

Department of Planning and
Environment
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Bays West

Place Based Transport Strategy

ARUP

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Glossary

Term	Meaning
CCN	Metropolitan Connected Cycle Network
CoS	City of Sydney council
DPE	Department of Planning and Environment
GA	Government Architect
GFA	Gross Floor Area
GSC	Greater Sydney Commission
INSW	Infrastructure New South Wales
LSPS	Local Strategic Planning Statement
NSW	New South Wales
PANSW	Port Authority of NSW
PBTS	Place-Based Transport Strategy
STM	Strategic Travel Model owned by TfNSW
TDM	Travel Demand Management
TfNSW	Transport for New South Wales

The background image is a high-angle aerial photograph of a large cable-stayed bridge spanning a wide body of water. The bridge has multiple lanes in each direction, filled with cars and trucks. On the left side of the bridge, a large Union Jack flag is visible. The water is a deep blue-green, with sunlight reflecting off its surface. In the foreground, a small pier or breakwater extends into the water. To the right of the bridge, there are some industrial buildings and a parking lot. In the upper left, there's a large shipyard or marina with several boats docked. An inset image in the top left corner shows a closer view of the shipyard, with a large white building and many boats. The text "Executive Summary" is overlaid on the left side of the image, with a white horizontal line underneath it.

Executive Summary

Executive Summary

Bays West has changed over time from its Aboriginal origins, through the industrial age, to its present day use as a significant harbourside precinct supporting ports and a working harbour, framed by decommissioned heritage structures and important arterial road infrastructure. As Bays West has evolved, the people have been progressively excluded, much of the space has become inaccessible and the area's life and vitality has been lost.

The Bays West of the future will evolve over time into a mixed-use precinct integrated with enhanced port and working harbour activities.

The successful integration of Bays West into Sydney's Transport Network is fundamental to the success of the Precinct, the sustainable and efficient movement of people and goods on foot, bike, public transport, private vehicle, and freight is critical.

Planning for Bays West represents a new kind of Sydney urbanism, an extraordinary place that is connected, vibrant, and activated. The Precinct will deliver on providing for walking, cycling and public transport and ensuring access for goods and services, private vehicle use will be discouraged with an ambitious plan for an ultra-low car environment.

This Bays West Place-based Transport Strategy (PBTS) supports the Bays West Place Strategy, embracing a shared vision for the precinct. Five enabling themes will guide the growth and change of the precinct over time, these include:

- Land Use and Function that address further land use and the role it will play.
- Design of places and spaces that guide how Bays West will feel to people and what is important in the design of buildings and public domain.
- Transport and movement that recognises and establishes how the precinct will move people and goods.
- Heritage and culture that recognises the importance of the past and why culture is critical to creating a place with meaning.
- Infrastructure delivery and governance that recognises the precinct will evolve over time and that multiple stakeholders are required to successfully deliver.

The PBTS identifies the necessary opportunities and initiatives required to articulate this vision for transport and movement within the Precinct.

Bays West is not without its challenges, poor connections to the existing transport network, congestion on the surrounding road network, competing travel needs, difficult topography, and isolated geography. Much of the Precinct today is restricted to the public and is dominated by car movements.

The delivery of major transport infrastructure projects such as Sydney Metro West along with the proposed renewal and restoration of much of the Precinct supported and enabled by new and emerging technology and innovation offers a once in a generation opportunity to shape this Bays West to embrace the right movement and place outcome.

In working towards best practice movement and place outcomes for Bays West, four transport themes and 14 planning principles have been developed, these have guided the identification of future opportunities and initiatives. These transport themes are summarised as:

1. **Access and connectivity:** Bays West will be highly connected and integrated within Greater Sydney, Eastern Harbour City, the local neighbourhood and within the Precinct. The transport and street network will be sustainable, the preferred mode of transport will be walking, cycling and public transport.
2. **Environment and topography:** A sustainable Precinct, that embraces, supports and enhances the natural environment, built form and key destinations to help achieve the NSW Government vision for net-zero emissions by 2050.
3. **Implementation and operation:** A transport network that is safe, workable and convenient and takes into consideration a variety of customers and users. Combined with reliable infrastructure that positively shapes the Precinct for the future.
4. **Managing growth and place:** A Precinct of opportunity, with great places, supported by transport that is appropriate, adaptable, innovative and can be delivered in stages aligned to growth.

Guided by these principles and an appreciation of the existing and future context, land use and travel information and aided by several customers personas various opportunities and initiatives were developed and linked to the four transport principles. These initiatives look to address the vision and respond to the challenges and opportunities.

The PBTS has identified 52 opportunities and initiatives, with 18 recommended for delivery and 34 that require further investigation that, in combination, will support the realisation of the transport vision for Bays West in 2030, 2040 and beyond.

The purpose of the PBTS is to provide an overarching framework for the transport network to respond to the vision for Bays West. This work is strategic and just the first step in the process.



Acknowledgement of Country

Acknowledgement of Country

The Department of Planning and Environment acknowledges the Traditional Owners and Custodians of the land and pays respect to Elders past, present and future. We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society. Aboriginal people take a holistic view of land, water and culture and see them as one, not in isolation from each other. The Bays West Place Strategy is based on the premise upheld by Aboriginal people that if we care for Country, it will care for us.



1

Introduction

This Draft Place-Based Transport Strategy (PBTS) draws on the current policy landscape, the Movement and Place Framework and the direction provided by the Bays West Place Strategy (The Place Strategy). This transport strategy aims to tie together aspirations for Bays West (the Precinct), with the future transport needs of the local community and Greater Sydney region.

1.1 Background

Department of Planning and Environment (DPE) has prepared the Bays West Place Strategy (the Place Strategy), released in November 2021, which sets out a vision for Bays West to be an innovative and sustainable mixed-use precinct for living, recreation and working, embracing its natural and cultural heritage, and integrated with enhanced port and working harbour activities.

The Place Strategy identified the constrained nature of the environment, with limited opportunities to move people and goods to, from and through Bays West. One of five themes in the Place Strategy is transport and movement, this theme aims to enhance connectivity, integration, permeability, and sustainable transport options in the Precinct. The three directions that support action are presented in Figure 1.

Transport and movement that recognise the constrained nature of Bays West and establish how the precinct will move people and goods to, from and through Bays West

Direction 8

Improve the precinct's connectivity and integration into its locality and surrounding areas

Direction 9

Provide for new connections to existing places by removing existing barriers to allow connections through the site and convenient access to the new metro station

Direction 10

Prioritise walking, cycling and public transport by capitalising on the new metro station, creating more convenient and direct active transport connections and investigate the reinstatement of a crossing from Bays West to Pyrmont

Figure 1: The Transport and movement theme in the Place Strategy, Bays West Place Strategy, November 2021

The Place Strategy was supported by two key documents:

- Bays West Strategic Place Framework
- Bays West Urban Design Framework.

In parallel to DPE's investigation into Bays West, Sydney Metro, as part of the Sydney Metro West Project is planning for a Sydney Metro West Station within the Precinct which is expected to be open in 2029-2030. The announcement of a Sydney Metro West Station within the Precinct has been the catalyst for a renewed interest in planning for the Precinct, following the early investigation as part of the Transformation Plan in 2015.

Port Authority of NSW (PANSW) owns a substantial amount of land in the Precinct, and operations of the working harbour at Glebe Island and White Bay, including the White Bay Cruise Terminal are planned to continue over the next decade and beyond. A Port Integration and Innovation Plan will be prepared to develop a vision for the long-term integration of working harbour and port activities within the precinct.

The development of Bays West will be realised over several years and is expected to be ongoing to 2040 and beyond, subject to feasibility. To support the ongoing planning, a transport strategy is required to help set a direction for balancing movement and place in the Precinct.

1.2 Purpose of the Strategy

This PBTS provides high-level transport planning analysis to inform the future planning, design and delivery of the Precinct. The PBTS will be underpinned by a movement and place methodology, that looks to discover, explore, and validate strategic transport constraints, opportunities, and potential initiatives to ensure an integrated approach to the planning movement networks and successful places.

The PBTS will put people first, adopting a holistic approach that considers the need of all transport networks (walking, cycling, public transport, road traffic, port uses, freight and servicing) for a wide variety of trip types and uses.

Critical to the success of the PBTS is the acknowledgement of the constrained and complex environment, the competing interests of different uses on-site and the need to deliver the extraordinary. A precinct that is well connected at the local, regional, and metropolitan scale, people-focused and pushes the boundaries to reduced private vehicle usage within the Precinct.

The outcome of the PBTS will be a set of strategic transport opportunities and initiatives that either respond to the vision for development in the Precinct or address a challenge to enabling development within the Precinct over the next several decades.

It is important to note that most projects are not yet funded or committed for delivery. As a result, they should be regarded as initiatives subject to further detailed investigation, scoping and business case development and investment decisions.

1.3 Study area

Bays West is located two kilometres west of the Sydney CBD and encompasses areas including Blackwattle Bay, Wentworth Park, Glebe Island, White Bay, Rozelle Bay, Rozelle Railyards and White Bay Power Station. Significant urban renewal and transformation are underway in the Precinct, with a focus on three key sites: Sydney Fish Markets, Blackwattle Bay and Bays West.

Though centrally located, Bays West is isolated by infrastructure and the natural environment on three sides. It has a long working history, as both a power source for Sydney and a critical working harbour, the latter is still a key function today and will be for decades to come. It is important that transport and place planning embrace this history, its location and plan for a truly unique future.

To deliver this strategy for Bays West, the PBTS will focus on the urban renewal at Bays West within the wider city context. The study area for this strategy is presented in Figure 2.

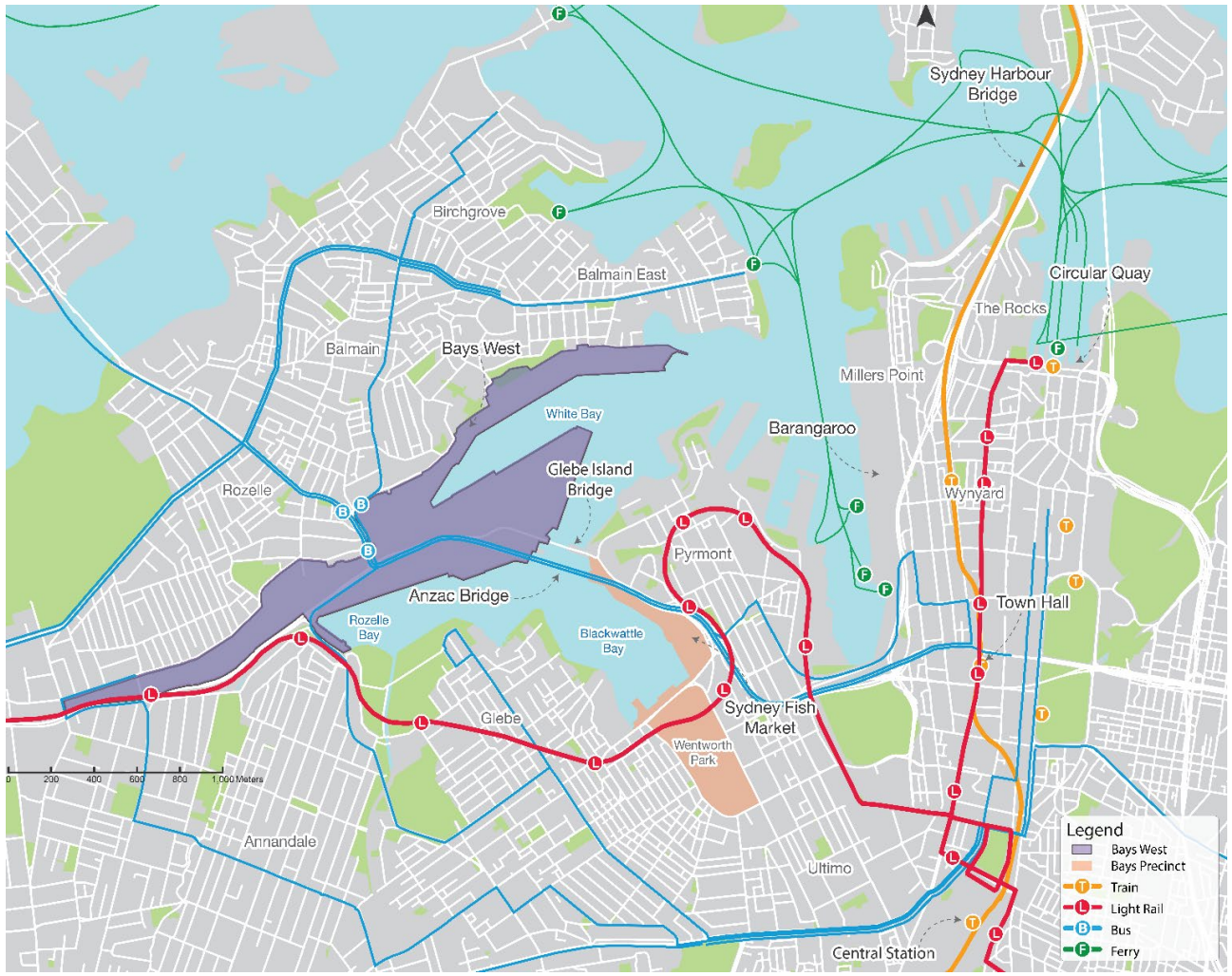


Figure 2: Bays West Precinct and study area

1.4 Document Structure

Underpinned by the Place Strategy, the PBTS develops a strategic transport Framework for Bays West, it aims to ensure that the place outcomes are supported by movement that enables, enhances, and supports the vision for Bays West. To guide the delivery of this framework, the PBTS presents the following chapters:

- **Chapter 1 - Introduction** provides the background, purpose and sets the structure for delivering the PBTS.
- **Chapter 2 - Our approach** explores our process for preparing the PBTS underpinned by a shared vision, delivered using a movement and place methodology to co-create outcomes that are flexible and responsive to the changing needs of the future.
- **Chapter 3 – Vision and principles** a shared Precinct vision built on the outcomes of the Place Strategy and supported by detailed transport focus Precinct Principles and indicators of success that drive an integrated and accountable transport response.
- **Chapter 4 – About Bays West** describes a snapshot of the current and future Precinct, including consideration of population, employment, transport and travel trends.
- **Chapter 5 - Problem Definition** presents the key transport challenges relating to Bays West and identifies opportunities to build for a sustainable future.
- **Chapter 6 – Realising the Vision** explores the pathway to realising the vision for Bays West. Presents key needs and initiatives for the future of the Precinct to 2040 and beyond.
- **Chapter 7 – Next Steps** outlines immediate and long-term steps for implementing the opportunities and initiatives outlined in this PBTS.

The image is a composite of two aerial photographs. The top half shows a wide view of a coastal city, featuring a large cable-stayed bridge with a tall, white, A-frame pylon. The bridge spans a body of water where several sailboats are docked in a marina. In the background, a dense residential area with many houses is visible, along with a large industrial facility with several tall, red, cylindrical storage tanks. The bottom half of the image is a closer aerial view of a residential neighborhood, showing a mix of houses with various roof colors (red, grey, blue) and lush green trees. A small green field or park is visible near the water's edge. The text '2 Our approach' is overlaid on the left side of the image, with a white horizontal line underlining the text.

2 Our approach

2.1 A Movement and Place Framework

Place-based planning is an emerging approach across NSW Government that involves taking a collaborative, spatial, long-term approach to develop contextual responses that better meet the needs of local people and their environment in a defined geographic location. It aims to support and build thriving communities and is ideally characterised by partnering and sharing design, shared stewardship, and shared accountability for outcomes and impacts.

A 'Place-based' approach is embedded within this PBTS, in which the interplay of contextual elements like land use, urban form and population demographics is balanced against the movement of people and goods through, to and within places. In Future Transport 2056, TfNSW adopted the Movement and Place Framework for planning and managing the road network.

The strategic nature of this work means that the focus on this work will sit within the initial steps of the movement and place process. This work aims to capture stages 1 to 4 and will require further work in the next stage of planning to continue to explore and investigate detail. These core steps in the Movement and Place Framework are shown in Figure 3.

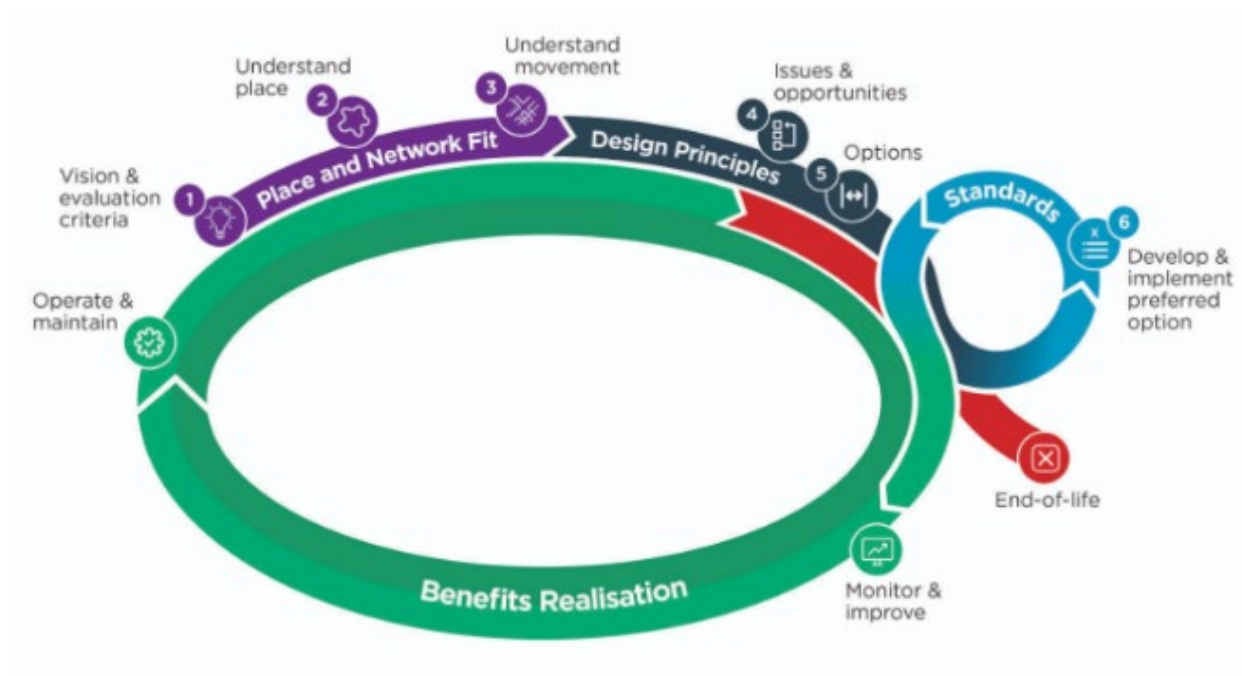


Figure 3: Steps in the core Movement and Place process (Source: TfNSW 2020)

The PBTS represents a framework for the next 20 years, it looks to set a vision and validate how that vision would be realised within a strategic framework. This is a step away from more traditional approaches to planning that have been aimed at building on today's experiences and historic trends, as such transport modelling has not been undertaken as part of this strategy.

A six-step approach, which aligns with the Movement and Place process, has been used to deliver the Bays West PBTS and is shown in Figure 4.

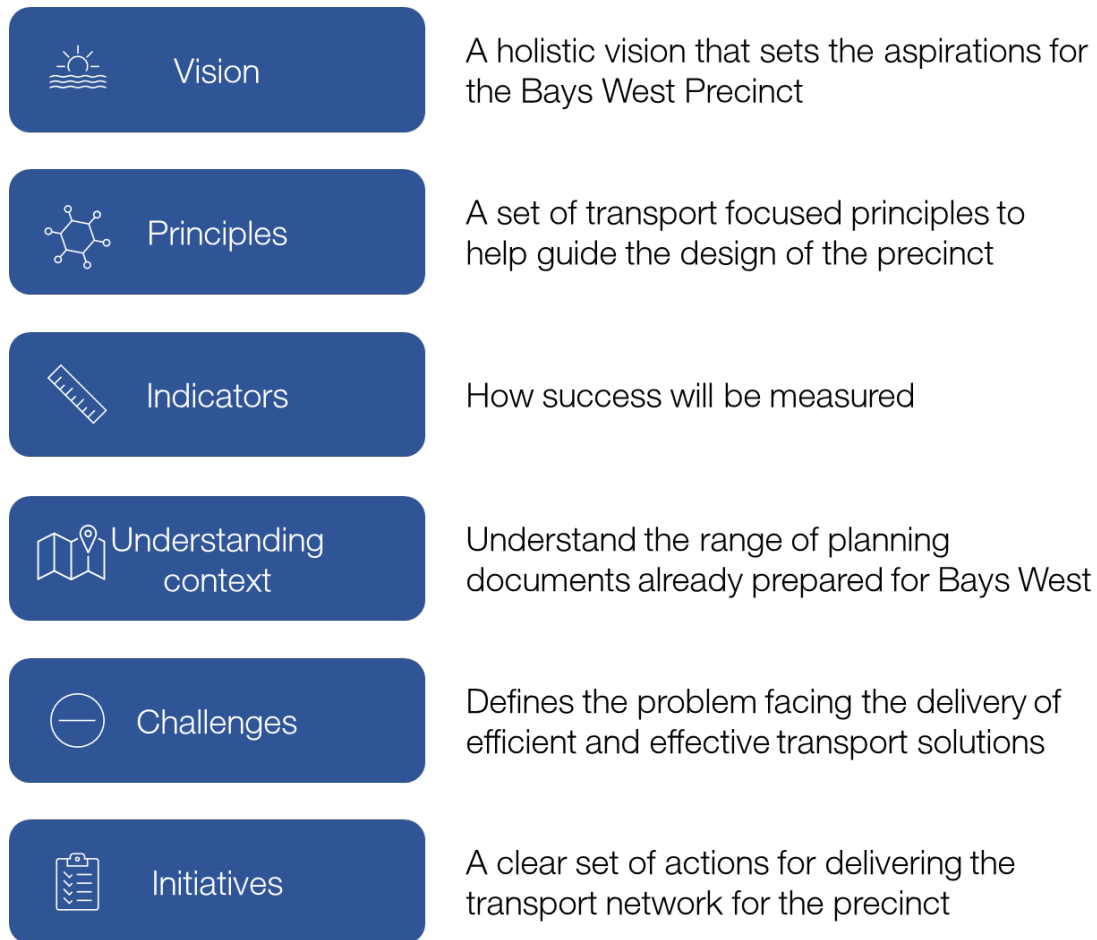


Figure 4: Key Methodology steps to deliver the Place-based Transport Strategy

2.2 Collaboration and co-design

‘Vision and Validate’ centres on a co-design approach, and forging partnerships with key stakeholders and partners. It starts with co-developing shared visions for places founded in a rich understanding of what our customers and communities want and need and validating the visions through scenario testing, stakeholder engagement and policy alignment. Supported by a common view of what defines success and how this will be measured, these partnerships will endure through delivery – working together to evaluate and adjust as we move forward in response to emerging outcomes and changing needs, priorities and circumstances (Source: Future Transport 2056).

Several critical challenges need to be resolved and a variety of existing and future uses for the Precinct need to be managed to unlock the potential of Bays West. It is critical to the success of the future Precinct that planning embeds co-design and constant collaboration at the heart of the approach.

The development of the PBTS has been undertaken in collaboration with DPE and key stakeholders within the Precinct, such as Sydney Metro, TfNSW and PANSW. Local knowledge and endorsement ensure that the PBTS addresses the key challenges and opportunities in the Precinct with the appropriate interventions.

Several workshops have been held with key stakeholders and ongoing transport working groups have been held to refine the plans for the various sub-Precincts within Bays West.

2.3 The first step in planning for Transport in the Precinct

The PBTS is a strategic document that will form part of the ongoing planning of the Precinct. The Place Strategy sets the overall vision for the PBTS to establish a strong link between the collective aspirations for the future Precinct and the related transport needs. This link ensures a clear and direct continuity of the vision.

Recognising the local and regional transport needs, the PBTS develops a contextual high-level transport response to enable the vision.

The design outcomes for both movement and place will be directed through the Master Planning and Re-zoning for individual sub-Precincts, which will require further detailed transport investigations. Inner West Council will be included as part of the rezoning process and master plan resolution. They will also be consulted on any State Significant Development Applications and Environmental Impact Statements developed for the sub-precincts as the planning process progresses. The structure of the place-based approach is presented in Figure 5.

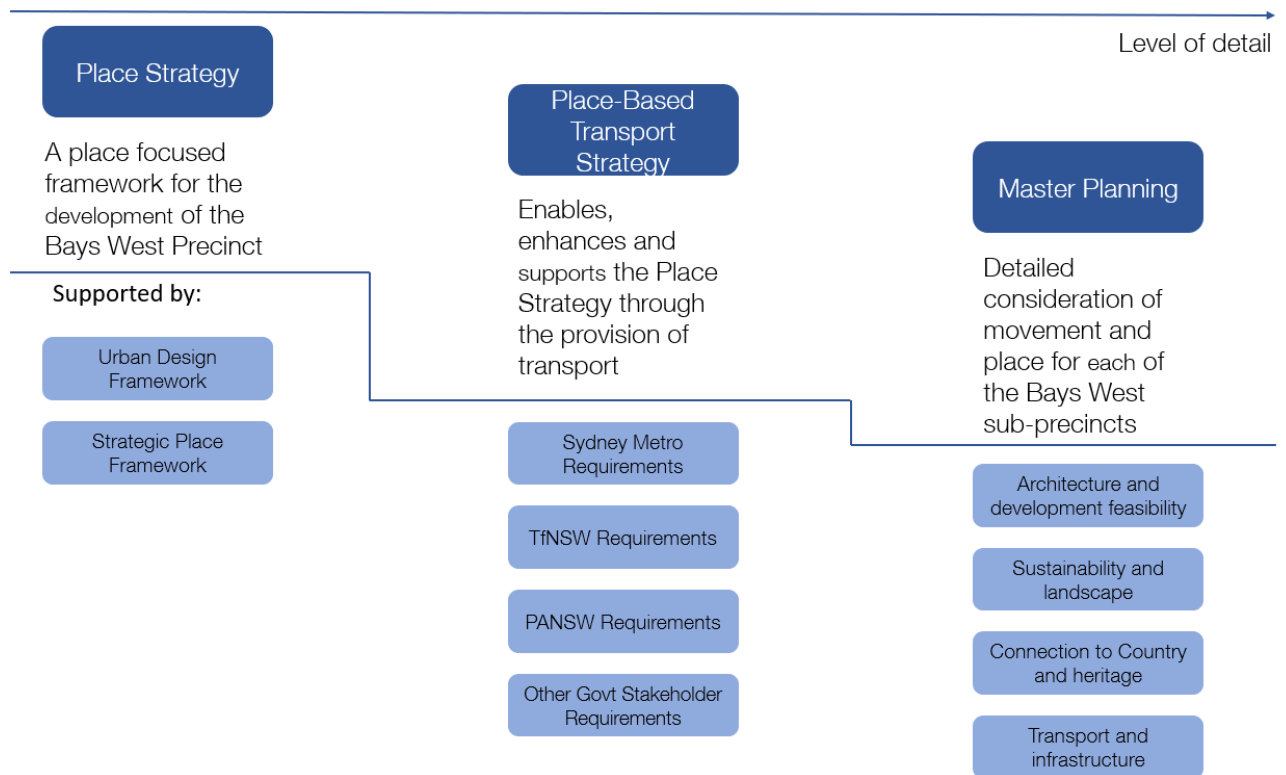


Figure 5: Relationship between different planning documents

2.4 Report Limitations and assumptions

This PBTS was developed using the best available information at the time of writing. In 2021, the long-term impacts of the COVID-19 pandemic on customer behaviours and investment have not been fully understood. Despite this uncertainty, the strategic intent and long term (20+ year planning horizon) vision presented within this Strategy are deemed suitable for planning purposes.

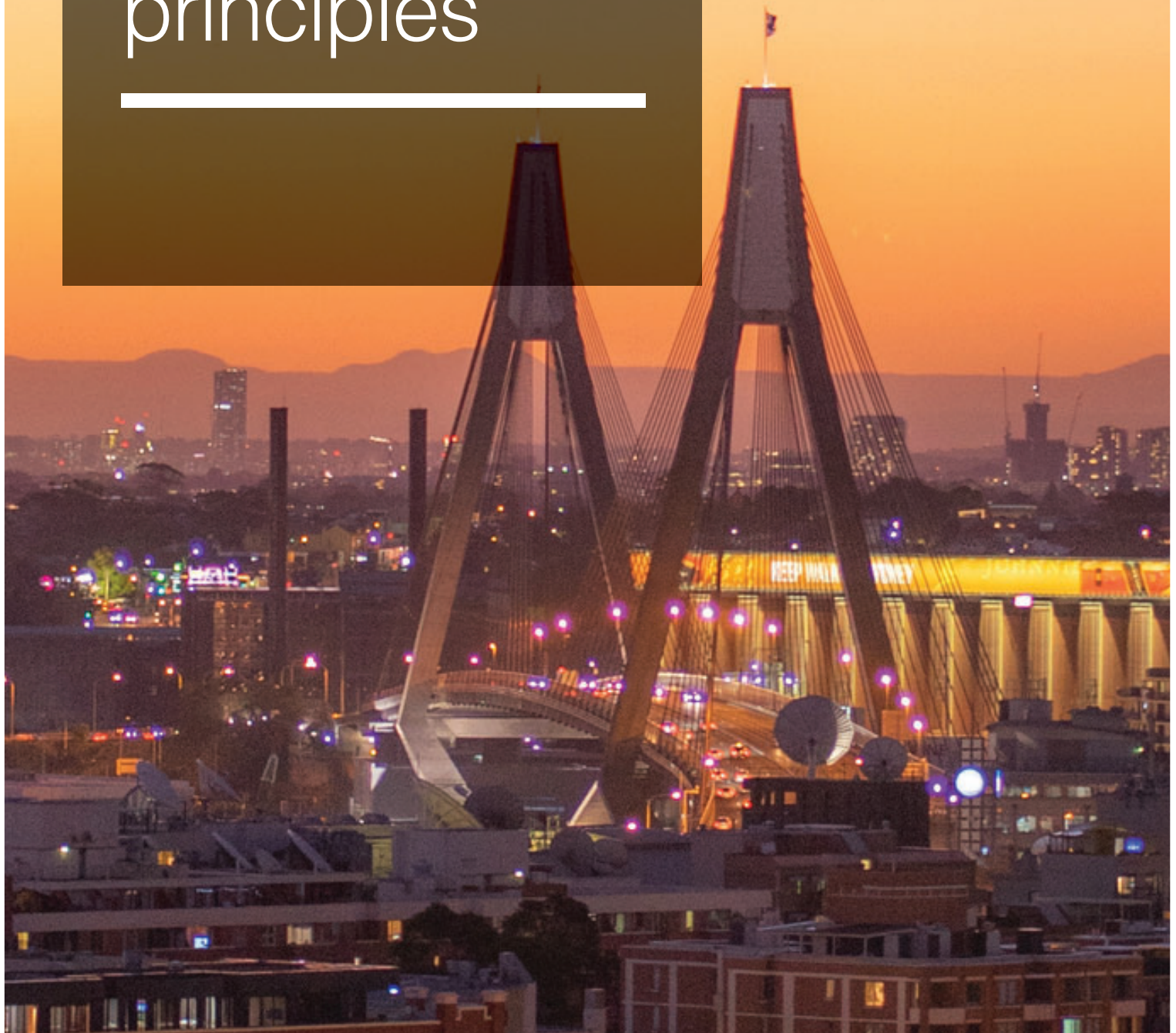
The PBTS is a strategic document focused on guiding the planning, design, and delivery of transport to enable and support the Vision presented in the Bays West Place Strategy. This PBTS is not meant to be a detailed technical report, as such, it does not include operational modelling, data analysis, feasibility assessments or design work.

It does provide high level guidance intended to assist in understanding the needs of the transport network and prioritising those opportunities and initiatives for further investigation. Many of the opportunities and initiatives described in the PBTS are preliminary and illustrate at a high level a desired intent for the Precinct and will require further justification. What validation is provided is reliant on assumptions and will need to be reviewed as the planning process progresses. Most projects are not yet funded or committed for delivery. As a result, they should be regarded as initiatives subject to further detailed investigation, scoping and business case development and investment decisions.

This strategy and supporting analysis are based on the agreed Common Planning Assumptions presented in November 2018. The Common Planning Assumptions represent a consistent baseline and were developed based on current and past trends and agreed policies and plans. They are not targets or scenarios. Travel data, trip generation benchmarks and traffic volumes are based on surveys from 2019 or earlier and do not reflect changing travel patterns due to COVID-19.

3

Vision and principles



3.1 The Vision for Bays West

The strategic vision for Bays West builds upon the previous visioning undertaken to inform the Bays West Place Strategy, November 2021. The vision statement and supporting themes provide a clear direction for success in achieving the best possible place outcome. The Place Strategy identifies the following Vision Statement:

Bays West will represent a new kind of Sydney Urbanism that respects and celebrates Country.

It will build on its natural, cultural, maritime, and industrial stories to shape an innovative and sustainable new place for living, recreation and working

New activities, places, connections, and destinations will enrich the Bays West's character and meaning over time through built form and public spaces that embrace its natural and cultural heritage.

The Bays West Place Strategy speaks to the Precinct's past, present and future. Supporting this vision are 14 directions under five enabling themes, that address connectivity, productivity liveability and sustainability that will guide the growth and change of the Precinct over time. The themes and directions are presented in Figure 6.

Land use and function that address further land uses of Bays West and the role it will play in Sydney's future	Design of places and spaces that provide guidance on how Bays West will feel to people and what is important in the design of buildings and public domain	Transport and movement that recognise the constrained nature of Bays West and establish how the Precinct will safely move people and goods within, to, from and through Bays West	Heritage and culture that recognise the importance of the past and how understanding history and culture is critical to creating a place with meaning	Infrastructure delivery and governance that recognise that the Precinct will evolve over time and that multiple stakeholders are required to ensure that Bays West is successfully delivered
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Figure 6: Themes and Directions (Source: Bays West Place Strategy 2021)

The vision, themes and directions are backed by six big moves (Figure 7). Several of these directly relate to transport and are considered as part of this PBTS.

1 Repurpose White Bay Power Station to become a focal point of the precinct.	2 Reinstate a crossing from Bays West to Pyrmont to create more convenient and direct active transport connections.	3 Connect community to water, while recognising and supporting the working harbour and port operational requirements.	4 Deliver a significant, connected, activated public open space near the water at an early stage.	5 Make the most of the opportunity that a new metro station presents to renew the precinct and surrounds through development that has a strong dependence on public and active transport.	6 Enable a world-class harbour foreshore walk.
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Figure 7: Six big moves for the Precinct (Source: Bays West Place Strategy 2021)

3.2 Bays West Transport Principles

The Bays West Place Strategy identifies transport and movement as a key theme. The PBTS has expanded this to include four key transport themes which will be critical in developing challenges, opportunities and initiatives, and measuring success.

When defining these four key themes, consideration was given to both the recently released documentation such as the Place Strategy but also included a retrospective look back at previous work and relevant policies, strategies and plans.

A review of the vision statements from several documents identified several recurring ideas, summarised in the word cloud in Figure 8. The larger the word, the more frequently it appears in relevant documents reviewed.



Figure 8: recurring ideas from existing strategies (Source: Arup 2021)

The four key transport themes are presented in Figure 9.







Figure 9: Bays West Key Transport Theme

To provide a clear message throughout this document, the four selected transport-based themes will be used to define the various work and findings.

To successfully deliver the overarching vision for Bays West, this PBTS has developed several detailed principles under each of the four key themes. Table 1 presents the principles under each theme. These principles are intended to guide the development of Bays West, to achieve positive transport outcomes for the Precinct.

Table 1: Bays West Transport themes and Principles

Theme	Statement	Principle
 <p>Access and connectivity</p>	<p>Bays west is highly connected and integrated with Greater Sydney, Eastern Harbour City, local neighbourhood and within the Precinct.</p> <p>The transport and street network will be sustainable, the preferred mode of transport will be walking, cycling and public transport and will support continued working harbour and port operations.</p>	C01 - Implement a visionary low-car Precinct
		C02 - Connect and integrate Bays West with the Eastern Harbour 30-minute City, the Innovation Corridor and the Inner West
		C03 - Harness opportunities provided by wider transport investment such as Sydney Metro and Rozelle Interchange and potential government investment such as the Glebe Island Bridge active transport connection between Rozelle and Pyrmont
		C04 - Integrate a core multimodal network that is equitable, people-focused and planned around seamless interchange at transport nodes
		C05 - Leverage opportunities to support Bays West using emerging technology and smart cities thinking
 <p>Environment and topography</p>	<p>A sustainable Precinct, that embraces, supports and enhances the natural environment, built form and key destinations.</p> <p>Supports the NSW Government's vision for net-zero emissions by 2050.</p>	E01 - Implement a low (or zero) carbon Precinct
		E02 - Exceptional connections that activate the heritage, landmarks, harbour and open space of Bays West
	A transport network that is safe, workable and convenient and takes into	I01 - Preserve and enhance working harbour and port operations, servicing requirements and freight in line with urban renewal

 Implementation and operation	consideration a variety of customers and users. Infrastructure is lasting and positively shapes the Precinct for the future.	I02 - Recognise the evolving transport demands of Bays West and plan and respond flexibly
		I03 - Provide safe and equitable access to a range of modes
		I04 Align the Safe System approach to deliver, design and operation of the transport network
 Managing growth and place	A Precinct of opportunity, with great places, supported by transport that is appropriated, adaptable, innovated and can be delivered in stages aligned to growth.	P01 - Deliver outcomes for the community and stakeholders through the application of the Movement and Place Framework
		P02 - Establish a Precinct-wide Travel Demand Management philosophy from opening
		P03 - Implement flexible uses and spaces that can adapt to changing functions and temporal travel patterns

3.3 Introducing Our Precinct Customers

The NSW Government will put the customers at the centre of everything that it does to achieve high quality customer outcomes and world-class leading customer experiences¹ and is a core value embedded into the planning, delivery and operation of transport in NSW.

Figure 10 outlines a summary of the framework and the five key focus areas:












Figure 10: NSW Government Customer Framework (Source: NSW Government Customer Strategy 2021)

Several customers personas have been created for the PBTS, presented in Table 2, that will be used throughout the document to guide and understand challenges, and help validate the strategy.

¹ NSW Government Customer Strategy, May 2021

Table 2: Bays West Customer Personas

	Ahmed	Alea	Eliza	Akira
				
Demographics	29 years old professional who works in the Sydney CBD	45 year old health care worker who works at Westmead Hospital (Balmain Local)	42 years old and lives in Burwood with 2 primary school aged children	65 year old couple. Visiting from Queensland with my wife who has a mobility impairment
Behaviours	<p>I don't own a car and prefer to use public transport, active transport, demand responsive transport services or micromobility</p> <p>I need a quiet and relaxing setting after a long day at work</p> <p>I like to go out for dinner close to home with friends in the evening</p> <p>I am interested in being able to walk and cycle to the CBD</p>	<p>I share a car with my son. I want to use public transport at the last minute if I don't have access to the car</p> <p>I am happy to walk or cycle to access the Sydney Metro West Station but want somewhere safe to store my bike if I do cycle</p>	<p>I currently drive to work in Bays West every day as I need to drop-off and pick-up my kids from school</p> <p>I need to drop my children to school 3 days a week and pick them up twice a week</p> <p>I would like to commute less in my car and more via public transport. The new Sydney Metro West Station at Burwood North gives me direct access to Bays West and is a very attractive option which I'm aiming to use 1-2 times a week</p>	<p>We will probably take a taxi from the cruise terminal to our family in Parramatta</p> <p>We are staying with family in Parramatta</p> <p>We speak limited English and require intuitive wayfinding where we can rely on maps rather than text</p>
Considerations	To be addressed in section 5			
Opportunities	To be addressed in section 5			
Strategy Responses	To be addressed in section 6			

	Martina	Lucas	Noor	Albert	Jeanine
					
Demographics	35 years old	17 years old	50 years old, visiting for two weeks from abroad with her husband and teenage son	65 years old, retired, living in Lilyfield	47 years old
Behaviours	<p>I drive a heavy vehicle loading dry bulk products at the port and delivering them across Sydney</p> <p>I visit daily and sometimes multiples times per day</p> <p>Interested in efficient, seamless and safe access to and from the port</p>	<p>I go on runs and bike rides with my friends or younger siblings in the evenings and on the weekends</p> <p>Improved access to green spaces and the harbour</p> <p>Safe and suitable walking and cycling routes via high quality separated bike, foot or shared paths</p>	<p>Our family loves to walk and spend time outside visiting landmarks</p> <p>We are staying in a hotel in the Sydney CBD</p> <p>To see as much of Sydney's harbour on foot including heritage landmarks at Bays West</p>	<p>To safely kayak on Sydney Harbour in Rozelle Bay without fear of harm from larger vessels on the water</p>	<p>Shipmaster for a cruise ship homeporting at White Bay Cruise Terminal once a week in the peak cruise season</p> <p>To efficiently embark/disembark passengers and goods and depart without delay</p>
Considerations	To be addressed in section 5				
Opportunities	To be addressed in section 5				
Strategy Responses	To be addressed in section 6				

3.4 Measuring Transport Success

Implementing the PBTS calls for a clear way to measure success and validate outcomes against the proposed vision, themes and principles. Success can be measured using clearly defined performance indicators that will ensure accountability.

These indicators should be used at all stages of the planning and delivery process and should be applied to any projects, programs or initiatives that may be delivered following the release of this PBTS.

A range of indicators are outlined in Table 3 with reference to the transport themes and linked to relevant planning principles. Given the strategic nature of this work, this list is a starting point, for practitioners and decision-makers and it is expected that these would be refined as the project progresses.

The NSW Practitioners Guide to Movement and Place and the Movement and Place Evaluators Guide has been used as a guide in developing these indicators and many of those selected have foundations in the built environment indicators.

Table 3: Place Base Transport Strategy Indicators

Theme	Indicator	Measure	Outcome	Transport Principle
Access and Connectivity	Mode share	Sustainable mode share	Positive indicates a shift to sustainable modes	C01, C02, C03, C04, E01, I02, I03, P02
	30-minute access	Percentage of dwellings within 30 minutes (walking, cycling and/or public transport trip) of a metropolitan or strategic centre	Positive indicates greater percentage of dwellings	C02, C03, C04, E01, I02, I03, P02
	Job containment	Percentage of job containment in Precinct	Positive indicates greater percentage of job containment	C03, C04, E01, I02, P02
	Equitable access	Mobility in comparison to the able or unencumbered	Positive indicates reduced differential to reduce severance and connect communities	C04, I03
	Steepness	Streets with accessible slope	Positive indicates increase in access by streets <1:7 slope	C04, E02, I03
	Cycling attractiveness	Score-based system to assess access to quality separated cycleways, quietways, shared paths or shared zones	Positive indicates a greater access to cycleways	C01, C04, E01, E02, I03, P01, P02
	Walking attractiveness	Score-based system	Positive indicates a more attractive walking environment	C01, C04, E01, E02, I03, P01, P02
	Public transport frequency	Score-based system to assess the relative speed of public transport versus light private vehicle and other factors	Positive indicates higher frequency	C01, C02, C03, C04, E01, I03, P01, P02
Environment and Topography	Sustainable development	The proportion of sustainable building materials sourced by reusing or recapture	Positive indicates greater prevalence of sustainable materials	C05, E01
	Carbon emissions	Electric or hybrid powered vehicles	Positive indicates transition towards electric and hybrid powered vehicles	C05, E01, I03
	Places to stop and rest	Average distance between benches, bus stop seating, low walls	Positive indicates reduction in average distance	E02, I03, P03
	Biodiversity	Land zoned for environmental protection	Positive indicates more environmental protection	E01
	Vegetation cover / pervious surface	% vegetation cover	Positive indicates greater vegetation cover	E01
	Tree canopy	% tree canopy cover	Positive indicates greater tree canopy cover	E01, E02
	Waterways	Access to precinct waterways (for use by foot and watercraft)	Positive indicates greater access to waterways	C03, C04, E02
	On-site management	% of run-off	Positive indicates run-off discharged to wider system	E01
Implementation and Operation	Ports, Working Harbour & Cruise Access	Access is maintained for light and heavy vehicles serving the Port, Working Harbour and Cruise terminals	Neutral, accommodate in the future existing and revised access requirements	I01, I02, I03, I04
	Access to loading and servicing	Business and freight operator access to managed loading opportunities	Positive indicates an increase in access to loading opportunities	C04, C05, I01, I02, P02, P03
	Safe speed limits	Kilometres of roads with safe speed limits for pedestrians and cyclists (Maximum limit of 40, desirable limit of 30, 20, 10)	Positive indicates an increased length of road with safe speeds	C01, C04, P01, P03, I04

	Community safety and security	Crime Prevention Through Environmental Design assessment	Positive indicates a greater perceived safety	C04, I03, P01, P03
	Safe System Assessment	Safe System Assessment risk score	Positive indicates greater safety	C04, I04
Managing Growth and Place	Community satisfaction	Community engagement/surveys	Positive indicates greater community satisfaction	I02, P01
	Stakeholder satisfaction	Stakeholder engagement/surveys	Positive indicates greater stakeholder satisfaction	I02, P01
	Movement and Place alignment	Degree of alignment of actual street use with planned street purpose/classification	Positive indicates greater alignment	C03, C04, I02, I03, P01
	Local living	Walkable access to local living needs	Positive indicates increase in access to and/or number of local living land uses	C02, C03, C04, E02, I03, P01, P02
	Public spaces	Access to public space	Positive indicates increase in number of dwellings within 10-minute catchment of public space	C02, C03, C04, E02
	Staged delivery	Balance land use with transport and port operations	Positive capacity or measures to deliver land use development	I02

A scenic view of a city skyline across a body of water, likely at dusk or dawn. The sky is a mix of blue, purple, and orange. In the foreground, there's a concrete pier with some construction equipment and a yellow crane. The middle ground shows a dense urban area with various buildings, including a prominent tower with a yellow top. The background features a dark grey rectangle on the left side, which contains the title text.

4

About Bays West

The Bays West Precinct is a state-significant harbour-side Precinct supporting existing ports and working harbour uses. It is framed by decommissioned heritage structures, such as the White Bay Power Station and Glebe Island Bridge, and regional road infrastructure, such as Victoria Road and City West Link.

The Precinct comprises 77 hectares of land, including Glebe Island, White Bay Power Station, White Bay, Rozelle Bay, and Rozelle Rail Yards. It also includes 76 hectares of adjacent waterways, including Rozelle Bay, White Bay and Johnsons Bay (Source: Place Strategy).

This section investigates relevant policy, travel trends and existing networks.

4.1 Relevant policy

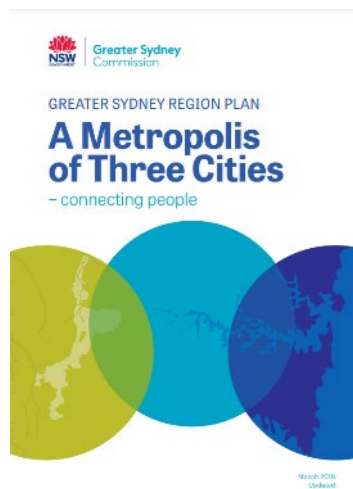
The PBTS is cognisant of multiple overarching policies that apply to Bays West. This includes Sydney-wide policies as well as strategic planning documents for surrounding LGAs. Key considerations drawn from the documents outlined below have been used in the creation of the PBTS.

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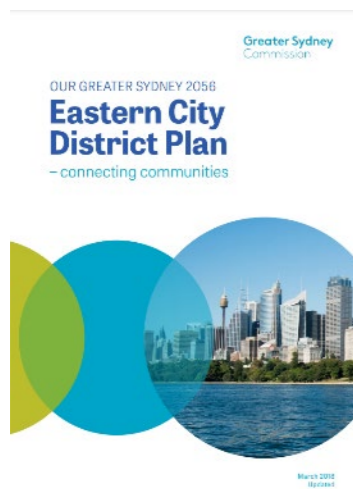
Future Transport 2056 TfNSW, 2018

The strategy outlines a 40-year vision for the New South Wales transport system. It presents a customer-focused vision built around six key principles and establishes a framework to guide investment in future transport. The strategy defines the vision of a 30-minute city supported by defined corridor types – such as city-shaping – for moving people and goods. The Strategy underwent a refresh in 2020 and now includes several new bus routes and metro lines or potential corridors that will serve Bays West, directly or indirectly. These include a Sydney Metro West Station within the Precinct and a rapid bus line operating between Parramatta and the Sydney CBD via the Precinct. The Strategy also details an on-demand ferry trial undertaken in Precinct, which connected Glebe, Pyrmont and Barangaroo.



The Metropolis of Three Cities Greater Sydney Commission (GSC), 2018

The Metropolis of Three Cities is the guiding land use strategy for Sydney. The plan is built on the vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places. The Strategy identifies the emerging Innovation Corridor, which extends from the Precinct to the Australian Technology Park via Pyrmont, Ultimo and the health and education Precinct at Broadway. Connections to, from and within this corridor will be integral to the success of Bays West as a place for people, innovation and employment.



Eastern City District Plan GSC, 2018

The Eastern City District Plan provides more detail and local context around delivering the objectives of the Metropolis of Three Cities for the Eastern City District. The Eastern City covers the Inner West LGA and provides a strategic planning framework to guide future growth and development in the area. The Plan outlines three key initiatives to enable the success at Bays West. These include:

- Diversification and expansion of the innovation corridor
- A strategy to manage port and related landside activities on Glebe Island
- A light rail connection to the Precinct to alleviate long-term capacity constraints on the Inner West Light Rail*

*Note that the Light Rail extension to The Bays Precinct has since been ruled out by TfNSW



Practitioner's Guide to Movement and Place GA, 2020

Movement and Place is a “place-based” approach to the planning, design, delivery and operation of roads and streets, which takes into consideration the entire road width, including the footpath. It organises transport links by their place and movement functions into road and street types. This PBTS has adopted a Movement and Place approach to ensure that the key principles are embedded into every step of the planning process. The Strategy will set a vision, identify challenges and opportunities before determining a preferred option for implementation.



State Infrastructure Strategy 2018-36 Infrastructure NSW (INSW), 2018

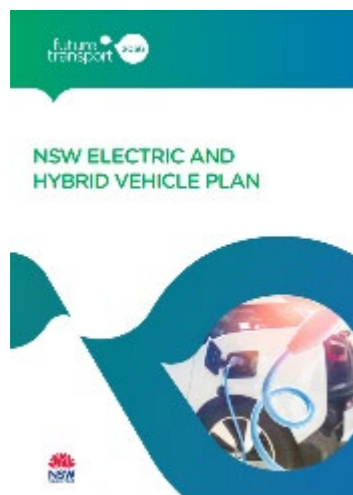
The State Infrastructure Strategy is the NSW Government's key strategy guiding infrastructure planning and investment decisions for the state over the next 20 years. The Strategy outlines the approach to integrate light rail with urban densification. An extension of the Inner West Light Rail to White Bay may be funded by – and, in turn, enable – the planned development on government owned land in this area. * The Strategy also highlights that around 13% of demand from the existing harbour crossings and Anzac Bridge is expected to be diverted to the Western Harbour Tunnel Beaches Link project during the morning peak.

*Note that the Light Rail extension to The Bays Precinct has since been ruled out by TfNSW



NSW Freights and Ports Plan 2018-23 TfNSW, 2018

The Plan provides industry with the continuity and certainty it needs to make the long-term investments that benefit not only their businesses – but the State's future growth and prosperity. The Plan includes over 70 initiatives to be delivered by 2023. The Plan highlights the importance of Glebe Island and White Bay in servicing the needs of Greater Sydney's construction boom. The area is uniquely placed to enable shipping of sand and aggregate to Sydney and reduces the need for trucks to travel into central Sydney with materials sourced from outside the area.



NSW Electric and Hybrid Vehicle Plan TfNSW, 2019

This plan aims to embrace the growing availability of alternative transport such as electric and hybrid vehicles. Its vision is to prepare for and accelerate the adoption of EV technologies, in recognition of the economic, social and environmental benefits. NSW supports the transformation of transport through technology and recognises the need for a clear direction forward to guide government and industry actions on EVs. The Plan includes three key actions which can be incorporated into the design and operation of Bays West:

- Vehicle availability
- Charging points
- Customer information

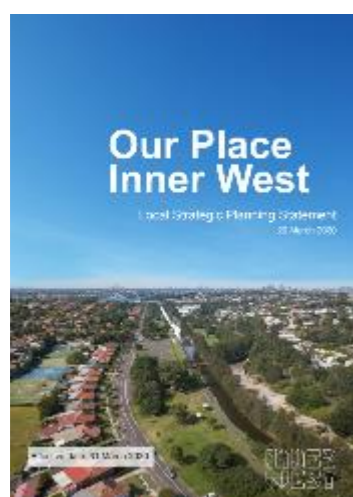


Connecting to the future; Our 10 Year Blueprint TfNSW, 2019

This document outlines the strategic direction of TfNSW. It sets out where they need to focus their efforts in the near term to move towards the long term vision outlined in Future Transport 2056. It aims to respond to economic and societal changes, such as the emergence of new technology and mobility solutions and changing expectations from customers and communities about how they want to live, work and travel. The document outlines four outcomes and seven strategic priorities and identifies the work needed to implement the Blueprint over the next ten years.

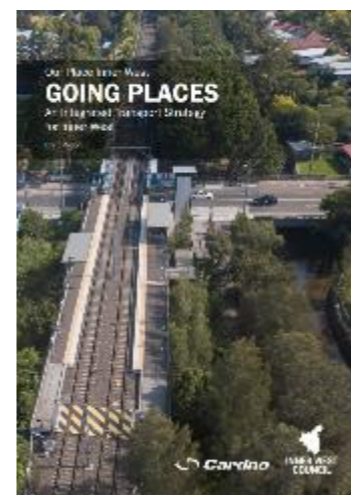
Connecting our City – Transport Strategy City of Sydney (CoS), 2017

This Strategy has been developed by the CoS as a framework for action to improve transport and access to better connect the CoS. It includes several short, medium and long-term objectives and actions to achieve better transport outcomes for the CoS. Approximately three-quarters of all people working in Central Sydney use public transport to get to work, and this share is rising. Increasing the number of residents and jobs in the city and adjacent areas such as Bays West, further develops the public transport network and minimises the amount of additional car commuting.



Our Place Inner West Local Strategic Planning Statement (LSPS) Inner West Council, 2020

This LSPS will guide land use in the Inner West over the next 20-years. Sustainable and coordinated land use will support more renewable energy, local waste reduction and shared transport. It will also guide the alignment of population growth and infrastructure. Ensuring the Bays has well-defined and connected open space linkages to the Balmain Foreshore, Glebe Island and the City of Sydney LGA is critical. These connections should include shared spaces to support and promote alternative modes of transport including cycling and publicly owned foreshore promenades, parks and a recreation area on the former Rozelle rail yards. The LSPS highlights the need to work with State Government to ensure that the Bays West redevelopment delivers strong benefits for both the Inner West community and the region and becomes a low carbon Precinct.



Going Places – An Integrated Transport Strategy for Inner West Inner West Council, 2019

This Strategy aims to address transport challenges and provide strategies and actions that move towards a future that focuses on active and sustainable modes of transport, and land-use planning approaches that support these modes of transport. The Strategy identifies the Inner West trends of comparatively lower vehicle use- 66% higher train patronage and 33% higher bus patronage.

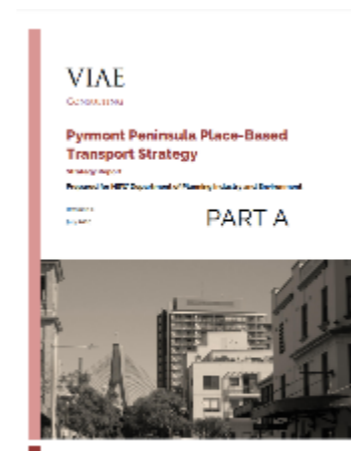
The Strategy highlights walking and cycling connections to the future Sydney Metro West Station at the Bays Precinct, which integrate with surrounding suburbs and existing public transport infrastructure. It also sets out a plan to develop the Inner West bus network to enhance its legibility, with an increase of direct connections and frequencies. Maintaining the separation of heavy vehicle movements associated with the multi-user facility on Glebe Island is also a key priority.



Pymont Peninsula Place Strategy DPIE, 2020

This Place Strategy sets a 20-year vision and planning framework to support the transformation of the Pymont Peninsula. There are several actions that relate directly to the Bays West Precinct including:

- Prioritise commercial floor space to support the Innovation Corridor
- Reprioritise street and traffic flows to promote pedestrian, cycling and public transport and provide improved active transport connections
- Investigate a multi-utility hub for Precinct-scale solutions such as integrated parking, EV charging, recycled water or bike facilities
- Create a continuous harbourside foreshore promenade



Pymont Peninsula Place Based Transport Strategy DPIE, 2020

The Strategy intends to respond to development within the Pymont Peninsula over the next 20 years and presents a defined vision for the peninsula. It is designed to accommodate a robust range of possible development outcomes in terms of population and employment forecasts and transport infrastructure interventions that could support these planning outcomes. The Pymont Peninsula is adjacent to Bays West and they share several bays, including Jones Bay. The opportunity to investigate the reinstatement of the Glebe Island Bridge could create an easy and convenient connection between the two locations strengthening their interaction.



M4-M5 Link EIS WestConnex, 2017

This document outlines the environmental impacts of the M4-M5 Link proposed as part of the WestConnex Motorway project. The project includes an interchange at Lilyfield and Rozelle and a tunnel connection between Anzac Bridge and Victoria Road. In addition, construction of tunnels, ramps and associated infrastructure to provide connections to the proposed future Western Harbour Tunnel and Beaches Link project would be carried out at the Rozelle Interchange. This project provides access for cyclists through the Rozelle Rail Yards, creating north-south and east-west connectivity to Bays West, as well as pedestrian and cycleway connections to link Rozelle and Lilyfield with the Precinct. The project will also increase traffic capacity, supporting greater use of public and active transport along key routes and allows for future growth and urban changes at the Precinct.

4.2 Progression planning for the Bays West Precinct

Given its unique geographic location and the opportunities the Precinct presents, various planning studies have been undertaken in the past to develop a vision for Bays West. The challenges and opportunities in the PBTS will draw from these previous studies as well as the Place Strategy. A key focus is identifying what has changed since previous studies and refining our understanding to develop the PBTS. In 2016, the NSW Government announced Sydney Metro West – a new underground Metro line connecting the Sydney CBD with Westmead. A station was committed at Bays West where Sydney Metro has undertaken a significant amount of design and investigation works.

The following is a brief overview of planning for the Precinct over the last decade.



Bays West Place Strategy DPIE, 2021

Sets out a vision for a connected, vibrant and activated Precinct that respects and celebrates Country, drawing on natural, cultural, maritime and industrial stories to shape an innovative and sustainable new place for living, recreation and working. Resets the strategic agenda which aligns with contemporary plans for The Bays as a whole.



Bays West Strategic Place Framework DPIE, 2021

Provides founding directions that will inform the renewal and redevelopment of the Precinct. Establishes the Vision and Directions that will guide the future of the Precinct. Transport and movement is one of the key themes identified by the document and will guide future masterplanning and development processes across the Precinct.



Bays West Urban Design Framework DPIE, 2021

Establishes a series of principles and site-specific performance considerations to guide the masterplanning process and development of the planning framework for sub-Precincts within Bays West. Highlights opportunities for maximised public benefit while balancing the complex arrangement of land use, design, transport, heritage and governance.



Bays West Connecting with Country Framework Bangawarra, 2021

Aims to embed considerations of Country into the future of Bays West as processes of city development have seldom considered the rich Indigenous knowledge and heritage. Outlines how the key directions under the transport and movement theme can be achieved by designing with a country perspective.



Bays West Sustainability Framework DPIE, 2021

Identifies the sustainability ambitions, priorities and opportunities for Bays West to support the renewal of the Precinct. Sustainability is addressed through the transport and mobility theme by addressing networks for active transportation and key decentralisation of basic services, prioritising walking and cycling and balancing movement and place.



The Bays West Precinct Transport Integration Network Strategy Arup, 2019

Address several gaps and identifies a range of opportunities to integrate Bays West within Greater Sydney's transport system at a local and regional scale. Key transport initiatives include active transport configuration on Glebe Island Bridge and Rozelle Bay Bridge, ferry wharves on Glebe Island and two new bus routes connecting the Precinct with the Inner West.



Bays Transformation Plan UrbanGrowth NSW, 2015

Established a whole-of-Precinct transport infrastructure plan based on connectivity, accessibility and active transport. Strategy for how The Bays can build on its heritage, support local communities, provide safe and exciting places and spaces, optimise maritime uses and develop social capital.

4.3 Bays West today

The Precinct is located on the iconic Sydney Harbour and has a long industrial and maritime history. The Precinct today is dominated by industrial and recreational maritime uses, working harbour, port functions and is home to the White Bay Cruise Terminal. There are several significant heritage items including the White Bay Power Station, Glebe Island Bridge and Glebe Island Silos. An overview of the Precinct today is presented in Figure 11.

Bays West is currently characterised by local segregation and severance with three major roads dividing the area into sections: Victoria Road, Anzac Bridge and the City-West Link Road. Despite the three major roads providing key regional connections, the area faces several constraints. To the North and West, connectivity is limited due to the steep slopes leading inland. Towards the east, the Anzac Bridge provides the only direct connection to Pyrmont and the Sydney CBD.

Current transport trends within the area indicate that the public transport and road networks are operating at or near maximum capacity, constraining access to and from Bays West. This is further exacerbated by a significant increase in travel on cruise days when passengers and workers access the cruise terminal. The congested traffic conditions in addition to heavy vehicle movement generated by the ports and other industrial uses create an overall undesirable setting for walking and cycling conditions in the Precinct.

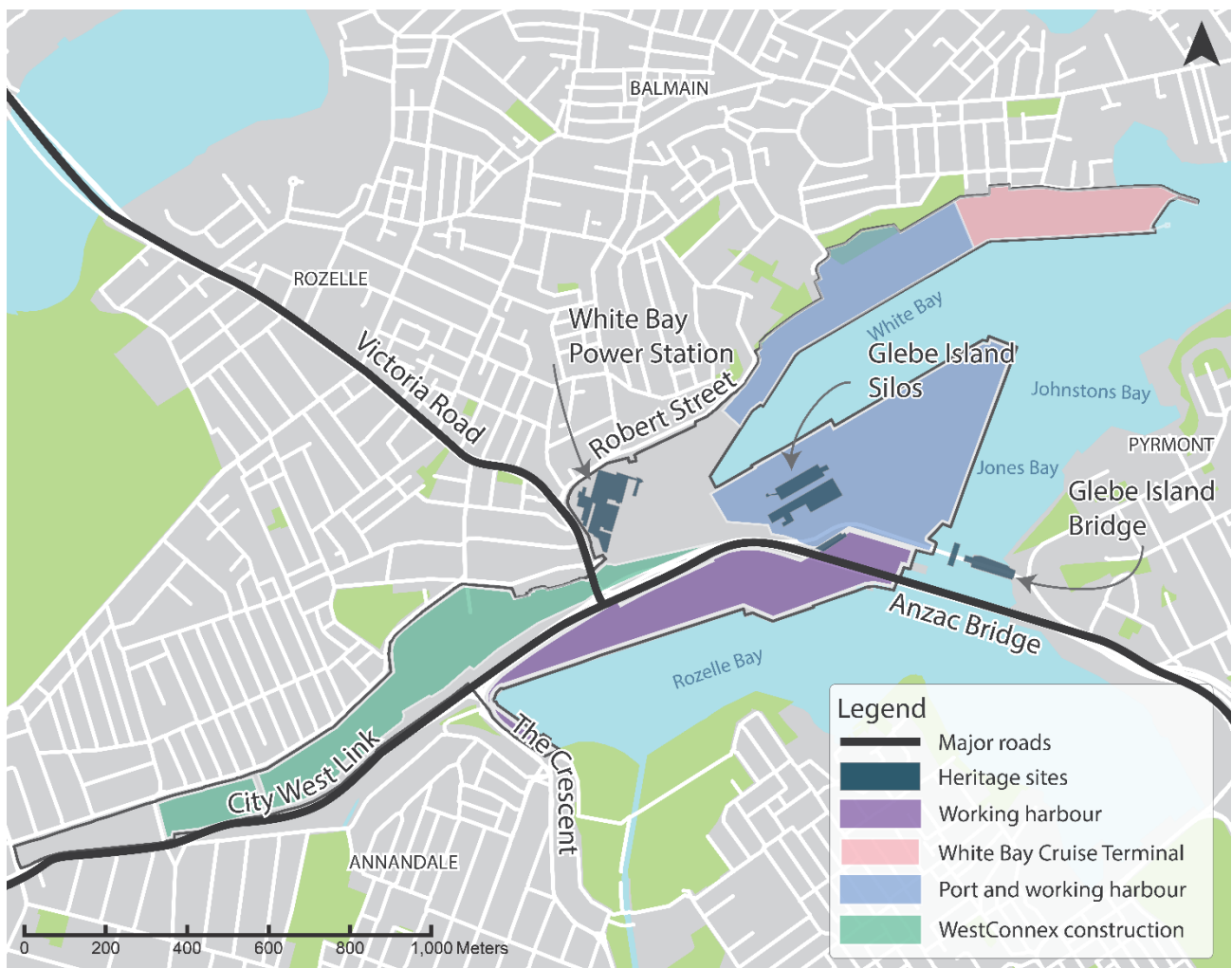


Figure 11: Existing Bays West Precinct

The Precinct has been broken into sub-Precincts in the Bays West Place Strategy and shown in Figure 12. These sub-Precinct will be useful as part of planning, design, and staging the future development within the Precinct. The land is owned and governed by various NSW Government Agencies and private owners. In addition to the PBTS, PANSW will be developing a masterplan providing further clarity around the Glebe Island and Robert Street sub-precincts.

Excluded from the Strategy is Rozelle Parklands (formerly the Rozelle Railyards sub-precinct) this is being delivered as part of WestConnex Project and shown in Figure 13. This PBTS should be read in conjunction with any masterplans developed by PANSW and TfNSW.

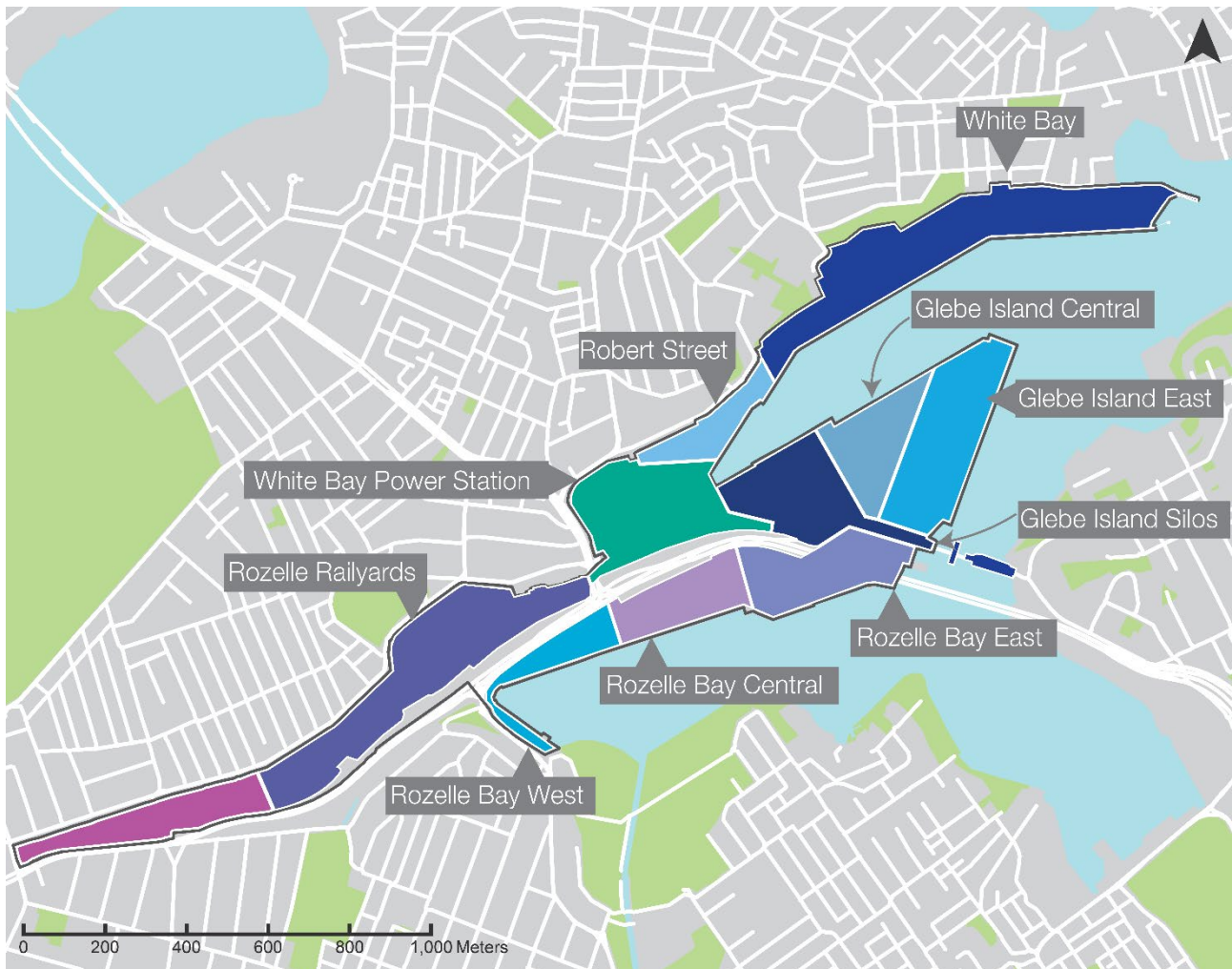


Figure 12: Bays West sub-Precincts



Figure 13: Masterplan for the Rozelle Parklands (Source: WestConnex 2020)

4.3.1 Travel patterns

To gain a better understanding of the existing travel behaviour and trends within the Precinct, Journey to work (JTW) Census data for the Leichhardt SA3 region and the TfNSW Household Travel Survey (HTS) has been analysed².

The Leichhardt SA3 includes the Inner West Suburbs off Leichhardt, Lilyfield, Annandale, Balmain, Birchgrove, Balmain East and the Bays. The Sydney Inner City SA3 region has been used as a comparison.

Why do people travel?

The reason for travel is categorised as discretionary and non-discretionary. The trip purpose split for Leichhardt and Sydney Inner City are shown in Figure 14. Travel for discretionary purposes, such as for shopping, social and personal business, occurs slightly more regularly for both Leichhardt and Sydney Inner City than the metropolitan Sydney average. Social and recreation make up the largest travel purpose share (~30%) in Leichhardt and Sydney Inner City, indicating that both locations have a preference for community, social and leisure activities and that Bays West should look to provide facilities to support this trend.

² The HTS data source does not include travel patterns associated with port and working harbour uses including the White Bay Cruise Terminal

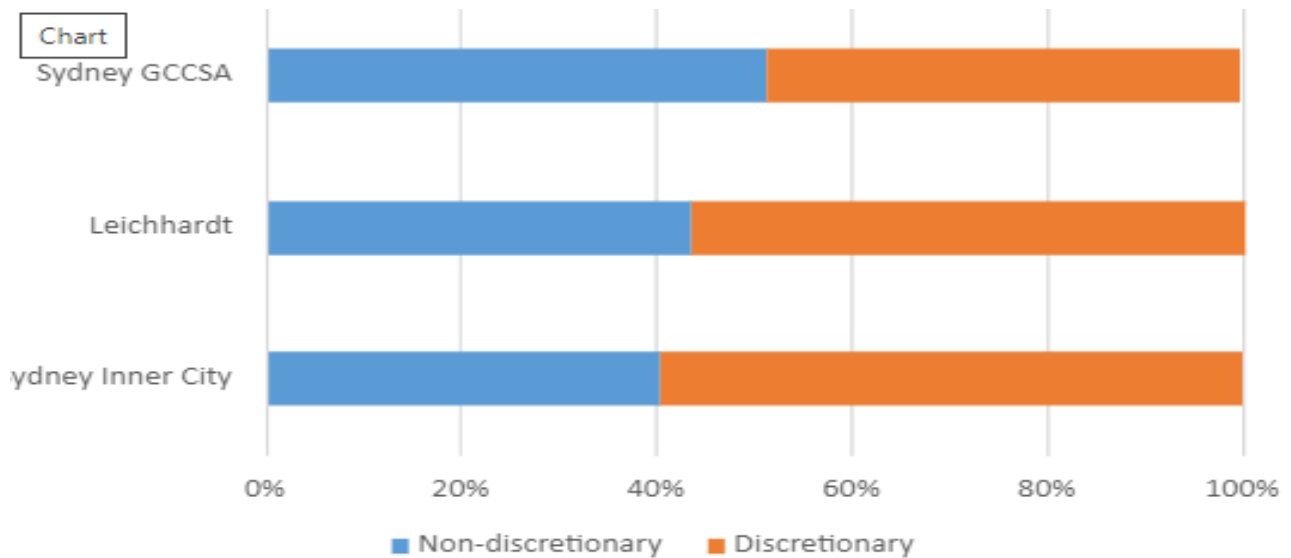


Figure 14: 2019/20 Discretionary travel Household Travel Survey Data

Where do people travel?

The most common origins and destinations for workers travelling to and from Leichhardt are shown in Figure 15. The data indicates that 30% of Leichhardt residents travel to the Sydney CBD and 12% travel within Leichhardt for employment purposes. A further 8% of Leichhardt residents travel to the North Shore, including North Sydney, Ryde and Chatswood for employment.

Leichhardt provides significant employment opportunities, drawing 26% of its own residents for work purposes. Other workers travelling into the area arrive from the Inner West (9%), Sydney CBD (8%), and Canada Bay (7%).

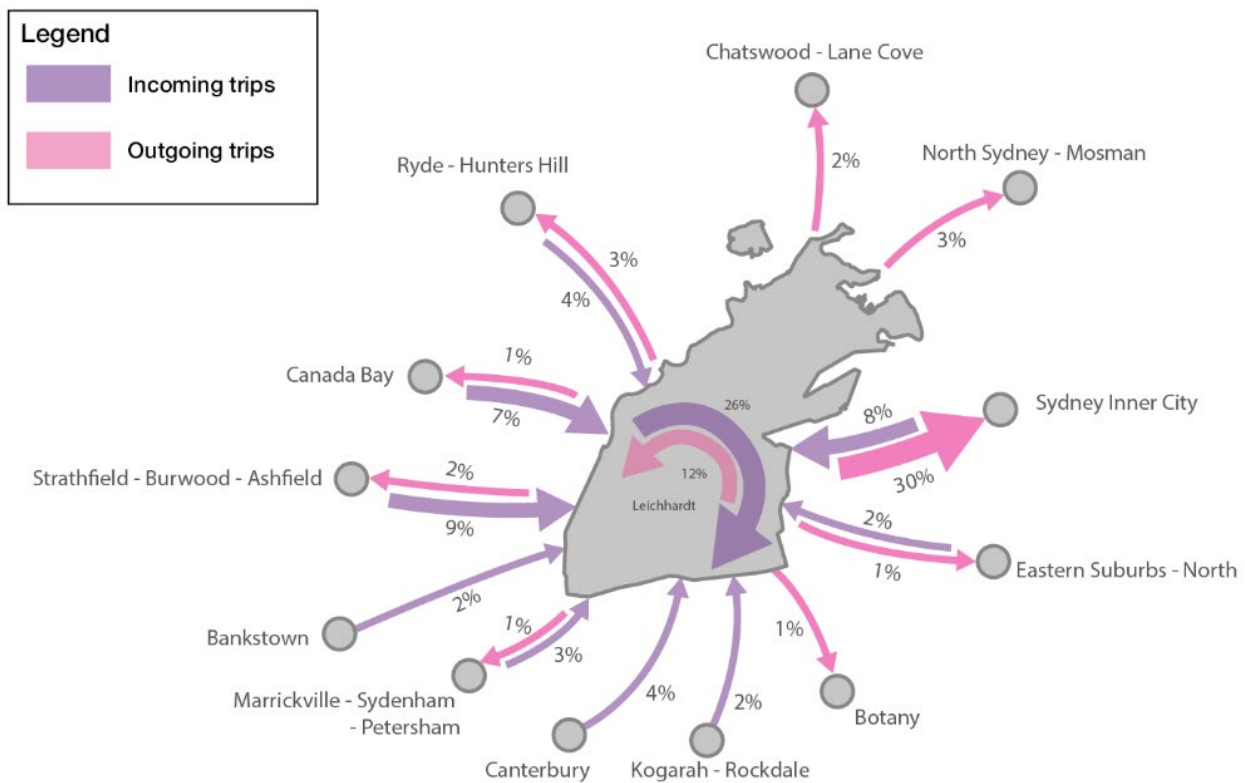


Figure 15: Top ten origins and destinations for travel to and from Leichhardt

Figure 16 displays the most common origins and destinations for workers travelling to and from Sydney Inner City. The major share of Inner-city workers is made up of its residents, with 40% of Sydney Inner City residents working in the city, this is a high level of self containment, and is consistent with the level of jobs, activities and amenities provided.

Workers come from a wider and more diverse catchment in the Inner City when compared to Leichhardt, which is reflective of the CBD's location, employment opportunities and access through its extensive transport network. This demonstrates that a significant change in land use and transport options in The Bays West is likely to shift the distribution of trip origins and destinations, with a potential increase in the catchment area as well.

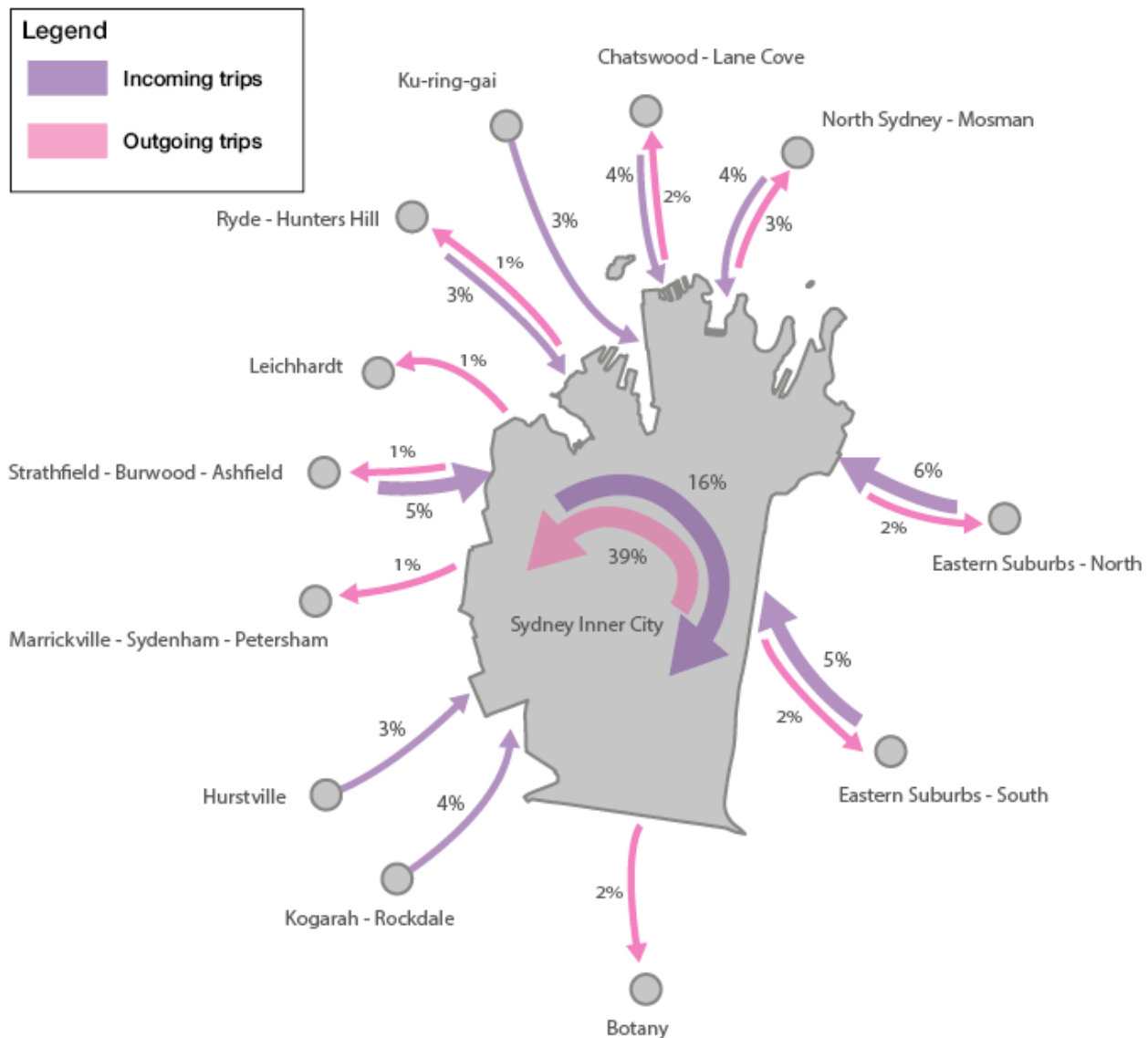


Figure 16: Top ten origins and destinations for travel to and from Sydney Inner City

How do people travel?

Those people in Leichhardt SA3s take public transport nearly as frequently as Sydney CBD residents (38% vs 41%), above the Sydney metropolitan average of 26%. The share of car trips to work sits in the middle between the Sydney CBD and metropolitan Sydney averages at 52%. The share of walking and cycling trips to work is not nearly as high (10%) as for Sydney Inner Sydney residents, of who almost a third of trips is by foot or bike.

For Leichhardt SA3 employees, travel mode share is similar to the metropolitan Sydney averages and less like the Sydney CBD, as it features more car use. The journey to work data for Leichhardt, shown in Figure 17 and Figure 18, indicates high private vehicle use at 67%, as compared to the Sydney average of 73%. Consequently, the share of public transport trips to work in Leichhardt is also much lower than Sydney CBD - 27% compared to 66%. In summary, the journey to work data shows that an increase in the provision of transport options is required for Bays West to achieve its low car vision.

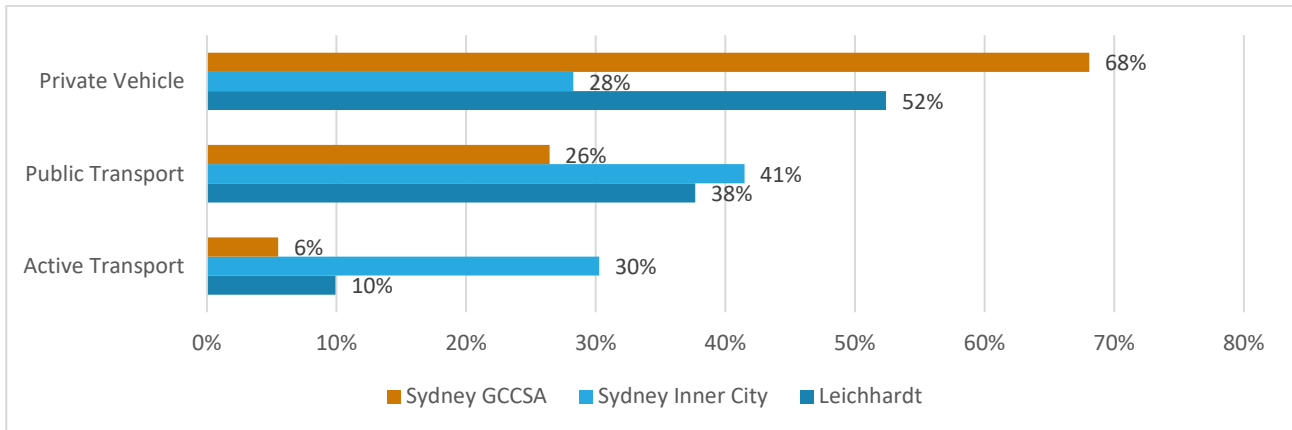


Figure 17: Mode share split for residents travelling out of Leichhardt (Source: JTW 2016)³

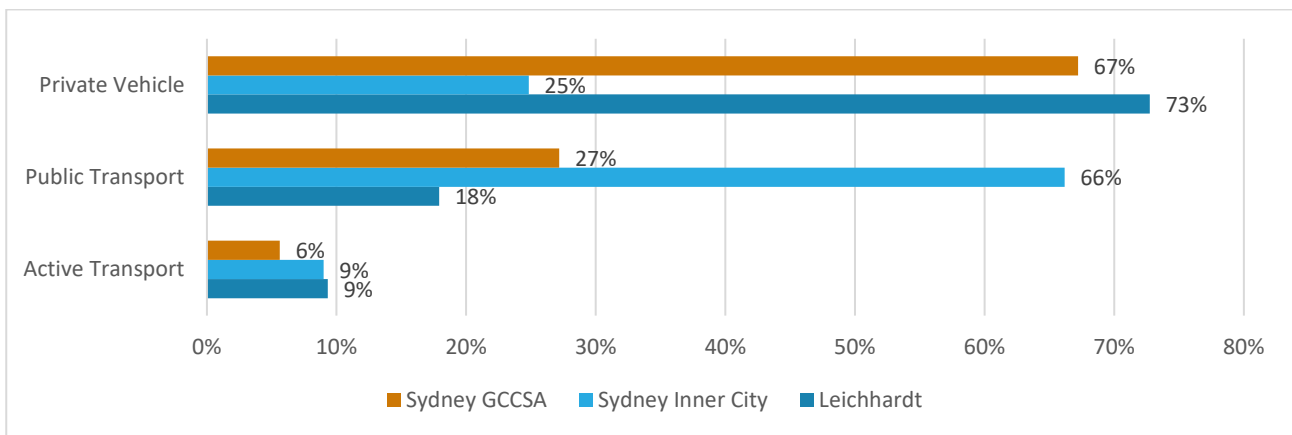


Figure 18: Mode share split for workers travelling into Leichhardt (Source: JTW 2016)

The variety of public transport modes within proximity of Leichhardt warrants a deeper investigation into the public transport mode share. The Leichhardt SA3 is only served by rail in the south of the area and this is reflected in the low train travel for residents and workers. As a result, a large share of the travel demand by public transport is absorbed by the bus network. Approximately 44% of workers travelling into Leichhardt and approximately 63% of residents departing Leichhardt use buses. Residents travelling to other areas for work purposes are more likely to use the local ferry and tram services than workers entering Leichhardt.

³ The JTW data source does not include travel patterns associated with port and working harbour uses including the White Bay Cruise Terminal

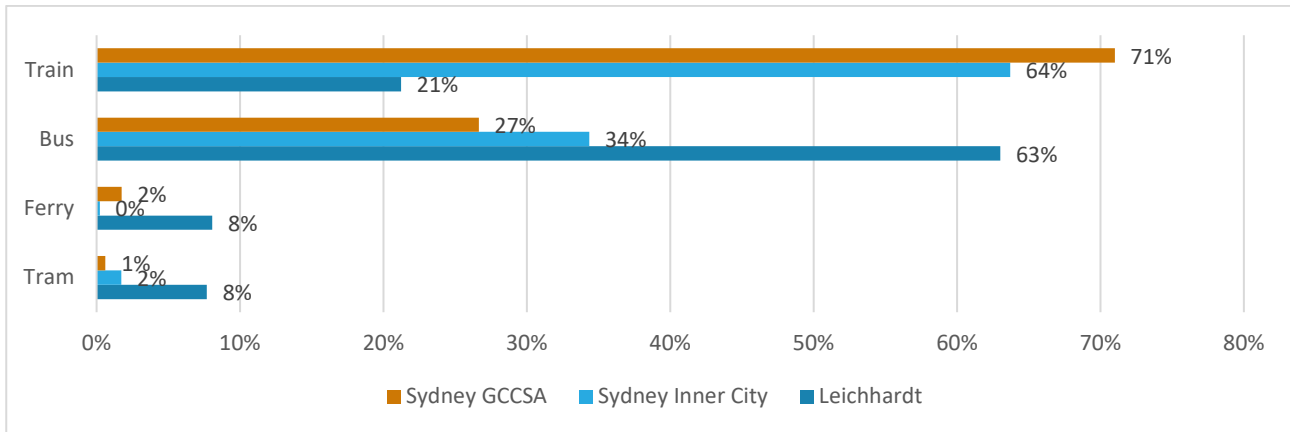


Figure 19: Public transport mode share split for residents travelling out of Leichhardt (Source: JTW 2016)

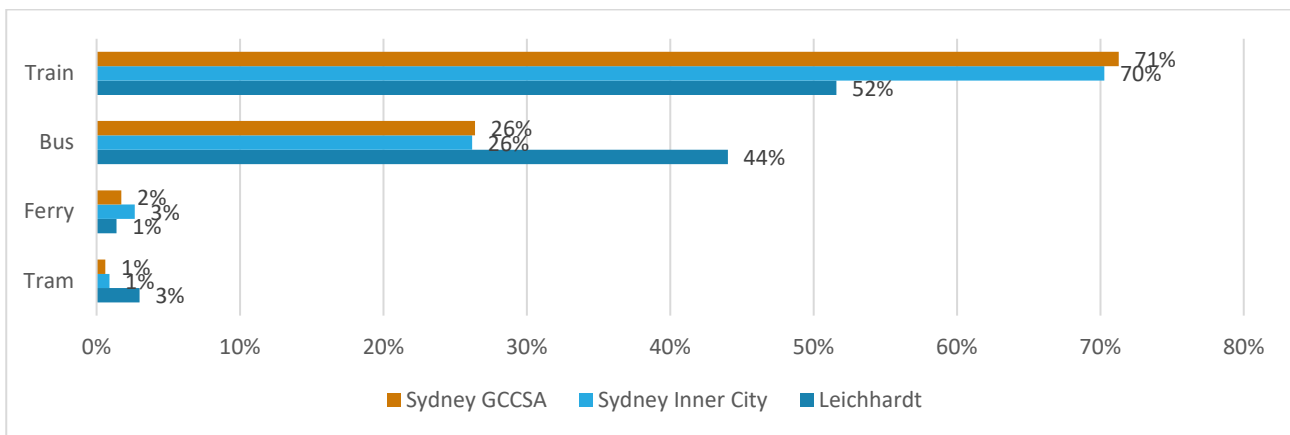


Figure 20: Public transport mode share split for workers travelling into Leichhardt (Source: JTW 2016)

The NSW Government announced Bays West, as one of the locations for a future metro stop on the Sydney Metro West alignment linking Parramatta/Westmead with the Sydney CBD it is expected that rail mode share would exceed that seen in the Leichhardt SA3 given the proximity to a new, frequent, and fast rail connection.

4.3.2 Walking and cycling

The current walking and cycling network in the Precinct is limited. It is shaped by the current environment and land use on-site, which is restricted to the public, Figure 21. The walking and cycling network surrounding Bays West has fundamental barriers to safe and convenient travel.

Some key characteristics of the walking and cycling network include.

- Major roads around the Precinct generally provide walking and cycling facilities. While Victoria Road and Anzac Bridge provide for active travel use, they can also form major crossing barriers for pedestrians and cyclists
- The shared path on Anzac Bridge is well utilised, however, it is narrow and pedestrians and cyclists often come into conflict with one another. The shared path on Victoria Road is narrow, in poor condition and has frequent pinch points at bus stops, busy pedestrian crossings and in front of shops

- An existing shared path along Robert Street provides walking and cycling access to the White Bay Cruise Terminal, however it does not run the length of Robert Street and does not provide a connection from the heart of the stage 1 precinct
- Existing pedestrian bridges across those roads create undesirable crossing opportunities Figure 21
- As part of the WestConnex project, an improved shared path will be delivered in several locations, including Rozelle Rail Yards and Anzac Bridge. This is further connected through shared paths on Victoria Road (northeast side) and the Anzac Bridge leading to the Sydney CBD. The Glebe Island Bridge is currently disused and closed to all users.
- Current walking and cycling links look to avoid the Precinct.

In summary, given the current network and facilities, cycling is likely to be unattractive to the average customer.

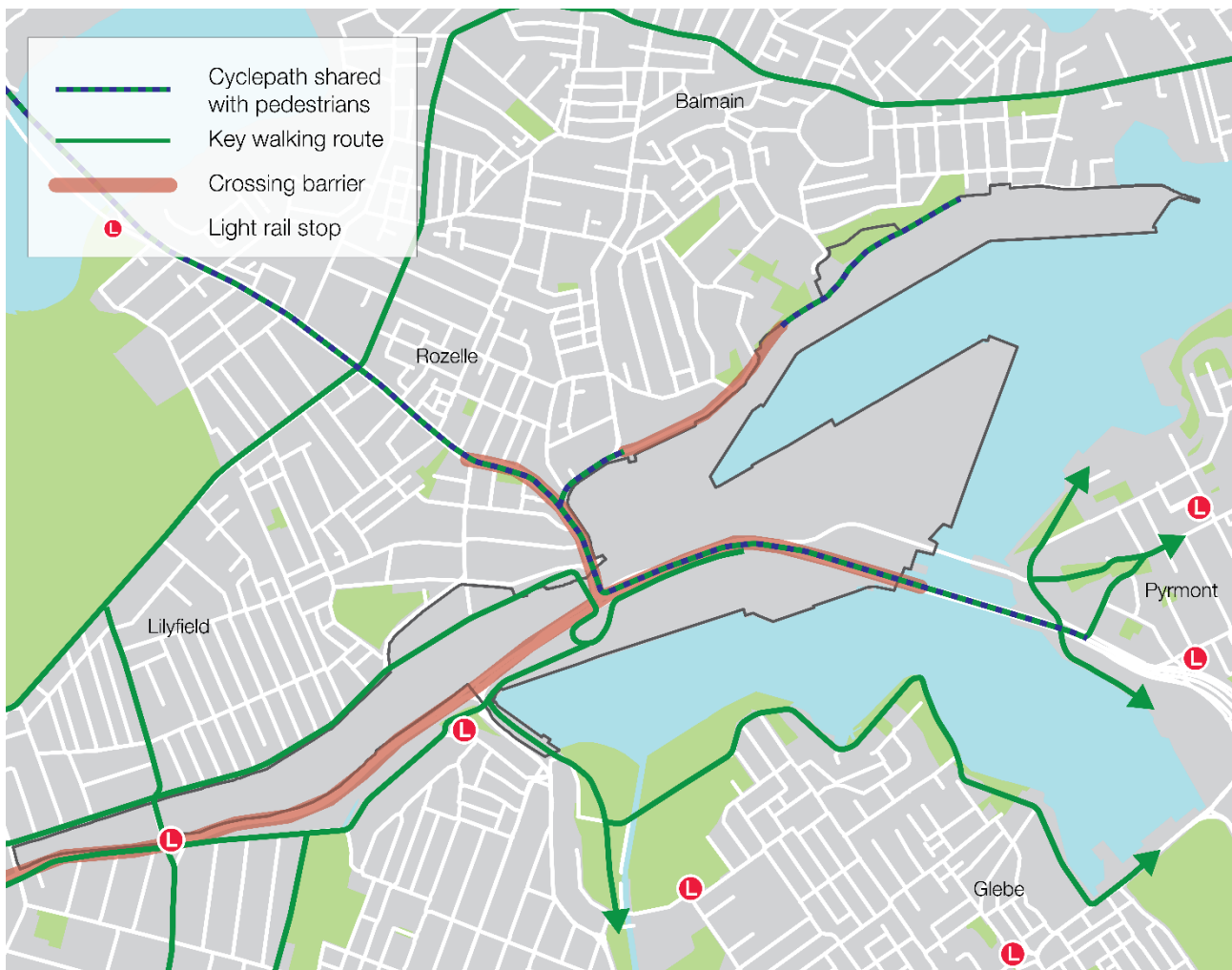


Figure 21: Constraints for pedestrians and cyclists; map adapted from the Integrated Transport Strategy, Inner West Council 2020

4.3.3 Public transport

Like walking and cycling, the current land use within the current Bays West has defined the delivery of public transport services as large sections of the Precinct are not accessible to the public today.

The periphery of Bays West is serviced by a combination of bus services and light rail, as shown in Figure 22. A major bus corridor accommodating multiple bus routes runs through the Precinct via Victoria Road and Anzac Bridge, connecting the Inner West with the Sydney CBD. Most of the bus corridor within the Precinct is however grade-separated from the Precinct as it ascends to the Anzac Bridge. Local routes service surrounding suburbs only.

Existing bus stops within walking distance of Bays West are located on the border of the Precinct on Victoria Road and Robert Street. Significant walking distances and frequent vertical transitions due to height differences, impede the safe, direct and accessibility of the bus stops.

Similarly, the L1 Dulwich Hill to Central light rail borders Bays West in the southwest. The closest stop at Rozelle Bay is located approximately 650 meters away (as the crow flies) from White Bay Power Station. The existing indirect walking network lengthens the walk to this stop.

An on-demand ferry service, which connected Barangaroo and the Bays Precinct, was trialled in 2019 but has since been discontinued. As part of this service, a stop was provided in Blackwattle Bay.

The lack of public transport amenities to the Bays West affects the transport mode share and broader connectivity of Bays West. This gap provides ample opportunity to develop an improved and integrated transport network for Bays West, underpinned by low-car use and superior walking and cycling connections.

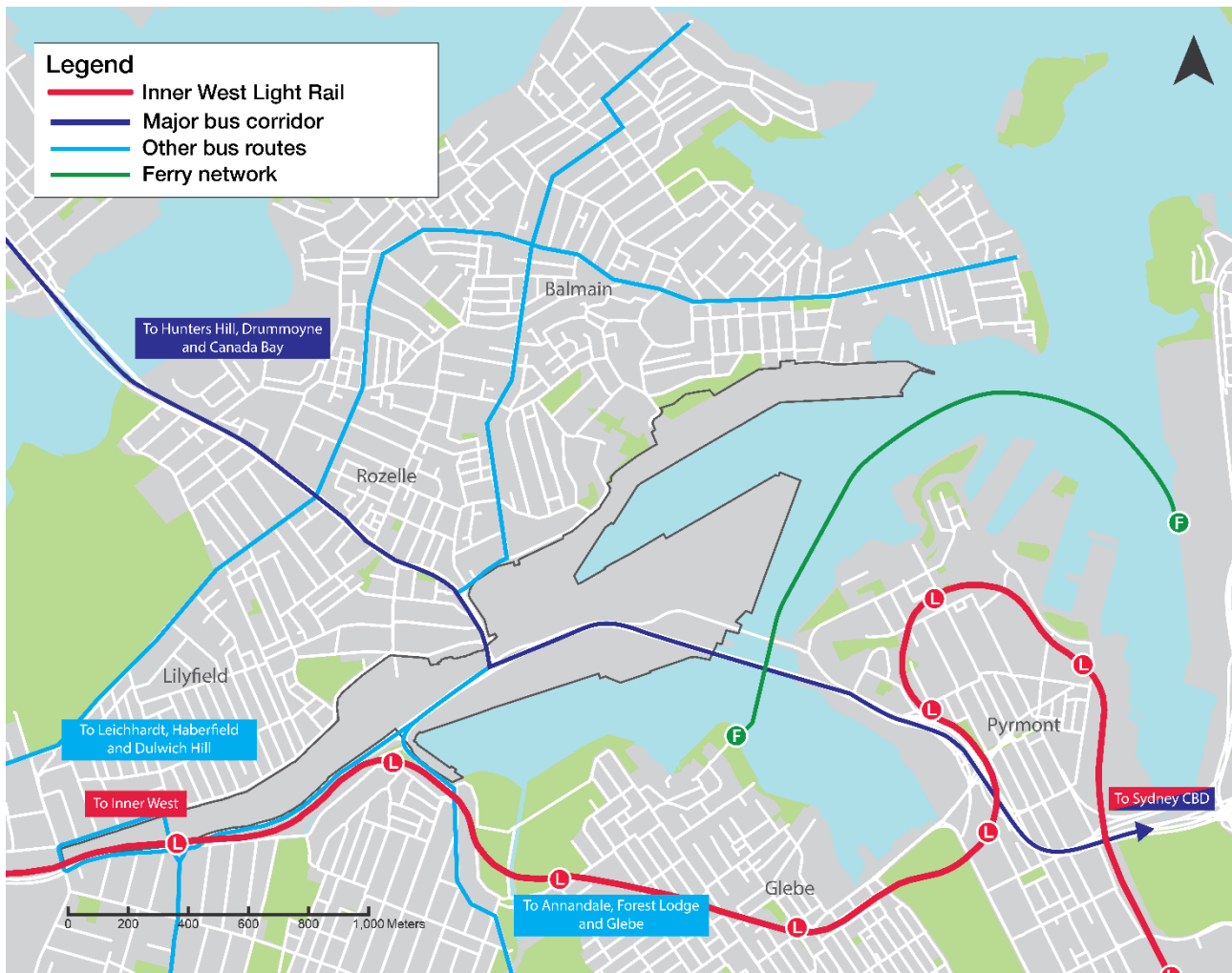


Figure 22: Existing public transport network

4.3.4 Private vehicle and freight

The Precinct is located at the intersection of 3 major roads, being Victoria Road, the Anzac Bridge and City-West Link Road, providing access to the Inner West, Sydney CBD, eastern suburbs and Northern Sydney. Local surrounding roads converge on these roads. The same three roads are also part of the tertiary freight network. Victoria Road, including its intersection with Robert Street, is already operating at or near capacity⁴ in the peak periods.

Traffic accessing the precinct today is generated by existing industrial, maritime, cruise and port functions. Traffic generated by the White Bay Cruise Terminal occurs on ship days and when functions and special events are held at the Cruise Terminal and are independent of ship-related traffic.

The NSW Government is delivering WestConnex, and the Precinct sits adjacent to the new Rozelle Interchange and Iron Cove Link, which will connect the M4, M5 and Victoria Road with the Sydney Motorway Network, this will also result in local road changes. It is unlikely that this work will provide additional capacity at key intersections serving the Precinct.

⁴ Bays West – Traffic Impact and Tipping Point Analysis (SIDRA). Arup, 2018

The industrial land uses on Glebe Island and the White Bay Cruise Terminal attract heavy vehicles to the site. Traffic significantly increases on days when cruise ships are berthed at the Cruise Terminal. Access to and from the White Bay Cruise Terminal and the industrial Precinct is highly regulated depending on road network limitations for heavy vehicles and planning conditions that apply to passenger traffic on cruise days.

James Craig Road is the main access point used and therefore sees the highest volumes of traffic. The daily peak on a non-cruise day is ~4,400 vehicles, spread between 6am and 6pm, of which approximately 20% are heavy vehicles. Approximately 80% of heavy vehicles entering via James Craig Road moves toward Glebe Island, the Silos or to the Rozelle Bay Precinct. The Port Access Road accommodates lower volumes with a daily peak of ~970 vehicles with a similar heavy vehicle proportion. On cruise days, traffic significantly increases with an additional 1,900 vehicles using James Craig Road and a further 2,500 vehicles using Port Access Road North⁵.

⁵ PANSW - Matrix traffic surveys, January and February 2020

4.4 Bays of tomorrow

The NSW Government is proactively considering the future of Bays West, its vision for the Precinct is presented in the recently released Bays West Place Strategy, November 2021. The structure which forms the foundation of the plan for the framework is shown in Figure 23.

Bays West Structure Plan 2040 and beyond

- LEGEND**
- Bays West site boundary
 - Light rail station
 - Light rail route
 - Future 'The Bays' Metro Station
 - Future 'The Bays' Metro Station box
 - Proposed active transport connection
 - - - Potential future active transport connection
 - Proposed bus stops/interchange
 - Key heritage landmarks
 - Proposed key public domain
 - Key landform
 - Foreshore promenade
 - - - Proposed promenade linking connections
 - - - Occasional foreshore promenade access (non-ship days)
 - Existing foreshore promenade
 - Proposed zone of development
 - Development zone with greater height potential
 - Integrated development/ports & working harbour
 - Public domain – Rozelle parklands
 - Integrated ports facility with public domain
 - Ports & working harbour zone
 - Vessel berthing zone
 - Road structures
 - - - Heritage tracings

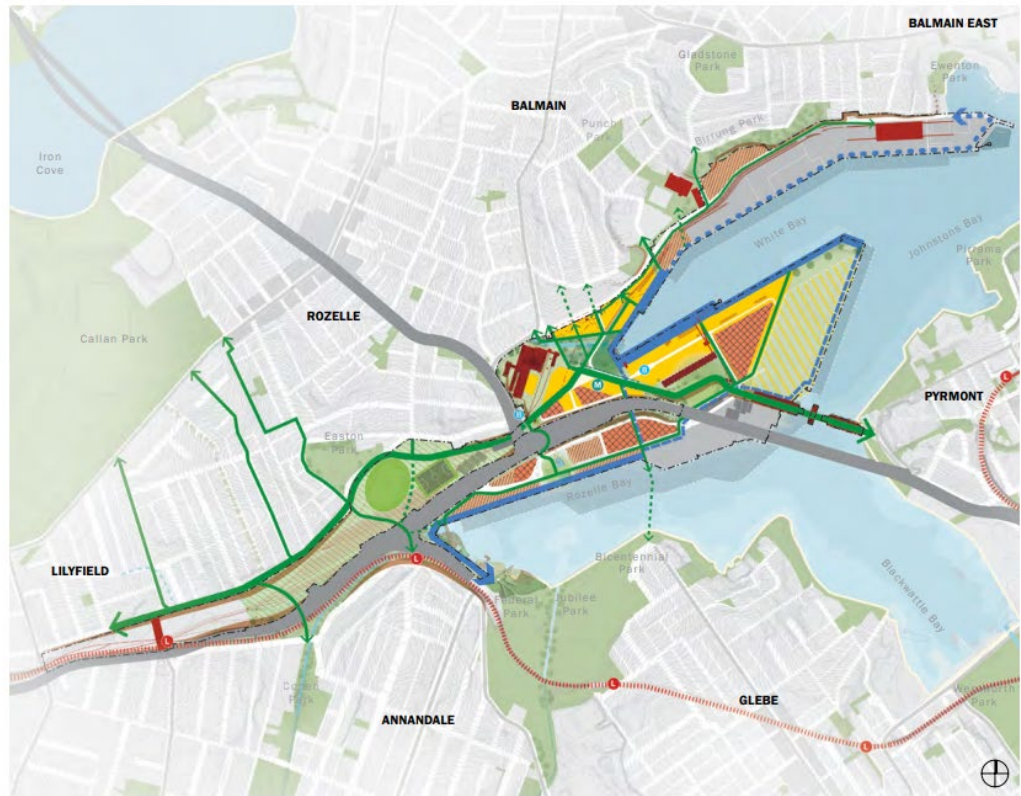


Figure 23: Bays West Structure Plan 2040 (Source: Bays West Place Strategy 2021)

The Bays West Place Strategy creates a long-term vision for Bays West to be delivered over time. It is aspirational, setting the scene for possibilities in line with this long-term staged approach. The Bays West Structure Plan will progressively be updated in stages, as more mastering planning and rezoning considerations are prepared. The DPE is currently developing a Draft Master Plan for an initial Precinct including the White Bay Power Station and Sydney Metro Station.

Expanding the Sydney CBD

A harbourfront location, on the doorsteps of Pyrmont and the Inner West and with a new metro connection, will see the Bays West Precinct become an extension of the Sydney CBD. Providing a diverse range of land uses to ensure a vibrant and lively Precinct. The uses include cultural, retail services, and educational establishments, focused on commercial uses, with a supporting range of residential uses. A world-class international gateway can be developed at the White Bay Cruise Terminal to create an amazing arrival experience and capitalise on the tourist economy. The combination of land uses is what makes Bays West unique and distinctive. The port and working harbour use create opportunities to deliver knowledge-intensive industries associated with the port and maritime uses, overlapped with other, broader knowledge-intensive industries supporting the innovation corridor. There are opportunities to link innovation to education and implement new technologies for industry. This has the potential to create a unique place along Sydney Harbour, which will be a focus of the future renewal of the precinct.

There is the opportunity for Bays West to Anchor the northern end of the expanding technology and innovation corridor that connections with Tech Central, which is being planned by the GSC to have an estimated 25,000 innovation jobs and provide a pipeline for 25,000 new students focused on science, technology, engineering and maths (STEM).



Figure 24: Bays West is an extension of the Sydney CBD

Planned urban renewal

The renewal of Bays West will enable new activities and destinations and provide for a mix of different and attractive land uses and open spaces. Incorporating the new Sydney Metro West Station, and the retention and transformation of the existing ports, working harbour and cruise industry will see the redevelopment of this Precinct, a once in a generation opportunity.

This Precinct is being delivered alongside several other local Precincts, that will see this part of the city change substantially in the coming years and decades. In the west of the area, the Rozelle Parklands as part of the Rozelle Interchange project is designated as parkland and open space for community use, including sporting fields and multi-purpose sporting courts. East of the Precinct, the Blackwattle Bay Redevelopment will deliver a continuous waterfront promenade from Rozelle Bay through to Woolloomooloo, including the redevelopment of the Fish Markets.

The renewal of the Bays West Precinct is expected to happen over time as sub-precincts are (individually or concurrently) master-planned, rezoned and redeveloped.

To assist with the planning for the future of Bays West, assumed yields have been developed that provide an indicative outcome for the future of the Precinct. They are outlined in Table 4. These assumed yields consist of three stages and include high, medium and low scenarios, noting that the density of each sub-precinct will be determined on a case by case basis. The numbers noted in these scenarios have been provided by DPE and are indicative only and intended to inform the modelling. They do not provide a definitive outcome or indication of the final uses of the Precinct.

These indicative outcomes do not identify a preferred outcome for Bays West or an indication of anticipated yield. These scenarios have been developed in order to understand the broader impacts of the transport network needs of the whole Precinct. The population forecast for option 2 has been considered in this benchmarking analysis.

Table 4: Land use assumptions (Source: Bays West Strategic Masterplan Reference Scheme Options, Terroir 2021)

Land Use	2030 GFA (m3)	2040 & Beyond GFA (m3)	Total GFA (m3)
Residential	39,172	296,877	336,049
Commercial	30,394	334,008	365,402
Working Harbour	0	28,725	28,725
Ports	0	60,000	60,000
Education	56,890	36,400	93,290
Social Infrastructure	8,050	5100	13,150
Cultural Infrastructure	13,500	0	13,500
Miscellaneous	4,850	2,833	7,683
Indoor Recreation	0	3,500	3,500
Overall Total	152,856	768,443	921,299

City shaping infrastructure projects

Bays West is located centrally to some of Sydney's largest and most complex infrastructure projects that will have a major impact on connectivity for pedestrians, cyclists, motorists and public transport users, see Figure 25.

Delivery of the Sydney Metro West Station on the Sydney Metro West line, due to be completed in 2029-30 will be critical to connect the Precinct with Greater Sydney. The metro will help to support development within Bays West by dramatically improving its accessibility and capacity for travelling to and from the Precinct. Once operational, Sydney CBD will be one stop away, and Western Sydney and Parramatta will be accessible within minutes.

A series of major and committed road infrastructure schemes are within proximity to The Bays and will hugely impact the Precinct, including Rozelle Interchange, WestConnex and Western Harbour Tunnel (WHT). These road infrastructure schemes will offer linkages between the North Shore, the M4 and wider metropolitan Sydney. The WHT link will provide a connection across Sydney harbour to the Warringah Freeway in North Sydney. This will improve the access to and from the Precinct, taking traffic away from the arterial roads that traverse through Bays West and diverting them underground.

As part of the delivery of the Rozelle Interchange, a key portal to access the underground network, new land bridges and shared paths will be implemented to improve the walking and cycling networks around the Precinct, further discussed in the following section.



Figure 25: Future infrastructure schemes around Bays West

4.4.1 Walking and cycling

Walking and cycling access to and within the Precinct will be pertinent to its connectivity with its surroundings. On a regional level, Future Transport 2056 sets out the NSW Government's ambition to provide a network of safe, high-quality cycleways within 5-10 kilometres of strategic centres. This may result in several strategic centres being connected via cycleways. On a local scale, a series of pedestrian bridges and connections are proposed as part of the Rozelle Interchange design, in addition to proposals within the Inner West Council Integrated Transport Strategy. There is an opportunity for these regional and local interventions to address some major connectivity issues in the currently fractured and indirect walking and cycling network.

The NSW Government is also investigating opportunities to restore Glebe Island Bridge as an active transport connection between Rozelle and Pyrmont. The delivery of this link will be critical to the success of the precinct. This active transport connection is important for the expansion of the innovation corridor into the precinct.

Cycling

Existing and proposed cycleways in the Precinct are provided in Figure 26 which provided a snapshot of the Metropolitan Connected Cycle Network (CCN) prepared by TfNSW.

In addition to the CNN, a cycleway along the foreshore within the Precinct is proposed as part of the planned Parramatta to CBD foreshore link, providing a key recreational route and connection to the iconic Sydney Harbour (not committed, subject to ongoing consultation with key stakeholder). The potential to investigate the reactivation of Glebe Island Bridge would provide the major opportunity of a direct, at-grade and safe connection to Pyrmont and the CBD, away from the heavily congested Anzac Bridge.

The current cycling plans have significant gaps within Bays West, and likely do not take into consideration the opportunity for future development. This strategy will look to address some of the gaps, providing for a comprehensive regional cycle network.

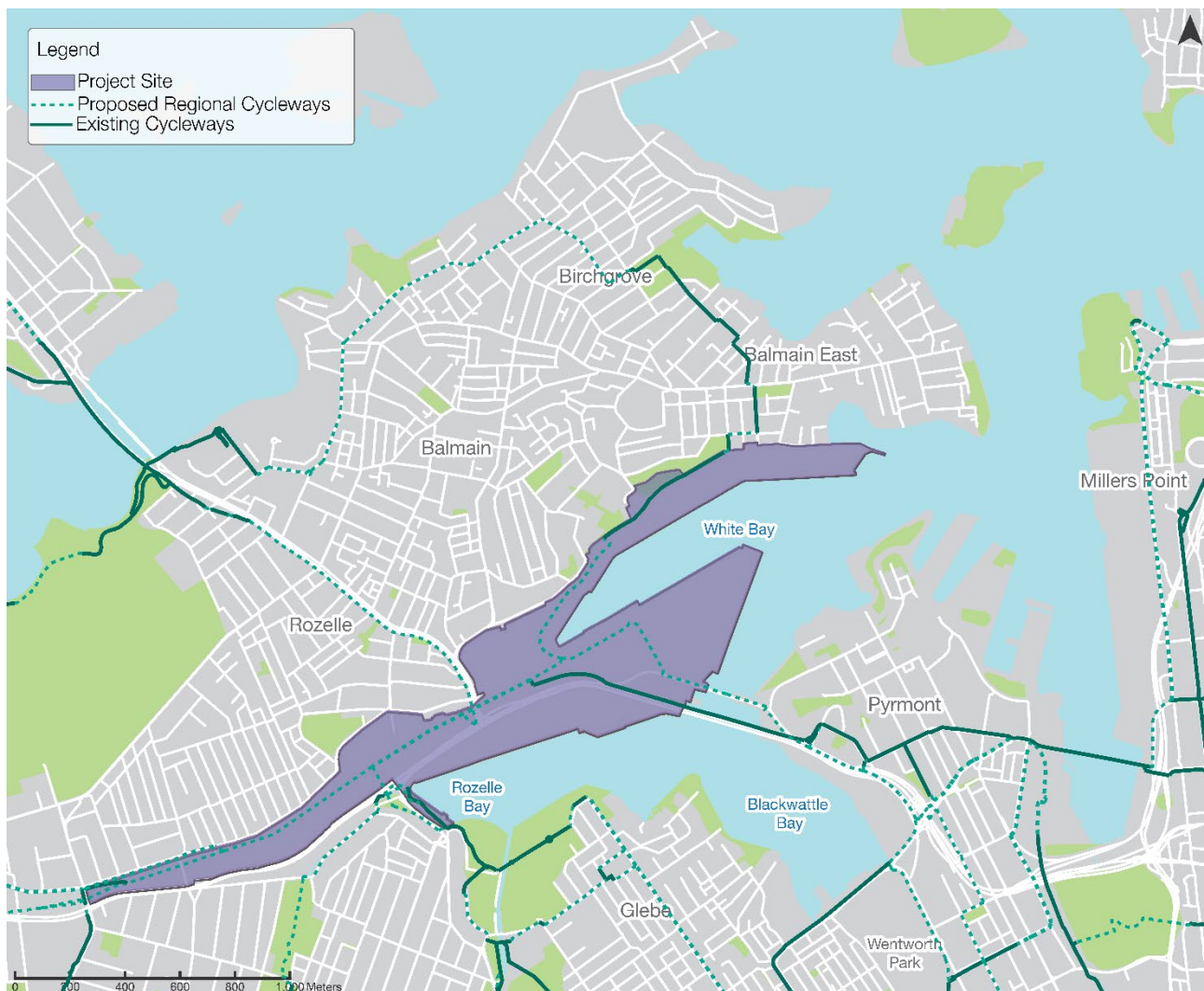


Figure 26: Proposed Bays West Cycling Network (Source: Metropolitan Connected Cycling Network)

Walking

As with cycling, the walking network is limited with the Precinct, and providing for a regional and finer grain network is a key element of this strategy, and critical to the success of Bays West in the future.

Walking networks prepared by the City of Sydney Council and Inner West Council have been reviewed as one potential future of walking and shown in Figure 27. As with cycling the cycling network, a walking connection along the foreshore or via Glebe Island Bridge, are subject to ongoing investigations by the NSW Government.

Supported by the shared paths and a land bridge being delivered by the WestConnex Project at Rozelle Interchange, the proposed walking connections are predominantly focused on existing public transport services, such as the Rozelle Bay light rail stop and bus services along Victoria Road, improving connectivity and directness of routes. Issues of indirectness and permeability will remain within the core of the Precinct.

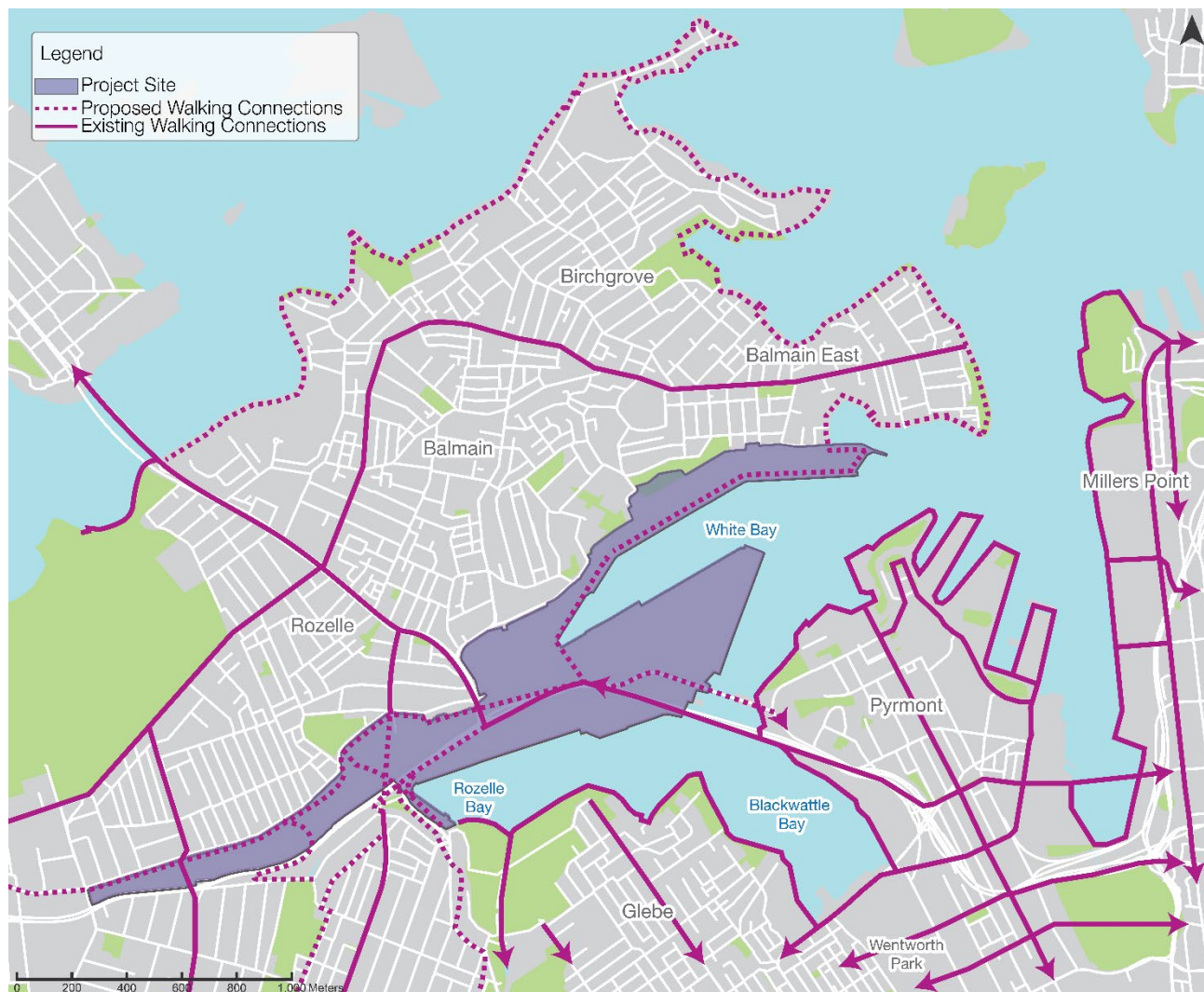


Figure 27: Proposed Bays West Walking Network (Source: Inner West Council and City of Sydney Council)

4.4.2 Public transport

The existing public transport catchment from Bays West is shaped by access to the bus network on Victoria Road and the Inner West Light Rail Network. These provide access to the Sydney CBD and Local Balmain and Rozelle Peninsula. However, the Precinct is isolated from much of the rest of Greater Sydney.

The delivery of Sydney Metro West will boost the public transport catchment significantly, enabling people to travel from Bays West to Sydney Olympic Park or Parramatta within 30 minutes. With an interchange in the Sydney CBD, major employment and retail hubs, including North Sydney and Crow's Nest, and suburbs on the Canterbury line, are accessible within 30 minutes. In summary, Sydney Metro West connects The Bays West to metropolitan Sydney and enables the Bays to become one of Sydney's most strategically located places.



Figure 28: Sydney Metro West alignment and station location (Source: Sydney Metro)

TfNSW and Sydney Metro, completed modelling using the Sydney Travel Model (STM) to inform the business case and design of the project. Origin and Destination analysis has been undertaken and mapped in Figure 29 and Figure 30 for bus and Figure 31 and Figure 32 for rail.

This indicates the likely catchment of the Precinct in 2036. There are several emerging trends:

- A large proportion of trips are contained locally within areas adjacent to Bays West, with the Inner West and Sydney CBD the main destinations and origins.
- The catchment does expand for rail users; however, most people would still be drawn from a local catchment.

In summary, the model suggests that the Precinct will have a greater influence on travel at the local and district scale, with most of the origin and destinations within Eastern Harbour City and will further support the local areas of the Sydney CBD, Inner West and the Tech and Innovation Corridor.

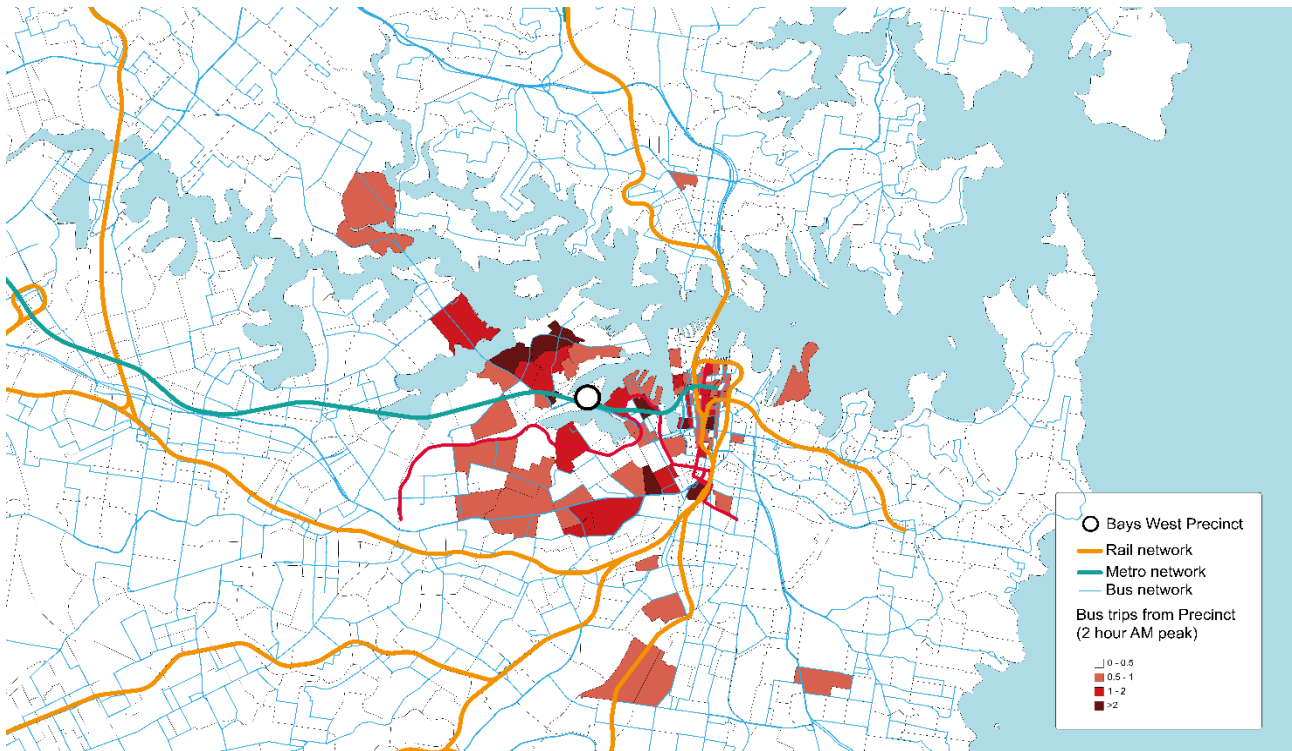


Figure 29: Origin of bus trips in Bays West

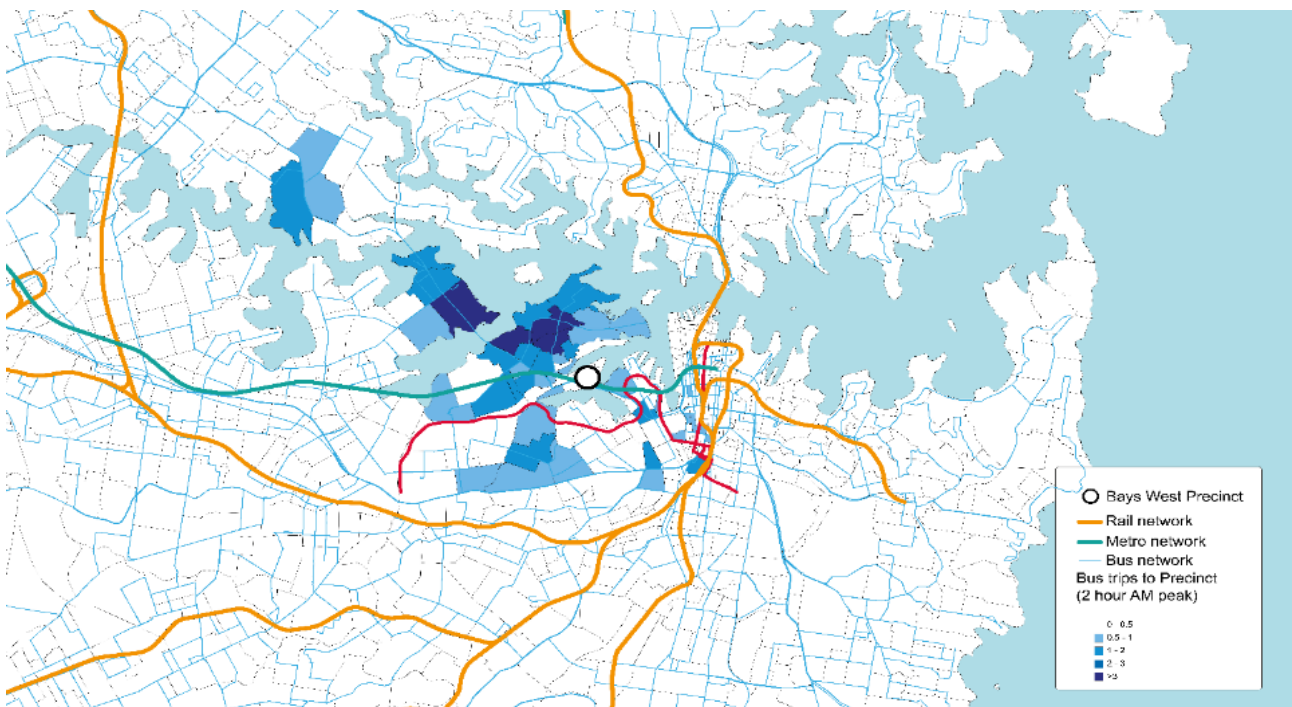


Figure 30: Destination of bus trips in Bays West

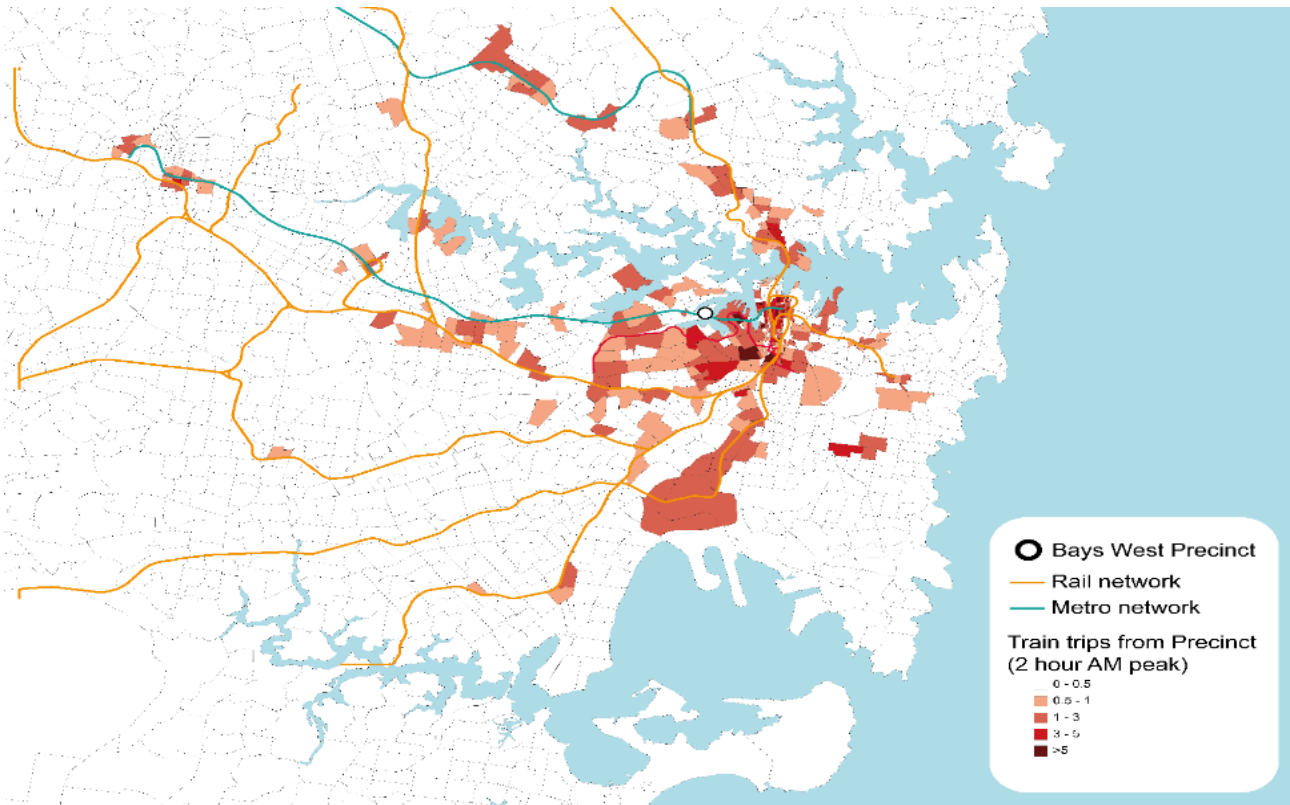


Figure 31: Origin of rail trips in Bays West

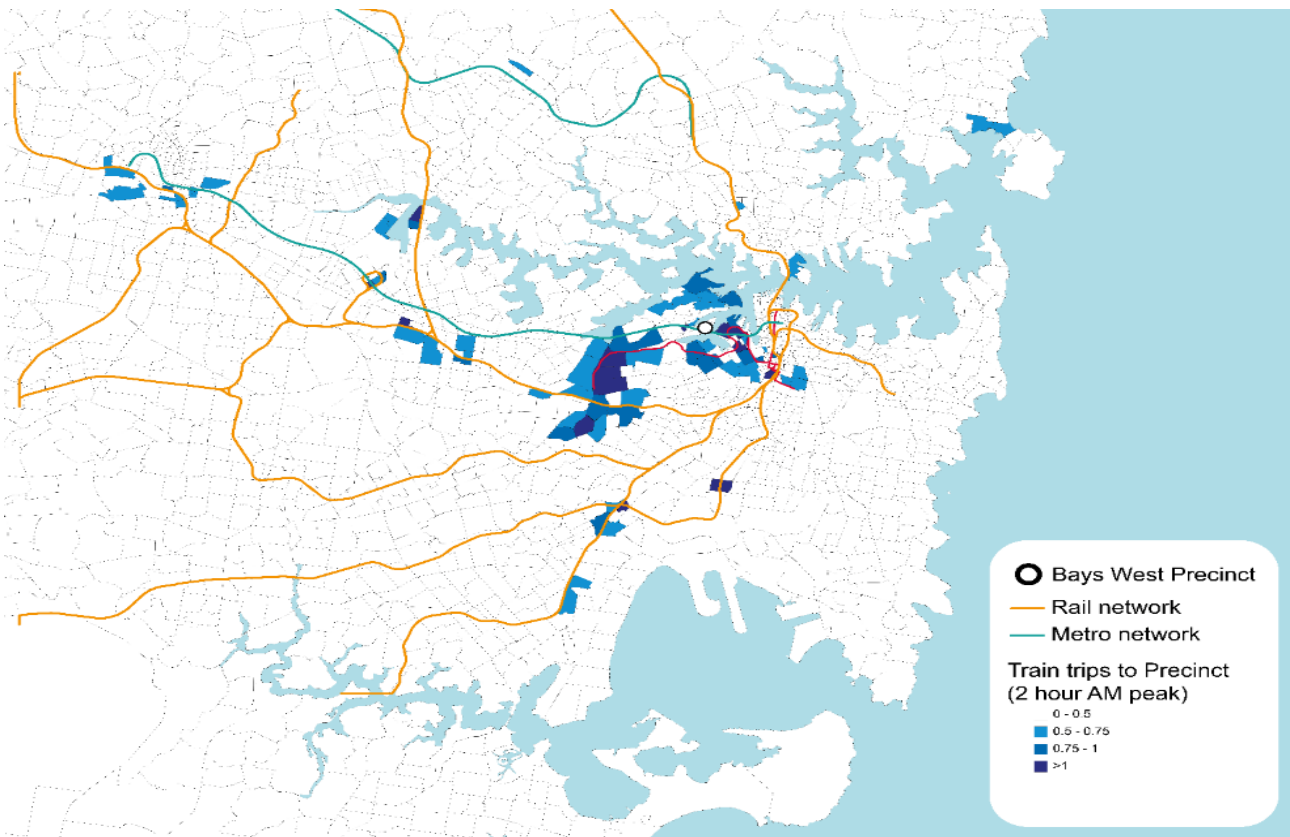


Figure 32: Destination of rail trips in Bays West

4.4.3 Private vehicle and freight

As described in section 4.2.2, a series of major road projects are planned around The Bays which will impact the structure of the road network and traffic conditions around Bays West.

While Victoria Road is currently operating at or near capacity throughout much of the day, it is expected that the planned projects will bring relief in the years after opening, particularly to northbound and southbound directions on Victoria Road and eastbound sections of Anzac Bridge⁶.

However, several industrial land uses are planned within the Precinct, likely counteracting this reduction, especially on James Craig Road. Two major freight operations are planned in the Precinct⁷ that is expected to drive a 36% increase in traffic using James Craig Road, resulting in up to 6,000 vehicles using this access point daily on a non-cruise day. The share of heavy vehicles will also increase from 25% to about 40%, reducing overall place amenity in the area. On cruise days, the daily peak volumes using James Craig Road will be 7,900 vehicles when considering the uplifts related to the new freight operations⁸.

Although local freight traffic demand will increase, there will be wider road network benefits as regional freight traffic demand that feeds surrounding supply chains, relating to concrete, will reduce as bulk materials are transported via water.

The STM model was also used to understand the origin and destination for private vehicle trips in the 2036 AM peak 2 hours. See Figure 32 and Figure 33.

The potential catchment for private vehicles is wider than that of public transport, however, that is expected, given the density of local roads when compared to transport. However, like public transport, the primary catchment for private vehicle trips is the Inner West and Sydney CBD. Port and working harbour traffic will still be a major contributor of traffic within the precinct in 2036, with traffic originating from locations throughout Sydney.

⁶ Bays West – Traffic Impact and Tipping Point Analysis (SIDRA). Arup, 2018

⁷ The Multi-User Facility on Glebe Island, an import, storage and distribution facility, and a development operated by Hanson Operations.

⁸ PANSW - Matrix traffic surveys, January and February 2020

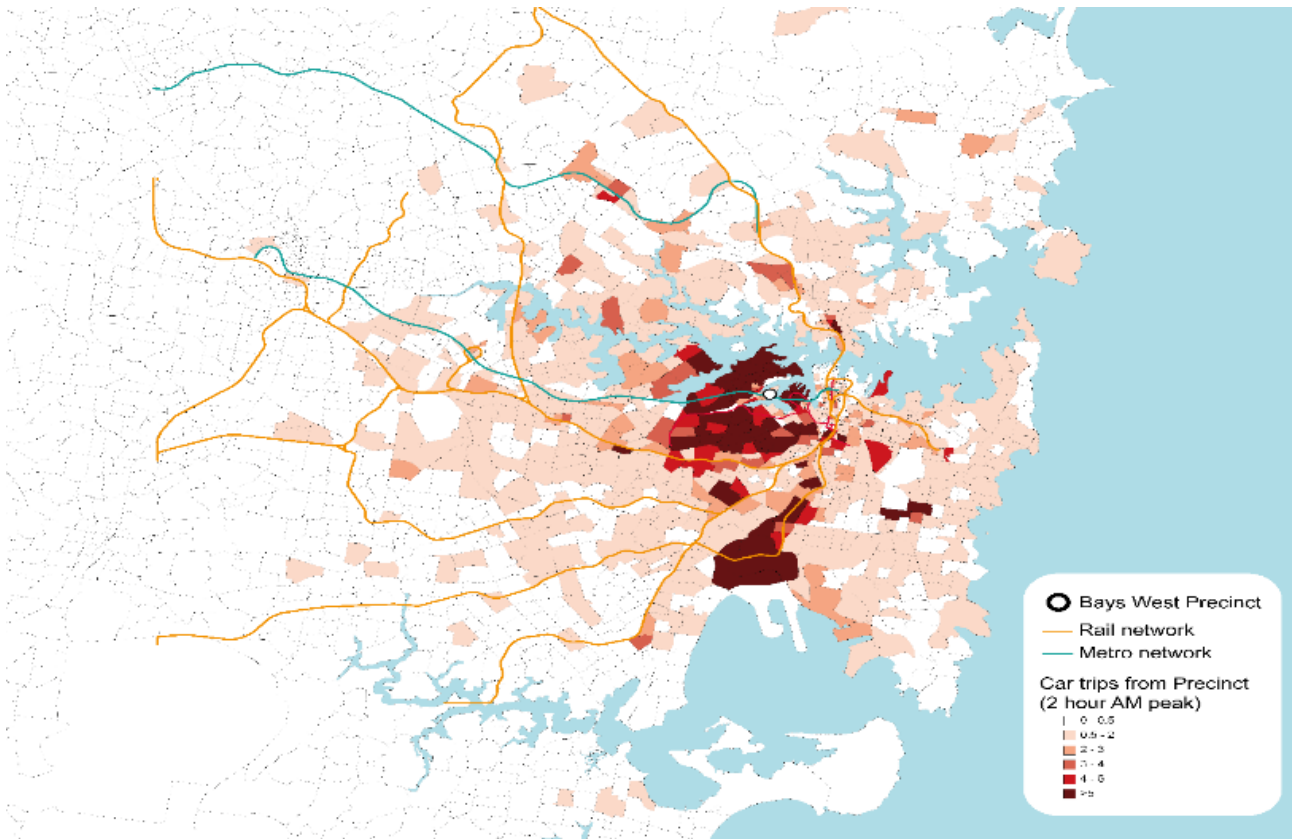


Figure 33: Origin of car trips in Bays West

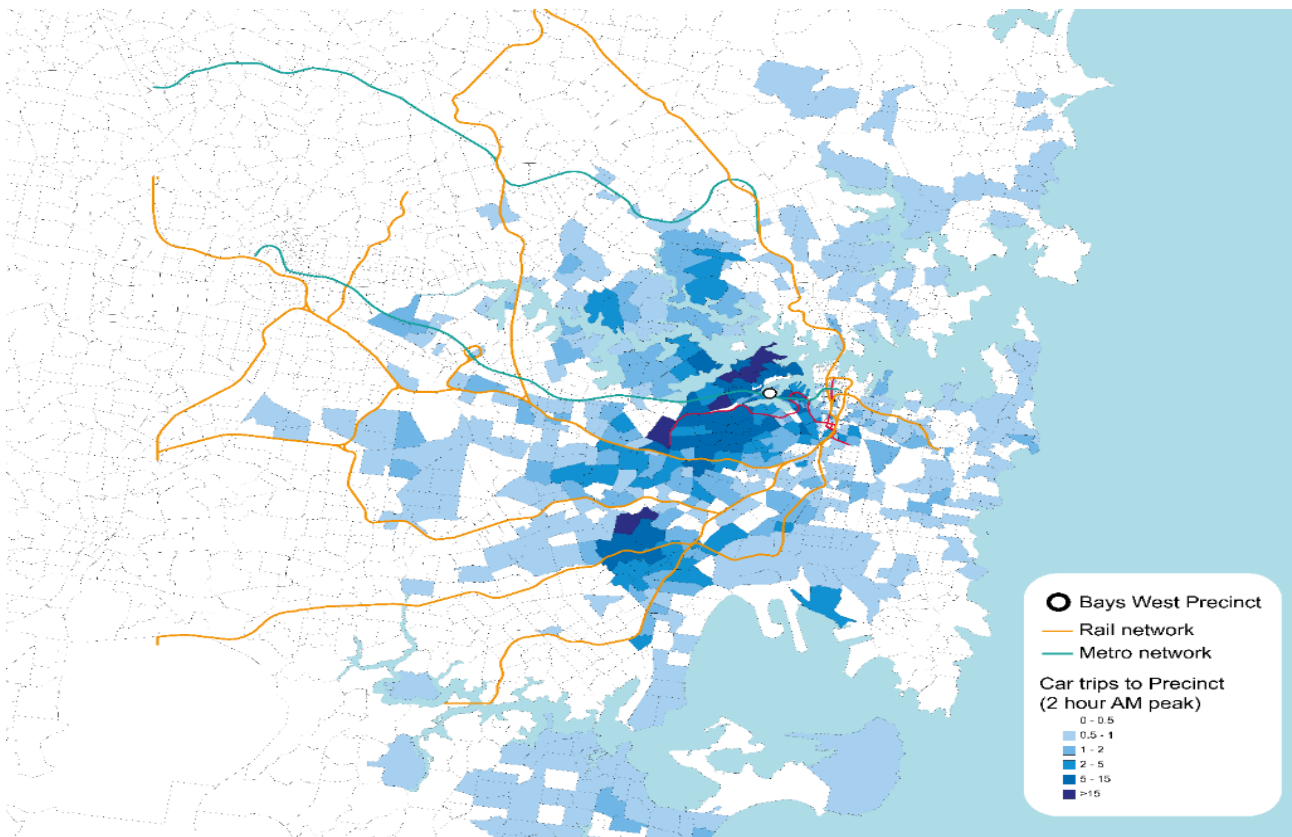


Figure 34: Destination of car trips in Bays West

An aerial photograph of a coastal industrial and maritime area. In the upper left, a large shipyard with several dry docks and cranes is visible. A multi-lane bridge spans the water in the middle. To the left of the bridge is a marina with numerous boats docked. In the lower right, a small, tree-covered island with some buildings is situated. The water is dark blue, and the sky is clear.

5

Problem
definition

Bays West provides the opportunity to deliver a once in a generation revitalisation, to an iconic harbourside location, expanding the CBD to the west and creating a vibrant, liveable, and sustainable Precinct that is well connected to the local and regional transport network.

The Precinct is not without complexities, topography, environment, competing demands for movement and place, evolving industry and uses, and capacity and access issues with the surrounding network, present a set of unique challenges and opportunities for the Precinct.

The challenges and opportunities are explored and summarised under the key transport themes below. Location-specific challenges and opportunities are numbered below and can be seen in Figure 35 and Figure 36.

5.1 Challenges



Access and Connectivity

The existing local transport network is at or nearing capacity and needs to cater for several modes and an increasing number of trip purposes and destinations. The structure of the local walking, cycling and transport network is fragmented, ignoring the Precinct and leaving it isolated from the network.

The site is dominated by different natural and topographical barriers, meaning that the Precinct can only be accessed by two existing locations at Roberts Streets and James Craig Road.

There are competing needs for road space and balancing different trip types, purposes and vehicles will require careful consideration.

Notable challenges include:

- Safety risks and potential conflicts between existing shared walking and cycling infrastructure, including primary cycling access routes, and heavy vehicles
- Fractured, indirect, sub-par quality connections with capacity constraints for walking or cycling
- Surrounding public transport and road infrastructure already operating at or near capacity
- Significant changes to local travel demand profiles on cruise days, an influence of private vehicle transport and coaches expected in the peak hours and throughout the day
- Multiple landowners, arterial routes, waterlocked boundaries and lack of public access create severance issues that mean the Precinct is isolated from the local area
- Vehicle access is indirect, congested, difficult from certain directions and conditioned under planning controls
- The competing and sometimes contradictory needs of transport customers within the precinct

- How to provide improved access and connection to the waterfront within the precinct with ongoing port and maritime uses.
- Entry and exit to Bays West is limited to two points, one on James Craig Road and one on Robert Street. Access to the precinct is limited by man-made barriers such as major roads. All existing access points are already congested (1)
- Intersections at Robert Street / Victoria Road and James Craig Road / The Crescent are already congested (2)
- The Crescent has convoluted routes and undesirable walking and cycling conditions (3)
- An active transport connection between Rozelle and Pyrmont via Glebe Island Bridge is under investigation, however, options, costs, funding mechanisms and timelines for delivery remain unconfirmed (4)
- Arterial roads, such as Anzac Bridge, Victoria Road and City West Link, sever the site and constrain pedestrian connectivity (5)
- Existing ports roads are not public roads and their status and maintenance responsibilities will need to change as other precinct traffic, including buses, uses these roads post-2030 (6)



Environment and topography

Natural and built environment aspects of the Precinct including steep grades, major road infrastructure and the natural waterside edge impact the ability of the place to accommodate efficient, attractive and direct transport connections, particularly walking and cycling. This is compounded by ever increasing impacts of climate change.

Notable challenges include:

- Major Roads and corridors detract from the walking and cycling experience
- A lack of sustainable connections (walking and cycling) to green and blue spaces
- Heritage conservation areas and curtilages restrict development and infrastructure
- Transport could be a key contributor to carbon emissions, climate change and associated sea level rises
- Challenging topography between sub-Precincts raised arterial routes and to surrounding suburbs such as Balmain restricts active transport movement
- Flood prone land and proximity to the harbour could impact built form outcomes and impact on customer movement and access (10)



Implementation and operation

As the precinct is progressively developed balancing the needs of existing, emerging and future users of the Precinct will be critical to success, but not always easy to manage in practice.

Notable challenges include:

- Managing the ongoing use of different sub-Precincts for working harbour and port operations and construction over several decades
- The temporal issue creates uncertainty around land use and operations which may result in fractured and disjointed networks
- Balancing security and safety with public access at the waterfront
- Short to medium term conflicts with other major infrastructure projects and associated impacts
- Governance and landownership could impact preferred connections and transport outcomes
- Balancing competing interests of existing ports and maritime uses with additional future uses
- Operation of the White Bay Cruise Terminal generates traffic movements through Bays West on cruise days as all associated traffic is required to use the James Craig Road access point. (7)
- Glebe Island and White Bay will be home to a range of port-related businesses that will generate a large number of daily heavy vehicle movements (8)
- Operational demand from maritime users in Rozelle Bay (9)



Managing growth and place

The Bays West Place Strategy outlines the opportunity for urban renewal that could deliver cultural, retail services, and educational establishments, focused on commercial uses, with a supporting range of residential uses. These will all generate additional trips and will need to be managed sustainably and flexibly to avoid exacerbating issues such as congestion on the surrounding road network.

The need for flexibility in the network is heightened by increased demands on certain days such as when cruise ships are loading and unloading passengers. Movement requirements for Bays West will need to be balanced with places that are diverse and equitable.

Notable challenges include:

- Balancing the demands of future growth with the constraints of the road network
- Ensuring quality places are delivered early in the staging process
- Providing fair, safe and equal access to the harbour and foreshore
- Managing community expectations around improvement of congestion issues and future transport offerings
- Agreeing and securing appropriate funding mechanisms to deliver the infrastructure required to support the precinct
- Staged implementation could see parts of the precinct isolated in the early years of the development timeline

Location-specific challenges (numbered above) are presented on Figure 35



Figure 35: Bays West location-specific challenges

5.2 Opportunities



Access and Connectivity

Bays West will be home to a diverse array of destinations, uses and other trip generators. To unlock the potential for development on Bays West the planning, design and delivery of an integrated, accessible and connected multi-modal transport network will be key.

Given the access and connectivity challenges, this Precinct will need to be aspirational, embracing sustainable transport (walking, cycling and public transport) as a primary means of travel and becoming one of NSW's most low car environments.

Notable opportunities include:

- Capitalise on committed investments in transport to enable, enhance and support the Precinct
- Establish a core network and exemplar travel behaviour for walking, cycling and public transport from the outset
- Delivery of a tiered, fit-for-purpose street network, planned using movement and place, and the NSW Government customer framework
- Introduce a Mobility-as-a-Service approach to incentivise public transport and shared mobility
- Create several new gateways into the site that focus on walking and cycling
- Create a new private vehicle gateway into the site on Robert Street
- Pioneer and trial emerging transport initiatives such as mobility hubs, micro-mobility
- Harness the mass transit connection to the Eastern Harbour and River City CBDs provided by Sydney Metro
- Deliver an integrated transport hub, with seamless interchange between different transport modes such as bus and ferry, enabled by Sydney Metro.
- Connect the Precincts with its surroundings and local communities i.e., Rozelle, Balmain, Glebe, Pyrmont
- Align with Safe System principles and the Towards Zero vision
- Align road speed limits with surrounding land uses and place functions to deliver safe environments for all users
- Establish an innovative connection between the Sydney Metro West Station and cruise terminal to provide seamless and efficient access between cruise ships and public transport

- Ensure that the road link to James Craig Road, in the vicinity of the proposed roundabout, is used to take pressure off the Robert Street point of access
- Support and investigate the potential for new bridges connecting Glebe and Rozelle this would broaden access to and from Bays West and improve access to Sydney Metro West (1)
- A tunnel between Rozelle Bay and the metro precinct / White Bay Power Station will improve accessibility between the two sub-Precincts (2)
- Investigate the potential to reinstate the Glebe Island Bridge to connect the Bays Precinct, the Innovation Corridor and onward trips to the Eastern Harbour CBD (3)
- Leverage new connections provided by the Rozelle Interchange (4)
- A continuous foreshore link will provide amenities and increase connectivity to surrounding suburbs, balanced with the access and security needs of ports and maritime operational uses (5)



Environment and topography

Delivery of the transport and street network should be designed to enhance the environment and take advantage of the topography. The focus should be on delivering a sustainable and low carbon transport system that encourages zero-emission technology and associated infrastructure and takes advantage of emerging technologies such as micro-mobility to redefine difficult grades.

Notable opportunities include:

- Align with policy and strategy to move towards a sustainable future
- Leverage and unlock Bays West's strategically important location on the edge of the Sydney CBD and at the heart of the Eastern Harbour City
- Transport to support access to rich and unique places, heritage buildings, culturally significant places and green space
- Design streets and infrastructure that are sensitive and adaptive to water and flooding
- Deliver a cool and green transport network, with greenery and vegetation integrated into all street design regardless of the mode
- Deliver exceptional and equitable routes for walking and cycling
- Introduce future modes to address topographical barriers (electric bicycles and scooters)



Implementation and operation

To ensure the seamless implementation and operation of the Precinct in the future, planning, design and delivery will need to look beyond the traditional, embrace innovation and aspire to be a low car precinct. The precinct should embrace sustainable modes and be managed by both travel demand management and smart infrastructure strategies throughout the various stages.

Notable opportunities include:

- Make the Precinct a testbed for innovation in managing transport implementation and operation
- Co-design and collaborate with stakeholders and the existing and future community
- Align development with ongoing ports, working harbour and maritime operations
- Deliver last-mile freight using electric vehicles or cargo bikes to minimise larger vehicles circulating on the transport network
- Develop parking management initiatives such as off-site, car share and common use facilities
- Consolidate freight and servicing to maximise place outcomes within Bays West
- Implement staging that harnesses the potential of key infrastructure investment and builds in flexibility to address uncertainty
- Evolution of White Bay and Glebe Island to a low carbon, sustainable port integrated with and adding value to urban renewal



Managing growth and place

The Bays West Place Strategy sets the vision, framework, and tone for the planning of this Precinct. The place needs to be at the forefront, and this is true for planning, designing and delivering the transport network and street design. Growth of the Precinct, for both development and transport, will need to be integrated and undertaken to enable, support and enhance each other.

Notable opportunities include:

- Incorporate Movement and Place principles to encourage street activity
- Develop Travel Demand Management measures to influence travel choices

- Subject to the future delivery of the precinct, responsibility for ongoing monitoring, management and planning for movement within the precinct to be identified
- Deliver intelligent mobility solutions through a Smart Precinct Strategy
- Connect the growing community using a core network that connects the community to key places from opening
- Educational campaigns and signage to increase public awareness of ports and maritime uses within the Precinct and how to interact safely
- Encourage development controls that support an exemplar low car Precinct
- Prepare an infrastructure staging plan and contributions scheme to support the delivery of necessary infrastructure to support growth in the precinct
- White Bay Power Station is a unique and heritage-listed building within Bays West that contributes to the character of the area (6)
- Future links can be designed to connect the community to the Glebe Island Silos and Ports uses to grow appreciation of these uses (7)
- White Bay Cruise Terminal could be utilised for other uses on non-cruise days and non-car connections implemented between the Terminal and Sydney MetroWest Station (8)
- The redevelopment of the Sydney Fish Markets and Blackwattle will activate the foreshore and support justification for new ferry services (9)

Location-specific challenges (numbered above) are presented in Figure 36.

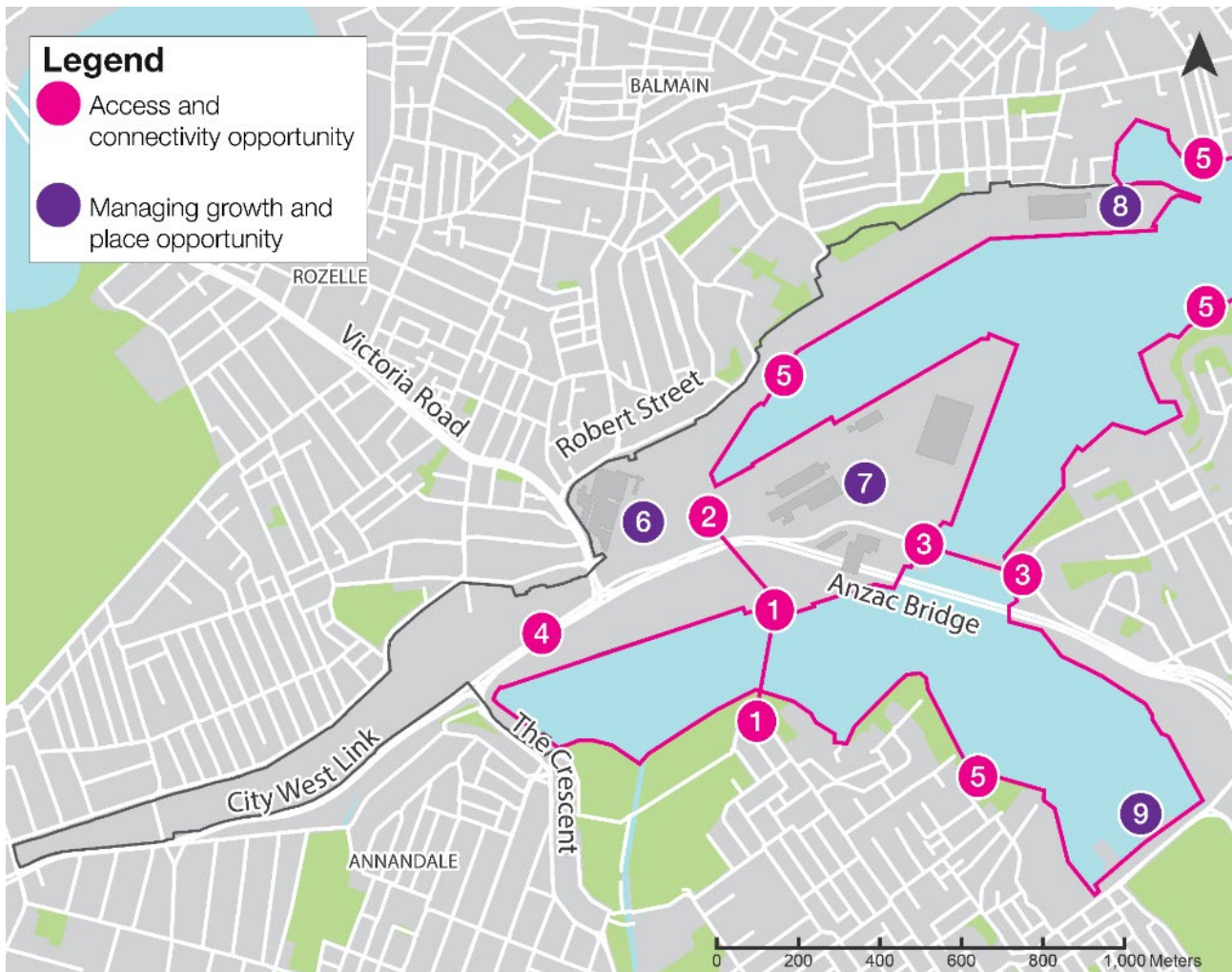






Figure 36: Bays West location specific opportunities






Most projects are not yet funded or committed for delivery. As a result, they should be regarded as initiatives subject to further detailed investigation, scoping and business case development and investment decisions.

5.3 Challenges and opportunities for Our Precinct Customers

Customer personas were introduced in Section 3. These aim to encompass the needs of the variety of different users of the future transport network. This section looks to expand on their behaviours with potential considerations and opportunities offered by the redevelopment of Bays West. See Table 5.

Table 5: Bays West Customer Personas

	Ahmed	Alea	Eliza	Akira
				
Demographics	29 years old professional who works in the Sydney CBD (thinking of living in Bays West)	45 year old health care worker who works at Westmead Hospital (Balmain Local)	42 years old and lives in Burwood with 2 primary school aged children	65 year old couple at Cruise Terminal. Visiting from Queensland with my wife who has a mobility impairment
Behaviours	<p>I don't own a car and prefer to use public transport, active transport, demand responsive transport services or micromobility</p> <p>I need a quiet and relaxing setting after a long day at work</p> <p>I like to go out for dinner close to home with friends in the evening</p> <p>I am interested in being able to walk and cycle to the CBD</p>	<p>I share a car with my son. I want to use public transport at the last minute if I don't have access to the car</p> <p>I am happy to walk or cycle to access the Sydney Metro West Station but want somewhere safe to store my bike if I do cycle</p>	<p>I currently drive to work in Bays West every day as I need to drop-off and pick-up my kids from school</p> <p>I need to drop my children to school 3 days a week and pick them up twice a week</p> <p>I would like to commute less in my car and more via public transport. The new Sydney Metro West Station at Burwood North gives me direct access to Bays West and is a very attractive option which I'm aiming to use 1-2 times a week</p>	<p>We will probably take a taxi from the cruise terminal to our family in Parramatta</p> <p>We are staying with family in Parramatta</p> <p>We speak limited English and require intuitive wayfinding where we can rely on maps rather than text</p>
Considerations	<p>I need to travel to the Sydney CBD for work, it's not every day, as I often work from home a couple of days a week.</p> <p>I need safe, direct and accessible walking, cycling or public transport to the CBD.</p> <p>I need local walking access to the shop, live and play</p>	<p>I am a shift worker and want to be able to get to work and back home safely in the early hours of the morning and late at night</p>	<p>I do not consider other options for getting my kids to school safely – it's too tricky with kids, bags, PT timetables, interchange and walking between multiple destinations</p> <p>Lunchtimes can be my only time to relax</p>	<p>My wife has a mobility impairment. I find it difficult to navigate difficult terrain with all of our luggage</p>
Opportunities	<ul style="list-style-type: none"> • Sydney Metro West Station • New Walking and cycling connections • Innovation Precinct with micro-mobility 	<ul style="list-style-type: none"> • Sydney Metro West Station • Local bus connections to Metro • Well light, safe night-time transport 	<ul style="list-style-type: none"> • Opportunity to shift employment to Bays West to leverage lifestyle, metro and harbourfront parkland 	<ul style="list-style-type: none"> • Vehicle access to the cruise terminal is to be maintained.
Strategy Response	To be addressed in section 6			

	Martina	Lucas	Noor	Albert	Jeanine
					
Demographics	35 years old	17 years old	50 years old, visiting for two weeks from abroad with her husband and teenage son	65 years old, retired, living in Lilyfield	47 years old
Behaviours	<p>I drive a heavy vehicle loading dry bulk products at the port and delivering them across Sydney</p> <p>I visit daily and sometimes multiple times per day</p> <p>Interested in efficient, seamless and safe access to and from the port</p>	<p>I go on runs and bike rides with my friends or younger siblings in the evenings and on the weekends</p> <p>Improved access to green spaces and the harbour</p> <p>Safe and suitable walking and cycling routes via high quality separated bike, foot or shared paths</p>	<p>Our family loves to walk and spend time outside visiting landmarks</p> <p>We are staying in a hotel in the Sydney CBD</p> <p>To see as much of Sydney's harbour on foot including heritage landmarks at Bays West</p>	<p>To safely kayak in Rozelle Bay without fear of harm from larger vessels on the water</p>	<p>Ship master for a cruise ship homeporting at White Bay Cruise Terminal once a week in the peak cruise season</p> <p>To efficiently embark/disembark passengers and goods and depart without delay</p>
Considerations	Sharing the road network with increased small vehicles, private cars, walkers and cyclists accessing or moving around Bays West	<p>I need to get places on foot or by bike</p> <p>I don't like riding on the road, especially when I'm with my sisters</p>	<p>Inconsistent and unclear connections between the Sydney CBD, Pyrmont and Bays West</p> <p>Can I walk to view the Powerhouse at Bays West?</p>	<p>An increasing number of vessels using the working harbour to access the port at Bays West</p> <p>Recreational water access to be concentrated outside areas dedicated to the working harbour and ports operations and the cruise terminal</p>	<p>Safe navigation in increasingly busy water around Bays West</p> <p>Arriving and departing the port without delay</p>
Opportunities	<ul style="list-style-type: none"> Segregating heavy vehicles from light vehicles, pedestrians and cyclists for efficiency and safety 	<ul style="list-style-type: none"> A new network of walking and cycling paths for recreation Parklands to undertake workouts 	<ul style="list-style-type: none"> Sydney Metro West A new or restored connection between Pyrmont and Bays West A direct connection from ANZAC bridge to Bays West 	<ul style="list-style-type: none"> Establish recreational water zones in Rozelle Bay outside areas dedicated to the working harbour and ports operations and the cruise terminal 	<ul style="list-style-type: none"> An accessible and well-managed port
Strategy Response	To be addressed in section 6				



6

Realising the Vision

6.1 Need for the extraordinary

The magnitude of challenges and opportunities associated with Bays West highlights the need to push the boundaries of traditional thinking as we plan, design and deliver the Precinct.

There is a need for the extraordinary if this Precinct is to be successful. This extends beyond just transport policy, services and infrastructure to encompass all elements of the Precinct including architecture, sustainability, heritage and landscape while embracing and contributing to its Connection with Country and our first nations people.

Aligning with the vision adopted from the Place Strategy, the Precinct calls for a new kind of urbanism that capitalises on the natural and cultural heritage and draws on its maritime and industrial past to deliver a precinct for the future. The PBTS outlines an integrated package of transport solutions that seek to minimise private vehicles trips, efficiently manage ongoing freight and working harbour (port) requirements and deliver a step-change in exemplar sustainable travel behaviour to set a new benchmark for urban renewal in Sydney.

Precincts both local and globally are pushing these boundaries; two such projects are Barangaroo recently completed in Sydney and Canary Wharf in Central London.

Breakout – Low car precincts

Barangaroo is a globally renowned urban renewal project on the western waterfront of Sydney's CBD. The development of Barangaroo is long term and aims to be sustainable today and for future generations. It is underpinned by commitments to be carbon neutral and water positive, to create zero waste emissions and contribute to community wellbeing. When complete, it will accommodate more than 23,000 workers and residents, and host thousands of visitors each day.

During the planning stages, Barangaroo set an aspirational goal of an ultra-low car precinct, targeting a 4% journey to work mode share for private vehicles. This was to be achieved through strict parking rates for all developments and minimal on-street and public parking.

Journey to Work data from 2016 indicates that the mode share for private vehicles at Barangaroo was approximately 15%. This figure is likely attributed to workers in Barangaroo using nearby parking facilities in the Sydney CBD. Despite being above the 4% target, Barangaroo has managed to achieve a private vehicle mode share much lower than the surrounding areas.

Canary Wharf is an example of a global precinct where an exemplar private vehicle mode share was delivered through transit oriented development. New public transport services including the Docklands Clipper shuttle service, Docklands Light Railway and the future Elizabeth Line have been complemented by reducing parking rates over time.

This has led to higher public transport mode shares than inner London with a private vehicle mode share of ~10%. The integration of land use and public transport has transformed a constrained precinct into a renowned business district.

Breakout – Low car precincts



Barangaroo skyline



Canary Wharf

To enable Bays West to become an exemplar, innovative and sustainable new place for living, recreation, and working, the Precinct will need to achieve:

- A focus on human scale planning. One that integrates movement and place from the outset and throughout all stages of development and operation.
- Embraces its unique location and opportunities to form an extension to the Sydney CBD
- The unprecedented use of walking, cycling and public transport for all trips and purposes. This behaviour must occur from day one on-site. Targeted measures around private car access and car parking will ensure sustainable modes are an attractive option
- Manage private vehicle trips through design and dedicated travel demand management measures that will enable this Precinct to be delivered as an ultra-low car environment
- A contained Precinct that has places to work, shop, live and play, reducing the need for regional movement and focuses on connection and accessibility at the local scale
- Increased efficiency in moving people and goods, through faster, higher capacity, more reliable services and high-quality connections to where people want to travel to and from
- Embrace digital solutions and innovation to optimise existing uses such as freight and servicing, and to create new opportunities for connections and greater connectivity.

6.2 A Future Connectivity Framework for Bays West

Bays West could be an exemplar precinct in Sydney, designed for sustainable transport such as walking, cycling, and public transport with little or no need for private car travel. A low car precinct that leverages off the delivery of Sydney Metro to unlock a place that is vibrant, liveable and accessible for all. A future connectivity framework is illustrated in Figure 37 below.

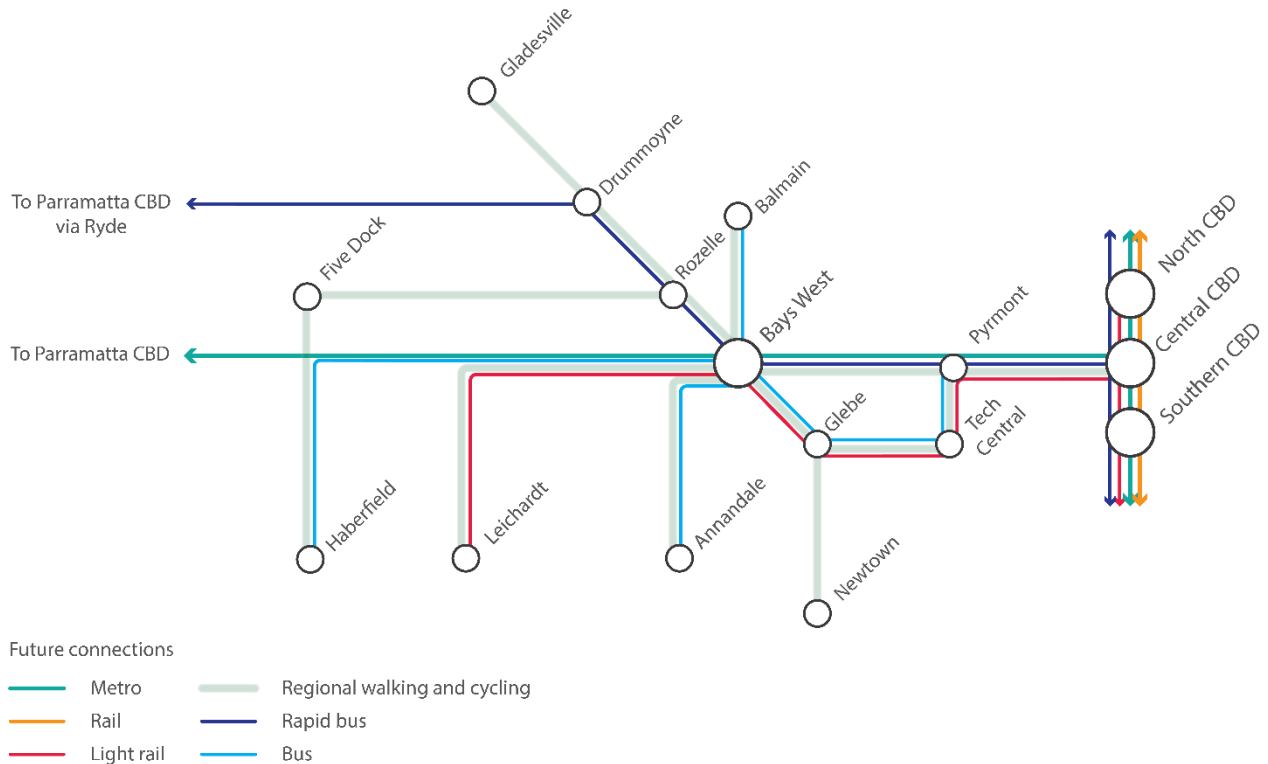


Figure 37: Connectivity framework for Bays West and its surrounds (not to scale)

Bays West could be one of the most connected places in Greater Sydney, with easy and direct connections to other key metropolitan centres, health, and education precincts and emerging innovations hubs and districts by Metro, bus, light rail and safe and efficient cycleways and walking paths.

It can provide local connections that will allow the Precinct to be ingrained in the fabric of the local environment and neighbourhoods of Balmain and Rozelle. Multiple connections with the Eastern Harbour and Central River City CBDs provide the opportunity for Bays West to access and connect with Greater Sydney.

6.3 Future Precinct Transport Network

Transport opportunities and initiatives were developed following a review of relevant strategic documents, an assessment of the existing and planned context for movement and place, analysis of existing and planned infrastructure and a co-design process undertaken through several workshops with stakeholders.

The opportunities and initiatives identified are collated and presented under the different themes to respond to the vision and transport principles for Bays West. Relevant spatial and project opportunities and initiatives have been presented on the attached maps for walking and cycling (Figure 38) and public transport and private vehicle (Figure 39).

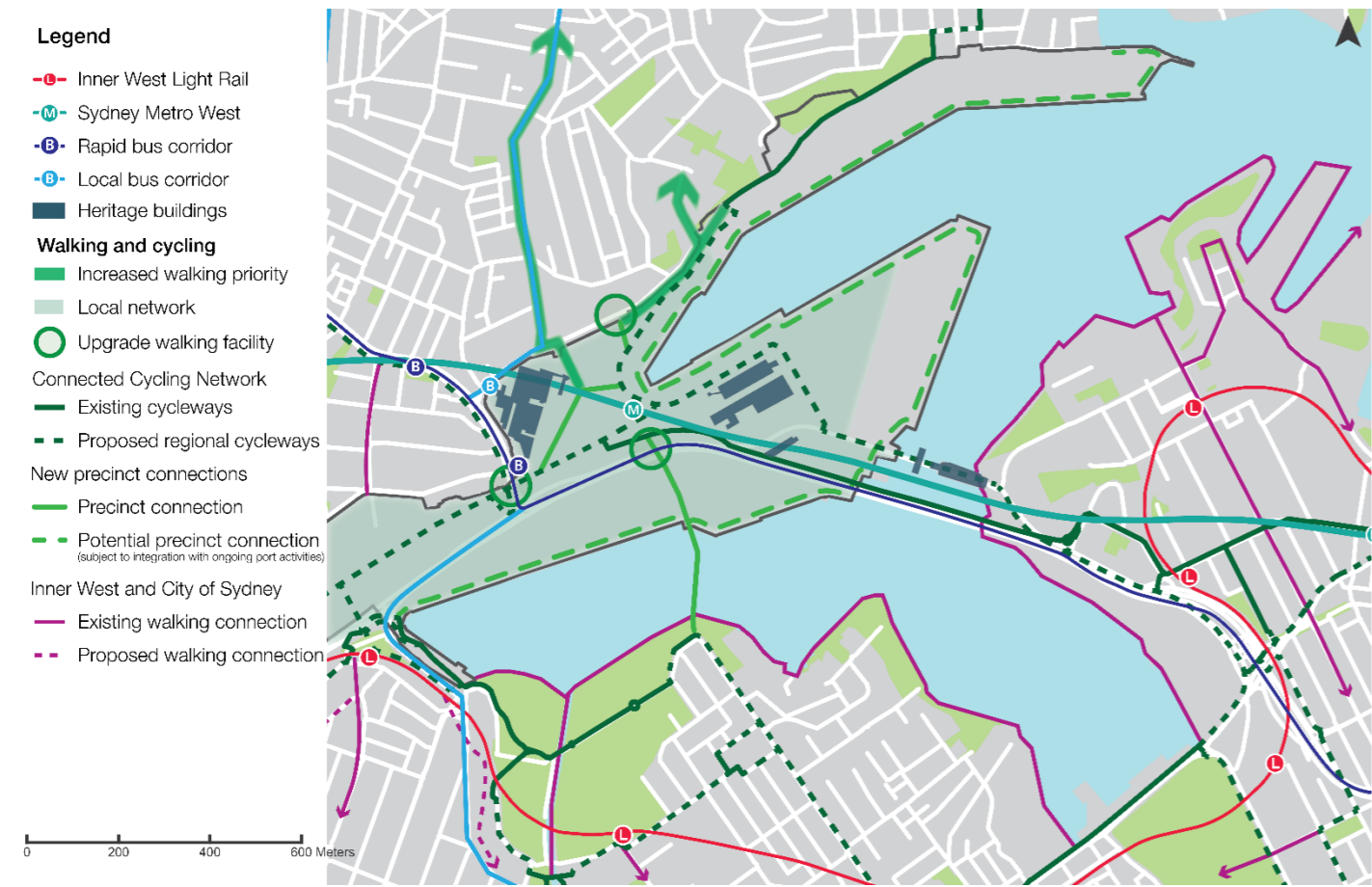


Figure 38: Potential transport opportunities and initiatives: walking and cycling (2040 and beyond)

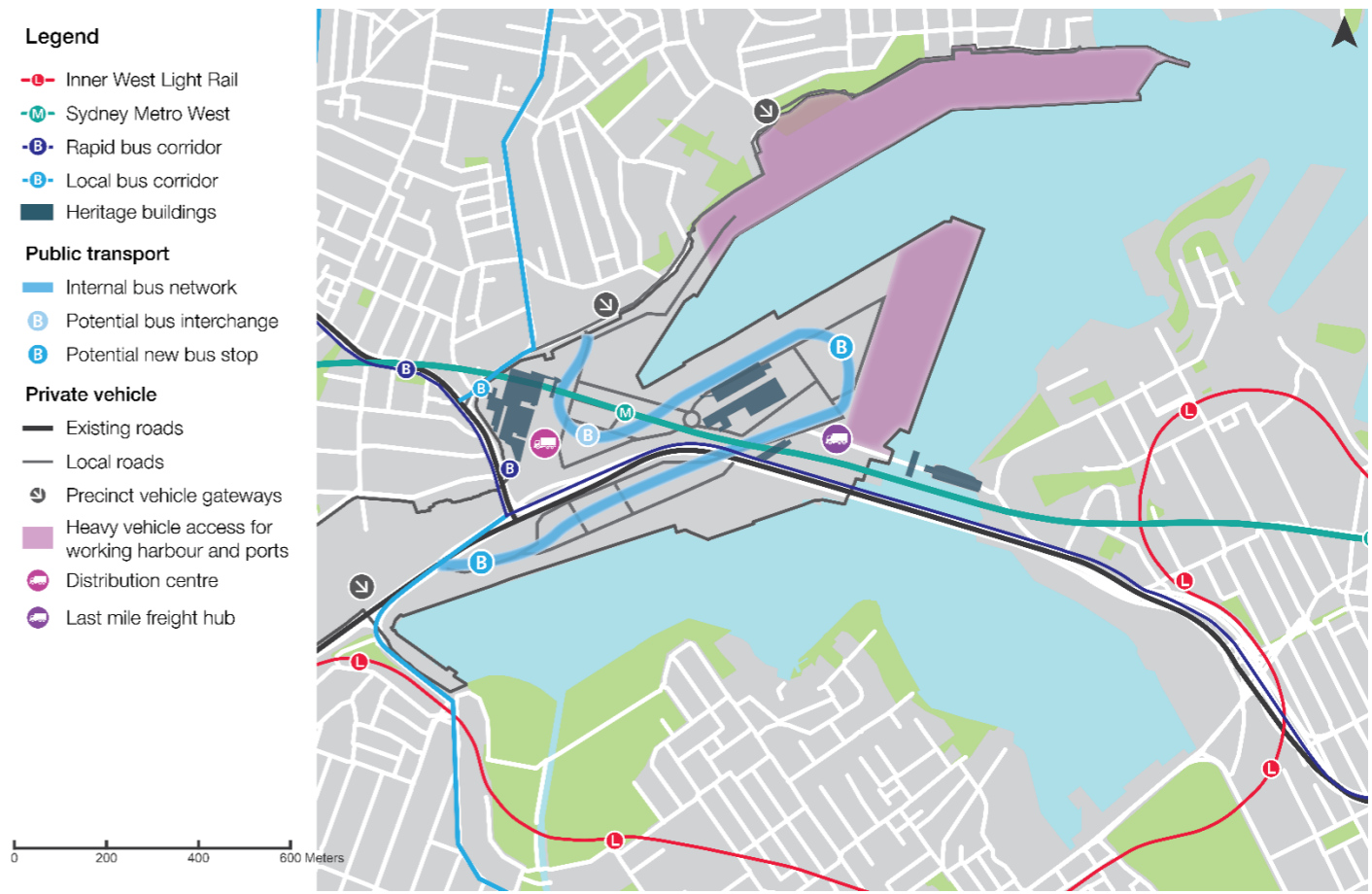


Figure 39: Potential transport opportunities and initiatives: public transport and private vehicle (2040 and beyond)

It is important to note that most projects are not yet funded or committed for delivery. As a result, they should be regarded as initiatives subject to further detailed investigation, scoping and business case development and investment decisions.

6.3.1 Staging Consideration in 2030

The White Bay Power Station and Robert Street precincts will be delivered around 2030 and are planned to open alongside the Sydney Metro West Station and supporting infrastructure within the Precinct.

To better understand the needs of the precinct in this initial stage, an estimate of the trips associated with the proposed development in 2030 was calculated to help identify and validate potential opportunities and initiatives outlined in this PBTS.

Terroir's *Bays West Strategic Masterplan Reference Scheme Options – Yield Studies* (September 2021) was used as the foundation for the potential future land use within Bays West. This information was combined with data provided from Sydney Metro in relation to the Bays West Metro Station and PANSW relating to uses on Glebe Island and the White Bay Cruise Terminal.

The 2030 stage is assumed to be two sub-precincts White Bay Power Station and Robert Street as shown in Figure 12.

Approximately 1,200 inbound people trips and 550 outbound people trips would be generated by the future uses in 2030 in the AM peak hour for all modes.

It was identified in the challenges, that the surrounding road networks experience congestion and capacity issues today. Assuming an ultra-low car mode share it is estimated that the precinct may generate from 200-500 trips for inbound movements and 150-300 for outbound movements in the AM Peak. These trips would be spread across the James Craig Road and Robert Street accesses. On cruise days passenger traffic is estimated to contribute an additional 300 two-way vehicle trips in the AM peak hour.

Preliminary analysis of Strategic Travel Model (STM) data has suggested the two vehicle access points to the precinct could accommodate an additional 800 inbound vehicle trips and 500 outbound trips in the AM peak hour in 2036 with most of this capacity being available at the James Craig Road access point. It should be noted that a large portion of this capacity would be taken up by passenger traffic on cruise days, and the Precinct would only be able to contribute a small percentage of traffic. The potential traffic impact is one of the reasons this precinct needs to be pushing the boundaries to deliver an ultra-low car precinct.

This work has been completed using high-level, strategic information and benchmarks, further modelling will need to be undertaken as planning for Bays West progresses to refine these calculations and consider the impact of other major infrastructures schemes on surface traffic flows.

With only a small portion of the proposed development in the precinct built out at this stage. The additional public transport capacity provided by the Sydney Metro West and a supporting network focused on walking and cycling is capable of managing expected demands provided an ultra-low car mode share is achieved. Further measures may need to be considered to manage passenger traffic demand on cruise days.

6.3.2 Staging for 2040 and beyond

There is a high level of uncertainty around the timing and staging of the development up to 2040 and beyond, and this is subject to ongoing investigations by the NSW Government. The limited information available makes it difficult to estimate and identify opportunities and initiatives.

As further sub-precincts are built out, land use volumes will rapidly increase with higher densities planned on Glebe Island and Rozelle Bay.

It is estimated this will lead to an additional 6,000 people travelling to Bays West and over 2,000 people exiting the precinct in the AM peak hour. Initial STM data suggests around an estimated 7,000 people will use the Sydney Metro West Station and transport interchange with a further 2,000 people walking and cycling to the precinct.

To achieve these proposed public transport, walking and cycling estimates a holistic transport network revolving around sustainable travel and placemaking must be delivered.

Despite these uplifts in land use over several decades, no changes to the immediate road network, beyond those currently under construction, are planned and therefore the latent capacity is expected to be comparable to that available in 2030. For the Precinct transport network to continue to function, more stringent controls on vehicle movements will be required to help achieve unprecedented levels of travel by sustainable modes over and above those implemented in the stages delivered to 2030. This will set a new benchmark for all transit-oriented precincts in Sydney. Developing a new approach to passenger traffic relating to the White Bay Cruise Terminal will be a key part of achieving the vision for the wider precinct.

It is too early to validate if the transport network proposed is suitable to meet the needs of the development in 2040 and beyond. As part of the progressive planning for each sub-precinct, analysis and validation should be undertaken as land use yields are refined and tested.

6.4 Theme 1: Access and Connectivity

To achieve the vision of a vibrant, liveable and connected community, the Precinct will need to deliver an integrated multimodal network. This network should focus on sustainable modes of walking, cycling and public transport with the aspiration and need to deliver a low car environment that is designed and managed to reduce the need to travel via private vehicle. The network should also ensure that the needs of all user groups are balanced.

6.4.1 Creating walkable streets and places

Walking will form the first and last leg of almost all trips to, from, within and through the Precinct. For residents (including children), students, workers and visitors, walking connectivity impacts the ease of getting around, accessibility to nearby opportunities and the chance for formal and informal interaction that an innovation precinct requires.

People of all ages and abilities, working, living, studying in, or visiting Bays West would benefit from increased permeability and the ability to better engage with streets, businesses, the White Bay Power Station, the Sydney Metro West Station, parks, watercourses and other land uses on foot. Walkable streets are a strong indicator of high place value. Travelling by walking or cycling also fosters sustainable travel and minimises private vehicle use, reduces the environmental impacts of travel and improves overall health and wellbeing.

Delivering a direct, safe, and amenable walking network, comprised of primary and local connections is critical. It will be important to provide access to the Precinct to allow connections to the regional walking routes to the Inner West and Sydney CBD. Local access will support key destinations, land uses, the Sydney Metro West Station and bus interchanges.

In planning for walkable streets and places, subsequent work should take into consideration:

- Adopting a Safe System approach to network and infrastructure design
- Designing streets to be low speed, preferably 30 km/h or lower to provide a safe and amenable environment
- Introducing pedestrian priority areas or restricted vehicle access zones to align with Civic Spaces or shared spaces
- Safe and prioritised pedestrian crossings and interchanges
- Designing equitably for all users.

6.4.2 A connected cycling network

A tiered cycling network should be delivered that integrates with the NSW Government's Metropolitan Connected Cycling Network at appropriate locations including Rozelle Rail Yards, Glebe Island Bridge and Roberts Street. Consideration of a route along the foreshore should be further investigated. At a finer grain, a secondary and local network is important to access various destinations within the precinct.

Private developments and key uses should be encouraged to implement green travel plans and supported by suitable end of trip facilities to accommodate those who wish to travel by bike. There is also the opportunity for a Precinct wide facility to be delivered in proximity to the new Sydney Metro West Station.

Shifting trips that are less than 10 kilometres to cycling should be a priority as the Precinct is planned and delivered. This will be critical in reducing the dependence on private vehicles and managing car parking demand.

The NSW Cycleway Design Tool Kit outlines six design principles, which will be applicable as subsequent and more detailed transport work is delivered. These principles include:

- **Safe:** Ensure the bike riders and other road users are provided with safe facilities
- **Connected:** Enable bicycle riders to reach their destinations easily via routes that are connected across the network
- **Direct:** Provide people cycling with the most direct route
- **Attractive:** Deliver safe and attractive surroundings that help deliver well-designed public spaces
- **Comfortable:** Ensure that riders of all ages and abilities can ride at a speed they are comfortable
- **Adaptable:** Incorporate flexibility in design to accommodate changes in user needs and demand over time

6.4.3 Enhanced public transport

The delivery of the Sydney Metro West Station will provide the foundation for a new multi-modal transport network centred around the heart of the Precinct. Offering rapid, frequent, and direct connections to the Sydney CBD and Parramatta / Westmead, customers will be connected to the Eastern Harbour City and Central River City within 30-minutes.

Supporting Sydney Metro West will be a bus network that offers access to local and regionally important destinations and will help to expand the catchment of the metro line.

The bus interchange will need to accommodate a mix of Rapid, Frequent and Local Services. Services and frequency will be progressively delivered in response to development and customer need. Suitable flexibility and operational adaptability must be included in subsequent design work to ensure that bus services, facilities and stops can be accommodated and expanded as the development within the Precinct grows over several decades. For example, the initial bus network delivered to support the Sydney Metro West Station could be expanded to service Glebe Island and Rozelle Bay as part of a Rapid connection to Tech Central in line with growth and development.

Planning the future bus network is the responsibility of TfNSW and Sydney Metro and will be planned and delivered to integrate with the opening of Sydney Metro West.

The metro station provides an opportunity to change how people access the White Bay Cruise Terminal. Activation of the precinct plays a role in changing the mode share, particularly for walking and cycling.

To achieve a mode for industry such as cruising, which has a traditional high private dependency, innovation and opportunities associated with Travel Demand Management (TDM) will need to be investigated to support the connection between the metro station and White Bay Cruise Terminal. This might include shuttle services from the metro station or other higher-capacity options.

As part of the planning proposal for Blackwattle Bay, a new ferry wharf has been proposed adjacent to the redeveloped Sydney Fish Market site. The F10 ferry service between Blackwattle Bay and Barangaroo could be expanded to provide a wharf in the precinct in the 2040 and beyond phase.

6.4.4 Key Initiatives responding to Access and Connectivity

A high-level summary of the proposed key initiatives that respond to the vision and principles have been identified. A brief justification, timeframe and link to the relevant Precinct principles are outlined below as either required for delivery (Table 6) or needing further investigation (Table 7).

Table 6: Key Access and Connectivity Initiatives for delivery

Initiative	Justification	Timeframe	Principles
Connect the key Regional and Local precinct cycleways into the Metropolitan Connected Cycling Network	To encourage cycling to and from the precinct	2030	C01, C02, C03, C04, E01, I03, P01
Provide direct, high quality and activated access to bus interchange within the precinct	To improve local public transport services to and from the precinct	2030	C01, C03, C04, E01, I03
Connect the Precinct with the Rozelle Rail Yard Park under Victoria Road	To support walking and cycling between the sub-precincts	2030	C01, C02, C03, C04, E02, I03
Ultra-low parking rates for all uses	To support an ultra-low car mode share	2030	C01, P02
Provide a mix of low speed environments. A maximum speed limit of 30km/h within the precinct	To create a street environment that supports placemaking, where private vehicles are guests	2030	I04, P01
Provide new vehicle access into the precinct at Robert Street	To provide connectivity into the northern boundary of the precinct	2030	C02, I01
Provide cycle parking and maintenance facilities in private buildings (EoT facilities) and in the public realm (cycle parking hubs)	To encourage cycling to and from the precinct	2030	C01, C04, E01, I03, P02
Real time transport information for all modes including pricing/journey time comparisons	To support seamless accessibility to a range of modes	2030	C02, C04, C05, I03, P02
Deliver a multi-modal street network, with a hierarchy of streets focused on walking, cycling and public transport	To encourage the uptake of walking, cycling and public transport	2030 and 2040 & Beyond	C01, C04, E01, I01, I03, I04, P01

Table 7: Key Access and Connectivity Initiatives for investigation

Initiative	Justification	Timeframe	Principles
Parking Strategy for the precinct including dynamic parking charges, levies and decoupled parking	To support an ultra-low car mode share	2030	C01, C03, C04, C05, E01, P02, P03
Provide a walking and cycling connection (bridge) between Rozelle Bay and Glebe Point Road	To support a mode shift to walking and cycling	2040 & Beyond	C01, C02, C03, C04, E02, I03
Through site walking and cycling connection between Rozelle Bay and Glebe Island (underneath Anzac Bridge)	To support walking and cycling between the sub-precincts	2040 & Beyond	C01, C02, C04, E02, I03
Reallocate road space at Victoria Road / Robert Street intersection and signals to facilitate safe access for all road users	To encourage walking and cycling to suburbs to the north of the precinct	2030	C01, C02, C04, E01, P01

A network of smart sensors to support on-street infrastructure such as pedestrian crossings and parking	To drive adaptability in the use of on-street infrastructure	2030	C01, C05, I02, P03
Provide public access and foreshore walking and cycling (Subject to ongoing Ports and Cruise operations)	To support a mode shift to walking and cycling and create a new recreational destination	2040 & Beyond	C01, C04, E02, P01
Renewal or replacement of Glebe Island Bridge, accommodating active transport	To support walking and cycling to the Sydney CBD and tech central	2030	C01, C02, C03, C04, E02
Mobility hubs to access micromobility and other modes at major destinations	To provide improved accessibility to a range of modes	2040 & Beyond	C01, C04, E01, I03
Consider a ferry stop in Bays West as part of the F10 ferry route	To create a new public transport connection to the Sydney CBD and Blackwattle Bay	2040 & Beyond	C01, C02, C04, E02
Provision of car share services to reduce overall volumes of parking within Bays West	To reduce car ownership and the space taken for parking in the precinct	2040 & Beyond	C01, C05, P03
MaaS / an integrated ticketing system to provide access to all modes available within Bays West	To support seamless accessibility to a range of modes	2040 & Beyond	C01, C02, C05, I03
Provision of bus services that connect to the transport interchange within the precinct	To improve local public transport services to and from the precinct	2030	C01, C02, C03, C04, I03
Leverage emerging technology to provide on-demand buses and water taxis	To provide adaptable services for local trips	2040 & Beyond	C01, C04, C05, E02, I02, I03, P03
TfNSW and metro to develop a bus network plan to serve the precinct	Provide public transport service to the Precinct	2030	C01, C02, C04, E02
Enhanced public transport connectivity to White Bay Cruise Terminal	To encourage a mode shift for people accessing the White Bay Cruise Terminal	2030	C01, C03, C04, I01, I03, P02

6.5 Theme 2: Environment and Topography

The future success of Bays West will depend on its response to the local environment, both built and natural, and the ability to be resilient to social, economic and environmental transitions. Whether it's the impact of the global COVID-19 pandemic on movement, climate change and the urban heat island effect or the potential for sea-level rise and flood, the transport network must be resilient, sustainable, and fit for purpose.

The pursuit of reduced carbon emissions is a critical component of this PBTS's response to environment and topography. In addition to opportunities such as electric or low emissions vehicles, sustainable travel choices such as walking, and cycling have many wide-ranging benefits.

6.5.1 Shaping a sustainable and resilient Precinct

Through the delivery and investment in infrastructure, transport has a significant role to play in shaping the built and natural environment. When infrastructure is well-designed and delivered it helps to ensure successful mobility, liveability and sustainable environmental outcomes.

Delivering green infrastructure within the Precinct including green building material and urban tree canopies throughout streets and civic spaces will help to enhance biodiversity. Paired with improving air quality and reducing the impact of noise will result in a precinct that is more liveable, amenable and sustainable.

Access to and from Bays West is constrained, with surrounding roads and topographical features acting as barriers to travelling to and from the Precinct. Unlocking the Precinct, with additional access points and connections to the local and regional networks will provide improved resilience.

New public transport connections such as Sydney Metro West, coupled with walking and cycling links via Rozelle Rail Yards, Glebe Island, ANZAC Bridge and Robert Street will provide several new ways of access to and from the precinct. Similarly, a vehicle connection at Roberts Street will allow access for buses, freight and private vehicles trips. In addition to unlocking access, it will also improve resilience in the network to shocks and stresses, with less dependence on a signal point of access.

Bays West has the opportunity to work with key stakeholders to deliver transport infrastructure that adopts a sustainable whole of life cycle approach. This includes planning for infrastructure now that can be adaptively reused in the future, a good example is decoupled parking structures.

6.5.2 Towards Net Zero

The NSW Government in its Net Zero: Stage 1 Plan 2020 – 2030 outlines a commitment to delivering on net zero emissions by 2050. Transport has a significant role to play in decarbonisation, in addition to the environmental benefits related to reduced emissions walking and cycling will help to improve health and amenity.

Planning for the future of Bays West, it will be important to set the right foundations that can be progressively delivered upon over several decades as the Precinct develops. The need for flexibility in the transport network and local places to accommodate changes in infrastructure, vehicle types, technologies and policy will be critical.

The contribution to net zero carbon in Bays West needs to address opportunities for clean mobility, active transport and green construction applied over the life cycle of the project. This includes:

- Developing a detailed transition plan as part of subsequent stages of work

- Ensuring that charging facilities, renewal energy and green practices are delivered from day one.
- High mode share for walking and cycling
- Reducing the need to build new infrastructure through the efficient use of existing road space and transport network capacity
- Ensure consistent design and material used in construction and maintenance
- Planning for behavioural change and demand for new infrastructure. Be ready for the unexpected
- Operational/management and incentivising use for green technology and zero emissions.

6.5.3 Integrating the blues and greens into the transport network

The liveability of our urban precincts can be improved by integrating green and blue infrastructure in our transport projects and networks. Equally important is designing for Country which aims to improve outcomes for Aboriginal people and respects the heritage of our natural environment and waterways.

Delivering green and blue infrastructure includes tree planting, green walls and roofs, parklands as well as swales, tidal pools and artificial wetlands.

In addition to the delivery of infrastructure, we must connect to the existing green and blues resources we have such as open space identified in Sydney Green Grid as one of Sydney's greatest assets. Our national parks, harbour, beaches, coast walks, promenades, playgrounds and reserves are integral to the life and character of Sydney.

As population density increases, delivering an interconnected network of open space will keep the city cool, encourage healthy living, enhance biodiversity and ensure ecological resilience. Linkages between open spaces are fostered within the wider public realm through enhancing creek corridors, transport routes, suburban streets, footpaths and cycleways.

To support a low car precinct at Bays West, excellent walking and cycling connections must be provided. Walking and cycling access to, from and within Bays West to surrounding green and blue open space will be critical to the success of the Precinct. Several regional walking and cycling links within the Precinct will integrate with the Metropolitan Connected Cycling Network to create safe, convenient, and accessible connections which help foster a culture of walking and cycling first. An extension of the world-class harbour foreshore walk from Pyrmont through Bays West will provide high quality and equitable access to Sydney Harbour.

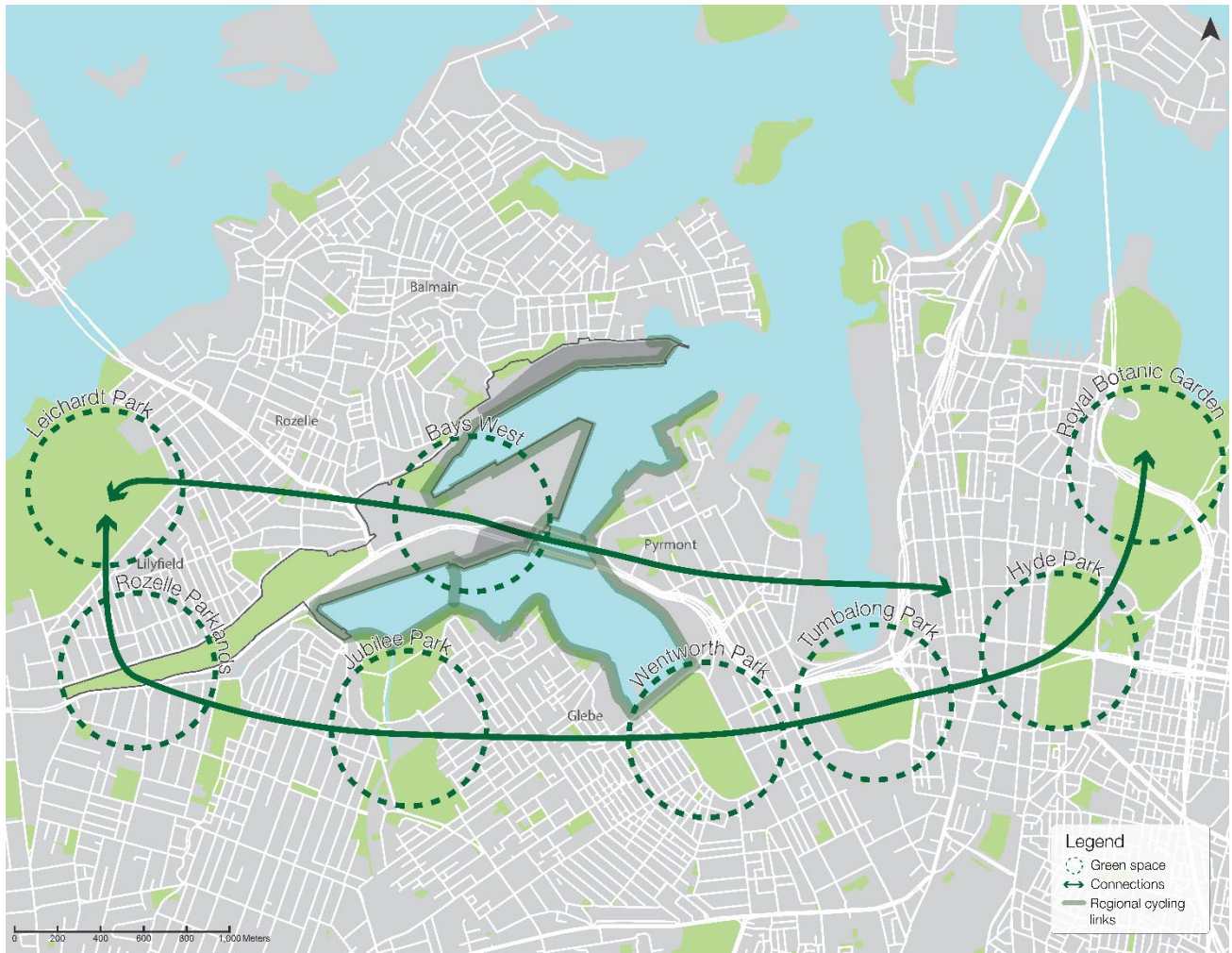


Figure 40: Walking and cycling access to green open space

6.5.4 Key Initiatives responding to Environment and Topography

A high-level summary of the proposed initiatives that respond to the vision and principles have been identified. A brief justification, timeframe and link to the relevant Precinct principle are outlined below as either required for delivery (Table 8) or needing further investigation (Table 9).

Table 8: Key Environment and Topography Initiatives for delivery

Initiative	Justification	Timeframe	Principles
Deliver a cool and green street network, with appropriate landscape and tree canopy	To minimise the Urban Heat Island effect and encourage street activity	2030	E01, E02, P01
Wayfinding to key destinations that is equitable and considers topography	To support walking and cycling between the sub-precincts	2030	C04, E02, I03, P01
Vertical connections to Victoria Road and Anzac Bridge	To support connections to regional routes, walking and cycling to surrounding suburbs	2040 & Beyond	C02, I03

Table 9: Key Environment and Topography Initiatives for investigation

Initiative	Justification	Timeframe	Principles
Waste strategy to improve operational efficiency and reduce waste collection	To manage waste in a sustainable and efficient manner using circular economy principles	2030	C01, I01
Provide infrastructure to support low-emissions vehicles, including EV charging facilities	To support the uptake of electric vehicles	2030	C05, E01
Renewable power sources to support new infrastructure and operational systems	To reduce the carbon footprint of the precinct	2040 & Beyond	C05, E01

6.6 Theme 3: Implementation and Operations

Meeting the vision of a low car precinct and achieving a 30-minute city that focuses on sustainable travel options will require a change in travel behaviours. Private vehicle trips in the Precinct will be slowed, on-street parking limited, and road space will be allocated to walking, cycling, public transport and landscaping.

The transport network will need to be more efficient with available road space. Innovation, flexibility, and adaptability is key to optimising the network and ensuring that access is provided for freight and servicing, along with additional demand on cruise days when it is known that private vehicle travel will increase in the Precinct. Digital innovation offers the opportunity to look at and explore movement from a unique perspective.

6.6.1 Balancing Movement and Place

The Transport Network for Bays West should be developed using the Movement and Place approach – a cross-disciplinary, “place-based” approach to the planning, design, delivery, and operation of transport networks.

The recommended priorities for investigation and actions could allow Bays West to thrive and grow as a place of innovation, employment and recreation for people who walk, dwell, learn, work and play whether they travel by foot, bike, bus, train, car or truck.

The future of Bays West will be home to a variety of different land uses, places and activities. Balances between these different uses and their individual needs will be challenging but necessary. Maintaining access and operations relating to the White Bay Cruise Terminal and Ports, while developing a permeable, people focus precinct with access to parklands, water, urban environments and the White Bays Power Station will need to be carefully managed.

Adopting the Movement and Place Framework will ensure that roads, streets and civic spaces are assessed on both their mobility and places functions.

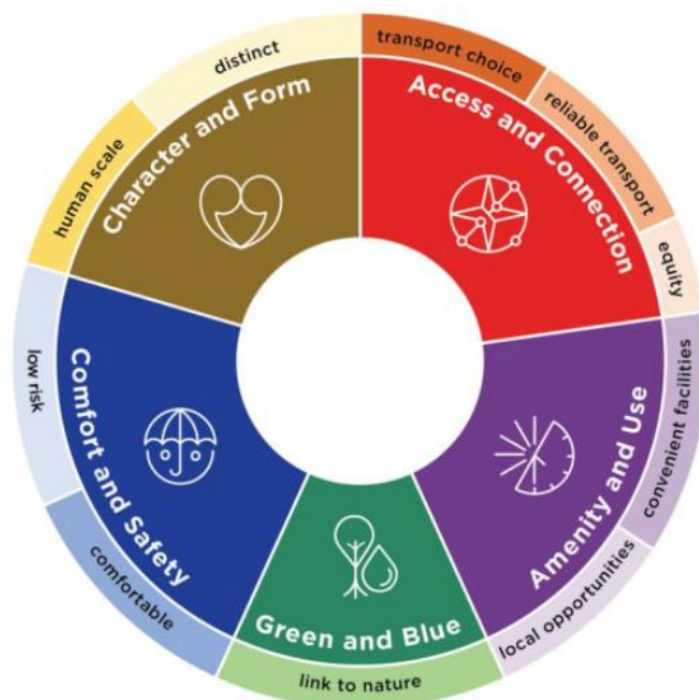


Figure 41: Movement and Place Framework – built environment performance indicators

As part of the progressive planning for each sub-precinct, it will be important the transport network is based on the Movement and Place Framework. The Precinct should consider:

- Integrating movement and place, into subsequent traffic and transport investigations
- Delivering a tiered network of different roads, streets and civic spaces, that serve different functions, users and provide for mobility and local access
- The Precinct transport network should focus on walking, cycling and public transport
- At the local level creating a 15-minute neighbourhood that encourages community interaction
- Limit the need for Main Road and Main Streets within the precinct to reinforce the aspirations for an ultra-low car precinct
- Ensure that the current Port, Cruise and Working Harbour uses are appropriately served, and offer flexibility to respond to change as these uses are being refined as part of PANSW's ongoing investigations
- Find the right balance for private vehicle access, capacity and parking within the Precinct
- Consider the Road User Space Allocation Policy as part of the design of the transport network within the Precinct.

6.6.2 Implementing a safe system approach

The design, delivery and operation of transport should facilitate the safe movement of people and goods, balanced with the place functions and the needs of Bays West.

To achieve this goal a safe system approach should be applied across the Precinct Transport Network, including public transport, waterways, streets, roads and civic spaces.

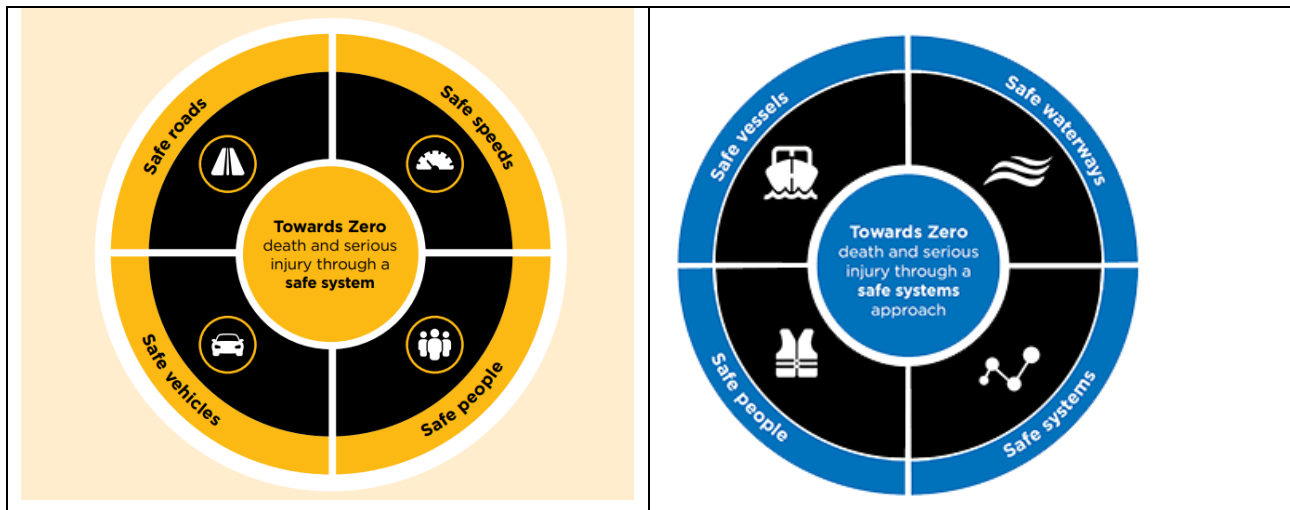


Figure 42: Safe System Approach on roads, streets, civic spaces and waterways

The safe system approach considers how people, vehicles, infrastructure and technology works together to create a safe environment for all. Key guiding principles of the safe system approach that should be applied to Bays West include:

- Planning and design at subsequent stages should use a safe systems approach

- The human body is not designed to withstand crashes. Increased speed means increased consequences
- Dedicated spaces for vulnerable users on roads, streets, intersections and crossings
- Safety for both heavy vehicle operators and other users within the precinct
- Speed limits to be appropriately set, to accommodate the environment
- Safety at all times of day and on the whole transport network.

6.6.3 The efficient operation of Freight, Logistics and Servicing

The efficient and reliable movement of goods for all freight, logistics and services will be critical to ensure the Precinct is productive and contributes to the NSW economy.

Bays West has several challenges in balancing the competing needs of different modes using road space within the transport network, including:

- Cruise, Working Harbour, and Ports heavy vehicle and freight movements
- Precinct freight and servicing movements
- Buses and private vehicle movements.

Cruise, Working Harbour, and Port use will continue to play an ongoing role within the Precinct for the foreseeable future, and access for private vehicles, light and heavy vehicles must be maintained in a safe and efficient manner, balancing the competing needs of movement and place.

The Cruise industry, which has been on hold during the COVID-19 pandemic will re-commence in time and will require regular servicing, and ship days will see a significant influx of traffic that will need to be managed.

Ports and working harbour operations, will continue and grow to 2030 with additional heavy vehicles accessing Glebe Island. Beyond this PANSW is investigating the future of the ports and working harbour operations within the Precinct, and this work will need to inform ongoing planning for Bays West.

In recent years, following the COVID-19 pandemic, people have adapted the way they live to a 'new normal'. The need for the delivery of goods, services and data to people has increased, playing a crucial role in the productivity and function of Australian cities and regions. This has driven innovation to decarbonise the industry, consolidate deliveries and remove vehicles from the road network. COVID-19 continues to expose weaknesses in global supply chains with best practice for logistics systems now revolving around sustainability and resilience at all scales.

Bays West encompasses a range of different servicing requirements, heightening the importance of developing a Freight and Servicing Strategy for the precinct as part of further detailed investigation into the planning and design of the Precinct. Current ports and maritime uses on Glebe Island play a regional role in supporting heavy industry in Greater Sydney and ensuring these uses continue to operate efficiently is vital to Sydney's economy. Given the nature and mass of goods being delivered, it is unlikely the types of vehicles being used will change dramatically. Servicing movements are also generated on cruise days at the White Bay Cruise Terminal to remove waste and provide suitable supplies to berthed vessels.

New uses in Bays West will generate servicing demand for and from businesses along with personal deliveries to residential uses driven by the uptake in e-commerce. There may be scope to change the way these goods and services are delivered, particularly for the 'last-mile' portion of the supply chain.

A 'Business as Usual' approach would see demand serviced using road-based vehicles and scheduled by a range of different logistical businesses and systems. Road capacity issues combined with the ultra-low car vision for the precinct dictate that a more holistic approach will be required. The TfNSW Freight and Servicing Last Mile Toolkit provides approaches to manage demand relating to freight and servicing, as outlined in Figure 43.



Figure 43: Managing last-mile freight within the Precinct (Source: TfNSW Freight and Servicing Last Mile Toolkit 2021)

Bays West has a unique opportunity to harness systems, infrastructure, policies and emerging technologies to deliver an exemplary precinct where the freight and servicing task is seamlessly ingrained and planned to support the vision and transport principles for the Precinct.

Measures to manage freight and servicing activity may range from physical and virtual consolidation to collaborative procurement and pedestrian porters. The Freight and Servicing Strategy will need to be refined throughout the planning and operational phases and be governed by a delivery authority. Monitoring freight and servicing activity will be a key role in the feedback process and will ensure accountability for all parties. How the Freight and Servicing Strategy may influence different parties over time is presented in Figure 44.

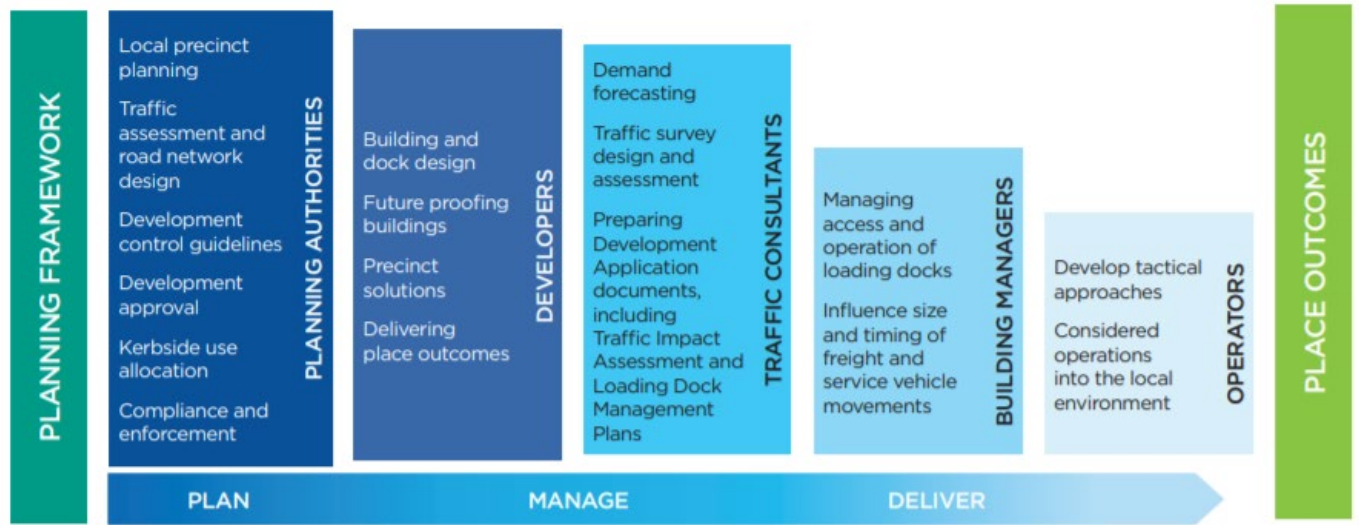


Figure 44: Freight and Servicing Strategy influence over time (Source: TfNSW Freight and Servicing Last Mile Toolkit 2021)

The success of the Freight and Servicing Strategy can be measured by assessing the precinct's operation against the following set of criteria:

- Safe - ensure the safety of all precinct users and stakeholders
- Sustainable - helps to meet precinct sustainability targets
- Efficient - maximise outcomes for minimal cost
- Reliable - ensures reliable supply of goods to all precinct users
- Resilient - ensures resistance and adaptability to shock and stress events
- Amenity - mitigates negative impacts to public amenity and supports placemaking

6.6.4 Key Initiative responding to Implementation and Operations

A high-level summary of the proposed initiatives that respond to the vision and principles have been identified. A brief justification, timeframe and link to the relevant Precinct principle are outlined below as either required for delivery (Table 10) or needing further investigation (Table 10).

Table 10: Key Implementation and Operation Initiatives for delivery

Initiative	Justification	Timeframe	Principles
Green travel plans for all workplaces, residential developments and schools/universities	To support an ultra-low car mode share	2030	C01, I02, P02
Consider logistics systems, such as consolidation hubs and freight pipelines	To minimise the effects of freight and servicing on the transport network and foster innovation in the sector	2040 & Beyond	I01
Access and time restrictions for heavy vehicles	To manage freight demand at peak times	2030	C01, I01, I02
Digital signage and dynamic wayfinding	To support walking and cycling between the sub-precincts	2030	C04, C05, E02, I03, P01

Table 11: Key Implementation and Operation Initiatives for investigation

Initiative	Justification	Timeframe	Principles
Freight and Servicing Strategy for the precinct, that includes ports and maritime uses, governed by a coordination authority	To plan freight and servicing activities that align with the wider aspirations for the precinct	2030	I01
Shared digital plumbing network	To support future digital infrastructure	2030	C05, I02
Dedicated travel demand management plan for cruise day operations	To reduce vehicle trips on cruise days whilst maintaining a level of customer service for passengers	2030	C01, I01, P02, P03
Flexible land uses in early stages that can be adapted and repurposed in the future	To provide flexibility throughout the planning process	2030	I02, P03
Tactical urbanism to create temporary walking and cycling facilities in the early stages of development	To support walking and cycling prior to the full network being established	2030	C01, E01, E02, I02, P03
Innovative last-mile freight solutions	To decarbonise and re-mode freight activity	2040 & Beyond	C01, E01, I01
TDM Strategy for the precinct including targets and a governance structure	To support an ultra-low car mode share	2030	C01, I02, P02, P03
A governance structure for collecting, monitoring and analysing transport data	To support the monitoring and refinement of transport solution	2030	C05, I02
Automated asset management for transport infrastructure	To support the continued maintenance of the precinct	2040 & Beyond	C05

6.7 Theme 4: Managing Growth and Place

The transport network and street design will need to be delivered progressively as the Precinct grows and develops over time. Infrastructure delivered in early stages must be fit for purpose for later stages, and if not required in future stages can be re-used to achieve a positive outcome.

To support the vision for a vibrant and liveable place, the transport network will need to be integrated into the public domain, and it will be critical that the balance between movement and place is achieved in Bay West.

The need for travel demand management within the Precinct will be critical to ensure that both the aspirations and the practical nature of the transport network are realised. Digital innovation offers the opportunity to look at and explore movement from a unique perspective.

6.7.1 A Transport network is flexible, adaptable, and delivered in stages

Bays West will be transformed and renewed over several decades, the Place Strategy provides high-level structure plans for 2030 to coincide with the opening of Sydney Metro West and for 2040 and beyond which provide a framework for development and infrastructure potential.

Given the scale of the proposed development, the precinct will continue to develop well beyond 2040. A transport network planned, designed, and delivered on day one also needs to be suitable for the longer-term future.

The staging of the precinct is under investigation by the NSW Government. To manage the uncertainty around staging, it is important that planning for the transport network is flexible to meet the needs of customers now, but also several different future years. The adaptability of the transport network is also critical in enabling infrastructure, services and facilities to respond to new development, changing needs of users or advances in technology.

Planning for flexibility and adaptability will help support the progressive planning of different sub-precincts. Consideration needs to be given to:

- Timeframes and the extent to which infrastructure, facilities and services are delivered
- Infrastructure or facilities delivered in the early stages can be temporary or permanent. If only temporary solutions are required can there be plans for adaptive reuse?
- Can infrastructure and facilities serve more than one purpose or function. An example would be kerbside parking that transitions on cruise days to accommodate shuttle buses or as an event space adjacent to the White Bay Power Station for community activities.
- The opportunity to deliver tactical urbanism, such as pop-up infrastructure to ensure that transport networks can be provided from day one at reduced costs and with greater flexibility

Critical to the success of planning, designing and delivery of Bays West over several decades, will be ongoing monitoring and coordination, to determine staging for new infrastructure, policy or services or to respond to delivery of the Precinct.

6.7.2 Managing Travel Demand

The constraints of the road network surrounding the precinct including several arterial routes that are already heavily congested at peak times dictate that a Travel Demand Management (TDM) approach will be needed to deliver on the ultra low car vision for the precinct.

This will include:

- Managing and consolidating freight relating to current operations on Glebe Island
- Reducing White Bay Cruise Terminal passenger's dependency on private vehicle
- Fostering high walking, cycling and public transport usage from inception for all new uses including the flexible management of parking

A TDM strategy is an interconnected web of strategies, policies and interventions that will span the entirety of the Precinct. The TDM strategy should be implemented on day one of operations and evolve alongside the Precinct, responding to changes in residents, visitors and travel patterns. To be most effective, the TDM strategy should be integrated into overall policy and planning decisions, rather than as a standalone strategy. The TDM strategy should focus on:

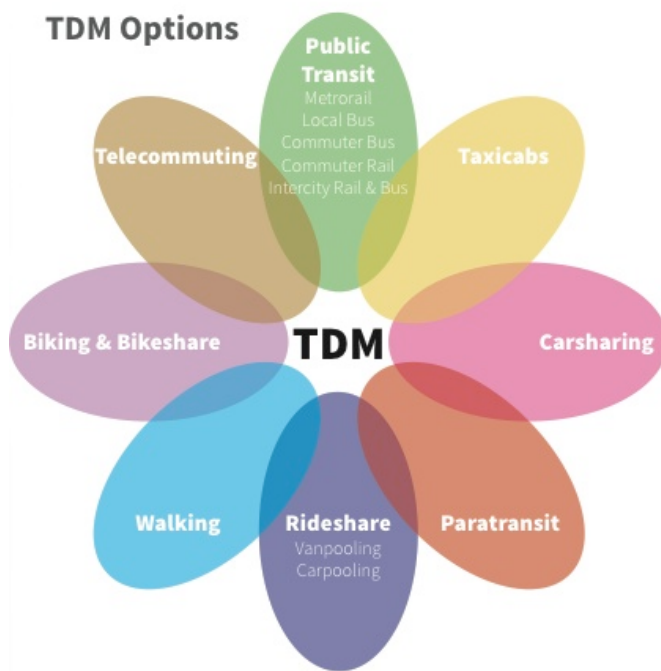
- Making sustainable travel options and choices available to customers
- Communication and promotion of sustainable travel options can influence mobility

This can be achieved through the implementation of travel choices, which encourage customers to:

- Reduce the number of trips they make
- Retime their trips to travel outside of peak periods
- Remode to undertake trips via more sustainable modes
- Reroute to avoid heavily congested areas

Given the high car dependency of passengers accessing the White Bay Cruise Terminal these trips present a key opportunity for the TDM strategy. There is a range of measures that could be implemented to achieve access mode shares that are more similar to the Overseas Passenger Terminal at Circular Quay:

- Shuttle service and baggage transfer from the Sydney Metro West Station
- Dedicated ferry service from Darling Harbour or Circular Quay
- Foreshore path from the Sydney Metro West Station bordered by cafes and restaurants
- A satellite area for pick up and drop off by private vehicle or taxi near the James Craig Road access point
- Coach services from other major transport hubs
- Access tariffs for drop off and pick up by private vehicle or taxis



TDM options (Source: Mobility Lab 2013)

Measures to manage travel demand for the precinct could include Green Travel Plans, parking controls, mobility hubs and dynamic signage.

6.7.3 Fostering Innovation

Bays West anchors one end of the technology and innovation corridor, extending from Tech Central. Digital technologies have advanced at a rapid pace in the previous decades and are increasingly at the heart of the way we live, work, play, travel and interact with our cities and transport systems.

Traditional major infrastructure projects can no longer perceive digital technology as an afterthought. Digital and smart city considerations are essential to meeting the needs of the community and achieving the project outcomes.

Innovation allows us to be better informed, more efficient and responsive to customer needs. For the PBTS, it means that transport services can be delivered more efficiently, operations can be improved, assets can be managed more effectively, and customer experience can exceed expectations.

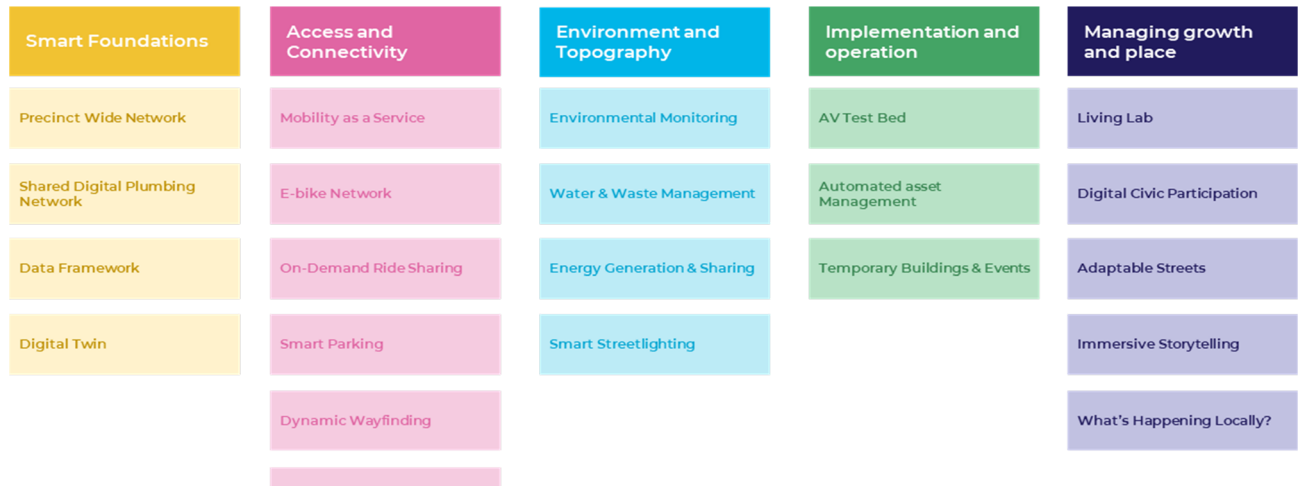
For this PBTS innovation can mean:

- Adapting proven technology or policies to a new context within the Precinct
- Developing or using new technologies that help deliver on the vision for transport in Bays West
- Finding new ways of delivering infrastructure, policy and services
- The utilisation of data, technology and infrastructure to improve the customer experience, including systems such as Mobility as a Service and enhanced real-time information
- Improving efficiency, particularly of freight, logistics and servicing with the Precinct
- Consider digital service offers, such as on-demand buses or micro-mobility to expand mobility and access within the precinct

- Smart cities and digital transformation.

Breakout - Smart Cities and Digital Transformation

Potential smart city opportunities that could assist in achieving Bays West's vision and address challenges are outlined below.



Innovation is an end product but also, an enabler that will support all the other transport themes, principles and responses provided throughout the PBTS.

6.7.4 Key Initiative responding to Managing Growth and Place

A high-level summary of the proposed initiatives that respond to the vision and principles have been identified. A brief justification, timeframe and link to the relevant Precinct principle are outlined below as either required for delivery (Table 12) or needing further investigation (Table 13).

Table 12: Key Managing Growth and Place Initiatives for delivery

Initiative	Justification	Timeframe	Principles
Plan multi-functional land uses that support the local community	To internalise trips within the precinct and create a neighbourhood feel	2030	I02, P01, P02, P03
High off-peak, evening and night-time service frequency to encourage public transport usage into the precinct at all times of the day	To improve local public transport services to and from the precinct and support the night-time economy	2030	C01, C02, C04, P02

Table 13: Key Managing Growth and Place Initiatives for investigation





Initiative	Justification	Timeframe	Principles
Prepare a detailed technology and smart cities roadmap for the Precinct to highlight potential opportunities	Support the efficient use of resources and embrace innovation in the development of emerging precincts	2030	C05, I02, P03
Gamification at key destinations to embrace the heritage nature of the precinct	To improve and enhance the user experience of key heritage items	2040 & Beyond	C05, E02
Opening the White Bay Cruise Terminal waterfront to the public at certain times	To support a mode shift to walking and cycling and create a new recreational destination	2040 & Beyond	C01, C04, E02, I01, P01, P03






Event scenarios for the street network that limit vehicle access	To improve and enhance the user experience of events within the precinct	2030	I02, I04, P01, P03
Adaptable and flexible streets that can have different functions throughout the day	To adapt the transport network to the changing demands and trends	2030	C04, I02, I04, P01, P03
Unlock access to the Harbour Foreshore	To support a mode shift to walking and cycling and create a new recreational destination	2030	C01, C04, E02, P01, P03
Consider a testbed for autonomous vehicles within the Bays West street network	To support the growth and development of the autonomous vehicles industry	2040 & Beyond	C03, C05
Digital twin developed to support precinct operations and environmental monitoring	To support the monitoring and refinement of the transport network and operational systems	2040 & Beyond	C05

6.8 Meeting our Precincts Customer Needs

Customer personas were introduced in Section 3. These provide a small cross-section of a variety of different users of the transport network who may interface with the Precinct. These different customers have different needs and opportunities, as identified in Section 4. Table 14 presents how the different customer personas are considered in the PBTS and the initiatives identified for delivery or further investigation.

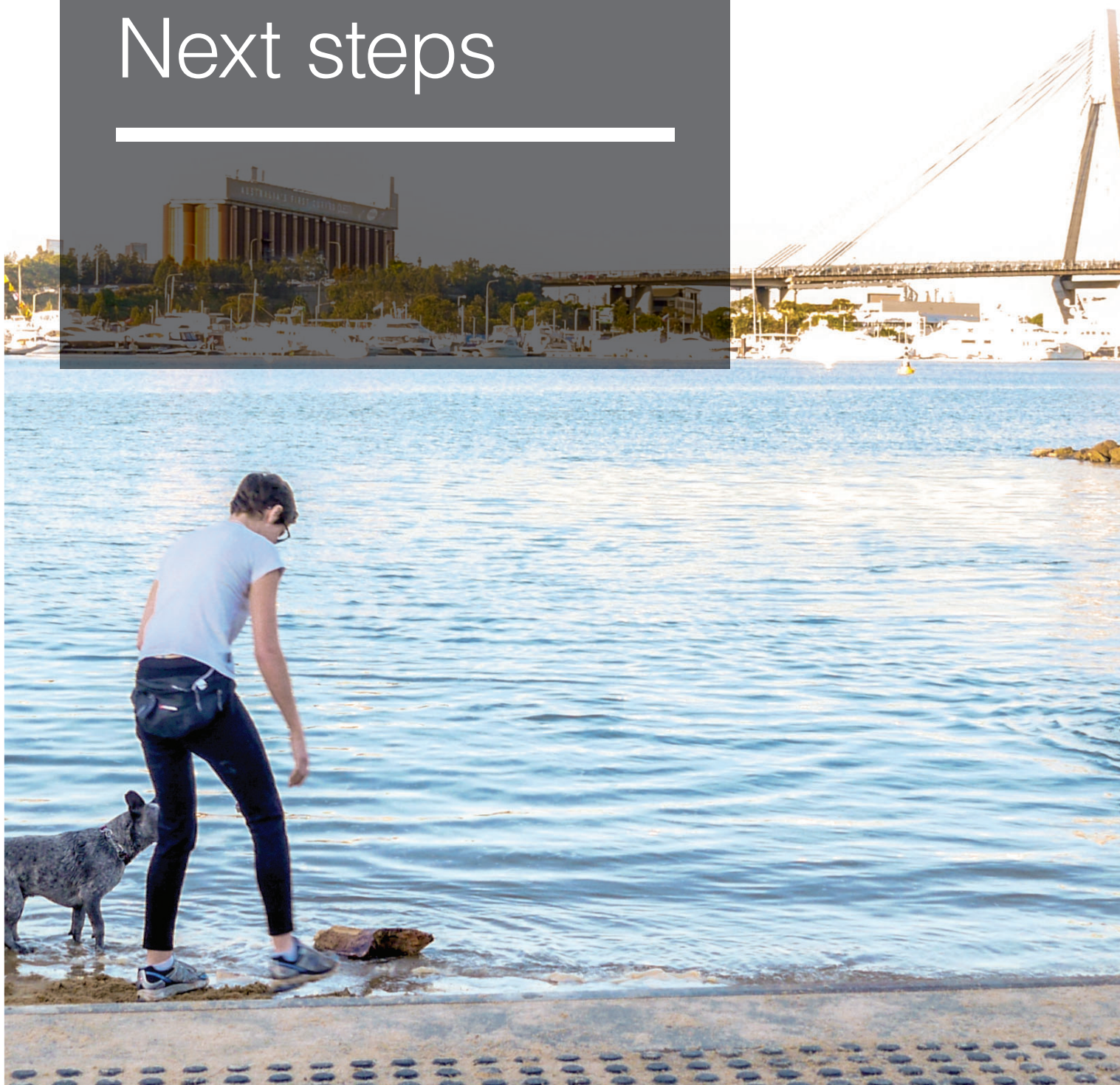
Table 14: Bays West Customer Personas

	Ahmed	Alea	Eliza	Akira
				
Demographics	29 years old professional who works in the Sydney CBD (resident in Bays West)	45 year old health care worker who works at Westmead Hospital (Resident Balmain)	42 years old and lives in Burwood with 2 primary school aged children	65 year old couple. Visiting from Queensland with my wife who has a mobility impairment
Behaviours	<p>I don't own a car and prefer to use public transport, active transport, demand responsive transport services or micromobility</p> <p>I need a quiet and relaxing setting after a long day at work</p> <p>I like to go out for dinner close to home with friends in the evening</p> <p>I am interested in being able to walk and cycle to the CBD</p>	<p>I share a car with my son. I want to use public transport at the last minute if I don't have access to the car</p> <p>I am happy to walk or cycle to access the Sydney Metro West Station but want somewhere safe to store my bike if I do cycle</p>	<p>I currently drive to work every day as I need to drop-off and pick-up my kids from school</p> <p>I need to drop my children to school 3 days a week and pick them up twice a week</p> <p>I would like to commute less in my car and more via public transport. The new Sydney Metro West Station at Burwood North is a very attractive option which I'm aiming to use 1-2 times a week</p>	<p>We will probably take a taxi from the cruise terminal to our family in Parramatta</p> <p>We are staying with family in Parramatta</p> <p>We speak limited English and require intuitive wayfinding where we can rely on maps rather than text</p>
Considerations	<p>I need to travel to the Sydney CBD for work, it's not every day, as I often work from home a couple of days a week.</p> <p>I need safe, direct and accessible walking, cycling or public transport to the CBD.</p> <p>I need local walking access to the shop, live and play</p>	I am a shift worker and want to be able to get to work and back home safely in the early hours of the morning and late at night	<p>I do not consider other options for getting my kids to school safely – it's too tricky with kids, bags, PT timetables, interchange and walking between multiple destinations</p> <p>Lunchtimes can be my only time to relax</p>	My wife has a mobility impairment. I find it difficult to navigate difficult terrain with all of our luggage
Opportunities	<ul style="list-style-type: none"> • Sydney Metro West Station • New Walking and cycling connections • Innovation precinct with micro-mobility 	<ul style="list-style-type: none"> • Sydney Metro West Station • Local bus connections to Metro • Well light, safe night-time transport 	Opportunity to shift employment to Bays West to leverage lifestyle, metro and harbourfront parkland	<ul style="list-style-type: none"> • Vehicle access to the cruise terminal is to be maintained.
Strategy Response	<p>Clear and direct access to the Sydney Metro Station and Bus Interchange. A tiered network of regional and local walking and cycling.</p> <p>This allows Ahmed to stay local when required but access the Sydney CBD on those days he needs to travel to the office.</p>	<p>Clear and direct walking and cycling paths, connecting Balmain with the Bays Precinct.</p> <p>This connection will happen at the new Robert Street gateway.</p>	<p>The new Sydney Metro West Station at Bays West connects with Burwood and will provide simple, direct and efficient travel to work.</p> <p>The mixed-use nature of the Precinct will allow Eliza to relax at lunch in the local parkland or by the harbour foreshore.</p>	A clear main street is provided through the Precinct, which will allow vehicle traffic to access the cruise terminal to allow Akira and his wife to access a taxi or other vehicle to travel to their destination.

	Martina	Lucas	Noor	Albert	Jeanine
					
Demographics	35 years old	17 years old	50 years old, visiting for two weeks from abroad with her husband and teenage son	65 years old, retired, living in Lilyfield	47 years old
Behaviours	<p>I drive a heavy vehicle loading dry bulk products at the port and delivering them across Sydney</p> <p>I visit daily and sometimes multiples times per day</p> <p>Interested in efficient, seamless and safe access to and from the port</p>	<p>I go on runs and bike rides with my friends or younger siblings in the evenings and on the weekends</p> <p>Improved access to green spaces and the harbour</p> <p>Safe and suitable walking and cycling routes via high quality separated bike, foot or shared paths</p>	<p>Our family loves to walk and spend time outside visiting landmarks</p> <p>We are staying in a hotel in the Sydney CBD</p> <p>To see as much of Sydney's harbour on foot including heritage landmarks at Bays West</p>	<p>To safely kayak in Rozelle Bay without fear of harm from larger vessels on the water</p>	<p>Ship master for a cruise ship homeporting at White Bay Cruise Terminal once a week in the peak cruise season</p> <p>To efficiently embark/disembark passengers and goods depart without delay</p>
Considerations	Sharing the road network with increased small vehicles, private cars, walkers and cyclists accessing or moving around Bays West	<p>I need to get places on foot or by bike</p> <p>I don't like riding on the road, especially when I'm with my sisters</p>	<p>Inconsistent and unclear connections between the Sydney CBD, Pyrmont and Bays West</p> <p>Can I walk to view the Powerhouse at Bays West?</p>	<p>An increasing number of vessels using the working harbour to access the port at Bays West</p> <p>Recreational water access to be concentrated outside areas dedicated to the working harbour and ports operations and the cruise terminal</p>	<p>Safe navigation in increasingly busy water around Bays West</p> <p>Arriving and departing the port without delay</p>
Opportunities	Segregating heavy vehicles from light vehicles, pedestrians and cyclists for efficiency and safety	<ul style="list-style-type: none"> • A new network of walking and cycling paths for recreation • Parklands to undertake workouts 	<ul style="list-style-type: none"> • Sydney Metro • Safe, comfortable and amenable walking connections 	Establish recreational water zones in Rozelle Bay outside areas dedicated to the working harbour and ports operations and the cruise terminal	An accessible and well-managed port
Strategy Response	<p>Freight and servicing must be a key consideration in balancing movement and place of the Precinct.</p> <p>A tiered network of streets allows for different loading and access arrangements.</p> <p>The Precinct will embrace innovation, and freight hubs or dynamic kerbside management to help minimise delays.</p>	<p>A regional walking network that connects to the Inner West and Sydney CBD and Glebe.</p> <p>This provides an opportunity for a variety of enjoyable running tracks.</p>	<p>A multi-layered walking and cycling network for both regional and local access.</p> <p>All walking and cycling to be cool and green.</p> <p>A new or restored connection between Pyrmont and Bays West. A direct connection from ANZAC bridge to Bays West. Access to the harbour foreshore walk.</p>	<p>Encouraged public access throughout the Precinct (outside areas dedicated to working harbour and ports operations and cruise terminal), that could enable at later stages of design access for recreational crafts into the harbour within the Precinct.</p>	<p>Suitable access for vehicle movements to and from the port has been provided on a main street within the Precinct.</p> <p>Access will be staged, in 2030, all current access will be maintained. As the Precinct evolves, access will be planned in consultation with PANSW to ensure it is adequate for industry.</p>

7

Next steps



This PBTS provides a framework for the delivery of a transport network that enables, enhances, and supports the vision for the Precinct, supported by practical initiatives and opportunities.

By understanding how the integration of movement can meet the needs of the Place, this strategy aims to set the foundations for delivering a new form of urbanism that would see Bays West become a vibrant hub connected to culture, heritage, and water. An extension of the Sydney CBD, but also a unique place with a diversity of different land uses a destination that puts the needs of people at its core.

This Strategy represents the first stage in an ongoing investigation into a planning, design and delivery process that will see movement and place integrated into Bays West as a fundamental concept by the NSW Government. Further investigation will be undertaken at the sub-precinct level, to provide further detail on the design, feasibility, and cost for many of the elements identified at a high level in this strategy.

A comprehensive set of transport opportunities and initiatives has been developed and presented in this Strategy and will be required to be delivered to enable the progressive build-out of the Precinct. Given the length of time considered as part of the PBTS, the opportunities and initiatives have been categorised as for delivery or for further investigation.

Most initiatives are not yet funded or committed for delivery. As a result, they should be regarded as initiatives subject to further detailed investigation, scoping and business case development and investment decisions.

The following would need to be considered to aid in the future implementation of this Strategy:

- Continued consultation with key stakeholders such as Sydney Metro, PANSW, Transport for NSW, Local Councils, and private developers.
- Further detailed investigation on the feasibility of future development in the Precinct in the long term, as land use types and areas, are refined. Once this information is available it will require more detailed transport modelling.
- Identification or creation of a governance structure to ensure design making is coordinated and considered by the relevant NSW Government Agencies over the long term.
- Adhere to the required planning process and approvals include Master Planning and Re-zoning Applications for the different sub-precincts and associated technical investigations.
- Development of detailed Strategic and Final Business Cases for major infrastructure and service initiatives by the responsible owner. This would confirm the feasibility, design, funding, timing and ensure value for money.
- Consideration of the different policy opportunities by the relevant authority and investigate and implement these if appropriate
- Implementation of a funding strategy by the NSW for delivery of the Precinct over the long term
- Opportunity to develop a stand-alone entity to coordinate and manage the Precinct as part of Precinct Travel Demand Management practices
- Ongoing stakeholder and community consultation via a variety of methods such as exhibition, briefings, and release of key documentation.