## CONTENTS

### SETTING THE SCENE FOR URBAN RENEWAL
- Setting the Scene for Urban Renewal: 4

### EXECUTIVE SUMMARY
- Executive Summary: 6

### STRATEGIC CONTEXT
- Strategic Context: 12

### RHODES EAST VISION
- Rhodes East Vision: 16

### OBJECTIVES
- Objectives: 17

### DESIGN APPROACH
- Design Approach: 18

### THE STRUCTURE PLAN
- The Structure Plan: 34
  - Evolution of the Structure Plan: 36
  - The Existing Urban Structure: 44
  - Creating the Structure Plan: 52
  - Character of Rhodes: 54
  - Station Gateway East: 56
  - Station Gateway West: 58
  - Leeds Street Foreshore: 60
  - Cavell Avenue: 62

### DESIGN STRATEGIES
- Design Strategies: 64

### DELIVERY STRATEGIES
- Delivery Strategies: 88

### APPENDIX
- Appendix: 92
  - Community Consultation: 93
  - Opportunities and Constraints: 95
  - From 2017 Structure Plan: 99
  - Existing Character Area Analysis: 99
SETTING THE SCENE FOR URBAN RENEWAL

RHODES

Rhodes is part of the Rhodes Peninsula located between Brays Bay and Homebush Bay on the southern bank of the Parramatta River, approximately 16km to the west of Sydney CBD. It has an area of 23 hectares, is located to the east and west of the Northern Rail line and is bounded by the Parramatta River to the north and Concord Road to the east. The study area is currently predominantly residential with light industrial land uses located along the northern edge, adjacent to the Parramatta River and McIlwaine Park to the south.
RHODES WILL BE A GREAT PLACE TO LIVE, WORK AND VISIT. A REVITALISED STATION GATEWAY AREA WILL PROVIDE AN ACCESSIBLE LOCATION FOR NEW EMPLOYMENT, HOMES AND COMMUNITY FACILITIES.
In 2015 Rhodes East was identified as a Planned Precinct. Planned Precincts provide a planned approach to growth in Sydney, focusing on providing well located new homes and jobs in close proximity to public transport, shops and services, whilst retaining and enhancing the character of the existing community. The future needs of the community are considered through a co-ordinated whole of government approach to the provision of infrastructure.

A series of Technical Reports and a comprehensive consultation process with the local community, key stakeholders and relevant Government agencies was undertaken in 2016 to inform the preparation of the draft 2017 Structure Plan.

A place led design approach was undertaken that included a comprehensive site audit to identify Opportunities and Constraints and an analysis of the physical characteristics, key destinations, and the movement of people throughout the area to develop an understanding of current and future identity. The place led design approach built on the existing urban fabric and character to create a pedestrian friendly, human scaled outcome.

During the 2016 consultation sessions, the local community raised concerns with respect to the existing traffic and transport situation within the Precinct. The community commented that the road and rail network was already operating at, or close to, capacity. Subsequent detailed transport analysis confirmed the same.

Any additional vehicular or passenger movements arising from the proposed new development at Rhodes would therefore, need to be carefully modelled, appropriate mitigation measures put in place and improvements proposed to ensure that any additional population can be supported.

Accordingly, various development scenarios were modelled to assess the traffic impacts on the road network but to also provide an indication of potential rail demand. These scenarios ranged from land use options that proposed new development across the entirety of the investigation area, to more modest land use options which indicated development at limited locations within the Precinct.

The results of the transport modelling are set out in detail within the Traffic and Transport Assessment and have been prepared in close collaboration with Transport for NSW (TfNSW) and the Roads and Maritime Services (RMS).

In summary:

- Concord Road, is a congested arterial road and will continue to be a key bus and freight corridor;
- During peak hours, train loads approach capacity at Rhodes Station;
- The local road network is constrained and has a lack of bus priority opportunities;
- Major transport infrastructure act as barriers to east-west movements for walking and cycling;
- Mitigation measures will be required to key intersections on Concord Road to ensure travel times are not significantly altered;
- Increased rail capacity can be achieved through timetable adjustments ‘extension of platform and introduction of higher capacity trains’;
- Improved bus services capitalising on Bennelong Bridge are recommended
- Improved ferry access will occur as a result of the new ferry wharf.
- A change in travel behaviour is critical for the success of the draft Structure Plan.
A key consideration that informed the 2017 Structure Plan was to ensure that the redevelopment of Rhodes delivered a sustainable outcome that reflected the rail and road capacity. As a result, the scale of development required to provide a commercially acceptable return whilst contributing to agreed broader public benefits was rigorously tested.

Given the traffic and transport constraints, and the community and Council’s vision of medium rise high density development, an assessment of the base feasibility, or the minimum commercially viable level of development, was undertaken.

This analysis identified a series of building typologies within each ‘Character Area’ and took into consideration the following criteria:

- existing land values;
- units sales and size of comparable developments;
- construction costs;
- council fees and charges; and
- other miscellaneous costs.
The Vision for the 2017 draft Structure Plan was:

Rhodes East will be a model for sustainable, low rise high density development, which builds upon the existing character and heritage of the area. It will provide more high quality housing choice, close to public transport and catering to a variety of household types. It will be supported by connections to the water, and local streets will be redesigned to support walking, cycling and use of public transport. Improved amenity will encourage residents and visitors to spend time and continue to take pride in the area.”

The draft Structure Plan provided improved access to the Parramatta River foreshore, new pedestrian and cycle paths, shops, cafes and community facilities, an integrated vertical primary school and a potential river pool.

Up to 3,600 new homes were proposed, ranging from terraces to apartments, including up to 200 affordable housing units. A key feature of the draft Plan was a landscaped pedestrian bridge from the train station to McIlwaine Park, across Blaxland Road and Concord Road improving access for walking and cycling.

Balancing the increased population with the constraints of the existing road and rail network was a key consideration. The draft Plan focussed on increasing pedestrian and cyclist connectivity within the Precinct, to neighbouring areas and key public transport nodes reducing reliance on the road and rail network. A number of upgrades to the road network were also proposed.

In addition, the capacity of the road and rail network and tailored building typologies, that represented minimum commercial development outcomes, informed the total maximum yield of 3,600 dwellings. The primary objective was to generate a human scaled sustainable development outcome, rather than maximising development potential.
EXECUTIVE SUMMARY

INVESTIGATION AREA

The original Investigation Area for Rhodes East included all land east of the rail line.

The 2017 draft Structure Plan considered all land within the Investigation Area and represented a wholistic view of redevelopment within the eastern portion of the Peninsula. However, following the detailed transport analysis and feasibility testing, it was determined that it was not viable to redevelop the whole of the Investigation Area. As a result, the draft 2017 Structure Plan only proposed to rezone land to the east of the Station, between the railway line and Concord Road. However, it was noted that if Government decided in the future to invest additional substantial transport infrastructure in close proximity to Rhodes, such as Sydney West Metro, the Structure Plan may be subject to re-evaluation for increased density.

2017 EXHIBITION

The draft Structure Plan was exhibited in September 2017, and during, and following, the exhibition period, additional information emerged relating to:

- The Greater Sydney Commission job targets
- Education Department requirements for a “stand alone” school site
- The capacity of the road and rail network
- The economic feasibility of some of the development controls within the exhibited Plan
- Stakeholder Feedback

2018 ENQUIRY BY DESIGN

In order to further discuss and consider these issues, an Enquiry by Design workshop was convened by the DPE in September 2018 with representatives from the DPE, Canada Bay Council, landowners and developers.

The workshop focussed on:

- Trip generation rates of different land uses and implications on the location of jobs and houses
- Meeting the job targets of the Greater Sydney Commission
- Considering the implications of expanding the Precinct boundary to include additional land in close proximity to the Station
- Preferred location of the primary school
- Planning Controls required to deliver viable development outcomes

Following the Enquiry by Design, the boundaries of the Planned Precinct were extended to include the land immediately to the west of the Station. This ensures that all land within 400 metres of the Station will be developed in accordance with best practice Transit Orientated Development (TOD) principles maximising the number of dwellings and jobs within close proximity to the station.

A revised 2018 Structure Plan has been prepared which reflects the outcomes of the workshop and subsequent discussions between relevant stakeholders. This Urban Design Report provides the background and context for the updated 2018 Structure Plan.
STRATEGIC CONTEXT

A METROPOLIS OF THREE CITIES

GREATER SYDNEY COMMISSION MARCH 2018

The Greater Sydney Region Plan was updated in March 2018 and presents a 40 year Vision which seeks to transform Greater Sydney into a metropolis of three cities where most of the residents live within 30 minutes of their jobs, education and health facilities, services and great places.

Rhodes is located within the Eastern Harbour City where the population is projected to grow from 2.4 million people in 2016 to 3.3 million by 2036. One of the biggest challenges is how best to provide the 157,500 new homes that will be required for the increased population of the Eastern Harbour City, while also creating strong, healthy and connected communities.

The Greater Sydney Region Plan identifies Rhodes as a Strategic Metropolitan Centre for the Eastern Harbour City with a job target in 2036 of between 22,000 and 24,000.

Planning priorities for each District Plan are identified to deliver the four pillars of:

- Infrastructure and Collaboration
- Liveability
- Productivity
- Sustainability

BETTER PLACED

GOVERNMENT ARCHITECT NSW 2017

Better Placed is an integrated design policy for the built environment of NSW. Leveraging the GA 200+ forums & workshops, the Policy offers clear directions towards design excellence at the scale of cities & towns, the public realm, buildings, and open space and landscape.

The Policy sets out seven objectives to guide healthy, responsive, integrated, equitable and resilient places to inform the built form outcomes at Rhodes:

- Better fit: contextual, local and of its place
- Better performance: sustainable, adaptable, and durable
- Better for community: inclusive, connected and diverse
- Better for people: safe, comfortable, and liveable
- Better working: functional, efficient and fit for purpose
- Better value: creating and adding value

“A well-designed built environment is resilient to the dynamic, challenging conditions of our time, to adapt and evolve while retaining essential qualities and values.”

- Better Placed
GREATER SYDNEY REGION PLAN
A Metropolis of Three Cities
– connecting people
March 2018

BETTER
PLACED

An integrated design policy for the built environment of New South Wales

GOVERNMENT ARCHITECT
NEW SOUTH WALES
STRATEGIC CONTEXT

GREENER PLACES
GOVERNMENT ARCHITECT NSW OCTOBER 2017
Greener Places is a draft urban green infrastructure policy for New South Wales. It has been developed to deliver the strategic approach for the planning, design and management of green infrastructure and ecosystems and to ensure that green infrastructure is considered at the forefront of the city making process. Green infrastructure or assets range from residential gardens to local parks and housing estates, streetscapes and highway verges, services and communications corridors, waterways and regional recreation areas.

The policy sets out four principles that will help deliver green infrastructure in NSW which have informed the built form approach at Rhodes.

• Integration: combine green infrastructure with Urban development and grey infrastructure
• Connectivity: create an interconnected network of open space
• Multifunctionality: deliver multiple ecosystem services simultaneously
• Participation: involve stakeholders in development and implementation

DRAFT URBAN TREE CANOPY GUIDE
GOVERNMENT ARCHITECT NSW JULY 2017
The Urban Tree Canopy Guide is one of several guideline documents that support and facilitate implementation of Greener Places, the urban green infrastructure policy for NSW. The document describes the need for a new approach and identifies strategies and targets to achieve increased urban tree canopy.

The Guide sets out a target of 40 per cent canopy cover across NSW and identifies three strategies that have informed tree canopy and built form at Rhodes:

• Protect, maintain, and enhance the existing urban tree canopy
• Develop a resilient, interconnected urban tree canopy across NSW
• Implement a holistic strategy that can deliver a healthy and effective urban tree canopy across jurisdictions
Establishing an urban Green Infrastructure policy for New South Wales.

Green infrastructure for climate adaptation and resilience.

Draft for discussion.
New homes will meet the needs of a range of household types. It will also allow more jobs to be located near the station and give residents the opportunity to walk to work. Vibrant waterfront areas, green space and intimate plazas will provide places to relax and enjoy. The area’s heritage will be evident and respected. An improved network of streets will support walking, cycling and use of public transport. Improved amenity will encourage residents and visitors to spend time in Rhodes and continue to take pride in the area.
OBJECTIVES

PLAN FOR A SUSTAINABLE FUTURE
Ensure Rhodes can meet the challenges of the future by building sustainability and longevity into planning, design and commercial capability from the start.

PRIORITISE ACTIVE TRANSPORT
Design integrated transport services and experiences that prioritise walking, cycling and the use of public transport.

DELIVER AFFORDABLE HOUSING
Provide affordable housing options for key workers in the area, for example people working in occupations such as teaching, child care, policing or nursing.

DENSITY WITH A HUMAN SCALE
Deliver a range of built forms, from terraces to apartment buildings, that promote activity on lower levels of buildings. The range of built forms will result in more open space, more sunlight to buildings and a closer connection to the street, other people and amenities.

PUBLIC ACCESS TO THE WATERFRONT
Provide new public access to the Parramatta River foreshore, including the provision of housing and public open space with views to the water.

GREAT PUBLIC SPACES
Provide a range of high quality, pedestrian prioritised public spaces that are safe for gathering and socialising. Map and protect important street and foreshore trees to retain their shade and character.

CREATE OPPORTUNITIES FOR NEW JOBS
Ensure commercial floorspace near the station is safeguarded for future employment.

BETTER EAST-TO-WEST CONNECTIONS
Improve accessibility around the train station and between east and west Rhodes to enable easy access between homes, jobs, shopping, recreation and entertainment opportunities.

INTEGRATE INFRASTRUCTURE AND LANDUSE
Deliver infrastructure (including social facilities) with development of housing and jobs.
The redevelopment of Rhodes has been framed around a place led approach that builds on the existing urban fabric and character to create a pedestrian friendly human scaled outcome.

Traditional city-building has created the world’s most loved and successful urban places which typically consist of a broad range of lots, blocks and buildings assembled to create liveable, mixed use walkable communities. Development was incremental and delivered, not only a diversity of lot sizes and building types, ranging from the very small to the very large, but also a strong public realm. This approach is evident in Sydney’s inner city neighbourhoods that are widely recognised for their walkability, sustainability and liveability.

However, in more recent times, this diversity has unfortunately been replaced with a more homogeneous approach that has resulted in places that are not human scaled and, as a consequence, are less walkable and with a lower quality public domain.

Throughout the consultation process, the local community has consistently affirmed a desire to celebrate the inherent character of Rhodes. As a result, the existing urban structure has informed a fine grain human scale urban renewal that will provide a genuine point of difference and create a unified community that is greater than the sum of its parts. However, recent experience suggests that relying solely on a combination of architectural and planning controls will not deliver the authentic fine grain, organic character the community is seeking.

A more effective way is to focus on the creation of streetscapes with multiple developments of different scales achieved by introducing a range of lot sizes and frontages. Diversity in development and form will be the key driver in realising a point of difference at Rhodes.

An analysis of the current urban fabric in respect of land use, street pattern, public domain and built form previously identified five Character Areas.

However, a revised approach which seeks to define Character Areas based on both existing and proposed character, and the likely staging of development and infrastructure requirements, has resulted in the delineation of the following four Character Areas:

- Station Gateway West
- Station Gateway East
- Leeds Street
- Cavell Avenue

The boundaries of the Character Areas typically include both sides of the streets to ensure a consistent character that contributes to an attractive and legible environment. However, where this can not be achieved, the combined landscape and street character contribute to defining the intended character. The Character Areas will be used to build character and identity through specific built form controls, function and use, landscape treatment and street types creating a series of distinct places that celebrate and evolve their existing character.
Rhodes West was developed on remediated industrial land. High density development was facilitated through the creation of large blocks that provided new housing types with a range of social infrastructure and community facilities delivered through Voluntary Planning Agreements.

In contrast, the eastern portion of the peninsula is an established urban area with an existing community. It contains a number of different places, each with its own unique identity and character, contributing to the overall experience and attraction of the Peninsula. This provides a genuine point of difference and an opportunity to deliver an alternative urban experience than that found at Rhodes West.
DESIGN APPROACH

BUILDING URBANITY THROUGH DENSITY: INTERSECTION, FRONTAGE AND LOT DENSITY

One of the key challenges facing the redevelopment of Rhodes is the capacity of the network movement to accommodate an increased population. As a result, a key focus has been to create an urban structure that maximises opportunities for walking, cycling and public transport patronage. Improving connectivity through additional street and pedestrian connections is critical to achieving the modal shift required to support the new community.

A crucial difference between pre and post – war development can be linked to the growing reliance on private vehicle movements. This change in personal mobility patterns fundamentally changed the urban structure and resulted in larger blocks, fewer intersections and less street frontage to activate the public realm. Whilst overall density was not impacted, the quality of the public realm deteriorated leading to reduced pedestrian activity and movement.

Successful urban renewal projects increase intersection density or the number of intersections in a given area. Intersection density corresponds closely to block size, so the greater the intersection density, the smaller the block. Small blocks make neighbourhoods more walkable and, in conjunction with smaller redevelopment sites, creates the pre-conditions to deliver authentic fine grain, human scale development in accordance with the Vision.

Research suggests that there is a direct correlation between intersection density, block size and walkability. There is further research that concludes that if intersection density is doubled walking will increase by 40 percent. (Travel and the Built Environment: A Meta-Analysis, 2010).

The diagrams opposite compare street layouts and the number of intersections per 10 ha in Potts Point, arguably one of the most walkable neighbourhoods in Australia, with Rhodes West and East.

Increasing intersection density inherently improves frontage density. Frontage density is the amount of ground floor building frontage engaging with the street providing a place-based framework for activities, experiences and uses to evolve over time. Increasing the extent of ground floor frontages promotes walkability and a more activated streetscape and public realm.

With lower intersection densities and larger blocks, ‘lot density’ is also reduced. An area developed pre-war consisting of typically 100 lots of varied sizes, would often now be reduced to about 4 super lots dimensioned to attract a single market segment developer. By reducing lot density fine-grain buildings have been replaced by fewer large buildings with less relationship to the street and pedestrian environment. The large floor plates are often driven by basement car parking requirements reflecting parking rates that encourage private vehicle ownership and driving rather than walking, car share or public transit use.

The above images illustrate a 1 hectare grid overlaid onto a 10 ha sample area to determine intersection density.
FIGURE 6
GROUND FLOOR FRONTAGES (CURRENT)

Sample 10 ha
Development Block
Public Frontage
Existing Public Open Space
Ferry Wharf (proposed)
Rhodes Precinct Boundary

TOTAL
6478M of Frontage
10 Blocks
1120M of Frontage in Sample
10ha Block
A range of social and physical infrastructure is required to support healthy happy communities. This infrastructure is critical to facilitate density and population growth and encourage a modal shift. In particular, the new streets, are fundamental to the delivery of the intersection and frontage densities necessary to support the public life envisaged.

The planning process provides a range of mechanisms to deliver this infrastructure including:

- Section 7.11 Contributions
- SIC Contributions
- DA Consent/In kind Contributions
- Voluntary Planning Agreements
MANDATING COMMERCIAL FLOOR TO CEILING HEIGHTS ALLOWS THE USE OF BUILDINGS TO TRANSITION OVER TIME

ADAPTABLE GROUND FLOORS PROVIDE THE OPPORTUNITY FOR LIVE-WORKS AND ADDITIONAL COMMERCIAL FLOORSPACE AS NEED DICTATES
DESIGN APPROACH

PROVIDING OPPORTUNITIES FOR A MODAL SHIFT

Achieving modal shift must be addressed from both a transport and an urban design placemaking perspective. Simply providing density and a mix of uses within close proximity to one another is not enough to encourage people to choose walking, cycling or public transport over driving. Every trip begins with walking so the pedestrian experience must be the priority.

An integrated high quality urban design outcome, not just density, is required to engage and stimulate the pedestrian, particularly along key desire lines. Active transport infrastructure, and parking rates that reflect proximity to public transport, is part of an integrated urbanity model.

As the existing road network is constrained, in order to provide a high quality urban environment for existing and future residents, a significant modal shift will be required. The proposed design approach can inform an urban design outcome that actively encourages active transport options.

CONNECTIVITY

Urban design can directly influence modal shift by creating the preconditions to support active transport including:

• Context Sensitive Streets
• A permeable urban structure that promotes walking, cycling, bus, train and ferry use
• Creating smaller, more compact blocks encouraging a diversity of small, medium and large developments that will enhance the pedestrian environment and encourage pedestrian interest and movement
• Increasing intersection densities that activate the public realm and encourage walkability
• Identifying Vibrant, Friendly and Mixed Facades for each block edge to encourage pedestrian movement

CONTEXT SENSITIVE STREET DESIGN

Context Sensitive Street design reflects the principles contained with the TfNSW “Movement and Place Framework” and aims to balance the often competing objectives of traffic capacity with place amenity, or place-led character.

Context Sensitive Streets consider both character and capacity. The configuration of the streets and public domain do not adversely affect traffic functionality. However, instead of the changes to street configuration responding solely to traffic requirements and hierarchy, the streets change in response to the land use and/or character area that they move through. This approach creates links between the user group and the environment. Streets that connect key destinations support and prioritize pedestrians and cyclist through cycleways, wider pedestrian paths and shade trees. While the safety and functionality of the private vehicle is not impacted, a modal shift is promoted by providing infrastructure and expenditure in the areas where it will be used.
Context Sensitive Streets are:

**Place-led**

Streets are the most important asset of a city. They are more than just transport corridors, they are used by everyone, everyday, and therefore should be designed for all users. They form the main civic space of communities; significantly affect the retail, cultural and leisure experience, and can provide inspiration for spontaneous activity, public art, creative lighting and greenery. They are the backbone of a healthy, ecological and lovable city where a high quality public domain forms the setting for daily life.

**Economic**

Context Sensitive Streets stimulate economic growth by creating attractive places with greater street activity, increasing the number of potential customers passing shop fronts and the length of time spent in a place. This typically leads to increased retail spending, enhanced desirability of business and residential addresses and ultimately increased property values.

**Healthy**

In 1970, 80% of children walk or rode to school. Today only 20% do. (source: ABS via www.bicyclenetwork.com.au). Context Sensitive Streets provide a safe space for walking and cycling and offer universal access, providing greater independence for children, as well as the elderly and disabled, encouraging more physically active lifestyles. The enhanced social activity and spontaneous encounters can also have positive impacts on mental health, whilst the increased number of street trees improve air quality and lower ambient temperatures. Overall, Context Sensitive Streets enhance the everyday quality of life for residents, workers and visitors by providing safe, comfortable spaces for public activities.

**Walkable**

To remain competitive and attract people and businesses, a city must be walkable. Context Sensitive Streets address the 10 elements of walkability as outlined in Jeff Speck’s Walkable City (2012):

- Consider pedestrians first
- Mix land uses
- Get the parking right
- Let transit work
- Protect pedestrians
- Welcome bikes
- Shape public spaces
- Plant trees
- Create active frontages
- Prioritise investments wisely

**REDUCED PARKING RATES**

Rethinking conventional parking controls can be a very effective way to assist with housing affordability and encourage residents and visitors to reassess their mobility choices.

Best practice transit orientated development typically reduces the amount of on site parking within 800 metres of train stations to reinforce the desirability of public transit. Rethinking parking standards should be accompanied by a parallel investment in active transit opportunities ensuring that personal mobility is not compromised.

The Context Sensitive Streets strategy prioritises pedestrians, cyclists, public transport and then motorists to create an environment that is conducive to active transit.
**DESIGN APPROACH**

**CREATING A FINE GRAIN PEDESTRIAN FRIENDLY ENVIRONMENT**

**HUMAN SCALE PLACES**

The worlds most loved and successful urban places consist of a broad range of lots, blocks and buildings assembled to create liveable, mixed use walkable communities.

In more recent times, this diversity has unfortunately been replaced with a more homogeneous approach that has resulted in places that are not human scaled and, as a consequence, are less walkable and have a lower quality public domain.

Whilst Rhodes West is acknowledged as a successful and high quality development, the consultation process has consistently affirmed a desire for the renewal of the balance of the Rhodes Peninsula to differentiate itself through a fine grain, human scale high density approach to built form.

Recent experience suggests that relying on architectural and planning controls does not deliver the authentic fine grain, organic character that will create a genuine point of difference with existing development within Rhodes West. The most effective way to achieve this outcome is to create streetscapes with multiple developments of different scales through introducing a range of frontages, styles and form. Diversity in development and form will be the key driver in realising a point of difference throughout the balance of the peninsula.

Establishing maximum lot frontage and lot size for the Cavell Street Character Area, is one way to encourage a fine grain, activated and visually interesting built form and streetscape outcome. Diversity in lot size will also attract a broader range of potential developers, some of whom could not afford the land costs associated with larger super lots.

It is important that the built form achieves a sense of coherance whilst still maintaining individual character through the repetition of key design elements such as window sills and other openings.

Traditional city-building was incremental and delivered, a diversity of lot sizes and building types, ranging from the very small to the very large, and also a strong public realm. This approach is evident in Sydney’s inner city neighbourhoods that are widely recognised for their walkability, sustainability and liveability attributes.

However, more recently, as seen at Rhodes West, development has typically involved super lot developments that can deliver large floor plate buildings, accommodate modern parking requirements and maximise financial return.

With the balance of the Peninsula, we have an opportunity to deliver a broad range of lot sizes and building types that will lead to neighbourhoods that are walkable and liveable.
Connectivity and the streetscape experience will be critical within new development areas.

Residential streets can have active friendly façade through attention to address.

Corner activation along key desire lines.

TRADITIONAL CITY-BUILDING WAS INCREMENTAL AND DELIVERED A DIVERSITY OF LOT SIZES AND BUILDING TYPES, RANGING FROM THE VERY SMALL TO THE VERY LARGE.
THE HIGH - LOW MODEL

Whilst the idea of increasing densities within neighbourhoods is not new, its success in terms of its ability to create quality urban environments has varied. The concept of a high-low density model seeks to achieve both a high quality public realm and efficient housing solutions that blends pre war and current development models.

Delivering quality density is primarily related to the ability of taller buildings to create an engaging and active pedestrian experience. This can be achieved through a high – low density model, where height is distributed in a manner that allows for good solar access, orientation and view corridors in addition to active facades and lively ground floor controls.

Under this model, desired densities can be achieved without overshadowing community open space, parks or other buildings by strategically locating the tallest elements with the balance of development being low to mid rise.

Fine grain buildings and the high-low model can be achieved and controlled through two mechanisms:

• Fine grain Heights Map within the LEP and/or
• An intentional combination of FSR and Height controls within the LEP

Typically, FSR and height controls achieve a relatively consistent built form outcome when applied either independently or together. This leaves amenity to be controlled by the Apartment Design Guide and/or a DCP where applicable.

A high low outcome is achieved when the height limit can only be fully realised on part of the site in order to comply with the maximum FSR constraints.

Whilst a developer could choose to maximise the FSR with none of the buildings reaching the maximum height, typically a developer will choose to construct a single taller element to optimise views and the high values associated with upper level apartments. The balance of the available floor space is sufficient to deliver low to mid rise development such as walk-up or terrace apartments as part of integrated development. The developer benefits from a height limit that allows a strategically located taller element, whilst the public domain is protected from the effects of a more consistent bulk and mass. Where these controls are further supplemented by frontage type controls an active and human scale streetscape and pedestrian experience is created.
<table>
<thead>
<tr>
<th>CONVENTIONAL PLANNING</th>
<th>MIXTURE OF DWELLING TYPES</th>
<th>MIXED USE STREETSCAPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional planning and developers typically maximise the density of different uses by building large, monotonous blocks.</td>
<td>The above demonstrates that the same density can be achieved with a mixture of dwelling types and land uses within each block. This achieves greater diversity and vibrancy and human scale development in priority pedestrian areas.</td>
<td>The fine grain, vibrant mixed use streetscape creates an active and attractive pedestrian environment that encourages walking and cycling.</td>
</tr>
</tbody>
</table>
DESIGN APPROACH

CREATING A FINE GRAIN PEDESTRIAN FRIENDLY ENVIRONMENT

BASE BUILDING

At an average walking speed of 80 seconds per 100 metres, 15 - 20 stimulation points of interest are required to entertain a pedestrian and encourage them to walk further. The role of the base building is to create this stimulation in the built form/public domain interface zone encouraging the desired pedestrian movements.

The base building is typically the first 3 storeys of a development which is generally the height perceived by the pedestrian. A taller form generally sits behind the base building and is set back. The base building provides an appropriate transition to existing lower scale development as higher density redevelopment incrementally occurs. Most importantly, the base building effectively frames the public realm and protects pedestrian amenity.

Facades controls such as 15 - 20 doors per 100 metres, independent at-grade access requirements, varied uses and visual richness in facades should be contained within the detailed controls.

In the absence of further controls, a base building is typically realised as a 3 storey podium of an apartment tower. In order to provide a vibrant, authentic, fine grain base building streetscape façade and frontages controls are required.

BUILDING TYPOLOGY FRONTAGE CONTROLS

A DCP can control the percentage of a street frontage occupied by a certain building typology. By mandating a significant portion of a primary or priority street to be fronted by terraces and multi-unit terrace apartments a safe and animated streetscape environment will be achieved.

The percentage requirement for these typologies should be less on secondary streets to ensure the opportunity for vehicle access and servicing.

Strata titled terraces will contribute to the ‘missing middle’ as discussed within the Medium Density Guide.
4m or greater setback to tower building from base building

4-6m setback can be used for balconies

0-6m base building setback to the road reserve for the first three levels
THE STRUCTURE PLAN

The Structure Plan reflects and celebrates the unique characteristics of the place whilst creating a framework to evolve and to become a 21st century transit oriented, human scaled waterfront community.

A variety of experience-based destinations will attract residents and visitors whilst a series of more intimate spaces will create opportunities for smaller gatherings and facilitate the organic growth and maturation of Rhodes over time.

These special places are connected by green streets and paths and supported by a vibrant, fine grain, activated, pedestrian-focused built form environment.

Delivering the Structure Plan will be incremental and long term. A focus on the first three storeys experienced by the pedestrian will ensure that the progressive redevelopment sensitively responds to the existing character and built form.

All of the design strategies incorporated into the Structure Plan reinforce Rhodes as a ‘walkable’ community.

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leeds Street Foreshore and Promenade</td>
<td>1</td>
</tr>
<tr>
<td>Shared Street Character</td>
<td>2</td>
</tr>
<tr>
<td>Potential Concord Road Pedestrian Bridge</td>
<td>3</td>
</tr>
<tr>
<td>Station to Millwaime Park Pedestrian Bridge</td>
<td>4</td>
</tr>
<tr>
<td>Potential River Pool</td>
<td>5</td>
</tr>
<tr>
<td>Community Spine</td>
<td>6</td>
</tr>
<tr>
<td>New Streets</td>
<td>7</td>
</tr>
<tr>
<td>New Pedestrian Links</td>
<td>8</td>
</tr>
<tr>
<td>Primary School</td>
<td>9</td>
</tr>
<tr>
<td>Potential Railway Bridge Location</td>
<td>10</td>
</tr>
<tr>
<td>Commercial Hub</td>
<td>11</td>
</tr>
<tr>
<td>Station Gateway West</td>
<td>12</td>
</tr>
<tr>
<td>Proposed Ferry Wharf</td>
<td>13</td>
</tr>
</tbody>
</table>
EVOLUTION OF THE STRUCTURE PLAN

The 2018 Structure Plan incorporates a number of key amendments to reflect the submissions received during the exhibition period, outcomes of the Enquiry by Design and further technical analysis.

RHODES PRIMARY SCHOOL

The proposed Primary School is located to the north of the Station on Leeds Street and will be a centrally located community facility.

With a site area of just over 1.03 hectares, the proposed school can accommodate up to 1,000 students with active and passive outdoor areas in a 21st century, 4 storey building that reflects its location within a higher density inner urban setting. The proposed school site can accommodate a school that would comply with the Department of Education requirements. There is the opportunity for both the school buildings and associated open space to be utilised by the broader community after school hours and on weekends reinforcing its role as a community hub and increasing the range of community facilities and open space.

Whilst subject to further detailed design, preliminary concept designs indicate that the site can accommodate:

- Contemporary student-focused Learning Studios supporting a rich range of learning activities, group sizes and learning modes
- Integrated Support Learning Studios
- External terraces providing outdoor learning and play opportunities directly connected to indoor learning spaces
- Age appropriate active and passive outdoor play areas
- Multipurpose Communal Hall and full-sized external hardcourt
- Library Resource Centre incorporating Special Programs
- Canteen, servery and covered outdoor eating
- Administration and staff facilities
- Habitable rooftop terrace to extend learning and play activities
- On site secure bike and car parking
- On-street ‘kiss and drop’ parking

The site is bounded by Leeds Street, Blaxland Road, and Cavell Street. Averill Street will be extended as part of the delivery of the proposed school providing good circulation with drop off and pick up zones determined through the subsequent detailed design.

Averill Street provides the most direct connection to and from Concord Road. Therefore, the safest location for the drop off and pick up zone is likely to be on Cavell Avenue, potential issues associated with varying speeds and reducing queuing.

The site is located on an existing bus route, and within walking distance of both the proposed Ferry Wharf and the Rhodes Station. Blaxland Road will be upgraded to provide a dedicated cycleway to ensure easy and safe access between the school site, Station and beyond connecting into regional cycleway connections.

There is a single storey interwar period warehouse along the Averill Street extension frontage that is heritage listed in the Canada Bay LEP inventory. The Heritage report prepared by GBA Heritage has recommended that the

"existing face brick component of the warehouse should be retained and incorporated into a potential redevelopment of the site..... New development to the rear of the brick section, with the equivalent of the first saw tooth roofed portion in plan retained at the same height as the brick building.”

These recommendations will inform the future design of the primary school.
EVOLUTION OF THE STRUCTURE PLAN

LEEDS STREET

Leeds Street is still proposed to be a multi-modal, water-based destination for both residents and visitors. The lifestyle and activities promoted within this Character Area will prioritise pedestrians and facilitate human interaction and a range of cafes and restaurants and destination retail will add vibrancy and increase the appeal of the area as a popular water based destination.

This Character Area has been redesigned to increase the extent of publicly accessible, north facing, open space.

There is now 17,750m² of public open space including:

- 7,830m² for active recreation
- 2,400m² for a 6m foreshore promenade
- 1,830m² for a future pedestrian connection to the proposed ferry wharf; and
- 5,690m² distributed throughout the Precinct that could be used for a variety of passive recreational activities

The boardwalk will connect into the existing network in Rhodes West, and ultimately form part of a continuous foreshore pedestrian path around the peninsula. Additional areas of private open space associated with the built form will be provided creating a green oasis.

The increased areas of open space will contribute to a more equitable distribution of open space throughout the peninsula and ensure the needs of future communities are met.

An average setback of 30 metres from the foreshore will reinforce Leeds Street as a destination and encourage people to spend time in this unique place.

View corridors along Cavell Avenue through the open space and to the Parramatta River have been maintained.

The built form will respond to the northerly aspect of the peninsula through the sensitive allocation of height combined with block permeability and building separation ensuring pedestrian level views of Parramatta River from the centre of Rhodes. The height strategy is intended to ensure a sensitive interface between the built form and public domain and that the amenity of the open space is prioritised.

The primary school will benefit from a direct connection across Leeds Street into the foreshore open space further enhancing its location and recreational opportunities for the students.
EVOLUTION OF THE STRUCTURE PLAN

STATION GATEWAY EAST

The introduction of approximately 40,000m² of commercial floorspace is proposed on the eastern side of the Station which will contribute to the identity of Rhodes as a hub of economic activity in accordance with the Eastern City District Plan. The proposed jobs will provide employment opportunities in close proximity to residential areas and public transport relieving pressure from the road network.

It will provide:

- Ground floor street activation fronting Blaxland Road and the Station
- Active and public transport infrastructure to reduce reliance on the private vehicle.
- Approximately 2,000m² of public accessible open space.
- View corridors from the Station, between buildings and to McIlwaine Park and Parramatta River.
EVOLUTION OF THE STRUCTURE PLAN

STATION GATEWAY WEST

Land on the western side of the rail, previously occupied by heavy industrial uses, has been progressively remediated and re-developed over the last 18 years.

The Station Gateway West is a 2 hectare mixed use site, located in the centre of the Peninsula, that provides an opportunity to integrate development on either side of the Station and improve connectivity to the station, community facilities and the foreshore.

It is a landmark mixed use site that will provide opportunities for living, working and playing in close proximity to the Station and commercial and retail uses and with the land bridge providing safe pedestrian movement across the rail, Blaxland Road and Concord Road to McIlwaine Park.

The Vision for this site in the Council adopted Master Plan, is for a well designed, mixed use development, with quality residential buildings, intimate laneways and a seamless public domain connecting to the railway station. The Master Plan provides for approximately 1300 dwellings. However, given the strategic location of the site, the LEP will be amended to enable consideration of additional height and density subject to a peer review of the Council adopted Master Plan, delivery of agreed infrastructure requirements, such as an upgrade to the station, and compliance with the agreed design principles.

STATION TO McILWAINE PARK LAND BRIDGE

As part of review of the Rhodes West Gateway, a new land bridge is proposed which will provide safe and convenient pedestrian connection from Rhodes West, across the station, Blaxland and Concord Roads to McIlwaine Park.

It is aligned with the Bennelong Bridge and Gaulthorpe Street contributing to a well connected and legible pedestrian network and providing strong visual connections from west to east of the rail line.

The land bridge will be integrated into the proposed Leisure Centre within the Rhodes West development and there is the opportunity to provide additional public plazas as part of the detailed design.

There is also a proposal to extend the platforms of the Station, to the north, and provide an additional northern entrance to the station to ease the current congestion experienced during peak hours. The land bridge will be aligned to enable safe access to the proposed northern entrance of the Station.

To the east of the rail, the land bridge is proposed to be located immediately south of Llewellyn Street, and integrated into the adjoining development with active frontages and diverse uses ensuring a safe vibrant environment. Llewellyn Street will remain open and contribute to the broader objectives of improved connectivity and permeability.

The land bridge will terminate in McIlwaine Park a key recreational destination on the Peninsula.
COUNCIL APPROVED RHODES WEST MASTERPLAN

VARIOUS PLANNING PROPOSALS HAVE SINCE BEEN ENDORSED BY COUNCIL.
THE EXISTING URBAN STRUCTURE

The Rhodes Planned Precinct comprises the area east of the rail line and one block to the west bounded by Walker, Gauthorpe, Marquet and Mary Streets. It is predominantly a residential area with access to a range of supporting non-residential uses located throughout the broader Peninsula. There is currently no Primary School or destination and experiential retail within the Precinct. In addition, whilst there is commercial floorspace within the HP site and Rhodes Corporate Park to the south, there is currently no significant areas of commercial floorspace within the Precinct.

The area is serviced by a passenger rail service via Rhodes train station with Concord Road providing the only road access to the wider area. Both the road and rail networks are congested. Most local trips are car dependent, reflecting the current spatial distribution of land uses, poor connectivity and limited infrastructure to support and encourage walking and cycling.

In addition, although Rhodes has more than 1.5 kms of water frontage, there are few public connections to the foreshore, resulting in 70% of the foreshore being inaccessible to the public. If McIlwaine Park is excluded from this calculation, then 90% of the foreshore is currently privatised.
A key project objective is to ensure that:

*Provide new public access to the Parramatta River foreshore, including the provision of housing and public open space with views to the water.*

The open space and ecological components of Rhodes have been the key driver for the development of the Structure Plan. The plan opposite, and those over the following pages, are a build-up series demonstrating how the layers of the Urban Design Plan were logically developed as a series of interrelated systems beginning with nature.

The solid base masks the existing fabric to reinforce that the Urban Design Plan has been envisioned as a holistic redevelopment proposal to occur over the long term.

The existing parks, plazas and open space within the Peninsula will not only be retained but enhanced.

**LEEDS STREET**

17,750m² Total Public Open Space

Includes:

- 7,830m² Active Recreation
- 2,400m² 6m Foreshore Promenade
- 5,690m² Public Open Space
- 1,830m² Future Wharf Pedestrian Connection
THE EXISTING URBAN STRUCTURE

CONNECTIVITY

Improved connectivity builds on the importance of the open space, ecology and waterfront as a framework to support the future growth and redevelopment of the balance of the Rhodes Peninsula.

A network of new pedestrian links, local streets, and pedestrian land bridges and passages will:

• Optimise the use and public benefit of the open space system,
• Provide visual and physical connectivity to the water, and
• Maximise walking, cycling and public transport patronage critical to achieving the modal shift required to support the new Rhodes community.

The additional connections increase the frontage and intersection density and create small blocks. Small blocks make a neighbourhood more walkable and, when combined with smaller redevelopment sites, provides the pre-conditions to deliver authentic fine grain, human scale development in accordance with the Project Vision.
LAND USE

The expanded residential community will be supported by a range of supporting uses, accessible by walking or cycling through a connected street and open space network.

Commercial opportunities will be located to the east of the station and a primary school site has been identified to the south of Leeds Street. Destination retail and a range of cafes and restaurants will be located at Leeds Street.

A proposed pedestrian bridge over Concord Road will provide safe active transit to these key destinations reducing reliance on private vehicle trips.

The following activation mechanisms will encourage walking, cycling and ferry use to relieve pressure from the road and rail networks, promoting healthy active lifestyles and provide the physical framework to enable Rhodes to evolve and mature:

- Leeds Street Foreshore destination and experiential retail and associated leisure activities leveraging off the now publicly accessible foreshore
- Mixed use corners along key pedestrian desire lines, created through improved connections, promoting fine grain organic activation
THE EXISTING URBAN STRUCTURE

PUBLIC DOMAIN

The landscape of the existing open space system will be enhanced celebrating the site’s natural ecology and proximity to the Parramatta River. Significant areas of open space will be provided at Leeds Street, including a large consolidated area of 7,500m² suitable for active recreation.

The streets will be transformed into linear parks through a series of landscape and public domain treatments creating a safe and attractive pedestrian environment encouraging people to choose to walk or cycle for recreation and daily needs.

The configuration and public domain treatment of each street reflects the street type and the Character Area through which it moves. Streets categorised as ‘shared’ balance an intended public domain character with the ability to accommodate traffic functions and volumes as required.
The intention is that the heights and densities at Rhodes will ensure:

- the co-location of density with amenity, and
- view sharing particularly for pedestrians

Higher densities are to be located adjacent to the Station, railway and at Leeds Street.

Strategically located pedestrian paths and building envelopes will ensure breaks in the building mass, safeguarding existing views. Introducing additional views will provide legibility and increase the extent of development that has the potential to benefit from the amenity provided by the Parramatta River.

The balance of the development should tier down from the railway line towards the eastern waterfront and Concord Road maximising views across the broader area and ensuring new development does not compromise the amenity of existing lower density development. Further opportunities to provide views can be created by the high-low approach that will ensure upper level views are achieved.
THE EXISTING URBAN STRUCTURE

HERITAGE RESPONSE

The listed heritage items at Rhodes are retained, respected and valued as an integrated component of the Structure Plan.

In all cases, appropriate built from transitions between heritage items and new development have been considered.

Where possible and logical, pedestrian paths, parks and mixed use corners are collocated with heritage houses to promote adaptive reuse and activation along key desire lines.