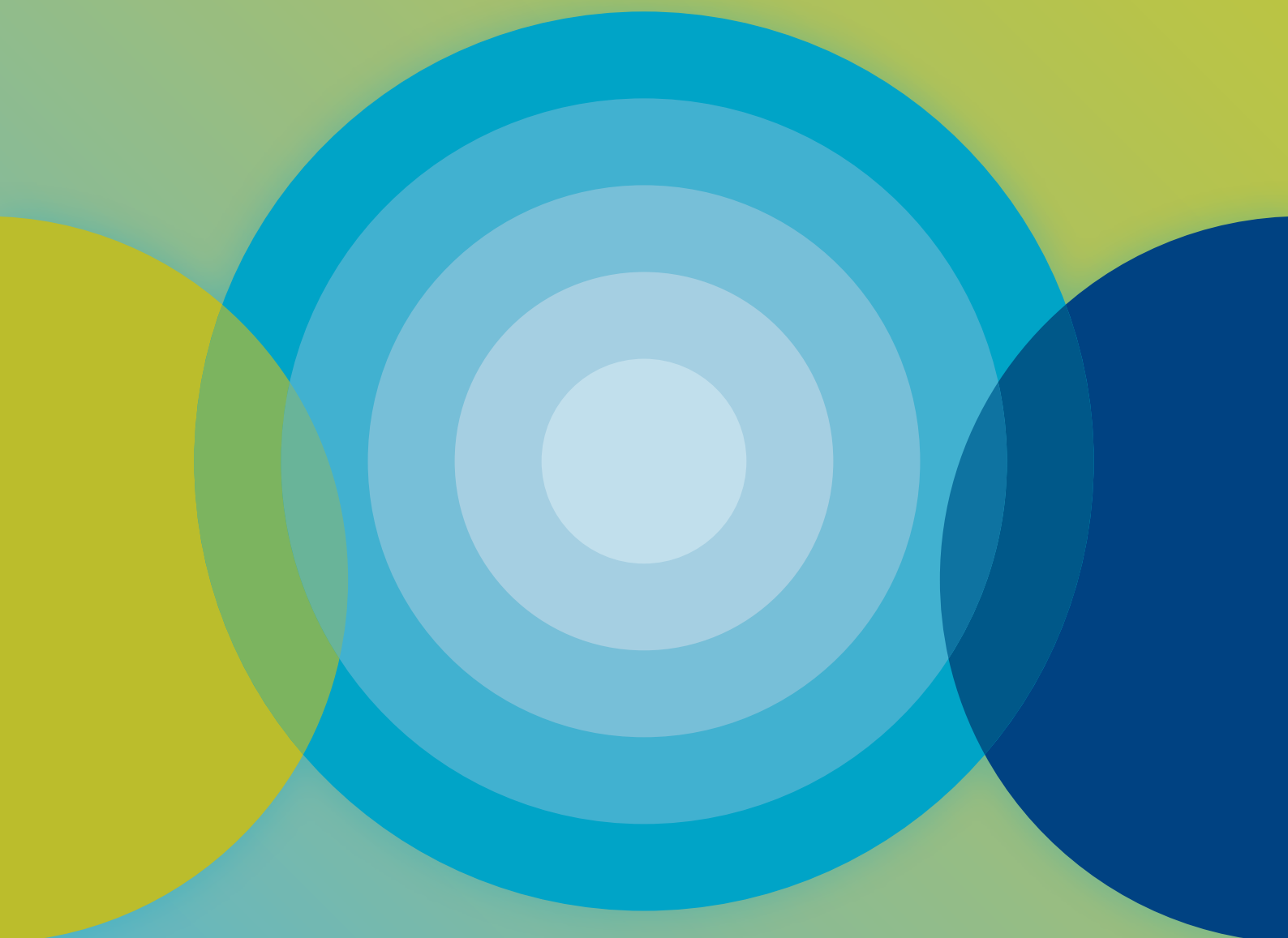




# A City Supported by Infrastructure

Place-based Infrastructure Compact Pilot

Draft for feedback



November 2019

## Greater Parramatta and the Olympic Peninsula (GPOP) within Greater Sydney's metropolis of three cities



Metropolitan Centre



Metropolitan Cluster



Waterways



City-shaping Transport Corridor



Regional Transport Corridor



Protected Natural Area



Metropolitan Rural Area

# Chief Commissioner's Message

Lucy Turnbull AO  
Chief Commissioner



Every successful city must have a vision for the future, and a plan for how to achieve it. The Greater Sydney Region Plan – *A Metropolis of Three Cities* (the Region Plan) responds to Greater Sydney's future need for housing, jobs, quality of life and a sustainable environment with a transformative vision for the Metropolis.

Fundamental to achieving this, and a critical issue raised by the community and the development industry during the Region Plan's development, is aligning growth with the timely delivery of infrastructure and services. That alignment is central to the Greater Sydney Commission's (the Commission) work in delivering the Region Plan.

The Commission, with more than 20 NSW Government partners, has created a new collaborative model: the Place-based Infrastructure Compact, or PIC. The PIC, unprecedented as a strategic planning tool, sets a course for the future growth of our city through the lens of place-based planning. It provides a deeper understanding of how to sequence growth in housing and jobs with the delivery of infrastructure and prioritises the delivery of great places to live, work and play.

Developing a PIC brings together government agencies and utility providers to examine an area's forecast growth under a range of possible scenarios; to inform where and when growth should occur and to identify the infrastructure needed to support it and when it is needed. Having piloted the PIC model in Greater Parramatta and the Olympic Peninsula (GPOP) we've produced this draft Paper for feedback.

We chose GPOP because of the outstanding opportunity it provides to get the best outcomes for a standout region of Greater Sydney. GPOP is experiencing unprecedented levels of job and housing growth and investment in city-shaping infrastructure. With GPOP's advancement as Greater Sydney's connected unifying heart, it plays a critical role in rebalancing growth and opportunity across the Metropolis, so these benefits can be realised for all residents and businesses.

The new PIC model will greatly help to deliver quality outcomes for people who live, work, play, shop, access services or do business in GPOP, now and into the future. For the people of Greater Sydney more broadly, it will mean more orderly and coordinated growth in the right places supported by affordable infrastructure at the right time. For industry, it will mean greater certainty for investment.

Collaboration is at the heart of everything we do at the Commission. Over the coming weeks we will be consulting with the community, councils and industry on the new PIC model and the Pilot in GPOP through this draft Paper. We'll then make our recommendations to the NSW Government for its consideration and public response. To give us your feedback, go to [www.greater.sydney](http://www.greater.sydney)



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## Acknowledgement of Country

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







# Executive Summary

A key message we heard from Sydneysiders as we prepared the Greater Sydney Region Plan – *A Metropolis of Three Cities* was that new jobs and homes needed to support our growing city must be created in an orderly way, in the right places, at the right time.

This is what sparked the idea of a Place-based Infrastructure Compact (PIC): a strategic planning model that looks holistically at a place to better align growth with the provision of infrastructure.

The idea emerged from the Greater Sydney Commission's Infrastructure Delivery Committee (the Committee) in response to the Minister for Planning's call for 'game changers' for Greater Sydney.

The Committee comprises the Greater Sydney Commissioners; Secretaries of the Department of Premier and Cabinet; the Department of Planning, Industry and Environment; the NSW Treasury; Transport for NSW; NSW Health; the Department of Education; and the Chief Executive Officers of the Greater Sydney Commission and Infrastructure NSW.

After considering more than 90 'game changers', the Committee decided to focus instead on a single 'game changer': an innovative new model to be piloted in Greater Parramatta and the Olympic Peninsula (GPOP). Originally called the Growth Infrastructure Compact (GIC), the tool quickly evolved into the Place-based Infrastructure Compact (PIC), recognising the primary significance of place in achieving liveability, productivity and sustainability.

Collectively, the Committee members resolved to develop the PIC and to pilot it in GPOP. Everyone recognised that in order to create more liveable places and build more community trust in the planning system, growth needs to be better aligned with the timely provision of infrastructure.

## GPOP – The place for the PIC Pilot

GPOP is located at the heart of the Central City, itself in the geographic heart of Greater Sydney. It is being transformed with unprecedented levels of public and private investment.

It is vitally important that current and future residents and workers, and more widely the people of Greater Sydney, obtain the best possible benefit from this investment.

Already one of the fastest growing areas in Greater Sydney, GPOP will continue to be a major generator of new jobs and housing in the future. The Central City District has Greater Sydney's highest target for new homes – an additional 207,500 by 2036. Much of this growth is expected to happen in GPOP.

GPOP is set to benefit from city-shaping investment by the NSW Government in projects including a new metro, light rail, hospital redevelopment, a museum, motorway and stadium. These projects must be paired with the full range of services and infrastructure needed to make great places for people.

Just as important to the community, and critical for the attraction of industry and jobs, is more localised infrastructure such as green open space, schools, community health centres and clean waterways.

For GPOP to reach its potential it must become more liveable, productive and sustainable as it grows. Achieving this is only possible if:

- growth is sequenced in a logical way
- infrastructure is provided when it is needed
- great places are created to support the needs of residents, workers and visitors
- opportunities for all involved in making cities are maximised.

## Applying the new model

The PIC is a new collaborative model that looks holistically at a place to identify the most cost-effective sequencing for growth aligned with the provision of infrastructure.

It is designed to support the NSW Government's decision-making processes and to provide guidance to regional and district planning, which then informs local planning.

In the GOP pilot, the PIC model was used to explore the growth potential of 26 precincts under four future scenarios:

**Scenario 1 – 'Existing':** GOP evolves on a more suburban trajectory beyond Parramatta CBD and Sydney Olympic Park in line with current land use plans and light rail from Westmead to Parramatta CBD and Carlingford.

**Scenario 2 – 'Incremental':** GOP transitions to better connectivity and places, with some land use changes around light rail from Westmead to Parramatta CBD and Carlingford.

**Scenario 3 – 'Transformative':** GOP undergoes a step change in connectivity and becomes a 30-minute city. This will require some land use change around new metro stations, a new light rail line through Ermington and Melrose Park across the Parramatta River to Wentworth Point, Sydney Olympic Park and Carter Street, and relief on the T1 rail line from Granville to Strathfield.

**Scenario 4 – 'Visionary':** The Central City experiences a step change in great places and becomes a 30-minute city. This scenario largely follows Scenario 3 but with the addition of new metro lines connecting Greater Parramatta to the north-east, north-west, south and west, as well as a globally significant Westmead Innovation District, new social and cultural experiences at Sydney Olympic Park, a completed 'Green Grid' and sustainable water sources for irrigation.

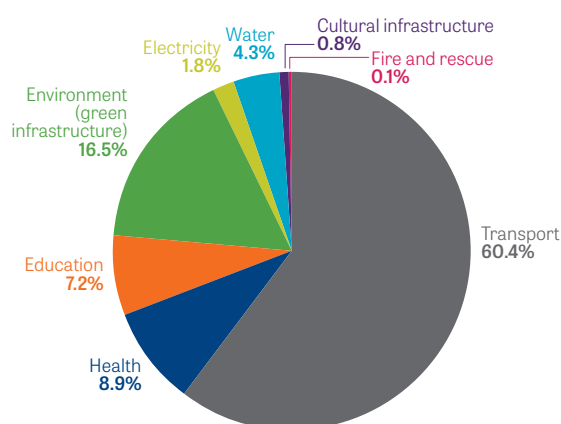
The 18-month PIC Pilot started by identifying 10-, 20- and 40-year forecasts for population, dwellings and jobs under each of the four scenarios.

All the necessary infrastructure was then identified with the relevant agencies, utility providers and, on some aspects, local councils. Costs as well as potential sources of funding were estimated for each of the 26 precincts.

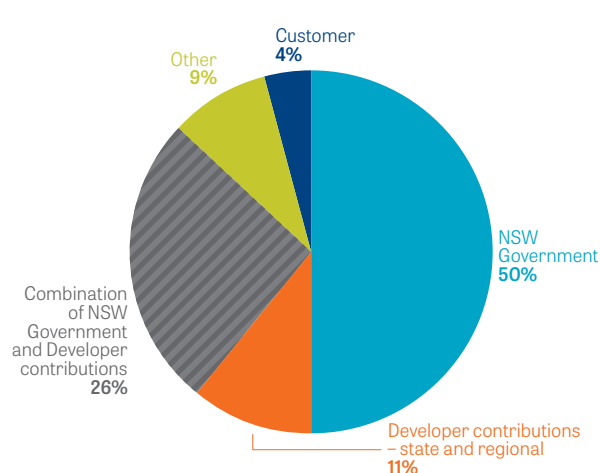
Finally, the scenarios were evaluated to identify the most cost-effective way to sequence growth in each of the 26 precincts across GOP under the most beneficial scenarios.

The PIC Pilot and subsequent draft Strategic Business Case produced five key findings. These were:

**Figure 1:** Proportion of capital costs by sector apportioned to GOP – 20 years



**Figure 2:** Identified funding source for capital costs apportioned to GOP – 20 years



1 Figures 1, 2, 3 report analysis for the 'Transformative' Scenario 3

2 For examples of funding sources and infrastructure included in each category refer to the key concept on page 39.



**Finding 1:** The ‘Transformative’ Scenario 3 and ‘Visionary’ Scenario 4 for GPOP delivered the greatest liveability, productivity and sustainability benefits, and these outweighed the costs. These scenarios delivered around double the net benefits of the ‘Incremental’ Scenario 2.

**Finding 2:** Great places need a wide range of social, economic and environmental infrastructure such as trees, parks, schools and health facilities. Public transport and roads accounted for 60 per cent of infrastructure costs in GPOP but these are key to the Central City becoming a 30-minute city (see Figure 1).

**Finding 3:** The scale of necessary infrastructure requires a clear and upfront understanding of costs, and of who should be contributing to them, in order to guide better decisions and achieve the most effective use of resources (see Figure 2).

**Finding 4:** The cost of delivering new homes and jobs varies across the 26 precincts in GPOP, owing to differing local conditions and levels of existing infrastructure. The cost of accommodating a new resident or job varied from under \$50,000 in some precincts to more than \$100,000 in others (see Figure 3).

**Finding 5:** If all recent and proposed land-use changes in GPOP were to happen in the near term, it would not be possible to fund all the necessary infrastructure at the same time. Growth must be sequenced to meet market demand,

but it must not outpace the NSW Government’s capacity to fund services and infrastructure.

Overall, the PIC Pilot demonstrated that in order to better align growth with the provision of infrastructure, greater focus should be placed on realising the potential of selected precincts in GPOP before moving on to others. This would ensure that these places receive the appropriate range of services and infrastructure at the right time.

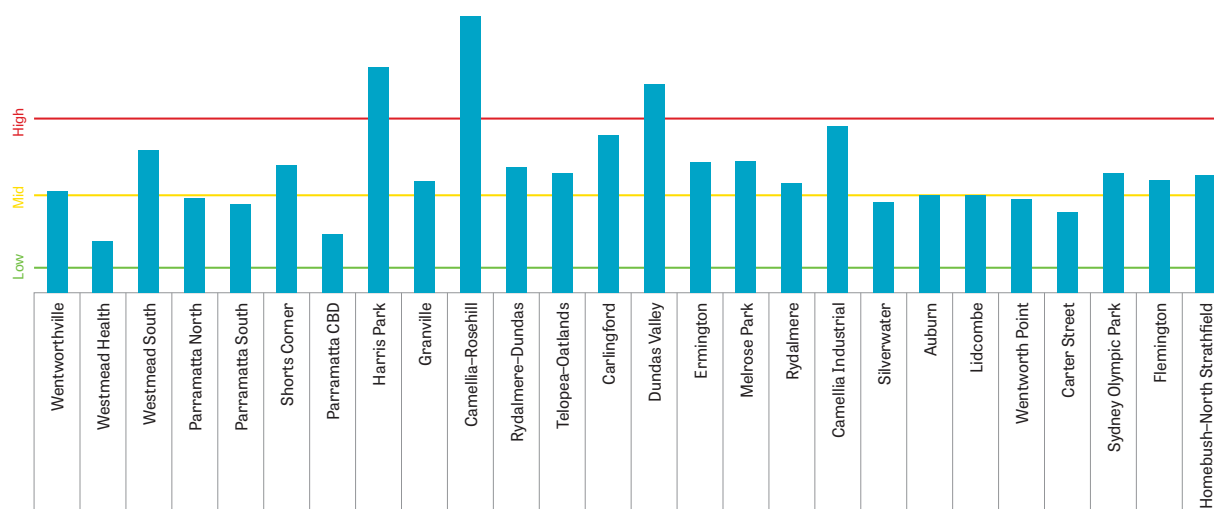
This is consistent with Objective 2 of the Region Plan and Planning Priority C1, C7 and C8 of the Central City District Plan.

Building on the findings of the PIC Pilot, a draft Strategic Business Case was also prepared by Infrastructure NSW, consistent with Recommendation 1 of the State Infrastructure Strategy: Building Momentum 2018–2038.

Drawing on the proposed high-level sequencing of precincts from the PIC Pilot, it proposes 10-year service and infrastructure priorities to respond to current, emerging and future needs within the NSW Government’s affordability limits.

These infrastructure priorities are subject to the finalisation of business cases and investment decisions through NSW Budget processes to ensure that they are affordable and are value for money.

**Figure 3:** Comparative costs of accommodating a new resident or job in GPOP’s 26 precincts – 20 years



## Proposed actions for GPOP

The collaborative and evidence-based PIC Pilot and draft Strategic Business Case has informed the five proposed actions for GPOP outlined in this Paper.

The first three proposed actions from the PIC Pilot identify the high-level sequencing of the 26 precincts in GPOP, as shown in Figure 4.

These are intended to inform the next iteration of district planning and subsequent local planning processes.

While they propose more orderly sequencing of land use changes to unlock new growth aligned with the provision of infrastructure, we acknowledge that GPOP is already a dynamic place with new development underway.

There are many places where growth can occur under current land use zones and controls or with some adjustments. This process needs to be continuously monitored to inform service and infrastructure planning.

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### Proposed action 1: Sequencing Plan – Phase 1: Focus on precincts where growth can be aligned with already committed infrastructure to support job creation and new development.

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The suggested priority areas in Phase 1 are:

- Parramatta (CBD, North and South), Westmead (Health and South) and Wentworthville Precincts
- Rydalmere to Carlingford Precincts
- Wentworth Point and Carter Street Precincts

These were assessed as being strategic precincts to facilitate development and land use changes aligned with investment in services and infrastructure. They were found to be more cost-effective than other precincts in GPOP.

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### Proposed action 2: Sequencing Plan – Phase 2: Focus on aligning growth with future city-shaping infrastructure.

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The suggested priority areas in Phase 2 are:

- Sydney Olympic Park Precinct
- Homebush-North Strathfield Precinct
- Melrose Park and Ermington Precincts
- Granville, Auburn, Lidcombe and Flemington Precincts

The development of these precincts was assessed to be more effective when sequenced after Phase 1 to allow for coordination with Sydney Metro West and the proposed Parramatta Light Rail Stage 2, which would support them.

This support could be direct, with new stations or stops, and indirect, with more trains stopping at local centres on the existing T1 rail line between Granville and Strathfield.

A review of the Sydney Olympic Park Master Plan (2018) would be needed to unlock new potential enabled by a new metro station and potential light rail stops.

Development in these precincts can continue under current planning controls, or consistent with District Plans and the Parramatta Road Corridor Urban Transformation Strategy, and may be reviewed over time.

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### Proposed action 3: Support existing uses in the remaining precincts across GPOP and review their potential over time.

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This proposed action supports existing uses in the remaining precincts for a range of strategic reasons, including the relatively higher costs of accommodating a new resident or job in the precinct and/or local environmental constraints.

These precincts include:

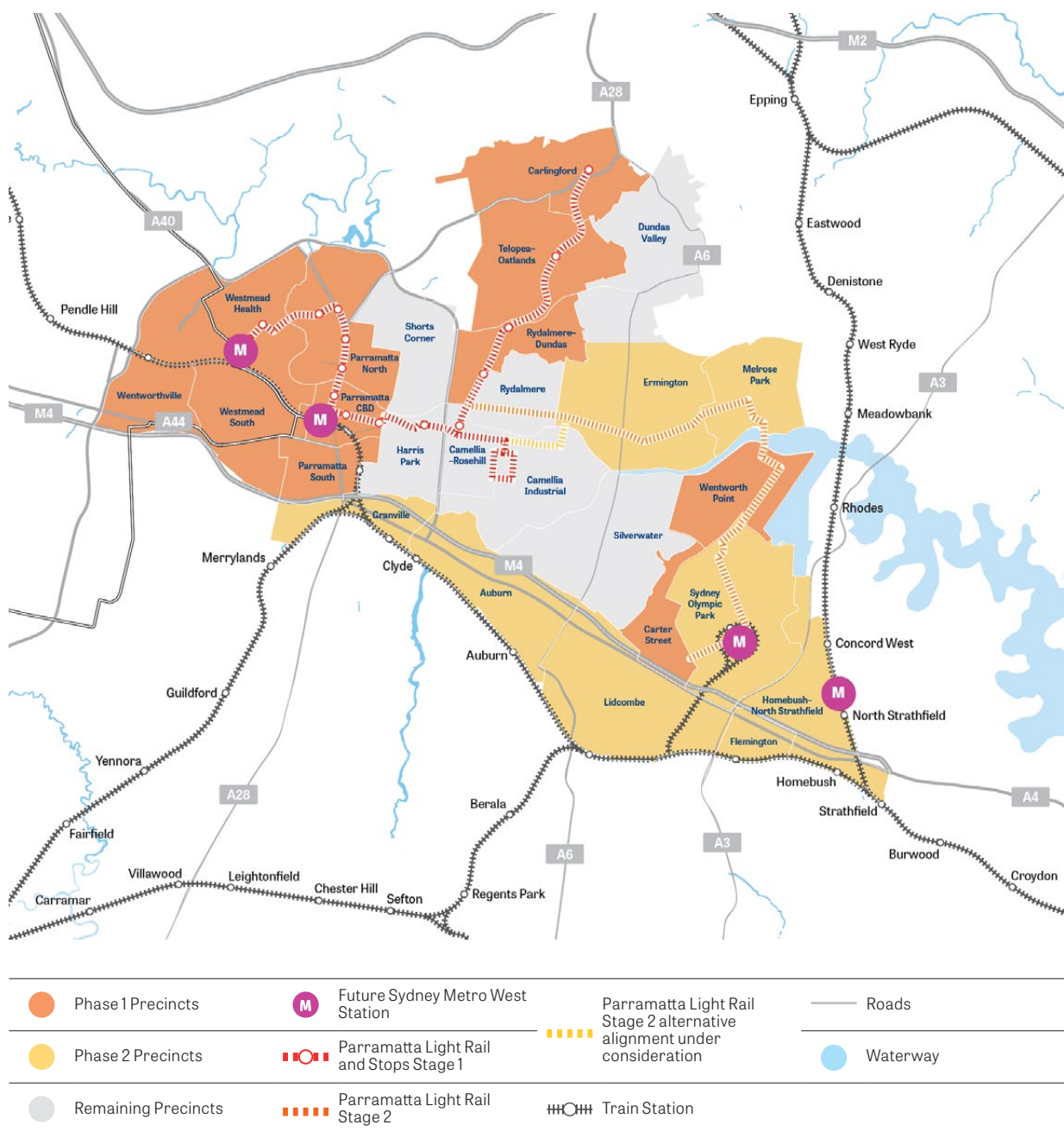
- Harris Park, Dundas Valley and the Shorts Corner Precincts
- Rydalmere, Camellia Industrial, Auburn, Lidcombe and Silverwater Precincts
- Camellia-Rosehill Precinct

Development in these precincts can continue under current land use zones and controls, or with some adjustments, and may be reviewed over time.

Subject to the NSW Government's adoption of the PIC Pilot, its findings and proposed actions, the approach to the draft Camellia Town Centre Master Plan (2018), which proposes a change of use to accommodate new housing and a new local centre, would need to be reconsidered.

The final two proposed actions are from the draft SBC. These actions recognise current and emerging pressures across GPOP, as well as the need to transition to the proposed high-level sequencing plan from the PIC.

These priorities are intended to inform the capital investment plans and budget processes of NSW Government agencies.





**Proposed action 4: Short-term infrastructure priorities for GPOP – investigate to support demand across all the 26 precincts.**

These priorities have been identified for the next five years plus to support current and emerging demand across all the 26 precincts of GPOP, recognising it as a dynamic place with development underway and in the pipeline (see Table 1).

The priorities include environment, water, culture, education, health, housing, justice and transport, and are additional to infrastructure already in planning,

development or delivery. They remain subject to further planning work and subsequent government investment decisions.

The draft Strategic Business Case recognises investment is needed to address demands that have arisen from sustained growth over the past five years and the pipeline of approved development across the 26 precincts in GPOP.

This investment will benefit the GPOP community as a whole while providing a foundation for investment in the priority areas identified in Phase 1.

**Table 1:** Proposals across GPOP – Subject to further investigation and funding decisions

Sector	Proposals
Environment and water (Green/blue infrastructure)	• Parramatta Park upgrades for the Bowling Greens Precinct and the Gardens Precinct
	• New and upgraded Green Grid links and urban tree cover at Sydney Olympic Park
	• New tree canopy at school sites across GPOP
Cultural infrastructure	• Joint-use cultural facilities at selected GPOP schools
	• New arts and cultural facilities for Parramatta Artist Studios and Gallery, Parramatta Digital and Performance Centre
Education	<ul style="list-style-type: none"> <li>• New High School for Sydney Olympic Park and surrounds</li> <li>• Redevelopment at Pendle Hill High School</li> <li>• Primary and Secondary School proposals servicing:               <ul style="list-style-type: none"> <li>– Wentworthville Precinct</li> <li>– Granville Precinct</li> <li>– Melrose Park Precinct</li> <li>– Wentworth Point Precinct</li> <li>– Carlingford Precinct</li> <li>– Westmead South Precinct</li> <li>– Sydney Olympic Park Precinct</li> </ul> </li> </ul>
Housing	• Social housing renewal / expansion at Ermington and Melrose Park
Justice	• Parramatta Justice Precinct Master Planning and Expansion
	• Police Station upgrades for Ermington and Granville
Transport	• Bus route and corridor improvements for Victoria Road and Parramatta to Macquarie Park
	<ul style="list-style-type: none"> <li>• Active transport improvements               <ul style="list-style-type: none"> <li>– crossings of T9 Northern line</li> <li>– north-south regional cycleway at Granville</li> <li>– connection improvements along sections of Parramatta Light Rail Stage 1 corridor</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• Future road and transport upgrades:               <ul style="list-style-type: none"> <li>– On approach to Parramatta CBD along Church Street, Cumberland Highway, Great Western Highway and Windsor Road</li> <li>– Parramatta Road and James Ruse Drive</li> <li>– Parramatta Outer Ring Road upgrade investigation</li> </ul> </li> </ul>
	• Travel demand management: technology solutions including on-demand travel

### Proposed action 5: Short-to-medium-term infrastructure priorities for Sequencing Plan – Phase 1.

These infrastructure priorities have been identified for the next five to 10 years plus to support the proposed Sequencing Plan – Phase 1 (see Table 2).

The priorities are additional to those already in planning, development or delivery. They remain subject to further planning work and subsequent government investment decisions.

**Table 2:** Proposals aligned to Phase 1 – Subject to further investigation and funding decisions

Sector	Proposals
<b>Environment and water</b> (Green/blue infrastructure)	<ul style="list-style-type: none"> <li>• Parramatta Park upgrades:               <ul style="list-style-type: none"> <li>– Biodiversity and Parramatta Riverbanks work</li> <li>– Bridges over the Parramatta River</li> <li>– Paddocks Precinct</li> <li>– People's Loop</li> <li>– Wisteria Gardens</li> </ul> </li> <li>• Recycled water network for new homes, businesses and open space</li> <li>• Resource recovery facility to provide recycled water</li> </ul>
<b>Cultural infrastructure</b>	<ul style="list-style-type: none"> <li>• Parramatta Indigenous Centre for STEM Excellence</li> <li>• Contribution to library expansions at Ermington and Telopea</li> </ul>
<b>Education</b>	<ul style="list-style-type: none"> <li>• Primary and Secondary School proposals servicing:               <ul style="list-style-type: none"> <li>– Wentworthville Precinct</li> <li>– Shorts Corner Precinct</li> <li>– Carlingford Precinct</li> <li>– Telopea-Oatlands Precinct</li> <li>– Westmead Health Precinct</li> <li>– Carter Street Precinct</li> </ul> </li> </ul>
<b>Health</b>	<ul style="list-style-type: none"> <li>• Integrated Mental Health Complex at Westmead</li> </ul>
<b>Housing</b>	<ul style="list-style-type: none"> <li>• Social housing renewal / expansion at:               <ul style="list-style-type: none"> <li>– Carlingford</li> <li>– Parramatta North</li> <li>– Rydalmere-Dundas</li> <li>– Westmead South</li> <li>– Westmead Health</li> <li>– Wentworthville</li> </ul> </li> </ul>
<b>Justice</b>	<ul style="list-style-type: none"> <li>• Fire Station upgrades at:               <ul style="list-style-type: none"> <li>– Wentworthville</li> <li>– Rydalmere</li> </ul> </li> </ul>
<b>Transport</b>	<ul style="list-style-type: none"> <li>• Bus route and corridor improvements:               <ul style="list-style-type: none"> <li>– Public transport priority improvements along Church Street in Parramatta South on approach to Parramatta CBD</li> <li>– Parramatta to Macquarie Park via Epping</li> <li>– Parramatta Road</li> <li>– Parramatta to Castle Hill</li> </ul> </li> <li>• Transport interchange upgrades at Parramatta CBD and Westmead Station</li> <li>• Active transport improvements:               <ul style="list-style-type: none"> <li>– Pedestrian bridge over Hill Road</li> <li>– Cycleway improvements between Westmead and Parramatta North on approach to Parramatta CBD</li> </ul> </li> <li>• Travel demand management: technology solutions including on-demand travel</li> </ul>

## Where to from here?

Your feedback on the PIC and on the findings and proposed actions from the PIC Pilot will be incorporated in the Commission's recommendations to the NSW Government for its consideration and response.

We will present our recommendations in mid 2020. Detailed questions for feedback are provided throughout this Paper.

Subject to the Government's acceptance, it is intended that the PIC Pilot and draft Strategic Business Case for GPOP would be implemented through:

- amendments to the relevant strategic and statutory plans, with further community consultation
- finalisation of business cases for State agencies capital investment plans and NSW Budget processes
- ongoing monitoring of development, land use and infrastructure decisions to ensure the effectiveness of the PIC as a decision-making support tool.

Your feedback will help the Commission to improve the PIC and identify other areas in Greater Sydney where the model could help the NSW Government in its decision-making processes.

More PICs in high-transformation areas in Greater Sydney using the same method would provide a basis for comparative analysis.

Incorporating this information into the Government's strategic planning will help identify areas where growth can be supported most cost-effectively with infrastructure, while creating great places for people.

By providing greater certainty and better coordination, this approach will benefit the community, businesses and industry.

See page 58 for details on how you can provide your feedback.



# 1 Introduction

Greater Sydney's future is being guided by new strategic plans for our city to flourish as a more liveable, productive and sustainable metropolis of three cities: the Eastern Harbour City, Central River City and Western Parkland City.

The Greater Sydney Region Plan – *A Metropolis of Three Cities*, was developed by the Greater Sydney Commission (the Commission) concurrently with Infrastructure NSW's *State Infrastructure Strategy 2018–2038: Building Momentum* and Transport for NSW's *Future Transport Strategy 2056*.

As Greater Sydney grows and becomes more complex, we need to find better ways of supporting growth with infrastructure in the right places and at the right time. This is critical to reassure the community and business that places are being planned and developed coherently and sustainably.

Better early planning, involving all the responsible agencies, will allow us to guide Greater Sydney's growth and deliver better outcomes for Sydneysiders.

It provides more certainty that infrastructure will support growth on a targeted basis, avoiding State agencies, utility providers and local councils trying to meet the demands of growth across an entire area brought about by ad-hoc development.

The Region Plan places the alignment of growth and infrastructure at the forefront: the first of its ten directions is 'A city supported by infrastructure', of which Objective 1 is 'Infrastructure supports the three cities'.

Planning decisions will need to support new infrastructure in each city – including environment and water (green/blue), culture, education, health, housing, justice and transport infrastructure – to balance population growth with infrastructure investment. At the same time, infrastructure decisions will need to support planning decisions.

Objective 2 of the Region Plan is '*Infrastructure aligns with forecast growth – growth infrastructure compacts*'. The PIC Pilot trials a new way to realise this objective and responds to feedback received by the Commission that infrastructure is not keeping pace with jobs and housing growth, compromising liveability.

## 1.1 A new collaborative approach

In 2016, the then Minister for Planning asked the Commission to develop a list of city-shaping 'game changers' for Greater Sydney.

This task was led by the Commission's Infrastructure Delivery Committee, comprising of the Greater Sydney Commissioners; Secretaries of the Department of Premier and Cabinet; the Department of Planning, Industry and Environment; the NSW Treasury; Transport for NSW; NSW Health; the Department of Education; and the Chief Executive Officers of the Greater Sydney Commission and Infrastructure NSW.

### Place-based Infrastructure Compacts

The PIC is a highly collaborative model that looks holistically at a place to identify at a high level the most cost-effective sequencing for growth aligned with the provision of infrastructure over 10, 20 and 40 year periods.

The aims of a PIC, as set out in Objective 2 of *A Metropolis of Three Cities*, are to:

- model the growth potential of an area and explore scenarios for its long-term future

- encourage openness about the range of infrastructure and services needed to grow an area, the costs involved and how this could be feasibly funded
- stage growth by being selective about where, when and what to invest in to deliver successful areas
- make the roll-out of new areas more certain, cost-effective and easier to understand for investors, developers and the local community.



Key  
Concept

The Infrastructure Delivery Committee, after assessing a list of more than 90 potential ‘game changers’, and having listened to feedback from Sydneysiders, jointly agreed to a single recommendation: a Growth Infrastructure Compact (GIC) to be piloted in GPOP.

The Commission collaborated with more than 20 State agencies and utility providers to develop the concept into the PIC, with local councils involved at various steps. This evolution to a PIC reflects the focus on achieving quality place-based outcomes with growth.

Alongside the PIC Pilot for GPOP, Infrastructure NSW prepared a draft Strategic Business Case. They are explained as key concepts on page 15 and page 17.

When the PIC model is applied in an area undergoing transformative change, it provides:

- clarity about where development could most effectively occur over time, and the implications for services and infrastructure
- clear directions for strategic places, to be considered in updates to District Plans, Local Strategic Planning Statements and in Local Environmental Plan (LEP) amendments
- information to assist in the assessment of Planning Proposals

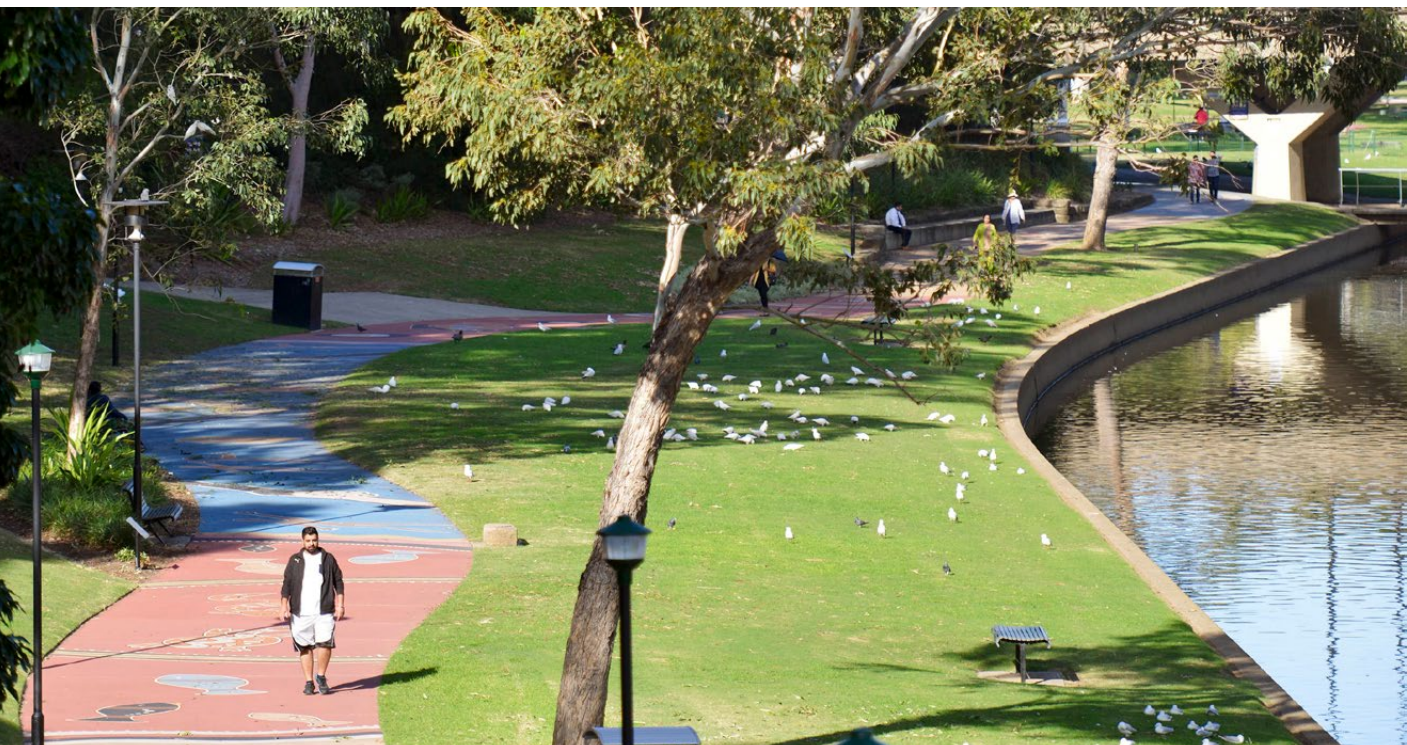
- a more predictable framework to better utilise, plan, prioritise and fund services and infrastructure, and achieve more cost-effective use of resources
- coordinated and aligned activities across different levels of government with the opportunity for better integration
- better place outcomes for the community, industry and governments brought about by a collective understanding of the high-level sequencing of precincts and of infrastructure priorities.

The success of the new PIC model and its outcomes will ultimately be measured by the quality of places and their contribution to the liveability, sustainability and productivity of Greater Sydney and its communities.

## 1.2 Partners in the PIC Pilot

Driven by the Commission and Infrastructure NSW, the Pilot for GPOP has been developed with many partners who all contribute to city building. They include:

- Ausgrid and Endeavour Energy
- Create NSW
- the Department of Education and School Infrastructure NSW
- the Department of Justice, Fire and Rescue NSW, NSW Police Force



- the Department of Planning and Environment
- the Department of Premier and Cabinet
- the Environmental Protection Authority
- the Land and Housing Corporation
- the Ministry of Health, Health Infrastructure and Western Sydney Local Health District
- the NSW Treasury
- the Office of Environment and Heritage
- the Office of Sport and Recreation
- the Office of the Government Architect and Parramatta Park Trust
- Property NSW
- Sydney Olympic Park Authority
- Sydney Water
- TAFE NSW
- Transport for NSW and Roads and Maritime Services
- Urban Growth Development Corporation NSW

The City of Parramatta Council and Cumberland Council have provided valuable local insights and expertise with respect to key steps in the PIC method, including scenario development and the green infrastructure assessment.

### 1.3 Structure of this Paper

This Paper is structured to outline:

- the reasons GPOP was selected as the place for the PIC Pilot (Section 2)
- the new PIC model and its method (Section 3)
- findings from the PIC Pilot for GPOP (Section 4)
- proposed actions for GPOP on the basis of the Pilot's findings (Section 5)
- how the PIC's proposed actions could be realised (Section 6)
- how you can give feedback on this new approach (Section 7).

## Place-based Strategic Business Case

The Strategic Business Case for GPOP was identified in the *State Infrastructure Strategy 2018–2038: Building Momentum* to complement the PIC Pilot.

Building on the PIC's findings, a draft Strategic Business Case has been prepared by Infrastructure NSW on behalf of eight service and infrastructure delivery agencies.

In conjunction with the PIC, it aims to ensure the right infrastructure proposals are developed at the right time

and put forward for capital and NSW Budget prioritisation over a 10-year horizon.

The draft Strategic Business Case takes the infrastructure needs identified in the PIC and optimises and prioritises them in line with the high-level sequencing plan and within what the NSW Government can afford



Key  
Concept

<sup>2</sup> The names of NSW Government agencies are as at December 2018, prior to the Machinery of Government changes in mid 2019.



# A 'game changing' idea

## 2016

Greater Parramatta Technical Coordination Group, chaired by the Chief Commissioner, identifies the city-shaping potential of land use and infrastructure decisions in GPOP. A bold new vision is prepared *GPOP – Our true centre: the connected, unifying heart*.



## 2017

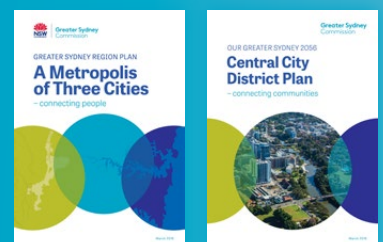
In response to the Minister's Priorities 2016–2018, the Greater Sydney Commission's Infrastructure Delivery Committee created under the *Greater Sydney Commission Act 2015* focuses on a single 'game changer', known as the Growth Infrastructure Compact (GIC) to be piloted in GPOP.

## 2018

Greater Sydney Region Plan, State Infrastructure Strategy and Future Transport 2056 released.

The Greater Sydney Commission leads the preparation of the GIC Pilot for GPOP with over 20 State agencies, utility providers, and local councils taking a 10-, 20- and 40-year view of the place.

The GIC evolved into the Place-Based Infrastructure Compact (PIC) to better reflect the need to focus on quality place-based outcome, with growth.

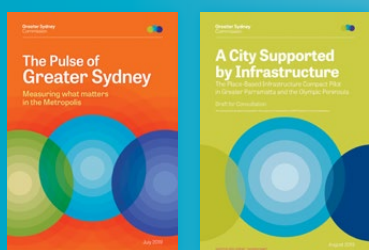


# 2019

Infrastructure NSW takes forward the findings of the PIC and leads the preparation of a draft Strategic Business Case for GPOP, focused on the 10-year service and infrastructure priorities for potential funding.

The Greater Sydney Commission releases the *Pulse of Greater Sydney: Measuring what matters in the Metropolis*, providing a monitoring and reporting framework for the PIC Pilot and draft Strategic Business Case.

The findings and proposed actions from the PIC Pilot and draft Strategic Business Case are released for feedback prior to the Commission making recommendations to the NSW Government for its consideration and public response.



## Tell us what you think

We are keen for your feedback and are particularly interested in your views on the following.

### The new PIC model

- How well do you feel you understand the model?
- How could we improve the model? For example is there anything we missed?
- How could this model be used to help other places?
- How can community and industry better participate?

### Key findings for GPOP

- What findings from GPOP do you agree with?
- Do you think there is anything else that could be considered?

### Proposed actions for GPOP

- Do you understand why we need to sequence development in GPOP?
- Do you have feedback on the sequencing plan?
- What do you think about the service and infrastructure priorities?
- Have we missed anything?

### Realising the PIC proposals

- How do we make sure the proposals from Place-based Infrastructure Compact are delivered?
- What level of transparency should there be around infrastructure planning and delivery in places undergoing significant change and growth?
- How can we keep you up to date with delivering the PIC proposals?

You can go to Section 7 for details on how you can tell us what you think.

Your feedback will help to inform the Commission's recommendations to the NSW Government, which we intend to present in mid 2020.

It will also help where and how to prepare future PICs in Greater Sydney to support the NSW Government in its decision-making processes.

## 2 The place for the PIC Pilot – GPOP

GPOP was chosen for the PIC Pilot because of the outstanding opportunity it provides to get the best outcomes for a highly dynamic place that is vital to the future success of Greater Sydney.

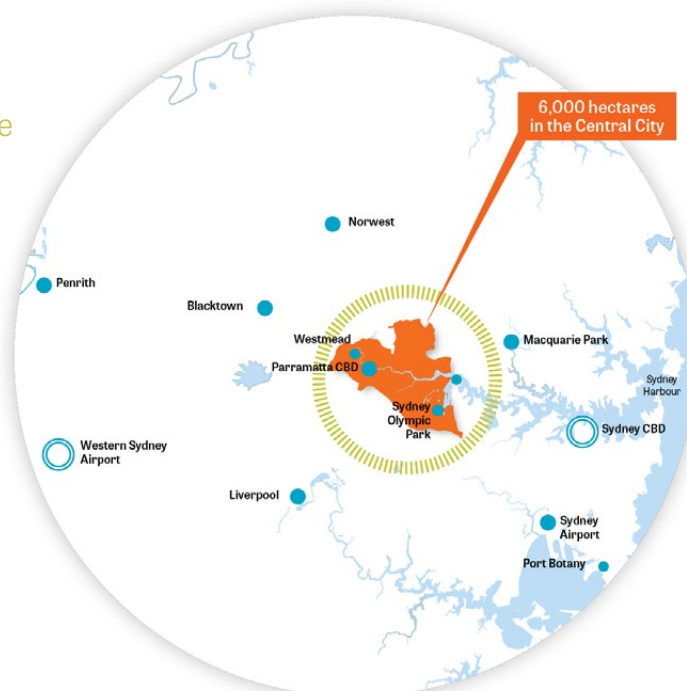
Sitting at the heart of the Central City, and at the geographic centre of Greater Sydney, GPOP is a 6,000-hectare urban renewal area that is home to over 190,000 people and generates more than 150,000 jobs (respectively 4.3 per cent and 7 per cent of Greater Sydney's total).

GPOP is already one of the fastest growing areas in Greater Sydney. As outlined in the GPOP vision, it has all the right elements to be:

- a place of celebrated indigenous and colonial history, natural beauty and city-scale natural treasures – its river, its parklands and its landscapes
- a thriving, accessible and inclusive civic heart with its own diverse cultures
- a physical bridge for Greater Sydney whose renewal will help build a unified, coherent and integrated city: one Greater Sydney for all
- a jobs hub within reach of skilled workers, helping to address the deficit of skilled work opportunities in the west
- an attractive place to invest, already having the foundations to be a diverse 21st-century urban economy that can service the city's needs, its people and its enterprises.

**Figure 5:** The Pilot Area – Greater Parramatta and the Olympic Peninsula

Greater  
Parramatta and the  
Olympic  
Peninsula





## 2.1 Transformational growth

The Central City District, which GPOP is part of, has Greater Sydney's highest target for new homes – 207,500 by 2036, a 65 per cent increase from today.

Much of this growth is expected to happen in GPOP. In the 10 years to 2018, nearly 24,000 new dwellings were built in GPOP, accommodating more than 50,000 new residents and bringing the area's population to over 190,000 people.

More than half of this growth has been in the past three years, making GPOP one of the fastest-growing places in Greater Sydney.

With its diversity of industries and significant new investment, GPOP is well-placed to generate a share of the 817,000 new jobs Greater Sydney will need by 2036.

More than 28,000 new jobs were created in GPOP in the decade to 2016, representing almost six per cent of Greater Sydney's jobs growth in the same period, although it represents only three per cent of the city's urban area.

But GPOP can do even better in helping rebalance jobs and opportunities across Greater Sydney to achieve a 30-minute city.

Over the next 20 years, and with the right city-shaping infrastructure, GPOP could potentially generate around 100,000 jobs to add to the 150,000 jobs it has today.

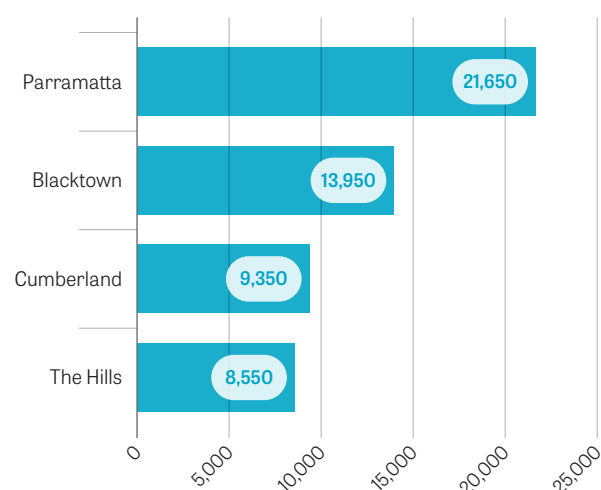
## 2.2 City shaping investment

Unparalleled public and private investment is already transforming GPOP and this will continue over the next decade.

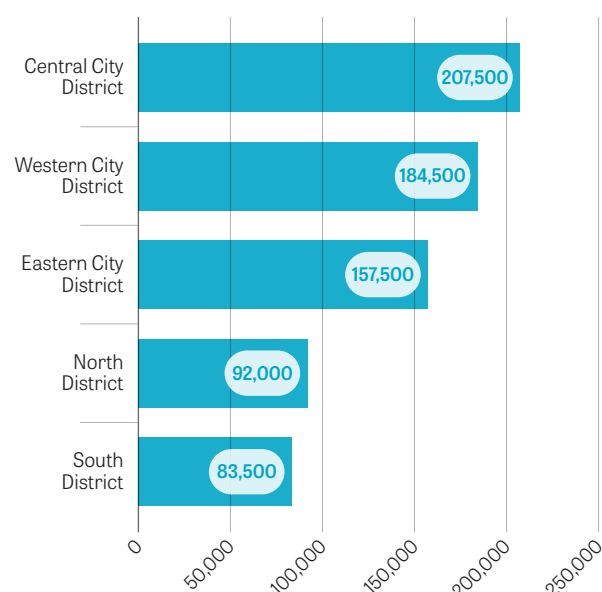
City-shaping projects now underway include:

- the \$1 billion Westmead Hospital and \$619 million Children's Hospital redevelopments at Westmead
- construction of the \$2.4 billion Parramatta Light Rail Stage 1 from Westmead to Parramatta CBD to Carlingford, via Camellia, with 16 accessible stops over 12 kilometres, offering a turn-up-and-go service seven days a week
- planning for the proposed Parramatta Light Rail Stage 2, comprising a further 10 kilometres of light rail and between 10 and 12 stops to link Stage 1 to Sydney Olympic Park via Ermington and Melrose Park
- \$6.4 billion committed to the new Sydney Metro West, linking the Central River City and the Eastern Harbour City. In GPOP stations are proposed at Westmead, Parramatta, Sydney Olympic Park and at North Strathfield
- the conservation of heritage buildings at Parramatta North
- \$645 million towards the new Powerhouse Precinct, to be built along the banks of the Parramatta River.

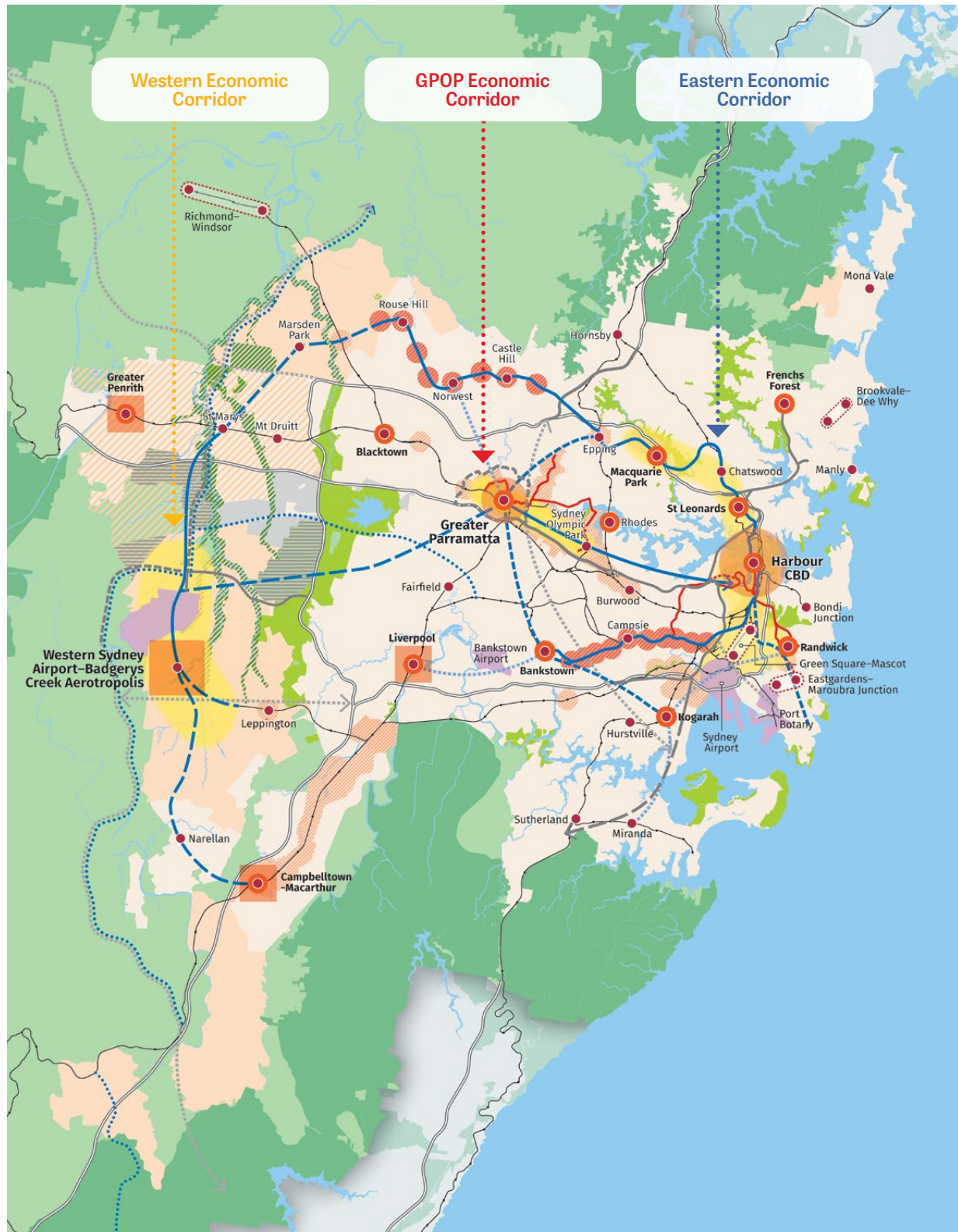
**Figure 6:** 5-year housing targets for Central City LGAs: 2016–2021



**Figure 7:** 20-year housing targets for Districts: 2016–2036



**Figure 8:** The GPOP Economic Corridor to support rebalancing the distribution of jobs and opportunities across Greater Sydney



- the newly-opened \$330 million Western Sydney Stadium (Bankwest Stadium), providing a new venue for sporting and entertainment events in the heart of Greater Sydney
- the now complete \$497 million WestConnex Stage 1a (M4 Widening from Parramatta to Homebush) and \$3.8 billion Stage 1b (M4 East – new M4 tunnels).

### 2.3 Diversity of economic activity

The diversity of industries and jobs is a key strength of GPOP, attracting interest and investment from universities, health services, sports institutes, business, developers and investors who see the area's potential.

Key employment sectors already in GPOP include public administration and safety, financial and insurances services, health care and social assistance, and retail.

The GPOP Economic Corridor, as identified in the Region Plan, is home to four major and distinct employment areas.

- **Parramatta CBD** – a metropolitan centre with growing commercial activity. Significant new investment in 'A Grade' office space is attracting public administration, finance, business services and tertiary education to the CBD.
- **Westmead Health and Education Precinct** – anchored by Westmead public and private hospitals, the University of Sydney, the Western Sydney University and several research institutions, this is the largest health precinct in the southern hemisphere.
- **Camellia–Rydalmere–Silverwater–Lidcombe–Auburn** – an industrial and urban services area spanning almost 700 hectares. It plays an essential role in supporting local employment, innovation, manufacturing, construction, energy and waste management.
- **Sydney Olympic Park** – an evolving mixed-use precinct, with modern, sustainable and flexible commercial office space. This precinct has a mix of leisure features distinctly different from the nearby Parramatta CBD or Macquarie Park.

#### A new investment prospectus

In recognition of GPOP's important contribution to the Greater Sydney and Australian economies and the job-creation prospects of Greater Sydney, the NSW Government has launched a new investment prospectus *Greater Parramatta and the Olympic Peninsula – The Future Made Here*.

The prospectus, a first for GPOP, is supported by a dedicated team committed to attracting innovative and energetic partners from here and overseas to help realise the GPOP vision.



## 3 The new PIC model

Developed with our partners in the Pilot, the new PIC model identified key findings and proposed actions for GPOP. They are outlined in Sections 4 and 5 of this Paper.

The PIC is a collaborative model that generates new insights to enable more effective decision-making about land use and infrastructure. It is designed to be scalable and repeatable in other high-transformation areas across Greater Sydney.

Explanations of the key concepts underpinning the PIC can be found throughout Section 4 of this Paper, where findings for GPOP are discussed.

While the development of the PIC marks a significant change in place-based planning, there is scope to continuously improve the model over time.

### 3.1 Understanding the three components of the model

Combining the expertise of service and infrastructure providers with the best data, information and methodology, the PIC considers:

- the growth potential for a place under different scenarios
- the services, infrastructure and utilities that will be needed
- a place-based evaluation of costs and benefits focused on liveability, productivity and sustainability
- a high-level sequencing plan to better align growth and infrastructure
- affordable infrastructure priorities.

The PIC model developed in the Pilot has three interrelated components, as shown in Figure 9:

1. **A collaborative approach** across State agencies, utility providers and local councils
2. **A six-step method** integrating land use, infrastructure and economic evaluation (see Section 3.2)
3. **A digital and data tool** providing analytics and insights that are important in keeping the PIC dynamic and up-to-date (Section 3.3).

Importantly, the PIC should not be viewed as a ‘black-box’ type model intended to predict service and infrastructure needs for communities. Rather, it relies on people working together and sharing information.

**Figure 9:** The new PIC model



### 3.2 Unpacking the six-step method

The six-step PIC method that emerged from practical testing and application in the Pilot process is shown in Figure 10.

**Step 1:** Setting the vision and place outcomes, developing different scenarios and forecasting land use change for agreed horizons, i.e. 10, 20 and 40 years.

**Step 2:** Identifying infrastructure needs and estimated capital costs, and integrating them for precincts under each of the scenarios developed in Step 1.

**Step 3:** Evaluating the costs and benefits in order to identify a preferred scenario or scenarios and the high-level sequencing of precincts for more orderly development.

**Step 4:** Refining infrastructure proposals to align with the high-level sequencing of precincts and prioritisation for funding over 10 years through a Strategic Business Case.

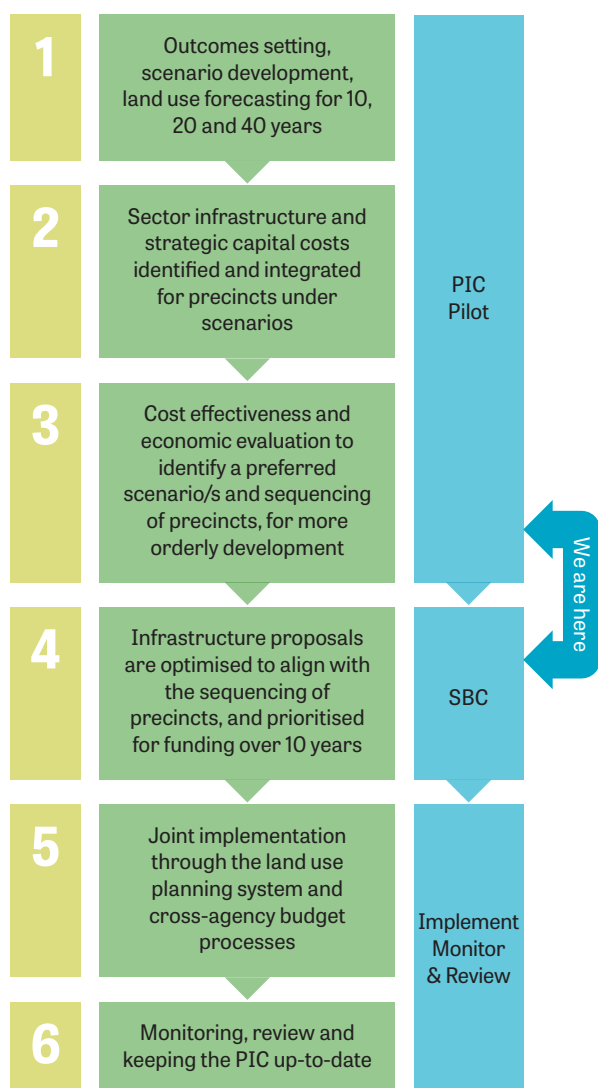
**Step 5:** Concurrent implementation of the PIC and Strategic Business Case through the land use planning system and NSW Budget processes.



**Step 6:** Monitoring development in the place and reviewing the PIC as market conditions, community preferences and policy decisions evolve.

The PIC method is directly linked to a place-based Strategic Business Case process, as shown in Figure 10.

**Figure 10:** The six-step method developed in the PIC Pilot



### 3.3 Using the Co.Lens tool

‘Co.Lens’ is the Commission’s purpose-built tool that stores the data, information and advice generated through the PIC method.

The tool enables viewing, integration and analysis of inputs to the PIC Pilot. This includes population; dwelling and job forecasts; and service and infrastructure costings under each scenario and for each precinct, over 10, 20 and 40 year horizons.

The Co.Lens tool was essential to the delivery of the PIC Pilot, including the key findings and proposed actions in Sections 4 and 5 of this Paper.

The Pilot demonstrated the need for sophisticated digital and data methods to deliver Steps 1, 2 and 3 of the PIC method.

The tool has enabled detailed analysis of cost-effectiveness and funding source analysis as shown on pages 38 to 41.

It will have a critical role in the monitoring and review step of the PIC method, and in keeping the PIC dynamic and up-to-date.

Given the PIC is designed as an ongoing decision-making support tool for high transformation areas, it is critical that it is not applied with a ‘set and forget’ mindset.



#### Tell us what you think

- How well do you feel you understand the model?
- How could we improve the model? For example, is there anything we missed?
- How could this model be used to help other places?
- How can community and industry better participate?

See Section 7 on how you can provide your feedback to the Commission.

### 3.4 Applying the PIC model to GPOP

#### Step 1: Scenario development and land use forecasting

Four scenarios were developed to enable us to compare alternative futures for GPOP. The scenarios offer varying levels of accessibility and amenity to support GPOP's growth. This modelling aligns with the visionary directions of the Commission's *Greater Sydney Region Plan*, Infrastructure NSW's *State Infrastructure Strategy 2018–2038: Building Momentum* and Transport for NSW's *Future Transport Strategy 2056*.

The scenarios recognise that to achieve GPOP's economic potential it will require investment in new transport connections. This must be complemented by investment in infrastructure such as green open space, schools, community health centres and clean waterways to create more liveable and sustainable places.

The following four scenarios were developed in the PIC Pilot (see Figure 13):

- **Scenario 1 – 'Existing':** *GPOP continues to evolve on a more suburban trajectory beyond Parramatta CBD and Sydney Olympic Park* in line with current land use plans and light rail from Westmead to Parramatta-CBD and Carlingford.
- **Scenario 2 – 'Incremental':** *GPOP transitions to better connectivity and places*, with some land use changes around the new light rail line from Westmead to Parramatta CBD and Carlingford.
- **Scenario 3 – 'Transformative':** *GPOP undergoes a step change in connectivity and becomes a 30-minute city.* This will require some land use change around the new metro stations, a new light rail line through Ermington and Melrose Park across the Parramatta River to Wentworth Point, Sydney Olympic Park and Carter Street, and relief on the T1 rail line from Granville to Strathfield.
- **Scenario 4 – 'Visionary':** *The Central City experiences a step change in great places and becomes a 30-minute city.* This scenario largely follows Scenario 3 but with the addition of new metro lines connecting Greater Parramatta to the north-east, north-west, south and west, as well as a globally significant Westmead Innovation District, new social and cultural experiences at Sydney Olympic Park, a completed 'Green Grid' and sustainable water sources for irrigation.

Population, dwelling and job forecasts over 10, 20 and 40 years were developed under each scenario, recognising that future levels of growth would likely be responsive to varying levels of public and private investment in GPOP. Figure 11 shows the range of dwelling and job forecasts for each scenario over 20 years.

The number of additional dwellings in GPOP ranges from 41,000 in 2036 under the 'Existing' Scenario 1 to 95,000 under the 'Visionary' Scenario 4. There were over 70,000 dwellings in GPOP in 2016, so these forecasts represent an increase of between 59 and 136 per cent over 20 years.

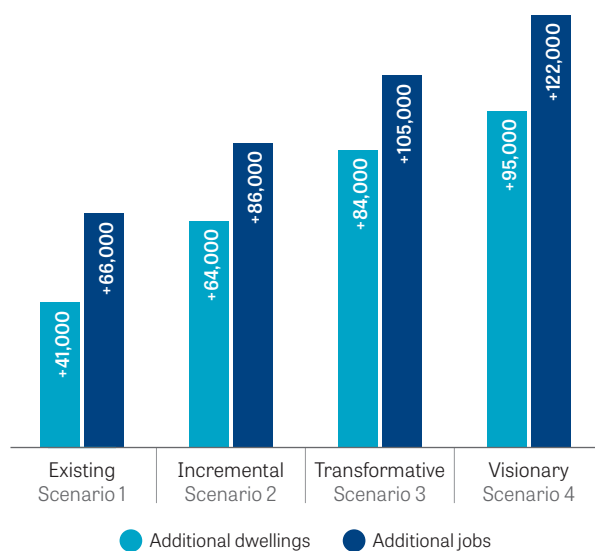
For jobs, the forecast ranged from an additional 66,000 in GPOP under 'Existing' Scenario 1 to 122,000 under the 'Visionary' Scenario 4. This compares with around 150,000 jobs in the area in 2016, representing an increase of between 44 and 82 per cent over 20 years.

Figure 12 shows the proportion of the Central City housing target that could be met by GPOP under each scenario the target if unchanged; and also the proportion of jobs needed in Greater Sydney that could be accommodated in GPOP.

The Central City District has Greater Sydney's highest target for new homes – 207,500 by 2036, a 65 per cent increase from today. Much of this growth is expected to happen in GPOP. The forecast growth tested by the PIC Pilot suggest that between 20 and 46 per cent of the Central City housing target could be achieved in GPOP, should the target remain unchanged.

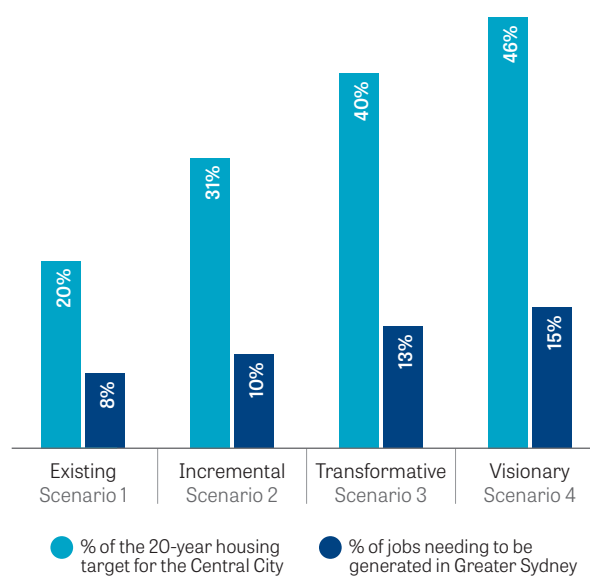
The Region Plan anticipated that Greater Sydney would need to generate 817,000 new jobs over the next 20 years. The forecast job growth for GPOP tested by the PIC Pilot represent between eight and 15 per cent of jobs required across Greater Sydney, although GPOP represents only three per cent of the urban area.

**Figure 11:** New dwellings and jobs for the scenarios – 20 year forecast

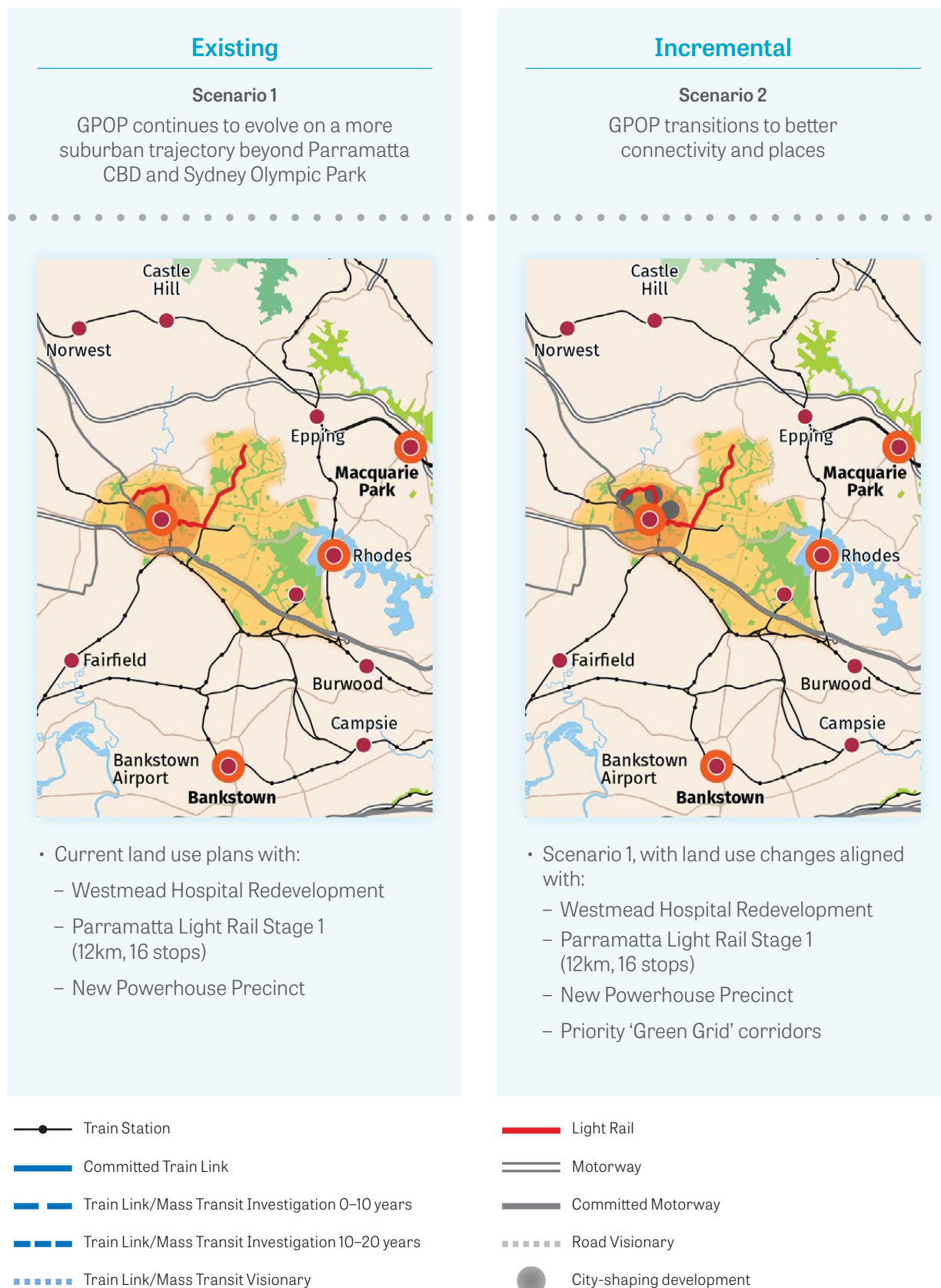


*These forecasts are additional to the 70,000 dwellings and 150,000 jobs in GPOP in 2016*

**Figure 12:** Proportion of housing target for the Central City and jobs needed for Greater Sydney – 20 years



**Figure 13:** Future 40-year scenarios explored in the PIC Pilot for GPOP

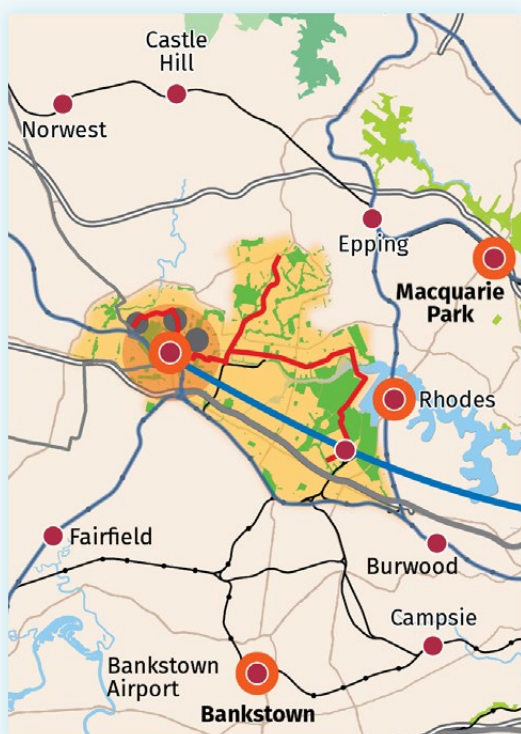




## Transformative

### Scenario 3

Step change in connectivity and GPOP becomes a 30-minute city

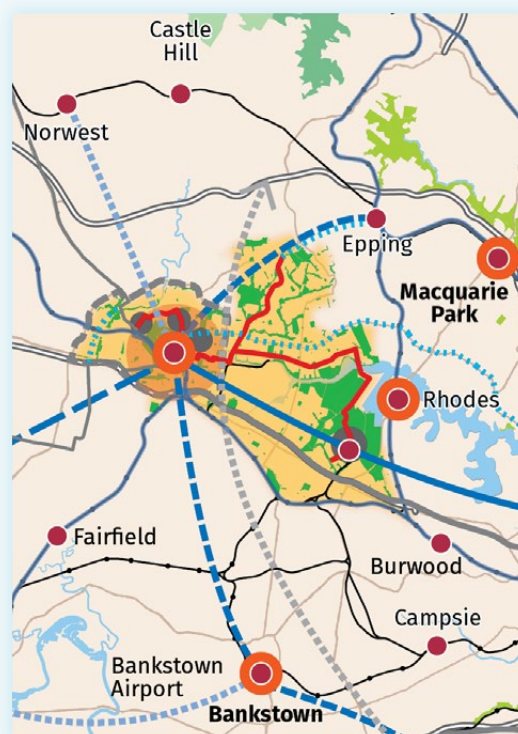


- Scenario 2, with land use changes aligned with:
  - Parramatta Light Rail Stage 2 (10km, 10-12 stops)
  - Sydney Metro West (4 to 5 new stations)
  - Improvements on the T1 Western Line
  - All priority 'Green Grid' corridors and associated improvements, including irrigation from sustainable water sources
  - New resource recovery facility and recycled water network targeted to Parramatta CBD and Sydney Olympic Park

## Visionary

### Scenario 4

Step change in great places and the Central City becomes a 30-minute city



- Scenario 3, with land use changes aligned with:
  - Visionary transit to connect Greater Parramatta to the north-east, north-west, south and west
  - Globally significant Westmead Innovation District
  - New university presence in North Parramatta and Westmead
  - New university presence at Sydney Olympic Park
  - New cultural investment at Parramatta and Sydney Olympic Park
  - Full realisation of the 'Green Grid', including irrigation from sustainable water sources
  - New resource recovery facility and recycled water network across GPOP

### Precincts used in the analysis

The 6,000 hectare Pilot area was organised into 26 precincts, aligned to the four quadrants in the Central City District Plan, as shown in Figure 14.

Precinct boundaries were defined by drawing recent planning investigations, existing suburbs and physical borders such as waterways and major transport corridors. Technical needs of the PIC resulted in some precinct boundaries not following common usage in current planning documents.

The precincts broadly align to the 12 precincts in the then Department of Planning and Environment's Greater

Parramatta Growth Area Interim Land Use and Infrastructure Implementation Plan (ILUIIP) released in July 2017.

The ILUIIP was prepared before the Central City District Plan and adopted the smaller area from the GPOP vision ([www.planning.nsw.gov.au/Plans-for-your-area/Priority-Growth-Areas-and-Precincts/Greater-Parramatta-Growth-Area](http://www.planning.nsw.gov.au/Plans-for-your-area/Priority-Growth-Areas-and-Precincts/Greater-Parramatta-Growth-Area)).

Dwelling and job forecasts for each of the four scenarios were also prepared for each of the 26 precincts, enabling subsequent analysis at a place-based level (see page 41).

Figure 14: GPOP Pilot area and 26 precincts

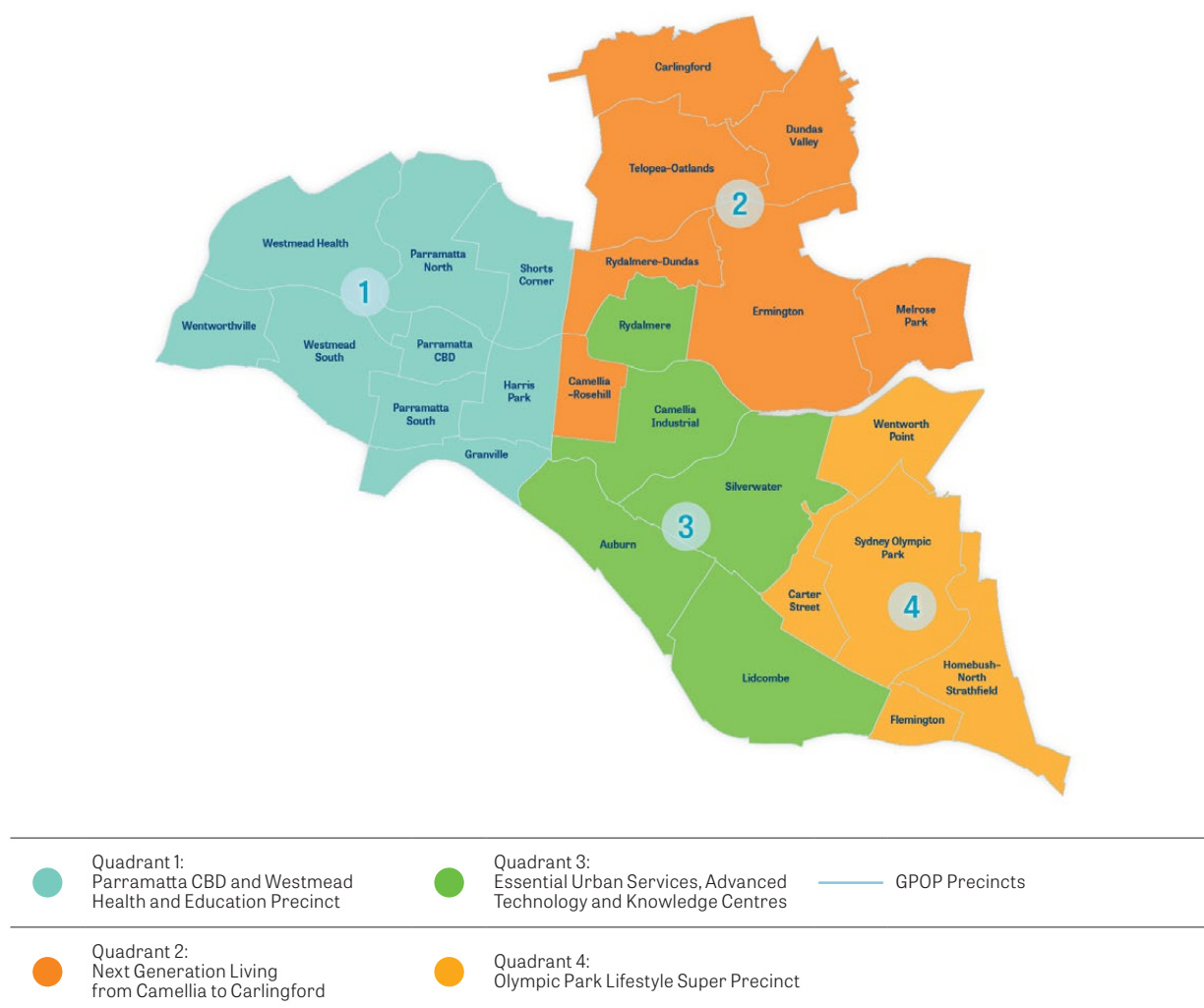








Figure 15: Types of infrastructure needs strategically costed in the PIC



Note: Through the subsequent draft Strategic Business Case, additional service and infrastructure needs were identified and considered in the Justice category, including courts and police stations. Further, in the Education category TAFE and early childhood education services will be included in PIC updates.

### Step 2: Cross-sector infrastructure needs, costings and funding source

State agencies and utility providers undertook extensive analysis of infrastructure needs and costings for the four scenarios and 26 precincts over 10, 20 and 40 year horizons. Local councils contributed to the analysis of green infrastructure requirements.

This analysis was integrated by the Commission using the Co.Lens tool. The full range of infrastructure types assessed by the PIC Pilot is shown in Figure 15.

Two of the key concepts related to Step 2 are explained on pages 37 and 39, alongside the major findings. They relate to the apportionment of capital infrastructure costs to a growing place, and the funding sources available to pay for infrastructure, including contributions from developers.



### Step 3: Economic and cost-effectiveness analysis of scenarios and precincts

To select a preferred scenario for the future of GPOP and identifying the high-level sequencing of all 26 precincts, we undertook an economic and cost-effectiveness analysis.

The economic analysis was based on the criteria of liveability, productivity and sustainability. This enabled the place-based benefits of each scenario to be measured in monetary terms relative to costs over a 40 year horizon. See the key concept on page 35.

Further, cost-effectiveness analysis determined the cost of accommodating a new resident or job in each of the 26 precincts.

The results of this analysis was used to guide the proposed high-level sequencing of precincts in GPOP for more orderly development, as presented in the key proposed actions on pages 44 to 48.

### Step 4: Infrastructure priorities for the next 10 years

The preferred scenario and high-level sequencing of precincts became core inputs to the draft Strategic Business Case, which focused on the 10 years of the PIC's planning horizon.

The Strategic Business Case optimises service and infrastructure needs and prioritises them in line with the high-level sequencing plan for GPOP within NSW Government's affordability limits.

The proposed infrastructure priorities are presented as key proposed actions on pages 49 to 53.

Before making recommendations to the NSW Government and proceeding to Step 5 (joint implementation of the PIC and Strategic Business Case through land use planning and budget processes), and Step 6 (monitoring post implementation), we are seeking feedback on the work completed so far.



## 4 Findings for GPOP

Piloting the new model demonstrated that fundamental insights about complex places such as GPOP can be developed by bringing together specialist knowledge and skills from a wide range of partners.

While a lead agency is critical to the PIC model, it is only by working collaboratively that we can better understand the choices the community faces about the future of a place. This understanding can inform better decision-making by the NSW Government and lead to improved outcomes for everyone.

This Paper shares five findings from the Pilot, supported by quantitative analysis where possible. Some inputs to the method and modelling are commercially sensitive and need to remain confidential to the partners involved, and the NSW Government.

### 4.1 Delivering place-based benefits

**Finding 1:** The ‘Transformative’ Scenario 3 and ‘Visionary’ Scenario 4 for GPOP delivered the greatest liveability, productivity and sustainability benefits, and these outweighed the costs. These scenarios delivered around double the net benefits of the ‘Incremental’ Scenario 2.

When evaluating the scenarios, the PIC considered what would be a ‘good’ scenario. Put simply, the answer was a scenario in which GPOP was:

- a place where people want to live and more people can live (*liveability*)
- a place where businesses want to be and which can attract new businesses (*productivity*)
- a place with greater positive environmental outcomes, resource efficiency, resilience and smaller negative outcomes (*sustainability*)
- a place with lower costs to government.

The physical changes within these categories were measured and given a monetary value to compare against the infrastructure and service costs. This process is outlined as a key concept on page 35.

Across the four scenarios considered by the PIC, the greatest benefits related to liveability.

Liveability value was primarily created through:

- better access to jobs for people in GPOP due to the significant transport improvements, as well as a greater number of jobs in GPOP
- better access to Parramatta CBD and important services such as universities, justice services and specialist medical and legal providers
- an increase in open space for a growing population.

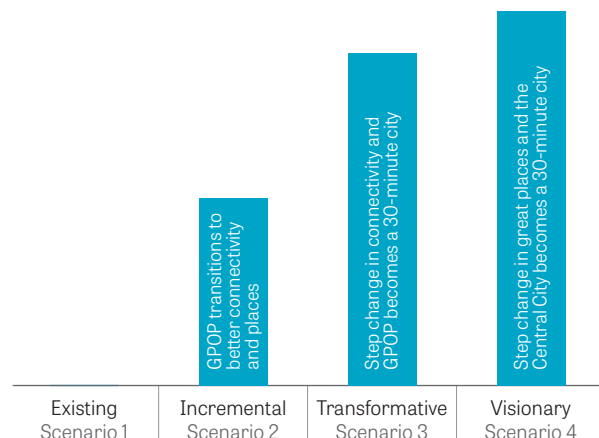
The PIC Pilot also found that growing industry and jobs within GPOP was essential to improving liveability, as people value and are willing to pay to live close to where they can work.

It is critical that infrastructure investment by the NSW Government focuses not just on housing growth but on attracting industry and generating more jobs.

This is essential to realising the vision for the GPOP Economic Corridor set out in the Region Plan, and to rebalance the distribution of opportunities and jobs across Greater Sydney.

The most significant sustainability benefits were from more tree canopy, which improves air quality and provides urban cooling and local amenity. The benefit of more tree canopy was reflected in higher property values.

**Figure 16:** The net benefits for GPOP of the Scenarios 2, 3 and 4 relative to the Existing Scenario



Together, the benefits of improved liveability and sustainability stimulate greater productivity benefits as more people and businesses choose to move to GPOP.

As shown in Figure 16, the ‘Transformative’ Scenario 3 and ‘Visionary’ Scenario 4 were found to deliver the greatest benefits over 40 years. The benefits after costs (i.e. the net benefits) for GPOP under these scenarios was twice that of the ‘Incremental’ Scenario 2.

The ‘Transformative’ Scenario 3 is in line with the NSW Government’s already-committed infrastructure agenda for GPOP over the next decade, especially Sydney Metro West and Parramatta Light Rail Stage 1. This scenario is used to

report the findings of the PIC Pilot on pages 36 to 41 of this Paper and the proposed actions on pages 44 to 53.

While the PIC Pilot demonstrated the net benefits of the ‘Transformative’ Scenario 3, it should be noted that the Government has yet to decide on the affordability of the total capital cost of infrastructure estimated to be around \$40 to \$50 billion over 20 years.

This decision would need to be tested over time against other priorities across Greater Sydney, and via a process of continuous engagement with the community and stakeholders.

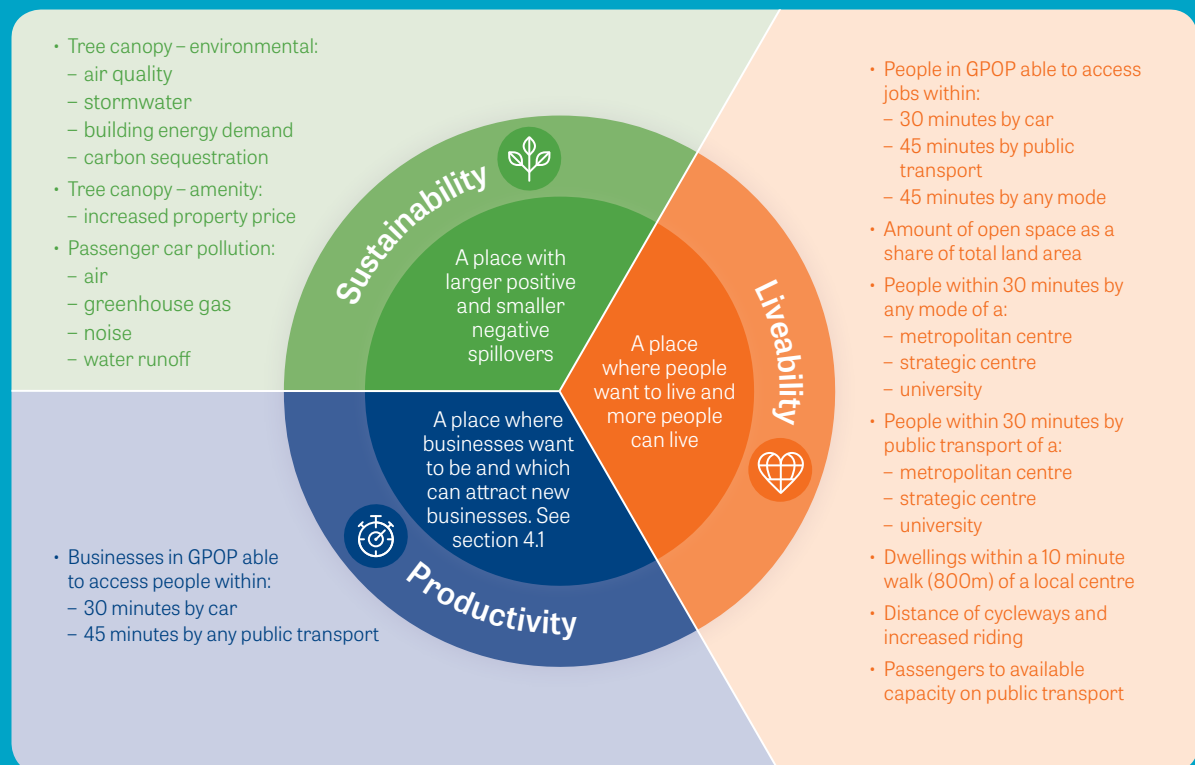
## What place-based benefits are measured?

The physical changes measured and given a monetary value in the economic evaluation are shown in Figure 17.

This method allows the ‘net benefits’ – the benefits of a scenario less the costs – to be measured relative to the status quo.

Measuring physical benefits and giving them a dollar value is a key step towards identifying a preferred scenario.

**Figure 17:** Liveability, productivity and sustainability measures given a monetary value to identify a preferred scenario



While the total estimated cost is high it includes funding already committed by the NSW Government for infrastructure projects such as:

- \$6.4 billion committed initially to Sydney Metro West
- \$2.4 billion for Parramatta Light Rail Stage 1
- \$1 billion for the Westmead Hospital Redevelopment
- \$619 million for the Children's Hospital at Westmead Redevelopment
- \$645 million towards the new Powerhouse Precinct
- \$225 million for redevelopment at Arthur Phillip High School and Parramatta Primary School

## 4.2 Taking a holistic approach to places

**Finding 2:** Great places need a wide range of social, economic and environmental infrastructure such as trees, parks, schools and health facilities. Public transport and roads accounted for 60 per cent of infrastructure costs in GPOP but these are key to the Central City becoming a 30-minute city.

The types of infrastructure assessed in the PIC Pilot are shown in Figure 15 (page 32). The infrastructure costs are for capital expenditure only. They include expenses related to buying land and buildings; construction; and equipment to deliver services.

The ongoing operational and maintenance costs of delivering services such as the cost of teachers' and nurses' salaries; the cost of running a fleet of buses; maintaining water pipes; and public open spaces were not included in the Pilot. Considering them is a question for further development of the PIC model.

A breakdown of the estimated capital infrastructure costs over 20 years apportioned to GPOP for the 'Transformative' Scenario 3, is shown in Figure 19. These costs were estimated at between \$20 and \$30 billion, with:

- public transport and roads infrastructure accounting for the majority of costs (60 per cent). This reflects the complexity of the system used to move people and freight as well as the range of investment required, from metro rail to pedestrian bridges
- green infrastructure the second most costly, at 16 per cent, reflecting the cost of buying land and the amount of land that needs to be acquired
- health and education costs comparatively moderate at 8.9 and 7.2 per cent respectively, due to the ability to leverage existing capacity and sites already owned by the NSW Government

- water and energy utility costs are relatively modest at a combined 6 per cent, with established networks and some latent capacity
- cultural infrastructure costs being comparatively low because while new city-scale facilities were strategically costed, only a small portion was apportioned to GPOP.

The concept of how to apportion costs in place-based planning is central to understanding this analysis and is explained on page 37. The estimated \$20 to \$30 billion of costs apportioned to GPOP is a subset of the total estimated \$40 to \$50 billion reported in Finding 1.

With respect to affordable housing, the PIC Pilot found that most precincts in GPOP have potential to support the implementation of the Region Plan's Objective 11: 'Housing is more diverse and affordable'.

The Region Plan recommends Affordable Rental Housing Targets as a mechanism to deliver more affordable housing for very low to low-income households and notes that within Greater Sydney targets of generally between five and 10 per cent of new residential floor space are viable.

It was found to be feasible for all precincts with residential uses to achieve some level of affordable rental housing, in addition to local, state and regional infrastructure. This will ensure that communities do not forgo local amenities and services.

The PIC also found significant opportunities in many precincts to renew aging social housing and increase supply, especially where connectivity had been improved as part of creating high-quality mixed-use and mixed-tenure precincts.

When considering the renewal and growth of a place, the NSW Government needs to understand holistically the wider costs involved in delivering all types of services and infrastructure, and partnering with the private and non-profit sectors. It will need to explore innovative solutions, such as the co-location and sharing of infrastructure, to deliver communities the services they need.



## How are costs apportioned to a place?

Place-based planning requires a consistent method for apportioning the capital costs of infrastructure and utilities to an area. Infrastructure and utilities often serve varying catchments and users outside an area being planned. Therefore, costs need to be estimated for the specific area being planned.

When apportioning costs for a growing area, it is important to identify who will benefit – the existing community or those who will live and work there in the future.

In the PIC Pilot we adopted the following approach:

- **Total costs:** capital investment required to support GPOP as well as providing benefits outside GPOP
- **Costs beyond GPOP:** capital investment providing benefits outside GPOP only
- **GPOP costs:** capital investment providing benefits inside GPOP only:
  - **Existing** – internal GPOP capital costs apportioned to beneficiaries already in the area
  - **Future** – internal GPOP capital costs apportioned to future beneficiaries generated by new development in the area.

This approach is fundamental to understanding the findings discussed on pages 38 to 41. We applied it to all types of infrastructure considered in the Pilot, ranging from the city-shaping infrastructure like Westmead Hospital and the Powerhouse Precinct to supporting infrastructure such as schools and fire stations.

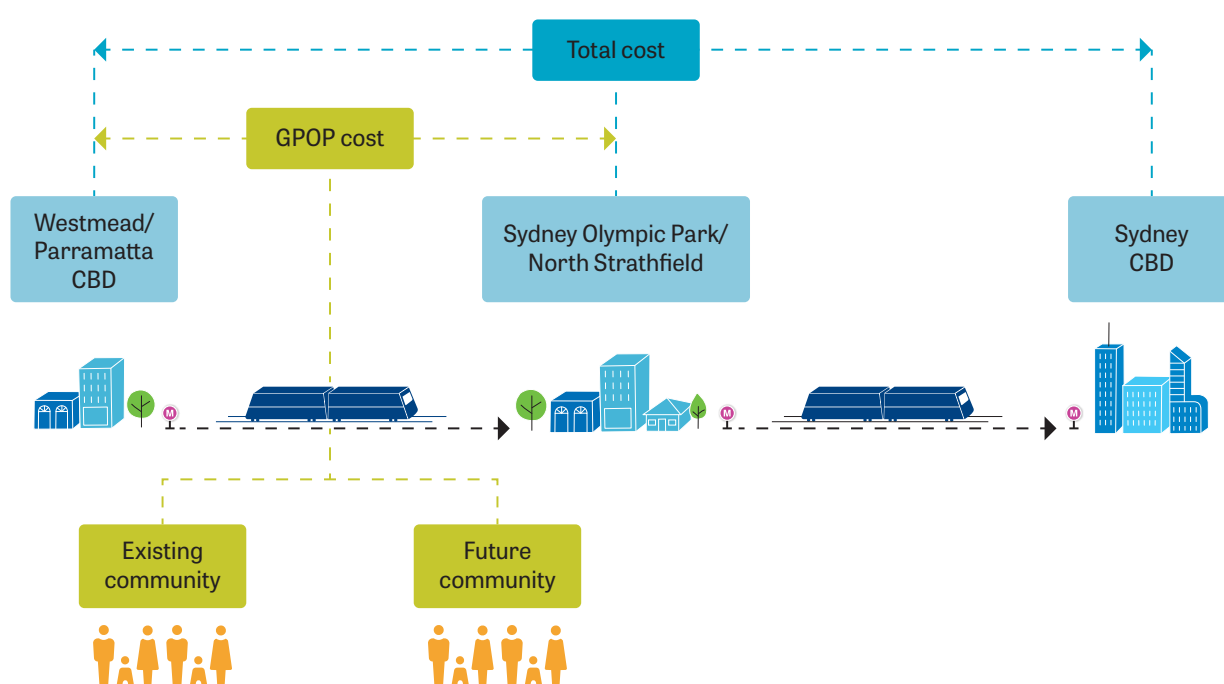
A practical example is shown in Figure 18 using the Sydney Metro West between Westmead and Sydney CBD.

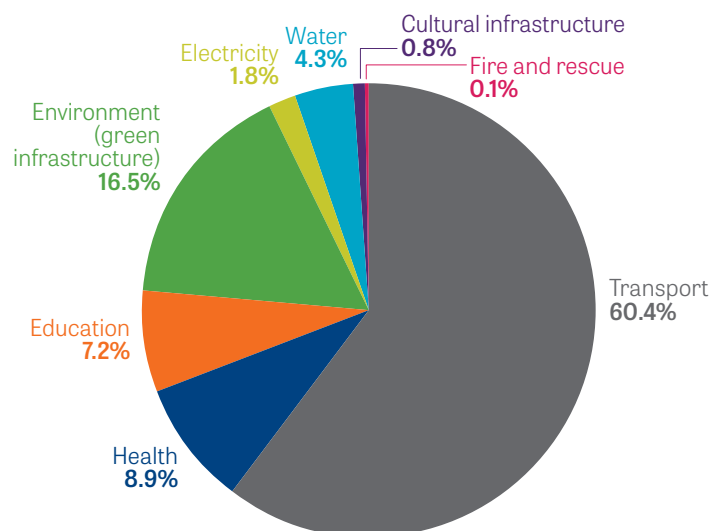
The **total cost** of the project covers the full length of the line between Westmead and the Sydney CBD, but the **GPOP costs** are confined to the section between Westmead and North Strathfield.

Using forecast growth figures, these costs are then apportioned to the **existing and future community**.

When calculating the cost of accommodating a new resident or job in GPOP's 26 precincts as explained in Finding 4 and shown in Figure 21, only the GPOP costs for the future community were used.

**Figure 18:** An example of the apportionment of the capital infrastructure costs of Sydney Metro West



**Figure 19:** Proportion of capital costs by sector apportioned to GPOP – ‘Transformative’ Scenario 3, 20 years

### 4.3 Better decision-making with early insights

**Finding 3:** The scale of necessary infrastructure requires a clear understanding of costs, and of who should be contributing to them, in order to guide better decisions and achieve the most effective use of resources.

The PIC Pilot considered the fundamental question of who should pay for and/or contribute to the infrastructure identified under the scenarios.

There are already multiple funding sources for new infrastructure in NSW. Five funding categories were identified in the PIC Pilot. They are:

- NSW Government consolidated revenue
- developer contributions – state and regional
- direct customer charges
- ‘other’ (mostly from local sources)
- combination of NSW Government and developer contributions

These are explained as a key concept on page 39.

For each of the infrastructure proposals costed, a funding source or combination of sources was identified in the PIC Pilot.

The PIC Pilot found that of the estimated \$20 to \$30 billion capital infrastructure costs apportioned to GPOP, 50 per cent would need to be funded by the NSW Government and 11 per cent through developer contributions where there was a direct relationship with the new development.

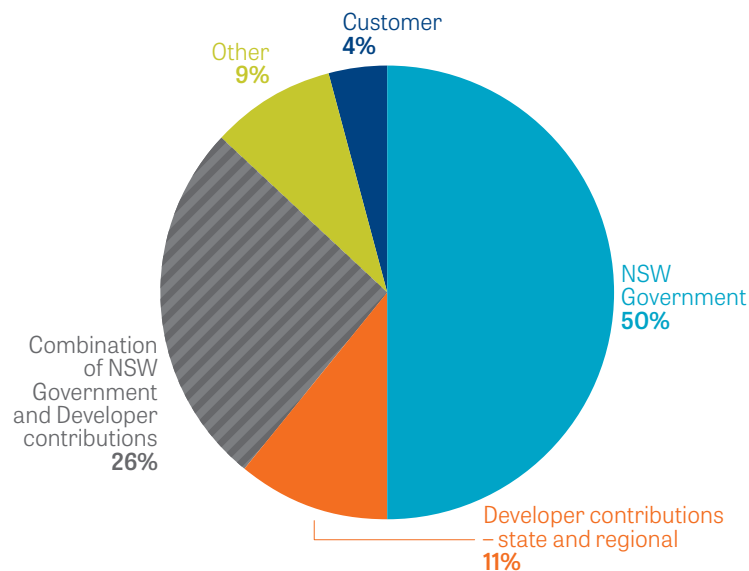
Around 26 per cent of infrastructure costs would need to be paid for with a combination of NSW Government funding and developer contributions.

Examples of infrastructure in this category include:

- upgrading an already congested state road or intersection that is also necessary to enable and support local growth
- upgrading a school that is at capacity and no longer meets service standards, and whose capacity is increased to support growth
- redevelopment of a fire station that is no longer in an appropriate location but can be relocated and expanded to support growth
- Parramatta Light Rail, in line with the NSW Government’s intent to part-fund the project with developer contributions.

The Region Plan recognises that new development needs to support the funding of infrastructure at an appropriate level without being unreasonably burdened to the extent that it become unviable.

**Figure 20:** Identified funding source for capital costs apportioned to GPOP – ‘Transformative’ Scenario 3, 20 years



## Who pays for infrastructure?

Delivering the right infrastructure at the right time will require coordinated funding from a range of sources.

Funding sources identified and used in the PIC Pilot were:

- **NSW Government:** NSW consolidated revenue or any special-purpose funds or grant programs for state and regional infrastructure to support existing and future community needs, such as metro rail, light rail, motorways, schools, hospitals, arts and cultural facilities.
- **Developer contributions – state and regional:** Development levies to fund state and regional infrastructure required under planning legislation to support developments that establish and service new communities. This infrastructure includes roads, schools, health centres, biodiversity conservation, regional open space and police stations.
- **Direct customer charges:** Where an existing customer base is the primary funding source. This applies to utilities such as water, wastewater and electricity.
- **Other:** All other funding sources, including local infrastructure contributions, local government rates, special rates and direct developer provision. In the PIC Pilot, these sources were identified primarily for infrastructure associated with open space, tree canopy, green links, walking and cycling, and public libraries.
- **Combination of NSW Government and Developer contributions:** Often needed where there are multiple drivers for investing in an infrastructure project, and multiple beneficiaries. In urban renewal areas this typically includes infrastructure that is needed to improve an existing service and to expand it to cater for growth. Several practical examples are explained on page 38.



Key  
Concept

Part of this involves a better understanding of the cumulative impacts of local and state contributions and the capacity of developers to make contributions across GPOP. The PIC Pilot has focused mostly on state and regional infrastructure, with limited inclusion of local infrastructure.

To this end, nine per cent of costs in the PIC Pilot were identified as having a funding source in the 'Other' category, mostly for local infrastructure often associated with regional and state infrastructure.

This included some open space, new tree canopy, green links, walking and cycling infrastructure and public libraries.

Only four per cent of costs were found to be funded through direct customer charges, including utilities such as water, wastewater and electricity.

Given the PIC Pilot found that at least 50 per cent (and up to 76 per cent) of costs would have to be funded by the NSW Government, it needs to understand the full extent of its expected contribution early and before land-use decisions are made.

The government will also need to explore new ways to partner with the private and not-for-profit sectors to deliver services and infrastructure.

#### A greater role for the private and not-for-profit sectors

One advantage of a PIC is it can open up more opportunities for the private and not-for-profit sectors to deliver high-quality services and infrastructure, and suggest ways of doing it more efficiently.

New infrastructure is almost always delivered by the private sector. Increasingly, services are provided by the private and not-for-profit sectors. This is done through well-established government procurement models and under existing regulation, such as taxi services or independent schools.

The PIC process will give private and not-for-profit providers better and more predictable information to plan and deliver services. To realise the benefits of a growing city, and deliver great outcomes for people, it is essential that the NSW Government continues and strengthens its partnership with the private and not-for-profit sectors.

## 4.4 Understanding the varying costs for precincts

**Finding 4:** The cost of delivering new homes and jobs varies across the 26 precincts in GPOP, owing to differing local conditions and levels of existing infrastructure.

The cost of accommodating a new resident or job varied from under \$50,000 in some precincts, to more than \$100,000 in others.

Costs vary because some precincts require more infrastructure investment to deliver the liveability, productivity and sustainability outcomes needed to support successful places and communities (see Figure 21). Overall, the variation in costs is an important consideration in developing a high-level sequencing plan for precincts through the PIC method.

There are varying levels of existing infrastructure across the precincts that can be leveraged to deliver new services more cost-effectively.

For example, some existing public schools have spare capacity in buildings due to demographic changes, and some are on sites large enough to accommodate new buildings.

These schools can accommodate additional students at a lower cost than in precincts where land would have to be bought for a new school site.

Similarly, some precincts are set to benefit from new or planned road or rail network investment that increases system capacity. These locations would generally be more cost-effective than a location that might be constrained and require unplanned major upgrades to be addressed before any growth could occur.

At one end of the spectrum, the high-growth residential and employment precincts in GPOP, typically in areas aligned with committed infrastructure, were found to be more cost-effective to service with Parramatta CBD and the Westmead Health precincts being standouts.

At the other end of the spectrum, the Camellia-Rosehill, Harris Park and Dundas Valley precincts were found to be less cost-effective to service, although for different reasons.

The high-growth Camellia-Rosehill precinct has very high upfront costs. The precinct is constrained with poor road access, contamination, a wastewater pumping station requiring relocation and no existing school sites.



Harris Park and Dundas Valley are relatively low-growth precincts, owing mostly to the local character heritage values in Harris Park, and the more suburban Dundas Valley's rolling topography.

In these cases, the costs apportioned to growing jobs and housing in these precincts would need to be spread across a fewer number of new residents or workers, making them less cost-effective.

#### 4.5 Moving to a more orderly sequenced approach

**Finding 5:** If all recent and proposed land use changes in GPOP were to happen in the near term, it would not be possible to fund all of the necessary infrastructure at the same time. Growth must be sequenced to meet market demand, but it must not outpace the NSW Government's capacity to fund services and infrastructure.

The PIC Pilot found dynamic places like GPOP were constantly changing to reflect market demands, developer activity, evolving community and business needs, and new planning directions.

There are several different pathways in NSW for the rezoning of land to facilitate growth. They include comprehensive Local Environment Plans (LEP), State-led precinct planning, as well as council and developer-led planning proposals to rezone areas and sites.

While the system has the advantage of being flexible, it also has the disadvantage of potentially ad-hoc rezoning decisions being made without an understanding of the cumulative impacts on state, regional and local infrastructure.

Figure 22 illustrates major land use planning activities that have either recently been completed or are currently under consideration in GPOP. These proposals span the whole GPOP area:

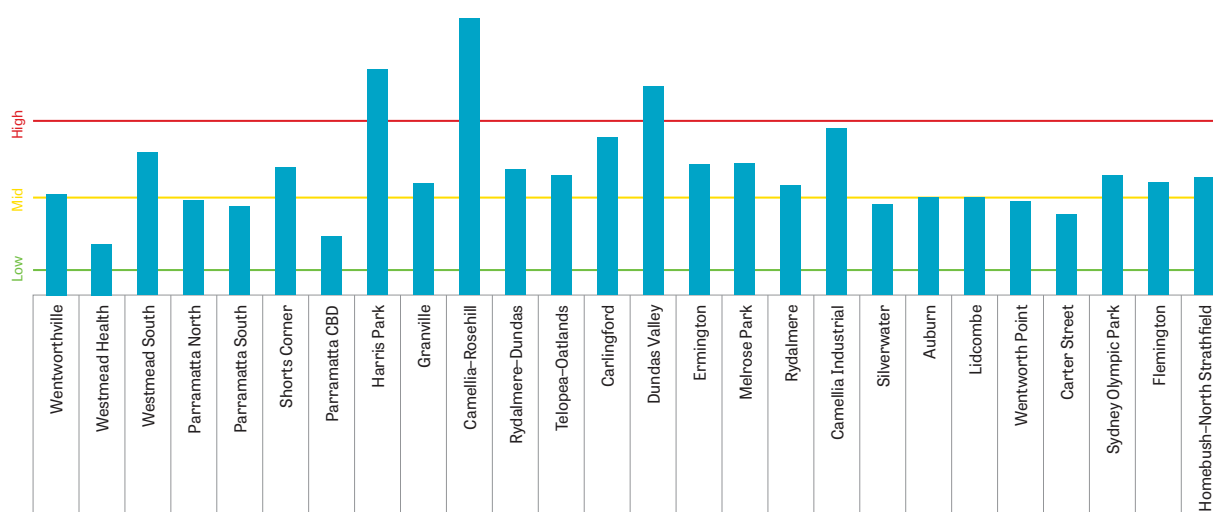
##### *Major recent rezonings*

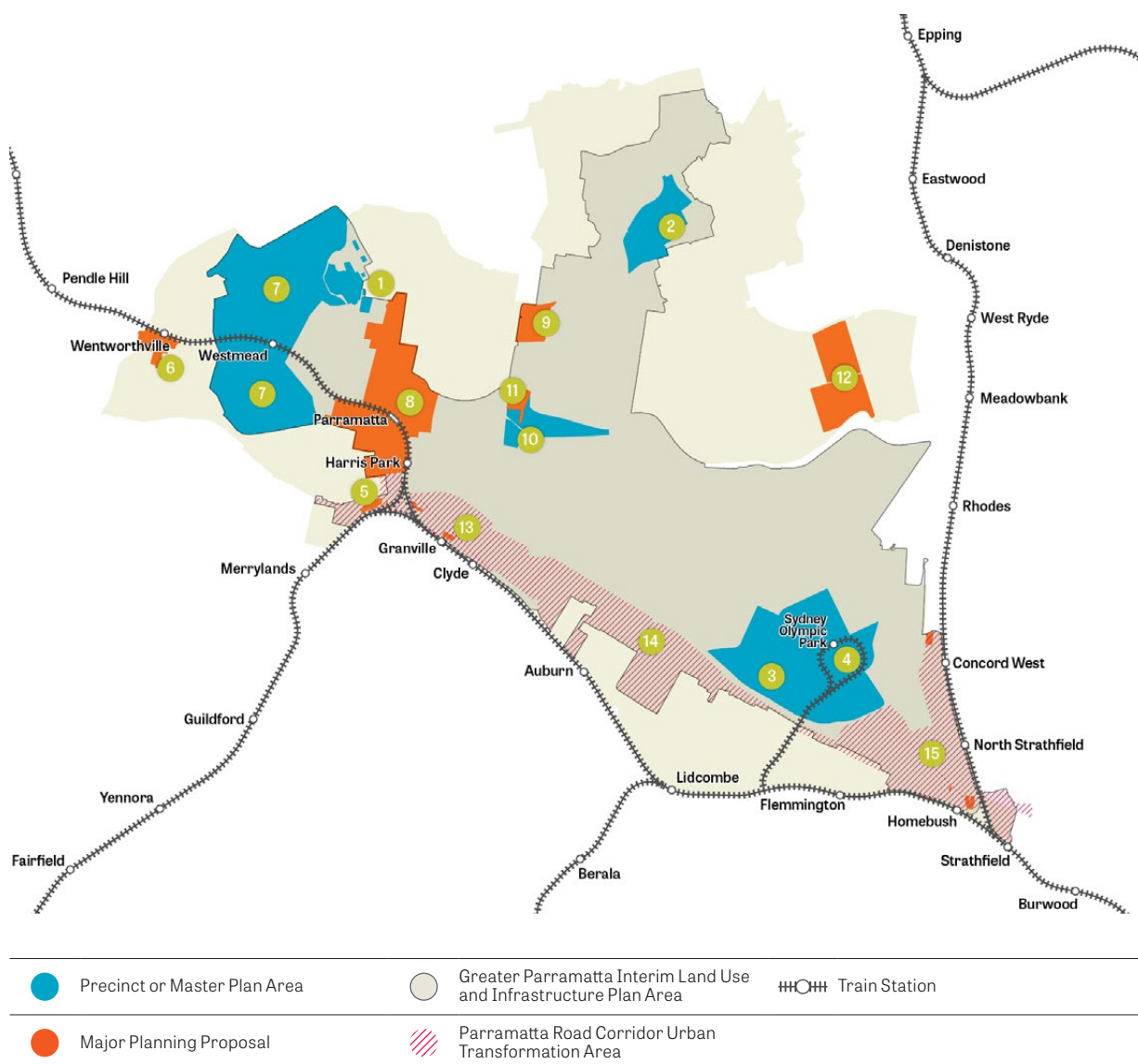
- North Parramatta – State Significant Site (2015) – 3,000 dwellings, 1,000 jobs
- Carter Street Precinct – State-led Planned Precinct (2015, revised 2018) – 5,500 dwellings, 5,500 jobs
- Telopea – Joint State-Local Masterplan and State-Led Rezoning (2018) – up to 4,500 dwellings
- Sydney Olympic Park – State-led Masterplan and State Environmental Planning Policy (State Significant Sites) Amendment (2018) – 10,700 dwellings, up to 34,000 jobs.

##### *Major proposals under consideration or investigation (not rezoned)*

- Wentworthville Town Centre – Council-led Planning Proposal – 2,500 dwellings, 1,150 jobs.
- Westmead Master Plan – Westmead Alliance-led Proposal
- 1 Crescent Street, Holroyd – Proponent-led Planning Proposal 1,200 dwelling

**Figure 21:** Cost of accommodating a new resident or job in GPOP's 26 precincts – 'Transformative' Scenario 3, 20 years



**Figure 22:** Planning activities, including rezoning, either recently completed or currently under consideration in GPOP

Recently rezoned	Under consideration or investigation (not rezoned)	
1 North Parramatta State Significant Site	5 Crescent Street Planning Proposal	11 Camellia Planning Proposal
2 Telopea Communities Plus	6 Wentworthville Town Centre Planning Proposal	12 Melrose Park Planning Proposal
3 Carter Street Precinct	7 Westmead Precinct	13 Granville Precinct
4 Sydney Olympic Park Master Plan	8 Parramatta CBD Planning Proposal	14 Auburn Precinct
	9 Rydalmere Planning Proposal	15 Homebush/North Strathfield Precinct
	10 Camellia Town Centre Master Plan	

- Parramatta CBD – Council-led Planning Proposal – 7,500 dwellings, 27,000 jobs.
- Camellia Town Centre – Joint State-Local Draft Masterplan (draft exhibited 2018) – up to 10,000 dwellings, up to 5,000 jobs.
- Within the Camellia Town Centre Master Plan area, 181 James Ruse Drive, Camellia – Proponent-led Planning Proposal, 3,100 new dwellings and 745 jobs
- 266 Victoria Road, Rydalmere – State-land Planning Proposal 2,500 dwellings
- Melrose Park North – Proponent-led Planning Proposal – 5,050 dwellings, 1,700 jobs
- Melrose Park Southern Precinct Structure Plan – Joint Council and Proponent
- Parramatta Road Urban Transformation Strategy s.117 Direction – three precincts in GPOP – Granville Precinct – 5,400 dwellings, 7,200 jobs; Auburn Precinct 1,000 dwellings, 12,800 jobs; and Homebush Precinct 9,500 dwellings, 12,900 jobs.

If all of these major proposals were to occur in the near term, along with the many smaller site-specific Planning Proposals, the result would be ad-hoc development. Consequently, delivering the required services and infrastructure at the time they were needed would be a challenge for the NSW Government.

Also, the extent of land use change under consideration is not necessarily needed all at once and risks creating an oversupply of development in the market. It also risks outpacing the NSW Government capability to fund infrastructure and services.

Initial attention should be focused on the areas of GPOP that already have infrastructure committed to them and are more cost-effective to grow. These will deliver the greatest benefit to the community relative to the cost.



### Tell us what you think

- What findings from GPOP do you agree with?
- Do you think there is anything else that could be considered?

See Section 7 on how you can provide your feedback to the Commission.





## 5 Proposed actions for GPOP

The key findings of the PIC Pilot confirm that the most effective way of aligning growth with the provision of infrastructure is through a high-level sequencing plan leading to more orderly development. This allows for:

- places to be well-planned, with a coordinated approach to funding and delivering services and infrastructure aimed at enhancing liveability, productivity and sustainability for local communities
- more targeted investment in services and infrastructure to maximise utilisation by communities while avoiding ad-hoc demands that are unlikely to be met in a timely way
- market demand to be met in a number of strategically selected precincts rather than trying to facilitate growth everywhere.

This is a key step forward in implementing the first of the Region Plan's ten directions – 'A City Supported by Infrastructure'. It is consistent with the logic outlined in Chapter 3 of the Plan: 'Infrastructure and Collaboration'.

While the PIC proposes the orderly sequencing of land use changes, it is understood that GPOP is a dynamic area with many places where growth can occur under existing controls or with some adjustments.

### 5.1 Proposed sequencing plan

The PIC Pilot proposes the high-level sequencing of the 26 precincts in GPOP as follows.

**Proposed action 1:** Sequencing Plan – Phase 1: Focus on precincts where growth can be aligned with already committed infrastructure to support job creation and new development.

**Proposed action 2:** Sequencing Plan – Phase 2: Focus on aligning growth with future city-shaping infrastructure.

**Proposed action 3:** Support existing uses in the remaining precincts across GPOP and review their potential over time.

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#### Proposed action 1: Sequencing Plan – Phase 1: Focus precincts to align growth with already committed infrastructure, supporting job creation and new development.

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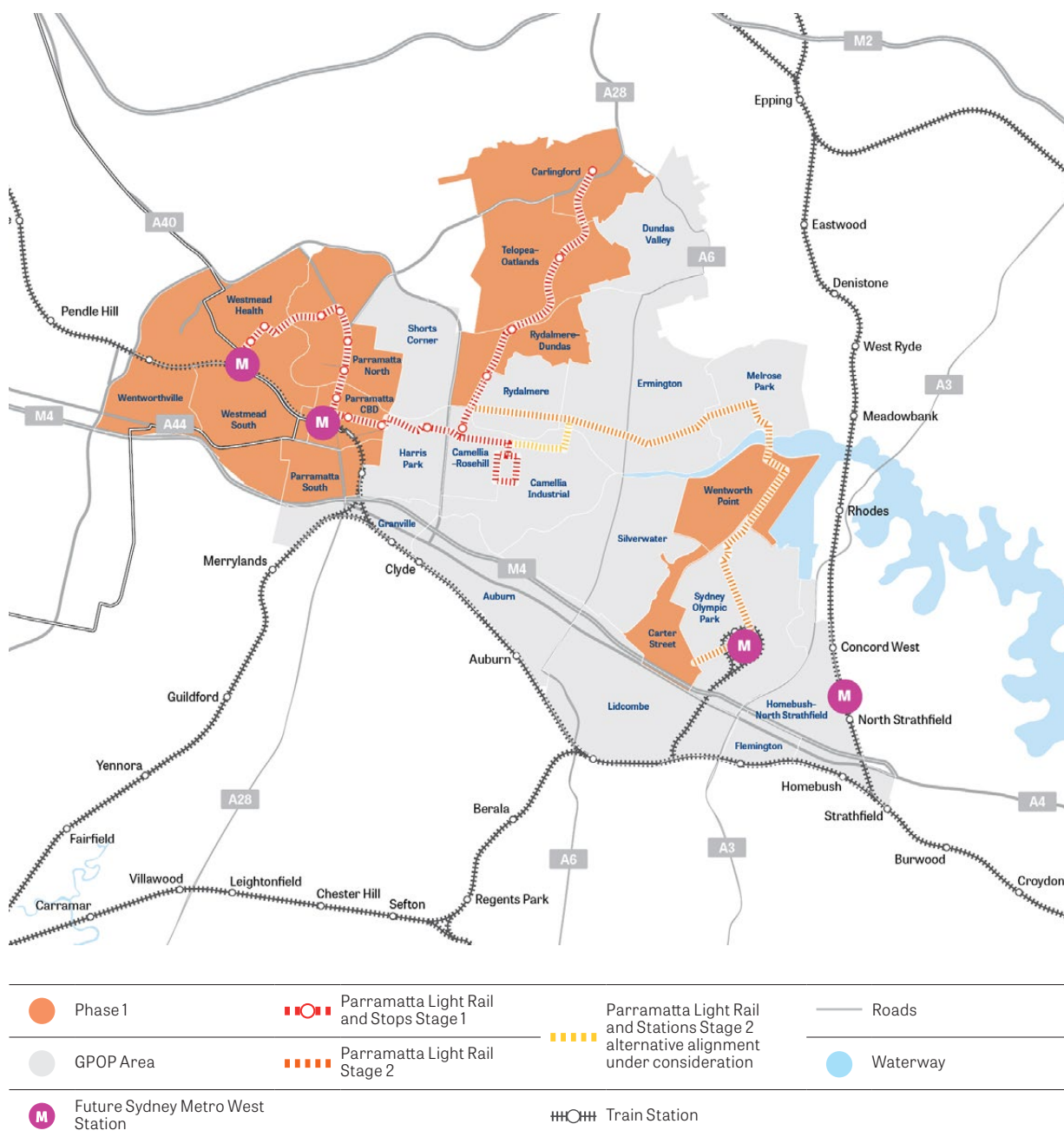
The **Phase 1** priorities (shown in Figure 23) focus on aligning growth with already committed infrastructure, supporting job creation in Greater Parramatta and new development in line with the Region Plan.

The following precincts were assessed as being strategic places to grow and relatively cost-effective compared with other precincts in GPOP.

1. **The Parramatta (CBD, North and South), Westmead (Health and South) and Wentworthville Precincts** which support jobs, health services, tertiary education, housing diversity and creating great cultural experiences. These precincts, at the western end of GPOP, are within or close to a Metropolitan Centre in the Central City District Plan. They are well positioned to leverage the investment in major infrastructure, particularly the new Parramatta Light Rail, the redevelopment of Westmead Hospital, the new Powerhouse Precinct and WestConnex.
2. **The Rydalmere to Carlingford Precincts** will experience 'next generation living' with a new 'turn up and go' light rail service opening in 2023 with four new stops, supporting mixed private, social and affordable housing. A review of existing planning controls should be prioritised to leverage the existing education, health and green infrastructure and make the most of the opportunity for creating vibrant new communities.
3. **The Wentworth Point and Carter Street Precincts** benefit from proximity to the world-class sporting and entertainment facilities at Sydney Olympic Park, offering a great lifestyle. Significant growth has already occurred in the Wentworth Point Precinct and more is underway in the Carter Street Precinct. These new communities need to be supported with sufficient services and infrastructure, before enabling more precincts to be developed in GPOP.



**Figure 23:** Sequencing Plan Phase 1 – Focuses on aligning growth with committed infrastructure, supporting job creation and new development



### Proposed action 2: Sequencing Plan – Phase 2: Focus on aligning growth with future city-shaping infrastructure.

The **Phase 2** priorities (shown in Figure 24) focus on aligning growth with future city-shaping infrastructure, namely Sydney Metro West and the proposed Parramatta Light Rail Stage 2.

The following precincts were selected for sequencing later to allow for investigation and planning with Sydney Metro West and the proposed Parramatta Light Rail Stage 2, which would support them.

1. The **Sydney Olympic Park Precinct**, which will transform into a significant precinct and centre when a new catalyst, the Sydney Metro West station, is built providing rapid and convenient access to the Parramatta and Sydney CBDs.

Parramatta Light Rail Stage 2 would connect Sydney Olympic Park with the northern side of the Parramatta River, with a new bridge connecting Wentworth Point and Melrose Park for pedestrians and cyclists.

A further review of the Sydney Olympic Park Master Plan will be needed to unlock new potential enabled by a new metro station and light rail stops. In the meantime, development can still occur under existing planning controls.

2. The **Homebush-North Strathfield Precinct** will benefit when the Sydney Metro West station is built at North Strathfield, connecting to the T9 Northern Line. This will create much-needed additional public transport capacity to support new housing and services in this precinct.

3. The **Melrose Park and Ermington Precincts**, like Rydalmere to Carlingford, would be transformed with a new ‘turn up and go’ service around the proposed Parramatta Light Rail Stage 2, supporting a mix of private, social and affordable housing, attractive to local workers.

This area provides significant opportunities on the northern side of the Parramatta River to accommodate new high-quality housing.

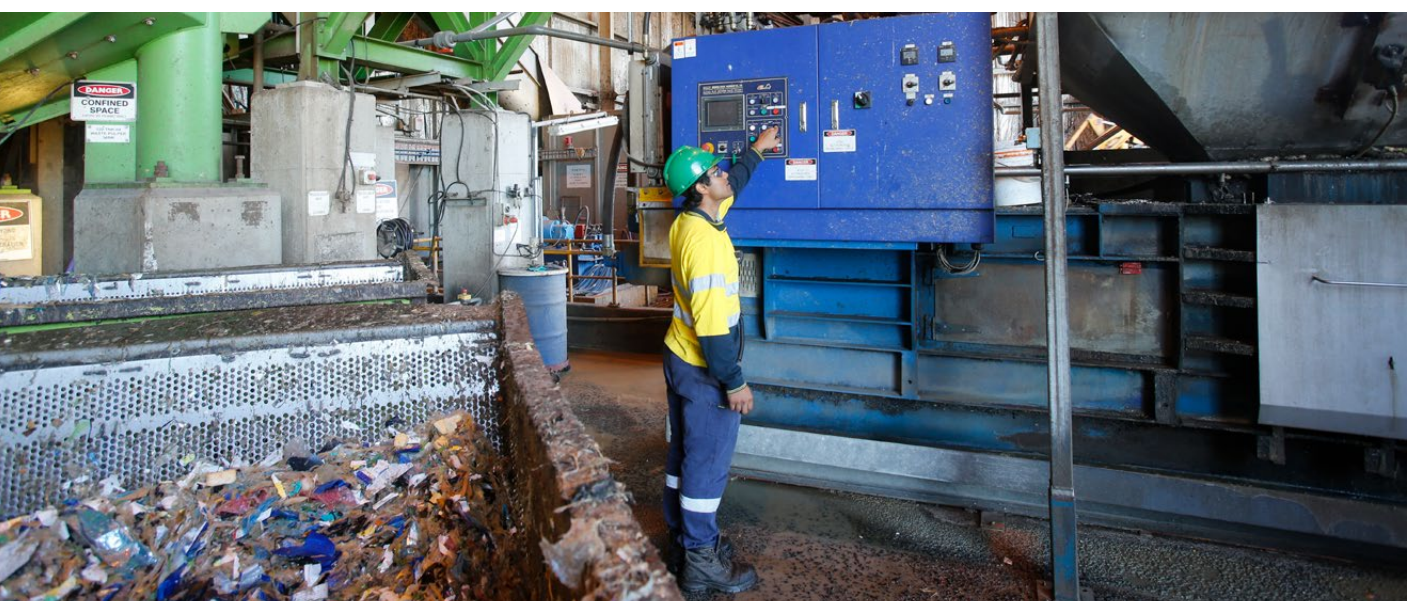
New communities in this area would be connected with a new bridge crossing – for public transport, walking and cycling – into the Sydney Olympic Park lifestyle precinct.

4. The **Granville, Auburn, Lidcombe and Flemington Precincts** between Parramatta Road and the rail line will all benefit from Sydney Metro West, when it is built.

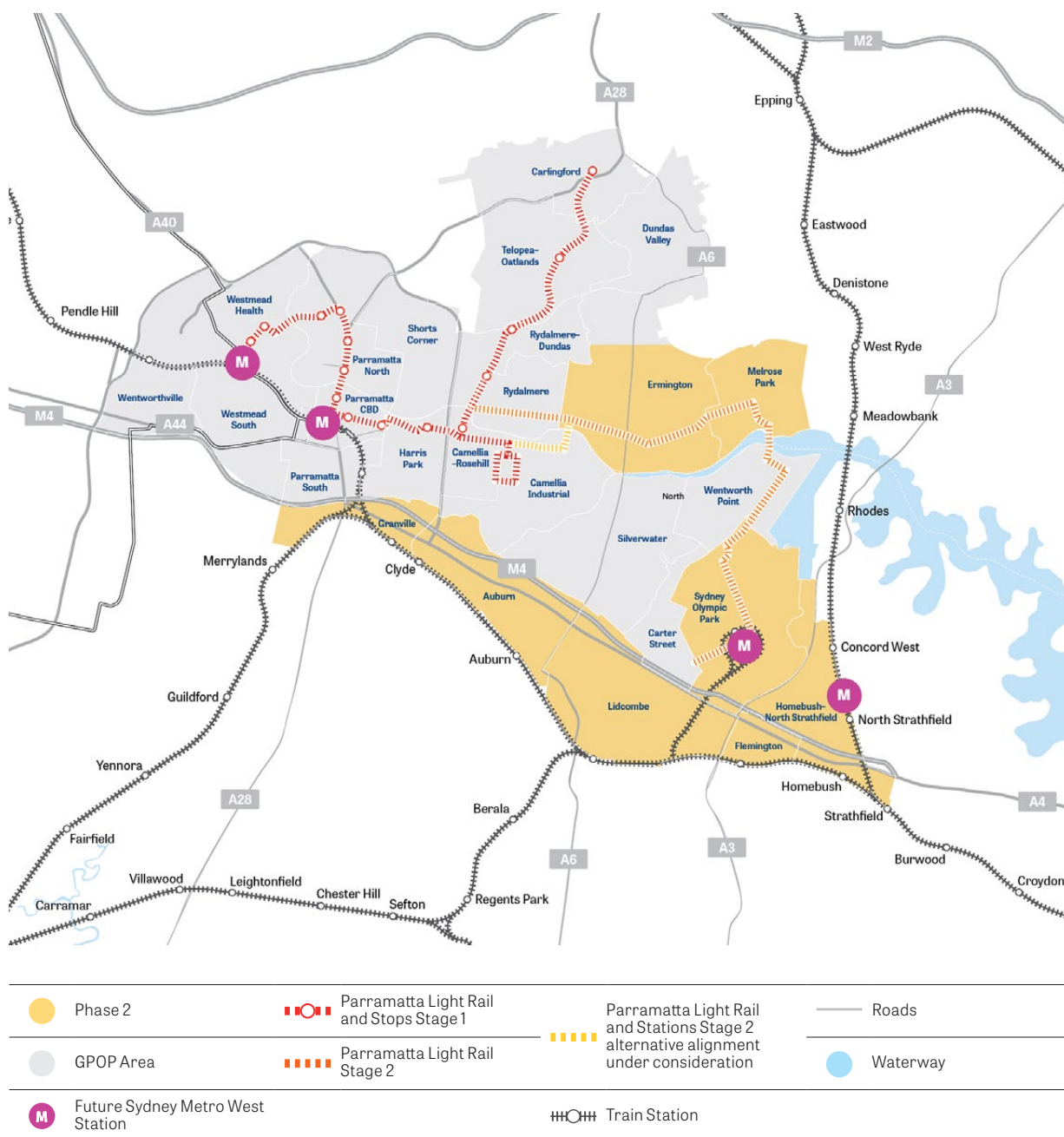
Sydney Metro West will provide relief to the T1 Western line, increasing service frequency at Granville, Auburn and Lidcombe railway stations, further supporting these town centres.

Together with public transport improvements on the Parramatta Road Corridor, these major infrastructure projects offer great opportunities for housing and jobs growth in these precincts.

Development in these precincts can continue under existing planning controls or consistent with the District Plans and the Parramatta Road Corridor Urban Transformation Strategy, and may be reviewed over time.



**Figure 24:** Sequencing Plan Phase 2 – Focuses on aligning growth with planned city-shaping infrastructure





### Proposed action 3: Support existing uses in the remaining precincts across GPOP and review their potential over time.

This proposal supports existing uses in the remaining precincts for strategic reasons, due to the relatively high costs of accommodating a new resident or job in the precinct and/or local environmental constraints.

Development in these precincts can continue under existing land use zones and controls, or with some adjustments, and may be reviewed over time to allow for their evolution. These precincts include:

- **Harris Park, Dundas Valley and Shorts Corner**
- **Rydalmere, Camellia Industrial, Auburn, Lidcombe and Silverwater**
- **Camellia-Rosehill**

The Harris Park, Dundas Valley and Shorts Corner Precincts either have high local character values and/or impediments that would constrain feasible growth and change.

Harris Park has high heritage values, Dundas Valley a rolling topography with limited public transport access, and Shorts Corner comprises mostly walk-up strata apartments. Their existing uses should continue to be supported as they provide and contribute to local housing choice.

The Rydalmere, Camellia Industrial, Auburn, Lidcombe and Silverwater Precincts form a high-value cluster of employment and urban services lands for the Central City.

Existing uses in these precincts should be supported and allowed to evolve over time as they modernise into higher-value precincts, supporting local innovation, creativity and productivity.

It should be noted that the Auburn and Lidcombe Precincts are also in Phase 2, recognising the town centres and residential components on the northern side of the T1 line.

The Camellia-Rosehill Precinct was assessed by the infrastructure and service providers in the Pilot as having high upfront costs if redeveloped for residential uses, relative to other precincts. These costs are considered to be too high to be cost-effectively funded in the near term or reasonably recovered from developer contributions.

The precinct has flooding and contamination problems that pose significant risks to the delivery of infrastructure. There are also potential land use conflict issues with the operations of the wider Camellia Industrial Precinct, should residential uses be permitted.

As the Central City grows it must be supported by a variety of industrial uses and urban services that will need to be located away from residential areas. It will also need support to evolve in a sustainable way, with technological advances that include more re-use and recycling of waste to support development of a circular economy.

Already, the NSW Government is acquiring land for Parramatta Light Rail stabling facilities in Camellia; Sydney Water has identified it as the place for a 17-hectare resource recovery facility and Sydney Metro West also requires stabling facilities in Camellia.

The PIC Pilot has identified several alternative precincts in GPOP where housing supply could be delivered more cost-effectively while avoiding land use conflicts. When residential, industrial and urban services are mixed, conflicts can result from noise, odour, lighting, hours of operation and heavy vehicle traffic.

For these reasons it is proposed that existing uses in the Camellia-Rosehill Precinct, including the Rosehill Racecourse, are supported to maintain the important cluster of the Camellia-Rydalmere-Silverwater-Lidcombe-Auburn Precincts.

Supporting this area as clustered, productive, affordable and economically-viable land for businesses, with compatible uses, is considered vitally important to the success of the GPOP Economic Corridor.

Should this proposal be taken further, it would require reconsideration of the draft *Camellia Town Centre Master Plan* (2018), which proposes a significant change of use to accommodate residential and commercial uses in the precinct along the Parramatta River.

As this represents a change to the Central City District Plan, an amendment would be required, specifically to 'Planning Priority C8 – Delivering a more connected and competitive GPOP Economic Corridor'.

This proposal has resulted from extensive new analysis developed in the PIC Pilot and not available at the time the District Plan was prepared.



## 5.2 Proposed infrastructure priorities

Identified through the draft Strategic Business Case, the final two proposed actions put forward 10-year service and infrastructure priorities aligned with the proposed high-level sequencing plan from the PIC.

These priorities take a holistic approach and include a wide range of services and infrastructure, from trees and park upgrades to school proposals and public transport improvements.

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### Proposed action 4: Short term infrastructure priorities for GPOP – investigate to support demand across all the 26 precincts.

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As outlined on page 21, an unprecedented level of public investment is underway in GPOP. The following projects are at various stages of planning, development and delivery:

#### *City shaping projects:*

- Westmead Hospital Redevelopment
- Children's Hospital at Westmead Redevelopment
- Powerhouse Precinct
- New Western Sydney Stadium and contribution for the Parramatta Pool
- Parramatta Light Rail Stage 1
- Sydney Metro West (partly funded)
- WestConnex – M4 Widening and M4 East Tunnels
- Smart Motorways improvements on the M4

#### *City building projects:*

- School expansions at Auburn North, Carlingford, Lidcombe, Rosehill and Parramatta West Primary Schools
- School redevelopments at Arthur Phillip High School and Parramatta Primary School
- New Primary School at Epping South
- Telopea Communities Plus Project
- Parramatta Police Station Redevelopment
- Wentworthville Police Station Upgrade
- Western Sydney Start-up Hub for Western Sydney Businesses

- Grants for the Duck River Open Space Corridor, Parramatta River Foreshore and the Canopy for the Community, Cooler Corridor in Cumberland Council
- Active transport and streetscape enhancements under Parramatta Road Urban Amenity Improvement Program
- Continued development of the M4 to Hill Road off ramp to improve westbound access to Sydney Olympic Park
- Creation of new public space on surplus land at Homebush
- Parramatta Park Upgrades – Mays Hill Precinct
- Improving accessibility at North Strathfield and Harris Park stations, and Parramatta and Rydalmere ferry wharves
- Bus route and service capacity improvements, including between Parramatta and Castle Hill, and between Parramatta and Liverpool
- Future road and transport improvements at key locations along on Pennant Hills Road, Kissing Point Road, Victoria Road and Woodville Road
- Planning for road improvements at Australia Avenue, Homebush Bay Drive and Underwood Road to improve access to Sydney Olympic Park.

Beyond these, further priorities have been identified for the short term (the next five years plus) to support existing and emerging demand that exists across all the 26 precincts of GPOP, as shown in Table 3.

These projects remain subject to further planning work and subsequent government funding decisions.

The draft Strategic Business Case recognises that even when taking a more orderly approach to development, investment is required to address needs that have arisen from sustained growth in GPOP over the past few years and from the pipeline of approved developments across many precincts in GPOP.

This investment is considered necessary ahead of a more focused investment program to support precincts in the Sequencing Plan – Phase 1.

**Table 3:** Proposals across GPOP – Subject to further investigation and funding decisions

Sector	Outcome	Proposals	Liveability, productivity and sustainability			
			Jobs, education and housing	30-minute city	Walkable places	Addressing urban heat
Environment and water (green/blue infrastructure)	<ul style="list-style-type: none"> <li>Increased urban tree canopy, more shade</li> <li>Improved links between CBDs, major places of activity and open space</li> <li>Upgraded historic features</li> <li>Richer urban experience within GPOP</li> <li>Better connections across the Green Grid</li> <li>Improved links to connect centres</li> <li>Reduction in ambient temperatures and mitigation of the heat island effect</li> <li>Supporting optimal outdoor learning and student experiences</li> <li>Improved air quality</li> </ul>	<ul style="list-style-type: none"> <li>Parramatta Park upgrades: <ul style="list-style-type: none"> <li>the Bowling Greens Precinct</li> <li>the Gardens Precinct</li> </ul> </li> </ul>	●	●	●	●
		<ul style="list-style-type: none"> <li>New and upgraded Green Grid links and urban tree cover at Sydney Olympic Park</li> </ul>			●	●
		<ul style="list-style-type: none"> <li>New tree canopy at school sites across GPOP</li> </ul>	●			●
Cultural infrastructure	<ul style="list-style-type: none"> <li>Placing schools at the heart of communities</li> <li>Making use of valuable school assets outside of school hours</li> <li>Improving access to cultural infrastructure</li> <li>Creating new space for community expression and for local artists and creatives</li> <li>Providing places where arts and culture can be shared and enjoyed</li> </ul>	<ul style="list-style-type: none"> <li>Joint-use cultural facilities at selected GPOP schools</li> </ul>	●			
		<ul style="list-style-type: none"> <li>New arts and cultural facilities for Parramatta Artist Studios and Gallery, Parramatta Digital and Performance Centre</li> </ul>	●			
Education	<ul style="list-style-type: none"> <li>Supporting optimal learning and student performance</li> <li>Providing quality education to meeting the needs of a growing student population</li> <li>Enabling future focused learning</li> </ul>	<ul style="list-style-type: none"> <li>New High School for Sydney Olympic Park and surrounds</li> <li>Redevelopment at Pendle Hill High School</li> <li>Primary and Secondary School proposals servicing: <ul style="list-style-type: none"> <li>Wentworthville Precinct</li> <li>Granville Precinct</li> <li>Melrose Park Precinct</li> <li>Wentworth Point Precinct</li> <li>Carlingford Precinct</li> <li>Westmead South Precinct</li> <li>Sydney Olympic Park Precinct</li> </ul> </li> </ul>	●			
Housing	<ul style="list-style-type: none"> <li>Accessible and affordable social housing</li> <li>More social housing for those unable to obtain housing through the private rental market due to social and financial disadvantage</li> <li>Providing a critical safety net for the most vulnerable members of our community</li> </ul>	<ul style="list-style-type: none"> <li>Social housing renewal / expansion at: <ul style="list-style-type: none"> <li>Ermington</li> <li>Melrose Park</li> </ul> </li> </ul>	●			

Sector	Outcome	Proposals	Liveability, productivity and sustainability			
			Jobs, education and housing	30-minute city	Walkable places	Addressing urban heat
Justice	<ul style="list-style-type: none"> <li>A safe GPOP community</li> <li>Enhanced feelings of community safety</li> <li>Avoided costs from asset loss</li> <li>Efficient justice and emergency management services to meet the needs of people</li> </ul>	<ul style="list-style-type: none"> <li>Parramatta Justice Precinct Master Planning and Expansion</li> </ul>	●		●	
		<ul style="list-style-type: none"> <li>Police Station upgrades at:               <ul style="list-style-type: none"> <li>Ermington</li> <li>Granville</li> </ul> </li> </ul>	●			
Transport	<ul style="list-style-type: none"> <li>A well-connected and accessible GPOP</li> <li>Supporting the realisation of GPOP as a 30-minute city</li> <li>Instigating a mode shift away from a car-centric GPOP</li> <li>Connecting centres with walking and cycling infrastructure</li> <li>Making GPOP a walkable city and making walking an attractive transport choice for short trips under two kilometres</li> <li>Future-proofing corridors to enable better movement and amenity</li> <li>Provisioning future road-space re-allocation to meet growing public transport demand</li> <li>Supporting efficient and reliable movement of freight and services</li> <li>More efficient transport with reduced transport carbon emissions</li> </ul>	<ul style="list-style-type: none"> <li>Bus route and corridor improvements:               <ul style="list-style-type: none"> <li>Victoria Road</li> <li>Parramatta to Macquarie Park</li> </ul> </li> </ul>	●	●	●	
		<ul style="list-style-type: none"> <li>Active transport improvements               <ul style="list-style-type: none"> <li>crossings of T9 Northern line</li> <li>north-south regional cycleway at Granville</li> <li>connection improvements along sections of Parramatta Light Rail Stage 1 corridor</li> </ul> </li> </ul>		●	●	
		<ul style="list-style-type: none"> <li>Future road and transport upgrades:               <ul style="list-style-type: none"> <li>on approach to Parramatta CBD along Church Street, Cumberland Highway, Great Western Highway and Windsor Road</li> <li>Parramatta Road and James Ruse Drive</li> <li>Parramatta Outer Ring Road upgrade investigation</li> </ul> </li> </ul>	●	●	●	
		<ul style="list-style-type: none"> <li>Travel demand management:               <ul style="list-style-type: none"> <li>technology solutions including on-demand travel</li> </ul> </li> </ul>	●	●	●	

### Proposed action 5: Short to medium term infrastructure priorities for Sequencing Plan – Phase 1.

These service and infrastructure priorities have been identified for the short to medium term (the next five to

10 years plus) to support the Sequencing Plan – Phase 1, as shown in Table 4.

As indicated above, these priorities remain subject to further planning work and subsequent government funding decisions.

**Table 4:** Proposals aligned to Phase 1 – Subject to further investigation and funding decisions

Sector	Outcome	Proposals	Liveability, productivity and sustainability			
			Jobs, education and housing	30-minute city	Walkable places	Addressing urban heat
Environment and water (green/blue infrastructure)	<ul style="list-style-type: none"> <li>Increased urban tree canopy, more shade</li> <li>Improved links between CBDs, major places of activity and open space</li> <li>Upgraded historic features</li> <li>Richer urban experience within GPOP</li> <li>Better connections across the green grid</li> <li>Improved links to connect centres</li> <li>Reduction in ambient temperatures and mitigation of the heat island effect</li> </ul>	<ul style="list-style-type: none"> <li>Parramatta Park upgrades:               <ul style="list-style-type: none"> <li>Biodiversity and Parramatta Riverbanks works</li> <li>Bridges over the Parramatta River</li> <li>Paddocks Precinct</li> <li>People's Loop</li> <li>Wisteria Gardens</li> </ul> </li> </ul>	●	●	●	●
	<ul style="list-style-type: none"> <li>Enabling greater circularity of water through a sustainable source</li> <li>Diversified Greater Sydney's water supply</li> <li>Contribution to urban cooling and greening outcomes at an optimal cost</li> <li>A GPOP more resilient to drought and climate change impacts</li> <li>Healthier waterways through improvements to treated water</li> </ul>	<ul style="list-style-type: none"> <li>Recycled water network for new homes, businesses and open space</li> <li>Resource recovery facility to provide recycled water</li> </ul>	●			●
Cultural infrastructure	<ul style="list-style-type: none"> <li>Improving access to cultural infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Parramatta Indigenous Centre for STEM Excellence</li> </ul>	●			
	<ul style="list-style-type: none"> <li>Creating new space for community expression and for local artists and creatives</li> <li>Providing places where arts and culture can be shared and enjoyed</li> </ul>	<ul style="list-style-type: none"> <li>Contribution to library expansions at Ermington and Telopea</li> </ul>	●			
Education	<ul style="list-style-type: none"> <li>Supporting optimal learning and student performance</li> <li>Providing quality education to meeting the needs of a growing student population</li> <li>Enabling future focused learning</li> </ul>	<ul style="list-style-type: none"> <li>Primary and Secondary School proposals servicing:               <ul style="list-style-type: none"> <li>Wentworthville Precinct</li> <li>Shorts Corner Precinct</li> <li>Carlingford Precinct</li> <li>Telopea-Oatlands Precinct</li> <li>Westmead Health Precinct</li> <li>Carter Street Precinct</li> </ul> </li> </ul>	●			



Sector	Outcome	Proposals	Liveability, productivity and sustainability			
			Jobs, education and housing	30-minute city	Walkable places	Addressing urban heat
Health	<ul style="list-style-type: none"> <li>Improving access to world class healthcare and research facilities</li> <li>Delivering high quality health outcomes for the GPOP community</li> </ul>	<ul style="list-style-type: none"> <li>Integrated Mental Health Complex at Westmead</li> </ul>		●		
Housing	<ul style="list-style-type: none"> <li>Accessible and affordable social housing</li> <li>More social housing for those unable to obtain housing through the private rental market due to social and financial disadvantage</li> <li>Providing a critical safety net for the most vulnerable members of our community</li> </ul>	<ul style="list-style-type: none"> <li>Social housing renewal / expansion at:               <ul style="list-style-type: none"> <li>Carlingford</li> <li>Parramatta North</li> <li>Rydalmere-Dundas</li> <li>Westmead South</li> <li>Westmead Health</li> <li>Wentworthville</li> </ul> </li> </ul>	●			
Justice	<ul style="list-style-type: none"> <li>A safe GPOP community</li> <li>Enhanced feelings of community safety</li> <li>Avoided costs from asset loss</li> <li>Efficient justice and emergency management services to meet the needs of people</li> </ul>	<ul style="list-style-type: none"> <li>Fire Station upgrades at:               <ul style="list-style-type: none"> <li>Wentworthville</li> <li>Rydalmere</li> </ul> </li> </ul>	●			
Transport	<ul style="list-style-type: none"> <li>A well-connected and accessible GPOP</li> <li>Supporting the realisation of GPOP as a 30-minute city</li> <li>Instigating a mode shift away from a car-centric GPOP</li> <li>Connecting centres with walking and cycling infrastructure</li> <li>Making GPOP a walkable city and making walking an attractive transport choice for short trips under two kilometres</li> <li>Future-proofing corridors to enable better movement and amenity</li> <li>Provisioning future road-space re-allocation to meet growing public transport demand</li> <li>Supporting efficient and reliable movement of freight and services</li> <li>More efficient transport with reduced transport carbon emissions</li> </ul>	<ul style="list-style-type: none"> <li>Bus route and corridor improvements:               <ul style="list-style-type: none"> <li>public transport priority improvements along Church Street in Parramatta South on approach to Parramatta CBD</li> <li>Parramatta to Macquarie Park via Epping</li> <li>Parramatta Road</li> <li>Parramatta to Castle Hill</li> </ul> </li> <li>Transport interchange upgrades at:               <ul style="list-style-type: none"> <li>Parramatta CBD</li> <li>Westmead Station</li> </ul> </li> </ul>	●	●	●	
		<ul style="list-style-type: none"> <li>Active transport improvements:               <ul style="list-style-type: none"> <li>pedestrian bridge over Hill Road</li> <li>cycleway improvements between Westmead and Parramatta North on approach to Parramatta CBD</li> </ul> </li> </ul>		●	●	●
		<ul style="list-style-type: none"> <li>Travel demand management:               <ul style="list-style-type: none"> <li>technology solutions including on-demand travel</li> </ul> </li> </ul>	●	●	●	

The PIC Pilot took a much longer-term view than the Strategic Business Case in setting a pathway that could realise the vision for GPOP, initially through the ‘Transformative’ Scenario 3 and then through the ‘Visionary’ Scenario 4.

To work toward the ‘Visionary’ Scenario 4, we will need to continue focusing our collaborative efforts on:

- enhancing and/or creating extensive green and blue corridors along the Parramatta River and its tributaries for walking and cycling to ensure GPOP continues to evolve into a truly vibrant, healthy and inclusive place.
- ensuring a sustainable water source is available for greening and cooling, including irrigation for GPOP’s network of parks, green links and street trees, as the city becomes increasingly urbanised.
- transforming and integrating water, waste and energy in Camellia and surrounds, leveraging existing activities and preparing for future needs as the Central City grows, to reduce our environmental impact.
- ensuring that infrastructure in the GPOP area is resilient to the impacts of a changing climate.
- creating visionary cultural infrastructure beyond the new Powerhouse Precinct, supported by ongoing programming for high-quality cultural events to ensure it is a place in which the arts are present and celebrated in daily life, such as in educational and community facilities.
- transforming the accessibility of GPOP, via north-south and east-west links, as more dynamic hubs are created in Parramatta CBD-Parramatta North-Westmead, and last-mile services are explored to connect people to the transport network.



### Tell us what you think

- Do you understand why we need to sequence development in GPOP?
- Do you have feedback on the sequencing plan?
- Have we missed anything?

See Section 7 on how you can provide your feedback to the Commission.

## 6 Realising the PIC proposals

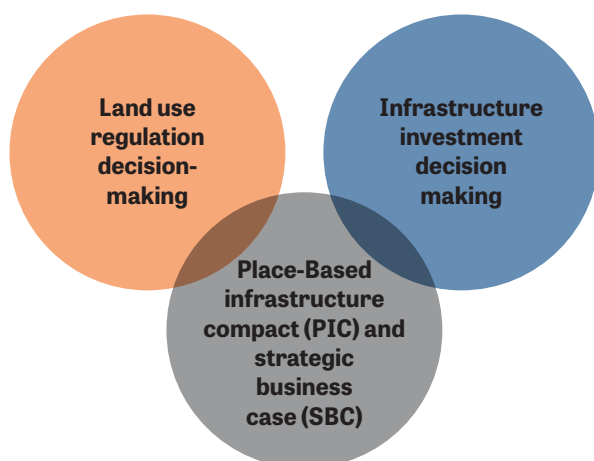
### 6.1 Aligning decision-making

The intent of the PIC model is to better integrate land use and infrastructure investment decision-making processes of the NSW Government and provide greater certainty to the community and the development industry.

Strategic land use decisions often precede the infrastructure capital investment plans of government agencies and project business case processes for funding. Consequently, decisions on infrastructure investment often are outpaced by the selection of new areas and precincts for growth.

Figure 25 illustrates how the PIC and Strategic Business Case conceptually bring together land use and infrastructure decision-making practices. This is fundamental to driving and delivering better place-based outcomes for communities.

**Figure 25:** Linking land use and infrastructure decision-making of government through the PIC and Strategic Business Case



To implement the PIC and Strategic Business Case, it is essential for NSW Government agencies, utility providers and local councils to work together with the community, the development industry and other stakeholders. This needs to include consideration of who contributes to infrastructure, how much they contribute and what for.

Subject to your feedback and the NSW Government's adoption of recommendations made by the Commission, the next steps for implementation would involve:

- Amendments to strategic and statutory plans
- Finalisation of business cases for State agencies capital investment plans and NSW government budget processes
- Keeping the PIC up-to-date
- Monitoring and reporting on performance indicators

There are also opportunities to complete more PICs in high-transformation areas in Greater Sydney using the same method, enabling us to do comparative analysis.

This would allow early consideration in strategic planning processes of where growth can be most cost-effectively supported by the provision of infrastructure and help us create great places for people.

### 6.2 Strategic and statutory plans

The Region Plan describes the hierarchy of plans and the role of planning authorities in Greater Sydney. This is the basis for setting out the hierarchy of plans relevant to GPOP, as shown in Figure 26.

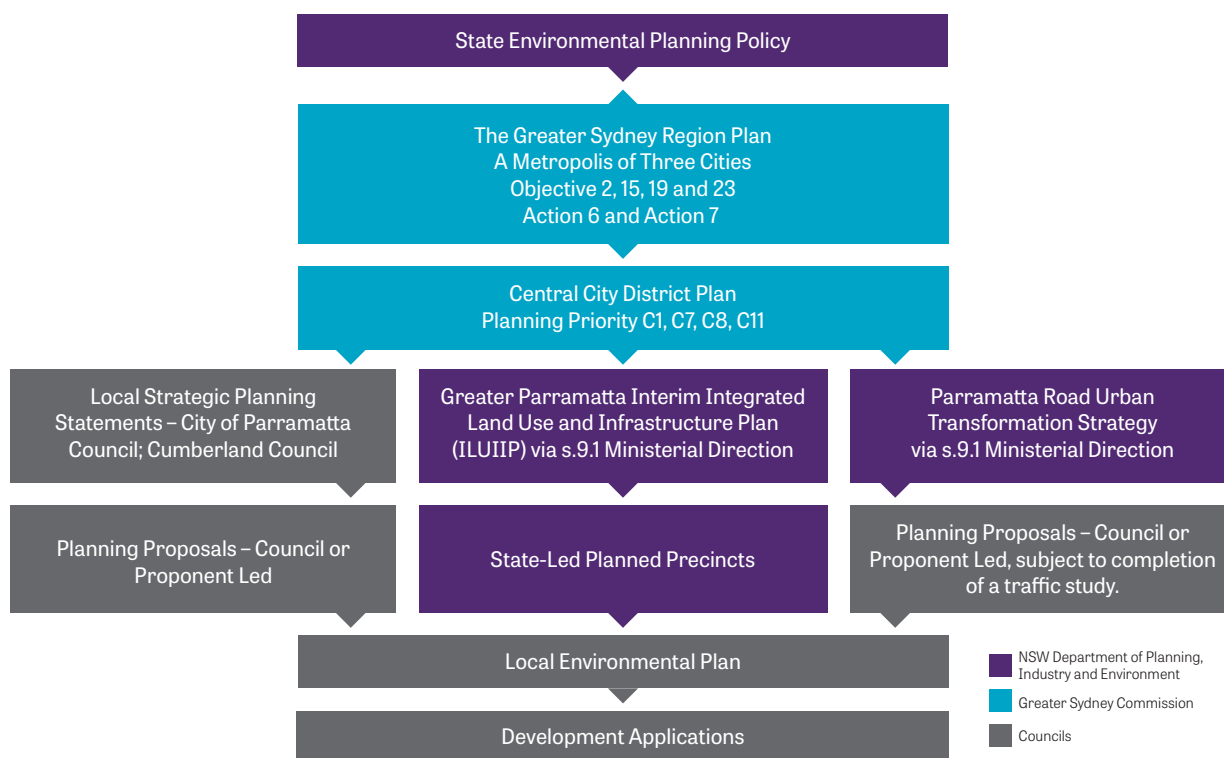
Consistent with this hierarchy of plans, should the proposed actions in this Paper be taken further, the Central City District Plan would require amendment, and this would involve further public consultation.

All other statutory and non-statutory plans would then need to be amended and updated to align with the Central City District Plan, including the Greater Parramatta Interim Land Use and Infrastructure Implementation Plan (ILUIIP) (2018) and Local Environmental Plans.

Implications, if any, for the *Parramatta Road Corridor Urban Transformation Strategy* (2015) would also need to be considered.

All councils in Greater Sydney are currently preparing their Local Strategic Planning Statements, Housing Strategies and Local Environmental Plan Reviews, in consultation with their local communities.

Figure 26: Hierarchy of strategic and statutory plans relevant to GPOP





The greater part of GPOP lies in the City of Parramatta Council and Cumberland Council areas, and they are working to meet NSW Government timeframes to have this work completed by mid-2020, to give effect to the current District Plans.

In seeking feedback on the PIC Pilot, the Commission will engage closely with the City of Parramatta and Cumberland Councils to ensure feedback they have received about GPOP is appropriately considered.

### 6.3 Keeping the PIC up-to-date

To ensure the work undertaken in a PIC continues to be relevant, it would need to be reviewed at least every five years:

- as land use plans are updated and development occurs
- at a point where city shaping infrastructure decisions are made
- if market conditions or community preferences change.

The new purpose-built 'Co.Lens' tool, developed as part of the PIC model, integrates land-use forecasts, infrastructure needs and costings, enabling them to be readily updated in collaboration with all the partners involved in the process.

### 6.4 Monitoring and reporting

The performance of GPOP is to be monitored using the four indicators in *The Pulse of Greater Sydney: Measuring what matters in the Metropolis*. This is outlined as a key concept below. These four indicators are:

- P1 – Jobs, education and housing
- P2 – 30-minute city
- P3 – Walkable places
- P4 – Addressing urban heat

The proposed infrastructure priorities outlined on page 49 to 53 relate to, and contribute to, these four performance indicators.



#### Tell us what you think

- How do we make sure the proposed actions from the Place-based Infrastructure Compact are delivered?
- What level of transparency should there be around infrastructure planning and delivery in places undergoing significant change and growth?
- How can we keep you up to date with delivering the PIC proposals?

See Section 7 on how you can provide your feedback to the Commission.

### Measuring what matters

The PIC Pilot in GPOP can make a significant contribution to the outcomes being monitored in *The Pulse of Greater Sydney*, released by the Commission in July 2019.

There are four performance indicators, developed in consultation with the people of Greater Sydney, to measure progress:

1. **Jobs, education and housing:** Monitoring where the places for jobs, education and housing are located, with the goal of better aligning jobs and education alongside population growth, and housing types that respond to changing community needs.
2. **30-minute city:** Measuring efforts to improve connectivity and enable a public transport network

that connects a greater number of residents within 30 minutes of where they live, to jobs, education and services in metropolitan and strategic centres.

3. **Walkable places:** Recognising that a walkable city contributes to a liveable and healthier city, looking at both the extent of walking as a mode of transport generally and walking to and from different destinations.
4. **Addressing urban heat:** Valuing the contribution of green infrastructure including tree canopy, vegetation, and waterways in reducing the impact of extreme heat on people's health and improving local amenity.



Key  
Concept

## 7 Where to from here?

This PIC Pilot marks the start of a place-based approach to developing GPOP and other areas in Greater Sydney that are experiencing significant transformation.

Community and stakeholder feedback will help inform the Commission's recommendations to the NSW Government for its consideration.

### 7.1 How are we consulting?

We want to ensure people in GPOP and Greater Sydney are informed and can give us feedback on the PIC Pilot.

We will actively engage with representative groups, industry, local councils and the community to listen and understand people's thoughts and insights into the PIC method and the outcomes of the Pilot in GPOP.

We will engage through round-table discussions, briefings and information drop-in sessions, as well as online and via focus groups and deliberative forums.

Details of key drop-in sessions and forums will be available on the Commission's website.

### 7.2 How can you give us feedback?

The Commission values and encourages the input of the community, business and the development industry.

We now want to give everyone an opportunity to give us their feedback.

Tell us what we got right, what we missed and what we should add. We will be inviting your response to the PIC Pilot from 7 November until 18 December 2019.

You can go to the Commission website to learn more about our work, give us your feedback, or attend a feedback session.

### 7.3 Contact details

For more information

Website: [www.greater.sydney](http://www.greater.sydney)

Phone: 1800 617 681

Address: Greater Sydney Commission  
PO Box 252 Parramatta NSW 2150

We look forward to hearing your feedback.

## Greater Sydney Commission

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The logo for the Greater Sydney Commission, featuring the text "Greater Sydney" in a bold, sans-serif font above the word "Commission" in a regular, sans-serif font. The background of the entire page is a vibrant yellow-green gradient, overlaid with several large, semi-transparent circles in various shades of green and teal, creating a layered, organic effect.

# Greater Sydney Commission

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