 (depending on whether the resident lived in the suburbs or the city) to an average of 2.7 in 2011.

Density has declined from 13 people per hectare in 1909 to an average of 4.25 people per hectare across Greater Sydney.<sup>1</sup> While there are 31 people per hectare in the Eastern Harbour City, this is low compared to an average density of 109 per hectare across New York City (the five boroughs).

**Figure 4:** Greater Sydney Region population growth rates at past regional plan and forecast dates





In addition, Greater Sydney is currently seeing a higher number of births, with around 63,500 births each year. At the other end of the spectrum, the proportion of over-85s will almost triple in the next 25 years. These two statistics alone generate the need for greater housing choice and affordability as well as community facilities from baby health care, child care and schools, to support services for older people.

Greater Sydney's housing market today is recognised as one of the most expensive in the world with median detached dwelling prices exceeding \$1 million and reaching 10.5 times the median annual household income. This will drive a change in expectations from the quarter-acre block of the 1948 and 1968 plans to smaller lots with compact and innovative forms of housing (refer to Objective 10 and Objective 11). The Eastern Harbour and Central River cities are increasingly attractive for inner-city living, with higher densities bringing greater vibrancy, reduced travel times and economic opportunities.

While the 1909 Commission sought to improve equity and living standards for key workers by moving them to suburban areas along transit corridors, today more opportunities for key workers to live closer to their jobs are needed: more affordable homes and better access to educational opportunities in each of the three cities (refer to Objective 10, Objective 11 and Objective 21).

Approaches to connecting the city have also changed and, arguably, have come full circle since the 1909 Commission found: "The only effective method of dealing with this rapidly growing traffic lies in the construction of the City and Suburban railway systems" (refer to Figure 5).

Today, rail systems need to be expanded to better serve the three cities, particularly the Western Parkland and Central River cities, and to accommodate new travel modes and technologies such as drones, electric and autonomous vehicles (refer to Objective 3).

Just as in 1948, when Greater Sydney was challenged to provide sewerage, public transport, schools or nearby jobs for the rapidly growing city, funding and providing infrastructure remains a challenge today. Development areas need to be delivered in sequence

so that adequate infrastructure can be funded and delivered (refer to Objective 2).

The growth of Greater Parramatta as the Central River City was first mooted by the 1968 Plan and confirmed by the 2005 Plan. Together with the emergence of the Western Parkland City and the reinforcement of the Eastern Harbour City, Greater Sydney will become a more equitable and connected city that makes the most effective use of its infrastructure (refer to Objective 1 and Objective 3).

A polycentric city is supported by the centres policy (refer to Objective 22) which reinforces an objective of the 2005 plan, that close to half of all Greater Sydney's jobs are to be in major centres. These centres need to be serviced by public transport to create a 30-minute city and to raise the use of public transport.

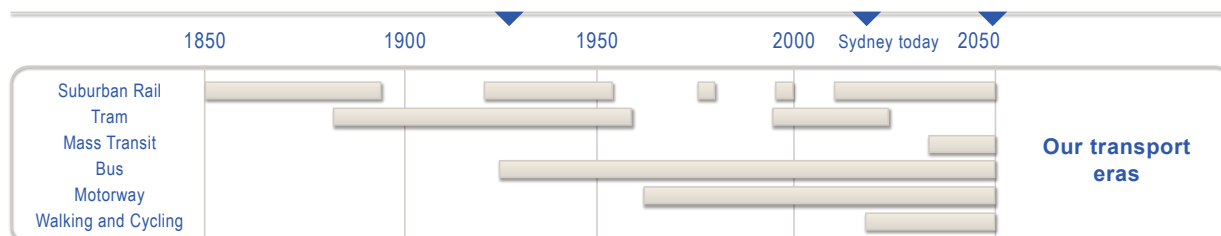
Strengthening centres is a key objective across all three cities, particularly the Western Parkland City where job numbers are well below workforce demand. At the last census, 45 per cent of residents, or nearly 217,000 people travelled outside the Western Parkland City to their place of work. A more sustainable and resilient region includes easier access for all.

Centres across Greater Sydney need to be supported by sufficient industrial and urban services land, also consistent with the 1988, 1995 and 2005 plans.

Every plan since 1909 has sought to beautify the region through good quality design and the protection of natural assets. This draft Plan too, seeks to uphold the importance of enhancing cultural, historic and natural icons, from Sydney Harbour to the Blue Mountains and Scenic Hills, while reinforcing the quality of public spaces such as Parramatta's Civic Square and Circular Quay.

This draft Plan builds on the green web of 1948 with the Green Grid, (refer to Objective 32) including re-envisioning Prospect Reservoir for tourism and greater leisure activities. It revitalises the waterways of the Western Parkland City around South Creek (refer to Objective 26) and recognises the importance of tree canopy for visual appeal and for managing heat, particularly in the western part of the region where it can be over seven degrees Celsius hotter than in the eastern part of the region.

**Figure 5:** Transport investment 1850–2050



Source: Transport for NSW

## Greater Sydney's future

Rapid technological change is inevitable, particularly around key areas of access and mobility and in creating a lower carbon future.

Electric and autonomous vehicles, robotics, drones, artificial intelligence, battery storage, automation, computing speed and device connectivity will change how residents live and, in turn, the shape of the region. They may reduce demand for car parking or new roads, allowing existing infrastructure to be adapted for other uses (refer to Objective 3).

Technology may also increase demand for local employment hubs, or shared office spaces, to support localised production through developments such as 3D printing (refer to Objective 24). There may be on-demand bus services, and the sharing of vehicles, smartphone-based bike sharing, autonomous vehicle hubs and electric charging stations.

The economy may also change with a greater reliance on knowledge-intensive jobs and tertiary education, particularly in the fields of science, technology, engineering and mathematics (referred to as STEM). Already, education and health care are significant growth industries forming precincts at Randwick, Camperdown-Ultimo, Liverpool and Greater Parramatta-Westmead (refer to Objective 21).

The gig economy – a labour market characterised by the prevalence of short-term contracts or freelance work as opposed to permanent jobs – may grow, potentially shifting traditional workplace and commuting patterns as a greater

number of workers are based at home. In aged care and health services, robots may increasingly take the load of routine tasks, so workers can concentrate on engagement and patient care.

The future will require people to adapt to climate change, to mitigate future impacts and to be more efficient with resources (refer to Objective 36). Infrastructure needs to be not only resilient but adaptable to technological transformation such as renewable energy, smart energy networks, distributed energy and water systems and energy-efficient homes and buildings (refer to Objective 34).

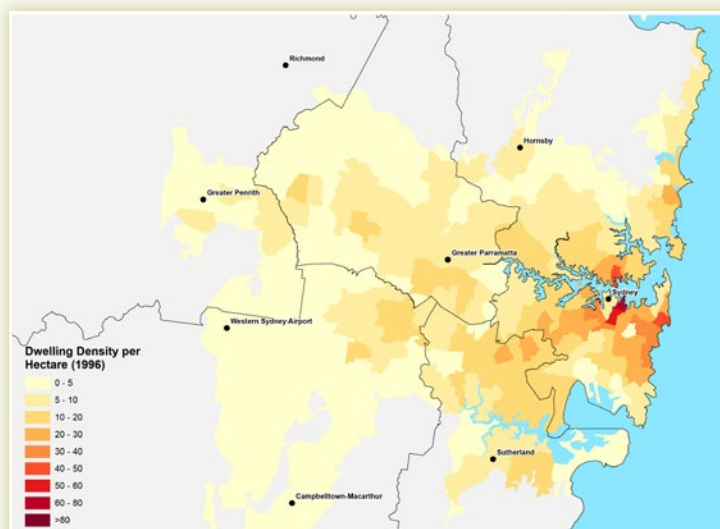
Development will need to better capitalise on air rights rather than making space by expanding the urban footprint (refer to Objective 33). This will not only require good quality apartment buildings and commercial towers but mixed-use buildings including schools, roof top gardens, vertical farms and energy sources (refer to Objective 34).

## Some things stay the same

While population growth, urbanisation and technologies change, many things stay the same – the importance of well-located housing, beautiful public places, efficient transport, local infrastructure and planning that is people focused.

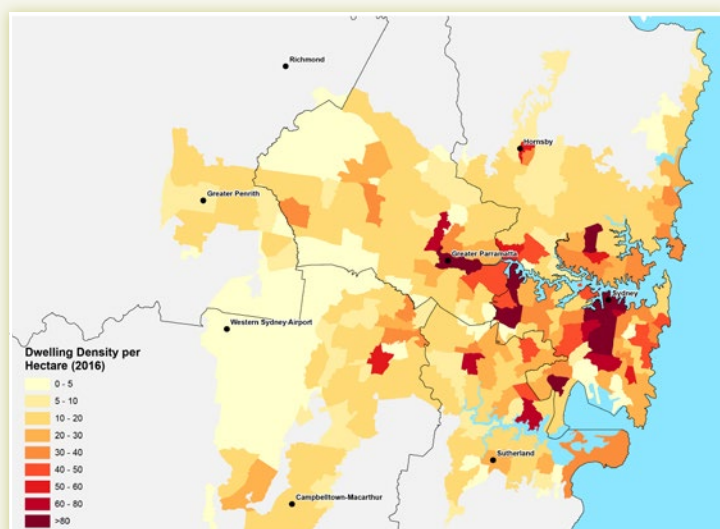
This draft Plan continues the strong legacy of strategic metropolitan planning. It seeks to protect what people love about Greater Sydney and safeguard opportunities for future generations.

## Greater Sydney's changing urban form: 1996–2016–2036



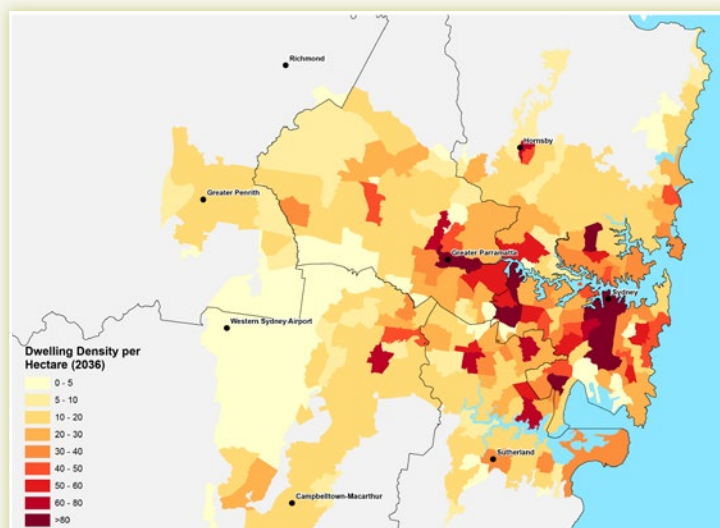
### 1996

Most of the urban area comprises detached low density housing on suburban quarter-acre blocks with some medium density semi-detached housing in the inner suburbs; higher density dwellings limited to city east (Potts Point/Kings Cross/Darlinghurst/Surry Hills), Eastern Beaches, North Sydney and Inner West



### 2016

Density has increased across the urban area; in the central and eastern areas the traditional quarter-acre block has diminished in size; more intense development is evident from the City of Sydney to Mascot and in Parramatta, Chatswood, Rhodes, Strathfield, Burwood and Hurstville; some increase in centres along the Western, Bankstown and Illawarra rail lines and in Hornsby and Liverpool



### 2036

Little change in the outward spread of intensification; increase in intensity of development in existing centres and within the existing urban area

Source: Australian Bureau of Statistics Census and NSW Department of Planning and Environment dwelling forecasts

Note: Data based on Australian Bureau of Statistics SA2s; but due to small geographies, unable to pick up changes in land release areas

## Directions for infrastructure and collaboration



### A city supported by infrastructure

**Metric:** Number of land use plans supported by infrastructure plans  
(NSW Department of Planning and Environment, Greater Sydney Commission, Councils)

Providing adequate infrastructure to support population growth is essential to creating strong communities. Therefore, the Commission is developing a series of mechanisms to better align growth with infrastructure. One mechanism is the growth infrastructure compact which would assess the nature, level and timing of infrastructure required for an area in light of its forecast housing and employment growth, including analysis of growth scenarios. This approach would demonstrate the correlation between growth and infrastructure, such as public transport, schools and open space, to allow for timely integration and more effective expenditure on infrastructure by location. The sequencing, optimising and adaptability of infrastructure are also considered for managing infrastructure delivery with growth.



### A collaborative city

**Metric:** Proportion of agreed outcomes achieved in Collaboration Areas

Managing the competing needs of a city requires all levels of government, industry and the community to work together. This is particularly important as development pressures grow. Collaboration between government, industry and local communities will result in the best use of resources such as public spaces, school ovals and community facilities. Communities will be involved in planning for their local infrastructure and services.

## 3

# Infrastructure and collaboration

Past plans for Greater Sydney have been successful in creating additional capacity for housing, employment and population growth. With continuing strong population growth and the current strength in the housing market, it has become viable to develop additional growth capacity across a broader section of Greater Sydney. This has resulted in unprecedented levels of housing development which is leading to increased demand on infrastructure and services across the three cities. In tandem, community standards for the quality and timely provision of infrastructure, amenity and place have also increased.

As Greater Sydney grows and becomes more complex there is a need to design better ways of supporting growth and delivering appropriate infrastructure in the right places. This will give the community confidence that the region is being planned and developed both responsibly and sustainably.

The NSW Government is a major contributor to much-needed housing supply through the Priority Growth Areas and Priority Precinct Programs.

Housing supply is also supported by acceleration of council-led rezonings, faster housing approvals and using surplus government lands.

It is imperative this growth is supported by essential services, such as education and health. Coordinating an integrated planning approach will also enable employment and job creation opportunities across Greater Sydney to be maximised.

The Priority Precincts will be consistent with the objectives and strategies of the *Greater Sydney Region Plan* and the relevant District Plans to enhance liveability, sustainability and productivity. These precincts will be well planned and designed and will be delivered in collaboration with councils and informed by key government agencies and

their asset plans. This planning will be supported by a Special Infrastructure Contribution or similar satisfactory arrangement to help fund the delivery of essential community infrastructure such as health, schools, open space and roads.

As a starting point, this draft Plan has collected information regarding when and where growth is anticipated or planned across the three cities. The Commission is sharing this information transparently, by identifying housing targets and where growth is being delivered through priority precincts and growth areas. The Commission has also worked with the NSW Government on a common platform and source of data including fiscal, population, demographic and employment planning assumptions which informs both long-term strategic planning and the preparation of business cases for infrastructure.

*Unprecedented levels of housing development is leading to increased demand on infrastructure and services.*

The Commission neither funds nor builds infrastructure, nor does it have the legislative ability to require others to do so. Instead, its role is to co-ordinate a whole-of-government approach that can provide the appropriate infrastructure in the right places to support the growing cities. In partnership with *Future Transport 2056* and *State Infrastructure Strategy*, this draft Plan plays a critical role in providing the basis for this collaborative approach in the future. This alignment connects policy and investment directions for business and community.

To achieve this new methodical, proactive and collaborative approach, the draft Plan sets out four overarching objectives (refer to Figure 6) to improve the planning and provision of infrastructure across Greater Sydney as it grows and evolves.



These objectives are supported by new and refined strategies for implementation, in collaboration with Infrastructure NSW, State agencies and councils. Each of these objectives is explained in the following sections.

The Commission has also initiated the concept of Collaboration Areas that focus on creating great places particularly as centres of economic productivity. The responsibility for delivering great places does not rest with any one organisation. As a non-statutory initiative, Collaboration Areas offer a new way of working to deliver collective responses that support growth and change. This will be undertaken by identifying and aligning the activities and investments of government and key stakeholders, based on evidence, to respond to the unprecedented levels of growth and investment in Greater Sydney. The outputs of the collaborations are a Place

Strategy and an Infrastructure Plan, that provide certainty to the community and the private sector, and align the Government's investment and policies to achieving great places.

This chapter outlines the Commission's infrastructure and collaboration recommendations for objectives and strategies. A number of these recommendations are not government policy.

## Actions

The following metropolitan significant action will deliver infrastructure and collaboration objectives.

- Identify, prioritise and deliver Collaboration Areas (refer to Objective 5).

**Figure 6:** Strategies to align infrastructure with a growing city

Vision – refer to Objective 1		
Prioritising infrastructure investment to support the three cities – an equitable home to 8 million residents in 2056		
Process – refer to Objective 2		
Aligning forecast growth with infrastructure – <b>growth infrastructure compact</b> simultaneously delivering housing and infrastructure	<b>Funding and financing infrastructure</b> – who pays and contributes to growing Greater Sydney	<b>Sequencing infrastructure with growth</b> – taking a methodical and sequenced approach
Implement and manage – refer to Objectives 3 and 4		
<b>Designing infrastructure to be adaptable</b> – future-proofing assets	<b>Asset management of infrastructure</b> – getting more out of existing assets	

# A city supported by infrastructure



## Objective 1

### Infrastructure supports the three cities

The metropolis of three cities provides the spatial foundation for more effective and efficient planning for city shaping infrastructure and enhanced utilisation of infrastructure.

The three-city metropolis vision moves away from the historical radial focus on the Eastern Harbour City to a new one requiring more interconnections within each city and between the cities. This will facilitate greater opportunities for learning, labour participation, industry growth and development, and access to housing and services across Greater Sydney.

This critical spatial shift will transform future infrastructure plans by providing a more specific approach to the infrastructure needs, timing and response required for each city. While each of the three cities will require new infrastructure, the focus will vary according to:

- existing infrastructure and services, capacity and industry and housing activity
- existing levels of committed investment
- the time scale of the development.

For example, the Eastern Harbour City has a significant rebuilding program in place, together with the need to make better use of existing assets and adapt them to new technologies (refer to Objective 18). The Central River City is also undergoing a rebuilding program in a high-growth environment which will also require existing infrastructure to be optimised (refer to Objective 19). Major new infrastructure will be required for the Western Parkland City, where the focus will be on planning growth and sequencing new infrastructure and services to support shaping a new city, connected to the north, east and south.

The metropolis of three cities must form the basis of future infrastructure decisions if future investment decisions are to better connect the three cities as well as support major economic drivers such as:

- digital technology, providing international gateways for business interactions
- transport services, enabling the movement of goods and labour participation
- the location and timing of critical support infrastructure, such as health and education facilities for job creation and agglomeration benefits.

Planning needs to improve connections to existing infrastructure in the three cities and, importantly, safeguard corridors for future infrastructure investment as well as locations for future centres.

Planning decisions need to support new infrastructure – including cultural, education, health, community and water infrastructure – in each city, so as to fairly balance population growth with infrastructure investment. These decisions are required to equitably enhance local opportunities, inclusion and connection to services. In this way, planning can move from a focus on network-based services to a place-based service approach for infrastructure provision.

#### Strategy 1.1

Prioritise infrastructure investments to support the vision of a metropolis of three cities.

#### Strategy 1.2

Sequence growth across the three cities to promote north-south and east-west connections.

Objective 2

Infrastructure aligns with forecast growth – growth infrastructure compact

This draft Plan identifies a range of areas that are forecast to experience significant residential and employment growth. All these areas will require new and/or enhanced local and regional infrastructure to support these changes.

Many of these areas have existing infrastructure challenges, particularly those areas experiencing growth and increasing demand for appropriate infrastructure. In order to better understand, plan for and address these existing challenges as well as new ones, the Commission has designed and is recommending to the NSW Government a new approach known as the growth infrastructure compact (refer to Figure 7).

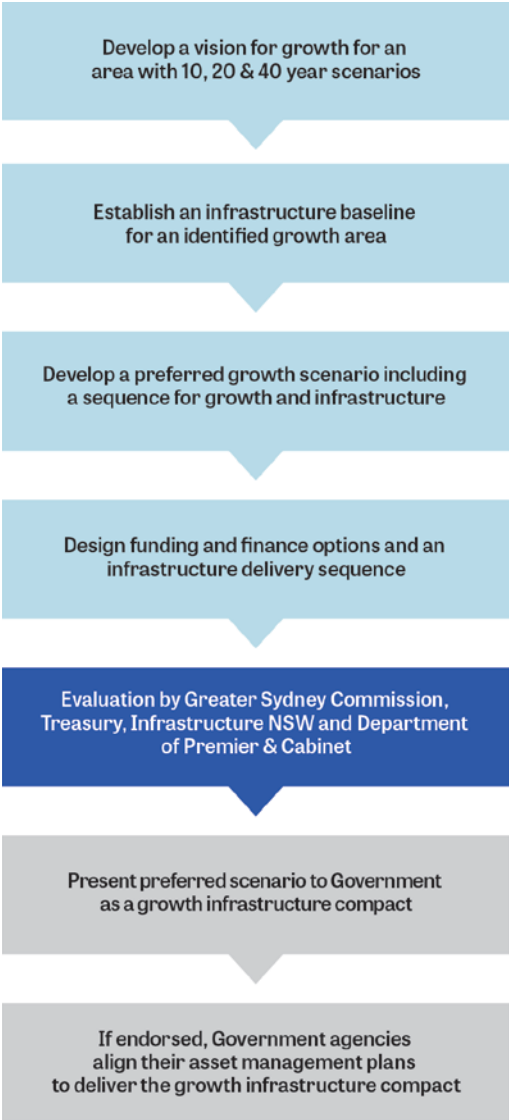
- The growth infrastructure compact aims to:
- model the growth potential of a place and explore scenarios for the long-term future
  - encourage openness about the range of infrastructure and services needed to grow a place, the costs involved and how this could feasibly be funded
  - get smarter about staging growth by being selective about where, when and what to invest in to deliver of successful places
  - make the roll out of new places more certain, cost effective and easier to understand for investors, developers and the local community.

In this way, the growth infrastructure compact sets out to assess the nature, level and timing of the infrastructure investment required for an area, considering its forecast housing and employment growth and analysis of growth scenarios.

- The growth infrastructure compact is based on a series of questions such as:
- to what extent can investment in existing infrastructure be maximised
  - to what extent does this infrastructure need to be enhanced, extended, embellished or replaced

- what new infrastructure is required to support various growth scenarios
  - how does this work with agency programs and priorities?
- This leads to an assessment of the potential cost of infrastructure plus methods to fund and deliver it.

Figure 7: Growth infrastructure compact





The growth infrastructure compact differs from existing approaches. It could provide a broader level of collaboration and a place-based business case, using a triple bottom line methodology, to determine the necessary level of investment to support the appropriate growth scenario. Input from all infrastructure agencies would be critical to the process. This approach would lead to an infrastructure delivery plan that is co-designed and co-delivered by State and local governments together with industry.

## Align growth with infrastructure

The growth infrastructure compact would model the best outcome by place and compare this across places in Greater Sydney. This would provide a tool to best determine the most effective and appropriate locations for growth, taking into consideration a wider range of variables within a local context. Taken together, growth infrastructure compact locations would have the potential to form a set of priority locations that inform city-wide government and business service and infrastructure planning.

Working with Infrastructure NSW, the Commission is piloting this innovation to plan for the optimal level of growth in the Greater Parramatta and the Olympic Peninsula (GPOP) area (refer to Objective 5). In time, this initiative should provide an important benchmark for understanding the relative costs and benefits of new development. These benchmarks would provide regional and district planning activities with a greater understanding of potential infrastructure priorities and planning decisions. In delivering on the growth infrastructure compact initiative existing Priority Precincts and Priority Growth Areas will be unaffected.

Across Greater Sydney significant areas have already been committed to growth and change. At the same time the NSW Government is allocating unprecedented levels of investment in transport, education and health (refer to Figure 8).

The Commission recognises that there is room to better align growth with infrastructure. On this basis, it is working with the NSW Government to provide advice on place-based infrastructure priorities.

In time, and as appropriate, this approach could be expanded to include local infrastructure requirements for an area.

## Fund and finance infrastructure

Resources are finite so infrastructure investments need to be carefully prioritised to deliver maximum benefit to the community. Even with the potential to improve decision-making inputs from the growth infrastructure compact, multiples sources of funding would be required to cover the cost of new infrastructure across Greater Sydney.

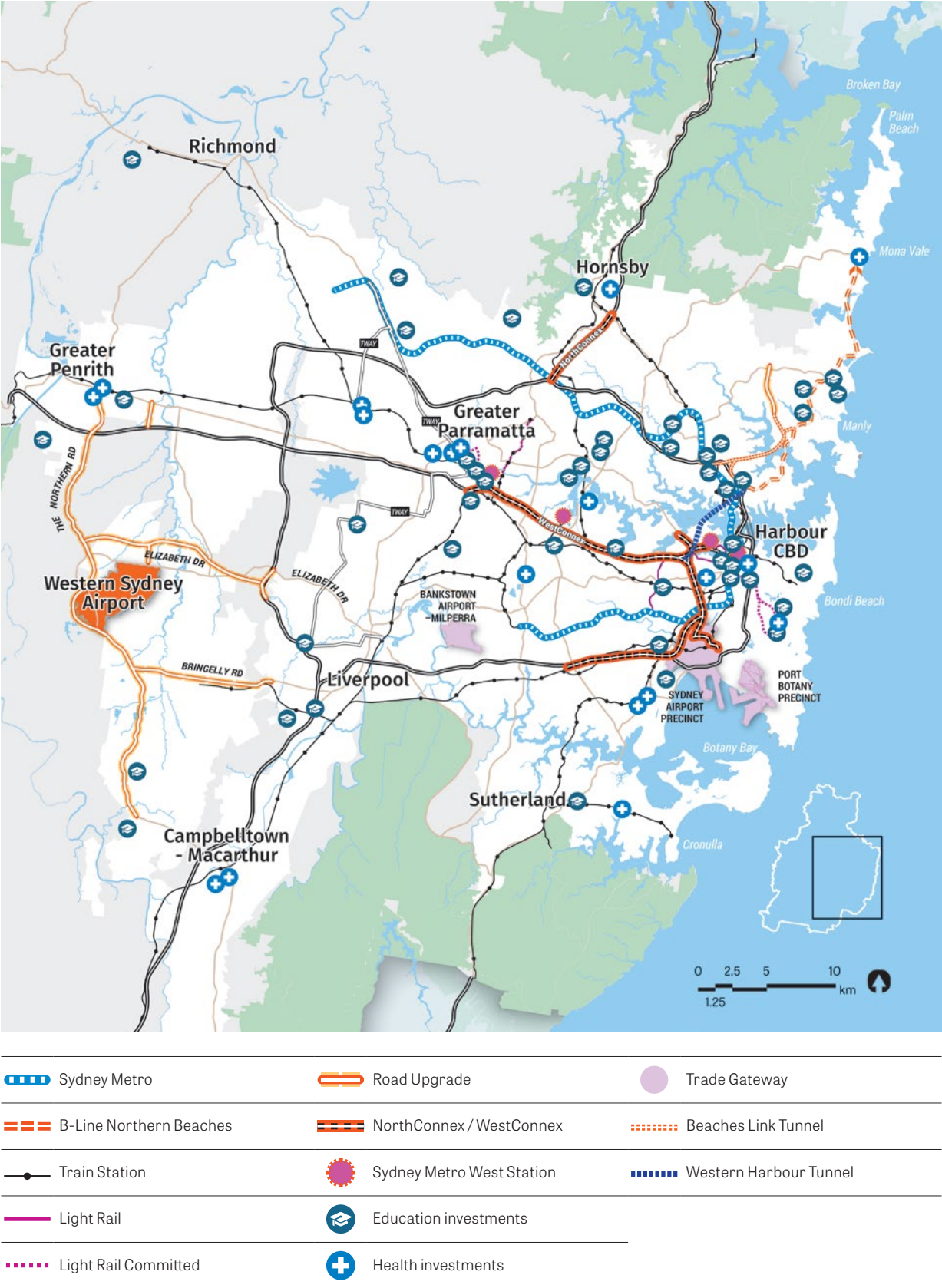
Many sources of funds are in place already, including funding from consolidated revenue and asset recycling, user charging, contributions by local development, voluntary planning agreements, council rates and private investment. The NSW Government is also expanding the consideration of Special Infrastructure Contributions to Priority Precincts to fund critical infrastructure.

*Working with Infrastructure NSW, the Commission is piloting the growth infrastructure compact to plan for the optimal level of growth in the Greater Parramatta and the Olympic Peninsula area.*

Many of the funding sources are provided via contributions from development. The Commission recognises that development needs to support the funding of infrastructure at an appropriate level, but should not be unreasonably burdened to the extent that development becomes unviable. Part of the solution to this challenge could rely on the growth infrastructure compacts identifying the most cost-effective locations for growth, based on existing and future infrastructure capacity. Another part of this solution relates to industry and governments being certain of cumulative development costs. The Commission has therefore identified the need for Government to prepare guidance to address the cumulative impacts of development contributions on development feasibility and delivery across Greater Sydney.

These established cost recovery mechanisms for infrastructure can operate alongside the other major project value sharing mechanisms. Value sharing is about identifying and raising funds additional to those which come through business-as-usual development activities. Value sharing assessments should be undertaken as part of the business case development process. Whilst value sharing may

Figure 8: Existing infrastructure investment in Greater Sydney



Source: NSW State Budget 2017–18

provide a useful contribution to project funding, the Commission recognises that it will not form a major part of the funding equation in most cases.

Several infrastructure funding mechanisms are sourced from State and local governments. Whilst the NSW Government is presently investing at unprecedented levels in Greater Sydney's infrastructure, many councils are limited in their ability to invest in infrastructure and its maintenance within the current settings for rates and Section 94 development contributions for local infrastructure. Accordingly, there is a need to continue to work within fiscal limits and manage community expectations for infrastructure whilst achieving this Plan's objectives to create great places (refer to Chapter 4) and support growing communities (refer to Objective 6).

There is also the need to consider the broader multi-jurisdictional impacts. One approach could be to expand the scope of infrastructure that is subject to development contributions however, this expense could create a greater burden on the sector and could ultimately lead to development being hindered, which is not in the interests of Greater Sydney.

Planning for infrastructure therefore needs to:

- carefully balance requirements to fund infrastructure without burdening private development unreasonably, by better understanding the cumulative impacts of developer contributions in different markets across Greater Sydney
- explore and, where appropriate, trial opportunities to share value created by the planning process and infrastructure investment (such as rail) to assist funding infrastructure
- increase collaboration with the private sector to finance infrastructure
- better leverage capacity and the efficiency of existing infrastructure
- investigate the potential of further user charging to support infrastructure delivery
- explore and implement new delivery models to improve services to the community.

The Commission will continue to plan for infrastructure that is closely aligned with land use planning at its earliest stages to enable infrastructure to be delivered efficiently by relevant government and private sector processes to meet the needs of Greater Sydney's growing population.

## Sequence infrastructure with growth

No matter what the provisions for funding and financing infrastructure, it is not possible to cover the cost of new or improved infrastructure across the entire city simultaneously. To effectively align infrastructure with growth calls for a methodical and sequenced approach to development, such as a place-based approach. This enables planners to support infrastructure alignment with areas of growth and transformation before additional areas are rezoned and ready for development. This new approach supports the appropriate growth and infrastructure being provided at the right time.

Using the growth infrastructure compact approach could improve understanding of where there is existing infrastructure capacity and which are the most cost effective areas for growth and therefore what areas should be sequenced ahead of others. At a district or regional level it could provide a valuable context for decision making.

Use of the Commission's existing governance frameworks – namely the Infrastructure Delivery Committee (comprising key State agencies including Health, Education, Transport, Treasury and Planning) – enables planning that will best align growth with the provision of infrastructure.

Using insights from growth infrastructure compact assessments, the Commission via its Infrastructure Delivery Committee could provide advice to the NSW Government on the sequencing of development.

### Strategy 2.1

Align forecast growth with infrastructure.

### Strategy 2.2

Sequence infrastructure provision across Greater Sydney using a place-based approach.

## Objective 3

### Infrastructure adapts to meet future needs

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In designing infrastructure to support Greater Sydney, there is a need to be able to adapt and transition with technological change and mega trends.<sup>2</sup> For example:

- design transport and infrastructure that responds to demands for use
- design places for electric vehicle recharging and to accommodate decentralised utilities
- adjust city management to changing lifestyles and preferences
- promote digital technology to improve the provision of services
- design car parks and drop-off bays that can be adapted to alternative uses (commercial uses, storage, logistics hubs, depots or community uses) in the event that autonomous vehicles reduce the requirements for car parking.

Infrastructure could soon experience a major productivity gain from innovative technologies promising new operating and maintenance solutions. Recent innovations in digital technologies, such as remote sensing, advanced analytics, autonomous operations, and integrated scheduling and control mean that traditional bricks-and-mortar infrastructure can now be used more effectively, and operated and maintained more efficiently.

Digital-led business models are likely to disrupt today's services and infrastructure. Therefore, infrastructure needs to be planned in ways that can be responsive to change.

Flexible designs and agreements for shared use provide new opportunities for social infrastructure – including sporting fields, meeting rooms, schools and community facilities that can be adapted for use by a cross section of the community.

As future technologies evolve, a precinct based approach to community and public infrastructure, including car parking, needs to be taken to maximise adaptability, access and utilisation.

#### Strategy 3.1

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Consider the adaptability of infrastructure and its potential shared use when preparing infrastructure strategies and plans.





## Objective 4

### Infrastructure use is optimised

Operating within appropriate fiscal limits calls for getting the most out of existing infrastructure assets. This will be particularly important for the established Eastern Harbour City but also in planning the new Western Parkland City. Achieving better utilisation of existing assets increases infrastructure capacity to better support communities and has the potential to minimise or avoid the need to fund additional infrastructure.

Before implementing new infrastructure responses, the demands on existing infrastructure need to be evaluated and managed. This can be achieved by exploring opportunities to:

- adopt new technologies such as smart traffic management systems and real time energy and water metering systems
- use land more efficiently by co-locating similar or mixed services, or by allocating road space to support increased mass transit services
- change behaviours through charging users, so that consumers are motivated to use services off peak.

To maximise asset utilisation, new precincts and new developments are to incorporate demand management, and where appropriate, be sequenced to be contiguous with existing developments so that existing demand management initiatives can be leveraged. Improved asset planning calls for consideration of the higher-level objectives that place-based infrastructure investments seek to achieve (outcomes) in terms of the overall economy, society and environment.

Because current planning and appraisal processes treat infrastructure as discrete, sector specific assets, agencies are not always able to identify and exploit potentially valuable place-based interdependencies. Similarly, these approaches are unable to identify potentially hazardous and costly interdependencies in a systemic manner. A functional corridor for example should incorporate essential utilities such as digital connectivity and energy. This approach



reinforces the need for a place-based assessment of infrastructure through measures such as the growth infrastructure compact.

A major challenge for providers of infrastructure is to realise the innovative opportunities in place-based interdependencies, and so increase value for money, sustainability and resilience. It is necessary to recognise that real-world infrastructure systems are highly interconnected, both with each other and with the socio-economic and natural systems in which they are located.

#### Strategy 4.1

Maximise the utility of existing infrastructure assets and consider strategies to influence behaviour changes, to reduce the demand for new infrastructure, including supporting the development of adaptive and flexible regulations to allow decentralised utilities.



## A collaborative city

### Objective 5

#### Benefits of growth realised by collaboration of governments, community and business

Collaboration across the three tiers of government and across State agencies is essential for coordinating land use and infrastructure planning and delivery.

Engagement with the community and stakeholders is central to all collaboration and is addressed in Objective 8 and Objective 9.

The complexities of a growing region mean different approaches are required depending on the context which ranges from nationally significant investment,

corridors of renewal and land release, to a focus on a specific strategic centre or precinct. The role of the collaboration also varies; it may be for the development of integrated strategy where alignment of agencies is critical, for coordination of investment across different tiers of government to achieve land use outcomes or for the delivery of specific projects. The current suite of approaches supporting land use and infrastructure planning and delivery are outlined in Table 1.

**Table 1:** Approaches to supporting land use and infrastructure planning and delivery

Collaboration	Agency	Focus
Western Sydney City Deal	Australian; State and local government	Domains for action: <ul style="list-style-type: none"> <li>– governance, city planning and regulation</li> <li>– infrastructure and investment</li> <li>– housing</li> <li>– jobs and skills</li> <li>– innovation and digital opportunities</li> <li>– liveability and sustainability</li> </ul>
Collaboration Areas	Greater Sydney Commission	Strategy development including: <ul style="list-style-type: none"> <li>– integrated place management (strategic centres and health and education precincts)</li> <li>– strategy drivers: economic productivity, liveability, sustainability</li> <li>– infrastructure alignment</li> </ul>
Priority Growth Areas Urban Renewal Corridors	NSW Department of Planning and Environment	Transformative corridor delivery including: <ul style="list-style-type: none"> <li>– new land release areas</li> <li>– city shaping transport investment and urban renewal</li> <li>– infrastructure schedules and funding options</li> </ul>
Priority Precincts	NSW Department of Planning and Environment	Transformative precinct delivery: <ul style="list-style-type: none"> <li>– targeted development focused on housing diversity around a centre and transit node/rail station</li> <li>– infrastructure schedules and funding options</li> </ul>
Urban Transformation	UrbanGrowth NSW Development Corporation and Landcom	Project delivery: <ul style="list-style-type: none"> <li>– focus on optimisation of government-owned land and urban renewal</li> </ul>

## Collaboration Areas and City Deal

The delivery of the Western Sydney Airport and Badgerys Creek Aerotropolis will be driven by a Western Sydney City Deal through the collaboration of all tiers of government. It will transform the Western Parkland City into a thriving, productive and sustainable area, with the Western Sydney Airport as the economic catalyst (refer to Objective 20).

Place-based planning in other parts of Greater Sydney can be achieved through Collaboration Areas. Collaboration Areas are nominated places where the Commission will facilitate the establishment of governance arrangements and support the coordination of activities across agencies and governments to deliver significant productivity, sustainability and liveability outcomes.

The Commission is facilitating a strategic, whole-of-government approach to each Collaboration Area with District Commissioners chairing the collaborations. Greater Parramatta and the Olympic Peninsula (GPOP) is the most advanced of these Collaboration Areas.

A GPOP vision was released by the Commission in October 2016 (refer to Objective 15).

Collaboration Areas may be set up to deal with the coordination of development with infrastructure funding, delivery and staging; and alignment of the activities of councils and government agencies at the NSW and/or Australian Government level.

Collaboration Areas across Greater Sydney are at different stages of development and require tailored, place-based approaches. The Commission's priority Collaboration Areas are outlined in Table 2.

The Commission has also identified St Leonards, Frenchs Forest and Macquarie Park as Collaboration Areas. As these are also Priority Precincts or Priority Growth Areas, the NSW Department of Planning and Environment is facilitating interagency engagements and inputs from the Commission.

The roles of the Western Sydney City Deal, the suite of Collaboration Areas and the Priority Growth Area and Priority Precincts are highlighted throughout this draft Plan and the District Plans.

**Table 2:** Priority Collaboration Areas

Priority	Collaboration Area	Local Government Area
2017-18	Liverpool strategic centre and environs	Liverpool
	Greater Penrith	Penrith
	Camperdown-Ultimo health and education precinct	Sydney
	Randwick health and education precinct	Randwick
	Rhodes East precinct	Canada Bay
2018-19	Kogarah health and education precinct	Georges River and Bayside
	Campbelltown - Macarthur	Campbelltown
	Australian Nuclear Science and Technology Organisation (ANSTO)	Sutherland
	Bankstown Airport/Milperra industrial and urban services precinct	Canterbury-Bankstown



### Action 1

#### Identify, prioritise and deliver Collaboration Areas

The Commission will continue to identify, prioritise and lead Collaboration Areas across Greater Sydney. It will annually review the Collaboration Area program and priorities.



## Directions for liveability



### A city for people

**Metric:** Annual survey of community sentiment

A growing Greater Sydney presents an opportunity to build social and cultural connections and networks. Strategic planning will capitalise on local identity, heritage and cultural values, together with easier access to services to foster a more resilient and connected society. The changing demographics of neighbourhoods across Greater Sydney will influence the local demands for social infrastructure.



### Housing the city

**Metric:** Number of councils on track to deliver housing targets

**Metric:** Number of councils with schemes that implement Affordable Rental Housing Targets

Sustained population growth over the coming decades will require a minimum of 36,250 new homes every year. Combined with changing demographics and housing affordability challenges, greater housing choice will be needed. This relates to a range of housing types, tenures and price points together with rental accommodation for lower income households and social housing for the most vulnerable. The provision of more housing will occur concurrently with the creation of liveable neighbourhoods close to employment opportunities, public transport, walking and cycling options for diverse, inclusive multi-generational and cohesive communities.



### A city of great places

**Metric:** Percentage of dwellings within walking distance of a local or strategic centre

**Metric:** Percentage of dwellings within walking distance of open space

Great places recognise local characteristics and the qualities people value. As Greater Sydney grows and changes, its places will offer more than just new homes and jobs. They will enhance well-being and a sense of community identity by delivering safe, inclusive and walkable mixed use areas that exhibit urban design excellence and are connected to social infrastructure and open spaces. These places will respect heritage and foster interaction and healthy lifestyles by encouraging exercise, creativity, enterprise and innovation.



# 4 Liveability

The quality of life that residents enjoy in neighbourhoods, work places and cities is central to liveability. Planning for people recognises that liveability not only contributes to productivity and sustainability, but is also an important influence on individual wellbeing and community cohesion.

The metropolis of three cities will enable great places to meet people's essential housing, transport, employment and social needs. Better access to economic, social, recreational, cultural and creative opportunities – and easier connections with family, friends and the broader community – will assist people to fulfil their potential.

The population of Greater Sydney is 4.7 million and is projected to grow by 1.7 million people to 2036. This growth is driven by the natural increase of the existing population, and domestic and international migration.

Planning for the next 20 years involves providing services and infrastructure locally to meet the needs of the growing population (refer to Figure 9) and changes to demographics. This includes health and education services and facilities, as well as accessible neighbourhoods and homes, for an increasing proportion of people over 65 years of age.

The region's Aboriginal communities, their histories and contemporary cultures and connections to country and community make a valuable and continuing contribution to the region's heritage, culture and identity.

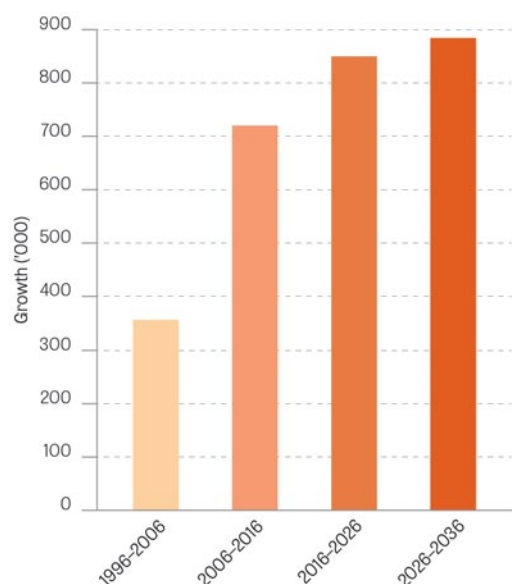
Beginning with the first settlement of Australia by Europeans, many migrants and refugees have made Greater Sydney their home, and also made significant contributions to shared history and identity.

Greater Sydney is home to a diversity of people from many cultures. Across the region 40 per cent of residents come from 230 countries. This cultural diversity finds expression in events such as NAIDOC Week and Reconciliation Week, Parramasala Indian festival in Parramatta, Multicultural Eid Festival in Fairfield, Haberfield Italian Festa and the Sydney Gay and Lesbian Mardi Gras. Diversity is evident from the more than 250 languages spoken across the region. Refer to Figure 12 for the top 10 non-English languages spoken at home.

Greater Sydney's growth reflects the worldwide trend towards city living and the better access this provides to people, services, resources, jobs and opportunities. Being an in-demand global city brings growth, which in turn brings opportunities to leverage the benefits of growth.

It also brings challenges. The biggest of these is housing affordability, which is a pressing social and economic issue across Greater Sydney. Housing affordability can affect job and lifestyle choices, and for some will determine whether they can live in Greater Sydney. Housing affordability is a primary focus of this draft Plan's approaches to improve liveability.

**Figure 9:** Greater Sydney Region population growth 1996–2036



The NSW Government has identified demand for 725,000 homes to meet growth over the next 20 years. In recent years, Greater Sydney has seen strong growth in new housing which, for the first time in a decade is reaching the level of supply that is needed to support growth.

The draft Plan sets out a process to deliver a steady pipeline of supply to meet forecast housing demand and to improve Greater Sydney's housing affordability. Housing targets have been established to support the creation of supply for delivery over the next ten years and to create capacity for the longer term. A suite of measures that address housing affordability are included, with the implementation of Affordable Rental Housing Targets the focus of current initiatives.

Although parts of Greater Sydney have significant capacity to provide new dwellings, housing preferences mean that market demand is a major factor in addressing housing supply. Research indicates that the people of Greater Sydney have strong neighbourhood preference. Over 80 per cent of people moving locally within the city move less than 15 kilometres.<sup>3</sup>

The Commission is planning for communities, not simply housing. The creation and renewal of great places for people, together with better local accessibility through walking and cycling will achieve local liveability that attracts and retains residents and workers.

When services and infrastructure like schools, health, recreation, arts and sports are co-located at the heart of a neighbourhood, designed for walking and cycling, they provide better opportunities for people to meet and develop strong ties (refer to Objective 7). For these reasons, great places exhibit design excellence and start with a focus on open spaces and a people-friendly realm.

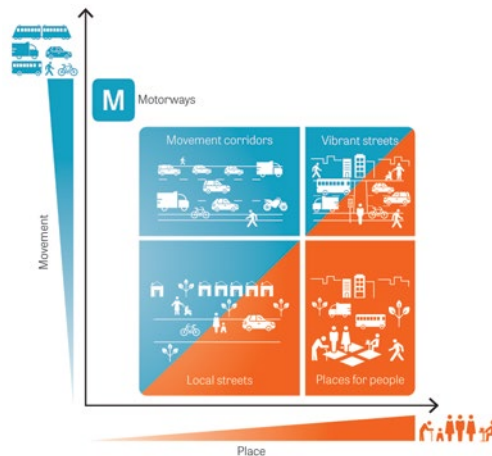
This draft Plan and *Future Transport 2056* adopt a common approach, illustrated in Figure 10, to creating great places and better connecting them. It recognises the dual function of streets as places for people and movement and how the prioritisation of transport movements, walking, cycling and social opportunity influences the function of streets and determines their character and identity.

## Place-based planning

Place-based planning is a design-led and collaborative way of examining the complexity of the city by viewing it as a mosaic of different places, each with unique potential and characteristics. Focusing on how specific places work for people, collaborative processes are used to develop a shared vision and values that capitalise on locally distinctive attributes and strengths.

The shared vision and a spatial framework for a place provide the basis for future development, governance and allocation of responsibilities. The outputs of place-based planning detail how the vision will be implemented and the place activated, monitored, managed and re-visioned over time to shape decision-making, strategic plans, development proposals and assessment, and ongoing management.

**Figure 10:** Movement and place framework



Source: Future Transport 2056 and Greater Sydney Commission

Improving liveability leads to better mental and physical health outcomes and community cohesion, and provides productivity and sustainability benefits.

Providing opportunities for people to participate in quality arts, cultural and heritage experiences inspires understanding of differences and innovation. Strengthening social connections within and between diverse peoples and cultures promotes resilience and collaborative responses to growth and change. Key to these outcomes are opportunities to participate in local sporting clubs and activities.

Planning for the infrastructure needs of Greater Sydney also requires planning for cemeteries and crematorium infrastructure. In the life of this plan, there will be a need to create substantial additional capacity to meet future local and regional demand.

Each of the three cities requires different approaches to improving liveability outcomes.

**The Western Parkland City** is a mix of well-established suburban and rural communities, emerging neighbourhoods and new centres. In the Western City, improving liveability is about new great places, with well-connected communities which have access to a range of jobs and services.

Creating the best city into the future requires a place-based approach that starts with public places and open spaces and transit oriented developments. The timely delivery of infrastructure to support new communities to develop social connections will bring vibrancy and activation and improve liveability.

**The Central River City** is transforming from a suburban to a more urban environment, with a mix of well-established and developing neighbourhoods along existing and new transit corridors. It is a focus for large transport, social and cultural infrastructure improvements. Providing local infrastructure to support its transformation and developing fine grain urban form and land use mix are essential for improving liveability.

**The Eastern Harbour City** is a mature mix of well-established communities from traditional suburban to Australia's most highly urban neighbourhoods. Growth will bring urban renewal and infill development with increased need for infrastructure and services. The quality of the public realm for people and access to open space and services are primary considerations for improving liveability.

This chapter outlines the Commission's liveability recommendations for objectives and strategies. A number of these recommendations are not government policy.

## Actions

The following metropolitan significant actions will deliver liveability objectives.

- Prepare housing strategies (refer to Objective 10).
- Develop 6–10 year housing targets (refer to Objective 10).
- Work with the NSW Department of Planning and Environment to implement Affordable Rental Housing Targets (refer to Objective 11).



## A city for people.

### Objective 6

#### Services and infrastructure meet communities' changing needs

Greater Sydney is growing at the same time as major demographic changes are occurring.

By 2036 the number of infants aged 0–4 years will increase by 85,000 and there will be 333,000 more children and young people aged 5–19 than today. Over the same period, the proportion of the population over 65 years of age will increase from 13 to 18 per cent. Also, the number of working age people aged 20–65 will decrease from 62 to 58 per cent. These changing demographics will affect the types and distribution of services and infrastructure required in neighbourhoods and cities, which will be supported by a smaller working population.

#### Schools

Schools are essential local infrastructure. The Department of Education estimates that an extra 260,000 students will need to be accommodated in government and non-government schools in Greater Sydney by 2031. Demand for school places will vary across Greater Sydney. The NSW Department of Education's high-level *School Assets Strategic Plan* coordinates planning for, and delivery of, both new and expanded schools.

The NSW Government will spend \$4.2 billion over the next four years on school buildings, which it estimates will create 32,000 more student places and 1,500 new classrooms. Many new and expanded schools will be in growth areas including Camden, Riverstone, Penrith and Bella Vista. Innovations such as contemporary design, flexible learning spaces and more efficient use of land will be essential responses to growth and changing spatial demands. Shared use

of facilities and increased opportunities for students to walk and cycle to school will better connect schools with local communities.

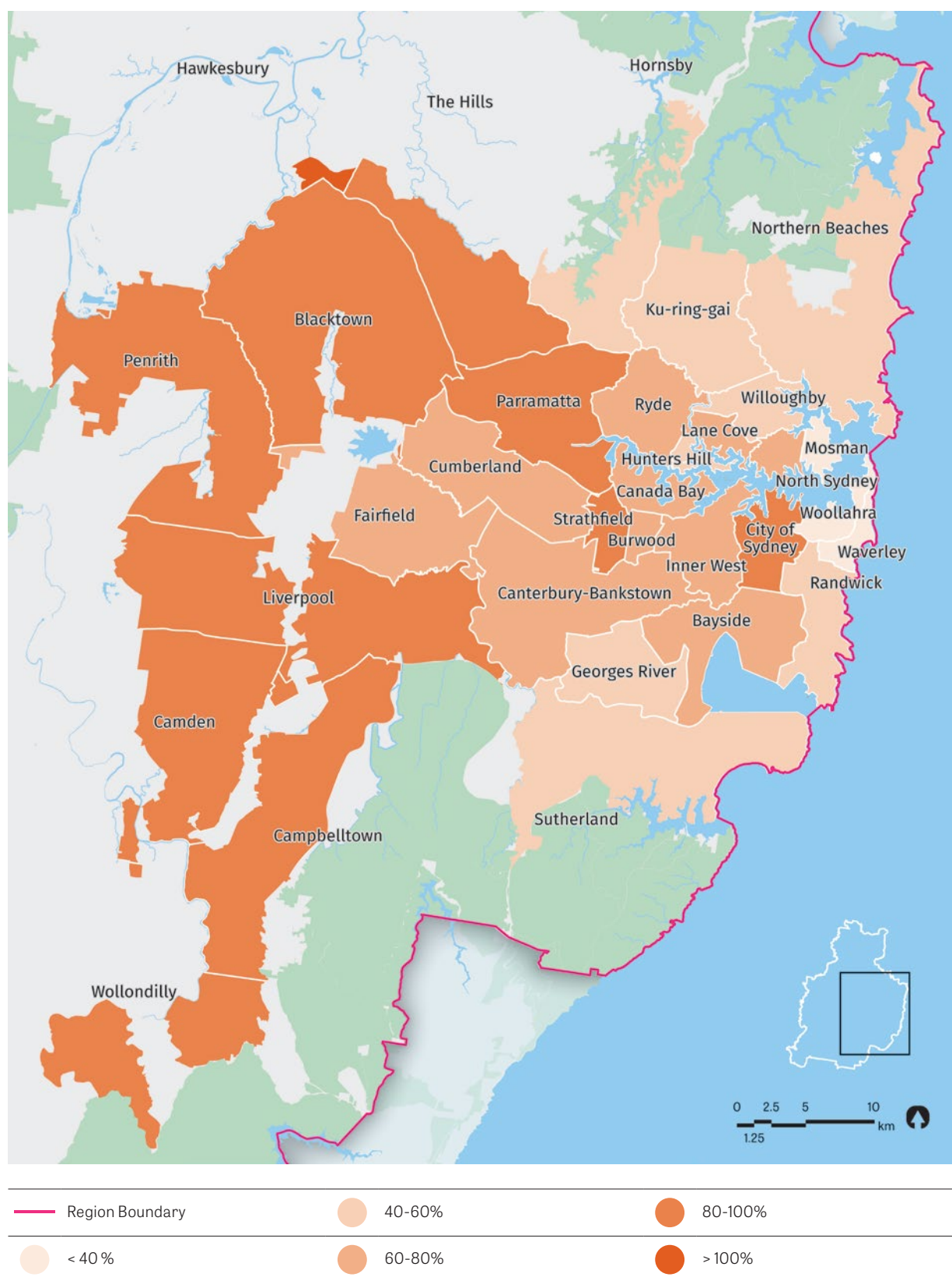
However, the needs of children and young people go beyond schools. With families increasingly living in higher density areas, planning and design responses need to place greater importance on how open space and the public realm are inclusive for children and young people (refer to Objective 12).

#### Health services

Integrated planning for health services will make it easier for people to access a comprehensive health system including general practice, community health services, in-home and aged care, medical centres, pharmacies, dental and related services. Strategic planning will continue to respond to the changing nature of health service delivery – providing accessibility for patients, visitors and staff in well-located health facilities. The co-location of health, higher education and related activities such as research, housing for health workers and students, short-term accommodation, and complementary commercial uses will support collaboration, innovation and accessibility outcomes.

Figure 11 shows greater proportional increases in people over 65 years in local government areas within the Western Parkland and Central River cities. These places will experience much greater demand for health, social and aged care services than currently exist.

**Figure 11:** Projected spatial pattern of population increase over 65 years from 2016 to 2036



Source: NSW Department of Planning and Environment



Tailored services and infrastructure will be required for people to age within their communities where being close to friends, family and support networks improves their wellbeing. This will require accessible local services including in-home care with associated parking and housing diversity for downsizing.

Providing accessible services and facilities for the aged will require innovative approaches to their delivery (refer to Objective 3). While digital technologies are increasingly improving the capacity of health and social services to be accessed from home, there will be increased demand for local aged care facilities.

Physical, social and spatial accessibility is important across all ages and abilities. A region that is female-friendly is safer and more accessible for all – people of all abilities including people with disability, older people and children.

## Universal design

Universal design is a term used to describe homes and places that can be accessed, understood and used by all people, regardless of their age, size, ability or disability. Universal design provides safer homes that are easier to enter, move around and live in, and that can be adapted to the changing needs of occupants over time. It benefits residents, visitors and all the community.<sup>4</sup>

If 20 per cent of new homes were of universal design, savings to the Australian health system of \$37–\$54.5 million per year could arise through reduced hospital stays, accommodation, health and in-home care. Construction costs are approximately one to two per cent more for universal housing.<sup>5</sup>

Improved health, public transport and accessibility outcomes can be achieved through the provision of schools, recreation, transport, community and health facilities in walkable mixed use places co-located with social infrastructure and local services (refer to Objective 7).

Delivery of the necessary facilities and services to meet people's changing needs requires integrated planning and collaboration amongst a broad range of stakeholders. This includes considering both the provision of services and the overall outcomes for the community and inter-generational equity.

## Strategy 6.1

Deliver social infrastructure to reflect the needs of the community now and in the future.

## Strategy 6.2

Optimise the use of available public land for social infrastructure.

### Related government initiatives:

- School Assets Strategic Plan Summary

### Useful links:

- Mapping the NSW Budget 2017–18



## Objective 7

### Communities are healthy, resilient and socially connected

Active and socially connected people are healthier and better able to adapt to change. Strong social networks help communities respond to the challenges of urban life, such as housing affordability and access to work and education. They give people access to knowledge, resources and opportunities. Great places for people are shaped by healthy and connected communities that share values and trust, and can develop resilience (refer to Objective 12 and Objective 36).

Street life, meeting and gathering places and emerging sharing and digital networks sustain social networks. Streets allow spontaneous social interaction and community cultural life when designed at a human scale for walkability.

Managing growth and change requires meaningful engagement with local communities. Understanding and building on a community's unique strengths, networks and potential is key. Existing social network strengths across the three cities include:

- playgrounds, libraries, education facilities and active street life
- farmers' markets, eat streets, street verge and community gardens
- creative arts centres, theatres, live music and co-working spaces
- bushcare groups, outdoor gyms, sports fields and aquatic centres, and community spaces.

These generate the greatest social opportunities when they are inter-generational, multipurpose and co-located at the heart of walkable neighbourhoods.

Well-planned neighbourhoods can improve the health of people, which is particularly important given the rising incidence of people with chronic lifestyle related diseases such as type 2 diabetes and childhood obesity. Mixed-use neighbourhoods with homes and schools close to centres and public transport improve the opportunities for people to walk and cycle to local shops and services. This has many flow-on benefits including increasing patronage of local businesses and transport, more successful centres and reduced traffic congestion.

Good access to fresh food and walkable opportunities for sport and recreation encourages more active and healthier people. With families increasingly living in higher density neighbourhoods, open spaces and public places need to be inclusive for children and young people.

A 20-minute walk built into a person's daily routine reduces the risk of early death by 22 per cent and increases a person's mental health by 33 per cent.<sup>6</sup>

Being connected – including physically, socially, economically, culturally and digitally – is central to building healthy, resilient and diverse communities. Delivery of places for people is an important consideration at every scale, from large transformation projects to local public realm improvements which are also addressed in Objective 14. These require coordination across a range of stakeholders and agencies, councils and communities, developers and service providers.

#### Strategy 7.1

Deliver inclusive places for people of all ages and abilities that support healthy, resilient and socially connected communities by:

- providing walkable places with active street life and a human scale
- co-locating schools, social, health, sporting, cultural and shared facilities.

#### Related government initiatives:

- Make Healthy Normal
- NSW Active Travel Charter for Children
- NSW Healthy Built Environment Checklist

## Objective 8

### Greater Sydney's communities are culturally rich with diverse neighbourhoods

Across Greater Sydney diverse neighbourhoods are home to people of different cultural and linguistic backgrounds. This cultural richness brings to the region a wide array of skills, languages, cultures and experiences.

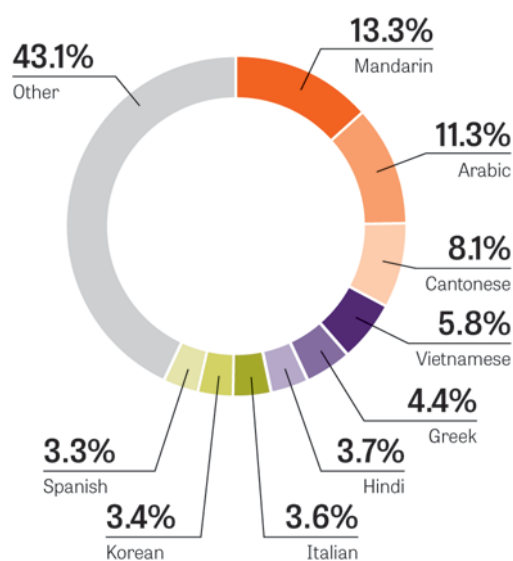
Greater Sydney's Aboriginal people have long standing and continuing connections with land, community and culture across the region. These are fundamental to Greater Sydney's heritage, culture and identity.

Greater Sydney is the site of the first European settlement in Australia. Its colonial history and heritage makes a significant contribution to the region's culture and identity. Since then, many migrants and refugees have brought diverse stories, heritage, tradition and customs that also celebrate diversity and contribute to the co-creation of distinctive places.

Recognition of diversity is one of Greater Sydney's key strengths. It fosters social and economic opportunity, individual wellbeing and community cohesion. Sporting participation is an important social and recreational pursuit that builds resilience and social connections in diverse communities.

To deliver rich and diverse neighbourhoods requires engagement across cultures to develop an understanding of local culture and needs, to capitalise on community strengths.

**Figure 12:** Top 10 non-English languages spoken at home in Greater Sydney



Source: Australian Bureau of Statistics Census 2016

Engagement with Aboriginal communities should be founded on self-determination and economic participation and mutual respect. This includes facilitating the ability of Local Aboriginal Land Councils to more readily derive economic, community and cultural use of Aboriginal land acquired under the *Aboriginal Land Rights Act 1983*.

### Strategy 8.1

Consider cultural diversity in strategic planning and engagement.

## Objective 9

### Greater Sydney celebrates the arts and supports creative industries and innovation

Greater Sydney is an innovative and creative region where cultural and artistic expression is encouraged and respected. Artistic and creative expression is central to Greater Sydney's identity and international image and is also a hallmark of an innovative economy. Artists develop and communicate ideas and new ways of thinking.

Great places for people are made when artistic, cultural and creative works are visible, valued, distinctive and accessible. Providing local opportunities for artistic, cultural and creative expression through support for, and access to, arts, literature, screen, performance and cultural experiences, public art and events encourages a culture of creativity and innovation and contributes to local identity. Growing the arts sector will draw greater participation from both residents and visitors, contributing to the economy and attracting investment.

Greater Sydney's Aboriginal people also continue to contribute to Greater Sydney's rich cultural and creative identity.

While there is an historic concentration of arts and cultural organisations in the Eastern Harbour City, there are also important arts facilities and strong local arts networks that give the Central River and Western Parkland cities distinctive arts cultures. These include Bankstown Arts Centre, Blacktown Arts Centre, Casula Powerhouse Arts Centre, Campbelltown Arts Centre, Penrith Performing and Visual Arts and the Riverside Theatres in Parramatta. However more facilities to support arts and culture are required in the Central River and Western Parkland cities to balance the three cities.

Arts and cultural experiences provoke thought and understanding of difference in shared spaces, venues, theatres, cinemas and eat streets, and through events. Increased connections between creative organisations can help support artistic

practice and build sector capacity. Multi-functional and shared spaces are also required, with opportunities for artists and makers to live, work and learn locally. Greater use of the public realm for interim and temporary uses can increase audience and artist participation.

A vibrant and safe night-time economy enhances Greater Sydney's standing as a global city, while meeting the social and recreational needs of shift workers, young people, tourists and visitors. Stimulating the night-time economy will support dynamic places and boost local economies. This can generally occur in mixed-use centres with adequate noise control, locally appropriate operating hours and safe late-night travel options.

#### Strategy 9.1

Facilitate opportunities for creative and artistic expression and participation, wherever feasible with a minimum regulatory burden, including:

- creative arts and cultural enterprises and facilities
- creative interim and temporary uses
- appropriate development of the night-time economy.

#### Related government initiatives:

- Create in NSW: NSW Arts and Cultural Policy Framework



## Housing the city

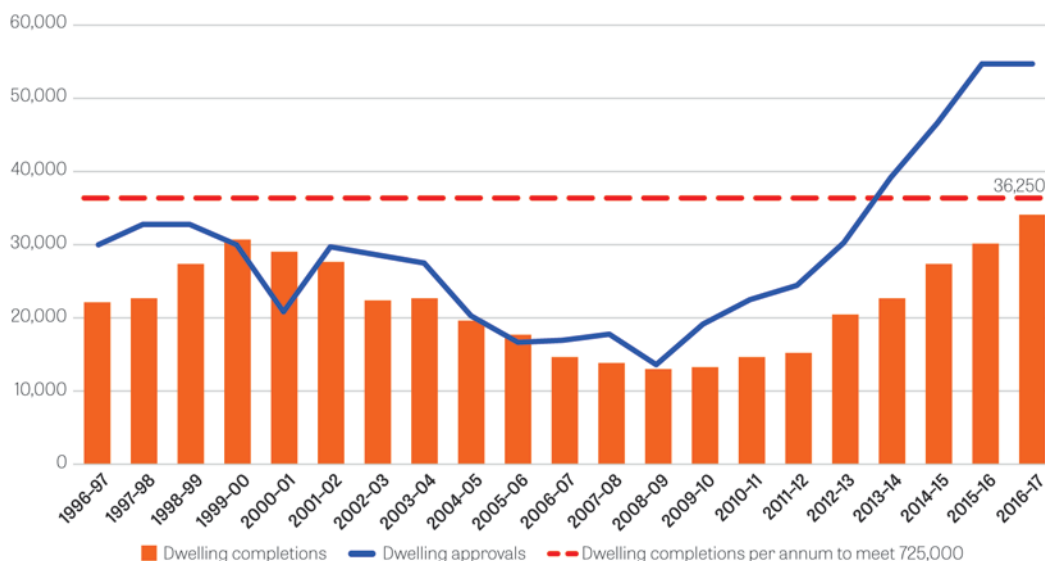
### Objective 10 Greater housing supply

Providing ongoing housing supply and a range of housing types in the right locations will create more liveable neighbourhoods and support Greater Sydney's growing population.

The NSW Government has identified that 725,000 new homes will be needed to meet demand based on current population projections to 2036. By 2056, it is anticipated that significant further housing supply will be required to meet Greater Sydney's continued strong population growth.

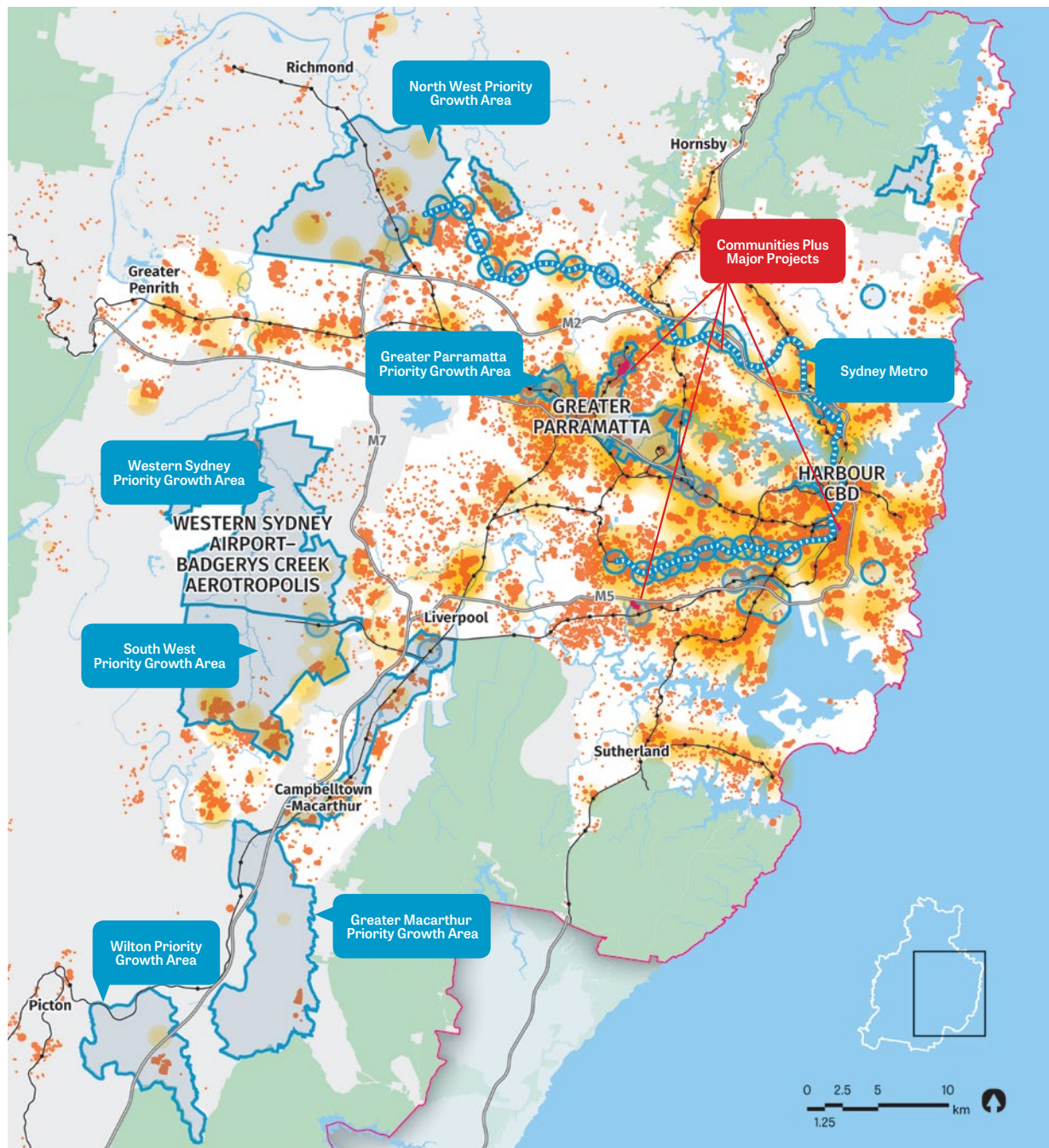
Between 2000 and 2010, dwelling completions across Greater Sydney declined substantially with less than half the number of homes completed in 2010 compared to 2000 (refer to Figure 13). However, the population continued to rise and household occupancy rates declined. In recent years, there has been a significant turnaround with more homes being built than at any time in Greater Sydney's history, with approximately 34,000 new homes in the year to June 2017. The NSW Government's current programs are significantly contributing to housing supply (refer to Figure 14).

**Figure 13:** Historic dwelling approvals and completions: 1996–97 to 2016–17



Source: NSW Department of Planning and Environment Metropolitan Housing Monitor Sydney Region

**Figure 14:** Historic and future housing supply



Region Boundary	Priority Growth Areas, Priority Precincts, Transit Oriented Development
Waterways	Communities Plus Projects (Land and Housing Corporation) Major Projects
Protected Natural Area	Dwelling Completions 2012 to 2016
Metropolitan Rural Area	Forecast Dwelling Completions 2016 to 2021
Sydney Metro	

Source: Greater Sydney Commission, NSW Department of Planning and Environment & NSW Government Housing Affordability Package



As part of this unprecedented level of supply, a range of housing types, tenures and price points will be needed across the housing continuum to meet demand. The housing continuum refers to all types of houses, apartments, terraces and villas; to different tenures including dwellings that are owned outright, mortgaged or rented; to homes occupied by single people, families and groups (refer to Objective 11).

A range of housing types provides for the needs of the community at different stages of life and caters for diverse household types. It means that as people age they can move into smaller homes and age in their own neighbourhoods, while young adults leaving home can stay close to their families and communities.

Good strategic planning can link the delivery of new homes in the right location with local infrastructure. Strong collaboration by State and local governments can best achieve the coordination required for local infrastructure to support additional housing supply and create liveable neighbourhoods.

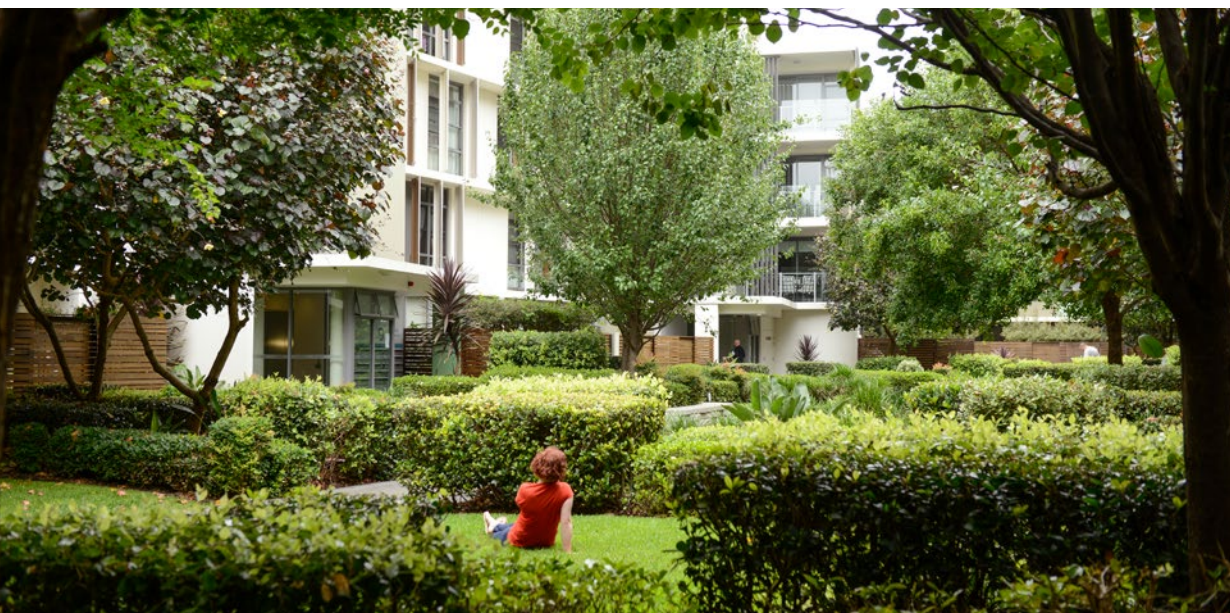
Importantly, this draft Plan recognises that not all areas of Greater Sydney are appropriate for significant additional development. Challenges relating to a lack of access to shops, services and public transport or other necessary infrastructure and local amenity constraints require careful consideration. Good planning is also required to enhance and not detract from local amenity.

## Housing Affordability Package<sup>7</sup>

### – A Fair Go for First Home Buyers

The NSW Government's 2017 Housing Affordability Package outlines a range of initiatives to make it easier for people to own their own homes, including an allocation of more than \$2.1 billion for infrastructure to support growth.

*The NSW Government wants to ensure there are enough homes built to meet the growing population. However supply needs to be in the right areas, and the housing needs to be the right type and take into consideration the unique character of local neighbourhoods. Communities and councils have the lead role in determining where new housing can be delivered and how this can be done with respect to the character of the local neighbourhood.*



## More housing in the right locations

Creating capacity for new housing in the right locations requires clear criteria for where capacity is to be located. Accommodating homes for the next generation needs to be linked to local infrastructure - both to optimise existing infrastructure use and to maximise investment in new infrastructure. Opportunities for capacity can be realised by urban renewal, local infill developments and land release areas (refer to Figure 156).

### Urban renewal

Opportunities for urban renewal need to be considered by location and by capacity of existing and proposed infrastructure. In older more established parts of Greater Sydney, urban renewal opportunities may exist around regional transport and strategic centres where links for walking and cycling promote a healthy lifestyle and contribute to liveability.

Where there is significant investment in transit corridors, both existing and proposed, urban renewal may best be investigated in key nodes along the corridor. Corridor investigations can provide a longer term strategic context while the development of precincts within the corridor is sequenced over time.

The Commission proposes locational criteria for urban renewal investigation opportunities to include:

- Alignment with investment in regional and district infrastructure. This acknowledges the catalytic impacts of infrastructure such as Sydney Metro Northwest and Sydney Metro City & Southwest, NorthConnex, WestConnex, CBD and South East Light Rail, Parramatta Light Rail, Northern Beaches Hospital together with other possible future NSW Government investments such as Western Harbour Tunnel and Beaches Link and Sydney Metro West. It also acknowledges the opportunities created by enhancements to existing infrastructure such as upgrades to schools, open space including sporting facilities and transport.
- Accessibility to jobs, noting close to half of Greater Sydney's jobs are generated in strategic centres.
- Accessibility to regional transport, noting that high-frequency transport services can create efficient connections to local transport services and expand the catchment area of people who can access regional transport.
- The catchment area that is within walking distance of centres with rail, light rail or regional bus transport.

Other matters to be carefully considered include:

- the feasibility of development, including financial viability across a range of housing configurations (one, two, three or more bedrooms) and consistency with market demand

- heritage and cultural elements, visual impacts, natural hazards such as flooding, special land uses and other environmental constraints
- local features such as topography, lot sizes, strata ownership and the transition between different built forms
- the staging of enabling infrastructure, upgrades or expansions of social infrastructure such as local schools, open space including sport and community facilities.

### Local infill development

Medium density housing which includes villas and town houses within existing areas can provide greater housing variety while maintaining the local appeal and amenity of an area.

Councils are in the best position to investigate and confirm what areas their local government areas are suited to additional medium density opportunities. In doing this the Commission proposes that Councils should consider:

- transitional areas between urban renewal precincts and existing neighbourhoods
- residential land around local centres where links for walking and cycling help promote a healthy lifestyle
- areas with good proximity to regional transport where more intensive urban renewal is not suitable due to challenging topography or other characteristics
- lower density parts of suburban Greater Sydney undergoing replacement of older housing stock.

Design guidelines set out in the NSW Department of Planning and Environment's *Draft Medium Density Design Guide* show how this infill can promote good design outcomes.

### New communities in land release areas

The Priority Growth Area programs of the NSW Department of Planning and Environment guide the development of new communities in land release areas. The largest growth areas are the North West, South West and Wilton Priority Growth Areas and the southern part of the Greater Macarthur Priority Growth Area. The current programs include significant capacity into the medium and longer term.

The Western Sydney Airport Priority Growth Area will include new communities at the same time as the development of the Western Economic Corridor, which includes Western Sydney Airport and Western Sydney Employment Area.

## Housing targets

The development of housing supply targets (refer to Table 3 and Figure 15) has been informed by an assessment of data and information sets, in particular, the NSW Department of Planning and Environment dwelling projections; the NSW Department of Planning and Environment housing supply forecasts<sup>8</sup>; the NSW Intergenerational Report; Housing Market Demand Areas<sup>9</sup>; housing market preferences; and the assessment of existing local infrastructure capacity. These targets are as published in November 2016 draft District Plans.

To inform the preparation of housing strategies district plans are to provide housing supply targets for a 0–5 year timeframe by local government area.

Councils are to work with the Commission to establish agreed 6–10 year housing targets for their local government area. In addition Councils are to identify attributes that make local areas suitable for housing supply beyond 10 years. These attributes include proximity to transport interchanges, and strategic and local centres (especially those with a supermarket) that can support walkable neighbourhoods with access to jobs, schools and open space and opportunities to optimise infrastructure use.

**Table 3:** Housing targets 2016–2036

District	0–5 year housing supply target: 2016–2021	20-year strategic housing target: 2016–2036
Central City	53,500	207,500
Eastern City	46,550	157,500
North	25,950	92,000
South	23,250	83,500
Western City	39,850	184,500
Greater Sydney	189,100	725,000

*Note: Central City and North District targets have been updated from November 2016 Draft District Plans due to changes to council boundaries.*

Planning for housing supply beyond 2026 is more strategic to allow for a range of changing circumstances and industry responses to market changes. Therefore the 20-year strategic housing targets at the district level, provide the longer-term context for housing strategies. Where housing market areas cross local government boundaries and where infrastructure to support growth is of city-shaping significance, a district level housing strategy may be appropriate.

**Councils** are to investigate opportunities for supply and a diversity of housing particularly around centres to create more walkable neighbourhoods. For councils, the main tool for understanding the need and planning for housing and infrastructure delivery is housing strategies. Councils' housing strategies will need to address the 0–5 and 6–10 year local (when agreed) or district housing targets as well as 20-year strategic district targets outlined in this draft Plan.

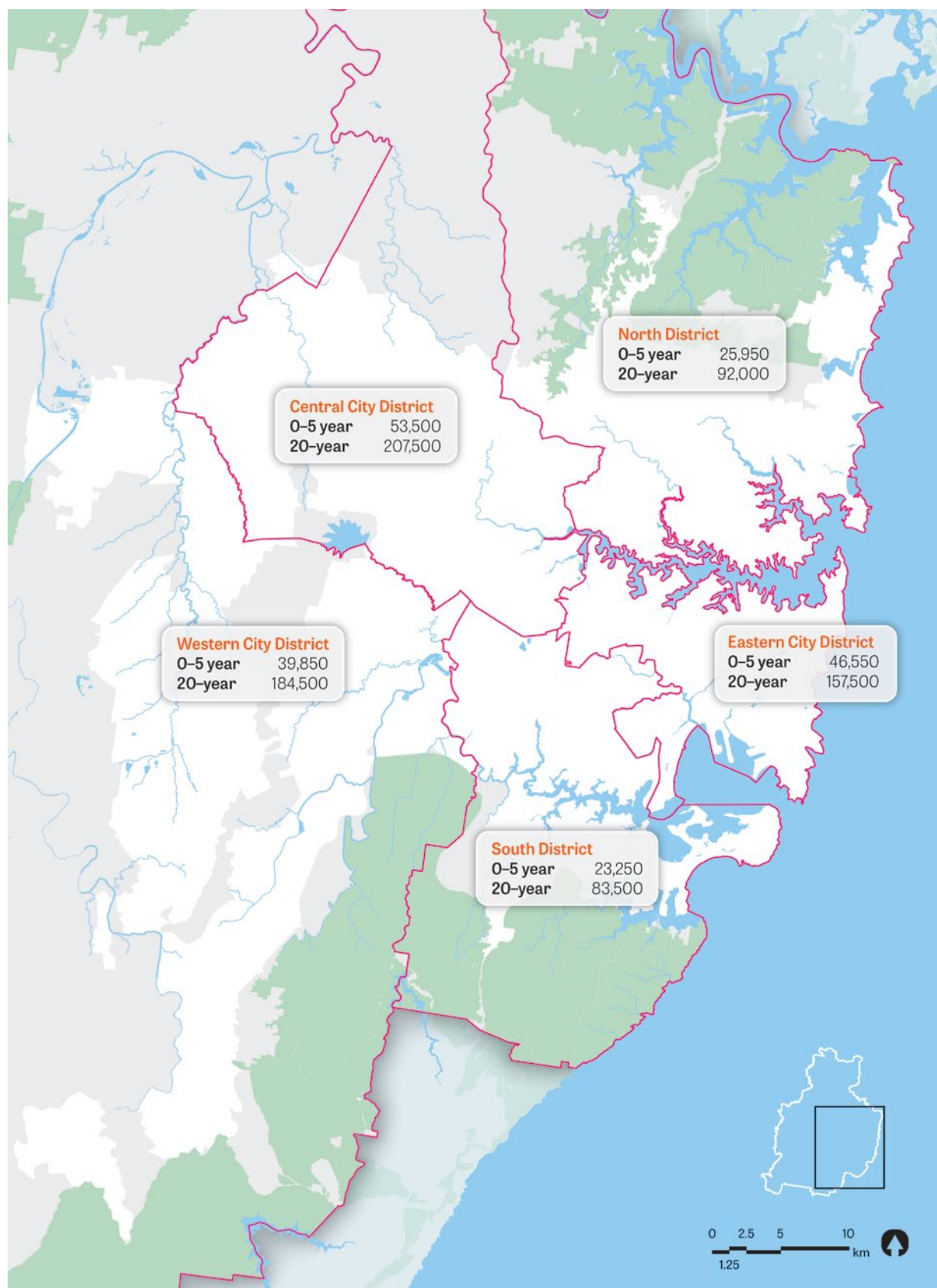
The 0–5-year housing supply targets are a minimum and councils will need to find additional opportunities to exceed their target to address demand.

The 6–10 year housing targets will build on the five-year targets and will be agreed with councils over the next 18–24 months in collaboration with the Commission as councils develop their housing strategies and identify the right locations to meet their area's housing needs.

**Developers** play an important role in supporting housing outcomes. The development industry needs to continually provide new housing and translate the development capacity created by the planning system into approvals and supply.



Figure 15: Housing targets 2016–2036



## Housing strategies

Housing strategies are to be prepared by councils for a local government area or district and be given effect through amendments to local environmental plans. To deliver co-ordinated outcomes the development of housing strategies is to be aligned with councils' community strategic planning and to inform council infrastructure investments and service programs.

Housing strategies need to identify:

- where in their local government areas the 0–5 and 6–10-year housing targets (when agreed) would most appropriately be applied to align with existing and proposed improvements to local infrastructure and open space improvements (refer to Objective 12 and Objective 31)
- the right locations for growth, including areas that are unsuitable for significant change in the short to medium term.

Housing strategies play an important role in planning new housing that creates more liveable neighbourhoods and meet demand by responding to:

- **Housing need:** The projected housing need and demographic characteristics of the existing and growing community, including different cultural, socio-economic and age groups and the availability of a range of housing types, tenures and price points required across the housing continuum.
- **Diversity:** including a mix of types, a mix of apartments, residential aged care, adaptable and student housing, group homes, student accommodation and boarding houses.
- **Market preferences:** Market demand considerations that drive the take-up of housing, including local housing preferences reflecting where people want to live.<sup>10</sup>
- **Alignment of infrastructure:** Opportunities to optimise transport infrastructure enabling access to jobs, health, education and recreation facilities, that align with State and local government infrastructure priorities.
- **Displacement:** Managing potential impacts of growth on existing communities such as displacement by understanding the location and volume of affordable rental housing stock.

- **Amenity:** Opportunities for place-based planning that improve amenity including recreation, the public realm, increased walkable connections to centres and local jobs (refer to Objective 12).
- **Engagement:** Engaging the community on a range of options and neighbourhood priorities that can be integrated with new housing and benefit existing and future communities.
- **Efficiency:** Opportunities for innovations in waste, water and energy provision by determining the nature of growth, location and demand for utilities.

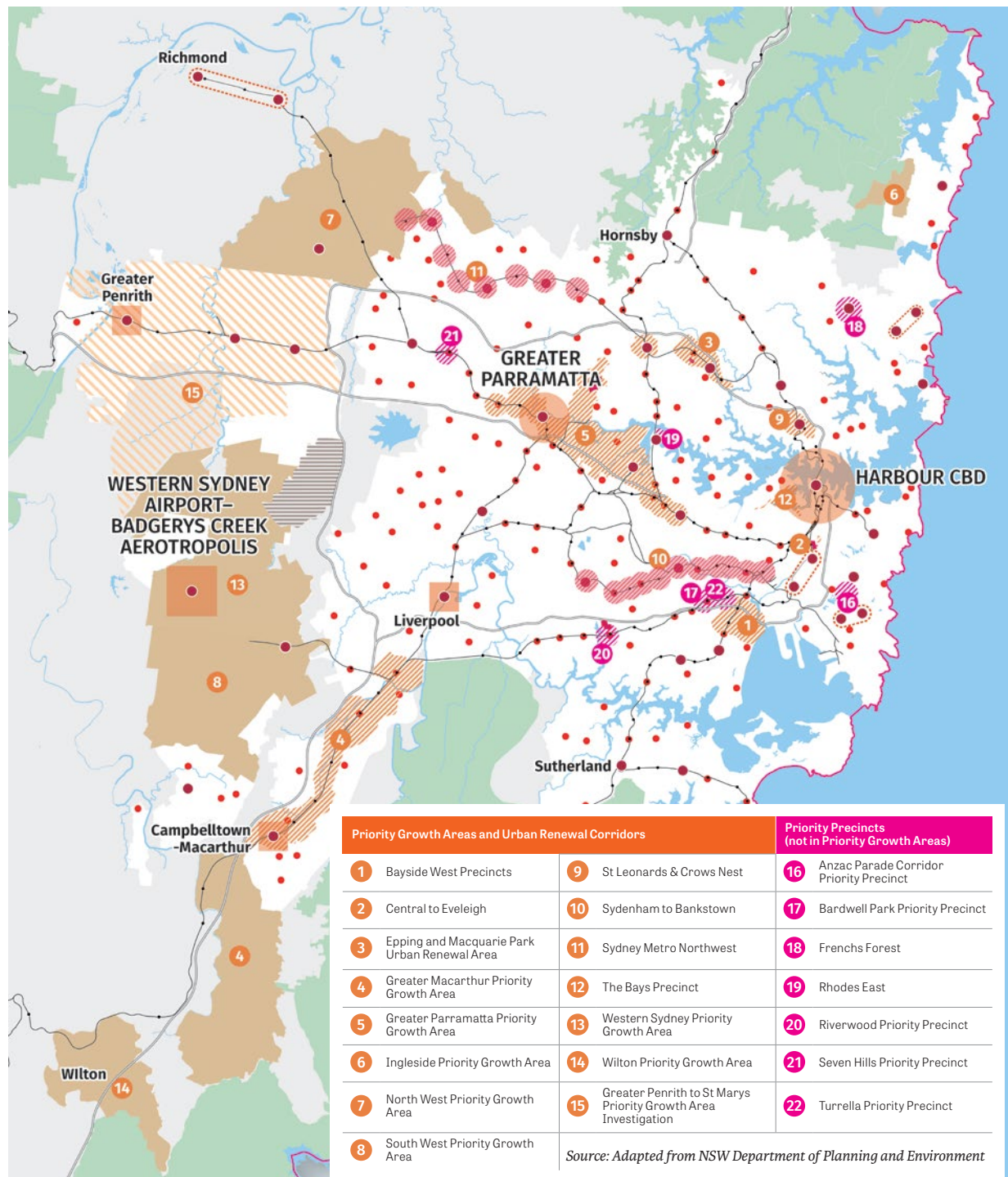
*Housing strategies play an important role in planning new housing that creates more liveable neighbourhoods.*

The draft District Plans provide assistance on the key technical aspects of preparing a housing strategy to improve housing affordability and choice. This will be further supported by a new planning circular and guidelines to be prepared by the NSW Department of Planning and Environment. Key aspects will include:

- **Capacity:** land with potential for rezoning for residential development whether in land release or existing urban areas.
- **Viability:** the assessment of new areas and whether the capacity created is financially viable for the market to develop, consistent with the extent of planning controls.
- **Good design:** neighbourhoods that are walkable, connected to transport and services, and have a mix of land uses.
- **Mix:** a mix of housing types within local housing market areas that allows people to relocate within their local area and stay connected to community services, friends and family.
- **Supply:** land zoned for residential development and served by adequate infrastructure.
- **Affordable rental and social housing:** access to supported and/or subsidised housing for low and very low income households (refer to Objective 11).



**Figure 16:** Future housing: government programs and preferred locations for consideration



	Region Boundary		Waterways		Priority Precincts
	Metropolitan City Centre		Protected Natural Area		Priority Growth Area Investigation
	Metropolitan City Cluster		Metropolitan Rural Area		Transit Oriented Development
	Strategic Centre		Land Release Area		Urban Investigation Area
	Local Centre		Urban Renewal Area		

- **Local infrastructure:** includes schools, health facilities and public spaces required to support the forecast housing supply (refer to Chapter 3 and Objective 6).
- **Delivery:** homes completed and ready for occupation.

To help resource councils to bring forward housing supply, the NSW Government's housing affordability package *A Fair Go for First Home Buyers* has allocated more than \$25 million for 10 councils to prepare their housing strategies and update their local environmental plans as a priority. The Commission is to nominate to Government the 10 priority councils. Additional funding is also available, for up to five other councils seeking to accelerate the updating of their local environmental plans.

## Creating a long-term housing pipeline by district

The Commission's research has identified a need to create a long-term housing pipeline across Greater Sydney for the next 10 years and beyond.

The NSW Department of Planning and Environment's Priority Growth Areas and Priority Precincts programs play a role in supporting this supply. However, given the scale of Greater Sydney's housing challenge and the associated timescale to rezone land and to bring houses to market, additional capacity is required to meet 20-year timeframes. As such it is necessary to take a longer-term view and where needed start planning for the longer-term – the 10 to 20-year horizon (2026–2036).

The Priority Precincts will be planned consistent with the objectives and strategies of the *Greater Sydney Region Plan* and the relevant draft District Plans to enhance liveability, sustainability and productivity. These well planned precincts are the NSW Government's infrastructure priority and will be designed and delivered collaboratively with councils and informed by key government agencies and their asset plans. This planning will be supported by a Special Infrastructure Contribution or similar satisfactory arrangement to help fund the delivery of essential community infrastructure such as health, schools, open space and roads.

The identification of opportunities for new housing is only part of the solution. Linking new housing to infrastructure is equally, if not more, important to realising supply. This has been shown in city-shaping transport projects such as Sydney Metro which will deliver 31 new and refurbished stations and unlock significant opportunities for urban renewal and connectivity.

The Commission's Infrastructure Delivery Committee will improve coordination across State agencies to align high growth areas with infrastructure delivery. The Committee is a whole-of-government approach with membership from Treasury, transport and planning agencies and health and education agencies. The Infrastructure Delivery Committee oversees the pilot process for the coordination of growth and infrastructure delivery – growth infrastructure compacts (refer to Chapter 3).

To create long-term housing supply across Greater Sydney, the Commission and the NSW Department of Planning and Environment will work with councils to understand local needs and local opportunities for the right housing in the right locations.

## Investigate a new Greater Penrith to St Marys Priority Growth Area

The Greater Penrith to St Marys corridor is a hub of economic activity that links the Penrith City Centre, and the Penrith health and education precinct, to the development opportunities around St Marys. A future transport corridor, running north to south between Macarthur, Narellan, Western Sydney Airport and Cudgegong Station, will connect with the existing heavy rail corridor running east to west. This will provide access to new jobs and services in the Western Parkland City and the new Western Sydney Airport.

A Greater Penrith to St Marys corridor growth area would provide for an integration of land use and transport planning to plan for a connected, vibrant Western Parkland City with more homes, jobs and services with open space opportunities. It will guide redevelopment opportunities and identify the infrastructure required to support continued growth.



## Action 2

### Prepare housing strategies

Councils will prepare local or district housing strategies that respond to housing targets set by the Commission.

Housing strategies will outline how housing growth is to be managed and what the right locations are for additional housing supply in each local government area, and inform updates of local environmental plans.

Updated local environmental plans that respond to housing strategies are to be submitted within three years of the finalisation of district plans, or two years in the case of priority councils where funding has been provided.



## Action 3

### Develop 6–10 year housing targets

To inform the development of updated local environment plans and housing strategies the Commission will work with each council within Greater Sydney, to develop 6–10 year housing strategies.

#### Related government initiatives:

- NSW Government, *A fair go for first home buyers – A plan to improve housing affordability*
- NSW Department of Planning and Environment/Plans for your Area, Priority Growth areas and precincts
- NSW Department of Planning and Environment, *Draft Medium Density Design Guide*

#### Useful links:

- NSW Department of Planning and Environment, 2016, 2016 New South Wales State and Local Government Area Population, Household and Implied Dwelling Projections
- NSW Treasury, 2016, NSW Intergenerational Report

## Objective 11

### Housing is more diverse and affordable

Housing has a dual social and economic role across Greater Sydney. Communities require housing that meets changing demographic needs over time and that provides stability. At the same time housing has an economic productivity role by providing housing choice and affordability for a cross section of workers.

Greater Sydney has been measured as being one of the least affordable housing markets globally<sup>11</sup> and is the least affordable Australian city – with challenges for both purchasing and renting. This has been exacerbated in the past five years by rapid price growth. Other factors that contribute to affordability challenges include:

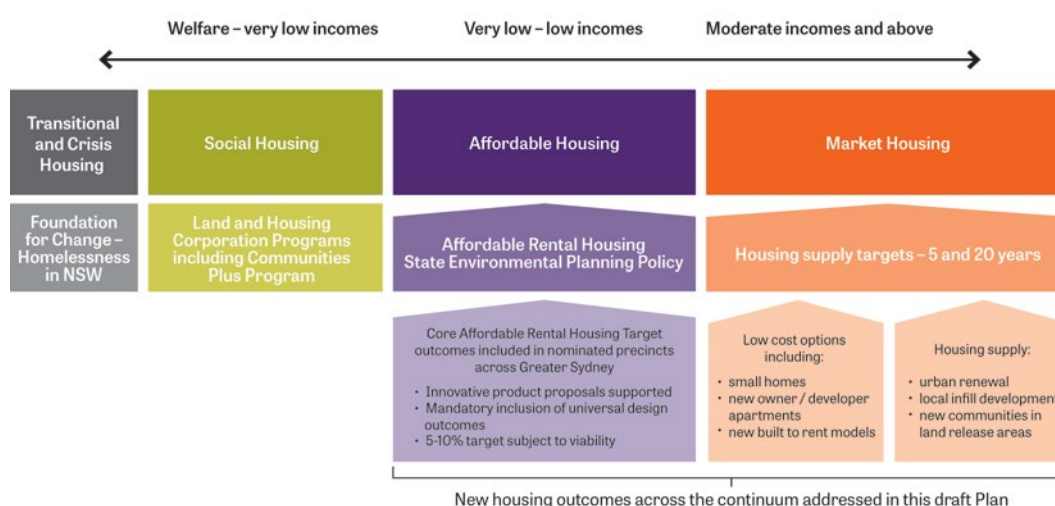
- limited availability of smaller dwellings to meet the growing proportion of small households
- a relatively poor choice of rental housing options, with short and insecure rental agreements for tenants against a backdrop of an increasing trend to rent rather than buy
- the growing distance between areas where housing is affordable and the location of employment and education opportunities.

### Meeting the challenges across the housing continuum

The Commission's research and testing of needs through stakeholder and community consultation reaffirms the critical importance of providing a diversity of housing outcomes across the housing continuum in Greater Sydney. The continuum recognises the fundamental importance of household income on the ability to access housing of different types, cost and tenure (refer to Figure 17).

Housing costs are an increasingly critical issue for lower income and key worker households in Greater Sydney. Lower income households (earning up to approximately \$67,600 per annum) without other financial support cannot afford the average rental cost for even more moderately priced areas of Greater Sydney, which are generally on the outskirts of Greater Sydney (refer to Figure 18). Many key workers such as police, nurses and firefighters also do not have access to affordable rental outcomes anywhere but the outskirts of Greater Sydney.

**Figure 17:** Housing continuum, initiatives and programs



The trend to rent is also strengthening with 70 per cent of people aged 25–34 now renting in Greater Sydney. This trend is driven by the ageing of first home buyers to over 35 years and the changing preference of younger generations to rent, partly through a desire for greater mobility.<sup>12</sup>

### Existing government policies to specifically address housing affordability

Ensuring a steady supply of market housing in locations well supported by existing or planned services and amenity with an emphasis on public transport access is set out in Objective 10.

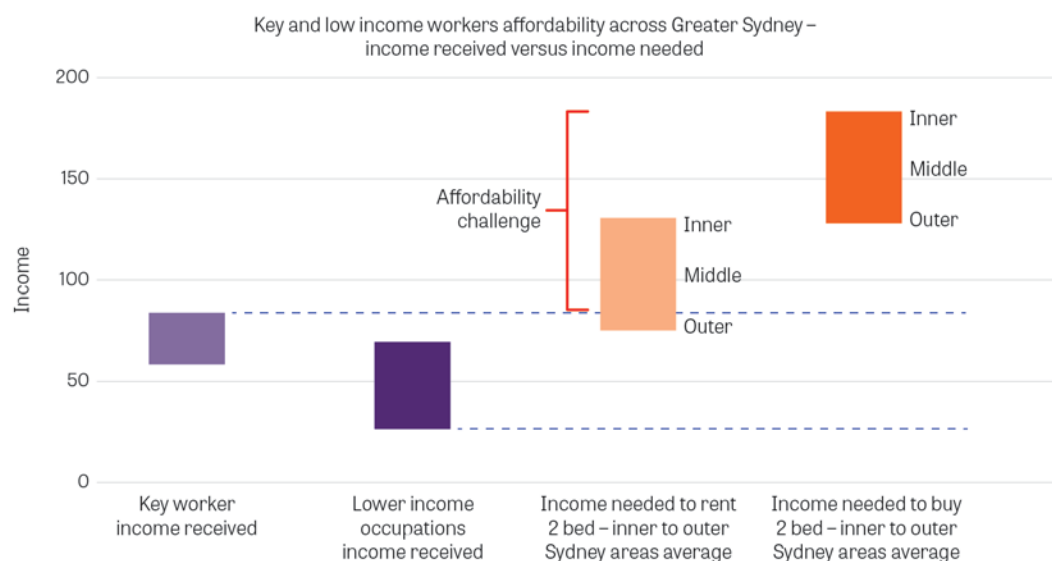
The Affordable Rental Housing State Environmental Planning Policy provides incentives for development projects to include a 10-year term for affordable rental housing dwellings for very low to moderate income households, however the areas where this is being applied are limited.

Social housing supply and renewal is being addressed through programs such as Communities Plus and the Social and Affordable Housing Fund. Social housing supports households experiencing

the highest housing stress and social disadvantage, however it addresses only part of the housing continuum. Recent research shows that Greater Sydney requires an estimated 4,000–8,000 additional affordable dwellings per annum to meet the needs of lower income groups.<sup>13</sup> More affordable rental dwellings distributed across Greater Sydney will assist as they create a layer of housing that helps social housing residents transition to more independent housing which frees more social housing to support the most vulnerable.

This draft Plan recommends the NSW Government adopt Affordable Rental Housing Targets for very low to low-income households in Greater Sydney as a mechanism to deliver a supply of affordable housing. Affordable Rental Housing Targets would be applied in defined future precincts that are entering the rezoning process, so as not to limit the development of projects already underway with land transactions largely in place. In order not to hinder the supply outcomes being sought and to not impact existing home and property owners, the viability of the targets would be calculated on the increased residential floor space in each case.

**Figure 18:** Housing affordability for key and lower income workers



Source: FACS Rent and Sales Reports, PayScale salary survey 2017



The NSW Department of Planning and Environment and the Commission will jointly investigate ways to facilitate housing diversity through innovative purchase and rental models.

Further opportunities for planning to support housing affordability and diversity measures in the following areas are indicated in Figure 17.

They include:

- provision of affordable rental housing to support working households in the community most vulnerable to housing stress
- application of the Affordable Rental Housing State Environmental Planning Policy for very low to moderate-income households
- more compact housing, either on smaller land lots or through a proportion of smaller apartments of clever design to support moderate-income households and particularly key workers and skilled workers in targeted employment areas such as health and education precincts
- new owner-developer apartment models that support lower cost and more flexible delivery of apartments for like-minded owner groups.
- the uplift in land value created as a result of a rezoning decision should be measured using a consistent viability test and core assumptions
- the inclusion of other government development charges for essential local and state infrastructure (known as Section 94 Development Contribution and Special Infrastructure Contribution charges) and scope of any Voluntary Planning Agreement is essential to accurately reflect the viability so that communities do not forgo local amenity and services
- the necessary allowance for an increase in value for land vendors so that land is willingly sold into development projects that create housing supply

## Affordable rental housing for very low and low-income households

The Commission's research and testing on the application of Affordable Rental Housing Targets has included wide engagement with stakeholders. This has confirmed a number of key parameters required for successful implementation. These include:

### Affordable rental housing eligibility

#### Who is eligible for housing provided through this Affordable Rental Housing Target?

Affordable housing is defined under the *Environmental Planning and Assessment Act 1979* as housing for very low-income households, low-income households or moderate-income households.

Low and very low-income households are the most vulnerable to housing stress because proportionally they have less money for living costs once they have paid their housing costs.

This draft Plan identifies the most vulnerable households (the low to very low income households) as eligible for housing secured by Affordable Rental Housing Targets as defined by the ranges in the table below.

Specific income ranges by household type are provided by the Department of Family and Community Services and available at [www.housing.nsw.gov.au/centre-for-affordable-housing/](http://www.housing.nsw.gov.au/centre-for-affordable-housing/)

Household income	% of median Sydney income	2016/17 income range
<b>Very low</b>	< 50%	< \$42,300 per annum or \$813 per week
<b>Low</b>	50%–80%	up to \$67,600 per annum or \$1,300 per week

Source: Department of Family and Community Services

- the necessary allowance for development companies to achieve a normal profit margin on the capital invested and risk taken on projects
- the requirement to have a separate approach for land release areas and urban infill areas given the differing circumstances in relation to development costs, development processes and land acquisition processes.

The Commission's testing reaffirms that across Greater Sydney targets generally in the range of 5–10 per cent of new residential floor space are viable, including the parameters set out above, noting that these parameters will be tailored to each nominated area. The Commission will work with the NSW Department of Planning and Environment to develop the mechanisms required for delivery of the proposed Affordable Rental Housing Targets.

## Planning for moderate income households to support Greater Sydney's workforce

Many moderate-income households face housing diversity and affordability challenges – typically households with incomes of \$67,400–\$101,400 per annum.<sup>14</sup> Recent research indicates that about half of young Greater Sydney residents are considering leaving Greater Sydney in the next five years<sup>15</sup>, with housing affordability being a key issue. It also highlighted that smaller dwellings are considered an acceptable approach to reducing housing cost.

A smaller and smarter home initiative was announced in the NSW Government's housing affordability package *A Fair Go for First Home Buyers*. Commission research indicates that smaller homes of excellent design – including apartments, medium density dwellings and small land lots in the right locations – could create housing at around 20 per cent less than current market prices. Innovative models for smaller homes are introducing elements such as shared facilities, including shared living spaces, to complement the smaller dwelling design.

This draft Plan also supports market-led affordable housing programs such as owner-developer apartment models for small to medium scale projects that aim for excellence and more flexible design and delivery outcomes. Commission research indicates that in appropriate locations this could create housing at around a 10–30 per cent discount compared to current market prices.

The proportion of households choosing to rent rather than buy, through need or preference, is growing quickly in Greater Sydney – with over one-third of all households in Greater Sydney renting their home (refer to Figure 19).<sup>16</sup> This is also the case in most global cities where support for more choice and supply of rental accommodation is underway. The pressures driving the trend to rent include:

- the increasing age of first-home owners – now over 35 years old in Greater Sydney – creating a necessity to rent before a sufficient deposit is available
- the increasing preference to rent for many younger workers who desire lifestyle mobility and increased workplace mobility
- a common approach to purchase a dwelling or investment property at lower cost outside Greater Sydney while choosing to rent in Greater Sydney to access work opportunities.

The largest providers of general rental accommodation in Greater Sydney are private property investors renting standard dwellings of variable conditions on short six to 12 month leases. Tenants are exposed frequently to uncertain tenure and rental costs under this model.

This draft Plan encourages investigation of an institutionally delivered and managed rental accommodation model in purpose-designed rental buildings – referred to as build to rent. This form of rental accommodation would need to be delivered close to public transport and centres, offer longer lease terms (greater than three years) and offer the opportunity to include affordable rental housing schemes if viable. This model would complement student accommodation and the new generation boarding houses (under the Affordable Rental Housing State Environmental Planning Policy) as specialised rental accommodation models for specific tenant segments.

This draft Plan supports NSW Government initiatives to improve tenant tenure security and longer lease terms of three to five years, together with improved certainty for tenants and landlords on potential rent increases.

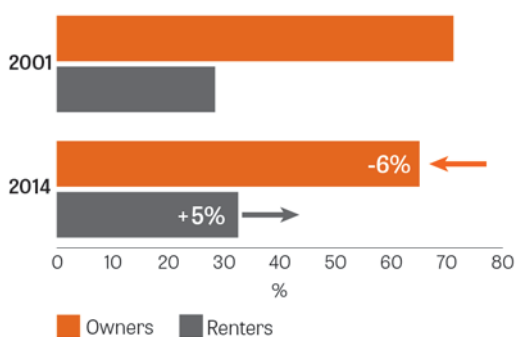
### Strategy 11.1

Prepare Affordable Rental Housing Target schemes.

### Strategy 11.2

State agencies, when disposing or developing surplus land for residential or mixed use projects include, where viable, a range of initiatives to address housing diversity and/or affordable rental housing.

**Figure 19:** Proportion of renters and owners



Source: Australian Bureau of Statistics 4130.0 – Housing Occupancy and Costs, 2013–14

#### Related government initiatives:

- NSW Department of Finance, Services and Innovation, *Property Infrastructure Policy*



#### Action 4

#### Work with the NSW Department of Planning and Environment to implement Affordable Rental Housing Targets

The Commission will work closely with the NSW Department of Planning and Environment to streamline implementation of new programs particularly in respect to the workings of the Affordable Rental Housing State Environmental Planning Policy and State Environmental Planning Policy No 70 – Affordable Housing (Revised Schemes).

Tasks will include finalising a consistent viability test for the targets to support councils and relevant planning authorities and ensuring that housing strategies include a sufficient affordable housing needs analysis and strategy to identify preferred affordable housing areas in each local government area.

# A city of great places



## Objective 12

### Great places that bring people together

Greater Sydney's cities, centres and neighbourhoods each have a unique combination of people, potential, history, culture, arts, climate, built form and natural features creating places with distinctive identities and functions. Great places build on these characteristics to create a sense of place that reflects shared community values and culture. Great places have a focus on the public realm and open space that attracts residents, workers, visitors, enterprise and investment.

To create great places the mechanisms for delivering public benefits need to be agreed early in the planning processes, so that places provide a combination of the following elements, as illustrated in Figure 20 and Figure 21.

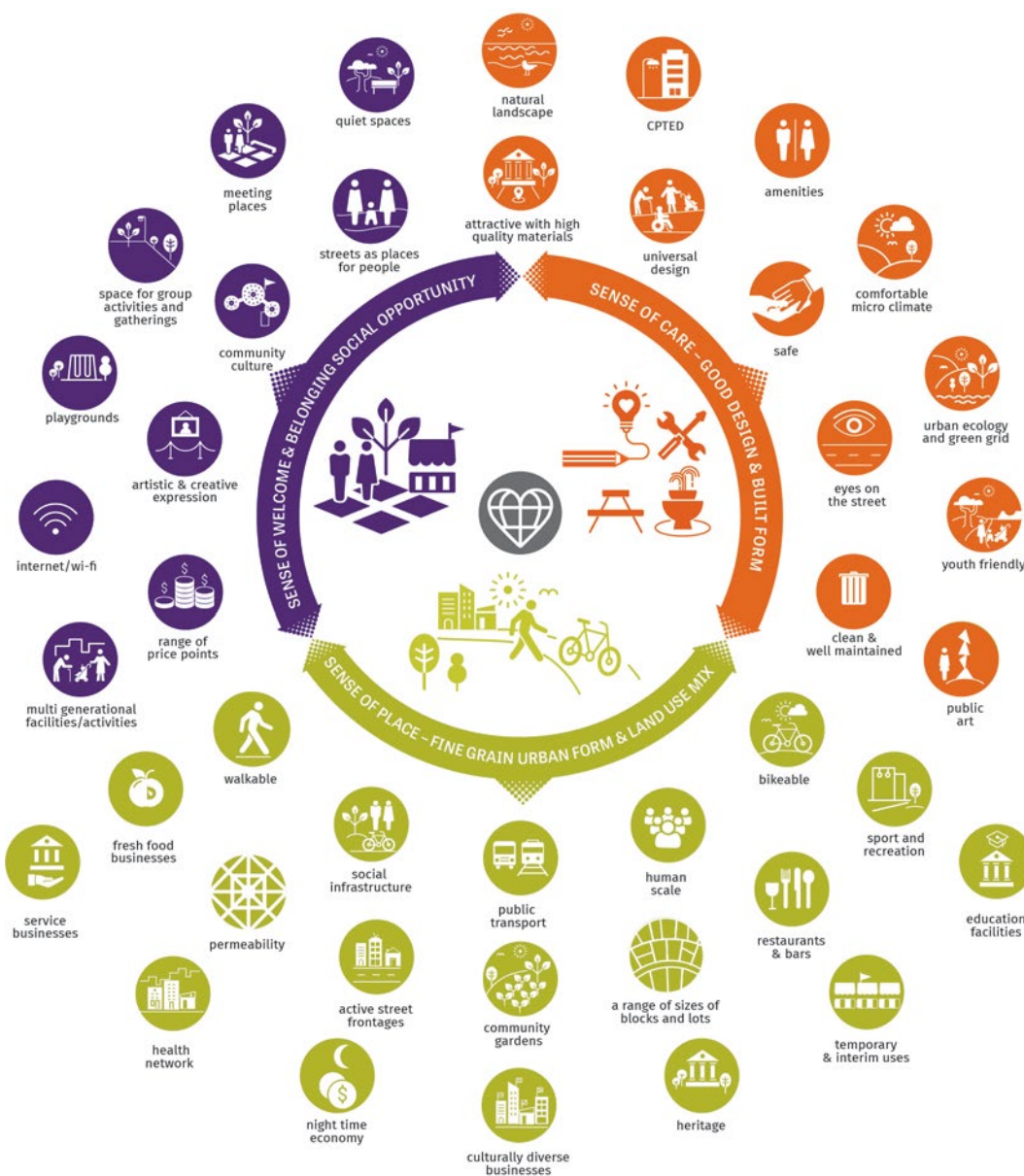
- **Well-designed built-environment** – great places are enjoyable and attractive, they are safe, clean and flexible with a mix of sizes and functions.
- **Social infrastructure and opportunity** – great places are inclusive of people of all ages and abilities, with a range of authentic local experiences and opportunities for social interaction and connection.
- **Fine grain urban form** – great places are of human scale, walkable with a mix of land uses including public buildings at the heart of communities.

**Figure 20:** Fine grain walkable places



Great places are characterised by a mix of land uses and activities that provide opportunities for social connection in walkable, human scale, fine grain neighbourhoods.

**Figure 21:** Elements of great places



Great places comprise a unique combination of locally distinctive elements. They build on local strengths and shared community values to create local identity that fosters enterprise, investment and innovation. Great places are delivered through place-based planning, design and development responses to local conditions and meaningful community engagement.



Streets are the most common places in any city. The way streets meet different people's needs is fundamental to the way the city is experienced. They shape the accessibility and liveability of a city, centre or neighbourhood. Street life enhances community safety and business, which improves social and economic participation.

Streets have transport functions, including cycling, but are also places for pedestrians. This draft Plan and *Future Transport 2056* adopt a common approach to balancing the dual functions of streets (refer to Figure 10).

Recognition of the dual function of streets as places for people and movement is of paramount importance as transport technologies transform the way streets are used. Balancing walking, cycling and social opportunities can make streets lively, safe places that also meet people's transport needs.

Every place and every community is different, the task of maintaining, making and renewing great places relies on local expertise, insight and participation. Local people, stories, experiences and expression generate a sense of place, which is key to attracting residents, workers and visitors and meeting the many and varied liveability needs of communities (refer to Objectives 7, 8 and 9).

The Government Architect NSW has prepared guidelines in *Better Placed: A strategic design policy for the built environment of New South Wales*, which support the creation and renewal of great places, for use by all practitioners including State and local government, business and community.

## Strategy 12.1

Deliver great places by:

- prioritising a people-friendly public realm and open spaces as a central organising design principle
- recognising and balancing the dual function of streets as places for people and movement
- providing fine grain urban form, high amenity and walkability
- integrating social infrastructure to support social connections and provide a community hub
- encouraging contemporary interpretation of heritage where possible
- using a place-based and collaborative approach throughout planning, design, development and management.

## Strategy 12.2

In Collaboration Areas, Priority Precincts and planning for centres:

- investigate opportunities for precinct based provision of adaptable car parking and infrastructure in lieu of private provision of car parking
- ensure parking availability takes into account the level of access by public transport
- consider the capacity for places to change and evolve, and accommodate diverse activities over time.

### Related government initiatives:

- Better Placed: A strategic design policy for the built environment of New South Wales

## Objective 13

### Environmental heritage is conserved and enhanced

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Conserving, interpreting and celebrating Greater Sydney's heritage values facilitates a better understanding of history and respect for the experiences of diverse communities. Heritage identification, management and interpretation are required so that heritage places and stories can be experienced by current and future generations.

Environmental heritage describes natural and built heritage and Aboriginal places and objects as well as stories, traditions and events inherited from the past. It is protected under the *Heritage Act 1977*, *National Parks and Wildlife Act 1974* and local environmental plans. This statutory framework requires identification of the values of environmental heritage, and context specific design and development that conserves heritage significance. This includes the tangible and intangible values that make places special to past, present and future generations.

Sympathetic adaptive re-use of heritage is an important way to conserve significance. Respectfully combining history and heritage with modern design achieves an urban environment that demonstrates shared values and history and contributes to a sense of place and identity.

*Heritage identification, management and interpretation are required so that heritage places and stories can be experienced by current and future generations.*

Improved public access and connection to heritage through innovative interpretation is also required. A well-connected region (Objective 14), creating great places (Objective 12) and developing the Greater Sydney Green Grid (Objective 32) will improve the connectivity and accessibility of the region's heritage.

Understanding the significance and community values of heritage early in the planning process provides the greatest opportunity for conservation and management. Protection and management of heritage is a community responsibility undertaken by a broad range of stakeholders including Aboriginal people, State and local governments, business and communities.

#### Strategy 13.1

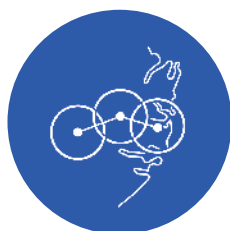
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Conserve and enhance environmental heritage by:

- engaging with the community early in the planning process to understand Aboriginal, European and natural heritage values
- conserving and interpreting Aboriginal, European and natural heritage to foster distinctive local places.



## Directions for productivity



### A well-connected city

**Metric:** Percentage of dwellings located within 30 minutes by public transport of a metropolitan city centre/cluster

**Metric:** Percentage of dwellings located within 30 minutes by public transport of a strategic centre

By 2036, the number of journeys across Greater Sydney is projected to increase to 22 million trips a day (up 40 per cent from 2016). To address this increase, the NSW Government will plan for quick, efficient and more localised connections to jobs, schools and services. A key outcome is for more people to have 30-minute public transport access to one of the three cities and to services in their nearest strategic centre seven days a week. This requires the integration of land use, transport and infrastructure planning. Co-locating jobs and services, improving transport efficiency and creating more efficient freight networks will also improve productivity. Enhancing transport connections to adjacent cities and regional NSW will strengthen economic links and provide more opportunities for long-term growth management.



### Jobs and skills for the city

**Metric:** Growth in jobs in the following metropolitan and strategic centres: Blacktown, Campbelltown–Macarthur, Greater Parramatta, Greater Penrith, Harbour CBD, Kogarah, Liverpool, Macquarie Park and Western Sydney Airport / Badgerys Creek Aerotropolis

**Metric:** Change in number of people employed locally (five yearly)

Enhancing Greater Sydney's productivity, export sectors and global competitiveness will be critical to increasing the region's economic activity to \$655 billion by 2036. This will require greater choice for where development can occur to enable the required employment growth of 817,000 jobs.<sup>17</sup> Strategic planning will guide the locations of business growth and investment and provide better freight connections, economic agglomerations and skills development. Building on health and education strengths and growing the advanced manufacturing sector will be central to delivering an innovative and internationally competitive economy.



## 5

# Productivity

Greater Sydney is Australia's global economic gateway and a regional hub for global financial markets. This strength puts Greater Sydney in the top 20 global economic cities, with the potential to become one of the top 10.

Greater Sydney is Australia's financial capital with the location of the ASX (Australian Securities Exchange) and the Reserve Bank, the headquarters of the majority of Australia's top 50 ASX-listed companies and the highest concentrations of professional workers of any capital city in Australia. The Eastern Economic Corridor between Macquarie Park and Sydney Airport alone accounted for 24 per cent of Australia's growth in GDP in the 2015–16 financial year. The scale of Greater Sydney's economy is highlighted in Figure 26 and Figure 27).

Greater Sydney also has a strong global advantage in education, being the second biggest exporter of higher education in the world, behind only London. It has two of the world's top 100 universities.<sup>18</sup> In addition, Greater Sydney is linked across the world by its medical research institutions at the Westmead, Randwick and Royal Prince Alfred Hospitals and at the Australian Nuclear Science and Technology Organisation.

There are significant productivity benefits from growing health and education clusters into innovation districts (refer to Objective 21 and Figure 24).

Productivity is boosted by Greater Sydney's high liveability and international tourist appeal. The region is instantly recognisable by icons including the Sydney Opera House, the Sydney Harbour Bridge and the Greater Blue Mountains World Heritage Area.

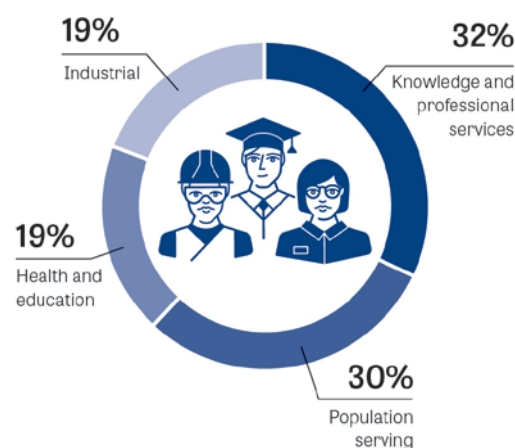
Greater Sydney is the manufacturing capital of Australia with industry gross value added

of \$21.5 billion. The region's share of national manufacturing gross value added grew from 21.6 per cent in 2005–06 to 22.2 per cent in 2015–16.

Electronic and medical devices are high growth industries in the advanced manufacturing sector and exports of elaborately transformed manufactures have recorded significant gains in the two years to 2015–16.

Efficient trade gateways and freight and logistics networks are required for the region to be more internationally competitive. The development of the Western Sydney Airport as a 24/7 airport to complement Sydney Airport will enable Greater Sydney to accommodate significant projected passenger growth. In addition, it is likely that Port Botany will need to be complemented by Port Kembla to handle the projected growth in shipping trade, especially containers (refer to Objective 16).

**Figure 22:** Proportions of jobs by type (2016)



Source: Transport Performance and Analytics 2016, published in Greater Sydney Commission 2016 Productivity Profile

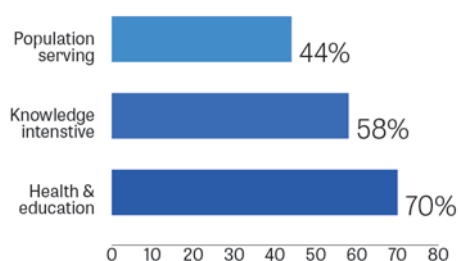


Greater Sydney is at a stage where changing its structure, from one city on the eastern edge to a metropolis of three cities, is needed to maximise economic growth and manage population growth. International research indicates that a monocentric region experiencing growth can eventually suffer from increasing business occupancy costs, increasing costs of living and housing, increasing costs of labour that impact on labour supply, spatial polarisation, social segregation, congestion, air quality problems, and heat island effects.<sup>19</sup>

Many major cities are responding by polycentric development that delivers:

- improved choice of spaces, costs and locations for businesses
- opportunities for economic specialisation
- better growth management and more agile land uses
- diversification of commuting patterns to reduce infrastructure stress
- new locations for housing closer to jobs at more affordable average prices
- competition between, and fostering innovation within, districts
- more even distribution of prosperity
- improved quality of life.

**Figure 23:** Highest growing job sectors % 1996–2016



Source: Transport Performance and Analytics 2016, published in Greater Sydney Commission 2016 Productivity Profile

Greater Sydney has a strong eastern bias in the location of its main economic attractors and job types, which means many residents in the growth areas of the Western City are increasingly remote from these activities and have less choice of local jobs.

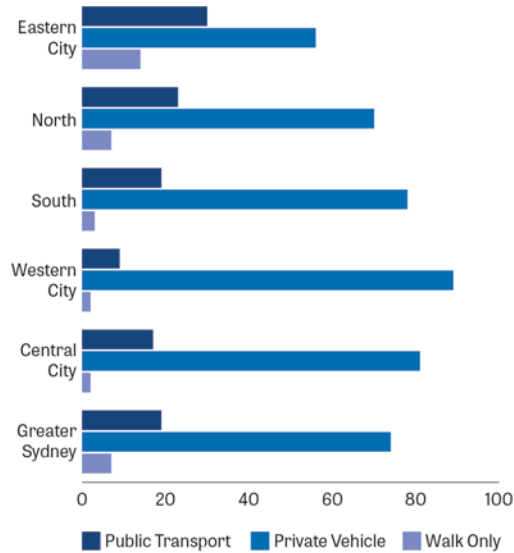
This draft Plan outlines the strategies and actions to deliver a metropolis of three cities and rebalance opportunities for all residents to have greater access to jobs, shops and services. International experience shows that sustained actions are required to achieve the benefits of a metropolis of three cities.

By rebalancing as three cities, Greater Sydney will broaden its global economic footprint to support net jobs growth of 817,000 to 2036. This will occur not only in the east, but west of Parramatta largely arising from the Western Sydney Airport and Badgerys Creek Aerotropolis. Currently 45 per cent of Western Parkland City workers commute to other parts of Greater Sydney compared to only eight per cent of Eastern Harbour City workers<sup>20</sup> (refer to Figure 25).

A metropolis of three cities requires a well-connected Greater Sydney with new jobs, shops and services in well-located centres with efficient transport connections and safe and convenient walking and cycling routes. This creates a 30-minute city.

A 30-minute city is where most people can travel to their nearest metropolitan city centre by public transport within 30 minutes; and where everyone can travel to their nearest strategic centre by public transport seven days a week to access jobs, shops and services. This is integral for economic competitiveness and will make Greater Sydney a more attractive place for investment, businesses and skilled workers. The percentage of jobs accessible within 30 minutes of Greater Sydney's districts are shown in Figure 24.

It also requires a structure within the three cities that builds on the network of strategic centres, particularly those with health, education and large commercial assets, which provide opportunities for strong economic growth.

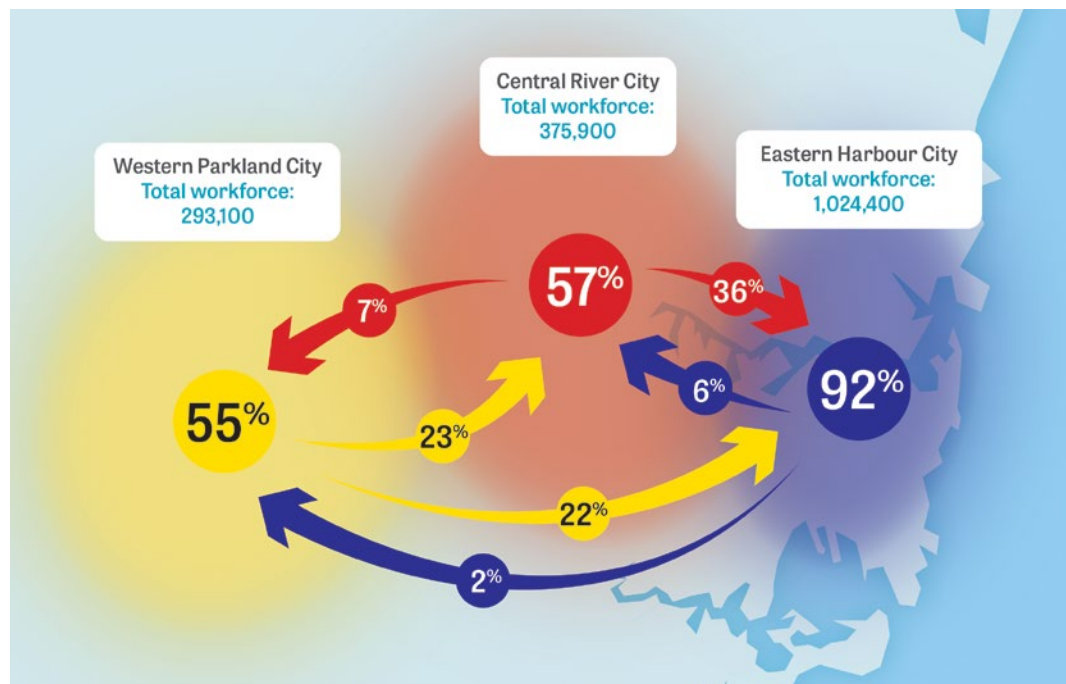
**Figure 24:** Journey to work by mode

Source: Australian Bureau of Statistics, 2011 Census of Population & Housing<sup>21</sup>

Many businesses and services seek to locate close to the populations they serve – from shops, schools and local health services to urban services which range from motor mechanics to waste management. Planning needs to enable these businesses, services and an efficient transport network with population growth. This will drive local employment for local communities.

Delivering the metropolis of three cities will be achieved by investments in infrastructure that are integrated with targeted land use decisions. This is particularly important in the Central and Western cities which need more local jobs.

**Western Parkland City:** The Western Sydney Airport will be the economic catalyst to transform the Western Parkland City over the next 40 years. It will attract globally significant defence and aerospace activities, and have significant freight and logistics strengths. The development of a new Western Economic Corridor with north-south access for the Western Parkland City and the Western

**Figure 25:** Proportion of people who live and work in each city

Source: Australian Bureau of Statistics Census 2011

Sydney Airport and Badgerys Creek Aerotropolis at its heart, will agglomerate the economic activities of the city. The established centres of Liverpool, Greater Penrith and Campbelltown-Macarthur will be critical locations for commercial and retail businesses and health, education and other services as the city grows.

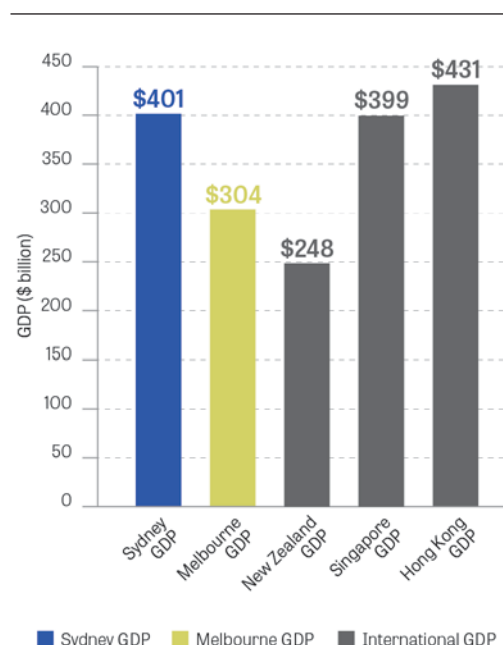
**Central River City:** Economic growth will leverage the world-class research activities of Westmead Hospital by creating a unique innovation cluster based around this and the other health, education and research institutions and the growing professional, business and administrative services of Greater Parramatta. This will be supported by \$10 billion of public and private investments in Greater Parramatta and potential new transport connections to skilled labour markets and the surrounding centres of Macquarie Park, Norwest, Sydney Olympic Park and Bankstown.

**Eastern Harbour City:** Ongoing investment and new opportunities for businesses will be needed for the continued global growth of the Eastern Economic Corridor. In addition, agglomerating the benefits from the assets on the western edge of the Harbour CBD such as the universities, tertiary teaching hospital, international innovation companies and fast-growing start-ups will support an Innovation Corridor. Growth will be supported by protecting the operations of the international gateways of Sydney Airport and Port Botany.

**Connecting the three cities:** Improving connections between the three cities will maximise the productivity and competitiveness of Greater Sydney.

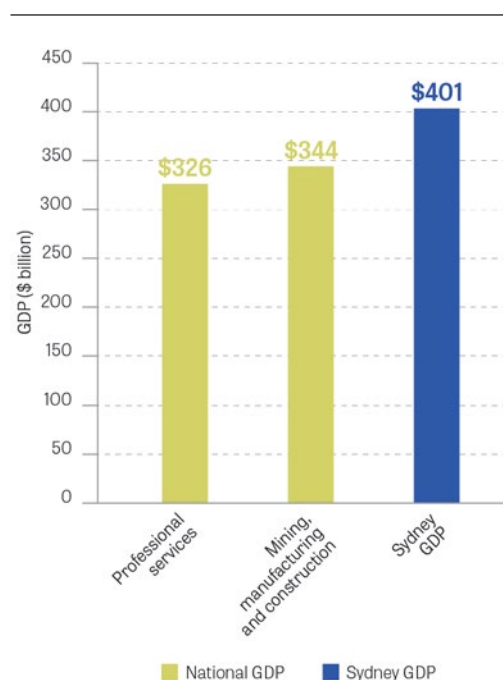
By 2056 the wider region including the Lower Hunter, Central Coast and Wollongong will have a population approaching 10 million. Research suggests that enhancing connections between regions can create opportunities to grow benefits-of-scale advantages, increase opportunities for specialisation and complementary sectors and potential growth management choices for the long term (refer to Objective 17). Over the life of this Plan, these connections will become more important as Greater Sydney will increasingly rely on access north and south to these areas. In the short term the initial objective is to protect these corridors (refer to Strategy 14.2).

**Figure 26:** Sydney GDP – international comparisons



Note: Sydney GDP covers Greater Sydney Capital City Statistical Area  
Source: World Bank 2016

**Figure 27:** Sydney GDP compared to national sector GDPs



Note: Sydney GDP covers Greater Sydney Capital City Statistical Area  
Source: World Bank 2016 and Greater Sydney Commission Productivity Profile



This chapter outlines the Commission's productivity recommendations for objectives and strategies. A number of these recommendations are not government policy.

## Actions

The following metropolitan significant actions will deliver productivity objectives.

- Collaborate to deliver the Greater Parramatta and the Olympic Peninsula (GPOP) vision (refer to Objective 15).
- Develop a growth infrastructure compact for GPOP (refer to Objective 15).
- Support the growth of the Camperdown-Ultimo Collaboration Area (refer to Objective 18).
- Collaborate to deliver the Western Sydney City Deal (refer to Objective 20).
- Facilitate the whole-of-government place-based outcomes through Collaboration Areas for targeted strategic centres, including Liverpool, Greater Penrith and Randwick (refer to Objective 22).
- Review industrial and urban services land in the Central River City and the South West and North West Priority Growth Areas (refer to Objective 23).





# A well-connected city

## Objective 14

### A metropolis of three cities – integrated land use and transport creates walkable and 30-minute cities

The productivity outcomes for a metropolis of three cities are to:

- drive opportunities for investment and business across Greater Sydney
- deliver an internationally competitive freight and logistics sector
- support a diverse economy
- support a network of centres
- rebalance the city's eastern economic focus
- deliver a 30-minute city.

Critical in achieving these outcomes is a well-connected city with transport and other infrastructure investments, which can:

- deliver more efficient supply chains, reducing business costs
- increase access to markets, facilitating growth
- enhance business access to a greater number of skilled workers, which increases their employment opportunities and productivity
- enhance business-to-business interactions.

Realising these benefits requires integrated land use and transport planning and a clear understanding of the long-term spatial pattern of land use activities, together with a long-term regional transport network.

The principal elements in achieving the productivity outcomes are:

- Establish a land use and transport pattern around a metropolis of three cities which includes:
  - metropolitan city centres/clusters, refer to Objective 22
  - an Eastern Economic Corridor, refer to Objective 15
  - a Western Economic Corridor refer to Objective 15
  - GPOP Economic Corridor, refer to Objective 15.
- Establish a metropolitan transport network which reinforces the metropolis of three cities particularly:
  - the delivery of a 30-minute city where most residents in each city can access their metropolitan city centre or city cluster within 30 minutes by public transport
- Develop a network of 34 strategic centres which provides the residents of Greater Sydney with access to jobs, goods, services supported by a public transport, cycling and walking network that provides residents with a 30-minute public transport service to their nearest strategic centre seven days a week and generally improves access.
- Co-locate activities in metropolitan, strategic and local centres and attract housing in and around centres to create walkable neighbourhoods.
- Over the life of the draft Plan, improve connections north-south to the wider regions.



An overview of the principal transport components which will support the delivery of integrated land use and transport outcomes are outlined in *Future Transport 2056* (see overleaf).

In this context all the transport initiatives outlined in this draft Plan are sourced from *Future Transport 2056*.

The transport initiatives are divided into four categories: committed, investigation 0–10 years, investigation 10–20 years and visionary 20+ years. The latter three categories require further investigation and ultimately decisions of Government on commitments to funding; none have funding commitments.

### Strategy 14.1

Integrate land use and transport plans to deliver the 30-minute city.

## Infrastructure corridors

A number of major committed and potential transit corridors that will improve connectivity in the Eastern, Central and Western cities have been identified in *Future Transport 2056*. Strategic land use and infrastructure planning across Greater Sydney can reinforce the opportunities created by the existing and proposed mass transit systems by integrating land use and infrastructure planning.

Where possible the proactive and early reservation of corridors to protect longer term linear infrastructure opportunities should be undertaken to provide greater clarity and certainty for landowners, communities and businesses. The early preservation of corridors also reduces the potential for conflict in the future.

### Strategy 14.2

Investigate, plan and protect future transport and infrastructure corridors.

## An adapting city

Greater Sydney's transport network is facing major capacity constraints, particularly during the morning peak. As the population grows, the challenges of congestion, average speed and

unreliability of journeys will spread to larger areas of the network and will increase in locations that already experience these constraints.

Addressing the capacity challenges of the transport network is not limited to the investment in new services and infrastructure, or fine tuning management of the existing networks. Changes to how businesses, education facilities, and other activities are operated, together with behaviour changes, can enable customers to use the transport network differently.

*Future Transport 2056, Services and Infrastructure Plans* include strategies and actions for travel demand management and better use of the transport network. Optimising the integration of transport and land use helps to address the congestion challenges of the transport network by channelling demand where there is capacity.

Effective planning promotes travel behaviour change to leverage the off-peak spare capacity of the network through strategies such as more flexible institutional arrangements (such as work and school hours).

### Strategy 14.3

Support innovative approaches to the operation of business, educational and institutional establishments to improve the performance of the transport network.



## Future Transport 2056

Source: Transport for NSW

### Greater Sydney transport objectives

1	<b>Safely, efficiently and reliably moving people and goods</b> The most fundamental task of the transport system is to enable safe, efficient and reliable journeys for people and goods. This requires a network of services and infrastructure that is also easy to understand and delivers equitable access across the city
2	<b>Connecting people and places in a growing city</b> As Greater Sydney becomes a metropolis of three cities, the transport system will enable efficient access for customers to their nearest centre and enable mobility across the city. Faster journeys by public transport and easy interchanging will underpin this
3	<b>Sustaining and enhancing the liveability of our places</b> The transport system will support the liveability of our places with a road network that supports movement and place functions and walking and cycling facilities around centres that make healthy transport choices attractive
4	<b>Accessible for all customers</b> Transport in Greater Sydney will be accessible to all customers. Stations, stops, wharves and transport services will meet accessibility regulations and deliver on the expectations of customers that require easy access
5	<b>Convenient and responsive to customer needs</b> Transport services will be convenient and responsive to customer needs. This means services will be integrated, customers will have comfortable journeys and we will harness new forms of mobility for the benefit of customers
6	<b>Makes the best use of available resources and assets</b> Transport services will be affordable for customers. The transport system will also be financially and environmentally sustainable through sound asset management and a network that is resilient and has a net zero emissions impact

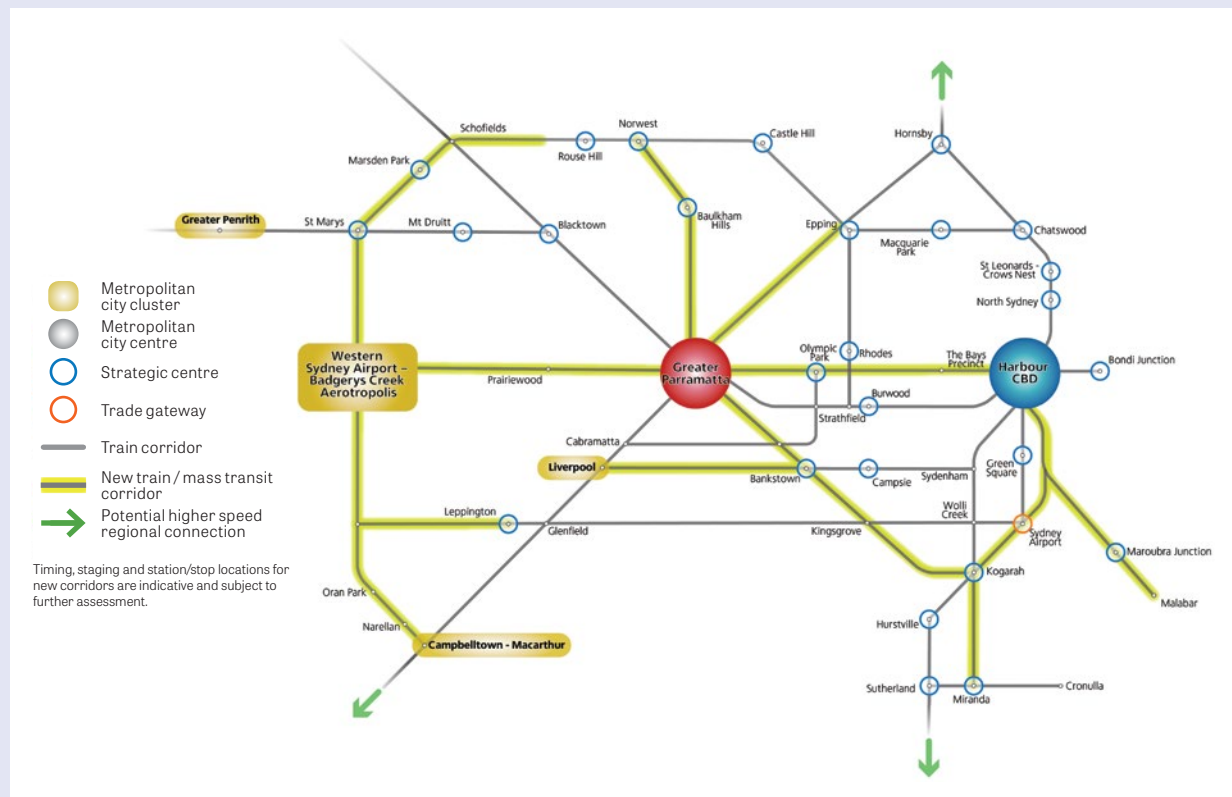
### Future Transport 2056 vision for the Greater Sydney mass transit network

Trains form the backbone of Greater Sydney's public transport system, enabling large numbers of customers to access centres reliably and efficiently. The future vision for our train system is to build on this role, supporting 30 minute access for customers to their nearest Metropolitan Centre and providing high capacity transport between these centres. This demands a more extensive network that delivers better access to Greater Parramatta and the WSA-Badgerys Creek Aerotropolis while continuing to support growth in the east.

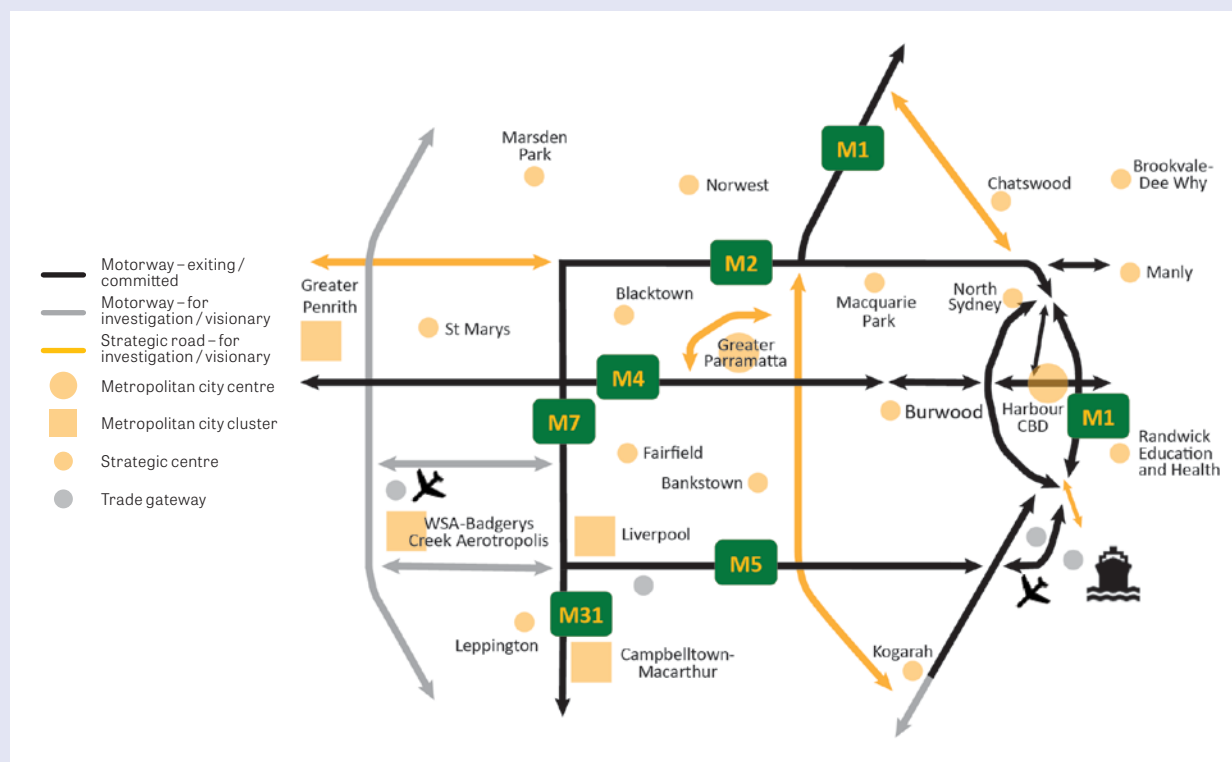
### Future Transport 2056 vision for the Greater Sydney strategic road network

With the growth of Greater Sydney, the share of trips by public transport and the share of freight moved by train will need to increase to enable efficient and reliable journeys and support 30 minute access to centres. However, roads will continue to have an important role in Greater Sydney, supporting freight, on-road public transport and trips best served by car, and – in some places – being destinations that people visit to shop and eat. This will require a network that is easy-to-understand, has a clear hierarchy of roads to support different types of journeys and balances movement and place needs.

## Future Transport 2056 vision for the Greater Sydney mass transit network



## Future Transport 2056 vision for the Greater Sydney strategic road network



## Objective 15

### The Eastern, GPOP and Western Economic Corridors are better connected and more competitive

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Greater Sydney's Eastern Economic Corridor (refer to Figure 39) has high concentrations (agglomerations) of jobs with good road and public transport connectivity, which allow high levels of interaction between business and people. The economic benefits of the agglomeration of activities in this corridor are reflected in its contribution to two-thirds of the State's economic growth over the 2015–16 financial year.

This draft Plan seeks to further strengthen the economic opportunities of this corridor and the GPOP Economic Corridor and plan and develop a new Western Economic Corridor.

#### The Eastern Economic Corridor

The well-connected Eastern Economic Corridor from Macquarie Park to Sydney Airport is of national significance and currently contains approximately 775,000 jobs. The major assets of the corridor include:

- Macquarie Park, Chatswood, St Leonards, Harbour CBD including North Sydney and the emerging Green Square
- four major university campuses, four principal referral hospitals and six of the 10 office precincts in Greater Sydney
- Sydney Airport and Port Botany trade gateways
- major industrial areas of Artarmon, South Sydney and Marrickville which provide for essential trades and services that support specialised economic activities.

A number of committed and potential transport infrastructure projects will improve accessibility between the well-established economic agglomerations along and near the corridor and significantly increase the size of the labour market which can access the corridor by public transport, boosting productivity. These transport infrastructure projects include the following:

- The committed Sydney Metro Northwest and Sydney Metro City & Southwest will extend the reach and capacity of the existing rail network beyond Rouse Hill and significantly enhance the accessibility to, and between, approximately 1 million jobs which will exist between Rouse Hill and Sydney Airport by 2036.
- The committed NorthConnex will, among other wider benefits to Greater Sydney, improve accessibility to Hornsby and the Central Coast.
- The committed CBD and South East Light Rail will improve connections to the health and education precinct at Randwick, and better connect it into the Corridor.
- The potential Northern Beaches to Chatswood bus improvements will better connect the major new Northern Beaches Hospital at Frenchs Forest and the Northern Beaches with the Corridor.
- A potential mass transit link from Parramatta to Epping would significantly improve the connection between Greater Sydney's (and in fact Australia's) two largest suburban centres of Macquarie Park and Greater Parramatta.

The NSW Government is also directly facilitating economic activity in the Eastern Economic Corridor through the work of the NSW Department of Planning and Environment, UrbanGrowth NSW Development Corporation and Landcom in the following initiatives:

- Macquarie Park Urban Renewal Area, where NSW Department of Planning and Environment will assess opportunities for new community facilities, vibrant spaces and homes close to transport links and jobs
- St Leonards and Crows Nest, where the NSW Department of Planning and Environment is working with Lane Cove, North Sydney and Willoughby City councils to undertake a strategic planning investigation of the St Leonards and Crows Nest Station Precinct
- Central to Eveleigh, where in November 2016, UrbanGrowth NSW released an Urban Transformation Strategy for approximately 50 hectares of government land in and around the rail corridor from Central to Erskineville Station
- Green Square Town Centre Project where Landcom is a major landowner within the town centre and the lead agency collaborating with key stakeholders on this, one of the most significant transformation programs in Greater Sydney.

## The GPOP Economic Corridor

In 2016, the Commission commenced work on its first Collaboration Area – Greater Parramatta and the Olympic Peninsula (GPOP) – which involves councils and multiple State agencies co-creating a vision for GPOP. It is the first Collaboration Area where a growth infrastructure compact will be piloted (refer to Objective 2).

In October 2016, the Commission published a vision for GPOP focusing on four distinct quarters (refer to Figure 28):

- Parramatta CBD and Westmead health and education precinct
- Next Generation living from Camellia to Carlingford
- Essential Urban Services, Advanced Technology and Knowledge Sectors in Camellia, Rydalmere, Silverwater and Auburn
- Olympic Park Lifestyle super precinct.

The economic activities form a corridor from Westmead to Sydney Olympic Park (refer to Figure 39).

GPOP is integral to the vision of a metropolis of three cities and the Central River City. The transformation of GPOP will assist in rebalancing opportunities across the Greater Sydney metropolis.

GPOP is envisaged to become Greater Sydney's connected and unifying heart. Both the Parramatta Light Rail and the potential Sydney Metro West will be catalysts for realising this vision. New north-south connections will also be essential.

Sydney Metro West has the potential to significantly enhance Greater Parramatta's inter-city linkage with the Harbour CBD through improved journey times and frequency of service.

Improved transport connections within GPOP and to the nearby strategic centres would deliver the economic benefits of agglomeration including enhanced opportunities for business-to-business interactions and access to larger skilled labour pools. They have the potential to create a cluster of economic activity with up to 370,000 jobs within a 10–15 minute public transport service provision.

*Improved transport connections ... have the potential to create a cluster of economic activity with up to 370,000 jobs within 10–15 minutes of public transport.*

Equally important is the creation of high quality, new places for people to enjoy a more urban lifestyle. Parramatta's CBD will be the first of these.

The Commission is providing a new platform for collaboration across State and local governments, businesses and the community in delivering the GPOP vision. A place-based approach to planning for the future in the most central part of Greater Sydney is core to this new way of working. The Commission's key focus areas are to:

- pilot a whole-of-government and place-based approach to new social and economic infrastructure to support city-scale growth in GPOP in the form of the growth infrastructure compact



- plan for the Parramatta Light Rail and the potential Sydney Metro West to enhance GPOP as a place for new business, housing choice, education, research, entertainment and tourism
- grow and diversify employment ranging from medical research at Westmead to clean technology at Camellia to sports science at Sydney Olympic Park
- enhance Parramatta CBD, Parramatta North and Westmead as walkable and cyclable places, with enjoyable access through Parramatta Park and along Parramatta River day and night
- design spaces for the arts and culture in Parramatta CBD that are flexible, inclusive and suitable for exhibitions, performances, creating, making and learning
- optimise the renewal of government-owned lands within GPOP, and align infrastructure and renewal planning to deliver value to the community
- engage with industry and research institutions to assess the potential for a 21st century clean-tech cluster around Camellia, Rydalmere, Silverwater and Auburn and protection of urban services in these areas
- reinvent Sydney Olympic Park and surrounds as a place that inspires a lifestyle of wellbeing, healthy activity and celebration in a unique setting that attracts allied and like-minded business.

An interim planning framework to deliver this vision has been outlined by the NSW Department of Planning and Environment. This includes an Interim Land Use and Infrastructure Implementation Plan across a range of precincts and a program for the development of a State Infrastructure Contribution and further Priority Precinct investigations.

The GPOP collaboration is looking to wider opportunities to improve liveability outcomes that maximise benefits in the surrounding areas such as walking and cycling and greater collaborations with Land and Housing Corporation.



#### Action 5

##### Collaborate to deliver the Greater Parramatta and the Olympic Peninsula (GPOP) vision

The Commission is leading the collaboration of councils, State agencies, the community and industry to deliver the GPOP vision. Being the connected and unifying heart of the Central City, the Commission is championing GPOP as a place for new business, homes and services; for diverse employment; for great walkable and cyclable places; and to facilitate spaces for arts and culture.



#### Action 6

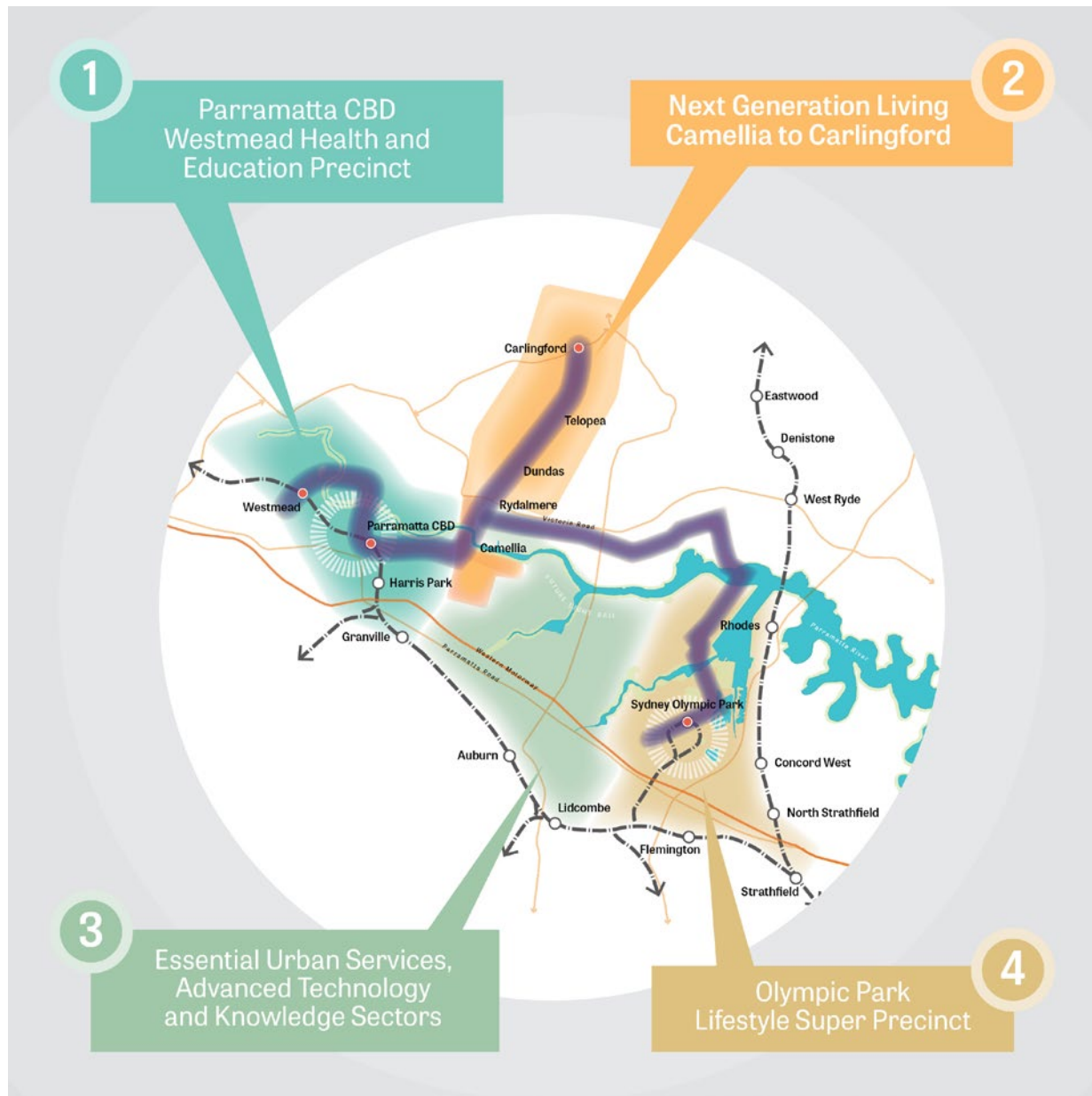
##### Develop a growth infrastructure compact for GPOP

The Commission will coordinate, seek expertise and insight from councils, agencies, industry and the community to develop the growth infrastructure compact.

The growth infrastructure compact will outline the order, priority sequencing and funding of local and regional infrastructure aligned to growth.

It will be submitted to the NSW Government by December 2018.

**Figure 28:** Greater Parramatta and the Olympic Peninsula (GPOP)



Source: Adapted from Greater Sydney Commission 2016 GPOP Vision

## The Western Economic Corridor

The Australian Government's investment in the Western Sydney Airport and participation in the Western Sydney City Deal (refer to Objective 5), will see the emergence of a new international airport for Greater Sydney and Badgerys Creek Aerotropolis.

These new economic agglomerations, together with the need for planning and delivering a transport network to support the significant projected population growth, create the opportunity for a potential north-south mass transit corridor which can act as a catalyst for a new Western Economic Corridor for Greater Sydney (refer to Figure 39).

In developing a Western Economic Corridor, consideration needs to be given to:

- maximising the opportunity to have major centres located on the north-south mass transit corridor taking advantage of local economic activity which will be created by well over 1.5 million people who will live west of the M7 Motorway in the long term
- providing east-west transport links which directly connect to centres on the potential north-south train corridor
- connecting the potential north-south train corridor through to the Sydney Metro Northwest at Cudgegong which would:
  - enhance the opportunities for economic activity at Marsden Park
  - create a range of development opportunities at the likely interchange with the Richmond rail line at Schofields
  - provide residents of the Western Parkland City with access to tertiary education and knowledge-intensive jobs along the Sydney Metro Northwest corridor

- connecting the potential north-south train corridor through to the health and education assets at Campbelltown-Macarthur and the existing centres of Narellan and Campbelltown-Macarthur, further connecting economic activity and access for labour to a wider number of jobs
- providing for a train link between the Western Sydney Airport – Badgerys Creek Aerotropolis and Greater Parramatta.

The delivery of a new Western Economic Corridor is integral to the approach of creating more jobs and a diversity of jobs in the Western Parkland City (refer to Objective 20).

## Delivery

A range of strategies support the delivery of the economic corridors.

In addition to enhancing accessibility within the corridors, growing investment and business in the centres and trade gateways is fundamental to their ongoing success. Objective 22 outlines how the draft Plan seeks to grow jobs in Greater Sydney's centres and Objective 16 provides similar guidance for trade gateways.

### Strategy 15.1

Prioritise public transport investment to deliver the 30-minute city objective for strategic centres along the economic corridors.

### Strategy 15.2

Co-locate health, education, social and community facilities in strategic centres along the economic corridors.

## Objective 16

### Freight and logistics network is competitive and efficient

#### Greater Sydney's trade gateways

The traditional manufacturing, transport, distribution, warehousing and intermodal functions found across Greater Sydney underpin the creation and success of global value chains, which in turn support trade growth through Port Botany and Sydney Airport. The Western Parkland City has the largest supply of these lands and substantial future supply yet to be developed, which will support large-scale logistics growth with two planned intermodal terminals. In addition to Port Botany, the Eastern Harbour City contains seven of Greater Sydney's 10 intermodal terminals and therefore will have an ongoing role in large-scale freight and logistics for the foreseeable future, with substantial growth in the west.

**Port Botany and Sydney Airport** are Greater Sydney's two nationally significant trade gateways. Both have significant growth projected – with the container traffic at Port Botany projected to grow from 2.4 million TEU (twenty-foot equivalent unit – a standard container measure) to 8.4 TEU by 2050 and passenger trips at Sydney Airport forecast to grow from 37 to 74 million passengers by 2033.<sup>22</sup> Each of the trade gateways also has substantial areas of industrial land in its immediate environs which are critical to the operations, in providing support services. Also, each location is served by substantial road and rail infrastructure which is vital to its operations.

Retaining internationally competitive operations at both these locations is vital for a productive NSW economy. Preventing the encroachment of sensitive uses that can impact on these operations and ensuring transport networks can support the needs of the trade gateways is of national significance.

The forecast TEU growth is beyond the future capacity of Port Botany. This growth will trigger the need to develop an additional container port location to service Greater Sydney's container logistic needs. This is most likely to be Port Kembla which has an approval to expand container handling capacity at a cost of \$1 billion. This will help manage some projected growth, but not all.

With the development of the **Western Sydney Airport and Badgerys Creek Aerotropolis** it will be critical, from the outset, to secure the access requirements for the airport and off-site industrial land for its 24/7 operation. The Commission is preparing a draft Structure Plan for the Western Sydney Airport Priority Growth Area to achieve this (refer to Objective 20).

**Bankstown Airport** currently caters for fixed wing and helicopter flight training, charter flights, air freight and emergency services. The airport is also the location of significant aviation and non-aviation related businesses within its 313 hectares. Up to 130 hectares of the site is occupied by a mix of industrial, commercial and retail tenancies, vacant sites or has been identified as suitable for release for development. Protecting its operational activities is important.<sup>23</sup>

A statewide approach to implementing the National Airport Safeguarding Framework is being developed by the NSW Department of Planning and Environment.

Likewise, the operational requirements of the **RAAF Base Richmond** need to be protected.

#### Strategy 16.1

Manage the interfaces of industrial areas, trade gateways and intermodal facilities by:

##### Land use activities

- providing buffer areas to nearby activities that are sensitive to emissions from 24-hour port and freight functions such as residential uses
- protecting industrial lands for port, intermodal and logistics uses from the encroachment of commercial, residential and other non-compatible uses which would adversely affect industry viability to facilitate ongoing operation and long-term growth
- requiring sensitive developments within the influence of port and airport operations to implement measures that reduce amenity impacts

- improving communication of current and future noise conditions around Port Botany, airports, surrounding road and rail networks, intermodals and supporting private lands
- improving the capacity of existing stakeholders to implement existing planning noise standards for incoming sensitive developments
- protecting prescribed airspace from inappropriate development, for example height of building controls that would allow buildings to penetrate prescribed airspace and reduce the capacity of existing airport operations
- preventing inappropriate development within the high noise corridor on the Kurnell Peninsula
- identifying and preserving land for future port and airport, intermodal and rail infrastructure
- accommodating advanced manufacturing where appropriate by zoning that reflects emerging development models.

#### **Transport operations**

- providing the required commercial and passenger vehicle, and freight and passenger rail access
- preventing uses that generate additional private vehicle traffic on roads that service Port Botany and Sydney Airport such as large scale car based retail and high density residential, to reduce conflicts with large dangerous goods vehicles (for example, Foreshore Road and Denison Street, Banksmeadow)
- improving the road connectivity from Villawood to Eastern Creek, via Yennora, Smithfield and Wetherill Park to improve business-to-business and supply chain connectivity along this industrial corridor.

## **Greater Sydney's freight and logistics sector**

Greater Sydney's freight task is forecast to more than double in the next 40 years. Policies and investment to reduce the cost of moving freight and increase efficiency and productivity while minimising traffic and amenity impacts on adjacent urban uses are essential.

The freight network needs to support future need – allowing movements that feed communities, deliver their consumer goods and provide the materials required to build the city.

Providing for a growing Greater Sydney requires an efficient and effective road and rail freight network integrated with ports and airports.

Most of Greater Sydney's freight is moved on the road network. The current higher levels of congestion over long periods of the day negatively impact freight operations and increase business costs. Rail-based freight movements are restricted where networks are shared with passenger services.

Major improvements are planned. In particular, a dedicated freight rail connection from Port Botany to the Western Parkland City will increase the proportion of freight moved by rail. This will boost the economic potential of surrounding industrial precincts in Western Sydney such as Smithfield and Wetherill Park.

With this investment comes the commensurate need to maintain buffers to nearby residential areas and restrict further encroachment by residential uses.

Increasing land values, major inland intermodal terminals such as at Moorebank, and plans for the new curfew-free Western Sydney Airport support the momentum for major freight and logistics operations to gravitate further west.



Demand for centrally located resources for parcel deliveries is increasing. Urban consumers require a more diverse range of products and services to be delivered either directly to their homes, or to nearby commercial and retail hubs. On-street car parking capacity and loading zones affect the delivery of goods.

An efficient and effective road and rail freight network will integrate with ports and airports. Figure 29 shows strategic freight corridors and intermodal terminals that will be required by 2056.

## Strategy 16.2

Optimise the efficiency and effectiveness of the freight handling and logistics network by:

- protecting current and future freight corridors
- balancing the need to minimise negative impacts of freight movements on urban amenity with the need to support efficient freight movements and deliveries
- identifying and protecting key freight routes
- limiting incompatible uses in areas expected to have intense freight activity.

**Figure 29:** Greater Sydney freight network



Source: Future Transport 2056

## Objective 17

### Regional transport is integrated with land use

By 2056 the combined population of Greater Sydney, Newcastle and Wollongong will be approximately 10 million. Improving the north-south transport connections between Greater Sydney, Newcastle and Wollongong will enable greater economic efficiencies and opportunities, particularly in the Western Parkland City where a number of committed and potential transport connections converge including the Outer Sydney Orbital corridor, the Bells Line of Road, the Western Sydney Freight Line and the new Western Sydney Airport and Badgerys Creek Aerotropolis.

Improving north-south connections between these cities will allow greater opportunities for residents of all cities to access a wider range of job opportunities and enhance business-to-business links collectively enhancing their productivity (refer to Figure 30). Improved regional connections of this type are increasingly a characteristic of numerous cities across the world. Equally, improved connections will provide greater choices for where people can live and in the long term provide increased growth management choices.

Regional transport connections will connect Port Botany, Port Kembla and the Port of Newcastle which are internationally important trade gateways, facilitating the import and export of significant volumes of container and bulk freight such as coal, motor vehicles and other agricultural products.

*Improving north-south connections will allow residents of all cities to access a wider range of job opportunities and enhance business-to-business links.*

Within 40 years Port Kembla will elevate its status and operate as a container port servicing Greater Sydney. There will be a need to develop enhanced new road and rail connections from Port Kembla to freight networks, specifically intermodal facilities in the Western Parkland City. Most likely this will include freight rail connections via the Maldon-

Dumbarton corridor and road connections linking to the proposed Outer Sydney Orbital corridor.

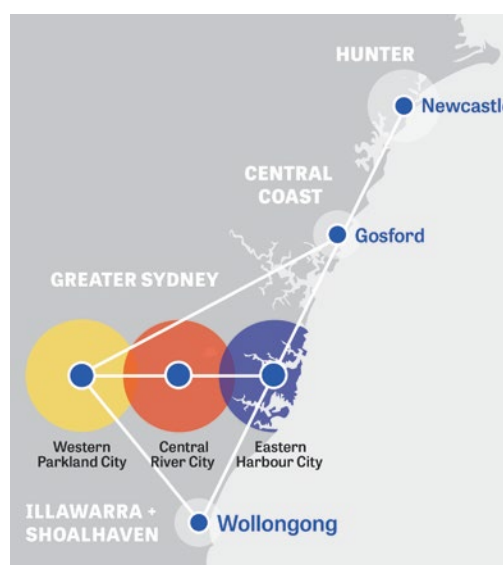
These longer-term transport upgrades will significantly influence land use opportunities in Wilton, Appin, West Appin, Mount Gilead and Campbelltown-Macarthur and their economic relationships to Wollongong.

Thus for the Western Parkland City there will be a strong temporal element to its growth with, in the first instance, opportunities being driven within the city and from connections to the Central and Eastern cities. In the longer term further growth opportunities will arise from north-south connections to the Illawarra and the Central Coast/Hunter regions.

#### Strategy 17.1

Investigate and plan for the land use implications of potential long-term transport connections.

**Figure 30:** Regional connections



# Jobs and skills for the city



## Objective 18

### Harbour CBD is stronger and more competitive

The Harbour CBD includes the areas of Sydney CBD, North Sydney CBD, Barangaroo, Darling Harbour, Pyrmont, The Bays Precinct, Camperdown-Ultimo health and education precinct, Central to Eveleigh, part of Surry Hills and Sydney East.

#### Global financial capital

Greater Sydney's economic strength globally and nationally is due to its role as a regional hub within global financial markets. The concentration of the financial services sector in the Harbour CBD includes:

- the headquarters of the ASX and Australia's monetary and finance institutions and regulators such as the Reserve Bank of Australia, Australian Securities and Investment Commission and the Australian Prudential Regulation Authority
- 63 per cent of the ASX 100 financial services companies, which is more than double the 31 per cent of the next highest capital city, Melbourne
- 82,100 jobs in the Finance and Insurance Services industry, which is the highest concentration of jobs per sector at 28 per cent
- the headquarters of 15 of the top 20 global investment banks, 18 of which have an Australian presence.

The implications of a strong financial services sector include high demand for premium-grade office space and high demand for associated knowledge-intensive industries such as legal, accounting, real estate and insurance. Therefore it is critical that planning controls enable the growth needs of the financial and professional sector.

The strength of the Harbour CBD is reinforced by the Eastern Economic Corridor – refer to Objective 15.

#### A diversity of activities

Distinct assets have emerged to support the Harbour CBD's global role. These include:

- entertainment cultural, tourist and conference assets
- an internationally competitive health and education precinct
- a robust creative sector providing entrepreneurial and job opportunities
- high-amenity, high-density residential precincts.

The Sydney Opera House and Sydney Harbour Bridge are internationally recognised icons of Greater Sydney, which serves as Australia's gateway for 30 million visitors<sup>24</sup> a year who are drawn to internationally renowned attractions, arts and cultural events. Destination NSW leads the delivery of tourism and events to support Greater Sydney's visitor economy.

Innovation underpins global 21st century cities, and along the western edge of the Harbour CBD an Innovation Corridor is emerging (refer to Figure 31). It extends from The Bays Precinct, to high-tech and start-up hubs in Pyrmont and Ultimo, to the health and education institutions of the University of Technology Sydney, Notre Dame University, the University of Sydney, the Royal Prince Alfred Hospital, and on to the Australian Technology Park. Facilitating the attraction and development of innovation activities will enhance

Greater Sydney's global competitiveness. Planning controls need to have flexibility to allow for the needs of the innovation economy.

The Harbour CBD, like many other capital cities, is becoming a more attractive place to live, in line with worldwide trends which are seeing global city centres as much about living as they are about jobs. Supporting both outcomes calls for a 24/7 economy – a night-time economy. This requires careful consideration and management of the activities of a night-time economy in the context of noise, safety and other amenity issues.

Building heights in the Harbour CBD are constrained by limitations relating to safety requirements for the management of flight paths for Sydney Airport.<sup>25</sup> The protection of the amenity of public spaces from overshadowing is also important. With identified future office supply limited to around 10 years there is a need to maximise vertical opportunities and outward extensions where possible, for example southward along the Central to Eveleigh corridor.

Facilitating office development can be complex, especially as residential development also competes with commercial development for scarce CBD space. Maintaining a long-term supply of office space is critical to maintaining Greater Sydney's global economic role, and should not be compromised by residential development.

## Well connected

The Harbour CBD is well served by a long-established public transport network with radial connections to most parts of Greater Sydney.

Committed public transport infrastructure such as Sydney Metro Northwest, Sydney Metro City & Southwest, the CBD and South East Light Rail and the Northern Beaches B-Line bus will significantly increase and improve accessibility to and from the Harbour CBD. Planning is also underway for the delivery of the potential Western Harbour Tunnel and Beaches Link which will further improve accessibility from the Northern Beaches to the Harbour CBD and remove through traffic from the Harbour CBD.

Improving walking and cycling links will improve amenity and attract more businesses to the Harbour CBD. Walking and cycling connections are particularly important for the Innovation Corridor, where pedestrian connections can spur an exchange of ideas.

## Strategy 18.1

Prioritise:

- public transport projects to the Harbour CBD to improve business-to-business connections and support the 30-minute city
- infrastructure investments which enhance walkability and cycling, particularly those focused on access to the transport network, and within five kilometres of any strategic centre or within 10 kilometres of the Harbour CBD.

## Strategy 18.2

Develop and implement land use and infrastructure plans which strengthen the international competitiveness of the Harbour CBD and grow its vibrancy by:

- further growing an internationally competitive commercial sector to support an innovation economy
- providing residential development without compromising the objectives for commercial development
- providing a wide range of cultural, entertainment, arts and leisure activities
- providing for a diverse and vibrant night-time economy, in a way that responds to potential negative impacts.





## Action 7

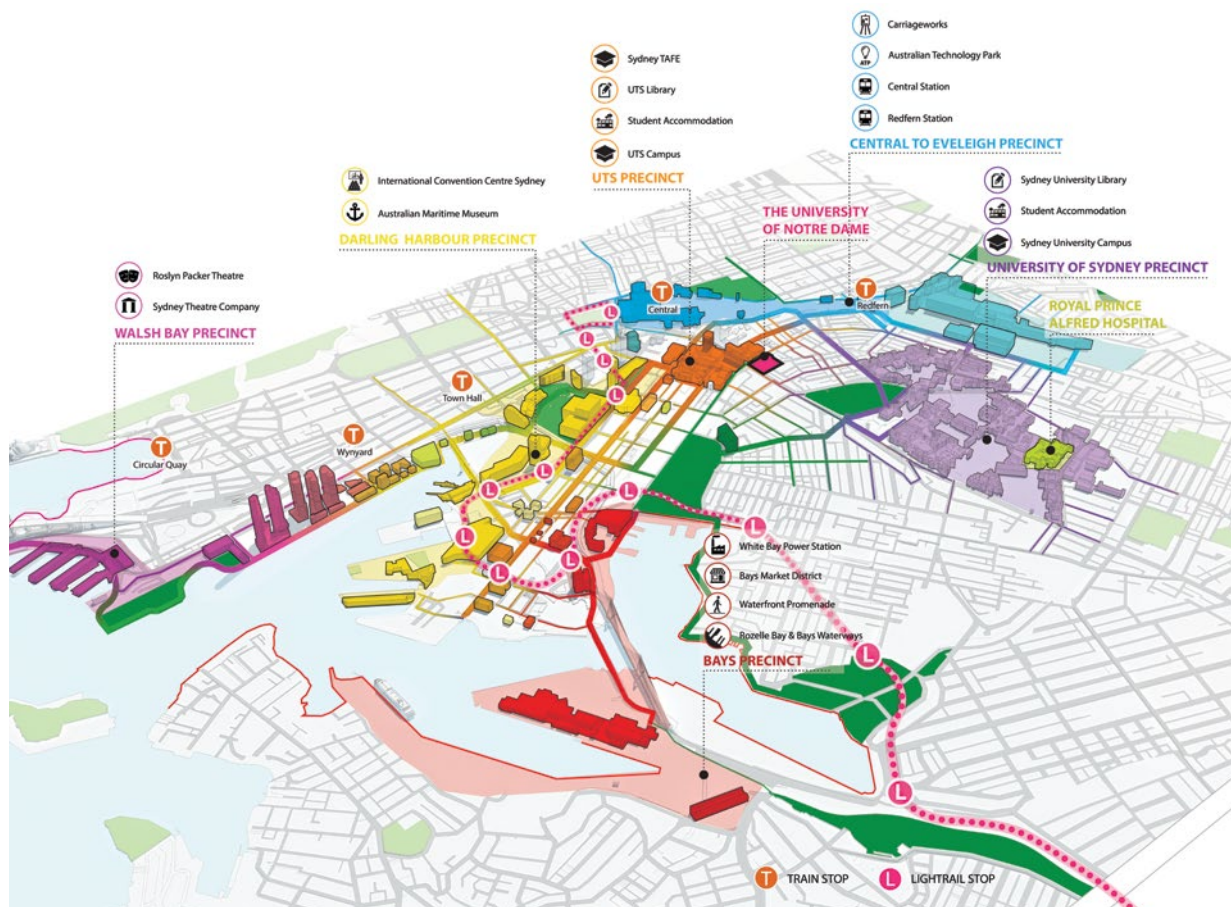
### Support the growth of the Camperdown-Ultimo Collaboration Area

The Commission will lead private, government and education sector stakeholders in the ongoing planning of the Camperdown-Ultimo Collaboration Area through the preparation of a Place Strategy.

This multi-stakeholder approach will support and leverage existing infrastructure to improve urban amenity to grow jobs and business opportunities.

The Commission's Strategic Planning Committee will consider a Place Strategy within 18 months of the finalisation the Greater Sydney Region Plan.

**Figure 31:** Innovation Corridor, Harbour CBD





## Objective 19

### Greater Parramatta is stronger and better connected

Parramatta was settled the same year as Sydney Cove and has had a long and important role in the growth of Greater Sydney.

The *1968 Sydney Region Outline Plan* identified that Parramatta should become “a very major commercial employment centre”. This was the first time that Parramatta was distinguished from other centres across Greater Sydney. By the time of the next plan in 1988, the designation of Parramatta had been elevated to be equivalent to the Sydney CBD.

Since that time, the progressive relocation of State agencies from the Eastern Harbour City to Parramatta has solidified Greater Parramatta as a major office market. It now has approximately 700,000 square metres of office space.<sup>26</sup>

Greater Parramatta is at the core of the Central River City, encompassing Parramatta CBD and the Westmead health and education precinct, connected via Parramatta Park (refer to Figure 32).

Today Greater Parramatta has close to 85,000 jobs with a diversity of activities including significant government and civic administration, businesses, major health and education institutions and significant lifestyle activities such as restaurants and theatres.

Greater Parramatta’s emergence as a metropolitan significant centre is now entering a period of transformational change driven by an unprecedented level of government and institutional investments into health, education, recreation, entertainment and amenity improvements. These include:

- Parramatta Square, including a new Western Sydney University campus – \$2 billion
- Parramatta North Urban Transformation Program
- Western Sydney Stadium Upgrade – \$360 million
- Old King’s School primary school and Arthur Phillip High School – \$100 million
- Parramatta Light Rail

- Museum of Applied Arts and Sciences
- Westmead Hospital Upgrade Stage 1 – \$900 million; including \$750 million for the acute services building; \$95 million for Sydney Children’s Hospital Network and \$72 million for car parking
- University of Sydney Westmead campus expansion – \$500 million
- Western Sydney University Westmead redevelopment – \$450 million
- New Parramatta aquatic centre
- Parramatta Road Urban Amenity Improvement – \$123 million.

Greater Parramatta’s potential is also being enhanced as a consequence of the activities of a wider State and local government initiative – the GPOP (refer to Objective 15).

### Internationally significant health and education precinct

Greater Parramatta is one of the largest integrated health, research, education and training precincts in Australia and is a key provider of jobs for the Central River City. Westmead Hospital provides health services to almost 10 per cent of Australia’s population. By 2026, the Westmead Hospital precinct will have over 2.8 million outpatient visits and over 160,000 emergency department presentations every year.

Westmead Hospital is leading innovation in the Central River City and is a major contributor to the Australian Government’s National Innovation and Science Agenda through its training of world leading scientists, scientific analysis and successful global collaborations.

A range of activities is underway which will boost the role of the Westmead health and education precinct as an economic catalyst for Greater Parramatta, including:<sup>27</sup>

- the attraction of private sector investment and business to the precinct, with a focus on Hawkesbury Road through the Westmead Alliance
- improved metropolitan accessibility from the potential Sydney West Metro which would provide enhanced access between Parramatta, the Harbour CBD, The Bays Precinct and Sydney Olympic Park
- enhanced local accessibility with Parramatta Light Rail.

## Growing opportunities

The City of Parramatta has a proposal to amend the planning controls for the Parramatta CBD.

The proposal seeks to:

- strengthen Parramatta's position as the dual CBD for metropolitan Sydney
- increase the capacity for new jobs and dwellings to create a dynamic and diverse city
- encourage a high quality and activated public domain with good solar access
- facilitate the provision of community infrastructure to service the growing city
- strengthen opportunities for the provision of high quality commercial floor space
- future proof the city through the efficient and sustainable use of energy and resources
- manage risks to life and property from flooding.

The investment and business opportunities of a location are enhanced when its accessibility to a wider labour pool and other economic agglomerations are improved. For Greater Parramatta, the potential mass transit connections to Macquarie Park, Norwest, the Harbour CBD

and Sydney Olympic Park, as outlined in *Future Transport 2056*, would significantly boost economic opportunities with skilled labour and markets that are currently constrained.

## Strategy 19.1

Prioritise:

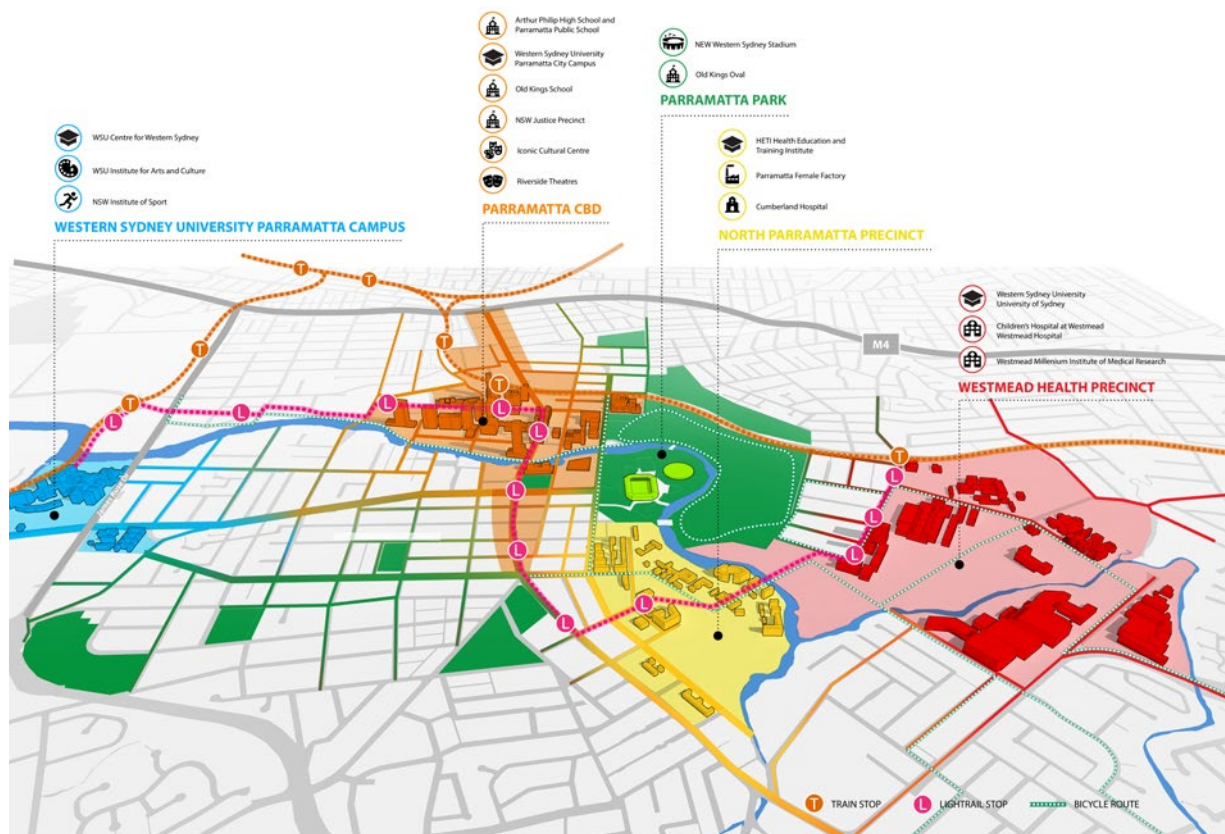
- public transport investments to improve connectivity to Greater Parramatta from the Harbour CBD, Sydney Olympic Park, Westmead, Macquarie Park, Norwest and Kogarah via Bankstown
- infrastructure investments which enhance walkability and cycling, particularly those focused on access to the transport network, and within five kilometres of any strategic centre or 10 kilometres of Greater Parramatta.

## Strategy 19.2

Develop and implement land use and infrastructure plans which strengthen the economic competitiveness of Greater Parramatta and grow its vibrancy by:

- enabling the development of an internationally competitive health and education precinct at Westmead
- creating opportunities for an expanded office market
- balancing residential development with the needs of commercial development, including, if required, a commercial core
- providing for a wide range of cultural, entertainment, arts and leisure activities
- improving the quality of Parramatta Park and Parramatta River and their walking and cycling connections to Westmead and the Parramatta CBD
- providing for a diverse and vibrant night-time economy in a way that responds to potential negative impacts.

Figure 32: Greater Parramatta



#### Useful links:

- Greater Sydney Commission, GOP Vision
- Greater Sydney Commission, GOP Connecting the Heart of Greater Sydney: Evidence Pack

## Objective 20

### Western Sydney Airport and Badgerys Creek Aerotropolis are economic catalysts for Western Parkland City

In the long term, well over 1.5 million people will live and work in the new Western Parkland City, with mass transit connections to existing strategic centres, the Western Sydney Airport and Badgerys Creek Aerotropolis as economic catalysts, and South Creek providing a green spine to improve amenity and environmental outcomes.

The Western Sydney City Deal, a collaboration across three tiers of government, will drive the delivery of the Western Sydney Airport and Badgerys Creek Aerotropolis. The area of focus for the City Deal will be Western Sydney Airport Priority Growth Area, in the context of planning and delivering Western Parkland City.

**The vision for the Western Parkland City** is a first in the history of planning for Greater Sydney. It is a vision which focuses west, where the development of the airport and aerotropolis are catalysts for re-imagining the Western Parkland City. It is a vision where:

- the central organising principle to guide development are two north-south corridors – South Creek and a train corridor
- the Western Sydney Airport and Badgerys Creek Aerotropolis are catalysts for attracting globally significant job types and over a 20–40 year period significantly improving job containment for the city
- the centres of Liverpool, Greater Penrith and Campbelltown-Macarthur provide the foundation for growing health and education precincts, complemented by the Badgerys Creek Aerotropolis, in the long term creating a ring of university cities
- in the longer term its economic importance will facilitate the delivery of a mass transit system which will connect all three cities
- the setting creates a unique identity, a parkland city, a place where the city meets the country and where national parks frame the city.

The vision is for a city with its own identity, creating its own destiny.

The emerging new city will be driven by the economic opportunities created by the Western

Sydney Airport and Badgerys Creek Aerotropolis and significant population growth, which will bring with them city-scale infrastructure and new advanced manufacturing, logistics and research industries providing hundreds of thousands of jobs over the long term. The catalytic benefits of the airport and aerotropolis will be influenced by their connectivity to labour markets and other economic agglomerations.

## Aerospace and defence

The aerospace and defence industry is technologically advanced, dealing with state-of-the-art systems and operations. The air transport sector is anticipated to benefit most from the Western Sydney Airport, growing to \$6.4 billion. The capability of Western and Central cities in relation to the design, engineering and manufacture of aerospace and defence components include:

- manufacture of electronic aviation and software systems
- engineering of tooling systems for the manufacture of aircraft bodies and components
- manufacture of aircraft engines and internal and external body components
- design and manufacture of defence systems for guided missiles, sonar and unmanned vehicles.

Western Sydney is home base for significant Australian Defence Force capabilities, including the RAAF Heavy Air Lift Group, Australian Army Special Forces, and Navy Afloat Support, Minehunters and Clearance Diving Teams. This concentrated presence means the region is home to a large pool of defence-capable companies and organisations, including a number of prime contractors.

Western Sydney Airport will trigger regional growth in these industries, given the availability of land, skilled labour, research and development opportunities and key transport linkages. There is capacity to grow more high-value, tradeable jobs and further develop globally competitive capabilities in skills and technology.



## The Western Sydney City Deal

The Australian and NSW governments will work together with local government towards a landmark agreement for Western Sydney that will unlock public and private investment in key infrastructure, support jobs and economic growth, and help improve the liveability of Sydney's outer west.

The Australian and NSW governments will work with Penrith, Liverpool, Camden, Campbelltown, Fairfield, Wollondilly, the Blue Mountains and Hawkesbury councils.

Delivering change for Western Sydney:

- An increase in infrastructure investment, including transformative public transport projects to unlock the economic potential of the region, reduce congestion and support local needs.
- A program of employment and investment attraction to support the development of the

region through reduced business regulation, investment in skills and removing barriers to employment, including a focus on youth and Indigenous employment.

- Improving housing affordability through support for increase supply and housing diversity, including improvements to planning and zoning regulations and higher density developments in appropriate locations.
- Improved environmental and liveability outcomes, including streamlined and coordinated biodiversity conservation, support for clean air, green spaces, vibrant arts and cultural experiences.
- Coordination between governments to deliver regulatory reforms that integrate infrastructure, land use, housing and environmental planning decisions to facilitate growth.

Figure 33: Campbelltown-Macarthur





## Western Sydney aerospace and defence industries precinct

The NSW Department of Industry is leading the development of a world-class aerospace and defence industries precinct adjacent to the Western Sydney Airport. It will entail the physical and virtual cluster of the aerospace, defence and related industry businesses, research and development facilities and training institutions. It will be an advanced technologies hub, with horizontal capabilities (information and communications technologies, data analytics, cyber security, advanced electronics, advanced manufacturing and systems integration) across both the aerospace and defence sectors with the potential to expand to other sectors.

A feasibility study has projected that the precinct could create approximately 5,000 jobs and over \$15 billion of Gross Value Add over the next 30 years.

In May 2017, a leading global security company committed to a \$50 million investment in a new advanced defence electronics maintenance centre in the precinct. This is the first of a range of businesses expected to establish a presence in the precinct.

The commitment of \$5.3 billion of funding by the Australian Government in the 2017–18 Budget to

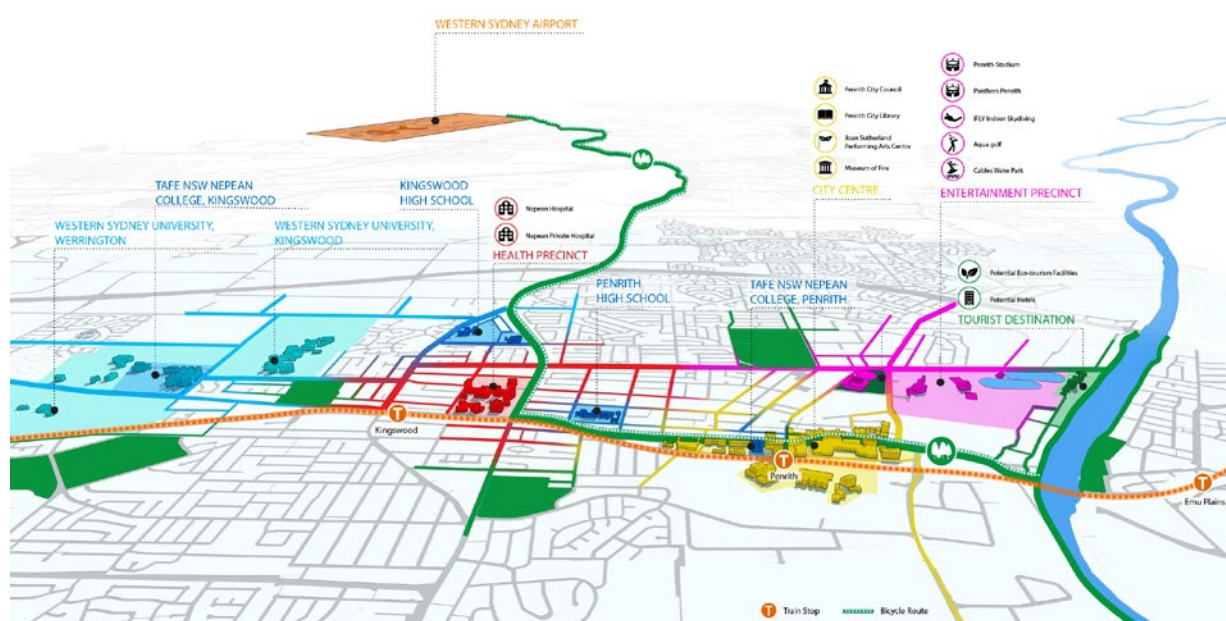
build the Western Sydney Airport by 2026 has positive implications for precinct. The development of the precinct will align with this schedule to leverage the once-in-a-generation opportunity of the new airport. It represents a critical economic growth opportunity for the Greater Sydney Region.

The RAAF Base Richmond Precinct will complement the airport and aerotropolis activities. Precinct activities include aerospace activities (defence and civilian); a Western Sydney University campus, TAFE NSW Richmond and a range of equine activities.

## Advanced manufacturing, logistics and trade

As the lower-value-adding manufacturers move offshore, the Australian manufacturing sector has been transforming with growth in the advanced high value sector. The expanding sector is characterised by significant investment in innovation, research and development as well as the use of technology and the production of goods that have a relatively high value. The research and development component includes opportunities to work closely with universities. The Western Parkland and Central River cities are manufacturing leaders in NSW, with well-developed specialisations in advanced manufacturing.

Figure 34: Greater Penrith



The Western Sydney Employment Area immediately to the north of the Western Sydney Airport was created to act as a long-term metropolitan land supply for industrial and employment activities. Its significance has been enhanced with the commitment to the Western Sydney Airport.

The existing freight and logistics activities of the Western Parkland City will be boosted by a number of transport initiatives which will significantly improve the accessibility of the Western Parkland City with Greater Sydney and regional NSW. These initiatives include the Western Sydney Freight Line, the Outer Sydney Orbital – a major orbital transit corridor for Greater Sydney – and a potential new intermodal terminal. Agribusiness opportunities will be supported by the allocation of land within the airport precinct for agricultural export logistics improving links to new markets. The NSW premier quarantine and biosecurity facility, Elizabeth Macarthur Agricultural Institute at Menangle, will play an important role and increase opportunities for agriculture research and education jobs.

## Liverpool, Greater Penrith and Campbelltown-Macarthur

The new Western Parkland City will be founded on the existing centres of Liverpool, Greater Penrith and Campbelltown-Macarthur and their commercial, health and education assets will support the growing communities (refer to Figure 33, Figure 34 and Figure 35). They form part of the metropolitan city cluster serving the Western Parkland City (refer to Objective 22). Their importance in providing a focus for commercial activities and population services as the Western Parkland City develops over the next 20 years cannot be overstated. There is an opportunity to substantially enhance the city's economic growth through their development as a ring of 'university cities', building on the existing tertiary facilities in each.

Over time, the Badgerys Creek Aerotropolis could become a fourth university city. The strategy to deliver the university cities will seek to:

- enable each university campus to focus on a full faculty or university presence with a minimum of 10,000 students in each co-located with TAFE facilities where there is adjoining land
- anchor the university presence for Liverpool, Greater Penrith and Campbelltown-Macarthur around the NSW Government's investment in hospitals and facilitate the emergence of the health and education precincts in each location
- enable Badgerys Creek university city to be anchored around the development of airport related industries such as defence and aerospace, avionics, cyber security, food manufacturing and advanced manufacturing.

There are already a number of investments underway to support the delivery of the university cities and their complementary health activities including:

- Nepean Hospital – \$550 million upgrade
- Campbelltown Hospital – \$632 million upgrade
- New University of Wollongong, Liverpool campus.

Significant greenfield urban development is still to occur along the South Creek corridor. People will live in and around new centres along the length of South Creek and its tributaries, providing a high level of liveability in a quality urban environment adopting best practice from cities around the world. High quality living will attract and retain businesses, skilled workers, international and domestic clients, students and service providers.

Figure 35: Liverpool



The spatial pattern of this new city will be based on the integration of land use, transport and other infrastructure over the life of this Plan:

- A potential new north-south train corridor will deliver a Western Economic Corridor (refer to Objective 15). It will connect the Western Sydney Airport and Badgerys Creek Aerotropolis as well as the Sydney Science Park to St Marys, Marsden Park and Rouse Hill in the north and to Oran Park, Narellan and Campbelltown-Macarthur in the south and create opportunities for new centres.
- Liverpool, Greater Penrith and Campbelltown-Macarthur centres will be better connected to the rail network and will leverage the associated benefits to drive their education and commercial strengths.
- New east-west mass transit corridors will better connect neighbourhoods in the Western Parkland City to the existing rail lines.

- South Creek and its tributaries will underpin the sustainability features of the Western Parkland City, from tree canopy cover to cool and green the city, to water sensitive urban design.
- South Creek will form the central organising design element when planning new communities.
- Centres and neighbourhoods will be integrated with the South Creek parkland.

Detailed decisions on the alignment of roads, mass transit and urban development are important to the long-term economic prosperity and liveability of the city. The early adoption of planning principles to inform these decisions will be critical in delivering this. Objective 26 provides initial principles for the development of South Creek.

## Strategy 20.1

Prioritise:

- public transport investments to improve the north-south and east-west connections to the metropolitan city cluster
- infrastructure investments which enhance walkability and cycling, particularly those focused on access to the transport network, and within five kilometres of any strategic centre or 10 kilometres of the metropolitan city cluster.

## Strategy 20.2

Develop and implement land use and infrastructure plans for the Western Sydney Airport, the metropolitan city cluster, the Western Sydney Employment Area and strategic centres in the Western Parkland City by:

- supporting commercial development, aerospace and defence industries and the innovation economy
- supporting internationally competitive freight and logistics sectors
- planning vibrant strategic centres and attracting health and education facilities, cultural, entertainment, arts and leisure activities
- creating high quality places with a focus on walking and cycling
- improving transport connections across the District.



### Action 8

#### Collaborate to deliver the Western Sydney City Deal

The NSW Government, the Australian Government and eight local councils are collaborating to deliver the Western Sydney City Deal.

It will be accompanied by a draft Structure Plan that will indicate potential land uses for the Western Sydney Airport Priority Growth Area.

The Western Sydney City Deal will be an implementation plan for the Western Parkland City, and will have commitments to be delivered over a 20-year timeframe in the domains of connectivity, jobs for the future, skills and education, liveability and environment and housing.

The different levels of government are to finalise the Western Sydney City Deal.

## Objective 21

### Internationally competitive health, education, research and innovation precincts

Universities, hospitals, medical research institutions and tertiary education facilities are significant contributors to Greater Sydney's economy. By 2036, 21 per cent of all jobs in Greater Sydney are projected to be in the health and education sectors, up from 19 per cent today.

Planned investment in major health facilities at Westmead, Nepean, Campbelltown, Randwick and the Northern Beaches is more than \$3.58 billion, creating significant local opportunities for direct jobs and growth in ancillary services. Housing location and choice for key workers and students are also important considerations and become economic infrastructure.

In addition to these current investments the NSW Government has identified the need for future a hospital in the north west.

For this draft Plan the health and education precincts are identified in Figure 36. It is anticipated that over time some additional health and education precincts have the potential to emerge. Related tertiary education is an important element for emerging health and education precincts.

Greater Sydney's health and education precincts are drivers of export services. In 2016, NSW had the highest number of overseas student enrolments in Australia, with 106,000 enrolments in higher education and 139,000 enrolments in vocational and English language courses.<sup>28</sup>

International enrolments are growing at a faster rate than domestic enrolments. As a result, education is the largest export service industry in NSW. New campuses are continuing to open – Western Sydney University has expanded into Greater Parramatta and is expanding into Liverpool. University of Wollongong has a campus in Liverpool, with commitments for a new facility.

Health care is provided through a comprehensive network of services across Greater Sydney ranging from large principal referral hospitals providing highly complex emergency and planned services, through to care in people's homes and community health centres. It includes ambulance services, population health and preventative services, mental health, primary care including general practice, allied health services, pharmacy, dental and residential aged care. There is a wide range and diversity of services delivered by different levels of Government as well as the private and not-for-profit sectors.

Integration across all services is pivotal to efficient and effective delivery of health care. The acute hospital system on its own cannot meet the changing needs of the community where people are living longer, often with chronic and complex healthcare needs, including mental illnesses. The challenge is to develop models of care, partnerships across the health sector, funding streams, new workforce models and eHealth solutions to create the connected healthcare system that is needed now and for the future.

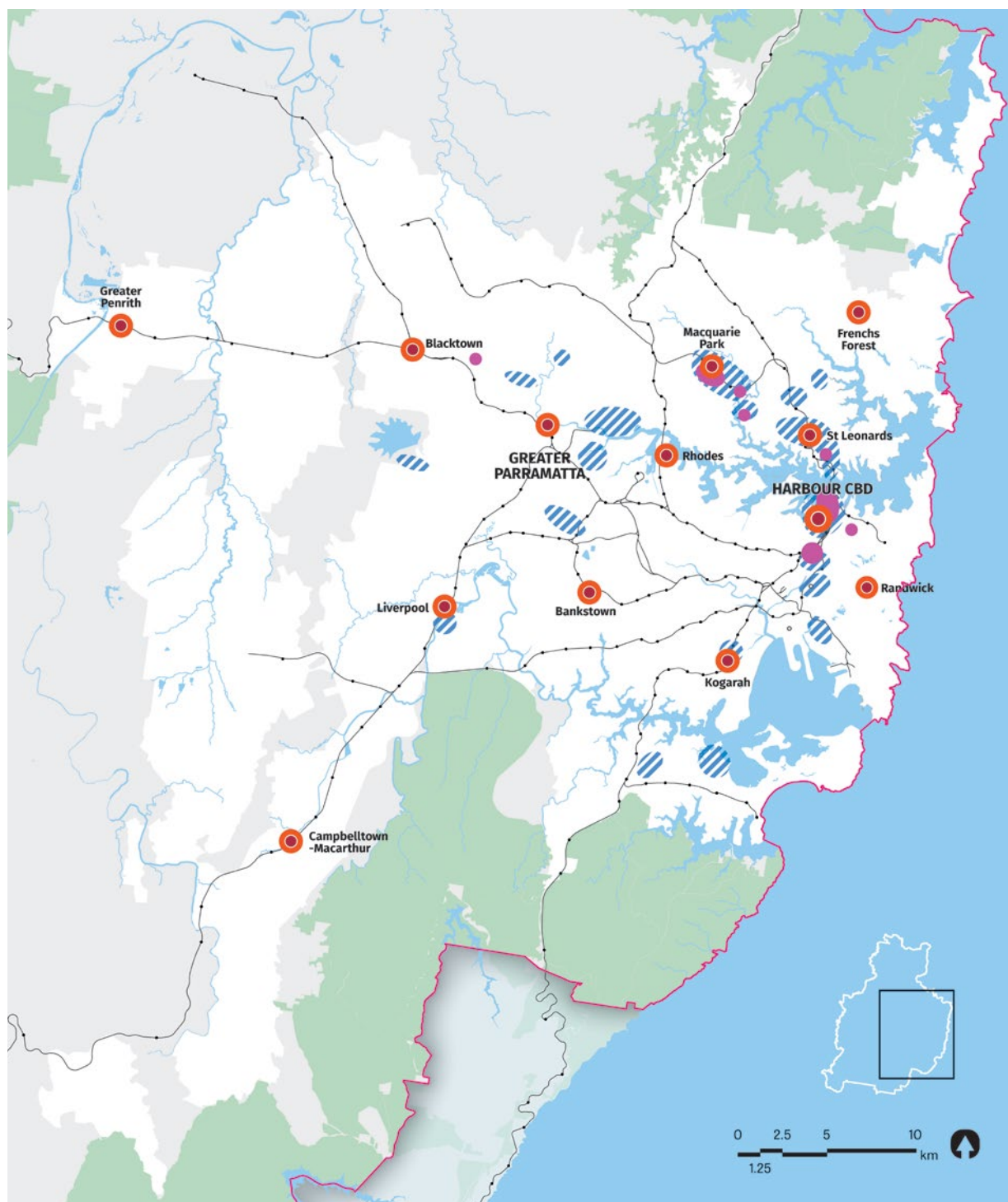
*There are three key stakeholders in the development of health and education precincts – government, academia and industry.*

Technology is being used to support the healthcare system as it changes and evolves, by embedding eHealth into everyday models of care that help link patients, service providers and communities in a connected, smarter healthcare system. eHealth and other technologies will enable a stronger approach to delivery of care in the home, leading to different approaches to accessing and delivering health care.

In Greater Sydney, health and education precincts offer the opportunity to both drive and support the capability to achieve international competitiveness.



Figure 36: Health and education precincts



<span style="color: pink;">—</span> Region Boundary	<span style="color: orange;">●</span> Health and Education Precinct	<span style="background-color: lightgrey;"> </span> Metropolitan Rural Area
<span style="color: purple;">●</span> Biotechnology Clusters	<span style="color: blue;"> </span> Waterways	<span style="border: 1px solid black; border-radius: 50%; width: 10px; height: 10px; display: inline-block;"></span> Urban Area
<span style="background: repeating-linear-gradient(45deg, transparent, transparent 2px, blue 2px, blue 4px); width: 10px; height: 10px; display: inline-block;"></span> Pharmaceutical Clusters	<span style="background-color: green;"> </span> Protected Natural Areas	

The health and education precincts will effectively connect the community's healthcare services, education and digital economy infrastructure. The precincts, together with the Government's initiatives to implement alternatives to hospital-based models of care, improve system integration, reduce variation in care, and implement preventative health measures. They will deliver strong social, environmental and economic benefits to the community.

## From health and education precinct to Innovation District

The most successful health and education precincts are more accurately described as Innovation Districts.<sup>29</sup> These Innovation Districts are transit-accessible precincts with an active ecosystem that includes health and education assets, surrounded by a network of medical research institutions, a mix of complementary industry tenants, housing, ancillary facilities and services. Economic productivity is created by the agglomeration benefits flowing from an active innovation ecosystem.

A benchmarking study indicates that the evolution of health and education precincts follow a Maturity Pathway. As precincts evolve, the economic productivity of the precinct increases substantially. This corresponds to three general models, which become progressively more complex: Clusters, Precincts and Innovation Districts. This Maturity Pathway and the corresponding models is shown in Figure 37.

The identified health and education precincts are at different points along the Maturity Pathway and therefore need differing responses (refer to Figure 38). To be truly internationally competitive and achieve sufficient critical mass, it is not expected that all precincts should or will be able to develop into an Innovation District.

There are three key stakeholders in the development of health and education precincts – government, academia and industry. The role of these key stakeholders changes over time:

- **Government:** heavy initial investment in hospitals and infrastructure, with ongoing planning and policy support as precincts mature

- **Academia:** initial research collaboration or satellite training campus, expanding to a multi-disciplinary university campus which is co-located with the hospital and supports specialisation and innovation
- **Industry:** (anchor institutions) initial establishment of medical research institute with organic 'medtech' growth, supported by accelerators and venture capital firms – ultimately creating an active innovation ecosystem.

The governance of health and education precincts may involve a Collaboration Areas approach. Collaboration Areas provide a governance and policy framework to coordinate place-based innovation and investment.

Governance arrangements for Collaboration Areas will vary from precinct to precinct but will usually be formed around the following principles:

- **Government:** strategy setting and infrastructure coordination
- **Anchors:** asset owners and operators with long term investment plans
- **Precinct-shaping projects:** projects involving one or more of the anchors aligned to deliver against broader precinct objectives.

## Strategy 21.1

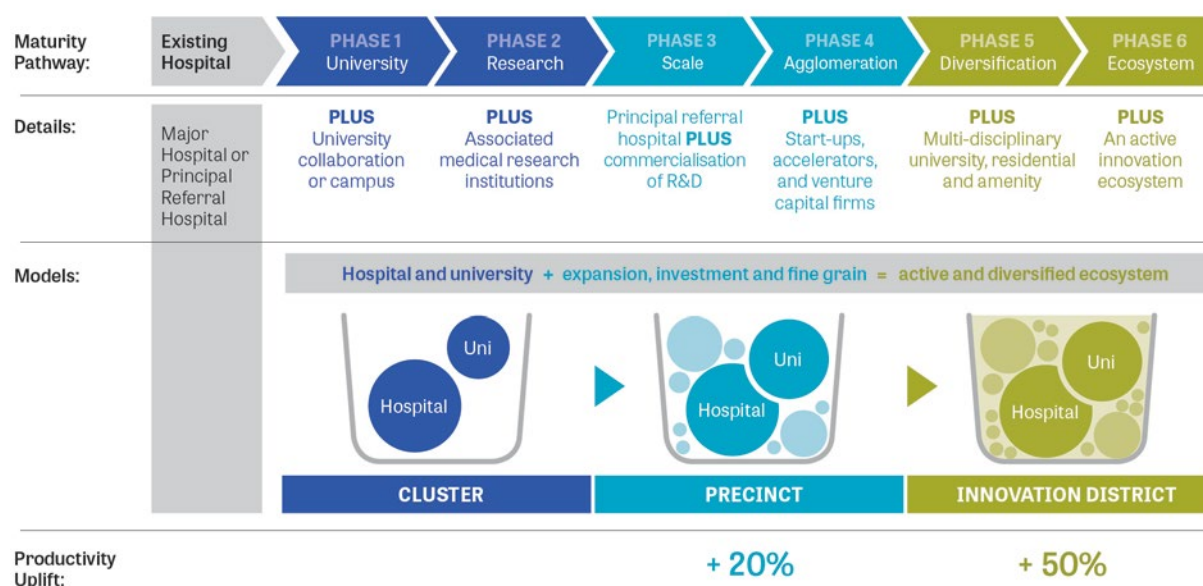
Develop and implement land use and infrastructure plans for health and education precincts that:

- create the conditions for the continued co-location of health and education facilities, and services to support the precinct and growth of the precincts
- have high levels of accessibility
- attract associated businesses, industries and commercialisation of research
- facilitate housing opportunities for students and workers within 30 minutes of the precinct.

## Major Hospital expenditure




- Westmead Redevelopment, Stages 1A, 1B & The Children's Hospital – \$900M
- Nepean Redevelopment – \$550M
- Campbelltown Hospital Redevelopment, Stage 2 – \$632M
- Blacktown & Mount Druitt Hospitals Redevelopment, Stages 1 & 2 – more than \$700M
- Northern Beaches Health Service Redevelopment – \$600M
- Randwick Campus Redevelopment – \$720M
- Concord Hospital Redevelopment – \$341M
- Hornsby Ku-ring-gai Hospital Redevelopment, Stage 2 – \$200M
- St George Hospital Redevelopment – \$277M
- Sutherland Hospital Redevelopment – \$62.9M

**Figure 37:** Maturity pathway for health and education precincts



Source: Deloitte 2016<sup>30</sup>

**Figure 38:** Characteristics of selected health and education precincts

Camperdown/Ultimo	Liverpool	Randwick	Westmead
 <b>Health</b>			
Royal Prince Alfred Hospital	Liverpool Hospital	Prince of Wales Hospital	Westmead Hospital
	Sydney South West Private Hospital	Sydney Children's Hospital	Children's Hospital
		Prince of Wales Private Hospital	Cumberland Hospital
		Royal Hospital for Women	Westmead Private
 <b>Education</b>			
University of Sydney	TAFE Liverpool	UNSW	Western Sydney University – Paramatta Campus
University of Technology Sydney	<i>Opening 2018</i> Western Sydney University – Liverpool Campus	TAFE Randwick	Western Sydney University – Westmead Campus
TAFE Ultimo	<i>Students commence in 2018</i> University of Wollongong – Liverpool Campus		Western Sydney University – Westmead Campus
University of Notre Dame	Liverpool Hospital <i>principal teaching hospital for Uni. of NSW and Western Sydney Uni.</i>		
University of Sydney – Rozelle Campus			
 <b>Research</b>			
<ul style="list-style-type: none"> <li>• Baird Institute</li> <li>• Brain and Mind Research Institute</li> <li>• Heart Research Institute</li> <li>• Centenary Institute of Cancer – Medicine and Cell Biology</li> <li>• George Institute for Global Health</li> <li>• Woolcock Institute of Medical Research</li> <li>• Sydney Research</li> </ul>	<ul style="list-style-type: none"> <li>• Ingham Institute for Applied Medical Research</li> <li>• South Western Sydney Clinical School</li> <li>• Research and Ethics Institute</li> </ul>	<ul style="list-style-type: none"> <li>• The Kirby Institute</li> <li>• Scientia Clinical Research</li> <li>• Lowy Cancer Research Centre</li> <li>• The Bright Alliance</li> <li>• Translational Cancer Research Network (TCRN)</li> <li>• Children's Cancer Institute of Australia (CCIA)</li> <li>• National Drug and Alcohol Research Centre (NDARC)</li> <li>• The Ageing Research Centre</li> <li>• Prince of Wales Medical Research Centre</li> <li>• Black Dog Institute</li> <li>• Eastern Health Clinic</li> <li>• NeuRa (Neuroscience Research Australia)</li> <li>• SEALS North, Randwick Campus</li> <li>• Southern Radiology, Randwick Neuroscience Building</li> <li>• Southern Radiology Nuclear Medicine</li> </ul>	<ul style="list-style-type: none"> <li>• Children's Medical Research Institute Australia (CMRI)</li> <li>• Clinical Research Centre</li> <li>• Westmead Institute for Medical Research</li> <li>• Crown Princess Mary Cancer Centre</li> </ul>

## Objective 22

### Investment and business activity in centres

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Greater Sydney continues to benefit from the policy of locating major centres on rail corridors, particularly following decisions in the 1960s to co-locate major retail centres at rail based centres. The benefits of well-connected centres include:

- Jobs are closer to homes – today 10 suburban centres have more than 20,000 jobs, providing a strong polycentric centres foundation on which to build a metropolis of three cities.<sup>31</sup>
- The public transport network is more effective and efficient.
- Businesses are connected to a large skilled workforce.

These benefits maximise opportunities to attract higher density and higher amenity residential developments, which in turn enhance the vibrancy of centres and support walkable neighbourhoods. Walkable neighbourhoods require infrastructure including walking paths on each side of the road, pedestrian crossings, wayfinding, lighting, shading and natural surveillance.

As Greater Sydney grows towards 8 million people over the next 40 years there will be a need to grow existing centres and develop new ones. This draft Plan emphasises that all centres are important. The 2015 retail audit identified over 1,394 centres across Greater Sydney ranging from the Harbour CBD with nearly half a million jobs across multiple precincts to local centres with a small cluster of shops.<sup>32</sup> To maximise the liveability, productivity and sustainability benefits of all centres, a targeted approach will focus on:

- managing and expanding the network of existing centres
- planning and growing new centres
- delivering walkable, accessible and high-amenity centres
- facilitating innovation in retail operations.

### New delivery approach

The draft Plan seeks to grow centres across Greater Sydney. It importantly proposes two new metropolitan-scale approaches for delivering the intended outcome. They are:

- the Western Sydney City Deal which will, among other things, facilitate the growth of the four centres which make up the metropolitan city cluster for the Western Parkland City (refer to Objective 20)
- the Commission's Collaboration Areas as an approach to delivering whole-of-government place-based outcomes (refer to Objective 5).

### Managing a network of centres

As Greater Sydney grows, it is important to provide clarity on the expectations of where growth should occur and the role of governments in supporting that growth. With all centres being different, the objective is to build on their individual strengths within a common framework. These differences mean that the importance of centres in delivering on the wider productivity and liveability objectives for Greater Sydney also varies depending on the activity mix, scale and location of individual centres. In this context to grow jobs across Greater Sydney and improve communities' access to goods and services, this draft Plan simplifies existing approaches to establish a three-level hierarchy of centres. They are metropolitan, strategic and local centres.

The provision of infrastructure, specifically transport, health and education infrastructure, can significantly influence the contribution that centres make and their importance at a local, strategic or metropolitan level. There is an important temporal aspect to the evolution of centres, especially as from east to west across Greater Sydney centres can be seen to change from mature evolving centres, through developing and growing, to emerging and growing.

The status of centres, in terms of the hierarchy, needs to be reviewed with each review of the *Greater Sydney Region Plan*.



## Metropolitan city centres

Growing the global competitiveness of Greater Sydney is fundamental to the vision of a metropolis of three cities. Underpinning this objective are two metropolitan city centres and a metropolitan city cluster which will drive productivity outcomes. These are:

- metropolitan city centres
  - Harbour CBD
  - Greater Parramatta
- metropolitan city cluster
  - Western Sydney Airport and Badgerys Creek Aerotropolis (to be developed over the life of the Plan)
  - Liverpool
  - Greater Penrith
  - Campbelltown-Macarthur.

This draft Plan affirms the economic significance of these places. They will continue to be a major focus of NSW Government investment, and as such are identified as metropolitan city centres. The focus for these centres will be on delivering very high levels of development with high levels of amenity.

They are central to delivering a well-connected city – a 30-minute city – where transport investments will improve the ability of residents to access the large number of diverse jobs. For the foreseeable future in the Western Parkland City, the focus will be on improving access to Liverpool, Greater Penrith and Campbelltown–Macarthur as the centres forming the Western Parkland City.

## Strategic centres

Creating opportunities to attract investment, business activity and jobs in centres across Greater Sydney will rebalance the opportunities of the community to access to jobs and services close to home.

There are 34 centres (refer to Figure 39) where the mix of activities, size and location enable the community to access a wide range of goods, services and jobs. They also reinforce the success of the three cities. Considering their attributes, this draft Plan identifies them as strategic centres.

Each of the strategic centres differs in scale and opportunities to provide jobs and services. For example, only a few have major commercial precincts. Others such as Leppington, Frenchs Forest, Marsden Park and Narellan have significant opportunities to grow driven by population growth or new infrastructure.

However, as strategic centres, expectations for all are similar, including:

- high levels of private sector investment
- flexibility, so that the private sector can choose where and when to invest
- co-location of a wide mix of land uses, including residential
- high levels of amenity and walkability
- areas identified for commercial uses, and where appropriate, commercial cores.

*Job targets are an important tool for investment and business growth.*

The NSW Government will enhance public transport access to strategic centres as part of the 30-minute city – that is 30-minute access by public transport to the nearest strategic centre seven days a week to access major retail, entertainment and other needs. This will improve both productivity and liveability.

In recognition of the differing opportunities and scale of the strategic centres, the NSW Government will prioritise infrastructure investment to:

- unlock significant private sector investment
- attract businesses and provide a range of services
- improve the attractiveness of the centres as a place to live, work and enjoy and provide community services
- allow continued expansion to increase the number of jobs close to where people live.

The Commission will explore opportunities to enhance initiatives which deliver jobs and investment in strategic centres. With a need to create 817,000 jobs over the next 20 years to 2036, job targets are seen as an important tool in driving opportunities for investment and business growth. District plans will include job targets for all metropolitan city and strategic centres. To support job targets the draft Plan has a jobs growth metric, (refer to Objective 40).

To deliver on this approach, strategic plans need to outline how the opportunities identified above can be delivered, including determining the infrastructure required to enable jobs growth and the planning regime to support this. Research indicates that the barriers which need to be addressed to unlock the economic potential of centres include:

- land fragmentation
- restrictive planning controls
- accessibility
- amenity.<sup>33</sup>

## Local centres

The remainder of centres across Greater Sydney have been classified as local centres. Local centres are important for people to access day-to-day goods and services.

Approximately 200 local centres have a supermarket. Supermarket based local centres are important in facilitating walkable communities. Increasing the level of residential development within walking distance of centres with a supermarket is an important liveability outcome.

Supermarket based centres also have an important role in providing local employment. They account for close to 18 per cent of all of Greater Sydney's jobs (Census 2011).

The management of local centres is predominantly led by councils. Considerations for a local hierarchy of centres within this classification should be informed by a strategic planning process at a local level including an assessment on how the proposed hierarchy influences decision-making for commercial, retail and other uses.

## Commercial office precincts

The majority of Greater Sydney's stand-alone office market is located in nine centres:<sup>34</sup>

- Harbour CBD – including North Sydney
- St Leonards
- Chatswood
- Macquarie Park
- Norwest
- Greater Parramatta
- Sydney Olympic Park
- Rhodes
- Green Square-Mascot.

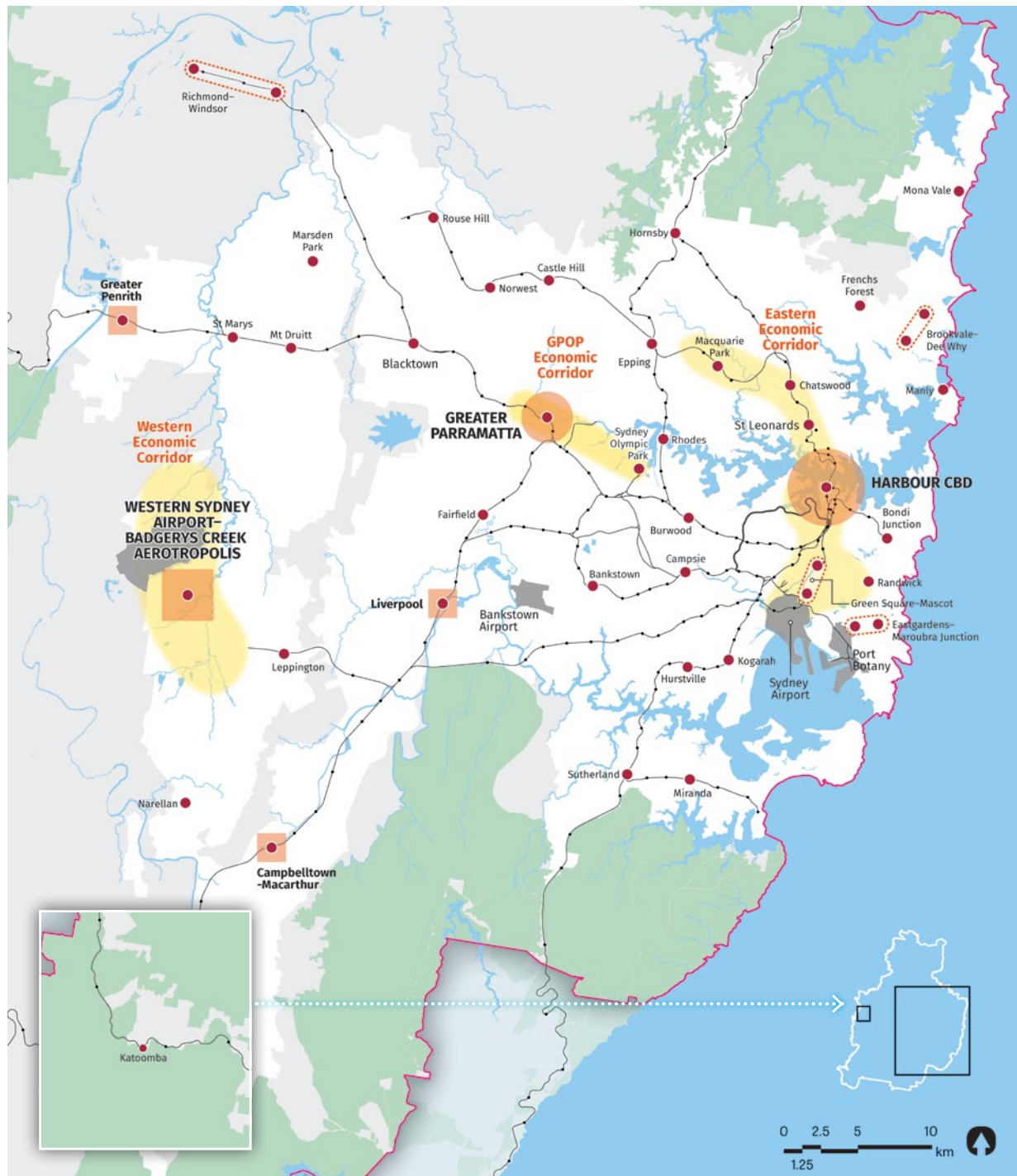
Greater Sydney's office market reveals an overflow market influenced by property and economic cycles where development opportunities are influenced by the availability of sites, planning settings, critical mass (perception of a precinct, generally seen to be 100,000m<sup>2</sup> of office floor space); access to labour and employers, proximity to health, education and legal activities, and government support.<sup>35</sup>

The importance of metropolitan and strategic centres as locations that support knowledge, health and education jobs is reflected in their increased share in the proportion of total jobs for Greater Sydney from approximately 41 per cent to 50 per cent between 1996 and 2011.

## Interchanges

*Future Transport 2056* identifies the importance of transport interchanges as places which will have a high level of accessibility as service times are improved. There will be potential for interchanges to deliver mixed-use, walkable centres and neighbourhoods. Councils will be encouraged to consider whether the local conditions of these interchanges warrant their becoming more substantial and potentially places which could be classified as strategic centres.

Figure 39: Metropolitan and strategic centres



Region Boundary	Urban Area	Economic Corridor
Waterways	Metropolitan City Centre	Trade Gateway
Protected Natural Areas	Metropolitan City Cluster	Train Station
Metropolitan Rural Area	Strategic Centre	

## Strategy 22.1

Provide access to jobs, goods and services in centres by:

- attracting significant investment and business activity in strategic centres to provide jobs growth
- diversifying the range of activities in all centres
- creating vibrant, safe places and quality public realm
- balancing the efficient movement of people and goods with supporting the liveability of places on the road network

- improving the walkability within and to the centre
- completing and improving a safe and connected cycling network to and within the centre
- improving public transport services to all strategic centres
- creating the conditions for residential development within strategic centres and within walking distance, but not at the expense of the attraction and growth of jobs, retailing and services; where appropriate, strategic centres should define commercial cores informed by an assessment of their need.



### Useful links:

- BIS Shrapnel, 2015, Forecasting the Distribution of Standalone Office Employment across Sydney<sup>36</sup>
- Urbis, 2016, Sydney Strategic Centres Barriers to Growth<sup>37</sup>
- Hill PDA, 2015, Strategic Centres Enabling Economic Growth and Productivity<sup>38</sup>



### Action 9

**Facilitate whole-of-government place-based outcomes through Collaboration Areas for targeted strategic centres, including Liverpool, Greater Penrith and Randwick**

The Commission will coordinate the established governance arrangements and drive the delivery of place-based outcomes.



## Opportunities for new centres

As Greater Sydney's population grows over the next 20 years, there will be a need for over five million square metres<sup>39</sup> of additional retail floor space and new office precincts. For Greater Sydney to remain competitive the market needs to be able to deliver this floor space in an efficient and timely manner. Numerous regulatory reviews across Australia have emphasised this issue.

There will be a need to grow existing centres, particularly strategic centres and supermarket-based local centres, create new centres including business parks and attracting health and education activities into centres. The principles for developing new centres are outlined below:

- **Existing centres:** Expansion options will need to consider building heights and outward growth. In some cases, directly adjacent industrial land may be appropriate for centre expansions to accommodate businesses. Quality design and adequate infrastructure provision will be critical to enable expansion. This approach needs to be informed by local government industrial strategies.
- **New centres:** These will be required across the whole of Greater Sydney.
  - In land release areas, this will include a range of centre types, including local and large centres which will grow and evolve into new strategic centres.
  - In land release areas, strategic plans should maximise the number and capacity of centres on existing or planned mass transit corridors. To deliver this outcome centres need to be identified early to allow their incorporation into transport infrastructure plans.
  - In the Western Parkland City, where South Creek is to be planned as the central organising element for the city, opportunities for new centres to address South Creek are to be maximised.
- In established areas, there are likely to be innovative approaches to creating new centres as part of urban renewal and mixed-use developments.
- All new centres are to have good public transport commensurate with the scale of the centre.
- **Business parks:** Not all centres will start as retail centres. Creating jobs and providing services to local communities can be initiated within business parks. However, the built form of these business parks is critical – that is, they need to be developed as urban places which can transition into higher amenity and vibrant places while maintaining their main role as an employment precinct. Councils' retail and employment strategies should provide guidance on the transition of business parks into mixed employment precincts including where appropriate ancillary residential to support the business park.
- **New health and tertiary education facilities** such as hospitals and community health centres: These should be located within or directly adjacent to centres, and ideally co-located with supporting transport infrastructure. Built form is also critical to facilitate the transition of centres with health and education uses into more mature innovation precincts (refer to Objective 21).

In all cases delivering centres that create walkable neighbourhoods is a high priority, and in this context additional centres which improve walkability are encouraged.

Land use and infrastructure plans inform decisions for the location of new centres and the expansion of existing centres.



Where there is a prevalence of retail in an industrial area, there may be exceptional cases to support the development of a new centre. Any such opportunities should be informed by a net community benefit test supported by a strategic review of centres (which identifies the need for the centre) and an industrial land review (which identifies that the loss of industrial activity can be managed) for the local government area. These reviews are to be prepared by councils, and endorsed by the Commission. The centre should be:

- located where public transport services are commensurate with the scale of the centre
- directly opposite a residential catchment accessible by a controlled pedestrian crossing
- more than a stand-alone supermarket
- of quality urban design with amenity, informed by a master plan
- supported by planned and funded infrastructure commensurate with the needs of the centre.

For new centres in industrial areas, the economic impact of the centre should be assessed and deemed to have an acceptable impact on the operation of existing businesses in the locality and the viability of surrounding centres.

## Strategy 22.2

Create new centres in accordance with the stated principles in the draft Plan.

### Useful link:

- Deep End Services, 2016, Sydney Retail Demand and Supply

## Enable innovations in retail operations

Over the past few decades, the retail industry has been affected by a broad range of trends and new technologies. In 2016, Australians spent an estimated \$21 billion on online retail with NSW contributing 34.9 per cent of this, well ahead of Victoria (23.7 per cent), Queensland (18.2 per cent) and Western Australia (11.2 per cent).<sup>40</sup>

Online retail remains a relatively small proportion of spending on bricks and mortar retail compared to other countries at 7.1 per cent in 2016.<sup>41</sup> However, Australia's adoption of consumer technology, increasing desire for innovative experiences, and the rise of online-only stores such as Amazon and Alibaba, has retailers reviewing their store formats, improving their online presence and in some cases significantly reducing their retail floor space.

While physical shop fronts will continue to play an important role, their functions and purpose will change depending on the market capacity to adopt new technology and digital platforms.

This technological transformation will go beyond improvements to the online shopping experience. The digital economy will change the way retailers obtain and use market intelligence, how they manage stock and deliver products, how they communicate with suppliers and respond to customers, and the type of physical space they need.

The future of retailing will have as yet unknown impacts on planning for cities. However, ongoing considerations for planning include:

- protection of urban services land that provides just-in-time logistics supply chains to support future retail in centres and deliveries
- the adaptation or re-use of existing urban forms such as car parking
- public domain design measures that enhance centre activation and vibrant street life.

## Strategy 22.3

Engage with the retail sector on its changing planning requirements and update planning controls as required.

## Objective 23

### Industrial and urban services land is planned, protected and managed

Much of Greater Sydney's manufacturing wealth is created on industrial and urban services land, 74 per cent of which is located in the Central City and Western City Districts. Across Greater Sydney, 19 per cent of all jobs are on industrial and urban services land<sup>42</sup> yet only eight per cent of developable land in Greater Sydney does not permit residential uses.

The range of activities in industrial areas varies from manufacturing and advanced manufacturing, to freight and logistics to urban services such as motor vehicle services, printing, waste management, courier services and concrete batching plants.

The importance and scale of the freight and logistics sector (refer to Objective 16) has grown in line with:

- increased imports of goods which are no longer manufactured in Australia
- the establishment of national distribution networks
- automation in the warehousing of goods
- the impacts of online retailing
- the rise of 'white van' delivery services.

The NSW Department of Planning and Environment monitors changes in industrial land supply and annually publishes its findings in the *Employment Lands Development Monitor*. A summary of existing supply across Greater Sydney showing the main activities in each district is outlined in Table 4.

While the table shows 2,927 hectares are undeveloped, discussions with industry identify that much of this land is not serviced. At the current rate of development, Greater Sydney only has two to three years of serviced industrial land supply.

**Table 4:** Zoned employment land stocks by district at January 2016

District	Hectares			Activity Mix
	Undeveloped	Developed	Total	
<b>Eastern City</b>	45	1,455	1,500	Manufacturing and Retail Trade are the dominant industries, followed by Professional and Scientific Services, other Wholesale Trade and Health Care.
<b>North</b>	40	531	572	Other industrial profiles are evenly distributed throughout the North District's precincts, due to the lack of major precincts.
<b>South</b>	141	1,521	1,663	Manufacturing dominates the South District's urban services precinct with a relatively even distribution of other industries behind it.
<b>Western City</b>	1,411	3,792	5,203	Urban services followed by manufacturing and Health Care and Social Assistance. Other industries are relatively evenly distributed.
<b>Central City</b>	1,290	3,349	4,639	Manufacturing is by far the most dominant non-Urban Services industry across Central City District's precincts, with Wholesale Trade second, although with far less prevalence.
<b>Total</b>	<b>2,927</b>	<b>10,648</b>	<b>13,577</b>	

Source: NSW Department of Planning and Environment, *Employment Lands Development Monitor*

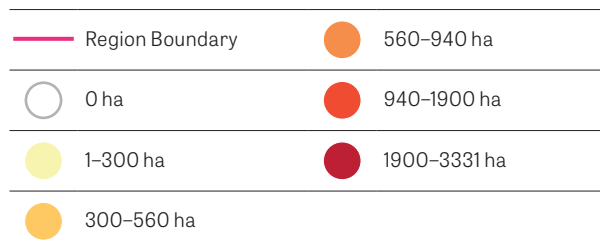
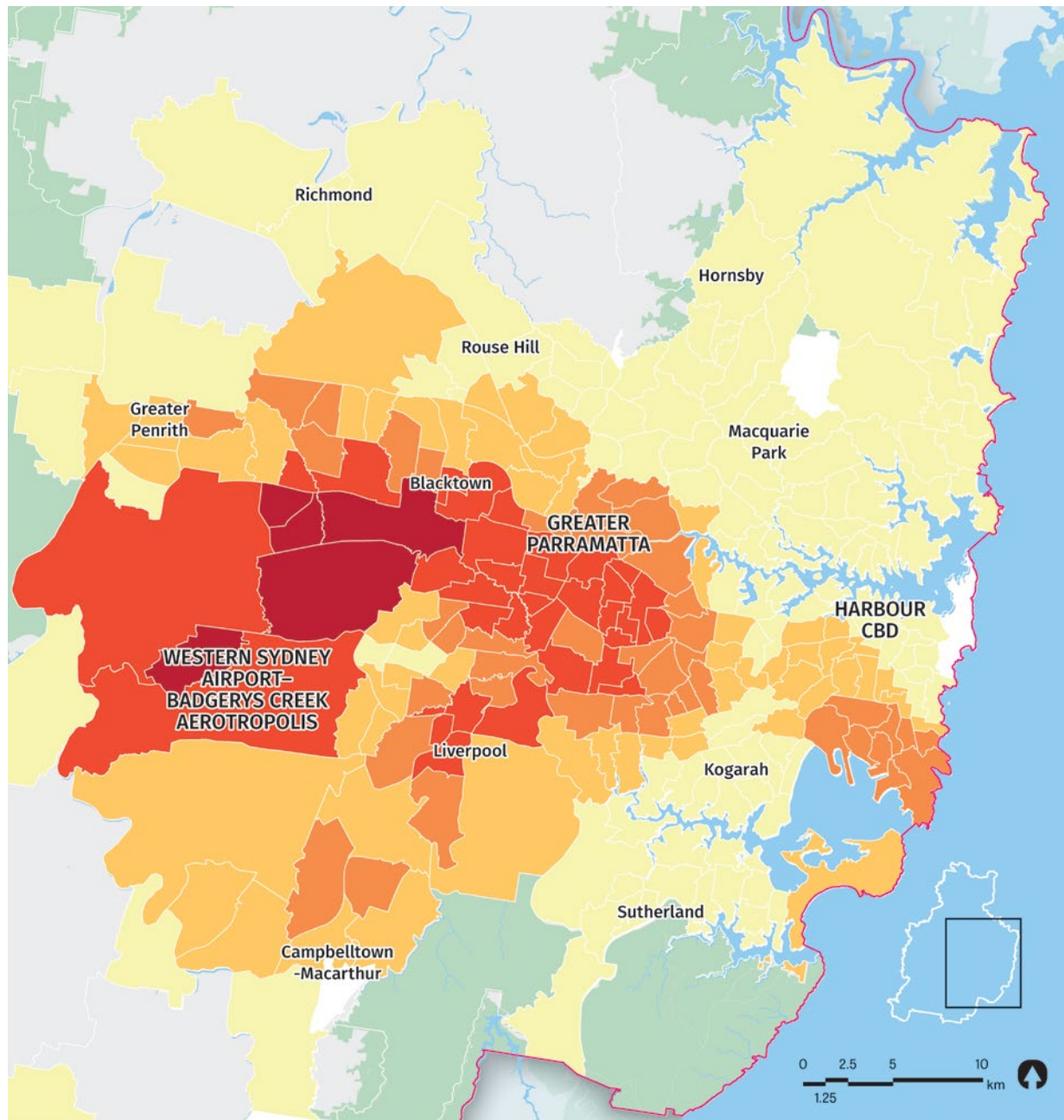
## Industrial and urban services land supply

This draft Plan's approach to managing industrial and urban services land considered several issues:

- The nature of industrial activities and their locational needs:
  - Manufacturing and freight and logistics activities are often more flexible in regard to preferred location, influenced by the availability of large, lower priced sites with very good access to transport networks, specifically motorways, major arterial roads, the freight rail network, intermodal terminals, ports and airports. Therefore, they are often found on the fringe of cities and around trade gateways.
  - Urban services often serve local communities and businesses, therefore they locate closer to their markets, including residential areas and commercial centres.
- In the past, industrial land in the Eastern Harbour City experienced substantial conversions to mixed-use residential zoning, much of which is being developed in response to unprecedented demand for residential supply. While some of these land use changes meet longer-term growth and productivity requirements, the provision of services and jobs close to business and where people live are considered as critical to Greater Sydney's productivity.
- Buffers to protect the operations of various industries (including concrete batching plants, waste handling facilities, freight activities) should not be compromised by encroachment from sensitive land uses like residential, which are impacted by noise, light and odours.
- High land values have been found to negatively impact on the amount of land per capita occupied by urban services. Therefore there is a need to provide a sufficient supply of industrial land and have a consistent policy position to keep downward pressure on land values.
- A review of industrial land adjacent to train stations, which are potential sites for conversion to residential development, reveals there are only a few remaining sites across Greater Sydney. Where industrial land is located adjacent to train stations, it is, in the main, part of large intact industrial precincts or directly linked to the freight rail network and therefore highly valuable industrial land.
- In the Eastern Harbour City, there are many smaller industrial precincts which have a higher than average proportion of urban services activities. Therefore while they may appear to be only a small part of the industrial land supply they are important for providing urban services and in some cases creative industries.
- In greenfield areas there is a need to consider the likely long-term population of the area, and therefore the need for land locally for urban services, as distinct from simply considering a 20-year population projection as the end state.
- Automation is driving the adaptation of buildings to accommodate high-bay automation, which requires building heights greater than existing buildings and current planning limits. Increased building heights are needed for the evolution of buildings in areas such as the Central River City, that have logistics functions linked to freight infrastructure networks.
- Manufacturing techniques are changing rapidly in response to technological and digital improvements creating new business models and advanced manufacturing. These changes may require a review of planning regulations which may be placing unnecessary barriers to the growth of advanced manufacturing.
- The currency and comprehensiveness of council studies and strategies that inform industrial and urban services land policy and planning controls varies by council.

Research prepared for the Commission has identified a benchmark requirement of three square metres of industrial land per capita and the need

**Figure 40:** Access to industrial land



Area (ha) of Industrial Lands in 5 km of SA2

Source: Derived from the NSW Department of Planning and Environment Employment Land Precincts 2016



Source: SGS 2017

to protect this minimum amount, as required, in each District.<sup>43</sup> The current and projected per capita levels for each district are outlined in Figure 40. Note that the per capita provisions in the Eastern Harbour City are already well below three square metres per capita; and while the Western Parkland City will benefit from the Western Sydney Employment Area, there may be a need to provide additional industrial and urban services areas across the extensive footprint of the Western City to accommodate significant levels of population growth which will occur beyond 2036. Whilst the Central River City currently exceeds this minimum benchmark, it too will experience significant population growth and these lands represent notable opportunities to transition to higher order employment, technology and advanced manufacturing uses.

## Protect, increase and enhance industrial and urban services areas

The protection and enhancement of industrial and urban services land should reflect the needs of each of the three cities providing a wide range of businesses that support the city's productivity and integrated economy (refer to Figure 41). Therefore, the Commission is recommending to the NSW Government that planning authorities should use the following approaches to manage industrial zoned land are (noting that these principles are not Government policy):

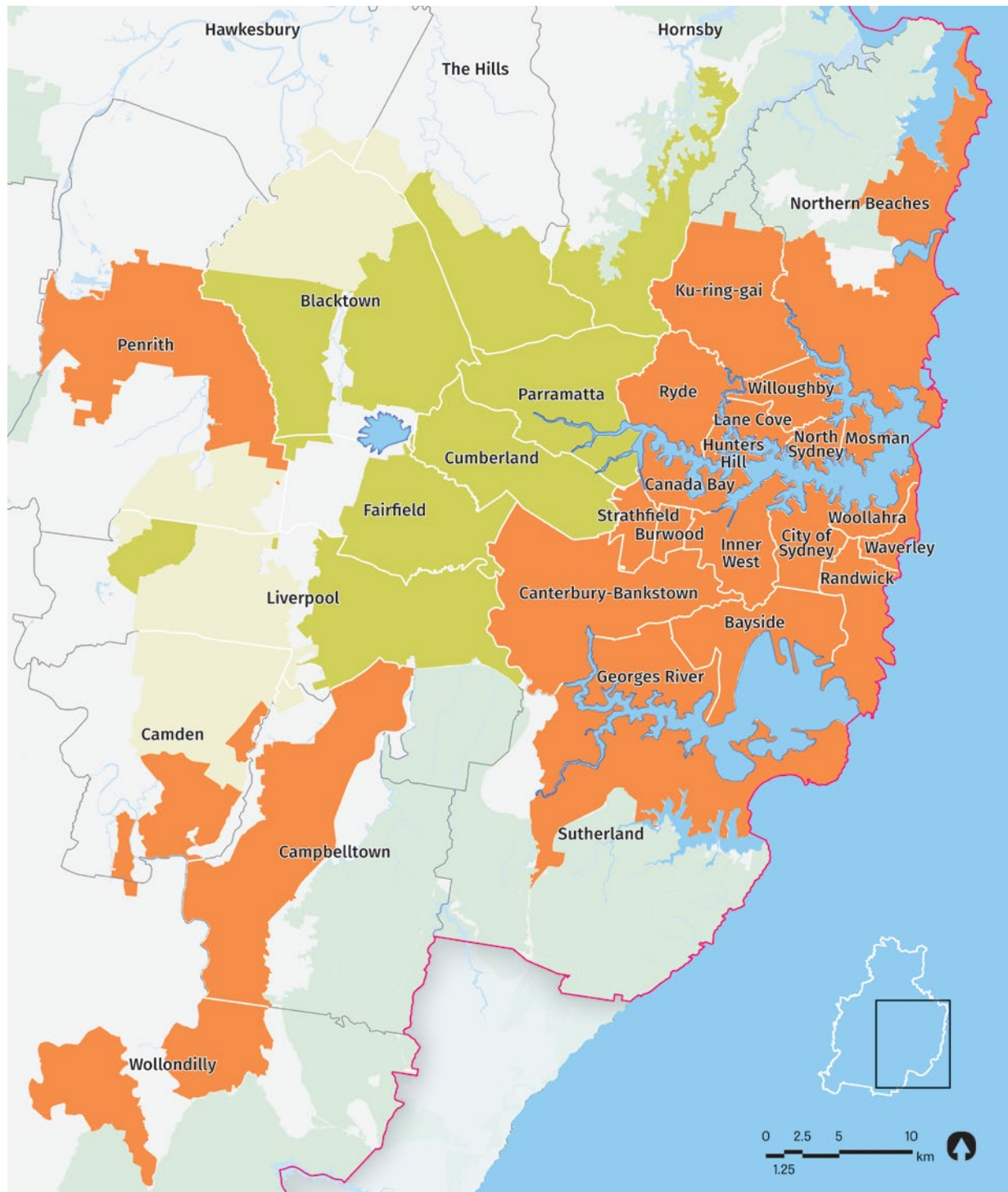
- **Eastern Harbour City:** Protect all industrial zoned land from conversion to residential development, including conversion to mixed-use zonings. In the context of retaining industrial and urban services activities there will be a need, from time to time, to review the list of appropriate activities within any precinct in consideration of evolving business practices and how they can best be supported through permitted uses in local environmental plans. Any review should take into consideration findings of industrial, commercial and centres strategies for the local government area and/or district.
- **Central River City:** Considering the levels of supply and the transformation occurring across this city, the Commission will undertake a review of all industrial land to confirm its protection or transition to higher order uses (such as business parks) and appropriate controls to maximise business and employment outcomes in light of the changing nature of industries in the area. In limited cases, where conversion to other uses is identified as appropriate to the needs of the city, the Commission will take a more tailored approach. Equally in some locations such as GPOP, specifically Camellia and Silverwater, the protection of industrial activities will be a starting objective. The Commission will collaborate with councils and seek input from stakeholders as part of the review.
- **Western Parkland City:** Parts of this city are well established and need to be protected and managed in similar ways to the Eastern Harbour City. However, owing to the substantial long-term projected population and development growth in greenfield areas there will be a need for additional industrial and urban services land. The Commission will work with the NSW Department of Planning and Environment and local councils as strategic plans are prepared to determine whether additional land is required. In considering the industrial lands needs of the Western Parkland City, the Western Sydney Employment Area is to be considered as a regional resource serving Greater Sydney.

### Strategy 23.1

Industrial land in the three cities is to be managed in line with the principles set out in this draft *Greater Sydney Region Plan*.



**Figure 41:** Industrial land approaches



<span style="color: red;">—</span> Region Boundary	<span style="color: green;">●</span> Protected Natural Area	<span style="color: orange;">●</span> Protect and Manage
<span style="color: blue;">●</span> Waterways	<span style="color: lightgrey;">●</span> Metropolitan Rural Area	<span style="color: limegreen;">●</span> Review and Manage
		<span style="color: yellow;">●</span> Plan and Manage

## Creating local employment opportunities

Stakeholder engagement to inform the draft Plan has emphasised the need to grow and diversify local employment opportunities. In the South District and Western City District, major stand-alone office precincts are largely absent, increasing the need for residents to travel longer distances to access a variety of jobs. A total of 10 locations account for 75 per cent of Greater Sydney's stand-alone development and they are in the Central, Eastern City and North Districts. This draft Plan proposes initiatives to facilitate the development of local office markets and therefore create a broader diversity of jobs close to home.

The objective is to create local office markets by supporting the consideration of offices as a permissible use in an industrial area. Delivering on this outcome is not seen as a first stop in transitioning an industrial area into, for example, a business park zone, nor is it about allowing retail to support the office activity. The decision to allow this outcome is to be council led. Delivering on this objective should not compromise the operations of existing industrial activities.

### Strategy 23.2

Consider office development in industrial zones where it does not compromise industrial activities in the South and Western City Districts.

#### Useful link:

- SGS, 2017, Sydney's Urban Services Land – Establishing a Baseline Provision



#### Action 10

#### Review industrial and urban services land in the Central River City and the South West and North West Priority Growth Areas

The Commission will undertake a review of all industrial and urban services land in the Central River City.

The review will be undertaken in close collaboration with councils and with industry input.

The review will confirm protection of industrial and urban services land and in limited cases their transition to higher order uses.

The Commission will work with the NSW Department of Planning and Environment to review the industrial and urban services land provision in the North West and South West Priority Growth Areas.

## Objective 24

### Economic sectors are targeted for success

The NSW Government is working closely with the Australian and local governments to drive key industry and economic development activities that will create a future where Greater Sydney has a highly skilled workforce that is able to access high-quality jobs in their local area. Key to the NSW Government achieving this vision requires:

- local jobs growth aligning with population growth, and jobs, skills and educational pathways that are increasingly available in resilient and productive knowledge-intensive sectors
- an increasing proportion of jobs and services that are more accessible as more high growth companies locate in Greater Sydney
- an increasing number of people choosing to live, work and visit a dynamic, vibrant, amenable and affordable Greater Sydney and spend their discretionary income in the local service economy and contribute to its cultural life.

Different economic sectors in Greater Sydney require targeted consideration. An important part of strategic planning is managing competing opportunities and protecting land values for activities that are fundamental to the overall

economy. This is required around a wide range of sectors, from the areas needed to undertake industries that build and grow the city, through to areas of agriculture that feed the city and the special places that attract visitors to Greater Sydney (refer to Table 5).

The majority of the NSW Government's initiatives to support sector growth apply to the whole of Greater Sydney, therefore each city. They include:

- Knowledge Hubs
- NSW Data Analytics Centre
- Jobs for NSW Funding Programs
- Jobs for Tomorrow Scholarship Program
- Sector Strategy Delivery
- Creative Industries Award
- Business Connect Advisory services and Easy to Do Business program
- NSW Government Western Sydney Industry Development Support Team
- Boosting Business Innovation Program
- Smart and Skilled Funding

**Table 5:** Key economic sectors by city

Eastern Harbour City	Central River City	Western Parkland City
Financial and professional services (including insurance and superannuation)	Advanced manufacturing (including defence industries)	Advanced manufacturing
Creative industries	Medical technology	Aerospace and defence industries
Information, communication and technology (including cyber security)	Tertiary education	Agricultural processing and export
Construction and infrastructure	Financial and professional services (including insurance, real estate)	Construction and infrastructure
Health and medical technology	Public / Government administration and safety	Transport and warehousing
Tertiary education	Health and health education	Visitor economy
Visitor economy	Visitor economy	Education and training

- Infrastructure Skills Legacy Program
- The Refugee Employment Support Program
- Skills for Small Business Program
- Western Sydney Procurement Toolkit
- StudyNSW
- Destination NSW Visitor Economy Strategy
- Investment attraction and Export Services
- Aboriginal Centre for Excellence.

A number of Government initiatives target specific cities. They are Launch Pad and Aerospace and Agriport precincts in the Western Parkland City and NSW Government's Decentralisation Program in the Central River City.

## Industry sector strategies

The NSW Department of Industry is leading the development and coordination of sector-specific industry development strategies to grow and globally position key sectors of the economy. Priority sectors are selected on their significant contribution to economic growth and jobs creation.

The NSW Government recognises that these sectors are important in fostering innovation in the development of highly-skilled jobs which drive productivity and global competitiveness.

The strategies are being developed in consultation with industry, government partners and other key stakeholders. They build on and leverage existing industry and government activities and plans, and focus on delivering high impact practical initiatives to drive sector growth through industry, academia and government collaboration.

Strategy initiatives are in the areas of:

- industry skills and capability building
- investment attraction
- export growth and facilitation
- industry showcasing and promotion
- opportunities through government procurement
- government and industry partnerships.

Strategies in development and to be delivered during 2017–18 are: cyber security; advanced

manufacturing; medical technologies; financial services; and creative industries. The NSW Government launched *Defence and Industry Strategy, NSW: Strong, Smart and Connected*, in February 2017. The strategy prioritises the defence industry as a key driver of growth and innovation across the State. It focuses on leveraging strengths in critical capability areas, future workforce, regional growth and increased opportunities for innovation, commercialisation and research.

The NSW Government is also committed to the development of key precincts to drive economic activity and job growth in Western Sydney:

### Westmead Precinct

The Westmead Precinct is currently the largest health hub in NSW. The Westmead Precinct is a priority for employment and business growth. The NSW Government will work with stakeholders to develop an integrated vision for the precinct and lead efforts to cluster health, education and research activities.

### Western Sydney Aerospace Precinct

The NSW Government, in partnership with the Australian Government, is leading the development of a world-class aerospace and defence industries precinct, adjacent to the Western Sydney Airport. The Precinct aims to create approximately 7,500 jobs and over \$15 billion of gross value add over the next 30 years.

## Cross-sectoral initiatives

### Boosting Business Innovation Program

The \$18 million *Boosting Business Innovation Program* is accelerating innovation in NSW by supporting greater collaboration between the 11 NSW universities and CSIRO, start-ups, and small to medium enterprises. The program has established a network of innovation spaces including incubators and maker spaces.

Through the Boost program, Western Sydney University is establishing an advanced manufacturing community of practice assisting early stage and established businesses to scale-up, through exposure to leading edge technologies in Western Sydney.

The Launch Pad is a business and innovation support program that provides facilities, assistance and resources for start-up and high-growth technology businesses in Western Sydney. Part of the Boosting Business Innovation Program is the *Tech Vouchers* scheme funds new research collaborations between small to medium enterprises (referred to as SMEs) and Western Sydney University.

### *Knowledge hubs*

The NSW Government established the *Knowledge Hubs* to drive collaboration between the Government and industry in five key sectors - financial services, medical technology, creative industries, transport and logistics, and energy and resources. Hubs in these priority industries deliver projects that build better collaboration and encourage economic growth. Each knowledge hub is a central point for people in an industry to collaborate and connect with the Government and universities.

### *Government procurement*

Through the Department of Industry, the NSW Government is connecting businesses to the procurement process for major infrastructure projects such as the WestConnex, Parramatta Light Rail, redevelopment of the Parramatta CBD, new public schools (Bass Hill, Oran Park, Spring Farm, Parramatta) and the Western Sydney Airport.

The *Western Sydney Procurement Toolkit* has been developed by the Australian and NSW Governments, AiGroup, RDA Sydney, Western Sydney Business Connection, Western Sydney Business Chamber, and ICN NSW partnership to assist business in Western Sydney. It will complement specialist NSW Government's Business Connect procurement advisory services.

### *NSW Data Analytics Centre*

NSW Government's Department of Finance, Services and Innovation has developed a boutique scholars' program for data science and analytics.

### *Jobs for Tomorrow scholarship program*

The NSW Government is investing \$25 million in 25,000 Jobs for Tomorrow scholarships in eligible science, engineering and technology (STE) related qualifications from 2016 to 2019.<sup>44</sup>

## **International investment attraction and export support**

NSW Trade & Investment helps develop industry sectors through international investment attraction, export support for NSW businesses and the promotion of NSW as a globally competitive, strong and agile economy.

In May 2017 *Competing Globally: NSW Trade and Investment Action Plan 2017-18* was released to provide a framework and pathway for growing the NSW economy. It is a whole-of-government plan that outlines practical actions to improve global competitiveness, focus efforts in areas of competitive advantage, engage effectively with priority markets and work collaboratively with partners.

These actions are supported and driven by an investment and markets team in Sydney, StudyNSW, an export team with strategic positions in the regions and a network of international trade commissioners and business development managers in the key markets of China, Japan, USA, UK, Korea, India, UAE, Singapore, Malaysia and Indonesia.

NSW Trade & Investment also works closely with domestic and international partners, including business chambers, industry bodies, not-for-profits and private enterprise on targeted sector events and investment activities.

NSW Trade & Investment launched an Export Capability Building Workshop Program at Parramatta in November 2016. The Program will include Introduction to Exporting and Advanced Exporting, Export awards and Skills events – eCommerce, Market and Sector Briefings and Networking, with the Export Council, NSW Business Chamber and Asialink. The Program will also include an Expert Advisor dedicated to Western Sydney.

## **Jobs for NSW programs**

The *Jobs for the Future* report, by Jobs for NSW, identifies 11 segments that NSW should target as part of its whole-of-government agenda to create 1 million new jobs in NSW by 2036. These are tradeable segments with the potential to be globally competitive and create additional, resilient jobs.



The segments are:

- international education
- financial and professional services
- regional headquarters of multinationals
- tourism
- start-ups and digital innovation
- food and other quality goods to Asia
- infrastructure and smart cities
- creative industries
- advanced manufacturing
- life sciences
- environmental technologies.

Together, these segments could deliver up to 43 per cent of jobs growth in the next several years, while representing only 28 per cent of current jobs.

Jobs for NSW is undertaking a range of strategic initiatives to support job creation and acceleration of the target segments through the \$190 million Jobs for NSW Fund. Jobs for NSW's support is particularly focused on the start-up sector, SMEs that are scaling, and companies developing new and innovative technologies. Jobs for NSW has a range of different financial products which it uses to directly fund businesses to grow and create jobs.

## Strategy 24.1

Consider the barriers to the growth of internationally competitive trade sectors including engaging with industry and assessing regulatory barriers.

## Supporting small business

The NSW Government's Small Business Strategy aims to make NSW the easiest place to start or grow a business.

Through the Easy to Do Business program, managed by the Department of Finance, Services and Innovation, the NSW Government has invested over \$15 million to create an online, one-stop shop for business customers, streamlining the way businesses transact with government, and cutting time and costs.

The \$30 million Business Connect business advisory program, managed by the Department of Industry, provides advice through a network of business advisors across NSW to support digital readiness and increase industry capabilities, to reach new markets and support business growth.

The NSW Government also provides opportunities for leading NSW companies to showcase their capabilities by trade shows at major industry events and shows.

*Eleven job segments could deliver up to 43 per cent of jobs growth in the next several years.*

In the **Eastern Harbour City**: mobile Business Advisors are based at Harbour CBD, Inner West, Randwick, Ryde, North Sydney and Northern Beaches. Specialist services include digital, creative industries, access to finance, disability sector, skills and disruption along the Sydney Light Rail construction route. The top three industries supported in 2017 have been Transport, Postal & Warehousing; Professional, Scientific & Technical Services and Retail Trade.

In the **Western Parkland City**: mobile Business Advisors are based at Katoomba, Narellan, Penrith and Springwood. Specialist services include digital, creative industries, access to finance, disability sector, skills and multicultural. The top three industries supported in 2017 have been Professional, Scientific & Technical Services; Retail Trade and Health Care & Social Assistance.

In the **Central River City**: mobile Business Advisors are based at Castle Hill, Fairfield and Parramatta. Specialist services include digital, creative industries, access to finance, disability sector, skills and multicultural. The top three industries supported in 2017 have been Professional, Scientific & Technical Services; Retail Trade and Health Care & Social Assistance.

The NSW Government has also developed a Western Sydney SME funding referral program that supports Western Sydney businesses to access appropriate NSW Government funding.

## Education and training

### *International Education Strategy*

StudyNSW collaborates with education institutions, industry and local government in Western Sydney on implementing programs that enhance the student experience for international students. Western Sydney University is a main provider of higher education in Central River City and Western Parkland City. Other campuses include University of Sydney (at Camden, Cumberland, and Westmead), Charles Sturt University (Parramatta) and University of Wollongong (Liverpool).

### *Training Services NSW*

Training Services NSW has three offices in Greater Sydney with responsibility for driving skill development to meet the needs of local employers. These are located at Chatswood covering Sydney north, CBD and east; Parramatta covering Sydney north west, west and Blue Mountains; and Bankstown covering Sydney south and south west. Training Services NSW is responsible for the implementation of funded programs, including Smart and Skilled, apprenticeships and traineeships, adult and community education and Aboriginal employment and business development.

### *Smart and Skilled funding*

This program is available to support full and part qualifications in the vocational education and training sector. Much of the expected expansion in Western Sydney will require people with these qualifications. Smart and Skilled funding can be used to prepare people for employment by providing foundation and basic technical skills. It can also be used to up-skill existing workers.

SkillsPoints are being established by TAFE NSW to deliver industry based training products and contribute to innovation to support the growth and development of the region.

### *The Infrastructure Skills Legacy Program*

This is a program to enable NSW to benefit from an employment and skill development outcome from the \$73.3 billion infrastructure investment. Targets have been set, as part of the tender

process for demonstration pilots for apprentices, learning workers, women in non-traditional pathways including trade occupations, Aboriginal participation, youth and local employment. Training Services NSW is working with a number of government agencies and principal contractors to embed the Infrastructure Skills Legacy Program targets in projects for Western Sydney. \$10 million over four years for project coordination state-wide has been allocated to the program.

### *The Refugee Employment Support Program*

This Refugee Employment Support Program supports refugees and asylum seekers into sustainable and skilled employment. It helps participants develop career plans and links them to employers, and assists with recognition of their overseas skills and qualifications, education and training. The program will assist up to 4,250 refugees and 1,000 asylum seekers across Western Sydney. \$22 million over four years has been allocated to this program.

### *Aboriginal Programs for Western Sydney*

Training Services NSW provides support for Aboriginal people in NSW. These programs include: Smart and Skilled, the Way Ahead Aboriginal Mentoring Services, Aboriginal Enterprise Development advisory services and the New Careers for Aboriginal People job brokerage service.

The Aboriginal Centre for Excellence is a \$20 million investment in a cultural and skills hub for Indigenous youth in the Western Sydney region. Western Sydney has a significant Aboriginal population and is also an area of significant population and economic growth. As well as providing opportunities for strengthening individual and community resilience this initiative will have a particular focus on ensuring that local Aboriginal people, particularly young people are equipped to seize opportunities stemming from this region's growth. A key objective of the facility will be to deliver programs and services that support Aboriginal young people making the transition from the school environment into further education and employment.

## Tourism

As Australia's prime international gateway, Greater Sydney welcomes around 3.75 million international visitors who stay 77.7 million nights and spend \$9.03 billion a year. The tourism industry contributed \$15.4 billion to the economy (4.7 per cent of Gross Domestic Product) and directly employed 74,300 people in 2014–15. Strong growth in the visitor economy is across all facets including business, leisure and visiting friends and family. Destination NSW has developed the Western Sydney Visitor Economy Strategy and will continue to secure and grow events in Western Sydney.

Visitors' experiences are shaped by major attractions and events and equally by the places they visit, the facilities available and how their needs are met. In the Eastern Harbour City, alongside iconic landmarks, beaches and harbour is the network of cultural institutions and conference centres. Linking business and leisure visits provides better experiences and has widespread benefits.

The Western Sydney Airport creates opportunities for the Western Parkland City to become an alternative to the Eastern Harbour City for international tourists with more affordable accommodation and attractions like the Greater Blue Mountains World Heritage Area, Aboriginal heritage, historic rural villages and scenic landscapes.

Alliances between councils and key industry stakeholders create opportunities to cross-promote events, develop and support a wider range of activities and importantly realise the opportunities as the Western Sydney Airport and Badgerys Creek Aerotropolis develops.

The Central River City tourism offer is multifaceted. Sydney Olympic Park is a major attractor, hosting sporting and cultural events, and investment in institutions which is set to increase with the Western Sydney Stadium, ANZ Stadium and the Museum of Applied Arts and Sciences.

## Strategy 24.2

Consider the following issues when preparing plans for tourism and visitation:

- encouraging the development of a range of well-designed and located facilities
- enhancing the amenity, vibrancy and safety of centres and township precincts
- supporting the development of places for artistic and cultural activities
- improving public facilities and access
- protecting heritage and biodiversity to enhance cultural and eco-tourism
- supporting appropriate growth of the night-time economy
- developing industry skills critical to growing the visitor economy.

## Rural industries – agriculture and resources

The main rural industries of the Metropolitan Rural Area of Greater Sydney are agricultural production on relatively small land parcels used for intensive agriculture and resource extraction in the Western Parkland City with some activity in the North District.

The value of agricultural production in Greater Sydney in 2015–16 was \$645 million or five per cent of the value of NSW's agricultural output.<sup>45</sup> The Metropolitan Rural Area (refer to Objective 29) is of specific importance for poultry, eggs, vegetables including mushrooms, nurseries, cultivated turf and cut flowers.

Significant mining and extractive resources include existing underground coal mining operations and coal seam gas primarily in the south west of Greater Sydney, and extractive industries more broadly distributed. Extractive industry resources are used to produce construction materials for roads, concrete, bricks, building stone and landscaping. Mining and extractive resources are expected to have an ongoing role in meeting energy needs, generating continuing export income and providing cost competitive inputs into the region's growing infrastructure and construction needs.

The proximity of rural residential development to agricultural, mining and extractive industries that generate odour, noise and other pollutants can be a source of conflict. There is a need to provide important rural industries with certainty so that their operations can continue without encroachment from incompatible land uses. At the same time the protection of biodiversity (offsetting the biodiversity lost in other areas of Greater Sydney) and the rehabilitation of exhausted resource extraction areas supports the re-establishment of significant ecological communities in the Metropolitan Rural Area into the future.

The Department of Primary Industry's Agriculture Industry Action Plan and International Engagement Strategy provide the direction for government and industry to work together to accelerate growth in NSW agribusiness.

The management of agricultural and extractive activities in this draft Plan is integrally linked to the general approach of managing the Metropolitan Rural Area, which is discussed in Objective 29.

### Strategy 24.3

Protect and support agricultural production and mineral resources (in particular construction materials) by preventing inappropriately dispersed urban activities in rural areas.

## NSW Government's Decentralisation Plan

The NSW Government is delivering on its commitment to implement the Government's Decade of Decentralisation policy. The aim of the policy is to relocate public sector jobs from the Harbour CBD to Greater Sydney with a particular focus on Western Sydney. The target is to relocate and consolidate more than 3,000 public servants to new offices in Parramatta, Liverpool, and Penrith to stimulate economic growth, long-term job generation and provide jobs closer to home.

## Adapting to changing technologies

The digital economy is disrupting businesses and the workforce worldwide with emerging technologies and innovations including the development of artificial intelligence, quantum computing and big data, robotics, autonomous vehicles, 3D printing and nanotechnology.

It is also dramatically changing the way people and goods move around, providing more efficient transport services.

Digital technology has improved efficiencies in administration, manufacturing, wholesale and retail and is increasingly transforming the knowledge and professional service sectors. While advancements can reduce demand for certain types of jobs, they enable innovation, new knowledge-intensive jobs and business opportunities.

Economic development strategies must embrace the digital economy and capture its benefits and productivity improvements. They must focus on sectors that will enhance Greater Sydney's global competitiveness and the creation of high-value jobs.

Embracing economic opportunities from new technologies relies on education, ongoing workplace training and building business and worker resilience. Businesses and governments must continually engage with industry, assess regulatory barriers and manage data.

The NSW Government supports the expansion of the State's Information Communications Technology (ICT) sector by providing businesses with information on NSW and Australia's ICT markets, site selection and government incentives. The NSW Data Analytics Centre is a boutique scholars' program for data science and analytics. NSW is investing \$25 million in 25,000 Jobs for Tomorrow scholarships in eligible STEM related qualifications from 2016 to 2019.

### Strategy 24.4

Provide a regulatory environment which enables economic opportunities created by changing technologies.



## Directions for sustainability



### A city in its landscape

**Metric:** Proportional increase in Greater Sydney covered by urban tree canopy

Greater Sydney has evolved within outstanding natural and scenic landscapes. As it grows, strategic planning will manage the effects of urban development to protect, restore and enhance these landscapes, waterways, coastline, natural areas, tree canopy and open spaces. Delivering on these outcomes will require careful management of the environmental, social and economic values of the Metropolitan Rural Area. A healthy natural environment will be important to improve liveability, create healthy places, and mitigate the effects of climate change. New approaches to water management and urban design will be part of the response to climate change and will help to cool the region, particularly the Western Parkland City.



### An efficient city

**Metric:** Number of precincts with low carbon initiatives

As Greater Sydney grows, innovative management of water, energy, resources and waste will be required in strategic land use, transport and infrastructure planning to reduce costs, carbon emissions and environmental impacts.



### A resilient city

**Metric:** Number of local government areas undertaking resilience planning

Resilient cities are those where the capacity of individuals, communities, institutions, businesses, and systems survive, adapt, and grow notwithstanding chronic stresses and acute shocks. This means building capacity in social and ecological systems to adapt and respond to both known and unforeseen impacts, including changes in technology and climate. Optimising the use of new city shaping technologies can support resilience to improve quality of life and productivity.



# 6

# Sustainability

Sustainability for Greater Sydney starts with a city in its landscape. Greater Sydney is one of the world’s most attractive and liveable regions. It has a diverse, beautiful and iconic natural landscape that includes a unique coastline, waterways, mountains, vegetation and a favourable climate.

Planning for sustainability involves taking a long-term approach to managing Greater Sydney’s waterways, biodiversity and bushland, rural lands, its connected green spaces and corridors. It also involves greening streets and neighbourhoods with increased tree canopy cover.

For tens of thousands of years, people have cared for and protected Greater Sydney’s natural landscapes and today, half of Greater Sydney is protected in national parks and reserves. The natural environment supports biodiversity as well as the economy and enhances residents’ quality of life and wellbeing.

Greater Sydney’s four major landscape types shown on Figure 43, are:

- Protected Natural Area
- Metropolitan Rural Area
- Urban Area
- Coast and Harbours.

The Protected Natural Area frames the city to the north, west and south and includes the Greater Blue Mountains World Heritage Area, and the coastal sandstone plateaux and estuaries of the Royal National Park – the world’s second oldest national park – and Ku-ring-gai Chase National Park. The Protected Natural Area is distinct from the Metropolitan Rural Area.

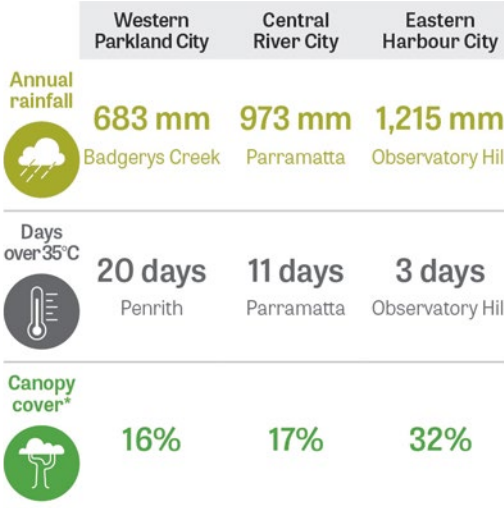
The Metropolitan Rural Area has a diversity of farmland, bushland, mineral resources, rural towns and villages. It includes the floodplains of the Hawkesbury-Nepean Valley, the hills and

steep ridgelines of the Wollondilly Shire, and areas of outstanding cultural heritage value (refer to Objective 29).

The Urban Area includes a mosaic of places from quiet neighbourhoods to vibrant business districts. Within the Urban Area the climate changes from east to west, with less rainfall, hotter summer days and colder winter nights in the Western Parkland City (refer to Figure 42). The steeper and more heavily vegetated landscapes of the northern and north-eastern neighbourhoods contrast with the flatter, more open landscapes of the Cumberland Plain.

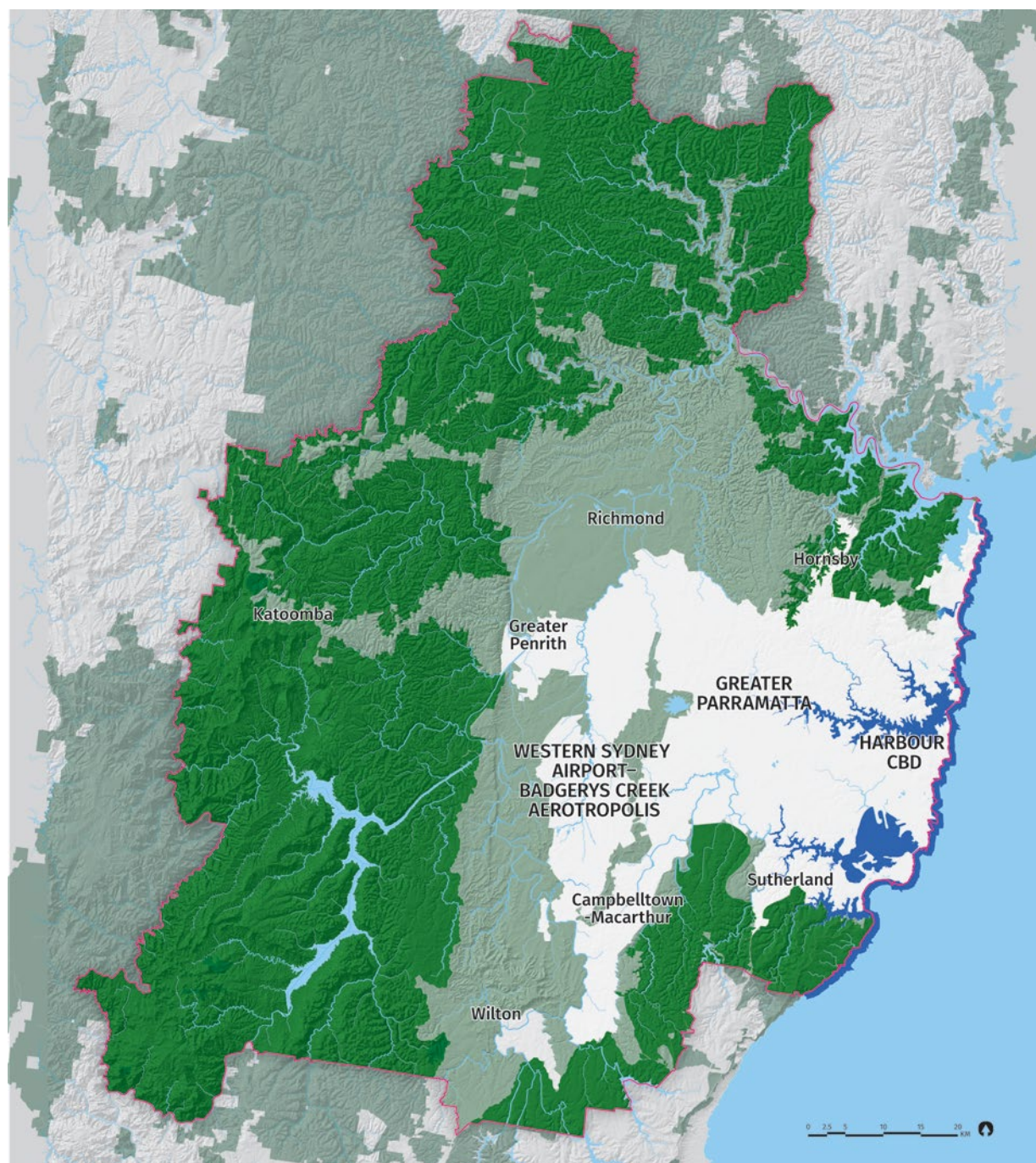
The Coast and Harbours from Broken Bay and Pittwater in the north to Port Hacking in the south are valued and protected. They support aquatic ecosystems and are important for recreation, tourism and Greater Sydney’s cultural identity (refer to Objective 8).-



**Figure 42:** Climate variations across Greater Sydney



\*Urban Area – refer to Figure 51  
Source: Climate statistical data, Bureau of Meteorology

**Figure 43:** Four major landscape types of Greater Sydney



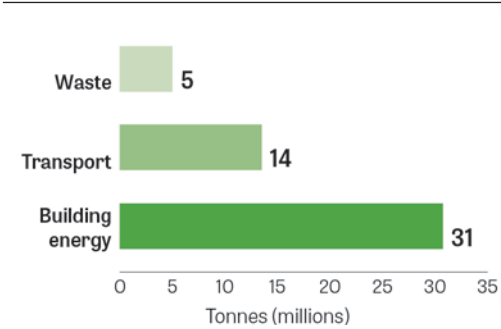
	Region Boundary		Protected Natural Area
	Waterways		Metropolitan Rural Area
			Urban Area
			Coast and Harbours

Across Greater Sydney, past urban development and industrial activities have impacted on natural landscapes and the environment. Even today, waterways are being affected by pollution. These practices, and the continued reliance on fossil fuels for energy and transport are creating environmental problems for future generations.

A sustainable region minimises its use of resources, and its impacts on global systems and climate change. It embraces the principle of capacity building to adapt to future changes. The region can become more sustainable through more cost effective and efficient ways to reduce environmental impacts, reduce emissions of greenhouse gases, re-use waste and increase recycling. Greater Sydney has the potential to become a leader and innovator in environmental technology and management of energy, water and waste.

For example, the combined emissions from electricity and gas used in buildings, transport and waste in Greater Sydney contributed 50 million tonnes of greenhouse gases into the atmosphere, equal to 54 per cent of NSW’s emissions from these sources<sup>46</sup> (refer to Figure 44).

**Figure 44:** Greenhouse gas emissions by source (2015–16)



*Note: Analysis of emissions does not include emissions from agriculture and land clearing*

*Source: Greater Sydney Commission, 2017, Exploring Net Zero Emissions for Greater Sydney, unpublished report prepared by Kinesis for the Greater Sydney Commission*

Greater Sydney, the nation’s largest city, has an important role in Australia’s response to climate change. The communities within Greater Sydney, with their differing characteristics, require targeted responses to climate change, focusing on the design of neighbourhoods and managing land use, infrastructure and transport. This supports the use of renewable energy, reduces consumption of energy and water, reduce waste and greenhouse gas emissions and helps to deliver a more efficient and sustainable city.

This can reduce costs for households and businesses, while contributing to global efforts to combat climate change.

A resilient region reduces its exposure and vulnerability to natural and urban hazards and becomes more resilient and able to withstand shocks and stresses. Planning for the region builds on the NSW Government’s support of the 100 Resilient Cities network.<sup>47</sup>

Many places, like Greater Sydney, are exposed to natural hazards like flooding, bushfires, severe storms and heatwaves. Urban hazards such as air pollution and noise need to be managed to protect the region’s liveability and sustainability. One of the most significant natural hazards in Greater Sydney is flooding in the Hawkesbury-Nepean Valley. The largest flood there on record occurred in 1867, when the river level reached 19.7 metres in Windsor. If a flood of this size happened in the Hawkesbury-Nepean Valley today, 12,000 residential properties would be impacted, 90,000 people would need evacuation and damages would cost an estimated \$5 billion.<sup>48</sup>

Many sustainability goals are incorporated into existing environmental laws, regulations and government policies and frameworks, including protection of waterways, coastlines and biodiversity, and provisions to reduce pollution and waste. However, these often single-issue approaches mean that balancing economic, social and environmental factors in decision-making is challenging. This draft Plan promotes integrated approaches to deliver sustainable outcomes.



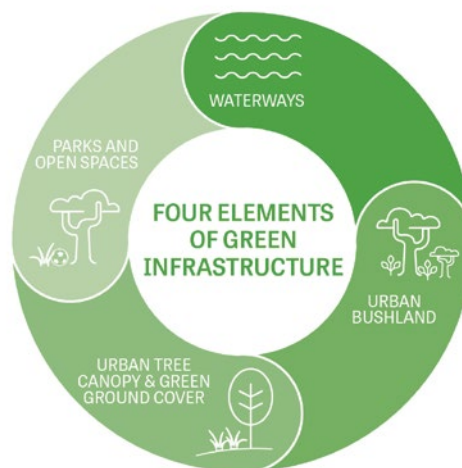
One integrated approach is through planning and delivering for green infrastructure. Green infrastructure is the network of green spaces, natural systems and semi-natural systems that support sustainable communities. It has four connected elements: waterways; urban bushland; urban tree canopy and green ground cover; parks and open spaces (refer to Figure 45).

Greater Sydney's Green Grid will connect communities to green infrastructure. Scenic and cultural landscapes and rural landscapes complement green infrastructure.

Greater Sydney's environment, and its sustainability, are linked to its liveability and productivity. Several of the objectives and strategies in the liveability and productivity chapters of this draft Plan support more sustainable communities. For example, Objective 7 – Communities are healthy, resilient and socially connected – helps create stronger communities that are less vulnerable to natural and urban hazards; Objective 23 – Industrial and urban services land is planned, protected and managed – supports local retention of recycling and waste management facilities; Objective 14 – A metropolis of three cities – integrated land use and transport creates walkable 30-minute cities – helps to lower the region's greenhouse gas emissions.

This chapter outlines the Commission's sustainability recommendations for objectives and strategies. A number of these recommendations are not government policy.

**Figure 45:** Green infrastructure has four connected elements



## Actions

The following metropolitan significant actions will deliver sustainability objectives.

- Develop and implement the South Creek Corridor Plan (refer to Objective 26).
- Deliver the open space toolkit (refer to Objective 31).

### Green infrastructure and greener places

Green infrastructure is fundamental to creating a high quality of life and is important in creating a region that is climate resilient and adaptable to future needs. The Government Architect NSW is working on a Green Infrastructure framework to guide the delivery of green infrastructure across NSW through planning, designing and managing green infrastructure as an interconnected network.

The Green Infrastructure framework will have three key components :

- Bushland and Waterways – delivering green infrastructure for habitat and ecological health
- The Urban Tree Canopy – delivering green infrastructure for climate change adaptation and resilience
- Parks and Open Space - delivering green infrastructure for people.









# A city in its landscape

## Objective 25

### The coast and waterways are protected and healthier

Greater Sydney has been a managed landscape since it was settled by Aboriginal people more than 30,000 years ago. The beauty of Greater Sydney's scenic landscapes is world renowned – natural waterways and ridgelines, the Greater Blue Mountains World Heritage Area and rural landscapes, the coastline, harbours and urban landscapes such as the World Heritage-listed Sydney Opera House.

The landscape of Greater Sydney is characterised by waterways – from the biodiversity in and around environmentally sensitive waterways to the economic productivity of its working harbours and the international attractions of its beaches. Its water systems provide drinking water, water for agriculture and for the disposal of stormwater and wastewater.

Across Greater Sydney there is a strong cultural attachment to waterways that provide important lifestyle and recreational assets, amenity and scenic quality. Penrith Lakes is a world-class recreational asset in the Western Parkland City; Lake Parramatta has become a popular destination for swimming and the Parramatta River is a water-based recreational asset that helps define the Central River City; Greater Sydney's beaches and Sydney Harbour are internationally recognised icons attracting millions of locals and visitors each year. Improving the health of these waterways is essential to the liveability of Greater Sydney.

Waterways support coastal, marine and groundwater dependent ecosystems which benefit from continuing protection and management. The health of coastal and marine waterways is interconnected with the health of catchments. The Marine Estate

Management Authority is preparing a Marine Estate Management Strategy which will support a clean, healthy and productive marine environment.

The *Fisheries Management Act 1994* protects aquatic biodiversity, as do other state and local plans.

Councils will undertake management of coastal catchments in accordance with the new *Coastal Management Act 2016* and the draft State Environmental Planning Policy Coastal Management as these policy settings take effect.

Waterways are part of the green infrastructure that supports the vision of Greater Sydney as a metropolis of three cities. While two-thirds of Greater Sydney's urban areas are within coastal and harbour catchments, the most significant change in Greater Sydney is set to occur on the Cumberland Plain centred around South Creek which flows north into the Hawkesbury-Nepean River (refer to Figure 46). This drier and flatter inland catchment is characterised by a network of creeks and intermittent waterways and extensive floodplains. Sydney Regional Environmental Plan No.20 – Hawkesbury-Nepean River (No. 2 – 1997) sets out approaches for protecting the environment of the Hawkesbury-Nepean River system.

The South Creek corridor is central to the future sustainability and liveability of the Western Parkland City (refer to Objective 26).

The waterways of the Central River and Eastern Harbour cities largely flow east to the coast. In recent decades, there have been efforts to restore and improve the quality of waterways affected

by past contamination. This is being delivered as part of establishing new parklands and urban renewal developments such as the reinstated public foreshores along the Parramatta River.

The community values access to waterways for recreation and cultural events just as it values the protection of environmentally sensitive waterways. Quality natural waterways and a temperate climate make water-based activities part of the culture and identity of Greater Sydney.

Councils across Greater Sydney protect waterways by applying the *Water Management Act 2000* and through their local environmental plans. Opportunities to protect waterways and at the same time enhance liveability and productivity, are part of an integrated approach to managing green infrastructure.

In many of the older more urbanised areas, waterways have been converted into underground pipes or concrete channels. Clear Paddock Creek in Fairfield is an example where reinstatement of a more natural system has improved water quality and provided significant amenity improvements to local open space, in particular supporting trees and canopy cover that improve the local micro-climate.

*There is a cultural attachment to waterways that provide important lifestyle and recreational assets, amenity and scenic quality.*

For local waterways where ownership is mixed, a green infrastructure approach can inform innovative outcomes that respond to community values.

The *2017 Metropolitan Water Plan* contains strategies to improve the contribution that water makes to the liveability and the resilience of urban communities. It sets out the NSW Government's commitment to release environmental flows from Warragamba Dam. This will help reduce the impact of high nutrient levels and other pollutants on the Hawkesbury-Nepean River.

However, management is fragmented. An integrated approach to the protection and management of waterways relies on comprehensive monitoring and reporting of water quality and waterway health. It also requires strategic alignment of science, urban design, land management and planning frameworks to be effective.

Greater Sydney's drinking water is supplied from catchments covering over 16,500 square kilometres.<sup>49</sup> The main sources are in the Blue Mountains and the Southern Highlands. Protections for drinking water catchments are in the State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011.

Outside drinking water catchments, waterway protections for aquatic ecosystems and cooler, greener environments are managed by councils, Sydney Water and State agencies. Management can be fragmented, as stakeholders have different roles across council boundaries. To improve the health of catchments and waterways, the cumulative impacts of strategic planning, development controls and management need to be considered.

The Office of Environment and Heritage and the Environment Protection Authority promote the use of a risk-based decision framework<sup>50</sup> across catchments to help improve the health of catchments and waterways and to manage the cumulative impacts of development and land management practices. The framework:

- provides a structured approach to consider the effects of land use change, development and the management of public land on waterways
- shows how better management of development can help meet environmental targets for waterways
- provides options for appropriate management responses across entire catchments.

## Prospect Reservoir – Prospect Nature Reserve

Prospect Reservoir is the largest body of water within the landscape of Central River City. The 5.2 square kilometre lake is surrounded by Prospect Nature Reserve which contains urban bushland, picnic grounds and bicycle tracks, and is part of the larger Western Sydney Parklands.<sup>51</sup> Prospect Reservoir remains an integral part of Greater Sydney's drinking water supply and is required in times of high demand for water.

The Commission is working with the Western Sydney Parklands Trust, Sydney Water and WaterNSW to investigate further opportunities to transform Prospect Reservoir into a significant nature-based destination to meet the recreational needs of the community while protecting its important role in Greater Sydney's water supply. In time, Prospect Nature Reserve could become a great destination for the Central River City and the Western Parkland City.

## Securing water supplies for Greater Sydney

A secure and sustainable supply of water is essential for Greater Sydney to grow and prosper. Reliable and affordable water is vital for households, businesses and industries to thrive and remain economically competitive.

Water is a limited natural resource that needs to be managed for the benefit of the community. Population growth, drought, climate change and changing community expectations present challenges and can increase demand for water. The *2017 Metropolitan Water Plan* outlines the measures that help provide Greater Sydney (and the Illawarra) with enough water to meet community needs into the future.

The NSW Government is implementing the *2017 Metropolitan Water Plan* and will continue to review plans to secure a sustainable supply of water for Greater Sydney, as required.

### Strategy 25.1

Protect environmentally sensitive coastal areas and waterways.

### Strategy 25.2

Enhance sustainability and liveability by improving and managing access to waterways, foreshores and the coast for recreation, tourism, cultural events and water-based transport.

### Strategy 25.3

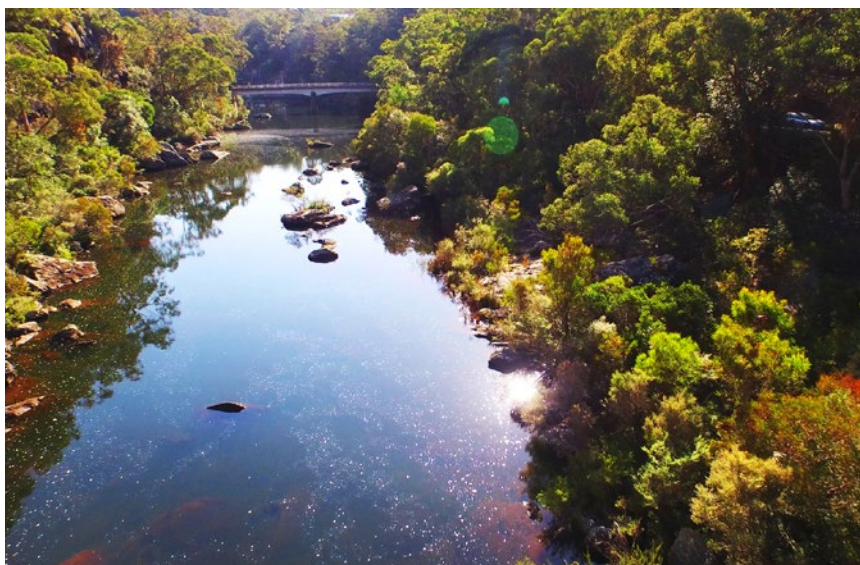
Improve the health of catchments and waterways through a risk-based approach to managing the cumulative impacts of development including coordinated monitoring of outcomes.

### Strategy 25.4

Reinstate more natural conditions in highly modified urban waterways.

### Related government initiatives:

- 2017 Metropolitan Water Plan



## Objective 26

### A cool and green parkland city in the South Creek corridor

By 2056, well over 1.5 million people will call the Western Parkland City home. Rapid and sustained growth in the South Creek corridor will radically transform the landscape and increase the amount of water moving through it. Around 80 per cent of the Western Parkland City is in its large catchment (refer to Figure 46). This will place pressure on the health of waterways and create challenges for managing stormwater, wastewater and floods.

South Creek flows through one of the flattest, hottest and driest parts of Greater Sydney. South Creek and its tributaries can form the basis for cool, green and attractive urban communities by retaining more water in the landscape and integrating waterways in the design of new neighbourhoods. Green spaces around South Creek and its tributaries will be attractive locations for new communities and provide the amenity that supports liveability and productivity.

Infrastructure NSW, in collaboration with the Commission, is leading a whole-of-government plan and approach for the South Creek corridor. The Commission's vision is that the South Creek corridor is the central element of the urban design of the Western Parkland City. This recognises the role of water in supporting healthy, liveable and sustainable communities (refer to Figure 47).

As an urban parkland, the South Creek corridor will be designed to respond to its landscape setting. Areas of higher density and high quality public spaces will be orientated towards waterways. Walking and cycling trails will connect continuous open space along South Creek. Regularly spaced bridge crossings of South Creek will provide people with a way to experience the parkland landscape and will connect communities on either side of the creek. The design of bridges will respect the local environment and not obstruct the movement of wildlife.

Riparian corridors will be maintained in public ownership creating opportunities for new open spaces including sporting facilities for people to enjoy, and helping to support habitat and healthy waterways by managing flows of water and nutrients.

The management of the South Creek corridor is being supported by the Environment Protection Authority's investigation for an integrated approach to waterway health and the potential use of a Protection of the Environment Policy for the South Creek catchment.

#### Strategy 26.1

Implement the South Creek Corridor Plan and use the design principles for South Creek to deliver a cool and green Western Parkland City.



#### Action 11

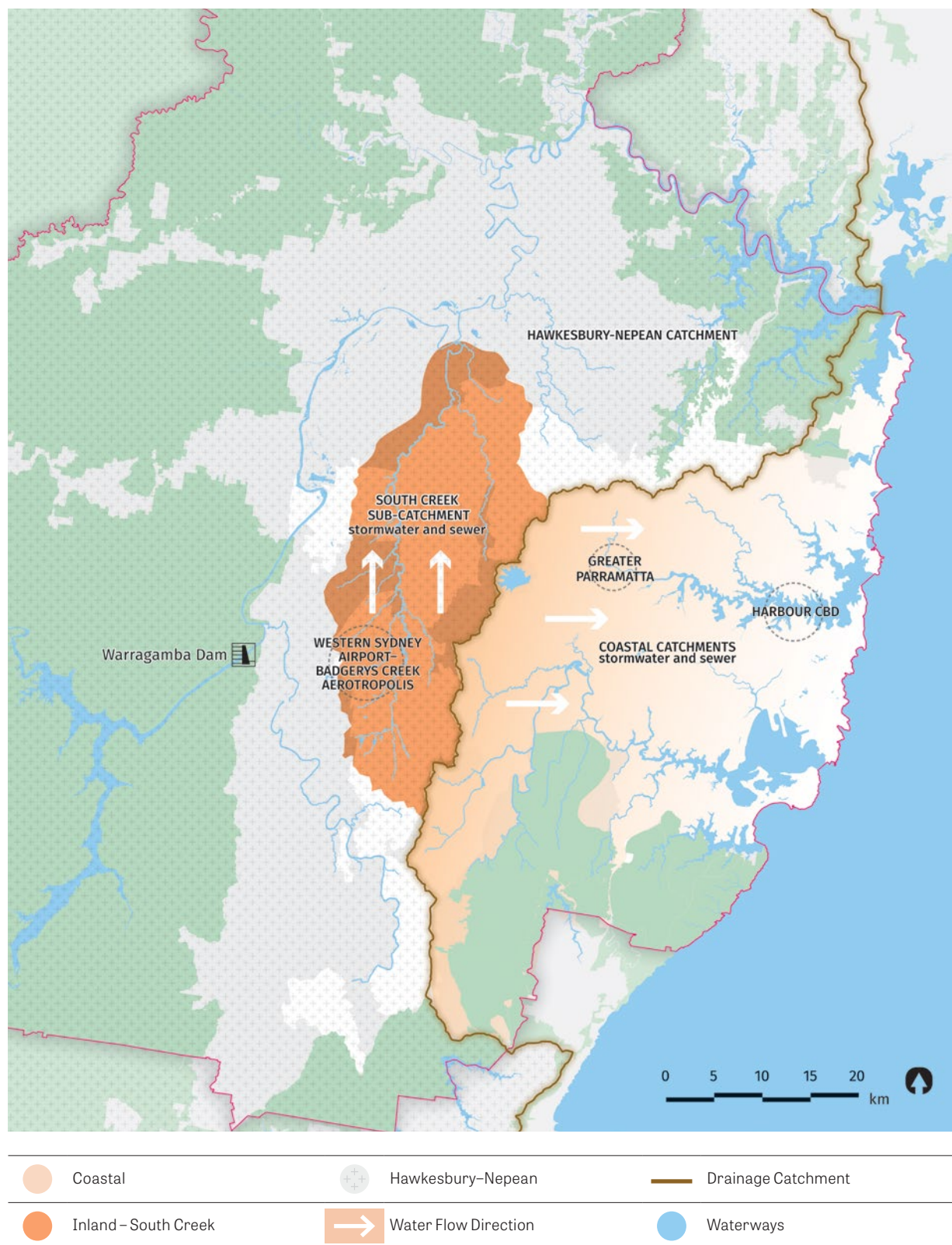
##### Develop and implement the South Creek Corridor Plan

Infrastructure NSW will lead the South Creek Corridor Plan, working with the Commission.

The outcome will be the creation of a greener and cooler Western Parkland City along South Creek and its tributaries. South Creek will be a defining structural element of the Western Parkland City. A continuous open space corridor along South Creek and its tributaries will be created. Water in the landscape will be managed to improve waterway health and the liveability of communities.



Figure 46: South Creek catchment





**Figure 47:** South Creek urban design principles.



### New city centre

- Pedestrian-oriented promenade with active frontages
- Density and fine grain
- 300–400m bridge spacing
- Mass transit 1–2 blocks from creek
- Regional civic anchors
- High transport connectivity



### New inner city neighbourhood

- Fine grain residential – terraces and mid rise apartments
- 400–600m bridge spacing
- Mass transit 2 blocks from creek
- Local civic anchors



### Established suburbs

- Studios and apartments added
- Connections between streets and to creek
- Programmed activity space
- Multiple pedestrian walkways
- Shared street promenade



### New business and industrial areas

- Creek-facing employment hubs
- Realigned car parking
- Recreation spaces for workers
- Accessible transit plaza
- Pedestrian only promenade



## Objective 27

### Biodiversity is protected, urban bushland and remnant vegetation is enhanced

The Sydney Basin bioregion is one of the most biodiverse areas of Australia and its biodiversity is protected through a range of State and Commonwealth legislation. Over 5,200 square kilometres of land in Greater Sydney, containing some of the highest environmental values, is protected in national parks and reserves primarily in the Protected Natural Area (refer to Figure 48).

As Greater Sydney has grown and changed, impacts on biodiversity have been managed through a range of approaches. With the expansion of the urban footprint into the south west and north west, and major transport infrastructure like the Outer Sydney Orbital corridor and the Western Sydney Airport, there will be continuing demand for offset sites where biodiversity can be protected.

The Office of Environment and Heritage maintains and continually updates information on areas of high environmental value.

The *Biodiversity Conservation Act 2016* seeks to avoid or minimise impacts on biodiversity through the biodiversity certification of land. The Act includes the concept of strategic biodiversity certification, which provides tools for landscape-scale conservation planning.

The restoration of degraded bushland complements the protection of corridors with the highest environmental values and enhances the protection of biodiversity.

To support investment in biodiversity, the Office of Environment and Heritage has produced the *Cumberland Subregion Biodiversity Investment Opportunities Map* to direct funding and investment in biodiversity to strategic locations for the greatest benefit.<sup>52</sup>

Allowing limited intensification of rural and rural-residential development in the Metropolitan Rural Area that enables the protection of high value biodiversity in corridors will help support landscape-scale conservation. This provides an incentive for landowners in the Metropolitan Rural Area to protect the environmental values of their land, creates greater opportunities for offset sites and delivers better outcomes for biodiversity (refer to Objective 29).

Urban bushland, particularly bushland on public land, will be protected and managed as it provides clean air and water, cooler urban environments and local habitat.

In the Western Parkland City, urban bushland including degraded or remnant vegetation should be considered for incorporation into the planning and design of new neighbourhoods, and where possible be maintained on public land as part of the Greater Sydney Green Grid and for urban tree canopy.

The important relationship of riparian vegetation, habitat and waterways is multi-faceted and provides water quality and amenity outcomes. Public ownership of riparian corridors will better manage habitat and vegetation and improve waterway health.

#### Strategy 27.1

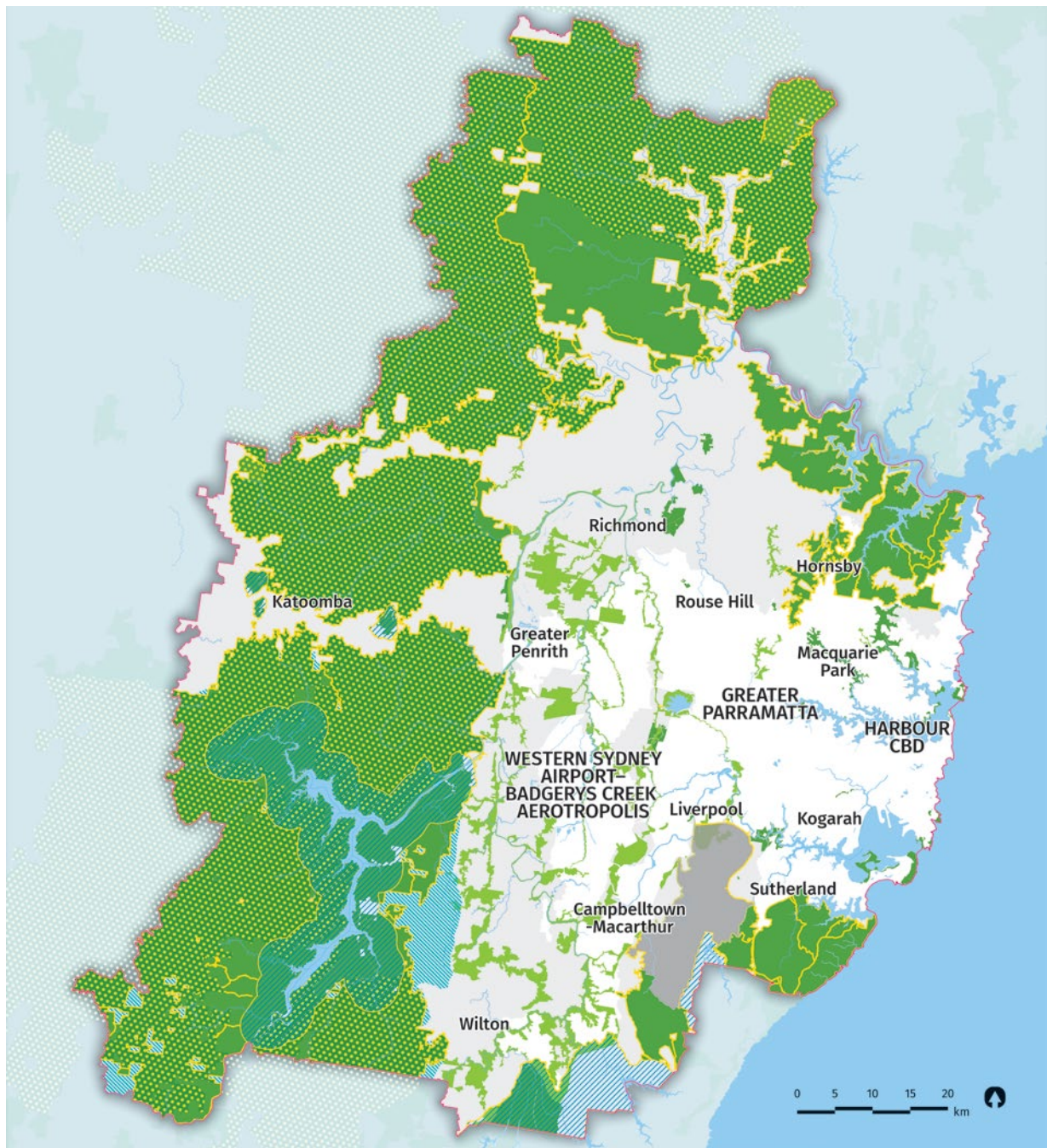
Protect and enhance biodiversity by:

- supporting landscape-scale biodiversity conservation and the restoration of bushland corridors
- managing urban bushland and remnant vegetation as green infrastructure.

#### Useful link:

- [Cumberland Subregion Biodiversity Investment Opportunities Map \(BIO Map\)](#)

**Figure 48:** Protected Natural Area and Metropolitan Rural Area



Region Boundary	Protected Natural Area	Metropolitan Rural Area
Waterways	National Parks and Reserves	Biodiversity Investment Opportunities Cumberland Subregion
Urban Area	Greater Blue Mountains World Heritage Area	Water Catchment – Restricted
	Water Catchment – No Entry	
	Holsworthy Military Reserve	



## Objective 28

### Scenic and cultural landscapes are protected

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Scenic and cultural landscapes create symbols of Greater Sydney and connect the contemporary urban environment with natural and historic urban landscapes. Their continued protection is important to the character of the region and for their aesthetic, social and economic values. They create a sense of identity, preserve links to Aboriginal, colonial and migrant era heritage and culture, and create opportunities for tourism and recreation (refer to Figure 49).

**In the Western Parkland City** historic homesteads and significant views are protected through heritage curtilages under State heritage provisions. Other significant scenic landscapes such as the Scenic Hills around Campbelltown are protected through local environmental plans.

Views to the escarpment of the Blue Mountains to the west and to the ridgelines of the Western Sydney Parklands to the east may be highlighted by retaining or creating vistas along east–west road links. In the flatter and drier landscape of the Cumberland Plain water may be featured in the environment to improve amenity and emphasise its many creek crossings.

**In the Central River City** parklands associated with rivers and creeks, street tree plantings, and the public spaces in centres provide a diversity of landscapes. In recent years, the development of tall buildings in strategic centres has reinforced the need for quality design to enhance new skylines.

**In the Eastern Harbour City** enhancing views of Sydney Harbour will come with renewal projects such as The Bays Precinct. Renewal across the Eastern Harbour City can protect and maintain views to the coast, harbours and waterways from public spaces.

The **Metropolitan Rural Area** and the **Protected Natural Area** create a range of attractive visual settings such as the Mulgoa Valley which has been recognised by the local community as an important scenic and cultural landscape. As traditional forms of agriculture continue within the Metropolitan Rural Area, and value of biodiversity protection increases through offsets, more opportunities to protect and enhance natural landscapes can be realised.

While consideration of scenic landscapes occurs through a range of mechanisms relevant to heritage, biodiversity and major project delivery, there is a role for local planning to consider that scenic landscapes as part of growth and change across Greater Sydney.

#### Strategy 28.1

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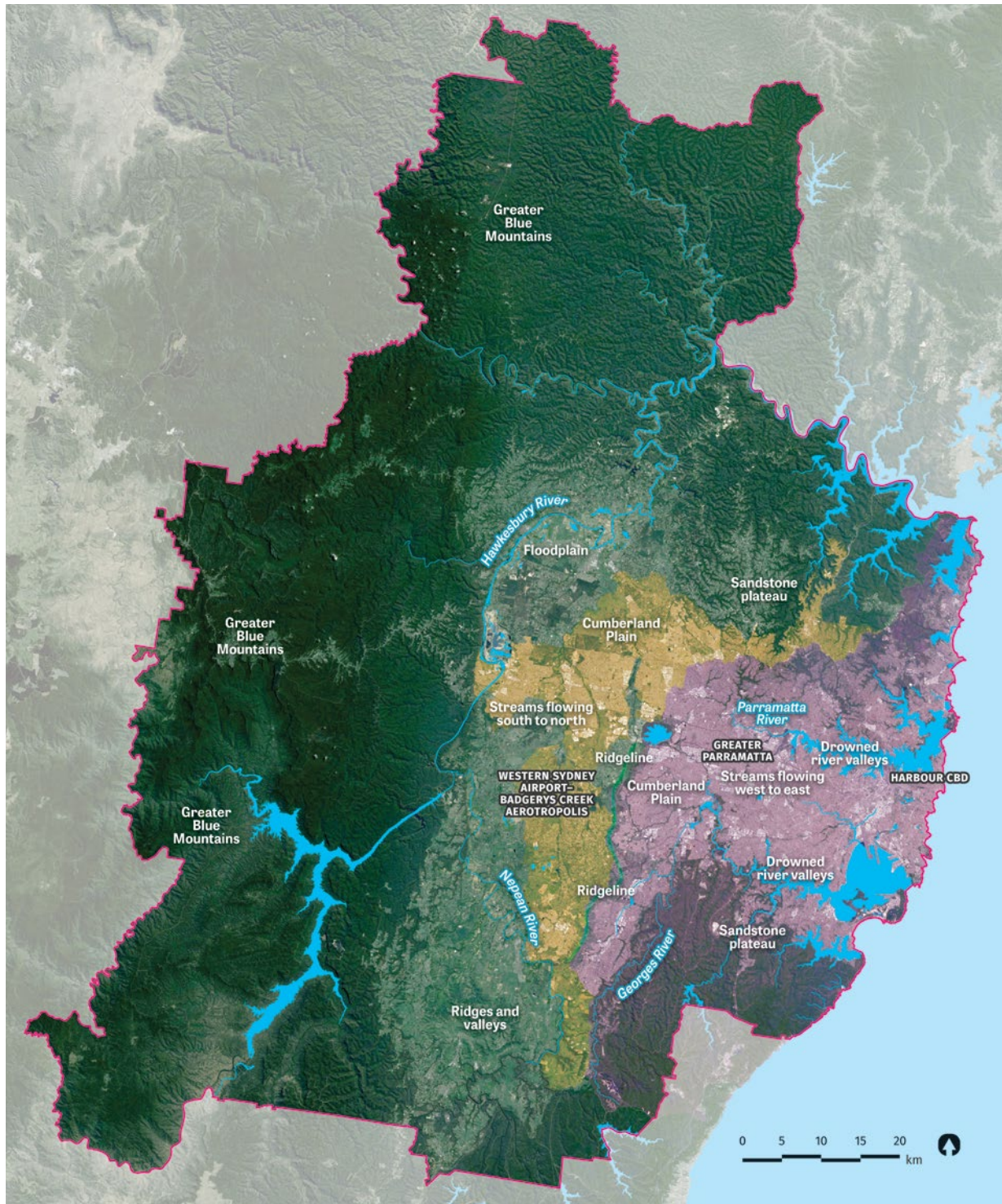
Identify and protect scenic and cultural landscapes.

#### Strategy 28.2

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Enhance and protect views of scenic and cultural landscapes from the public realm.

**Figure 49:** Landscape features of Greater Sydney



<span style="color: magenta;">—</span> Region Boundary	<span style="background-color: yellow; border-radius: 50%; width: 10px; height: 10px; display: inline-block;"></span> Hawkesbury-Nepean Catchment
<span style="background-color: blue; border-radius: 50%; width: 10px; height: 10px; display: inline-block;"></span> Waterways	<span style="background-color: purple; border-radius: 50%; width: 10px; height: 10px; display: inline-block;"></span> Harbour Catchments



## Objective 29

### Environmental, social and economic values in rural areas are maintained and protected

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The Metropolitan Rural Area has a wide range of environmental, social and economic values (refer to Figure 48). It covers almost one quarter of Greater Sydney and contains farms; rural towns and villages; rural residential developments; heritage, scenic and cultural landscapes; mineral resources; and locations for recreation and tourism. Its areas of high environmental value have been mapped by the Office of Environment and Heritage.

The Metropolitan Rural Area also has large areas of underutilised land that have the potential to be used more productively, as well as areas where natural hazards such as flooding need managing.

Farming in the Metropolitan Rural Area has been integral to the supply of Greater Sydney's fresh food for over two centuries. Agricultural production bolsters Greater Sydney's resilience, and agriculture is supported by a growing interest in local food production.

The Metropolitan Rural Area also contains mineral resources, particularly in the Western City District where commercial quantities of coal and coal seam gas are being extracted. Valuable supplies of sand, stone, clay and other materials are sourced from within Greater Sydney. Protection of these resources is important in supporting the construction industry.

Heritage assets, scenic cultural landscapes, rural towns and villages provide a setting for recreation and tourism – both of which have potential to grow. The Metropolitan Rural Area attracts people who want to live in a rural location.

Urban development is not consistent with the values of the Metropolitan Rural Area. Priority Growth Areas in the Western Parkland City generally provide a long-term supply of land for the growth of Greater Sydney and eliminate the need for urban expansion into the Metropolitan Rural Area.

This draft Plan identifies that Greater Sydney has sufficient land to deliver its housing needs within the current boundary of the Urban Area, including existing Priority Growth Areas. The draft Plan also recognises there is a need to consider three small areas proximate to the Western Sydney Airport for urban development. This is due to the infrastructure and investments from the airport (refer to Figure 50).

From time to time, there may be a need for additional land for urban development to accommodate Greater Sydney's growth, but not at this stage. Future region plans will identify if additional areas of land in the Metropolitan Rural Area are required for urban development.

Land use in the Metropolitan Rural Area will be influenced by:

- increasing demand for biodiversity offset sites in the Metropolitan Rural Area creating additional value for landowners with native vegetation which could become offset (refer to Objective 27)
- opportunities for more tourism and recreation, linked to Western Sydney Airport and improved transport infrastructure, which can bring more visitors to the Metropolitan Rural Area and the Protected Natural Area
- new opportunities for growing fresh food close to a growing population and freight export infrastructure associated with the Western Sydney Airport (refer to Objective 20).

## Urban Investigation Areas

The new metropolitan city centre at Western Sydney Airport and Badgerys Creek Aerotropolis in the wider Western Parkland City will change the relationship between urban and rural lands to the north and east of the airport. Three areas require investigation as future urban areas due to their proximity between existing urban areas and the emerging Western Parkland City.

To the north of the Western Sydney Airport Priority Growth Area there are two areas that form part of the Greater Penrith to St Marys Priority Growth Area investigations:

- Orchard Hills, north of The Defence Establishment Orchard Hills and west of St Clair
- east of The Northern Road at Luddenham between the Western Sydney Airport Priority Growth Area and the water pipeline.

The Defence Establishment Orchard Hills land has been included in the Priority Growth Area Investigation to ensure coordination of existing and future land uses in the corridor.

To the east of the Western Sydney Airport Priority Growth Area is the third area:

- Horsley Park and Mount Vernon located west of the M7 Motorway.

Restricting urban development in the Metropolitan Rural Area will help manage its environmental, social and economic values, help to reduce land speculation, and increase biodiversity from offsets in Priority Growth Areas and existing urban areas.

Careful planning of additional rural residential development in Metropolitan Rural Area can help maximise the productive use of the land, create buffers around farms and rural industries, and generate opportunities for greater investment in the protection of waterways and bushland.

Place-based approaches for landscape units within the Metropolitan Rural Area will help manage its environmental, social and economic values and maximise the productive use of the land.

## Mineral resources supporting construction

Mineral resources supply construction materials that are vital to building housing and infrastructure across Greater Sydney. Access to construction materials from local sources within Greater Sydney is critical for continued growth and for minimising construction costs.

Across Greater Sydney, there are few areas where the geology includes mineral resources suitable for viably extracting construction materials. In some areas, the potential to extract construction materials can be lost or constrained by other forms of development. When this happens, construction materials extracted elsewhere need to be transported to Greater Sydney, congesting roads and increasing costs and environmental impacts.

Managing the use of land so the initial extraction of construction materials is followed by rehabilitation and redevelopment of sites for other activities supports economic activity and helps maintain a more affordable and sustainable supply of construction materials. There are many locations across Greater Sydney where quarries have been successfully rehabilitated to create new residential areas, rural land, open space and community infrastructure, demonstrating the value of continued access to mineral resources with the rehabilitation and redevelopment of land.

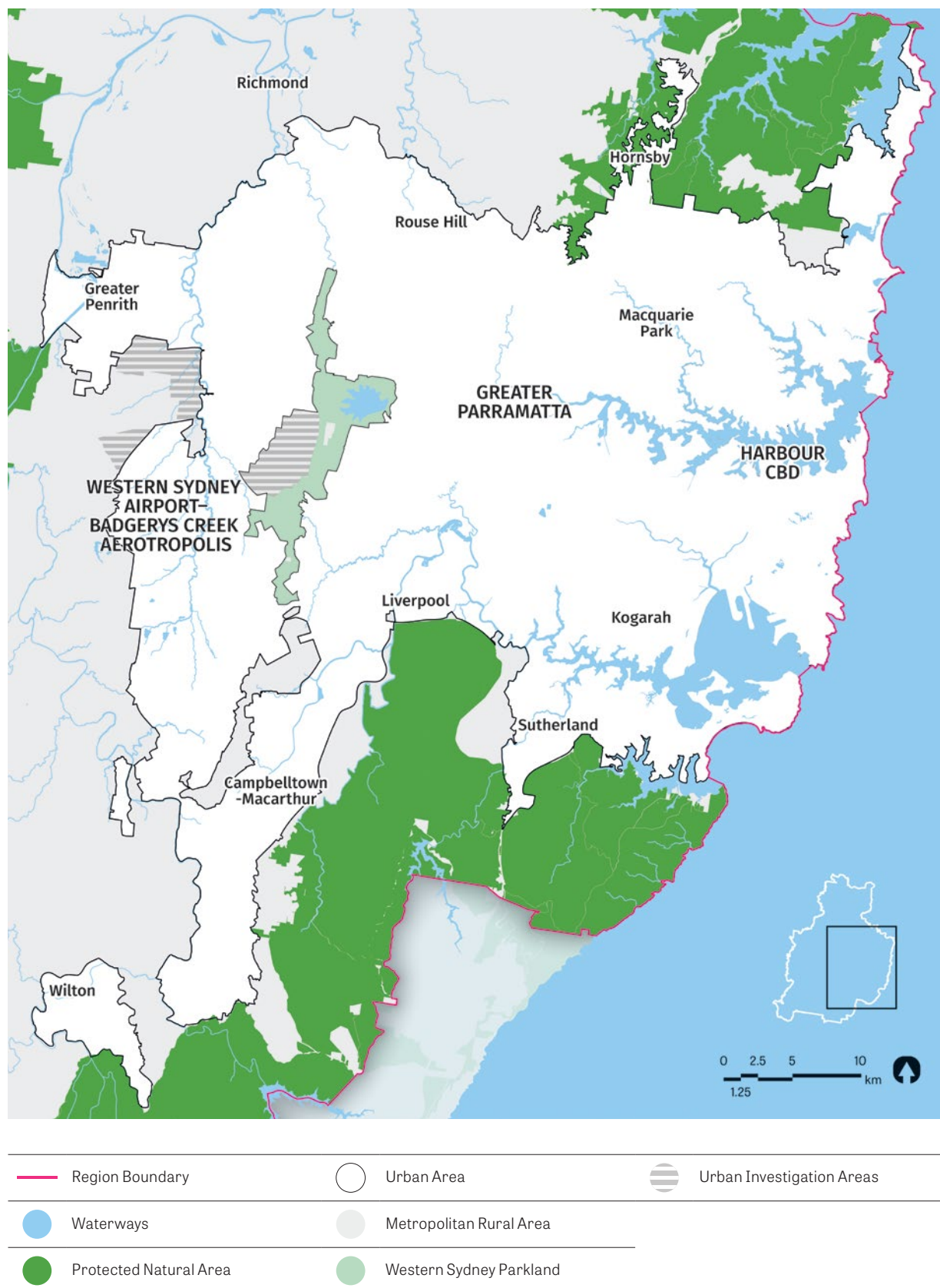
### Strategy 29.1

Maintain or enhance the values of the Metropolitan Rural Areas using place-based planning to deliver targeted environmental, social and economic outcomes, including rural residential development.

### Strategy 29.2

Limit urban development to within the Urban Area, except for the investigation areas at Horsley Park, Orchard Hills, and east of The Northern Road, Luddenham.

Figure 50: Boundary of urban area



## Objective 30

### Urban tree canopy cover is increased

The urban tree canopy is a form of green infrastructure providing shade, which reduces ambient temperatures and mitigates the heat island effect. The heat island effect is where urban development, with large amounts of hard and dark coloured surfaces like roads and roofs, causes localised warming (refer to Objective 38).

Every 10 per cent increase in tree canopy cover can reduce land surface temperatures by 1.13 °C.<sup>53</sup>

The urban tree canopy also has environmental benefits. It provides habitat, helps protect the health of waterways and removes fine particles from the air to improve air quality. Recent research shows that urban tree canopy is greatly valued by communities and that it increases property values. A 10 per cent increase in street tree canopy can increase the value of properties by an average of \$50,000.<sup>54</sup>

Urban tree canopy along streets and in the public domain contributes to Greater Sydney's Green Grid and makes walking and cycling more pleasant.

Greater Sydney's urban tree canopy is made up of trees along streets, in parks and other public spaces, and on privately owned land including front and backyards. It includes native vegetation and exotic and deciduous trees (refer to Figure 51).

As Greater Sydney grows and urban areas become denser, extending urban tree canopy is one of the most effective ways to improve amenity. Urban tree canopy can be complemented by green ground cover, rain gardens, green roofs and green walls.

A major challenge in many areas is the lack of sufficient space within existing street corridors to extend urban tree canopies. In other areas, urban tree canopies compete for space with other forms of infrastructure both above and below the ground. Creating space for urban tree canopy should be balanced with the need to allow sunlight into homes and onto roofs for solar power.

*Technical Guidelines for Urban Green Cover in NSW* provides practical information for planning and expanding urban tree canopy and green ground cover.

The NSW Government has prepared the draft *Greenfield Housing Code*, which will help to provide more space for trees, in both front and backyards, in new residential areas. To complement this, up to 5,000 trees a year will be provided over the next three years, under the *Free Tree Initiative*, to owners of new homes approved under the complying development code in Greater Sydney's greenfield areas.<sup>55</sup>

Several councils have developed innovative strategies, such as Sutherland Council's Greenweb program, to enhance and extend the urban tree canopy.<sup>56</sup>

Planning and designing new communities and urban renewal should prioritise expanding urban tree canopy in the public realm. Setting neighbourhood benchmarks for tree canopy cover is a useful approach. Planning controls need to protect urban tree canopy on privately owned land and provide incentives for residents to develop green roofs and green walls. Councils should collect and publish data on the urban tree canopy alongside other local infrastructure assets.

### Strategy 30.1

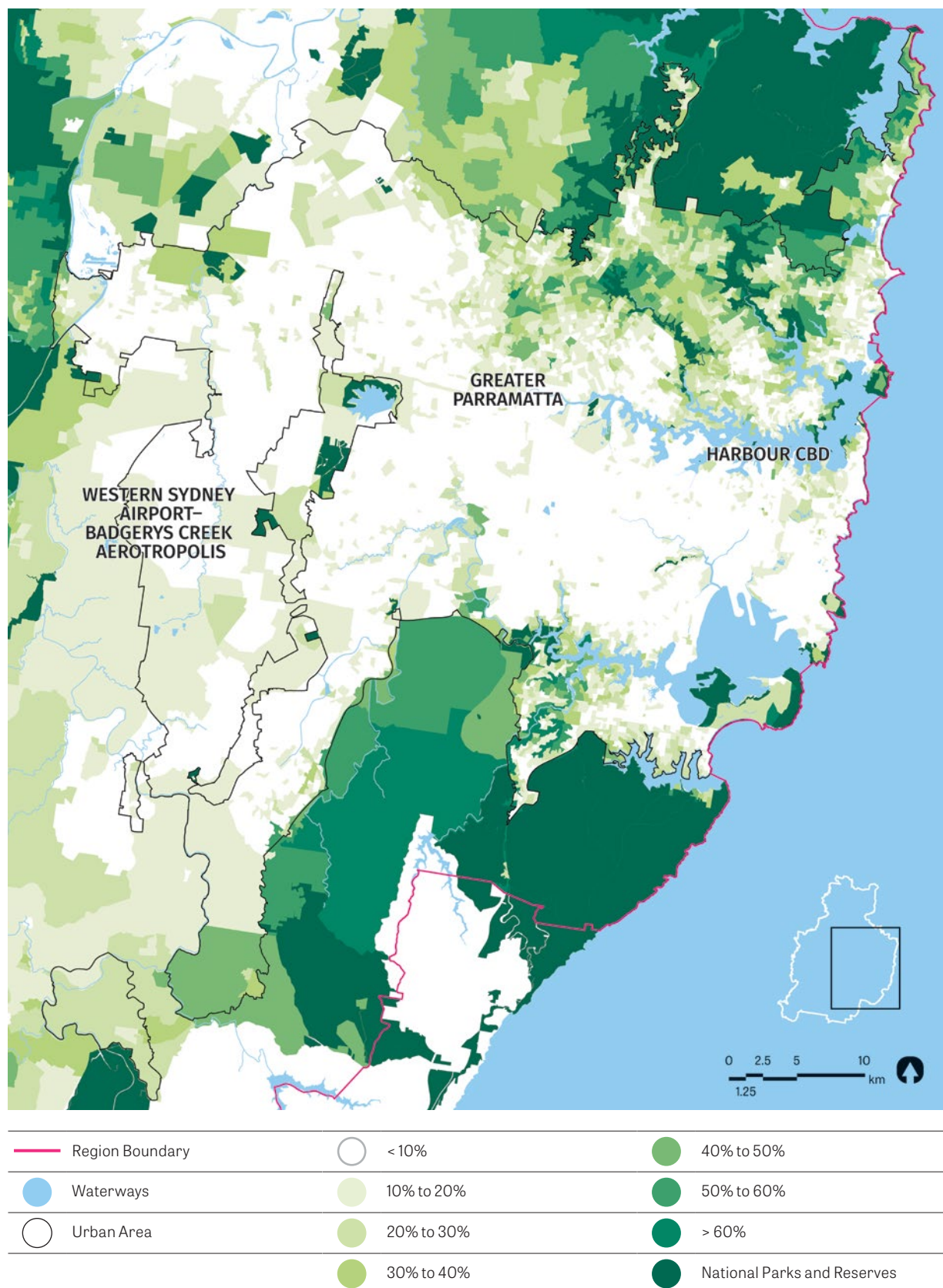
Expand urban tree canopy in the public realm.

#### Related government initiatives:

- Technical Guidelines for Urban Green Cover in NSW



Figure 51: Greater Sydney tree canopy cover as at 2011



Data Source: SPOT5 Woody Extent and Foliage Projective Cover (FPH) 5-10m, 2011, NSW Office of Environment and Heritage. Averaged to SA1 (2016)



## Objective 31

### Public open space is accessible, protected and enhanced

National parks, harbours, beaches, coastal walks, waterfront promenades, rivers, parks and playgrounds are integral to the character and life of Greater Sydney. This network of open spaces, which includes sporting facilities, is a form of green infrastructure which supports sustainable, efficient and resilient communities. Open space expands people's sense of home to include the wider local area and shared communal spaces and facilities.

The key considerations for planning open spaces are quantity, quality and distribution (see Figure 52). Understanding the open space, sport and recreation needs of the community will help determine the quantity, quality and distribution that will be required. The Greater Sydney Green Grid (refer to Objective 32) helps to connect open spaces to communities.

Access to high quality open space is becoming increasingly important as higher housing densities, more compact housing and changing work environments develop. Where land for additional open space is difficult to provide, innovative solutions will be needed, as well as a strong focus on achieving the right quality and diversity of open space.

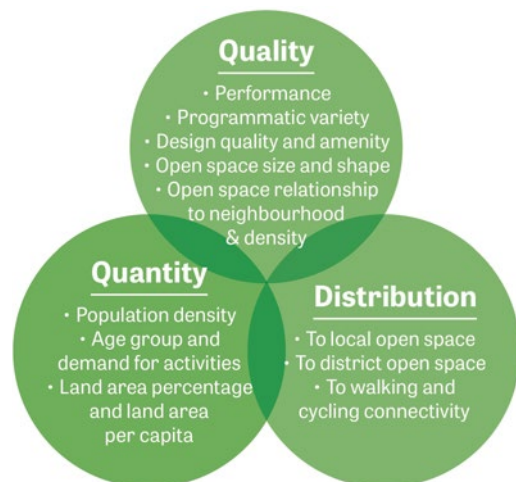
Enhancing open space so that it can meet a wider range of community needs is an important approach in areas where it is difficult to provide additional open space. This can include better landscaping, more durable high quality facilities, better lighting and multi-use playing fields and courts.

Using existing open space assets wisely, and sharing them more broadly, is an important response to rising demand for open space. Open spaces within school grounds are a potential asset that could be shared by the wider community outside of

school hours. The use of golf courses may also be examined to provide a wider range of sport and recreational facilities for local communities. In addition, there may be opportunities to use surplus government-owned land as open space including sport and recreational facilities.

Urban renewal needs to begin with a plan to deliver new, improved and accessible open spaces that will meet the needs of the growing community, particularly where density increases. High density development (over 60 dwellings per hectare) should be located within 200 metres of quality open space, and all dwellings should be within 400 metres of open space.

**Figure 52:** Considerations for planning open space





## Strategy 31.1

Maximise the use of existing open space and protect, enhance and expand public open space by:

- investigating opportunities to expand a network of diverse, accessible, high quality open space that responds to the needs and values of communities as populations grow
- investigating opportunities to provide new open space so that all residential areas are within 400 metres of open space and all high density residential areas are within 200 metres of open space
- requiring large urban renewal initiatives to demonstrate how access to high quality and diverse local open space is maintained or improved
- planning new neighbourhoods with a sufficient quantity of new open space
- delivering shared and co-located sports and recreational facilities including shared school grounds and repurposed golf courses
- delivering on, or complementing, the Greater Sydney Green Grid.



### Action 12

#### Deliver the open space toolkit

The Government Architect NSW will develop the toolkit working with the Commission and other State agencies.

The toolkit will provide guidelines for planning, delivering and managing open spaces to meet the needs of local communities.

## Objective 32

### The Green Grid links parks, open spaces, bushland and walking and cycling paths

The Greater Sydney Green Grid connects communities to the landscape. It sets a long-term vision for a network of high quality green areas – from regional parks to local parks and playgrounds – that connect town centres, public transport and public spaces to green infrastructure and landscape features. Links are fostered within the public realm by enhancing waterway corridors, transport routes, suburban streets, footpaths and cycleways.

The Greater Sydney Green Grid offers a network of green spaces that is far greater than the sum of its parts. It will keep the region cool, encourage healthy lifestyles, enhance bushland and support ecological resilience. Planning and delivery of the green grid will be influenced by the ways people move through places, the multiple roles of green grid corridors, supporting walking and cycling and better access to open spaces.

The delivery of the Greater Sydney Green Grid will build on past investments in the Regional Tracks and Trails Framework. Transport for NSW is establishing the Principal Bicycle Network which will provide high quality priority cycling routes across Greater Sydney. It will be integrated with the Greater Sydney Green Grid.

The Greater Sydney Green Grid will be delivered incrementally over decades, as opportunities and connections are refined and funded. Councils and the NSW Government will continue to use a range of land use planning tools, funding programs such as the Metropolitan Greenspace Program and transport initiatives to deliver the Greater Sydney Green Grid.

In the **Western Parkland City** the green grid will be integral to the creation of cool and green neighbourhoods and a continuous parkland corridor along South Creek that is an attractive place for recreation, retains water in the landscape and helps manage stormwater and flooding. The Western Parkland City's green grid will connect to Western Sydney Parklands, areas of high environment value and waterways in the nearby Metropolitan Rural

Area, providing more viable areas of habitat and links to scenic rural landscapes.

In the **Central River City** the green grid will leverage off existing open spaces along the Parramatta River, Duck River, Georges River and Prospect Reservoir. It will use urban renewal initiatives as opportunities to enhance and extend connections into growing communities. Connections to Western Sydney Parklands will link the Central City to the Western City, and connections along waterways flowing to the east will link the Central City to the Eastern City.

Open space along the foreshores of beaches, harbours and bays of the **Eastern Harbour City** form the backbone of its green grid. The popular walking tracks along the coast and Sydney Harbour will be enhanced and complemented by improved connections from dense urban communities, through tree-lined streets and established urban parks, towards open space along coastal waterways, such as the Northern Beaches Coastal Lagoons, Cooks River and Georges River.

Figure 53 shows the priority opportunities, as well as other options across Greater Sydney to form the long-term vision for the Greater Sydney Green Grid. District plans will provide more details on delivering the priority opportunities.

#### Strategy 32.1

Progressively refine the detailed design and delivery of:

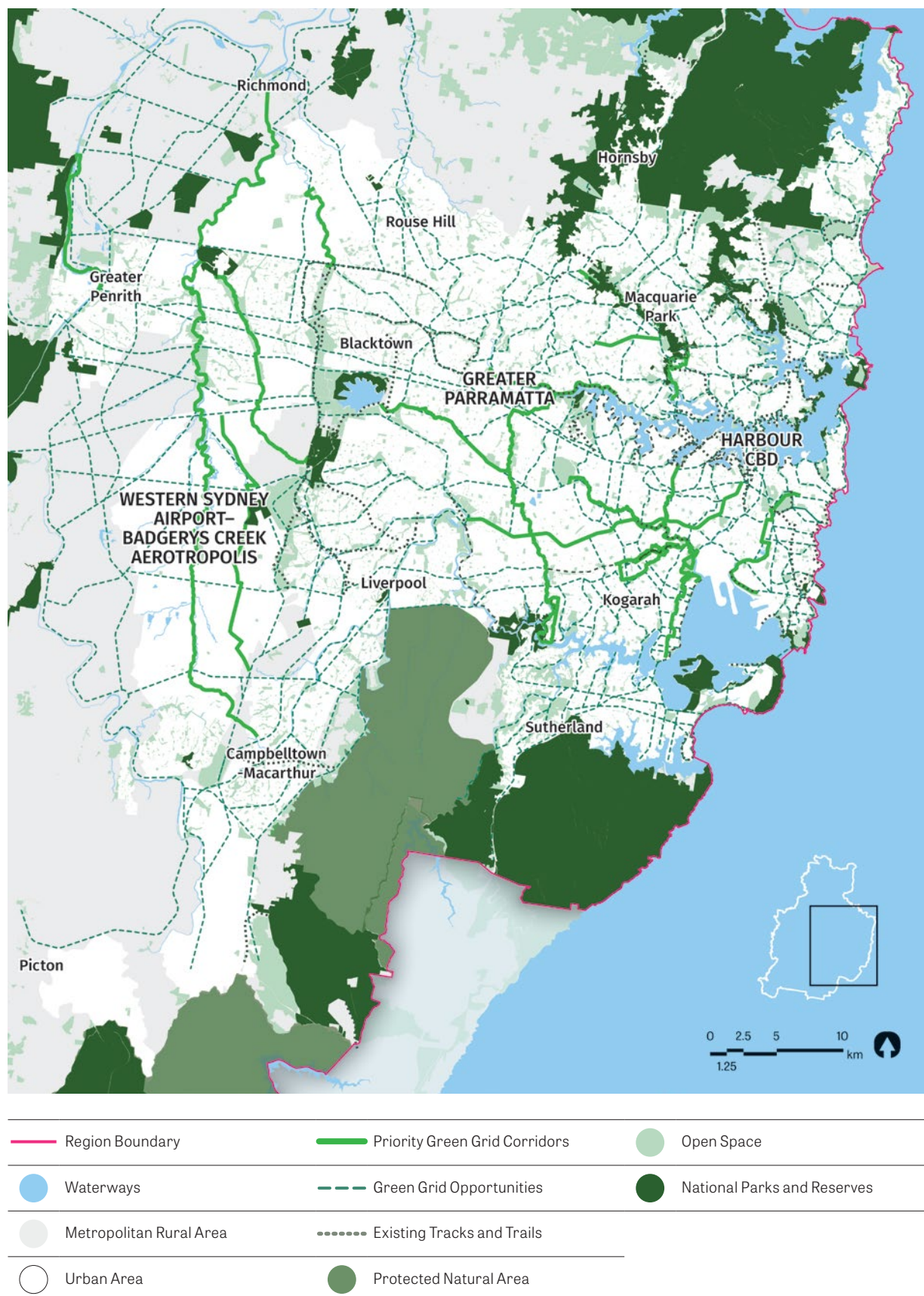
- Greater Sydney Green Grid priority opportunities
- connections that form the long-term vision of the network.

#### Useful links:

- Tyrrell Studio, March 2017, Sydney Green Grid Spatial Framework and Project Opportunities



Figure 53: Green Grid vision and opportunities





# An efficient city



## Objective 33

### A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change

Mitigating climate change is a complex and ongoing challenge both globally and locally. It requires reducing the emission of greenhouse gases to prevent more severe climate change and adapting to manage the impacts of climate change.

The *NSW Climate Change Policy Framework* sets out the aspirational long-term objective for NSW to achieve net-zero emissions by 2050. The NSW Government has released a draft plan – the *NSW Climate Change Fund Draft Strategic Plan*. It supports the implementation of the framework and sets out priorities for investing in clean energy, energy efficiency and resilience for climate change adaptation.

The way Greater Sydney's urban structure and built form develops over time can support NSW's transition towards net-zero emissions.

In Greater Sydney, the sectors that contribute most to greenhouse gas emissions are energy (electricity and gas) used in buildings, transport and waste (refer to Figure 44).

Developing a metropolis of three cities and aligning land use with transport planning will help slow emissions growth by planning the location of new homes near public transport, walkways and cycling paths. It will also help to better manage congestion, improve air quality and increase mobility.

Costs savings for households, businesses and local government can be realised by improving the design and operation of buildings through energy, water and waste efficiency measures. Increasing the uptake of solar panels can reduce reliance on

centralised energy. The objectives for energy and waste (refer to Objective 34 and Objective 35) also set out contributions to net-zero emissions.

The pathways towards net-zero emissions by 2050 vary across Greater Sydney, and depend on local circumstances and characteristics of each neighbourhood. In areas undergoing transformative change, more comprehensive approaches delivering greater reductions in greenhouse gas emissions are possible. For example, greater use of public transport and changes to parking supply in locations such as GPOP can reduce greenhouse gas emissions by nine per cent.<sup>57</sup> The pathways are summarised in Figure 54.

The *NSW Climate Change Fund Draft Strategic Plan* includes proposals to identify pathways for NSW to reduce emissions.

## Strategy 33.1

Support initiatives that contribute to the aspirational objective of achieving net-zero emissions by 2050 especially through the establishment of low-carbon precincts in Priority Growth Areas, Priority Precincts and Collaboration Areas.

### Related government initiatives:

- NSW Climate Change Policy Framework
- NSW Climate Change Fund Draft Strategic Plan

## Objective 34

### Energy and water flows are captured, used and re-used

Greater Sydney currently consumes energy, water and waste resources well beyond what can be managed within its boundaries. Recycling wastewater and stormwater can recover resources and energy and diversify the sources of water to meet growing demand, irrigate open spaces, keep waterways clean and contribute to Greater Sydney's water quality objectives.

When State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 was introduced, it marked a significant step in the efficient use of energy, water and sustainability in NSW. The BASIX energy targets were recently increased by 10 per cent, supporting NSW's transition to net-zero emissions.<sup>58</sup> While BASIX will continue to make a major contribution to the efficiency and sustainability of Greater Sydney, the next step is to examine how entire precincts can be planned and designed with shared infrastructure to produce even greater efficiencies.

Advances in technology will increase opportunities to generate energy more sustainably, and to store, distribute and use energy more efficiently. Organic waste also has the potential to contribute to a sustainable generation of energy.

An integrated approach to water use, embracing opportunities for local energy generation and using waste as a local renewable energy source, supports a circular economy (refer to Figure 55). A circular economy reframes the traditional way of using resources so energy, water and waste are used efficiently and continually recycled and re-used.

These efficiencies, productivity benefits and cost savings can be realised at the local and precinct scale. Efficient and sustainable precincts such as Rouse Hill, Barangaroo and Chippendale reduce pressure on existing energy, water, waste, wastewater and transport infrastructure and lower carbon emissions.

Other opportunities to achieve more efficient use of energy, water and waste are through sustainable utilities infrastructure in precincts. For example, Sydney Water carried out a trial at the Cronulla wastewater treatment plant to convert organic waste from local councils into energy to power waste treatment plants.

The WaterSmart Cities Program is investigating new ways to deliver more integrated water systems in a cost-effective and sustainable way.

#### Strategy 34.1

Support precinct-based initiatives to increase renewable energy, and energy and water efficiency especially in Priority Growth Areas, Priority Precincts, Collaboration Areas and State Significant Precincts.

##### Related government initiatives:

- WaterSmart Cities Program

**Figure 54:** Pathways towards net-zero emissions in Greater Sydney



## Objective 35

### More waste is re-used and recycled to support the development of a circular economy

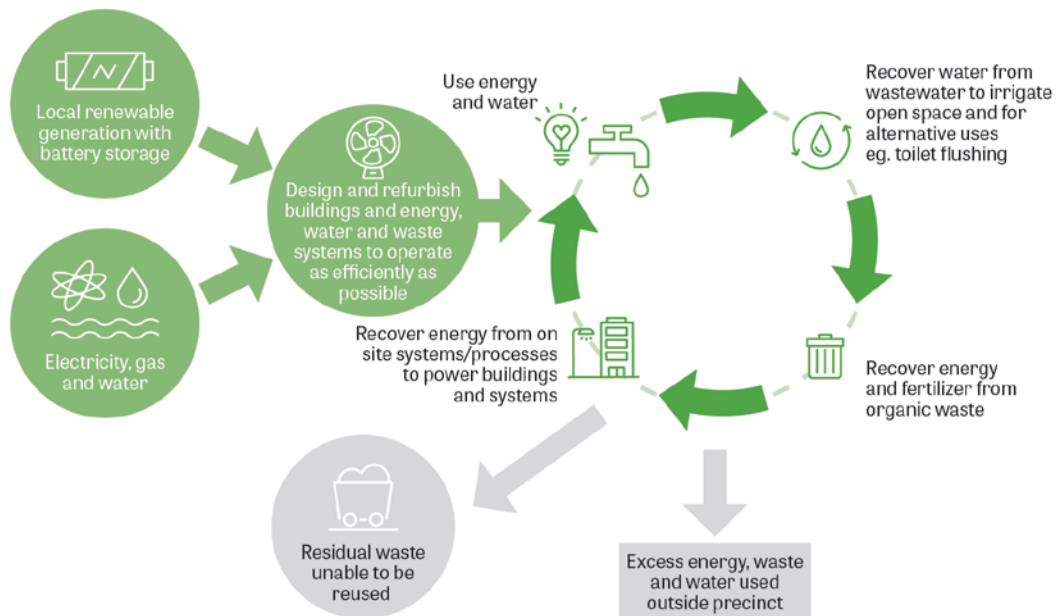
Greater Sydney faces challenges providing and managing waste services as the population grows. Existing waste management facilities do not have the capacity to accommodate projected growth. Councils working with private sector contractors manage much of Greater Sydney's waste collection and processing. Many contractors rely on waste facilities outside the local area due to limited waste infrastructure in Greater Sydney.

Approaches for reducing the environmental impacts of waste, re-using materials and using resources more efficiently are set out in the *NSW Waste and Resource Recovery Strategy 2014–21*. The strategy highlights the importance of having recycling and

waste management facilities distributed throughout the urban area. This contributes to increasing the proportion of waste that is recycled and reducing inefficiencies from transporting waste.

Existing waste management facilities need to be protected from residential encroachment and at the same time they need to address ongoing environmental issues such as odour, noise, truck movements and dust. As set out in Objective 23, industrial and urban service land provides important locations for waste management facilities and the recycling of municipal, commercial and industrial waste and hazardous materials.

**Figure 55:** Circular economy



In coming years, several large landfills in Greater Sydney will close as they reach capacity, meaning more waste will be transported outside the region. This limits economic and transport efficiency and increases costs. Additional sites for waste management within Greater Sydney would improve efficiencies for the management of waste. Identifying suitable sites is challenging due to the potential impacts of odour, truck traffic and noise. Support is required for councils and the private sector to identify and develop additional sites to deliver more efficient waste management for Greater Sydney.

Land use plans need to address opportunities for the private sector to develop recycling and waste management facilities.

### Strategy 35.1

Protect existing, and identify new, locations for waste recycling and management.

### Strategy 35.2

Support innovative solutions to reduce the volume of waste and reduce waste transport requirements.

#### Related government initiatives:

- NSW Waste and Resource Recovery Strategy 2014–21



Image source: NSW EPA



# A resilient city



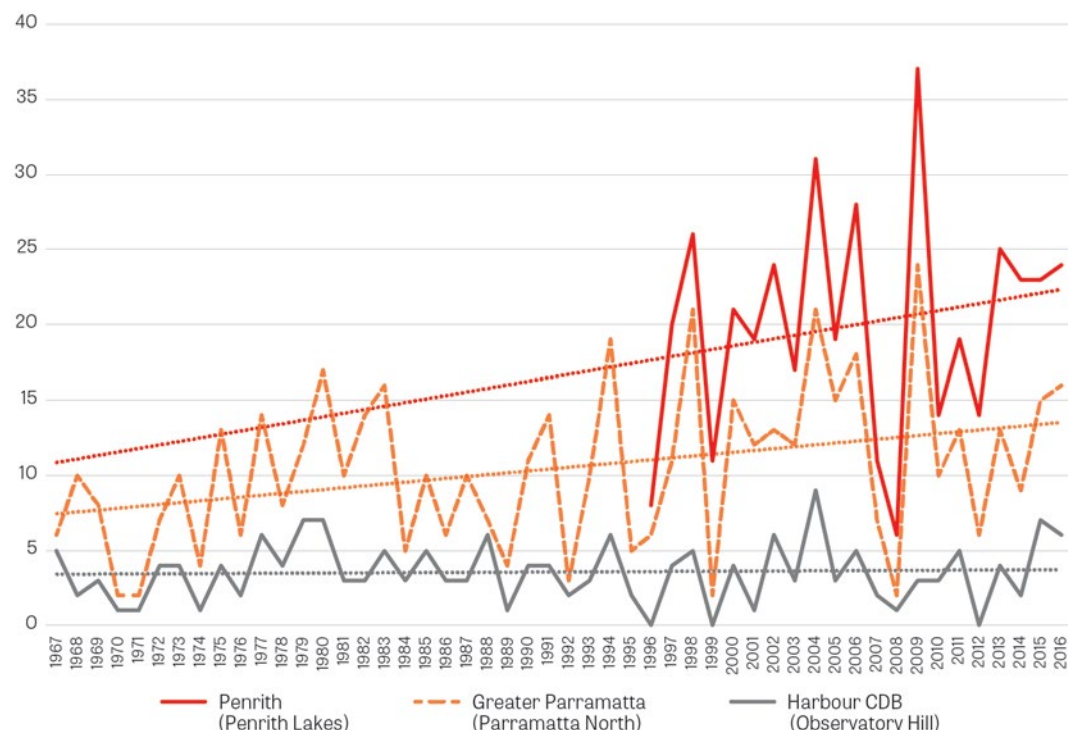
## Objective 36

People and places adapt to climate change and future shocks and stresses

Planning for resilience has largely been driven by environmental issues, but is increasingly being used as a way to consider a wide range of economic and social issues. In 2016, the City of Sydney, in collaboration with councils across Greater Sydney, commenced the 100 Resilient Cities network.

100 Resilient Cities describes urban resilience as the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks it experiences.

**Figure 56:** Number of days above 35 °C in Harbour CBD, Greater Parramatta and Penrith



Source: Greater Sydney Commission (2017) using data from the Bureau of Meteorology

Adapting to climate change will be critical to Greater Sydney's future resilience. The *NSW Climate Change Policy Framework* has set an aspirational objective for NSW to be more resilient to a changing climate. It is internationally acknowledged that with the amount of carbon and other greenhouse gases already in the atmosphere, climate change will be inevitable with some impacts already being felt today. *The National Climate Resilience and Adaptation Strategy* outlines the risks of climate change to cities and the built environment including greater risks of human injury, disease and death.

The Office of Environment and Heritage's *AdaptNSW*, provides background information, analysis and data as well as information to explain and address climate change risks. This includes projections of higher temperatures, higher evaporation, changes to the distribution and intensity of rainfall and how severe and more frequent heatwaves contribute to more severe bushfire weather and a longer bushfire season.

The Intergovernmental Panel on Climate Change has developed a range of future sea level rise projections associated with different greenhouse gas emission scenarios. The potential implications of sea level rise over time include higher storm surge and inundation levels, the erosion of sandy shorelines, saltwater intrusion into freshwater ecosystems, impacts of stormwater infrastructure, and altered flood behaviour in the catchment of coastal lagoons.

Investigations<sup>59</sup> have shown that the key challenges for Greater Sydney are:

- managing the worsening impacts of natural hazards on communities
- managing risks to energy, water and communications utilities and transport infrastructure, particularly for older infrastructure, from sea level rise, floods, bushfires and heatwaves
- maintaining capacity on transport routes to evacuate communities at risk from natural hazards
- managing damage to biodiversity and ecosystems, as well as natural systems that provide essential services such as clean air and clean drinking water
- adapting communities to cope with more very hot days.

Figure 56 shows the number of very hot days in Parramatta has increased by 81 per cent since the late 1960s and even more significant increases in Penrith.

The *NSW Climate Change Fund Draft Strategic Plan* includes proposals for providing information about climate change impacts, best practice approaches to adaptation and managing the impacts of climate change on natural resources, ecosystems and communities.

### Strategy 36.1

Support initiatives that respond to the impacts of climate change.

#### Related government initiatives:

- AdaptNSW

#### Useful links:

- 100 Resilient Cities
- Australia's Strategy for Protecting Crowded Places from Terrorism

## Objective 37

### Exposure to natural and urban hazards is reduced

Greater Sydney is subject to a range of natural and urban hazards which can be exacerbated by climate change. Vulnerability and exposure to these hazards are shaped by environmental, social and economic factors. To be resilient, communities need social cohesion and access to economic resources.

The NSW Government and councils use a range of policies and tools to reduce risks from natural and urban hazards. Improved coordination between all levels of government, including effective communication about exposure to hazards, helps protect communities.

Bushfires and flooding are significant natural hazards across many areas of Greater Sydney. These hazards are addressed through NSW Government guidelines, including the *Floodplain Development Manual 2005* and *Planning for Bush Fire Protection 2006* (which is currently being reviewed). The NSW Government's emergency services are vital in preparing communities for natural hazards and responding to events and disasters.

The Hawkesbury-Nepean Valley has a high flood risk and climate change may increase the severity and frequency of floods in the future. The NSW Government has launched *Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy* to reduce the potential risk to life, the economy and communities. As part of this strategy ongoing work will focus on managing development in areas at risk of flooding.

Transport, particularly freight transport, can produce air pollution and noise. However, advances in technology and the adoption of standards will help reduce these environmental impacts over the long term. Although Greater Sydney's air quality continues to improve and is very good by world standards, air pollution can exceed national standards at times.

Hazards such as noise pollution and soil and water contamination are also caused by a range of human activities. State Environmental Planning Policy

No 55 – Remediation of Land and its associated guidelines manage the rezoning and development of contaminated land. The Environment Protection Authority and councils manage waste management, agricultural activities and industrial processes like construction, manufacturing and mining. Some of these require buffers to manage odour and noise. Australian Standards are in place to manage impacts from aircraft noise, and NSW Government licensing manages impacts from industrial emissions and the disposal of waste products such as treated waste water.

*Effective land use planning can reduce the exposure to natural and urban hazards and build resilience to shocks and stresses.*

Greater Sydney, particularly its rural lands, is at risk from biosecurity hazards such as pests and diseases that could threaten agriculture, the environment and community safety. Biosecurity hazards are being managed by the NSW Government through the *Greater Sydney Peri Urban Biosecurity Program*.

Effective land use planning can reduce the exposure to natural and urban hazards and build resilience to shocks and stresses. Growth and change needs to be considered at a local level when making structural decisions about the region's growth, and when considering cumulative impacts at district and regional levels. Current guidelines and planning controls minimise hazards and pollution by:

- avoiding placing new communities in areas exposed to existing and potential natural hazards
- managing growth in existing neighbourhoods that are exposed and vulnerable to natural hazards
- in exceptional circumstances, reducing the number of people and the amount of property vulnerable to natural hazards, through the managed retreat of development
- using buffers to limit exposure to hazardous and offensive industries, noise and odour

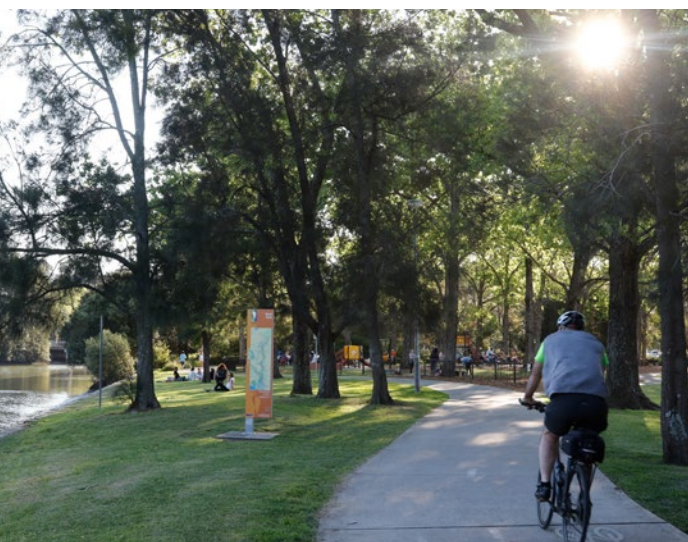


- designing neighbourhoods and buildings that minimise exposure to noise and air pollution in the vicinity of busy rail lines and roads, including freight networks
- cooling the landscape by retaining water and protecting, enhancing and extending the urban tree canopy to mitigate the urban heat island effect (refer to Objective 30 and Objective 38).

The wellbeing and social cohesion of a community can affect a community's ability to prepare, respond to and recover from acute shocks, noting there are different levels of vulnerability between communities. Planning to build strong and cohesive communities is set out in the Liveability Chapter.

### Strategy 37.1

Respond to the direction for managing flood risk in the Hawkesbury-Nepean Valley as set out in *Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy*.



#### Related government initiatives:

- Floodplain Development Manual 2005
- Planning for Bush Fire Protection 2006
- Planning for Bush Fire Protection (draft) 2017
- Greater Sydney Peri Urban Biosecurity Program



## Objective 38

### Heatwaves and extreme heat are managed

Greater Sydney’s climate means that communities are exposed to both heatwaves (more than three consecutive days of abnormally high temperatures) and extreme heat (days above 35 °C). This is more pronounced in the Western Parkland City which is more exposed to extreme heat. Climate change is likely to increase exposure to extreme heat and heatwaves. The urban heat island effect can also increase localised exposure to heat.

Heatwaves and extreme heat have a significant impact on human health. Heatwaves are estimated to cause more deaths in Australia than any other natural hazard. In addition, heatwaves and extreme heat can lead to more illness, which places pressure on communities, emergency services and the health system. Older people, young children and people with existing illnesses are generally more vulnerable, as are people who work outdoors. Bushfires triggered by heatwaves and extreme heat also have impacts on human health and safety.

Heatwaves and extreme heat also place great pressure on infrastructure, particularly on the electricity network during times of peak demand. Heat-related power shortages have the potential to place further pressure on vulnerable people and communities.

Increased demand for electricity for air-conditioning and other forms of cooling also contributes to increased greenhouse gas emissions, further exacerbating extreme heat linked to climate change.

Extreme heat makes it less attractive for people to walk and cycle and spend time outdoors.

The planning of great places and liveable local communities needs to consider how the urban heat island effect can be mitigated, particularly in areas with a higher proportion of vulnerable people.

The NSW Government has released the *NSW State Emergency Management Plan* which includes the *State Heatwave Sub Plan*. The Sub Plan details the control and coordination arrangements across State and local government for the preparation for, response to, and immediate recovery from a heatwave.

Objective 26 describes the vision for a cool and green city in the South Creek Corridor and Objective 30 highlights how the urban tree canopy can help mitigate the urban heat island effect, keep Greater Sydney cool and improve the amenity of local communities. In some limited circumstances where it is difficult to expand the urban tree canopy, innovative design measures are to be used to increase shade and reduce heat.

#### Strategy 38.1

Mitigate the urban heat island effect and reduce vulnerability to extreme heat.

##### Related government initiatives:

- NSW State Emergency Management Plan
- State Heatwave Sub Plan

## 7

# The Greater Sydney Structure Plan

The Greater Sydney Structure Plan 2056 highlights the principal spatial elements for managing growth and change across Greater Sydney based on a metropolis of three cities (refer to Figure 57 and Figure 58). The elements in the draft Plan can be seen as integrated layers and draw on components from *Future Transport 2056*.































The Structure Plan shows:

- **Landscape elements** which emphasise that Greater Sydney is a city defined by its landscape of Protected Natural Areas and Metropolitan Rural Areas which frame the Urban Area (refer to Objective 29).
- **Economic agglomerations** which account for more than 50 per cent of Greater Sydney's jobs, including the Western, GPOP and Eastern Economic Corridors, the health and education precincts, the metropolitan city and strategic

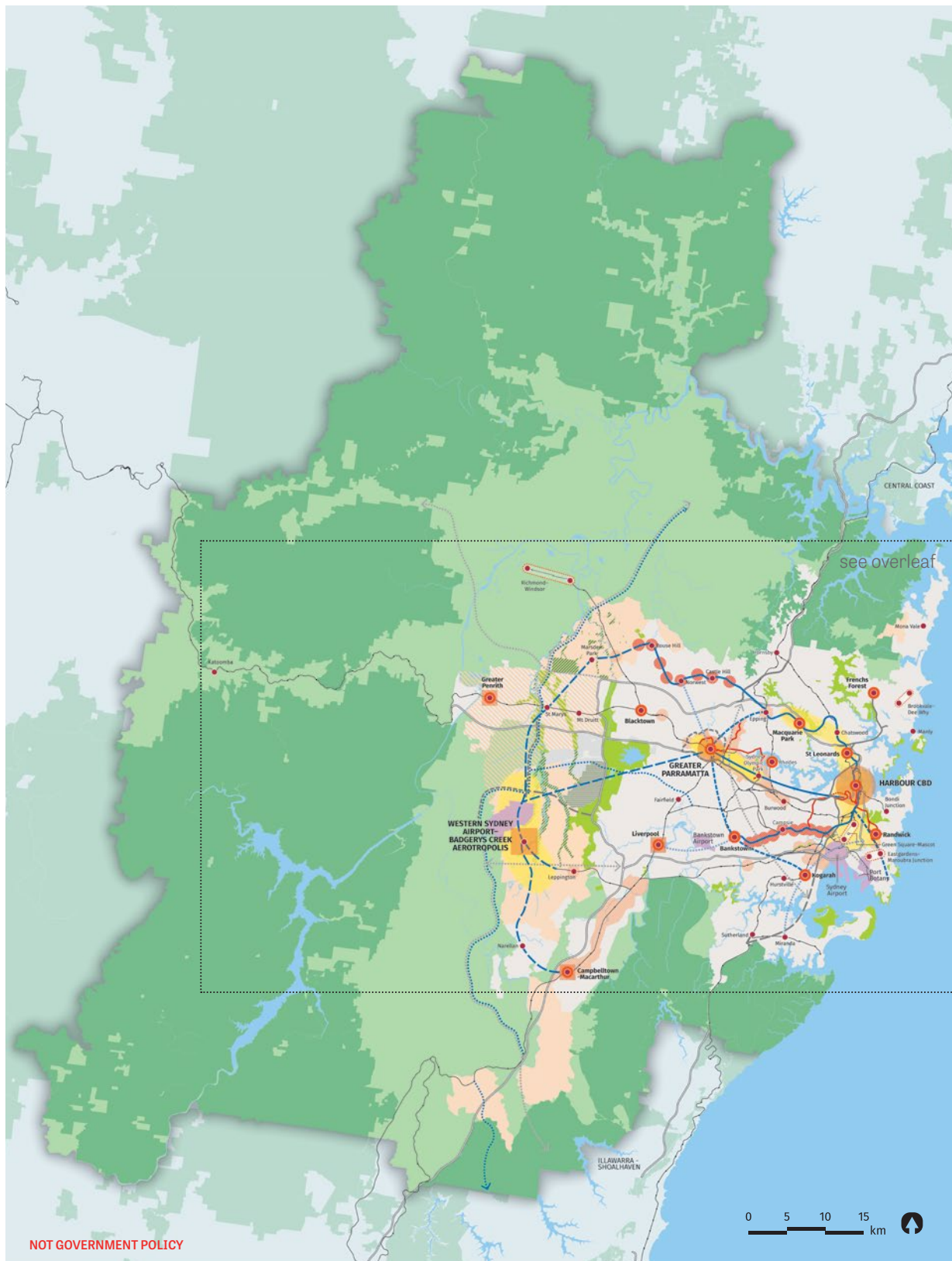
centres, the Western Sydney Employment Area and trade gateways (refer to Objective 15, Objective 16, Objective 21, Objective 22 and Objective 23).

- **Mass transit and strategic road networks** which connect the economic agglomerations and connect residents to jobs, goods and services (refer to Objective 14 and Objective 17).
- **Government-led housing supply program areas** which will provide a substantial proportion of Greater Sydney's housing supply, including Priority Growth Areas, Priority Precincts and Land and Housing Corporation renewal areas (refer to Objective 10).

District Plans will provide more detail on these elements.

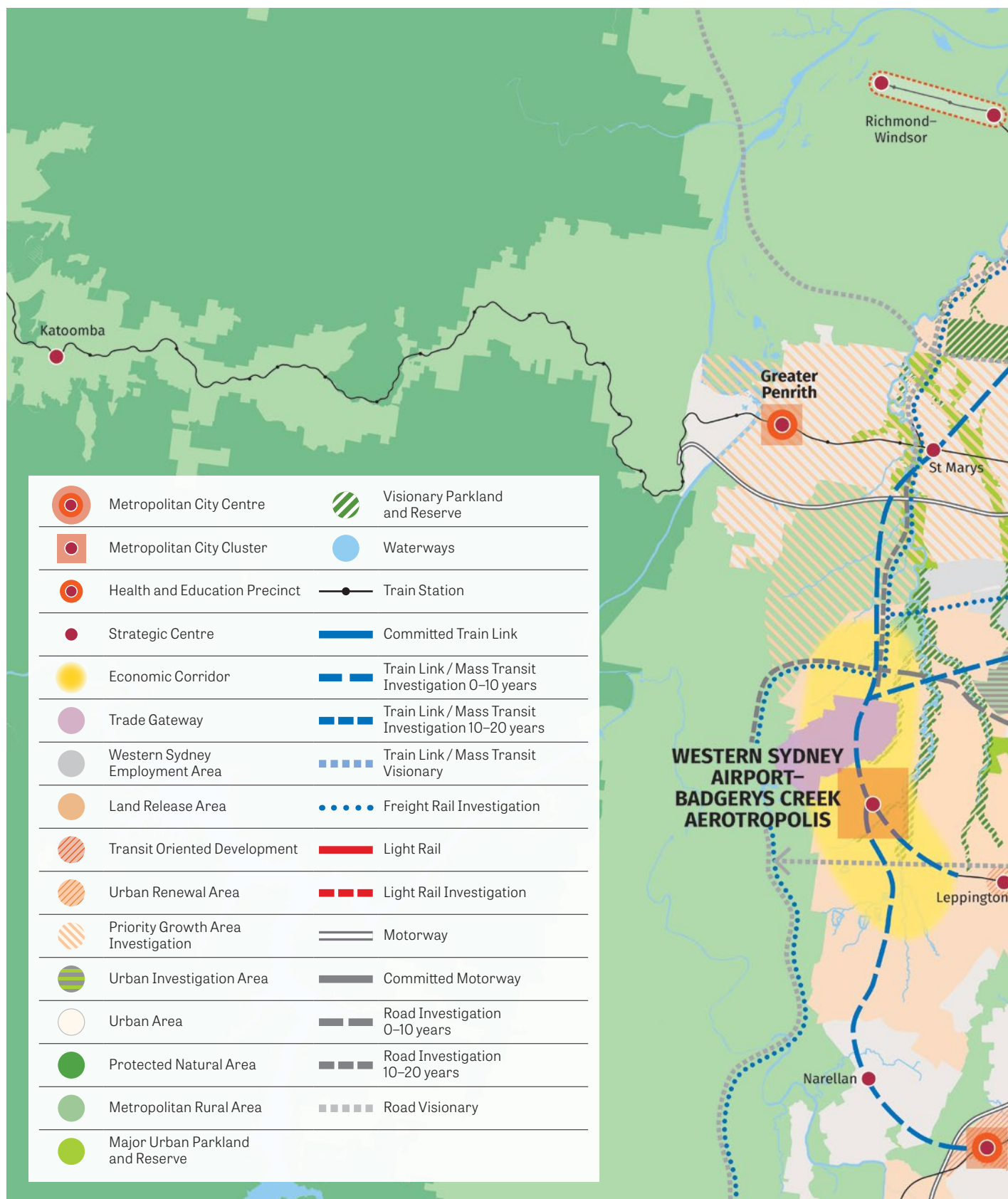
 Metropolitan City Centre	 Urban Investigation Area	 Train Link / Mass Transit Visionary
 Metropolitan City Cluster	 Urban Area	 Freight Rail Investigation
 Health and Education Precinct	 Protected Natural Area	 Light Rail
 Strategic Centre	 Metropolitan Rural Area	 Light Rail Investigation
 Economic Corridor	 Major Urban Parkland and Reserve	 Motorway
 Trade Gateway	 Visionary Parkland	 Committed Motorway
 Western Sydney Employment Area	 Waterways	 Road Investigation 0–10 years
 Land Release Area	 Train Station	 Road Investigation 10–20 years
 Transit Oriented Development	 Committed Train Link	 Road Visionary
 Urban Renewal Area	 Train Link / Mass Transit Investigation 0–10 years	
 Priority Growth Area Investigation	 Train Link / Mass Transit Investigation 10–20 years	

**Figure 57:** Greater Sydney Structure Plan 2056



NOTE: Committed projects of: Western Harbour Tunnel & Beaches Link, F6 – WestConnex to President Avenue Kogarah, Parramatta Light Rail Stage 2 and Sydney Metro West are subject to final business case, no investment decision yet. Routes and stops for some transport corridors/projects are indicative only.

**Figure 58:** Greater Sydney Structure Plan 2056 – the three cities



NOTE: Committed projects of: Western Harbour Tunnel & Beaches Link, F6 – WestConnex to President Avenue Kogarah, Parramatta Light Rail Stage 2 and Sydney Metro West are subject to final business case, no investment decision yet. Routes and stops for some transport corridors/projects are indicative only.





## 8

# Implementation

There are multiple aspects to the successful implementation and delivery of the draft *Greater Sydney Region Plan*:

- Using the draft Plan as a framework for decision-making will inform district plans and local environmental plans, and provide context for councils' community strategic plans.
- The draft Plan's integration with *Future Transport 2056* and the *State Infrastructure Strategy*, will align major land use, transport and infrastructure planning.
- Private sector investment, will be guided by the draft Plan that gives clarity on the priorities and vision of the NSW Government, to enable the building of homes, retail space, office buildings, and factories across Greater Sydney.
- Regional, district and local planning will inform engagement with the wider community so that plans are co-created with the people of Greater Sydney.

Achieving the vision of a metropolis of three cities requires the involvement of a wide range of stakeholders with a diversity of responsibilities. Collaboration and engagement with the community, local government, businesses, and State agencies have helped inform the draft Plan and will be essential in implementing its strategies and actions.

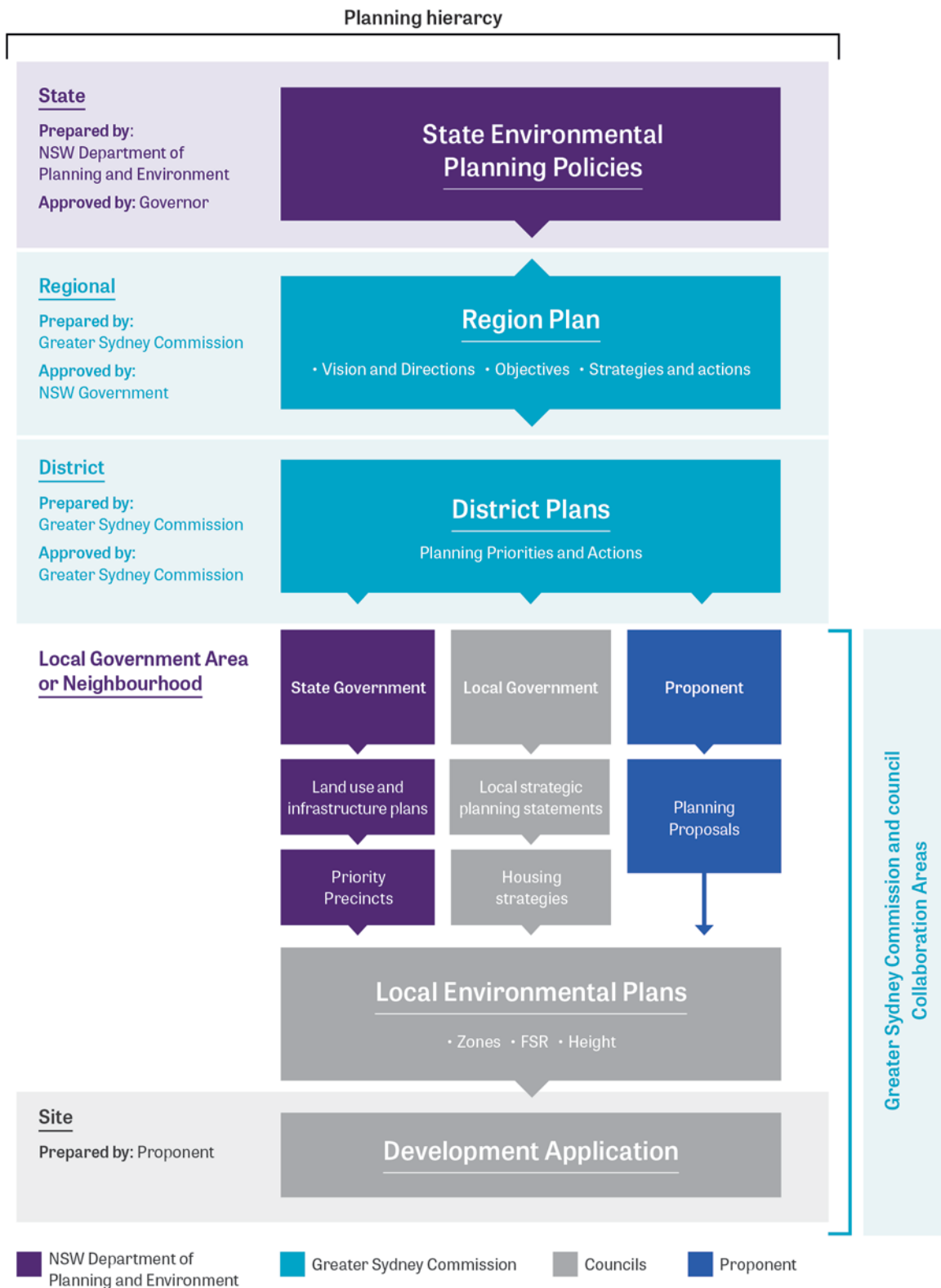
The delivery of the vision also requires regular monitoring and reporting on Greater Sydney's growth and change and on the progress of the delivery of the final Plan. Regular monitoring and reporting will provide the people of Greater Sydney with transparency on the delivery of the Plan's directions and actions. It will also yield critical information to allow for responses and refinements over time to the directions and actions in the final Plan as set out in Objective 40.

## Actions

The following metropolitan significant action will deliver implementation objectives.

- Work with the NSW Department of Planning and Environment to develop its role in peer reviewing key land use and infrastructure plans prepared by NSW Department of Planning and Environment to provide assurance to the community that robust planning is being undertaken across Greater Sydney consistent with the directions, priorities and objectives of the District and Region Plans (refer to Objective 39).
- Report on actions (refer to Objective 40).

**Figure 59:** Roles of planning authorities in Greater Sydney



## Objective 39

### A collaborative approach to city planning

The role of the Commission is to lead metropolitan planning for the Greater Sydney Region, and to promote orderly development by aligning infrastructure decision-making with land use planning.

This draft Plan sets out the Commission's long-term vision for the Greater Sydney Region. To deliver the objectives and strategies of the vision the Commission needs to work collaboratively with the NSW Department of Planning and Environment and local government to complete the city's hierarchy of strategic plans and enable consistent, transparent and fair decision-making.

Figure 59 shows how each of the participants in the process can bring their strengths and legislated responsibility to create a holistic and successful planning system for Greater Sydney.

#### Next steps – district and local planning

It is the Commission's responsibility to provide the NSW Government with a final draft *Greater Sydney Region Plan* for consideration and to finalise the district plans for Greater Sydney.

The district plans, presented through the themes of liveability, productivity and sustainability, with a continued focus on infrastructure and collaboration, expand on the economic, social and environmental context and priorities for each district. This provides local guidance for State agencies, councils, industry and the community.

The region and district plans inform the preparation and assessment of local environmental plans and planning proposals. Councils are to implement the region and district plans over a two-year or three-year timeframe (see text box) following the finalisation of the district plans. This involves councils reviewing their existing local environmental plans, undertaking necessary studies and strategies and preparing an update in accordance with the requirements

of the *Environmental Planning and Assessment Act 1979* and the NSW Department of Planning and Environment's *A guide to preparing local environmental plans*.

A key part of preparing local environmental plans is the preparation of a housing strategy to inform the local plan (refer to Objective 10). Prepared at local government or district area these housing strategies play a crucial role in catering for needs of projected population growth and local infrastructure.

State environmental planning policies also form part of the planning framework for Greater Sydney. As noted throughout this document, these policies cover specific economic, social and environmental matters that may impact on a local government area. The NSW Department of Planning and Environment is currently reviewing state environmental planning policies as part of initiatives to simplify the NSW planning system and reduce complexity. This review process will modernise, simplify and improve the effectiveness and usability of policies. The review intends to remove policy and controls that are duplicated in strategies, regional plans and local environmental plans.

To accelerate the local planning process, the Housing Affordability Package announced by the NSW Government in June 2017 requires the Commission, as part of a suite of policy measures, to nominate 10 Priority Councils in Greater Sydney, who will each receive up to \$2.5 million to assist with updating their local environmental plans to give effect to the district plans, within two years of the Commission releasing final district plans.



Several State agencies have a role in the delivery of housing supply. Land and Housing Corporation delivers social housing and renewal through a range of programs including Communities Plus. The NSW Government is committed to improving housing affordability by increasing housing supply, including by accelerating rezoning and building infrastructure such as roads, schools and utilities that can enable development. The NSW Government will work with councils to provide the right conditions for developers to supply enough new housing in the right places.

Under Section 117 of the *Environmental Planning and Assessment Act 1979*, there are a suite of Ministerial directions which require consideration for local plan making that cover issues such as employment, environment and heritage, and housing, infrastructure and urban development.

Local planning is also informed by councils' community strategic plans. These community focused plans provide the strategic framework for the planning and delivery of services over a 10-year period for each local government area. They set the economic, social and environmental context for local government areas and are part of the broader Integrated and Reporting Framework under the *Local Government Act 1993*.

Community engagement underpins each community strategic plan and provides detailed local considerations to be addressed in councils' local environmental plans, operational plans and information management.

Once the Commission has completed an engagement program on this draft Plan, it will submit a final draft Plan to the Minister for Planning for the NSW Government's consideration.

Further supporting information for this draft Plan is available on the Commission's website.



### Action 13

**Work with the NSW Department of Planning and Environment to develop its role in peer reviewing key land use and infrastructure plans prepared by NSW Department of Planning and Environment to provide assurance to the community that robust planning is being undertaken across Greater Sydney consistent with the directions, priorities and objectives of the District and Region Plans**

This approach allows for a differentiation between the NSW Department of Planning and Environment undertaking more detailed planning work in growth areas and Priority Precincts and the role of the Commission in preparing District and Region Plans together with other key plans nominated by the Minister or the Commission. This approach will be developed to capitalise on the independence of the Commission and the expertise of its Commissioners and planners.

Objective 40  
Plans refined by monitoring and reporting

The Commission will monitor a range of metrics and report annually on the performance of the final Plan. Monitoring and reporting will provide transparency to the community and other stakeholders on the progress of achieving the objectives and the vision. The metrics will be available on the Commission’s data hub.

Monitoring is integral to the successful implementation of the final Plan. It will provide the information needed to determine how well the plan is being implemented and whether it is succeeding. It will inform the Commission on what improvements or changes are needed to and reflect current directions for the city.

As a result, the final Plan will be dynamic and evolve as needed. It is based on a long-term vision with strategies and actions that will be updated over time. While monitoring will be regular, overall reviews of the Plan will occur at least every five years, consistent with the *Environmental Planning and Assessment Act 1979*.

Monitoring of the final Plan will focus on its contribution to delivering on the 10 Directions with metrics for each as set out in Table 6.

The Commission will provide an annual report to the NSW Government on the performance of the actions in the final Plan. The report will assess the status of the actions (refer to Table 7) to inform the NSW Government’s infrastructure delivery program and the place-based plans of other agencies.



Action 14

Report on actions

The Commission will report annually to the NSW Government on the delivery of the Plan, by reporting on the status of each action.

**Table 6:** Metrics to monitor the Plan

10 Directions	Plan metric (service)
 1. A city supported by infrastructure	<ul style="list-style-type: none"> <li>Number of land use plans supported by infrastructure plans (NSW Department of Planning and Environment, Greater Sydney Commission, Councils).</li> </ul>
 2. A collaborative city	<ul style="list-style-type: none"> <li>Proportion of agreed outcomes achieved in Collaboration Areas.</li> </ul>
 3. A city for people	<ul style="list-style-type: none"> <li>Annual survey of community sentiment.</li> </ul>
 4. Housing the city	<ul style="list-style-type: none"> <li>Number of councils on track to deliver housing targets.</li> <li>Number of councils with schemes that implement Affordable Rental Housing Targets.</li> </ul>
 5. A city of great places	<ul style="list-style-type: none"> <li>Percentage of dwellings within walking distance of a local or strategic centre.</li> <li>Percentage of dwellings within walking distance of open space.</li> </ul>
 6. A well-connected city	<ul style="list-style-type: none"> <li>Percentage of dwellings located within 30 minutes by public transport of a metropolitan city centre /cluster.</li> <li>Percentage of dwellings located within 30 minutes by public transport of a strategic centre.</li> </ul>
 7. Jobs and skills for the city	<ul style="list-style-type: none"> <li>Growth in jobs in the following metropolitan and strategic centres, Blacktown, Campbelltown - Macarthur, Greater Parramatta, Greater Penrith, Harbour CBD, Kogarah, Liverpool, Macquarie Park and Western Sydney Airport / Badgerys Creek Aerotropolis.</li> <li>Change in number of people employed locally (five year).</li> </ul>
 8. A city in its landscape	<ul style="list-style-type: none"> <li>Proportional increase in Greater Sydney covered by urban tree canopy.</li> </ul>
 9. An efficient city	<ul style="list-style-type: none"> <li>Number of precincts with low carbon initiatives.</li> </ul>
 10. A resilient city	<ul style="list-style-type: none"> <li>Number of local government areas undertaking resilience planning.</li> </ul>

**Table 7:** Actions to deliver the Plan

Action	Lead Agency
1. Identify, prioritise and deliver Collaboration Areas.	Greater Sydney Commission
2. Prepare housing strategies.	Local Government
3. Develop 6-10 year housing targets.	Greater Sydney Commission, Local Government
4. Work with the NSW Department of Planning and Environment to implement Affordable Rental Housing Targets.	Greater Sydney Commission
5. Collaborate to deliver the Greater Parramatta and the Olympic Peninsula vision.	Greater Sydney Commission
6. Develop a growth infrastructure compact for GPOP.	Greater Sydney Commission
7. Support the growth of the Camperdown-Ultimo Collaboration Area.	Greater Sydney Commission
8. Collaborate to deliver the Western Sydney City Deal.	Australian Government, NSW Government, Local Government
9. Facilitate whole-of-government place-based outcomes through Collaboration Areas for targeted strategic centres, including Liverpool, Greater Penrith and Randwick.	Greater Sydney Commission
10. Review industrial and urban services land in the Central River City and the South West and North West Priority Growth Areas.	Greater Sydney Commission
11. Develop and implement the South Creek Corridor Plan.	Infrastructure NSW
12. Deliver the open space toolkit.	Government Architect NSW
13. Work with the NSW Department of Planning and Environment to develop its role in peer reviewing key land use and infrastructure plans prepared by NSW Department of Planning and Environment to provide assurance to the community that robust planning is being undertaken across Greater Sydney consistent with the directions, priorities and objectives of the District and Region Plans.	Greater Sydney Commission
14. Report on Actions.	Greater Sydney Commission



## 9

## Endnotes

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