Greater Sydney Commission

City-shaping impacts of COVID-19

Towards a resilient Greater Sydney

September 2020

The Greater Sydney Commission has produced City-shaping impacts of COVID-19 in collaboration with the following agencies:

- Department of Planning, Industry and Environment
- Department of Premier and Cabinet
- NSW Data Analytics Centre
- Department of Customer Service
- NSW Treasury
- Transport for NSW
- NSW Health
- Department of Education
- Department of Communities and Justice
- Infrastructure NSW
- Create NSW
- Resilience NSW
- NSW Public Service Commission

Acknowledgement of Country

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

Message from the Chief Commissioner

Chief Commissioner
Geoff Roberts AM

The shocks and stresses of the COVID-19 pandemic have tested personal and community resilience in a way we have not seen in our lifetimes.

The pandemic has impacted the health system, individuals and families and is changing how many people work and interact with Greater Sydney. These impacts have been particularly acute, following the catastrophic 2019–20 summer bushfires, recent drought and floods.

The Greater Sydney Commission is working with our partners across government to try to build an understanding of what effect the pandemic will have on Greater Sydney.

This report is an early indication of the city-shaping impacts that will influence how we plan for Greater Sydney. It looks at the emerging challenges and opportunities that we need to address or harness to support Greater Sydney's productivity, liveability and sustainability.

The analysis shows that the digital elements of cities will also shape the physical aspects of cities. These impacts differ across Greater Sydney – we may be at risk of increasing already existing inequities, particularly for young people.

We have also found that people have embraced their local neighbourhoods and that these have been essential to people's wellbeing during the pandemic.

I thank everyone who has contributed to the development of this report including State agencies, councils, peak groups and industry representatives who shared their data, knowledge and perspectives.

I particularly want to acknowledge our close partnership with the Department of Planning, Industry and Environment.

We remain committed to building a resilient Greater Sydney and working with the community to achieve the vision of a metropolis of three cities.

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Executive Summary

COVID-19 is having a dramatic impact on Greater Sydney – both through the virus itself and the restrictions put in place to stop its spread.

Our behaviours have had to adapt to new circumstances. Our work environment may have changed, our economic security harmed. How and where we travel, shop, spend our leisure time and access services are all affected. The infrastructure we use and rely on may have shifted. Our physical and mental health, our wellbeing may be compromised as a result of these changes.

In some cases, there may be positive impacts. Many people are spending more time with family and surveys show significant increases in walking and cycling and connecting with others in local communities.

Understanding the city-shaping impacts of the pandemic must also consider the economic and health impacts that people are feeling across Greater Sydney and how to support economic recovery.

When the pandemic first emerged, the NSW Government's policy settings and the city's communities and businesses adapted quickly to restrictions to minimise the spread of the virus. Many businesses closed and many workers were stood down or lost their jobs.

The easing of some restrictions as the spread of COVID-19 slowed, enabled Greater Sydney to transition to a half-open city where social distancing and preventive health measures remain in place. Nevertheless, for many the changes and impacts are ongoing.

The Greater Sydney Commission (the Commission) has worked with stakeholders across Government to gather and interpret data to investigate the changes and the impacts on Greater Sydney. The Commission has also consulted with Greater Sydney's 33 councils, industry and other stakeholders to make sense of the data and what groups and individuals are experiencing.

This report analyses the first six months of available data. From this and our consultation with State agencies, councils, industry and stakeholders we identified nine critical focus areas of city-shaping that we believe will be fundamental to recovery and resilience.

They are:

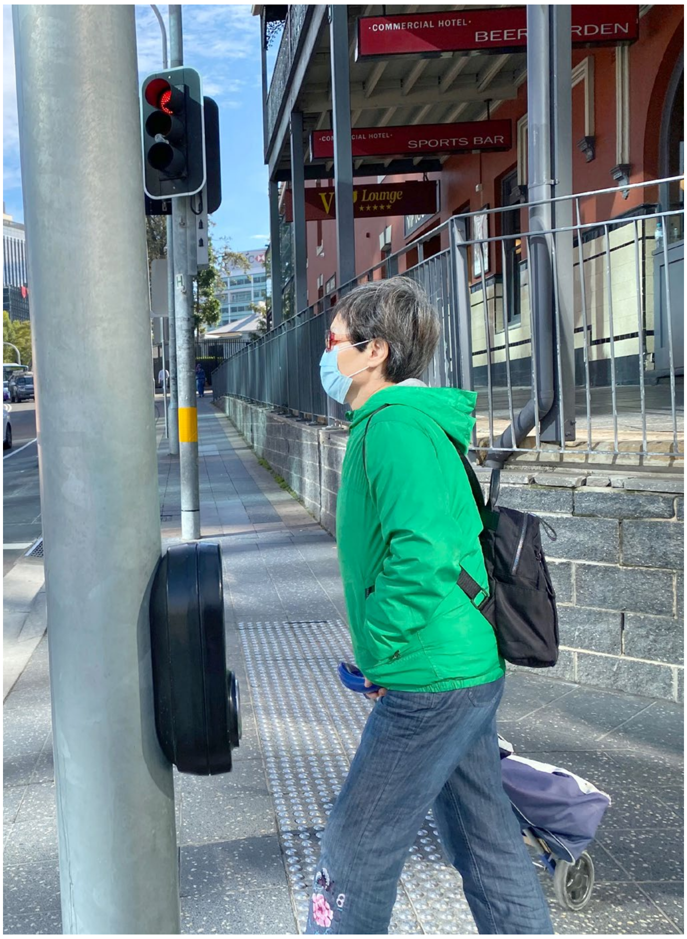
1. Community wellbeing is essential to resilience.
2. Rapid recalibration of jobs and productivity through training and skills and developing specialised precincts is critical to economic recovery.
3. Changes to where we work is revitalising some centres and may influence where we choose to live.
4. Changes to where and when we work and shop alters demand for transport services and freight logistics.
5. Digital technology is vital infrastructure and universal access is needed.
6. Investment in open, public and shared spaces connects communities and supports healthy lifestyles.
7. A metropolis of three connected cities supports local outcomes.
8. Collaboration and evidence are central to responsive and efficient government.
9. Scenario planning provides for adaptive management and agile responses.

The NSW and Australian Governments have already implemented a range of significant policy responses to support people and the economic health of Greater Sydney.

The Commission will keep a watching brief on the changes, impacts, challenges and opportunities that the pandemic presents to Greater Sydney. This will include monitoring and analysing what the data tells us about how to maintain and optimise liveability, productivity and sustainability across our three cities. It will also tell us what it means for recalibrating policy settings and/or implementation approaches to Greater Sydney's strategic plans.

This work reflects a point in time, a snapshot of how the early months of the pandemic have informed government, business and community planning for Greater Sydney's present and future. The complex and far-reaching impacts of the pandemic are still evolving. Any future scenarios will be highly sensitive to the length and severity of the health crisis,


Bayside Council
BEACH CLOSED
Public Health Order 2020:
ALL BEACHES CLOSED DUE TO COVID-19
The Public Health Order is enforceable. Ignoring this notice may result in a $1000 fine per individual.


COMMERCIAL HOTEL
SPORTS BAR
Lounge

the gravity of fiscal and institutional damage, and the extent of government support and leadership.

This is the first '*City-shaping impacts of COVID-19*' report to keep abreast of how our city is changing as we move through the stages of the pandemic.

We will continue to collate data and provide city planning insights over the coming months. It is anticipated that further insights will be presented in the next edition of *The Pulse of Greater Sydney*.

Consultation

Cities are complex and the ability to adapt and recover requires an understanding of the challenges and opportunities in all aspects of Greater Sydney's liveability, productivity and sustainability.

To gain this understanding, the Commission consulted across State agencies, including Transport for NSW, Infrastructure NSW, NSW Health, Department of Education, Department of Planning, Industry and Environment, Department of Customer Service, Department of Premier and Cabinet, and Department of Communities and Justice.

The NSW Government's Data Analytics Centre has made a significant contribution and we received strong support from the Department of Planning Industry and Environment, particularly in relation to digital infrastructure and public spaces.

The Commission spoke to Greater Sydney's 33 councils, industry and other stakeholders. This included social and environmental peak groups and planning and development organisations. We used the Greater Sydney Region Plan's performance indicators and canvassed available data and evidence to inform the consultation.

The Commission focused on four questions:

1. How has the city and people's behaviour changed since the pandemic began?
2. What should revert to normal, in keeping with health objectives?
3. Which of these changes can be embraced and how can we optimise their benefits?
4. What are the future uncertainties and how can they be managed?

Shifting trends

COVID-19 is accelerating existing trends – some of these may return to 'normal', others may endure to a certain extent; we cannot be sure yet. What is clear is that the negative impacts are affecting some more than others, increasing the inequities that already exist.

This may be as a result of where people live across the three cities, their age, family or personal circumstances, gender, socio-economic status or a combination of these.

For example, with 47 per cent of Greater Sydney's employees able to work from home, the uptake of digital technology has accelerated as pressure is reducing on the transport system[1]. More health services are being delivered digitally in telehealth conferences and more consumers are shopping online.

The COVID-19 period also highlights the importance of designing cities, neighbourhoods and homes in ways that support wellbeing. Individuals and families are creatively utilising available space at home, adapting to evolving circumstances and relying on nearby open and public spaces. Connections to surrounding communities remain a fundamental consideration.

Serious impacts continue to be felt from the virus itself, the restrictions and the knock-on effects to the economy. These impacts are being felt unequally across Greater Sydney with 53 per cent of workers unable to work from home[2]. In addition, many people were temporarily stood down as workplaces closed, while others lost their jobs altogether, with an estimated 5.2 per cent of jobs lost in Greater Sydney between March 2020 and August 2020[3].

Looking ahead

The Premier's COVID-19 Recovery Plan (Recovery Plan) focuses on priorities that are embedded in the Greater Sydney Region Plan – *A Metropolis of Three Cities,* the State Infrastructure Strategy – *Building Momentum* and the *Future Transport Strategy 2056*. These include the acceleration of large city-shaping infrastructure and major development projects to create jobs.

These strategies will underpin the government-wide efforts to respond to the Premier's Recovery Plan. The focus areas identified in this report will inform updates of the Greater Sydney Region Plan, District Plans and a range of state and local initiatives to support recovery and long-term resilience.

Outcomes will continue to be monitored through The Pulse of Greater Sydney, the Commission's comprehensive monitoring and reporting framework for Greater Sydney, which can be accessed via the Commission's website.

City-shaping focus areas

Analysis of early data and consultation across agencies, councils, industry and city stakeholders brought nine critical aspects of city-shaping into sharp focus. Understanding these focus areas and their impacts is fundamental to recovery and improving resilience.

1 Community wellbeing is essential to resilience

People's involvement in the community, mental health and social connections are important in shaping a city that is resilient to future shocks and stresses. This includes consideration of intergenerational impacts, wider social and environmental impacts of policy and the quality of economic responses. The challenges for young people and elderly are particularly acute highlighting a need to enable social connections, and to focus on jobs and training for youth, and health and community services for the aged.

2 Rapid recalibration of jobs and productivity through training and skills and developing specialised precincts is critical to economic recovery

Impacts on job sectors have been uneven. While some sectors are likely to be affected only in the short term, some may continue to be affected and others may be presented with growth opportunities. Education and training must respond to these changes to match industries with skills and people with jobs. The economics of place means successful job creating precincts and corridors benefit from agglomeration and proximity to other businesses and productivity networks. The spread of industrial lands across the cities are also an important consideration.

3 Changes to where we work is revitalising some centres and may influence where we choose to live

Flexible locations for work have increased rapidly and there are indications that a portion of this increase may continue. This would lead to the revitalisation of local centres and an evolving role for CBDs. It may also mean that people who can work flexibly have a greater choice in where they live.

4 Changes to where and when we work and shop alters demand for transport services and freight logistics

Increased working from home and greater flexibility in work location and work hours have shifted peak hour travel demand. This has the potential to change the focus from planning for a growing peak hour to supporting increased demand for a 24-hour transport network across the three cities. The rapid acceleration of e-commerce requires land use responses to support increased and efficient freight and logistics activities, especially 'last-mile' delivery systems.

5 Digital technology is vital infrastructure and universal access is needed

Never has it been more striking that digital infrastructure should be prioritised as essential infrastructure alongside physical and social infrastructure. Digital technology is transforming established business models, use of services, community networks and how we use public spaces. Greater incorporation of digital with spatial planning will ensure the virtual and physical city complement and support businesses and the community. This requires a risk-based approach to information and cyber security that incorporates citizen support.

6 Investment in open, public and shared spaces connects communities and supports healthy lifestyles

The increase in local activity in open, public and shared spaces and its positive input to wellbeing underscores their value as community infrastructure. Public spaces support increased physical activity and healthy lifestyles and play a central role in connecting communities. Recognising how the community views and uses public spaces will enable better support for a wide range of social and economic functions.

7 A metropolis of three connected cities supports local outcomes

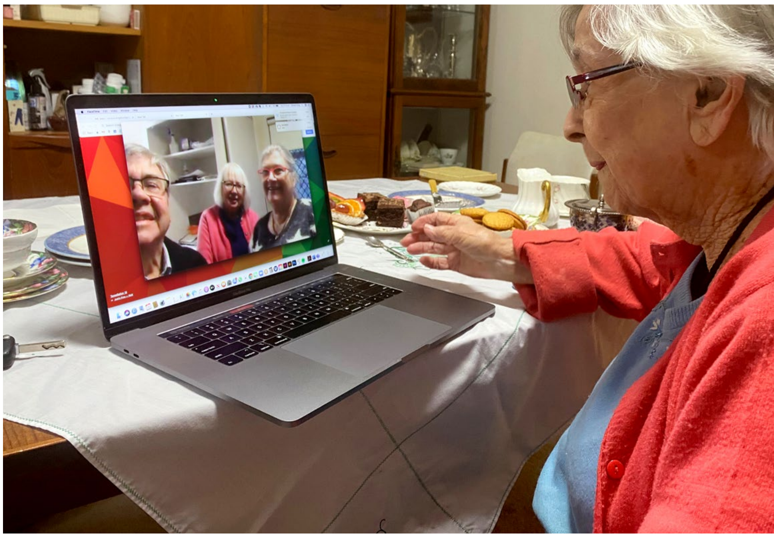
Greater Sydney's urban structure and the existing strategic planning framework are robust and well-suited to support recovery and resilience. The vision of a metropolis of three 30-minute cities is designed to rebalance and grow economic and social opportunities. The focus is to refine and accelerate its implementation within the context of COVID-19 and recovery.

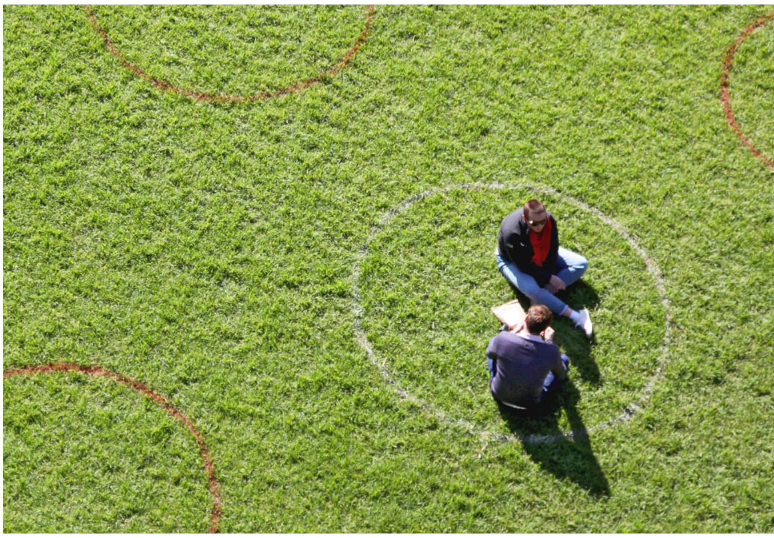
8 Collaboration and evidence are central to responsive and efficient government

Quick evidence-based decision-making is enabling government, individuals and businesses to adapt to optimise health and business outcomes. New collaborative models of working across government and with stakeholders have emerged to deliver high quality and efficient decision making on key operational issues for Greater Sydney. These models are principles driven, ensuring the best evidence, resources and skills are made available.

9 Scenario planning provides for adaptive management and agile responses

Acknowledging that change is constant for cities, the testing of scenarios that can incorporate a range of interrelated variables will enable more agile responses to support business recovery and changes to population growth.





1 How is Greater Sydney changing?

1.1 Impacts on Greater Sydney

COVID-19 is changing how people live, work and interact. Closely following the 2019–20 bushfires, drought and floods, its spread means Greater Sydney will need to recover simultaneously from three once-in-a-century events.

Shifting trends

Analysis has found that COVID-19 is accelerating existing trends. For example, with 47 per cent of Greater Sydney's employees able to work from home[4], the uptake of digital technology has accelerated as pressure is reducing on the transport system. More health services are being delivered digitally by telehealth conferences and more consumers are shopping online.

The COVID-19 period also highlights the importance of designing cities, neighbourhoods and homes in ways that support wellbeing. Individuals and families are creatively utilising available space at home, adapting to evolving circumstances and relying on nearby open and public spaces. Connections to surrounding communities remain a fundamental consideration.

Serious impacts continue to be felt from the virus itself, the restrictions and the knock-on effects to the economy. These impacts are being felt unequally across Greater Sydney. A University of Sydney study shows that 53 per cent of workers are unable to work from home[5]. In addition, many people were temporarily stood down as workplaces closed, while others lost their jobs altogether, with an estimated 5.2 per cent of jobs lost in Greater Sydney between March 2020 and August 2020[6].

The economic and fiscal context

Australia is in recession after 30 years of continuing economic growth. The NSW Government's economic response to the pandemic – the largest of any state in Australia, currently at more than $15 billion[7] – together with Australian Government support, seeks to soften the economic impact. Despite this, the State's economy contracted by almost 10 per cent in the second half of the 2019–20 financial year[8].

Varying impacts across the three cities

The impacts of the pandemic have varied across the geographical spread of Greater Sydney. For example, as of August 2020 there were almost 50 per cent fewer people working in the Sydney CBD than in January 2020[9]. Meanwhile, local centres such as Villawood, Auburn, Homebush and Padstow experienced a 40 to 50 per cent increase in spending in June 2020, compared with February 2020[10].

Knowledge economy workers are more likely to be able to work from home (50 per cent of people working from home were knowledge workers in 2016[11]) which has contributed to an estimated 45 per cent drop in public transport use in August 2020 when compared to August 2019[12].

The **Eastern Harbour City** is characterised by a high proportion of workers in the knowledge economy (almost 37 per cent of its labour force[13]) and also has a relatively high reliance on the tourism and arts and culture sectors, which have been heavily impacted during the pandemic.

The closure of international borders is having a severe impact on tourism businesses and universities concentrated in the Eastern Harbour City. The reduction in international student numbers is also contributing to a more than doubling of residential vacancy rates in the Sydney 2000 postcode to 13.2 per cent in July 2020[14].

In the **Central River City**, many industries supply products to the health sector. Concurrently, investments in the Westmead health and education precinct, Parramatta Square redevelopment and Parramatta Light Rail support the growing productivity of Greater Parramatta. The planned upgrade of the rail freight line to Botany also supports productivity, with the freight line ensuring continued access to global markets for export-oriented businesses.

In the **Western Parkland City**, workers are less likely to be able to work from home as a higher proportion of workers are in the health and education and service sectors. This has seen traffic volumes generally remain the same, compared with the reductions elsewhere in Greater Sydney. The higher demand for digital solutions in business and education has highlighted that households in the south west of Sydney have lower rates of access to home-based internet.

1.2 Global impacts

Globally, the pandemic requires a resilient health care sector, a rigorous testing and screening system, and the capacity to quickly and safely provide treatments and a possible vaccine. It also requires an economic response, with the global economy being dealt a blow likened to the Great Depression and World War Two.

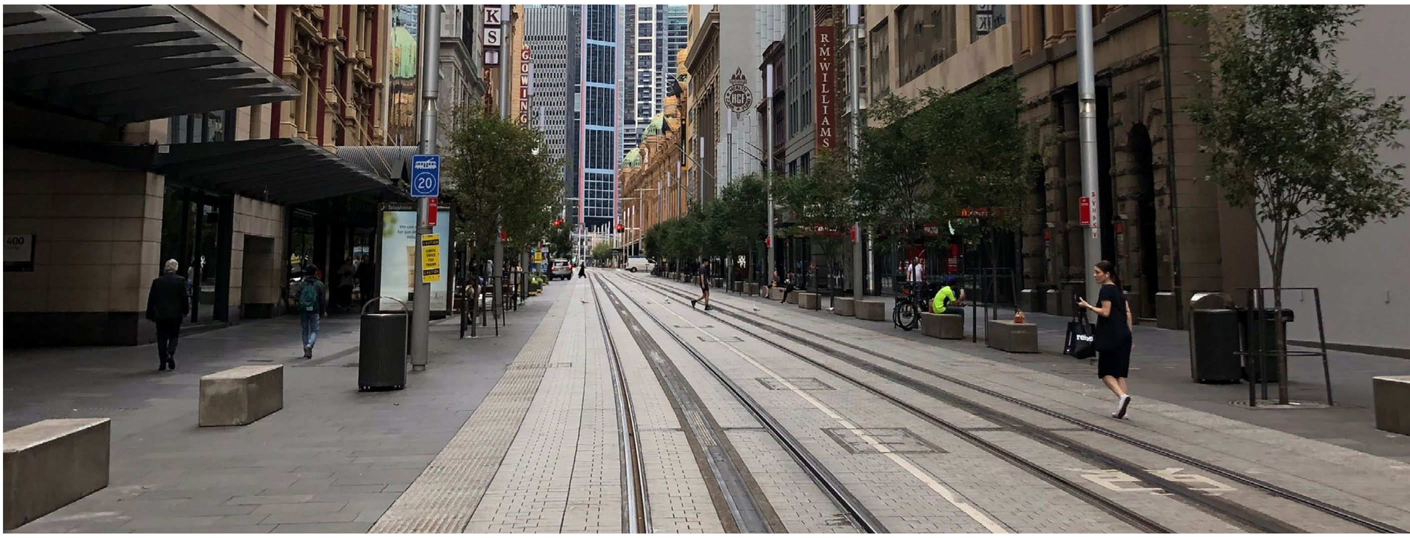
Living with and recovering from the pandemic and its social and economic impacts will be challenging for nations around the world.

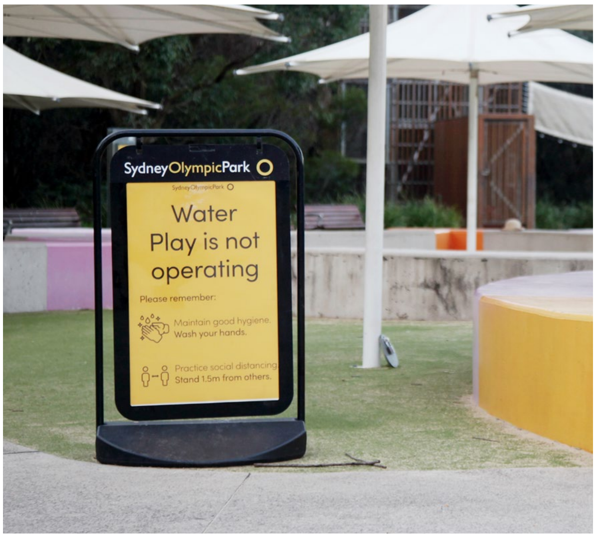
Our analysis focused on global cities that are comparable to Greater Sydney, including Greater London, Greater Toronto, the San Francisco Bay Area and the Berlin Region.

In general recovery is being recognised as having four overlapping stages: the health crisis with its necessary restrictions; a half-open city as the pandemic is managed; a post-pandemic recovery; and a new and more resilient normal.

For example, larger global cities anticipate that the crisis will drive further digitisation of industry. This is already prompting more demand for remote and flexible working arrangements in some sectors. This places further pressure on digital infrastructure capacity and disrupts office space demand, particularly in city centres.

We also found more demand for localised distribution networks, highlighting the importance of access to industrial land.





How is Greater Sydney changing?

Working

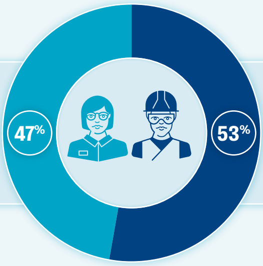
6.7% unemployment in NSW (Aug 2020)

compared with 4.3% in Aug 2019[15]

*seasonally adjusted

11.7% youth unemployment in NSW (Aug 2020)

compared with 9.5% in Aug 2019[16]



An estimated **47%** of Greater Sydney's workers have jobs that could allow them to work remotely

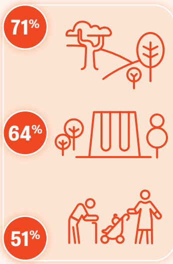
An estimated **53%** are in jobs that do not provide them with the ability to work remotely[17]

Lifestyle

On average there has been a **12% increase** in spending across local centres (as at mid June) compared with before COVID-19 (early February)[18]

Doubled use of Western Sydney Parkland's tracks and trails (June 2020)[19]

45% of Greater Sydney residents are spending more time in public space than prior to the restrictions (June 2020)[20]



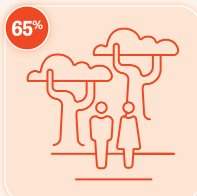
71% of Sydney residents are appreciating walking tracks and bushland/national parks more;

64% of Sydney residents are appreciating local parks more;

51% are appreciating local streets more[21]

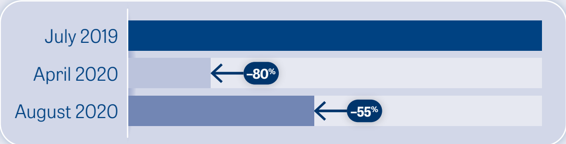
52% of people are connecting with people outside of their family in public spaces[22]

In 2016, **65%** of people living in Greater Sydney's urban area were within a 400 metre walk of local open space[23]

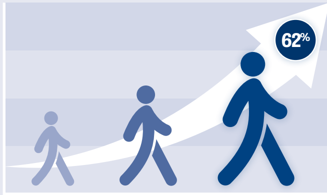


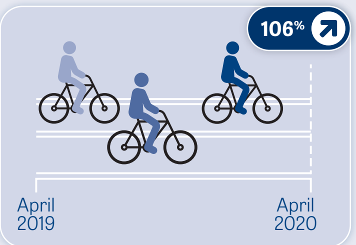
Travel and transport

As at August 2020 public transport trips are now **45%** of the August 2019 rate, up from **20%** in April 2020[24]



62% of people are walking more[25]





Ten cycleways with scanners revealed **106%** increase in cycling during lock-down in April 2020 compared with April 2019[26]

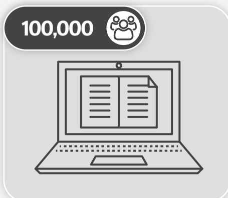
83% concerned about hygiene on public transport which could see more private car use (April 2020)[27]

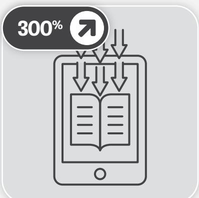
Digital services

Online retail growth of **80%** year-on-year in the eight weeks after the pandemic was declared[28]

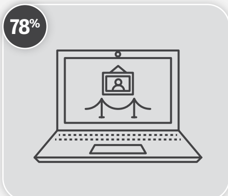
100,000 enrolments in free online TAFE courses across NSW (May 2020)

48% of students are studying with TAFE NSW for the first time (May 2020)[29]





300% increase in e-book downloads across NSW Libraries (June 2020)[30]



High rates of online participation in arts and culture in NSW (**78%**) May 2020[31]

In the four months to May 2020, **700%** increase in tele-health video-conferences relative to the same period in 2019[32]

Increased court appearances by audio visual link[33]

2 Mitigating the negatives

Change is integral to a growing, global city; robust, adaptable strategic planning is how we can anticipate and plan for these changes.

In Greater Sydney, for example, 700,000 overseas migrants settled between 2006 and 2016[34]. More people chose to live near jobs and centres with 78 per cent of new housing between 2014 and 2019 delivered in existing urban areas[35]. The university sector has also expanded to cater for overseas students. In 2018 there were over 70,000 international students at Greater Sydney's five largest universities[36].

While these changes have been gradual, the rate of change during the pandemic has been rapid affecting productivity and wellbeing. The impacts are being felt unequally across the city – geographically and by age group, gender, socio economic status. In many cases these impacts are exacerbating existing inequities.

2.1 Wellbeing

Wellbeing affects every part of our lives. It reflects physical and mental health, economic security, social connections and sense of purpose. The pandemic has impacted wellbeing dramatically for many due to the virus itself and the effects of the measures put in place to control its spread. Different groups across the three cities are affected in different ways, with those more vulnerable before the pandemic generally faring worse than others.

Despite signs of recovery, there are challenges to reclaim many of the activities that support wellbeing, economic security and economic growth. The normalisation of sectors such as arts and culture, tourism, hospitality, sports and events will underpin social connections. The needs of younger people will require a focus on jobs and training, the needs of older people and other vulnerable people will require a focus on health and community services for the aged.

Minimising the negative effects of the pandemic will be critical in supporting the wellbeing of the people of Greater Sydney.

Economic security

The temporary and permanent closure of businesses, the loss of jobs and the number of people receiving the JobKeeper Payment are having wide-ranging impacts. The impacts are being felt by some groups more severely than others (refer to Figure 1).

There are higher rates of workplace casualisation and, consequently, much higher rates of unemployment and underemployment among people aged under 25, as young people are more likely to work in sectors such as hospitality that are more exposed to the pandemic.

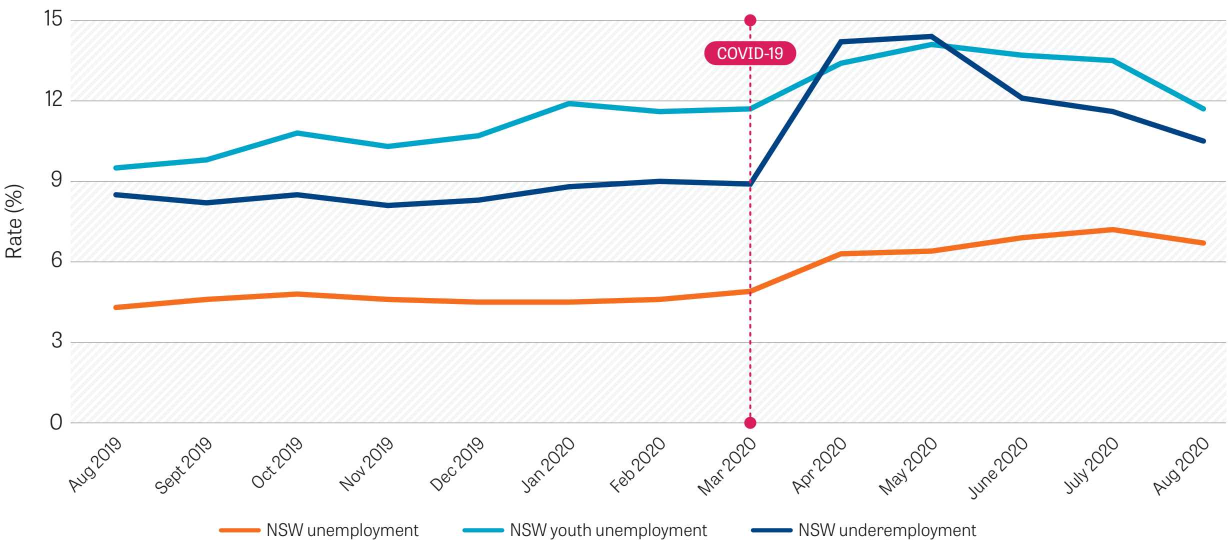
Greater Sydney's youth unemployment rate rose to 11.7 per cent in August 2020 compared with 9.5 per cent per cent a year earlier[37], and already much higher than the overall average. Young people also have less money saved, on average, making them less prepared for sudden changes or emergencies.

> **In March 2020, women accounted for 39 per cent of the full-time workforce but accounted for 62 per cent of full-time job losses in the period to August 2020[39]**

Similarly, women are facing greater impacts than men during the pandemic. The higher proportion of women in part-time employment (about 40 per cent of women across Greater Sydney compared with 20 per cent of men) makes them more vulnerable to the economic shock of the pandemic[40]. This is further backed up by evidence that women with fewer skills are likely to suffer the most in a recession[41].

Longer standing issues that disproportionately affect Aboriginal people such as higher youth unemployment and lower standards of living are also exacerbated by the pandemic.

Figure 1: NSW Unemployment, Youth Unemployment and Underemployment[38]



Lifestyle impacts and health

During initial lockdowns, restrictions meant many people could not engage in their usual recreation activities. This included 29 per cent of adults aged 18 and over who participate in sports through a sports or recreation club and the two-thirds of people 18 and over who participate in organised sport or attend a gym[42]. Gyms, fitness classes, community sport have recommenced but are still subject to physical distancing, hygiene and COVID-safe restrictions.

Young people aged between 16–25 face a combination of issues. The Commission's Youth Panel provided first-hand insights into the social impacts of remote learning, the postponement of tutorials or practical lessons and the limited opportunities for informal interactions. Restrictions on team sports have also disproportionately affected young people, who are more likely to belong to a sports club than older people. For example, in NSW, more than 50 per cent of those aged 15 to 17 years and more than a third of those aged 18–24 belonged to a sports club in 2019, compared with just over 20 per cent of people aged 25 to 54[43].

For Aboriginal people important cultural events and activities such as Sorry Day and NAIDOC week were postponed or celebrated differently. Restrictions on movement both within and outside Greater Sydney have prevented access to Country and limited the ability to fulfil cultural obligations.

Other groups who are more vulnerable than the general population include the elderly, a higher proportion of whom live alone. For many, restrictions have led to greater isolation and loneliness. Elderly people have lower levels of digital literacy, making it harder for them to virtually access family and friends and services such as shopping deliveries, telehealth and banking.

Further, people who rely on government services, including those provided by councils such as community meal delivery and access to the internet in local libraries, were impacted during tighter restrictions.

A mid-April survey by the Australian Bureau of Statistics found that compared with 2017–18, more Australians felt restless or fidgety (up from 24 per cent to 42 per cent), felt nervous at least some of the time (up from 20 per cent to 35 per cent) or felt everything was an effort at least some of the time (up from 22 per cent to 26 per cent)[44].

Learning and working at home

Between March 2020 and May 2020, 95 per cent of students attended school virtually[45], with support from the NSW Department of Education. This presented challenges such as the issuing of SIM cards and laptops to students to enable virtual learning, and the ability of parents and carers to juggle home schooling with their own work priorities.

Analysis by the Grattan Institute suggests that working from home while supervising children in remote learning had a negative impact on productivity, with paid hours worked among NSW families estimated to have contracted by almost 25 per cent[46]. The return to normal rates of face-to-face learning has both improved students' welfare and the economic productivity of parents and carers.

For many people studying and working from home presents challenges as some home environments are not well suited. These include the need for dedicated workspaces to lessen the impacts on the household. This period emphasises the importance of:

- safe and secure housing
- well-designed housing and multifunctional spaces
- good digital connectivity.

Focus Area 1

Community wellbeing is essential to resilience

People's involvement in the community, mental health and social connections are important in shaping a city that is resilient to future shocks and stresses. This includes consideration of intergenerational impacts, wider social and environmental impacts of policy and the quality of economic responses. The challenges for young people and elderly are particularly acute highlighting a need to enable social connections, and to focus on jobs and training for youth, and health and community services for the aged.

2.2 Jobs and productivity

Economic impacts from COVID-19 have seen the value of international trade in goods fall by about five per cent in Q1 2020 and this is expected to decline by a further 27 per cent in Q2 2020[47]. Sectors that felt immediate impacts as a result of closed borders included tourism and education.

In 2019 Greater Sydney welcomed 44.9 million visitors who spent $22.8 billion, employing more than 135,000 people[48]. With closed borders international tourism is expected to register its worst performance in terms of the number of travellers and revenue, since 1950[49]. The impacts of closed borders are widespread and include secondary sectors such as hospitality, food and beverage, arts and culture and retail.

The decline in international students in Greater Sydney has dramatically reduced university revenue. In turn, this will affect more than 95,000 full-time equivalent jobs and future research and development that the international education sector supports[50]. Analysis estimates that the pandemic will result in a decline in total spending on research at universities across Australia from $11.3 billion to potentially $7.3 billion[51].

Emerging impacts across sectors

Longer term impacts are still emerging for some industries. Those more dependent on the pandemic's duration and severity will continue to require government support while others could help to drive economic recovery.

The construction industry, which accounts for almost 190,000 jobs in Greater Sydney[52], is yet to feel the full impacts of the pandemic. New dwelling approvals dropped to 6,900 between April and June 2020, from around 7,700 in the same period in 2019. This is 40 per cent down from the record highs of around 11,600 over the same period in the previous four years[53].

Industries experiencing an expansion of their operations are being driven by shifting consumer demands and the acceleration of digital services. Health and wellness, retail-as-a-service, e-commerce, data storage, advanced manufacturing and fintech are all growth areas. For example, demand for data centres in Greater Sydney is growing despite the remoteness from other cities and economies across the Asia Pacific. This growth is driven by local demand from financial services, internet and tech companies and Greater Sydney is well placed to accommodate future growth in this regard[54].

Supply chains

At a metropolitan scale the pandemic is exposing the underlying complexities of Greater Sydney's economic ecosystems and supply chains, such as:

- limitations for essential goods, particularly to respond to the health crisis
- susceptibility of those heavily reliant on only a few sources, compared to more diversified supply chains.

The pandemic has seen the production of essential services brought closer to home, as many businesses have retooled to provide medical goods including ventilator solutions.

Across the globe businesses are looking to diversify supply chains and relocate strategic activities to better manage risk. This means businesses are seeking more local capacity and contingency in and around cities. Greater Sydney's 280 industrial precincts are well placed to respond to this demand.

Skills, training and economic recovery

Analysis of Greater Sydney's economic resilience reveals a greater need to match education with the skills required by industry. Programs that develop skills and training must not only cater for people leaving school and vocational education and training. They also need to meet the training and skill needs of the existing workforce that must transition to new opportunities in growth industries such as advanced manufacturing, health research and information and communications technology.

A review of industrial lands data shows that one in 10 industrial jobs in Greater Sydney are in the Blacktown Local Government Area (LGA) and many of these jobs are in the construction industry[55]. It also revealed the concentration of goods and services supporting the health sector through the Cumberland and Canterbury-Bankstown LGAs, as well as critical freight and logistics hubs. This central productivity spine, that includes the Westmead health and education precinct, provides a strong foundation to grow a high-value economic ecosystem.

In the Western Parkland City, the City Deal and emerging Western Sydney Aerotropolis provide significant opportunity for economic growth and innovation. The Liverpool Innovation Precinct will be a hub for health, research, education and technology, which will capture opportunities in the growing health sector. Other initiatives such as re-imagining Campbelltown CBD and the Penrith Economic Development Strategy will target opportunities for growth.

The Eastern Economic Corridor includes high value economic precincts from Macquarie Park in the north through the Harbour CBD to the trade gateways at Port Botany and Sydney Airport. The Eastern Economic Corridor has been heavily impacted by the sharp decline in international students and visitors. An important part of the economic recovery in this corridor will be precincts such as Tech Central and the renewal of Circular Quay, as well as the expansion of the night-time economy.

For precincts to successfully deliver on the NSW Government's objectives for innovation, economic recovery and growth, they need to have:

- sufficient scale
- clustering of research, expertise, services and industries
- a unique value proposition or areas of specialisation.

Focus Area 2

Rapid recalibration of jobs and productivity through training and skills and specialist precincts is critical to economic recovery

Impacts on job sectors have been uneven. While some sectors are likely to be affected only in the short term, some may continue to be affected and others may be presented with growth opportunities. Education and training must respond to these changes to match industries with skills and people with jobs. The economics of place means successful job creating precincts and corridors benefit from agglomeration and proximity to other businesses and productivity networks. The spread of industrial lands across the cities are also an important consideration.

3 Optimising the positives

3.1 Where we work

One of the most striking lifestyle changes to emerge in response to the pandemic is the change in how and where people work. At the operational level there are changes to accommodate physical distancing, such as capacity limits on work sites, dedicated entry and exit doors, concierge for managing numbers and registration in shops and restaurants. Moreover, it is the large-scale changes to where people work that have city-shaping implications.

Working from home and workplace flexibility

It is estimated that the proportion of workers who can work remotely is 47 per cent compared with 53 per cent who are unable to[56]. Many frontline health care workers, teachers, retail and salespeople or those in the transport, logistics and construction sectors continue to work from their workplace.

While working from home is different for each worker, for the average full-time worker working from home increased from 0.9 days per week to 2.1 days per week in the wake of the pandemic[57]. Private and public sector businesses are now considering how they can be more flexible, with some private businesses already committing to flexible workplaces.

A global survey by Gartner CFO indicates corporate support for working from home where 74 per cent of companies surveyed plan to permanently shift at least five per cent of their workforce from the office to permanently working remotely[58].

In 2016, only 4.3 per cent of workers worked from home on the day of the Census[59]. Of those working from home, 50 per cent were knowledge and professional service workers. The concentration of these jobs varies across Greater Sydney. The Eastern Harbour City has the highest proportion of resident population in knowledge jobs at 37 per cent, followed by the Central River City with 29 per cent and the Western Parkland City with 23 per cent[60].

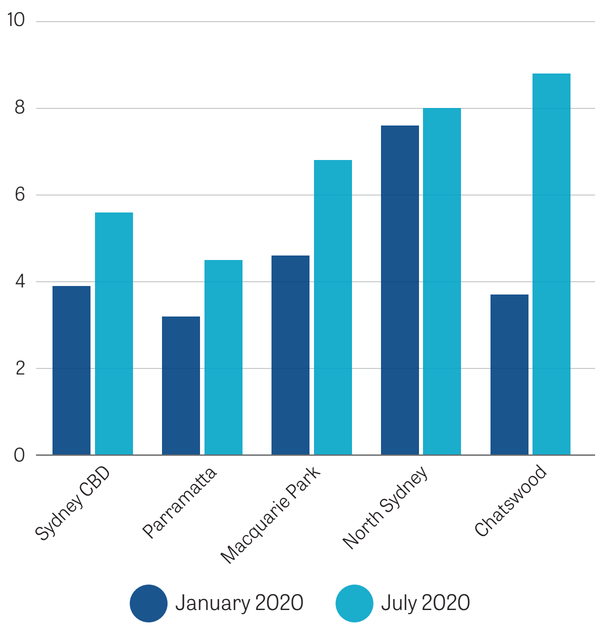
There will be impacts in terms of office space, particularly in the Harbour CBD, which normally accommodates 500,000 workers[61]. It will take some time for businesses to recalibrate demand for office space as working remotely continues.

Subdued activity in CBD hubs

The changes in where and how people work will have knock-on impacts on many other aspects of city life. Transport for NSW estimates that in June 2020, the number of unique visitors to Sydney CBD was close to a third of June 2019 levels[62].

Office vacancy rates increased across CBD hubs from January 2020 to July 2020, with the greatest increase in Chatswood (refer Figure 2). The office market typically works in cycles and in early 2020, Greater Sydney had some of the lowest vacancy rates (four per cent) of commercial office space compared to rates across Australia (average eight per cent), meaning the COVID-19-related impacts came at the peak of the market cycle[63].

Figure 2: Office market vacancy rates, July 2020 (%)[64]



Our consultation with State agencies identified opportunities to support a revitalised Sydney CBD and other centres such as a return to the office for collaborative work, multifaceted use of commercial office space and growing the city's night-time economy through COVID-safe transport connections.

More activity in local centres

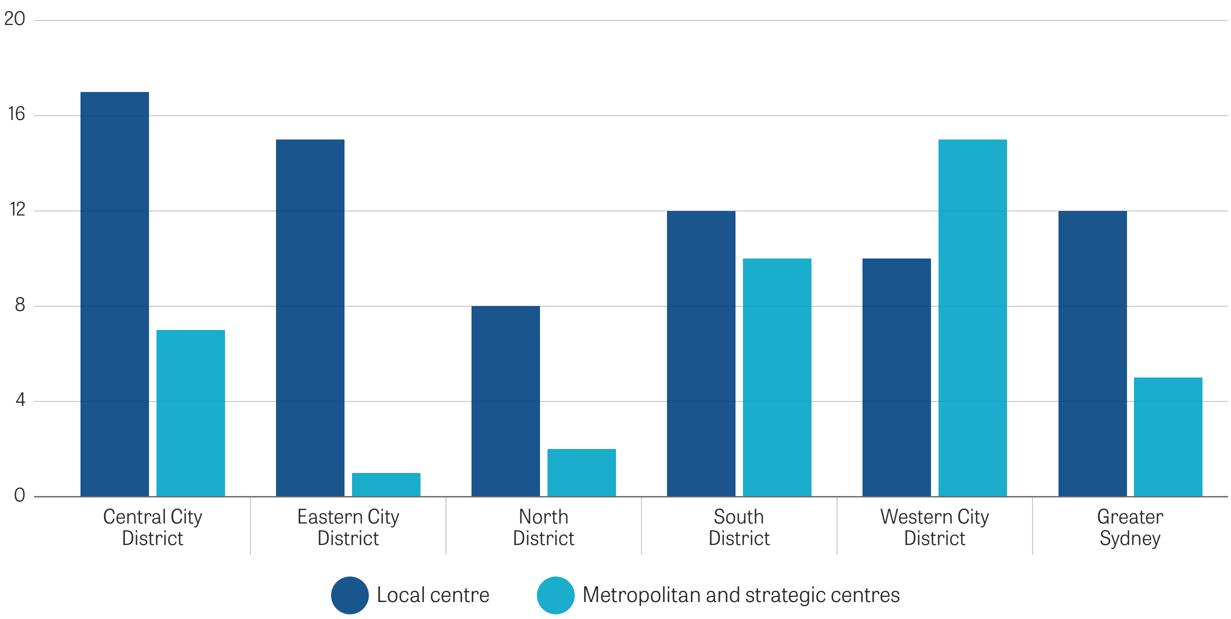
The increase in people working from home means more people are accessing services in local centres. The increase in consumer spend in local centres since the pandemic began is greater than in strategic and metropolitan centres (refer Figure 3). This highlights the importance of vibrant local centres and high streets.

The *Pulse of Greater Sydney 2019* shows that 96 per cent of the population lives within 30 minutes by public transport of a metropolitan and strategic centre[65]. However, access to local centres, measured by a 10-minute walk, is uneven, with higher levels of access in the Eastern Harbour City compared to the Western Parkland City.

If high levels of working from home continue, there could be more people spending more money and time in their local area. People value the time they save by not commuting and many use that time for leisure. A further component of the increased consumer spending in local communities is the increase in deliveries to the home for food and online purchases.

For others, however, working from home may exacerbate a sense of isolation. Research indicates many workers build social connections at work and the social aspects of face-to-face work can be critical to performance in some industries. This highlights the importance of agglomeration, where a co-location of skills, services, markets and knowledge can generate social and economic benefits.

Figure 3: Comparison of changes in spending centres (February 2020–June 2020)[66]



To optimise the benefits of people working from home, such as increased local spending and more leisure time, businesses would need greater investment in technology to support remote working.

Working from home and housing choice

An enduring increase in people working from home, could give more people choice in where to live, such as further from their place of work. While data is yet to show definitive trends, this could see more people enjoying the lifestyle benefits associated with living further away from city centres or in regional communities.

Any changes in housing preferences would influence the supply and demand for more diverse housing in Greater Sydney and across NSW.

> **Focus Area 3**
>
> **Changes to where we work is revitalising centres and may influence where we choose to live**
>
> Flexible locations for work have increased rapidly and there are indications that a portion of this increase may continue. This would lead to the revitalisation of local centres and an evolving role for CBDs. It may also mean that people who can work flexibly have a greater choice in where they live.

3.2 Changing travel patterns

COVID-19 could open up a range of opportunities to improve overall transport network efficiency and customer satisfaction. Changes in travel patterns may create opportunities to rebalance the peak times in which people travel and build efficiency and resilience in the transport system for freight and logistics.

Road usage in Greater Sydney fell by a third during April 2020. This steadily recovered and by early June was approaching levels comparable with the same time last year. During June, July and August, road usage has stabilised at around five to 10 per cent fewer vehicle movements compared to the same day in 2019[67], similar to what it is like to be on the road during school holidays.

Rebalancing travel demand across the day

Public transport patronage dropped to 20 per cent during the initial lockdown and reverted to around 45 per cent in August 2020 compared to August 2019[68]. This aligned with efforts to discourage non-essential travel so that customer safety and travel by essential workers could be prioritised. Commuters are also exercising more discretion about what time of day they travel and are encouraged to avoid the busiest times.

Reduced demand during the traditional morning and afternoon peaks has helped to manage demand, and is making it easier to avoid service delays at busy CBD stations and improve on-time running. It has also helped to reduce congestion and improve the efficiency of the overall transport network.

Flexible working arrangements have the potential to spread the working day and reduce pressure on peak road and public transport usage. This creates the prospect of actively shaping travel demand across the day, which could reduce congestion and improve productivity of Greater Sydney as a whole.

More walking and cycling

The greatest change for any mode of transport from March to July 2020 was in cycling and walking. Data from 10 Sydney cycleways with counters revealed approximately a 106 per cent increase in cycling during April 2020, compared with April 2019[69]. Bike sales from January to June 2020 were more than double the same period in 2019[70].

To support the increase in cycling, 30 kilometres of pop up cycleway were rolled out by Transport for NSW in partnership with councils in the first three months of the pandemic.

Since the start of the pandemic, 62 per cent of people are walking more[71]. If the greater reliance on local centres continues, we may see increased demand for shared spaces, where pedestrian and place needs are better balanced with those of vehicle traffic.

Several councils are trialling reduced speed limits so that more people can walk, cycle and move around centres in a safer, more amenable environment. In 15 centres, speed limits have been reduced from 50 to 40 kilometres an hour and in two pedestrian-focused centres, to just 30 kilometres an hour[72].

The shift to walking and cycling could be sustained by retaining some of the short-term initiatives introduced such as:

- pop-up cycleways to encourage new and ongoing cyclists
- dedicated additional road space to support adjacent businesses, such as increased capacity for queuing or on-street dining
- prioritised traffic signals for pedestrians and cyclists
- lower speed-limited streets.

A distributed local freight and logistics network

The acceleration in online commerce has impacted the freight and logistics network.

Analysis of online retail shows an 80 per cent year-on-year increase in the eight weeks after the pandemic was declared. If this continues there will be an impact urban logistics, such as delivery trucks, as freight transport and retail warehouses compete for land use.

This may require a shift to more local distribution hubs as companies develop more efficient delivery models supporting 'last-mile' deliveries. While global innovations will support this demand, the value of well-located industrial lands will increase. This emphasises the opportunity for:

- fewer restrictions on freight for efficient goods movement
- improved last-mile infrastructure to support a shift to online commerce
- a spread of micro-distribution hubs.

Focus Area 4

Changes to where and when we work and shop alters demand for transport services and freight logistics

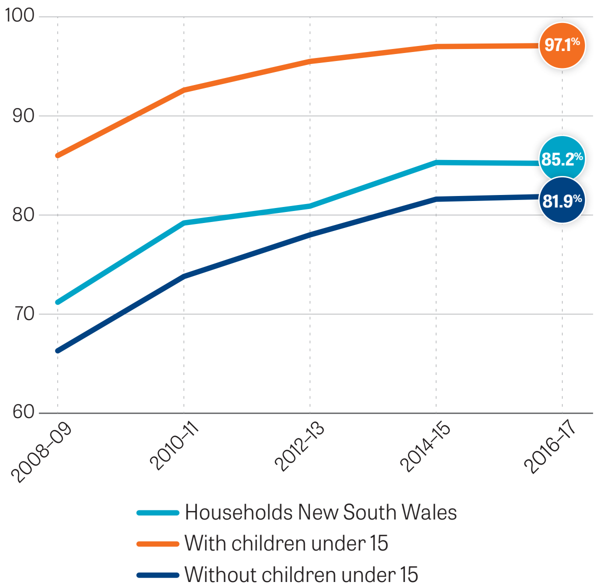
Increased working from home and greater flexibility in work location and work hours have shifted peak hour travel demand. This has the potential to change the focus from planning for a growing peak hour to supporting increased demand for a 24-hour transport network across the three cities. The rapid acceleration of e-commerce requires land use responses to support increased and efficient freight and logistics activities, especially 'last-mile' delivery systems.

3.3 Accelerated use of technology

The increase in e-commerce and online sales, a 700 per cent increase in telehealth services and large-scale increases in collaborative work and social platforms since the pandemic was declared[74] and a 300 per cent increase in library e-loans[75] illustrate how the pandemic is accelerating the digitisation of all areas of life.

Over the last 10 years the proportion of households in NSW with access to the internet increased from around 70 per cent to around 85 per cent across all categories of households (refer Figure 4)[76]. As universal access to fast, reliable, affordable digital technology becomes essential, so too does building the community's capability to use digital services.

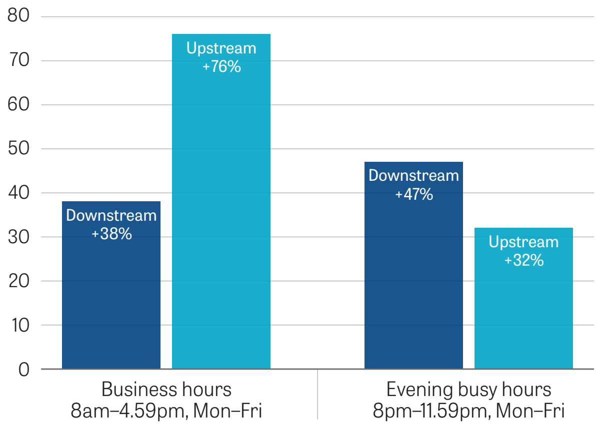
Figure 4: Accessibility to digital infrastructure in Australia (%)[77]



14.8% of households in NSW do not have access to the internet. This rate is higher for households without children under 15 at 18.1%[72].

The NBN provides the means for meeting the connectivity needs of most households. Figure 5 shows the increases in NBN network traffic across Australia during the pandemic.

Figure 5: NBN network traffic across Australia pre-COVID to August 2020 (%)[78]



Downstream traffic refers to data that is received by a computer or network. This includes receiving emails, downloading files, visiting Web pages and online games.

Upstream traffic refers to data that is sent form a computer or network and includes all types of outgoing data such as sending emails uploading files and data sent over the internet in online multiplayer games.

Quality and accessible digital infrastructure is essential as demand increases and businesses, households and governments become more reliant on digital connections and processes.

Pressure on Greater Sydney's digital infrastructure capacity will continue. However, access is inconsistent. There are gaps in the affordability, quality and reliability of connectivity and differences in technical literacy and willingness to access digital services. During the pandemic, south west Sydney had the highest numbers of public school students who had limited or no access to the internet, including smartphones[79].

Where people can get online is also changing. It is not just in the home or the office, but also in public spaces or on public transport. Consultation with stakeholders highlighted that:

- flexible work can be supported with smart work hubs and public wi-fi in parks, and public spaces or public transport
- face to face services and communication are still important and not always suitable to be conducted online, for example, when people interact with the health, justice or education systems.

Globally, growth in demand for data and the number of connected devices is growing beyond what has ever been envisaged in city planning. This demand is outstripping investment. While some countries are planning for 10 gigabit optical fibre networks, others are already planning 100 gigabit networks.

Digital economy and cyber security

The conversion of physical services digital delivery during the pandemic, including telehealth consultations and the widespread virtual learning at schools reinforces the need for fit-for-purpose digital infrastructure that everyone can access.

This however presents a city-wide cyber security risk. Businesses need the right hardware to overcome challenges with remote access to their systems including cyber security threats. There are also risks for utility operations such as intrusion into critical activities like energy or water supplies. The appropriate infrastructure and systems will better guard the city from cyber security threats, support continuity of internet access and create opportunities for innovation and business expansion that could underpin economic recovery.

In this context, digital infrastructure must be considered essential infrastructure. This is already acknowledged with recent investment in the digital economy and cyber security through the NSW Government's Digital Restart Fund, which includes $240 million for cyber security[80].

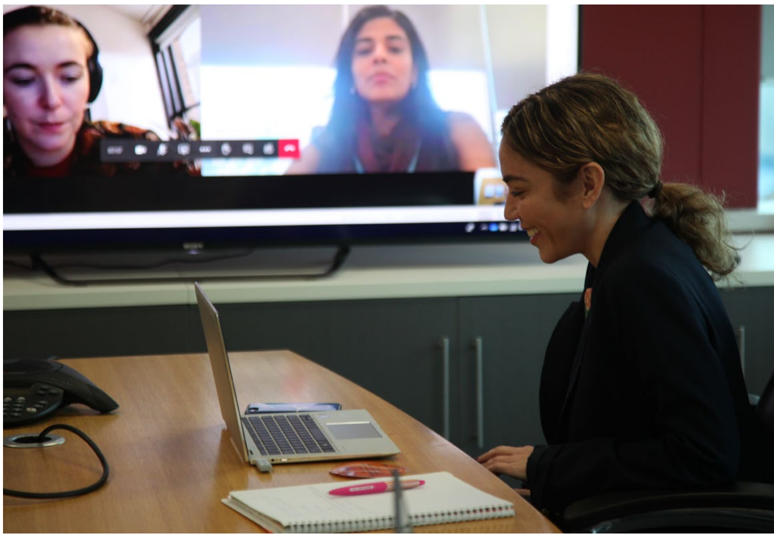
Smart Places

The pandemic is accelerating the sharing of data but has also exposed where systems need to be improved. The NSW Government's commitment to smart places, expressed through the Smart Places Strategy, uses live and near-time data and insights to drive decisions. Data is gathered through a network of sensors and technologies embedded in the built and natural environment. Emerging initiatives like the Smart Western City Program are designed to support place-based smart interventions. This may include smart pole networks with public wi-fi to improve connectivity in public spaces and making greenfield sites "smart" from the start.

Focus Area 5

Digital technology is vital infrastructure and universal access is needed

Never has it been more striking that digital infrastructure should be prioritised as essential infrastructure alongside physical and social infrastructure. Digital technology is transforming established business models, use of services, community networks and how we use public spaces. Greater incorporation of digital with spatial planning will ensure the virtual and physical city complement and support businesses and the community. This requires a risk-based approach to information and cyber security that incorporates citizen support.

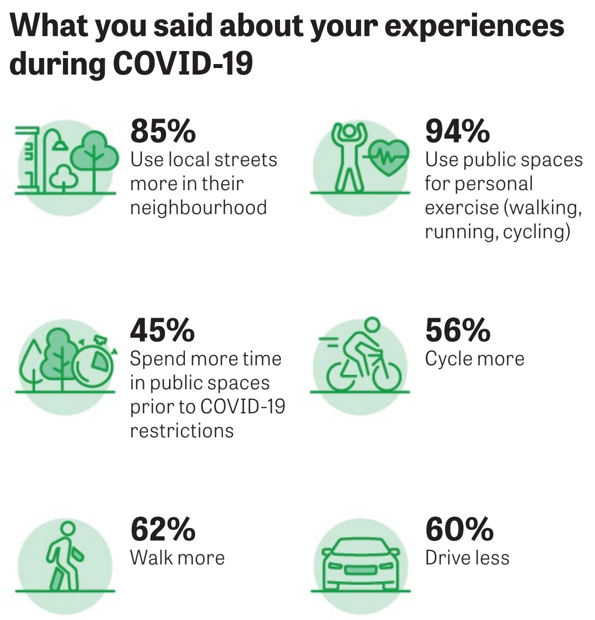


3.4 Greater use of public, open and shared spaces

As the pandemic has shifted recreation options, we have witnessed people adapting and increasing their use of open spaces. Open space recreation is part of the way of life in Greater Sydney and research shows that more than 85 per cent of respondents walked, jogged, hiked or ran for recreation or exercise in the past 12 months[81]. A recent survey by the NSW Department of Planning, Industry and Environment (DPIE) shows a dramatic increase in activities in public spaces and local neighbourhoods with 71 per cent of respondents appreciating local parks more[82].

Research has shown that walking for an average of 30 minutes a day can lower the risk of heart disease, stroke, and diabetes by 35 per cent[83], and reduce the risk of dying from all other health related-causes by 11 per cent[84]. Regular physical activity has positive impacts on mental health and wellbeing and reduces the risk of depression, anxiety, dementia and Alzheimer's disease[85].

Figure 6: DPIE Public space during COVID-19 Survey Report Findings, August 2020[86]



Built environment and shared spaces influence physical activity

Access to public open space close to where people live is associated with increased physical activity in all age groups[87]. People who have access to nearby useable green space are also twice as likely to report better health than those who do not[88]. This is further emphasised by research that highlights the benefits that can be reaped from the built environment:

- Living within 400–800 metre of a mix of destinations is associated with higher levels of walking and cycling across all age groups.
- People living within 1.5 kilometres of a convenience store, or newsagent are twice as likely to regularly walk, and those living within 1.5 kilometres of a larger shopping centre are three times more likely to regularly walk.
- The more street trees along the footpath network, the more likely residents are to walk for 60 minutes each week[89].

The DPIE survey also found that 45 per cent of respondents spent more time in public spaces since the pandemic, even with the challenges of physical distancing. Around 52 per cent of respondents used public space to connect with people outside their households[90].

Communities connect in public spaces

Research indicates that people tended to spend more time in their local communities due to restrictions and other health concerns, or because working from home allows them to undertake leisure and recreation activities near where they live. DPIE's survey found that 30 per cent of respondents feel more involved in their local community or neighbourhood since the start of the pandemic[91].

An analysis of current levels of access to centres shows around 34 per cent of people living in Greater Sydney are within a 10-minute walk of a centre that has at minimum a supermarket of 1,000 square metres. However, this accessibility is uneven across Greater Sydney with far higher levels of access to local and larger centres with levels of over 60 per cent in the Eastern City District, compared with around 20 per cent in the Western City and Central City districts[92]. Access to open space is better across the board, with around 65 per cent of people living in Greater Sydney within a 400 metre walk of open space. This is higher in the Eastern City District at 77 per cent than Western City District at 58 per cent[93].

Accessible open spaces connect people, and support health and wellbeing and vibrant local economies. Public and shared spaces, such as public facilities, streets and pavements enable local communities to socialise and engage in physical and recreational activities. Public spaces can also include schools, which are used for multiple community purposes through local joint use plans, as demonstrated by the 2019–20 bushfires where schools served as sites of relief and recovery.

> **Focus Area 6**
>
> **Investment in open, public and shared spaces connects communities and supports healthy lifestyles**
>
> The increase in local activity in open, public and shared spaces and its positive input to wellbeing underscores their value as community infrastructure. Public spaces support increased physical activity and healthy lifestyles and play a central role in connecting communities. Recognising how the community views and uses public spaces will enable better support for a wide range of social and economic functions.

3.5 A resilient and equitable urban structure

The current rate of accelerated and far-reaching change has the potential to exacerbate inequalities in cities. This presents a challenge to city planning and raises the question whether Greater Sydney's current planning framework is fit-for-purpose.

The Greater Sydney Region Plan aims to address inequality so that "targeted growth and investment can rebalance and improve opportunities for all who live in Greater Sydney." The Region Plan emphasises the importance of city-shaping infrastructure to overcome this inequality by shaping three cities where people can access jobs and services within 30 minutes of where they live. Infrastructure investments respond to areas of high population growth and the need to connect people to jobs, particularly across existing and emerging centres. Land use frameworks complement this through balancing greenfield and urban renewal development and by protecting and optimising important assets that support the functioning of the Greater Sydney, such as the spread of industrial lands.

Addressing local impacts

Given the impacts of COVID-19 are unequally distributed and have the potential to reinforce existing socio-spatial inequality, the existing three cities regional planning framework is well-suited to supporting recovery. At the same time, as the pandemic is a once-in-a-generation event it will challenge how we think about land use and infrastructure and how we optimise the city's valuable assets for recovery.

The vision for a metropolis of three cities recognises that targeted growth and investment can rebalance and improve opportunities for all who live in Greater Sydney by aligning infrastructure and growth to restructure economic activity and access across the three connected cities:

- the established **Eastern Harbour City** – building on its recognised economic strength and global networks
- the developing **Central River City** – investing in a wide variety of infrastructure and services and improving amenity
- the emerging **Western Parkland City** – developing the Aerotropolis, the emerging new city to ensure high quality jobs close to home.

Three cities, each with supporting metropolitan and strategic centres, will put workers closer to knowledge-intensive jobs, city-scale infrastructure and services, entertainment and cultural facilities. The Region Plan also retains and manages industrial land close to centres and transport to ensure critical services and local supply chains are available to support businesses and residents. Green infrastructure such as urban tree canopy, green ground cover, bushland, waterways, parks and open spaces is valued for its economic, social and environmental benefits.

> **Focus Area 7**
>
> **A metropolis of three connected cities supports local outcomes**
>
> Greater Sydney's urban structure and the existing strategic planning framework are robust and well-suited to support recovery and resilience. The vision of a metropolis of three 30-minute cities is designed to rebalance and grow economic and social opportunities. The focus is to refine and accelerate its implementation within the context of COVID-19 and recovery.

4 Managing unknowns

4.1 Recognising stakeholder roles

Consultation with councils, State agencies and industry has canvassed the new ways key stakeholders are working together to manage change driven by the necessity for quick, evidence-based decisions. Stakeholders agree that collaboration is central to managing uncertainties and making well-informed decisions efficiently.

Responding rapidly

As the pandemic evolves, governments at every level are making rapid decisions to support public health and the economy through tightening and easing restrictions on movement and business, providing financial support to affected individuals and businesses, and introducing temporary changes such as flexible employment arrangements.

The pandemic has accelerated existing trends, is driving new changes and resulting in a wide range of ways to adapt to restrictions. Within just a few weeks, people and businesses changed how they operate in Greater Sydney. Operating hours were extended for retail trade, waste removal and for infrastructure and other construction work.

While stimulus initiatives include $3 billion for new or upgraded schools, hospitals and roads across NSW[94], other initiatives to support positive behaviour changes include a $250 million program for councils to create new or improved public spaces for their communities[95].

New provisions have been established for online planning processes including public hearings. The NSW Government has developed accelerated development assessment processes, illustrating how criteria for jobs and public benefit could be a framework for probity and rapid decision-making .

Addressing volatility

New trends will continue to emerge that require the people of Greater Sydney to adapt and governments to respond. With the potential for increased volatility, the importance of real-time or near-time data to understand behaviour changes is vital.

Initial analysis and consultation indicate several emerging risks to city planning. Of concern is the return of trends that strategic planning and investment have helped to reverse over many years. For example:

- while flexible working may change how and where many people work there is a risk that economic impacts will create even more imbalance in jobs across Greater Sydney's three cities, particularly for young people and casual workers
- while more people are walking and cycling and spending more time and money in their local areas, some areas offer less access to diversity and choice in terms of services, open space, entertainment or retail
- increased anxiety around personal safety on public transport means more people are likely to use their cars, which could reinforce car-based urban forms that do not support healthy active lifestyles and a pedestrian friendly public domain.

Despite these issues, the greatest opportunity comes from how the community and businesses have been able to shift their mindsets as they adapt to new ways of living and working. Changes such as the support for workplace flexibility and working from home show a greater willingness to move beyond traditional norms.

Focus Area 8

Collaboration and evidence are central to responsive and efficient government

Quick evidence-based decision-making is enabling government, individuals and businesses to adapt to optimise health and business outcomes. New more collaborative models of working across government and with stakeholders have emerged to deliver high quality and efficient decision making on key operational issues for Greater Sydney. These models are principles driven, ensuring the best evidence, resources and skills are made available.

4.2 Planning for the longer term

In the 30 years since Greater Sydney was last in an economic recession, two generations of workers have joined the workforce and the experience of a recession is new or a distant memory. Addressing ongoing uncertainty will need to consider two key drivers:

- **Business recovery**: The length of the pandemic will influence how quickly businesses can recover and grow and create jobs. A longer wait for a treatment or vaccine means a range of support measures will need to remain in place for longer.
- **Population growth**: Fluctuations in forecasts for immigration and international students, workers and visitors will depend on when borders reopen, whereas changes to birthrates are likely to be impacted by the speed of the economic recovery.

Lower migration can change the proportion of working age people in Greater Sydney and the mix of services required, such as in health and education.

Changing demographics means changes in demand across all sectors. For example, the potential impacts on housing markets could be marked by a confluence of reduced demand from lower population growth with a need for greater housing choice brought about through increased workplace flexibility.

Given these uncertainties, more scenario testing will help improve the understanding of the potential impact of changes on these key drivers influencing Greater Sydney's future and support policy responses. This includes analysis of the potential impacts on the economy, population, housing, employment and service and capital investment under different environmental shocks and stressors and behaviour change trends.

Focus Area 9

Scenario planning provides for adaptive management and agile responses

Acknowledging that change is constant for cities, the testing of scenarios that can incorporate a range of interrelated variables will enable more agile responses to support business recovery and changes to population growth.

5 What's next?

This first six months of the COVID-19 pandemic has highlighted the value of working together across government and with key stakeholders to support rapid, evidence-based decision-making.

The data and observations outlined in this Report, together with further observations as more data becomes available, will influence the refresh of the Greater Sydney Region Plan and other government initiatives to get the best outcomes for the metropolis of three cities.

Identifying aspects of the delivery of the plans that are being accelerated and responding to changes that are happening faster than previously imagined are important. How this affects infrastructure priorities and/or their sequencing is also important, as agencies refresh their strategies to best align the changing ways Greater Sydney functions.

The NSW Government must be supported with data and city planning analysis to respond to the short, medium and longer-term challenges presented by COVID-19 to maintain and enhance the liveability, productivity and sustainability of Greater Sydney.

This report is an initial contribution. We will continue to collate data and provide city planning insights over the coming months. It is anticipated that further insights will be presented in the next edition of *The Pulse of Greater Sydney*.

6 Endnotes

1. Institute of Transport and Logistic Studies (ITLS), The University of Business Schools May 2020, Insights into the impacts of COVID-19 on household travel, working, activities and shopping in Australia
2. ITLS, The University of Business Schools May 2020, Insights into the impacts of COVID-19 on household travel, working, activities and shopping in Australia
3. Australian Bureau of Statistics (ABS), July 2020, Weekly Payroll Jobs and Wages
4. ITLS, The University of Business Schools May 2020, Insights into the impacts of COVID-19 on household travel, working, activities and shopping in Australia
5. ITLS, The University of Business Schools May 2020, Insights into the impacts of COVID-19 on household travel, working, activities and shopping in Australia
6. ABS, August 2020, Weekly Payroll Jobs and Wages
7. NSW Government, 'More industries to benefit as small business recovery grant extended', August 2020
8. Job creation to drive NSW economic recovery. Dominic Perrottet Media Release. 16 June 2020
9. Google, August 2020, Community Mobility Report
10. Quantium, July 2020, Economic Performance Tracker
11. ABS, 2016, Census of Population & Housing
12. Transport for NSW (TfNSW), August 2020, Public Transport Patronage
13. ABS, 2016, Census of Population & Housing
14. SQM Research, July 2020, Residential vacancy rates postcode 2000
15. ABS, August 2020, Labour Force Survey
16. ABS, August 2020, Labour Force Survey
17. ITLS, The University of Business Schools May 2020, Insights into the impacts of COVID-19 on household travel, working, activities and shopping in Australia
18. Quantium, July 2020, Economic Performance Tracker
19. NSW Government, June 2020, Sydneysiders take to green space during the pandemic
20. DPIE, August 2020, Public space during COVID-19 Survey Report
21. DPIE, June & August 2020, Public space during COVID-19 Survey Report
22. DPIE, June 2020, Public space during COVID-19 Survey Report
23. The Pulse 2019 GSC analysis
24. TfNSW, August 2020, Public Transport Patronage
25. DPIE, August 2020, Public space during COVID-19 Survey Report
26. TfNSW June 2020, State of the Cities Report: Data Insights
27. ITLS, The University of Business Schools May 2020, Insights into the impacts of COVID-19 on household travel, working, activities and shopping in Australia
28. Australia Post, 2020, Inside Australian Online Shopping 2020 eCommerce Industry Report
29. TAFE NSW May 2020, TAFE fee-free courses pass 100,000 enrolments Open source
30. NSW State Librarian May 2020, Millions turn to libraries to get them through Open Source
31. Australian Council May 2020, National Audience Outlook Monitor Open Source
32. NSW Health, June 2020, State of the Cities Report: Data Insight
33. NSW Courts, March 2020 The 'Coronavirus Effect' On the NSW Court System Open source
34. ABS, 2016, Census of Population & Housing
35. DPIE, 2019, Net Completions by financial year from FY2009–10 to FY2018–19
36. Australian Government Department of Education, 2020, Research Snapshot
37. ABS, August 2020, Labour Force Survey
38. ABS, August 2020, Labour Force Survey
39. ABS, August 2020, Labour Force Survey
40. ABS, 2016, Census of Population & Housing
41. Duke, J. and Wright, S., June 2020, COVID-19 to cost Australia $170 billion and women will bear the brunt, Sydney Morning Herald
42. Clearinghouse for Sport, 2019, AusPlay Survey
43. Clearinghouse for Sport, 2019, AusPlay Survey
44. Australian Bureau of Statistics, April 2020, Household Impacts of COVID-19 Survey
45. NSW Department of Education, 2020
46. Grattan Institute, April 2020, Cautiously reopening schools will be a lifeboat for families and the economy
47. United Nations UNCTAD, June 2020, Global Trade Update
48. Destination NSW, 2019, Sydney visitor profile Year ending December 2019
49. World Trade Organisation, August 2020, Cross Border Mobility, COVID-19 and Global Trade
50. Australian Department of Education and Training, 2019, Research Snapshot
51. Australian Government Chief Scientist, May 2020, Pandemic impact on Australia's research workforce
52. REMPLAN, 2019
53. ABS, June 2020, Building Approvals
54. CBRE, February 2017, Data centres: Bring the could back to Earth
55. Greater Sydney Commission Analysis, 2020
56. ITLS, The University of Business Schools May 2020, Insights into the impacts of COVID-19 on household travel, working, activities and shopping in Australia
57. NSW Innovation and Productivity Council, Remote Working (2020), forthcoming
58. Gartner, April 2020, Gartner CFO Survey Reveals 74% Intend to Shift Some Employees to Remote Work Permanently
59. ABS, 2016, Census of Population & Housing
60. ABS, 2016, Census of Population & Housing
61. ABS, 2016, Census of Population & Housing
62. TfNSW June 2020, State of the Cities Report: Data Insights
63. Property Council of Australia, July 2020, Sydney CBD vacancy remains tight despite falling demand, Office vacancy remains strong for Parramatta CBD

64. Property Council of Australia, July 2020, Sydney CBD vacancy remains tight despite falling demand, Office vacancy remains strong for Parramatta CBD
65. Greater Sydney Commission Analysis, 2020
66. Quantium July 2020, Economic Performance Tracker
67. TfNSW June 2020, State of the Cities Report: Data Insights
68. TfNSW, July 2020, Public Transport Patronage
69. TfNSW June 2020, State of the Cities Report: Data Insights
70. We Ride Australia, August 2020, Newsletter Open source
71. DPIE, August 2020, Public space during COVID-19 Survey Report
72. TfNSW, 2020, Pop-up transport
73. Australia Post, 2020, Inside Australian Online Shopping 2020 eCommerce Industry Report
74. NSW Health, June 2020, State of the Cities Report: Data Insight
75. NSW State Librarian May 2020, Millions turn to libraries to get them through
76. ABS, 2017, Household Use of Information Technology, Australia, 2016–17
77. ABS, 2017, Household Use of Information Technology, Australia, 2016–17
78. NBN Co, August 2020, Network usage COVID-19
79. Chrysanthos, N, June 2020, Public school students 2.5 times more likely to be without home internet, Sydney Morning Herald
80. NSW Government, 'Record funding for digital infrastructure' 18 June 2020
81. DPIE, 2019, Greater Sydney Outdoors Study
82. DPIE, June 2020, Public space during COVID-19 Survey Report
83. The Heart Foundation, 2020, Benefits of walking
84. Williams, P. T. and Thompson, P. D., 2013, Walking Versus Running for Hypertension, Cholesterol, and Diabetes Mellitus Risk Reduction
85. Kelly P, Kahlmeier S, Götschi T, et al, 2014. Systematic review and meta-analysis of reduction in all-cause mortality from walking and cycling and shape of dose response relationship
86. DPIE, August 2020, Public space during COVID-19 Survey Report
87. Erickson, K., Weinstein, A. and Lopez, O., 2012. Physical Activity, Brain Plasticity, and Alzheimer's Disease. Archives of Medical Research Coutts, C., Chapin, T., Horner, M. and Taylor, C. County level, 2013, Effect of green space access on physical activity
88. Carter, M. and Horwitz, P. Beyond proximity: The importance of green space useability to self-reported health, EcoHealth 2014; 11(3): 322–332
89. McCormack, G. R., et al, 2008, The relationship between destination proximity, destination mix and physical activity behaviours
90. DPIE, June 2020, Public space during COVID-19 Survey Report
91. NSW Government, June 2020, Sydneysiders take to green space during the pandemic
92. Greater Sydney Commission Analysis, 2020
93. Greater Sydney Commission Analysis, 2020
94. NSW Government, June 2020, Job Creation to Drive NSW Economic Recovery
95. Dominic Perrottet, Treasurer and Rob Stokes, Minister for Planning and Public Spaces, August 2020, $250 million boost for public spaces

Greater Sydney Commission

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Greater Sydney
Commission

Email: info@gsc.nsw.gov.au
Post: PO Box 257, Parramatta NSW 2124
Tel: (02) 8289 6200 or 1800 617 681

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Commission

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Post: PO Box 257, Parramatta NSW 2124
Tel: (02) 8289 6200 or 1800 617 681