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CAMELLIA-ROSEHILL PLACE STRATEGY INFRASTRUCTURE AND DELIVERY PLAN

Department of Planning and Environment

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Camellia-Rosehill Place Strategy

Infrastructure and Delivery Plan

FINAL

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Prepared for

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Disclaimer

By

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Contents

Executive summary

The Department of Planning and Environment is preparing the Camellia-Rosehill Place Strategy.

The Camellia-Rosehill Place Strategy establishes a 20-year vision and planning framework to guide the renewal of the precinct. It is informed by a detailed evidence base including integrated Master Plan and several technical studies that builds on the significant body of strategic works and extensive consultation undertaken to date.

The vision for Camellia-Rosehill is for new homes and jobs set beside a well-designed town centre with access to the new light rail and services by a network of walking and cycling paths. Environmental features, country and culture will be valued and respected. The precinct will be net zero ready and set a new standard for environmental sustainability.

GLN Planning was engaged to prepare an Infrastructure Delivery Plan (IDP) to support the Camellia-Rosehill Place Strategy.

The overall purpose of the IDP is to assist landowners, developers and infrastructure agencies to collaboratively plan, prioritise, program and deliver infrastructure in the Camellia-Rosehill Place Strategy area in an orderly and timely manner.

The IDP:

- sets out the growth infrastructure to support the development vision for Camellia-Rosehill, and their costs
- recommends a mix of mechanisms to fund and deliver the infrastructure, and the projected revenue that could be derived from the mechanisms
- identifies the entities / agencies likely to be responsibility for the delivery of the infrastructure – e.g., landowners, developers, and government (both local and State)
- identifies the potential for individual developments (including development on key sites) that can accommodate specific infrastructure in their developments
- provides an indicative staging scenario that shows infrastructure timing and cost, compared to income / delivery timing, resulting in a high-level cash flow analysis
- lists the next steps that should be followed to create the framework necessary to enable orderly and timely delivery of infrastructure to support the place strategy.

Key features of the IDP include:

- Total infrastructure costs more than $1.63 billion.
- Identified developer and landowner funding mechanisms that could meet around $959 million of this cost, reflecting a funding gap of around $673 million.
- An infrastructure indicative staging profile as shown in the table below.

Infrastructure costs by stage of delivery

Infrastructure type	Short term (0-5 years) ($m)	Medium term (5-10 years) ($m)	Long term (10+years) ($m)	Total costs ($m)
Roads and intersections	$53.1	$339.9	$278.6	$671.6
Active transport	$0.0	$80.5	$85.8	$166.3
Utilities	$0.0	$46.6	$0.0	$46.6
Social infrastructure	$95.4	$22.1	$200.7	$318.2
Open space and recreation	$0.0	$155.0	$275.1	$430.1
Total	$148.5	$644.1	$840.2	$1,632.8

The following page contains a summary of this plan, and shows:

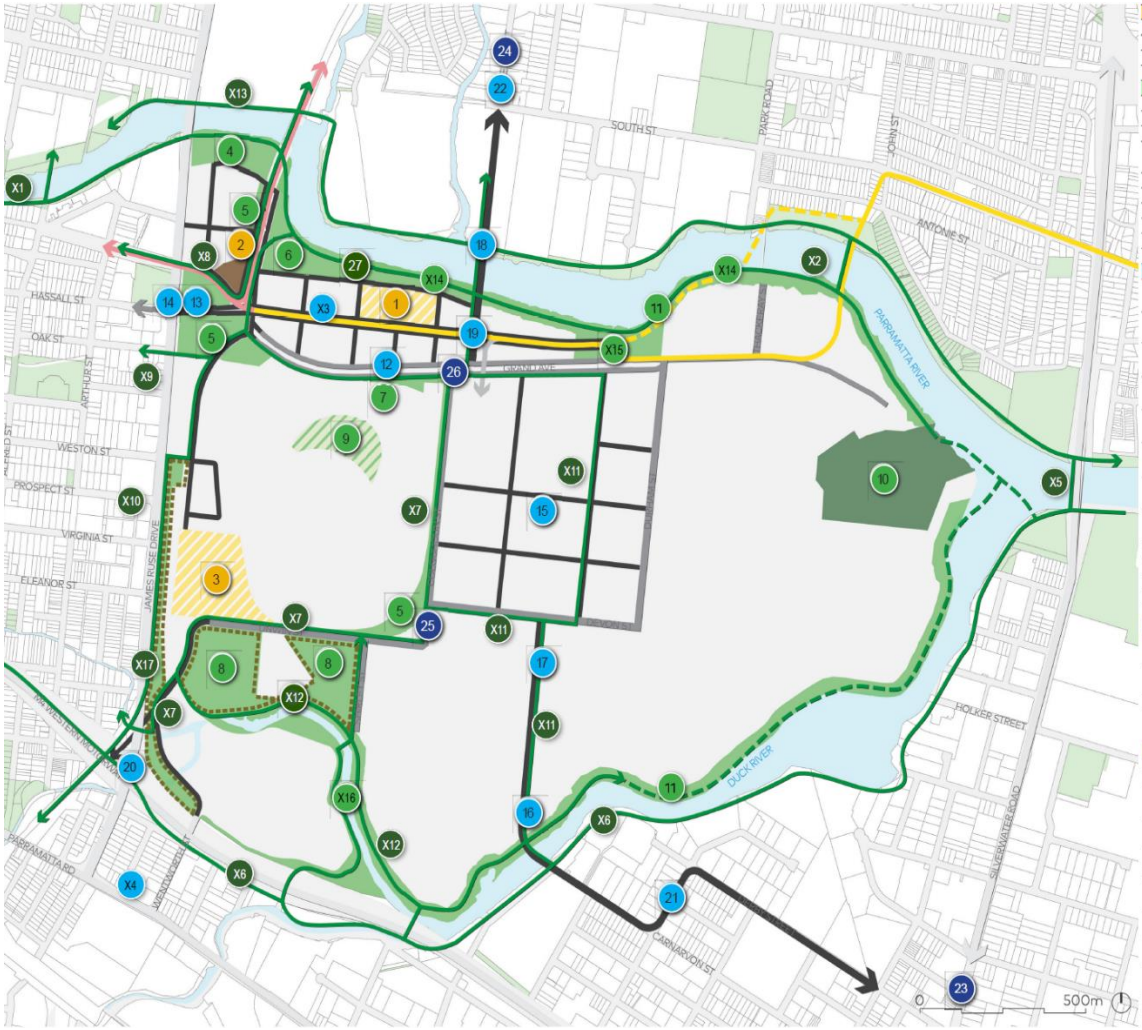
- The map containing the infrastructure items and their indicative locations, proposed for delivery under this plan
- The figure 'Infrastructure Costs' that provides a breakdown of the infrastructure costs associated with each infrastructure type
- The figure 'Delivery Mechanisms' that provides an indicative breakdown of what infrastructure funding mechanisms may be used to fund the delivery of infrastructure and an indicative funding gap that will need to be funded by alternative sources.

This IDP has been prepared and is subject to the following limitations:

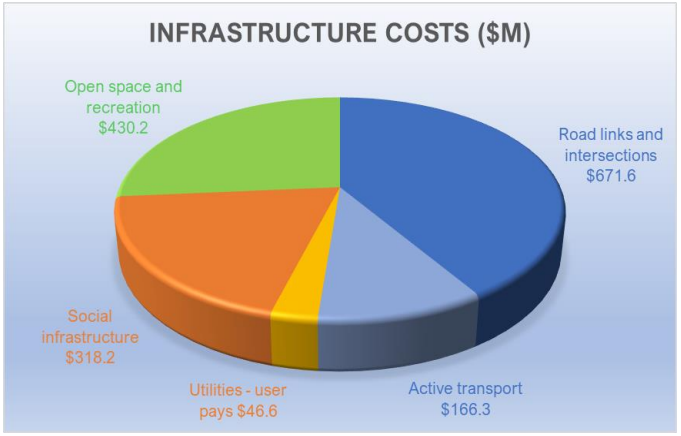
- All infrastructure costs are high level preliminary cost estimates which have not been prepared using concept or detailed designs, so further assessment is required
- The costs have been prepared using multiple assumptions for land and remediation costs
- There has been no commitment from government agencies to fund infrastructure in the Precinct. The use of government funding options is subject to future consideration.

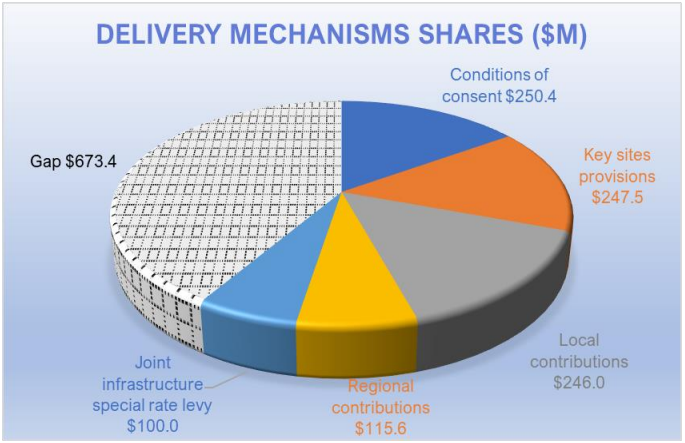
The future rezoning of the Precinct will be supported by an infrastructure framework and Strategic Business Cases/s to confirm costs, lock in timing for delivery, and the establishment of funding sources that address the infrastructure funding gap.

Infrastructure delivery plan at a glance



	Social Infrastructure
1	Primary School-subject to further review
2	Multipurpose Community Facility (location TBC)
3	K-12 School-subject to further review
4	District Park
	Open space and recreation
5	Local Park
6	District Park
7	Local Linear Park
8	District Park (Subject to further review of Sydney Metro's operational requirements)
9	Potential restricted access open space
10	Potentially Publically Accessible Wetlands
X14	Riparian and Foreshore
X15	Local Park
X16	Linear Foreshore Park
X17	Linear Park
	Traffic and active transport - Road Links
12	Upgrade and widening of Grand Avenue to 4 lanes
13	Removal of Grand Avenue Bridge approaching James Ruse Drive
14	Upgrade of James Ruse Dr / Grand Ave / Hassall St intersection
15	Internal road network between Colquhoun Street, Durham Street, Grand Avenue, and Devon Street
16	Road and active transport Duck River Bridge to Carnarvon Street
17	North-South link connecting from Grand Avenue to proposed Duck River Bridge
18	Road and active transport Paramatta River Bridge to Clyde Street
19	North link connecting from Grand Avenue to proposed Parramatta River Bridge
20	Connection to M4 Western Motorway conection
21	Widening of Carnarvan Road and Derby Street
22	Widening of Clyde Street
X3	Internal roads north of Grand Avenue
X4	Widening of Wentworth Street
	Traffic and active transport - Intersections
23	Upgrade Intersection of Derby Street and Silverwatear Road
24	Upgrade Intersection of Clyde Street and Victoriea Road
25	North-South link intersection with Devon Street
26	North-South link dog-leg intersection with Grand Avenue and North Link to Rydalmere
	Active Transport
27	Parramatta River active transport frontage
X1	Bridge Parramatta River to Morton Steet
X2	Bridge Parramatta Light Rail alignment to Antoine Street
X5	Bridge over Parramatta River to Silverwater Bridge
X6	Path from M4 to Silverwater Bridge
X7	Path along Western Motorway to Unwin Street
X8	Bridge Parramatta Light Rail alignment north of Grand Avenue
X9	Bridge over James Ruse Drive and rail line to Oak Street
X10	Bridge over James Ruse Drive and rail line to Prospect Street
X11	Path along Shirley St, Unwin St, Colquhoun St and Grand Ave
X12	Duck Creek active transport frontage
X13	Corridor to Camellia Peninsula





Glossary of terms and abbreviations

Abbreviation	Meaning
DPE	Department of Planning and Environment
CBD	Central Business District
Council	City of Parramatta Council
EbD	Enquiry by Design
FSR	Floor space ratio
GANSW	Government Architect New South Wales
GPOP	Greater Parramatta and Olympic Peninsula
IDP	Infrastructure Delivery Plan
IPART	Independent Pricing and Regulatory Tribunal
LEP	Local Environmental Plan
NGO	Non-Government Organisation
OSHC	Out of Hours School Care
PCYC	Police and Community Youth Club
PLR	Parramatta Light Rail
RIC	Regional Infrastructure Contribution
SEPP	State Environmental Planning Policy
SIC	Special Infrastructure Contribution
SPS	Sewer Pumping Station

1 Project background

New South Wales Department of Planning and Environment (DPE), in collaboration with City of Parramatta Council (Council), industry, the community and State agencies, is leading the development of the Camellia-Rosehill Place Strategy and Master Plan for the Camellia –Rosehill Precinct (the Precinct). The Precinct is defined by Parramatta River to the north, Duck River to the east, the M4 Motorway to the south and James Ruse Drive to the west, all of which form physical boundaries to the Precinct.

Source: Cox Architecture 2022
Figure 1 Area of the Camellia-Rosehill Master Plan

The Precinct is presently dominated by industrial activity, with large amounts of land also allocated to Rosehill Gardens Racecourse and stabling yards for Parramatta Light Rail and Sydney Metro. Its industrial legacy means that soils are heavily contaminated across most of the Precinct.

Located in the geographic heart of Sydney, the Precinct has an important strategic role in the Greater Parramatta and Olympic Peninsula (GPOP).

The Place Strategy and Master Plan is being prepared for the whole Precinct and draws on the substantial body of previous investigations, including ongoing collaboration with industry, the community and state agencies.

The overarching objective of the Place Strategy is to provide an integrated 20-year vision, which recognises the strategic attributes of the Precinct, guides future land use and infrastructure investment decisions and which can be delivered with the support of State and local agencies.

DPE has engaged GLN Planning to deliver technical studies for Package E – Delivery and Funding, with the scope of work to establish the funding mechanisms that may be available to assist with the delivery of infrastructure to support the proposed vision.

An Enquiry by Design (EbD) process was undertaken to inform the preparation of the Place Strategy. The EbD was an interactive process which explored a number of master plan options for Camellia-Rosehill which could deliver the vision for the Precinct and resulted in a Draft Master Plan which was the subject of public consultation as part of the Camellia-Rosehill Directions Paper. The Draft Master Plan was further refined following exhibition of the Directions Paper and consideration of the submissions received.

The draft place strategy was publicly exhibited on 17 December 2021 until 4 March 2022. The draft master plan was further refined following exhibition of the place strategy and consideration of the submissions received. Refer to the Department of Planning and Environment's finalisation report for further information.

1.1 Purpose of this plan

The purposes of this Camellia-Rosehill Place Strategy IDP are to:

- set out the infrastructure that will be needed to support the vision
- recommend a mix of funding mechanisms for the delivery of place strategy infrastructure, and the respective responsibilities of the main organisations who will deliver the infrastructure – Landowners, Developers, and Government (both local and State)
- identify the potential for individual developments (including development on key sites) to incorporate some of the required infrastructure in their developments
- identify the estimated costs of the infrastructure
- recommend priorities and an indicative staging schedule for delivery of the different infrastructure items
- provide a 'road map' to assist agencies to collaboratively plan, prioritise, program and deliver infrastructure in the Place Strategy area in an orderly and timely manner.

1.2 How is infrastructure funded and delivered in NSW?

'Infrastructure' are assets supporting services that enable our cities, towns, and regions to properly function. Most of these services are provided by public authorities including State agencies and local councils.[2]

State and local government usually play a lead role in providing new or augmented public infrastructure to meet the needs of land that is developed or redeveloped.

Public infrastructure where government plays a leading role in its delivery typically includes:

- roads and pedestrian and cycle paths
- public transport

[2] NSW Productivity Commission (2020), Review of Infrastructure Contributions in New South Wales – Final Report, p22

- water cycle management
- open space for recreation facilities
- community facilities such as community centres and libraries, schools and hospitals
- utility services such as water and sewer, electricity, gas, telecommunications.[3]

Funds for public infrastructure must ultimately come from either users and other beneficiaries, rate payers or tax-payers. These funding sources include:

- the State Budget from State tax revenue, Commonwealth funding and grants, and the proceeds of asset transactions
- local government from general rates revenue
- direct user charges
- infrastructure contributions.[4]

Developers of land also play a major role in delivering infrastructure to support land development and redevelopment through requirements placed on development approvals. Conditions are imposed on development by consent authorities such as planning panels and local councils requiring developers to provide roads and transport facilities, drains, and utility services to meet the needs of development. Often, the completed facilities become public infrastructure when they are handed over to be maintained in perpetuity by public authorities and local councils.

Developers and State and local government also act jointly in providing infrastructure whereby developers make 'contributions' of money, land or works which the government then applies towards providing public infrastructure that supports growth. These are known as infrastructure contributions.

Developers and owners of land, as well as State and local government (through the funding sources listed above) will all have a role in the delivery of infrastructure to support the Camellia-Rosehill Place Strategy land use plan.

Funding and delivery sources and mechanisms are discussed in section 3.

1.3 Limitations

This IDP has been developed with input from DPE, Parramatta City Council (Council), government agencies and the place strategy consultant team using the latest available evidence.

The plan's funding mix and staging recommendations and conclusions are heavily influenced by several assumptions. Variation of these assumptions may significantly affect the plan.

The reader should therefore be mindful of the following:

- The infrastructure costs are high level strategic costs that have not been prepared with regard to concept or detailed designs.

[3] NSW Productivity Commission (2020), p23

[4] NSW Productivity Commission (2020), p23

- The infrastructure costs have been prepared using multiple assumptions including but not limited to, land remediation costs and land valuation costs. A detailed list of assumptions is included in Appendix A. More detailed cost estimates have not been included due to commercial sensitivities.
- The commitment of government agencies to fund infrastructure in the Precinct using taxpayer sources is unknown and untested.
- The commitment of local government to fund infrastructure in the Precinct will need to be agreed to and endorsed by Council.
- Development uptake is assumed to be 100% of the available potential over 20 years.
- The uptake of development is assumed to follow the staging plan contained in this plan.
- The capture of development contributions from industrial and non-residential development is uncertain. Industrial lands within the Precinct have existing use rights that may allow for future redevelopment without a proportional increase in demand i.e., the sites are being underused currently because of vehicle access limitations.
- The application of the key sites' mechanism being used to internalise to certain developments a considerable portion of the community and open space facilities costs relies on development viability benchmarks being met.
- The proposed reforms to the NSW infrastructure contributions system are still being designed and the final form will influence the revenue and spending of regional contributions collected from development within Camellia-Rosehill.

2 Infrastructure drivers and constraints

2.1 Camellia-Rosehill Vision

Camellia-Rosehill has an important strategic role as an industry and employment hub within the Greater Parramatta and Olympic Peninsula (GPOP) Economic Corridor. By 2041, the Precinct will be enhanced, with service and circular economy industries, and new recreational and entertainment facilities, all enabled by better transport access via light rail, active transport and road connections.

A well-designed town centre next to the light rail stop will be the focus of the community activity.

A new urban services precinct and retention of heavy industrial land will ensure Camellia-Rosehill fulfils its potential to be an employment powerhouse.

New homes and jobs will be close to public transport supported by new quality public spaces including public open spaces, public facilities, high quality street furniture, and walking and cycling paths.

Key environmental features such as Parramatta River, Duck River and their wetlands will be protected and enhanced. Camellia's rich heritage will be preserved, celebrated and promoted.

Country and culture will be valued and respected with the renewal guided by Aboriginal people.

The precinct will be net zero ready and set a new standard for environmental sustainability with embedded renewable energy networks, integrated remediation and water management strategies and circular economy industries.

Recycled water will be connected to all residences, businesses and public spaces and will support the integrated network of green infrastructure.

Camellia will be a showcase of recovery and restoration – a place of economic prosperity but also a place where people love to live, work and enjoy.

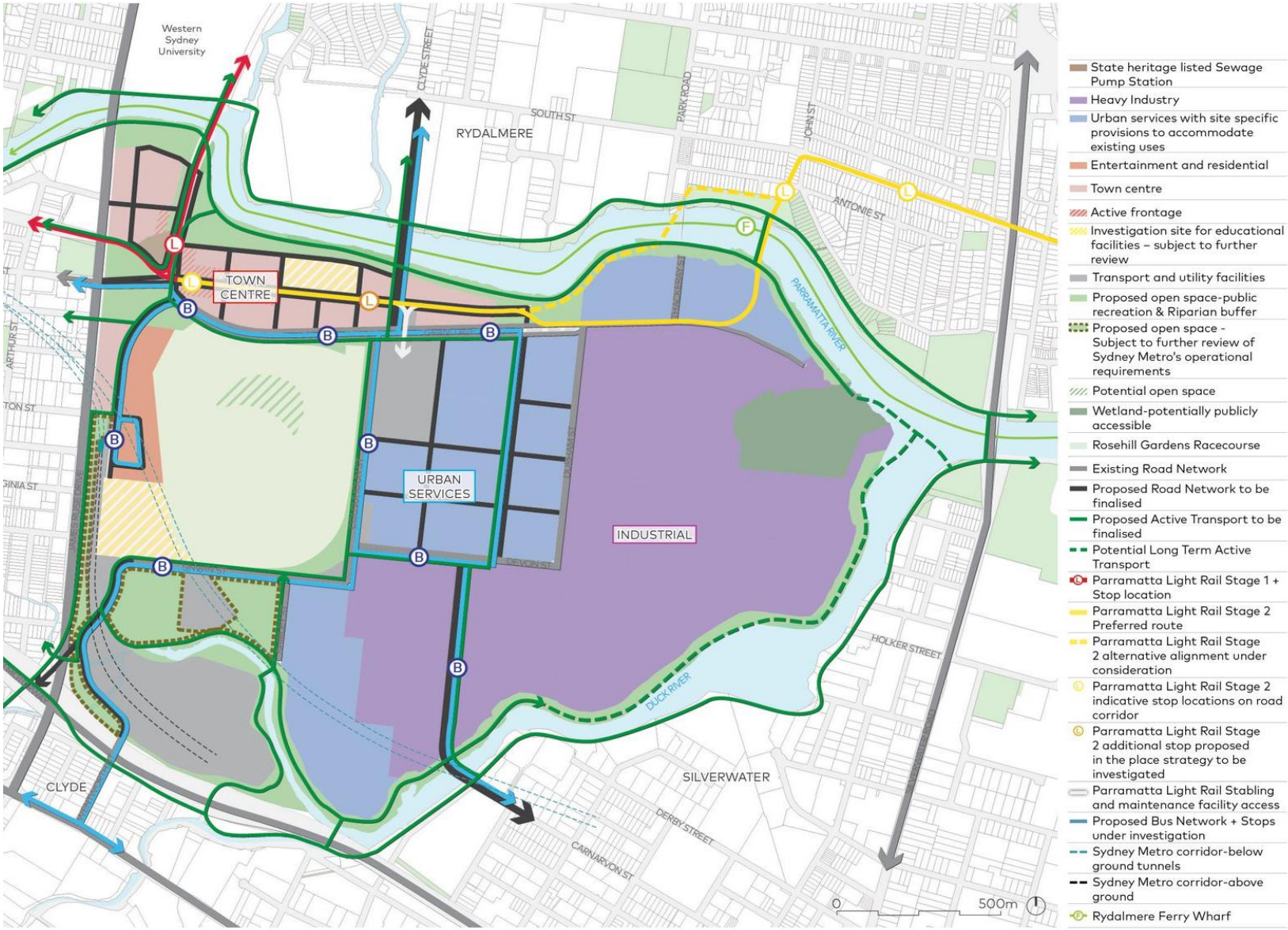
2.2 The Camellia-Rosehill Master Plan

The Master Plan is shown in Figure 2 and forms the basis of the Place Strategy.

Key features of the Master Plan include:

- Provision for approximately 10,000 dwellings within a Town Centre serviced by light rail
- Provision for approximately 15,400 jobs
- A new primary school and primary and secondary high school
- District open space facilities
- Introduction of a new entertainment precinct and an urban services area
- Initiatives to Care for Country and continued protection of heritage listed sites

- Retention of the existing state heritage sewerage pumping station (SPS) 067 within the town centre
- Measures to mitigate land use conflicts and risks including regulatory buffers and setbacks from existing fuel pipelines and between the existing sewerage pumping station and future surrounding residential uses
- Access to the Parramatta River, Duck River and Duck Creek foreshores and potentially the wetland
- New transport infrastructure including a local road network, potential bus services, additional connections into and out of the Precinct, and opportunities to integrate with Parramatta Light Rail (PLR) Stage 2
- An extensive active transport network
- A comprehensive remediation strategy
- A sustainability strategy and integrated water cycle management strategy.



Source: Camellia-Rosehill Place Strategy, Cox 2022

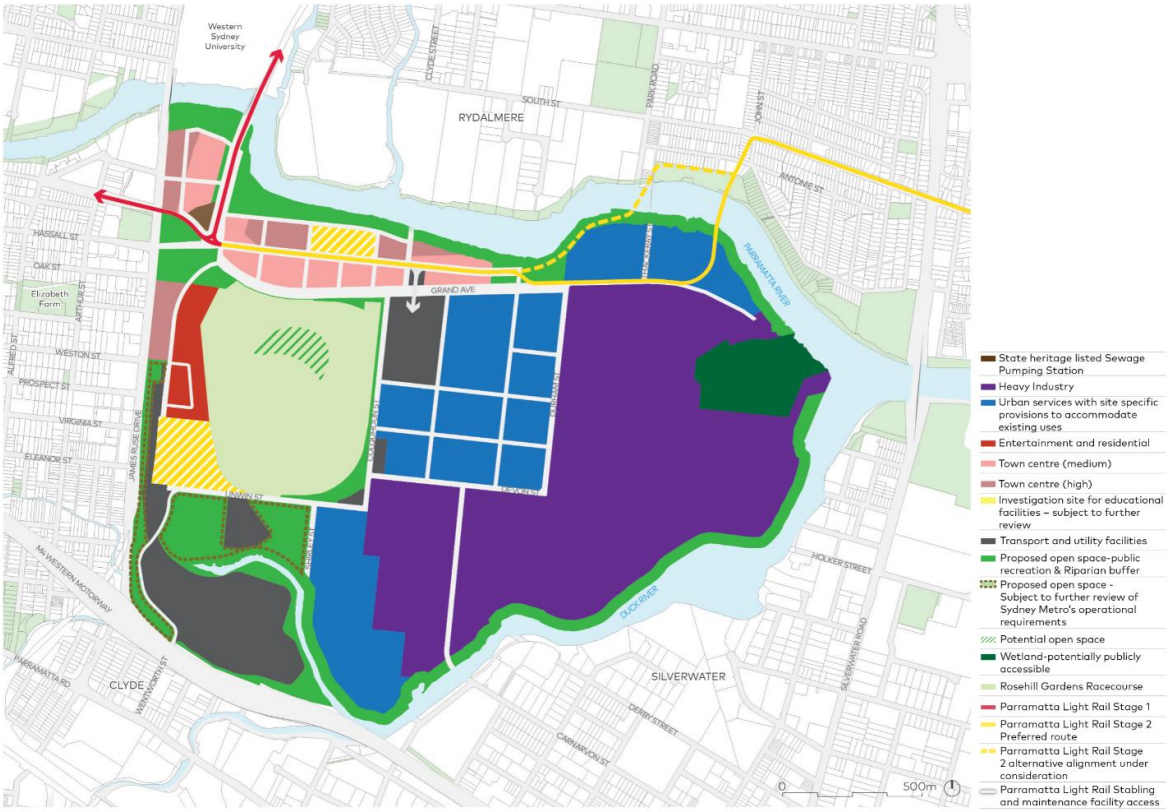
Figure 2 Camellia-Rosehill Master Plan

Land use

Figure 3 provides the proposed land uses within the Precinct. Residential and mixed-use development is concentrated in the north-western section. The central, southern, and eastern areas are proposed to continue to be industrial and urban employment areas.

Other uses include primary and secondary schools, a multipurpose facility of a minimum 4,300m^2 located in the Town Centre, and areas for open space and recreation purposes.

Figure 4 shows the proposed estimated land use metrics for the Precinct.



Source: Camellia-Rosehill Place Strategy, Cox 2022

Figure 3 Camellia-Rosehill Master Plan - Land Use

	Area	Efficiency	HOB (storeys)	HOB (m)	Mix Resi	Mix Retail/Com	Dwelling: GFA	Emp (X:GFA)	Dwellings (90sqm)	Population (@2.4ppd)	Jobs
State heritage listed Sewage Pump Station	5,125	-	-	-	-	-	-	-	-	-	-
Heavy Industry	1,061,335	100%	4	16	-	-	-	-	-	-	2,653
Urban services with site specificprovisions to ac	580,517	100%	4	20	-	-	-	80	-	-	10,885
Entertainment and residential	51,697	95%	8-12	36	80%	20%	90	80	1,746	4,191	491
Town centre (medium)	98,773	95%	12-24	80	95%	5%	90	35	4,457	10,697	603
Town centre (high)	69,094	95%	24-40	130	95%	5%	90	35	3,811	9,146	516
Investigation site for educationalfacilities – subje	20,198	100%	-	-	-	-	-	-	-	-	100
Investigation site for educationalfacilities – subje	56,100	100%	-	-	-	-	-	-	-	-	200
Transport and utility facilities	282,941	-	-	-	-	-	-	-	-	-	-
Open space-public recreation & Riparian Buffer	449,894	-	-	-	-	-	-	-	-	-	-
Riparian buffer (viva energy)	61,241	-	-	-	-	-	-	-	-	-	-
Wetland-potentially publicly accessible	98,714	-	-	-	-	-	-	-	-	-	-
Potential open space	26,264	-	-	-	-	-	-	-	-	-	-
Rosehill Gardens Racecourse	372,417	-	-	-	-	-	-	-	-	-	-
Waterways	306,537	-	-	-	-	-	-	-	-	-	-
Total	**3,540,847**								**10,014**	**24,034**	**15,448**

Source: Camellia-Rosehill Place Strategy, Cox 2022

Figure 4 Camellia-Rosehill Master Plan land use metrics

The Master Plan is anticipated to result in:

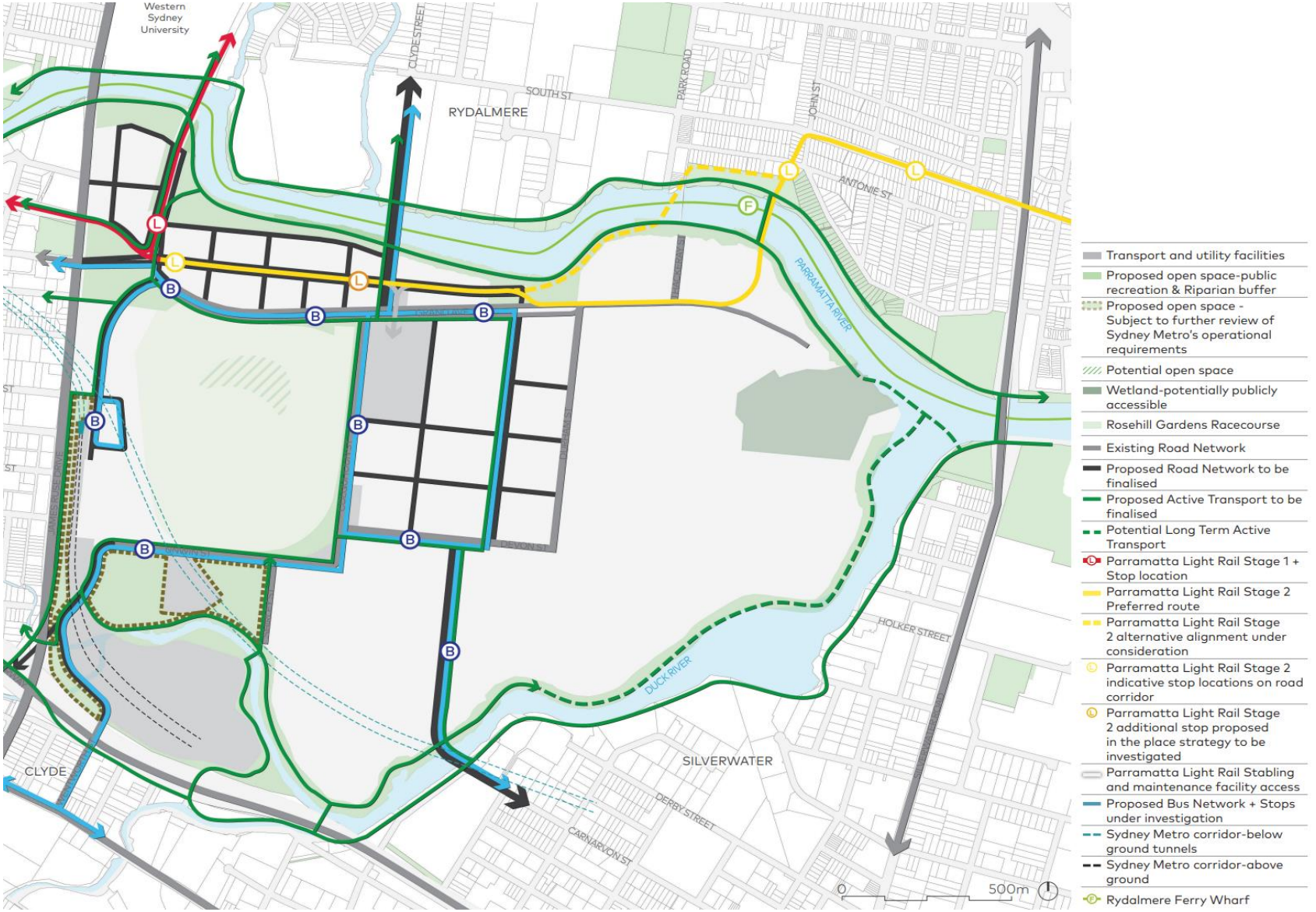
- 10,014 dwellings with a mix of dwelling typologies
- 24,000 new residents
- 15,400 new jobs.

This development demand has informed the infrastructure planning for the Precinct Master Plan.

2.3 Supporting infrastructure overview

Access for vehicles and people

A summary of the proposed transport infrastructure to meet the needs of the development anticipated in the Precinct Master Plan is shown in Figure 5.



Source: Camellia-Rosehill Place Strategy, Cox 2022

Figure 5 Camellia-Rosehill Master Plan - Movement and Access

The works include:

- New road bridge crossings for vehicles providing new access to the north and south-east of the Precinct
- New active transport bridge crossings
- New active transport paths internal to Camellia
- New internal local roads
- Widening of some internal roads
- Upgrades to intersections and roads external to the Precinct.

Public transport requirements are centred on the new PLR station at Camellia that provides future connection to Parramatta and Westmead to the west, Melrose Park and Wentworth Point to the east and Carlingford to the north. Additional public transport options would include improved bus services. None of the public transport options are included in this funding and delivery strategy, as it is assumed that their cost will be met by State budget allocations.

The provision of cycleways and shared paths focus on closing the gaps in the network both inside and beyond the Precinct. They will also improve connection to open spaces and alternative routes to the Parramatta CBD.

Open space and recreation infrastructure

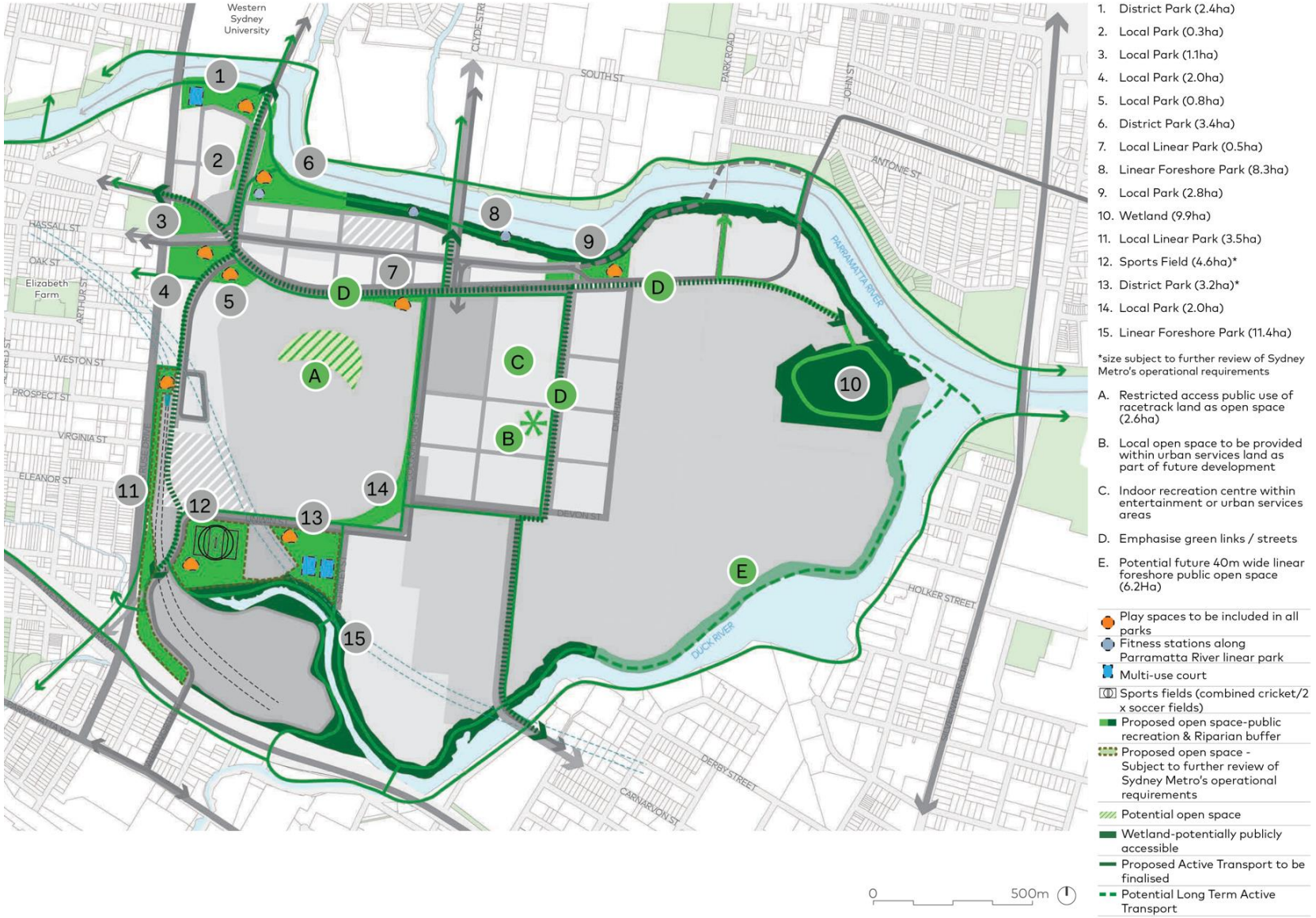
A summary of the proposed open space and recreation infrastructure to meet the needs of the development anticipated is listed below and shown in Figure 6:

- New district parks
- New local open space
- Linear park/riparian corridor along part of Parramatta River and Duck Creek
- Access to the existing wetlands
- New sportsfields provision to support resident growth
- Play spaces and fitness equipment
- Future potential open spaces
- Potential indoor recreation courts.

Social and community infrastructure

A summary of the proposed social infrastructure to meet the needs of the development anticipated is listed below and partly shown in Figure 6:

- 4,300 sqm for a multipurpose community facility (community, cultural and library) within the Town Centre
- Childcare Services
- Out of School Hours Care services (potentially located within the proposed public school)
- Public primary school
- Combined primary and secondary school.



Source: Camellia-Rosehill Place Strategy, Cox 2022

Figure 6 Camellia-Rosehill Master Plan - Community and Open Space Infrastructure

Green infrastructure

Green infrastructure is the network of green spaces, natural systems and semi-natural systems that supports sustainable communities and includes waterways; bushland; tree canopy and green ground cover; parks, and open spaces that includes parks; and open spaces that are strategically planned, designed and managed to support a good quality of life in the urban environment (Greener Places: An Urban Green Infrastructure Design Framework GANSW 2020).

This type of infrastructure can be provided by government or developer. The delivery of items such as alternative parking options need to be incentivised through development controls or can also be achieved through 'key sites' provisions in a future Local Environmental Plan (LEP) instrument.

Affordable housing

The Place Strategy provides for a minimum of 5% of affordable housing. The mechanisms to be used for this outcome are yet to be resolved. This could include:

- In-kind dedication
- A sale to a community housing provider (CHP) with a 10-year restriction (i.e., must be used for affordable housing during this period)
- A sale to a CHP with a restriction to be used as affordable housing in perpetuity.

Utilities

Utilities are provided by utility service providers. It is possible for developers to have an agreement with a utility provider to deliver infrastructure on their behalf.

2.4 Risks to the timely delivery of infrastructure

Development viability impacts on infrastructure provision

Developers of land are likely to emphasise that the viability of redevelopment should or must be benchmarked against today's economic conditions. This has implications for determining the 'capacity to pay' level of developer contributions, and how much development is needed on a key site in order for the site to accommodate infrastructure.

The place strategy is based on changes and developments set to occur over many years. Just because a particular development does not meet viability thresholds today does not mean it will always be so. Viability results will eventually reach benchmarks if sales income outstrips development costs. This may not be right now, but may be feasible in 5 or 10 years time. In the context of a plan taking twenty or more years to implement, it is reasonable to consider the temporal aspect of development viability.

Remediation method impacts development and infrastructure staging

Contamination of land in the Precinct requires careful consideration when the Master Plan proposes the transition to more sensitive land uses (residential and social). The remediation costs of land should include the initial clean-up of the site areas and the ongoing management and maintenance costs of the areas into the future. Further, any land proposed to be dedicated to Council would be subject to discussions and agreement with Council.

A remediation strategy has been developed to support the place strategy and includes indicative cost estimates. The strategy sets out a precinct-wide approach to minimising contamination disturbance and

generation of waste, while considering opportunities for a precinct-wide approach for groundwater remediation. The remediation assumed in the estimate of costs in this plan for publicly accessible areas like the foreshore linear park, public open space and public facilities spaces assumes the strategy approach above. Should the precinct-wide approach not be followed, then there is potential for increased remediation costs.

Development contributions opportunities limited to areas being developed

An important limitation on the delivery of infrastructure is that the opportunity to receive either contributions funds or works-in-kind relies on development occurring. The contributions that may be collected to deliver infrastructure items, is limited because development is delayed or does not happen as expected.

In the case of local contributions, the Precinct has been identified for both residential and non-residential development. While there is considerable short to medium term interest for residential development, new industrial and innovation development is likely to occur once Precinct vehicle access to the external arterial network is improved. The capture of development contributions from industrial and non-residential development is uncertain. Industrial lands within the Precinct may have existing use rights that allow for future redevelopment without a proportional increase in demand. Or, intensification of land use may occur through, for example, use of external hard paved areas for freight storage without any floor space increase. That is, the sites are being underused currently because of vehicle access limitations. Therefore, redevelopment of the sites may not incur the payment of development contributions (i.e. local contributions are usually based on net increase in floor space or jobs). It means that the recoupment (through contributions) of costs incurred by forward funding of infrastructure projects may be substantially limited to residential projects.

Regional and state contributions will be collected for all new development within the Precinct irrespective of the demand that is created, including changes of use of land. There is also an option for a Transport Project Contribution to help fund the PLR project.

Consequently, a special rate levy on all the lands within the Precinct may be a more reliable source of long-term income for the potential recoupment of local and regional works that may be provided by forward funding by local and state government. More detail on special rates is provided in section 3.4.

A related risk is that income via contributions will fall short of the target if only a portion of the development potential provided in the place strategy is taken up. For example, this plan assumes 100% of development potential will be taken up, whereas there may be much less, such as 50-60% take-up over 20 years.

The provision of social or open space infrastructure located on privately owned lands is contingent on the development of those lands. Where development is delayed longer than expected, important infrastructure such as open space or schools may require compulsory acquisition by government to achieve important community outcomes.

3 Infrastructure funding and delivery mechanisms

New or augmented infrastructure that is needed to support the growth of urban redevelopment areas in a built-up urban context with numerous landowners - such as Camellia-Rosehill - is provided through several mechanisms.

Potential mechanisms that might be used to deliver infrastructure are shown in Table 1. It summarises contributions and other planning system mechanisms that are available to deliver infrastructure that is linked to development growth.

Blue highlighted mechanisms are discussed more fully in sections 3.1 to 3.4. Potential application of these mechanisms to individual infrastructure items is discussed in section 3.5.

Table 1 Potential infrastructure funding and delivery mechanisms

Mechanism	Brief description of mechanism	Potential for use at Camellia-Rosehill
Planning system mechanisms		
Direct developer provision through planning controls	The developer is required to provide, replace or upgrade infrastructure as a condition on a development consent. The works are usually required directly as a result of the development works. For example: in-street drainage and upgrades of street adjoining development.	High
S7.11 contributions	A contribution of money or land imposed as a condition on a development consent or complying development certificate. The contribution cannot be more than an amount that reflects the relationship (or nexus) between the particular development and the infrastructure the subject of the contribution.	High Section 3.1
S7.12 levies	Fixed rate levy imposed as a condition on a development consent or complying development certificate. Maximum levy rate is set by regulation and is generally 1% of development cost. Can be applied instead of a s7.11 contribution.	High Section 3.1
S7.24 Special Infrastructure Contributions (SICs)	Contribution of money or land imposed as a condition on a development consent or complying development certificate to be applied toward the provision of public infrastructure determined by the Minister for Planning. (Note: draft legislation has been prepared for SICs to be phased out and regional infrastructure contributions (or RICs) to replace them – see section 3.2)	High Section 3.2
Planning agreements (State and Local)	An agreement voluntarily negotiated between a developer and the one or more planning authorities in which the developer commits to providing contributions of land, works or money for public purposes.	High
Key sites provisions in an LEP	An arrangement where a developer provides infrastructure on or adjacent the development site that has a broader public benefit, in exchange for the right to develop the site for alternative and/or more intense land use. The contributions are formalised through a planning agreement.	High Section 3.3

Mechanism	Brief description of mechanism	Potential for use at Camellia-Rosehill
Other mechanisms		
Council General fund	Ordinary rates revenue that is collected by the council on an annual basis to fund the operations of the council. The use of general funds to fund infrastructure needs to be agreed and endorsed by Council.	Low
Special rate variation (LGA)	Additional council rates pursuant to sections 508 and 508A of the Local Government Act 1993 for works or services that will service the LGA. An application is required to be made and approved by Independent Pricing and Regulatory Tribunal (IPART). The use of special rate variations need to be agreed and endorsed by the local council.	Medium
Local area special rate	Additional council rates pursuant to section 495 of the Local Government Act 1993 for works or services limited to a specific area (e.g. land release or suburb) that will benefit from the proposed infrastructure. An application is required to be made and approved by IPART. The use of special rate variations need to be agreed and endorsed by the local council.	High Section 3.4
Subsidised borrowing schemes	Low cost loan financing offered by the NSW Government (e.g. Low- Cost Loans Initiative, LCLI). All councils are eligible to apply for a maximum loan period of 10 years. Programs tend to support 'enabling infrastructure' that may include community facilities, parks and playing fields. This mechanism depends on the NSW Government continuation of the scheme over time.	Low
Non council providers of similar service	Facilities and services that have been traditionally provided by councils but are also provided by other organisations. Examples include childcare centres (increasingly provided by for-profit companies), indoor recreation centres (increasingly provided by registered clubs and Non-Government Organisations (NGOs) such as Police and Community Youth Clubs (PCYC)).	Medium
Proceeds from asset sales	Sale of publicly owned assets (usually land e.g. depots) that are surplus to needs or are otherwise redundant and are no longer required.	Low
Redevelopment of State Government land	Opportunities to have infrastructure, facilities, affordable housing or other public benefits incorporated into the redevelopment of State-owned land that is surplus to agency needs.	Low
State and Commonwealth Government grants	Funds that are available for the provision of infrastructure via an application process. Most schemes require co-funding/cash contribution for projects. Projects without co-funding tend to score lower against the merit criteria. Current examples of State government grant program targeted at funding enabling infrastructure are the Housing Acceleration Fund and the Accelerated Infrastructure Fund.	Medium
State Budget allocations	Amounts allocated from NSW government consolidated revenue. Specific works would normally need to progress thought a Business Case process prior to a budget allocation being made.	High

Mechanism	Brief description of mechanism	Potential for use at Camellia-Rosehill
User fees and charges	One-off and recurrent payments made by users of a facility or service, such as connection and usage fees charged by utility authorities for utility services	High

3.1 Local infrastructure contributions

The primary funding and delivery mechanism available to councils to fund local infrastructure is local infrastructure contributions (s7.11 or s7.12 contributions).

Typical infrastructure items that may be part or fully funded (depending on the population growth) includes:

- local road improvements, pedestrian crossings, and cycleways
- local and district park upgrades
- local and district community facilities upgrades and expansions
- public domain works including footpath widening and street tree planting (where it is not fronting new development works)
- recreation and sport facilities including courts, swim centres, sportsfields
- trunk stormwater drainage facilities.

Under the current planning framework, councils can impose contributions, but are restricted on the amount of contributions imposed on a residential development. For section 7.11, the current State government policy is that unless a contributions plan has been reviewed by the Independent Pricing and Regulatory Tribunal (IPART), the maximum amount applying to residential development in infill areas is $20,000 per dwelling or lot. Presently no corresponding limit applies to contributions imposed on non-residential development.

The IPART review process is extensive and the infrastructure in a plan must be on the 'essential works' list to be funded by developer contributions. Essential works do not currently include community buildings, indoor sports centres and streetscape works not linked to traffic improvements. These are all works proposed in the Camellia-Rosehill master plan.

Alternatively, a section 7.12 plan may be applied to development. The contribution levy is restricted to a maximum of 1% of the cost of development in most circumstances, although higher maximum percentage rates up to 4% have been allowed by regulation for residential and commercial development.[5]

Assuming a rate of 1% of development cost the contributions that could potentially be exacted from development for the provision of infrastructure under a section 7.12 plan is usually less than contributions received from section 7.11. This is reflected in Council's recent repeal of the existing section 7.12 plan and adoption of a section 7.11 plan for all the areas outside of the Parramatta Central Business District (CBD) which includes Camellia-Rosehill.

[5] Applies at Burwood Town Centre, but does not apply to industrial lands.

To understand the type of income that could be expected from local infrastructure contributions GLN has applied the following section 7.11 contribution rates that apply to the land, taken from the City of Parramatta (Outside of CBD) Plan 2021:

- $20,000 per dwelling
- $3,000 per worker.

Additional contributions, of potentially up to $50 million[6] may be achievable with an alternative precinct specific contribution rate for employment lands.

3.2 Infrastructure contributions reforms

In November 2020, the NSW Productivity Commission completed its Final Report on the Review of the NSW Infrastructure Contributions System.

In March 2021 the State Government accepted all 29 recommendations of the review. Of the recommendations identified by Productivity Commission Review, the following are of special interest in Camellia-Rosehill:

- Recommendation 4.6: contributions plans reflect development-contingent costs only (including applying the essential works list to all section 7.11 contributions plans)
- Recommendation 5.1: adopt Regional Infrastructure Contributions (or RICs)
- Recommendation 5.3: Adopt transport contributions for major projects.

At the time of writing the detail of all the reforms is yet to be revealed. Nevertheless, we make the following observations that are likely to impact on the scope of both State and local contributions to fund infrastructure in the Precinct:

Impacts on local contributions

- It is proposed that s7.12 contributions will be based on a standard dollar rate instead of a percentage rate on the cost of development. The standard dollar rate for each dwelling in the Central City (which covers the study area) is proposed to be $12,000 per dwelling. Rates per square metre of non-residential floor area are $40 per square metre for commercial space, $35 per square metre for retail space, and $25 per square metre for industrial space.
- Minor changes to the 'essential works list' (EWL) are proposed by IPART. Items added to the EWL are strata space for community facilities and borrowing costs to forward fund infrastructure. Important social infrastructure like indoor recreation facilities, community, and library facilities (if not in strata space within a building) remain non-essential. These works have been identified for delivery in the Precinct.
- A Productivity Commission recommendation that all s7.11 contributions plans (regardless of whether they contain residential rates below the $20,000 per dwelling cap) only include items on the EWL, has been shelved. The current arrangements in respect to the essential works list applying only to IPART-reviewed plans with rates above the cap will continue until at least 2025.

Impacts on State and regional contributions

[6] This figure is an estimate based on an employment rate of $6000 per worker in Camellia-Rosehill.

A new Regional Infrastructure Contribution (RIC) Framework is proposed to replace the existing Special Infrastructure Contributions (SIC) framework, providing a simpler, more strategic and consistent approach to funding state and regional infrastructure. The RIC (Base Contribution) is a standard broad-based charge applying to residential, industrial, commercial and retail development.

The Precinct is located in the Greater Sydney RIC region. The base RIC rates applicable to the Precinct are:

- $10,000 per residential unit
- $15 per m^2 of new gross floor area for industrial development
- $30 per m^2 of new gross floor area for commercial or retail uses.

Similar to other infrastructure contributions frameworks, the RIC is proposed as a developer contribution supplementing infrastructure funding through other budget processes. Based on the proposed development yield of the Precinct there is potential to collect approximately $115 million in contributions. This will then form part of the overall RIC investment program, which is expected to generate approximately $700 million per annum across the Greater Sydney Region.

The RIC Framework includes a new approach to strategic planning and infrastructure planning. A RIC Fund will be established and incorporated into new infrastructure planning, delivery, and budgeting mechanisms. This will ensure state agencies align new infrastructure with potential new growth. Eligible infrastructure identified for the Precinct will be delivered through this program, and other State funding mechanisms, forming part of the prioritisation process for growth infrastructure in the Greater Sydney region.

In addition to the base contribution, the RIC includes a Transport Project Component (TPC), that can also apply to new development within a specified service catchment of a major transport project. It aims to ensure that developers contribute towards the cost of major transport infrastructure that results in a significant uplift in their property values. While this opportunity exists in Camellia-Rosehill to support the delivery of the PLR project, further work is required to determine the service catchment and contribution rate and whether it will be applied.

3.3 Key sites planning provisions

'Key sites' planning provisions are included in an environmental planning instrument such as a LEP that allow developers of key sites to deliver infrastructure - works in-kind, or via land dedication - in exchange for approval to develop the land for alternative use or, at a greater intensity, or both.

For example:

- a planning instrument may allow additional floor space or building height on a site if the developer provides open space, community facilities, through site links, or other specified public benefits
- a planning instrument may allow land that is currently zoned for industrial purposes to be allowed to be developed for residential purposes, subject to the developer of that land providing infrastructure / public benefits specified for that land in the LEP.

A planning agreement(s) providing the detail around the specification and timing of infrastructure provision would be negotiated between the developer and the relevant planning authority as part of the process.

Figure 7 over page shows how a key sites infrastructure delivery approach could work in helping to deliver Camellia-Rosehill infrastructure.

The key sites approach has been used extensively and effectively by the City of Sydney Council, which has included provisions in the Sydney LEP 2012[7] that give the opportunity for developers of the key site to directly provide community infrastructure in exchange for approval to develop the land in excess of the prevailing building height and floor space controls.

A more recent example of key sites being part of a comprehensive approach to the delivery of infrastructure can also be found in the Lane Cove LEP 2009[8] provisions applying to the St Leonards South redevelopment area.

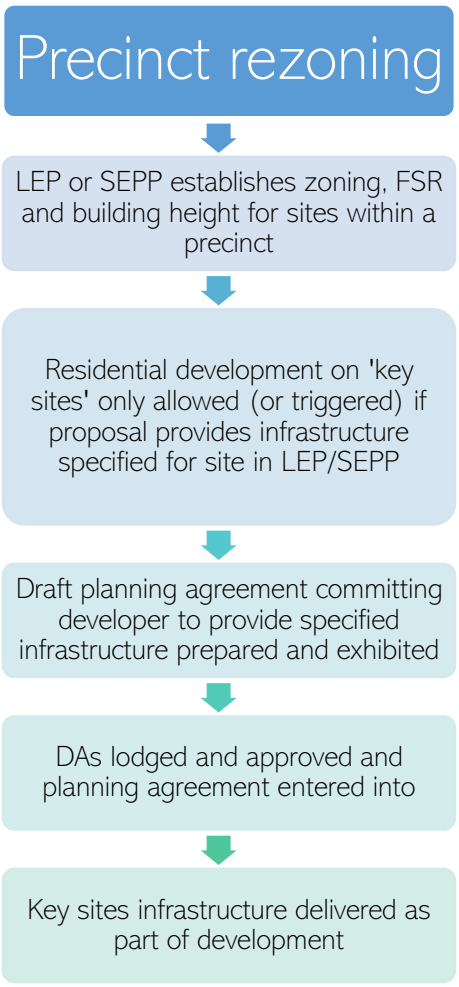


Figure 7 Key Sites process

Key sites provisions could be used in the redevelopment of sites in the Precinct to provide growth -related infrastructure, particularly social infrastructure. Opportunities include:

[7] Sydney LEP 2012 permits for provision of amenities in exchange for additional floor space on either key sites or throughout a wider area such as Green Square Town Centre.

[8] Lane Cove LEP 2009 permits for provision of community facilities, open space, pedestrian links and roads in exchange for floor space within the St Leonards South area.

- Development sites require substantial land contamination remediation. Developers could be required to remediate their entire landholding, thus creating a 'clean' portion of the site to accommodate required social infrastructure.
- Land holdings are reasonably large, providing the potential for single developers to absorb the cost of whole infrastructure items on their site (in exchange for an increase in development rights of a scale that will cover the extra infrastructure costs).
- Infrastructure provided by this mechanism means that the infrastructure does not need to be included in a contributions plan.
- Facilities that have a broader public benefit - such as open space and community facilities than the development site - can be provided in conjunction with development and potentially sooner than if they had to be provided through contributions from a number of developments.
- Having the developer provide the facility in theory removes the financial risk of council having to provide that facility potentially many years after the development, using the less predictable local contributions funding stream.

A key site may, but not necessarily, align with existing land ownership boundaries. There is nothing to prevent a key site being a consolidation of parcels owned by multiple entities.

The infrastructure provided using key sites provisions are usually additional to mandatory section 7.11 / 7.12 contributions that are authorised to be imposed on the development under Council's contributions plans. This necessarily means that the developer of a key site is subject to a greater infrastructure burden than a developer of a site that is not a key site. For the key sites approach to work, it must be based on an assessment that verifies that the key site can be feasibly developed while absorbing the extra infrastructure costs.

The developers of residential accommodation can be incentivised (through sufficient development yield) to deliver social, open space and recreation infrastructure. The proposed high density mixed-use residential area in the north-west part of the Camellia-Rosehill Place Strategy area has high potential for the key sites approach.

Table 2 and associated maps on the following page show the potential key sites and the infrastructure items can be linked to residential development on the sites.

For the purposes of this IDP, the cost estimate for potential 'key sites' infrastructure is assumed to be approximately $247 million.

Table 2 Key sites and potential associated infrastructure

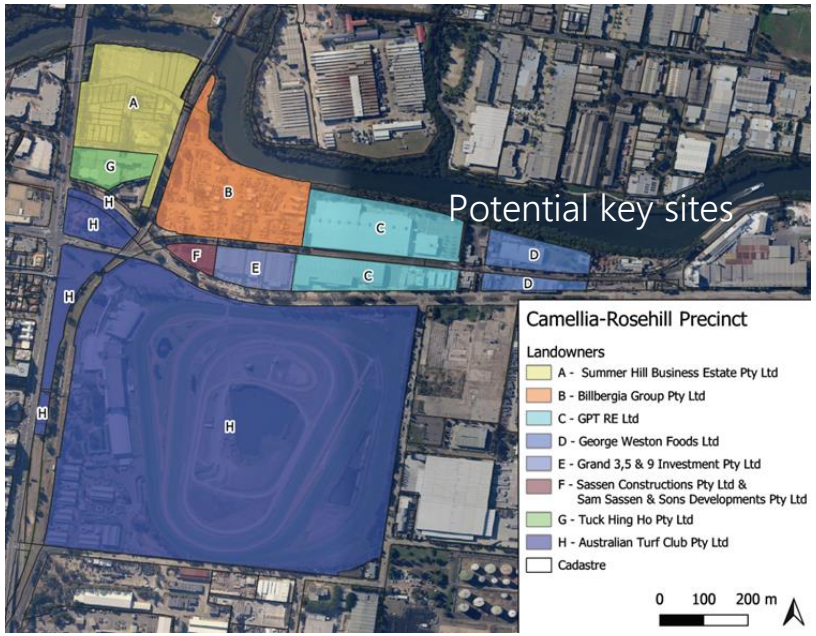
Infrastructure map extract ref (bottom right)	Item description	Linked key site (s) (map top right)
2	Multi-purpose community hub (land and works)	Any key site
4	District Park (works only)	A*
5, 7 ,9	Potential local open space (5 & 7 land and works, 9 works only)	H
X14	Foreshore/riparian park (Parramatta River frontage land and works)**	A , B, C and D
27	Active transport works (Key sites frontage Parramatta River)	A, B, C and D
TBD	Indoor recreation – courts (land and works)	Any key site

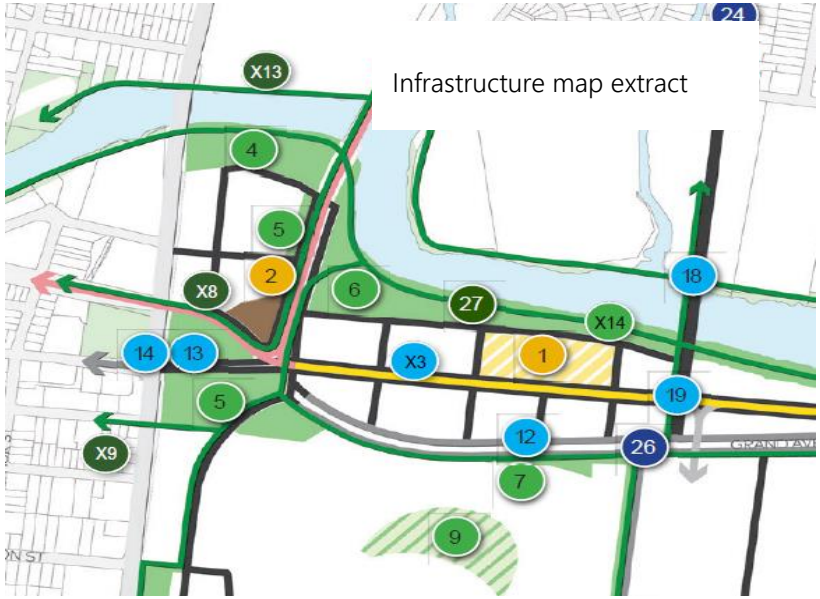
All land assumed to be remediated and dedicated in a state that is fit for purpose

* Subject to further review of covenants on site

** land for foreshore /riparian park is assumed to be provided as a condition of development consent (except for site A); works on land regarded as potential infrastructure provided by key sites

Note: The maps show indicative opportunities for provision of infrastructure via the key sites mechanism. The location, extent and cost of infrastructure, together with the development potential proposed to be available on potential key sites, needs to be investigated using feasibility analysis to ensure development is feasible.





3.4 Special rates and levies

Partnerships between Local and State Government

The *Local Government Amendment Act 2021* proposes to allow changes to the making and levying of special rates. The change is to allow a special rate to be levied for 'intergovernmental projects'. This is where works, services or facilities are to be undertaken as a joint venture between local government and one or more government entity. This change would allow councils to partner with the State Government for the delivery of external infrastructure to the Camellia–Rosehill Precinct such as traffic upgrades and bridges. The costs of the project would be split between the government entities.

Local area special rate and low-cost loan financing

A special rate imposed on certain LGA properties (i.e., the properties in the Precinct) would provide a funding mechanism by which a council can hypothecate revenue from the rateable properties in an area for the infrastructure needs, thereby eliminating, or at least reducing, any unnecessary burden on the broader community. The special rate is levied on all properties within an identified area that would benefit from the infrastructure to be provided, regardless, of whether properties within the area are further developed or not.

Special rates must be made pursuant to section 495 of the Local Government Act. They may be levied for works or services provided or proposed to be provided by a council which includes growth infrastructure for urban release or renewal areas. Such rates should not be levied on properties that will not benefit from the purpose for which the funds are collected. In this case, it is reasonable to levy all properties within the Precinct benefit from any infrastructure works that improve access, circulation, and connectivity.

An example of a special rate approved by the Minister for Local Government in 2006, continues to be in operation in the City of Ryde.[9] It is levied to all properties within the Macquarie Park Corridor precinct. The funds are used to implement a master plan developed to respond to the change of the Precinct into an urban centre. Income provides public domain works, road improvements and cycleways. The levy has raised approximately $17.5 million since commencement.

3.5 Linking Camellia-Rosehill infrastructure to delivery mechanisms

A summary of the opportunities for the various delivery mechanisms to fund infrastructure in Camellia-Rosehill is shown in Table 3 over page.

[9] More detail is available in City of Ryde Delivery Program, page 96

Table 3 Summary of potential funding and delivery mechanisms

	Site /shared within Precinct /shared external to Precinct	Responsibility	Contributions mechanism(s) opportunities	Developer delivery opportunities		
				Works condition of consent	In kind RIC or LIC contribution offsets	Key sites LEP provisions (VPA) [a]
Transport infrastructure						
PLR (Stage 2)		State	RIC (potential)	N/A	N/A	
Roads connecting to surrounding arterial network	Site / Precinct	Developer / Council	LIC / Special rate	Yes	Yes	
New bridge crossings for vehicles	Precinct	Council	LIC / Special rate		Yes	
New bridge crossings active transport only	Precinct / External	Council / State	RIC[b] / LIC / Special rate		Yes	
Additional internal roads	Site / Precinct	Developer	-	Yes		
Widening of internal roads	Site / Precinct	Council / State	LIC	Yes	Yes	
New internal active transport paths	Precinct	Council / State/ Developer	RIC[b] / LIC	Yes	Yes	
New active transport paths outside precinct	External	Council / State	RIC[b]		Yes	
External road and intersection upgrades	External	Council / State	RIC[b] / Special rate		Yes	
Public transport infrastructure and services (light rail, bus)	External	State	RIC			
Utilities						
All utilities required for the precinct	Precinct	Utility providers/ Developer	User charges	Yes		
Recycled Water connection	Precinct	Developer /Sydney Water / Council		Yes		

LIC = Local infrastructure contributions; RIC = Regional infrastructure Contribution
a Operates as an alternative to, or additional to State and local contributions
b Where the link provides regional connectivity

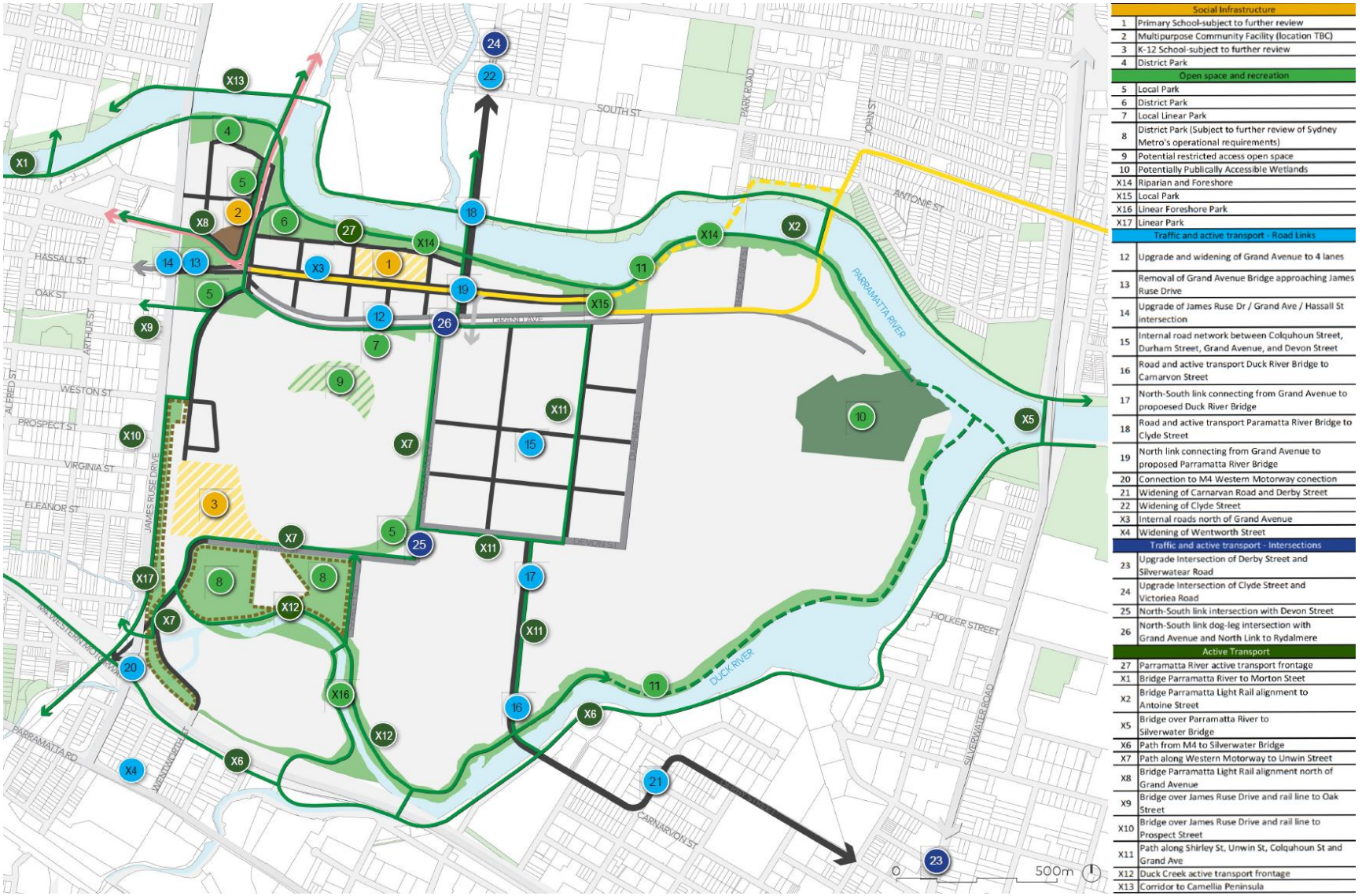
	Site /shared within Precinct /shared external to Precinct	Responsibility	Contributions mechanism(s) opportunities	Developer delivery opportunities		
				Works condition of consent	In kind RIC or LIC contribution offsets	Key sites LEP provisions (VPA) [a]
Social Infrastructure						
Multipurpose community hub	Precinct	Council / Developer	LIC/ Developer		Yes	Yes
Childcare LDC /OHSC	Precinct	Private	-			Yes
Primary School	Precinct	State	RIC			
Combined Primary and High School	Precinct	State	RIC			
Open space and recreation						
District Parks	Precinct	Council / Developer	LIC / Developer		Yes	
Local Open Space	Precinct	Council / Developer	LIC / Developer		Yes	Yes
Active Recreation	Precinct	Council / Developer	LIC		Yes	
Potential Open Space	Precinct	Private		Yes		Yes
40m wide Foreshore / Riparian (South - Duck River frontage)	Precinct	Council / Developer	RIC / LIC / Developer	Yes	Yes	
40m wide Foreshore / Riparian (North - Parramatta River frontage)	Precinct	State / Developer	RIC / LIC / Developer	Yes		
Indoor recreation centre - 4 multi-purpose courts	Precinct	Council / Developer	LIC / Developer		Yes	Yes

LIC = Local infrastructure contributions; RIC = Regional infrastructure Contribution
a Operates as an alternative to, or additional to State and local contributions
b Where the link provides regional connectivity

4 Infrastructure delivery plan

4.1 Infrastructure map and schedule

Figure 8 shows the location of the proposed infrastructure to meet the development vision for the Precinct.



	Social Infrastructure
1	Primary School-subject to further review
2	Multipurpose Community Facility (location TBC)
3	K-12 School-subject to further review
4	District Park
	Open space and recreation
5	Local Park
6	District Park
7	Local Linear Park
8	District Park (Subject to further review of Sydney Metro's operational requirements)
9	Potential restricted access open space
10	Potentially Publically Accessible Wetlands
X14	Riparian and Foreshore
X15	Local Park
X16	Linear Foreshore Park
X17	Linear Park
	Traffic and active transport - Road Links
12	Upgrade and widening of Grand Avenue to 4 lanes
13	Removal of Grand Avenue Bridge approaching James Ruse Drive
14	Upgrade of James Ruse Dr / Grand Ave / Hassall St intersection
15	Internal road network between Colquhoun Street, Durham Street, Grand Avenue, and Devon Street
16	Road and active transport Duck River Bridge to Carnarvon Street
17	North-South link connecting from Grand Avenue to propoesed Duck River Bridge
18	Road and active transport Paramatta River Bridge to Clyde Street
19	North link connecting from Grand Avenue to proposed Parramatta River Bridge
20	Connection to M4 Western Motorway conection
21	Widening of Carnarvan Road and Derby Street
22	Widening of Clyde Street
X3	Internal roads north of Grand Avenue
X4	Widening of Wentworth Street
	Traffic and active transport - Intersections
23	Upgrade Intersection of Derby Street and Silverwatear Road
24	Upgrade Intersection of Clyde Street and Victoriea Road
25	North-South link intersection with Devon Street
26	North-South link dog-leg intersection with Grand Avenue and North Link to Rydalmere
	Active Transport
27	Parramatta River active transport frontage
X1	Bridge Parramatta River to Morton Steet
X2	Bridge Parramatta Light Rail alignment to Antoine Street
X5	Bridge over Parramatta River to Silverwater Bridge
X6	Path from M4 to Silverwater Bridge
X7	Path along Western Motorway to Unwin Street
X8	Bridge Parramatta Light Rail alignment north of Grand Avenue
X9	Bridge over James Ruse Drive and rail line to Oak Street
X10	Bridge over James Ruse Drive and rail line to Prospect Street
X11	Path along Shirley St, Unwin St, Colquhoun St and Grand Ave
X12	Duck Creek active transport frontage
X13	Corridor to Camellia Peninsula

Source: Camellia-Rosehill Place Strategy, Cox Architecture (June 2022) & GLN Planning

Figure 8 Camellia-Rosehill infrastructure schedule and map

4.2 Infrastructure costs

The estimated capital costs of infrastructure have been derived from several sources including consultant strategies from the Enquiry by Design process, Council and external sources. Appendix A provides a detailed list of the assumptions used to estimate costs, the source documents and unit rates. It also provides works that are excluded.

Table 4 below shows a summary of the estimated infrastructure costs by category.

Table 4 Infrastructure costs summary by category

Infrastructure category	Estimated cost
Roads and intersections	$671,558,665
Active transport	$166,291,284
Utilities - user pays	$46,575,691
Social infrastructure	$318,216,000
Open space and recreation	$430,195,300
Total	$1,632,836,940

4.3 Funding sources and delivery mechanisms

The following mechanisms are considered to have the greatest potential to be applied to deliver the place strategy infrastructure:

- Conditions of development consent to carry out works under section 4.17 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).
- Key sites planning provisions in LEPs
- Local infrastructure contributions (LICs) condition imposed on development consents.
- Planning agreements between developers and local or State government.
- State and regional infrastructure contributions (where the scale the redevelopment is likely to impact on State or regional infrastructure) (i.e., RICs).
- User charges (for example, charges imposed by utility authorities).
- General taxation revenue, including State budget allocations, local council general funds and local land taxation via special rate levies.

The mechanisms would be applied according to the type, scale and location of proposed infrastructure as shown in Table 5.

Table 5 Place Strategy infrastructure types and delivery mechanisms

Infrastructure type(s)	Key features	Mechanisms
Infrastructure to enable individual site development to occur	These are the infrastructure requirements necessary for individual sites to be redeveloped to higher order uses. Site-level needs include: • Access into the site, including new roads that service the development, and potential improvements to existing roads that are necessary to accommodate the proposed growth • All utilities and other infrastructure required to service the particular site, including drainage, where the base/trunk infrastructure is available • Private open space and improvements/upgrades to the public domain fronting the development site such as footpaths, lighting etc.	At the developer's cost via: • Conditions of development consent, • User fees and charges (for utilities). Where a developer provides additional infrastructure to the minimum required, planning agreements can be used.
Shared infrastructure situated within the Precinct	Costs of shared-demand infrastructure in a precinct are typically shared between all the developers of a precinct. Shared-demand infrastructure includes: • district / local open space, • community facilities, • higher order road upgrades that will benefit multiple developments • active transport linkages. Because the need for them is generated by multiple developments they are often items included in a council contributions plan. Developers are required to either make a cash contribution under section 7.11 or s7.12 of the EP&A Act toward the provision of infrastructure or offer (the Council) to provide the works instead of making cash payments. An alternative to conventional contributions is the use of 'Key sites' LEP provisions. This approach identifies specific sites, the development of which is contingent upon the developer providing infrastructure that provides a broader public benefit. Refer section 3.3 for a brief explanation.	Key sites planning provisions in the planning instrument to facilitate direct developer delivery of infrastructure items on particular sites. Where key sites provisions can't be used, then the following are to be imposed on all developments to help fund shared infrastructure LICs and RICs: These mechanisms can be complemented by implementing a Special local area rate on all land owners in the Precinct to ensure existing use beneficiaries meet some of the infrastructure costs. Existing uses are likely to be a feature of future development because of the extra capacity afforded by the proposed new connections to external arterial routes leading to induced heavy vehicle demand. In other words, extra traffic and extra land value will be generated on current industrial sites using their existing approvals or existing use rights.

Infrastructure type(s)	Key features	Mechanisms
Shared Infrastructure items situated external to the Precinct	These infrastructure item costs are typically shared between developers and Government (State and/or Local). In the case of Camellia-Rosehill it includes the major road access upgrades and water crossings that are required to allow the Precinct to be further developed. Vehicle bridge crossings and new or upgraded roads connecting them would serve development in the Precinct and may also meet a broader need (e.g., diversion of arterial road traffic from the surrounding network when it is congested at peak times). This user profile suggests that costs should be shared between existing land owners, developers of land in the Precinct, and by taxpayers .	As for 'Shared infrastructure situated within the Precinct' plus State Budget allocations.

4.4 Funding mix and gap

Table 6 shows that the potential funding and delivery mechanisms have the capacity to fund around $959.4 million in infrastructure, leaving a notional funding gap of $673.4 million. Funding of the gap could be via other mechanisms listed in Table 1, however the source most likely to be able to meet the gap is State Budget allocation of consolidated revenue.

The projected gap is dependent on, among other things, 100% take-up of development potential over 20 years. For example, if the take-up turns out to be much lower, such as 50% of development, reductions in development contributions would increase the gap by as much as $150 million. Other factors could also increase the projected gap. For example, if the special rate is struck at 50% of the assumed $5 million per year, the gap would increase by $50 million.

Table 6 Delivery mechanisms potential funding mix and funding gap

Funding / delivery mechanism	**Estimated income ($m)**
Local Infrastructure Contributions	$246.0
Regional Infrastructure Contributions	$115.6
Key sites infrastructure	$247.5
Conditions of consent	$250.3
Local area special rate*	$100.0
Total funding	$959.4
Total infrastructure costs	$1,632.8
Funding gap	-$673.4

* The special rate is an assumption that has not undertaken the process described in section 4.4.

The potential funding from separate sources shown in Table 6 assumes that RIC funds would be used to fund the regional infrastructure items for the Precinct. Should the RIC funds be used to fund infrastructure like the PLR (assumed to be funded from other sources), then the funding gap will increase.

The breakdown and assumptions informing the different mechanism funding amounts are discussed below.

Conditions of consent

We have assumed that the following infrastructure would be delivered by conditions imposed on development consents – i.e., they would be carried out at the developers' cost and do not include works that would be contained in any council local contributions plan:

- new subdivision roads
- foreshore/riparian corridor open space (remediated)

User fees and charges

User fees and charges are the fees charged by utility providers to service the area. They include connection to electricity, sewer and water. The fees are usually paid by developers of as part of their project works.

Local and regional infrastructure contributions

A summary of potential contributions income is shown in Table 7 below. The estimates are based on:

- RIC rates foreshadowed by the NSW Productivity Commission
- Current LIC (s7.11) rates contained in the recently adopted Parramatta City Council contributions plan.

Table 7 Summary of potential contributions income

Contribution type		Assumed rate	Demand No. or m^2	Contributions
Local	Residential per dwelling	$20,000	10,014	$200,280,000
	Per worker	$3,000	15,248	$45,744,000
			Subtotal Local	$246,024,000
State	Residential per dwelling	$10,000	10,014	$100,140,000
	Industrial	$15/$m^2$	870,800	$13,062,000
	Commercial	$30/$m^2$	39,280	$1,178,400
	Retail	$30/$m^2$	39,165	$1,174,950
			Subtotal State	$115,555,350
			Total	$361,579,350

Key sites

A summary of potential value of land and works that have been assumed could be delivered directly by developers of 'key sites' is shown in Table 8. The location of the key sites is shown in Figure 7.

As discussed in section 3.3, the potential of the key sites mechanism is dependent on the developer of each key site being able to absorb the cost of the infrastructure while still achieving a profitable development.

The feasibility of the linked infrastructure items and the development potential of key sites has not been tested, and so the anticipated $247 million return from the key sites mechanism should be treated with caution. Feasibility testing needs to be undertaken before deciding on key sites and their required infrastructure.

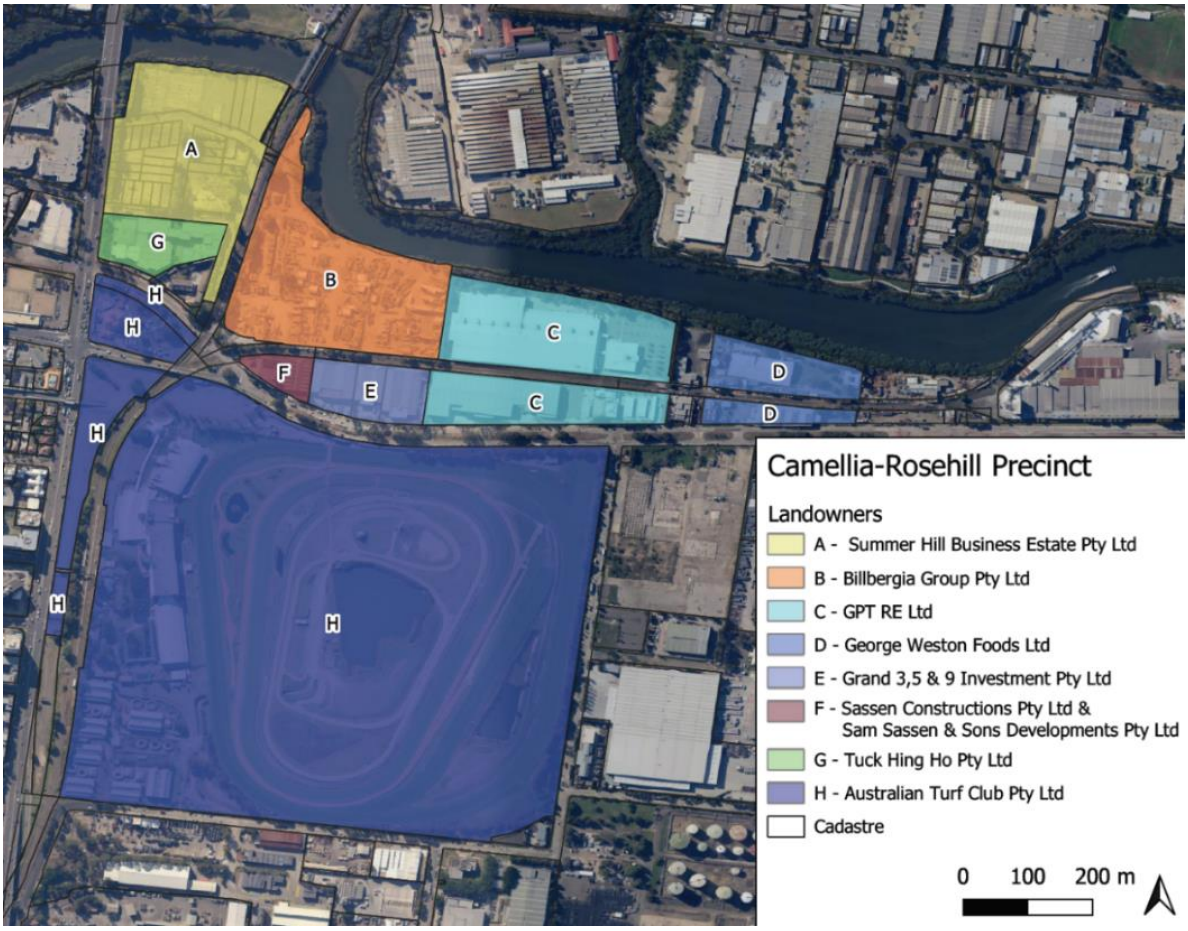
Table 8 Infrastructure items that have the potential to be delivered by key sites

Infrastructure item	Key sites that could accommodate item (refer map in Figure 8)
Multi-purpose community hub (land and works)	Any key site
District Park (works)	A
Potential local open space (land and/or works)	H
Foreshore/riparian park (Parramatta River frontage works)*	A (not land), B, C and D
Active transport works along Parramatta River frontage	A, B, C and D
Indoor recreation – 4 courts (land and works)	Any key site
Total potential estimate	$247.5 million

All land assumed to be remediated and dedicated in a state that is fit for purpose

* land for foreshore/riparian park is assumed to be provided as a condition of development consent; works on land regarded as infrastructure provided by key sites

Note: The maps show indicative opportunities for provision of infrastructure via the key sites mechanism. The location, extent and cost of infrastructure, together with the development potential proposed to be available on potential key sites needs to be investigated using feasibility analysis so that development is feasible.



Source: GLN Planning 2021 (ownership may be subject to change)

Figure 9 Potential key sites

Local area special rate

A special rate applying to key access infrastructure jointly funded by Parramatta City Council and the State Government would be appropriate as it would allow beneficiaries that are not developers sharing in the cost of infrastructure.

The estimated income that could be derived from such a measure is difficult to predict. For the purpose of deriving a proposed funding mix, the special rate levy is assumed to generate $5 million (in today's dollars) per annum over a 20-year timeframe.

The actual amount would be determined after investigating relevant aspects to determine a reasonable levy reflecting the unearned value of the infrastructure program added to land.

The special rate levy study would address matters such as:

(a) Current annual rates paid to Parramatta City Council by the Precinct landowners.

(b) Compare the level of rates imposed on land in Camellia with the rates imposed on land in comparable industrial areas – for example, Silverwater, Smithfield, Wetherill Park, Botany, Enfield.

(c) Determine the particular works and likely timing of the place strategy infrastructure that will significantly improve access for heavy vehicles servicing existing industrial zoned land in the Precinct. This is likely to be the works providing extra external access capacity, such as the M4

ramps to Unwin Street, the southern crossing of Duck River and the northern access across Parramatta River.

(d) Assess the change in land values across the Precinct attributable to each of the external access works, corresponding to the expected timing of delivery, noting that the current restricted / constrained external access effectively limits the intensity of use of industrial zoned land at Camellia.

(e) Assess the likely change in land value with a 'do nothing' option – no new or upgraded external access works.

(f) Determine a suitable special area rate based on the likely value uplift created by access improvements (i.e., the difference over time between (d) and (e)).

This work would then provide the basis for a special rate application to IPART.

4.5 Staging

The purpose of this section is to provide an indicative funding and delivery staging schedule for the development and infrastructure that is anticipated to take place over a 20-year timeframe based on the Master Plan.

General development and infrastructure outcomes are identified for short, medium and long term horizons. These are shown in Table 9.

Table 9 Indicative infrastructure delivery by stage

Timeframe	Infrastructure	Employment uses	Town centre, residential and entertainment precincts
Short term (0 – 5 years)	• PLR stabling yard delivered • PLR Stage 1 operating • PLR Stage 2 preferred route decided and construction commenced* • Planning, design and feasibility of transport initiatives • Planning and design of social infrastructure and open space • Educational facilities**	• Ongoing industrial activity, with growth associated with development applications in the pipeline • Progress development of the entertainment precinct, capitalising on existing entertainment facilities and connections to the Parramatta CBD	• Start of planning and remediation works • Early stage works for unconstrained development sites • Works for open space and community infrastructure to support early stage development

Timeframe	Infrastructure	Employment uses	Town centre, residential and entertainment precincts

Medium term
(5 – 10 years)
	• Sydney Metro West stabling yards delivered
	• PLR Stage 2 delivered*
	• Deliver the initial road network enhancements:
	  ○ Grand Ave/James Ruse Dr intersection upgrade
	  ○ M4 connection
	  ○ Road connections across Parramatta River and Duck River
	  ○ Upgrade to Carnarvon and Derby St, and Derby St/ Silverwater Rd intersections
	• First stage of active transport links
	• Town Centre enabling works
	• Foreshore access
	• Bus services established
		• Continued growth of industrial and urban services
		• Start of finer grain development through the urban services precinct
		• Consolidation of city building uses with access to enhanced wastewater and renewable energy supply (including battery storage facilities, subject to private sector investment)
			• Initial development on remediated sites and on sites with few constraints once the base infrastructure for the precinct is established
			• Early stage town centre enabling work, including District Park and early community facilities
			• Further development of the entertainment precinct

Long term (10-20+ years)	• Active transport links completed • Additional educational facilities**	• More employment growth within and adjacent to the town centre • Establishment of a new road network through the urban services precinct. • Consolidation of a circular economy built around businesses supporting city building, including water treatment, energy generation and materials recycling	• Gradual development of the town centre supported by social infrastructure, PLR and road upgrades • Build out of remediated sites

All initiatives are indicative only and subject to design, detailed feasibility review and funding commitments

*Construction of PLR Stage 2 is subject to the delivery of a strategic business case for the project, and to the endorsement of a funding commitment by the NSW Government

** The locations and timing of educational facilities are under investigation and subject to further review by School Infrastructure

Infrastructure staging and responsibility summaries

Using the information in the above table each infrastructure item was assigned a delivery year, with years grouped into short, medium and long term horizons (0-5, 5-10 and 10-20 years).

The bulk of infrastructure is anticipated to be delivered in the medium and long terms, as shown in Table 10. The short-term works assume design and planning costs for the proposed bridges over the Parramatta River, the Duck River, the M4 free flow ramps and delivery of a public school.

Table 10 Infrastructure spending by stage of delivery

Infrastructure type	Short term (0-5 years) ($m)	Medium term (5-10 years) ($m)	Long term (10+years) ($m)
Roads and intersections	$53.1	$339.9	$278.6
Active transport	$0.0	$80.5	$85.8
Utilities	$0.0	$46.6	$0.0
Social infrastructure	$95.4	$22.1	$200.7
Open space and recreation	$0.0	$155.0	$275.1
Total	$148.5	$644.1	$840.2

Note: This table provides an indicative cost of infrastructure proposed by each stage.

Table 11 shows the responsibility for and general timing of the proposed infrastructure – i.e., the infrastructures items, the organisation that may deliver the infrastructure and the indicative timeframe for the delivery.

There are many items that are identified as the responsibility of local government, but it is not to be assumed that the infrastructure will be funded by local government. The actual delivery of infrastructure and the method of funding to be used will be a mix of the available funding mechanisms.

Table 11 Infrastructure responsibilities and timing

	Description	Responsibility			Timing		
		Local	State	Developer	Short	Medium	Long
	Road links						
12	Widening of Internal Roads - Grand Avenue widening (approx 10 metres)	●		●		○	○
13-14	Grand Avenue Bridge removal and remaking at grade intersection		●			○	
X3	Additional internal roads north of Grand Avenue, with a N-S link west of Rosehill Racecourse			●		○	○
15	Additional internal roads between Colquhoun St and Durham St			●			○
16	Bridge over Duck River to Carnarvon St (including active transport path)	●	●			○	○
17	New N-S link from Grand Ave to proposed Duck River Bridge			●		○	○
18	Bridge link between Parramatta River and Clyde Street			●	○	○	
19	New N-S link between Colquhoun St and Durham St, from new bridge south to Grand Ave (includes active transport path)			●	○	○	
20	Free flow M4 ramps		●		○	○	
21	Widening of Roads - Carnarvon Road and Derby Street widening (approx 10 metres)	●	●		○	○	
X4	Widening of internal roads - Wentworth Street	●					○
22	Widening of Clyde Street (approx 10m)	●					○
	Intersections						
23	Upgrade Intersection of Derby St and Silverwater Rd		●			○	
24	Upgrade Intersection of Clyde St and Victoria Rd		●			○	
25	New Intersection of N-S Link and Devon St		●			○	
26	New Intersection of N-S Link (Dog-Leg) and North Link to Rydalmere		●			○	
	Active transport						
X7	New active transport path along Western Motorway through the Unwin St connection		●				○
X8	New bridge crossing - active transport path alongside new PLR alignment north of Grand Ave		●			○	○
X9	New bridge crossing - active transport path over James Ruse Drive and rail line connecting Rosehill Racecourse to Oak St		●				○
X10	New bridge crossing - active transport path over James Ruse Drive and rail line connecting Rosehill Racecourse to Prospect St		●				○
X11	New active transport located alongside Shirley St, Unwin St, Colquhoun St and Grand Ave	●		●		○	○
	Parramatta River frontage						
X1	New bridge crossing - active transport path over Parramatta River connecting to Morton Street	●				○	
X2	New Bridge Crossing - Active Transport path alongside new Parramatta Light Rail alignment (over Parramatta River) connecting to Antoine Street		●			○	
X5	New Bridge Crossing - Active Transport path over Parramatta River adjacent to Silverwater Bridge	●	●			○	
X13	New Active Transport Corridor to Camellia Peninsula (Parramatta River north riverbank)	●	●	●			○
27	New active transport path from James Ruse Drive along Parramatta River to the Silverwater Bridge	●	●	●		○	○

	Description	Responsibility			Timing		
		Local	State	Developer	Short	Medium	Long
	Duck River Frontage						
X6	From M4 along Duck River to Silverwater Bridge	●	●				○
X12	Path along south-west border of the Camellia peninsula including across Duck River	●					○
	Utilities						
	Recycled Water Plant						
	Water Plant			●		○	
	Recycled Main			●		○	
	Communications						
	Conduits along all 6 current main roads			●		○	
	Electrical						
	Undergrounding all overhead lines along Grand Ave near the residential area			●		○	
	New HV transformer kiosks for residential area			●		○	
	Gas						
	Low pressure network			●		○	
	Pressure reduction facilities			●		○	
	Social and community						
1	Primary school		●		○		
2	Multipurpose community hub (library etc.)	●		●		○	
3	K-12 School		●				○
	Childcare - LDC					○	○
	Childcare - OOSH					○	○
	Open space and recreation						
4 & 6	District Parks	●	●	●		○	○
5	Local open space			●		○	○
7	Local linear park			●		○	○
8	Active recreation - playing fields with amenities and carpark		●			○	○
9	Potential local open space			●			○
10	Wetlands		●				○
X14	Linear foreshore park	●		●		○	○
X15	Local Park		●				○
X16	Linear foreshore/riparian along Duck River	●	●			○	○
X17	Local linear park		●			○	
	Indoor recreation centre – courts and amenities	●		●		○	○

5 Next steps

The following actions are recommended to enable efficient, effective and timely delivery of infrastructure in Camellia-Rosehill:

1. Investigate the viability of direct-developer provision of certain infrastructure on specific sites ('key sites') identified in Section 4.3. Based on that investigation, DPE should:
   (a) adjust (increase) potential development yield where appropriate so that infrastructure can be provided by the developers of these sites, or
   (b) adjust the scope of infrastructure items to be provided via the key sites mechanism,

   or both, to ensure development is feasible on these sites.

2. The planning proposal and subsequent environmental planning instrument that implements the place strategy should contain provisions that:
   (a) enable direct-developer provision of certain infrastructure on key sites
   (b) ensure that any public infrastructure land dedicated or transferred to the local council or other public authority has been decontaminated / remediated to the relevant standard.

3. Council to update its section 7.11 contributions plan to reflect the local infrastructure works contained in this IDP, excluding infrastructure that is intended to be provided via the key sites mechanism.

4. Investigate the potential for a local area special rate to assist in the funding of infrastructure that will enable all uses an improved level of access to the surrounding arterial road network. The special rate levy study would address the following:
   (a) Current annual rates paid to Parramatta City Council by the Precinct landowners.
   (b) Compare the level of rates imposed on land in Camellia with the rates imposed on land in comparable industrial areas – for example, Silverwater, Smithfield, Wetherill Park, Botany, Enfield.
   (c) Determine the particular works and likely timing of the place strategy infrastructure that will significantly improve access for heavy vehicles servicing existing industrial zoned land in the Precinct. This is likely to be the works providing extra external access capacity, such as the M4 ramps, the southern crossing of Duck River and the northern access across Parramatta River.
   (d) Assess the change in land values across the Precinct attributable to each of the external access works, corresponding to the expected timing of delivery, noting that the current restricted / constrained external access effectively limits the intensity of use of industrial zoned land at Camellia.
   (e) Assess the likely change in land value with a 'do nothing' option – no new or upgraded external access works.
   (f) Determine a suitable special area rate based on the likely value uplift created by access improvements (i.e., the difference over time between (d) and (e)).

5. Progress Strategic Business Cases (SBC) for transport improvements and social infrastructure (schools and key open space), to confirm costings and determine the extent of government funding that may be available for these works.

APPENDIX A: ASSUMPTIONS AND EXCLUSIONS

These items have either been excluded or an allowance has been made for the infrastructure costs assessment.

Item	Notes
Drainage	Assumed to be managed by conditions of consent - developer to provide - excluded
Wetlands/riparian area	Included - land to be gifted/dedicated. Remediation based on WSP Golder Remediation Report Appendix C.
Recycled water uses connection	Included with utilities costs, considered to be private/developer funded
Innovative parking solutions	Excluded
Parramatta Light Rail	Excluded - it is assumed that the PLR project funds are not sourced from this project. A transport contribution levied for PLR is also excluded from this assessment because the levy is proposed to be in addtion to RIC.
Utilities	User pays - unknown if the costs include disturbance/remeditation costs required for relocation and new infrastructure
Existing roads	Reconstruction or realignment costs are excluded. Assumed to be completed by developers if required.
Public schools	Estimate based on typical costs for new schools shown in the 2021 NSW Budget Papers
New bus services	Excluded - may be private or State
Open space on private land	Excluded - there may be future lease arranagments to consider
Remediation costs	See table below

Unit Rates Assumptions

Land

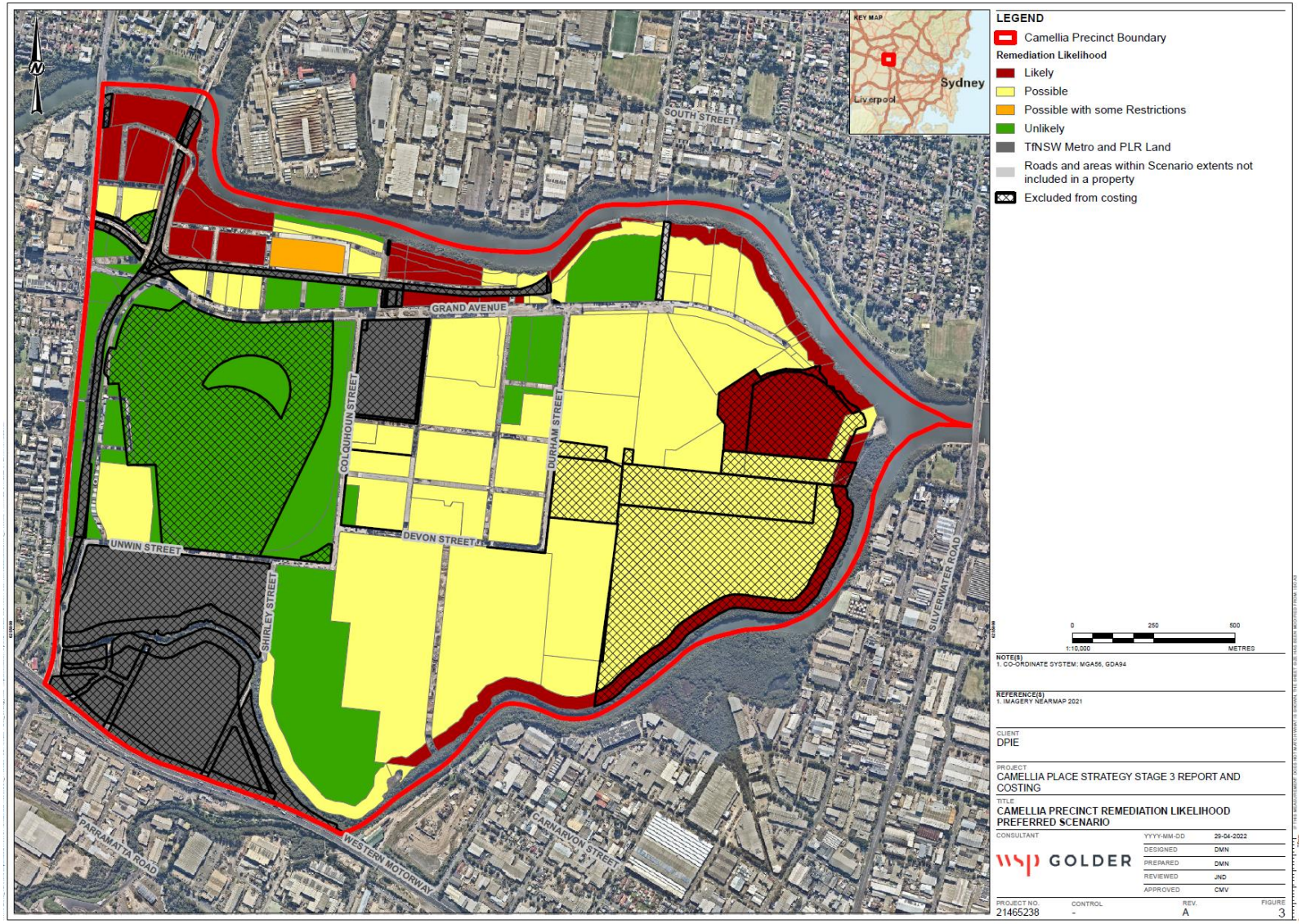
Category	$/m2	Source
All land - excluding riparian	$ 1,500.00	Based on information from DPE May 2022 (Land excludes potential remediation costs)
Riparian land	$ 50.00	Estimate based on AEC Land Valuation Report June 2020 for comparable riparian

Remediation	$/m2	Source
Open space land identified 'red' on potential remediation map	$ 425.00	WSP Golder Remediation Implementation Report May 2022 using Figure 3 Remediation Likelihood
Open space land identified 'yellow or green' on potential remediation map	$ 100.00	All rates/sqm provided by WSP Golder May 2022
Other land identified 'yellow' on potential remediation map	$ 260.00	
Other land identified 'green' on potential remediation map	$ 85.00	

Works

Open Space and Recreation	$/m2	Source
Passive open space embellishment	$ 500.00	Estimated rate from Mitchell Brandtman - high-end finish
Active open space embellishment	$ 400.00	Estimated rate from Mitchell Brandtman - high-end finish
Districit open space embellishment	$ 500.00	Rate from Draft City of Parramatta Outside CBD CP (Item O12b)
Riparian embellishment	$ 150.00	Estimated rate from Mitchell Brandtman - high-end finish

APPENDIX B: WSP GOLDER REMEDIATION MAP


KEY MAP
Sydney
Liverpool
LEGEND
Camellia Precinct Boundary
Remediation Likelihood
Likely
Possible
Possible with some Restrictions
Unlikely
TfNSW Metro and PLR Land
Roads and areas within Scenario extents not included in a property
Excluded from costing
SOUTH STREET
GRAND AVENUE
COLQUHOUN STREET
DURHAM STREET
DEVON STREET
UNWIN STREET
SHIRLEY STREET
SILVERWATER ROAD
PARRAMATTA ROAD
WESTERN MOTORWAY
CARNARVON STREET
0 250 500
1:10,000 METRES
NOTE(S)
1. CO-ORDINATE SYSTEM: MGA56, GDA94
REFERENCE(S)
1. IMAGERY NEARMAP 2021
CLIENT
DPIE
PROJECT
CAMELLIA PLACE STRATEGY STAGE 3 REPORT AND COSTING
TITLE
CAMELLIA PRECINCT REMEDIATION LIKELIHOOD PREFERRED SCENARIO
CONSULTANT
GOLDER
YYYY-MM-DD 29-04-2022
DESIGNED DMN
PREPARED DMN
REVIEWED JND
APPROVED CMV
PROJECT NO. 21465238
CONTROL -
REV. A
FIGURE 3