



COLLABORATION AREA

# Kogarah

## Place Strategy



## Acknowledgement of Country

The Greater Sydney Commission acknowledges the Bidjegal people of the Eora Nation, the traditional owners of the lands that include the Kogarah Collaboration Area, 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.

## List of shortened terms

BC	Bayside Council
CBD	Central Business District
CO <sub>2</sub> -e	Carbon dioxide equivalent (standard unit for measuring greenhouse gas emissions)
DCP	Development control plan
DoE	NSW Department of Education
DPC	Department of Premier and Cabinet
DPIE-EES	Department of Planning, Industry and Environment – Environment, Energy and Science Group
DPIE-PDPS	Department of Planning, Industry and Environment – Place Design Public Spaces Group
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
GANSW	Government Architect NSW
GRC	Georges River Council
GSC	Greater Sydney Commission
HI NSW	Health Infrastructure NSW
LAHC	Land and Housing Corporation
NSW Health	Representing the Health Cluster
RMS	Former Roads and Maritime Services
SINSW	School Infrastructure NSW
SES	State Emergency Service
SESLHD	South Eastern Sydney Local Health District
SMaRT	Sustainable Materials Research and Technology
SSE	Sydney School of Entrepreneurship
SSMRF	St George and Sutherland Medical Research Foundation
SSROC	Southern Sydney Regional Organisation of Councils
TAFE NSW	Technical and Further Education New South Wales
TfNSW	Transport for NSW
UNSW	University of NSW

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# Foreword

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Eastern City District  
Commissioner



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Central City District  
Commissioner  
South District Commissioner



Kogarah will be a successful health and education precinct that services the communities and boosts the economies of both the South and Eastern City districts.

Anchored by St George Hospital, St George Private Hospital, Calvary Health Care Kogarah, Wesley Hospital Kogarah, Westpac Bank, TAFE NSW, UNSW St George and Sutherland Clinical School, Netstrata Jubilee Stadium and 12 schools, Kogarah's institutions combine to create a cluster of health, knowledge and wellness.

This Place Strategy is a first for planning in Kogarah. It brings together the ambitions of two councils and multiple organisations that have a stake in Kogarah's future. It sets a shared vision, priorities and actions that will leverage the area's existing assets and bring about new opportunities as the area evolves. It emphasises wellness and promotes population health and community wellbeing.

The Place Strategy addresses issues including better public transport connections to other major economic centres such as Randwick, Bankstown and Parramatta and better physical connections between Kogarah and Rockdale. It draws on planned transport infrastructure to change how people access and move around Kogarah. This will encourage investment and bring in more jobs, helping to further develop the centre's health and education functions.

The Place Strategy identifies the area's specialisations to create a brand and identity that supports Kogarah as a destination. It uses these specialisations to reveal and expand connections and relationships between different sectors to foster innovation and support research activities.

Sustainable modes of transport, including walking and cycling, will enable seamless connectivity. Centres will be vibrant, busy and well designed. Social infrastructure, services and facilities will meet the needs of the changing population.

Housing and accommodation will support the economic functions of the centre and the accommodation requirements of a health, knowledge and wellness precinct.

As Kogarah grows, investment in new infrastructure gives us the opportunity to introduce precinct-wide energy, water and waste efficiency solutions to ensure a healthy and resilient precinct.

This is an ambitious plan for Kogarah. The Place Strategy is the roadmap that guides collaboration, prioritises investment and brings together expertise and local knowledge to support Kogarah's evolution.

## 1

# Introduction

Kogarah is identified as a Collaboration Area owing to its significant presence of health and education assets in the South District. The ambition for Kogarah is that it will be a hub of knowledge-intensive jobs and industries for the Eastern City District, the South District and Greater Sydney. As one of only two health and education precincts and knowledge intensive centres in the South District, it is also critical in achieving the vision for a 30-minute city and supporting communities in the south of Sydney.

Over the next 20 years it is anticipated that Kogarah will become an important transport interchange, with connectivity to the Eastern City and Central City through mass transit links which will transform the centre.

Supported by both Bayside Council and Georges River Council and located within the Eastern City District and South District, **Kogarah's planning and governance as a strategic centre, health and education precinct and Collaboration Area is unique.**

The Kogarah Collaboration Area is loosely bounded by Bestic Street to the north, the Rockdale Wetlands Corridor in the east, Jubilee Avenue in the south, and Caledonian Street to the west (see Figure 1). Including both Kogarah and Rockdale town centres, it is 14 kilometres south of the Harbour CBD, 20 kilometres from Greater Parramatta and in close proximity to Sydney Airport and Port Botany.

This Kogarah Collaboration Area Place Strategy was collectively designed by the stakeholders involved in planning for the future of the Collaboration Area. Specifically, it:

- establishes a vision for the Kogarah Collaboration Area, based on the community's vision expressed in the South and Eastern City District Plans, Bayside Council and Georges River Council's Community Strategic Plans and the Rockdale Town Centre and Kogarah North Precinct master plans.
- identifies the impediments and opportunities within the Collaboration Area
- sets out the priorities for the Collaboration Area
- identifies actions to deliver the vision.

This Place Strategy will inform both public and private policy and investment decisions. It identifies and recognises the complex, place-specific issues that may inhibit growth and change and the many opportunities that growth and change can bring.

For the purposes of this Place Strategy, references to Kogarah Town Centre aligns with the Kogarah strategic centre identified within the Greater Sydney Region Plan and South District Plan. Similarly, references to the Rockdale Town Centre are reflective of the Rockdale local centre identified in the Eastern City District Plan.



## 1.1 Places in the Kogarah Collaboration Area

The Collaboration Area includes several places, as described below and illustrated in Figure 1.

### Health, knowledge and wellness core

Located in Kogarah Town Centre, this is a cluster of major health, knowledge and wellness services including:

- St George Public Hospital and St George Private Hospital
- TAFE NSW St George sites on Princes Highway and Montgomery Street
- Moorefield Girls High School and James Cook Boys Technology High School
- The Microbiome Research Centre
- UNSW St George and Sutherland Clinical School

This cluster has the highest intensity of jobs in the Collaboration Area.

### Kogarah Town Centre

Kogarah Town Centre is a civic destination with services and retail to support residents, students, workers and visitors, particularly those who use the health, knowledge and wellness core.

### Rockdale Town Centre

Rockdale Town Centre includes several distinct and definable precincts. It provides civic and population serving functions and facilities and is complementary to the Kogarah Town Centre.

### Kogarah North

Kogarah North will be a focus for new housing close to the health, knowledge and wellness education core.

### Kogarah West

Kogarah West is identified by Bayside Council as an investigation area for urban growth. The area will enable housing close to jobs, future transport connections and services located within the Kogarah Town Centre.

### Rockdale Wetlands Corridor

Rockdale Wetlands Corridor is a north-south corridor of public spaces for recreation, infrastructure and biodiversity.

### Jubilee Stadium

Containing Netstrata Jubilee Stadium and Kogarah Park, this precinct provides high performance training facilities and is home to the St George Dragons national rugby league team, an anchor tenant. It will continue to support sporting, entertainment and health functions, with additional yet intermittent transport demand during events.

### Industrial and urban services land

The two industrial and urban services land precincts to the east of the Collaboration Area at Production Avenue and West Botany Street have the potential to contribute to the health and knowledge functions of the Collaboration Area through emerging technologies.<sup>1</sup>

<sup>1</sup> Bayside Council Centres and Employment Lands Discussion Paper 2019 - Prepared by SGS Economics and Planning

**Figure 1:** Places in the Kogarah Collaboration Area (GSC 2019)



### Kogarah Collaboration Area

#### Key Places in the Kogarah Collaboration Area

- |   |   |
|---|---|
| <span style="display: inline-block; width: 15px; height: 10px; background-color: yellow; border: 1px solid black;"></span> Study Area   | <span style="display: inline-block; width: 15px; height: 10px; background-color: #f08080; border: 1px solid black;"></span> Health                          |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #ff69b4; border: 1px solid black;"></span> Bayside and Georges River LGA and District Boundary | <span style="display: inline-block; width: 15px; height: 10px; background-color: #add8e6; border: 1px solid black;"></span> Primary and Secondary Education |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #add8e6; border: 1px solid black;"></span> Key places  | <span style="display: inline-block; width: 15px; height: 10px; background-color: #b0c4de; border: 1px solid black;"></span> Tertiary Education              |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #90ee90; border: 1px solid black;"></span> Open Space  | <span style="display: inline-block; width: 15px; height: 10px; background-color: #ff0000; border: 1px solid black;"></span> Financial services              |
| <span style="display: inline-block; width: 15px; height: 10px; background-color: #ff69b4; border: 1px solid black;"></span> Industrial and urban services                       |   |

0 250m 500m

## 2

# Vision for Kogarah Collaboration Area

By 2036, the Kogarah Collaboration Area will be a vibrant health and knowledge precinct that fosters innovation, provides access to comprehensive education, is home to research institutions and is well-connected to major economic centres by efficient transport links.

The Collaboration Area will emphasise wellness with efficient, healthy and resilient natural and urban environments, places and movement networks that are high amenity and promote population health and community wellbeing.

## 2.1 Shared objectives

The Kogarah Collaboration Area stakeholder group has identified six shared objectives to guide the area's growth and change. These objectives act as markers so that all future projects contribute to achieving the vision.

The Kogarah Collaboration Area is a place that:

- has a distinct identity with high quality green infrastructure and public spaces, and sporting and cultural facilities, to support wellness and wellbeing, and sustainably designed buildings concentrated around transport hubs
- has strong relationships and connections to major economic centres such as Sydney Airport and Port Botany and other health and education precincts at Westmead, Randwick and Bankstown
- provides seamless connectivity between health, financial and education institutions, Kogarah and Rockdale town centres and other nearby centres
- prioritises active, vibrant connections, with a focus on east-west walking, cycling and public transport links that reinforce a desirable place for people to dwell, work and live

- provides accommodation for patients, students and professionals in hotels, serviced apartments and specialist student accommodation, and facilities that attract national and international visitors and support opportunities for research, collaboration and innovation
- is a healthy, resilient and efficient precinct, where sustainable transport, developments, water, energy, air quality and waste initiatives help to mitigate climate change risks.

Rockdale Town Centre and Kogarah North have established visions that are supported by this work.

**Kogarah North Precinct** will be a renewed neighbourhood village for the community – an authentic place where the community enjoys attractive and safe pedestrian and cycle paths and facilities, green infrastructure, and a variety of public open spaces.

**Rockdale Town Centre** will be easily accessible with a great public open space network and a strong civic focus, responding to the needs of a diverse and growing community and celebrating its historical and topographic setting.



## 2.2 Complex urban issues

Achieving a vibrant health, knowledge and wellness precinct with jobs, a mix of dwellings and a level of appropriate infrastructure requires a deliberate and coordinated effort to resolve impediments.

There are numerous issues facing Kogarah and these vary in size, scale and impact. These issues are spread across a variety of themes and create complexity for the growth of the Kogarah Collaboration Area over time. Achieving the vision requires cross council and multi-agency action to address these complexities including:

- the reduced frequency of train services and existing train services that operate beyond capacity
- impacts on traffic around Kogarah Town Centre when the M6 Stage 1 is introduced
- the effect of topography, transport corridors, infrastructure barriers and limited wayfinding on the area's urban structure and legibility
- movement corridors limit access and complicate travel within and around the Collaboration Area
- pressure on and deficiency of existing open spaces, lack of access and poor quality of some open spaces and limited opportunities to deliver new open spaces
- limited urban tree canopy cover and high urban heat impacts and vulnerability
- increased development and additional dwellings in Kogarah North and Rockdale Town Centre that put pressure on existing infrastructure
- an adequate provision of student and key worker housing, as well as short to medium-

term accommodation to support the health, knowledge and wellness core

- limited cultural infrastructure and night-time activities in the Rockdale and Kogarah town centres
- the interaction of two nearby yet disconnected centres, each with complementary functions
- limited connections to other economic centres and Greater Parramatta
- the requirement for a strong governance framework and Council partnership given the Collaboration Area is in two LGAs, two districts, and Kogarah is designated a Strategic Centre and Health and Education precinct

## 3

## Summary of priorities and actions

	Connectivity			Liveability		
Priorities:	<b>Priority 1:</b> Create a transport network that meets immediate and future needs.	<b>Priority 2:</b> Provide integrated and connected movement options that balance movement and place	<b>Priority 3:</b> Enable digital connections to support knowledge-intensive jobs and potential for innovation	<b>Priority 4:</b> Plan for housing and accommodation for residents, workers and visitors to support economic activity	<b>Priority 5:</b> Encourage a flourishing culture and night-time economy	<b>Priority 6:</b> Create high quality public spaces and facilities that focus on wellness
Actions:	<b>Action 1:</b> Review how existing transport networks service Kogarah Collaboration Area, including service frequency in peaks, and the ability to provide local access to jobs to meet strategic targets.  <b>Action 2:</b> Investigate a future network of Rapid Bus Lines, better service frequencies and mass transit links from Parramatta to Kogarah, Randwick to Kogarah and Kogarah to Miranda.  <b>Action 3:</b> Develop a place-based integrated transport strategy that includes a funding and implementation plan.  <b>Action 4:</b> Identify and investigate how NSW Government-owned land can be used to build connections.  <b>Action 5:</b> Initiate projects to encourage walking and cycling with schools and major employers.	<b>Action 6:</b> Use the Movement and Place framework to achieve the desired future character for streets and places in the Collaboration Area.  <b>Action 7:</b> Revitalise the Muddy Creek corridor and other local creeks to: <ul style="list-style-type: none"> <li>• improve walking and cycling between Rockdale and Kogarah town centres</li> <li>• improve the interface with the creek line</li> <li>• create new open space and seamless connections between key places</li> <li>• create an east-west Green Grid connection linking major open spaces.</li> </ul> <b>Action 8:</b> Refine and plan for the Green Grid in the Collaboration Area.	<b>Action 9:</b> Use partnerships and technology to build connections and develop a digital data connectivity strategy.	<b>Action 10:</b> Investigate and identify locations for student and affordable housing, short-term accommodation and serviced apartments close to transport.	<b>Action 11:</b> Develop a Cultural Infrastructure Strategy and Cultural Program for the Collaboration Area focused on: <ul style="list-style-type: none"> <li>• Kogarah Town Centre</li> <li>• Rockdale Town Centre</li> <li>• Jubilee Stadium Precinct</li> <li>• Areas around major transport nodes, interchanges, hospitals and anchor institutions</li> <li>• Shopfront Youth Arts Precinct.</li> </ul> <b>Action 12:</b> Develop a night-time economy strategy for the Collaboration Area.	<b>Action 13:</b> Develop a Collaboration Area Urban Design Framework to provide a vision and coordinate actions for public spaces in the Collaboration Area that considers: <ul style="list-style-type: none"> <li>• the movement and place framework</li> <li>• government owned land</li> <li>• the Green Grid</li> <li>• resilience initiatives</li> <li>• precinct vision, brand and marketing</li> <li>• car parking</li> <li>• EV charging stations.</li> </ul> <b>Action 14:</b> Develop a master plan and public domain plan for the Collaboration Area that emphasises wellbeing, amenity, safety and safe crossings, cultural infrastructure and activity, with costing and funding plan.

**Immediate imperatives**

**Action 3:** Develop a place-based integrated transport strategy that includes a funding and implementation plan

**Action 14:** Develop a master plan and public domain plan for the Collaboration Area that emphasises wellbeing, amenity, safety and safe crossings, cultural infrastructure and activity, with costing and funding plan.

**Action 16:** Develop a vision, brand and marketing plan that creates an identity for the precinct and promotes the vision for the Collaboration Area.

**Action 23:** Develop a climate resilience strategy that:

- identifies climate change risks
- develops and implements an adaptation plan

**Action 37:** Establish an enduring precinct governance structure and group to deliver the actions in the Place Strategy which includes a partnership between Georges River and Bayside Council and with key anchor institutions in the Collaboration Area

Productivity		Sustainability			Governance
<p><b>Priority 7:</b> Increase knowledge-intensive jobs and support the area's role as a health, knowledge and wellness precinct.</p>	<p><b>Priority 8:</b> Support the growth of education and next steps to tertiary education.</p>	<p><b>Priority 9:</b> Mitigate and adapt to the impacts of climate change</p>	<p><b>Priority 10:</b> Prioritise sustainable transport, development and water and energy use and reduce waste</p>	<p><b>Priority 11:</b> Protect and enhance the natural environment, increase the quantity, access to and quality of open space and enhance the urban tree canopy</p>	<p><b>Priority 12:</b> Establish precinct wide and cross council governance to ensure the success of the Collaboration Area into the future and deliver the vision.</p>
<p><b>Action 16:</b> Develop a vision, brand and marketing plan that creates an identity for the precinct and promotes the vision for the Collaboration Area.</p> <p><b>Action 17:</b> Identify and market areas of specialisation and key differentiators of the health, knowledge and wellness institutions and how they respond to emerging health issues.</p> <p><b>Action 18:</b> Investigate the potential for alternative modes of care to alleviate pressure on health services, including collaboration with public and private hospitals.</p> <p><b>Action 19:</b> Leverage international health and research connections for knowledge sharing, innovation, investment and economic development.</p> <p><b>Action 20:</b> Investigate the potential for, and viability of, a medical research institute associated with St George Public Hospital and investigate space for research activities to support the MRC.</p>	<p><b>Action 21:</b> Leverage partnerships between Kogarah's primary, secondary and tertiary education institutions and encourage education uplift programs</p> <p><b>Action 22:</b> Explore opportunities for an enhanced tertiary education presence in the Collaboration Area.</p>	<p><b>Action 23:</b> Develop a climate resilience strategy that:</p> <ul style="list-style-type: none"> <li>identifies climate change risks</li> <li>develops and implements an adaptation plan.</li> </ul> <p><b>Action 24:</b> Investigate a net-zero emissions plan that targets catalyst sites and projects and addresses:</p> <ul style="list-style-type: none"> <li>precinct-based battery power</li> <li>renewable energy</li> <li>waste efficiency/ circular economy</li> <li>energy efficiency with large energy users</li> <li>the LED street lights program run by Ausgrid through SSROCs 'Lighting the Way'.</li> </ul> <p><b>Action 25:</b> investigate ways to mitigate the urban heat island effect for the Collaboration Area.</p>	<p><b>Action 26:</b> Explore precinct wide and site-specific energy efficiency initiatives, with a focus on NSW Government-owned land, high energy users and catalyst projects.</p> <p><b>Action 27:</b> Address precinct wide and localised flooding and drainage issues through capital works projects and sustainability initiatives in the Rockdale Wetlands Corridor and Muddy Creek.</p> <p><b>Action 28:</b> Prioritise renewable energy by:</p> <ul style="list-style-type: none"> <li>auditing potential solar install sites</li> <li>increasing renewable energy percentage in the Power Purchase Agreement</li> <li>incentivising installation of renewable energy generators.</li> </ul> <p><b>Action 29:</b> Plan for sustainable development through controls for new buildings and higher BASIX targets.</p> <p><b>Action 30:</b> Prioritise sustainable transport options.</p> <p><b>Action 31:</b> Develop a precinct-wide water strategy.</p> <p><b>Action 32:</b> Create a smarter waste economy by focusing on:</p> <ul style="list-style-type: none"> <li>waste flow reduction</li> <li>organics recovery</li> <li>joint and localised waste recycling plants.</li> </ul>	<p><b>Action 33:</b> Develop a biodiversity strategy, maintain a species list and enhance biodiversity protection through LEPs.</p> <p><b>Action 34:</b> Map open space deficiencies, explore the expansion of open space, investigate acquisition of land for new open space and investigate initiatives for large roof surface areas and car parks for open space.</p> <p><b>Action 35:</b> Increase the percentage of urban tree canopy in:</p> <ul style="list-style-type: none"> <li>town centres and main streets</li> <li>areas with high pedestrian activity and high vulnerability and high urban heat island effect</li> <li>NSW Government-owned land including hospitals</li> <li>areas with low urban tree canopy cover</li> <li>Green Grid routes.</li> </ul> <p><b>Action 36:</b> Support the vision for a wellness precinct by investigating ways to maintain and improve air quality.</p>	<p><b>Action 37:</b> Establish an enduring precinct governance structure and group to deliver the actions in the Place Strategy which includes a partnership between Georges River and Bayside Council and with key anchor institutions in the Collaboration Area.</p> <p><b>Action 38:</b> Develop an infrastructure plan that includes funding requirements and innovative funding solutions.</p>

## 4

# A collaborative process

Collaboration Areas are a place-based multi-stakeholder approach to solving complex urban issues, conducted over 12 months. The Greater Sydney Region Plan identifies Kogarah as a Strategic Centre, Health and Education Precinct and Collaboration Area, requiring a Place Strategy to realise the area's metropolitan role.

The Collaboration Area process involved stakeholder engagement through workshops and discussions. The process uncovered and explored the area's challenges and opportunities within the context of the NSW Government's strategic planning framework, and puts people and quality of public space, liveability and amenity considerations at the forefront of planning.

The Greater Sydney Commission, Bayside Council and Georges River Council established the Kogarah Collaboration Area stakeholder group in December 2018. This stakeholder group worked under a Collaboration Area Agreement that set out the shared vision and purpose, outputs and membership of the Kogarah Collaboration Area. The Commission chaired the stakeholder group, which includes:

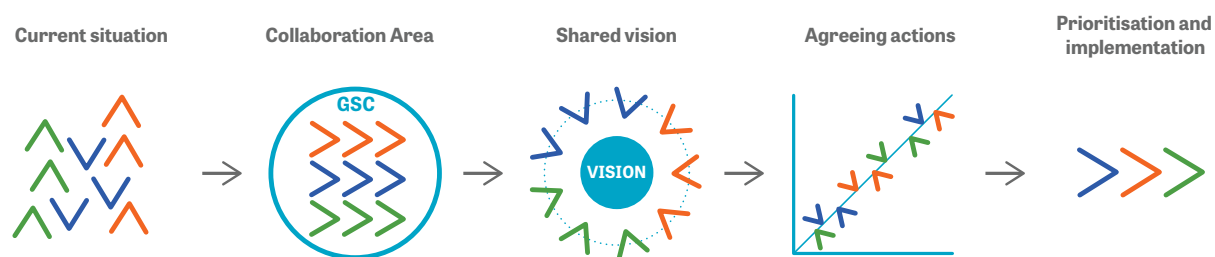
- NSW Ambulance
- Create NSW
- Department of Planning, Industry and Environment
  - Place and Infrastructure Team
  - Greater Sydney Team
  - Energy Environment and Science Team
  - Public Spaces Team
  - Green and Resilient Places Team
  - Government Architect NSW
- Greater Sydney Local Land Services
- NSW Health - Health Infrastructure

- NSW Treasury – including former Jobs for NSW
- NSW Land and Housing Corporation
- Office of Sport
- Department of Education - School Infrastructure NSW
- South Eastern Sydney Local Health District
- South Sydney Regional Organisation of Councils
- St George Police Area Command
- State Emergency Service
- Sydney Water
- TAFE NSW
- Transport for NSW - including former Roads and Maritime Services
- University of New South Wales

The Commission also engaged other stakeholders who provided input through the Kogarah Collaboration Area Reference Group. This group was represented by:

- Advanced Diversity Services
- Catholic Archdiocese of Sydney
- Hot Desk Heaven
- Kogarah Community Services
- Rockdale Community Services
- St George and Sutherland Medical Research Foundation (SSMRF)
- St George Business Chamber
- St George Community Housing
- St George Community Transport
- Sydney Catholic Schools
- VC Enterprises
- Wesley Hospital Kogarah
- Westpac Bank (Property Division)

**Figure 2:** The Collaboration Area Process (GSC, 2019)



**Figure 3:** Collaboration Areas within the framework of Region and District planning (GSC, 2019)





## 4.1 Context

The *Greater Sydney Region Plan - A Metropolis of Three Cities* identifies Kogarah for its ability to achieve the vision for Greater Sydney as a 30-minute city. Kogarah will contribute to this vision for Greater Sydney in two key ways.

As a **strategic centre**, Kogarah is expected to accommodate high levels of private sector investment. The *South District Plan* specifies a baseline target of an additional 4,200 jobs and a higher target of 8,700 additional jobs in Kogarah by 2036.

The Kogarah Collaboration Area is also defined as a **health and education precinct**, which can form parts of centres and include major hospitals, universities and medical research institutions.

The following documents should be consulted alongside this Place Strategy to understand the wider policy context:

- *A Metropolis of Three Cities*: the NSW Government's 40-year vision and 20-year plan to rebalance growth and deliver benefits more equally and equitably to residents across Greater Sydney
- *Future Transport Strategy 2056 and the Greater Sydney Services and Infrastructure Plan*: focusing on the decisions the NSW Government needs to make now to address Greater Sydney's growth and change over the next 40 years
- *State Infrastructure Strategy 2018-2038*: the NSW Government's priorities for the next 20 years that, combined with the *Future Transport Strategy 2056* and *A Metropolis of Three Cities*, brings together infrastructure investment and land use planning for cities
- The *Eastern City and South District Plans*: translating the metropolitan-level objectives set out in *A Metropolis of Three Cities* to inform local planning
- *Aligning Movement and Place 2019* developed by the Government Architect NSW, this document provides a framework for balancing the movement and place functions of an area and ensuring that the value of place was considered as a critical element needed for the success of movement-based projects
- *2019-2022 Premier's Priorities* which represent the NSW Government's commitment to making a significant difference to enhance the quality of life of the people of NSW including:
  - **Greener Public Spaces** - Increasing the proportion of homes in urban areas within a 10-minute walk of quality green, open and public space by 10 per cent by 2023
  - **Greening our City** - Planting 1 million trees by 2022
  - **Improving service levels in hospitals** - 100 per cent of all triage category 1, 95 per cent of triage category 2 and 85 per cent of triage category 3 patients commencing treatment on time by 2023.
  - **Improving outpatient and community care** - Reduce preventable visits to hospital by five per cent through to 2023 by caring for people in the community.
  - **Towards zero suicides** - Reduce the rate of suicide deaths in NSW by 20 per cent by 2023.

Other strategies, policies and assessments that have informed this Place Strategy include:

- Bayside Council draft Transport Strategy Discussion paper
- Bayside Council *draft Local Strategic Planning Statement (LSPS)* and supporting studies
- *Bayside Council Waste Avoidance and Resource Recovery Strategy 2030*
- *Bayside Council Community Strategic Plan*
- *Better Placed 2018* (GANSW)
- *Georges River Council Community Strategic Plan 2018-2028* (Georges River Council)
- *Cultural Infrastructure Plan 2025+* (Create NSW)
- *Draft Greener Places* (GANSW)
- *Draft Principal Bicycle Network* (TfNSW)
- *Draft South Eastern Sydney Transport Strategy* (TfNSW)
- *F6 Stage 1 Extension EIS and Preferred Infrastructure Report* (TfNSW/former RMS)
- *Georges River Council Commercial Centres Strategy* (2019)
- *Georges River Council draft Local Strategic Planning Statement* and supporting studies
- *Georges River Cultural Strategy* (Georges River Council)
- *Georges River Economic Development Strategy 2018-2021* (Georges River Council)
- *Journey to Excellence Strategy 2018-2021* (SES LHD)
- *Kogarah Investment Attraction Strategy* (Georges River Council)
- *Kogarah New City Plan* (Georges River Council)
- *Kogarah North Precinct Master Plan* and *Kogarah North Public Domain Plan* (Georges River Council)
- *Public Space discussion paper* (GANSW)
- *Rockdale Town Centre Master plan 2012 and Rockdale Town Centre Public Domain Plan* (Bayside Council)
- *St George Integrated Health Services Plan 2018* (SESLHD)
- *Sydney Green Grid* (GANSW)

## 5

# Framework and response

## 5.1 Alignment of priorities and actions in this Place Strategy

To deliver on the vision and shared objectives, this Place Strategy proposes 12 priorities and 38 actions. To align with *A Metropolis of Three Cities*, the *South District Plan* and *Eastern City District Plan*, the priorities and actions are set around five themes:

- connectivity
- liveability
- productivity
- sustainability
- governance.

Throughout the process, participants underscored the importance of appreciating the interrelations between the themes. Many also emphasised the Collaboration Area creates opportunities to simultaneously address multiple issues and areas. For example, delivering the green grid improves local connectivity, ecological outcomes, recreational opportunities and the local economy.

Priorities and actions that span multiple themes have been allocated to the chapter aligned with the structure of the *Eastern City* and *South District Plans*.

The following actions are immediate imperatives:

- **Action 3:** Develop a place-based integrated transport strategy that includes a funding and implementation plan
- **Action 14:** Develop a master plan and public domain plan for the Collaboration Area that emphasises wellbeing, amenity, safety and safe crossings, cultural infrastructure and activity, with costing and funding plan.
- **Action 16:** Develop a vision, brand and marketing plan that creates an identity for the precinct and promotes the vision for the Collaboration Area.
- **Action 23:** Develop a climate resilience strategy that:
  - identifies climate change risks
  - develops and implements an adaptation plan
- **Action 37:** Establish an enduring precinct governance structure and group to deliver the actions in the Place Strategy which includes a partnership between Georges River and Bayside Council and with key anchor institutions in the Collaboration Area

## 5.2 How to use this Place Strategy

This Place Strategy focuses on leveraging existing assets, networks and activity through a place-based framework. It is not primarily concerned with land use and development – rather, it guides stakeholder decision-making to achieve the Collaboration Area vision.

The Place Strategy illustrates an understanding of the Collaboration Area at a point in time. In time, some components may no longer be relevant. Its implementation requires a governance arrangement that gives industry, institutions, State agencies and other partners a roadmap for interactions, investment and development.

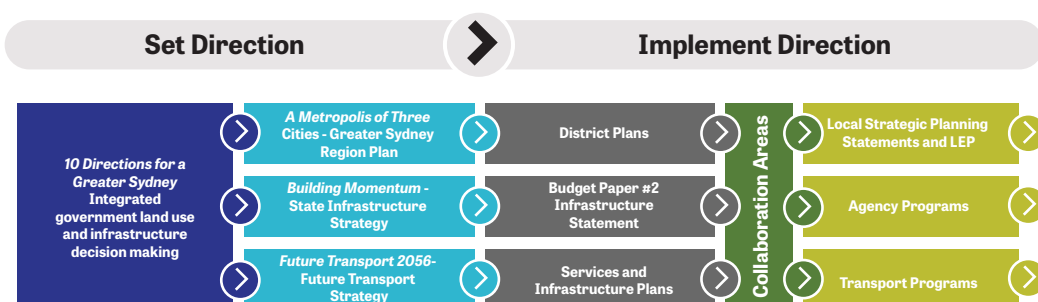
The Place Strategy uses the following terms:

- **Priorities:** The focus areas to progress *A Metropolis of Three Cities*, the *South District Plan* and the *Eastern City District Plan*
- **Outcomes:** What the realised priority will achieve by 2036

- **Actions:** Initiatives and projects that stakeholders will lead to realise the outcome
- **Immediate imperatives:** actions of critical importance to be undertaken early
- **Lead:** Stakeholders that provide project management and expertise to implement the action
- **Partner:** Stakeholders who collaborate with leads, assist with integration through their own agency programs, resourcing, technical assistance and advice.
- **Considerations and next steps:** guidance on the core focus and potential next steps for each action ([see Appendix 1 - Transition to Implementation](#)).

These elements are detailed in the following chapters. They should be considered with those set out in *A Metropolis of Three Cities* and the district plans, current legislation and NSW Government-endorsed policies.

**Figure 4:** Collaboration Areas within the framework of State Plans



## 6

# Connectivity

## 6.1 Analysis of opportunities and challenges

### Kogarah as a 30-minute city

At present, the Collaboration Area's road and rail connections, and proximity to Sydney Airport and Sydney CBD mean that many people living in the area can access jobs and services within 30 minutes. Approximately 184,000 dwellings are within 30-minute access of Kogarah by public transport. Compared to other strategic centres, such as Liverpool, the number of people able to access Kogarah within 30-minutes is greater. Whilst Kogarah's catchment is large, access is primarily along the north south train corridor, including to the Harbour CBD and south to Miranda. There are limited connections from Kogarah to other major economic centres to the west and east including Bankstown, Parramatta and Randwick.

### Future transport priorities

Over the next 20 years future transport infrastructure projects will catalyse the Kogarah health, knowledge and wellness precinct. Transport for NSW's (TfNSW) *Future Transport 2056* identifies the following future projects to better connect to the west and further east:

- **0-10-year investigation** for on-road rapid transit links for buses and high efficiency vehicles between Greater Parramatta and surrounding strategic centres such as Kogarah.
- **10-20-year investigation** of a Parramatta to Bankstown, Hurstville/Kogarah rapid bus link and Parramatta to Kogarah mass transit link
- **20+ year visionary** extension of a south east mass transit train link from Randwick to Miranda via Sydney Airport and Kogarah.

As a result of these links, Kogarah Station will evolve into an interchange with mass transit, buses and heavy rail and will enable greater access to other economic centres.

In the short to medium term, major transport projects including the More Trains, More Services program will address travel demand to enhance 30-minute access and address existing connectivity issues that face the area.

*Future Transport 2056* also identifies a Movement and Place Framework. This is a framework that assists in balancing the movement and place functions of an area and ensuring that the value of place is considered as a critical element needed for the success of movement-based projects.

[Appendix 2](#) details the Movement and Place Framework for the Collaboration Area, which should be considered alongside planning for new transport.

### Travel demand management

People who work or study in Kogarah tend to live nearby, with 49 per cent of all commuter trips between 2.5 and 10 kilometres.<sup>2</sup> TAFE NSW students commute from different parts of Greater Sydney to Kogarah. In 2018, around 37 per cent of students lived within five kilometres from the TAFE NSW St George campus, 27 per cent from between 5 to 10 kilometres and the remainder (36 per cent) beyond 10 kilometres.<sup>3</sup>

However, despite their relative proximity, most people travel to Kogarah by car. In 2016, 58 per cent of journeys to work in the Collaboration Area were by car, with just 15 per cent by train and 2 per cent by bus<sup>4</sup>. Supporting mode shift away from cars will help to manage travel demand as the area grows and changes and will contribute to the area being a desirable place to live, work and dwell.

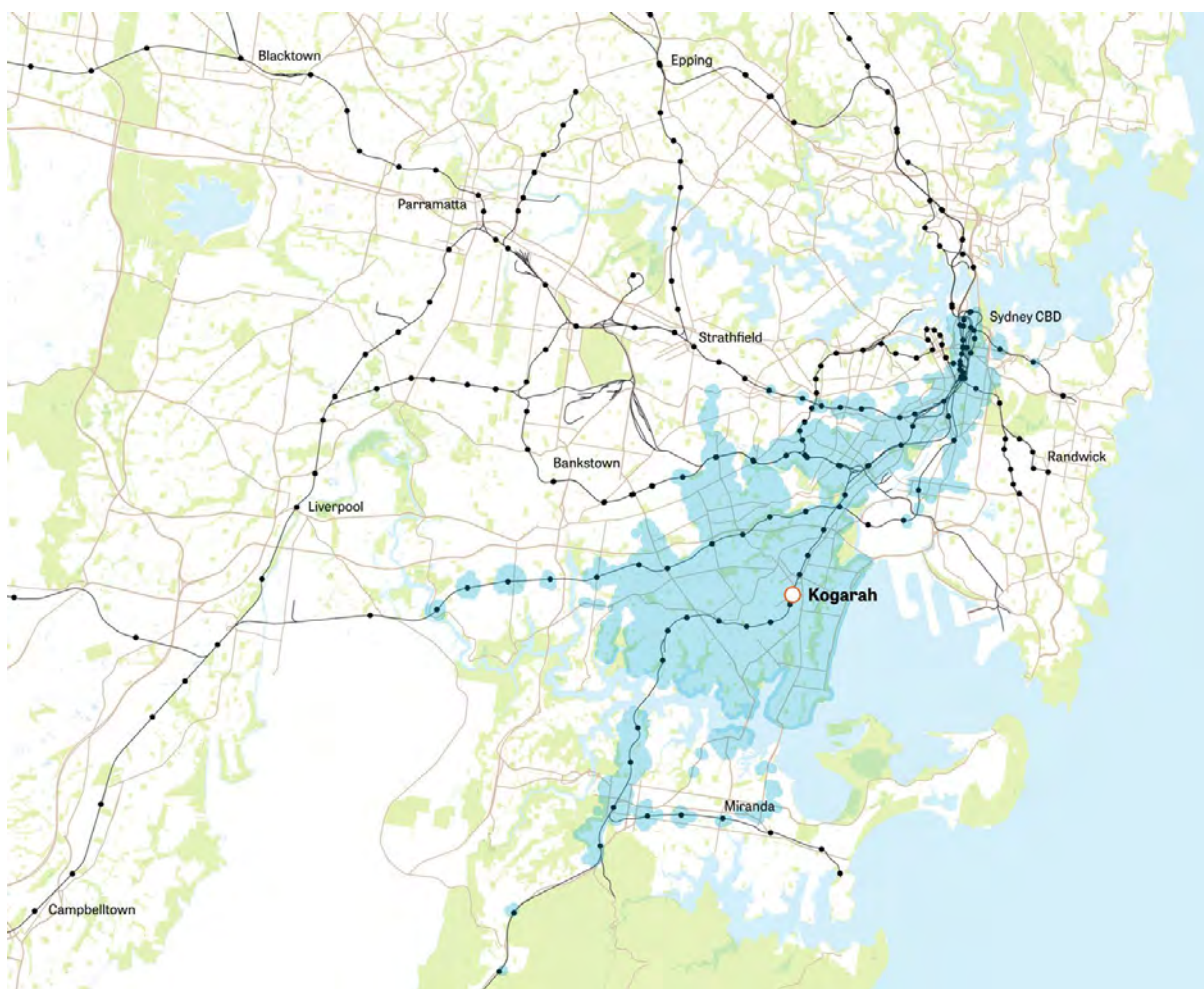
<sup>2</sup> Australian Bureau of Statistics Census of Population and Housing 2016 Destination zone - Journey to work by distance

<sup>3</sup> TAFE NSW St George Campus 2018 Enrolments by Postcode

<sup>4</sup> Australian Bureau of Statistics Census of Population and Housing 2016 Destination zone - Journey to work by mode



**Figure 5:** Sydney's population within 30 minutes of Kogarah Strategic Centre AM Peak (TfNSW, 2019)



## Walking

Between 2010 and 2017, the Kogarah Collaboration Area saw a lower number of kilometres walked per dwelling compared to averages for the South District, Eastern City District and Greater Sydney.<sup>5</sup> This number is declining, indicating that fewer people may be walking, or people are walking shorter distances.

Several factors discourage walking within the Collaboration Area at present, including:

- a poor pedestrian environment characterised by a lack of quality public spaces and low-quality pedestrian crossings and footpaths
- high traffic speeds and complex intersections on main roads, leading to concerns with pedestrian safety
- lack of wayfinding compounded by discontinued sight lines
- traffic noise and pollution
- urban structure including long blocks and large distances between road crossings points, particularly moving east-west across major corridors

However, in areas where streets are closed to pedestrians and sheltered from surrounding traffic, street life is vibrant and pedestrian space is well used, as is the case in King Street shown in Figure 6.

New spaces that are pedestrian priority will support revitalisation in the area including around the future Kogarah Station's transport interchange to support the influx in transport patrons. Similarly, future upgrades of the Rockdale and Kogarah Stations could address the north south barriers of the train line through better station design, interfaces and links across the corridor for pedestrians

Opportunities to deliver improved pedestrian links to provide seamless connectivity in and around the precinct and to other areas have also been identified through:

- Master Plans for the Rockdale Town Centre and parts of Kogarah
- St George Hospital master plan
- using the T4 Eastern Suburbs & Illawarra train line corridor as a Green Grid link is also discussed in the [Sustainability Chapter](#).
- improving Keats Avenue as a key north-south walking connection between Rockdale and Kogarah linking to the Muddy Creek Channel.

**Figure 6:** King Street, Rockdale Town Centre (GSC, 2019)



<sup>5</sup> Kinesis CCAP City Platform Journey to work data and dwelling numbers

Kogarah Town Centre's main streets, highways and corridors interface over council boundaries and with State-managed roads. Complex governance arrangements can be addressed through a joint approach to key streets and corridors that draws on the Movement and Place Framework for the Collaboration Area (See [Appendix 2](#)).

## Cycling

Cycling infrastructure is currently limited, disconnected and low quality. It is not well integrated across council boundaries, which limits access between the centres, and to open space and the coastline. The most direct link between Rockdale and Kogarah town centres is the Princes Highway, a hostile environment for pedestrians and cyclists. Concerns around safety and lack of facilities dissuades students using cycling as a mode of transport.

New or enhanced cycling infrastructure is proposed under the following projects:

- Kogarah North and Rockdale Town Centre master plans
- Bayside Council's draft Bike Plan
- TfNSW's Principal Bicycle Network (PBN) to connect to other major regional nodes
- concept designs for the M6 Stage 1 show a new shared cycle path, pedestrian pathways, boardwalk and grade separated connection over President Avenue
- a master plan to rehabilitate the Muddy Creek open and provide a walking and cycling link alongside the channel

There are opportunities to work with TAFE NSW, Schools – including the Kogarah Cluster Group, a group of school principals in the Kogarah Town Centre - and businesses in the area, to encourage walking and cycling to schools and work as an alternate mode of transport.

## Public transport

Public transport accounts for a small but growing proportion of transport within the Collaboration Area. In 2016 only 16 per cent of journeys to work by residents in the Collaboration Area were by bus or train; of which 15 per cent were by train.<sup>6</sup> Just twenty-eight per cent of all kilometres travelled in 2015-16 in the Collaboration Area were by bus or train.<sup>7</sup>

There are limited rail and bus links to other employment centres including Parramatta, Bankstown and the Randwick Health and Education Precinct, which has strong linkages to the UNSW St George and Sutherland Clinical School.

Demand for **train travel** is high, with Kogarah identified as the 19th busiest station in the Sydney Trains network in the AM peak in 2014.<sup>8</sup> The number of kilometres travelled by train per dwelling in the Collaboration Area is growing, with a more significant increase (29 per cent) in the number of kilometres travelled by train between 2014 and 2015.<sup>9</sup> 83 per cent of workers who commute from Kogarah to the Sydney CBD for work do so by train.<sup>10</sup>

While the Collaboration Area is close to Sydney Airport, the airport station access fee limits the appeal of travelling there by train.

**Train travel** on the T4 Eastern Suburbs & Illawarra train line is affected by:

- congestion due to population growth outside the Collaboration Area, including at Wolli Creek and in the Sutherland Shire. The line operates at capacity between Bondi Junction and Wolli Creek.
- the track bottleneck between Sutherland and Hurstville, which is currently considered the most significant network bottleneck on Sydney's suburban rail network, limits service frequencies.
- the 2013 timetable changes, which had a number of impacts including reduced service frequencies. These changes were focused on benefits for users beyond Kogarah including an

<sup>6</sup> Australian Bureau of Statistics Census of Population and Housing 2016 destination zone - journey to work by mode

<sup>7</sup> Kinesis CCAP City Platform

<sup>8</sup> TfNSW Bureau of Transport Statistics *Train Statistics 2014* p.42

<sup>9</sup> Kinesis CCAP City Platform

<sup>10</sup> TfNSW Bureau of Transport Statistics *Train Statistics 2014* p.22



extended peak period and reduced peak period crowding on trains.

Demand for train services to and from the Collaboration Area as jobs and student places increase will require a review of service frequency in peak periods, infrastructure investment to increase service frequencies at Kogarah and Rockdale, and alternative public transport services.

The NSW Government's \$831 million digital signalling trial, which aims to increase line capacity, and the More Trains, More Services program will address these issues by improving capacity on the T4 Eastern Suburbs & Illawarra Line through increased frequency of services. This will enhance Kogarah's access and strengthen relationships with other economic centres.

**Bus services**, running along a few main streets, link to many destinations, with passengers entering the Collaboration Area primarily originating from Brighton Le Sands, Bexley, San Souci, Beverley Park, Monterey, Hurstville, Mascot, Ramsgate Beach, Caringbah and Ramsgate.<sup>11</sup> Demand for bus services from the south into Kogarah is creating capacity issues, and bus reliability is affected by:

- low travel speeds at major intersections
- major infrastructure corridors and challenging crossing points, which affect bus manoeuvring

Interchange between trains and buses is focused on Rockdale, at the dedicated bus interchange on both sides of the station. Kogarah Station will be a future key interchange with buses, mass transit and heavy rail, creating opportunities for better access to the rest of Greater Sydney.

St George Community Transport commenced a grant-funded trial shuttle bus in February 2019. This connects to key services, stations, hospitals and aged care facilities in the area and connects Hurstville, Kogarah and Rockdale. The trial is inhibited by the limited number of locations where the bus can stop legally for passengers to board and alight.

A review of the bus network, interchanges and stopping locations will ensure services cater to

current and future demand and can support Kogarah Station as it evolves into a transport interchange and destination with efficient connections.

### Private vehicles and parking

People residing in the area have low car ownership and low and declining private vehicle use. For example, the number of kilometres travelled per dwelling by private car as a passenger and driver declined between 2010 and 2017.

Average car use is 47 per cent less than the Greater Sydney average, 46 per cent less than the South District average and slightly lower than the Eastern City District average.

Car use is particularly low in areas adjacent to the T4 Eastern Suburbs & Illawarra train line and stations. In 2016-17, car ownership in the Collaboration Area averaged 1.6 cars per dwelling. It has been consistently lower than the Greater Sydney and South District average and slightly higher than the Eastern City District.

Major road-based movement corridors bisect the Collaboration Area, including the Princes Highway which services about 40,000 vehicles a day. Future road-based projects will affect vehicle congestion, movement and road corridor character. These projects include:

- The **M6 Stage 1** which aims to link the new M5 to Kogarah via a twin tunnel. This project will redirect road traffic and freight underground. Early studies show it could reduce vehicle movements in segments of the Princes Highway north of President Avenue by around five per cent<sup>12</sup> and reduce the number of trucks on surface roads by more than 2,000 a day by redirecting them into the tunnel.<sup>13</sup>
- TfNSW's **Road Network Plan for the Princes Highway** will guide the future character of this corridor and prioritise works for the short, medium and long term.

The presence of these major road corridors impacts casualty crash rates, which are above average. This is linked to high pedestrian traffic, unsafe crossings

<sup>11</sup> TfNSW 2016 Opal Trip counts – Buses

<sup>12</sup> RMS F6 Stage 1 *New M5 Motorway at Arncliffe to President Avenue at Kogarah Environmental Impact Statement* October 2018 Chapter 8 p78

<sup>13</sup> RMS F6 Stage 1 *New Motorway at Arncliffe to President Avenue at Kogarah Project Overview* June 2018 p3

**Figure 7:** Connectivity opportunities and challenges for the Collaboration Area



### Kogarah Collaboration Area

#### Connectivity

##### Opportunities

- Future mass transit
- Improved service frequency on train line
- St George Community Shuttle Bus Route + Stops
- Reduced vehicle movements
- New walking, cycling and green grid links



Major transport interchange



Strong street and lanes network



Muddy Creek channel

##### Challenges

- Busy roads
- Increased vehicle movements
- Challenging intersections and crossings
- <--> Distance between crossing points



and tensions between vehicles and pedestrians in and around major transport nodes and town centres.

The redirection of vehicle movements enables change in character of existing movement corridors into places for people, space to promote alternative modes of transport and ability to address safety issues. It will reduce noise and emissions associated with vehicles. However, tunnel related pollution management may create lower air quality for the Collaboration Area in certain areas.

Limited commuter parking near Rockdale Town Centre causes road congestion and public safety issues, and park and ride facilities at Kogarah Station are well utilised. A precinct-wide parking strategy for parking will help to prioritise walking and cycling in the town centres by identifying parking demand. Expected influence of emerging technology such as autonomous vehicles, car parking and car sharing can promote a shift away from private car use and aid prioritisation of active connections.

## Freight

Road and rail freight routes traverse the Collaboration Area. The future M6 Stage 1 will become the primary freight route. Until then, the Princes Highway, though defined as a secondary freight route, is currently the most important freight corridor for the area. Rocky Point Road, President Avenue and Bay Street are tertiary freight routes and all local streets can accommodate local freight services.

The T4 Eastern Suburbs & Illawarra train line is part of the rail freight network that connects Port Kembla and the Illawarra to the Sydney Rail Freight Network. This function will continue.

Less freight, vehicle volumes and noise, combined with public space improvements, better public transport and road space reallocation to walking, cycling and public transport will help to create more attractive local places on several streets and in local centres.

## Digital connectivity

Current digital connectivity needs to be improved to enable a high performing health, education and wellness precinct due to lack of appropriate digital infrastructure. Projects are underway to address digital connectivity including:

- the rollout of the NBN - anticipated to arrive in the Collaboration Area between January and June 2020.
- public wi-fi - available at Rockdale Library, King Street Place, Kogarah Library and Kogarah Square.
- the delivery of the ChillOut Hub on Belgrave Street, Kogarah including Wi-fi, smart furniture and charging points

Bayside and Georges River Council's planning will create enhanced digital connectivity through broader public wi-fi capability, sustainability programs driven through data analytics, enhanced online and smartphone services and community safety programs supported by electronics.<sup>14 15</sup>


However, investment in high speed fibre and advanced wireless internet infrastructure is needed to support innovation, a digitally collaborative culture and a technology-enabled precinct.

<sup>14</sup> Georges River Council *Georges River Council Discovery Paper* 2019

<sup>15</sup> Bayside Council *Bayside Council Digital Strategy* 2019

## 6.2 Connectivity Priorities and Actions

The following priorities and actions underpin the vision for the Kogarah Collaboration Area, while also giving effect to *A Metropolis of Three Cities* and the district plans (including planning priorities and actions). Note shortened terms are listed on page 2.


<b>Priority 1</b> Create a transport network that meets immediate and future needs.		
<b>Outcome</b> Transport sufficiently services the needs of the area and supports planning for future growth.		
 <b>Actions</b>	<b>Lead</b>	<b>Partners</b>
<b>Action 1:</b> Review how existing transport networks service Kogarah Collaboration Area, including service frequency in peaks, and the ability to provide local access to jobs to meet strategic targets.	TfNSW	BC, GRC
<b>Action 2:</b> Investigate a future network of Rapid Bus Lines, better service frequencies and mass transit links from Parramatta to Kogarah, Randwick to Kogarah and Kogarah to Miranda.	TfNSW	BC, GRC
<b>Action 3:</b> Develop a place-based integrated transport strategy that includes a funding and implementation plan	TfNSW	BC, GRC, DPIE – PDPS
<b>Action 4:</b> Identify and investigate how NSW Government-owned land can be used to build connections.	BC, GRC, TfNSW	DoE, TAFE NSW, SESLHD, DPIE – PDPS
<b>Action 5:</b> Initiate projects to encourage walking and cycling with schools and major employers.	TfNSW, DoE, Kogarah Cluster Group	BC, GRC, GANSW, SESLHD, Anchor institutions

**Priority 2**

Provide integrated and connected movement options that balance movement and place

**Outcome**

People have several movement options to connect to, from and within the Collaboration Area..


 Actions	Lead	Partners
<b>Action 6:</b> Use the Movement and Place framework to achieve the desired future character for streets and places in the Collaboration Area	BC, GRC, TfNSW, GANSW, DPIE - PDPS	
<b>Action 7:</b> Revitalise the Muddy Creek corridor and other local creeks to: <ul style="list-style-type: none"> <li>• improve walking and cycling between Rockdale and Kogarah town centres</li> <li>• improve the interface with the creek line</li> <li>• create new open space and seamless connections between key places</li> <li>• create an east-west Green Grid connection linking major open spaces</li> </ul>	BC, GRC, Sydney Water, TfNSW	DPIE- PDPS
<b>Action 8:</b> Refine and plan for the Green Grid in the Collaboration Area	BC, GRC, TfNSW, DPIE - PDPS	GANSW, GSC, Sydney Water

**Priority 3**

Enable digital connections to support knowledge-intensive jobs and potential for innovation

**Outcome**

With an increase in knowledge-intensive jobs, individuals and organisations can easily connect locally and internationally.

 Actions	Lead	Partners
<b>Action 9:</b> Use partnerships and technology to build connections and develop a digital data connectivity strategy.	BC, GRC	NBN, Anchor institutions, Local businesses, 5G network providers, TfNSW, NSW Treasury, DPIE

## 7

# Liveability

## 7.1 Analysis of opportunities and challenges

### Dual centres and established character

The Collaboration Area is supported by the town centres of Rockdale and Kogarah. Where Rockdale Town Centre provides civic services, Kogarah Town Centre has a focus on health, knowledge and wellness jobs and services. Future planning of these centres needs to ensure that uses and activities complement each other to support residents, students, workers, visitors, institutions and businesses.

Rectilinear street networks and rear laneways in Kogarah and Rockdale Town Centres support local access and movement within the precinct. Outside of these town centres, the Collaboration Area's rich history contributes to its character. Many smaller neighbourhoods have their own unique character and structure which can be leveraged and strengthened to provide a unique experience of the place and reinforce Kogarah as a destination.

### Changing community demographics

The Collaboration Area community is changing. Families with children are forecast to remain the dominant household type in Kogarah. However, single person households are expected to see the most growth.<sup>16</sup> New housing in Kogarah North is expected to attract predominantly young singles and couples (people aged 18 to 29). As a result, the number of births in the area is expected to increase.<sup>17</sup>

The community is culturally diverse, with 41% of the population born overseas in 2016<sup>18</sup>, a decrease from 44% in 2011. China and Nepal are the largest countries of origin for the Collaboration Area's migrant population.

The Collaboration Area's resident population is estimated to grow from 67,887<sup>19</sup> to 92,644 residents by 2036.<sup>20</sup> The future community is projected to comprise a diverse cultural mix, young population, non-resident workforce and ageing population.

### Social infrastructure

The growing and changing Collaboration Area community will require a range of hard and soft social infrastructure. Housing diversity and affordability, activated Town Centres, green urban spaces and places for culture, entertainment, and recreation underpin quality of life.

New immigrant communities need welcoming and accessible services and a range of spaces for people to connect and feel included in their community.<sup>21</sup> Services and facilities for students and workers are needed to align with the area's 24-hour hospital activities.

Providing social infrastructure in the area is complex given the different jurisdictions and regulatory restrictions. The Collaboration Area provides an opportunity to address these complex governance arrangements to ensure that infrastructure meets the needs of the community.

<sup>16</sup> Profile .id *Forecast household types maps 2016 to 2036 percent change and 2036 number*

<sup>17</sup> Georges River Council *Draft Evidence Base for Local Housing Strategy* prepared by ID January 2019

<sup>18</sup> Australian Bureau of Statistics *Census of Population and Housing 2016, 2011 Census of Population and Housing, Population by place of usual residence*

<sup>19</sup> Australian Bureau of Statistics *Census of Population and Housing, 2011. SA2 Level data including Bexley, Kogarah, Kogarah Bay- Carlton-Allawah and Rockdale-Banksia.*

<sup>20</sup> Transport for NSW *Employment Projections 2011-2056. SA2 level data including Bexley, Kogarah, Kogarah Bay- Carlton-Allawah and Rockdale-Banksia.*

<sup>21</sup> Georges River Council *Draft Open Space, Recreation and Community Facilities Strategy 2018*

## Cultural infrastructure

Create NSW's cultural infrastructure mapping shows a limited number of cultural infrastructure assets in Kogarah and Rockdale. However, Georges River Council's Cultural Strategy identified 51 sites of cultural activity (refer to Figure 8) in the area including:

- **Kogarah School of Arts** used for theatrical performances, concerts, balls and events, art and education classes, community workshops and meetings, as well as St George Art Society exhibitions.
- **Kogarah Library and the St George Community Centre** host curated collections, programs and events both during the day and after hours.
- **Rockdale Town Hall**, a performing arts and theatre space.
- **The Guild Theatre**, a performing arts theatre with a community theatre group.
- **Shopfront Arts in Carlton** is the only dedicated youth-led arts organisation in southern Sydney and Illawarra region. It is expanding to become a significant youth cultural precinct.

Developing cultural spaces and clustering creative activities is needed. Identifying opportunities to embed arts and culture into local government assets, NSW Government properties and in public spaces can expand cultural infrastructure in the area and respond changing demographics to ensure that culture flourishes.

## Sport and recreational infrastructure

The dispersion and availability of community sport infrastructure is limited across the Collaboration Area. Rockdale Wetlands Corridor is the primary source of multiple sporting and recreational facilities including baseball, a PCYC, cricket nets, sporting fields, tennis courts and multi-use courts. These facilities have very high usage.

Georges River Council's Draft **Jubilee Stadium Precinct** Master Plan is at business case stage. It recommends the redevelopment and enhancement of the site to expand fitness and wellness offerings. It also explores 24-hour child care and parking for key workers and visitors of the Collaboration Area.

## Schools

There are many schools in the area which have varying utilisation. The 12 schools are in the area which provide education for approximately 4,000 students including:

- six high schools, including a selective school for girls, two single sex public high schools and an Orthodox secondary College for boys
- four primary schools
- one K -12 Boys Christian College and;
- a school for specific purposes.

High school catchments go beyond the Collaboration Area, meaning the capacity of these schools is mixed. Kogarah High School is at capacity while Moorefield Girls and James Cook High remain under capacity.

Kogarah's status as a strategic centre will place additional pressure on these schools, requiring detailed asset planning to take place to cater to change and demand to ensure that this comprehensive education offering is maintained.

Some Schools have sportsfields and playgrounds that could be used to supplement open space access in the area.



**Figure 8:** Netstrata Jubilee Stadium (Georges River Council, 2019)



**Figure 9:** Kogarah School of Arts. (Georges River Council, 2019)



## Retail and shopping

The retail offering in the area is limited. Shopping and retail services are provided in the Collaboration Area at:

- **Kogarah Shopping Centre** within Kogarah Station provides a local supermarket and specialty stores
- **Rockdale Plaza** is the primary supermarket and specialty retail in Rockdale
- fine grain shops line **Railway Parade** along the train line in Kogarah Town Centre and along the **Princes Highway** in Rockdale Town Centre.

Shops lining the Princes Highway make a limited contribution to the local economy due to the highway's high vehicle volumes and freight noise.

The wide road corridor limits connectivity between shops on each side (Refer to Figure 10).

Further, the limited night-time activity and government services do not align with the 24-hour nature of a health and tertiary education services in the area. Night life in town centres could be expanded and laneways activated to provide new places for people and night time activities, enhancing the vibrancy of the area. This can also contribute to increased passive surveillance and safety in the area.

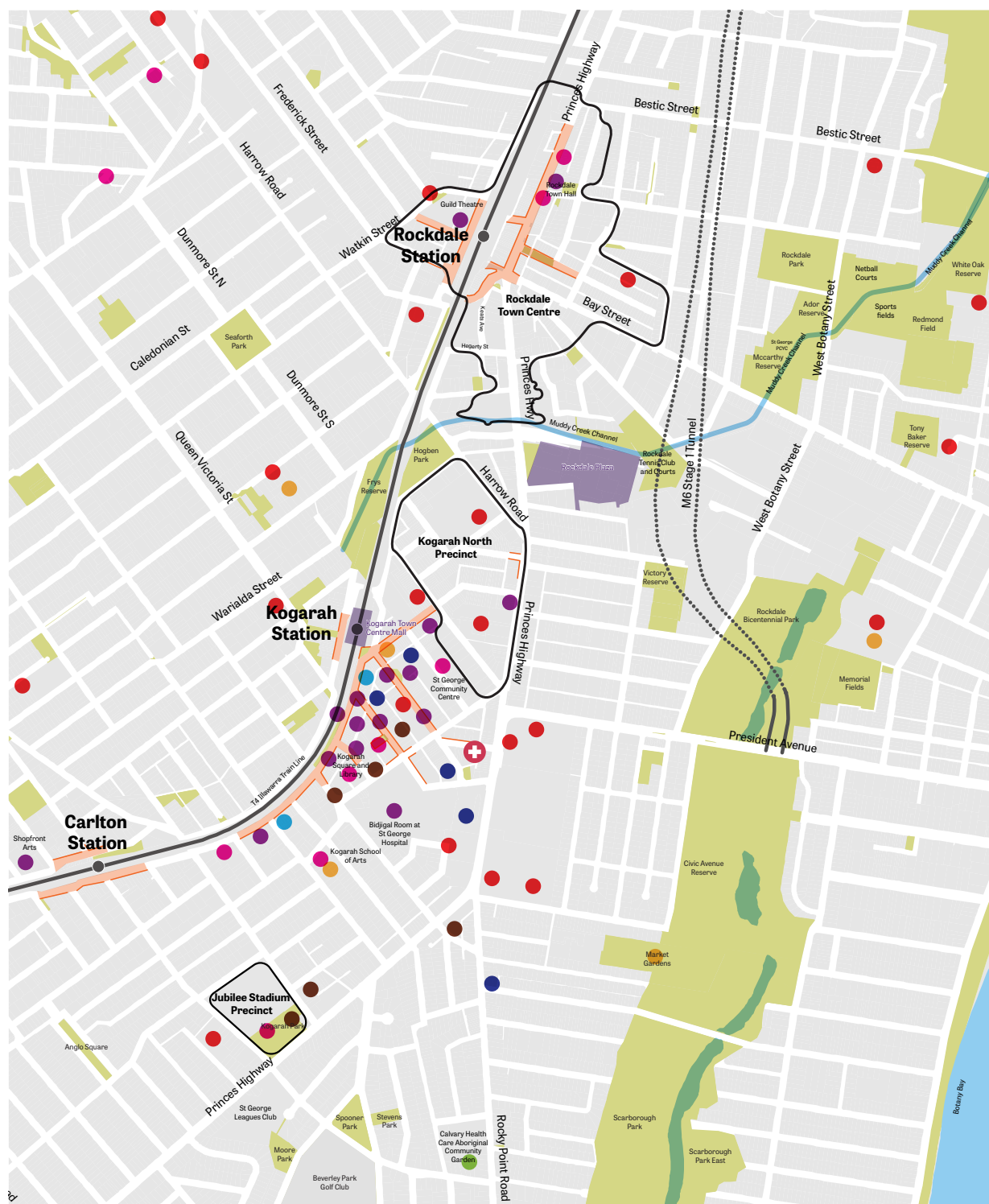
Future upgrades of the Jubilee Stadium could improve the attractiveness of the precinct more and provide additional food and beverage options.

**Figure 10:** Interface of Rockdale Town Centre with the Princes Highway (GSC, 2019)





**Figure 11:** Infrastructure to support great places in the Collaboration Area (GSC, 2019)



### Kogarah Collaboration Area Infrastructure to support great places

- |                                    |                              |                             |
|------------------------------------|------------------------------|-----------------------------|
| ● Art, Culture, performing arts    | ● Religious/place of worship | ■ Active Frontages          |
| ● Education                        | ● Community garden           | ■ Major shopping and retail |
| ● Community facilities and library | ● Heritage items             | ■ Masterplanned Precincts   |
| ● Music                            | ● Innovation                 | ● Medi-Stay Accommodation   |

## Housing and accommodation

Housing and accommodation requirements for a health, knowledge and wellness precinct are varied. For visitors, the length of stay fluctuates, and housing offering needs to meet the needs of the changing demographic. This creates demand for a range of accommodation types. Councils' housing strategies will, in detail, determine the type of housing needed to suit the changing population into the future.

The Collaboration Area is experiencing a shift away from traditional lower density housing types and changing demographics. For example, in 2016, 61 per cent of dwellings were apartments in a building with more than four storeys, 26 per cent were in apartment buildings less than four storeys, townhouses, semi-detached or terraces and 25 per cent were detached houses.<sup>22</sup> This is linked to high proportions of single person households (18 per cent).<sup>23</sup>

Rental stress and lack of **affordable housing** is an issue for very low-income households and residents. Lack of specific policies or guidelines make delivery of assets difficult. Job targets further prompt a need for housing for key workers.<sup>24</sup> Mechanisms to deliver affordable housing need to be investigated. Local not-for-profit and community-based organisations are investigating opportunities in the area.

NSW Land and Housing Corporation own only a few **social housing** assets in the area. This is an historical trend; with former Kogarah LGA having the lowest percentage of social housing of all LGAs in Greater Sydney. Housing for females over 55, one-bedroom apartments and accessible accommodation have been identified as areas of need by LAHC. Partnering with other organisations that have land in the area will create opportunities to deliver new social housing assets.

Demand for **short-term accommodation** is created by specialised trauma and acute services, visitors for conferences and business-related travel. Medi-hotel accommodation is emerging in Kogarah Town Centre and short-term accommodation options are increasing in Rockdale Town Centre. Student accommodation is required to support the TAFE NSW campus and future enhanced tertiary presence in the area.

The potential redevelopment of the **Netstrata Jubilee Stadium** provides opportunities for a hotel and/or serviced apartments and conference facilities for small conventions, elite training camps or intercity and interstate visitors to events at the stadium.

## Movement and place

As part of the Collaboration Areas process, the stakeholder group piloted and developed the Movement and Place Framework, applying it at a place, precinct and corridor level for key places, neighbourhoods and precincts (Figure 12). This builds on work already undertaken by Council and will evolve as projects are triggered across the Collaboration Area.

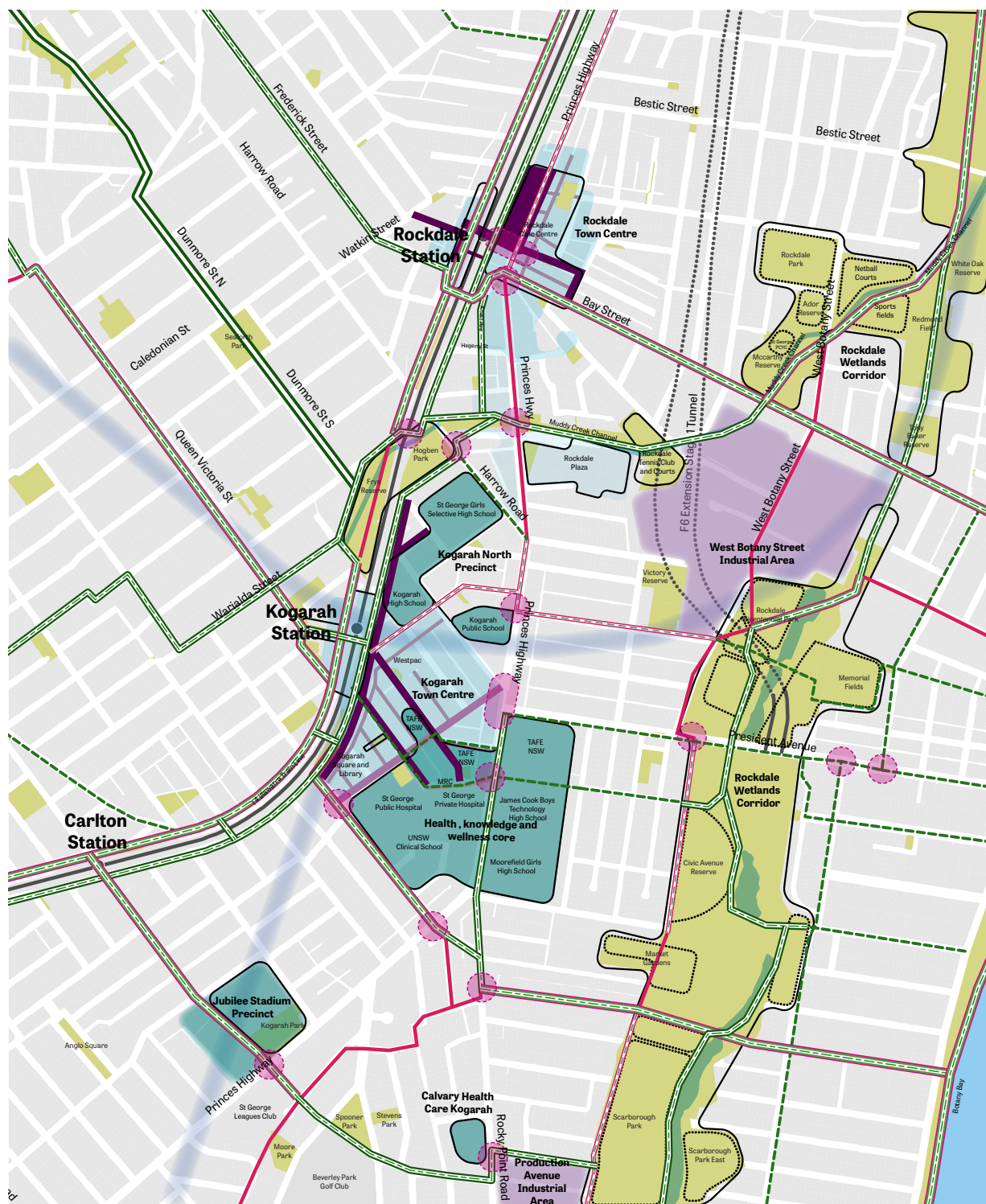
This framework consists of an opportunities and challenges map, agreed desired future character for streets and places, and challenges and barriers for delivery. It assigns actions to various agencies. More detail is available in [Appendix 2](#).

<sup>22</sup> Australian Bureau of Statistics *Census of Population and Housing 2016, Census of Population of Housing 2011, Dwellings by place of enumeration by dwelling structure*

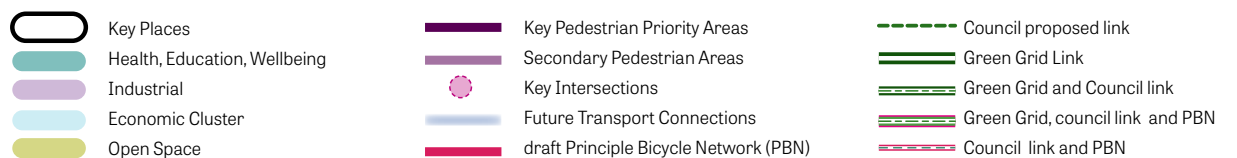
<sup>23</sup> Australian Bureau of Statistics *Census of Population and Housing 2016, Census of Population of Housing 2011, Dwellings by place of usual residence by dwelling structure*

<sup>24</sup> Georges River Council *Commercial Centres Strategy*, 2019, p12

Figure 12: (GSC, 2019)



### Kogarah Collaboration Area draft Movement and Place Framework



## 7.2 Liveability priorities and actions

The following priorities and actions underpin the vision for the Kogarah Collaboration Area, while also giving effect to *A Metropolis of Three Cities* and the district plans (including planning priorities and actions) and the Premier's Priorities.

### Priority 4

Plan for housing and accommodation for residents, workers and visitors to support economic activity

#### Outcome

The Collaboration Area includes a range of housing at a variety of price points and accommodation for short, medium and long-term stays



#### Actions

**Action 10:** Investigate and identify locations for student and affordable housing, short-term accommodation and serviced apartments close to transport

#### Lead

BC, GRC, DPIE

#### Partners

St George Community Housing, Landowners, Community housing providers, TfNSW

### Priority 5

Encourage a flourishing culture and night-time economy

#### Outcome

The vibrant culture and the night-time activities provide a diversity of options for residents, visitors and workers



#### Actions

**Action 11:** Develop a Cultural Infrastructure Strategy and Cultural Program for the Collaboration Area focused on:

- Kogarah Town Centre
- Rockdale Town Centre
- Jubilee Stadium Precinct
- Areas around major transport nodes, interchanges, hospitals and anchor institutions
- Shopfront Youth Arts Precinct

#### Lead

BC, GRC

#### Partners

HI, SINSW, TAFE NSW, UNSW, TfNSW, NSW Police, Create NSW

**Action 12:** Develop a night-time economy strategy for the Collaboration Area

BC, GRC

FACS, SESLHD, DoE, Office of Sport, TfNSW, DPIE – PDPS, Create NSW, Small Business Commission, St George Business Chamber, Bayside Business Chamber




**Priority 6**

Create high quality public spaces and facilities that focus on wellness

**Outcome**

The area's high-quality public spaces and facilities build a sense of wellbeing and wellness.

 Actions	Lead	Partners
<b>Action 13:</b> Develop a Collaboration Area Urban Design Framework to provide a vision and coordinate actions for public spaces in the Collaboration Area that considers: <ul style="list-style-type: none"> <li>• the movement and place framework</li> <li>• government owned land</li> <li>• the Green Grid</li> <li>• resilience initiatives</li> <li>• precinct vision, brand and marketing</li> <li>• car parking</li> <li>• EV charging stations</li> </ul>	BC, GRC	GANSW, DPIE-PDPS
<b>Action 14:</b> Develop a master plan and public domain plan for the Collaboration Area that emphasises wellbeing, amenity, safety and safe crossings, cultural infrastructure and activity, with costing and funding plan.	BC, GRC	TfNSW (M6 Team) Sydney Metro (into the future), DPIE-PDPS Group, GANSW, HI
<b>Action 15:</b> Investigate opportunities for joint or shared use, multi-use spaces, sporting facilities and social infrastructure in existing and future spaces.	BC, GRC	SINNSW, Create NSW, TAFE NSW, UNSW, TfNSW, Sydney Metro, SESLHD, Office of Sport, DPIE – PDPS, Kogarah Cluster Group

## 8

# Productivity

## 8.1 Analysis of opportunities and challenges

### Economic profile and evolution

The Collaboration Area plays a significant role in the economy, contributing \$3.5 billion to Australia's GDP and provides employment to 21,209 workers<sup>25</sup>.

The Kogarah Strategic Centre is a significant contributor to jobs and the economy for the South District with 11,800 jobs estimated in the area in 2016.<sup>26</sup> Between 2007 and 2016, the number of jobs in the Kogarah Collaboration Area increased 2.4 per cent on average each year. On these trends, the area will accommodate around 30,100 jobs and contribute \$5.5 billion to the economy by 2036.

Into the future, Kogarah will grow to become a stronger centre in the South District that leverages its future connectivity.

The Collaboration Area's businesses and institutions are large contributors to employment and provide a range of jobs. However, the area's main strengths lie in its health, knowledge and wellness jobs. For example, in 2016, hospitals, finance and medical and other health care services were the top three industries in the area.

Figure 13 reflects a specialisation in health care and social assistance where the growth of jobs in this sector is outpacing the Greater Sydney average. It also reflects an increase in the number of people working in construction, financial and insurance services, professional, scientific and technical services and healthcare and social assistance. Employment in manufacturing and retail trade has declined, in line with trends across Greater Sydney.

Over time, changes in employment, business and commercial activities have directly influenced the Collaboration Area. The key changes affecting the area over the past 12 years is illustrated in Figure 14.

The existing cluster of health, knowledge and wellness industries in the Kogarah Town Centre provide a significant source of employment and add \$1.4 billion to the local economy.<sup>27</sup>

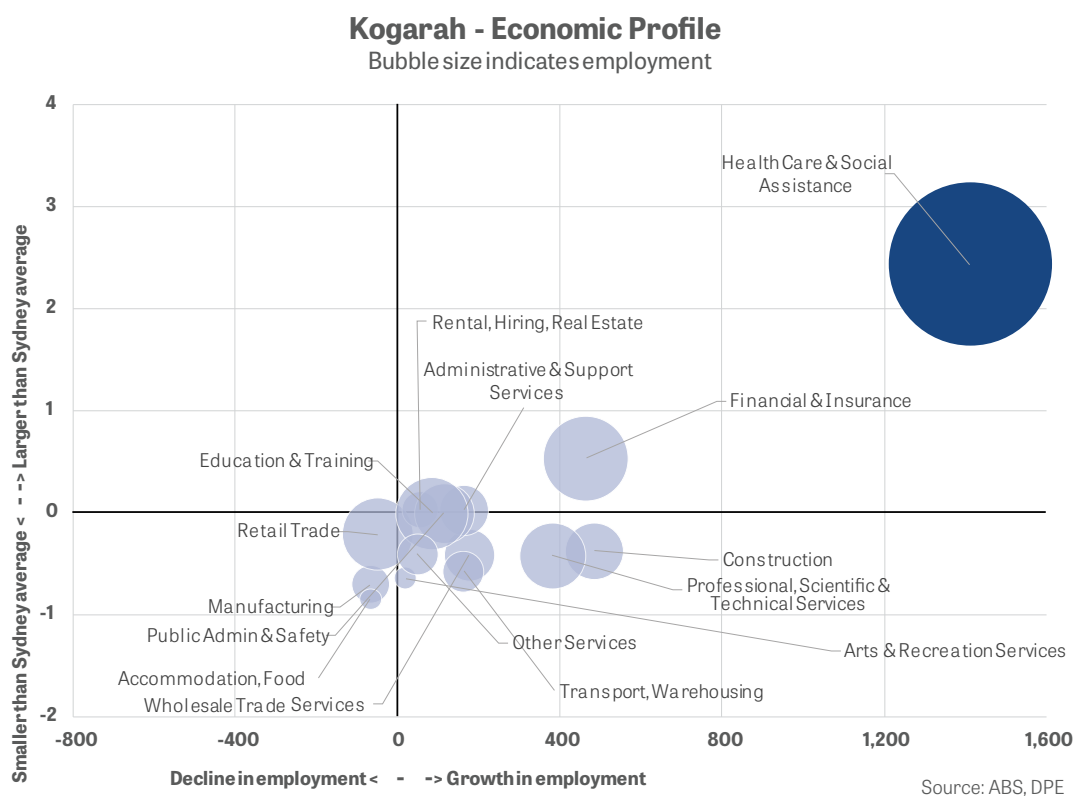
Whilst there is an existing cluster of health services in the area, the absence of a large research and university presence means the area is currently identified as in the 'cluster' phase on the maturity pathway. Attracting an enhanced tertiary presence to the area and leveraging the health, knowledge and wellness assets in the area will enable the precinct to evolve and mature over time.

<sup>25</sup> PwC GEM modelling tool 2019

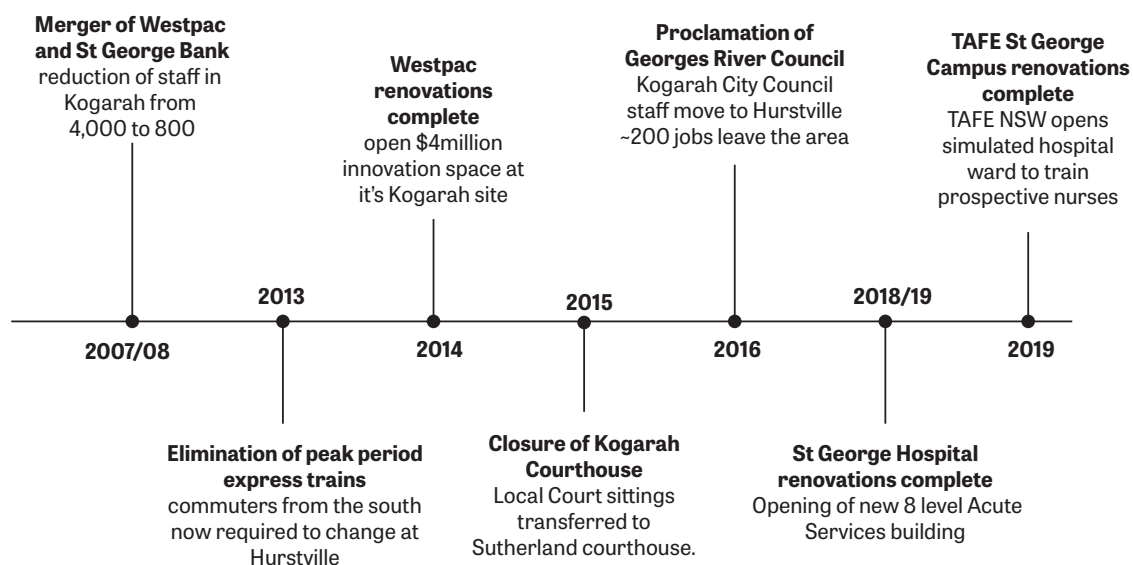
<sup>26</sup> Greater Sydney Commission South District Plan March 2018

<sup>27</sup> .id Profile, Georges River Council and Bayside Council Economic Profile 2016

**Figure 13:** Industry Specialisations and changes in employment in the Kogarah Collaboration Area compared to Greater Sydney 2011 - 2016 (DPIE and ABS, 2016)



**Figure 14:** Changes affecting productivity in the Kogarah Collaboration Area (GSC, 2019)



Westpac Bank's headquarters located on Montgomery Street in Kogarah Town Centre, is a major contributor to the precinct's economy and provides many of the jobs in the financial services sector. As an important anchor tenant for the area, its presence in Kogarah should be retained to strengthen the areas economic resilience.

Baseline and higher job targets (16,000 and 20,500 respectively) are identified by the *South District Plan* for Kogarah strategic centre and include employment-generating uses in the area. A proportion of these targets will be provided within the Kogarah Town Centre, which currently has 163,529sqm floor space and 50 vacant commercial premises<sup>28</sup>.

To meet employment targets, the Kogarah Town Centre will accommodate between 448,360 and 504,602sqm total employment floor space.<sup>29</sup> Current planning controls do not enable this to be delivered. Sites will need to be protected for future commercial development and enable jobs creation to support the evolution of the precinct and in line with its vision.

Whilst specialisations are emerging through health and financial services sectors and research, innovation and wellness activities, the complex interrelationships between the different sectors and activities are not currently known.

Revealing and leveraging the alignment and complementary offering of health services and other specialisations in the Collaboration Area will help to create a unique identity and economic offering. Creating unified branding and narrative for the health, knowledge and wellness precinct will further elevate the area and it's vision. This will build on Georges River Council's Kogarah Investment Attraction Strategy, which draws on Kogarah's strengths and future vision.

## Health and wellness

There are major medical services in the Collaboration Area, some of which are co-located, that provide services to improve population health and community wellbeing. Together create an ecosystem that together support a health and wellness precinct. These anchor institutions include:

- **St George Hospital** - a major teaching hospital of the University of NSW and is a tertiary referral centre providing over 3,000 jobs and is a Level 1 Trauma Centre for SESLHD.
- **St George Private Hospital** - adjacent to the public hospital, is a 280-bed facility and one of the largest and most comprehensive private hospitals in Australia with around 1,000 staff.
- **Calvary Health Care Kogarah** - provides specialist palliative care and rehabilitation services and is one of the largest sub-acute hospitals in NSW with around 500 staff members serving around 12,500 patients a year.
- **Wesley Hospital Kogarah** - a not-for-profit hospital that focuses on treating drug and alcohol, mental health and eating disorders and employs approximately 50 people. The hospital primarily provides services to the local community.

Previous and future investment is identified for many of these institutions. The primary purpose of investment is to meet existing demand and includes major upgrades to existing assets and sites.

<sup>28</sup> Georges River Council *Draft Commercial Centres Strategy - Part 1 Centres Analysis*, 2019

<sup>29</sup> Georges River Council *Draft Commercial Centres Strategy - Part 1 Centres Analysis*, 2019

The St George hospital has been upgraded over the last five years, and future upgrades are in the pipeline:

- \$43.7 million for a new emergency department, opened in October 2014
- \$277 million expansion which included an eight-level acute services building, completed in 2019.
- \$385 million planned future investment in an ambulatory care unit, outpatient and day surgery services, day rehabilitation unit, increased sub-acute inpatient beds and a hub for community health and home-based services on the existing campus footprint.

A \$25 million redevelopment is currently underway at St George Private Hospital, including a footbridge that links the existing main building to a new facility on South Street.

Wesley Hospital Kogarah are looking to expand but their current site is landlocked and is constrained by planning controls. Co-location and integration on other sites in the area could enable its further expansion.

These major medical services are supported by an **ecosystem of allied health, wellbeing and fitness facilities**. These include Netstrata Jubilee Stadium, physiotherapy and sports medicine, gyms, yoga studios, seniors' fitness and dance classes. Together with major health institutions in the area, they create a strong foundation for a wellness focussed precinct.

**Figure 15:** St George Public Hospital Kogarah (SESLHD, 2019)





## Knowledge

Along with the healthcare and social assistance industry, the professional, scientific and technical services industry is a major employer in the Collaboration Area.<sup>30</sup> The presence of jobs in these sectors is attributed to the Westpac Bank head office on Montgomery Street, research work, and several NSW Government and Council-owned facilities that serve the local community.

Innovation is also emerging through several initiatives across these sectors. The tertiary presence provided by TAFE NSW and UNSW's clinical school contribute to knowledge generation in the precinct.

## Financial and professional services

Jobs in the **Westpac offices** are mainly technology-based, with around 2,500 staff who work flexibly between Kogarah and other Westpac offices including Barangaroo.

The Westpac Kogarah building has adequate infrastructure potential to support additional uses including a newly renovated interior, stand-out atrium to attract businesses and partners, meeting rooms and an auditorium. However, the building has strict building access requirements which limits the ability to provide co-working or collaborative spaces.

**Westpac's innovation space known as 'the Hive'** is in the offices and enables the bank to test and develop ideas for new products and services for its 12 million-plus customers, contributing to the presence of innovation in the Collaboration Area.

**Figure 16:** Westpac's atrium space in St George House on Montgomery Street (HASSALL, 2019)



<sup>30</sup> id Profile, Kogarah Industry Sector of Employment 2016

## Research

While there is no medical research institution in the Collaboration Area, research is emerging through several initiatives and organisations including:

- **The St George & Sutherland Medical Research Foundation (SSMRF)** is an independent, not-for-profit body that raises awareness and funds for research at St George and Sutherland hospitals and new research. The foundation established the Microbiome Research Centre (MRC) in the St George Hospital's Research and Education Building in August 2019, a collaboration between UNSW and SESLHD. It is UNSW-owned and operated with funding provided by SSMRF and SESLHD.
- The **Microbiome Research Centre** itself provides a business model that links all research on campus. A Professor of Medicine and associated research team has been appointed in association with the UNSW. Once fully established, the MRC's research will contribute to at least eight of the nine Australian National Health Priority Areas.<sup>31</sup> With existing research labs in the centre almost at capacity, additional spaces are needed to enhance the research offering in the area. The MRC is an innovator in research as Australia's first research centre dedicated to studying the microbiota and has global relationships.<sup>32</sup>
- The **Research and Education Centre** on South Street Kogarah has purpose-built research laboratories for research into cancer, haematology and immunology.
- SES LHD's investigation of alternative model of care including their **Hospital in the Home Service (HITH)**<sup>33</sup> and telepath opportunities
- **Optimus Clinical Research** undertakes clinical trials for rheumatic diseases.
- The **Clinical Skills Centre** has two simulation rooms, three seminar rooms, a lecture room and a breakout area. It also supports post graduate surgical training.
- A branch of the **Women's Health & Research Institute of Australia** in the Blue Shield Specialist Medical Centre at Kogarah undertakes clinical trials in a number of female related health issues.
- The **Centre for Research in Nursing and Health** in St George Hospital undertakes research around chronic disease management, patient safety and health and cultural diversity.
- the **research centre at Calvary Health Care Kogarah**, is one of four virtual research sites across the Calvary Health network.<sup>34</sup>

This presence of research and innovation offers opportunities to leverage existing and create new local and international partnerships and networks.

Investigating the potential for a medical research institution presence and supporting the existing research currently underway in the area will enable the evolution and maturity of the precinct and foster innovation.

<sup>31</sup> UNSW, Microbiome Research Centre officially opens, 2019

<sup>32</sup> The Leader, Microbiome Research Centre opens at Kogarah, 2019

<sup>33</sup> The Leader, St George Hospital launches The Hospital in the Home (HITH) service for patients, 2019

<sup>34</sup> Calvary Care, Calvary launches the new Palliative and End of life Care Research Institute, 2017

## Education

Alongside the 12 schools in the area, **TAFE NSW St George** provides a tertiary presence across four sites, with over 120 courses offered to around 4,000 students. The main campus is near the public and private hospitals and provides courses across industry areas including as electrotechnology, nursing, aged care and community services, ICT, building and construction, carpentry, business services and adult migrant english program.

Building M on Montgomery Street offers courses in fine arts and graphic design and Building H on Hogben Street is rented out to private enterprise. TAFE NSW St George has a relationship with local high schools to provide technical and vocational education and training (TVET) to students in years 10 to 12. The campus also has a specialist training centre, which includes simulated hospital wards.<sup>35</sup>

Similarly, the **UNSW St George and Sutherland Clinical School** operates at both St George and Sutherland Hospitals. St George Hospital has been a major teaching hospital since 1966. Approximately 300 staff are employed by or formally affiliated with the school. It offers postgraduate research positions in a diverse range of areas including cancer biology, immunology, rheumatology, renal medicine, regenerative medicine, intensive care, microbiome and others.<sup>36</sup> The school is located on the St George Hospital Campus Site within a space owned and managed by the SESLHD.

Whilst TAFE NSW St George and the Clinical School together provide a tertiary presence in the area, establishing a university campus in the Collaboration Area will create jobs and develop tertiary education and research, further establishing the comprehensive education offering in the area.

## Industrial and urban services land

The Collaboration Area has industrial precincts that are well located between Sydney Airport, Port Botany and the Sydney CBD at **Production Avenue** and **West Botany Street**. These areas primarily contribute to the 1,219 Collaboration Area's jobs in the industrial sector in 2016.<sup>37</sup> Jobs have reduced by 27 per cent since 2011, reflecting national trends of the decline in manufacturing.

The relationship between industrial areas and health and knowledge industries could be a foundation for skills development in highly technical sectors. Proximity to the airport could drive the development of an advanced manufacturing and freight and logistics hub in the area. Flexible employment areas for potential research and development or fabrication functions will be valuable to the health, knowledge and wellness core. There may also be opportunities to connect with schools in the area.<sup>38</sup> New industries and businesses attracted to these areas will likely take different forms differ from traditional manufacturers, meaning areas may look and feel more like business parks than industrial developments.<sup>39</sup>

<sup>35</sup> Mark Couré MP, NSW Government Open \$4.2 million Health Training Facility at TAFE NSW St George, 2019

<sup>36</sup> St George & Sutherland Clinical School, About us

<sup>37</sup> Australian Bureau of Statistics Census of Population and Housing 2016, 'Destination Zones - Jobs by Industry Sector'

<sup>38</sup> Georges River Council draft Employment Strategy 2019

<sup>39</sup> Bayside Council Bayside Centres and Employment Lands Strategy Background Paper, prepared by SGS Economics and Planning, May 2019

## 8.2 Productivity priorities and actions

The following priorities and actions underpin the vision for the Kogarah Collaboration Area, while also giving effect to A Metropolis of Three Cities and the district plans (including planning priorities and actions).

### Priority 7

Increase knowledge-intensive jobs and support the area's role as a health, knowledge and wellness precinct

#### Outcome

There are more knowledge-intensive jobs and Kogarah is recognised as a health, knowledge and wellness precinct


 Actions	Lead	Partners
<b>Action 16:</b> Develop a vision, brand and marketing plan that creates an identity for the precinct and promotes the vision for the Collaboration Area	BC, GRC	Business chambers Local businesses Anchor institutions
<b>Action 17:</b> Identify and market areas of specialisation and key differentiators of the health, knowledge and wellness institutions and how they respond to emerging health issues	SESLHD, HI, UNSW, TAFE NSW, DoE, St George Private Hospital, Wesley Hospital Kogarah, Westpac Bank	BC, GRC, Existing private and allied health service providers and businesses
<b>Action 18:</b> Investigate the potential for alternative modes of care to alleviate pressure on health services, including collaboration with public and private hospitals	SESLHD	BC, GRC, Private hospitals
<b>Action 19:</b> Leverage international health and research connections for knowledge sharing, innovation, investment and economic development.	SESLHD, BC, GRC	SSMRF, Medical research institutions, UNSW, NSW Treasury, TAFE NSW
<b>Action 20:</b> Investigate the potential for, and viability of, a medical research institute associated with St George Public Hospital and investigate space for research activities to support the MRC	BC, GRC, SESLHD, SSMRF, UNSW	MRC, Research institutes, NSW Health & Medical Research, TAFE NSW

**Priority 8**

Support the growth of education and next steps to tertiary education

**Outcome**

There is a seamless connection and strong partnership between primary, secondary and tertiary education in the area, and an enhanced tertiary education presence

 Actions	Lead	Partner
<b>Action 21:</b> Leverage partnerships between Kogarah's primary, secondary and tertiary education institutions and encourage education uplift programs	DoE, UNSW, TAFE NSW	NSW Treasury, SSE
<b>Action 22:</b> Explore opportunities for an enhanced tertiary education presence in the Collaboration Area.	BC, GRC	UNSW, Other universities



## 9

# Sustainability

## 9.1 Analysis of opportunities and challenges

### Landscape, biodiversity and waterways

Scenic landscapes, recreational facilities, biodiverse areas, coastline and parklands are nearby the Collaboration Area and contribute to the area's natural environment and the community's wellbeing. These include the Rockdale Wetlands Corridor, Bardwell Valley and Muddy Creek.

The area is framed by many waterways including Botany Bay to the east, the Cooks River to the north and the Georges River to the south. Many of these have poor water quality. Other local waterways traverse the area underground. Several Sydney Water assets that traverse the area have capacity for growth while others need renewal.

These landscape and water assets and facilities contribute to the area's attractiveness and character and create a natural setting fit for a wellness precinct.

**Muddy Creek** is a concrete channelised creek that runs diagonally through the precinct. The channel is fenced with some segments in need of renewal. It currently does not add to the area's attractiveness. Naturalisation of the channel presents an opportunity to address multiple challenges facing the area, including retaining water in the landscape to mitigate urban heat impacts and extending the Green and Blue Grid into the Kogarah Town Centre and creating links to other open spaces and waterways.

Protecting the natural environment and exploring new ways to supply and manage stormwater and wastewater in an integrated, cost effective and sustainable way will improve waterway health. It will also contribute to health of the population.

Enhancing existing biodiversity and reinstating native vegetation will improve longevity of the ecosystem and its ability to adapt and respond to climatic changes. Targeted public tree planting and stronger biodiversity protection in land use planning controls can enhance biodiverse links between natural areas.

### Green Grid

Green Grid connections in the Collaboration Area are identified in the *South and Eastern City District Plans* (see Figure 17). These connections include:

- Rockdale Wetlands Open Space Corridor (priority project)
- T4 Eastern Suburbs & Illawarra train line from Kogarah to Sutherland (project of district importance)

The links need to be refined to align with streets and to reflect local conditions, opportunities and potential for delivery. The development of a finer grain Green Grid that builds on work done in the Kogarah North and the Rockdale Town Centre Master Plans will integrate the walking, cycling and biodiversity network with links to natural assets.

### Urban tree canopy

The suburbs of Kogarah and Rockdale have just 11 to 15 per cent urban tree canopy cover,<sup>40</sup> this is very low when considered against the NSW Government target of 40 per cent cover in Greater Sydney by 2036.<sup>41</sup> The Premier has set a priority to plant one million trees across NSW by 2022 to help achieve this long-term target.

Open spaces, school sites, lower density housing areas and the TAFE Campus on Princes Highway provide higher percentages of urban vegetation. The Kogarah and Rockdale town centres and hospital sites provide less than 10 per cent cover (see Figure 17).<sup>42</sup>

Overhead wires and excessive pruning contribute to the loss of urban tree canopy and limit opportunities for new planting. Increasing the urban tree canopy is challenging as new developments result in canopy loss and large floorplate buildings in centres leave little space for planting.

Investigating multiple opportunities to plant trees, including reallocating road space, car parking, planting trees on private and government-owned land and along active transport routes can assist in increasing urban tree canopy.

### Open space

The provision of open space in Kogarah and Rockdale town centres is low, and residential areas are further than 400-metres of open space<sup>43</sup>. Existing open spaces are small, limiting flexibility and function. Many have low levels of embellishment and do not meet community need. New development places additional pressure on existing spaces, compounding reliance on spaces outside the town centres.

The Rockdale Wetlands Corridor to the east contains recreational and sporting infrastructure. It is difficult to access due to indirect connections, few access points, major north-south infrastructure barriers and poor walking and cycling amenity. Future direction for NSW Government-owned land and the Stage 2 and 3 of the M6 are required to understand the Corridor's future recreational value.

New public spaces, through-site links and upgrades in new precincts or projects are planned through master planned areas. Increasing the number of homes within a 10-minute walk of open space is a Premier's Priority that will improve the quality of, and access to, open space. Council-owned sites, schools and health and education facilities can be used to address this priority. Additional work is required to plan for public spaces into the future to promote amenity, population health and community wellbeing.

40 NSW Department of Planning, Industry and Environment, Five Million Trees for Greater Sydney – Local Government Grant Program 2018-19 Guidelines, 2018

41 Government Architect NSW Urban Tree Canopy Guide Draft for Discussion Issue No-1, 2018

42 SEED Data portal Percentage of urban vegetation

43 Greater Sydney Commission South District Plan March 2018 p 105

**Figure 17:** Sustainability challenges for the Kogarah Collaboration Area Source: Greater Sydney Commission



## Energy

The Collaboration Area has high energy consumption, with total emissions in 2016-17 (256,651 tonnes of CO<sub>2</sub>e<sup>44</sup>) accounting for 10 per cent of the combined emissions of Georges River and Bayside LGAs. This high consumption is attributed to the predominant land uses including health care activities, which requiring high quality, conditioned spaces and critical equipment, and the large educational institutions and industrial areas.

The NSW Government has an aspirational long-term objective of achieving net-zero emissions by 2050. The *Eastern City District Plan* (Action 74) and *South District Plan* (Action 72) support initiatives that contribute to this objective through the establishment of low-carbon precincts in Collaboration Areas.

The top five largest sectors contributing to emissions in the Collaboration Area in 2015-16 were:

- multi-unit residential areas (33.4 per cent)
- health sector (22.8 per cent)
- population-serving sector (18.3 per cent)
- detached residential areas (15.9 per cent)
- knowledge intensive sector (10.7%).

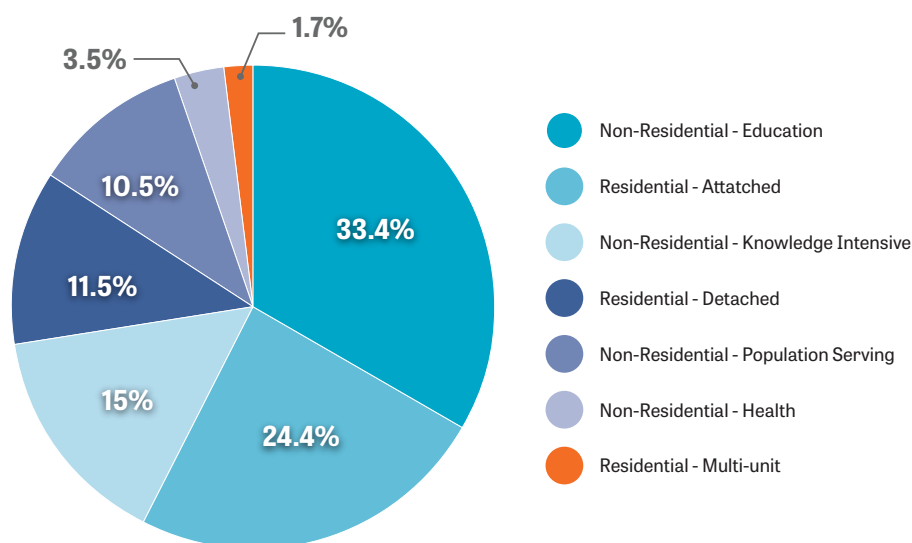
The major source of emissions in the residential and non-residential sectors were electricity, transport and waste. In 2035-36, electricity, gas and transport will remain as the highest emission generators if mitigation initiatives are not implemented. Figure 18 illustrates the projected emissions for the Collaboration Area by sub sector in 2035-2036.

Increasing population growth places demand on the energy grid, which has limited capacity. This poses a threat to the resilience of the Collaboration Area, and prompts a need to investigate renewable energy generation, storage and target high energy users to reduce consumption. Community, government and industry engagement around energy consumption and mitigation initiatives can establish an energy culture that can achieve net zero emissions.

High-density development and newly constructed buildings offer opportunities to address emissions amongst other sustainability initiatives.

Investigation of mechanisms such as planning controls, higher BASIX targets, sustainably designed buildings and energy efficient targets can contribute to a resilient urban environment.

**Figure 18:** Projected percentage of carbon emissions by subsector in the Kogarah Collaboration Area 2035-36 (Kinesis CCAP Platform, 2019)



<sup>44</sup> Kinesis CCAP City Platform – total carbon emissions by destination zone – accessed 3 September 2019



## Waste

Waste consumption carbon emissions in the Collaboration Area is above the Greater Sydney average. Waste consumption accounted for 10.6 per cent of the area's carbon emissions in 2015-16.<sup>45</sup> Composting and organics collection are not provided in the area and the closest organics transfer stations are at capacity. To better manage waste in the area, Councils have leveraged domestic waste contracts to provide basic commercial waste service to almost all Kogarah businesses. Georges River Council's red bin collection currently achieves 56 per cent waste diversion.

Increasing population places pressure on waste services, prompting the need to better manage waste through avoidance, resource recovery and waste diversion. Opportunities to better manage waste in the area include:

- identifying a location for a new organics transfer station to enable collection into the future.
- joint recycling facilities combined loading docks to divert waste from landfill while also reducing truck movements.
- improvement to future contracts and use of models being developed by NSW Treasury
- partnering with SSROC and UNSW's Sustainable Materials Research & Technology (SMaRT) centre to efficiently manage resource recovery and deliver a circular economy
- further place-based and targeted educational programs will focus on high waste producers to elevate work already underway.

## Water

Residential water consumption in the Collaboration Area is high. Detached dwelling consumption rate is higher than the average of all housing types in Greater Sydney and accounted for 42 per cent of total consumption in the Collaboration Area in 2015-16. Approximately 50 per cent of the water within detached housing is being used for toilets, laundry or outside watering. Multi-unit dwellings also consume a significant portion of water in the area, 34.1 per cent. In the non-residential sector, health is the largest consumer of water (49.8 per cent), followed by the population-serving sector (14.6 per cent) and knowledge-intensive sector (17.5 per cent).

Targeted water efficiency strategies are required for high consumers to reduce demand on potable water and compounding impacts on water infrastructure already under pressure. The large number of sites in the Collaboration Area with expansive roof areas can help to capture rainwater for re-use. Alternative sources of water supply from other additional re-use schemes, including sewer mining, could assist in water conservation within the Collaboration Area, and enable a resilient and efficient precinct.

## Sustainable transport

Transport is a large contributor to carbon emissions in the Collaboration Area, accounting for 15 per cent of total emissions in 2015-16.<sup>46</sup> Despite the number of kilometres travelled per dwelling by private car is 47 per cent lower than the Greater Sydney average, an embedded driving culture is evident in the area. This makes it challenging to radically change driver behaviour and movement.

Travel demand management will support the transition to sustainable modes of transport and emissions reduction. This is also discussed in the [Connectivity Chapter](#). However, parking and driving initiatives need to be incremental, based on education and supported by alternative transport. New transport initiatives will provide alternative travel options. Multi modal strategies involving stakeholders and institutions will help to change the culture and promote public transport and support an efficient healthy and resilient urban environment.

<sup>45</sup> Kinesis CCAP City Platform carbon emissions by sector and destination zone - Accessed 3 September 2019

<sup>46</sup> Kinesis CCAP City Platform – Carbon emissions by source - Accessed 3 September 2019



### Climate change, urban heat and pollution

The impacts of climate change are already being realised in the Collaboration Area. Data from the Australian Bureau of Meteorology shows that at Sydney Airport – only 4.3 kilometres from Kogarah – there has been an upward trend in the number of days over 35 degrees between 1939 and 2019, with a spike to 17 days over 35 degrees in 2017.<sup>47</sup>

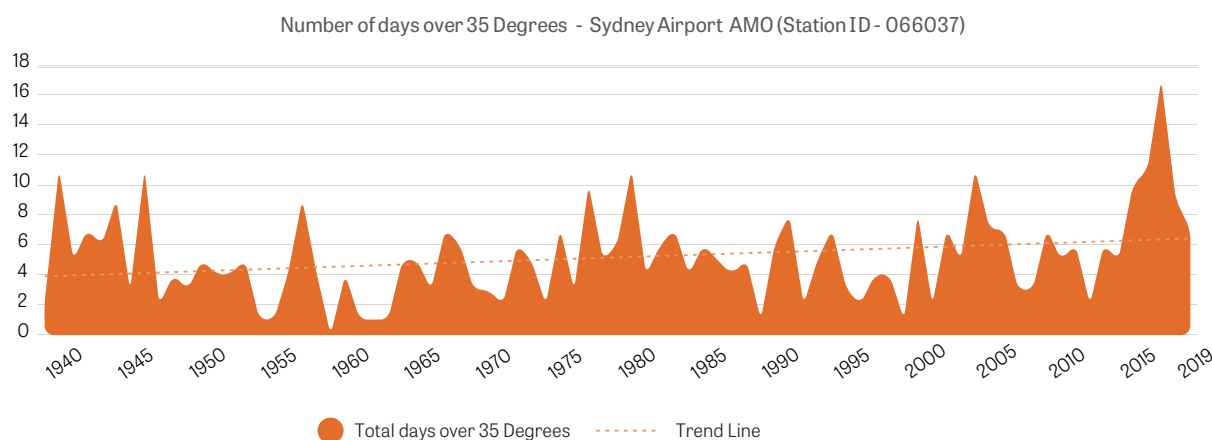
Parts of the Collaboration Area are exposed to heat waves and extreme heat as a result of the urban heat island effect, and climate change will exacerbate increasing temperatures and exposure. This exposure to heat creates health risks for the local community. Neighbourhoods in the area are vulnerable to urban heat, with a vulnerability index of 5, the most vulnerable. This index utilises indicators for exposure, sensitivity and adaptive capacity to monitor where populations are more vulnerable to heat.<sup>48</sup>

The area also has instances of high heat impact, with some areas nine degrees warmer than baseline temperature (see Figure 19). These areas are clustered around the town centres, and large government-owned sites and buildings, including the St George Public Hospital.

Retaining water in the landscape and integrating waterways in the design of new communities, increasing tree canopy cover and improving building design and materials will assist in mitigating urban heat and will ensure that population health and community wellbeing are promoted.

Air and noise pollution impact the Collaboration Area, primarily from busy roads and the nearby Sydney Airport and Port Botany. In addition, future motorway entries and ventilations stacks nearby will impact the area. High air quality levels will need to be maintained to meet the vision for a health and wellness precinct and high amenity urban environment.

**Figure 19:** Number of days over 35 degrees at Sydney Airport between 1939 and 2019 (Australian Bureau of Meteorology, 2019)




<sup>47</sup> Australian Bureau of Meteorology Climate Data Online– Number of days over 35 Degrees Sydney Airport AMO

<sup>48</sup> Department of Planning, Industry and Environment SEED data portal

## 9.2 Sustainability priorities

The following priorities and actions underpin the vision for the Kogarah Collaboration Area, while also giving effect to *A Metropolis of Three Cities* and the District Plans (including planning priorities and actions).


<b>Priority 9</b> Mitigate and adapt to the impacts of climate change		
<b>Outcome</b> The precinct is climate change resilient, with precinct-wide strategies and an action plan to address climate change risks and impacts		
 Actions	Lead	Partners
<b>Action 23:</b> Develop a climate resilience strategy that: <ul style="list-style-type: none"> <li>identifies climate change risks</li> <li>develops and implements an adaptation plan</li> </ul>	BC, GRC	DPIE – EES, Resilient Sydney, SSROC, SESLHD
<b>Action 24:</b> Investigate a net-zero emissions plan that targets catalyst sites and projects and addresses: <ul style="list-style-type: none"> <li>precinct-based battery power</li> <li>renewable energy</li> <li>waste efficiency/circular economy</li> <li>energy efficiency with large energy users</li> <li>the LED street lights program run by Ausgrid through SSROC Lighting the Way</li> </ul>	BC, GRC, DPIE-EES, HI, Anchor institutions	SSROC
<b>Action 25:</b> Investigate ways to mitigate the urban heat island effect for the Collaboration Area	BC, GRC	HI, DPIE-EES

**Priority 10**

Prioritise sustainable transport, development and water and energy use and reduce waste

**Outcome**

People are more likely to use sustainable transport and live or work in high quality developments that incorporate sustainability, water and energy. The contribution of waste to carbon emissions is minimal


 Actions	Lead	Partners
<b>Action 26:</b> Explore precinct wide and site-specific energy efficiency initiatives, with a focus on NSW Government-owned land, high energy users and catalyst projects.	BC, GRC, Relevant State agencies	DPIE – EES, Resilient Sydney, SSROC
<b>Action 27:</b> Address precinct wide and localised flooding and drainage issues through capital works projects and sustainability initiatives in the Rockdale Wetlands Corridor and Muddy Creek	DPIE – EES, BC, GRC, Sydney Water	SES
<b>Action 28:</b> Prioritise renewable energy by: <ul style="list-style-type: none"> <li>• auditing potential solar install sites</li> <li>• increasing renewable energy percentage in the Power Purchase Agreement</li> <li>• incentivising installation of renewable energy generators</li> </ul>	BC, GRC, DPIE – EES, State Government	HI, SINSW, UNSW, TAFE NSW, Energy suppliers, SSROC
<b>Action 29:</b> Plan for sustainable development through controls for new buildings and higher BASIX targets	BC, GRC	DPIE
<b>Action 30:</b> Prioritise sustainable transport options	BC, GRC, TfNSW	Anchor institutions, TAFE NSW
<b>Action 31:</b> Develop a precinct-wide water strategy	BC, GRC, Sydney Water	TfNSW, DPIE – EES, DPIE-PDPS, SES, TAFE NSW
<b>Action 32:</b> Create a smarter waste economy by focusing on: <ul style="list-style-type: none"> <li>• waste flow reduction</li> <li>• organics recovery</li> <li>• joint and localised waste recycling plants</li> </ul>	BC, GRC	DPIE – EES, SSROC, Resilient Sydney, Anchor institutions, NSW Circular Economy Innovation Network, UNSW Sm@rt Centre

**Priority 11**

Protect and enhance the natural environment, increase the quantity, access to and quality of open space and enhance the urban tree canopy

**Outcome**

New and protected natural assets, the increase in the quantity, quality and access to open space and a broader urban tree canopy cool the area, provide for biodiversity and provide more attractive places and spaces.

 Actions	Lead	Partners
<b>Action 33:</b> Develop a biodiversity strategy, maintain a species list and enhance biodiversity protection through LEPs	BC, GRC	DPIE – EES
<b>Action 34:</b> Map open space deficiencies, explore the expansion of open space, investigate acquisition of land for new open space and investigate initiatives for large roof surface areas and car parks for open space	BC, GRC	TAFE NSW, TfNSW, SINSW, HI, DPIE – PDPS, GANSW, Kogarah Cluster group, Office of Sport
<b>Action 35:</b> Increase the percentage of urban tree canopy in: <ul style="list-style-type: none"> <li>• town centres and main streets</li> <li>• areas with high pedestrian activity and high vulnerability and high urban heat island effect</li> <li>• NSW Government- owned land including hospitals</li> <li>• areas with low urban tree canopy cover</li> <li>• Green Grid routes</li> </ul>	DPIE – EES, DPIE – PDPS, BC, GRC, TfNSW	HI, SINSW, TAFE NSW, UNSW
<b>Action 36:</b> Support the vision for a wellness precinct by investigating ways to maintain and improve air quality	BC, GRC, TfNSW	

## 10

# Governance

Many government and non-government partners are collectively responsible for achieving the vision for Kogarah Collaboration Area. A transparent and efficient governance structure will drive the achievement of the Place Strategy's vision, priorities and actions.

## 10.1 Analysis of opportunities and challenges

With the Collaboration Area traversing two LGAs, both Georges River and Bayside Councils proactively support the ambitions for the health and education precinct and strategic centre. Master planning Rockdale Town Centre and Kogarah North Precinct and both local strategic planning statements reflect the ambitions for Kogarah Collaboration Area.

Both councils are proactively supporting the vision for a health, knowledge and wellness in the area through:

- master planning for Rockdale Town Centre and Kogarah North Precinct
- aligning local strategic planning statements with the work of the Kogarah Collaboration Area.
- Georges River Council's Investment Attraction Strategy, 2050 Vision, Economic Development Strategy, Reputation Strategy and the draft Jubilee Stadium Precinct Master Plan.

- Bayside Council's Centres and Employment Lands Strategy Background Paper (May 2019)
- Bayside Council's Housing Strategy Background Paper (March 2019) including complementary and supporting functions of the Rockdale Town Centre as a population-serving centre.
- Bayside Council's Waste Avoidance and Resource Recovery Strategy 2030

The presence of health, research and education providers and the potential for additional providers to participate in the development of the Collaboration Area requires a place-based governance arrangement. This arrangement must focus on economic development, use a coordination function that relies on influence rather than directives and create strong relationships across sectors.

The Collaboration Area process and Place Strategy will inform stakeholder decision-making and help to align investment as the area evolves into a health and knowledge precinct that continues to foster innovation.



## 10.2 Governance priorities


The following priorities and actions underpin the vision for the Kogarah Collaboration Area, while also giving effect to *A Metropolis of Three Cities* and the district plans (including planning priorities and actions).

### Priority 12

Establish precinct wide and cross council governance to ensure the success of the Collaboration Area into the future and deliver the vision

### Outcome

A precinct wide and cross council governance group unites multiple stakeholders and anchor institutions to realise the vision for the Collaboration Area

 Actions	Lead	Partner
<b>Action 37:</b> Establish an enduring precinct governance structure and group to deliver the actions in the Place Strategy which includes a partnership between Georges River and Bayside Council and with key anchor institutions in the Collaboration Area	BC, GRC, GSC, Stakeholder group, Anchor institutions	
<b>Action 38:</b> Develop an infrastructure plan that includes funding requirements and innovative funding solutions.	BC, GRC	DPIE, TfNSW, HI, DoE, TAFE NSW, UNSW

# 11 Next steps

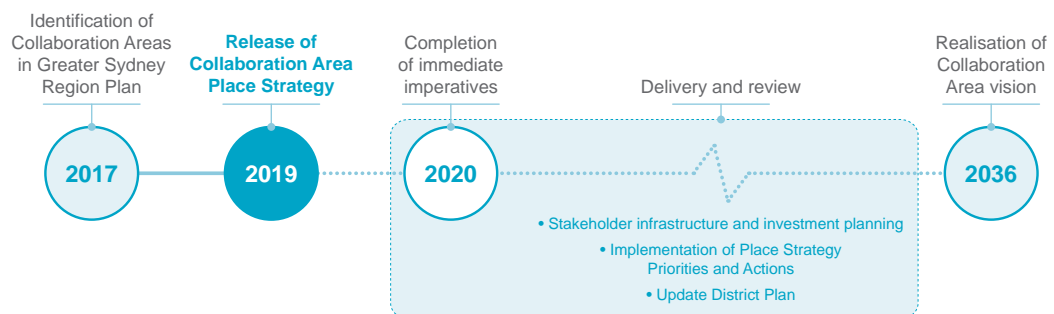
Implementing the Place Strategy's priorities and actions requires a collective approach from all stakeholders, various levels of government and the private sector.

Following the release of this Place Strategy, the focus will be on the immediate imperatives and accelerating the delivery of the actions identified for the Collaboration Area.

Review of the Place Strategy will be required to ensure that the strategy remains up to date, and is reflected in the District Plans.

Many stakeholders have a role to play in realising the vision of this Place Strategy. The roles of key organisations are documented below.

**Figure 20:** Next steps for the Collaboration Area



## 11.1 The role of the NSW Government

The Place Strategy identifies projects that can only be implemented with the support of the NSW Government. The Collaboration Area process requires State agencies to understand key issues, articulate the vision and identify projects that might address the impediments to growth.

The NSW Government will:

- consider the timing, costs and benefits of the projects and initiatives to achieve the Collaboration Area vision in the context of the State Infrastructure Strategy and respective programs
- where necessary, prepare business cases to support investment
- continue to collaborate with the Commission, Bayside and Georges River Councils and across government to improve infrastructure investment decisions to support the vision
- align with and contribute to the Premier's Priorities for 2019 to 2023.

## 11.2 The role of the Commission

The Greater Sydney Commission facilitates whole-of-government coordination and partnerships with councils. It establishes stakeholder governance arrangements to help implement Collaboration Area place strategies. The Commission will:

- help to establish the Collaboration Area Governance Group including the role for the District Commissioner during the initial start-up and operation
- statutorily support the Place Strategy's objectives and actions through by including them in updates to district plans
- assure the progress and continued collaboration towards the vision for the Collaboration Area and associated projects through local planning processes such as updated local environment plans
- elevate strategic issues and/or decision-making to the Commission's Infrastructure Delivery Committee where appropriate
- as an agency within the Department of Premier and Cabinet cluster, implement the Premier's Priorities through monitoring the delivery of relevant actions
- administer an implementation framework and annual report to Infrastructure Delivery Committee including reporting against place indicators (refer to Appendix 3 – Indicators for the Kogarah Collaboration Area)

## 11.3 The role of Bayside Council and Georges River Council

Both Councils must lead the implementation of the Place Strategy's priorities and actions. They will:

- be the key point of contact for coordination and implementation of the Place Strategy
- help establish the governance group for the Collaboration Area
- help identify and facilitate opportunities for partnerships, particularly with the business community
- lead the local strategic planning process in collaboration with State agencies and anchor institutions.
- provide opportunities for community engagement as the Place Strategy is implemented
- leverage community and local stakeholder input to decision-making
- help implement the Strategy's actions through place-making, funding mechanisms and advocacy with the Collaboration Area Governance Group
- align the Place Strategy with local strategic planning statements
- align Council studies and strategies that include the Collaboration Area.

## 11.4 The role of NSW Health

St George Public Hospital Campus will drive growth and investment in the Collaboration Area. The Hospitals' Campus, represented by NSW Health, will:

- promote partnerships and research opportunities with the MRC, SSMRC, UNSW, other universities and the private sector
- help establish the Collaboration Area Governance Group
- help achieve the Place Strategy's objectives and actions, subject to available funding.

## 11.5 The role of TAFE NSW

TAFE NSW is a major contributor to tertiary education in the Collaboration Area. It will:

- support the growth of and access to tertiary education
- help establish the Collaboration Area Governance Group
- help achieve the Place Strategy's objectives and actions, subject to available funding.

## 11.6 The role of the Community

This Place Strategy reflects the community's input into the development of the *South* and *Eastern City District Plans*, Council's Community Strategic Plans and Local Strategic Planning Statements.

People can get involved in planning for the Kogarah Collaboration Area through:

- future updates of the *South* and *Eastern City District Plans*
- updates to both Councils' Community Strategic Plans, Local Strategic Planning Statements and Local Environmental Plans

## 12

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## 13

# Appendix 1 - Transition to implementation

This appendix provides guidance on what the core focus and potential next steps to deliver on the action might be. These were identified through the consultation process.

## Considerations and next steps

The development of each action incorporated various considerations and next steps as noted below:

### Action 1

**Review how existing transport networks service Kogarah Collaboration Area, including service frequency in peaks, and the ability to provide local access to jobs to meet strategic targets.**

- Undertake a bus network review (including a network of rapid bus lines and frequency of services)
- Investigate potential for continued investment in future stages of More Trains More Services Program future stages
- Investigate options for investing in track infrastructure to alleviate the bottleneck between Sutherland and Hurstville
- Invest in digital signalling systems to increase line capacity
- Address the needs of visitors and patients of major medical services
- Design the local road network to support local commutes to work
- Plan to support local trips and patterns
- Address emerging needs for connections between Sutherland to Kogarah
- Address future transport options including electric vehicles, autonomous vehicles, point to point, car share and micromobility
- Address emerging walking and cycling needs, including pedestrian facilities
- Manage parking supply

### Action 2

**Investigate a future network of Rapid Bus Lines, better service frequencies and mass transit links from Parramatta to Kogarah, Randwick to Kogarah and Kogarah to Miranda.**

- Investigate rapid bus lines for the health and knowledge precinct
- Investigate walking and cycling infrastructure and connections within the rapid bus line network
- Investigate stop locations for mass transit
- Balance and prioritise metro and rapid bus lines to enable movement between centres in the short to medium term.

### Action 3

#### Develop a place-based integrated transport strategy that includes a funding and implementation plan

- Consider travel demand management strategies including:
  - refinement of the Principle Bicycle Network
  - a Collaboration Area-wide car parking strategy and review
  - working with the hospitals to increase the frequency of community shuttle services
- Explore the potential to prioritise sustainable transport options through:
  - laneways, through-site links and pedestrian-only streets to encourage people to walk and cycle while improving the quality of places
  - opportunities to engage with leaseback bicycles and e-bike businesses and private companies
  - increased bus services to Sydney Airport from Rockdale and Kogarah
  - connections between Kogarah and Rockdale, and Kogarah and Hurstville
  - reduced fares for short trips to promote public transport use
  - staff discounts
- Provide wayfinding systems so that people can better understand spaces
- Invest in digital signals and improve bus shelters
- Consider how transport projects and infrastructure, and different streets, can help create better public spaces
- Prepare a transport management and access plan for the Collaboration Area
- Align planning with the Georges River and Bayside Councils transport strategies

### Action 4

#### Identify and investigate how NSW Government-owned land can be used to build connections.

- Investigate the T4 Eastern Suburbs & Illawarra line corridor for walking and cycling
- Investigate linking Annette Avenue to the Princes Highway and beyond to Rockdale Wetlands Corridor
- Make it easier to move around St George Hospital through the future master plan
- Consider connections across the T4 Eastern Suburbs & Illawarra line corridor and Princes Highway
- Consider parcels of residual land as part of the F6 Extension (Stage 1) project, including the corner of Princes Highway and President Avenue
- Consider how transport projects and infrastructure, and different streets, can help create better public spaces

### Action 5

#### Initiate projects to encourage walking and cycling with schools and major employers.

- Investigate a digital platform to share data and knowledge on active transport
- Create awareness, and encourage more people to, walk or cycle
- Provide and encourage walking tours every year
- Provide cycle parking and end-of-trip facilities in educational institutions
- Work with Department of Education for lockers and bike racks in schools
- Develop internal staff programs at councils and schools like ride to work days, free bike training with a helmet when you do the training or council-led bike promotion events
- Use 'Beat the Streets' as an example project for schools.

#### Action 6

##### **Use the Movement and Place framework to achieve the desired future character for streets and places in the Collaboration Area**

- Upgrade the pedestrian network and public space and increase the urban tree canopy along corridors that more people use, pedestrian priority areas or areas more vulnerable to heat
- Explore funding options available through the 5 Million Trees grants program
- Explore funding options for pedestrian and cycling connections in the Collaboration Area
- Implement and prioritise the initiatives of the Rockdale Town Centre Master Plan

#### Action 7

##### **Revitalise the Muddy Creek corridor and other local creeks to:**

- **improve walking and cycling between Rockdale and Kogarah town centres**
- **improve the interface with the creek line**
- **create new open space and seamless connections between key places**
- **create an east-west Green Grid connection linking major open spaces**
- Continue collaboration with Sydney Water and TfNSW on the first stage of active transport corridors in the Muddy Creek precinct
- Implement the Rockdale Town Centre master plan and LEP initiatives that accommodate setbacks along Muddy Creek to service growth and access to open space
- Work with Sydney Trains on dual use of rail corridor verge space, using the precedent set in Sutherland
- Investigate Keats Avenue as a right of way or pedestrian corridor to shape development between Seven Ways and Muddy Creek channel
- Deliver Georges River Council's Hogben Park Landscape Master Plan and its proposed connections over the channel
- Maximise open space along the channel

#### Action 8

##### **Refine and plan for the Green Grid in the Collaboration Area**

- Align planning for Green Grid priorities with those in the district plans
- Prioritise Green Grid routes in areas with less urban tree canopy and higher heat vulnerability

#### Action 9

##### **Use partnerships and technology to build connections and develop a digital data connectivity strategy.**

- Investigate partnership opportunities with network providers
- Consider options for providing public-wifi in the health and education core
- Investigate options for providing a high performance network with open source access to data
- Investigate shared digital connections with hospitals and schools
- Investigate knowledge transfer between health and tertiary education organisations and departments in Randwick, Bankstown, Wollongong, Westmead, Sutherland and Liverpool.

### Action 10

#### **Investigate and identify locations for student and affordable housing, short-term accommodation and serviced apartments close to transport**

- Determine the accommodation that suits the needs of the changing population
- Pilot a local housing strategy that integrates with transport infrastructure investment, open space planning and a social infrastructure strategy
- Investigate:
  - strategies that respond to gentrification, and the transition of people and housing
  - a joint facility with short-term residential living for students, patients or their families
  - the use of residual disposal land from Transport and TFNSW projects to deliver housing and accommodation for the area
  - required changes to the Affordable Rental Housing SEPP and Standard LEP

### Action 11

#### **Develop a Cultural Infrastructure Strategy and Cultural Program for the Collaboration Area focused on:**

- **Kogarah Town Centre**
  - **Rockdale Town Centre**
  - **Jubilee Stadium Precinct**
  - **Areas around major transport nodes, interchanges, hospitals and anchor institutions**
  - **Shopfront Youth Arts Precinct**
- Align with Create NSW's Cultural Infrastructure Plan 2025
  - Research arts and culture needs and interests for the area's demographics
  - Engage with local artists around policy development, public art, laneway activation, installations and signage
  - Consider temporary use of existing spaces for creation/production for local artists
  - Investigate using industrial precincts at Production Avenue and West Botany Street for creative uses
  - Leverage existing council cultural strategies and cultural programs.

### Action 12

#### **Develop a night-time economy strategy for the Collaboration Area**

- Ensure that the Strategy:
  - advocates for a night-time economy grant to stimulate arts and culture in the Collaboration Area
  - investigates the use of streets and car parks to create a night-time network
  - develops a night-time safety strategy
  - identifies potential spaces and programming for live music, cultural and community activation
  - partner businesses to leverage government and private investment
  - investigates the potential of Jubilee stadium for 24/7 facilities
  - investigate later library opening hours and night-time events and activities in libraries
- Consider live music, art and cultural pursuits as contributors to the night-time economy
- Investigate:
  - expanded opening hours on dedicated shopping and dining precincts
  - streets and car parks for night food markets and destinations
  - the potential of the Jubilee Stadium for 24/7 facilities
- Integrate with connectivity and transport actions in Priority 1



### Action 13

**Develop a Collaboration Area Urban Design Framework to provide a vision and coordinate actions for public spaces in the Collaboration Area that considers:**

- **the movement and place framework**
- **government owned land**
- **the Green Grid**
- **resilience initiatives**
- **precinct vision, brand and marketing**
- **car parking**
- **EV charging stations**

- Ensure co-ordination of work relating to public spaces.

### Action 14

**Develop a master plan and public domain plan for the Collaboration Area that emphasises wellbeing, amenity, safety and safe crossings, cultural infrastructure and activity, with costing and funding plan.**

- Focus the plans on:
  - Kogarah Town Centre
  - Rockdale Town Centre
  - Jubilee Stadium Precinct
  - around major transport nodes, interchanges, hospitals and anchor institutions
  - links between town centres
- Develop a public domain manual including a materials palette
- Investigate embellishment of Scarborough Park to address changes proposed as part of the M6 (Stage 1) project
- Implement the desired future character and actions from the Movement and Place framework through public domain plans and improvements
- Address better and higher quality public transport, walking and cycling
- Continue to investigate public space potential under St George Hospital Master Plan
- Improve Kogarah Station Precinct as a more attractive transport interchange
- Improve the safety of public areas and the road network
- Incorporate the Princess Highway Urban Design Study into the public domain plan and related strategies
- continue to develop a hierarchy of streets and design strategies through public domain plans.

### Action 15

#### **Investigate opportunities for joint or shared use, multi-use spaces, sporting facilities and social infrastructure in existing and future spaces.**

- Target the following opportunities:
  - school open spaces, internal spaces and facilities
  - health, knowledge and wellness assets
  - library spaces and child care centres
  - sports, aquatic and fitness facilities
  - future transport upgrades
- Encourage private businesses to provide end-of-trip facilities
- Review planning controls, particularly zoning controls, to allow the provision of sports, aquatic and fitness facilities
- Consider shared use, multi-use spaces, sporting facilities and social infrastructure when planning for Green Grid corridors
- Execute memorandums of understanding with schools for shared use of space

### Action 16

#### **Develop a vision, brand and marketing plan that creates an identity for the precinct and promotes the vision for the Collaboration Area**

- Draw on the Kogarah Investment Attraction Strategy's vision for Kogarah as a precinct for recovery, restoration, rehabilitation and regenerative medicine.

### Action 17

#### **Identify and market areas of specialisation and key differentiators of the health, knowledge and wellness institutions and how they respond to emerging health issues**

- Determine the hospitals' areas of specialisation and existing health services through market segmentation.
- Promote the precinct as a wellness precinct that includes mental health awareness and alternative and preventative health and wellness
- Better understand the relationship between the finance sector and health and education sectors in the area

### Action 18

#### **Investigate the potential for alternative modes of care to alleviate pressure on health services, including collaboration with public and private hospitals**

- Collaborate with private hospitals
- Identify other models of community care and services

**Action 19**

**Leverage international health and research connections for knowledge sharing, innovation, investment and economic development.**

- Generate a baseline understanding of the medical technology and research underway in the area
- Leverage existing international connections formed through the MRC, SSMRF, UNSW and hospitals
- Investigate how tourism can support international investment and economic development

**Action 20**

**Investigate the potential for, and viability of, a medical research institute associated with St George Public Hospital and investigate space for research activities to support the MRC**

- Support existing research at the MRC
- Investigate a medical research institute presence in the Collaboration Area
- Determine skills required in the area and develop a talent pipeline through tertiary education
- Plan for new research space and understand required facilities

**Action 21**

**Leverage partnerships between Kogarah's primary, secondary and tertiary education institutions and encourage education uplift programs**

- Develop an understanding of the existing relationships between education institutions and current pathways to secondary and tertiary education
- Amplify connections between education institutions and other anchor institutions in the area
- Better understand the talent pipeline required for the area and tailor education to suit

**Action 22**

**Explore opportunities for an enhanced tertiary education presence in the Collaboration Area.**

- Identify the planning outcomes that can deliver this including identification of a potential site for university campus or enhanced tertiary facility
- Liaise with universities to gauge interest

**Action 23**

**Develop a climate resilience strategy that:**

- **identifies climate change risks**
- **develops and implements an adaptation plan**

- Generate an Action Plan
- Identify climate change risks to qualify for an Increasing Resilience to Climate Change grant (Bayside Council)
- Leverage research by the Climate Research Team on Climate risks for local government through the Cities Power Partnership including:
  - The cutting edge in climate-forced natural hazards research, as they apply to local governments
  - Councillors' and officers' personal liability for the management of climate risk

#### Action 24

##### **Investigate a net-zero emissions plan that targets catalyst sites and projects and addresses:**

- **precinct-based battery power**
- **renewable energy**
- **waste efficiency/circular economy**
- **energy efficiency with large energy users**
- **the LED street lights program run by Ausgrid through SSROC Lighting the Way**

- Investigate opportunities to lower emissions at catalyst sites and projects and from larger emission producers in the area
- Aim to increase the BASIX targets for residential buildings as part of ongoing collaboration on emissions reduction
- Use an analytical and modelling framework to determine developments and properties with highest energy consumption to target reduced consumption via alternative management measures and renewable energy
- Assess the urban and built form to potentially retrofit energy efficient devices and assess existing and projected roof spaces to determine where renewable energy can be cost-effectively generated under existing and projected development conditions
- Analyse and model energy consumption and emission patterns, map opportunities and constraints in existing and projected scenarios, and develop and assess emission reduction interventions

#### Action 25

##### **Investigate ways to mitigate the urban heat island effect for the Collaboration Area**

- Investigate the following opportunities
  - a roof strategy (including green roofs, material and coats selection) for town centres and large sites
  - a paving strategy to include cool surfaces material for paving
  - green walls, misting fans or shading structures
  - new planning controls for buildings and public domain materials
  - urban heat reduction strategies in major developments
- Address urban heat island effect in the St George Hospital Master planning process
- Develop and enhance the urban tree canopy cover on streets in the Collaboration Area.
- Map existing and proposed roof spaces that can be used for green roofs or materials that reduce urban heat island impacts

#### Action 26

##### **Explore precinct wide and site-specific energy efficiency initiatives, with a focus on NSW Government-owned land, high energy users and catalyst projects.**

- Investigate opportunities for energy efficiencies through the St George Hospital Master Plan and Jubilee Stadium Precinct Master Plan

#### Action 27

##### **Address precinct wide and localised flooding and drainage issues through capital works projects and sustainability initiatives in the Rockdale Wetlands Corridor and Muddy Creek**

- Update the flood risk management plans for Muddy Creek and Scarborough Park
- Leverage Bayside Council's Muddy Creek Flood Study and strategies to address flooding while also considering funding solutions such as levies

### Action 28

#### Prioritise renewable energy by:

- **auditing potential solar install sites**
- **increasing renewable energy percentage in the Power Purchase Agreement**
- **incentivising installation of renewable energy generators**

- Investigate potential for council rate incentives or subsidisation for renewable energy
- Update energy agreements
- Investigate mandated renewable energy targets and policy changes.
- Refer to the work being done as part of 2020 TAFE NSW Sustainability Framework

### Action 29

#### Plan for sustainable development through controls for new buildings and higher BASIX targets

- Aim to increase BASIX targets, targeting high density developments including internal stormwater harvesting to irrigate all internal landscaping areas.
- Review planning controls for new buildings

### Action 30

#### Prioritise sustainable transport options

- Investigate the following opportunities
  - promoting car share and electric vehicles and charging stations
  - incentivising public transport use
  - implementing the Green Grid
  - providing for e-bikes
  - setting a precinct-wide parking strategy
  - providing adequate pick up and drop off zones
- Investigate electric vehicle charging stations in locations that align with council car parking strategies
- Promote technology that leverages existing car parking and car sharing opportunities
- Encourage staff to walk or cycle by creating centralised end-of-trip hubs
- Maximise and include walking and cycling infrastructure in major roadway projects
- Consider movement as a service in planning for local movement
- Investigate staff discounts to promote public transport use
- Review parking rates and electric charging
- Develop a precinct-wide car parking strategy
- Implement the Green Grid to create a regional walking and cycling network
- Increase bicycle parking throughout the area



### Action 31

#### Develop a precinct-wide water strategy

- Ensure that the strategy targets:
  - walking and cycling connections
  - place and amenity
  - the Blue Grid
  - water efficiency
  - rainwater and stormwater harvesting
  - runoff and flood risk management
  - water quality
  - wastewater management
  - revitalisation of the Muddy Creek channel
- Investigate recycling water from blackwater (sewer mining or water recycling)
- Investigate splitting larger wastewater systems into smaller systems (long- term management wastewater systems)
- Undertake a feasibility assessment of local sewer mining
- Investigate using new and existing infrastructure as transmission and distribution networks for harvested rainwater and stormwater for non-potable usages
- Explore opportunities for non-potable water sources for irrigation
- Explore setting and implementing water targets
- Review water consumption data to identify high water users and target reduced water consumption
- Explore using roofs to reduce urban runoff and rainwater harvesting
- Ensure land use changes link to asset maintenance, renewal and improvement strategies
- Investigate:
  - water sensitive urban design opportunities
  - a demonstration project for rainwater harvesting from buildings for street tree irrigation
  - rainwater harvesting incentives for residents (avoided costs for water supply upgrading, management of flood risk and stormwater management) etc.
- Identify existing buildings to retrofit for water efficiency

### Action 32

#### Create a smarter waste economy by focusing on:

- **waste flow reduction**
- **organics recovery**
- **joint and localised waste recycling plants**
- Analyse and model waste flows and explore opportunities to reduce waste flows or internalisation using localised and decentralised treatment and management facilities
- Develop a plan for organics recovery and waste management, with funding for transition
- Investigate:
  - joint and localised waste recycling plants
  - alternative treatment of local food waste
  - locations for an organics transfer station in the region
  - methodologies used for waste in other areas
  - location for a sustainability 'hub' within the Kogarah Town Centre

**Action 33****Develop a biodiversity strategy, maintain a species list and enhance biodiversity protection through LEPs**

- Map areas of biodiversity in land reservation mapping and environmentally sensitive land mapping
- Enhance planning controls to protect and enhance biodiversity
- Educate the community about the importance of biodiversity
- Maintain a species list in biodiverse areas
- Monitor loss/shift to maintain communities or assist transitional communities
- Develop a biodiversity strategy and encourage community participation.

**Action 34****Map open space deficiencies, explore the expansion of open space, investigate acquisition of land for new open space and investigate initiatives for large roof surface areas and car parks for open space**

- Develop and implement recommendations of Rockdale Wetlands Corridor masterplan (which includes Scarborough park)
- Plan for the long-term use of Rockdale Wetlands Corridor
- Ensure design briefs for new schools consider longer term shared use
- Target locations for potential new open space and include in land reservation mapping
- Seek Agreement from school principals to utilise open space

**Action 35****Increase the percentage of urban tree canopy in:**

- **town centres and main streets**
- **areas with high pedestrian activity and high vulnerability and high urban heat island effect**
- **NSW Government- owned land including hospitals**
- **areas with low urban tree canopy cover**
- **Green Grid routes**

- Implement new controls for development that allow space for trees to grow
- Apply for funding under the 5 million trees for Greater Sydney program
- Prioritise planting in government land holdings and car parks
- Develop an urban tree canopy study that prioritises areas for planting and maps the urban forest
- Investigate opportunities to address regulations for tree removal and clearing in the LEP and DCP
- Investigate rates incentives to maintain urban tree canopy
- Explore using commuter car parks to increase the urban tree canopy
- Explore ways to increase the urban tree canopy in new developments
- Increase the urban tree canopy as identified in Kogarah North and Rockdale Town Centre master plans, and prioritise planting according to urban heat mapping, heat vulnerability and Green Grid planning

**Action 36****Support the vision for a wellness precinct by investigating ways to maintain and improve air quality**

- Support the implementation of the potential M6 Stage 2
- Investigate ways to mitigate impacts of exhaust tunnels

#### Action 37

**Establish an enduring precinct governance structure and group to deliver the actions in the Place Strategy which includes a partnership between Georges River and Bayside Council and with key anchor institutions in the Collaboration Area**

- Establish the purpose of the governance group
- Select actions the group can work on together
- Develop a memorandum of understanding and terms of reference
- Co-write a thought leadership piece on dual council governance
- Develop a Place Strategy Implementation Plan
- Establish alignment and joint advocacy for projects that affect the Kogarah Collaboration Area
- Consider aligning the Place Strategy actions with Local Strategic Planning Statements.

#### Action 38

**Develop an infrastructure plan that includes funding requirements and innovative funding solutions.**

- Identify grant funding opportunities
- Investigate joint section 7.11 and section 7.12 development contributions to fund the infrastructure plan
- Use the infrastructure plan to influence how required infrastructure can be provided within development proposals.

## 14

# Appendix 2 - Movement and Place Framework

## Framework for implementation

This appendix captures discussions and work undertaken as part of the Movement and Place Framework pilot and seeks to identify:

- a desired 2036 future character statement for streets and places in the Collaboration Area
- issues and opportunities for that street or place
- actions to deliver the desired character
- responsible agencies in a lead and partner capacity to address actions identified.

### Princes Highway

#### Desired Future Character

The Princes Highway will be local connector and seam that joins east and west, including Rockdale and Kogarah town centres and the health, knowledge and wellness core. It will have regular, high quality and safe crossing points, supported by reduced vehicle movements in particular segments of the corridor and increased pedestrian priority achieved by the introduction of stages of the M6 over time.

#### Issues and Opportunities

- Potential for a well performing rapid bus corridor – bus lane dedication required.
- The introduction of M6 stage 1 is expected to create an opportunity to enhance the place functions on the Princess Highway between Rockdale town centre and President Ave.
- The Princes Highway near Kogarah is expected have increased traffic volumes following the introduction of M6 stage 1 which will inhibit its transformation into a local connector.
- Tidal flow of traffic on the Princes Highway
- Strategic modelling outputs suggest that traffic volumes will be of a similar level as today along Princes Highway at Kogarah following implementation of the M6.
- Spatial mapping of 5-year crash record shows hotspot throughout Rockdale town centre including pedestrian crash clusters. Rockdale currently has lower vehicle flows and higher pedestrian volumes than Kogarah. If we increase place activity at Kogarah, its interface with the higher trafficked Princes Highway will need to be managed to create a safe environment.
- Crash data identifies a cluster of speed related casualty crashes at President Avenue, and high-risk curve casualty crashes at Rocky Point Road intersection.
- Pedestrian access to the hospital via South Street. The arrangement of dropped kerbs is non-compliant. No tactile paving. Crossing provided on one leg of Princes Highway. Does not present an 'accessible' entry to the Health Precinct.
- Speed limit review policy and warrants
- Design requirements to implement a push button in the median for crossing of >22m encourages pedestrians to dwell in 'skinny' medians that offer little protection
- Consideration of how we balance the movement function along Princes Highway and connectivity across it. Vibrant Streets in Sydney have the highest pedestrian crash records – this is an outcome we want to avoid. This will be the biggest challenge. There is probably need for a 'movement strategy' to compliment the Place Strategy.

Princes Highway		
Actions to deliver the desired character	Responsibility	
	Lead	Partners
Increase urban greenery with well-planned street tree planting;	BC and GRC, TFNSW	
Investigate the opportunity for a through site link linking Annette Street to the Rockdale Wetlands Open Space Corridor and Princes Highway as part of the M6 Project	BC and GRC	TFNSW TAFE NSW, SINSW
Establish the existing and future entry points into the Kogarah Town Centre for different users and modes – potentially railway parade?	BC and GRC	
Undertake focused area studies of the Princes Highway in the Rockdale Town Centre and the Kogarah Health, knowledge and wellness core	BC and GRC	TFNSW
Undertake master planning of the Princes Highway corridor	BC and GRC	TFNSW
Refine Rockdale Town Centre Public Domain plan to reflect the findings of the movement and place framework for the Collaboration Area, and the corridor vision for the Princes Highway	BC	
Investigate the role of Hogben Street as a main pedestrian connector between the Kogarah town centre. Ensure that the design of the space puts pedestrians as the primary customer in the street.	GRC	
Investigate a change in public space to encourage a shift in behaviour as people travel through the Rockdale Town Centre and Kogarah Health, knowledge and wellness core.	TFNSW (via RNP 35 and RAP)	BC and GRC
Formalise shared path from Marshall Street to President Avenue and footbridge overpass	TFNSW	BC and GRC
Between now and 2036 investigate a change from a fixed 3x3 lane configuration, that reduces the overall width of the street, removing the need for median pedestrian buttons. and investigate which sections of the road could be reconfigured into a four-lane carriageway using tidal flow lanes including exploring options for: <ul style="list-style-type: none"> <li>• Spare space reassigned to rapid bus lanes</li> <li>• Reassigned to cycle lanes + tree planting/greening</li> <li>• Reassigned to place (footway + tree planting)</li> </ul>	TFNSW	BC and GRC
After M6 stage 1 – further reassignment based on changes to demand to reallocate additional space to AT/PT/place	TFNSW	
M6 stage 2 onward – further reassignment based on changes to demand to reallocate additional space to AT/PT/place	TFNSW	
Determine tree species and planting opportunities that can work with overhead and underground services;	BC and GRC	

### Princes Highway

Contribute to a wider strategy to improve the character of Princes Highway shared with adjoining Councils;	BC and GRC	
Create uniformity with paving types and paving width, including removal of the defunct grass verges;	BC and GRC, TfNSW	
Create an avenue of trees within the boundary of Kogarah Public School for visual screening for the school and contribute to greening of the streetscape;	GRC	DoE
Refocus opportunities for public domain activation for retail within the side streets of the Princes Highway.	GRC	

### President Avenue

#### Desired Future Character

President Avenue will be one of the main gateways into the Kogarah Town Centre from the east, directly linking the town centre to the Bay.

The design of the street will respond to the different areas of character that it passes through, including park edge, Residential and Commercial edge and Health, knowledge and wellness core and the design tapers as it enters an urban environment.

The intersection of President avenue should respond to and facilitate safe crossings in response to pedestrian desire lines into Kensington Street

#### Issues and Opportunities

- Changing character along its length including
  - park edge
  - TAFE NSW St George Princes Highway campus edge
  - residential Edge
- M6 project (widening and intersection upgrades)
- Potential future stages of the M6 and potential to reduce widths as additional stages come online
- President Ave traffic will increase following M6 Stage 1.
- M6 future character detailed in the EIS however new clearways re-emphasises the need to focus on street tree planting to provide noise and amenity benefits to schools, residents and business in this soon-to-be very busy road.
- The junction with the Princes Hwy is brutal and impersonal. How can pedestrian and bikes be managed in this precinct, better options crossing these two roads in the face of motorway feeder road should be considered.
- Safe access from Moorefield estate (i.e. Lachal Ave was key consideration in M6 – notable concerns)
- Observed on site, flows of school children and TAFE NSW students travelling along Princes Highway and crossing President Avenue to access the 7/11 shop at lunch time. Some were observed to cross halfway on the “red-man” and wait on the median island.
- Access into the Kogarah Town Centre from President Avenue should be considered and reconfigured. The car wash site at the corner of Kensington St and Princes Highway is zoned as “SP2 Classified Road” to enable President Avenue to extent straight into the Kogarah Town Centre. This project is included in the Kogarah Section 94 Development Contributions Plan No. 8 - Kogarah Town Centre (p55)



President Avenue		
Actions to deliver the desired character	Responsibility	
	Lead	Partners
President Ave/ Bay Street connections to be improved through an active transport link as part of the M6 project which links wetland areas between West Botany and Crawford Street	TfNSW	BC
Investigate the location of off-street pedestrian and bike facilities (i.e. wide footpaths/shared paths both sides) to connect Town Centres.	TfNSW	BC and GRC
Identify opportunities to influence the M6 Stage 1 Project and realise the desired future character	BC , GRC	TfNSW
Develop alternative high quality and high amenity East West connection options that link the town centre to the bay and Rockdale Wetlands Corridor	BC, GRC, TfNSW	
Investigate the different arrangements of space within the corridor over time as a result of traffic volume reductions with the introduction of future stages of the M6 using sections through the street, including visionary long term aspirations for the street and the potential for lane reductions and consideration for changing character along the length of President avenue in the design of the corridor – including park edge, residential edge and tapering into an urban edge at Kogarah Town Centre.	BC, GRC, TfNSW	
Respond to existing commercial shops that currently front President avenue, and reduced access to the TAFE NSW St George Princes Highway site	TfNSW	BC
Challenge the School Zone policy to include 40km/h during lunch time period as well as the AM and PM peak	TfNSW	BC, GRC
Investigate improved intersection with Princes Highway to support east west pedestrian desire line connecting president avenue to Kensington Street.	TfNSW	BC, GRC
Investigate focus areas for street tree planting to provide noise and amenity benefits for schools, residents and businesses to offset new clearways and increasing traffic volumes	TfNSW	BC, GRC

## T4 Eastern Suburbs & Illawarra train line corridor

### Desired Future Character

The T4 Eastern Suburbs & Illawarra train line corridor will be a Green Grid and active transport link that provides larger regional connections – linking to other regional Green Grid Connections.

The corridor will be easy to connect into from the east and west, enable easy and safe access routes to schools and will be designed to support these connections and users. The link will also respond to growth that is occurring nearby.

### Issues and Opportunities

- Currently identified as a project that is important for the district in the South District Plan
- Support prospective key green grid AT link as a key regional connector – collaboration with Sydney trains is key (Sutherland present to observe)
- Currently parking in corridor restricts and unsafe for pedestrian movement
- Lack of clear and delineated footpath through/alongside parking

Actions to deliver the desired character	Responsibility	
	Lead	Partners
Consider higher quality street planting with preference for an alternative to casuarina.	BC GRC	
Undertake detailed corridor analysis and property study which includes consideration of Sydney Trains land (TfNSW and Councils) and determines the feasibility of the corridor. This study will seek to identify and evaluate connection difficulty and option hierarchy, as well as consideration for any green grid network 'holes' as a result.	BC, GRC, TfNSW , Sydney Trains Property team	

## Kogarah Station Precinct

### Desired Future Character

The Kogarah heavy rail, bus and metro interchange will open the two sides of Kogarah and improve movement and access between the east and west sides of the train line. There will be an improved interface of square facing the Kogarah Town Centre with the station square set at the same level as the surrounding streets.

### Issues and Opportunities

- Three potential new connections via metro
- The need for a bus interchange at the station
- Staging of different transport modes
- Over Station Development (unsolicited proposal)
- Relative priority and cost. Any city shaping projects would seek to enhance the place through the design process.

**Kogarah Station Precinct**

Actions to deliver the desired character	Responsibility	
	Lead	Partners
<p>Develop design options for the Kogarah Station precinct and analyse the place impacts to inform advocacy for a preferred station location for the east-west connection through Kogarah with the following considerations in mind:</p> <ul style="list-style-type: none"> <li>Improving access to the health and education precinct will be facilitated by a metro station location south of the existing Kogarah Station</li> <li>A twin centre precinct comprised of Rockdale and Kogarah will be facilitated by a metro station location north of the existing Kogarah Station.</li> <li>Either of the above options will have an impact on the active transport network and this will need to be adjusted to respond.</li> </ul>	BC and GRC	Sydney Metro, TfNSW

**Muddy Creek Channel****Desired Future Character**

The Muddy Creek Channel will be the precinct's playground and green spine, connecting Kogarah Station to Fry's Reserve, Hogben Park, school open spaces, Rockdale Plaza, Bay Street into Rockdale and the Rockdale Wetlands Corridor with active transport and a focus on safe connections and crossings.

**Issues and Opportunities**

- Masterplan for Hogben park includes a crossing of the Channel that has not been built yet.
- Muddy Creek Canal could be a community passageway connecting town centres to open and recreation space, while re-imagining the built form and quality access in a revitalised Rockdale.

Actions to deliver the desired character	Responsibility	
	Lead	Partners
Deliver the Hogben Park masterplan proposed improved connectivity across the muddy creek channel (new bridge)	GRC	Sydney Water
Investigate feasibility of purchasing site with low value use that is currently obstructing connections to the channel	BC, GRC	
Beautify an otherwise detracting feature of the Rockdale/Kogarah precinct through revitalisation of the channel, vegetation, new active transport connections and new and improved open spaces.	BC, GRC, Sydney Water	

## Harrow Road

### Desired Future Character

Harrow Road will have two distinct movement functions east and west of the train line but will have a consistent vegetated character which will unite its two sides.

To the east of the train line, Harrow Road will support high pedestrian and active transport volumes associated with a connection to the Muddy Creek Channel active transport link and an active transport link along the T4 Eastern Suburbs & Illawarra train line and the large number of schools and low-scale residential areas that line the street.

West of the trainline, street tree planting will develop a consistent landscape character and support bus movements into the Rockdale and Kogarah town centres.

### Issues and Opportunities

- Dual council street – agreement on vision for this street needs to be agreed to get a holistic outcome
- Key north-south link to Muddy Creek corridor, Hogben park and across the T4 rail corridor
- Edges St George Girls high school
- The street is designed with the intention that the streetscape is mirrored by Bay Council;
- Greatly increase street tree planting to contribute to the urban tree canopy enhancement of Kogarah;
- Street geometry realignment and kerb extensions to enable street greening and stormwater management and facilitate a safer pedestrian environment;
- Provide more safe pedestrian crossing points;
- Provide an east- west separated cycle lane connection.
- Harrow Road splits at the rail line, which has two characters
  - Eastern side of the rail line houses St George Girls HS where the relatively high prevalence of on-street parking could well be integrated with on-street tree planting, allowing wider footpaths and Local Area Traffic Management (LATM) and Active Transport (AT) (pedestrian and bike infra) measures. (theme for high parking/high pedestrian sites throughout precinct)
  - Harrow Road underpass at bridge to support dedicate bicycle path (Wolli Creek to Rockdale) crossing under the bridge where it will run on the Western side of the train line harrow road not suitable for on street AT facilities as it is steep and is a bus access route.

Actions to deliver the desired character	Responsibility	
	Lead	Partners
<ul style="list-style-type: none"> <li>• Identify species and spacing to create a continuous tree canopy along Harrow Road. Georges River Council to deliver a segregated 2-way cycleway on the south side of the road as per the Kogarah North Precinct Master Plan and Public Domain Plan.</li> <li>• Investigate integration of on street tree planting interspersed with on street parking to enable wider footpaths and Local Area Traffic Management and Active Transport measures on Eastern side of Harrow Road</li> <li>• Investigate dedicated bicycle path at Hegarty Street underpass to enable link between Wolli creek to Rockdale Active transport connections and active transport connection to towards Hurstville in the verge space of the rail corridor.</li> </ul>	BC, GRC	TfNSW
Investigate street side planting to develop character harrow road to the west of the Train line	BC	

## Kensington Street

### Desired Future Character

Kensington Street will provide a main frontage to the St George Public Hospital and is the interface that stitches the hospital campus into the Town Centre, providing services for a variety of street users and activities, including buses and vehicles moving east-west across the Collaboration Area.

The street will be a major connector to the hospital from the south and across the Town Centre feeding the streets that lead into Kogarah train station. It will support pedestrian desire lines east west and have safe crossings and connections to President Avenue and East towards Botany Bay.

The street will also be an important suburban connector from the southern suburbs accessing the Kogarah Town Centre and a key street providing access to the Jubilee Stadium Precinct

### Issues and Opportunities

- Lack of clear wayfinding leading to the proposed hospital entry.
- New front door to the hospital
- Key street that connects to all major streets and laneways leading to the station – Montgomery, Belgrave and laneways
- Key connection between Hospital and TAFE NSW St George Princes Highway campus
- Investigate traffic signals/pedestrian crossing at the corner of Gray and Kensington streets
- Changing role of the street with changes to access to the Hospital
- Additional role for patients and staff
- Main thoroughfare for vehicle movement
- Number of cafes that currently exist on the street

Actions to deliver the desired character	Responsibility	
	Lead	Partners
Investigate reorienting the main entry of the St George Public Hospital to Kensington Street as part of the redevelopment of the Site to better integrate the hospital with the town centre	NSW Health, HI	
Prioritise street tree planting in Railway Parade, Kensington and Belgrave Streets.	GRC	
Investigate traffic signals/pedestrian crossing at the corner of Gray and Kensington streets – interface with the relocation of the emergency entry of the hospital	TfNSW	GRC
Investigate on-street dining and café activation as 'destination'.	GRC	
Investigate ways to deliver a slow speed highly pedestrianised area outside the new main entry of the hospital	NSW Health, HI	TfNSW, GRC
Public transport multi-modal interchange point (clear wayfinding strategy sought)	BC and GRC	TfNSW
Investigate opportunities for 40km/hr speed limit for = all streets in Kogarah CBD		

### Kensington Street

(also need to confirm previous council resolution to do this)	GRC	TfNSW
Find opportunities for street tree planting to increase shade on the street	GRC	
Develop an Emergency services strategy that frees Kensington Street up for other uses – e.g. directing emergency access to Gray Street and making Gray street the fire station emergency access route	SES LHD, HI, GRC	TfNSW
Improve intersection with Princes Highway to facilitate pedestrian desire line connection to President avenue so that it is safe	TfNSW , BC, GRC	
Investigate funding to deliver a crossing at the intersection of Gladstone street, Princes Highway and Kensington street		
Investigate funding opportunities to deliver the current proposal for a raised pedestrian crossing to be installed on Kensington Street linking to Bank Lane.	GRC	TfNSW

### Montgomery Street

#### Desired Future Character

Montgomery Street will be the flagship street for the area and will be a major mixed use and active street, with retail, commercial and medical/civic uses with active frontages along its length. The street will have pedestrian priority and will change in character and design to accommodate the emergency access needs of the Hospital.

#### Issues and Opportunities

- Recognise The importance of Montgomery street as an economic/employment spine
- Streets closer to the station e.g. Belgrave and Montgomery as pedestrian priority and then further from the station this changes to accommodate the emergency access and needs.
- Montgomery street as a commercial street – possibility of improving public domain and delivering additional open space.
- Flagship street for the area.
- Consider what kind of treatments will be required at Montgomery Street to provide better amenity and priority for pedestrians/cyclists, e.g. wider footpaths, less waiting time at traffic signals, more crossing opportunities, etc.
- Highly pedestrianised street – wider footpaths, kerb extensions for crossings, 30kph zone and street tree planting within the road corridor to create boulevard character

Actions to deliver the desired character	Responsibility	
	Lead	Partners
Reinforce Montgomery Street as a major mixed use, active street, encompassing retail, commercial and medical/ civic uses with retail shop fronts along much of its length.		
Develop opportunities for quality food and beverage uses and night time activity	GRC	



**Montgomery Street**

Investigate street as pedestrian priority subject to the needs of emergency access	GRC	TfNSW
Green the Kogarah Town Centre starting with Montgomery/Belgrave/railway streets then Kensington then infill remaining streets and lanes	GRC	
Investigate the needs of the emergency access along Montgomery street	NSW Health, HI, TfNSW	GRC
Develop key objectives/principles for the street – e.g., minimum footpath width	GRC	
Investigate the use of Montgomery Street as a bus corridor	TfNSW (Buses)	GRC
Trial a temporary change in the street environment that gives pedestrians priority	GRC	TfNSW
Highly pedestrianised street – wider footpaths, kerb extensions for crossings, 30kph zone and street tree planting within the road corridor to create boulevard character		
Consider what kind of treatments will be required at Montgomery Street to provide better amenity and priority for pedestrians/cyclists, e.g. wider footpaths, less waiting time at traffic signals and more crossing opportunities		

**Belgrave Street****Desired Future Character**

Belgrave Street will be a green, vibrant pedestrian priority main street for the Kogarah Town Centre, providing a direct link to the hospitals as the southern anchor, leveraging its civic uses and supporting pedestrian desire lines from the hospitals to the station.

**Issues and Opportunities**

- previous upgrades to Belgrave Street can be leveraged

Actions to deliver the desired character	Responsibility	
	Lead	Partners
Enhance the pedestrian amenity of the area with a new Town Square in Belgrave Street and upgraded laneways, widened and addressed by buildings.	GRC	
Investigate street as pedestrian priority subject to the needs of emergency access	GRC	TfNSW, HI
Green the Kogarah Town Centre starting with Montgomery/Belgrave/railway streets then Kensington then infill remaining streets and lanes	GRC	

### Belgrave Street

Enhance wide footpaths, plantings and 'place' principles of street	GRC	TfNSW
Investigate a 40km/h zone if there is not one in place already	GRC	TfNSW
Investigate providing a link between Belgrave St and Montgomery Street. There are opportunities for this to occur to the west of car park or east of the Greek church.	GRC	

### Railway Parade

#### Desired Future Character

Railway Parade will continue to be one of the main streets for the Kogarah Town Centre with a pedestrian scale environment with a high degree of visual interest, activity, amenity and connections to the laneway network. It will have reduced speeds to promote safety at key interfaces with the station, schools and park edge at Hogben Park and along the T4 Eastern Suburbs & Illawarra train line.

#### Issues and Opportunities

- Green Edge/interface with the T4 Corridor
- Interface with the Kogarah Station Precinct
- Interface with Hogben Park
- Cycling conditions along the corridor are poor
- Railway street to west of railway is key cycle commuter route NS to Rockdale off Princes Hwy and city

Actions to deliver the desired character	Responsibility	
	Lead	Partners
<ul style="list-style-type: none"> <li>• Green the Kogarah Town Centre starting with Montgomery/Belgrave/ railway streets then Kensington then infill remaining streets and lanes</li> <li>• Encourage pedestrian connections through to Post Office Lane enabling easy access to current and future development sites to the rear. This will assist in strengthening the pedestrian network.</li> <li>• Improve accessibility to the western side of the railway station.</li> <li>• Upgrade existing lanes to create a better address for buildings and improve the public domain.</li> <li>• Create a cohesive streetscape and encourage outdoor dining.</li> <li>• Maintain traffic flows, but reduce speeds, through increased use of trees and different parking lane treatment;</li> <li>• Increase pedestrian safety, especially during periods of peak movements by school children;</li> <li>• Increase street trees and improve the overall character of the street, through undergrounding of powerlines;</li> <li>• Incorporate WSUD and stormwater management as part of the streetscape greening;</li> <li>• Provide an east-west separated cycle lane connection;</li> <li>• Work with the existing trees and Hogben Park frontage.</li> </ul>	GRC	

### Railway Parade

Main street with a distinct regional town centre character – this could be enhanced with on-street/recessed parking bays and street tree planting scheme promoting shade and pedestrian amenity	BC, GRC	
Discussion with Sydney Trains as the co-functionality use of rail corridor space – whether there are opportunities for public use, greens space or AT corridor in/ around the town centre	TfNSW , Sydney Trains, BC, GRC	
Investigate widening footpaths free from clutter to encourage walking to Kogarah and Rockdale Town Centres	BC, GRC	TfNSW
Investigate a low speed vehicle environment (30kph)	BC, GRC	TfNSW
Create a more formalised linear park from the green space at Fry's reserve	BC	GRC
Improving the cycling environment along this corridor.	BC, GRC	TfNSW

### Gray Street and Gray Avenue

#### Desired Future Character

Gray Street and Gray Avenue will be the primary bus corridor, providing St George Hospital emergency vehicle access and will facilitate high pedestrian and vehicle activity due to school entries and pick up/drop off areas.

#### Issues and Opportunities

- Key major bus route
- High pedestrian activity due to school entry (St Patricks Primary)
- Pick up and drop offs for school children
- Gray Street and Princes highway intersection a safety issue for children crossing the road.. This feedback from the community formed the basis of a report presented to the Georges River Council Traffic Advisory Committee in June 2017

Actions to deliver the desired character	Responsibility	
	Lead	Partners
Consolidate vehicle movements for the hospital by reorienting vehicle entries to the 'back' of the hospital.	NSW Health, HI	TfNSW
Prioritise wide footpaths and kerb extensions for crossings in the High Pedestrian Activity Area -	BC, GRC	TfNSW
Investigate shoulder bike lane uphill from the Princes Highway to Kogarah as steep road is not amenable to bikes – however as there are very few crossing points of Princes Hwy - this Gray St access point should remain a prospective active transport network corridor.	GRC	TfNSW

### Gray Street and Gray Avenue

Pram ramps to be reconstructed to be made compliant

GRC and  
TfNSW

### Post Office, Wicks, O'Keefe's and Moorefield Lanes

#### Desired Future Character

Post Office, Wicks, O'Keefe's and Moorefield lanes will provide a finer grain pedestrian network for the Kogarah Town Centre and will facilitate activation, street art and night time activity.

#### Issues and Opportunities

- Potential for Arts, activation, night time economy
- Current lanes don't support pedestrian movement well

Actions to deliver the desired character	Responsibility	
	Lead	Partners
investigate a shared zone which promotes slow (i.e. 10kph vehicle speed) to give pedestrians preferred access through laneways	GRC	TfNSW
Upgrade lanes to have a high standard of pedestrian amenity.	GRC	

### Keats Avenue

#### Desired Future Character

Keats Avenue will be a Green Grid and active transport connection directly linking Rockdale and Kogarah and the Muddy Creek Channel.

#### Issues and Opportunities

- Urban designed pedestrian and active transport movement corridor from Kogarah to Rockdale
- Links to revitalised Rockdale/ Muddy Creek precinct
- Inclusion of a green grid connection with cycling path

Actions to deliver the desired character	Responsibility	
	Lead	Partners
Undertake master planning process of corridors to strengthen Rockdale to Kogarah and Brighton Le Sands to Kogarah	BC, GRC	
Leverage rezoning and corridor enhancement to deliver an improved connection	BC	

**Jubilee Avenue****Desired Future Character**

Jubilee Avenue will be a Green Grid connection between Carlton Station and the Scarborough Park Corridor that links the station, the stadium, the golf course and Scarborough Park.

**Issues and Opportunities**

- Joins up Carlton Station, the Jubilee Stadium, Beverley Park Golf Club, open spaces, production avenue and Scarborough Park
- Stadium Masterplan - opening up the stadium to the surrounding streets and spaces- particularly the frontages to Jubilee Avenue, Park Street, and to Kogarah Park
- Current Shared path being constructed on Production Avenue to enable to Jubilee Ave – Scarborough Parklands EW Link – Scarborough Park Masterplan to guide the connections leading from Jubilee (currently being revised by Bayside)
- Proving a safe cycling route to the Stadium from Carlton station, is likely to reduce congestion in the area, particularly during main events.

Actions to deliver the desired character	Responsibility	
	Lead	Partners
As part of the jubilee stadium project investigate the delivery of increased urban tree canopy and cycling route.	GRC	

**Gladstone Street****Desired Future Character**

Gladstone Street will be a slow speed and high-quality pedestrian environment street to accommodate a range of uses including schools, residential areas, the Kogarah Town Centre and the higher traffic and pedestrian volumes as a result of these varied uses. It will include regular and safe crossing points for pedestrians.

**Issues and Opportunities**

- Accommodate a range of principles incorporating school zones, residential zones, town centre and road with higher traffic volumes

Actions to deliver the desired character	Responsibility	
	Lead	Partners
Create two school environment slow zones outside Kogarah High and Kogarah Public Schools;	GRC	TfNSW
Investigate Street geometry realignment and kerb extensions to enable street greening and stormwater management and facilitate a safer pedestrian environment;	GRC	TfNSW
Provide more safe pedestrian crossing points;	GRC	

### Gladstone Street

Powerlines removed to make street improvements realisable.

GRC

### Queen Victoria Street

#### Desired Future Character

Queen Victoria Street will be a key active transport corridor leveraging its existing consistent heritage landscape character and urban tree canopy, creating a direct connection between Forest Road (Bexley) and the Kogarah Town Centre.

#### Issues and Opportunities

- The street plantings in Queen Victoria Street are historically significant as evidence of the development of the Ocean View Estate in the 1920's and the operations of Bexley Council currently to beautify its suburbs. The street trees are aesthetically significant as evidence of the influence of the Garden City approach to public landscaping which had evolved in England the century before. The plantings enhance Queen Victoria Street, one of the main streets of the Ocean View Estate. The palms directly out the front of the former Bexley Council Chambers are particularly significant for their landmark quality and as they pre-date the other trees.
- Sydney buses travel along this corridor. The selection of treatments to calm the traffic will need to consider the impact on buses.
- Heritage street tree and boulevard character to be retained and enhanced
- Wide paths > 2.5m on both sides (connecting town centres)
- Opportunities for kerb extensions at/near roundabouts for pedestrian crossing and LATM

#### Actions to deliver the desired character

#### Responsibility

##### Lead

##### Partners

Investigate ways to calm traffic on Queen Victoria Street

BC

TfNSW



**Bay Street****Desired Future Character**

Bay Street will be the primary public transport and active transport link connecting Rockdale to the bay, leveraging its existing successful bus services, flat topography and direct line of sight to the water from Rockdale Town Centre.

**Issues and Opportunities**

- Identified in the ongoing Draft Brighton Le Sands Masterplan as the main street for day and night activity and pedestrian use. The public areas on Bay Street should allow for a range of activities and outdoor uses such as cafes.
- Key access point to open space, sport and recreation fields
- Will be access point for future mass transport stop (i.e. increased density around the transport corridor – needs to be serviced by pedestrian and bike amenity)
- Green grid and AT link Rockdale to Brighton Le Sands as noted in Draft Brighton Le Sands Master Plan Draft (street tree planting strategy).
- Bay Street at the Intersection of Princes Highway is a crash hotspot containing pedestrian crash cluster. Noted on site that pedestrian refuge islands do not cater for demand in pedestrian movement i.e., at The Seven Ways
- Provide direct route to and from sports precinct from Rockdale station

**Actions to deliver the desired character****Responsibility****Lead****Partners**

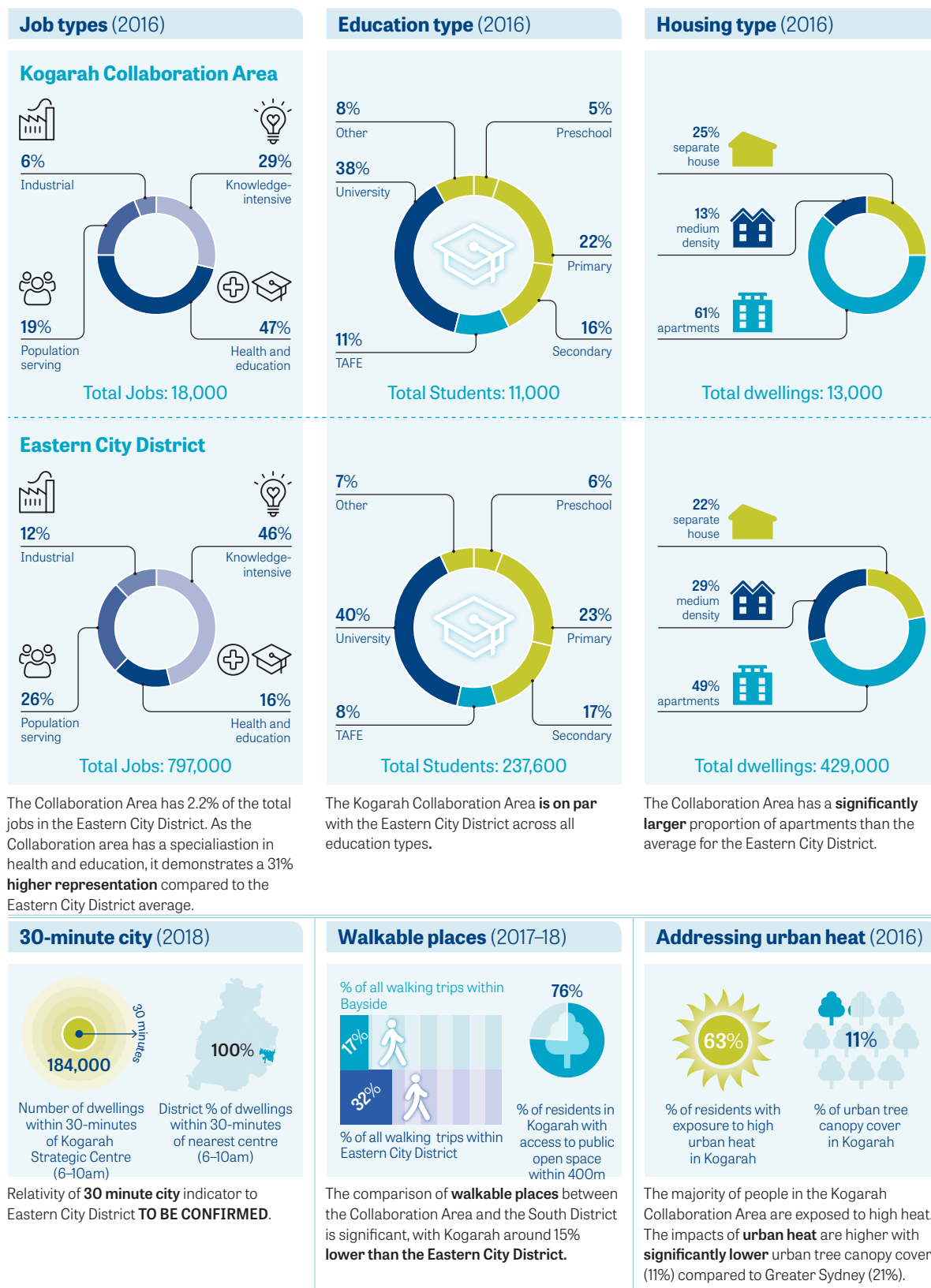
- Widen pedestrian footpaths
- Deliver premium quality paving and street furniture
- Provide weather protection in segments of the street
- Investigate off-road cycling infrastructure
- Investigate on street parking
- Implement planning controls that enable access to new development off Bay Street to be avoided
- Increase greenery and investigate opportunities for large street trees

BC

## 15

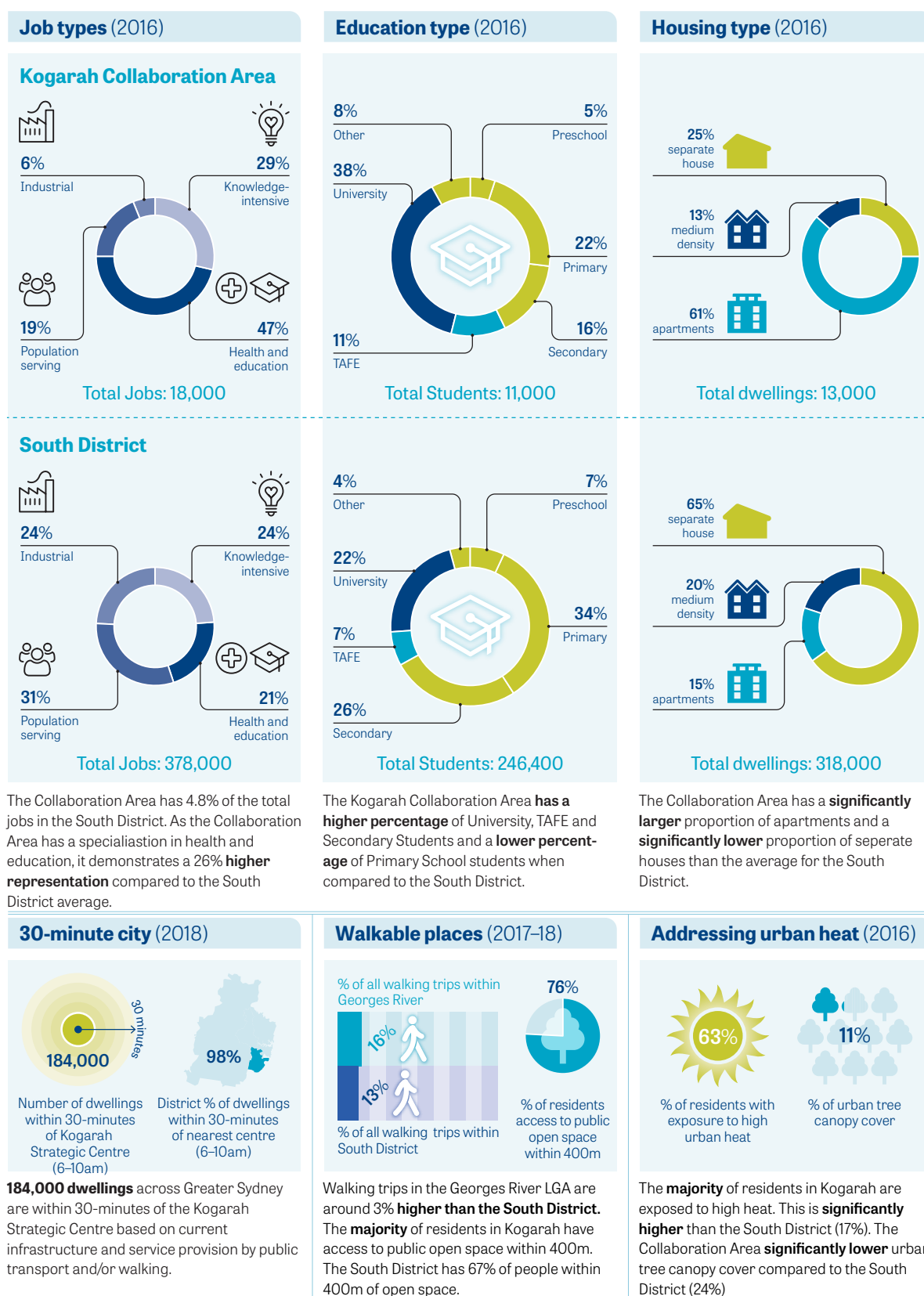
## Appendix 3 - Indicators for the Kogarah Collaboration Area

This appendix provides a baseline set of indicators for the Kogarah Collaboration Area that can be measured against over time. This will assist in understand benefit realised from the actions in this Place Strategy.

**Figure 21:** Indicators for the Kogarah Collaboration Area - Comparison to the Eastern City District (GSC, 2019)

For information on source data refer to Greater Sydney Dashboard on the Commissions website [www.greater.sydney](http://www.greater.sydney)  
 Comparison data for Collaboration Areas is approximated for job type using ABS Destination Zones; for education, housing.

**Figure 22:** Indicators for the Kogarah Collaboration Area - Comparison to the South District (GSC, 2019)



For information on source data refer to Greater Sydney Dashboard on the Commissions website [www.greater.sydney](http://www.greater.sydney)  
Comparison data for Collaboration Areas is approximated for job type using ABS Destination Zones; for education, housing,

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