Draft Central Sydney Infrastructure Plan

City of Sydney
Town Hall House
456 Kent Street
Sydney NSW 2000

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Sydney2030/Green/Global/Connected
city of villages

CITYOFSYDNEY 2030

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Introduction

The greatest challenge for any global city is the supply, funding and delivery of infrastructure. Doing this well creates and sustains a resilient city with high standards of living and contributes to its sustainable growth.

This plan seeks to aid in the supply, funding and delivery of infrastructure by identifying infrastructure that will support an increasingly dense Central Sydney with a growing worker, resident, visitor and student population.

The plan highlights specific infrastructure types, actions in place to address infrastructure demand and what improvements may be required to support Central Sydney's projected worker and population growth. The plan identifies how the City will act in meeting the demand for infrastructure improvements, and specific mechanisms that may be utilised in delivering improved infrastructure.

Infrastructure covered by this plan

This plan covers infrastructure already identified by other City, NSW Government or Federal Government plans, studies or strategies (source studies). Where the plan highlights a specific type of infrastructure a reference to the source study is provided at Appendix A. The source study can then be accessed by the reader if they require additional background as to the supply, demand and need for the infrastructure.

Infrastructure includes Essential Required Infrastructure (e.g. energy, waste, water, loading and servicing), Community Infrastructure (e.g. child care centres, libraries, and indoor recreation centres) and Federal/NSW Government Infrastructure and Services (e.g. rail, bus and ferry services, health and education services and a range of community services).

The Plan is not an exhaustive list of required infrastructure for Central Sydney. As communities, technology and the urban environment changes the infrastructure needs and demands of the community and city change with it. Government, industry and the community may determine innovative ways to deliver infrastructure outside of the Plan. The Plan therefore is to be treated as a baseline plan for infrastructure that can be reviewed and updated in association with source study updates and publications.

Private facilities and services

Central Sydney has a wide range of private facilities, including institutional libraries, private health and personal care services, private schools, child care centres and gyms. These are typically operated on a commercial user-pays basis.

Alongside this suite of infrastructure, a city requires infrastructure that is publicly available to all people in a socio-economically diverse society; infrastructure that is accessible – both in terms of affordability and operating hours – to meet the needs of a diverse and growing community.

This Plan outlines the requirements for public Community Infrastructure in Central Sydney. While acknowledging the importance of private facilities and services, this Plan contributes to the provision of a baseline level of social facilities and services accessible to all.

Community Infrastructure delivered under this plan is to be dedicated to the City as public infrastructure in public ownership, free of charge. This may involve torrens

title, strata or stratum dedication. In limited conditional circumstances the City may accept Community Infrastructure via easements (for public access), long term leases or similar, but only where these alternate methods provide for a better outcome, in the public interest.

Where it applies

This plan applies to the Central Sydney or 'City North Area', one of four City Areas which the City applies for urban and social planning purposes.

Central Sydney comprises two Village Groups, CBD & Harbour (Harbour) and Chinatown & CBD South (Haymarket), both with very different and diverse characters and communities, and very distinctive population growth profiles. The Central Sydney Planning Strategy provides a detailed analysis of Central Sydney's population growth profile.

The aim of the Village Group approach is to seek to ensure that a range of infrastructure needed to support daily life is available within walking distance of local Village Group communities. The City Area approach recognises that some social infrastructure may service a wider district or 'Area' population, and, in the case of Central Sydney – a Strategic Centre identified in the NSW Government's Eastern City District Plan – that infrastructure services a broader regional, metropolitan and even State-wide community, well beyond the daily requirements of Central Sydney's fixed worker and resident population.

Infrastructure delivery

By consolidating the infrastructure requirements of Central Sydney from source studies into one infrastructure plan, the supply, funding and delivery of infrastructure can be streamlined with emerging challenges, demands and priorities clear for all levels of government and the community. The plan identifies opportunities to strengthen Community Infrastructure provision and areas where government and industry can work together to ensure infrastructure is delivered in an efficient, integrated and timely manner.

Greater Sydney Region and District Plans

Central Sydney forms one precinct within the larger Harbour City strategic centre identified in the Greater Sydney Region Plan and the Eastern City District Plan (the Region and District Plan). The remainder of the strategic centre includes the North Sydney CBD, the Bays Precinct, Pyrmont Ultimo, Camperdown Education and Health Precinct, Central to Eveleigh, Surry Hills and Sydney East.

The Harbour City is targeted to deliver 166,000 additional jobs to 2036 under the District Plan's baseline jobs target, excluding North Sydney CBD. Under the Central Sydney Planning Strategy, Central Sydney is positioned to deliver 87% the baseline target. The Harbour City will also be required to accommodate an additional 70,000 jobs earmarked for the Harbour City under the District Plans higher target, the majority of which will need to be accommodated outside of Central Sydney in the existing lower density areas of the Bays Precinct and Pyrmont Ultimo.

The Harbour City is also targeted to deliver a significant proportion of the Eastern Districts 20 year dwelling target of approximately 157,000 new dwellings.

This is significant growth identified by the District Plan. The Region Plan states:

> *These areas will require new and/or enhanced local and regional infrastructure to support these changes.*

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

The City supports the investigation of alternate infrastructure funding mechanisms for the Harbour City including a growth infrastructure compact for areas including Innovation Corridor (including Darling Harbour) and Special Infrastructure Contributions for areas including the Bays Precinct and Central to Eveleigh.

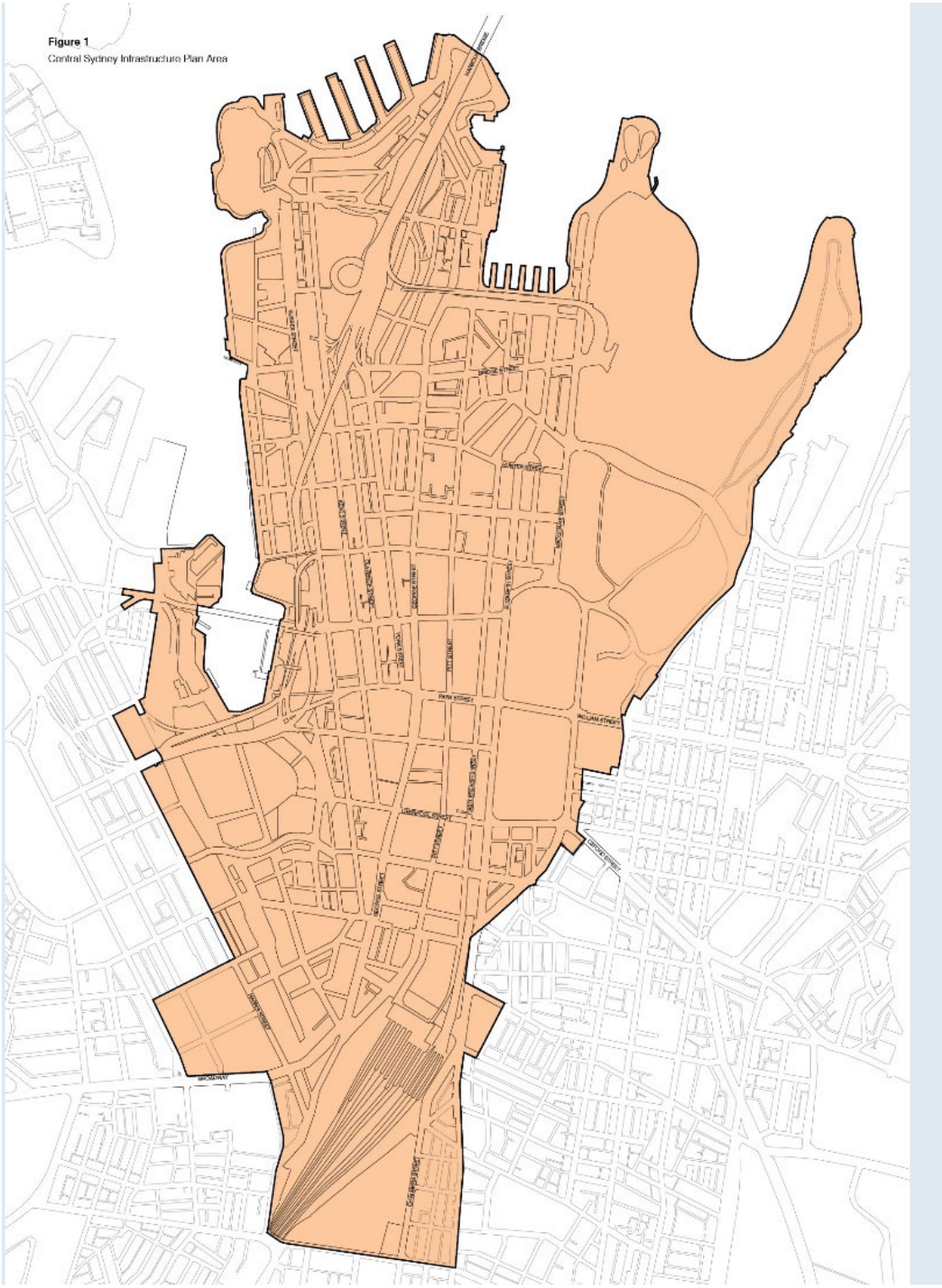
In relation to Central Sydney however, to effectively align infrastructure with growth, and to support the orderly development of land, requires a coordinated response, integrated with the City's existing contributions plan.

Central Sydney Development Contributions Plan 2020

The Draft Central Sydney Development Contributions Plan 2020 (the Contributions Plan) applies to the most land in Central Sydney, with the exception of The Rocks and Darling Harbour. It enables the City to levy a contribution on new development to generate contributions towards infrastructure in Central Sydney.

The Plan was adopted by Council on XX/XX/20XX, and commenced on XX/XX/20XX.

Figure 1
Central Sydney Infrastructure Plan Area



Central Sydney Planning Strategy

In December 2020, Council and the Central Sydney Planning Committee endorsed the Central Sydney Planning Strategy (the Strategy) . The Strategy provides the justification for changes to planning controls in Central Sydney as well as shaping how Central Sydney will grow to 2036.

Under the Strategy, Central Sydney has the potential to accommodate approximately 145,000 new jobs, 35,000 new residents in 18,000 new dwellings to 2036. This is in addition to increasing international, local and student visitors. Under a low growth scenario, worker projections may come down to approximately 105,000 new jobs by 2036.

Table 1 summarises the predicted growth projections including workers, residents and dwelling numbers.

Year	Workers	Residents	Dwellings
2016	305,690	28,730	15,121
2022	318,593	53,826	28,329
2024	323,261	56,079	29,515
2028	327,044	60,181	31,674
2032	381,294	61,526	32,382
2036+	448,320	62,801	33,053

A major proportion of the growth envisaged by the Strategy may be delivered on a site-by-site basis informed by the City's Guideline for Site Specific Planning Proposals in Central Sydney (the Guideline). This Infrastructure Plan complements the Guideline providing one avenue for the supply, funding and delivery of Community Infrastructure through value sharing, an infrastructure funding mechanism supported by the NSW Government:

> *Value sharing involves identifying and raising funds additional to those which come through business-as-usual development activities. Value sharing assessments should be undertaken as part of the business case development process.*
>
> The Greater Sydney Region Plan.

The projections presented in this Infrastructure Plan were last updated in January 2018 taking into account NSW Government Transport Performance and Analytics 2016 population forecasts. They are supply-constrained demand estimates of outcomes.

While reasonably accurate in Central Sydney in the past, projections are subject to fluctuations in market conditions, government policy and supporting infrastructure. It is also recognised that some development scenarios are likely to take a number of years, due to complex landownerships including some strata ownership.

Population projections provide the City of Sydney, Council and the community with knowledge so that they can make informed and confident decisions about the future. Projections therefore form part of the foundation for evidence based planning. This is particularly the case for infrastructure planning.

Development as a result of the Strategy will create additional demand for Community Infrastructure beyond that catered for by existing developer contribution schemes that apply in Central Sydney.

Where there is strategic and site specific merit the City will consider amending the planning controls, leading to increased in density. This funding approach only applies to floor space and height that is not available under current controls with the process for requesting to change the planning controls outlined in the Guideline.

Essential Required Infrastructure

Essential Required Infrastructure is standard infrastructure that must be delivered as part of any project and therefore in most instances cannot be classified as a public benefit to offset Community Infrastructure Contributions.

The following table summarises the detailed Infrastructure Audit at Appendix A. It provides a quick reference point as to the Essential Required Infrastructure types for Central Sydney and the actions in place to address increasing demand for that infrastructure type.

Precinct Response to Essential Required Infrastructure

Where a project delivers a precinct response to Essential Required Infrastructure within Central Sydney the City may consider offsetting a proportion of a required Community Infrastructure Contribution against a proportion of the precinct response to Essential Required Infrastructure cost.

Table 1 – Essential Required Infrastructure

Essential Required Infrastructure Type	Actions to address demand
Energy	Using energy efficiency initiatives and local generation solutions to reduce future pressure on electricity transmission and distribution networks. Actions include: • mainstreaming highly energy-efficient buildings through development controls • encouraging building renovations that ensure low-carbon and high energy efficiency performance • encouraging green energy infrastructure solutions • encouraging replacing old and inefficient existing infrastructure and technologies **Precinct response** • focus on precinct-scale, low-carbon, highly efficient solutions that support net-zero emissions by 2050
Waste	Using waste minimisation initiatives and local waste management solutions to divert waste from landfill. Actions include: • mainstreaming highly efficient waste management through development controls • ensuring developments are designed to facilitate 90% resource recovery rates when operational • ensuring 90% of waste from construction and demolition activities is diverted from landfill • requiring on-site separated food waste systems • encouraging replacing old and inefficient existing infrastructure and technologies **Precinct response** • focus on precinct-scale, best practice, waste management solutions that support a circular economy approach to waste management

	• encourage precinct-scale automated waste collection systems to improve amenity, reduce vehicle access requirements and reduce space required for waste storage and handling
Water	Using water efficiency and local water re-use solutions to minimise potable water consumption, reducing pressure on existing water and wastewater infrastructure and improving water quality through stormwater management reducing stormwater volumes leaving sites. Actions include: • mainstreaming water-efficient buildings through development controls • encouraging building renovations that ensure high water efficiency performance • require stormwater management as per Sydney Development Control Plan 2012 • encouraging replacing old and inefficient existing infrastructure and technologies • encourage green roofs and walls that are supported by recycled water • encourage stormwater harvesting, rain water tanks and wastewater harvesting if precinct scale solutions are not viable • requiring recycled water dual reticulation for sites in close proximity to recycled water schemes **Precinct response** • focus on precinct-scale, best practice, water management and re-use solutions that support a circular economy approach to water management and the delivery of recycled water infrastructure that enhances the existing network including storage tanks, pipelines and recycled water treatment plant
Tree Canopy	Increase urban tree canopy to mitigate urban heat island effect, support cleaner air and water quality and provide local habitat by: • prioritise tree planting in streets and public spaces • focus on tree canopy delivery in the public domain with more than 15% canopy coverage, a mix of tree heights, a preference for local indigenous species and permeable surfaces accommodated where possible • require tree canopy works to be complemented by vegetated stormwater systems, green roofs and green walls supported by recycled water where possible **Precinct response** • incentivise publicly accessible precinct-scale tree canopy solutions at podium level that deliver more than 50% of the combined roof area of the site, below 75 metres in height, as dense tree canopy
Affordable Rental Housing	In Central Sydney it is addressed via the City of Sydney Affordable Housing Program. Affordable housing is

	managed by a registered community housing provider and rented to very low to moderate income households.
Public Art	Support the continued application of the City of Sydney's Public Art Policy by requiring Public Art consistent with Sydney LEP 2012 generally in the order of 1 per cent of capital investment value for moderate sized projects sliding to 0.5 per cent capital investment value for very large projects.
Telecommunications	Support the continued application of the City of Sydney's Digital Strategy 2017 by advocating for telecommunications infrastructure in private and public spaces and the continued rollout of broadband fibre and wireless mesh networks. Focus on public telecommunication solutions that support digital inclusion and reliable high-speed broadband as an essential community and business service.
Public Domain Works	Public Domain Works, including public domain frontages and interfaces, stormwater drainage, vegetated stormwater management systems, road works, shared zones, open space and embellishment including widened footpaths, street tree planting, landscaping, furniture and lighting. To be delivered via City of Sydney approved Public Domain Plans in accordance with the City of Sydney's Public Domain Manual, Design Codes, Technical Details and relevant conditions of consent.
Floodplain Management Works	Floodplain Management Works, including flood mitigation works, overland flow works, drainage upgrades, public domain frontage and interface works including basement/below ground carpark entry works, incorporating flood compatible materials, flood storage works and on-site sewer management works. To be delivered via City of Sydney Floodplain Management Policy in accordance with the City of Sydney's Flood Planning Level requirements, City Area Floodplain Risk Management Plan and Study, Darling Harbour Floodplain Risk Management Plan and Study, Woolloomooloo Floodplain Risk Management Plan and Study, Blackwattle Bay Floodplain Risk Management Plan and Study Public Domain Plans, Public Domain Manual, Design Codes, Technical Details and relevant conditions of consent.
Through Site Links and Lanes	Through Site Links and Lanes are delivered in accordance with Sydney Development Control Plan 2012, Central Sydney Planning Strategy and any approved City of Sydney structure plans.
Cycling	Cycling Infrastructure delivered in accordance with the Central Sydney Planning Strategy including advocating and implementing the Inner Sydney Regional Bike Plan, continuing to encourage facilities for bicycle delivery

services and ensuring end-of-trip facilities are available for all cyclists.

Community Infrastructure

Community Infrastructure is public infrastructure that can be delivered above and beyond Essential Required Infrastructure, can be classified as a public benefit.

The following table summarises the detailed Infrastructure Audit at Appendix A. It provides quick reference point as to Community Infrastructure types, description and minimum requirements.

Table 2 – Community Infrastructure

Community Infrastructure Type	Description and minimum requirements
Integrated Multipurpose Facility	Large multipurpose community facilities, minimum 2,000 square metres aiming for 2,500 square metres internal area, that: • are typically integrated or co-located with other facility types within the network, such as libraries, children's services and indoor recreation facilities; frequently include a branch library as a core use • may include a range of other spaces and uses as appropriate to meet local community's needs; this may include adaptable community meetings rooms/programmable spaces (accommodating up to 200 people in a single space or fewer in smaller sub-spaces); indoor recreation space, such as indoor (or rooftop) courts
Local Community Facility	Facilities that are small (typically less than 400 square metres internal area) and serve a local catchment. They may be integrated with a larger commercial or retail complex/precinct.
Child Care Centres/Preschools	Purpose-built or fitted out for the provision of Early Childhood Education and Care. Minimum 400 square metres internal area per facility and include, but not limited to, required thoroughfares, outdoor play areas, panic rooms, toilet and hygiene facilities, storage areas and administrative areas as per NSW Government legislative and regulatory requirements. Excludes out-of-hours school and vacation care and early childhood health centres, which are typically provided by the NSW Government.
Libraries	Refers to libraries that function as local community branch libraries. Libraries may be standalone facilities, although contemporary libraries are frequently provided as part of larger Integrated Multipurpose Facilities, typically forming the core component of such complexes,

	along with community meeting rooms and other ancillary community spaces. Minimum 1,500 square metres internal area. Libraries in Central Sydney should form the primary component of Integrated Multipurpose Facilities.
Cultural/Creative Facilities	Covers a range of creative and cultural facilities that serve a range of catchments, including: • Facilities for 'active' participation for the public (e.g. spaces with resources for active making, doing and skill sharing) • Facilities for professional creative practice and art form development (e.g. rehearsal rooms, artist studios), and creative enterprise • Facilities for audiences/spectatorship (e.g. theatres, cinemas, cultural centres, exhibition spaces) • Spaces for temporary cultural activities in the public domain
Indoor Recreation Facilities	Typically provided to serve district or regional catchments. Include: • Indoor Courts Facilities, providing two or more playing courts, which may also incorporate ancillary indoor recreation facilities such as gyms and fitness studios • General Indoor Recreation Facilities, that are incorporated within and/or ancillary to other facilities types, such as outdoor pools, Integrated Multipurpose Facilities and Local Community Facilities • Indoor swimming pools, with or without ancillary health and fitness spaces. Indoor Courts Facility: minimum 2,000 square metres with an ancillary component minimum 400 square metres. General Indoor Recreation Facility: minimum 400 square metres. Indoor Swimming Pool Facility: incorporate a 25-50 metre pool and learn-to-swim/children's swimming spaces: minimum 6,000 square metres.
Public Toilet Facilities	Public Toilet Facilities are toilet facilities which are directly accessible to the public. They are located in parks, on streets, in some City managed public buildings, at some rail stations and in some shopping centres. Public Toilet Facilities can include end-of-trip facilities with showers, change rooms and parent's rooms. They may also include features that make them accessible to people with profound disabilities and their carers. They are often referred to as "Changing Places" toilets. Changing Places toilets are larger than a standard unisex accessible toilet. They include extra features such as an

	adult change table, and more circulation space to meet the needs of people with profound and multiple disability and their carers. Public Toilet Facilities should be accessible, inclusive, safe and of quality. Public Toilet Facilities should incorporate best practice principles of Environmentally Sustainable Design and management.
Public Domain Improvements and Open Space	• Public Domain Improvements, beyond essential required Public Domain Works delivered as part of any project, are delivered via City of Sydney approved Public Domain Plans and the Central Sydney Planning Strategy, in accordance with the City of Sydney's Public Domain Manual and relevant conditions of consent. • New Public Open Space and connections delivered in accordance with the Central Sydney Planning Strategy including progressing the delivery of a future Town Hall Square and identifying opportunities to provide new and additional public open space through significant new development, particularly in the Western Edge, Southern, Midtown and Central Station precincts.
Floodplain Management Improvement Works	• Floodplain Management Improvement Works, beyond essential required Flood Plain Management Works delivered as part of any project, including upgrades to regional/catchment trunk drainage, precinct overland flowpath works, precinct drainage upgrades, critical facility works and flood storage works. • To be delivered via City of Sydney Floodplain Management Policy in accordance with the City of Sydney's Flood Planning Level requirements, City Area Floodplain Risk Management Plan and Study, Darling Harbour Floodplain Risk Management Plan and Study, Woolloomooloo Floodplain Risk Management Plan and Study, Blackwattle Bay Floodplain Risk Management Plan and Study, Public Domain Plans, Public Domain Manual, Design Codes, Technical Details and relevant conditions of consent.
Loading and Servicing	Focus on the provision of loading and servicing infrastructure that supports the amenity and character of the precinct, including by providing: • space (potentially on a commercial basis) for the storage and transfer of goods to other modes • direct street access for delivery personnel on foot, bike or other alternative mode • functional space for loading and servicing activity (e.g. good clearance height, HRV suitable dock spaces, adequate manoeuvring space) • open-access or shared servicing facilities servicing existing surrounding heritage sites and small sites which may not have on-site parking or loading

- where feasible, links to existing/adjoining loading and servicing infrastructure

Spaces supporting priority economic development activities

Economic development spaces can support activities for key economic sectors, such as cultural and creative businesses, tech start-ups, and social enterprises. They are not community facilities in the typical sense they are key tools to meet the City's strategic economic, cultural or social objectives.

Economic Development Spaces	**Economic Development Spaces include:**
	• **shared working spaces for start-up businesses and social enterprises**
	• **creative retail shopfronts**
	• **work (or live/work) spaces for artists and other cultural, creative or other enterprises**
	• **specifications for these spaces are defined by the:**
	  - **strategic objectives that such a space would be fall under**
	  - **supply and demand characteristics**
	  - **functional requirements of the project**
	  - **locational opportunities and feasibility**

Federal/NSW Government Infrastructure and Services

Provision of a range of infrastructure and services accessible to Central Sydney are the remit of Federal Government and NSW Government agencies. This includes rail, bus and ferry services, Sydney Airport, health and education services and a range of community services, such as aged care, early childhood health and homelessness support services.

The City advocates on behalf of the wider community to ensure adequate facilities and services provided by all levels of government are available to those living and working within the Local Government Area. This includes actively participating in master planning and public discussion of local and metropolitan urban renewal and transport projects including the Bays Precinct, Central to Eveleigh, Central Station Precinct, Botany Road, Redfern-Waterloo, Sydney Metro and WestConnex.

Actions to address demand

- The City will continue to participate in these discussions, including to ensure that relevant agencies are aware of development in Central Sydney and are able to plan for adequate services to be in place as development occurs
- The City will advocate for Essential Required Infrastructure and Community Infrastructure as part of these projects
- The City will advocate for Federal/NSW Government Infrastructure and Services on behalf of the wider community for the provision of required infrastructure – including district and regional infrastructure – with consideration of indicative good practice service/facility provision benchmarks

Appendix A – Infrastructure Audit

Infrastructure type title

source study	Name of City, NSW Government or Federal Government plans, studies or strategy that identifies the supply, demand and need for the infrastructure type.
current provision	Either a quantitative statement of current supply, or a discussion of current supply and issues and associated issues.
demand profile	Discussion of current and future demand, issues associated and where relevant characteristics which should be used to shape targeted delivery of future infrastructure.
description (where applicable)	A bullet list providing a basic description of the infrastructure type. This description should be used to guide the infrastructure outcomes required.
minimum requirements (where applicable)	The minimum physical requirements of the identified infrastructure. These minimum requirements are mandatory with infrastructure outcomes required to comply.
actions	A list of actions as to potential methods of delivery, mitigation or the City's position in relation to advocating for delivery.

Essential Required Infrastructure

Energy

source study	City of Sydney Environmental Action 2016-2021 Strategy & Action Plan TransGrid Network Management Plan 2011-2016 TransGrid Annual Planning Report 2017 TransGrid Network Development Strategy 2014 TransGrid Powering Sydney's Future 2014
current provision	The energy network in the Inner Sydney (the Eastern Suburbs, City of Sydney, Botany and Marrickville) supplies electricity to over 500,000 customers including homes, businesses, hospitals and public transport as well as Australia's financial hub, largest airport and one of the busiest sea ports in the country. Consistent with good international practice, supply to high-density urban and central business districts is given special consideration. The jointly developed target reliability standard for the area is that the system will be capable of meeting the peak load under a number of contingencies. Notwithstanding this, parts of the electricity network supplying Inner Sydney area are reaching the end of their serviceable lives and are requiring energy providers to consider ageing assets, demographics and social trends and planning for peak demand.
demand profile	Inner Sydney's population is forecast to grow due to renewed economic activity and development of new transport corridors. Electricity demand forecasts as a result indicate that the need to address a shortfall in electricity capacity could vary from 2019 to 2023. Notwithstanding population growth however, the increase in demand for energy has been moderated in recent years due in part to increased electricity prices, the use of energy efficient devices and the gradual penetration of embedded renewable sources of power and tri-generation installations in Central Sydney buildings. The need for initiatives therefore to support the energy network are essential to delay committing to significant capital investment and to insulate Central Sydney from the very real possibility of network outages, especially at peak usage.
actions	Using energy efficiency initiatives and local generation solutions to reduce future pressure on electricity transmission and distribution networks. Actions include: • mainstreaming highly energy-efficient buildings through development controls • encouraging building renovations that ensure low-carbon and high energy efficiency performance • encouraging renewable energy infrastructure • encouraging replacing old and inefficient existing infrastructure and technologies **Precinct response** • focus on precinct-scale, low-carbon, highly efficient solutions that support net-zero emissions by 2050

Waste

source study	City of Sydney Waste Strategy and Action Plan 2017-2030
current provision	The City is home to more than 200,000 residents and 437,000 jobs. On an average day, it is estimated that there are more than 1.2 million people in the city, including workers, residents, visitors and students. The City is responsible for generating more than 25% of NSW's GDP and more than 20% of the NSW's business waste. The City collects and manages around 65,000 tonnes of waste each year from more than 115,000 households and around 11,000 tonnes from City-managed assets, parks and public places. Commercial and Industrial (C&I) waste is the term given to all non-residential waste streams that are produced by businesses or institutions and is largely made up of organic or biodegradable wastes. Businesses are responsible for collecting their own C&I waste and produce around 700,000 tonnes of it annually. The C&I waste stream represents a significant proportion of the total emissions created by waste going to landfill. We need to identify how we can most effectively influence the way this waste stream is reduced and managed to achieve the most sustainable outcome.
demand profile	As the City grows, so will the levels of waste produced. Central Sydney's population alone is expected to grow by 145,000 jobs and 35,000 residents by 2036. By 2030, City collected waste is forecast to grow to more than 100,000 tonnes a year and waste from the C&I sector is forecast to grow to more than 800,000 tonnes a year. Waste minimisation and recycling will continue to be a priority for the City. The City believes that for NSW to achieve resource recovery targets and maximum diversion from landfill an adequate network of waste transfer and treatment facilities must be developed. As Sydney is currently in a period of unprecedented development and growth the availability of accessible and suitable sites for transfer and management of waste is diminishing. Precinct based solutions to managing waste would assist, especially for small businesses and sites in the city which have few options available for recycling, and much of their garbage goes to landfill. Challenges for the City include influencing everyone to produce less waste, tackling the problems presented by the high-density urban environment, promoting Advanced Waste Treatment, and encouraging the commercial sector to become involved in these systems.
actions	Using waste minimisation initiatives and local waste management solutions to divert waste from landfill. Actions include: • mainstreaming highly efficient waste management through development controls • ensuring developments are designed to facilitate 90% resource recovery rates when operational • ensuring 90% of waste from construction and demolition activities is diverted from landfill • requiring on-site separated food waste systems • encouraging replacing old and inefficient existing infrastructure and technologies **Precinct response**

- focus on precinct-scale, best practice, waste management solutions that support a circular economy approach to waste management
- encourage precinct-scale automated waste collection systems to improve amenity, reduce vehicle access requirements and reduce space required for waste storage and handling

Water

source study	City of Sydney Decentralised Water Master Plan 2012-2030 City of Sydney Recycled Water Master Plan 2012
current provision	The city uses 33.7 billion litres of water a year. It has the oldest network of water mains, sewage pipes and drainage pipes in Australia. This ageing water infrastructure has coped well with population and development growth since the time they were laid underground. However, a significant proportion of them are reaching their structural life and/or hydraulic capacity to deal with increased water demand and volumes of sewage and stormwater run-off anticipated by 2030. Water in the City of Sydney is supplied by Sydney Water. Wastewater in the city is also managed by Sydney Water. Stormwater management is the responsibility of the City of Sydney. Sydney's rainfall is variable. Droughts highlight the importance of improving our understanding of the implications of climate variability and climate change for the water supply/demand balance of Sydney.
demand profile	The predicted impacts of climate change and population growth will strain our potable water (treated water that is safe enough for consumption) supplies, with potable water demand estimated to grow by 30 per cent to 44 billion litres a year by 2030. The City therefore aims to conserve our valuable water resources to accommodate these impacts. Alternative water resources must increase to drought-proof our city and keep it green and cool. The City is transforming to be a water sensitive city that is resilient, cool, green and productive. Our water management approach includes: • using less through behaviour changes and efficient fixtures/fittings • capturing alternative sources for recycling and non-potable use • reducing stormwater pollution, minimising local flood risk, enhancing greening and urban cooling through retrofitting the stormwater management network with 'green' stormwater infrastructure The City's 2030 target is to maintain 2006 potable water consumption levels. We plan to achieve this by using water more efficiently and unlocking recycled or alternative water sources including promoting recycled water schemes in Central Sydney and in Darling Quarter.
actions	Using water efficiency and local water re-use solutions to minimise potable water consumption, reducing pressure on existing water and wastewater infrastructure and improving water quality through stormwater management reducing stormwater volumes leaving sites. Actions include: • mainstreaming water-efficient buildings through development controls • encouraging building renovations that ensure high water efficiency performance • require stormwater management as per Sydney Development Control Plan 2012 • encouraging replacing old and inefficient existing infrastructure and technologies • encourage green roofs and walls that are supported by recycled water • encourage stormwater harvesting, rain water tanks and wastewater harvesting if precinct scale solutions are not viable

- requiring recycled water dual reticulation for sites in close proximity to recycled water schemes

Precinct response

- focus on precinct-scale, best practice, water management and re-use solutions that support a circular economy approach to water management and the delivery of recycled water infrastructure that enhances the existing network including storage tanks, pipelines and recycled water treatment plant.

Tree Canopy

source study	City of Sydney Urban Forest Strategy 2013 NSW Government Greener Places 2017 NSW Government Urban Green Cover in NSW Technical Guidelines 2015
current provision	In 2008, the City's tree canopy covered around 15.6% of the local area: • 6.6% of private land • 4.9% on roads • 4.1% in parks. Private land makes up 61.7% of the City's total land area and therefore has the greatest ability to contribute to the provision of additional tree canopy cover. Central Sydney's canopy cover ranges between 7 and 15%. Landscaping in Central Sydney is an important way to contribute to the urban ecology, and has a range of environmental, social and economic benefits. Not only does Central Sydney's landscaped character contribute greatly to its image, but a thriving urban forest of parks and street trees provides cleaner air, manages noise, filters stormwater and is a cost-effective means of managing Central Sydney's temperature in periods of extreme heat. Trees, shrubs and other plants create important habitat for birds, insects and reptiles – and they make for beautiful city streets also. In an environment characterised by tall buildings, awnings and busy streets, landscaping and street trees have psychological benefits in reducing stress and providing spaces for relaxation and contact with nature. People typically linger, shop and dine longer in tree-lined streets, hence increasing the attractiveness of business and tourism areas, enhancing property values and playing a role in the economic sustainability of the city. And importantly, they provide a sense of place.
demand profile	The Strategy maximises opportunities within the public domain to improve urban ecology by other measures as well: prioritising streets for people, protecting and widening footpaths and increasing opportunities for street tree planting. The Strategy promotes green walls and green roofs within development sites. The City of Sydney is working to create an urban forest with greater tree canopy and more diversity to provide the proven benefits to cities of plants and trees. For Central Sydney, this means increasing the average total canopy cover to more than 15 per cent by 2030.
actions	Increase urban tree canopy to mitigate urban heat island effect, support cleaner air and water quality and provide local habitat by: • prioritise tree planting in streets and public spaces • focus on tree canopy delivery in the public domain with more than 15% canopy coverage, a mix of tree heights, a preference for local indigenous species and permeable surfaces accommodated where possible • require tree canopy works to be complemented by vegetated stormwater systems, green roofs and green walls supported by recycled water where possible **Precinct response**

- incentives publicly accessible precinct-scale tree canopy solutions at podium level that deliver more than 50% of the combined roof area of the site, below 75 metres in height, as dense tree canopy

Affordable Rental Housing

source study	Central Sydney Planning Strategy 2016-2036 City of Sydney Housing Issues Paper 2015 City of Sydney Affordable Housing Review
current provision	Housing supply in the City of Sydney comprises 9.8 per cent social housing and 0.7 per cent affordable housing. About another 8,000 affordable housing dwellings are required to achieve the City's Sustainable Sydney 2030 7.5 per cent affordable housing target.
demand profile	In 2011, Central Sydney's two most populous age groups were "tertiary education and independence age" and the "young workforce". By 2036 these two groups will proportionally decrease by 12 per cent replaced mostly by "parents and homebuilders", "empty nesters and retirees" and "seniors". This highlights a looming skills crisis for new and establishing business, not just a lack of direct access to a large student population and a highly mobile and educated young workforce, but a lack of access to well-staffed service industries – retail, food and beverage, and entertainment – that help them to attract workers from across the globe. This growing loss of lower-income households results in essential employment sectors finding it increasingly difficult to fill employment vacancies and staff shifts, hampering business productivity and economic growth. Currently at around 50,000 employees, low income workers make up about 17 per cent of Central Sydney's workforce. With significant population growth expected in Central Sydney over the next 20 years, some of the jobs that will locate to Central Sydney will be for low-paid workers who are essential to our economy. In addition, a general demand for the services provided by low-income workers will increase as a result of more workers, residents and visitors.
description	Affordable Rental Housing typically house workers such as hospitality workers, young professionals, retail workers, and key support services. Affordable housing is not social housing. It can be private or publicly owned, but available at a price that is no more than 30 per cent of household income. Because of the cost of private accommodation in Central Sydney, it is unlikely that affordable rental housing will be delivered by the market.
minimum requirements	Affordable Rental Housing or an Affordable Rental Dwelling is affordable housing that is managed by a registered community housing provider or government and rented to very low to moderate income households.
actions	In Central Sydney it is addressed via the City of Sydney Affordable Housing Program. Affordable housing is managed by a registered community housing provider and rented to very low to moderate income households.

Public Art

source study	City of Sydney Public Art Policy 2016 City of Sydney Public Art Strategy 2011 City of Sydney Guidelines for Public Art in New Development
current provision	City Art, the City of Sydney's public art program, plays a crucial role in developing opportunities for artists to reflect on contemporary life and present innovative ideas to challenge and delight our citizens and visitors. Guided by the City's public art advisory panel along with our public art policy and strategy, the City develops public art projects and programs in partnership with private groups and individuals which play an important role in investigating, questioning and responding to the spaces of our city and the issues of contemporary life. The City commissions major stand-alone permanent public art works that are integrated with the City's capital works projects and a number of popular ongoing temporary public art programs.
demand profile	Drawing on the City of Sydney's Sustainable Sydney 2030 Plan the City Art Public Art Strategy includes eight guiding principles for public art across the City of Sydney local government area. All eight guiding principles are underpinned by the overarching vision for a sustainable city based on universal access for all. Each principle addresses sustainability in different ways, including environmental, cultural, economic and social sustainability: • align significant City Art projects with major Sustainable Sydney 2030 urban design projects • recognise and celebrate Aboriginal stories and heritage in public spaces • support local artists and activate city sites with temporary art projects • support vibrant places in village centres with community art and City Art projects • promote high quality public art in new development • support stakeholder and government partners to facilitate public art opportunities • manage and maintain the City's collection of permanent art works, monuments and memorials • initiate and implement programs to communicate, educate and engage the public about City Art projects
actions	Support the continued application of the City of Sydney's Public Art Policy by requiring Public Art consistent with Sydney LEP 2012 generally in the order of 1 per cent of capital investment value for moderate sized projects sliding to 0.5 per cent capital investment value for very large projects.

Telecommunications

source study	City of Sydney Digital Strategy 2017
current provision	The City provides community members with public access to digital infrastructure and services through the City's existing neighbourhood and community spaces, as well as encouraging others to do the same, such as in shopping centres and spaces run by other government agencies. Reliable high-speed broadband (fibre and wireless) is an essential community service. In 2011, 78 per cent of households in the City's local area had access to a broadband internet connection. Reliable high-speed broadband is also an essential business service with workers, start-up businesses and international businesses attracted to cities with advanced digital technologies and reliable digital networks.
demand profile	Lively, competitive cities keep pace with change. Advances in digital technology have transformed the way we live, work and experience the world around us. New technologies have empowered our residents, visitors and businesses to be greener, more global and more connected than ever before. Improving the city's digital infrastructure with initiatives such as publicly available Wi-Fi will connect our communities and provide an environment where creativity and commerce can grow. At the same time, the City of Sydney's residential population is also growing faster than ever before. There are now over 205,000 people living in the City of Sydney local area, and this is growing at a rate of 4 per cent per year. All up, 25 per cent of Sydney's population comes into the city every day, swelling the numbers to 1.2 million. Digital technology paves the way for greater accessibility to information and services than ever before. It is a great enabler for all members of the community and has particular benefit for people with a disability. However, for all communities in the city to make full use of digital technology, there needs to be public Wi-Fi access in key areas of the city. This will address congestion issues on the telecommunications networks, particularly in times of very high usage such as during a city emergency or major event and also provide an important alternative for those without reliable access to paid networks, for example people on low incomes and visitors. Providing public Wi-Fi for our visitors in key areas will help Sydney to market itself as a networked community and leading global city. And Wi-Fi enhances the overall experience of the city, including safety, wayfinding, reporting of issues and how people can more easily move around the city. Embedding Wi-Fi into the public domain allows us to better manage the city. Improvements to citywide digital infrastructure

	networks will require ongoing partnerships and influencing strategies.
actions	Support the continued application of the City of Sydney's Digital Strategy 2017 by advocating for telecommunications infrastructure in private and public spaces and the continued rollout of broadband fibre and wireless mesh networks. Focus on public telecommunication solutions that support digital inclusion and reliable high-speed broadband as an essential community and business service.

Public Domain Works

source study	Sustainable Sydney 2030 (including the 5 big moves and 10 project ideas) City of Sydney Public Domain Design Codes, including: Sydney Streets Sydney Lights Sydney Parks Sydney Signs City of Sydney City North Public Domain Plan 2015 City of Sydney Harbour Village North Public Domain Plan 2012 City of Sydney Chinatown Public Domain Plan 2010 City of Sydney City South and Chinatown Public Domain Plan Review 2015 City of Sydney City South Belmore Park Precinct Public Domain Plan 2018 City of Sydney Town Hall Precinct Public Domain Plan 2018 City of Sydney Open Space, Sports and Recreational Needs Study 2016 City of Sydney George Street Concept Design 2013 City of Sydney George Street 2020 – A Public Domain Activation Strategy 2015 City of Sydney Wayfinding Strategy 2012 City of Sydney Walking Strategy and Action Plan 2015-2030
current provision	With Central Sydney increasingly being chosen as a place to work, live and visit, public open space is becoming the greatest challenge in such a physically constrained setting: its provision, quality, delivery and protection and ensuring it is sunlit, meaningful and connected.
demand profile	Central Sydney is divided into key precincts for which detailed feasibility and public domain improvement proposals are developed. To date, the City has undertaken public domain plans for Chinatown/Belmore Precinct, Harbour Village North, George Street and City North. For the remaining areas public domain plans will be developed.
actions	Public Domain Works, including public domain frontages and interfaces, stormwater drainage, vegetated stormwater management systems, road works, shared zones, open space and embellishment including widened footpaths, street tree planting, landscaping, furniture and lighting. To be delivered via City of Sydney approved Public Domain Plans in accordance with the City of Sydney's Public Domain Manual,

	Design Codes, Technical Details and relevant conditions of consent.

Floodplain Management Works

source study	City of Sydney Floodplain Management Policy NSW Government Floodplain Development Manual, April 2005 NSW Government Coastal Planning Guideline: Adopting Sea Level Rise, 2010 **City of Sydney City Area Floodplain Risk Management Plan and Study** **City of Sydney City Area Catchment Flood Study** **City of Sydney Darling Harbour Floodplain Risk Management Plan and Study** **City of Sydney Darling Harbour Catchment Flood Study** **City of Sydney Woolloomooloo Floodplain Risk Management Plan and Study** **City of Sydney Woolloom**ooloo Catchment Flood Study City of Sydney Blackwattle Bay Floodplain Risk Management Plan and Study City of Sydney Blackwattle Bay Catchment Flood Study City of Sydney Public Domain Design Codes City of Sydney City North Public Domain Plan 2015 City of Sydney Harbour Village North Public Domain Plan 2012 City of Sydney Chinatown Public Domain Plan 2010 City of Sydney City South and Chinatown Public Domain Plan Review 2015 City of Sydney City South Belmore Park Precinct Public Domain Plan 2018 City of Sydney Town Hall Precinct Public Domain Plan 2018
current provision	For the purposes of floodplain management, Central Sydney is covered by 4 catchments: the City Area; Darling Harbour, Woolloomooloo and Blackwattle Bay. The catchment are fully urbanised, with runoff draining to Circular Quay, Darling Harbour, Woolloomooloo Bay and Blackwattle Bay via the area's pit and pipe stormwater system. There are significant overland flowpaths across the catchments, which are active when the capacity of the pit and pipe network is exceeded. Flood liability exists across the area, including several locations where overland flow is trapped by unrelieved depressions in the catchment topography. Sydney LEP 2012 requires the consent authority to be satisfied that all new development adequately protects the safety of property and life, and avoid significant adverse impacts on flood behaviour and the environment. Specified flood planning controls apply to all land which is at or below the flood planning level. The requirements set out in Sydney LEP 2012 and Sydney DCP 2012 must be met before development consent is granted.
demand profile	The City has a responsibility to manage floodplains to ensure that any: • new development will not experience undue flood risk; and • existing development will not be adversely flood affected through increased damage or hazard as a result of any new development.

	The City has floodplain risk management plans and studies for the 4 catchments that make up Central Sydney. The plans and studies include recommended management measures that must be addressed by new development.
actions	Floodplain Management Works, including flood mitigation works, overland flow works, drainage upgrades, public domain frontage and interface works including basement/below ground carpark entry works, incorporating flood compatible materials, flood storage works and on-site sewer management works. To be delivered via City of Sydney Floorplain Management Policy in accordance with the City of Sydney's Flood Planning Level requirements, City Area Floodplain Risk Management Plan and Study, Darling Harbour Floodplain Risk Management Plan and Study, Woolloomooloo Floodplain Risk Management Plan and Study, Blackwattle Bay Floodplain Risk Management Plan and Study, Public Domain Plans, Public Domain Manual, Design Codes, Technical Details and relevant conditions of consent.

Through Site Links and Laneways

source study	City of Sydney City North Public Domain Plan 2015 City of Sydney Harbour Village North Public Domain Plan 2012 City of Sydney Chinatown Public Domain Plan 2010 City of Sydney City South and Chinatown Public Domain Plan Review 2015 City of Sydney City South Belmore Park Precinct Public Domain Plan 2018 City of Sydney Town Hall Precinct Public Domain Plan 2018 City of Sydney George Street Concept Design 2013 Central Sydney Planning Strategy City of Sydney Development Control Plan 2012
current provision	Central Sydney is supported by an interconnected network of public places, including streets, lanes, parks, squares and plazas. Public space is critical to the public life of Central Sydney. At a basic level, a well-connected and high-quality network of public places is necessary for people to move around Central Sydney. Central Sydney must provide a diversity of public places to suit diverse needs. In such a dense and constrained urban environment, streets, through site links and lanes are an important component of the public space network. They connect public spaces and, where vehicular access is managed, prioritise the needs of pedestrians. Required Through Site Links and Laneways are shown on in Sydney Development Control Plan 2012.
demand profile	Expanding the walking network between public places and improving the amenity of existing footpaths and pedestrian links will support sustainable growth in Central Sydney. A rich walking network with high amenity and many routes, links, crossings and connections will not only assist in addressing footpath capacity constraints, but will provide more choice and encourage more people to walk. This has a range of social and economic benefits. It spreads the load of pedestrians, reducing strain on infrastructure; promotes community health and the reduction of obesity; creates opportunity for social interaction; and spurs economic activity by bringing people into new spaces. It also reduces the demand on public transport for short trips by reducing walking distances. Connect gaps in the network of open space that surrounds Central Sydney by delivering high-quality, green and pedestrian priority links at the south between Darling Harbour, Railway Square and Belmore Park via Quay Street and Hay Street; and improved connection between the Ultimo Pedestrian Network and Railway Square. Providing through-site links within significant new development in the Western Edge Precinct, particularly on street blocks between Clarence and Sussex Streets, where the grade is most difficult, and between Erskine and Bathurst Streets, where at grade connections are not currently possible.

actions	Through Site Links and Lanes are delivered in accordance with Sydney Development Control Plan 2012, Central Sydney Planning Strategy and any approved City of Sydney structure plans.

Cycling

source study	Central Sydney Planning Strategy 2016-2036 NSW Government Sydney City Centre Access Strategy 2013 Future Transport Strategy 2056, October 2017
current provision	Since 2003, the number of bike riders has grown by more than 10 per cent per annum on major routes to the city, with peak cycling trips to central Sydney likely to triple, and total cycling trips across the City likely to increase at least five times by 2036. Social research undertaken by the City has indicated that the greatest barriers to cycling within the City are lack of safe, off road bicycle facilities. Prospective cyclists are daunted by the potential for riding a bicycle near parked cars or moving traffic. This links very strongly with the lack of facilities in terms of proper cycle lanes, a linked network, dedicated cycle lights, markings on roads where cyclists are crossing or any of the other means that cyclist cities use to look after their cyclists.
demand profile	Completing safe and direct cycleway connections to the north, east, west and south of Central Sydney will provide the infrastructure needed for the increasing number of people who are choosing to ride between the city and surrounding suburbs. The City and State Government will enhance cycling infrastructure by completing the city centre cycleway network involving new separated cycleway and intersection lighting. In most cases, cycleway will be provided in street space currently not used for traffic movement providing safer and more direct access for cyclists and encouraging them to use dedicated routes.
actions	Cycling Infrastructure delivered in accordance with the Central Sydney Planning Strategy including advocating and implementing the Inner Sydney Regional Bike Plan, continuing to encourage facilities for bicycle delivery services and ensuring end-of-trip facilities are available for all cyclists.

Community Infrastructure

Integrated Multipurpose Facilities

source study	City of Sydney Development Contributions Plan 2015 – Community Facilities Planning Benchmarks Peer Review of Community Facilities Planning Benchmarks, Elton Consulting for City of Sydney, 2015
current provision	Zero across both Village Groups
demand profile	Demand for an Integrated Multipurpose Facility is currently strongest in the Haymarket Village Group with a current higher residential and student population. Major residential completions in this area between 2016 and 2020 will see an increase in demand, largely driven by NSW Government projects including Darling Square. For the Harbour Village Group demand for an Integrated Multipurpose Facility is less, with demand likely to increase between 2020 and 2036 with major residential and office completions at Barangaroo and Circular Quay and further residential development throughout the area.
description	An Integrated Multipurpose Facility is a large multipurpose community facility that: • is a focal point for the community in the Village Group • is delivered through a single building/site or cluster of buildings • is typically integrated or co-located with other facility types within the network, such as libraries, children's services and indoor recreation facilities; frequently includes a branch library as its core • provides a series of adaptable programming spaces for use by diverse sectors of the community, such as youth, children and families, and seniors • may include a range of other spaces and uses as appropriate to meet local communities' needs; this may include a adaptable community meeting rooms/ programmable spaces (accommodating up to 200 people in a single space or fewer in smaller sub-spaces); indoor recreation space, such as indoor (or rooftop) courts • is accessible on a walk-in basis, providing opportunities for spontaneous interaction amongst diverse members or sectors of the community.
minimum requirements	2,000 square metres – aiming for 2,500 square metres where possible – internal area
actions	• Advocate for the delivery of an Integrated Multipurpose Facility in association with the State Significant Development and Infrastructure project at Central Railway Station • Work with industry to deliver an Integrated Multipurpose Facility with the Haymarket Village Group if unsuccessful at Central Railway Station

- Advocate for the delivery of an Integrated Multipurpose Facility in association with State Significant Development including at Central Barangaroo

Local Community Facilities

source study	City of Sydney Development Contributions Plan 2015 – Community Facilities Planning Benchmarks Peer Review of Community Facilities Planning Benchmarks, Elton Consulting for City of Sydney, 2015
current provision	Four within the Harbour Village Group Zero within the Haymarket Village Group
demand profile	Given population densities are so high and it is so walkable and so well served by public transport, there is less current demand for highly localised Local Community Facilities in Central Sydney. The stronger demand is for Integrated Multipurpose Facilities. Access between both Village Groups should be improved with potential to renew and repurpose some older Local Community Facilities to enable the development of new integrated facilities across both Village Groups. Generally speaking Central Sydney's workforce is not expected to access localised Local Community Facilities.
description	Facilities that are small (typically less than 400 square metres internal area) and serve a local catchment. They may be integrated with a larger commercial or retail complex/precinct.
minimum requirements	400 square metres internal area
actions	• Monitor demand for Local Community Facilities • Improve walking, cycling and public transport access between Village Groups • Investigate potential to renew and repurpose existing Local Community Facilities

Child Care Centres/Preschools

source study	City of Sydney Development Contributions Plan 2015 – Community Facilities Planning Benchmarks Peer Review of Community Facilities Planning Benchmarks, Elton Consulting for City of Sydney, 2015 City of Sydney Child Care Needs Analysis 2013
current provision	One within the Harbour Village Group Two (two planned) within the Haymarket Village Group
demand profile	There is a current strong demand for Child Care Centres, particularly to meet residents' needs in the the Haymarket Village Group. The high growth in families and young children aged 0-4 across Central Sydney to 2036 combined with the increasing demand from a growing workforce means a sustained period of strong demand is likely to 2036.
description	These facilities are purpose-built or fitted out for the provision of Early Childhood Education and Care. This typology excludes out-of-hours school and vacation care and early childhood health centres, which are typically provided by the NSW Government.
minimum requirements	400 square metres internal area per facility. Includes, but is not limited to required thoroughfares, outdoor play areas, panic rooms, toilet and hygiene facilities, storage areas and administrative areas
actions	• Work with industry to deliver Child Care Centres/Preschools within the Haymarket and Harbour Village Groups • Continue to encourage child care centres in new development as private community type facilities through floor space ratio incentives

Libraries

source study	City of Sydney Development Contributions Plan 2015 – Community Facilities Planning Benchmarks Peer Review of Community Facilities Planning Benchmarks, Elton Consulting for City of Sydney, 2015 NSW State Library: A Guide for Public Library Buildings
current provision	One within the Harbour Village Group Two (one planned) within the Haymarket Village Group
demand profile	The planned delivery of a new library as part of the Darling Exchange renewal scheme will meet the needs of the Haymarket Village Group in the forecast timeframe.The Harbour Village Group is currently served by the Customs House facility – also noting that the public State Library of NSW is in this locality and the Ultimo Community Centre library is in close proximity to the Haymarket Village Group.
description	Library Infrastructure in the context of this plan refers to libraries which function as local community branch libraries. Libraries may be standalone facilities, although contemporary libraries are frequently provided as part of larger Integrated Multipurpose Facilities, typically forming the core component of such complexes, along with community meeting rooms and other ancillary community spaces. Branch libraries within the City's network are complemented by "library express" facilities, which provide access to library services within local community facilities. Libraries in Central Sydney should form the primary component of Integrated Multipurpose Facility, given their importance to the dominant resident age groups, including the high number of tertiary education students – many of whom attend private colleges and may not have access to university libraries. Libraries would be expected to provide a range of facilities including spaces for quiet reading, as well as group work and socialising. Spaces for programming for seniors will also be important.
minimum requirements	1,500 square metres internal area
actions	• Monitor demand for libraries, including the context of evolving service models.

Cultural/Creative Facilities

source study	City of Sydney - Creative City: Cultural Policy & Action Plan 2014-2024 City of Sydney Live Music & Performance Action Plan 2014 City of Sydney Creative Work Space Study 2017 Western Sydney University Mapping Culture Report 2016 Western Sydney University Planning Cultural Creation & Production in Sydney Report 2018 Macquarie University/Australia Council, Making Art Work Study 2018 City of Sydney FES Creative IS and ICT Sector Report 2012 Innovate Reconciliation Action Plan 2015-2017 Eora Journey Economic Development Plan 2016 NSW Government Cultural Infrastructure Action Plan 2018
current provision	One within the Harbour Village Group Three (one planned) within the Haymarket Village Group
demand profile	Whilst Central Sydney has a strong supply of large Cultural/Creative Facilities, small & medium scale facilities have declined over time. These facilities play a very important role in enabling Central Sydney to continue to be the economic and cultural gateway to the nation, and ensuring the wider community's equitable access to participation and careers in the creative, cultural & knowledge economy. Demand will be consistently strong to 2036 as these facilities service a much wider populations. Source studies indicate strong demand for a National Aboriginal & Torres Strait Islander Cultural and Knowledge Centre & spaces for Aboriginal & Torres Strait Islander cultural activity.
description	Cultural/Creative Facilities are defined as facilities for: • 'active' participation for the public (e.g. spaces with resources for active making, doing & skill sharing) • professional creative practice & art form development (e.g. rehearsal rooms, artist studios), & creative enterprise • audiences/spectatorship (e.g. theatres, cinemas, cultural centres, exhibition spaces) • temporary cultural activities in the public domain A National Aboriginal & Torres Strait Islander Cultural & Knowledge Centre (including a nationally focused centre & potentially a network of metropolitan local centres) would promote cultural understanding among Sydneysiders and visitors. It would provide opportunities for employment, tourism & development of sustainable industry & enterprises.
minimum requirements	Guidelines for levels of provision across the City are currently being confirmed through work arising from Creative City. Preliminary minimum requires are: • Facilities for active participation, such as not-for-profit multipurpose spaces (500-2,000sqm) involving subtenancies for performance spaces (60 to 500sqm2), gallery (100 to 500sqm), rehearsal (60 to 500sqm) & studio and workspace (open plan

	areas of 60 to 500sqm, capable of subdivision into individual spaces of 5-10sqm). • Facilities for professionals creative practice & enterprise, including rehearsal, studio, office, small retail & workspace (open plan areas of 60 & 500sqm capable of subdivision into individual spaces of 5-10sqm). • Facilities for audiences & spectatorship, such as small contemporary art galleries (60sqm and 500sqm), & small to medium music & performance venues (60 to 500sqm). • Public space with provision for three phase power, amenities & suitable development approval for events. Note that many of these uses are best placed in close proximity, such as in separate or linked tenancies within a single site of between 500sqm & 2,000sqm. This is particularly true for multipurpose, active participation spaces.
actions	• Work with industry to define a range of management models & deliver facilities across both Village Groups • Advocate for the delivery of a Cultural & Knowledge Centre at Barangaroo • Advocate for the delivery of Cultural/Creative Facilities in association with State Significant Development projects • Investigate potential to renew & repurpose existing City facilities for cultural/creative uses which maximise public access, particularly in Haymarket Village Group.

Indoor Recreation Facilities

source study	City of Sydney Development Contributions Plan 2015 – Community Facilities Planning Benchmarks Peer Review of Community Facilities Planning Benchmarks, Elton Consulting for City of Sydney, 2015 City of Sydney Open Space and Recreational Needs Study 2016 City of Sydney Sports Facilities Demand Study 2016
current provision	Two within the Harbour Village Group Zero within the Haymarket Village Group
demand profile	Demand for Indoor Recreation Facilities in Central Sydney is very strong with a growing worker and residential population. Serviced currently by two local facilities and by local facilities in neighbouring City Areas, demand is likely to grow beyond existing supply with major office and residential completions between 2016 and 2020, largely driven by State Significant Development projects at Barangaroo and Darling Harbour. At least one Indoor Courts Facility and one General Indoor Recreation Facility is required. Beyond 2020 and approaching 2030 demand for Indoor Recreation Facilities should be reassessed, especially with high population growth expected within the Haymarket Village Group and surrounds around Central Station. At this time, additional Indoor Courts Facilities, General Indoor Recreation Facilities and a new Indoor Swimming Pool Facility may be required.
description	Indoor Recreation Facilities are typically provided to serve district (i.e. City Area) or regional catchments (LGA and beyond). This includes: • Indoor Courts Facilities, providing two or more playing courts, which may also incorporate ancillary indoor recreation facilities such as gyms and fitness studios • General Indoor Recreation Facilities, that are incorporated within and/or ancillary to other facilities types, such as outdoor pools, Integrated Multipurpose Facilities and Local Community Facilities • Indoor swimming pools, with or without ancillary health and fitness spaces.
minimum requirements	Indoor Courts Facility: 2,000 square metres with an ancillary component minimum 400 square metres. General Indoor Recreation Facility: 400 square metres Indoor Swimming Pool Facility: incorporating a 25-50 metre pool and learn-to-swim/children's swimming spaces: minimum 6,000 square metres.
actions	The City has traditional primary role of delivering Indoor Recreation Facilities within Central Sydney, however, managing State Significant Developments and State Significant Infrastructure Projects on large sites that generate increases in worker, resident and visitors populations, the NSW Government has a role in delivering Indoor Recreation Facilities. The City will explore options to deliver local and district-scale Indoor Recreation Facilities with the NSW Government and industry.

- Advocate for the delivery of Indoor Recreation Facilities in association with State Significant Development and Infrastructure projects
- Advocate for the delivery of a district-scale Indoor Recreation Facility at Barangaroo

Public Toilet Facilities

source study	City of Sydney Public Toilet Strategy 2014
current provision	The City aims to ensure that public toilets are available within 400 metres (5-10 minute walk) of any point within Central Sydney, day and night.
demand profile	People usually need a public toilet when they are away from home for an extended period of time. A lack of public toilets can greatly impact people with high needs such as families with children, seniors and people with disability and medical conditions. Some may avoid or be reluctant to travel or partake of social activities where Public Toilet Facilities are lacking or not available. The City promotes healthy lifestyles such as walking, cycling and active sports. Where pedestrians are expected to double and the number of cyclists is expected to increase five-fold by 2030 Public Toilets Facilities will be increasing in demand. Currently the availability of Public Toilet Facilities falls dramatically after the close of business hours and further after midnight. Social conditions which contribute to increased demand at some locations include homelessness, public drinking and persons refused entry or ejected from bars at entertainment precincts. The provision of 24-hour inclusive access public toilets at sites with identified high demand benefits the wider community, and careful location of 24-hour facilities in highly visible places can mitigate safety concerns for users.
description	Public Toilet Facilities are toilet facilities which are directly accessible to the public. They are located in parks, on streets, in some City managed public buildings, at some rail stations and in some shopping centres. Public Toilet Facilities can include end-of-trip facilities with showers, change rooms and parent's rooms. They may also include features that make them accessible to people with profound disabilities and their carers. They are often referred to as "Changing Places" toilets. Changing Places toilets are larger than a standard unisex accessible toilet. They include extra features such as an adult change table, and more circulation space to meet the needs of people with profound and multiple disability and their carers. Public Toilet Facilities should be: • accessible - well distributed, appropriately located and open at times that meet the needs of residents, workers and visitors • inclusive - public toilets are accessible to everyone, and well connected to pedestrian areas and public transport • safe - the location and orientation of Public Toilet Facilities will meet best-practice principles of Crime Prevention Through Environmental Design • quality - be well-designed and built using robust, high quality, vandal-resistant materials and fixtures that reflect the character of their setting. They will incorporate best practice principles of Environmentally Sustainable Design and management.

actions	• Work in partnership with industry to deliver Public Toilet Facilities and Changing Places within the Haymarket and Harbour Village Groups • Advocate for the delivery of Public Toilet Facilities and Changing Places in association with State Significant Development and Infrastructure projects • Investigate potential to renew and repurpose existing City facilities for Public Toilet Facilities

Public Domain Improvements and Open Space

source study	Sustainable Sydney 2030 (including the 5 big moves and 10 project ideas) City of Sydney Public Domain Design Codes, including: Sydney Streets Sydney Lights Sydney Parks Sydney Signs City of Sydney City North Public Domain Plan 2015 City of Sydney Harbour Village North Public Domain Plan 2012 City of Sydney Chinatown Public Domain Plan 2010 City of Sydney City South and Chinatown Public Domain Plan Review 2015 City of Sydney City South Belmore Park Precinct Public Domain Plan 2018 City of Sydney Town Hall Precinct Public Domain Plan 2018 City of Sydney Open Space, Sports and Recreational Needs Study 2016 City of Sydney George Street Concept Design 2013 City of Sydney George Street 2020 – A Public Domain Activation Strategy 2015 City of Sydney Wayfinding Strategy 2012 City of Sydney Walking Strategy and Action Plan 2015-2030
current provision	With Central Sydney increasingly being chosen as a place to work, live and visit, public open space is becoming the greatest challenge in such a physically constrained setting: its provision, quality, delivery and protection and ensuring it is sunlit, meaningful and connected.
demand profile	Central Sydney is divided into key precincts for which detailed feasibility and public domain improvement proposals are developed. To date, the City has undertaken public domain plans for Chinatown/Belmore Precinct, Harbour Village North, George Street and City North. For the remaining areas public domain plans will be developed. As Central Sydney's daily population grows demand on the areas limited open space resources (streets, parks and squares) for both recreational and circulation uses grows. Walking has nearly doubled in the last 10 years as a mode of transport. Within Central Sydney, walking accounts for 90 per cent of all internal trips. Demand for more pedestrian space will need to be satisfied within the finite area of streets. It will be increasingly difficult to allocate space among competing transport modes. As pedestrian numbers in Central Sydney grow, the need for safer and more generous pedestrian spaces will increase.
actions	• Public Domain Improvements, beyond essential required Public Domain Works delivered as part of any project, are delivered via City of Sydney approved Public Domain Plans and the Central Sydney Planning Strategy, in accordance with the City of Sydney's Public Domain Manual and relevant conditions of consent.

- New Public Open Space delivered in accordance with the Central Sydney Planning Strategy including progressing the delivery of a future Town Hall Square and identifying opportunities to provide new and additional public open space through significant new development, particularly in the Western Edge, Southern, Midtown and Central Station precincts.

Floodplain Management Improvement Works

source study	City of Sydney Floodplain Management Policy NSW Government Floodplain Development Manual, April 2005 NSW Government Coastal Planning Guideline: Adopting Sea Level Rise, 2010City of Sydney City Area Floodplain Risk Management Plan and Study City of Sydney City Area Catchment Flood Study City of Sydney Darling Harbour Floodplain Risk Management Plan and Study City of Sydney Darling Harbour Catchment Flood Study City of Sydney Woolloomooloo Floodplain Risk Management Plan and Study City of Sydney Woolloomooloo Catchment Flood Study City of Sydney Blackwattle Bay Floodplain Risk Management Plan and Study City of Sydney Blackwattle Bay Catchment Flood Study City of Sydney Public Domain Design Codes City of Sydney City North Public Domain Plan 2015 City of Sydney Harbour Village North Public Domain Plan 2012 City of Sydney Chinatown Public Domain Plan 2010 City of Sydney City South and Chinatown Public Domain Plan Review 2015 City of Sydney City South Belmore Park Precinct Public Domain Plan 2018 City of Sydney Town Hall Precinct Public Domain Plan 2018
current provision	For the purposes of floodplain management, Central Sydney is covered by 4 catchments: the City Area; Darling Harbour, Woolloomooloo and Blackwattle Bay. The catchment are fully urbanised, with runoff draining to Circular Quay, Darling Harbour, Woolloomooloo Bay and Blackwattle Bay via the area's pit and pipe stormwater system. There are significant overland flowpaths across the catchments, which are active when the capacity of the pit and pipe network is exceeded. Flood liability exists across the area, including several locations where overland flow is trapped by unrelieved depressions in the catchment topography.
demand profile	The City has a responsibility to manage floodplains to ensure that any: • new development will not experience undue flood risk; and • existing development will not be adversely flood affected through increased damage or hazard as a result of any new development. The City has floodplain risk management plans and studies for the 4 catchments that make up Central Sydney. The plans and studies include recommended management measures that must be addressed by new development.
actions	• Floodplain Management Improvement Works, beyond essential required Floor Plain Management Works delivered as part of any project, including upgrades to regional/catchment trunk drainage, precinct overland flowpath works, precinct drainage upgrades, critical facility works and flood storage works. • To be delivered via City of Sydney Floodplain Management Policy in accordance with the City of Sydney's Flood Planning

Level requirements, City Area Floodplain Risk Management Plan and Study, Darling Harbour Floodplain Risk Management Plan and Study, Woolloomooloo Floodplain Risk Management Plan and Study, Blackwattle Bay Floodplain Risk Management Plan and Study, Public Domain Plans, Public Domain Manual, Design Codes, Technical Details and relevant conditions of consent.

Loading and Servicing

source study	Central Sydney Planning Strategy 2016-2036
current provision	At present, the size of a building guides the number of dock and car parking spaces developers provide. In addition, buildings (and the loading and servicing infrastructure within buildings) are viewed largely individually and not in the context of the area of precinct in which a building is located. In areas with high density land use in Central Sydney, there may be multiple dock/basement and dock/basement entrances in close proximity, each servicing only the building in which it is located. Oversized ground-level building services, and loading and parking facilities have resulted in large areas of blank walls and cavernous portals for vehicle entry that face the street. For small sites, where car park access or loading is provided, ground floor activation is always graded as 'inactive'. The time involved in entering and exiting multiple docks/basements within a constrained area is a disincentive to drivers of freight and servicing vehicles. At the same time, the location of site entries and driveways can have profound impacts on the functioning and character of Central Sydney. Well planned, suitably located and functional loading and servicing infrastructure can improve amenity, create more space for pedestrians and cyclists, provide opportunities for ground-level activation and improve high value retail and commercial frontages.
demand profile	Sydney is currently in a period of unprecedented development and growth. The availability of accessible and suitable sites for the transfer and management of goods is diminishing, in particular at the kerbside. In addition, freight supply chains are evolving in response to the growth of e-commerce and the increasingly shorter delivery times promised by retailers. With growth in the CBD and increasing pressure on the road network, the use of alternative last mile delivery modes, such cycling or walking is becoming more common. Precinct based solutions to managing loading and site servicing demand can help support manage this growing demand as well as ensuring freight and servicing infrastructure and activity supports rather detracts from the amenity and character of key precincts in the CBD. Recent positive examples of precinct based site servicing in relation to loading and car parking include Barangaroo loading dock/carpark and precinct and Westfield City Centre Toll Group delivery hub.
description	Key features of a precinct solution to loading and servicing includes; direct street access; access height up to 4.3m; internal space to allow HRV access, and; in limited circumstances at-grade docks.
actions	Focus on the provision of loading and servicing infrastructure that supports the amenity and character of the precinct, including by providing: • space (potentially on a commercial basis) for the storage and transfer of goods to other modes

- direct street access for delivery personnel on foot, bike or other alternative mode
- functional space for loading and servicing activity (e.g. good clearance height, HRV suitable dock spaces, adequate manoeuvring space)
- open-access or shared servicing facilities servicing existing surrounding heritage sites and small sites which may not have on-site parking or loading
- where feasible, links to existing/adjoining loading and servicing infrastructure

Economic Development Spaces

source study	City of Sydney Economic Development Strategy 2013 City of Sydney Tech Startups Action Plan 2016
current provision	One (one planned) within the Harbour Village Group Zero within the Haymarket Village Group
demand profile	The City also provides economic development spaces to support activities for key economic sectors, such as cultural and creative businesses, tech start-ups, and social enterprises. They are not community facilities in the typical sense, however they are key tools to meet the City's strategic economic, cultural or social objectives. Economic Development Spaces can act as catalysts that help galvanise individual and community activity, creativity and enterprise, delivering space that can support economic vibrancy across local neighbourhoods and the City as a whole. Supporting start-up enterprises and other businesses through the provision of low cost co-working spaces is a direct way through which the City seeks to enable economic diversity to flourish. The provision of property targeted at key economic growth sectors, such as the Information and Communications Technology sector, is a direct means by which the City supports Sydney's ongoing economic diversity, a key ingredient to the success of global cities. As Central Sydney's worker population increases and demand for floor space becomes ever more competitive, there will be increasing demand for City curated spaces that can provided to start-up enterprises and other businesses. There is current demand and likely increasing demand across Central Sydney, but this demand should be monitored as the market delivers lower cost employment floor space through mixed use development.
description	Economic Development Spaces may include: • shared working spaces for start-up businesses and social enterprises • creative retail shopfronts • work (or live/work) spaces for artists and other cultural, creative or other enterprises. Specifications for these spaces are defined by the: • strategic objectives that such a space would fall under • supply and demand characteristics • functional requirements of the project • locational opportunities and feasibility
actions	• Work with industry to deliver Economic Development Spaces across both Village Groups

Federal/NSW Government Infrastructure and Services

Provision of range of infrastructure and services accessible to Central Sydney are the remit of Federal Government and NSW Government agencies. This includes rail, bus and ferry services, Sydney Airport, health and education services and a range of community services, such as aged care, early childhood health and homelessness support services.

The City advocates on behalf of the wider community to seek to ensure that adequate facilities and services provided by other levels of government are available to those living and working within the Local Government Area. This includes actively participating in the master planning and public discussion of local and metropolitan urban renewal and transport projects including the Bays Precinct, Central to Eveleigh, Central Station Precinct, Botany Road, Redfern-Waterloo, Sydney Metro and WestConnex.

Actions

- The City will seek to continue to participate in these discussions, including to ensure that relevant agencies are aware of development in Central Sydney and are able to plan for adequate services to be in place as development occurs
- The City will advocate for Essential Required Infrastructure and Community Infrastructure as part of these projects
- The City will advocate for Federal/NSW Government Infrastructure and Services on behalf of the wider community for the provision of required infrastructure – including district and regional infrastructure – with consideration of indicative good practice service/facility provision benchmarks

Indicative good practice service/facility provision benchmarks are outlined in Table 1 below. In considering Table 1 it is noted that numeric benchmarks for social infrastructure provision represent a blunt instrument for the purposes of undertaking a supply gap analysis. Benchmarks do not take into account all aspects of agencies' facilities and services planning methods. They provide an indicative guideline only.

For these reasons, Table 1 should be interpreted as a broad guide to provision, and not as a highly accurate set of recommendations.

Table 1 – Service/facility provision benchmarks
SGS Economics and Planning, 2014

Service/ Facility	Benchmark	Responsible Agencies
Rail	The Central Sydney Planning Strategy addresses the supply and demand constraints of transport infrastructure for Central Sydney in detail. The City will advocate on behalf of the wider community based on the objectives and actions for this transport infrastructure as outlined in the Central Sydney Planning Strategy.	Transport for NSW Sydney Trains Sydney Metro
Light Rail		Transport NSW
Bus		Transport NSW Sydney Buses
Airport		Sydney Airport Department of Infrastructure, Regional Development and Cities

Service/ Facility	Benchmark	Responsible Agencies
Primary Schools	1 primary school for 500 students	Department of Education and Communities
Secondary Schools	1 government high school for up to 1200 students	Department of Education and Communities
Before and After School care	1 place for every 25 children aged 5-12 years	Department of Education and Communities
TAFE	1 TAFE to cater for a population of 300,000 – 500,000	Tafe NSW Department of Education and Communities
University	1 university for every 150,000 people	Sydney University University of Technology Sydney Department of Education and Communities
Hospitals	2.3 beds per 1,000 people	NSW Health
Primary Health Care Centre (including mental health)	1 new primary care centre per 50,000 people	NSW Health
GP Medical Centres	1 GP per 4,000 people	NSW Health
Children's Health Services	1 early childhood nurse per 2,000 children	NSW Health
Aged Care	88 places per 1000 people 70+	NSW Health
Ambulance Services	1 ambulance station per 105,000 people	Ambulance Service of NSW
Fire Services	1 fire station for every 60,000 people	Fire and Rescue NSW
Police	1 police station for every 108,000 people	NSW Police