

HARBOURSIDE PEDESTRIAN STUDY

7TH OCTOBER 2016
PREPARED FOR MIRVAC



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EXECUTIVE SUMMARY

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Urbis has been engaged by Mirvac to assess current and proposed pedestrian routes in and out of Harbourside, and provide advice on the suitability of a proposed new connection from Bunn Street and the overall benefits of this new connection along with the bridge at the northern end, which will be retained by Mirvac.

As Darling Harbour is undergoing significant development and repositioning, new connections in and out of Darling Harbour from all key directions should align with the vision for seamless pedestrian connections, which includes Harbourside.

The new Harbourside development will provide residents and visitors with a quality retail and leisure experience. A new connection can provide branding and identity opportunities for Harbourside and help create a sense of arrival.

In addition to the development occurring in Darling Harbour there is also significant development occurring in Barangaroo and Darling Square. Other urban renewal precincts identified including the Bays Market Precinct and the Central to Eveleigh Corridor are in planning stages. Harbourside is centrally located to all, and as such can play an important linking role between the precincts.

In 2016, Harbourside has approximately 60,000 customers residing and working within walking distance of the centre, which is forecast to increase to approximately 71,000 in 2031. The main segments are affluent 30-35 year old singles and couples, most likely with high disposable incomes. These characteristics point towards strong demand for a quality retail, café, bar and restaurant offer, aspirations that Harbourside can most likely meet.

The visitor market is also an important segment for Harbourside, accounting for 49% of customers, and thus ease of access from nearby hotels should be considered in the design. Customers visiting Harbourside also visit other attractions in Darling Harbour (35%).

As part of the proposed development, Mirvac is removing the bridge from the carpark at the rear of the Novotel, though will retain the bridge at the northern end adjacent to the monorail station. To supplement the removal of the carpark bridge, Mirvac proposes to build a new improved connection from Bunn Street. So, while initially there is a loss in connections resulting from removal of the bridge from the Novotel carpark, long term the proposed new bridge combined with retention of the bridge at the northern end will provide better public access than the current pedestrian bridge arrangements.

EXECUTIVE SUMMARY

The proposed bridge connection from Bunn Street to Harbourside will provide the following benefits to those living, working or staying in the Bunn Street walking catchment:

- Access to quality publicly accessible landscaped space within Harbourside, and the public domain at the waterfront
- Access to retail amenity
- Improved access for residents to key employment hubs to the south including the International Convention Centre (ICC), Darling Quarter, Haymarket and UTS
- Provides a better entry into Darling Harbour for Ibis and Novotel hotel guests.

The Bunn Street walking catchment has 8,700 residents and workers, forecast to increase to 10,300 in 2031. The catchment is an urban environment characterised by high density residential development. A lack of open space means that residents and workers have limited opportunities within their neighbourhood to enjoy quality urban space. The Darling Harbour foreshore can provide an extension to this neighbourhood, provided access is simple.

The Bunn Street connection has direct benefits for residents and workers in the immediate catchment as well as addressing key design principles around connectivity and permeability, specifically:

- A new view corridor from street level
- Creation of a new east-west connection to help knit neighbourhoods and the precinct together
- Provides a safe point of entry into and out of Harbourside and Darling Harbour
- Integration and linkages with the site with surrounding modes of public transport
- Creates new an improved pedestrian connections with the surrounding pedestrian network
- Integrates upper levels with the lower floor/waterfront.

EXECUTIVE SUMMARY

The proposed replacement connection is a better outcome than the current bridge from the carpark below the Novotel because it:

- Provides at-grade access from the street
- Provides strong sight lines between the street and the foreshore
- Links publicly accessible spaces and not carparks.

The performance of upper levels at Harbourside is contingent on an attractive offer and a critical mass of retail on the upper levels. The strength of street connections, bridge connections and vertical integration can have implications for the performance of upper level retail at Harbourside. An entry and connection point direct from Bunn Street provides a simple access for pedestrian in this catchment and carpark users. Multiple entry points to the upper levels at Harbourside will result in a more even distribution of traffic in the centre and support an appealing or drawcard tenant. It will also allow Harbourside to position more of its retail floorspace towards meeting the day to day needs of local residents.

The proposed Bunn Street connection and the secondary connection at the northern end therefore has positive implications for the performance of Harbourside, provides ease of access for pedestrians in the Bunn Street catchment and has broader connectivity benefits for Darling Harbour and other Sydney foreshore precincts. Harbourside is centrally located between several key urban renewal precincts including Bays Market Precinct and SICEEP, and thus an important link in connecting these new precincts.

INTRODUCTION

INTRODUCTION

As part of the proposed demolition and redevelopment of the Harbourside Shopping Centre Urbis has prepared this pedestrian study to define and assess the existing and proposed pedestrian routes.

As part of the planning, connections between Harbourside and the broader area are being considered particularly in light of existing connections being removed. Harbourside can act as a new link in the future between Darling Harbour and the Bays Precinct.

One potential pedestrian route investigated in this report is a bridge connection from Bunn Street to Harbourside. This report provides an assessment of how a potential Bunn Street link would operate and to consider its overall benefit to the community and other users.

Other pedestrian pathways considered in this report are:

- Pathways and access from Pyrmont Bridge into the retail centre
- Flow and movement along the foreshore, from the Sydney International Convention, Exhibition and Entertainment Precinct (SICEEP) and beyond
- Flow and access from the northern part of Pyrmont to Darling Harbour.

REPORT SECTIONS

This report includes the following sections.

Section 1 provides renders of the proposed development, overview of new Pyrmont Bridge connections and summary of current market segments

Section 2 provides an overview of the role of Darling Harbour and mapping of key attractors within Darling Harbour and other foreshore precinct

Section 3 summarises the existing research on Harbourside and Darling Harbour

Section 4 illustrates the main transport modes servicing Darling Harbour and pedestrian routes from each mode

Section 5 summarises the success factors associated with upper level bridge connections

Section 6 outlines the changes to existing pedestrian bridge connections, the proposed new Bunn Street connection and impacts of the changes on pedestrians

Section 7 profiles the catchment who will benefit from a new connection at Bunn Street

Section 8 provides an assessment of the Bunn Street connection, identifies groups that will benefit, urban design implications and illustrates improved pedestrian pathways resulting from the connection

1. PROPOSED DEVELOPMENT

PROPOSED HARBOURSIDE DEVELOPMENT

The proposed development includes demolition of the existing retail centre, and the construction of a new retail centre and residential tower comprising a total of 87,000 sqm of Gross Floor Area (GFA) across the site.

The proposed retail centre will be between 3 levels at the southern end, increasing to 5 levels at the northern end.

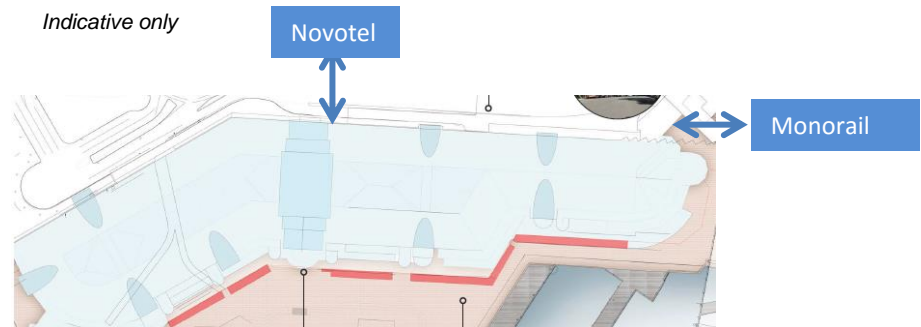
A new direct connection to the retail centre is proposed from Pyrmont Bridge. Harbourside visitors will be able to move through the levels with ease with easy and direct access to Darling Harbour.

The new centre will be developed to a standard that aligns with the quality of development occurring nearby such as the International Convention Centre, and thereby play a key role in the positioning of the overall precinct for residents and visitors.

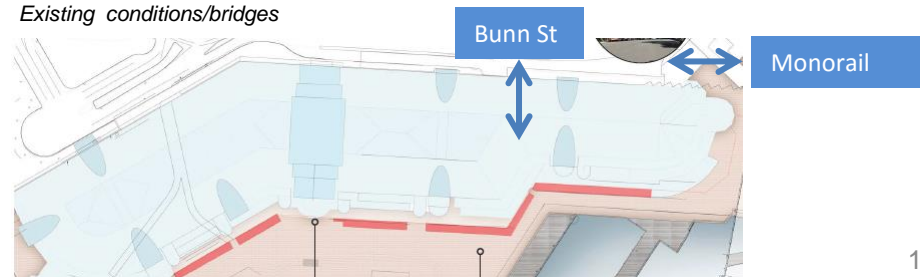
Additional concept renders illustrating the proposed design are included on the following pages.



Indicative only

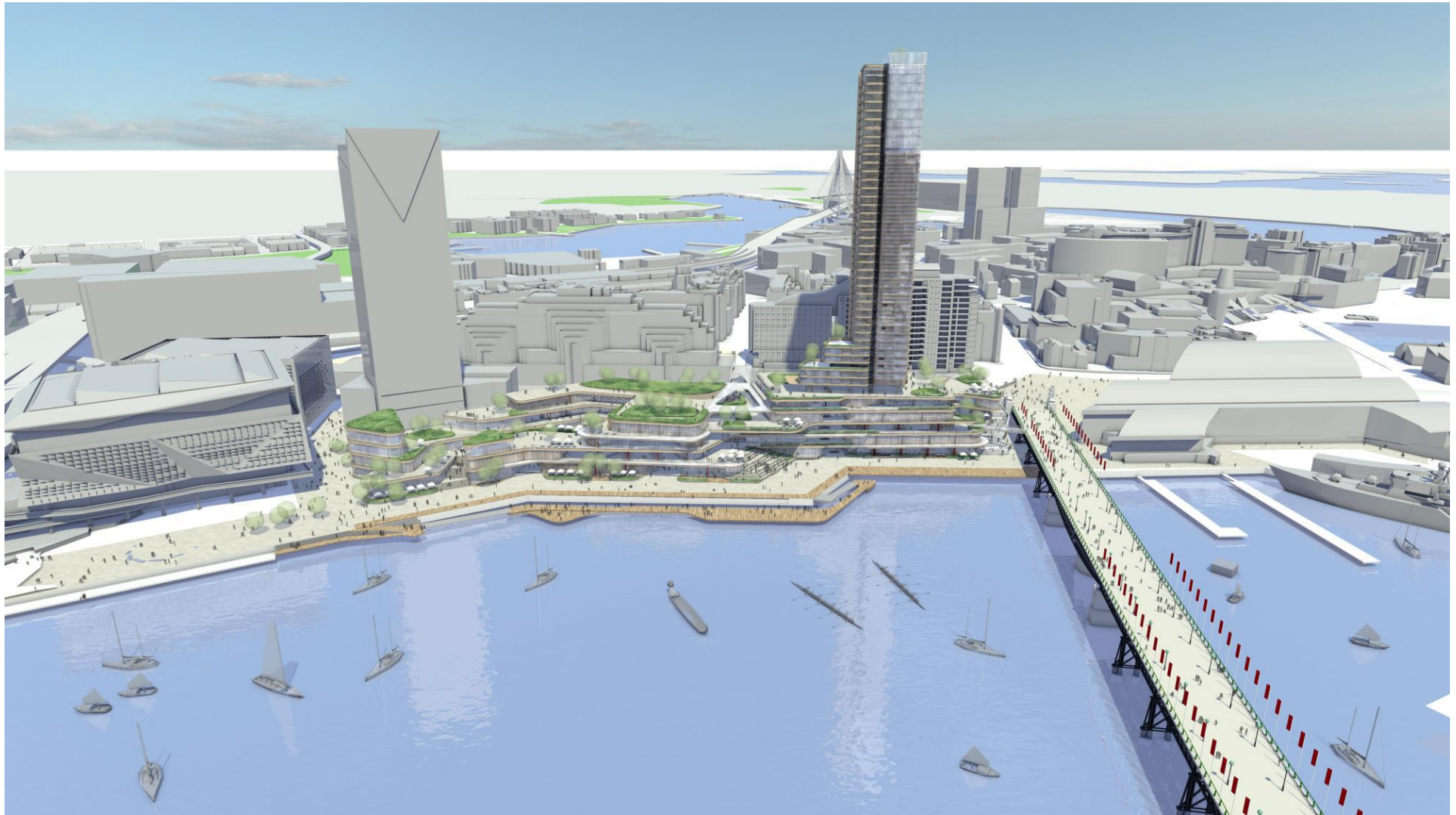


Existing conditions/bridges



Future conditions/bridges

PROPOSED HARBOURSIDE DEVELOPMENT



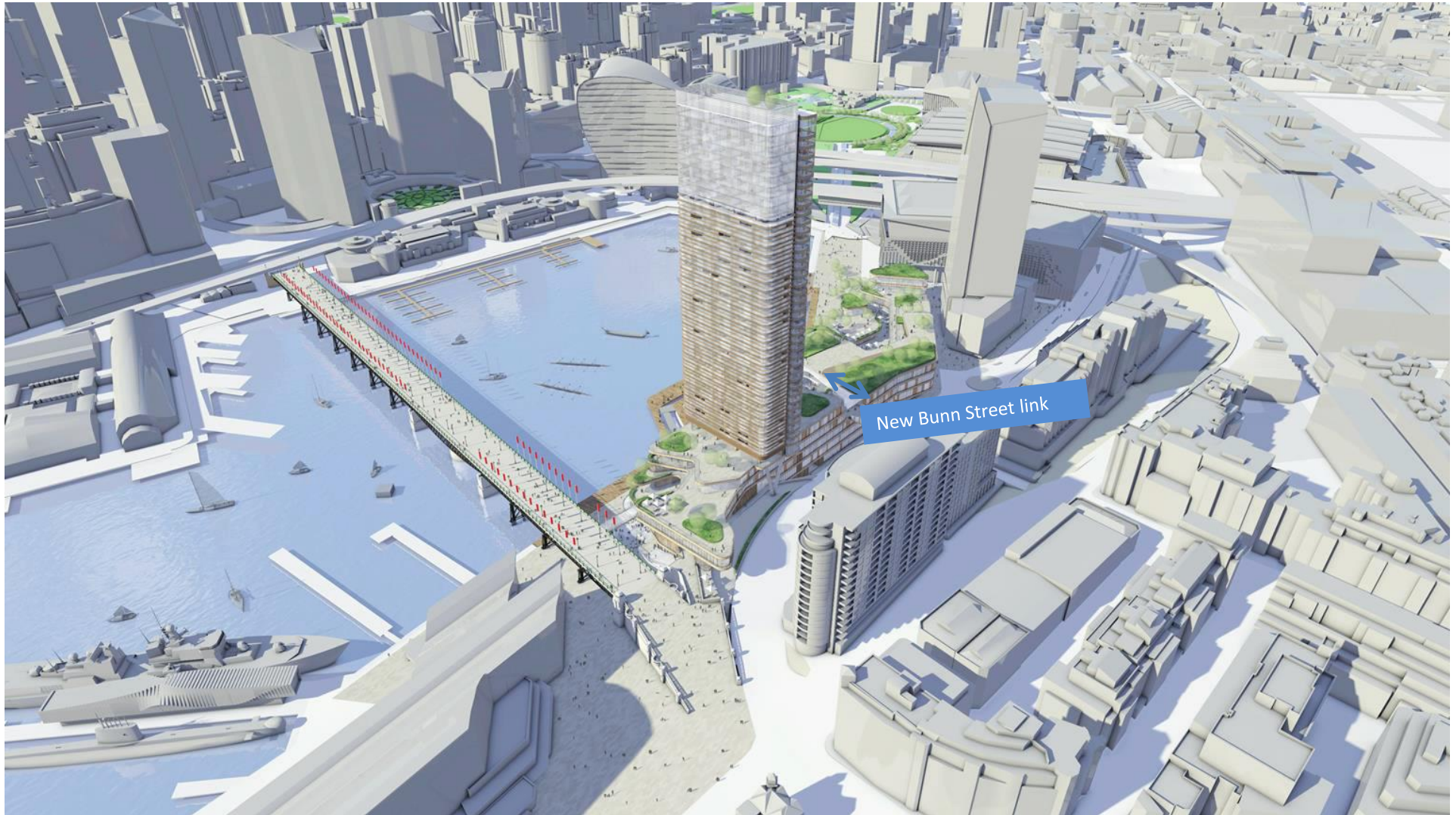
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PROPOSED HARBOURSIDE DEVELOPMENT



Indicative only

PROPOSED HARBOURSIDE DEVELOPMENT



Indicative only

IMPACT OF NEW PYRMONT BRIDGE CONNECTIONS



Indicative only



Indicative only

There will be an additional access point with on-grade connection from Pyrmont Bridge to the retail centre and a new wider and more accessible staircase will be provided adjacent to Pyrmont Bridge replacing the current stairs. The outcomes of the proposed design are:

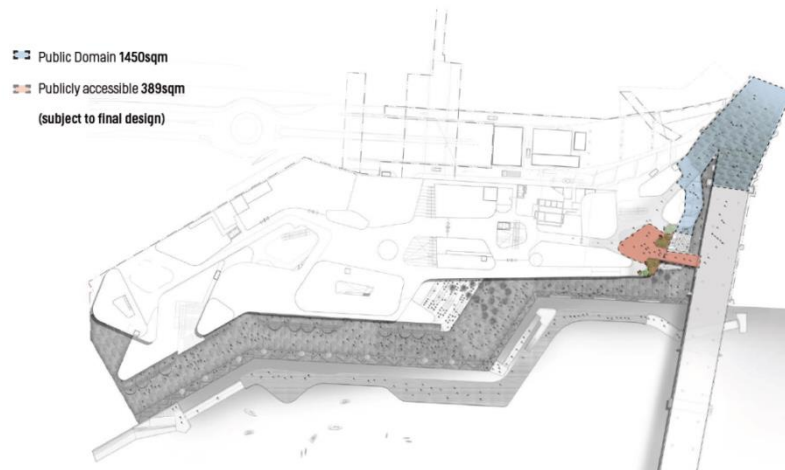
- Better direct connections between Pyrmont Bridge and the southern part of Darling Harbour (supported by vertical transport within Harbourside)
- Greater legibility particularly for pedestrians heading west along the Pyrmont Bridge, i.e. easier to see the entry to Harbourside and Darling Harbour
- More options generally for pedestrians to access Darling Harbour.

GENERAL FLOW THROUGH THE REDEVELOPED CENTRE

- Improvements in connections to Harbourside from the Pymont Bridge end should result in more direct flow throughout the centre with better articulated travel paths.
- The following indicative floor plans indicate a potential pedestrian flow path through the centre from the proposed Bunn Street Bridge to the waterfront and Pymont Bridge.

GENERAL FLOW THROUGH THE REDEVELOPED CENTRE

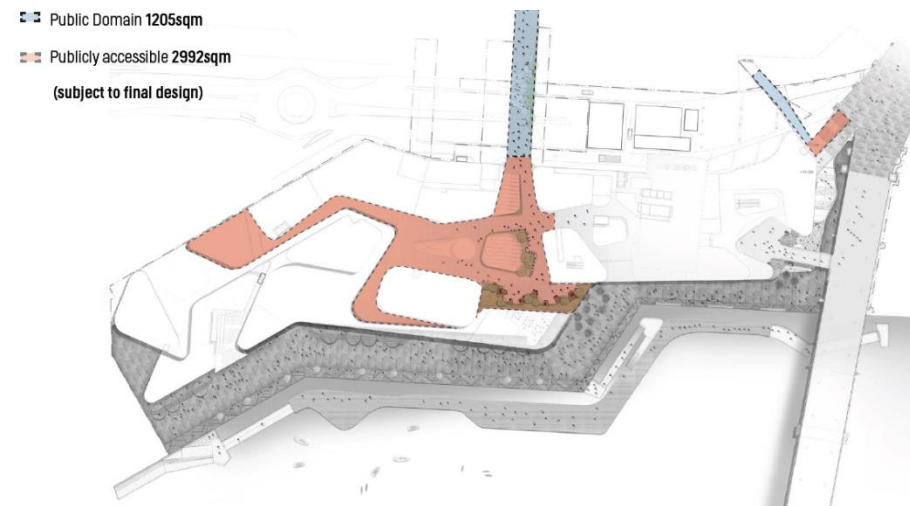
- A path along the water's edge at ground floor level will have footpaths that are flush with entry points to the centre providing accessible grades for all pedestrians.
- A new direct access from Pyrmont Bridge at Level 2 will provide earlier access to the centre for pedestrians approaching from the north.
- The proposed Bunn Street Bridge integrates with the centre at Level 3 and provides direct access from street level into the centre.
- Retention of the existing bridge at the northern end provides further direct level connection from the north western edge of the site and Pyrmont.
- Central stairs provide a link to the upper retail levels, and several lift locations provide disability compliant access to the upper levels.



Level 2 – Retail & Pyrmont Bridge Access



Ground Floor– Public Domain



Level 3 – Retail & Bunn Street Bridge Access

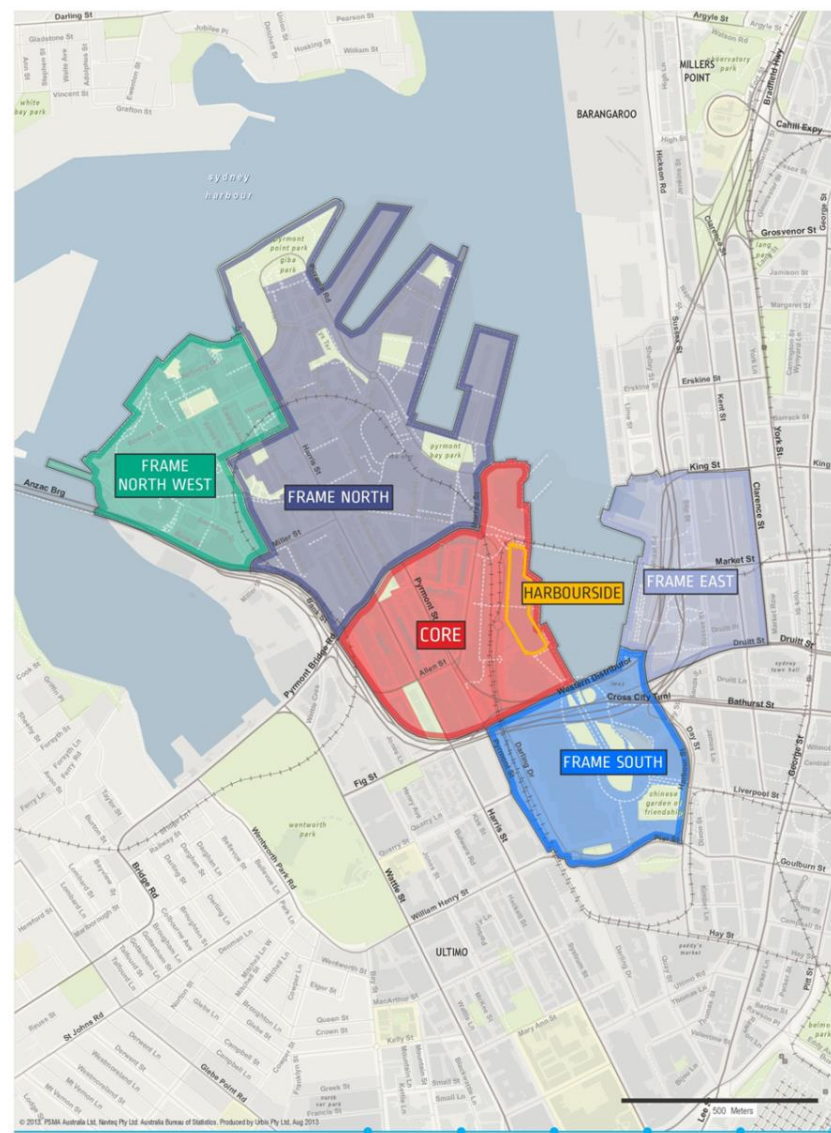
All Images are Indicative only

KEY HARBOURSIDE MARKET SEGMENTS

The map on this page shows a walk-in retail trade area for Harbourside. This is a historical trade area based on the centre's current offer. This trade area is likely to expand to reflect the draw of a different offer, particularly if improved to address the needs of local residents, and as connectivity is improved. Similarly, the trade area could change if there is additional competition in the future. A walking catchment based on a new bridge at Bunn Street is addressed in pages 48-54 in this report, and takes in areas to the west of Harbourside.

The trade area has been defined with regard to distance, topography, and competing retail facilities, particularly major food and beverage precincts.

Harbourside's key market segments can be summarised as workers and residents who work and live within walking distance of Harbourside. The map on this page shows there is a core walk-in catchment and four secondary walk-in areas identified as 'frame' segments in the map.



KEY HARBOURSIDE MARKET SEGMENTS

The residents and worker forecast numbers for Harbourside's walk-in trade catchment are shown in the table below, which shows growth in both segments though more notably among workers. The growth in workers is driven by a number of developments that includes the ICC, IMAX Theatre re-development and Four Points by Sheraton.

Resident and workers Harbourside Walk-In Trade Area				
	2016	2021	2026	2031
Residents	12,900	13,000	13,200	14,000
Workers	48,000	51,100	54,200	57,000

Source: NSW BTS Travel Zone Data 2016



KEY HARBOURSIDE MARKET SEGMENTS

Other core market segments to consider are:

- Hotel guests staying in Darling Harbour hotels (Ibis, Novotel) and the Sheraton ICC when completed
- Conference delegates attending events at the International Convention Centre (ICC) Sydney, currently under construction
- Future residents and workers in the Bays Precinct redevelopment, and these numbers are included in the walking catchment population table on page 51.

In addition, Harbourside also attracts Sydney residents from beyond the catchment, and tourists not based in Darling Harbour.

Annual hotel visitors	
	2016
Novotel guests	12,900
Ibis guests	48,000

Source: ABS, Urbis , Accor Hotels

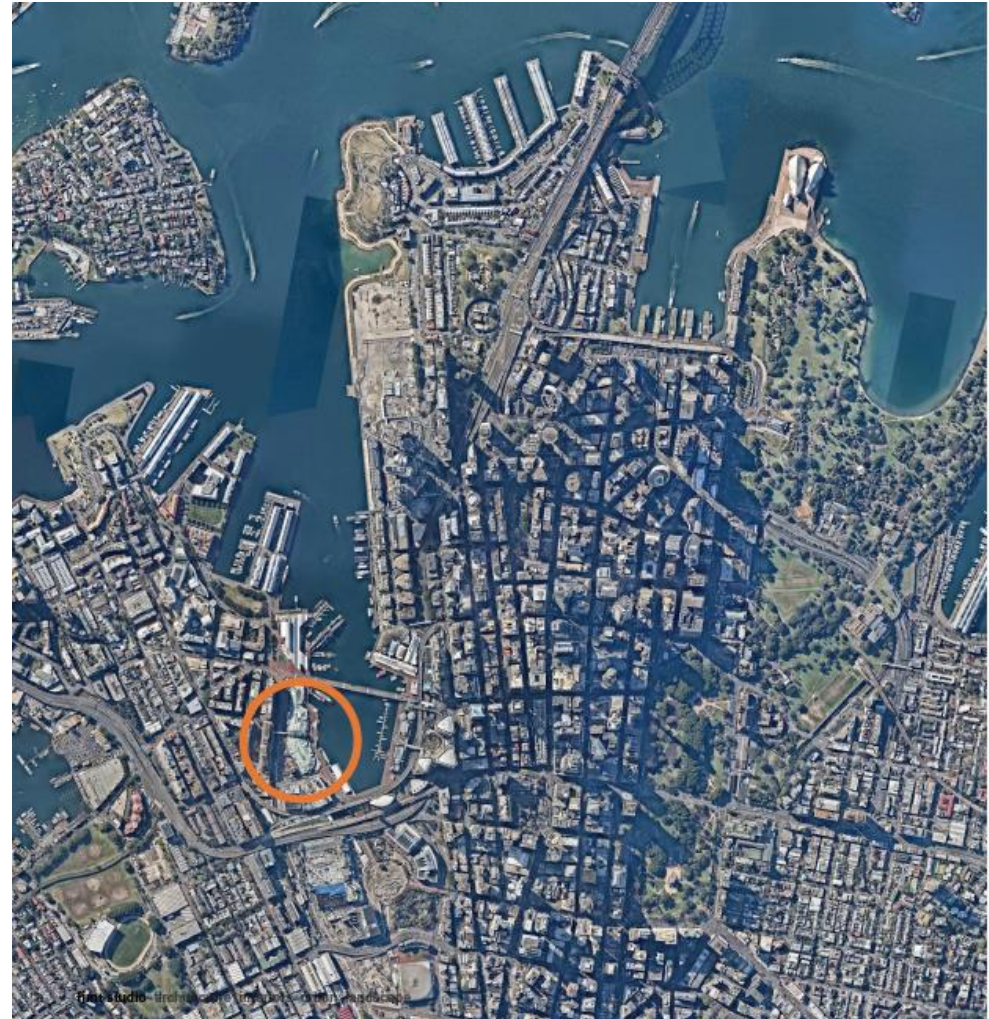
2. CURRENT AND FUTURE ATTRACTORS

DARLING HARBOUR AT A GLANCE

Darling Harbour is located on the western edge of the Sydney CBD. The precinct has primarily an entertainment role, comprising the following key attractions:

- Sydney Aquarium and Wildlife Zoo
- National Maritime Museum
- ICC (under construction)
- Harbourside.

Darling Harbour is bordered to the east by the western corridor of the Sydney CBD and Cockle Bay Wharf, to the south by Darling Quarter and ICC redevelopment precinct and to the west by STAR casino, Maritime Museum and the commercial precinct along Jones and Pyrmont Bay.



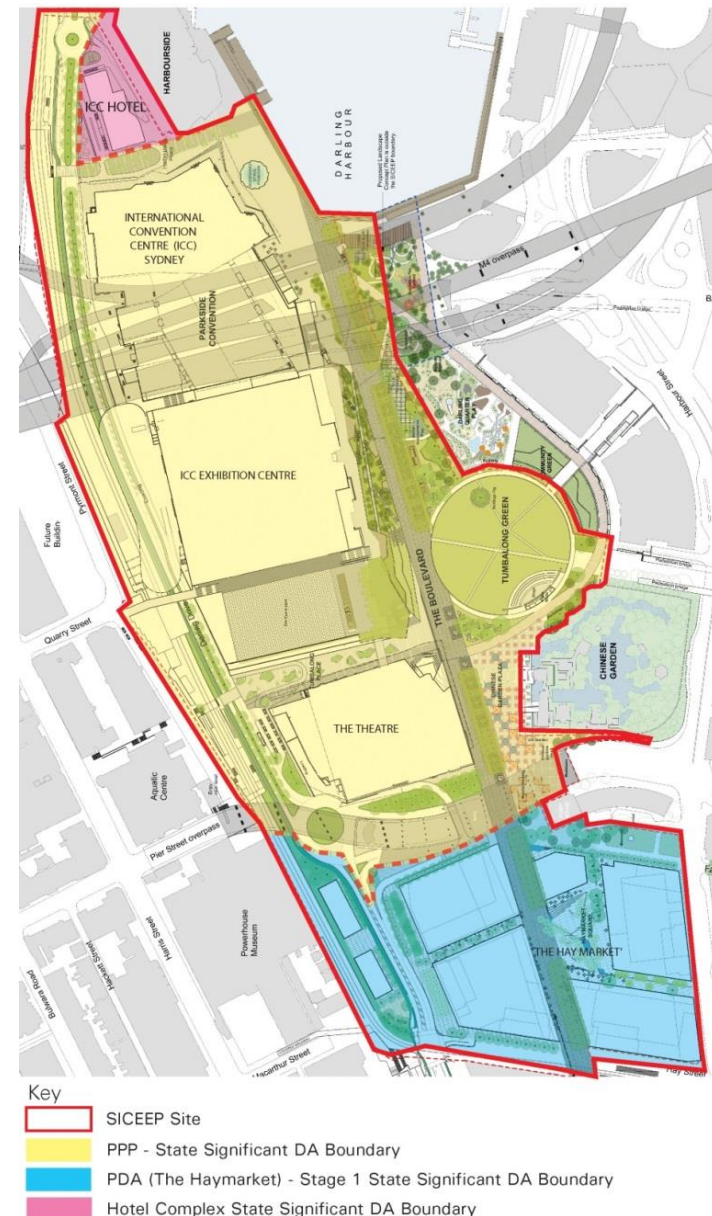
DARLING HARBOUR AT A GLANCE

The revitalisation of Darling Harbour will create a memorable public space on Sydney's foreshore, building on the precinct's current role as a popular Sydney destination. In 2014 pedestrian numbers in Darling Harbour were 26,500,000 (SHIFA 2013-2014).

Central to the precinct strategy is the principle of creating seamless pedestrian connections throughout Darling Harbour, and with the nearby communities. The precinct is defined around 5 main principles namely:

- The north-south boulevard
- The 3 primary public opens spaces (The Waterfront, Tumbalong Park and a new urban space)
- Harbourside Place and Tumbalong Place
- The ICC buildings
- Terraced landscape over the ICC Exhibition Centre.

Implication: Connections in and out of Darling Harbour from all key directions should align with the vision for seamless pedestrian connections.



THE REPOSITIONING OF DARLING HARBOUR

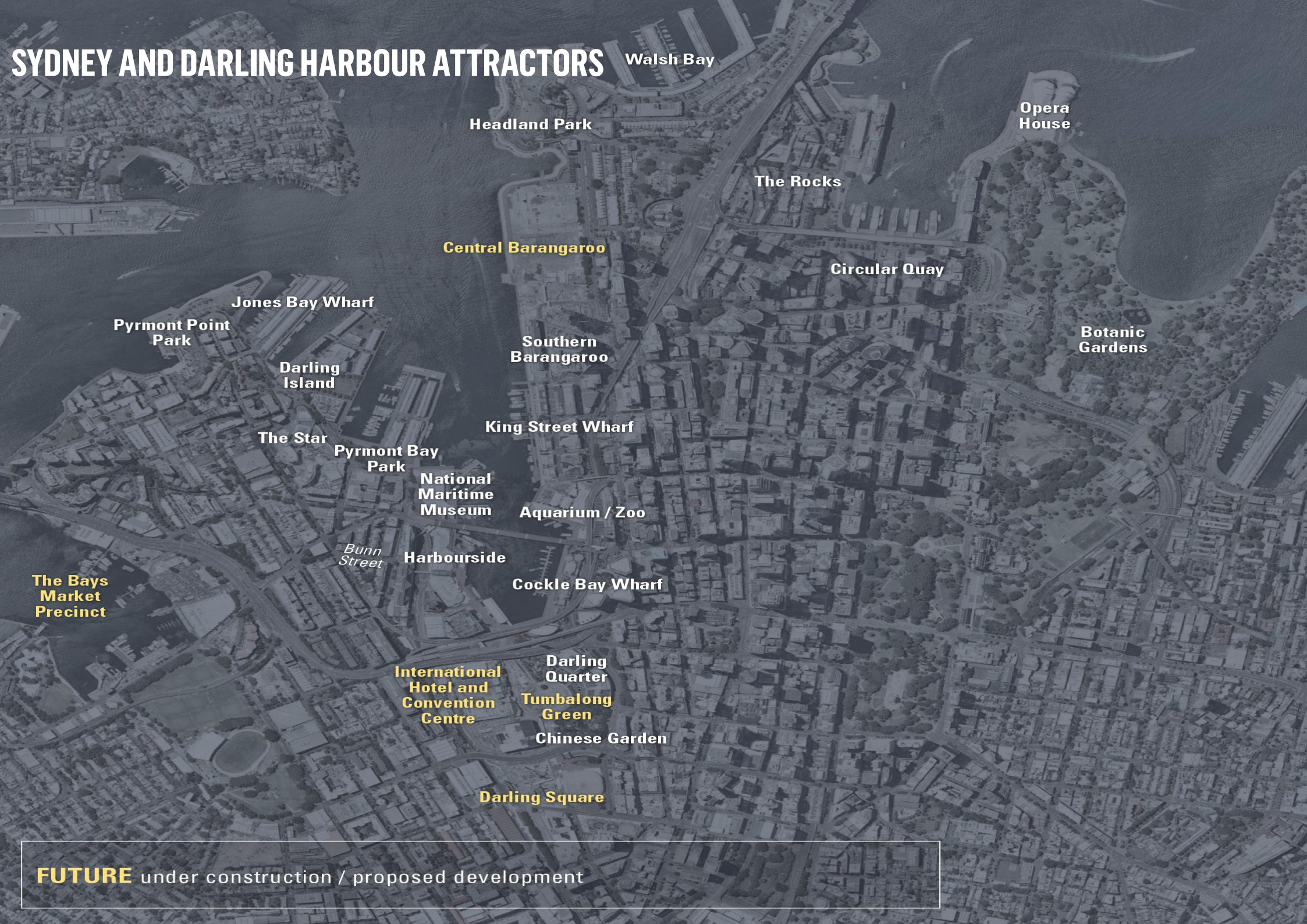
While Darling Harbour will have a pivotal tourism role, the upgraded precinct will provide exceptional amenity for residents on its doorstep, mainly from the suburbs of Ultimo and Pyrmont. The City of Sydney's 'Sustainable Sydney 2030' creates a vision for central Sydney to be easy to get around, and with good transit routes connecting the villages and city centre.

The following pages show Darling Harbour attractors and nearby harbour precincts, and the foreshore loop connections of which Harbourside is part of.

Implication: Clear connection routes between Sydney's urban villages and city attractions are central to a 'Sustainable Sydney'.



SYDNEY AND DARLING HARBOUR ATTRACTORS



Walsh Bay

Headland Park

Opera House

The Rocks

Central Barangaroo

Circular Quay

Botanic Gardens

Pymont Point Park
Jones Bay Wharf

Southern
Barangaroo

Darling
Island

The Star

Pymont Bay
Park

King Street Wharf

National
Maritime
Museum

Aquarium / Zoo

Bunn
Street

Harbourside

Cockle Bay Wharf

The Bays
Market
Precinct

International
Hotel and
Convention
Centre

Darling
Quarter

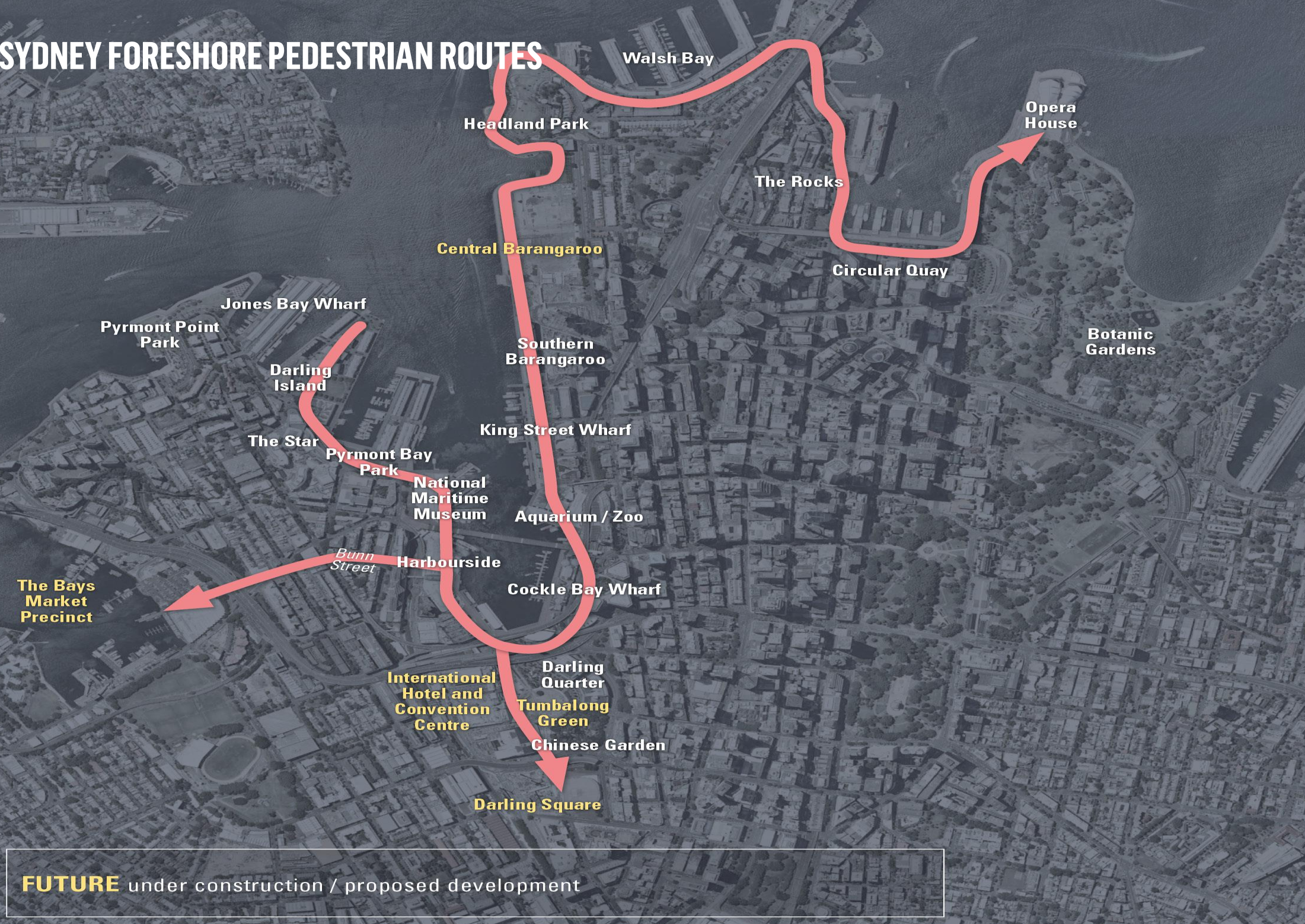
Tumbalong
Green

Chinese Garden

Darling Square

FUTURE under construction / proposed development

SYDNEY FORESHORE PEDESTRIAN ROUTES



FUTURE under construction / proposed development

SYDNEY ATTRACTORS

Facilitating pedestrian links to attractions with Darling Harbour is important. At a broader level, connections between established and future precincts including future Bays Market Precinct and Central to Eveleigh Corridor will be important. Strengthening connections in Darling Harbour is therefore important for connectivity more broadly, of which Harbourside is well positioned to be a key link.



3. REVIEW OF SURVEY DATA

RESEARCH OVERVIEW

The next three pages provide a summary of existing research into visitation of Harbourside and Darling Harbour. The SHFA research information is limited to the number of recorded people movements annually, which was 26,500,000 in 2013-2014 comprising a mix of:

- Sydney residents
- Domestic tourists
- International tourists.

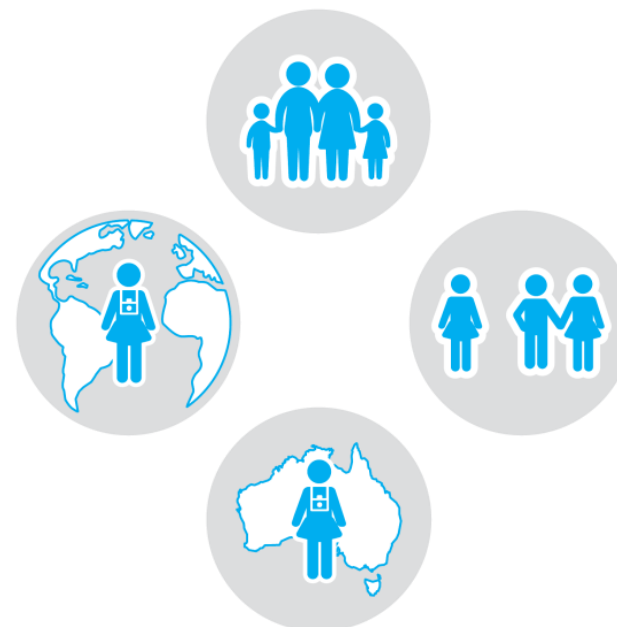
The above number does not show unique visitors.

A Customer Exit Survey at Harbourside in 2014 shows the main customer groups as:

- 49% are visitors (intrastate, interstate, overseas)
- 39% are Sydney residents
- 12% are CBD workers.

While the SHFA research does not provide a breakdown of the main segments, it is clear from the Harbourside Exit Survey that Darling Harbour is an important tourism precinct.

Implication: Ease of access into Darling Harbour for tourists is an important consideration. This is an expectation for visitors staying in Darling Harbour hotels.



HARBOURSIDE KEY CUSTOMER SEGMENTS

The survey results below are from an exit survey conducted among (n=1,000) customers for Harbourside in February 2014. The purpose of the survey was to provide a profile of the centre's customers, their shopping behaviour, usage patterns and perceptions of the centre.

Harbourside customer segments: Demographic profile		
	Darling Harbour workers	Pymont residents
Age	34 years	33 years
Lifecycle	54% are singles/couples < 35 years	61% are singles/couples < 35 years
Occupation	44% upper white collar	42% upper white collar
Average household income	\$105,500	\$86,100

Source: Customer Exit Survey 2014

Implication: *These customers account for 18% of total Harbourside customers. They most likely have high disposable incomes, and as such are key customers for cafes, restaurants and bars and thus important segments.*

HARBOURSIDE KEY CUSTOMER SEGMENTS

The survey results below are from an exit survey conducted among (n=1,000) customers for Harbourside in February 2014. The purpose of the survey was to provide a profile of the centre's customers, their shopping behaviour, usage patterns and perceptions of the centre.

Harbourside customer segments: Behaviour		
	Darling Harbour workers	Pymont residents
Frequency of visiting Harbourside	55% visit at least weekly	71% visit at least weekly
Average time spent at Harbourside	32 minutes	50 minutes
Main purpose for visiting Harbourside	51% visit for food and beverage	47% visit for food and beverage

Source: Customer Exit Survey 2014

Implication: These customers (18% of total Harbourside customers) are frequent visitors. There is a relationship between ease of access and frequency, hence the need for strong pedestrian access for the walk-in catchment.

4. TRANSPORT MODES AND PEDESTRIAN PATHS

ACCESS TO DARLING HARBOUR

Darling Harbour can be accessed via public transport, car and on foot. The most relevant train station is Town Hall, which provides access to the southern end of Darling Harbour. Central Station is also connected to Darling Harbour via the Devonshire Street pedestrian tunnel and Ultimo pedestrian network. There are Light Rail Stations at:

- Exhibition Centre
- Convention Centre
- Pyrmont Bay
- The Star.

Bus services can be accessed in the following locations:

- Harris Street and Pirrama Road
- CBD locations (mainly Clarence Street, QVB, Town Hall House/Druitt Street)

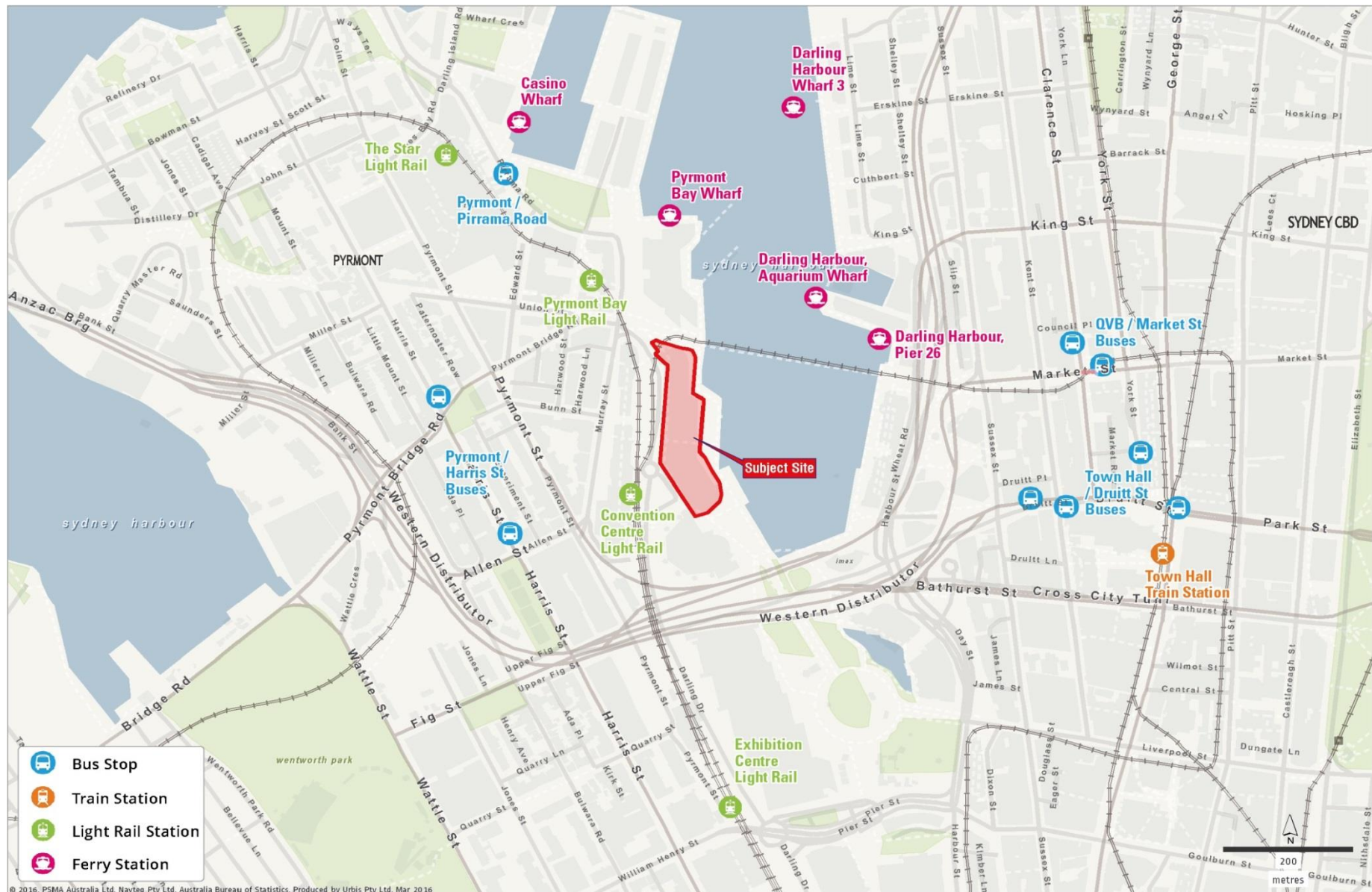
Ferry services operate into Darling Harbour, Pyrmont Bay and King Street Wharf.

Car access points are Murray Street primarily for the Wilson Harbourside Carpark, and limited passenger set down opportunities on Pyrmont Bridge Road.

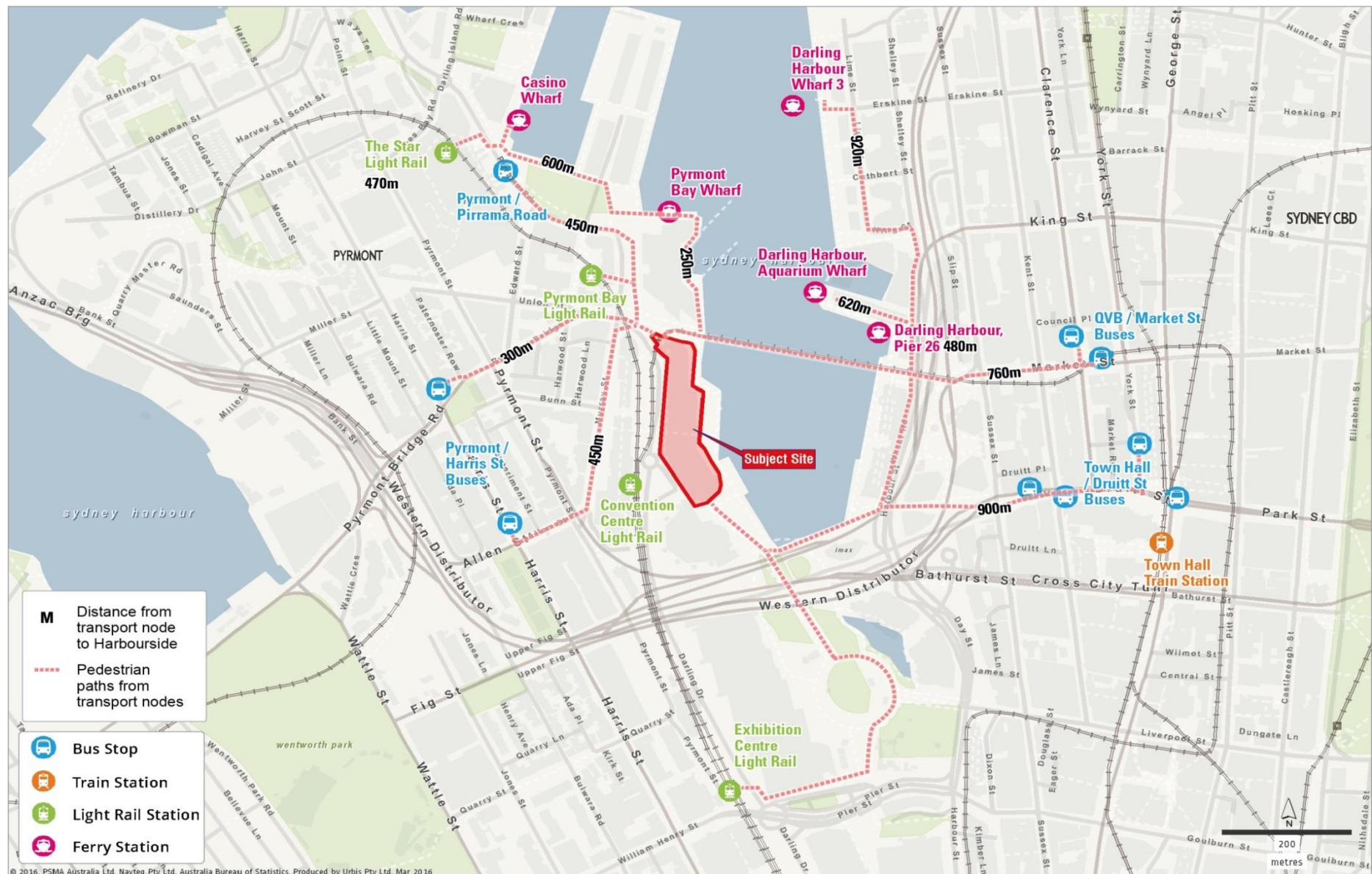
The precinct is accessed on foot via Pyrmont Bridge, Murray Street, Pyrmont Bridge Road and pedestrian paths from the southern part of Darling Harbour and Darling Quarter. The current footbridge linking the Wilson Harbourside Carpark is not strongly visible from Murray Street or Pyrmont Street, and mainly provides access for carpark users.

Implication: Future connections for pedestrian traffic from Bunn Street should be highly visible to maximise usage.

TRANSPORT MODES FOR DARLING HARBOUR



PEDESTRIAN ACCESS FROM TRANSPORT MODES



ACCESS TO DARLING HARBOUR

Based on a customer exit survey undertaken in 2014, the main mode of transport to Harbourside is by foot for 87% of customers, walking from either the Sydney CBD or Pyrmont. This increases for residents from Pyrmont (97%), and resident customers in the CBD and other central suburbs. In addition:

- 5% travel by car
- 3% travel by light rail
- 2% travel by ferry
- 3% travel using 'other' modes.

Source: Customer Exit Survey 2014

Implication: Pedestrian access points into Harbourside should be given important consideration given the vast majority access the centre, and the broader Darling Harbour on foot. Options that increase the appeal of walking and improve accessibility will have a wide benefit.

Harbourside customers also visit other places nearby in conjunction with their visit to Harbourside, both within Darling Harbour, and outside:

- 35% visit other attractions in Darling Harbour
- 17% visit other attractions outside Darling Harbour namely the Star Casino, Chinatown and the Sydney Fish Markets.

With development of the Bays Market precinct, this cross visitation is likely to increase, and thereby strengthening the need to improve pedestrian connections.

Source: Customer Exit Survey 2014

Implication: An improvement in connections to attractions outside of Darling Harbour will drive better cross visitation, allowing visitors to maximise their Sydney experience

5. BRIDGE CASE STUDIES

RETAIL SUCCESS DRIVERS AND IMPLICATIONS FOR UPPER LEVEL RETAIL

The success of multi level shopping centre properties is subject to the following value drivers:

1. Location including direct street connections
2. Critical mass on upper levels
3. Vertical integration
4. Bridge and tunnel connections
5. Other external connections
6. Quality of development

Each of these drivers are discussed in the following table and examined in the context of the upper levels at Harbourside and on the assumption there is a bridge connection at Bunn Street.

SUCCESS FACTORS AND IMPLICATIONS FOR UPPER LEVEL RETAIL AT HARBOURSIDE

Value drivers of upper level retail	Success factors	Implications for Harbourside
Location including direct street connections	The location of a centre and further the location of retailers within the centre is a key driver in determining rents.	Harbourside benefits from being located in a key entertainment precinct for residents and tourists.
Critical mass on upper levels	Critical mass retailing on the upper levels increases shopper attraction, turnover and rents.	Currently only 9% of Harbourside customers enter via Level 3 (the upper level). A connection directly from Bunn Street into the upper level may help direct more shoppers into upper levels.
Vertical integration	Above ground levels of retail rely on the correct placement of vertical movement infrastructure.	Moving traffic with ease from the Bunn Street level downwards is as important as moving shoppers from the ground levels upwards.
Bridge and tunnel connections	The purpose of bridge connections is to drive pedestrian traffic from adjoining activity nodes and depends on the strength of the connecting node, type of activity and the length of the bridge.	The strength of the connecting node is based on how much traffic is on the other side, which in the case of Bunn Street moderate to weak. On current observation the volume is consistent throughout the day. The length of the bridge is likely to be short and therefore should encourage usage.
Other external connections	Upper retail levels can benefit from other adjoining activity generators.	The relevant activity generators are the Novotel and Ibis hotels, the Harbourside Carpark and the workers and residents in the Bunn Street walk-in catchment (refer to 33 for details). Retention of the Murray Street monorail bridge and integration with level 3 of the retail centre will also facilitates better circulation at upper levels.
Quality of development	A high quality development which is characterised by superior amenities, premium design and high quality finishes attracts more shoppers.	The proposed rooftop and grand stairs in development will enhance the quality of the public domain. Any pedestrian connections into the centre should be activated in a way that is consistent with the overall quality of the new centre.

RETAIL CENTRES THAT BENEFIT FROM UPPER LEVEL CONNECTIONS

Retail centres that have benefited from bridge or tunnel connections to help circulate customer traffic on upper retail levels are:

- Westfield Sydney – the direct upper connections have assisted in providing alternatives to pedestrians looking for convenient movement between upper levels in Myer and the centre, assisting to activate this retail and improve movement options for customers.
- David Jones Sydney – similarly, the upper level connections and tunnels have helped to link the two David Jones stores and provide a more direct connection from shoppers on Pitt Street through to the department stores. This also provided options for pedestrian with mobility / accessibility requirements to access a broader range of retail stores without having to utilised congested footpaths or busy streets.

Centres where the upper level retail has not been successful include:

- Piccadilly - In the case of Piccadilly, poor quality connections to the old monorail and office tower had a negative impact on the third level retail, which has since been converted to childcare.

6. IMPACT OF CHANGES TO PEDESTRIAN BRIDGES

REMOVAL OF PEDESTRIAN CONNECTIONS

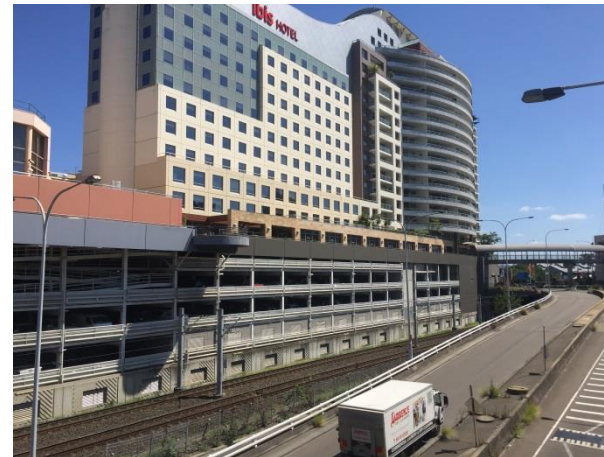


As part of the future redevelopment of the Harbourside precinct, the current pedestrian bridge between the Harbourside Carpark at Murray Street and Harbourside level 3 will be removed. This link has limited relevance only to those that park in the carpark, and does little to encourage pedestrian movement.

With the removal of this connection, a new replacement connection is important to address access for pedestrians between the Harbourside Carpark, the retail centre and Darling Harbour.

Implication: *If there is no replacement bridge, the only access point will be the monorail bridge behind the Ibis Hotel.*

REMOVAL OF PEDESTRIAN CONNECTIONS



The above images illustrate the difficulty for pedestrians in navigating different levels between the street and Harbourside, which includes the light rail tracks and Darling Drive. Removal of the current bridge will have implications for the following groups with regards to future access of Darling Harbour:

- Workers in the Bunn Street Catchment
- Residents in the Bunn Street Catchment
- Harbourside Carpark users
- Ibis and Novotel hotel guests
- Pedestrians using the footbridge between Harris Street, Pyrmont Street and Harbourside Carpark and pedestrians accessing the Bays Market Precinct.

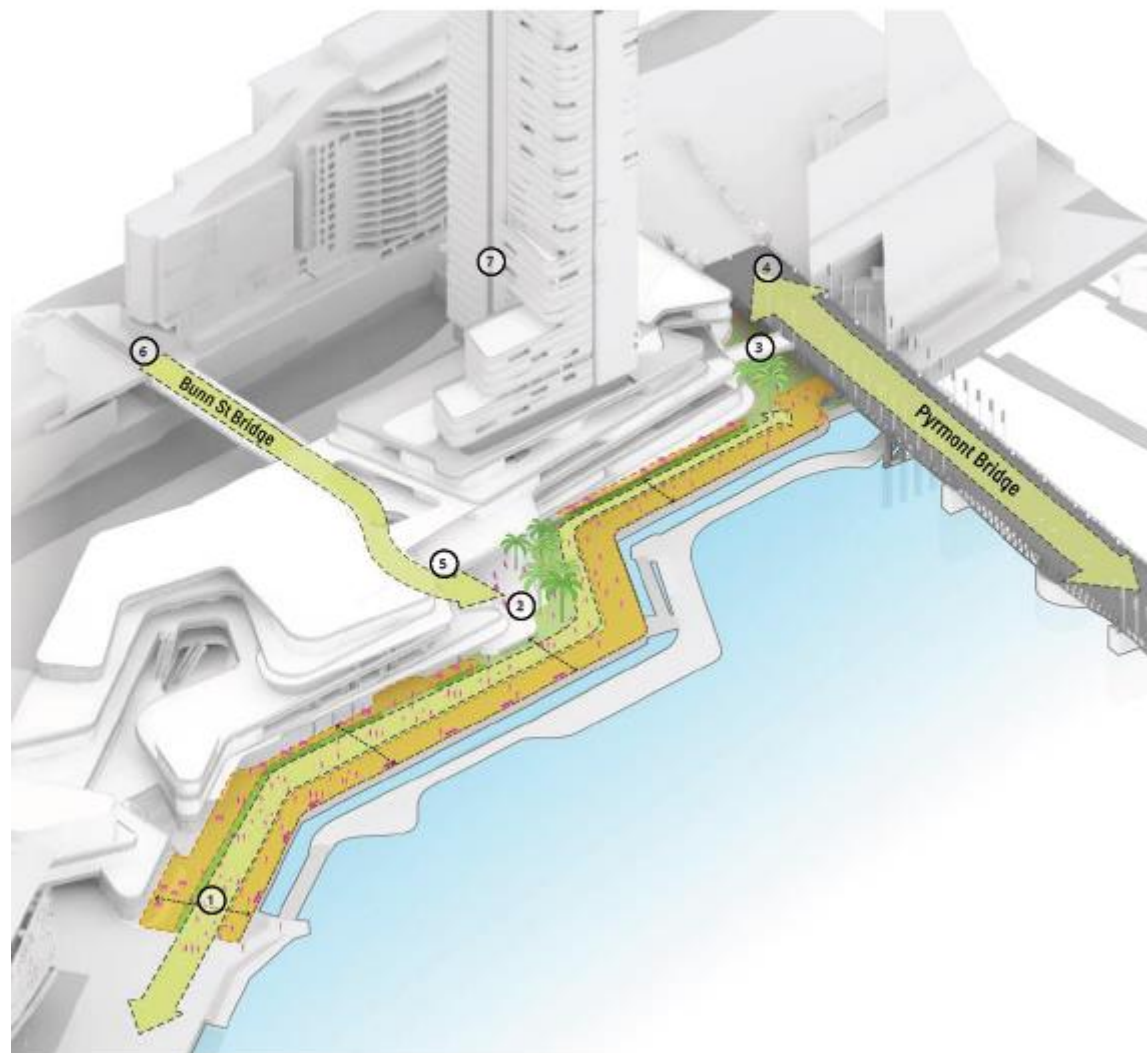
As such, access to Darling Harbour for all these groups need to be considered.

Implication: Lack of easy access to amenity can have detrimental impacts on the connectedness and liveability of communities affected.

PROPOSED CONNECTIONS

The images on this page show the proposed connections including the Bunn Street connection. The following is illustrated by the images:

- No. 3 shows the Ribbon Stairs with seating steps and access to Pymont Bridge.
- No. 5 shows the observation deck planned to maximise harbour views.
- No. 6 shows the connection via Bunn Street which will facilitate east-west pedestrian flows.
- No. 7 shows the existing bridge at 50 Murray Street which will be retained and upgraded to integrated with the Harbourside development.



IMPACT ON CONNECTIVITY FROM PROPOSED CONNECTIONS

The proposed bridge at Bunn Street will provide an east-west pedestrian a link direct from street level from Bunn and Murray Streets to Harbourside and Darling Harbour. The current bridge connections require pedestrians accessing Harbourside to use stairs. Retention of the monorail bridge and integration with the retail centre at level three will provide better vertical access opportunities. Visitors will be able to use escalators and lifts within the centre to access different levels of Darling Harbour.

The residential tower's location at the northern end of Harbourside will create clearer navigation for pedestrians from Bunn Street to Darling Harbour due to a clear line of sight from the street to the rooftop space of Darling Harbour and down to the harbour foreshore.

The two existing bridges link private spaces with public, i.e. from carpark and hotels, and subsequently there is limited public benefit. By comparison the Bunn Street connection links a public space, i.e. street with a publicly accessible space in the Harbourside rooftop.

The new Bunn Street bridge is a better outcome than the current access because:

- The new bridge will provide on-grade access from the street
- Provides strong sight lines between the street and the foreshore
- Links publicly accessible spaces.



7. PEDESTRIAN CATCHMENT ASSESSMENT

BUNN STREET WALKING CATCHMENT

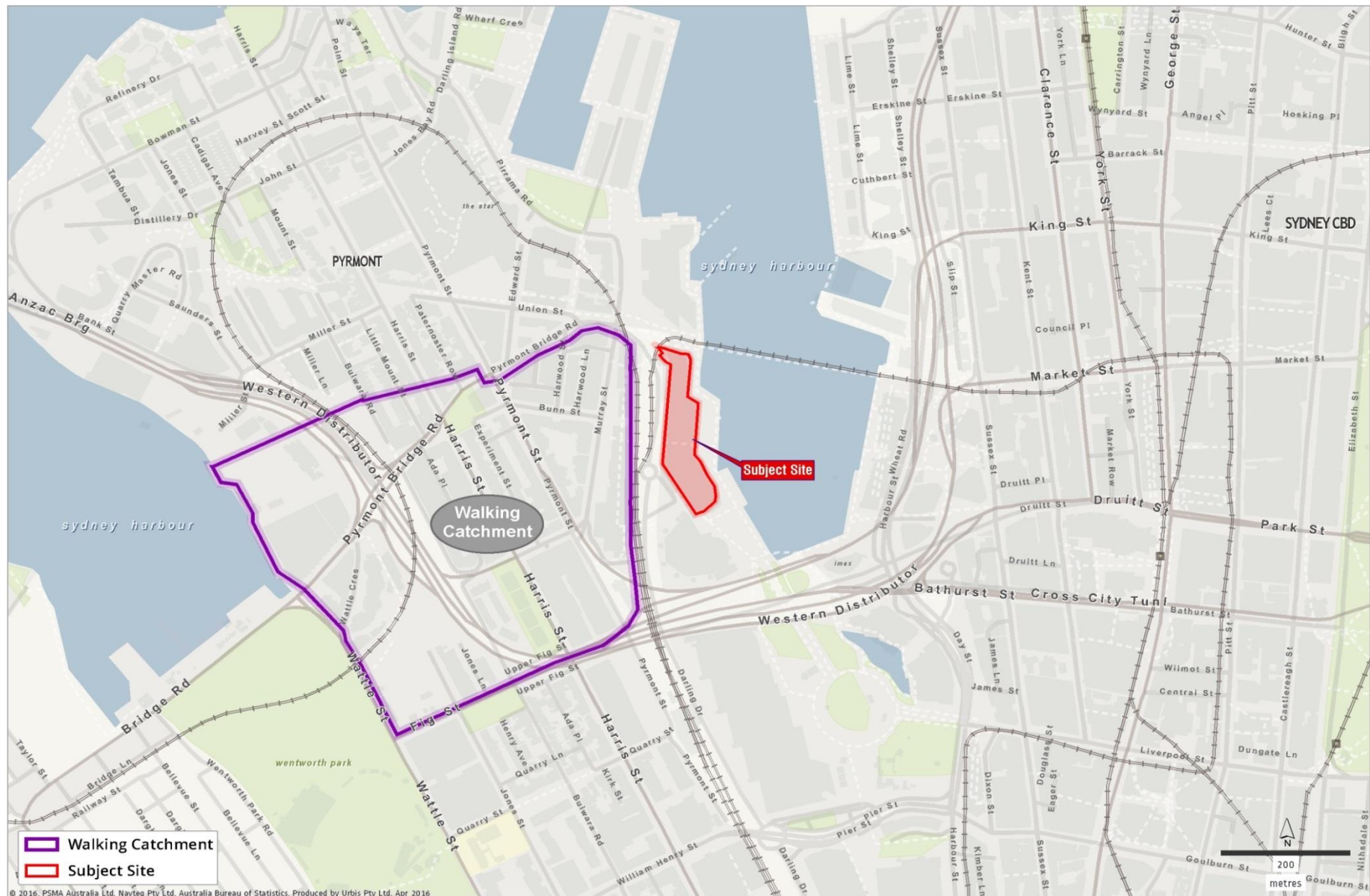
For the purpose of investigating the impact of a bridge connection from Bunn Street directly to Harbourside, a walking catchment has been defined based on which segments would benefit from this future connection. The trade area is defined by:

- Bound by Wattle Street and the Fish Markets to the west
- Bound by Murray Street to the east
- Pyrmont Bridge Road to the north.

Residents and workers in this catchment currently access Darling Harbour and the CBD via one of the following route combinations:

- Pyrmont Bridge Road and Pyrmont Bridge
- Rear of the Ibis Hotel and monorail footbridge
- Wilson Harbourside Carpark and Harbourside
- Footbridge from Harris Street to Wilson Harbourside Carpark and Harbourside.

BUNN STREET WALKING CATCHMENT



CHARACTERISTICS OF THE BUNN STREET CATCHMENT

The Bunn Street catchment is largely residential in focus developed with medium rise apartment buildings and some office based employment. Bunn Street itself has some retail activation primarily focussed on locals. Some of the key characteristics of the catchment are:

- Urban with a high density of development
- Limited open space
- Predominately hard spaces / limited green space
- High density residential
- High traffic roads, i.e. Harris Street, Pyrmont Bridge Road, Western Distributor

The lack of open space means that catchment residents and workers have limited opportunity to enjoy quality urban space. The Darling Harbour waterfront provides enjoyment opportunities for quality urban spaces.



BUNN STREET WALKING CATCHMENT POPULATION



Resident and worker forecast numbers Bunn Street Catchment

	2016	2021	2026	2031
Residents	6,100	7,100	7,100	7,100
Workers	2,600	2,800	3,000	3,200

Source: NSW BTS Travel Data 2016, based on TZ geography TZs 88, 153, 154, 155, 156.

Resident forecast numbers: 1) Assume 10% of TZ 153 residents. 2) For the Bays Market Precinct area within the walking catchment, assume site area of 45,000 sq.m of which 50% are for residential use, FSR 1.5, average apartment size 80 sq.m, 2.23 household size.

Worker forecast numbers: 1) Assumes wholesale workers in TZ153 2) For the Bays Market Precinct area within the walking catchment, the worker numbers will double due to the redevelopment of the fish market.

Note: The BTS data shows no increase to population from 2016 to 2031.

BUNN STREET WALKING CATCHMENT USERS

In addition to residents and workers in the Bunn Street walking catchment, guests and carpark users also form part of this catchment. The size of these segments is shown in the table by annual visitors.

The tourism element is important for the broader Darling Harbour and Bays Precinct. Improving connections from these hotels is likely to assist in generating additional trips into Darling Harbour, optimising tourism expenditure opportunities.



Annual Visitors Bunn Street Catchment

Novotel guests	114,130
Ibis guests	55,650
ICC Hotel guests#	130,430

Source: ABS, Urbis , Accor Hotels

Under development, due for completion late 2016.

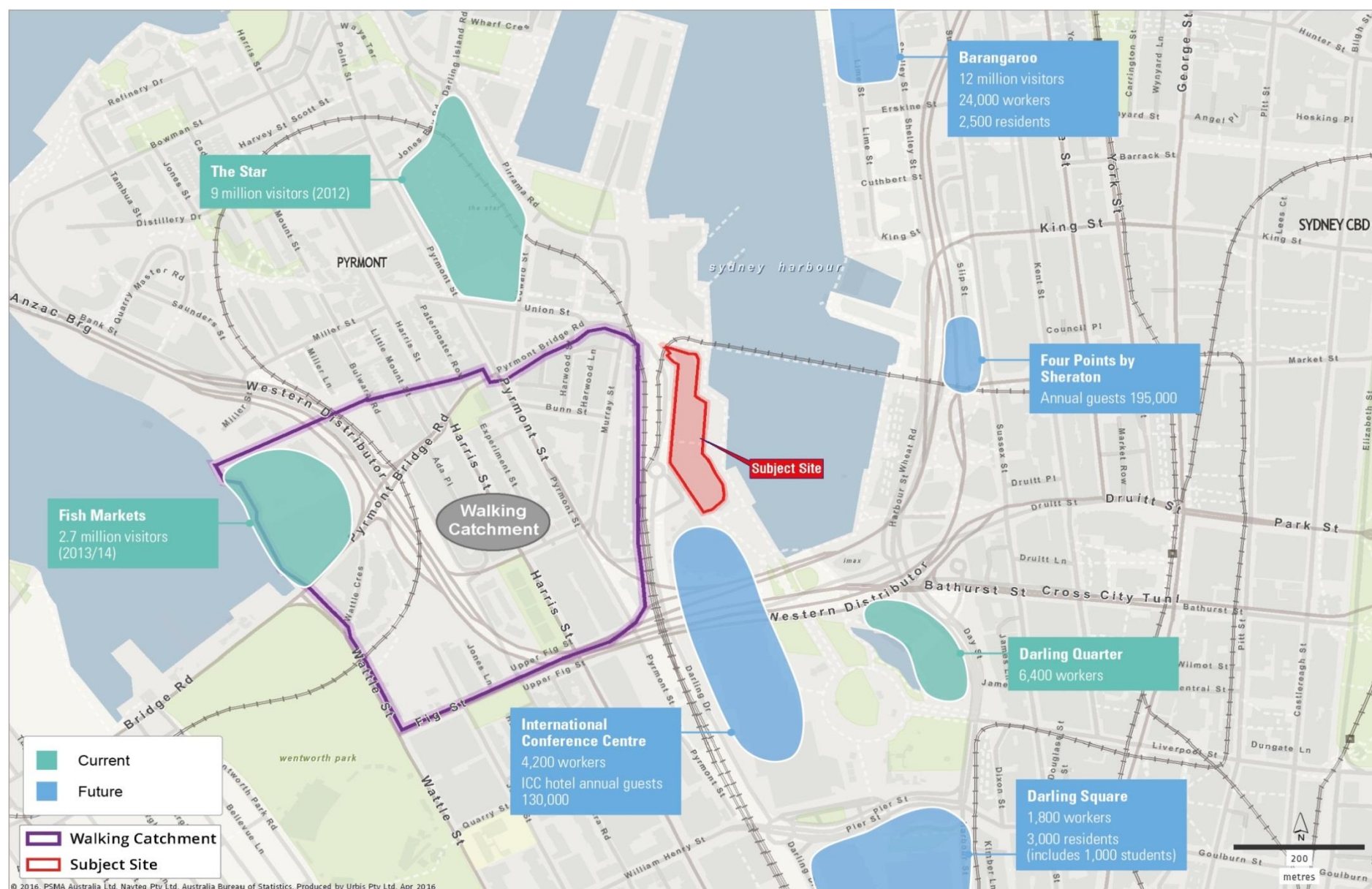
CURRENT AND FUTURE PATRONAGE NUMBERS OF FORESHORE PRECINCTS

The map on the following page shows other groups who interact with the foreshore and may benefit from a connection at Bunn Street. All of the locations on the map represent key sites for residents, workers or visitors, or a combination of these groups, which may generate trips to Harbourside and beyond. A proportion of these groups could benefit however it is not possible to quantify. One important factor that will influence the use of the proposed connection is the appeal and drawcard factor of the new Bays Market Precinct.

Nonetheless, these numbers combined indicate increased movement in the foreshore precincts located west of the Sydney CBD.

Irrespective of future developments, there is already existing high visitation of the two main attractions in Pyrmont, i.e. The Star Casino and Sydney Fish Markets.

CURRENT AND FUTURE PATRONAGE NUMBERS OF FORESHORE PRECINCTS





BRISBANE

Level 7, 123 Albert Street
Brisbane QLD 4000
Australia
T +61 7 3007 3800

GOLD COAST

45 Nerang Street,
Southport QLD 4215
Australia
T +61 7 5600 4900

MELBOURNE

Level 12, 120 Collins Street
Melbourne VIC 3000
Australia
T +61 3 8663 4888

PERTH

Level 14, The Quadrant
1 William Street
Perth WA 6000
Australia
T +61 8 9346 0500

SYDNEY

Tower 2, Level 23, Darling Park
201 Sussex Street
Sydney NSW 2000
Australia
T +61 2 8233 9900

CISTRI – SINGAPORE

An Urbis Australia company
#12 Marina View
21 Asia Square, Tower 2
Singapore 018961
T +65 6653 3424
W cistri.com

URBIS.COM.AU