

OUR GREATER SYDNEY 2056

Revised **Draft** **South District Plan**

– connecting communities



October 2017

Acknowledgement of Country

The Greater Sydney Commission acknowledges the traditional owners of the lands that include South District and the living culture of the traditional custodians of these lands. The Commission recognises that the traditional owners have occupied and cared for this Country over countless generations, and celebrates their continuing contribution to the life of Greater Sydney.

South District

Canterbury–Bankstown
Georges River
Sutherland



How to be involved

This revised draft *South District Plan* replaces the draft *South District Plan*, released in November 2016.

You can read the entire draft District Plan at:

www.greater.sydney

This draft District Plan is on formal public exhibition until 15 December 2017.

You can make a submission:

by visiting:

www.greater.sydney/submissions

by emailing:

submissions@gsc.nsw.gov.au

by post to:

Greater Sydney Commission
Draft South District Plan
PO Box 257
Parramatta NSW 2124

Before making a submission, please read the Privacy Statement at 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.

Chief Commissioner
Lucy Hughes Turnbull AO



This draft District Plan sets out planning priorities and actions for the development of the South District.

The draft District Plan recognises that the District's natural waterways and bushland are great assets and attractors, sustaining and supporting a diverse and multicultural community and bringing visitors from Greater Sydney and beyond. We know that as the South District accommodates a growing population, the Sydney Metro City & Southwest rail system will reinforce its connections to the Harbour CBD.

Collaboration will be the key for clarity and guidance on our city's growth. The Greater Sydney Commission is bringing together all parties with an interest in the District's future and is channelling the collective energy into improved planning outcomes. By taking a leadership role, we are bringing together public resources and expertise

to create a more liveable, productive and sustainable city.

We will advocate for effective infrastructure to keep pace with population growth and plan for demographic changes such as increases in the number of children and frail aged in the community. We will support the coordination of government activity and delivery – transport, infrastructure, land use, housing, health, education, heritage and environment. We will also work positively with the private sector and councils to make sure the South District is liveable and prosperous.

I encourage everyone to review this draft District Plan. Your suggestions and comments are important in making this draft District Plan a living and working document to guide the South District's future.

South District Commissioner
Morris Iemma



The South District offers something for everyone. It is home to beaches, bushland and parks; a range of vibrant multicultural communities and cultural events; and is close to the nation's trade gateways of Port Botany and Sydney Airport. The District includes the Royal National Park — the world's second oldest national park, and Australia's oldest.

These social, economic and environmental assets contribute to a highly liveable and sustainable district. As the District grows, there is enormous potential in the development of economic assets. These include an innovation and research precinct based around the Australian Nuclear Science and Technology Organisation at Lucas Heights; the growth and diversification of businesses at Bankstown Airport; and the growth of knowledge-intensive jobs at Kogarah's health and education precinct.

We want to build on the District's assets to make it easier for residents to access more of the jobs, services and places that create a high quality of life. We will continue to prioritise the protection of our natural areas and our heritage, and do so while planning for how we can boost the number and types of jobs in the District. We want to see more people working in the District, in 21st century jobs that build skills and economic resilience.

This draft District Plan is part of a conversation between all of us who live and work here, about how we can come together to create the District we aspire to. I'm eager for as many people as possible to get involved as we finalise the draft District Plan. It's an important step in helping to shape the decisions that will drive the District's future.

Contents

Future of the South District 6

South District Structure Plan – 2036	8
Greater Sydney context	10
South District snapshot	12
Ten Directions and Planning Priorities	14

1 About the draft Plan 16

2 Infrastructure and collaboration 18

Planning Priority S1. Planning for a city supported by infrastructure	19
Planning Priority S2. Working through collaboration	20

3 Liveability 22

Planning Priority S3. Providing services and social infrastructure to meet people's changing needs	24
Planning Priority S4. Fostering healthy, creative, culturally rich and socially connected communities	28
Planning Priority S5. Providing housing supply, choice and affordability, with access to jobs and services	33
Planning Priority S6. Creating and renewing great places and local centres, and respecting the District's heritage	40

4 Productivity 46

Planning Priority S7. Growing and investing in the ANSTO research and innovation precinct	48
Planning Priority S8. Growing and investing in health and education precincts and Bankstown Airport trade gateway as economic catalysts for the District	51
Planning Priority S9. Growing investment, business opportunities and jobs in strategic centres	55
Planning Priority S10. Protecting and managing industrial and urban services land	65
Planning Priority S11. Supporting growth of targeted industry sectors	70
Planning Priority S12. Delivering integrated land use and transport planning and a 30-minute city	73

5

Sustainability

80

Planning Priority S13. Protecting and improving the health and enjoyment of the District's waterways	82
Planning Priority S14. Protecting and enhancing bushland, biodiversity and scenic and cultural landscapes and better managing rural areas	86
Planning Priority S15. Increasing urban tree canopy cover and delivering Green Grid connections	90
Planning Priority S16. Delivering high quality open space	94
Planning Priority S17. Reducing carbon emissions and managing energy, water and waste efficiently	97
Planning Priority S18. Adapting to the impacts of urban and natural hazards and climate change	100

6

Implementation

104

7

Endnotes

108

Future of the South District

The vision for Greater Sydney as a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City – means residents in the South District will have quicker and easier access to a wider range of jobs, housing types and activities.

The South District is part of the Eastern Harbour City. It connects to the Central River City through Canterbury-Bankstown Local Government Area.

Its extensive rail and road network, proximity to Australia's major trade gateways, along with the social connections of its multicultural communities provide links to the region, the country and the world.

The District is a place of great natural beauty and diverse communities, where jobs are easy to get to, nature is close at hand, and a variety of housing forms and affordability levels support a diverse community.

The draft *South District Plan* guides the growth of the District within the context of Greater Sydney's three cities to improve the District's social, economic and environmental assets.

The draft District Plan guides this growth with new homes and knowledge-intensive jobs as an impetus for public investment in infrastructure. New infrastructure will

support the collaboration area focused on the Australian Nuclear Science and Technology Organisation, the Kogarah health and education precinct and the emerging health and education precinct at Bankstown-Lidcombe.

Infrastructure will support a greater range of housing types with urban renewal along the Sydenham to Bankstown corridor, in the Campsie-Canterbury, Belmore-Lakemba and Riverwood priority precincts as well as precincts close to centres and railway stations.

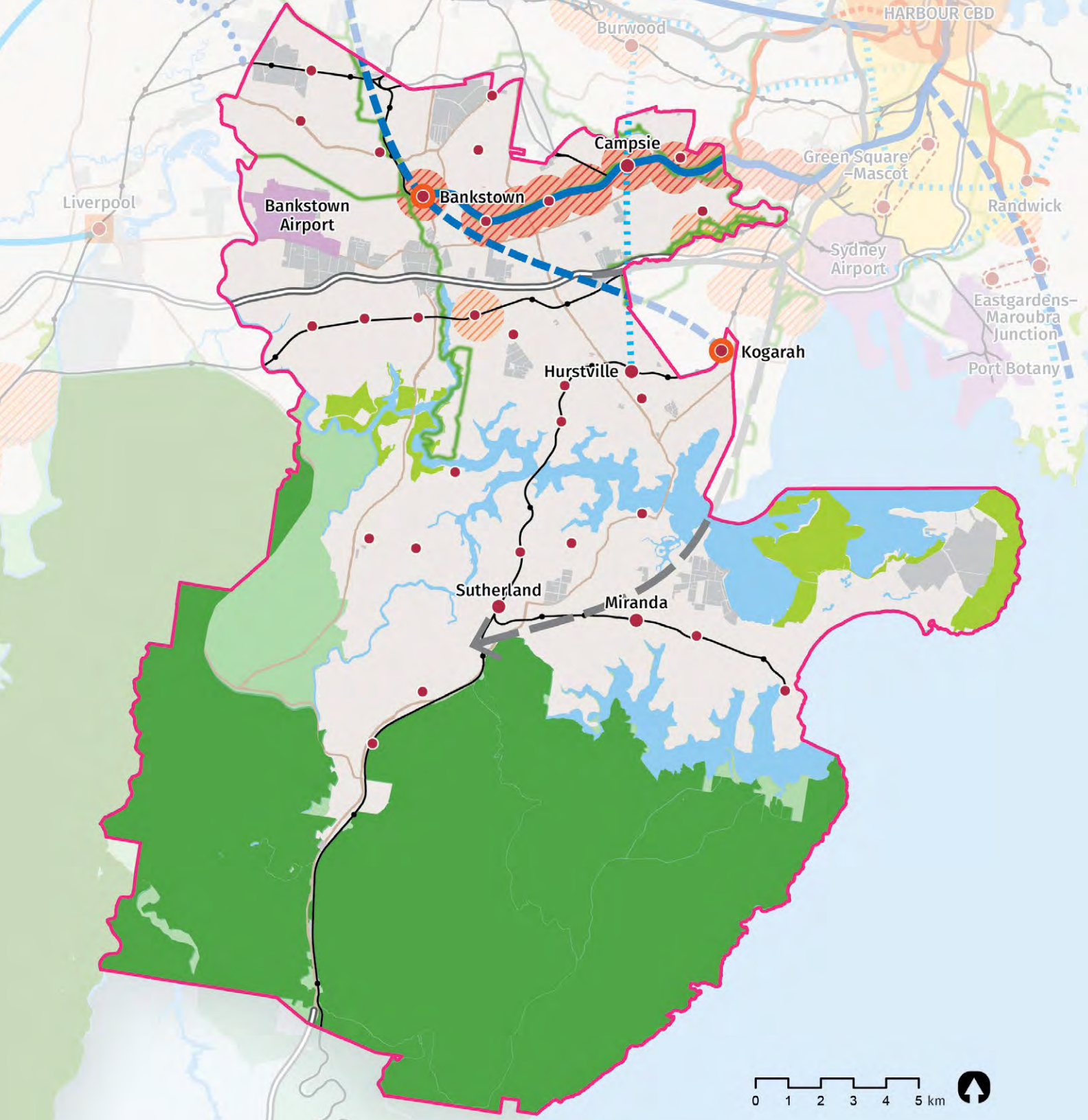
The District will build on its advantages – close to both Sydney Airport and Port Botany as well as the Illawarra and Port Kembla – through infrastructure investments such as the F6 Extension, M5 Motorway and Sydney Metro City & Southwest. It will also capitalise on Bankstown Airport, its connections to Parramatta, and in the longer term to Liverpool and the Western Sydney Airport.

The District's local areas will benefit from new or enhanced infrastructure to create pleasant, leafy centres, enhanced open spaces and eat streets. This will protect residents' existing lifestyle assets.

The District's landscape features, including the beaches, waterways, bushland and national parks, biodiversity such as the internationally important Ramsar-listed wetlands at Towra Point, and the high number of endangered species, will be protected for the sustainability of the environment and to continue to attract tourists.



South District Structure Plan 2036



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.

Housing



Existing and projected dwellings

	2016	2036
South District	279,000	362,500

Jobs



Centre job target ranges

	2016	2036
Bankstown	12,100	17,000–25,000
Kogarah	11,800	16,000–20,500
Hurstville	11,600	15,000–20,000
Miranda	7,000	8,000–11,500
Sutherland	5,700	8,000–9,000
Campsie	4,800	7,000–7,500

	Metropolitan City Centre		Protected Natural Area
	Metropolitan City Cluster		Metropolitan Rural Area
	Health and Education Precinct		Major Urban Parkland and Reserve
	Strategic Centre		Waterways
	Local Centre		Train Station
	Economic Corridor		Committed Train Link
	Trade Gateway		Train Link / Mass Transit Investigation 10–20 years
	Industrial Land		On Street Rapid Transit
	Land Release Area		Motorway
	Transit Oriented Development		Committed Motorway
	Urban Renewal Area		Road Investigation 0–10 years
	Urban Area		Green Grid Priority Project

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Greater Sydney context



Figure 1: Metropolis of three cities

Planning for the five districts of Greater Sydney will support the vision for a metropolis of three cities (refer to Figure 1)

- The emerging **Western Parkland City** with the Western Sydney Airport and Badgerys Creek Aerotropolis will grow a strong trade, logistics, advanced manufacturing, health, education and science economy within a Western Economic Corridor and will be the most connected place in Australia.
- The developing **Central River City** will capitalise on its location in the centre of Greater Sydney and with radial transport links will continue developing its world-class health, education and research institutions, its finance, business services and administration sectors, and its logistics and urban services to drive the economy and support a growing population.
- The established **Eastern Harbour City**, Australia's global gateway, will build on its economic credentials and leverage its strong financial, professional, health and education sectors and push its capabilities with an innovation precinct that boosts productivity and global connections.

This vision will transform land use and transport patterns and rebalance Greater Sydney so the benefits of growth are shared more equally and equitably to all residents as Greater Sydney's population increases from 4.7 million to 8 million over the next 40 years.

Each of the three cities is at a different stage of development so implementation requires a targeted approach to growth.

Economic growth is to be commensurate with population growth across Greater Sydney. Increasing productivity, global competitiveness and the region's export sectors are expected to increase economic activity to \$655 billion with 817,000 new jobs by 2036.

Greater Sydney's Eastern Economic Corridor has high concentrations of jobs with good road and public transport connectivity and high levels of interaction between business and people. This corridor contributed two-thirds of the State's economic growth

over the 2015–16 financial year. Planning and investment will strengthen the established Eastern Economic Corridor and grow the Greater Parramatta and the Olympic Peninsula (GPOP) and Western Economic Corridors.

People want to live close to jobs and services, so each of the three cities will have more housing in the right places which will assist with housing affordability. Housing and jobs will be aligned with new or improved infrastructure from transport to schools, health facilities and public places under the new growth infrastructure compacts.

Improved transport within and between each of the three cities will produce a 30-minute city where most commuters 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.

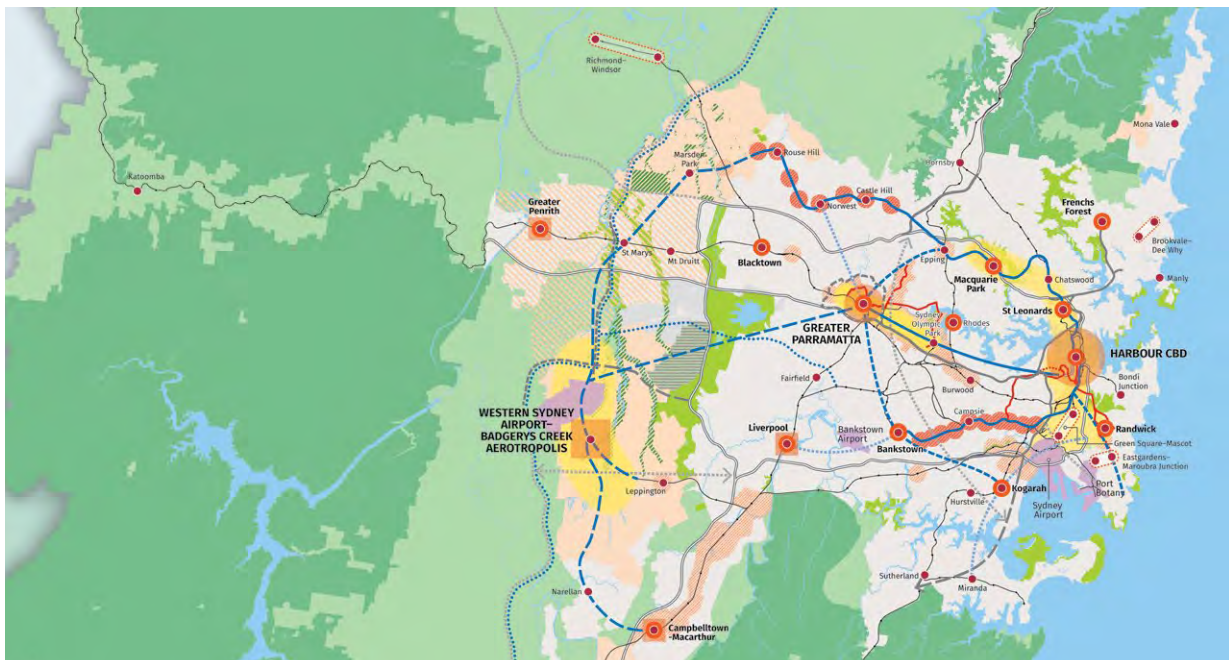
Better transport means people will be closer to knowledge-intensive jobs, city-scale infrastructure and services, and lifestyle features like entertainment, sporting and cultural facilities.

Walking and cycling will become increasingly important as part of daily travel with well-designed paths in popular thoroughfares improving the sustainability of the region and the wellbeing of residents. Growth within each of the three cities will be accompanied by higher quality public places and green spaces leading to opportunities for healthy lifestyles and community cohesion. Creativity, culture and the arts will be supported and acknowledged as part of the innovation economy.

The Greater Sydney Green Grid will connect green areas including parks, bushland and playgrounds to town centres, public transport and public places encouraging healthy lifestyles, enhancing biodiversity and supporting ecological resilience.

A metropolis of three cities brings liveability, productivity and sustainability benefits to all parts of Greater Sydney. It is consistent with the 10 Directions in *Directions for a Greater Sydney* which establishes the aspirations for the region over the next 40 years. The 10 Directions have been key to integrating land use, transport and infrastructure planning - they are foundational building blocks for the draft *Greater Sydney Region Plan*.

Figure 2: Greater Sydney Structure Plan 2056 – the three cities



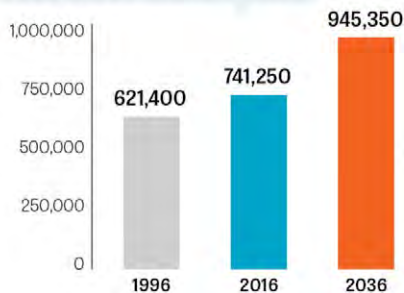
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South District snapshot

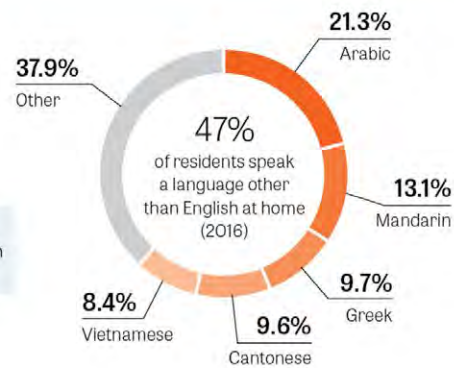


People – Population, age and languages spoken

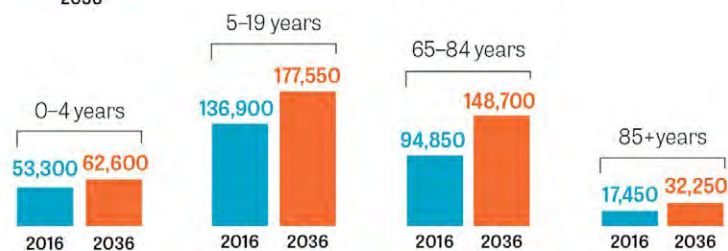
+204,100 more people by 2036



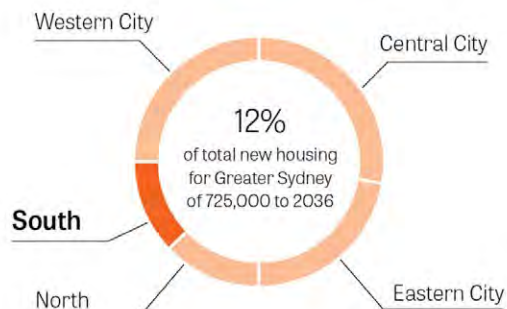
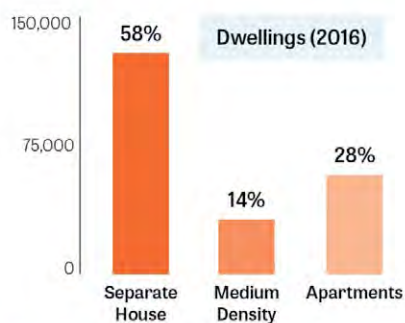
12% of Greater Sydney's total growth of 1,740,400 to 2036



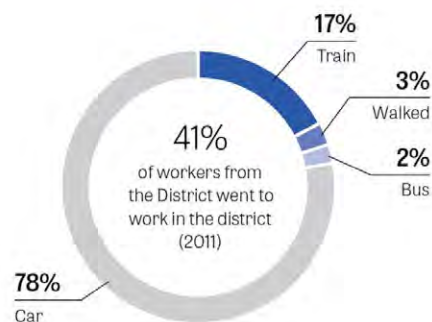
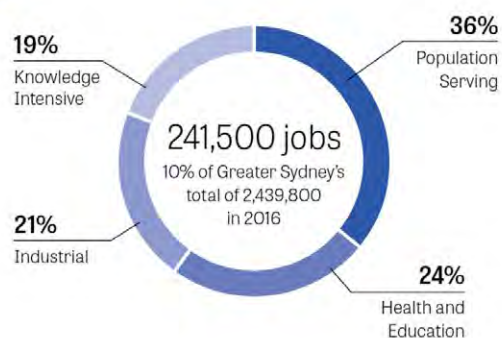
There will be a **61%** increase in the number of people aged 65 years and older in the next 20 years.



Dwelling demand and dwelling types



Jobs and journey to work








District context






Local government areas:

- CANTERBURY – BANKSTON
- GEORGES RIVER
- SUTHERLAND



Ten Directions and Planning Priorities

Directions	A city supported by infrastructure	A collaborative city	A city for people	Housing the city	A city of great places
	Infrastructure supporting new developments 	Working together to grow a Greater Sydney 	Celebrating diversity and putting people at the heart of planning 	Giving people housing choices 	Designing places for people 
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"> Number of councils on track to deliver housing targets Number of councils with schemes that implement Affordable Rental Housing Targets 	<ul style="list-style-type: none"> Percentage of dwellings within walking distance of a local or strategic centre Percentage of dwellings within walking distance of open space
South District Planning Priorities	Planning Priority S1 Planning for a city supported by infrastructure	Planning Priority S2 Working through collaboration	Planning Priority S3 Providing services and social infrastructure to meet people's changing needs Planning Priority S4 Fostering healthy, creative, culturally rich and socially connected communities	Planning Priority S5 Providing housing supply, choice and affordability, with access to jobs and services	Planning Priority S6 Creating and renewing great places and local centres, and respecting the District's heritage

A well connected city	Jobs and skills for the city	A city in its landscape	An efficient city	A resilient city
Developing a more accessible and walkable city  <ul style="list-style-type: none"> Percentage of dwellings located within 30 minutes by public transport of a metropolitan city centre/cluster Percentage of dwellings located within 30 minutes by public transport of a strategic centre 	Creating the conditions for a stronger economy  <ul style="list-style-type: none"> Growth in jobs in targeted metropolitan and strategic centres. Change in number of people employed locally (five yearly) 	Valuing green spaces and landscape  <p>Proportional increase in Greater Sydney covered by urban tree canopy</p>	Using resources wisely  <p>Number of precincts with low carbon initiatives</p>	Adapting to a changing world  <p>Number of local government areas undertaking resilience planning</p>
Planning Priority S12 Delivering integrated land use and transport planning and a 30-minute city	Planning Priority S2 Planning Priority S7 Growing and investing in the ANSTO research and innovation precinct Planning Priority S8 Growing and investing in health and education precincts, and Bankstown Airport trade gateway as economic catalysts for the District Planning Priority S9 Growing investment, business opportunities and jobs in strategic centres Planning Priority S10 Protecting and managing industrial and urban services land Planning Priority S11 Supporting growth of targeted industry sectors	Planning Priority S13 Protecting and improving the health and enjoyment of the District's waterways Planning Priority S14 Protecting and enhancing bushland, biodiversity and scenic and cultural landscapes and better managing rural areas Planning Priority S15 Increasing urban tree canopy cover and delivering Green Grid connections Planning Priority S16 Delivering high quality open space	Planning Priority S17 Reducing carbon emissions and managing energy, water and waste efficiently	Planning Priority S18 Adapting to the impacts of urban and natural hazards and climate change

1

About the draft Plan

The South District covers the Canterbury-Bankstown, Georges River and Sutherland local government areas (refer to Figure 3).

This draft *South District Plan* is a 20-year plan to manage growth in the context of social, economic and environmental matters to achieve the 40 year vision for Greater Sydney. It is a guide for implementing the draft *Greater Sydney Region Plan* at a district level and is a bridge between regional and local planning.

The draft District Plan informs local environmental plans and the assessment of planning proposals as well as community strategic plans and policies. The draft District Plan also assists councils to plan for and deliver growth and change, and align their local planning strategies to place-based outcomes. It informs infrastructure agencies, the private sector and the wider community of expectations for growth and change. Community engagement on the draft District Plan will contribute to a plan for growth that reflects local values and aspirations, in a way that balances regional and local considerations (refer to Figure 4).

The draft *Greater Sydney Region Plan* has been prepared by the Commission concurrently with the Government's *Future Transport 2056* and Infrastructure NSW's *State Infrastructure Strategy* to integrate land use, transport and infrastructure across the region for the first time in a generation. In this context, all the transport initiatives outlined in this draft District Plan are sourced from *Future Transport 2056*.

This draft District Plan has been prepared to give effect to the draft *Greater Sydney Region Plan*. The final District Plan will need to reflect the final content of the region plan. This draft District Plan identifies, where relevant, areas of state, regional and district significance, including priority growth areas.

In preparing this draft District Plan, the focus has been on identifying the Planning Priorities that

are important to achieving a liveable, productive and sustainable future for the District. Relevant Objectives, Strategies and Actions from the draft *Greater Sydney Region Plan* are embedded in each of the Planning Priorities, to integrate the District's challenges and opportunities with the Greater Sydney vision of a metropolis of three cities.

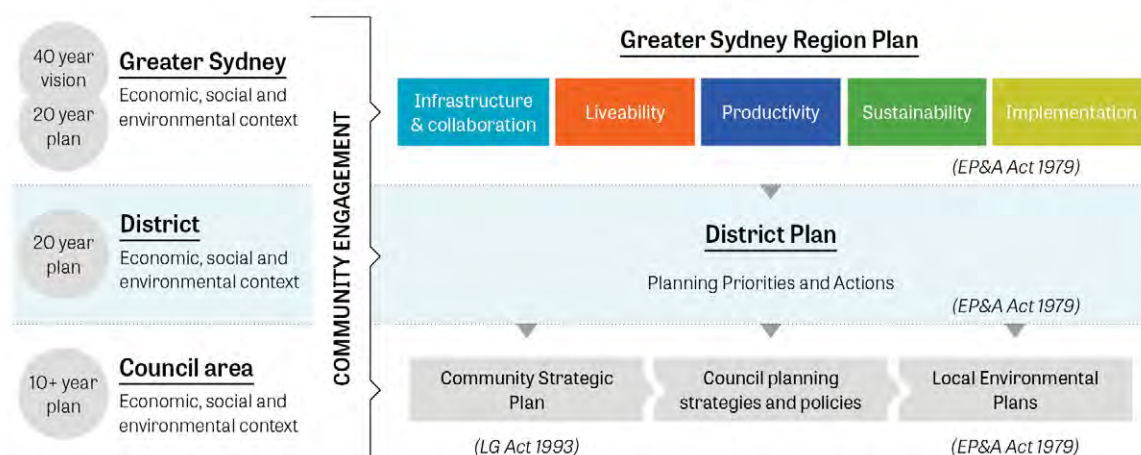
The concurrent preparation of the draft District Plan with the draft *Greater Sydney Region Plan* has maximised the opportunity to integrate these two plans. All data in this draft District Plan is based on current Government approved and published data sourced from the relevant State agency.

In undertaking strategic planning processes, and/or preparing or considering planning proposals, planning authorities must give effect to the draft District Plan, specifically the Planning Priorities and Actions.

Figure 3: South District



Figure 4: Relationship of regional, district and local plans



Changes from the 2016 draft District Plan

This revised draft *South District Plan* replaces the version released in November 2016.

This draft District Plan reflects feedback from the initial exhibition period and consultation throughout the development of the draft *Greater Sydney Region Plan*.

In preparing the revised draft District Plan, the Commission recognised there were Planning Priorities and Actions that were common to all districts – these have been incorporated into the draft *Greater Sydney Region Plan*.

The draft *Greater Sydney Region Plan* applies to the districts that make up the region. The NSW Government declared six districts for the Greater Sydney Region on 27 January 2016. These were realigned to five districts on 22 September 2017.

Feedback

This draft District Plan incorporates feedback from the exhibition of draft District Plans from November 2016 to March 2017. This draft District Plan is the Commission's formal response to the key issues raised in submissions. The top five issues raised in relation to the draft *South District Plan* are outlined below.

Transport planning

- Need for investment in key transport infrastructure, including upgrade to the Illawarra Rail Line, clarity on the F6 Extension and improved links between South District and Greater Parramatta and the Western Parkland City.

Vision and priorities

- Importance of more consultation with the community and government agency integration to achieve the vision of creating great places in the District.

Open space

- Support for the Greater Sydney Green Grid to protect and provide open space and areas of biodiversity, particularly as housing density increases.

Housing diversity and affordability

- Support for increased housing diversity and the provision of affordable housing, including medium density housing where this does not change the existing street character.
- Concern that higher densities are not appropriate in some areas due to heritage and local character.

Housing targets

- Concerns about the inequitable distribution of housing targets across the District, especially for the Canterbury-Bankstown Local Government Area.

View the *Interim Submissions & Engagement Report* and *Submissions Response Report* at www.greater-sydney/what-weve-heard to see a summary of the responses to the key issues.

2

Infrastructure and collaboration

Greater Sydney is a successful and growing city, but, to become more liveable, productive and sustainable, it needs additional infrastructure and services in the right places and at the right time.

Infrastructure planning requires collaboration - managing the competing needs of a city involves all levels of government, industry and the community. The draft *Greater Sydney Region Plan* emphasises the alignment of local environmental plans, transport programs and other agency programs. This involves the interface of NSW Government investment, such as transport interchanges, and local infrastructure programmed by councils, such as public domain improvements.

Planning for infrastructure includes consideration of how such investments contribute to the shape and connectivity of Greater Sydney as a metropolis of three cities. This draft District Plan responds to major transport and health investments underway across the District, such as the Sydney Metro City & Southwest, Westconnex and expansion of St George Public Hospital and aligns with *Future Transport 2056*.

The increasingly rapid pace of change of technological innovations will influence the planning and delivery of infrastructure. Recognising and facilitating this adaptability in infrastructure planning is critical.

Infrastructure - planned to support orderly growth, change and adaptability - must be efficient. Optimal use of infrastructure increases the capacity to better support communities.

For the South District, this means the following Planning Priorities:

- Planning for a city supported by infrastructure.
- Working through collaboration.

Planning Priority S1

Planning for a city supported by infrastructure

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 1: Infrastructure supports the three cities; Objective 2: Infrastructure aligns with forecast growth – growth infrastructure compact; Objective 3: Infrastructure adapts to meet future needs and Objective 4: Infrastructure use is optimised** and the corresponding strategies.

Future infrastructure investment is to be considered in the context of how it will contribute to the shape of Greater Sydney as a metropolis of three cities. This considers the influence of metropolitan, district and local level infrastructure planning, and emphasises connections between each of the three cities.


For the South District, this includes Sydney Metro City & Southwest which will create opportunities for people in the South District to work closer to their homes. WestConnex will deliver significant benefits to local communities by easing congestion and help improve safety, local air quality and reduce traffic noise.

To align infrastructure with growth, a growth infrastructure compact approach could be used. This approach is being piloted in Greater Parramatta and the Olympic Peninsula (GPOP). The compact would identify possible scenarios for land use and infrastructure to assess optimal land

use, infrastructure investment and community outcomes. The Commission will use this pilot to consider a broader application, particularly for areas set to experience high growth.

Planning for infrastructure considers infrastructure in terms of its function: catalytic infrastructure such as major transport investments that generates greater demand and influences land uses; enabling infrastructure such as electricity and water, without which development cannot proceed; and supporting infrastructure such as local bus services that meets demand in growing communities.

In terms of transport planning, for example, new public transport infrastructure, such as taxis and rideshare will help connect residents to their nearest strategic or metropolitan city centre within 30 minutes. In other areas, traditional facilities such as libraries are being reimaged as community hubs.

 Actions	Responsibility
1. Prioritise infrastructure investments to support the vision of a metropolis of three cities.	Councils, other planning authorities, State agencies and State-owned corporations
2. Sequence growth across the three cities to promote north-south and east-west connections.	Councils, other planning authorities, State agencies and State-owned corporations
3. Align forecast growth with infrastructure.	Councils, other planning authorities, State agencies and State-owned corporations
4. Sequence infrastructure provision using a place-based approach.	Councils, other planning authorities, State agencies and State-owned corporations
5. Consider the adaptability of infrastructure and its potential shared use.	Councils, other planning authorities, State agencies and State-owned corporations
6. 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.	Councils, other planning authorities, State agencies and State-owned corporations

Planning Priority S2

Working through collaboration

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 5: Benefits of growth realised by collaboration of governments, community and business** and the corresponding action.

Collaboration in the planning and delivery of infrastructure, housing, jobs and great places is essential to realise the full benefits of growth.

The complexities of a growing region mean different approaches are required depending on the context. This 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 an 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.

Table 1 outlines the approaches supporting land use and infrastructure planning and delivery.

The suite of Collaboration Areas and Priority Precincts are highlighted throughout this draft District Plan.

The Commission's facilitation role in bringing together various parties with an interest in the District's future and channelling their collective energy into improved planning outcomes, is demonstrated by its Collaboration Areas. This collaborative approach is underpinned by *Directions for a Greater Sydney* and is central to the way the Commission works.

The responsibility for creating 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 stakeholders, based on evidence, to respond to unprecedented growth and investment.

The outputs of the collaborations are a Place Strategy and an Infrastructure Plan that provide certainty to the community and the private sector, and direct the NSW Government's investment and policies to achieving great places.

In the South District, the following areas have been identified as Collaboration Areas:

- the **ANSTO innovation precinct**, which includes collaboration between the Commission, ANSTO, Sutherland Shire Council and government agencies
- the **Kogarah health and education precinct**, where the Commission will partner with the NSW Department of Planning and Environment, Georges River Council, Bayside Council and State agencies
- the **Bankstown Airport and Milperra industrial area**, which the Commission will plan with the NSW Department of Planning and Environment, City of Canterbury-Bankstown Council, NSW Department of Planning and Environment, Bankstown Airport Limited and State agencies

Other collaborative processes include:

- NSW Department of Planning and Environment-led housing initiatives in the **Sydenham to Bankstown Urban Renewal Corridor** including the precincts of Hurlstone Park, Canterbury, Campsie, Punchbowl, Lakemba, Wiley Park and Bankstown, in partnership with City of Canterbury-Bankstown Council, and Bardwell Park, in collaboration with Georges River Council
- Land and Housing Corporation housing initiatives for the renewal of the **Riverwood Estate State Significant Precinct**, in collaboration with the NSW Department of Planning and Environment

- NSW Department of Planning and Environment-led housing initiatives in the revitalisation of the **Priority Precinct of Riverwood**, in partnership with City of Canterbury-Bankstown Council and Georges River Council.

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 projects 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.

Bankstown CBD has also been identified as a potential Collaboration Area to plan for the strategic transformation of the centre.

The Commission is also collaborating with local councils to improve regional open space and deliver the Greater Sydney Green Grid through the administration and management of the Metropolitan Greenspace Program (refer to Planning Priority S15).

Table 1: Approaches for supporting land use and infrastructure planning and delivery

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

 Actions	Responsibility
7. Identify, prioritise and deliver Collaboration Areas.	Greater Sydney Commission

3

Liveability

The South District is a place of variety and contrast, from the leafy neighbourhoods of Yowie Bay and East Heathcote to the diverse urban areas of Hurstville, Canterbury and Bankstown in the north.

The District's distinct neighbourhoods are close to bushland, beaches, the Royal National Park, and the Cooks, Georges and Port Hacking Rivers. Many residents take advantage of the District's outdoor, sporting and recreational opportunities. Street life is also an important part of the District's vibrant places like Campsie, Cronulla, Engadine, Hurstville, Peakhurst, Riverwood, Earlwood, Canterbury and Bankstown.

As the overall population of around 740,000 people grows, it will also age. By 2036, the number of residents over 65 is expected to grow by 61 per cent (or an additional 68,650 people). The number of single person households is expected to rise by 46 per cent, although couples with children are anticipated to remain the dominant household type. Consequently, the number of children aged 0–4 years is projected to also grow (by 17 per cent or 9,300 children). As a result, there will be comparatively fewer working age people (24–64 years) living in the District.

Together with overall population growth of around 204,000 (2016–2036), these demographic changes mean that an additional 83,500 homes will be required across the District by 2036. Many new homes will be in the Sydenham to Bankstown Urban Renewal Corridor to benefit from the Sydney Metro City & Southwest. New homes will also be concentrated around centres with good transport connections.

Liveability is about people's quality of life.

Maintaining and improving liveability means housing, infrastructure and services that meet people's needs; and the provision of a range of housing types in the right locations with measures to improve affordability. This enables people to stay in their neighbourhoods and communities as they transition through life.

Creating and renewing great places, neighbourhoods and centres requires place-based planning and design excellence that builds on local strengths and focuses on public places and open spaces.

Great places are walkable – they are designed, built and managed to encourage people of all ages and abilities to walk or cycle for leisure, transport or exercise. This requires fine grain urban form and land use mix at the heart of neighbourhoods. Walkable, great places that demonstrate these characteristics promote healthy, active lifestyles and social interaction and can better support the arts, creativity, cultural expression and innovation.

A place-based and collaborative approach required to maintain and enhance the liveability of the South District can be achieved by the following Planning Priorities:

- Providing services and social infrastructure to meet people's changing needs.
- Fostering healthy, creative, culturally rich and socially connected communities.
- Providing housing supply, choice and affordability, with access to jobs and services.
- Creating and renewing great places and local centres, and respecting the District's heritage.



Planning Priority S3

Providing services and social infrastructure to meet people's changing needs

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 6: Services and infrastructure meet communities' changing needs** and the corresponding strategies.

As the District's population grows, major demographic changes are also occurring. Planning must recognise the changing composition of population groups in local places and provide services and social infrastructure that meet the changes in people's needs through different stages of life. This requires integrated planning and collaboration. This includes considering both the provision of services and the overall outcomes for the community and intergenerational equity.

Population projections and age profiles show distinct differences where specific demographic groups will live in the South District (refer to Figures 5 and 6). The greatest increase in population is expected in Canterbury-Bankstown Local Government Area where 70 per cent of new residents (an additional 142,450 people over the 20 years to 2036) will be accommodated due to the anticipated urban renewal in the area and the strong growth in the numbers of children. Growth in Sutherland Local Government Area by comparison is likely to be slower (a 13 per cent increase on today's numbers over the 20 years to 2036).

Growth increases demand on existing services and infrastructure, particularly sport and recreation facilities that are, in some cases, at or nearing capacity. Residents need the right local mix of services, programs and social infrastructure at the heart of walkable neighbourhoods to support them to live socially connected, active and healthy lives.

This includes co-located schools, health services, aged care, community and cultural facilities, parks and recreation facilities, and accessible walking and cycling connections.

Improving safety, accessibility and inclusion by co-locating activities benefits all residents and visitors. It supports a fine grain urban form and land use mix which provides greater diversity of uses and users and thereby improves liveability.

Creating opportunities for increased shared use and more flexible use of underutilised facilities such as schools, sports facilities, church halls and creative spaces can support growth and respond to the different needs of local demographic groups. Multipurpose and intergenerational facilities are the key to better use of, and access to, infrastructure in new developments.

Publicly owned land, including social housing in renewal precincts may provide opportunities to optimise the co-location of social infrastructure and mixed uses at the heart of neighbourhoods.

Integrated and targeted delivery of services and infrastructure is needed to support growth and respond to the different needs of population groups. Accessible local health services and regional health services such as hospitals are important for all people across the District. South Eastern Sydney Local Health District and South Western Sydney Local Health District focus on delivering healthy communities through local health services including community health services, obesity prevention and promotion of the benefits of a healthy built environment (refer to Planning Priority S4).

Children and young people

Projections show an expected increase of 9,300 children aged four years and younger who will make up the District's population by 2036, with almost 90 per cent of the anticipated growth in the Canterbury-Bankstown Local Government Area.

Planning for early education and child care facilities requires innovative approaches to the use of land and floor space, including co-location with compatible uses such as primary schools and office buildings, close to transport facilities.

A projected increase in school-aged children of 30 per cent necessitates planning for new and

more innovative use of existing schools. The Canterbury-Bankstown Local Government Area will need to accommodate a substantial 72 per cent of this growth. The NSW Department of Education estimates that an extra 31,600 students will need to be accommodated in both government and non-government schools in the District by 2036.

Schools play an important role in creating and supporting inclusive and vibrant neighbourhoods. Planning for new schools, and use of existing schools must respond to demand in innovative ways such as more efficient use of land, contemporary design, greater sharing of spaces and facilities, and flexible learning spaces. Safe walking and cycling links to schools maximises opportunities for young people to lead more active lifestyles.

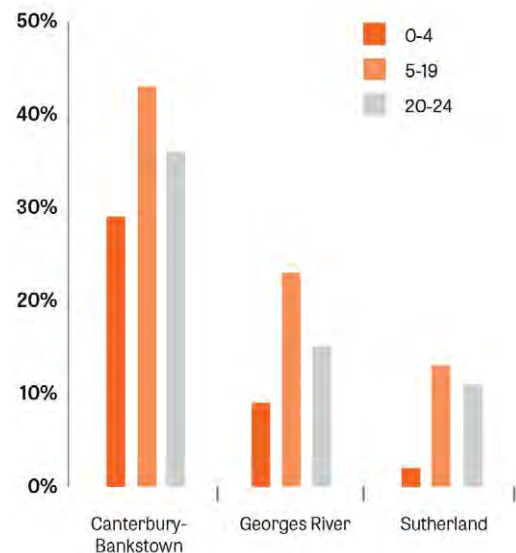
The NSW Department of Education's *School Assets Strategic Plan* sets the direction and framework for the future of school infrastructure. School Infrastructure NSW, a new specialist unit within the department, will undertake school community planning and deliver the education infrastructure program, working with other State agencies and groups to develop schools as community hubs.

The needs of children and young people go beyond schools. They also require careful consideration of the way that open spaces, cultural spaces and the public realm are designed and managed to include children and young people (refer to Planning Priority S6).

The Office of the Advocate for Children and Young People's *NSW Strategic Plan for Children and Young People* is the first legislated three-year whole-of-government plan that is focused on all children and young people aged 0–24 years. It aims to help ensure children and young people have opportunities to thrive, get the services they need and have their voice heard.

Canterbury-Bankstown Local Government Area is projected to see the largest growth in people aged 20–24 years across the District (36 per cent) between 2016 and 2036. The South District provides important opportunities for tertiary and vocational education and training. These allow people to gain and refine skills for employment and connect with other people in the community. TAFEs and universities are also employment hubs for knowledge-intensive industries.

Figure 5: South District projected population change 2016 to 2036 by local government area: 0–4, 5–19 and 20–24 years



Source: NSW Department of Planning and Environment, 2016 *New South Wales State and Local Government Area Household Projections and Implied Dwelling Requirements 2016 to 2036*, NSW Government, Sydney.

Education and Child Care SEPP

State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 will make it easier for child care providers, schools, TAFEs and universities to build new facilities and improve existing facilities. It streamlines approval processes recognising the need for additional educational infrastructure with a focus on good design.

The accompanying *Child Care Planning Guideline* will assist in matters such as site selection, location and building design to meet national requirements for child care.

Older people

An 85 per cent proportional increase in people aged 85 and over and a 57 per cent increase in the 65–84 age group is expected by 2036. This means 19 per cent of the District's population will be aged 65 or over in 2036, up from 15 per cent in 2016.

Canterbury-Bankstown Local Government Area will see the highest growth in older people, with 35,900 additional people aged 65 or over, whereas Georges River Local Government Area will see an increase of just 13,300 people in this age group. In the Sutherland Local Government Area the number of people aged over 65 age will grow by 19,450 – meaning almost half its population growth will be in the 65–84 years age group.

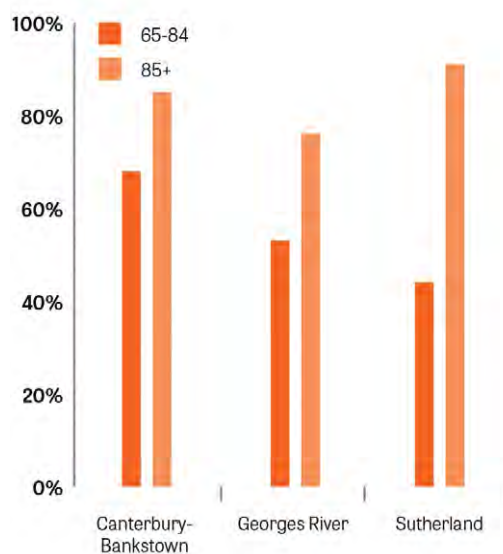
More compact housing types and medium-density housing, as well as the design of walkable neighbourhoods, will create opportunities for older people to continue living in their community, where being close to family, friends and established health and support networks improves people's wellbeing.¹

Walkable places that encourage older people to lead physically and socially active lives for as long as possible are required to facilitate ageing in community. Universal design – the design of homes and places that can be accessed, understood and used by all people, regardless of their age or ability – also improves accessibility for older people.

Coordinated and additional health, social and aged care services and collaborative responses across government and industry are needed to meet the expected increase in demand for local aged care facilities and respite services, including home care options (with associated visitor parking). This approach will also need to address care for people with specific needs such as those with dementia and the frail aged.

The *NSW Ageing Strategy 2016-2020*, prepared by the NSW Department of Family and Community Services, responds to the opportunities and challenges of the ageing population.

Figure 6: South District projected population change 2016 to 2036 by local government area: 65–84 and over 85 years



Source: NSW Department of Planning and Environment, 2016 *New South Wales State and Local Government Area Household Projections and Implied Dwelling Requirements 2016 to 2036*, NSW Government, Sydney.

Accessibility

Public places including streets, parks, shopping precincts and community facilities must be designed so that people of all ages and abilities can participate in community life. In addition to the rapidly ageing population, the District includes over 39,500 people with disability.² Walkable places and homes of universal design are essential to provide opportunities and participation for all people.

Joint and shared use

Infrastructure can be adapted and shared for different uses – school and open space facilities can be used for community, sports, arts, screen and cultural or recreational use when they are not otherwise required.

The Commission has identified a number of opportunities for developing a more collaborative city by enhancing shared use of spaces and greater connectivity between residents. These include the occasional use of streets for community events such as temporary markets, basketball and other sports or school fetes.

For example, within the Greater Sydney region, a memorandum of understanding and joint use agreement between The Hills Shire Council and the NSW Department of Education enables co-funding and co-utilisation of a new outdoor sporting field and an indoor sporting centre at the Kellyville South Public School.

Shared use agreements increase opportunities for the community to access facilities and resources and facilitate programs and activities where resources and funding are limited. This is particularly important in urban environments with high land values and growing demand for access to open space and community facilities.

Related government initiatives:

- NSW Department of Education, *School Assets Strategic Plan Summary*, 2017
- Office of the Advocate for Children and Young People, *The NSW Strategic Plan for Children and Young People*, 2016–2019
- NSW Government, *NSW Ageing Strategy*, 2016–2020
- South Eastern Sydney Local Health District, *Healthcare Services Plan*, 2012–2017
- South Western Sydney Local Health District, *Strategic & Healthcare Services Plan, Strategic Priorities in Health Care Delivery to 2021*

Useful links:

- Mapping the NSW Budget 2017–18
- State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
- Livable Housing Design Guidelines

 Actions	Responsibility
8. Deliver social infrastructure to reflect the needs of the community now and in the future.	Councils, other planning authorities, and State agencies
9. Optimise the use of available public land for social infrastructure.	Councils, other planning authorities, State agencies and State-owned corporations

Planning Priority S4

Fostering healthy, creative, culturally rich and socially connected communities

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 7: Communities are healthy, resilient and socially connected**; **Objective 8: Greater Sydney's communities are culturally rich with diverse neighbourhoods** and **Objective 9: Greater Sydney celebrates the arts and supports creative industries and innovation** and the corresponding strategies.

To foster healthy, creative, culturally rich and socially connected communities this draft District Plan recognises cultural richness and diversity as some of Greater Sydney's key strengths. Strong social connections are key to these strengths and a foundation of resilience and healthy lifestyles among the District's residents. To support and deliver these outcomes a multi-faceted and place-based approach is required to focus on the local inter-relationships between healthy, creative, culturally rich and socially connected communities.

Healthy and active lifestyles

Research identifies three key aspects of the built environment that support healthy lifestyles and improved health outcomes: strong social connections, physical activity and access to fresh food.³ Consequently, the design and management of streets, places and neighbourhoods are essential to achieving improved mental and physical health outcomes. These characteristics of the built environment are important preventative responses to the incidence of chronic lifestyle diseases like obesity and type 2 diabetes. This is important given that around 52 per cent of the adult population in the South District is overweight or obese.⁴

Walkable streets that provide accessible and safe connections to schools, daily needs and recreation facilities can encourage greater physical activity and social connection. Fine grain urban form and local mixed use places can provide better access to fresh food, together with opportunities for people to participate in arts, recreation and cultural activities. Connectivity of, and access to, diverse open space and opportunities for recreational physical activity are also essential.

Diverse neighbourhoods

Greater Sydney, like many global cities, has a diversity of people from differing socioeconomic circumstances and a range of social, cultural, ethnic and linguistic backgrounds. As the District grows and changes, supporting social connections, and cultural and creative expression will build resilience through understanding, trust and neighbourliness.

Targeted local responses to address spatial variations in socioeconomic disadvantage across the South District are required, particularly in neighbourhoods that experience greater disadvantage.

The South District is home to people from many cultural and social backgrounds. Thirty-five per cent of residents in the District are from 202 countries including China, Lebanon, Vietnam, England, and Greece. As a result, 47 per cent of the District's population speak over 100 languages other than English in their homes.⁵

In Canterbury-Bankstown Local Government Area, 64 per cent of people speak 91 languages other than English. Arabic, Vietnamese and Greek are the most commonly spoken languages other than English in the local government area.

In the Georges River Local Government Area, 56 per cent of residents speak 76 languages other than English, with Cantonese and Mandarin being the most commonly spoken languages. This compares with Sutherland Local Government Area, where 13 per cent of residents speak 71 languages other than English.

The South District is home to refugees from many parts of the world. Sutherland Shire, Georges River and Canterbury-Bankstown councils are declared Refugee Welcome Zones and have made

a commitment in spirit to welcoming refugees into communities and celebrating their diversity of cultures.

A diversity of housing types such as urban renewal, local infill – missing middle – and new communities in land release areas supports diversity of household types and community needs.

Place-based planning in the District's culturally diverse neighbourhoods utilises engagement that recognises the different ways people participate. Many councils have targeted approaches that consider specific linguistic or other needs to support greater participation.

A better understanding of people's social and economic aspirations and specific needs achieved through engagement and participation, enhances inclusion and identifies culturally appropriate responses to local needs, to deliver improved health and wellbeing outcomes.

Aboriginal people

The District's Aboriginal people, their histories and connections to Country and community make a valuable and continuing contribution to the District's heritage, culture and identity.

Supporting Aboriginal self-determination, economic participation and contemporary cultural expression will strengthen the District's identity and cultural richness.

The District contains landholdings acquired under the *Aboriginal Land Rights Act 1983* where Local Aboriginal Land Councils may be working towards planning outcomes that will help support self-determination and economic participation.

As this draft District Plan is implemented, engagement with Aboriginal communities will be founded on self-determination and mutual respect to foster opportunities for economic participation, culturally appropriate social infrastructure and contemporary cultural expression.

Supporting creative enterprise, cultural expression and social connection

Cultural and creative expression is a hallmark of innovation and promotes understanding of people's differences. Place-based planning will build on the District's artistic, heritage, cultural, volunteering and creative strengths.

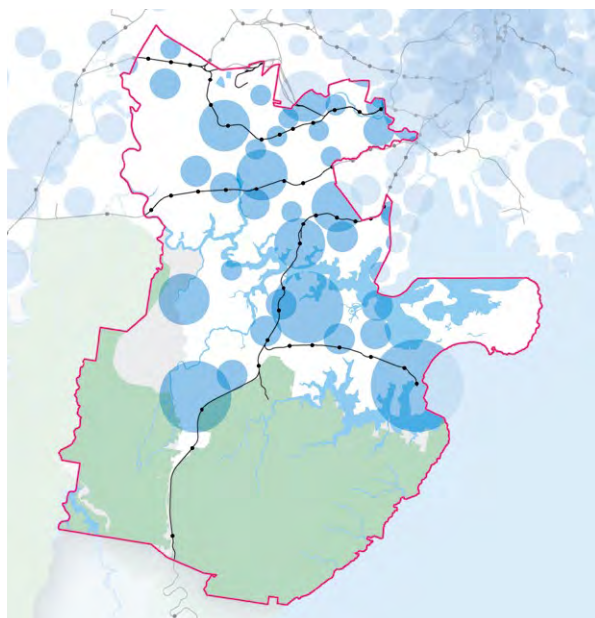
Co-locating artistic and creative organisations will support creative enterprises and precincts. This requires planning for multi-functional and shared spaces with opportunities for artists and makers to live, work, exhibit, sell and learn locally.

Cultural diversity is celebrated through a multitude of opportunities for cultural expression that develop and are nurtured by the communities of the South District.



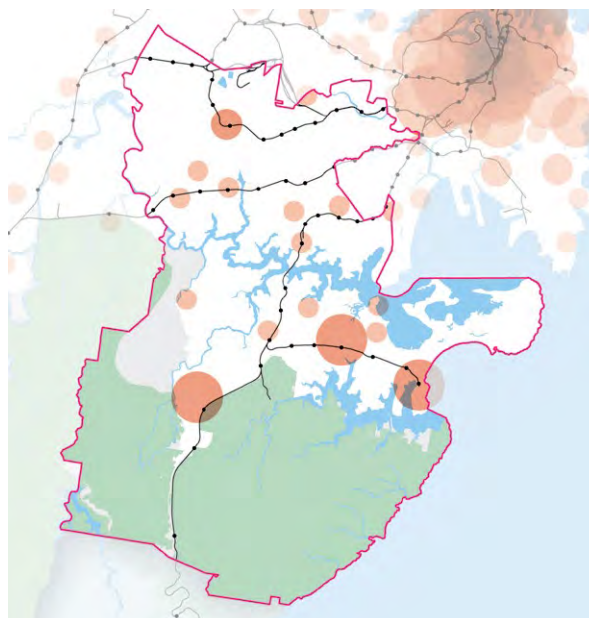
South District social connectors

Figure 7: South District social infrastructure



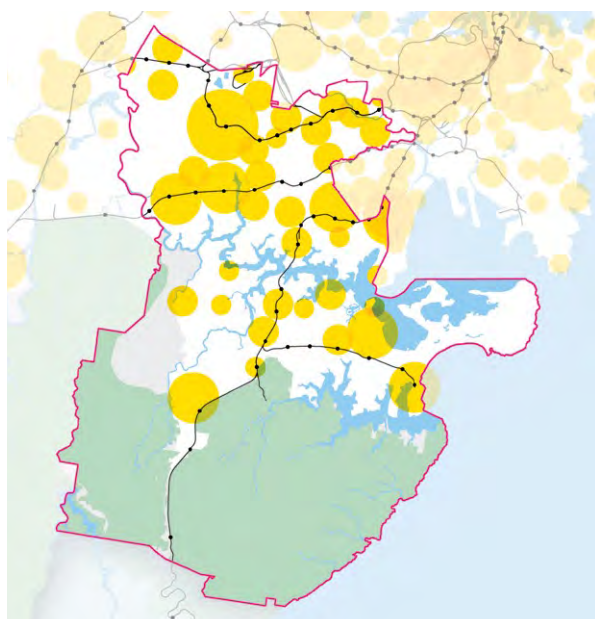
● Social infrastructure includes facilities such as community and neighbourhood hubs, sportsfields, clubs and courts, men's sheds, pools and leisure centres

Figure 8: South District shared places



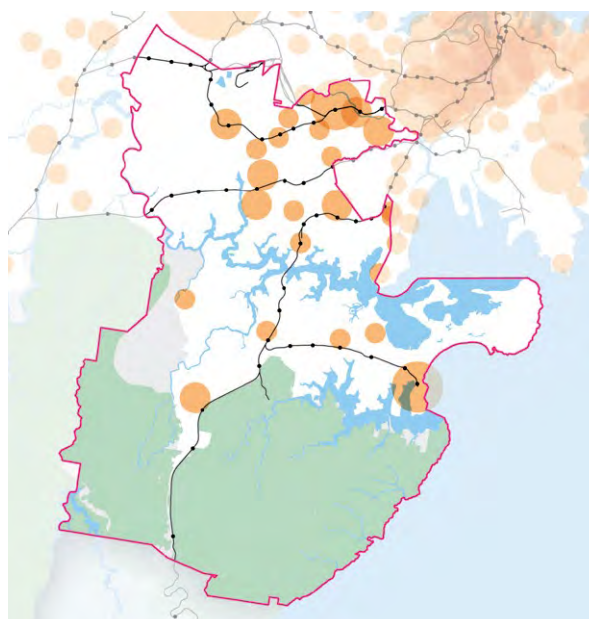
● Sharing spaces include community gardens, co-working spaces and car sharing

Figure 9: South District learning



● Learning spaces include education facilities like child care, schools, TAFEs and universities as well as libraries

Figure 10: South District street life



● Street life and meeting places include live music venues, farmers' markets, high streets and eat streets

Source: Greater Sydney Commission, 2017 adapted from Greater Sydney's Social Capital Study (2017), Cred Consulting.

The District's artistic and cultural experiences include:

- cultural events and celebrations such as NAIDOC Week, National Reconciliation Week, Haldon Street Festival, Lunar New Year Festival in Hurstville and Kogarah and Bankstown Bites Festival
- cultural facilities, including Kogarah Library, Sutherland Entertainment Centre and local public libraries
- arts facilities including Bankstown Arts Centre and Hazelhurst Regional Art Gallery
- sporting events, and open space and recreational facilities such as Endeavour Field (Shark Park), Jubilee Oval, The Crest Sporting Complex, Bass Hill and local sports ovals.

Support for a wide range of creative enterprises and opportunities for cultural expression will expand arts and cultural institutions, and support audience and artist participation. Locations to consider for creative industries and cultural enterprises may include underutilised mixed use areas and ground level retail or declining high streets. Greater use of public areas for interim and temporary uses through flexible regulatory settings can support activation of places and encourage participation. Continued investment in the arts, screen and cultural sector attracts a skilled workforce and encourages innovation in other sectors.

Consistent with the *State Infrastructure Strategy Update 2014*, the Cultural Infrastructure Program Management Office is working with Infrastructure NSW to develop a cultural infrastructure strategy, which will include clear strategies and actions for Greater Sydney.

There are many educational and community facilities, social enterprises, community initiatives, clubs and sporting organisations and facilities that connect people with one another. These social connectors help foster healthy, culturally rich and networked communities which share values and trust and can develop resilience to shocks and stress.

Key social strengths and their multi-faceted nature are illustrated in Figures 7 to 10. These preliminary maps illustrate places with concentrations of social connectors which provide opportunities for people to connect with one another. They include:

- social infrastructure including community and neighbourhood hubs, sportsfields, clubs and courts, men's sheds, pools and leisure centres
- education facilities like child care, schools, TAFEs and universities as well as libraries
- sharing spaces like community gardens, co-working spaces and car sharing
- street life and meeting places including live music venues, farmers' markets, high streets and eat streets.

Healthy, culturally rich and networked communities share values and trust.

Stronger concentrations of social connectors are indicated by larger dots. The maps illustrate examples of centres where place-based planning can recognise and enhance existing community connections and provide a focus for strengthening and adding new social connectors. Focusing and augmenting social connectors in accessible places will help to improve individual and community health, inclusion and participation outcomes.

Social connectors are some of the characteristics on which the local identity, specialities and distinctive functions, of these centres are built. For example, places like Engadine, Riverwood, Menai, Oatley and Kareela are important places for people to meet, play sports and make a significant contribution to local liveability. Cronulla, Lakemba and Bankstown offer streets, places and facilities for active and vibrant street life.

The District's cultural vibrancy is reinforced by night-time activities that extend from popular eat streets, clubs and small bars to lifestyle activities like cinemas. Stimulating and diversifying the night-time economy in appropriate locations across the District can support local economies and culture. This can generally occur in mixed-use centres with adequate noise control, locally appropriate operating hours and safe late-night travel options.

Lifelong learning facilities and libraries provide valuable opportunities to continue education and connect with others in the community. Digital connectivity is also emerging as key to building broad and diverse communities of interest that can cross traditional spatial boundaries.

In the South District places with high concentrations of social connectors are characterised by:

- access to trains or high frequency bus routes
- cultural and economic diversity
- high levels of volunteering
- high provision of social infrastructure
- access to education and learning
- walkable town centre / eat street
- diverse housing mix (density, tenure, affordability).

Place-based planning to enhance social connections within and across communities should focus these activities at the heart of neighbourhoods and in local centres to enhance social and economic participation.

This co-location of social infrastructure with daily needs and other services is required to help build connections – as is evidenced at multipurpose intergenerational facilities such as St George Community Centre and Bankstown Library Knowledge Centre.

In recognition of the importance of sporting participation as a key activity and social strength, the NSW Office of Sport will bring councils together across the District to develop a Sport and Recreation Participation Strategy and a Sport and Recreation Facility Plan for the District.

Related government initiatives:

- NSW Department of Planning and Environment, *Aboriginal Community Land and Infrastructure Program*
- NSW Department of Planning and Environment, *Cultural Infrastructure Program*
- NSW Office of Sport, *A New Way of Delivering Sport and Active Recreation in NSW*

 Actions	Responsibility
10. Deliver inclusive places for people of all ages and abilities that support healthy, resilient and socially connected communities by: <ul style="list-style-type: none"> a. providing walkable places with active street life and a human scale b. co-locating schools, social, health, sporting, cultural and shared facilities. 	Councils, other planning authorities and State agencies
11. Consider cultural diversity in strategic planning and engagement.	Councils, other planning authorities, State agencies and State-owned corporations
12. Strengthen the economic self-determination of Aboriginal communities by engagement and consultation with Local Aboriginal Land Councils to better understand and support their economic aspirations as they relate to land use planning.	Councils, other planning authorities, State agencies and State-owned corporations
13. Facilitate opportunities for creative and artistic expression and participation, wherever feasible with a minimum regulatory burden, including: <ul style="list-style-type: none"> a. creative arts and cultural enterprises and facilities b. creative interim and temporary uses c. appropriate development of the night-time economy. 	Councils, other planning authorities, State agencies and State-owned corporations
14. Strengthen social connections within and between communities through better understanding of the nature of social networks and supporting infrastructure in local places.	Councils, other planning authorities, State agencies and State-owned corporations

Planning Priority S5

Providing housing supply, choice and affordability, with access to jobs and services

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 10: Greater housing supply** and **Objective 11: Housing is more diverse and affordable** and the corresponding strategies and actions.

The draft *Greater Sydney Region Plan* sets out objectives to deliver housing supply and affordability. The location, type and cost of housing requires choices that have far-reaching impacts on quality of life, including time spent commuting, which affects people's ability to spend time with family or in community.

Housing is more than just dwellings and needs to be considered across the housing continuum and with a place-based approach that is designed to support communities and create great places (refer to Objective 11 of the draft *Greater Sydney Region Plan*).

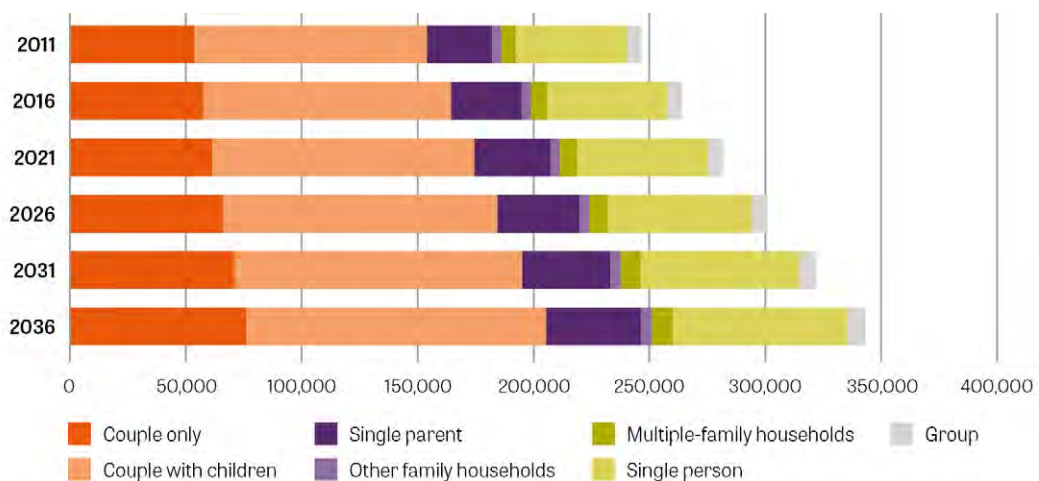
The NSW Department of Planning and Environment's projections of population and household growth in the South District translate to a need for an additional 83,500 homes between 2016 and 2036.

Housing diversity and choice

New housing must be in the right places to meet demand, for different housing types, tenure, price points, preferred location and design. Housing supply must be coordinated with local infrastructure to create liveable, walkable and cycle-friendly neighbourhoods with shops, services and public transport. This means that some areas are not appropriate for additional housing, due to natural or amenity constraints, or lack of access to services and public transport.

Planning for housing needs to consider the type of dwellings required to respond to expected changes in household and age structures (refer to Figure 11). The number of single person households, for example, is expected to increase by 46 per cent over the 20 years to 2036.

Figure 11: South District projected household structure 2011–2036



Source: NSW Department of Planning and Environment, 2016 New South Wales State and Local Government Area Household Projections and Implied Dwelling Requirements 2016 to 2036, NSW Government, Sydney.

The number of single parent and couple only households are also expected to increase by 34 per cent and 32 per cent respectively. This requires additional smaller homes, group homes, adaptable homes of universal design and aged care facilities.

At the same time, households comprised of couples with children will remain the highest proportion of households. This requires housing that can meet the needs of families as well as flexible housing types that can accommodate multiple generations and family groups living together.

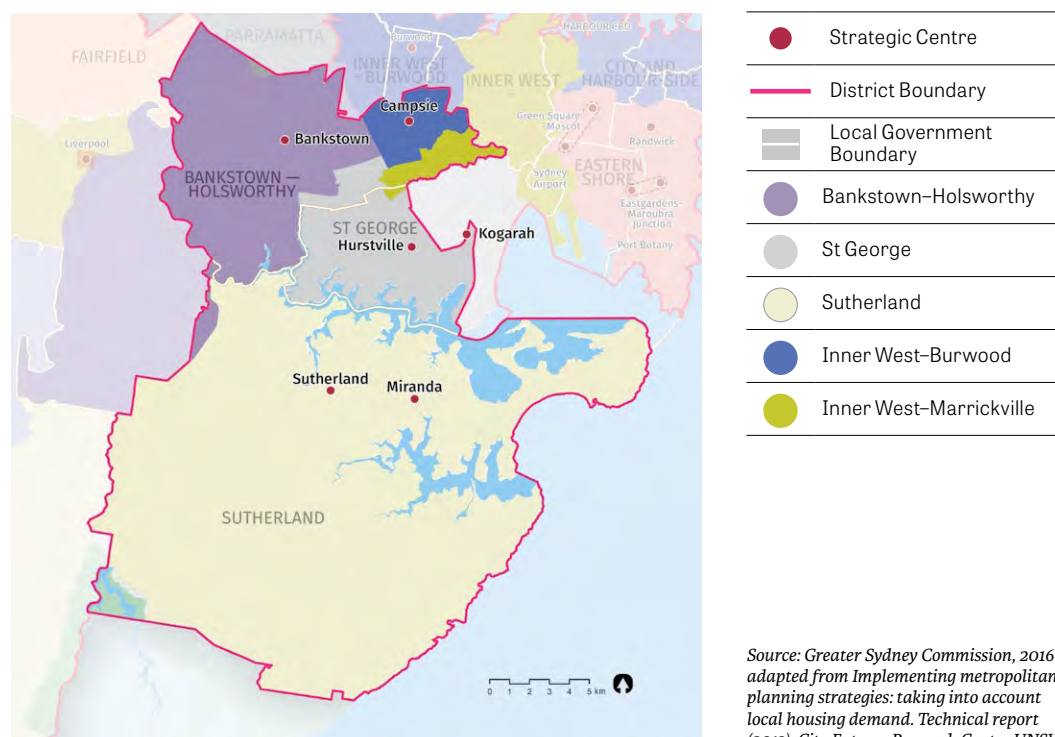
Housing preferences

Research into housing preferences in Greater Sydney has shown that people generally prefer to remain within their local area, with 82 per cent of residents moving into a new home within 15 kilometres of their former residence.⁶ In the South District, there are five housing market areas (refer to Figure 12):

- **Sutherland** – mostly aligned with the Sutherland Local Government Area
- **St George** – the entirety of the former Rockdale and Kogarah local government areas as well as the Riverwood and Roselands parts of Canterbury-Bankstown Local Government Area
- **Bankstown-Holsworthy** – containing the Punchbowl, Wiley Park and Lakemba Station precincts of the Sydenham to Bankstown Urban Renewal Corridor
- **Inner West-Burwood** – largely coinciding with the Belmore, Campsie, Canterbury and Hurlstone Park precincts of the Sydenham to Bankstown Urban Renewal Corridor
- **Inner West-Marrickville** – containing the Earlwood and Kingsgrove parts of the Canterbury-Bankstown Local Government Area.

These housing markets mean that providing supply in one market demand area may not satisfy demand in another. Understanding need and capacity in individual housing markets will better satisfy residents' preferred housing locations.

Figure 12: South District housing market areas



Historic housing supply

Dwelling completions are at their highest levels in 16 years for Greater Sydney. In 2016–2017 completions for the South District totalled 3,297 dwellings. In the 5 years from 2012–2013 to 2016–2017, 12,103 dwellings were completed.⁷ Over half the completions were in the Canterbury-Bankstown Local Government Area. Although more than three-quarters of completions in 2016–2017 were multi-unit dwellings, existing housing stock remains dominated by detached dwellings.

Apartment completions were concentrated near centres along rail lines. Since 2010–2011, 55 per cent of these have been in the Canterbury-Bankstown Local Government Area, concentrated around Bankstown, Campsie and Canterbury. Only 11 per cent have been in the Sutherland Local Government Area, mainly concentrated around Sutherland. Completions in Georges River Local Government Area were concentrated around Hurstville and Kogarah. Apartments provide transitional housing for seniors, homes for small households and more affordable homes for young people and young families.

The remaining housing completions are medium density developments - comprising three to five units - or new single or dual occupancy dwellings. These were distributed across the District, particularly in the Canterbury-Bankstown area south of the M5, for example Padstow, Revesby and Panania.

Over the past 10 years the South District has had an annual average dwelling completions rate of 1,860. Forecast supply of housing growth in the South District has identified the potential for dwelling completions above this annual average in the next five years.

Current initiatives and opportunities

Additional capacity for housing supply is well progressed across much of the District. Current State-led initiatives include:

- the Sydenham to Bankstown Urban Renewal Corridor (Priority Precincts have been announced for Belmore and Lakemba, and Campsie and Canterbury)
- Riverwood Priority Precinct
- Bardwell Park Priority Precinct
- Communities Plus – Riverwood Estate State Significant Precinct

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 projects 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.

Local government strategies that identify opportunities to increase capacity for housing in the South District include:

- Bankstown Residential Development Study (2009)
- Canterbury Residential Strategy (2013)
- Hurstville City Centre Masterplan (2004)
- Kogarah Council Housing Strategy 2031 (2014) and New City Plan (2015)
- Sutherland Housing Strategy (2014) and Sutherland Local Environmental Plan (2015).

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 13).

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 City & Southwest and WestConnex, together with other possible future NSW Government investments. 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

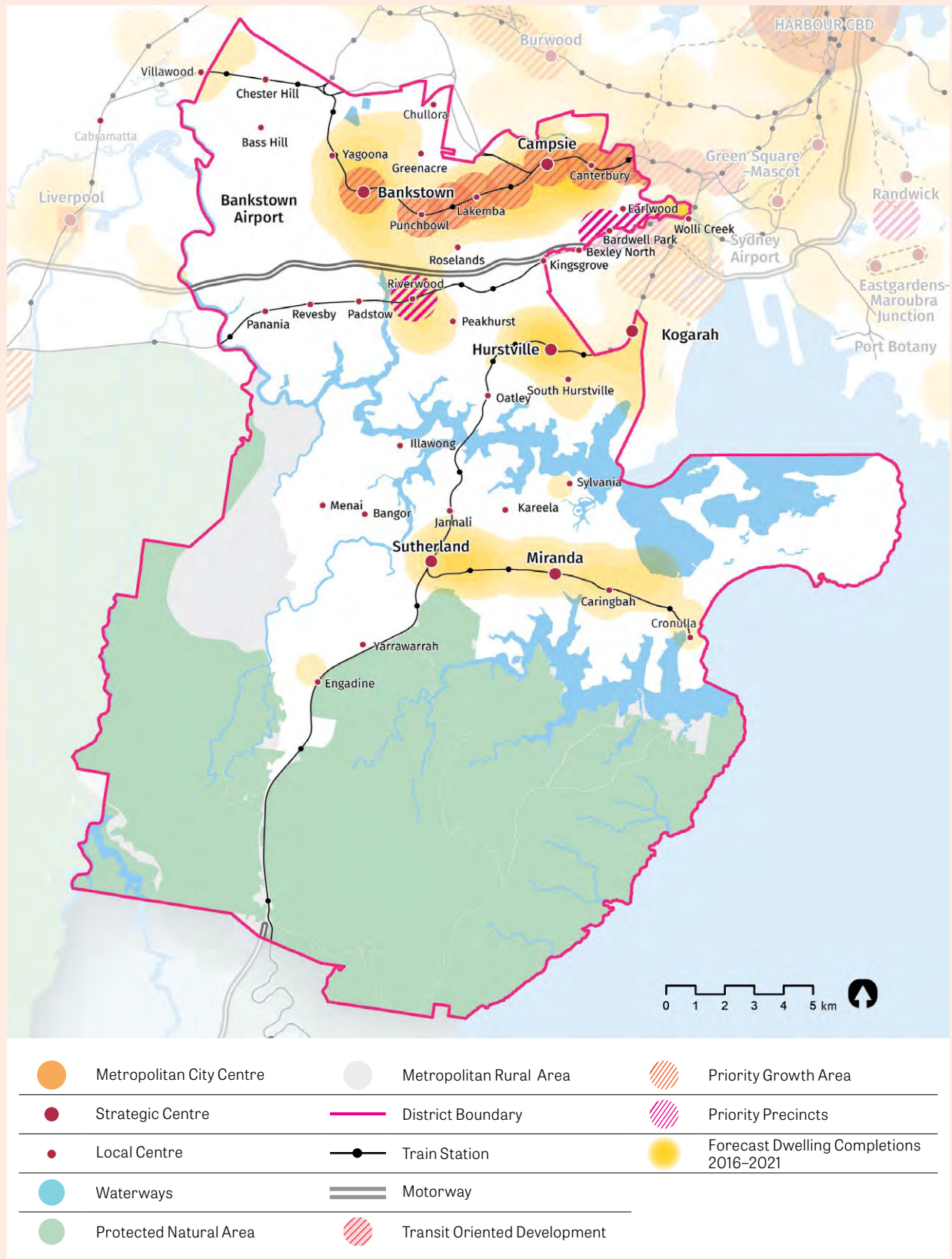
Medium density housing which includes villas and town houses within existing areas can provide greater housing variety while maintaining the local appeal and amenity of an area.

Councils are in the best position to investigate and confirm what locations in 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.

Figure 13: South District future housing supply



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

Housing strategies and targets

To address housing supply, strategies are to be developed by councils to:

- make provision to meet the five and 10-year (when agreed) housing targets and identify capacity to contribute to a rolling program to deliver the 20-year district strategic supply
- inform the Affordable Rental Housing Target for development precincts
- coordinate the planning and delivery of local and state infrastructure.

The NSW Department of Planning and Environment will prepare guidelines to support housing strategies as outlined in the draft *Greater Sydney Region Plan* in Objective 10.

Table 2 sets five-year housing targets for the South District which are the same as published in the November 2016 draft District Plan. These are based on the District's dwelling needs and the existing opportunities to deliver supply. They include all types of housing – traditional detached and attached houses, apartments, seniors housing, granny flats and aged care.

The five-year targets are generally consistent with known housing approvals and construction activity. These are minimum targets and largely reflect delivery potential under current planning controls.

Meeting the demand over 20 years requires a longer-term outlook. The draft *Greater Sydney Region Plan* sets a District 20-year strategic housing target of 83,500, equating to an average annual supply of 4,175 dwellings, or one in nine of all new homes in Greater Sydney over 20 years.

The Commission will work with each council to develop 6–10 year housing targets.

Future Transport 2056 identifies city-shaping transport projects that will, in the long term, improve accessibility to jobs and services, and act as a stimulus for additional housing supply. To deliver the 20-year strategic housing target, councils should, in local housing strategies, investigate and recognise opportunities for long-term housing supply associated with city-shaping transport corridors, growing, emerging and new centres, and other areas with high accessibility.

Table 2: South District housing targets by local government area

LGA	0–5 years housing supply target
Canterbury-Bankstown	13,250
Georges River	4,800
Sutherland	5,200
South District Total	23,250

Affordable Rental Housing Targets

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.

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.

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 outlined in Objective 10 in the draft *Greater Sydney Region Plan*.

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.

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


This draft District 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.

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.

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.

Further opportunities for planning to support housing affordability and diversity measures include:

- 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.

 Actions	Responsibility
15. Prepare local or district housing strategies that address the following: <ol style="list-style-type: none"> the delivery of five-year housing supply targets for each local government area the delivery of 6–10-year (when agreed) housing supply targets for each local government area capacity to contribute to the longer term 20-year strategic housing target for the District housing strategy requirements outlined in Objective 10 of the draft <i>Greater Sydney Region Plan</i> that include: <ol style="list-style-type: none"> creating capacity for more housing in the right locations supporting planning and delivery of priority growth areas and precincts as relevant to each local government area supporting investigation of opportunities for alignment with investment in regional and district infrastructure supporting the role of centres. 	City of Canterbury-Bankstown Council Georges River Council Sutherland Shire Council
16. Prepare Affordable Rental Housing Target schemes.	Councils and other planning authorities

Planning Priority S6

Creating and renewing great places and local centres, and respecting the District's heritage

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 12: Great places that bring people together** and **Objective 13: Environmental heritage is conserved and enhanced** and the corresponding strategies.

Greater Sydney's cities, centres and neighbourhoods each have a unique combination of local people, 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. Through this, they attract residents, workers, visitors, enterprise and investment.

Great places include all parts of the public realm such as open space, streets, centres and neighbourhoods. They exhibit design excellence and start with, and focus on, open space and a people-friendly public realm.

To create great places the mechanisms for delivering public benefits need to be agreed early in the planning process, so that places provide a combination of the following elements as set out in the draft *Greater Sydney Region Plan*:

- 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 landuses including public buildings at the heart of communities.

The District's great places include local and strategic centres such as Menai, Riverwood, Bankstown and Hurstville, beachside and riverside neighbourhoods like Cronulla and Lugarno together with major shopping precincts, and distinctive dining and night-time precincts such as Campsie and Lakemba.

The unique character and distinctive mix of land uses, activities, social connectors and functions in these places provide social and physical connectivity, local diversity and cultural richness, all of which contribute to the liveability of neighbourhoods and enhance people's quality of life.

Places best achieve these outcomes when they exhibit human scale and provide fine grain urban form and land use mix at the heart of neighbourhoods. Accessibility for people of all ages and abilities is central to creating and renewing great places, particularly walking and cycling connections to and within local places.

Improving liveability in urban environments necessitates planning for a mix of high-quality places that engage, activate and connect people and communities. Co-locating activities and social infrastructure in mixed use areas delivers more efficient use of land and enhances the viability of, and access to, great places, centres and public transport.

To deliver high quality, community specific and place-based outcomes, planning for the District should integrate site-specific planning proposals with precinct-wide place and public domain outcomes through place-based planning. This is a method by which great places can capitalise on the community's shared values and strengths and the place's locally distinctive attributes through collaboration and meaningful community participation.

With growth and change, more high-quality public places will be required in and around centres. Renewal will increase opportunities to expand and connect these places and to explore opportunities for innovative public places, such as rooftops and podiums.

Streets as places

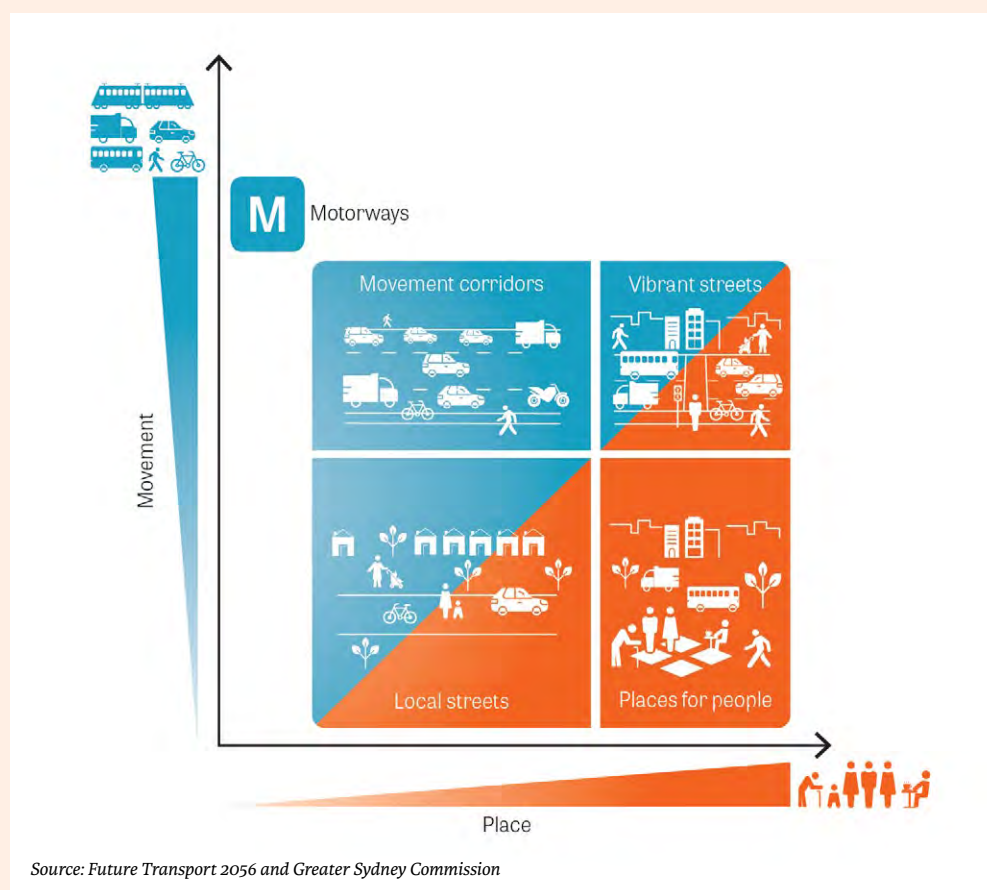
Creating and renewing great places also requires recognition of the function of streets as places (refer to Figure 14). Streets are important for moving people and goods between places, but are also important places for people and street life, enhancing social and economic participation.

Much of people's experience of the public realm is in a street environment. Consequently, the way the street meets people's different movement and place needs determines the character of the street and

shapes people's experience of a city. Creating and renewing streets as great places is therefore key to improving liveability.

Although streets differ in their function and character, maximising opportunities for walking, safe cycling and social interaction is a priority. This requires allocation of road space between footpaths, cycleways, public transport and vehicles that considers people's safety needs and balances movement and place functions in response to the type of street and local conditions.

Figure 1: Movement and place framework



Vibrant streets like The Kingsway in Cronulla are important places for street life and transport.

Local streets are important places for people as they provide the principal opportunity for formal and informal connections with neighbours and the local community. They must also provide good local access.

Movement corridors like the King Georges Road and Princes Highway provide safe reliable and efficient movement between centres, neighbourhoods and places.

Local centres

Local centres are the focal point of neighbourhoods and where they are a focus for public transport, they are an important part of a 30-minute city.

Local centres with supermarkets greater than 1,000 square metres account for nearly 18 per cent of all jobs in Greater Sydney. They also meet residents' needs for shopping, social interaction, cultural and creative expression.

Local centres vary in size, function and character and meet a variety of needs from a cluster of local shops like Yarrowarrah to vibrant main streets such as Frederick Street in Oatley or retail centres like Roselands. They each perform a variety of functions but all form an important part of local community life as social connectors and contain many of the District's great places.

Centres such as Gymea and Cronulla serve as community hubs, with a mix of uses and spaces such as Hazelhurst Art Gallery at Gymea, Cronulla Plaza and Gunnamatta Park. Belmore and Lakemba are destinations for new eateries, cafes offering unique neighbourhood qualities and cultural facilities.

The success of local centres and high streets should be supported through specific and flexible measures to improve activation and viability. This may include provision of creative workspaces, opportunities for social, creative or cultural enterprise, pop-up retail and other innovative uses. Activation of side streets may assist in some locations.

Rapid changes in technology and retail trends, emerging night-time economies and population growth require councils to be agile and responsive in their planning for the growth of centres. Adaptive and flexible spaces may be required because of an increasing demand for workspaces from start-up and creative industries.

A vibrant and safe night-time economy will enhance Greater Sydney's standing as a global city, while meeting the social and recreational needs of communities. Planning for a night-time economy in centres includes supporting a diverse range of small businesses such as retail, and cultural events and assets, accompanied by a suitable regulatory environment.

The accessibility of local centres with supermarkets greater than 1,000 square metres is illustrated in

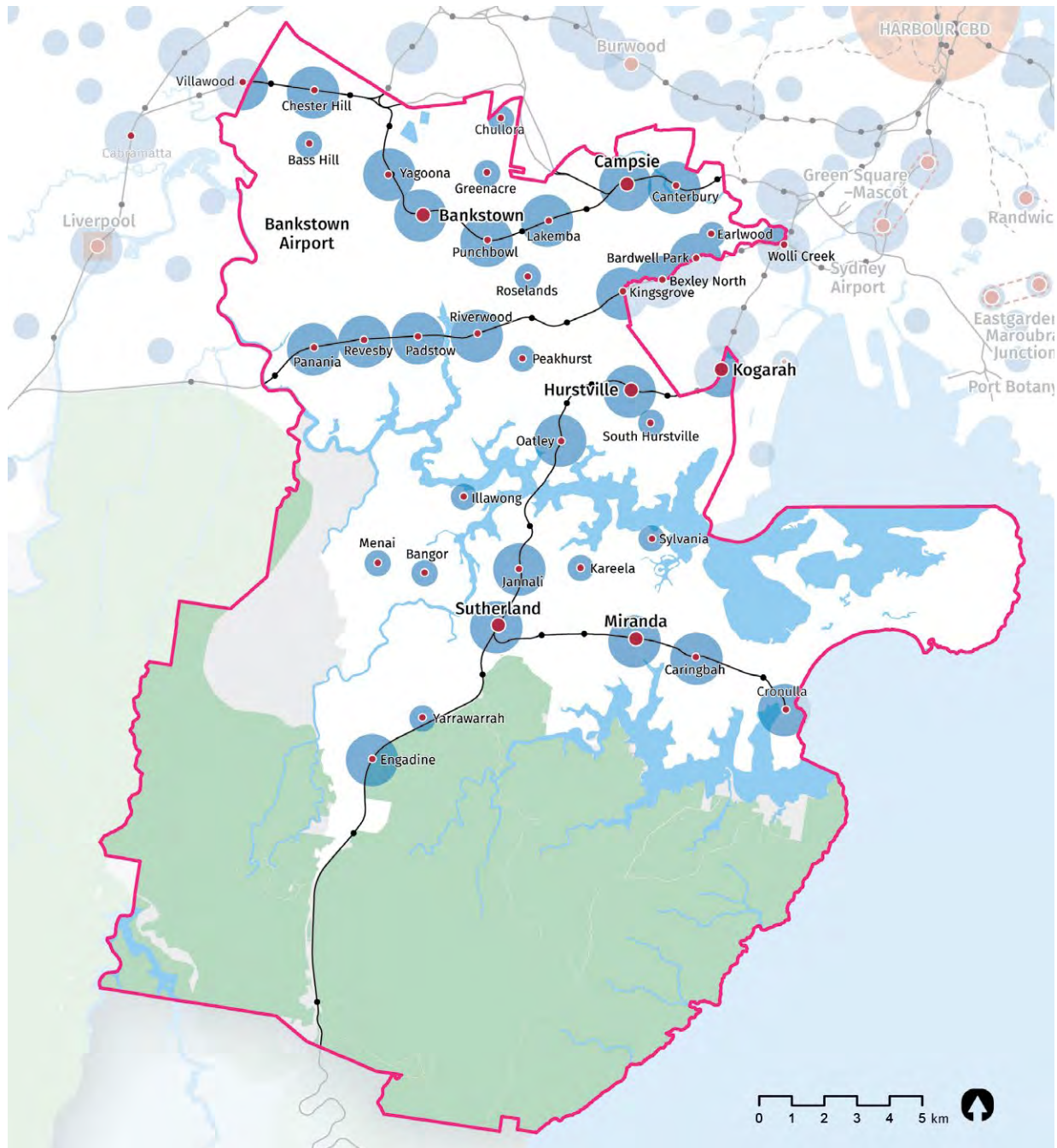
Figure 15. As a result of this walkability, many of these local centres will be increasingly supported by residential development, however housing should not compromise the ability of the centre to grow, expand and change over time. It is also recognised that some centres without supermarkets have specialised roles.

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.

An understanding of the unique identity, size, land use mix, catchment and potential of each local centre and the local centres hierarchy will inform housing strategies. This draft District Plan identifies a range of specific matters for consideration in place-based planning for centres. These include:

- provide public realm and open space focus
- deliver transit-oriented development and co-locate facilities and social infrastructure
- provide, increase or improve local infrastructure and open space
- improve walking, cycling and public transport connections, including through the Greater Sydney Green Grid
- protect or expand retail and/or commercial floor space
- protect or expand employment opportunities
- support the night-time economy
- integrate and support arts and creative enterprise and expression
- augment or provide community facilities and services and cultural facilities
- conserve and interpret heritage values
- accommodate local festivals, celebrations, temporary and interim uses
- increase residential development in, or within a walkable distance of, the centre
- provide parking that is adaptable to future uses and takes account of access to public transport, walking and cycling connections.

Figure 15: South District – centres



 District Boundary	 Urban Area	 Local Centre
 Waterways	 800m Walking Catchment	 Train Station
 Protected Natural Areas	 400m Walking Catchment	
 Metropolitan Rural Area	 Strategic Centre	

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. It responds to place-specific considerations, local qualities and community needs.

It is also a way of managing change over time in places, by recognising the value and need for local expertise, knowledge, responsibility and investment.

The process itself is a means of better understanding the place, and building relationships and collaboration to deliver solutions that respond to a place's potential. Staging and sequencing in a place-based context also allows for continual adjustment and improvements.

People involved in the process will vary depending on the circumstances, nature and scale of the task and may include the community, local businesses, residents, State and local government and other stakeholders. A compelling and shared vision for a place that resolves different perspectives and interests can then be created.

The products of place-based planning extend beyond a shared vision. A spatial framework for a

place provides 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.

The place-based planning approach can be applied to streets, neighbourhoods, local centres, and larger scale urban renewal as well as the Metropolitan Rural Area. This approach also underpins the development of strategies in Collaboration Areas.

The District presents many opportunities for improved liveability outcomes through place-based planning, such as Canterbury Road and Riverwood. In Collaboration Areas this approach can help deliver innovative approaches to change over time, particularly in relation to parking and infrastructure provision. For example, the provision of precinct-based adaptable car parking in lieu of the private provision of car parking taking into account public transport accessibility.

The Government Architect NSW has prepared *Better Placed – An integrated design policy for the built environment of New South Wales*, which supports the creation and renewal of great places, for use by all place makers including State and local government, business and the community.

Place-based planning opportunities

Riverwood: Riverwood social housing estate is being renewed through the Communities Plus program. Together with renewal of the Riverwood local centre, this can create a vibrant, well-connected and mixed community with access to great places, services and facilities and open space especially Salt Pan Creek.

Canterbury Road: Canterbury Road is an important transport corridor undergoing

change. The draft Canterbury Road Review commissioned by the City of Canterbury-Bankstown Council, recommends that urban renewal along the corridor should concentrate new housing at identified key junctions to improve liveability, support streetscape and public domain improvements, enhance access to open space and the Green Grid and create better connections to public transport.

Heritage and character

Heritage and history are also important components of local identity and are important attributes of great places. The District's rich Aboriginal, cultural and natural heritage reinforce its sense of place and identity. A wide variety of local heritage items and heritage streetscapes also form part of the character of centres throughout the District.

The District's communities share heritage items and historic places such as Towra Point Nature Reserve, a declared Aboriginal Place; heritage conservation areas in Penshurst; historic places like

Heathcote Hall, Thurlow House and Captain Cook's first landing place at Kurnell and recreational parks including Carrs Park and Como Pleasure Ground.

The conservation and interpretation of places and values of heritage significance is required to give current and future generations a better understanding of history and people's past experiences. Sympathetic adaptive re-use of heritage is an important way to conserve heritage significance. Improved public access and connection to heritage through interpretation is also essential.

Related government initiatives:

- Government Architect NSW – *Better Placed: An integrated design policy for the built environment of New South Wales.*

 Actions	Responsibility
17. Deliver great places by: <ol style="list-style-type: none"> 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. 	Councils, other planning authorities, State agencies and State-owned corporations
18. Conserve and enhance environmental heritage by: <ol style="list-style-type: none"> 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. 	Councils, other planning authorities, State agencies and State-owned corporations
19. Use place-based planning to support the role of centres as a focus for connected neighbourhoods.	Councils, other planning authorities and State agencies
20. In Collaboration Areas, Priority Precincts and planning for centres: <ol style="list-style-type: none"> 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. 	Councils, other planning authorities and State agencies

4 Productivity

The vision for Greater Sydney as a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City – seeks to deliver a more productive region. This will be achieved by driving opportunities for investment, business and jobs growth; supporting economic diversity; supporting internationally competitive industry sectors; and rebalancing the region's eastern economic focus so that all three cities benefit from growth.

A well-connected Greater Sydney will contribute to productivity by improving efficiency in supply chains and reducing business costs; increasing access to markets; enhancing access between businesses and large numbers of skilled workers; and enhancing business-to-business interactions.

The South District forms a large part of the Eastern Harbour City.

The Australian Nuclear Science and Technology Organisation (ANSTO) at Lucas Heights, the Kogarah health and education precinct and the health and education facilities at Sutherland, Hurstville and Bankstown are home to the District's largest concentrations of knowledge-intensive jobs.

While recent jobs growth has been predominately in the health and education industry sector, population-serving industries like retail and construction are also key drivers of the South District's economy, providing 36 per cent of jobs. Population serving jobs are concentrated at Bankstown, Campsie, Hurstville, Miranda and Sutherland (refer to Figure 16 and 17).

Increasing the number of jobs in health and education and population-serving industries is particularly important as the District's historically strong industrial base is in decline. Balancing the transition from manufacturing to professional, high-tech, scientific, creative industries and ancillary

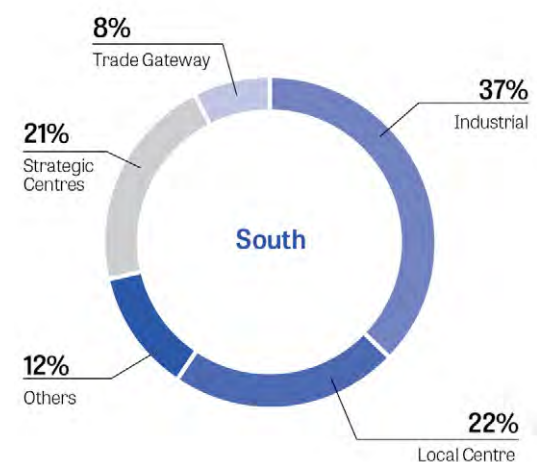
distribution and warehousing, with protecting locations for local urban services will assist in boosting productivity.

The District includes large tracts of industrial and urban services land in the Canterbury-Bankstown Local Government Area and at Kurnell. In addition, many smaller tracts of industrial and urban services provide cost-effective locations for industry and jobs.

The trade gateway of Bankstown Airport fulfils a significant statewide role and has a greater potential to further benefit the economies of the District and the State.

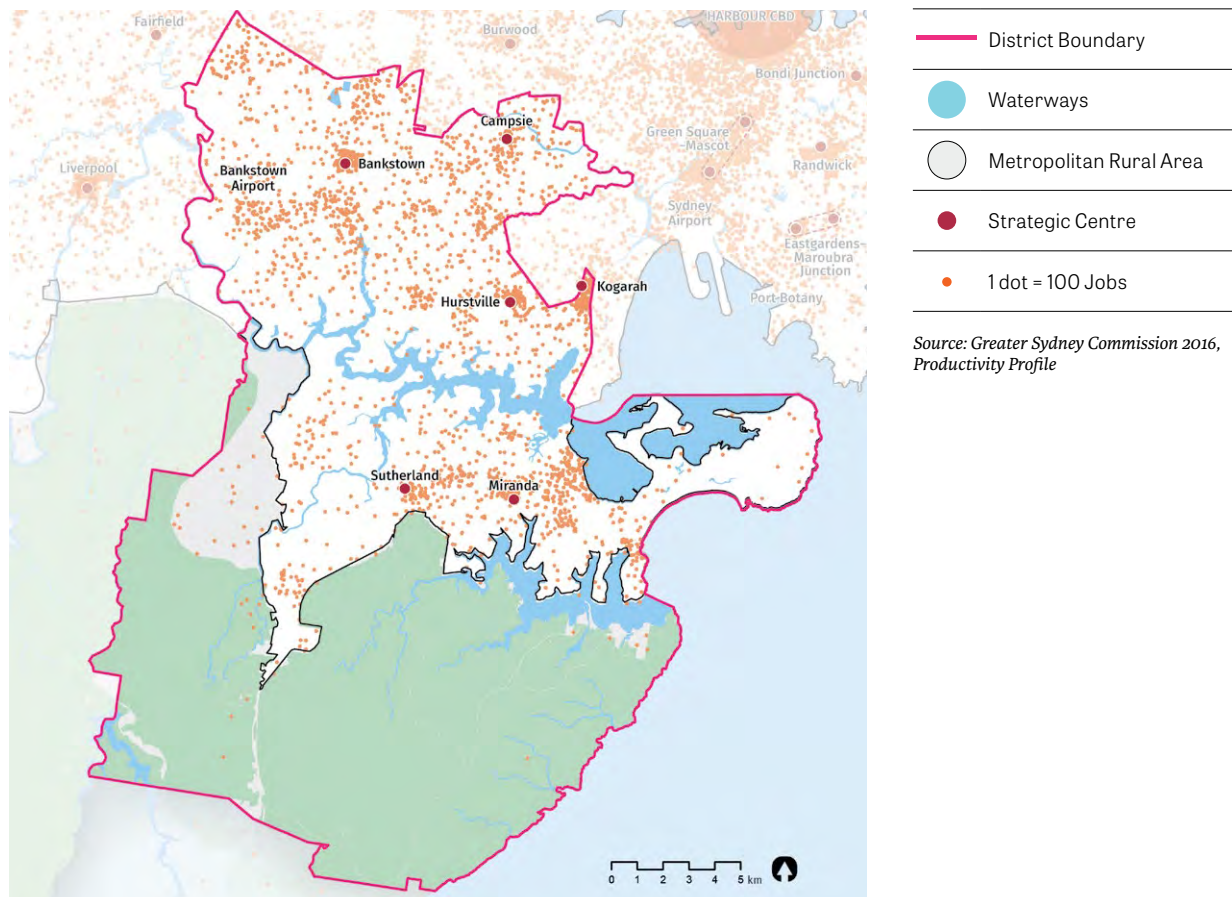
Integrating jobs growth with new or enhanced transport infrastructure will deliver a well-connected region, improving business-to-business transactions and enabling skilled workers to access a larger number of jobs.

Figure 16: South District job distribution by type of location



Source: Australian Bureau of Statistics, Census 2011

Figure 17: South District job density



Job targets for strategic centres will guide councils and State agencies to the potential scale of growth and inform land use and infrastructure planning. Twenty-one per cent of all jobs in the District are within the strategic centres of Bankstown, Campsie, Hurstville, Kogarah, Miranda and Sutherland (refer to Figure 16). Growth in strategic centres with efficient transport connections, and safe and convenient walking and cycling routes creates a 30-minute city.

For the South District, improving productivity can be achieved by the following Planning Priorities:

- Growing and investing in the ANSTO research and innovation precinct.
- Growing and investing in health and education precincts and Bankstown Airport trade gateway as economic catalysts for the District.
- Growing investment, business opportunities and jobs in strategic centres.
- Protecting and managing industrial and urban services land.
- Supporting growth of industry sectors.
- Delivering integrated land use and transport planning and a 30-minute city.

Planning Priority S7

Growing and investing in the ANSTO research and innovation precinct

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 21: Internationally competitive health, education, research and innovation precincts** and the corresponding strategy.

Innovation precincts are important contributors to economic productivity due to the agglomeration effects of co-locating scientific, research, health, education, technical and start-up businesses to achieve critical mass and international competitiveness.

The Australian Nuclear Science and Technology Organisation (ANSTO) is at the forefront of Australia's nuclear science research and has the potential to secure Greater Sydney as a global leader in nuclear science research. The 100-hectare site at Lucas Heights includes the Open Pool Australian Lightwater (OPAL) reactor, one of the most advanced nuclear research reactors in the world. ANSTO's 1,000-strong staff deliver world-class research and nuclear innovation, particularly in nuclear medicine.

ANSTO has plans for a research and innovation precinct containing a graduate institute, innovation incubator and technology park. The precinct would attract and co-locate scientific partners, small to medium size enterprises, high-tech industry and research graduates to create an innovation community.

A new nuclear processing plant is under construction, enabling ANSTO to supply up to 25 per cent of the global demand for molybdenum-99, the most commonly used nuclear medicine. ANSTO, through providing silicon irradiation services for manufacturers of silicon wafers, supplies almost 50 per cent of the global market for wafers. Silicon wafers are used in high-end electronic switching devices for applications such as power infrastructure, high-speed trains, electric cars and wind turbines.⁸

ANSTO undertakes important research in three main streams – nuclear fuel cycle, the environment and human health. It has established

partnerships with universities within Australia and internationally, as well as with numerous international research organisations.

ANSTO's research and innovation precinct will include the world's first nuclear science and technology incubator, and be a centre for knowledge exchange, commercialisation of research, innovation and business support for small to medium enterprises. ANSTO's graduate institute program for postgraduate training and development for students links education, research and industry and focuses on technology development and innovation. Several universities in ANSTO's existing collaborative network of 40 Australian and New Zealand universities have expressed interest in the ANSTO graduate institute.

Providing facilities and supporting amenities in a technology park will encourage business and technology development to co-locate on one campus, creating links between industry and research.

Improving access to ANSTO is a challenge due to the buffer around the nuclear facility which keeps it relatively isolated. An innovation precinct at Lucas Heights requires enhanced transport and infrastructure, including:

- improved key transport connections to link planned economic activity at ANSTO with trade gateways and health and education facilities across Greater Sydney, and improve access for workers
- investigation into the need for investment in essential infrastructure including water, sewer, stormwater, electricity, gas and telecommunications.

ANSTO research partnerships

ANSTO has established partnerships with universities and research organisations within Australia and internationally. The agreements include information exchange, staff exchange, cooperative projects, access to large-scale facilities and overseas research programs. Joint activities strengthen research to advance science, technology and innovation.

Research partners

Australian Institute for Bioengineering & Nanotechnology
 Australian Microscopy and Microanalysis Research Facility
 Collaborating Research Centre for Polymers
 Commonwealth Scientific and Industrial Research Organisation
 Defence Science and Technology Organisation
 National Imaging Facility
 National Measurement Institute

University partners

Curtin University of Technology	University of New South Wales
University of Sydney	University of Queensland
Flinders University	University of Tasmania
Macquarie University	University of Technology, Sydney
Monash University	University of Western Australia
Royal Melbourne Institute of Technology	University of Western Sydney
University of Auckland	University of Wollongong
University of Melbourne	

International partners

Argonne National Laboratory (US)	Korea Atomic Energy Research Institute
Budapest Neutron Centre	Korean Nuclear International Cooperation Foundation
Chinese Academy of Sciences	Lawrence Livermore National Laboratory
China Institute of Atomic Energy	Los Alamos National Laboratory (US)
Commissariat à l'Énergie Atomique (France)	National Central University of Taiwan
European Organisation of Nuclear Research – CERN	National Institute for Materials Science in Japan
French Embassy	National Institute of Standards and Technology (US)
Helmholtz-Zentrum Berlin	National Nuclear Laboratory (UK)
Indonesian National Nuclear Energy Agency BATAN	National Research Council of Canada
Institut de la Radioprotection et Sécurité Nucléaire	National Science Council, Taiwan
Institute of Environmental Science and Research (New Zealand)	NMI3 – Integrated Infrastructure Initiative for Neutron Scattering and Muon Spectroscopy
Institute for Energy and Transport (JRC-IET)	Nuclear Energy Corporation of South Africa
Institut Laue Langevin, Grenoble, France	Oak Ridge National Lab (US)
Institute of Solid State Physics, University of Tokyo	Office of the Chief Science & Technology Officer of Singapore
International Atomic Energy Agency	Paul Scherrer Institute (Switzerland)
J-PARC Japan Proton Accelerator Research Complex	Riken Spring-8 Centre (Japan)
Japan Atomic Energy Agency	Shanghai Institute of Applied Physics (China)
Karlsruhe Institute of Technology, Germany	Universiti Teknologi Mara, Malaysia
KEK High Energy Research organisation, Japan	

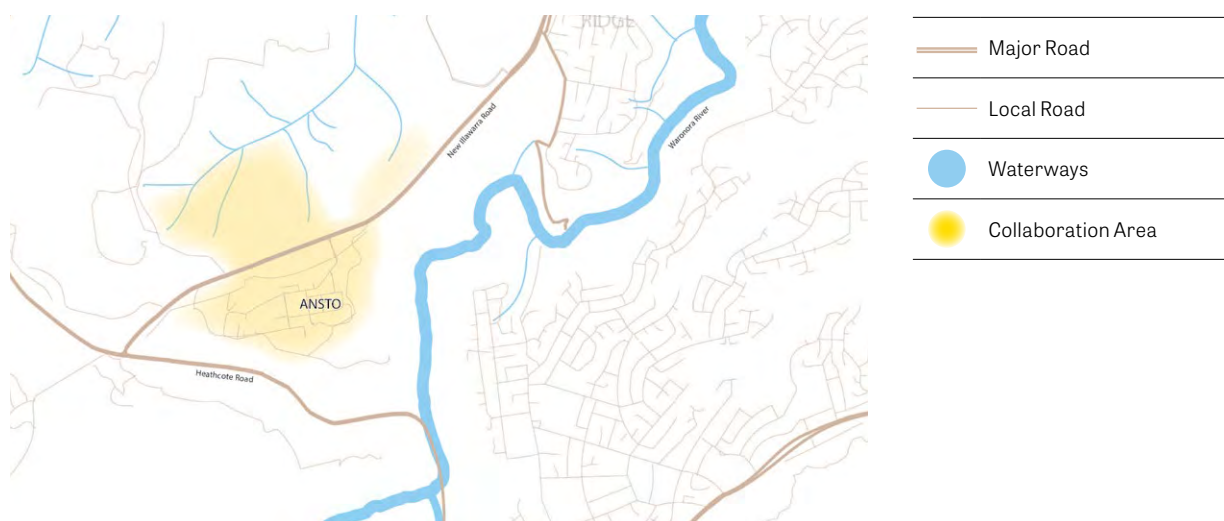
Source: <http://www.ansto.gov.au/AboutANSTO/Partnerships/index.htm#research>, accessed 29 August 2017


The ANSTO innovation and research precinct requires a partnership between multiple tiers of government to realise its full potential as an economic catalyst in the District. For this reason, it is identified as a Collaboration Area (refer to Figure 18).

The Commission will facilitate collaboration between ANSTO; Sutherland Shire Council; NSW Department of Health; Transport for NSW; the NSW Department of Industry, Skills and Regional Development; the Australian Government; other institutions and agencies and the community. This will develop and agree on a shared vision, commitments and appropriate phasing and delivery of infrastructure and:

- enhance ANSTO's economic and employment role
- retain the site for employment and complementary uses
- improve transport connections between the ANSTO facility, trade gateways and health and education facilities across Greater Sydney
- provide essential infrastructure to support the innovation precinct.

Figure 18: ANSTO Collaboration Area



 Actions	Responsibility
21. Facilitate an innovation precinct that: <ol style="list-style-type: none"> attracts associated businesses, industries and commercialisation of research delivers high levels of accessibility, walkability and amenity includes housing opportunities for students and workers within 30 minutes of the precinct. 	ANSTO, councils, other planning authorities and State agencies
22. Deliver and implement an Infrastructure Plan for the ANSTO innovation precinct.	ANSTO, Greater Sydney Commission, Sutherland Shire Council and State agencies

Planning Priority S8

Growing and investing in health and education precincts and Bankstown Airport trade gateway as economic catalysts for the District

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 21: Internationally competitive health, education, research and innovation precincts** and **Objective 24: Economic sectors are targeted for success** and the corresponding strategies.

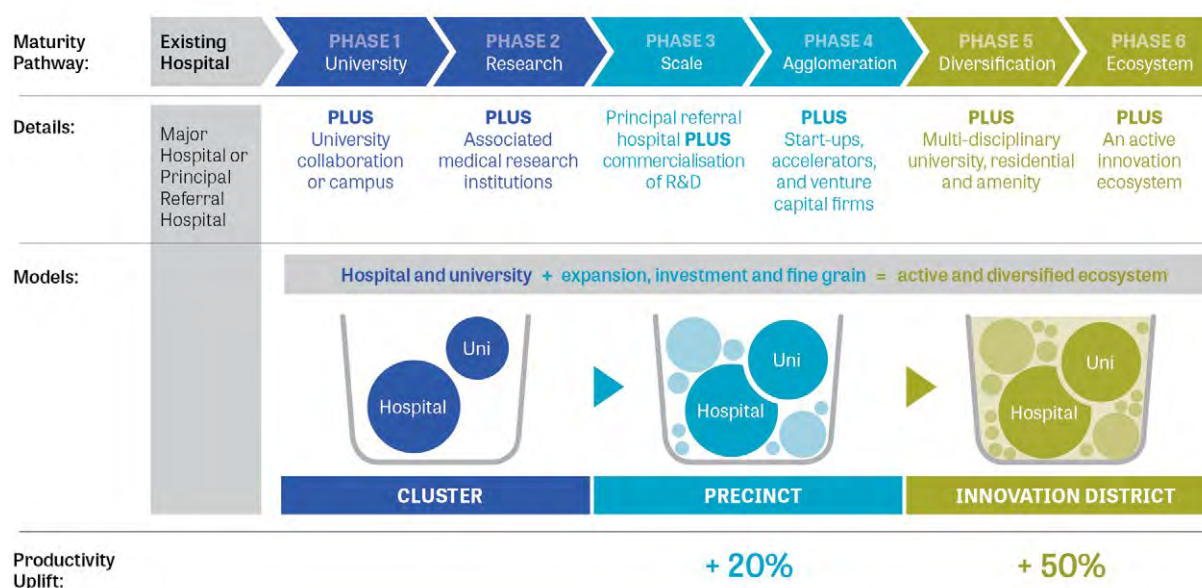
Health and education are significant contributors to Greater Sydney's economy and was the highest growing jobs sector over the 20 years from 1996 to 2016. In the South District, over the same time, health and education recorded a 73 per cent growth in jobs.

As outlined in the draft *Greater Sydney Regional Plan*, the evolution of health and education precincts follows a Maturity Pathway (refer to Figure 19). 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.

The Kogarah health and education precinct and Bankstown-Lidcombe health and education precinct are at the Cluster stage and will therefore need a tailored response to progress along the Maturity Pathway based on what is already in place and what is required in the short, medium and long term. To be truly internationally competitive and achieve sufficient critical mass, it is not expected that all precincts should, or will, develop into an Innovation District.

Figure 19: Maturity pathway for health and education precincts



Source: Deloitte 2016, Westmead Innovation District: Building Western Sydney's job engine 2016-2036

Kogarah is a centre of medical expertise, with over 50 per cent of the centre's jobs in the Health Care and Social Assistance sectors. Bankstown-Lidcombe is an emerging hub of medical expertise. Growth of the health and education sectors will boost the District's skills base and economic contribution, and increase opportunities for access to high-wage local employment for residents.

The Bankstown Airport trade gateway is of statewide importance, and is supported by road and rail infrastructure. The nearby Milperra industrial area is the largest employment precinct in the South District, and includes businesses in strategic economic sectors such as advanced manufacturing. This base can be leveraged to grow international competitive sectors to increase productivity and local jobs in the District.

Kogarah health and education precinct

Kogarah health and education precinct crosses the boundary of the South and the Eastern City districts. Health services at Kogarah service communities in the Bayside and Georges River local government areas as part of the South Eastern Sydney Local Health District.

St George Public Hospital, a major tertiary and teaching hospital, is the District's leading hospital. It specialises in medical trauma services and contains the Medical Retrieval Service Coordination Centre for NSW. The NSW Government has committed \$277 million between 2014–2019 to support the hospital's expansion.⁹ Together with the nearby St George Private Hospital, this provides approximately 680 hospital beds in the precinct.¹⁰

The St George & Sutherland Clinical School, which is part of UNSW Medicine at the University of NSW, provides clinical studies for students at St George Hospital. St George College TAFE, with an enrolment of 4,000 students is nearby. Numerous allied health services including the research capacity at South Eastern Area Laboratory Services are also nearby.

Collaborative planning will encourage land uses that can grow health and ancillary services and provide opportunities for new allied health and education services. Providing housing and choice for moderate income households, students and health visitors are important to support the growth of the precinct, as is improving accessibility to the precinct and connections from the public transport network.

Growth of the health and education sectors will boost the District's skills base and economic contribution, and increase opportunities for access to high-wage employment for residents.

The Commission has identified the Kogarah health and education precinct as a Collaboration Area. The Commission will facilitate collaboration between Georges River Council; Bayside Council; NSW Department of Health; TAFE NSW; St George Public and Private Hospitals; NSW Department of Education; Transport for NSW; NSW Department of Industry, Skills and Regional Development; other institutions and agencies and the community. This will develop and agree on a shared vision, commitments and appropriate phasing and delivery of infrastructure and:

- prioritise land uses to grow existing and new allied health and education services
- increase knowledge-based and population serving employment
- prioritise opportunities for affordable housing for students, moderate income households and health visitors
- investigate opportunities to improve connections within the precinct and east-west transport connections within the District.

Bankstown-Lidcombe emerging health and education precinct

Western Sydney University will establish a world-class teaching and research campus in the Bankstown strategic centre.¹¹ The university is working with the City of Canterbury-Bankstown Council to identify potential sites.

Bankstown-Lidcombe Hospital is located close to Bankstown strategic centre. A range of allied health care providers and services are already located at the centre, as is Bankstown College TAFE.

A health and education precinct will emerge from the co-location of health and education facilities in the centre, as well as improved transport connections from Sydney Metro City & Southwest. Residents of the District will benefit from improved health care services, particularly in the western part of the District.

Collaborative planning will assist in identifying locations for the key facilities and create opportunities for allied health and education services to locate in the precinct. Providing housing and choice for moderate income households, students and health visitors are important to support the growth of the precinct, as is improving accessibility and connections from the public transport network.

Bankstown Airport and Milperra industrial area

Bankstown Airport is a trade gateway, used largely for general aviation, parcel freight and recreational flying. It fulfils an important role for fixed wing and helicopter flight training and as a base for emergency services.

The airport's future must be strategically planned in the context of the Western Sydney Airport and Badgerys Creek Aerotropolis, the need to manage airspace and the future distribution of regional and freight aviation services. The *Bankstown Airport Masterplan 2014* anticipates aircraft movements at Bankstown Airport to increase to approximately 282,000 movements per year to 2036. The airport is anticipated to have capacity for a further 450,000 movements per year over this time period.

The airport site occupies 313 hectares and adjoins the Milperra industrial area, one of the most important centres of economic activity in the South District. Approximately 15,700 people work in the Milperra industrial area¹², with a third of jobs in manufacturing, including advanced manufacturing operations. Sectors of specialisation include aviation/aerospace and electronics. Advanced manufacturing is identified in *Jobs for the Future* as a priority globally tradeable segment which offers strong prospects for high-value and accelerated jobs growth and to develop globally competitive capability in skills and technology.¹³

The *Bankstown Airport Masterplan 2014* sets aside 130 hectares of land adjacent to Milperra for future development for non-aviation uses, with the aim of developing an industrial economic and employment hub.¹⁴ Together with the established Milperra industrial area, this area is well located with access to air transport, the road and rail freight network; proposed Moorebank intermodal terminal, Liverpool, Bankstown and the Liverpool health and education precinct. Public transport for workers could improve with the potential expansion of the Sydney Metro City & Southwest from Bankstown to Liverpool.

Given the strategic opportunities associated with Bankstown Airport and Milperra industrial area, it has been identified as a Collaboration Area (refer to Figure 20). The Commission will work with City of Canterbury-Bankstown Council, the NSW Government, the Australian Government, Bankstown Airport Limited, industry and the community to develop a long-term economic strategy. This will:

- improve transport connections to the broader District
- integrate planning for the airport with planning of surrounding lands
- coordinate infrastructure delivery
- facilitate advanced manufacturing and innovation
- expand opportunities stemming from Western Sydney University Bankstown Campus and the University of NSW Aviation School.

Figure 20: Bankstown Airport – Milperra Industrial Collaboration Area

Actions	Responsibility
<p>23. Facilitate health and education precincts that:</p> <ul style="list-style-type: none"> a. create the conditions for the continued co-location of health and education facilities, and services to support the precinct and growth of the precincts b. have high levels of accessibility c. attract associated businesses, industries and commercialisation of research d. include housing opportunities for students and workers within 30 minutes of the precinct. 	Councils, other planning authorities and State agencies
24. Deliver and implement a Place Strategy and Infrastructure Plan for the Kogarah health and education precinct.	State agencies, Greater Sydney Commission, Bayside Council and Georges River Council
25. Deliver and implement a Place Strategy and Infrastructure Plan for the Bankstown Airport and Milperra Industrial Area collaboration area.	Greater Sydney Commission, City of Canterbury-Bankstown Council, other planning authorities and State agencies

Planning Priority S9

Growing investment, business opportunities and jobs in strategic centres

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 22: Investment and business activity in centres** and the corresponding strategies and action.

The growth, innovation and evolution of centres is central to the economy of the South District. Centres provide important services and jobs for local residents and places for communities to meet. Their vitality and viability is important to local economies and their character defines local areas. Well-planned centres help to stimulate economic activity and innovation through the co-location of activities, provide jobs closer to where people live and use infrastructure more efficiently.

To manage the growth and change of the South District's centres, a centres hierarchy has been established as:

- Strategic centres: Bankstown, Campsie, Kogarah, Hurstville, Miranda and Sutherland.
- Local centres (refer to Planning Priority S6).

All strategic centres will be the focus of public transport investments that seek to deliver the 30-minute city objective (refer to Planning Priority S12).

Some strategic centres in the South District have health and education activities. They differ in size and scale of economic activity. However, as strategic centres, they all have similar expectations, 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 activities, including residential
- high levels of amenity and walkability
- areas identified for commercial uses, and where appropriate, commercial cores.



Creating the conditions for growth and making centres great places is a focus of Planning Priority S6.


Research has shown that the South District will need to accommodate more than 680,000 square metres of additional retail floor space over the next 20 years.¹⁵ In addition, there will be significant demand for additional office floor space. Creating the opportunities to attract retail and office development locally brings jobs closer to where people live. This requires growth in either existing or new centres. The principles for developing new centres are outlined in this Planning Priority.

Delivering housing within a walkable distance of strategic centres encourages non-vehicle trips, which also fosters healthier communities. Housing within centres contributes to a sense of vibrancy,

however the delivery of housing should not constrain the ongoing operation and expansion of commercial and retail activities.

Jobs growth and community access to goods and services is the core objective for centres. For this reason, job targets, expressed as a range, have been projected for each strategic centre. These targets seek to inform planning authorities and infrastructure agencies of anticipated growth. They should not be seen as maximum targets.

The lower end of the range of these job targets reflects the baseline of projected jobs growth anticipated in the centre, while the upper end is an aspirational higher growth scenario to reflect outcomes in the case of future investment and land use planning in centres.

 Actions	Responsibility
26. Provide access to jobs, goods and services in centres by: <ol style="list-style-type: none"> 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. 	Councils, other planning authorities and State agencies
27. Create new centres in accordance with the <i>Principles for Greater Sydney's Centres</i> .	Councils and other planning authorities
28. Engage with the retail sector on its changing planning requirements and update planning controls as required.	Councils and other planning authorities
29. Prioritise strategic land use and infrastructure plans for growing centres, particularly those with capacity for additional retail floor space.	Councils and other planning authorities
30. Use flexible and innovative approaches to revitalise high streets in decline.	Councils and other planning authorities
31. Review current planning controls and create capacity to achieve the job targets for each of the District's strategic centres.	Councils and other planning authorities

Principles for Greater Sydney's Centres

As Greater Sydney's population grows over the next 20 years, there will be a need for over five million square metres 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 emphasized 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 to attract health and education activities in centres. The principles for developing these centres are:

- **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 enabling these situations. 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 wide range of centre types, including local and large centres which will grow and evolve into new strategic centres.
 - In land release areas, strategic planning should maximise the number and capacity of centres on existing or planned rail corridors. The 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 must be developed as urban places which can transition into

higher amenity and vibrant places while maintaining the main role as employment precincts. Councils' retail and employment strategies should guide the transition of business parks into mixed-use 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 be co-located with supporting transport infrastructure. Built form is also critical to facilitate the transition of centres with health and education uses to facilitate more mature innovation precincts.

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.

Bankstown



Bankstown	Jobs
2016 estimate	12,100
2036 baseline target	17,000
2036 higher target	25,000

Bankstown is a large centre with a range of retail, healthcare, community and civic services. It is an important transport interchange with an extensive bus and rail catchment.

Sydney Metro City & Southwest create significant opportunity for the future of Bankstown, its urban form and public realm. Investment in the Bankstown Library and Knowledge Centre and improvements to its streetscape also demonstrate ongoing change in Bankstown centre.

The improved frequency and reduced travel time on public transport to the Harbour CBD and beyond to Chatswood and Macquarie Park

will strengthen the economic links between Bankstown and the Eastern Economic Corridor. This has potential to act as a stimulus for new economic opportunities to attract jobs to Bankstown. New jobs and housing developments are also planned for the Bankstown Precinct as part of the Sydenham to Bankstown Urban Renewal Corridor.

The opening of a Western Sydney University campus, together with the existing TAFE, will introduce a new vibrancy to the centre. This will have an economic flow-on effect, creating opportunities for more local jobs, including knowledge-intensive jobs.

Over time, investments in the centre have the potential for it to emerge as a health and education precinct

Bankstown CBD has been identified as a potential Collaboration Area for planning for a highly productive, economically vibrant and liveable centre, leveraging the initiatives already underway, especially with the potential of a health and education precinct. Investment in, and redevelopment of, strategic sites also provide a unique opportunity for these to be examples of innovative forms of sustainable development.



Actions

32. Strengthen Bankstown through approaches that:
- support links between Bankstown-Lidcombe Hospital, allied health services and links to tertiary education and research facilities to grow the emerging health and education precinct
 - encourage new lifestyle and entertainment uses to activate streets and grow the night-time economy
 - facilitate the attraction of office and commercial floor space and provide opportunities to allow commercial and retail activities to innovate
 - encourage activation of secondary streets
 - enhance the quality of Paul Keating Park
 - improve and integrate the transport interchange and city centre.

Responsibility

City of Canterbury-Bankstown Council, other planning authorities and State agencies

Campsie



Campsie is a thriving commercial centre with a range of medical services nearby. It is identified as a Priority Precinct by the NSW Department of Planning and Environment. The centre has a high level of amenity. It is an important transport hub for rail, local and cross-regional bus routes. Accessibility will be further enhanced by the Sydney Metro City & Southwest which will provide faster and more reliable services to other economic centres such as the Harbour CBD and Bankstown. Improving traffic flows through the centre will enhance the pedestrian experience of the centre. Other opportunities include increasing local jobs, enhancing the public domain and providing housing in the right locations.

Campsie	Jobs
2016 estimate	4,800
2036 baseline target	7,000
2036 higher target	7,500

Actions	Responsibility
<p>33. Strengthen Campsie through approaches that:</p> <ul style="list-style-type: none">a. strengthen Beamish Street’s role as an ‘eat street’ to grow the night-time economyb. encourage activation of secondary streetsc. strengthen links to Canterbury Hospital and surrounding allied health servicesd. manage traffic and parking to reduce impacts on pedestrian amenity, especially on Beamish Streete. improve the appearance of the existing rail (freight) corridor.	<p>City of Canterbury-Bankstown Council, other planning authorities and State agencies</p>

Hurstville



Hurstville is an important retail destination for the South District, with its high street and large shopping centres. It is a commercial precinct for residents and has a growing health services sector. Its cultural diversity presents tourism and night-time economy opportunities. These activities are supported by good access to the centre by rail and bus services.

Improvements to Hurstville's public spaces and better integration of these with the shopping centres will help activate streets and attract visitors to the centre, creating opportunities for local employment and new economic activity.

Hurstville	Jobs
2016 estimate	11,600
2036 baseline target	15,000
2036 higher target	20,000



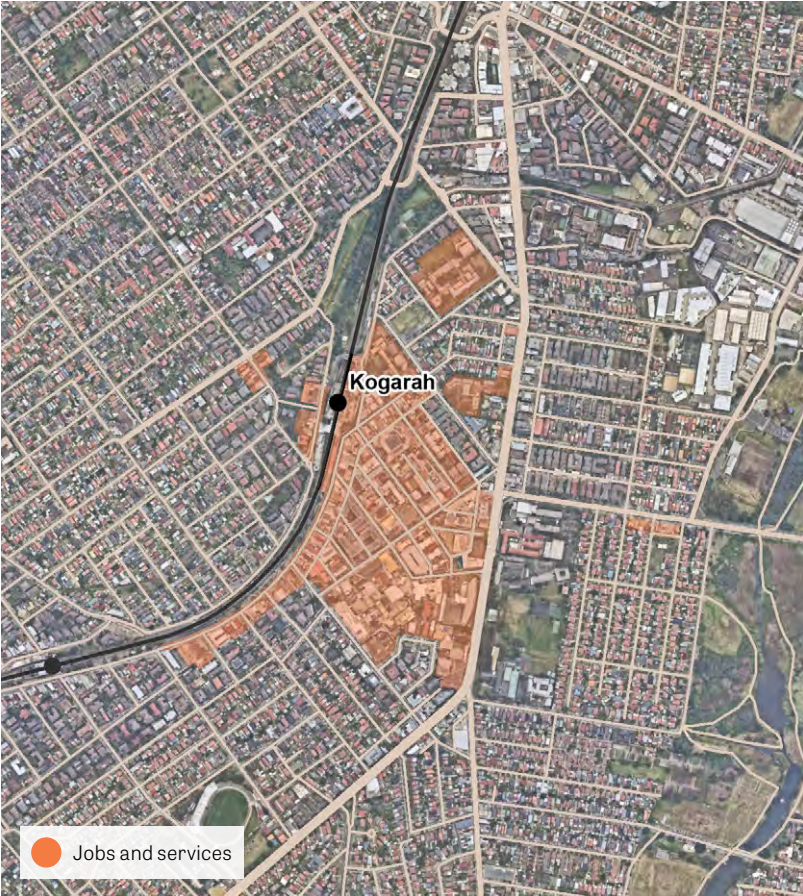
Actions

34. Strengthen Hurstville through approaches that:
- encourage and support shopping centre improvements to better integrate with the surrounding public spaces
 - create a strong sense of place by celebrating Hurstville's cultural diversity
 - support the expansion of the hospitals in the centre and the growth of allied health services
 - encourage new lifestyle and entertainment uses to activate streets and grow the night-time economy
 - build on the centre's administrative and civic role
 - protect existing commercial lands for future employment opportunities
 - facilitate the attraction of office and commercial floor space and provide opportunities to allow commercial and retail activities to innovate
 - recognise and support the role of Forest Road as a movement corridor and as an 'eat street'
 - encourage activation of secondary streets.

Responsibility

Georges River Council, other planning authorities and State agencies

Kogarah



Kogarah contains a concentration of medical facilities and a mix of retail and commercial activities, focused on the finance and insurance industry. Ongoing investment in the centre will support the health and education precinct focused around St George Hospital, and encourage opportunities for local jobs and economic activities to achieve the jobs target.

Kogarah	Jobs
2016 estimate	11,800
2036 baseline target	16,000
2036 higher target	20,500

Actions	Responsibility
<div>35. Strengthen Kogarah through approaches that:<div><div>a. support growth of the health and education precinct</div><div>b. encourage new lifestyle and entertainment uses to activate streets and grow the night-time economy</div><div>c. facilitate the attraction of office and commercial floor space and provide opportunities to allow commercial and retail activities to innovate</div><div>d. encourage activation of secondary streets.</div></div></div>	Georges River Council, other planning authorities and State agencies

Miranda



Miranda is an important retail destination with a vibrant high street, large shopping centre and a mix of retail and local services, particularly health services. It is highly accessible by rail and local and cross-regional bus services. There are opportunities to enhance public spaces and activate secondary streets to make it a more attractive retail and commercial centre.

Miranda	Jobs
2016 estimate	7,000
2036 baseline target	8,000
2036 higher target	11,500



Actions

36. Strengthen Miranda through approaches that:
- enhance public spaces to make a more attractive shopping destination
 - build on the success of existing retail to grow the centre
 - facilitate the attraction of office and commercial floor space and provide opportunities to allow commercial and retail activities to innovate
 - encourage activation of secondary streets.

Responsibility

Sutherland Shire Council, other planning authorities and State agencies

Sutherland



Sutherland presents a diversity of retail, entertainment, commercial and community services, and has a civic role as the location of a District Court. University of Wollongong satellite campus and Sutherland College Sydney TAFE are located nearby. Building on these strengths and activating streets will provide opportunities to grow local jobs and the night-time economy.

Sutherland	Jobs
2016 estimate	5,700
2036 baseline estimate	8,000
2036 higher estimate	9,000

Actions	Responsibility
<div>37. Strengthen Sutherland through approaches that:<ul style="list-style-type: none">a. build on the centre's administrative and civic roleb. facilitate the attraction of office and commercial floor space and provide opportunities to allow commercial and retail activities to innovatec. encourage new lifestyle and entertainment uses to activate streets and grow the night time economyd. encourage activation of secondary streets.</div>	Sutherland Shire Council, other planning authorities and State agencies

Planning Priority S10

Protecting and managing industrial and urban services land

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 23: Industrial and urban services land is planned, protected and managed** and the corresponding strategies and action.

Greater Sydney's existing industrial, manufacturing, warehousing and distribution facilities contribute to its role as Australia's manufacturing capital. These activities occur on industrial and urban services land that also accommodates freight and logistics services and advanced manufacturing.

Urban services includes activities such as motor vehicle services, printing, waste management, courier services and concrete batching plants. These activities serve local communities and businesses and require adequate access to industrial land across the District. Demand for this land will increase commensurate with population growth. Good local access to these services also reduces the need to travel to other areas, minimising congestion on the transport system.

Industrial land supply

The South District has 1,744 hectares of industrial and urban services land, spread over 40 precincts (refer to Figure 21). This represents 12 per cent of Greater Sydney's total stock of industrial and urban services land. About eight per cent (146 hectares) is undeveloped, indicating strong demand for industrial and urban services land in the District.¹⁶

This land provided for approximately 51,800 jobs (37 per cent of jobs) in the District. Historically, the District has had a strong industrial base, but industrial employment declined by nearly 17 per cent between 1996 and 2016.¹⁷

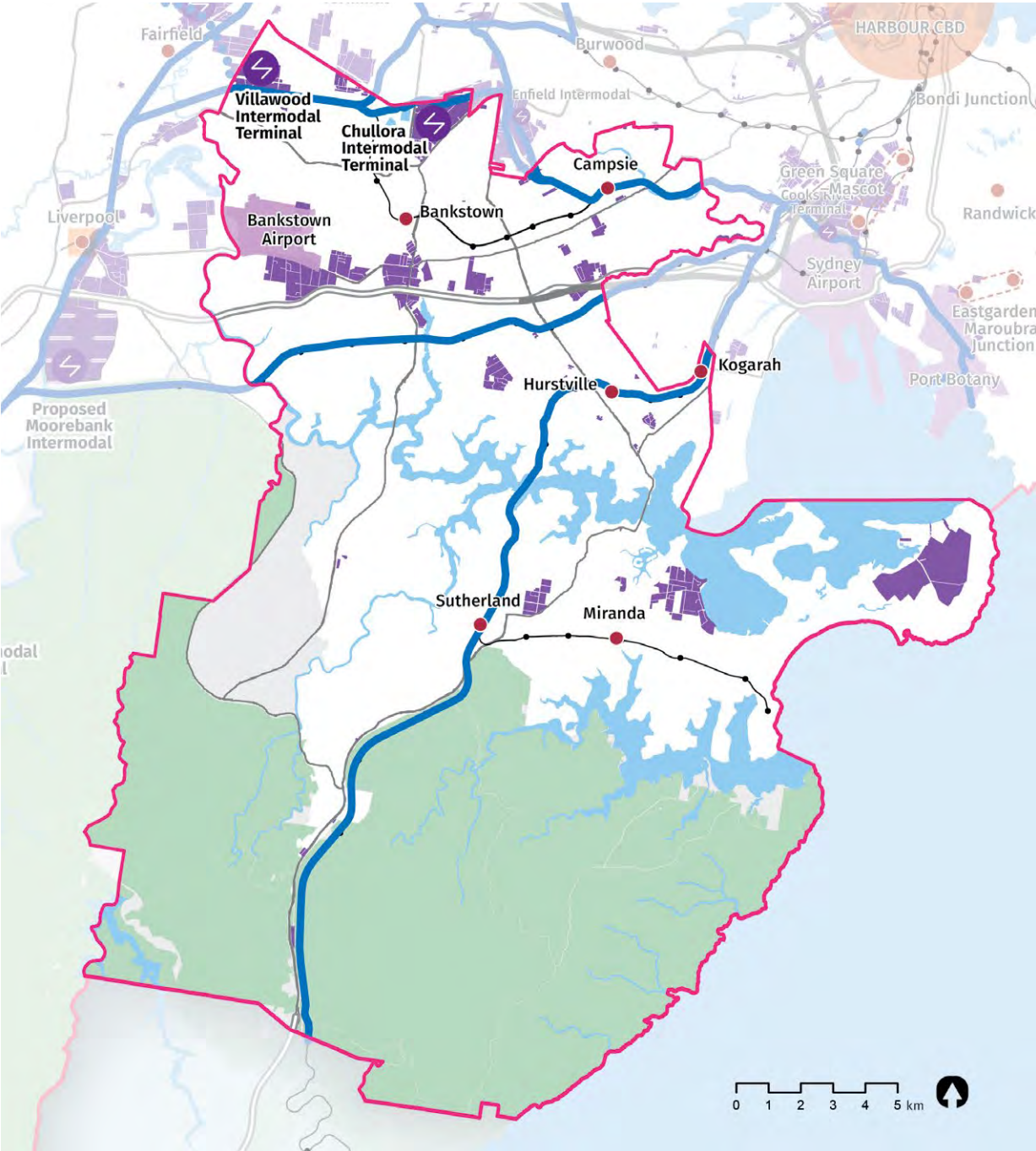
The largest industrial and urban services precincts in the South District are listed in Table 3. Manufacturing dominates the South District's industrial and urban services land, particularly in the larger precincts.

Table 3: South District's ten largest industrial and urban services precincts

Precinct	LGA	Undeveloped Land (ha)	Developed Land (ha)	Total (ha)
Kurnell	Sutherland	107	261	367
Chullora	Canterbury-Bankstown	21	191	212
Leightonfield Station	Canterbury-Bankstown	0	160	160
Caringbah/Taren Point	Sutherland	<1	142	143
Revesby	Canterbury-Bankstown	<1	132	133
Milperra	Canterbury-Bankstown	1	101	102
Padstow North	Canterbury-Bankstown	<1	94	95
Kirrawee	Sutherland	5	56	60
Peakhurst, Boundary Road	Georges River	<1	56	56
Padstow South	Canterbury-Bankstown	2	44	45

Source: NSW Department of Planning and Environment, *Employment Lands Development Program 2015 Report*, NSW Government, Sydney.
Note:

Figure 21: Industrial and urban land services and freight assets



District Boundary	Strategic Centre	Road
Waterways	Industrial and Urban Services Land	Freight/Shared Rail
Protected Natural Areas	Trade Gateway	
Metropolitan Rural Area	Intermodal Terminal	

These larger precincts are located near the Harbour CBD, Port Botany, Sydney Airport and the motorway and rail freight networks.

The Kurnell Peninsula historically accommodated petrochemical and heavy industries and the construction sector. However, Continental Carbon, Australia's carbon black manufacturing, has closed, Caltex Oil Refinery has converted to a fuel storage centre and sand mining is almost depleted. Kurnell now accommodates more advanced manufacturing such as the water desalination plant and creative industries such as cloud-based computing, although construction remains the main industrial sector.

A significant freight and logistics task will remain in the South District due to the competitive advantages and efficiencies afforded by proximity to Villawood and Chullora freight intermodal terminals.

The predominant industrial sectors in Chullora are transport, postal and warehousing and food product manufacturing, which each representing about 20 per cent of employment in the precinct. Utilities, creative industries and wholesale and retail trade are other important activities in the precinct, which is an important location for urban services.

The District's employment lands are supported by the Villawood and Chullora intermodal terminals with direct connections to Port Botany, Australia's second largest container port, handling about a third of the nation's maritime container trade. There is a plan to connect a container staging zone at Port Botany to Villawood intermodal freight terminal. This will help transform how freight moves to and from Port Botany.

Even though larger-scale freight and logistics firms may choose to locate in the Western City District, a significant freight and logistics task will remain in the South District due to the competitive advantages and efficiencies afforded by proximity to Villawood and Chullora freight intermodal terminals. Critical to servicing these operations will be the retention of sites large enough to meet their needs – generally, two hectares or more.

Activities in Leightonfield Station precinct are diverse, including transport, postal and warehousing, manufacturing (focused on basic chemical and chemical products), wholesale trade and urban services.

The 12 smallest precincts in the District (between one to five hectares in size) are important for providing local jobs and services, with between 30 and 50 per cent of jobs in each precinct being urban services jobs.¹⁸

Almost 58 per cent of the District's industrial and urban services land is in the Canterbury-Bankstown Local Government Area. Manufacturing is the largest employment sector, dominated by food product, furniture, machinery and equipment and polymer product and rubber product manufacturing. Other activities include freight and logistics (transport, postal and warehousing), construction and wholesale trade.

Predominant activities at the Bankstown Airport trade gateway are freight activities and advanced manufacturing, in the form of transport equipment manufacturing. These two industry sectors provide two-thirds of the employment at the trade gateway.

There are 10 industrial and urban services precincts in the Sutherland Local Government Area. Half of all jobs in these precincts are in construction, retail trade, health care and social assistance, accommodation and food services and education and training. Construction is the largest sector by employment, providing 14 per cent of all industrial jobs.

Industrial and urban services land in the Georges River Local Government Area is spread over eight precincts; six are smaller than 10 hectares and primarily accommodate light industrial uses and urban services.

Managing industrial and urban services land

While industrial activity and urban services remain important, the nature of the economic sector is changing, with emerging technologies and new industries with different requirements. Industrial land is evolving from traditional industrial and manufacturing lands, and freight and logistics hubs, into complex employment lands. This trend is consistent with other parts of Greater Sydney, particularly east of Parramatta.

There is limited undeveloped industrial and urban services land in the District. The Kurnell Peninsula has capacity to accommodate new and evolving industrial and urban services activities on large and undeveloped sites. Some of these sites are subject to environmental and other constraints, including the operational requirements and impacts of Sydney Airport.

As industries transition, proposals to convert some industrial and urban services land to higher-order uses including residential or large format retail have not been supported. Industrial and urban services land have been largely protected, with only approximately 27 hectares rezoned for other uses since 2011.¹⁹

Future growth across all industries and urban services will require additional floor space, additional land or both. Urban services are often less able to increase their floor space efficiency or locate in multi-storey buildings.

Existing industrial and urban services land needs to be protected and must be managed to accommodate business supporting the local economy and serving the local population.

Research prepared for the Commission has compared urban services provision in Greater Sydney with the ACT benchmark of three square metres of urban services land per person. In South District, the per person amount is below the benchmark in 2016, and the per capita amount is anticipated to reduce between 2016 and 2036.²⁰

In the context of retaining industrial and urban services activities, there may be a need, from time to time, to review the scope of appropriate activities within any precinct to allow flexibility for new and evolving business practices, new industries and emerging technologies. Any review should take into consideration findings of the industrial, commercial and centres strategies for the local government area and/or district.



Growing local employment opportunities


As Greater Sydney grows over the next 20 years, there will be a need for the efficient and timely delivery of new office precincts. Stakeholder feedback has emphasised the need to grow and diversify local employment opportunities.

In the South District there are no stand-alone office precincts, increasing the need for residents to travel longer distances to access a variety of jobs. The draft *Greater Sydney Region Plan* supports the consideration of offices as a permissible use in an industrial precinct to grow the local office market to provide a greater mix of employment opportunities and synergies between enterprises. However, this should not be seen as a first step in transitioning an industrial area into, for example, a business park, nor is it about allowing retail to support office activity.

Considerations should include:

- the context of industrial, commercial and centres strategies for the local government area and/or the District
- proximity to established business parks or office precincts, with the transition to accommodate new offices or uses only supported in precincts not close to existing business parks or office precincts
- where access to the industrial precinct is constrained, transition to accommodate new uses or offices should be supported only where it will not compromise industrial activities in the precinct or the operation of trade gateways.

The Commission will work with the NSW Department of Planning and Environment and local councils to facilitate offices in industrial precincts, where this is identified as appropriate.

 Actions	Responsibility
38. Manage industrial land in the South District by protecting all industrial zoned land from conversion to residential development, including conversion to mixed-use zones.	City of Canterbury-Bankstown Council, Georges River Council, Sutherland Shire Council and other planning authorities
39. Consider office development in industrial zones where it does not compromise industrial activities.	Councils and other planning authorities
40. Prohibit new residential development on the Kurnell Peninsula where there is potential to interfere with the operation of Sydney Airport or where the ANEF contours and prescribed airspace requirements exclude residential development.	Councils and other planning authorities
41. Facilitate the contemporary adaptation of industrial and warehouse buildings through increased floor to ceiling heights.	Councils and other planning authorities

Planning Priority S11

Supporting growth of targeted industry sectors

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 24: Economic sectors are targeted for success** and the corresponding strategies.

The draft *Greater Sydney Region Plan* highlights the importance and role of the NSW Government in leading the development and coordination of sector-specific industry development strategies to grow and globally position key sectors of the economy.

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.

The draft *Greater Sydney Region Plan* outlines the strategies to support industry sectors. They cover the areas of:

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

To support these strategies, Objective 24 of the draft *Greater Sydney Region Plan* emphasises the need to work with internationally competitive trade sectors by considering the barriers to growth, including regulatory barriers.

The draft *Greater Sydney Region Plan* also identifies a number of the key economic sector for Greater Sydney's three cities. The South District is part of the Eastern Harbour City where the key economic sectors include:

- financial and professional services (including insurance and superannuation)
- creative industries
- information, communication and technology (including cyber security)
- construction and infrastructure
- health and medical technology
- tertiary education
- visitor economy.

This Planning Priority reinforces the need to:

- support the growth of internationally competitive industry sectors
- respond to changing technologies
- plan for tourism and visitation
- protect and support mineral resources.

Tourism

The South District attracts tourists who visit the Royal National Park, the long stretch of beach from Boat Harbour to North Cronulla or the surf beaches of Cronulla and Wanda.

In 2015–2016, approximately 715,000 visitors stayed overnight in the District, 90 per cent of whom were domestic visitors. Visitor spending in the District was almost \$950 million in the same period.²¹ In the Sutherland Shire, of the 1 million day-trip visitors each year, less than 400,000 people stay overnight.²²

Visitors' experiences are shaped by major attractions and events, the places they visit, the facilities available and how their needs are met. Tourism provides widespread economic benefits, which can be enhanced by providing a better experience and facilities.



The Royal National Park is the District's major attraction, with visitor precincts at Audley, Wattamolla, Bonnie Vale and Garie. Wattamolla Beach is the most visited precinct in any national park in NSW.²³ Businesses such as ANSTO attract domestic and international corporate travellers to the District, many staying in the District during their visit.

The District could capture tourist interest associated with education, medical and business activities and international sports events.

The District has Aboriginal, European and natural heritage and could capture tourist interest associated with education, medical and business activities and international sports events.

Other tourism assets include:

- Cronulla's surf beaches and foreshore walks
- the Georges and Port Hacking rivers
- Kamay Botany Bay National Park, the Georges River National Park, Heathcote National Park and the Garawarra State Conservation Area
- whale watching at Cape Solander
- the wetlands along the Georges River, particularly the Ramsar-listed wetlands at Towra Point and the wetlands around Salt Pan Creek
- cycleways from Botany Bay to Kurnell and Cronulla and along the Cooks River
- the site of Captain Cook's first landing in Australia
- major sporting facilities such as Endeavour Field (Shark Park) and Jubilee Oval (Kogarah Park)
- a diverse range of centres with restaurants and eat streets, night-life and shopping.


While Australia's prime international gateway, Greater Sydney, welcomes 30 million visitors a year, the South District is not heavily promoted as a tourist destination. In addition, supporting tourist infrastructure, particularly hotel and overnight accommodation, is limited.

The NSW Government committed \$9.3 million to the Wattamolla Visitor Precinct and improvements to the Royal Coast Track in the 2017–18 Budget.²⁴

Strategic planning can grow the tourism offer and increase overnight stays through more facilities for overnight and short-stay visitors, recreational tourists, business and education-related tourists and health visitors. Planning and place-making initiatives for destinations and tourist hubs will also improve visitor experiences and public transport connections.

Adapting to changing technologies

Rapid technological changes and digital advancements are disrupting established business models and the workplace worldwide. These changes are dramatically changing the way people and goods move around, providing more efficient transport services. While technological changes can reduce demand for certain types of jobs, they also help to deliver innovation, new knowledge-intensive jobs and business opportunities. As governments continue to engage with industry, assess regulatory barriers and update governance and policies to capitalise on changes, strategic land use planning needs to respond by providing a regulatory environment which enables the economic opportunities created by changing technologies.

 Actions	Responsibility
42. Consider the barriers to the growth of internationally competitive trade sectors, including engaging with industry and assessing regulatory barriers.	Councils and other planning authorities
43. Provide a regulatory environment which enables economic opportunities created by changing technologies.	Councils, other planning authorities and State agencies
44. When preparing plans for tourism and visitation, consider: <ul style="list-style-type: none"> a. encouraging the development of a range of well-designed and located facilities b. enhancing the amenity, vibrancy and safety of centres, places and precincts c. supporting the development of places for artistic and cultural activities d. improving public facilities and access e. protecting heritage and biodiversity to enhance cultural and eco-tourism f. supporting appropriate growth of the night-time economy g. developing industry skills critical to growing the visitor economy. 	Councils and other planning authorities
45. Consider opportunities to implement place-based initiatives to attract more visitors, improve visitor experiences and ensure connections to transport at key tourist attractions.	Councils and other planning authorities
46. Consider opportunities to enhance the tourist and visitor economy in the District, including a coordinated approach to tourism activities, events and accommodation.	Councils, other planning authorities and State agencies
47. Create capacity for tourist accommodation in appropriate locations through local environmental plans.	Councils and other planning authorities

Planning Priority S12

Delivering integrated land use and transport planning and a 30-minute city

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 14: A metropolis of three cities – integrated land use and transport creates walkable and 30-minute cities; Objective 16: Freight and logistics network is competitive and efficient; and Objective 17: Regional transport is integrated with land use** and the corresponding strategies.

Enhancing regional connections

By 2056 the combined population of Greater Sydney, Newcastle and Wollongong will be approximately 10 million. Greater Sydney's regional connections to Wollongong and the Illawarra Region are provided by the South Coast Rail Line and the Princes Highway/M1 which traverse the South District. Improving north-south connections between the five cities will allow greater opportunities for residents of all cities to access a wider range of jobs opportunities and enhance their productivity.

Sydney Airport, Port Botany and Port Kembla are important trade gateways. Enhanced new road and rail connections connecting Port Kembla to Port Botany, Sydney Airport and the freight networks of Greater Sydney will cross the South District.

Planning is underway for the **F6 Extension** linking the M5 near Sydney Airport and the Princes Highway at Waterfall. Although the northern parts of this connection are in the Eastern City District, delivery of this connection will improve connections between Wollongong and the Eastern Harbour City, particularly Sydney Airport and Port Botany.

Improving north-south connections between Greater Sydney and Wollongong will allow residents to access wider job opportunities and enhance business to business links. Equally, improved connections will provide greater choices for where people can choose to live and, in the long term, provide increased growth management choices.

Efficient and reliable journeys are supported by the separation of freight and passenger movements wherever possible, particularly on public transport corridors.

Plans to improve the **Southern Sydney Freight Line**, which runs through the District's north west, will increase capacity to accommodate freight movements between ports, intermodal terminals at Chullora and Villawood, and customers across Greater Sydney.

Improvements outside the District to the **Maldon-Dombarton freight rail link** will free capacity on the South Coast Rail Line between the Illawarra and Greater Sydney.

As the South District grows, the need for freight movements, particularly delivery vehicles, will rise. Freight movements can have negative impacts such as noise and additional congestion on roads, particularly during the morning peak. Freight movements outside the peak can help reduce congestion, greenhouse gas emissions and freight costs. The planning and design of communities should minimise the negative impacts of freight movements and support more efficient freight movements. This could include considering how development addresses busy roads, the siting of loading docks and how more freight movements can happen out of peak hours.

Much of the Kurnell Peninsula is under Sydney Airport's main southern flight path, which takes 55 per cent of all the airport's flights and is the only flight path with no night curfew. This freight corridor must be protected. A state-wide approach to implementing the National Airports Safeguarding Framework is being developed by the NSW Department of Environment and Planning.



Delivering a 30-minute city and improving connections between strategic centres

Future Transport 2056 and the draft *Greater Sydney Region Plan* propose a well-connected city, based on the concept of '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. Improved connections between strategic centres in the South District, and to connect South District with strategic centres in Greater Sydney are important for business to business interactions and access to jobs. These will be supported by enhanced access to public transport at centres.

The Sydney Metro City & Southwest will upgrade and convert the T3 Bankstown Line from Sydenham to Bankstown to metro standards by 2024. The section of the proposed metro between Hurlstone Park and Bankstown stations is in the South District. This will increase the frequency, speed and reliability of services, better linking South District residents with jobs in the Eastern Economic Corridor, which extends from Macquarie Park in the north of Greater Sydney, through the Harbour CBD to Sydney Airport.

Future Transport 2056 and draft *Greater Sydney Region Plan* identify short to medium-term initiatives, including intermediate transport network initiatives, to provide people in the South District with better transport connections between districts and strategic centres and improve journey times. These include:

- investigation into high-capacity public transport links between Parramatta and Kogarah, via Bankstown
- investigation into train improvements on the T2 and T4 railway lines to improve capacity and reliability
- improving service frequencies
- investigation into intermediate transit (on-road transport) between Hurstville and Parramatta (via Kingsgrove) and between Hurstville and Burwood (via Campsie).

The A3 (King Georges Road) and A6 (New Illawarra Road, Alfords Point Road, Davies Road and Stacey Street) provide important business to business connections across the District, connecting Sutherland and Kogarah, Sutherland and Bankstown, and beyond to Parramatta. These are important for connecting residents to centres where they can access public transport, jobs and services. Planned upgrades on Alfords Point Road and King Georges Road will address congestion, improve travel times and safety and improve the transport networks within the District. Future improvements to the strategic road network and key intersections can improve traffic flows through the District and access to strategic centres.

Current **WestConnex** works will duplicate the existing M5 by providing twin underground motorway tunnels from Kingsgrove to a new St Peters Interchange, improving east-west motorway access and freight movements for Greater Sydney and the District to Sydney Airport, Port Botany and the south west. Upgrades to the M5 Belmore Road ramps will improve the District's access to the M5.

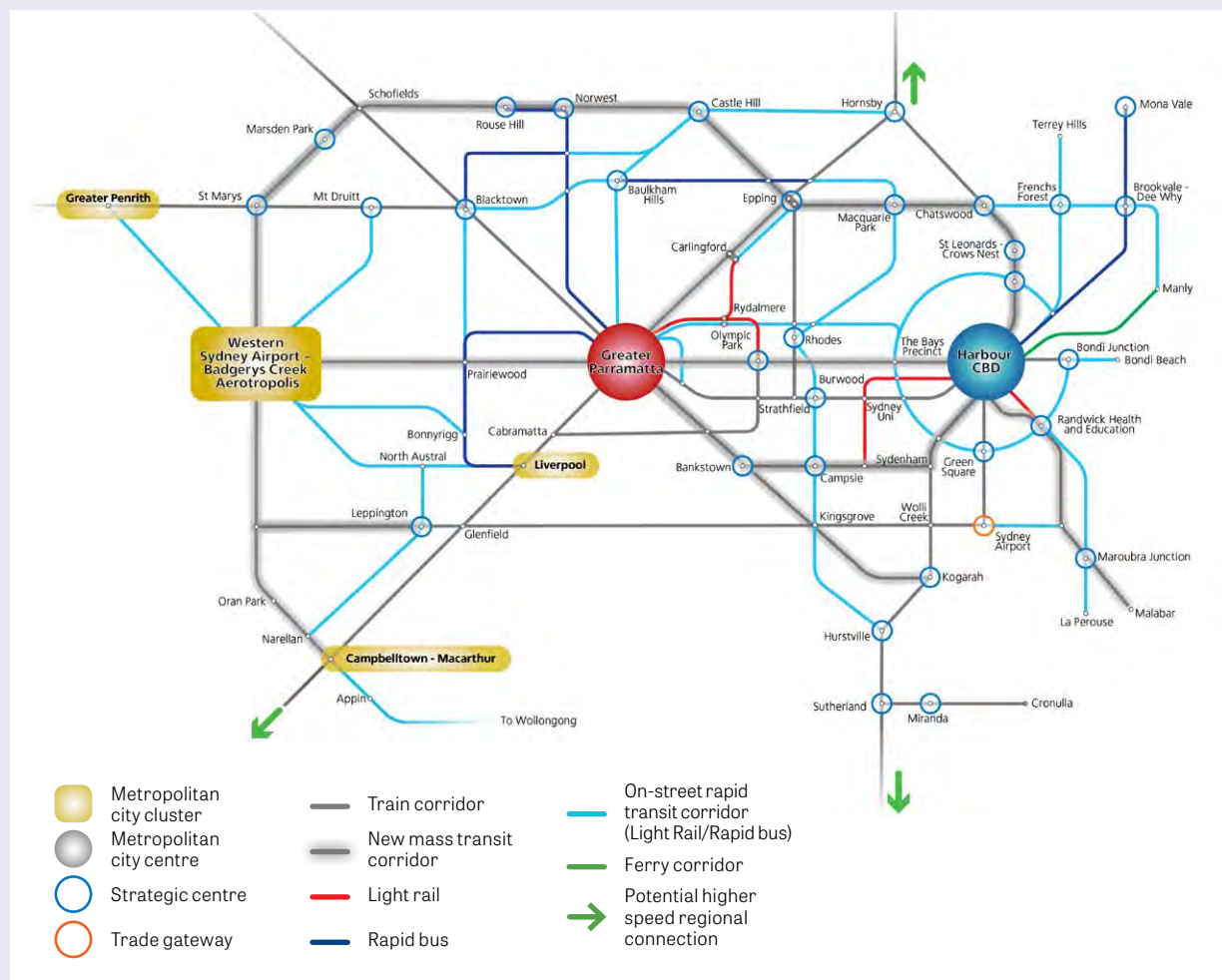
Into the future, opportunities to improve connections across Greater Sydney may include South District. These may include:

- extension of the Sydney Metro City & Southwest from Bankstown to Liverpool
- new mass transit linking the eastern suburbs with Miranda via Kogarah
- Central City strategic road corridor linking Hurstville to Hornsby.

Public transport initiatives will require careful consideration to minimise the impact of future corridors on communities. 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 to manage growth.

Intermediate transit 2036

Source: Transport for NSW



Note: Timing, staging and station/stop locations for new corridors are indicative and subject to further assessment.

Intermediate transit includes buses, ferries, light rail and point-to-point transport such as taxis and rideshare.

It has a key role in providing access for customers to the train network and serving customers on corridors where trains do not operate. These roles underpin the vision for the future intermediate transit network as one that will provide coverage for customers across Greater Sydney, be easy-to-understand and well-integrated with the train network.

As Greater Sydney transitions to a metropolis of three cities, public transport will play an increasingly important role in enabling customers to access their nearest metropolitan and strategic centre within 30 minutes and travel across the city.

This requires the public transport system to not only support reliable and efficient access to centres but also to reach destinations across Greater Sydney efficiently and reliably.

Intermediate transit will support this by:

- providing frequent, reliable and efficient transport between local areas and nearby train stations where customers can access high capacity transport to travel to their nearest centre and other destinations across Greater Sydney
- providing direct access to centres for customers on corridors where trains do not operate.

The future intermediate transit network will enable this by providing coverage across Greater Sydney through a combination of strategic routes and local routes, being easy-to-understand and connecting to interchanges on train lines. This means that new routes in the Western Parkland City will be investigated to support growth, additional connections to Greater Parramatta will be investigated, including light rail extensions to support urban renewal, and new routes will be investigated in the Eastern Harbour City to support more efficient access to train corridors. As the train network grows, the intermediate transit network will also evolve to enable customers to reach their nearest station.

Walking, cycling and local connections

Most people in South District use their car to travel, demonstrated by 78 per cent of journey to work trips being by car. Walking accounts for 22 per cent of trips less than five kilometres, and of the trips over 10 kilometres, 18 per cent of trips are by rail.²⁵

Residents drive from low density neighbourhoods to transport interchanges, centres and places of employment. Parking provision is becoming constrained near rail stations, transport interchanges, centres and places of employment.

This draft District Plan supports the introduction of other forms of transport to access centres and the transport network. For example, around centres, in Priority Precincts, and in urban renewal precincts and corridors, improved walking and safe cycling links, improvements to the public domain and an increased tree canopy will encourage people to walk or cycle for the first or final legs of their journeys to and from stations and public transport interchanges.

More convenient interchanges will encourage public transport use. This includes making interchanges more attractive and providing more services such as shops. Upgrades to Heathcote, Jannali, Oatley, Panania and Narwee rail stations have improved or are improving station accessibility.

Improved walking and cycling links, improvements to the public domain and an increased tree canopy will encourage people to walk or cycle.

In the eastern parts of the District, there is good cycling access to centres, and some neighbourhoods have access to more than one strategic centre within a 30-minute journey. However, cycle journeys between strategic centres within the District are generally longer than 30 minutes.

Cycling can be encouraged as a preferred transport mode for shorter journeys through on- and off-road cycleways linking to centres and local destinations such as schools or parks; for example the proposed Sutherland to Cronulla active transport link.

Transport for NSW and Roads and Maritime Services are establishing a bicycle network hierarchy in collaboration with councils. The Principal Bicycle Network will establish high-quality, high-priority routes through the Greater Sydney Green Grid to facilitate safe, connected direct north, south, east and west connections to centres. Several Greater Sydney Green Grid Priority Projects (refer to Planning Priority S15) include cycling connections to Kogarah, Hurstville and Sutherland, and from Campsie to Bankstown.


Regional routes and local routes identified in local government bike plans will connect to the principal Bicycle Network to facilitate a seamless and connected network within urban areas. Local streets will connect to local and regional routes to provide door-to-door access for cycling.


Cycleways should be supported by facilities such as bike racks or bike lockers at shopping centres, workplaces and transport interchanges. An example is the bike facilities near Caringbah Station. Increased provision of end-of-trip facilities such as lockers, showers/change rooms at workplaces also support cycling.

For neighbourhoods that are further afield, or where the topography does not support walking or cycling, locally appropriate public transport links such as smaller buses will reduce car use for the first and final legs of the commute, encouraging an overall shift towards public transport.

On-demand shuttle bus services are being trialled in parts of the District from late 2017. Commuters can book a service to provide connection in:

- Bankstown – a service will run from Bankstown CBD to Bankstown-Lidcombe Hospital
- Sutherland Shire – services will be available for commuters from Jannali West, Sylvania, Caringbah and Gympie to local shops and transport hubs.

 Actions	Responsibility
48. Prioritise: <ol style="list-style-type: none"> 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 10 kilometres of the Harbour CBD. 	Councils, other planning authorities and State agencies
49. Integrate land use and transport plans to deliver the 30-minute city.	Councils, other planning authorities and State agencies
50. Investigate, plan and protect future transport and infrastructure corridors.	Councils, other planning authorities and State agencies
51. Support innovative approaches to the operation of business, educational and institutional establishments to improve the performance of the transport network.	Councils, other planning authorities and State agencies
52. Manage the interfaces of industrial areas, trade gateways and intermodal facilities by: <p>Land use activities</p> <ol style="list-style-type: none"> providing buffer areas to nearby activities, such as residential uses, that are sensitive to emissions from 24-hour port and freight functions 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 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. <p>Transport operations</p> <ol style="list-style-type: none"> providing the required commercial and passenger vehicle, and freight and passenger rail access. 	Councils, other planning authorities, State agencies and State-owned corporations

 Actions	Responsibility
53. Optimise the efficiency and effectiveness of the freight handling and logistics network by: <ul style="list-style-type: none"> a. protecting current and future freight corridors b. balancing the need to minimise negative impacts of freight movements on urban amenity with the need to support efficient freight movements and deliveries c. identifying and protecting key freight routes d. limiting incompatible uses in areas expected to have intense freight activity. 	Councils, other planning authorities, State agencies and State-owned corporations
54. Investigate and plan for the land use implications of potential long-term transport connections.	Councils and other planning authorities, State agencies and State-owned corporations
55. Plan for urban development, new centres, better places and employment uses that are integrated with, and optimise opportunities of, the public value and use of Sydney Metro and other city shaping projects.	Councils, other planning authorities and State agencies
56. Protect transport corridors as appropriate, including the F6 extension.	Councils, other planning authorities and State agencies



5

Sustainability

Improving sustainability will involve: incorporating natural landscape features into the urban environment; protecting and managing natural systems; cooling the urban environment; innovative and efficient use and re-use of energy, water and waste resources; and building the resilience of communities to natural and urban hazards, shocks and stresses.

All aspects of sustainability rely on maintaining and managing 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.

The South District has a vast diversity of landscapes, from bushland, national parks and reserves, coastal headlands and escarpments, coastal sand dunes systems, ocean beaches, estuaries, wetlands and waterways. The Royal National Park, proclaimed in 1879, is the second oldest national park in the world. Urban neighbourhoods are nestled between river valleys, on the sandstone Woronora Plateau and areas of the low-lying Cumberland Plain.

The Greater Sydney Green Grid will provide cool, green links throughout the District - the regional network of high quality green spaces that supports walking, cycling and community access to open spaces – and with urban tree canopy lining streets and neighbourhoods.

Improving the health of the South District's coast and waterways will provide habitat for aquatic ecosystems and help cool the urban environment. The Cooks River, Georges River, Botany Bay, Port Hacking and the coastline form the District's eastern edge and help define its identity. They are important for swimming, boating and other forms of recreation.

The District's rural areas include mineral resources which supply construction materials as well as bushland which can provide habitat for local wildlife and offset sites for biodiversity.

Its climate and natural landscape can create natural hazards such as bushfire, flooding, storms, coastal inundation and erosion and heatwaves. Natural and urban hazards will be exacerbated by climate change. Supporting actions that mitigate climate change and actions that assist communities to adapt to the impacts of climate change will be important.

For the South District an integrated approach to improving sustainability can be achieved by the following Planning Priorities:

- Protecting and improving the health and enjoyment of the District's waterways
- Protecting and enhancing bushland, biodiversity and scenic and cultural landscapes and better managing rural areas
- Increasing the urban tree canopy cover and delivering Green Grid connections
- Delivering high quality open space
- Reducing carbon emissions and managing energy, water and waste efficiently
- Adapting to the impacts of urban and natural hazards and climate change.

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.



Planning Priority S13

Protecting and improving the health and enjoyment of the District's waterways

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 25: The coast and waterways are protected and healthier** and the corresponding strategies.

The South District's coast and waterways shape its landscape and character. They are natural assets, cultural resources and recreational destinations. As the District grows, greater housing density around waterways, and more people looking to use waterways for recreation, will mean that these assets will need to be carefully managed so they continue to support a wide range of activities.

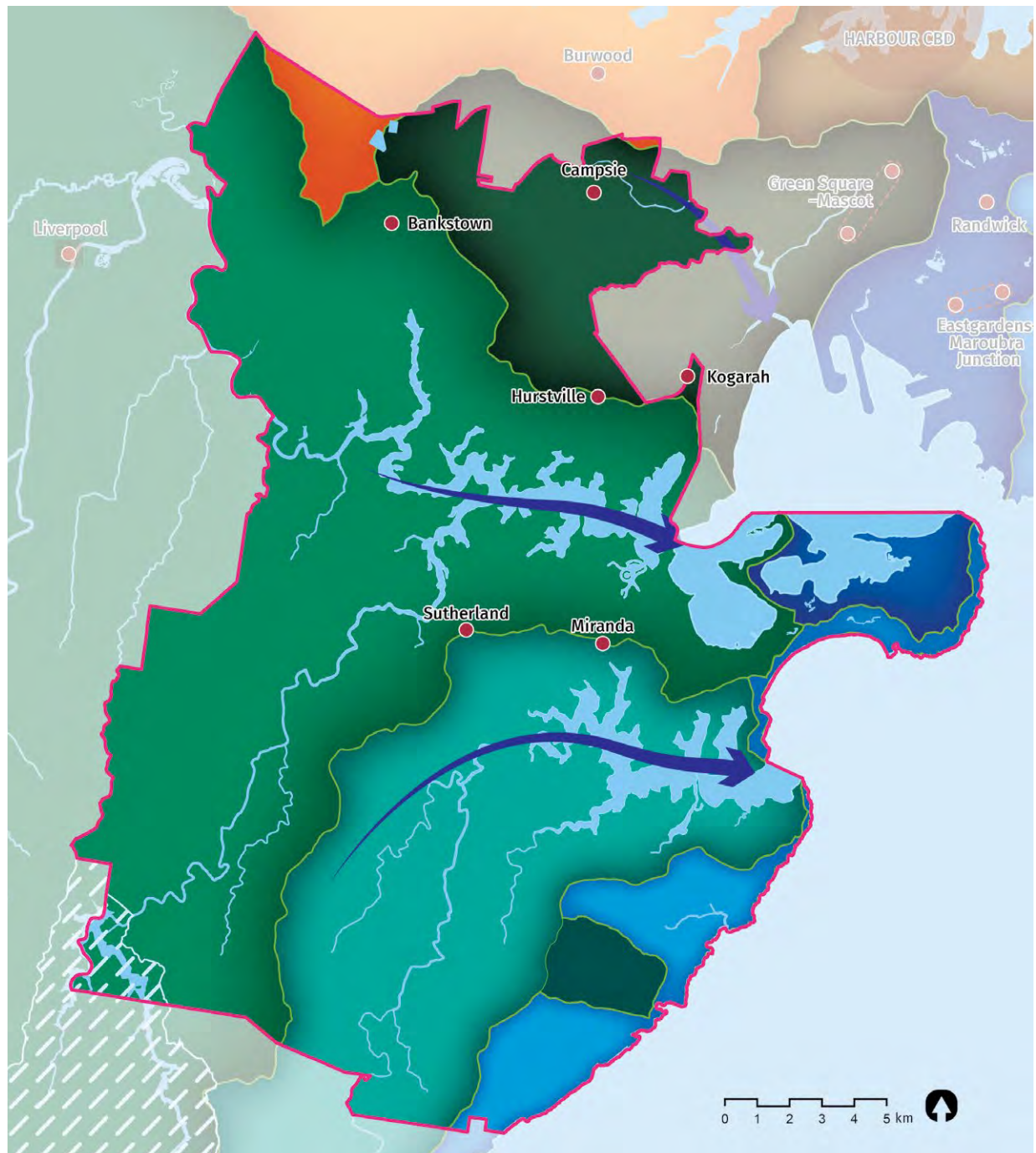
The waterways and rivers of the South District are part of an overall natural system and contribute to the 'green infrastructure' that cools and greens the District. The District's waterways support coastal, marine and groundwater dependent ecosystems, which benefit from continuing protection and management. They support threatened ecological communities and accommodate the disposal of stormwater and wastewater. The District's catchments and waterways are shown on Figure 22.

The District's coastline includes popular beaches, some of which are protected within national parks. Its aquatic reserves at Boat Harbour, Towra Point and Shiprock have been created to protect fish, aquatic animals and marine vegetation. The Ramsar-listed Towra Point Nature Reserve is critical for migratory shorebirds protected by international migratory bird conservation agreements, providing roosting habitat and feeding grounds to replenish reserves before the birds migrate to the northern hemisphere.

The District's waterways and coastline also offer great views, access to peace and quiet, open space and wildlife as well as opportunities for boating, swimming, walking and cycling. They tell the story of Aboriginal and European history, and are used for the arts, family visits and sports. They have an economic value in tourism and maritime-related industry and activities at Taren Point.



Figure 22: South District catchments and waterways



● Strategic Centre	● Georges River Basin	● Wattamolla Creek Basin
— District Boundary	● Cooks River Basin	● Coastal Catchment
➡ River Flow Direction	● Botany Bay Basin	● Waterway
▨ Sydney Drinking Water Catchment	● Port Hacking Basin	

Botany Bay, Port Hacking, the Georges River, the Woronora River and the Cooks River form part of the structuring elements of the Greater Sydney Green Grid. Waterway corridors such as the Cooks River and Salt Pan Creek provide local parks and native vegetation close to urban areas in the District's north.

A legacy of historical land uses, contaminated land, aged infrastructure and the pattern of urban development have impacted some of the District's waterways. Other waterways, such as the Georges River at Oatley Bay Baths are in better health, provide habitat, are accessible and a popular setting for swimming.

Urban development, the clearing of vegetation and more impermeable surfaces have resulted in elevated run-off, reduced water quality and loss of habitat. Urban stormwater carries litter and contaminants into the District's waterways. The District's waterways often flow through more than one local government area and are managed by a number of agencies and stakeholders, so water quality and waterway health is best managed at a catchment and sub-catchment level.

Growth and new investment provide an opportunity to improve the necessary health and quality of the District's waterways, foreshores and riparian corridors, through improving public access to, and along, the foreshores; providing connected green space around the foreshores; conserving cultural heritage; protecting flora and fauna, and urban bushland; and recovering and reinstating more natural conditions in highly modified waterways. Enhancing community access to the coast and waterways within the District should be prioritised. This includes access for pedestrians as well as boats and other watercraft. The delivery of the Greater Sydney Green Grid will enhance connections to Georges River and other waterways. Further information on delivering the Green Grid is outlined in Planning Priority S15.

There is legislation, as well as policies and plans, already in place to improve the health of waterways and to manage water resources. For example, the *Coastal Management Act 2016* integrates coastal management and land use planning and the *Fisheries Management Act 1994* protects aquatic biodiversity. State agencies and councils also manage the health of waterways through planning and development decisions, environmental programs and through the management of public land.

Growth and new investment provide an opportunity to improve the necessary health and quality of the District's waterways, foreshores and riparian corridors.

The *2017 Metropolitan Water Plan* is the NSW Government's plan to ensure there is sufficient water to meet the needs of the people and environment of the Greater Sydney region, now and for the future. It established the WaterSmart Cities program, which will explore new ways to supply drinking water, and manage stormwater and wastewater in a more integrated, cost-effective and sustainable way.

The Marine Estate Management Authority is preparing a Marine Estate Management Strategy which will support a clean healthy and productive marine environment.

Local land-use planning controls also protect environmentally sensitive coastlines, waterways and foreshores, and the health of catchments above these waterways.

Protecting and improving the environmental health of the District's waterways safeguards the health of the coast and ocean. An integrated approach to the protection and management of waterways will also rely on more comprehensive approaches to the monitoring and reporting of water quality and waterway health. Councils monitor water quality and waterway health, implement sustainable urban water management approaches and encourage water sensitive urban design.

The draft District Plan aims to integrate the objectives for waterways that are set out in legislation, policies and plans, by prioritising the management of waterways as green infrastructure. This involves:

- reconceptualising waterways as an infrastructure asset that can provide environmental, social and economic benefits to communities
- integrating approaches to protecting environmentally sensitive waterways within a larger network of green infrastructure
- addressing the cumulative impacts of development and land management decisions across catchments in a way that improves water quality and waterway health.

Collaboration and coordination across levels of government and with the community is needed to deliver the green space, urban cooling and integrated water management outcomes needed to support the South District.

Future work will apply the lessons from previous management of the District's rivers, notably the Georges River Combined Councils' Committee, which facilitates a coordinated approach to the management of the Georges River.

Catchment-scale management and coordination can:

- solve multiple problems – for example, catchment condition and water scarcity, or addressing water quality impacts on aquifers, estuaries and the marine estate
- set objectives for the District's waterways and enable them to be achieved in innovative and cost-effective ways
- enable both public and private benefits to be achieved – for example, stormwater from private land could provide a benefit to public management of green space and urban waterways.

Strategic planning needs to manage the cumulative impact of activities and associated infrastructure such as moorings, marinas and boat launching facilities while ensuring public access to the waterways and opportunities for swimming, and small boat and kayak launching from publicly-owned land.

Useful link:

- *Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions, 2017*

 Actions	Responsibility
57. Protect environmentally sensitive coastal areas and waterways.	Councils, other planning authorities, State agencies and State-owned corporations
58. Enhance sustainability and liveability by improving and managing access to waterways, foreshores and the coast for recreation, tourism, cultural events and water-based transport.	Councils, other planning authorities, State agencies and State-owned corporations
59. Improve the health of catchments and waterways through a risk-based approach to managing the cumulative impact of development including coordinated monitoring of outcomes.	Councils, other planning authorities, State agencies and State-owned corporations
60. Reinstate more natural conditions in highly modified urban waterways.	Councils, other planning authorities, State agencies and State-owned corporations

Planning Priority S14

Protecting and enhancing bushland, biodiversity and scenic and cultural landscapes and better managing rural areas

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 27: Biodiversity is protected, urban bushland and remnant vegetation is enhanced;** **Objective 28: Scenic and cultural landscapes are protected** and **Objective 29: Environmental, social and economic values in rural areas are maintained and enhanced** and the corresponding strategies.

Bushland areas protected in national parks and reserves support the District's significant biodiversity, while bushland and remnant vegetation throughout the District's urban and rural areas also provide habitat, help cool the environment and support cleaner waterways and air.

Objective 27 in the draft *Greater Sydney Region Plan* outlines how the NSW Government seeks to protect and manage biodiversity values across Greater Sydney, from national and state conservation legislation to information such as biodiversity mapping. This Planning Priority reinforces the importance of Objective 27 and provides a context to District issues.

The scenic and cultural landscapes of the South District contribute to the identity and international profile of Greater Sydney. Scenic and cultural landscapes encourage an appreciation of the natural environment, protect heritage and culture, and create economic opportunities, particularly for recreation and tourism. Aboriginal culture is deeply entwined in the landscapes of Greater Sydney.

The South District's rural areas contribute to habitat and biodiversity, provide mineral and energy resources, and sustain the local rural villages. They are part of the larger Metropolitan Rural Area.

Bushland and biodiversity

Bushland makes up almost 37 per cent of the South District. Much of the District's bushland is recognised for its environmental value and located within the Protected Natural Area (the major landscape area in the southern parts of the district, including the Royal National Park, Heathcote

National Park and Holsworthy Defence Lands). Large areas of urban bushland follow the creek system and steep sandstone valleys, providing a bushland network close to homes in areas such as Illawong, Bangor and Woronora Heights. Figure 23 shows the extent of the District's Protected Natural Area.

The District is part of one of the most species-diverse bioregions in Australia. It contains at least 21 threatened ecological communities and several endangered vegetation communities, many of which are located in bushland areas.

Many areas of urban bushland are on public land managed as green infrastructure by councils, while some urban bushland is found on privately owned land.

These areas of urban bushland, close to some of the District's most densely populated areas, support opportunities for nature-based recreation and enhance liveability. Areas of bushland at the edges of urban neighbourhoods will need to be managed and enhanced to reduce impacts from urban areas, such as pollution and nutrients from stormwater, weeds and litter.

A strategic approach to protecting the biodiversity in the South District involves investing in connected bushland corridors and protecting larger pockets of remnant vegetation, as large and connected areas of bushland give the District's wildlife the greatest chance of survival. This strategic approach complements the delivery of the Greater Sydney Green Grid.

Strengthening the protection of bushland in urban areas will help to conserve the District's biodiversity, preserve its scenic landscape, and

enhance its tourist and recreational values. Remnant vegetation should be recognised as an asset that can be incorporated into the planning and design of neighbourhoods, for example in parks, school grounds and as street trees.

The *Biodiversity Conservation Act 2016* provides a framework and tools to avoid, minimise and offset impacts on biodiversity through the planning and development assessment process.

Scenic and cultural landscapes

Scenic and cultural landscapes can complement green infrastructure, particularly where scenic landscapes include waterways and urban bushland. Scenic and cultural landscapes can often be prone to natural hazards, for example escarpments, which can be prone to land slip and erosion.

The coastline and waterways are significant elements of the District's scenic and cultural landscapes (refer to Planning Priority S13). Bushland is also an important part of the District's scenic landscape.

Bushland creates places that provide a sense of identity, culture, and creates opportunities for tourism and recreation. The bushland ridgelines are highly valued elements of the scenic and cultural landscape of the South District. The scenic qualities of the ridgelines, as well as views to these landscape elements should be protected and maintained. For the South District, strategic planning should focus on opportunities to identify and protect important bushland vistas, scenic views, hills, ridgelines and valleys.

Continued protection of the South District's scenic and cultural landscapes is important for the sustainability, liveability and productivity of the District. It can complement the protection of biodiversity and habitat, help manage natural hazards and support tourism. Protecting scenic and cultural landscapes can also help preserve links to Aboriginal cultural heritage.

Rural areas

The South District's rural areas include the Gandangara Aboriginal Land Council land at West Menai, which is predominately bushland, and the villages of Bundeena, Maianbar and Waterfall which adjoin national parks. Figure 23 shows the extent of the District's rural areas.

The District's rural areas provide opportunities for people to live in a bushland setting. Urban development is not consistent with the values of the Metropolitan Rural Area. The draft *Greater Sydney Region Plan* takes a strategic approach to managing Greater Sydney's needs for new land release areas. Therefore, urban development in the Metropolitan Rural Area will only be considered in the investigation areas identified in the draft *Greater Sydney Region Plan*. There are no investigation areas in the South District.

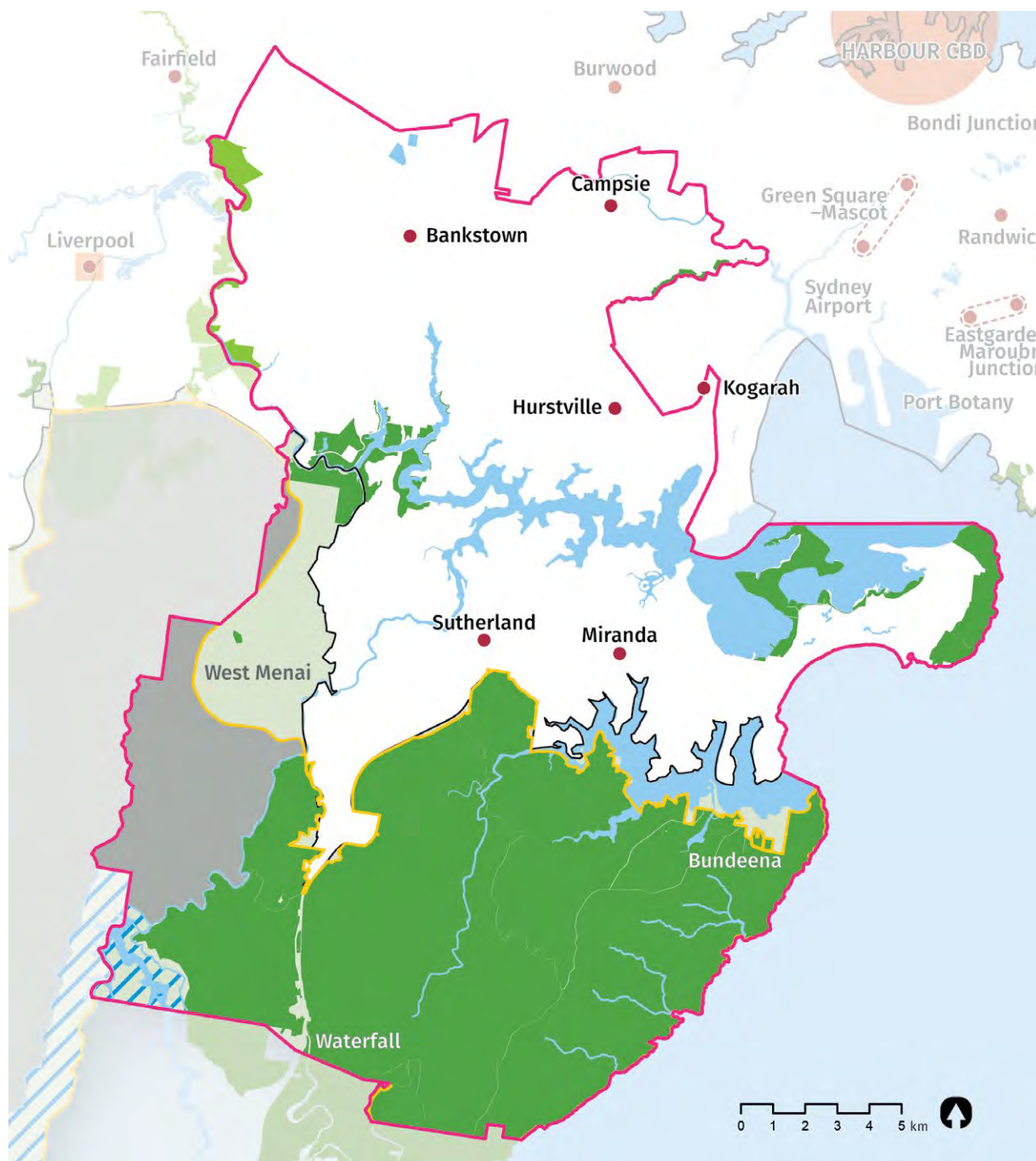
Design-led place-based planning in the Metropolitan Rural Area will help manage its environmental, social and economic values, maximise the productive use of land, and incentivise biodiversity protection for remnant vegetation. Increased demand for biodiversity offset sites and limiting urban development in the Metropolitan Rural Area will help make it more attractive for landowners to protect biodiversity on private land through stewardship agreements.

In some circumstances, careful planning of rural residential development can provide the necessary incentive to enable greater investment in the management of bushland, waterways and scenic landscapes, using effective buffers around rural industries.

Useful link:


- Cumberland Subregion Biodiversity Investment Opportunities Map (BIO Map)

Figure 23: Protected Natural Area and Metropolitan Rural Area



District Boundary	Metropolitan Rural Area	National Parks and Reserves
Strategic Centre	Urban Area	Water Catchment – No Entry
Waterways	Protected Natural Area	Holsworthy Military Reserve



 Actions	Responsibility
61. Protect and enhance biodiversity by: <ul style="list-style-type: none"> a. supporting landscape-scale biodiversity conservation and the restoration of bushland corridors b. managing urban bushland and remnant vegetation as green infrastructure. 	Councils, other planning authorities, and State agencies
62. Identify and protect scenic and cultural landscapes.	Councils, other planning authorities, and State agencies
63. Enhance and protect views of scenic and cultural landscapes from the public realm.	Councils, other planning authorities, and State agencies
64. Maintain or enhance the values of the Metropolitan Rural Area using place-based planning to deliver targeted environmental, social and economic outcomes, including rural residential development.	Councils and other planning authorities
65. Limit urban development to within the Urban Area.	Councils, other planning authorities, State agencies and State-owned corporations

Planning Priority S15

Increasing urban tree canopy cover and delivering Green Grid connections

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 28: Scenic and cultural landscapes are protected**, **Objective 30: Urban tree canopy cover is increased** and **Objective 32: The Green Grid links parks, open spaces, bushland and walking and cycling paths** and the corresponding strategies.

The Greater Sydney Green Grid is a long-term vision for a network of high quality green spaces that connects communities to the natural landscape. It links tree-lined streets, waterways, bushland corridors, parks and open spaces with town centres, public transport and public places. The Greater Sydney Green Grid builds on the District's established open space, the *Regional Tracks and Trails Framework* and the emerging Principal Bicycle Network.

Tree-lined streets, urban bushland and tree cover on private land form a component of the urban tree canopy. The urban tree canopy is a form of green infrastructure that mitigates the urban heat island effect, with a 10 per cent increase in tree canopy cover reducing the land surface temperature by 1.13 degrees Celsius. The urban tree canopy also supports cleaner air quality and water and provides local habitat. Trees remove fine particles from the air and help insulate against urban noise pollution. This is particularly important along busy road corridors where air quality can be improved. The urban tree canopy can also help make communities more resilient, by reducing the impact of heat waves and extreme heat.

The urban tree canopy

The South District benefits from bushland and national parks, and trees in parks and public spaces, along streets, and in the front and backyards of privately-owned land, creating a distinct tree canopy. These native and exotic trees provide an average of 26 per cent tree canopy cover in the urban area. Some areas in the south of the District such as Loftus and Padstow Heights have more than 50 per cent cover. Figure 28 shows tree canopy cover in the urban area in 2011.

Sutherland Shire Council has initiated a Green Streets program of street tree planting, with more than 5,000 trees planted since 2013, along with native grasses in road reserves and on other public land.

Along many busy roads, where there is limited space to plant trees, there may be opportunities to plant other forms of green ground cover, such as garden beds and hedges that can help improve air quality.

Trees are valued by residents and contribute to the streetscapes, character and amenity of the District. As the District continues to grow and change, the urban tree canopy will come under pressure. This means that the urban tree canopy will become even more important for supporting sustainable and liveable neighbourhoods.

The tree canopy may be formed by a mix of native and exotic, deciduous or evergreen trees, which provide shade in summer while allowing sunlight into homes and onto roofs for solar power, particularly in winter.

Therefore, urban renewal and transformation projects will be critical to increasing urban tree canopy cover. This can be complemented by other

green cover, including rain gardens, green roofs and green walls. Green cover can help slow and store stormwater and improve water quality, filtering pollution before it reaches the District's waterways

Extending the urban tree canopy in public and private areas requires the resolution of issues such as the design of road space, competition with above and below ground infrastructure and the need to protect access to sunlight for homes and solar energy panels.

The District's councils generally provide guidance on enhancing tree canopy and tree cover in the urban environment, and information on street trees. Some encourage permeable surfaces to allow rainwater to soak into the ground and reduce stormwater run-off, which supports the growth of canopy trees and vegetation, and reduces pollution, flooding and urban heat. Where trees are lost as a result of development, some councils have developed programs to plant replacement trees in the public realm.

The NSW Department of Planning and Environment's *Apartment Design Guide* and the new *Greenfield Housing Code* help guide the requirements for landscape areas that can support the urban tree canopy.

Connecting the Greater Sydney Green Grid

Enhancing the amenity and activity within, and accessibility to, the Greater Sydney Green Grid will promote a healthier urban environment, improve community access to recreation and exercise, encourage social interaction, support walking and cycling connections and improve resilience.

The draft *Greater Sydney Region Plan* describes how the Greater Sydney Green Grid sets a long-term vision for a network of high quality green areas. The long-term vision for the Greater Sydney Green Grid in the South District is shown on Figure 24.

This vision will be delivered incrementally over decades, as opportunities arise and detailed plans for connections are refined. Green Grid Priority Projects have been selected to provide district-scale connections that link open space, waterways and bushland. Table 4 lists Green Grid Priority Projects for the District.

Councils will lead delivery of the Greater Sydney Green Grid through land use planning and infrastructure investment mechanisms such as development and land use controls, agreements for dual use of open space and recreational facilities, direct investment in open space, and other funding mechanisms such as Section 94 Contributions and Voluntary Planning Agreements.

State regional and district parklands and reserves form a principle element of the Greater Sydney Green Grid for both biodiversity and recreation purposes.

The NSW Government supports the delivery of regional open space and Green Grid connections through the Metropolitan Greenspace Program (which provided \$733,500 to South District councils towards selected projects in 2016–17). The NSW Government also supports delivery of regional open space, using Special Infrastructure Contributions.

Transport for NSW is establishing a Principal Bicycle Network in collaboration with councils. This network will be integrated with Green Grid.

In some areas, rail lines and other linear infrastructure prevent connectivity. Where feasible, planning and investment must consider opportunities for connections across rail lines, roads and other linear infrastructure.

Useful link:

- [NSW Urban Green Cover Technical Guidelines](#)


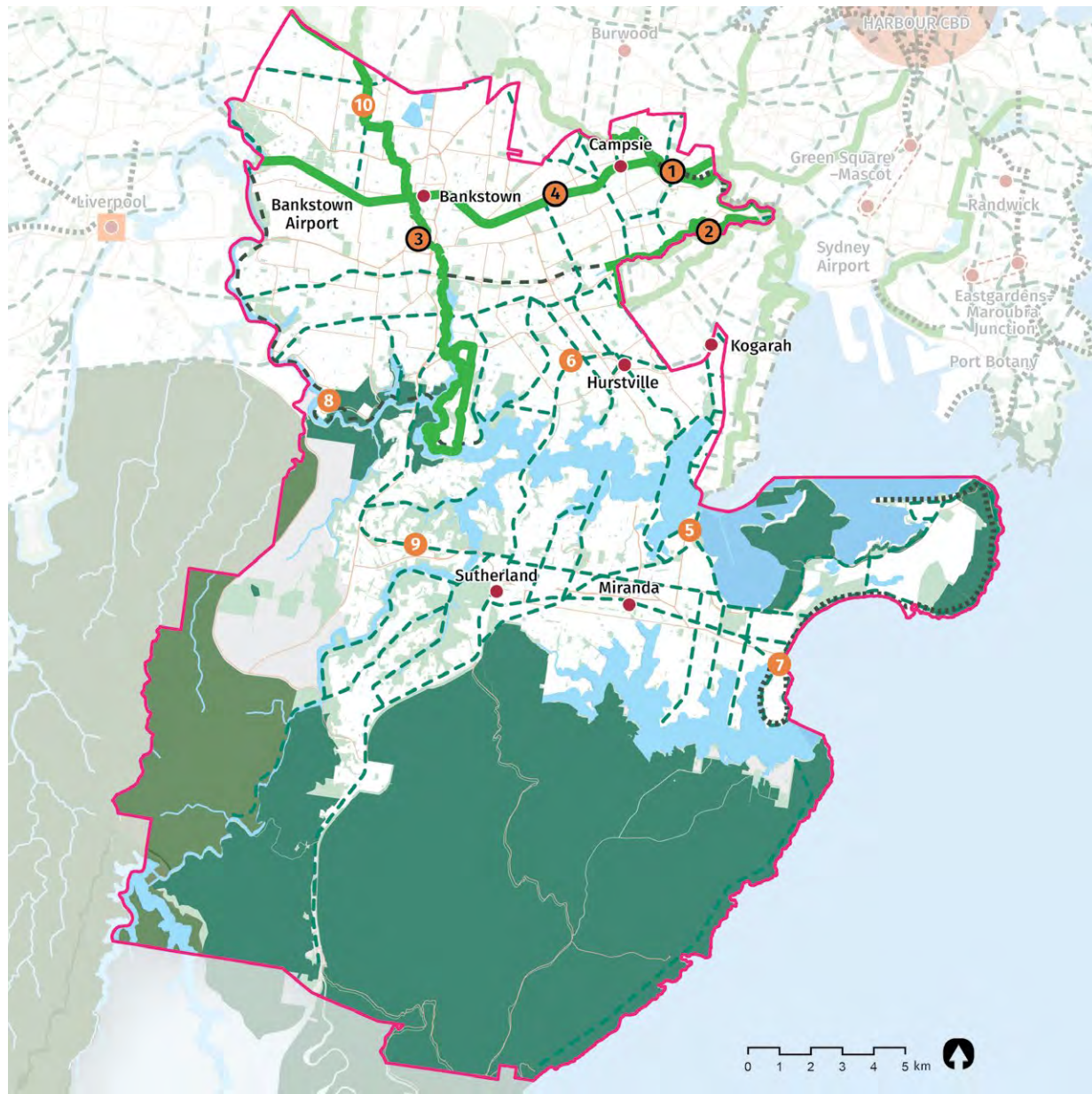
 Actions	Responsibility
66. Expand urban tree canopy in the public realm.	Councils, other planning authorities and State agencies
67. Progressively refine the detailed design and delivery of: <ul style="list-style-type: none"> a. Greater Sydney Green Grid priority opportunities b. connections that form the long-term vision of the network. 	Councils, other planning authorities and State agencies

Table 4: South District Green Grid Priority Projects

Priority Projects	
1	<p>Cooks River Open Space Corridor</p> <p>This regionally-significant parkland corridor in the South and Eastern City Districts will improve water quality and link high-quality open spaces between Strathfield, Sydney Olympic Park, Campsie, Canterbury, Dulwich Hill, Marrickville and Wolli Creek. This is a priority project for both the South and Eastern City Districts, and forms part of the Principal Bicycle Network.</p>
2	<p>Wolli Creek Regional Park and Bardwell Valley Parkland</p> <p>This project on the boundary of the South and Eastern City Districts and will provide open space for recreation, walking and cycling trails, connected areas of ecologically significant vegetation and improved water quality and stormwater management. It will connect to other Green Grid projects, forms part of the Principal Bicycle Network and is a priority Green Grid project for both Districts.</p>
3	<p>Salt Pan Creek Open Space Corridor</p> <p>The corridor contains important ecological communities, mangroves, wetlands, recreational facilities and walking and cycling trails on both sides of the creek, which form part of the Principal Bicycle Network. The project will strengthen the connection between Bankstown and Salt Pan Creek, improve trails and recreational opportunities, and improve bridge crossings and connections to Bankstown, Punchbowl, Riverwood, Padstow, Peakhurst and Lugarno.</p> <p>The Stage 1 Detailed Design works for Salt Pan Creek Reserve II received \$171,500 under the 2017/2018 Metropolitan Greenspace Program. The design works will deliver a reserve as a regional park, with recreation activities including a new shared pathway system to connect the reserve to the existing Salt Pan Creek trails network.</p>
4	<p>Bankstown to Sydenham Open Space Corridor</p> <p>This project will transform surplus rail easement land and wide local streets that run parallel to the rail line into an active walking, cycling and open space corridor connecting Cooks River, Wolli Creek Regional Park, The Greenway and Salt Pan Creek Open Space Corridor as well as the wider open space network. The cycle path will form part of the Principal Bicycle Network</p>
Other important projects to deliver Sydney's Green Grid in the South District are	
5	<p>The Coastal Walk: Botany Bay Foreshores</p> <p>This will link Taren Point Bridge and Shell Point to an open space corridor across Taren Point Bridge and onward to the eastern and northern shores of Botany Bay. The cycle path will form part of the Principal Bicycle Network</p>
6	<p>Illawarra Rail Line Corridor: Kogarah to Sutherland</p> <p>The corridor will integrate walking and cycling paths with open spaces, green urban areas and stormwater treatment along the surplus rail easement lands, and parallel local streets and centres along the rail line including Kogarah, Hurstville and Sutherland. This project is part of the Principal Bicycle Network</p>
7	<p>The Coastal Walk: Kurnell to the Royal National Park</p> <p>This includes a cluster of projects to connect Kamay Botany Bay National Park and Bonna Point Reserve to Cronulla. The Boat Harbour site and the beach to the south west are important missing links in the coastal walk from Kurnell to Cronulla</p>
8	<p>Georges River Parklands</p> <p>The project will connect the Parklands to protect and enhance threatened ecological communities, improve water quality and stormwater treatment, improve access to the river and parklands and create a continuous walking and cycling trail.</p> <p>The Gannon's Park Water Quality Improvement and Renaturalisation Stage 2 received \$562,000 under the 2017/2018 Metropolitan Greenspace Program to reinstate the natural line of Upper Boggywell Creek in Gannon's Park, with wetlands, bioretention systems and storage ponds, and a new 138 metre boardwalk to improve public access</p>
9	<p>The Great Kia'Mia Way River Foreshores Walk</p> <p>This will create linked foreshore access from Menai and Woronora to the Georges River along Still Creek, Woronora River and Mill Creek and form part of the Principal Bicycle Network</p>
10	<p>Duck River Open Space Corridor</p> <p>The project will establish the Duck River Open Space corridor as a regional open space with improved recreational space, habitat for ecological communities and better treatment of stormwater. It will create a continuous walking and cycling link north-south between Parramatta, Camellia, Granville, Auburn, Regents Park and south to Bankstown, forming part of the Principal Bicycle Network. The corridor will complement the Salt Pan Creek Corridor to form a combined connection from the Georges River to Parramatta River. This is a priority project for the Central City District.</p>

Figure 24: South District Green Grid opportunities



	District Boundary	1	Projects Important to District		Road
1	Metropolitan City Centre		Existing Tracks and Trails		Protected Natural Area
1	Metropolitan City Cluster		Green Grid Priority Corridor		National Parks and Reserves
1	Strategic Centre		Future Green Grid Opportunities		Public Open Space
	Metropolitan Rural Area		Motorway		Waterways
1	Priority Corridors		Highway		

Source: Greater Sydney Commission, 2017, adapted from Sydney Green Grid, published report prepared by Tyrrell Studio and Office of the Government Architect for the Greater Sydney Commission.

Planning Priority S16

Delivering high quality open space

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 31: Public open space is accessible, protected and enhanced** and the corresponding strategy and action.

Public open space is a form of green infrastructure that enhances the character of the South District's neighbourhoods, supports healthy and active lifestyles, and brings communities together. As the district grows, providing for and developing innovative ways to optimise open space areas for recreation, sport and social activity, as well as establishing physical links that support social networks and create a sense of community, will become increasingly important.

The key considerations for planning open space are quality, quantity and distribution. The Greater Sydney Green Grid will help improve access and distribution. There will be relatively few opportunities to increase the quantity of public open space, and therefore greater emphasis will be needed

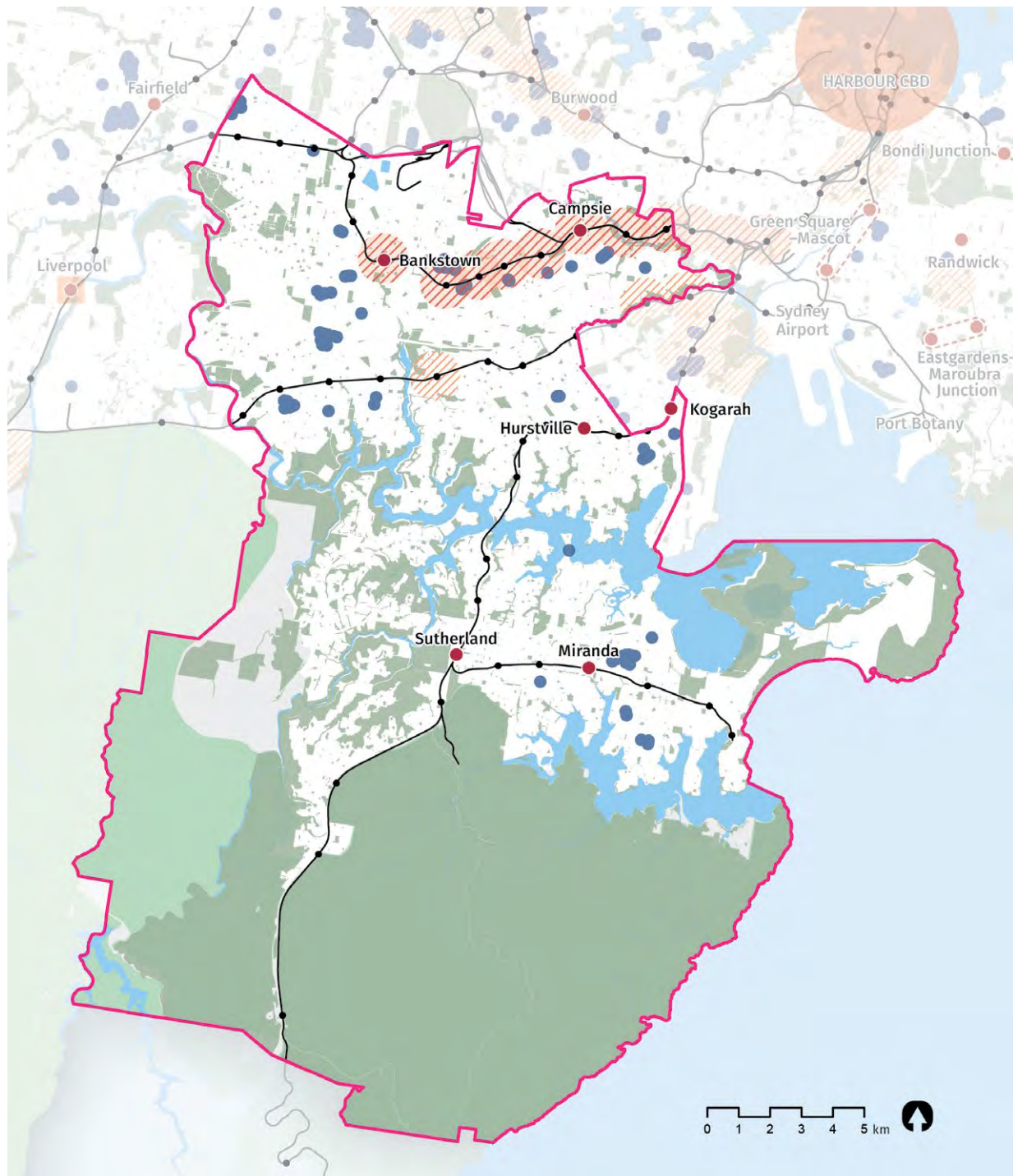
on improving the quality and distribution of open space including sporting facilities.

Councils already identify innovative solutions for the shortfall in active open space, including making better use of existing sportsgrounds, converting existing open space into sports fields, and partnering with schools to share spaces outside school hours.

People in urban neighbourhoods should be able to walk to local open space. In high density neighbourhoods, public open space is used like a shared backyard, providing a green communal living space. Open space in high density neighbourhoods needs to be durable, multi-purpose and accessible to a wide variety of users. High density neighbourhoods also need to have high quality open space within close proximity.



Figure 25: South District access to open space



— District Boundary	 Transit Oriented Development	 Existing Open Space
● Strategic Centre	—●— Train Station	 Metropolitan Rural Area
 Infill Priority Precinct / Urban Renewal Corridor	 Residential Areas >400m to open space	 Protected Natural Area

In local and strategic centres and Priority Precincts, local open space is important to provide places for workers to relax and for people to meet and socialise. It also provides for tree and vegetation planting in the centre. Place-based planning can identify opportunities to improve the quality, management and use of existing open space, and to provide new open space.

While 42 per cent of the South District is open space, most of this (87 per cent) is protected national parks and reserves and large areas of urban bushland. Local parks, open spaces and pockets of native vegetation comprise the remaining 13 per cent and provide local access to the Greater Sydney Green Grid.²⁶ The District's beaches, estuaries and waterways are part of the District's open space.

Almost 98 per cent of the District's residents live within 400 metres of open space²⁷ (refer to Figure 25). For residents of high density dwellings, access to local open space within 200 metres is poor in the areas along Canterbury Road and the T3 Bankstown Line, particularly between Campsie and Wiley Park.

Open space for formal outdoor sport use makes up only four per cent of the local open space in the District.²⁸ The District is characterised by high levels of participation in active sports, which results in considerable wear and tear on playing fields and places demands on local government to maintain these facilities for year-round use.


Additional open space areas, and sports and recreation facilities and innovative use of existing ones will be needed to accommodate the needs of the growing population, especially in areas where residential density is increasing and there is limited scope to provide additional capacity. These include the Sydenham to Bankstown Urban Renewal Corridor and along Canterbury Road. Urban renewal and infrastructure programs should result in a net increase in open space.

The District's Greater Sydney Green Grid projects will improve regional-scale open spaces and walking and cycling links.

Delivering connectivity of walking and cycling trails is an important objective to maximise their utility.

The future of some larger spaces used for activities such as golf and horseracing may be uncertain due to declining membership and attendance figures. Any land or facilities in public ownership should be retained as open space and transition to shared open space and facilities, including for organised sports. For land in private ownership, there may be opportunities for part of the land to be repurposed or set aside for open or shared spaces.

The Government Architect's Office is developing an open space toolkit, a resource for councils to use for open space planning.

 Actions	Responsibility
<p>68. Maximise the use of existing open space and protect, enhance and expand public open space by:</p> <ul style="list-style-type: none"> a. 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 b. 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 c. requiring large urban renewal initiatives to demonstrate how access to high-quality and diverse local open space is maintained or improved d. planning new neighbourhoods with a sufficient quantity of new open space e. delivering shared and co-located sports and recreational facilities, including shared school grounds and repurposed golf courses f. delivering on, or complementing, the Greater Sydney Green Grid. 	<p>Councils, other planning authorities, State agencies and State-owned corporations</p>

Planning Priority S17

Reducing carbon emissions and managing energy, water and waste efficiently

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 33: A low carbon city contributes to net-zero emissions by 2050 and mitigates climate change;** **Objective 34: Energy and water flows are captured, used and re-used;** and **Objective 35: More waste is re-used and recycled to support the development of a circular economy** and the corresponding strategies.

The significant growth and development planned for the South District will mean that demand for energy and water and the generation of waste will increase. Without new approaches to the use of energy and water and management of waste, greenhouse gas emissions are likely to increase.

The District has an opportunity to include precinct-wide energy, water and waste efficiency systems for land release, urban renewal, industrial and urban services land, centres and Collaboration Areas. Adopting a place-based approach is necessary to achieve the best sustainability outcomes, including renewing and replacing inefficient infrastructure and organising utilities, car parking, amenities, open space, urban green cover and public spaces.

Better design of precinct-wide energy, water and waste systems will encourage a circular economy that improves efficiency. A circular economy means designing waste out of the system. For example, a food manufacturing plant could send waste to an adjacent organic waste-to-energy facility.

A low-carbon District

More efficient use of energy and water in the District will reduce impacts on the environment and the District's greenhouse gas emissions.

The Commission has been seeking to better understand greenhouse gas emissions for each District across Greater Sydney and will continue to explore opportunities for planning initiatives to support the NSW Government's goal of achieving a pathway towards net-zero emissions by 2050.

Potential pathways towards net-zero emissions in the District include:

- new public transport infrastructure, electric vehicles and autonomous vehicles to connect residents to their nearest strategic centre or metropolitan centre within 30 minutes
- new building standards and retrofits to design energy, water and waste systems to operate as efficiently as possible (for residential and non-residential buildings)
- building and precinct-scale renewables
- waste diversion from landfill.

How Greater Sydney's urban structure and built form develops in future can support NSW's transition towards net-zero emissions. More closely integrating land use with transport planning will help slow emissions growth by locating new homes near public transport and high-quality walkways and cycle paths.

Building on existing public transport connections with electric vehicle transport hubs, shared autonomous vehicles and other innovative transport technologies can further reduce greenhouse emissions, and reduce levels of noise and air pollution. Emerging transport technologies will reduce the need for parking spaces and help reduce congestion.

Designing high efficiency buildings and incorporating renewables will reduce emissions and reduce costs. This means improving the energy and water efficiency of buildings, and reducing waste in urban renewal projects and infrastructure projects.

Recycling local water and harvesting stormwater creates opportunities for greening public open spaces including parks, ovals and school playgrounds. Recycling water diversifies the sources of water to meet demands for drinking, irrigating open spaces, keeping waterways clean and contributing to Greater Sydney's water quality objectives.

Recycling and reducing waste

In coming years, several large landfills in Greater Sydney will close as they reach capacity, meaning waste will have to be transported outside of the region or new facilities developed. This limits economic and transport efficiency, and increases costs. Additional sites for waste management in Greater Sydney would improve efficiencies in managing waste.

Waste is managed through a number of facilities in the South District. Lucas Heights Resource Recovery Park is the largest waste receiving facility in the District. Organic waste is diverted through the Garden Organics Processing Facility, producing compost and mulch products for landscaping and horticultural use. The Lucas Heights smart cell facility breaks down organic waste to produce electricity. The Resource Recovery Centre and Waste Collection Point is a separate collection point for recyclable materials, scrap metals, hazardous items, old clothing and household rubble. There is a waste and recycling centre at Taren Point for dropping off recyclable and non-recyclable items. Chullora Resource Recovery Park is a transfer station for general household waste as well as processing garden organics before transfer to other facilities for composting. Some waste disposed in South District is trucked to landfills outside the District, including interstate.




The planning and design of new developments should support the sustainable and effective collection and management of waste. The Environment Protection Authority has prepared a range of guidelines and other information to assist in the sustainable management of waste.

Separating organics from other forms of waste, and valuing it as a resource which can be processed through a waste-to-energy facility to recover energy, will reduce waste being diverted to landfill. Recovering energy and capturing methane through organic waste to energy also helps to reduce greenhouse gas emissions.

In higher-density neighbourhoods innovative precinct-based waste collection, re-use and recycling would improve efficiency, reduce truck movements and boost the recycling economy. Where possible, additional land should be identified for waste management, reprocessing, re-use and recycling.

Useful links:

- NSW Waste and Resource Recovery Strategy 2014–2021
- Environment Protection Authority Waste Guidelines and Information
- Climate Change Fund Draft Strategic Plan

 Actions	Responsibility
69. 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 Precincts, Collaboration Areas, State Significant Precincts and Urban Transformation projects.	Councils, other planning authorities, State agencies and State-owned corporations
70. Support precinct-based initiatives to increase renewable energy, and energy and water efficiency especially in Priority Precincts, Collaboration Areas and Urban Transformation projects.	Councils, other planning authorities, State agencies and State-owned corporations
71. Protect existing, and identify new, locations for waste recycling and management.	Councils, other planning authorities and State agencies
72. Support innovative solutions to reduce the volume of waste and reduce waste transport requirements.	Councils, other planning authorities and State agencies
73. Encourage the preparation of low-carbon, high efficiency strategies to reduce emissions, optimise the use of water, reduce waste and optimise car parking provision where an increase in total floor area greater than 100,000 square metres is proposed in any contiguous area of 10 or more hectares.	Councils, other planning authorities, State agencies and State-owned corporations
74. Investigate potential regulatory mechanisms such as a Protection of the Environment Policy (PEP) that sets low-carbon, high efficiency targets to be met through increased energy efficiency, water recycling and waste avoidance, reduction or reuse. This could include a framework for the monitoring and verification of performance for precincts in Priority Precincts, Collaboration Areas, urban renewal precincts and housing growth areas that are planned to have an increase in total floor area greater than 100,000 square metres.	Environment Protection Authority

Planning Priority S18

Adapting to the impacts of urban and natural hazards and climate change

In giving effect to the draft *Greater Sydney Region Plan*, this Planning Priority delivers on **Objective 36: People and places adapt to climate change and future shocks and stresses; Objective 37: Exposure to natural and urban hazards is reduced; and Objective 38: Heatwaves and extreme heat are managed** and the corresponding strategies.

The District's climate and natural landscape can create natural hazards such as heatwaves, bushfire, flooding, storms, coastal inundation and erosion. Climate change will exacerbate these natural hazards. While planning for resilience has traditionally focused on responses to natural hazards and climate change, it is increasingly being used to consider a wider range of social and economic shocks and stresses.

Effective planning has a fundamental role in reducing the exposure to natural and urban hazards and building resilience to shocks and stresses. Growth and change needs to be considered at a local level, and when making decisions about growth and considering cumulative impacts at district and regional levels.

Natural and urban hazards

The climate, vegetation, topography and pattern of developments in the District mean that bushfire and flooding will continue to be hazards. Placing developments in hazardous areas or increasing the density of development in areas with limited evacuation options increases risk to people and property.

Parts of the District such as at Taren Point and Kingsgrove are exposed to flooding, whether from major rivers or from local overland flow. This can impact travel and community assets like open space, as well as directly affecting people and property.

Some coastal areas of the District, such as Kurnell, and areas along the Georges River, Port Hacking and Cooks River are at risk of coastal inundation and sea level rise. It will be important to manage community assets and infrastructure at risk, such

as Wills Ground in Earlwood, to continue to support sustainable and resilient communities.

Past and present urban development and activities can also create urban hazards such as noise, air pollution and soil contamination. Compared to many cities around the world, Greater Sydney enjoys excellent air quality, which enhances its reputation as a sustainable and liveable city. However, the combined effect of air circulation patterns in the Sydney Basin, local topography, and proximity to different sources of air pollution such as wood-fire smoke, can lead to localised air quality issues.

Transport movements along major roads and rail corridors generate noise and are a source of air pollution. The degree of noise or air pollution can be related to the volume of traffic and the level of truck and bus movements. The design of new buildings and public open space can play a significant role in reducing exposure to noise and air pollution along busy road and rail corridors. Public transport, walking and cycling, as well as electric cars provide opportunities to reduce air pollution.

Soil and groundwater contamination is another urban hazard which will require careful management as the District grows, and land uses change. This is particularly important when planning for more sensitive land uses such as schools, open space and low-density residential neighbourhoods, in areas with potential for pre-existing contamination. State Environmental Planning Policy No. 55 – Remediation of Land and its associated guidelines manage the rezoning and development of contaminated land.

Greater Sydney, particularly its rural land, is at risk from biosecurity hazards such as pests and diseases



that could threaten agriculture, the environment and community safety. Biodiversity hazards are being managed by the NSW Government through the *Greater Sydney Peri Urban Biosecurity Program*.

In planning for future growth, consideration of natural hazards and cumulative impacts includes avoiding locating growth and development in areas exposed to natural hazards and limiting growth in existing communities that are exposed and vulnerable to natural hazards. In exceptional circumstances, there may be a need to reduce the number of people and amount of property that are vulnerable to natural hazards, through managed retreat of development.

The impact of extreme heat on communities and infrastructure networks can also be significant. More highly developed parts of the District can be exposed to extreme heat as a result of the urban heat island effect. Increasing the tree canopy is important to help reduce those impacts. The *State Heatwave Sub Plan*, which sits under the *NSW State Emergency Management Plan*, details the control and coordination arrangements across State and local government for the preparation for, response to, and immediate recovery from a heatwave.

Current guidelines and planning controls also focus on minimising hazards and pollution by:

- 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.

Minimising land that interfaces with hazardous areas can reduce risks. Clearing vegetation around developments on bushfire-prone land can help reduce risks from bushfire, but must be balanced with protecting bushland, and its ecological processes and systems. Planning on bushfire-prone land should consider risks and include hazard protection measures within the developable area. The Rural Fire Service requires new development to comply with the provisions of *Planning for Bush Fire Protection 2006*.

Figure 26: Vulnerability to heatwaves

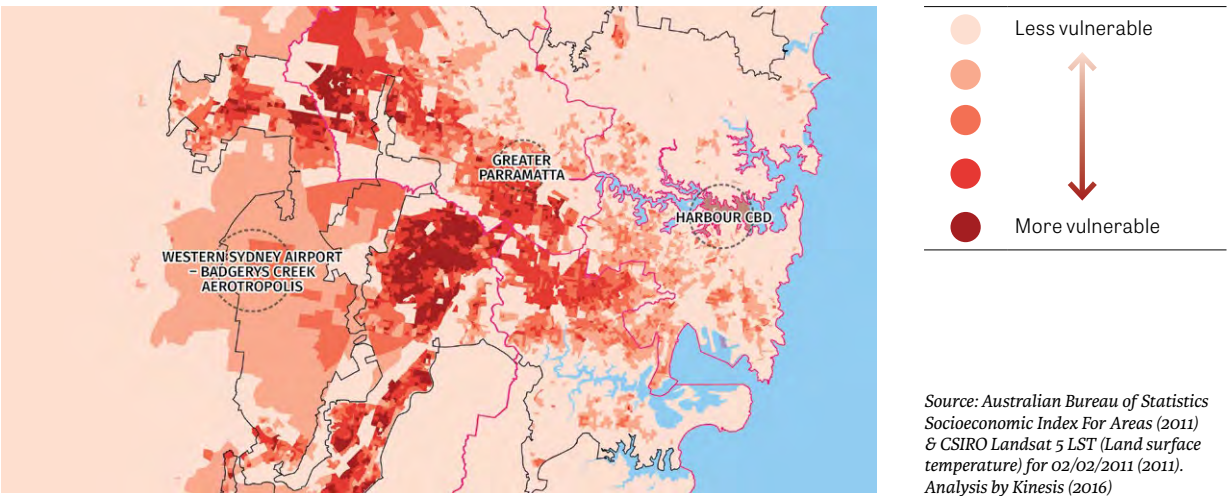


Figure 27: Land surface temperature during a heatwave

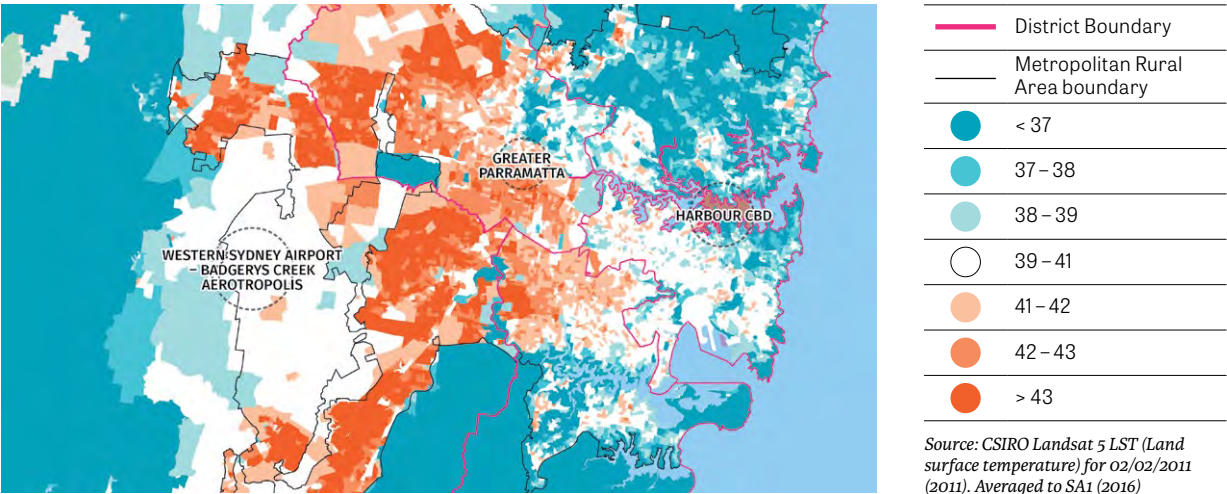
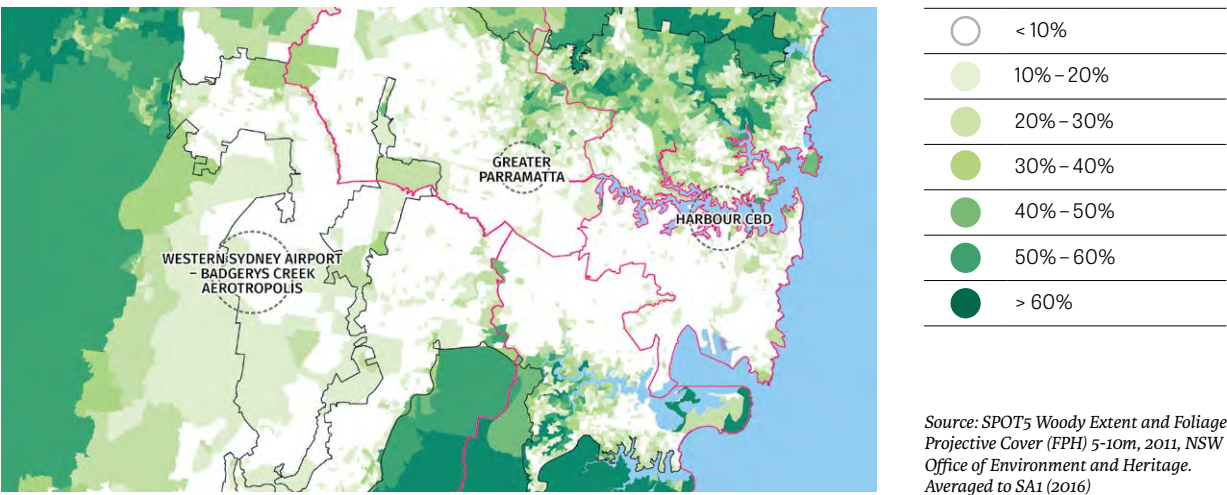


Figure 28: Tree canopy cover at 2011



Adapting to climate change

The most significant natural hazards and acute shocks that affect the South District include bushfire, severe storms and coastal erosion and inundation. These natural phenomena will be exacerbated by climate change.

More highly developed parts of the District can be exposed to extreme heat as a result of the urban heat island effect.

Air temperatures in Greater Sydney are expected to increase due to climate change and increasing urbanisation. With projected increases in heatwaves and the number of extreme temperature days, taking action to cool the city, in conjunction with supporting the community to adapt to a changing climate, is increasingly important. Increasing the tree canopy is important to help reduce those impacts.

Figure 26 shows different levels of vulnerability to heatwaves. Areas are ranked by their combined level of socioeconomic disadvantage and exposure to heat during a heatwave and Figure 27 shows land surface temperatures during heatwave conditions. Figure 28 shows tree canopy cover as at 2011.

The way neighbourhoods and buildings are planned and designed can help communities adapt and be more resilient to extreme heat. Increased tree canopy and green ground cover, verandahs and awnings, and minimising dark coloured materials and surfaces will minimise these effects.

Water-play features and connections with water will become essential elements of urban areas. The incorporation of green walls, green roofs and initiatives such as rain gardens should be designed into urban environments. More cooling elements should also be used in construction and building materials. Retaining more water in the landscape and integrating waterways in the design of new communities will help create a greener and cool city.


Shocks and stresses

Councils across the South District are participating in the 100 Resilient Cities initiative and considering ways to respond to shocks and stresses that could strengthen community resilience.

The Australian Government has released *Australia's Strategy for Protecting Crowded Places from Terrorism*, which provides a framework for making public places safer and more resilient. This strategy is accompanied by tools which councils, building owners and managers can use to implement protective measures that will strengthen community resilience.

Useful links:

- Floodplain Development Manual 2005
- Planning for Bush Fire Protection 2006
- State Heatwave Sub Plan
- Australian Government *Australia's Strategy for Protecting Crowded Places from Terrorism*
- AdaptNSW
- 100 Resilient Cities

 Actions	Responsibility
75. Support initiatives that respond to the impacts of climate change.	Councils, other planning authorities and State agencies
76. Mitigate the urban heat island effect and reduce vulnerability to extreme heat.	Councils, other planning authorities and State agencies

6

Implementation

District plans are the first step in the implementation of the region plan for the Greater Sydney Region. They must give effect to the region plan. More particularly, they have to outline the planning priorities consistent with the region plan, and the actions to achieve the priorities.

Successful implementation of the district plans is more than updating council local environmental plans. It also requires:

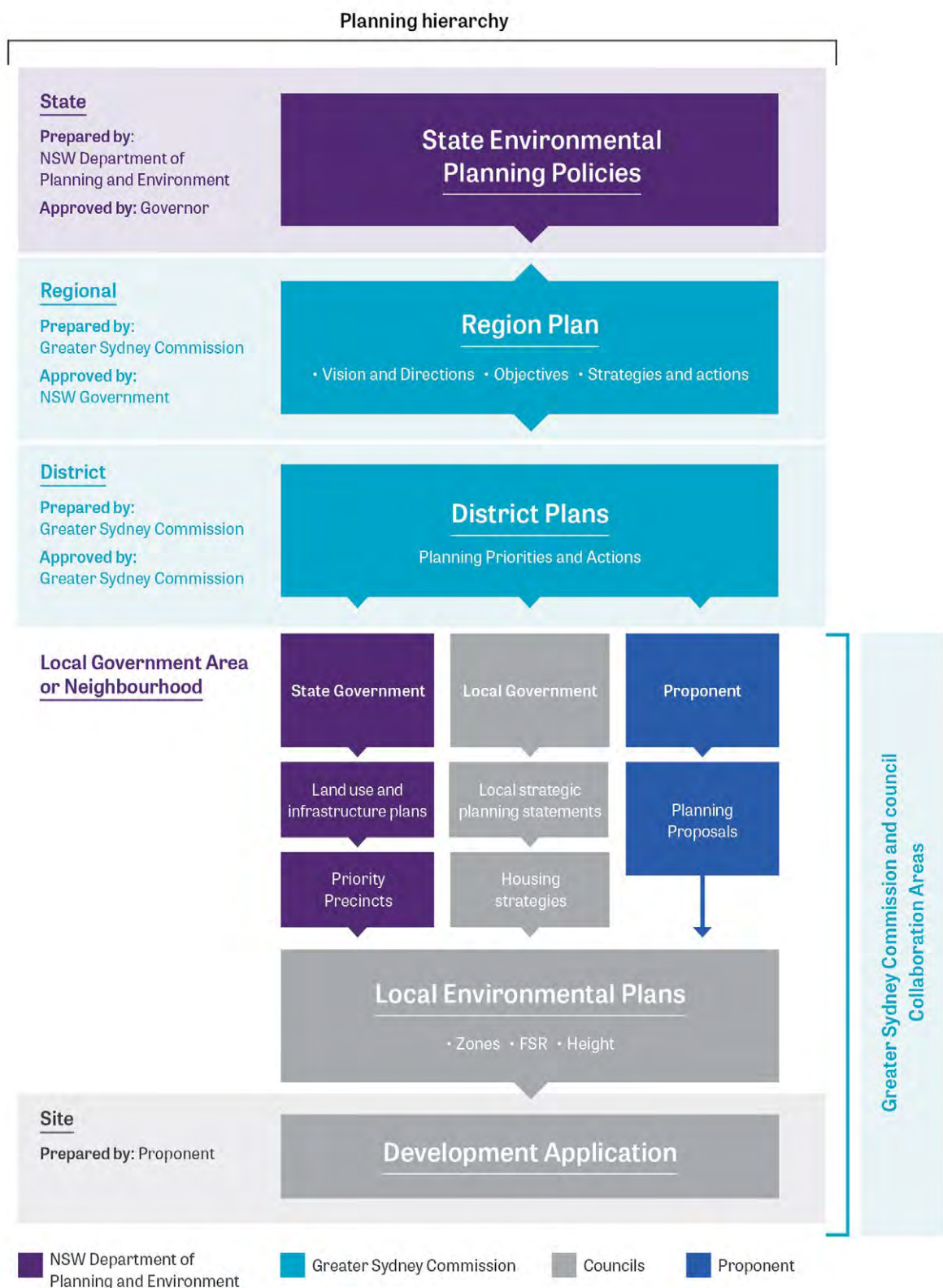
- collaboration across government and with local government and the private sector where each have clear roles and responsibilities (refer to Figure 29)
- private sector investment in line with the expectation for housing, commercial, retail and industrial development
- infrastructure delivery which is responsive to the draft District Plan's priorities and growth patterns across the District
- ongoing engagement to inform implementation activities
- annual monitoring of the performance of the draft District Plan and the status of delivering the actions.

On finalisation of the district plans, councils are required to update their local environmental plan to give effect to the district plan. The NSW Government has outlined, in the recently released *A Fair Go for First Home Buyers*, that councils are to complete the update of their local environmental plan within three years of the district plans being finalised or within two years for those councils receiving funding under the 'Priority Councils' initiative.

As drafts, district plans have a role in informing the preparation of planning proposals. Information Note 6, released concurrently with the draft district plans, outlines the status of the district plans in regard to planning matters.

In undertaking strategic planning processes, and/or preparing or considering planning proposals, planning authorities must give effect to the draft District Plan, specifically the planning priorities and actions.

Figure 29: Roles of planning authorities in Greater Sydney



Monitoring and reporting

The draft *Greater Sydney Region Plan* outlines metrics to monitor the performance of that Plan. The same metrics will be used to monitor the performance of this draft District Plan. The Commission will report annually to the NSW Government on the metrics as outlined in Table 5.

Monitoring and reporting will provide transparency to the community and other stakeholders. The Commission will also provide an annual report to the NSW Government on the status of the actions in this draft District Plan.

In addition, the Commission maintains a data hub — an online profile of the region. Incorporating data from the latest Australian Bureau of Statistics Census of Population and Housing, the data hub helps to track broad trends, identify geographic differences and explain how the region is changing. Data is regularly updated.

On the making of the District Plan, each council is to report to the Commission on the:

- review by the council of the local environmental plans for the area
- preparation of planning proposals under section 55 of the *Environmental Planning and Assessment Act 1979* to give effect to the District Plan.

Next steps

This draft District Plan is on formal public exhibition until 15 December 2017. The draft District Plan is aligned with the draft *Greater Sydney Region Plan*.

Public exhibition is an opportunity to contribute to the future of the South District by providing feedback on the proposed planning priorities and actions in this draft District Plan.

A range of engagement activities will help the public to get involved in the future of the South District — visit the dedicated engagement portal at www.greater.sydney to find out more.

This is an opportunity to participate in the story of Our Greater Sydney 2056 A metropolis of three cities — connecting people.



Table 5: Metrics to monitor the Plan

10 Directions	Plan metric (service)
 1. A city supported by infrastructure	<ul style="list-style-type: none"> Number of land use plans supported by infrastructure plans (NSW Department of Planning and Environment, Greater Sydney Commission, Councils).
 2. A collaborative city	<ul style="list-style-type: none"> Proportion of agreed outcomes achieved in Collaboration Areas.
 3. A city for people	<ul style="list-style-type: none"> Annual survey of community sentiment.
 4. Housing the city	<ul style="list-style-type: none"> Number of councils on track to deliver housing targets. Number of councils with schemes that implement Affordable Rental Housing Targets.
 5. A city of great places	<ul style="list-style-type: none"> Percentage of dwellings within walking distance of a local or strategic centre. Percentage of dwellings within walking distance of open space.
 6. A well-connected city	<ul style="list-style-type: none"> Percentage of dwellings located within 30 minutes by public transport of a metropolitan city centre /cluster. Percentage of dwellings located within 30 minutes by public transport of a strategic centre.
 7. Jobs and skills for the city	<ul style="list-style-type: none"> 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. Change in number of people employed locally (five year).
 8. A city in its landscape	<ul style="list-style-type: none"> Proportional increase in Greater Sydney covered by urban tree canopy.
 9. An efficient city	<ul style="list-style-type: none"> Number of precincts with low carbon initiatives.
 10. A resilient city	<ul style="list-style-type: none"> Number of local government areas undertaking resilience planning.

7 Endnotes

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Note: The source of population, dwellings and household data in this draft District 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.

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