



BARANGAROO SOUTH PUBLIC DOMAIN STAGE 1A LANDSCAPE REPORT

Date Issued 07 April 2014



ASPECT | OCULUS



Lend Lease

BARANGAROO

PUBLIC DOMAIN PLAN

STAGE 1A



Fig 1 Stage 1a Public Domain Masterplan

INTRODUCTION

This report supports a State Significant Development Application (SSDA) (SSD 6303) submitted to the Minister for Planning and Infrastructure pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The SSDA seeks approval for public domain works within Stage 1A at Barangaroo South as described in the Overview of Proposed Development section of this report.

Overview of Proposed Development

The Public Domain SSDA seeks approval for all public domain works within 'Stage 1A' of the Barangaroo South Site. These works include typical public domain features such as street paving, street furniture, lighting and planting.

Additional items such as shade/weather protection structures, water features and bicycle facilities are also included in the design of the public domain. Various services and infrastructure such as power and water are incorporated into the proposed works where relevant.

Site Location

Barangaroo is located on the north western edge of the Sydney Central Business District, bound by Sydney Harbour to the west and north, the historic precinct of Millers Point (for the northern half), The Rocks and the Sydney Harbour Bridge approach to the east; and bound to the south by a range of new development dominated by large CBD commercial tenants.

The Barangaroo site has been divided into three distinct redevelopment areas (from north to south) – the Headland Park, Barangaroo Central and Barangaroo South.

The Public Domain (Stage 1A) SSDA Site area is located within Barangaroo South as shown in Figure 1. The SSDA Site extends over land generally known and identified in the approved Concept Plan as Blocks 1, 2, 3, and X and the area of the foreshore between Block X and Darling Harbour.

Barangaroo South forms the urban quarter of the greater Barangaroo. It will be a connected and dynamic new part of Sydney. When complete it will cater for a daily population of over 24,000, and provides significant opportunities to engage with the harbour in an activated public realm which includes waterfront promenades, streets, lanes and places.

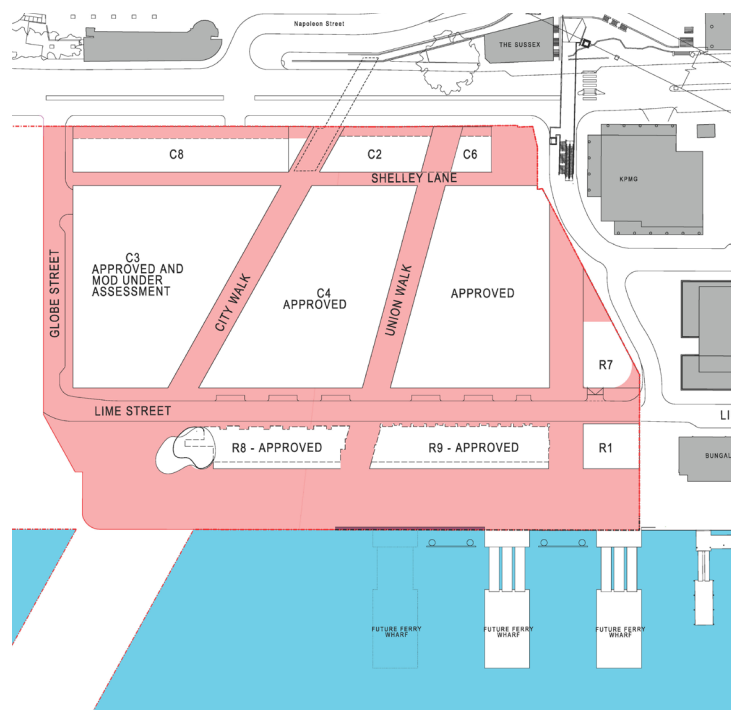


Fig 1.1 Stage 1a Public Domain Site Plan

The Barangaroo South Public Domain Stage 1a Landscape Report establishes a set of Public Domain principles and describes streets and places that together comprise the public domain within the Barangaroo South Stage 1A site.

It is intended that this report is read in conjunction with the SSDA drawings for the public domain. The final detailed design resolution of each public space will be developed with the principles contained in this report. A specific palette of materials will also be determined as part of the design development and detail documentation phases of the project.

PRINCIPLES

The design of the public domain has been underpinned by the following urban design principles:

Connections

- The Barangaroo South public domain will provide clear connections to the Sydney CBD, King St Wharf, Sydney Harbour and the wider Barangaroo site.
- The waterfront promenade will reinforce the City of Sydney's Cultural Ribbon and add to the 14km harbour side walking trail that links Sydney's leading cultural landmarks.
- Generous on grade pedestrian routes provide safe and easy access to, from and around the site.
- The public domain will ensure easy connection to key transport nodes and routes including Wynyard Walk, the new Barangaroo South ferry terminal and taxi drop off zones.
- Seamlessly integrate the site with the City through the use of City of Sydney materials, smart poles and street furniture in appropriate locations.
- Provide shared bike and car routes that connect with the City of Sydney bike lanes.

Activation

- Ensure the public domain is activated day and night, seven days a week, by encouraging use of the public spaces through seating and flexible spaces for programming initiatives and artworks.
- The public spaces are edged by active uses such as restaurants, retail, commercial and residential.
- Create shady tree lined streets that incorporate seating bays and public furniture.
- Define well lit pedestrian routes to ensure afterhours pedestrian safety.
- Use feature lighting to create an ambient night time experience.

Diversity

- Create a variety of spaces and places to encourage flexibility of use.
- Provide a range of spaces from small and intimate to open and spacious to cater for large gatherings, festivals and events.

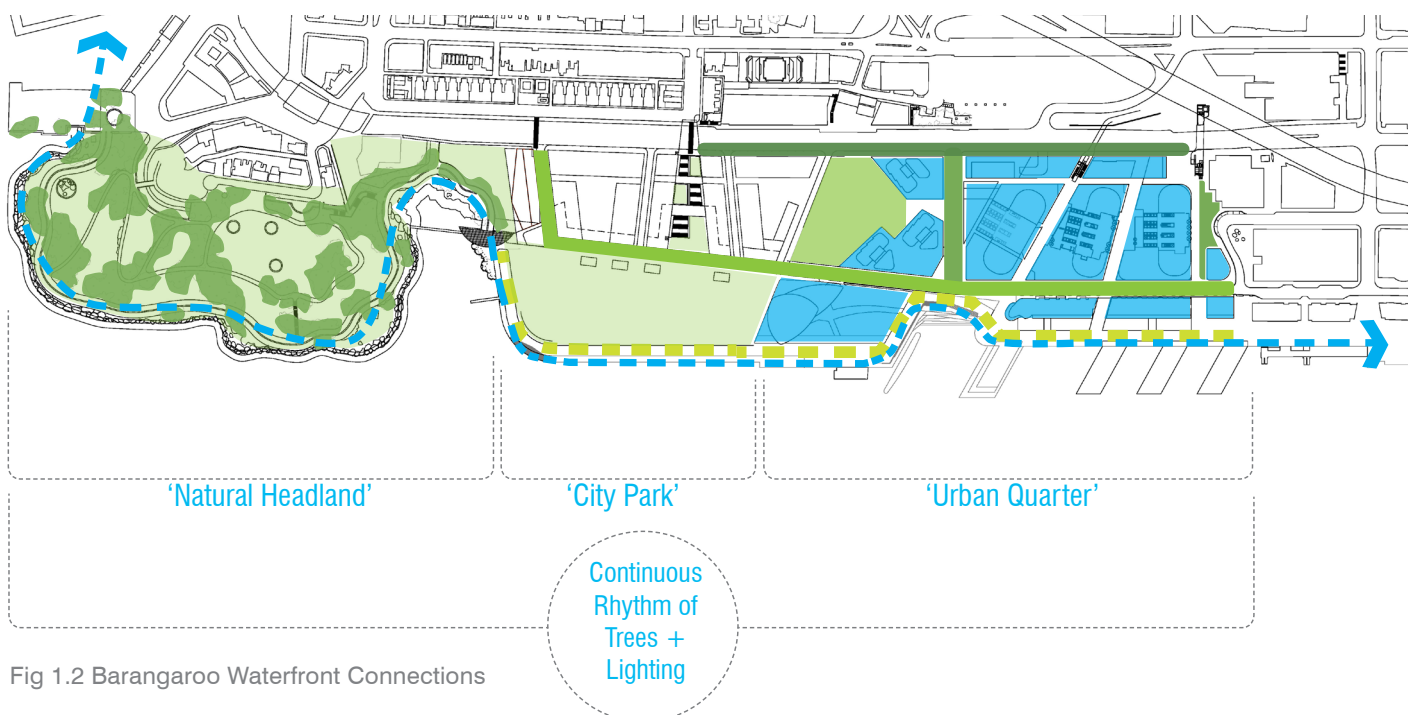


Fig 1.2 Barangaroo Waterfront Connections

Identity

- Define an urban commercial and residential precinct that reads as both an extension of the City and a part of Barangaroo.
- Create a strong, instantly recognisable identity and an authentic sense of place.
- Enhance Barangaroo South's identity as the new financial hub of Sydney and ensure a synergy between the high rise commercial towers and the ground plane.

Sustainability

- The ESD initiatives for the development aim to be world class, and support the City of Sydney on its Sustainable Sydney 2030 Plan.
- Deliver a sustainable precinct, with low operational energy consumption, reduced potable water use, minimisation of waste to landfill and appropriate materials selection.
- Offset the public domain energy consumption through onsite photovoltaic generation (public domain specific photovoltaics subject to detailed design).

- Use sustainable materials within the public domain, including recycled timber and reduced cement content in concrete.
- Low energy public domain lighting.
- Water sensitive urban design initiatives.
- Use native flora and encourage habitats for fauna.
- Operational waste to landfill reduction strategies through onsite separation of waste.
- The trees (Globe St, Lime St & Waterfront) are forming a connection in the site wide green links hierarchy.
- Endemic Species are proposed for the understorey planting where possible.

Safety

- Ensure the public domain complies with CPTED principles to create a safe environment day and night.
- Create a safe, low-speed on site environment.

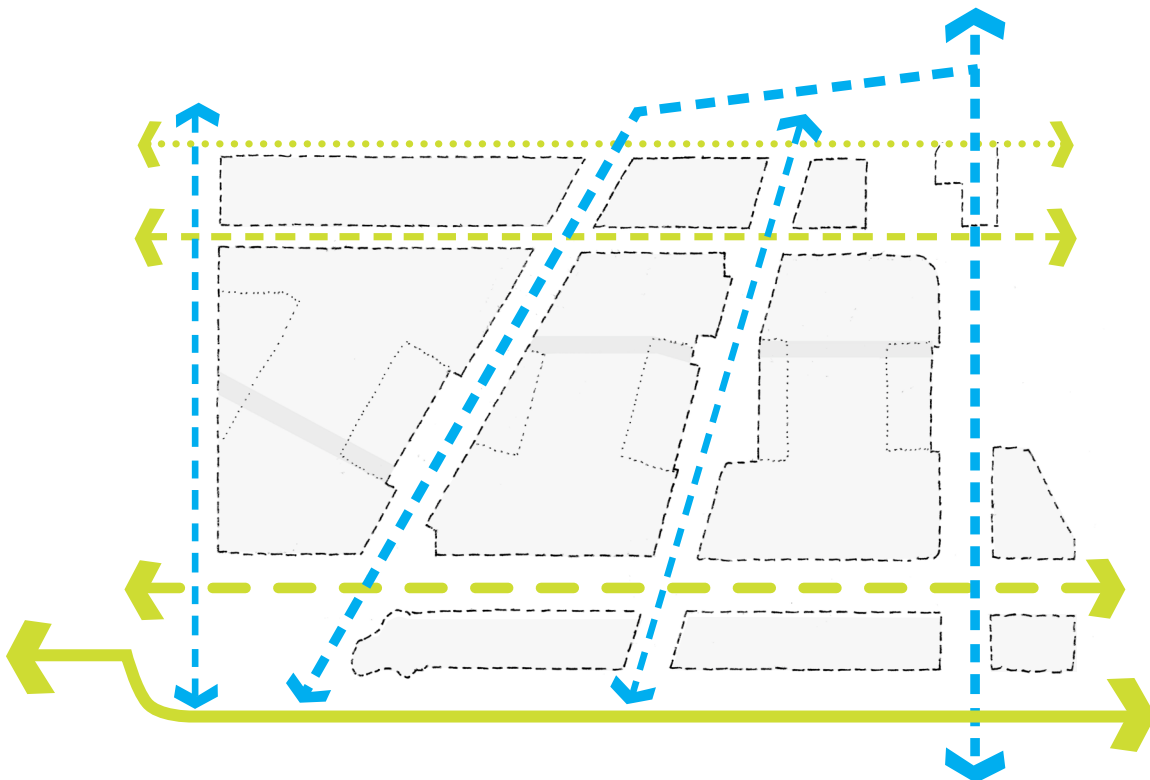


Fig 1.3 Barangaroo South Stage 1a Pedestrian Connections

KEY PLAN - PUBLIC PLACES

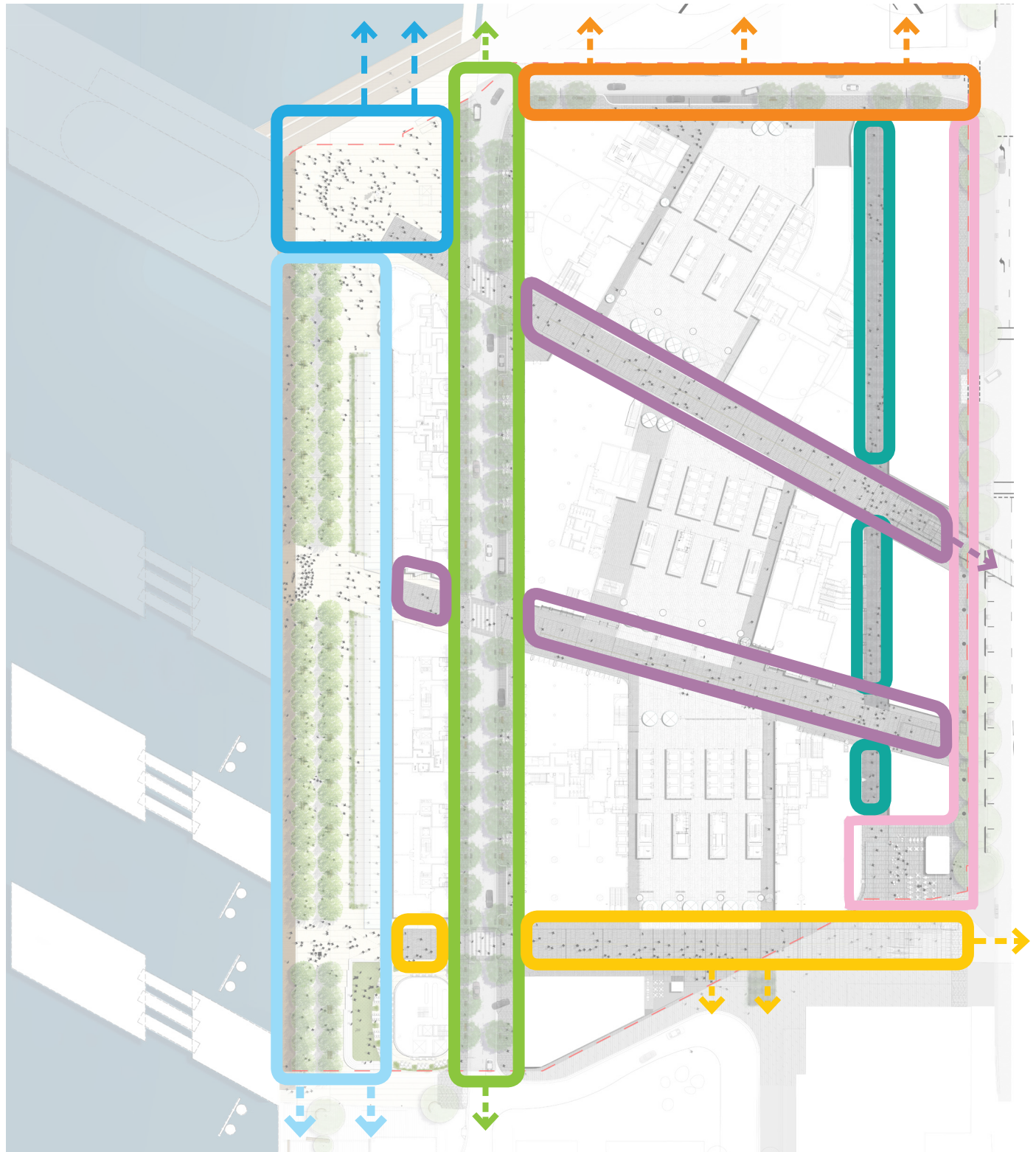


Fig 2 Barangaroo South Places

Waterfront Promenade
Globe Square

Globe Street
City And Union Walk
Lime Street

Shelley Lane
Transport Place
Hickson Place

PLACES

The Barangaroo South public realm will be a major factor in Barangaroo's destination appeal. It will reflect the site's unique location between the 'high rise' and the harbour. Organised around a series of urban places and united by the Waterfront Promenade, each place provides a distinctive urban experience that changes throughout the day and the year. A series of organising principles link the network of precincts, places and spaces.

These destinations comprise a series of urban places that transition from high density urban to low or no density parkland north of Globe Harbour and include:

- Waterfront Promenade:

Waterfront Promenade

Globe Square

- Streets and Lanes:

Lime Street

Globe Street

City and Union Walk

Shelley Lane

Transport Place

Hickson Place / Road

WATERFRONT PROMENADE

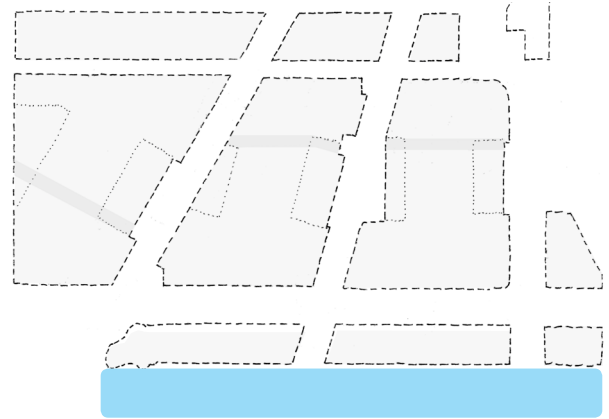
The Vision:

The Waterfront is Barangaroo South's main public pedestrian connection and address to the waterfront.

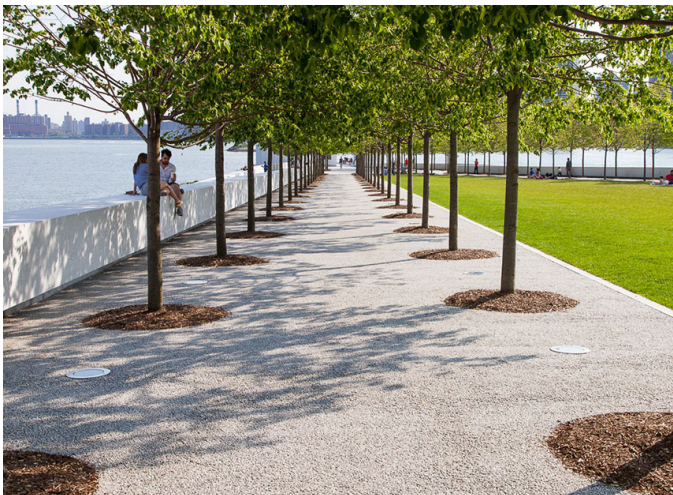
The 250m long waterfront promenade is lined with a double row of trees. It connects King Street Wharf and Darling Harbour to the south with the Barangaroo Central Parkland and Headland Park to the north. It strengthens Sydney's emerging 'Cultural Ribbon' and is a link in one of the world's great waterfront walks. The waterfront is the place where the city meets the Harbour. It is the destination point from multiple site wide street and walkway connections.

The Waterfront is comprised of:

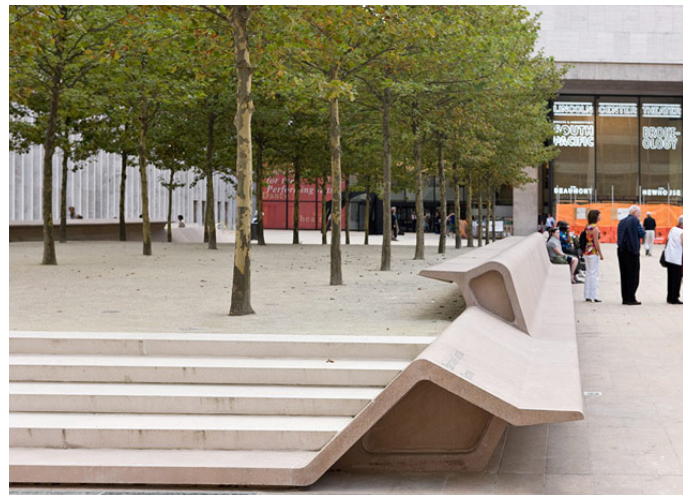
- The Waterfront Promenade
- Globe Square



The promenade is Barangaroo South's main public pedestrian connection along the waterfront.



Roosevelt Island, New York



Julliard School, Lincoln, New York

COMPONENTS:

- Continuous double row of trees
- Weather / wind and solar protection
- Water and sunset views
- Public ferry wharves
- Public seating
- Removable seating terraces
- Pole mounted lighting
- Shade trees
- Open waterfront lawn at southern entry
- Terraced seat/steps at southern entry

ACTIVATION:

- Promenading
- People watching
- Alfresco dining
- Running / leisure / exercise
- Markets and event overlays
- Plaza city scaled events/celebration
- Programmed events along the foreshore
- Harbour vantage point / lookout
- Eating, reading, relaxing
- Summer shade & winter sun

The Outcome:

The promenade will be activated by a series of public rooms with multiple opportunities for seating and strolling. The terraced 'public rooms' and spaces will allow a variety of relaxed, alfresco dining experiences. The promenade itself is bookended by two generous shaded gathering spaces at Globe Harbour and King Street Wharf at the proposed ferry wharves.

The unifying structure of the waterfront promenade is the tree lined waterfront allee. There is 30 meters between the water's edge and buildings, with a 13.5m circulation zone at the waters edge.

The waterfront caters for both daily movements and large scale events.

In addition, between the allee and the retail terrace are a series of outdoor 'rooms' that have shaded public seating areas for members of the public to enjoy while looking out to the harbour.

Along the waterfront there are places for people to sit along the edge of the harbour and underneath trees.

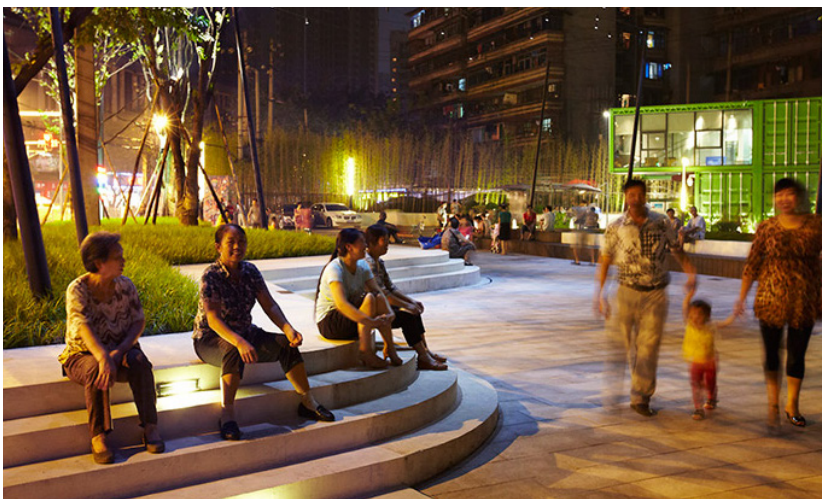
The Waterfront Promenade at the water's edge will be no higher than RL+2.9 (well above the IPCC forecasted sea level rise for the year 2100) and will transition to King Street Wharf and Globe

Harbour via generously designed accessible grades and walkways.

The Waterfront Promenade will become a distinct public space adjacent to the most beautiful harbour in the world.

The geometry of the terraced lawn has been generated from pedestrian movement patterns and the level transition from around RL2.4 at King Street Wharf to RL3.5 at the ground floor of buildings R8 and R9.

The lawn will allow a variety of public uses from passive recreation with people sitting under the shade of trees and on the terraced steps to the ability to host live music and performance.



Balmoral Boat House, Sydney



Fig 2.1 Illustrative View - Waterfront Promenade

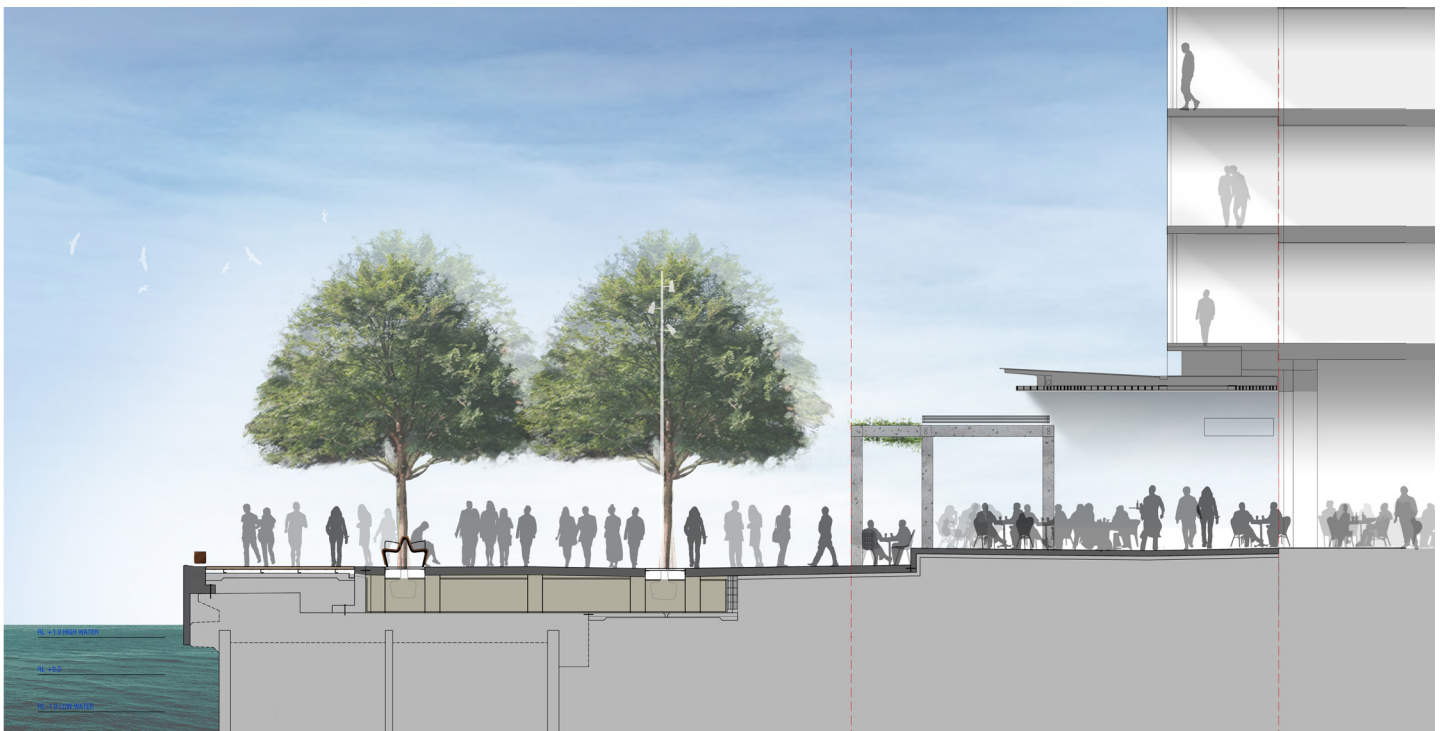


Fig 2.2 Section - Waterfront Promenade



Figure 2.3 Detail Plan - Waterfront Promenade



Fig 2.4 Illustrative View - Southern Waterfront



Fig 2.5 Illustrative View - Waterfront Structures



Figure 2.6 Detail Plan - Southern Waterfront



Figure 2.7 Section - Southern Waterfront

GLOBE SQUARE

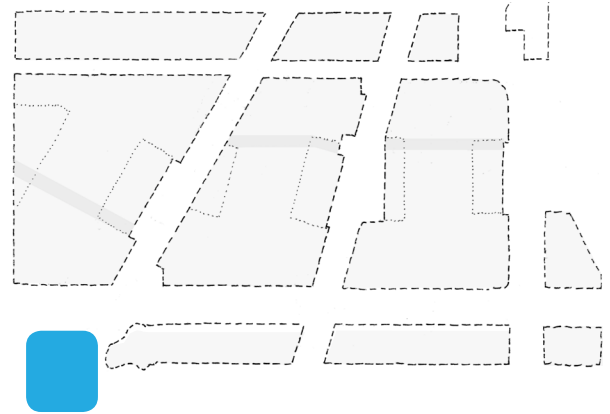
The Vision:

Globe Square sits at the axis point where the Barangaroo South waterfront promenade folds to create Globe Harbour and resolves the termination of the strong geometry of City Walk.

The Stage 1A application proposes temporary works for Globe Square. The final design will be addressed in the Stage 1B application to ensure continuity with the Globe Harbour works and pier.

Globe Square is comprised of:

- Temporary 'pop up' landscape
- Continuous waterfront paving
- Event Space



Globe square is the waterfront gathering place for Barangaroo South.



Melbourne Museum - Melbourne



Vancouver - Canada

The Outcome:

Globe Square is a temporary public space which will allow public gathering, 'pop up' landscape elements and an open air event space.



Southbank - Melbourne



Southbank - Melbourne

STREETS AND LANES

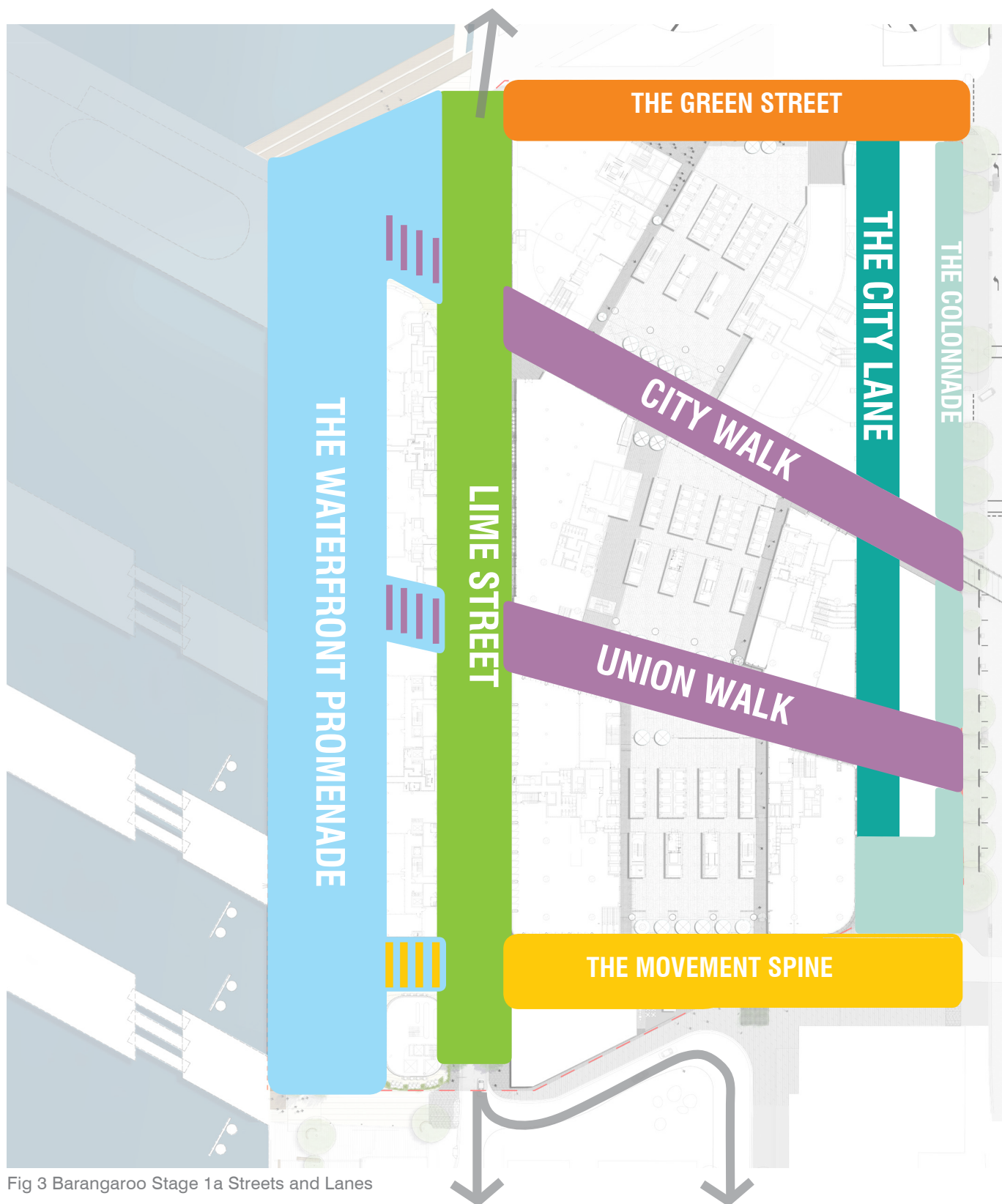


Fig 3 Barangaroo Stage 1a Streets and Lanes

STREETS AND LANES

Each street and laneway within the public realm at Barangaroo South provides a distinctive urban experience.

These are defined by characters of the individual places:

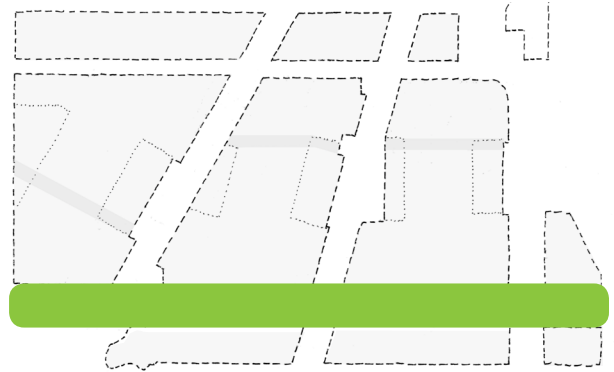
- Lime Street:
 - Village high street
 - Active frontages and seating zones
 - Primary north / south connection
- Globe Street:
 - The 'green street'
 - Major east / west corridor and waterfront connection
 - WSUD best practice
- City and Union Walk:
 - Civic scaled space
 - Sense of grandeur
 - Prioritising circulation & arrival experience to lobbies
- Shelley Lane;
 - Small, busy, active, vibrant
 - Fine grain
 - Catenary lighting
- Transport Place;
 - Large scale / public entrance to Barangaroo South
 - Main connection from the City to Waterfront
- Hickson Place / Road
 - Large scale / public entrance to Barangaroo South
 - Main connection from the City to Waterfront

LIME STREET

The Vision:

Lime Street is Barangaroo South's 'high street.' It is an extension of the city and adopts the standards of the City of Sydney materials, finishes and furniture palette.

Lime Street is the principal north south street within the heart of Barangaroo South and is highly activated with shops, restaurants and the residential lobbies. Lime Street is a continuation of the existing southern Lime Street that will continue to the north in Stage 1B.



Lime Street is Barangaroo South's 'High Street,' a tree lined slow speed pedestrian focused environment.



New Road, Brighton



Brisbane, Australia

COMPONENTS:

- Two way street
- Native evergreen tree lined
- Framed water views
- Parking between seating bays
- Residential lobby address
- Taxi drop off bays
- Water Sensitive Urban Design (WSUD)

The Outcome:

Lime Street has been designed to cater for the high flows of pedestrian traffic in Barangaroo South and to facilitate a high degree of street life and activation. It has generous footpaths on either side of the street with large seating bays on the eastern side to facilitate public seating areas. Vehicular drop off is located between the seating bays.

Lime Street forms the main north south axis through the site for pedestrians, vehicles and cyclists. Vehicles are able to connect from King Street Wharf through the site to Globe Street and Hickson Road while cyclists will share the carriageway and are able to access Stage 1B and the Barangaroo Central parklands

ACTIVATION:

- Shopping
- Taxis ranks and on-street parking
- Day and Night on-street dining

either around Globe Harbour or along Hickson Road via a separated cycle way. Due to the high numbers of pedestrians moving through the waterfront promenade, pedestrian crossings have been proposed at the extension of City Walk and Transport Place. These layouts will contribute to create an active, well scaled slow street environment.

The street tree planting proposed is a double row of native evergreen trees. The tree planting incorporates Water Sensitive Urban Design (WSUD) initiatives to collect and treat storm water runoff from the street before it is stored in specifically designed storage tanks for reuse.

Lime Street will offer a mix of dining experiences and a range of varying retail outlets.

Lime Street has been designed as a 'slow street' environment. The carriageway paving is asphalt with stone sets in the parking bays to visually extend the stone footpaths granite materials. Contrasting stone pavements signal the major pedestrian connection from City Walk down to the Waterfront Promenade and Globe Square.



Crown Street, Darlinghurst, Sydney



Bourke Street - Sydney



Fig 3.1 Illustrative View - Lime Street



Fig 3.2 Section - Lime Street

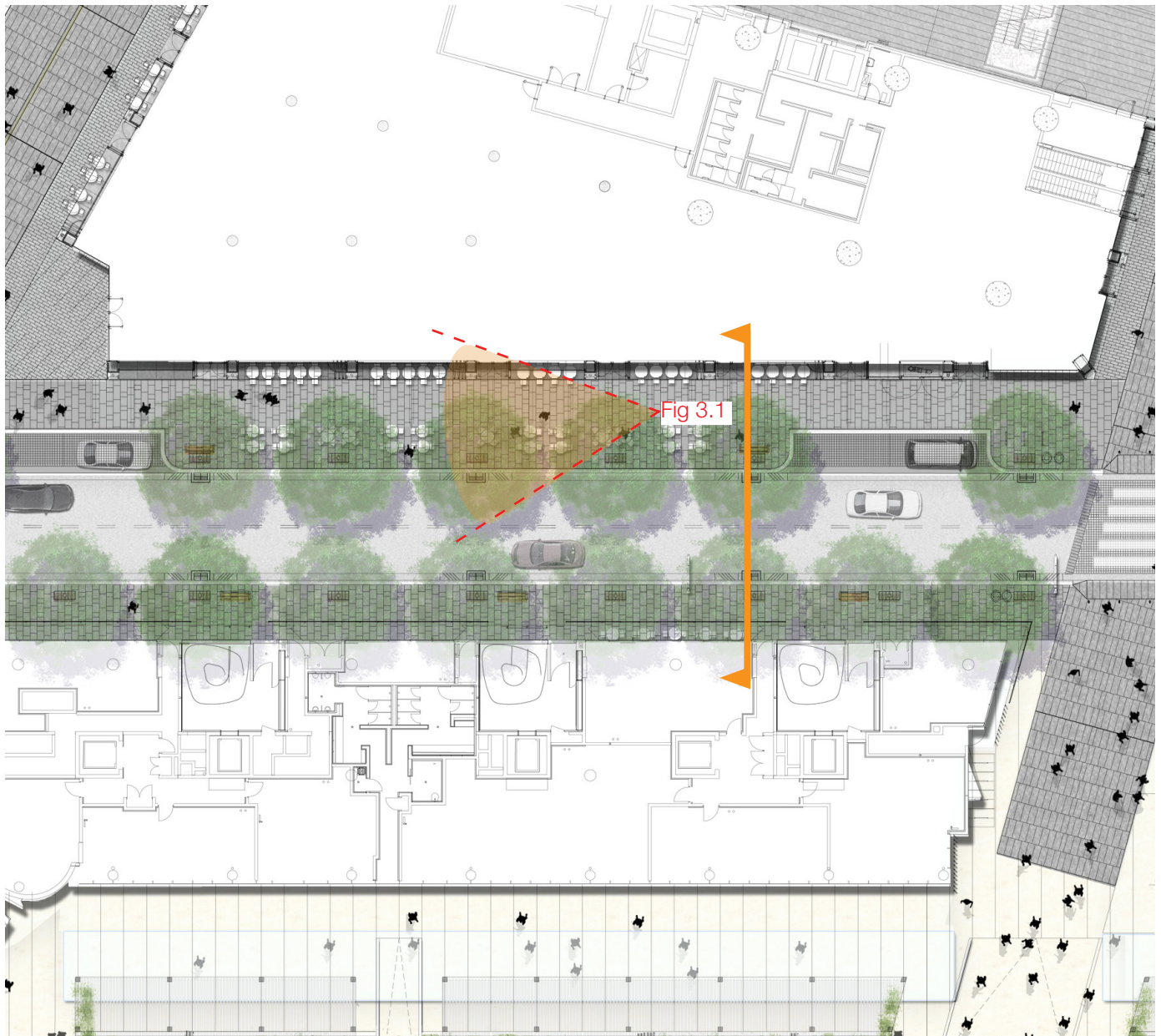


Fig 3.3 Detail Plan - Lime Street

GLOBE STREET

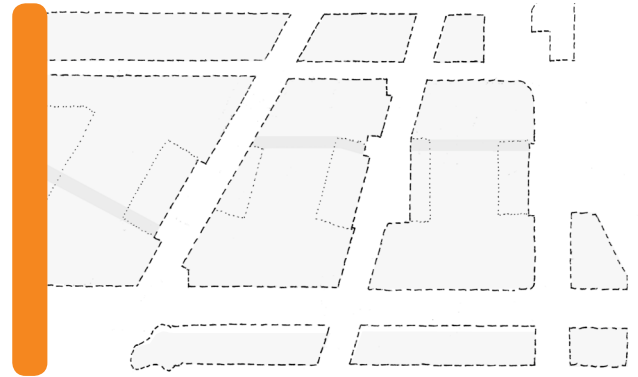
The Vision:

Globe Street will be Barangaroo South's 'green street.'

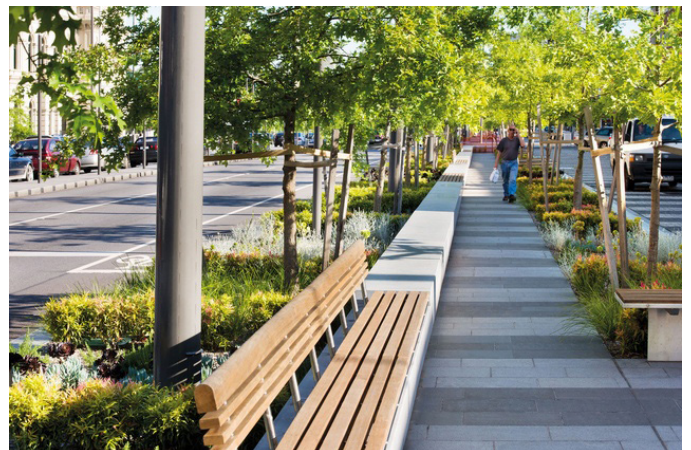
Globe Street will be the primary vehicular basement and loading access point for the residential and commercial towers.

The Stage 1A boundary dissects Globe Street and enables the street to be delivered across Stages 1A and 1B. Stage 1A will deliver the southern portion including: footpaths, tree planting, taxi drop off, car park and basement entry and a street address for the C3 tower.

Stage 1B will expand and complete the 'green street' and it contains a central median swale, additional street planting, trees, taxi and drop off zones and street addresses to the future residential towers and central parklands of Stage 1B.



Pitt Street Mall, Sydney



Lonsdale Street, Dandenong

COMPONENTS:

- Connection to C3 lobby
- Central median swale (Stage 1B)
- Generous pedestrian footpaths
- Street furniture and retail spill out zones
- Taxi | Car drop off zones
- Connection to through site link
- Basement entry

ACTIVATION:

- Pedestrian transition
- Vehicular drop off to C3 lobby
- Retail spill out zones

The Outcome:

Globe street will contain large native evergreen trees on either side with generous footpath pavements that will terminate at the waterfront.

It will provide opportunities for seating and spill out zones and for people to gain direct access to the waterfront from the city. It contains vehicular and taxi drop off zones and serves as a high quality address to Barangaroo South.

Seating areas and activation to the west of Globe Street will further strengthen the connection to Lime Street and the Waterfront and Globe Square.

The role of Globe Street is to facilitate drop off and address to the residential buildings to its north and C3 to the south and encourage opportunities for people to gain direct access to the waterfront from the city.



Bourke Street, Sydney



Crown Street, Sydney

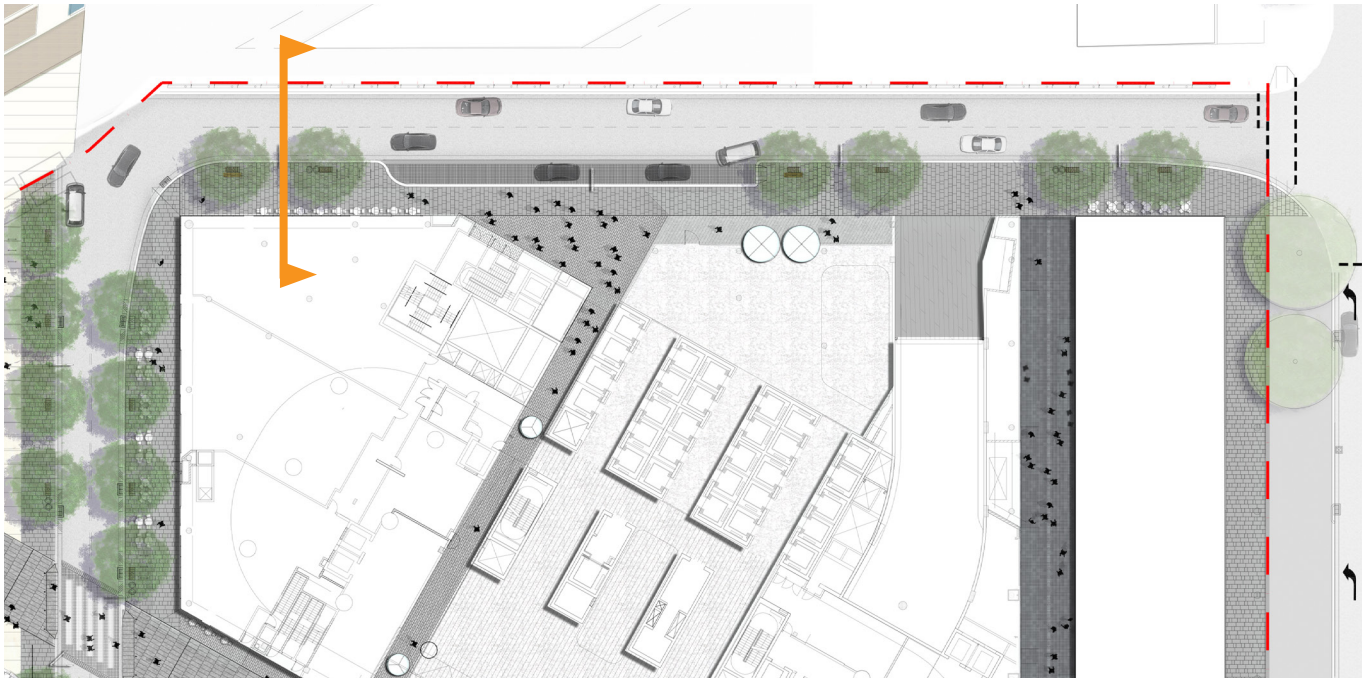


Fig 3.4 Detail Plan - Globe Street (Stage 1A)

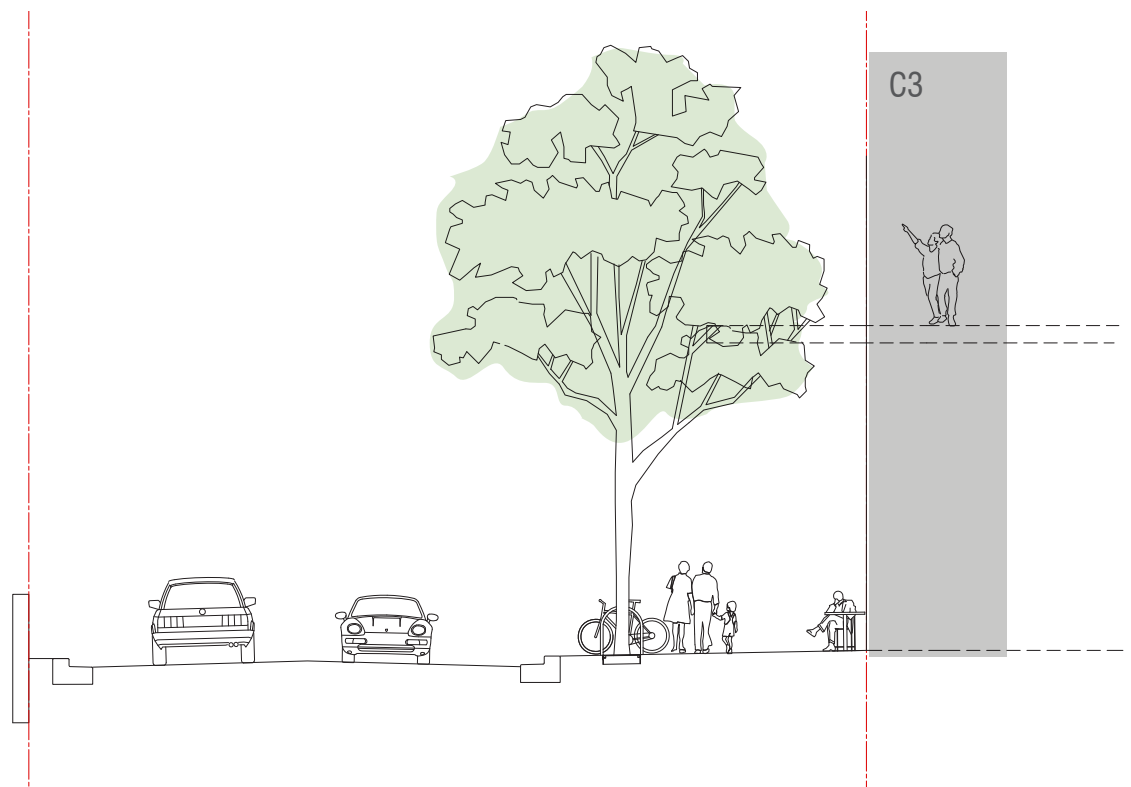


Fig 3.5 Section - Globe Street (Stage 1A)

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CITY + UNION WALK

The Vision:

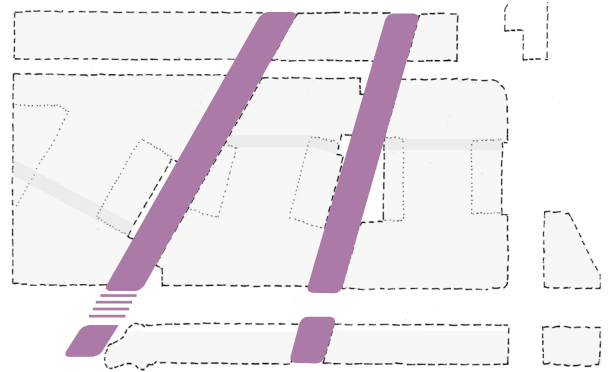
The City and Union Walks are high quality, civic pedestrian spaces and the primary east west pedestrian connections within Barangaroo South.

The walks act as the major pedestrian links delivering 15,000- 30,000 people to the tower lobbies of C3, C4 and C5 from the city and ferry terminals on the waterfront.

They will also bring people from the City and Wynyard walk bridge to Lime Street, the Waterfront Promenade and Globe Square.

The character of the Walk's will change throughout the course of the day expressing significant peaks during the arrival and departure times.

The walks will have a civic character and create a flexible space that can accommodate major pedestrian movement.



City and Union Walk will be the primary pedestrian connection to Barangaroo from the city and waterfront.



Darling Quarter, Sydney



Barcelona, Spain

COMPONENTS:

- High quality large scale pavements
- Skylight / day lighting
- Lobby address
- Weather protection
- Retail and cafés
- Variety and individuality of shop fronts

ACTIVATION:

- Commercial buildings arrival and departure
- Pedestrian connections to the waterfront
- Informal meeting place
- Shopping
- Cafés
- People watching

The Outcome:

City and Union Walk will be activated pedestrian street twelve metres wide and open twenty four hours a day. They will contain feature lighting to the cornices of the podiums and outdoor seating areas associated with the ground floor tenancies.

The Walks are the main public east west circulation spaces at Barangaroo South and connect the three tower lobbies by through site links that connect C3, C4 and C5.

The ground plane materials are of the City of Sydney palette, reconfigured to suit the grandeur and scale of the space. The central

'wharf' paving is the main design gesture - extending from Hickson Road to the waterfront pavement.

The Walks are highly activated through retail and lobby addresses providing a place where people can buy a coffee or meet colleagues.

City and Union Walk prioritises circulation and the arrival experience to the lobbies of the commercial towers.

The Walks are composed of a stone ground plane of Austral Black granite that will ensure they read as grand civic city spaces.



Dubrovnik, Croatia



Fig 3.6 Illustrative View- City Walk



Fig 3.7 Section - City Walk



Fig 3.8 Detail Plan - City Walk

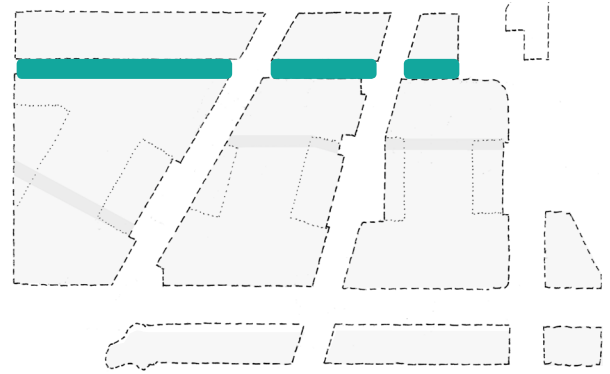
SHELLEY LANE

The Vision:

Shelley Lane is designed to have a 'fine grain' Melbourne laneway character. It is the north-south pedestrian connection extending from Hickson Place in the south to Globe Street to the north.

Shelley Lane provides access to the east-west walks, the main areas of pedestrian flow in Barangaroo South. Based on predictive pedestrian modelling, Shelley Lane will experience a high volume of pedestrian traffic in the am peak, pm peak and lunch time.

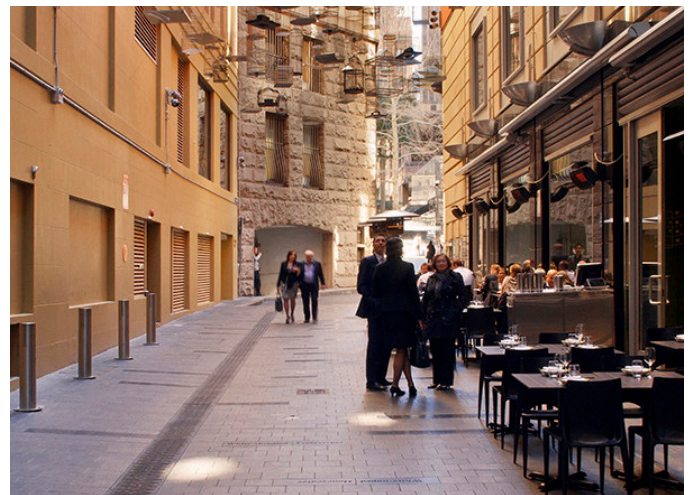
Shelley Lane captures the life and vibrancy of a cosmopolitan city in an intimate human scale.



Shelley Lane captures the life and vibrancy of a cosmopolitan city in an intimate human scale.



Centre Place, Melbourne



Angel Place, Sydney

COMPONENTS:

- 6m wide car-free pedestrian lane way
- Ground floor retail and café
- Open to the sky
- Tenant controlled awnings for sun and rain
- Temporary and permanent Art pieces
- Central strip drain

- Diversity and individuality of shop fronts
- Local design boutiques and independent businesses
- Catenary / installation lighting

ACTIVATION:

- Shopping
- Pedestrian connections
- Day / Night time experience
- Café dining

The Outcome:

Shelley Lane is a six meter wide retail pedestrian laneway with a mix of vibrant shop fronts. Textured stone paving gives richness to the ground plane along with site specific feature lighting/art installation and removable tenant specified seating at building edges.

Shelley Lane is the 'fine grain laneway' of Barangaroo South and is made up of a mix of materials, retail and lighting/art installations.

It is of an intimate scale and being only 6m wide gives the opportunity for a vibrant mix of retail and spill out to occur providing places for pedestrians to stop at a number of retail/dining experiences.

The furniture will be temporary, managed by the tenants and provide a mix of styles along the lane edge.

The stone paving gives a strong laneway richness to the experience.



Angel Place, Sydney



Degraves Street, Melbourne



Fig 3.9 Illustrative View - Shelley Lane

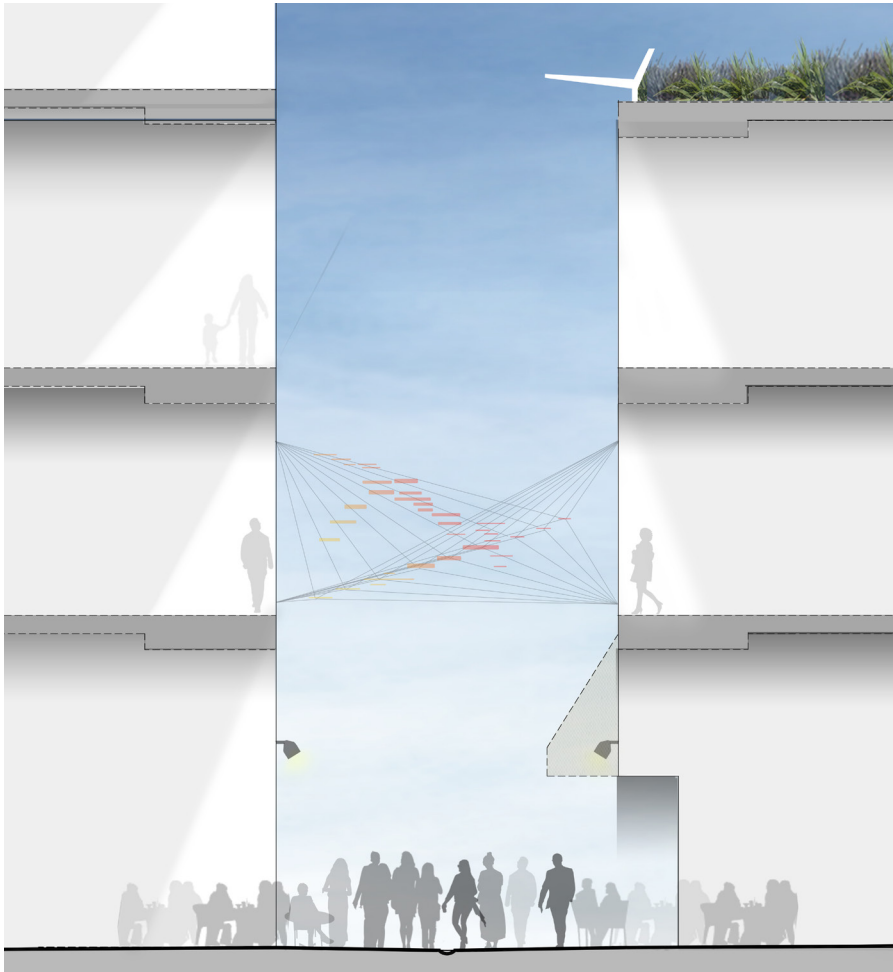


Fig 3.10 Section - Shelley Lane

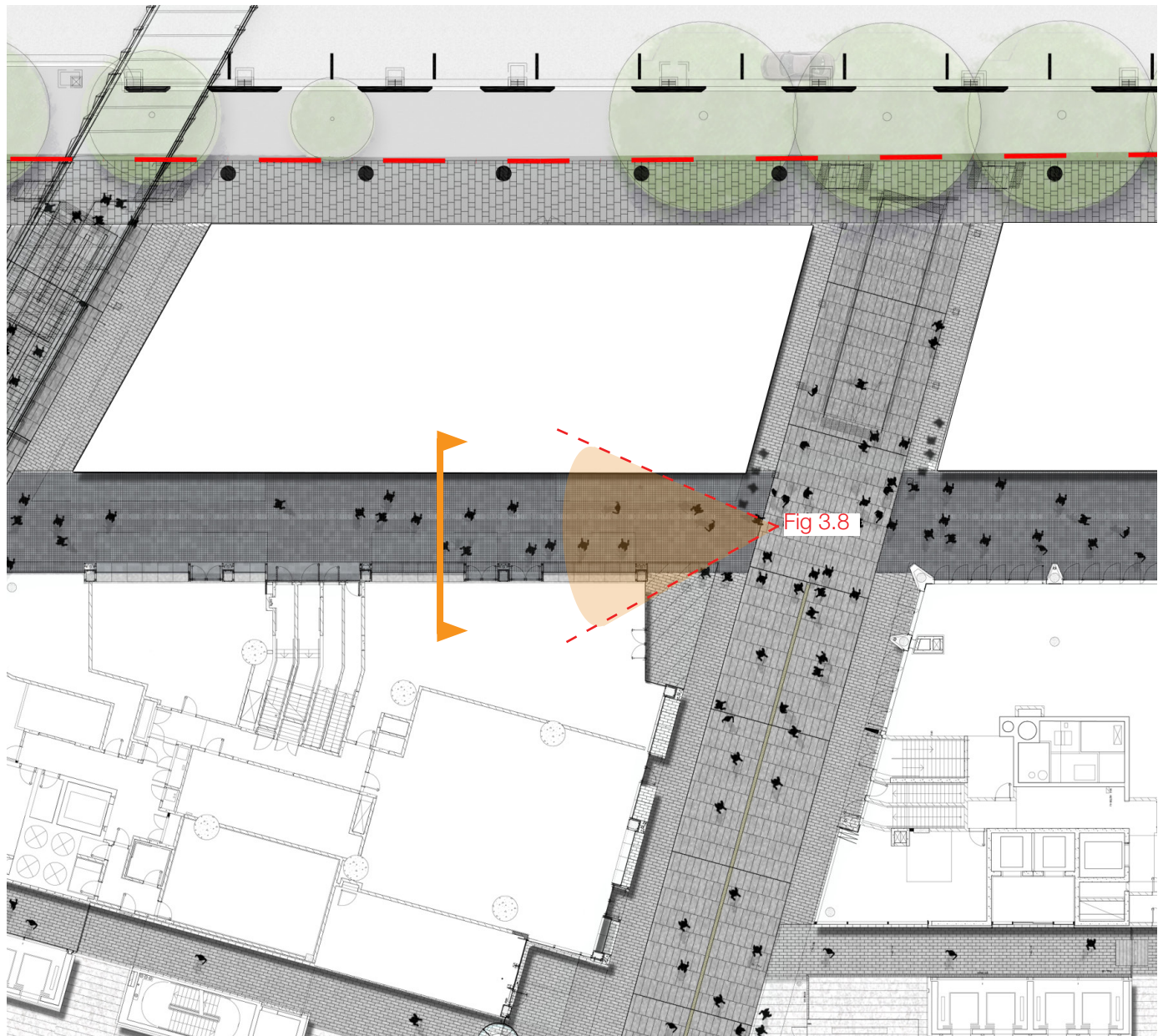


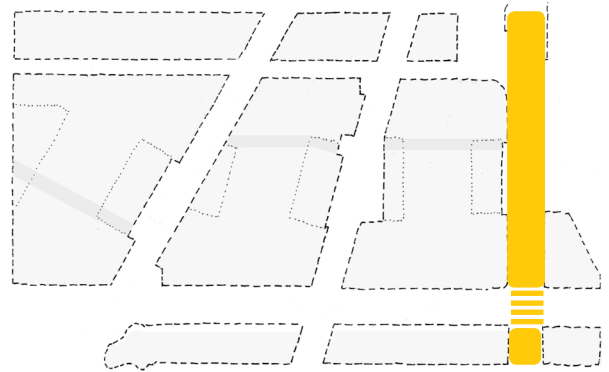
Fig 3.11 Detail Plan - Shelley Lane

TRANSPORT PLACE

The Vision:

Transport Place is the front door and southern entry to Barangaroo South. It connects to the city via Wynyard Walk and acts as the major city to harbour pedestrian link.

Transport Place is the interface between Barangaroo and King Street Wharf and provides an interchange for transport users. It transitions between the ferry wharves on the Waterfront Promenade through to the Hickson Road taxis and to Wynyard Station via Wynyard Walk. It also has direct pedestrian connection to Shelley Lane, Hickson Place and the C5 lobby, connecting it to the major walks and lobbies.



Transport Place is the front door to Barangaroo South and acts as the major city to harbour connection.



Aarmentieres Square, France



Tower Place, London

COMPONENTS:

- Pedestrian space
- Large scale City of Sydney pavers
- Skylight / daylighting
- Lobby address
- Retail and cafés
- Art works
- Variety and individuality of shop fronts
- Varied widths
- Grove of trees

ACTIVATION:

- Activated program of events
- Commercial buildings arrival and depart
- Pedestrian connections
- Meeting place
- Cafés
- People Watching
- Public Transport Circulation

The Outcome:

A generous stair, seating and planters open to a civic plaza formed by the southern address to the C5 tower lobby. The lobby paving forms a welcome mat to the existing buildings of King Street Wharf and the new Barangaroo South. The plaza will become a meeting place with seating and shade from the grove of trees.

Transport Place will provide convenience and service retail and lobbies with taxi/car drop off zones, complementing its role as a transport interchange and gateway to Barangaroo.

The materials and civic nature of Transport Place sees the lobby pavements extending to the City of Sydney standard palette used in the 'wharf pavement' that extends from Hickson Road through to the Waterfront.



Trieste, Italy



Pitt Street Mall, Sydney



Fig 3.12 Section - Transport Place

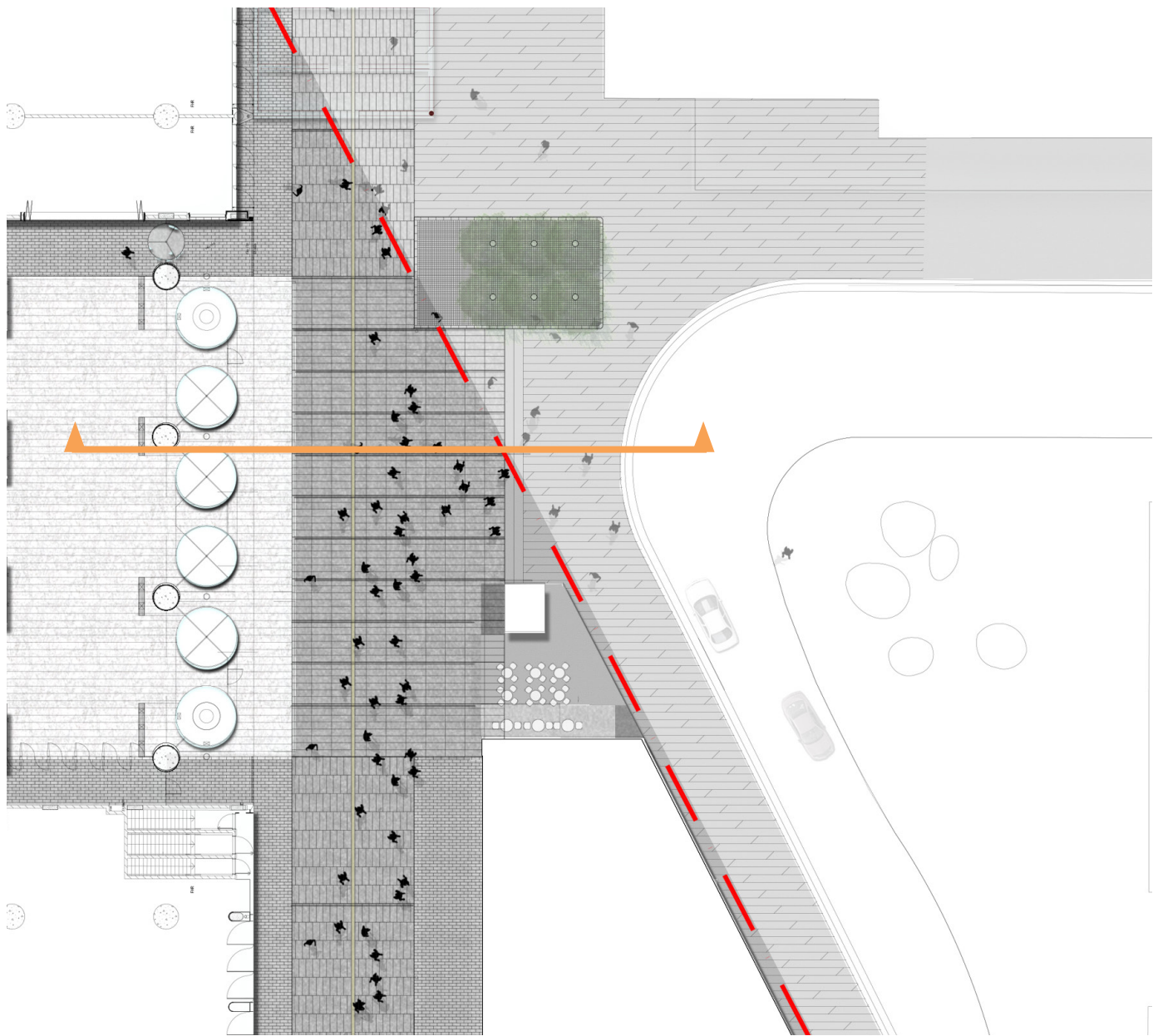


Fig 3.13 Detail Plan - Transport Place

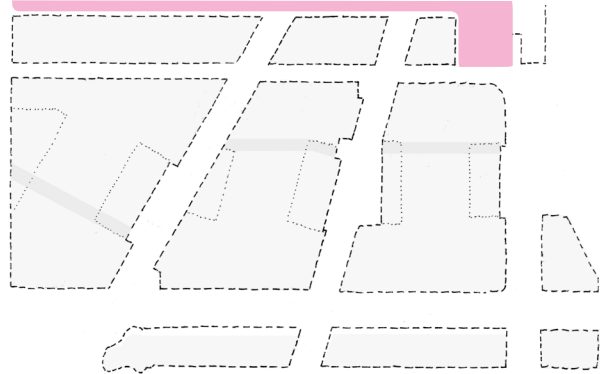
HICKSON PLACE

The Vision:

Hickson Place is the welcoming public square to Barangaroo South.

Located in the south eastern most corner along Hickson Road, it is a civic square that knits Barangaroo into the fabric of the city.

Made up of high quality materials and an open and flexible plan, Hickson Place will allow a variety of overlays, programs, functions, social gatherings to occur. It is one of the key public open spaces and forms a 'welcome mat' to Brangaroo South. It also provides an opportunity to provide social infrastructure and amenity for the high volume of pedestrians moving from Wynyard Walk into Barangaroo.



It is one of the main public open spaces at Barangaroo South and acts as the 'welcome mat'.



Place de la République, France



Wilhelmina Square, Netherlands

COMPONENTS:

- Large scale paved civic space
- Retail and cafe activated edges
- Civic scale seating
- Infrastructure for varied activities to occur

As one of the main civic spaces at Barangaroo South Hickson Place will be activated with programmed and spontaneous cultural events and is designed to be used as an outdoor gathering space.

During major events this space can be configured to host upwards of 1000 people at a time comfortably.

Hickson Place is framed by the active frontages of the commercial building C6 and the retail podium to C5.

Hickson Place will be covered by the loggia, providing all weather protection. It will be one of the few covered outdoor places in Sydney, providing a unique opportunity for all weather events such as markets.

ACTIVATION:

- Activated program of events
- Commercial buildings arrival and depart
- Pedestrian through site flow
- Meeting place
- People watching

A temporary 'pod' is proposed to contribute to the place activation

The colonnade on the western side of Hickson Road will provide a covered, outdoor path from Hickson Place through to Globe Street.

The colonnade transforms with the change in uses along the length of Hickson Road – be it building lobbies, storefronts or commercial offices.

The footpath under the colonnade is paved with 'of the city' materials complementing the palette of materials currently being developed for the city's public domain street codes.



Paley Park, New York



Terminal 3 Loggia, Heathrow Airport, London

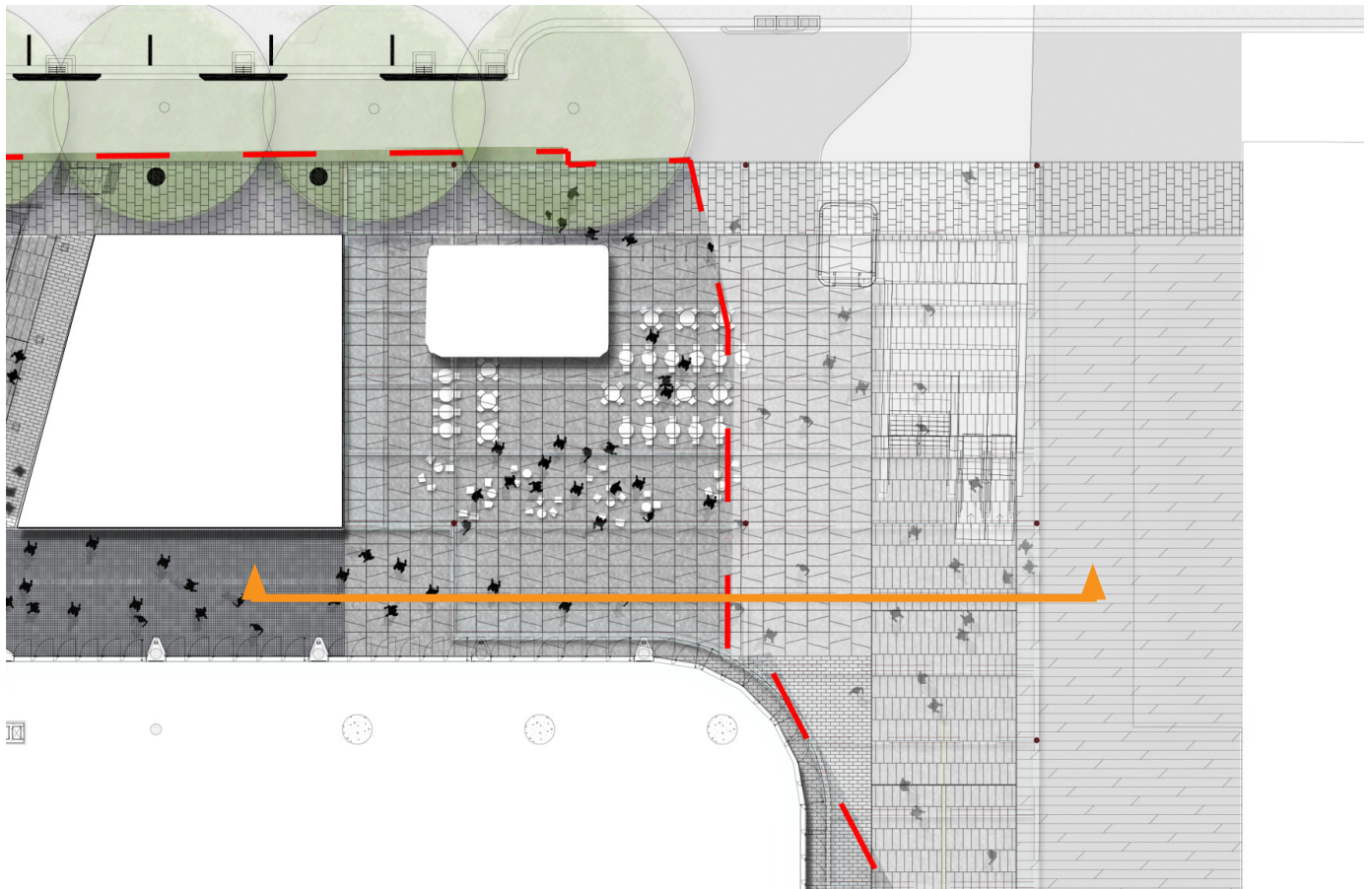


Fig 3.14 Detail Plan - Hickson Place

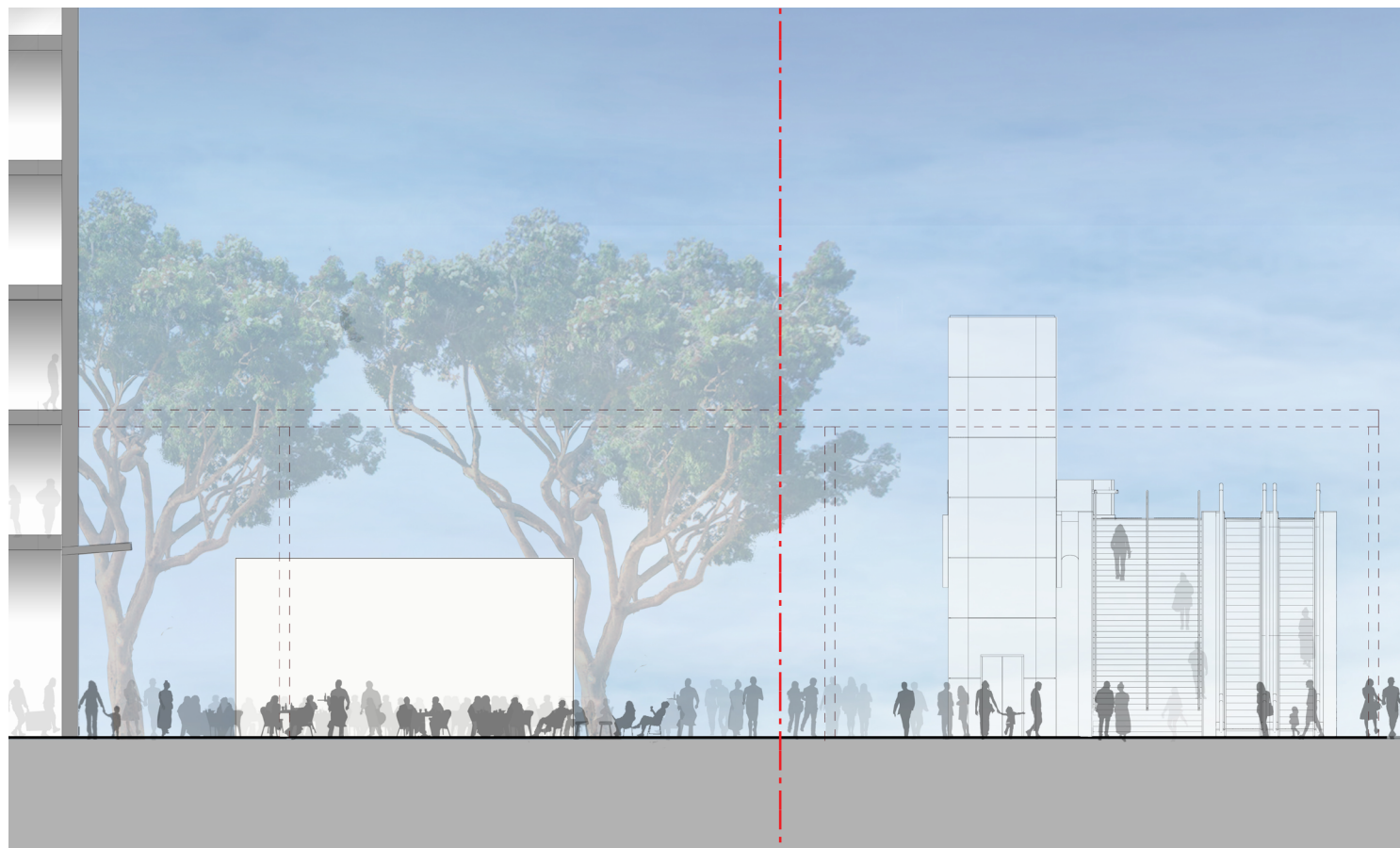


Fig 3.15 Section / Elevation - Hickson Place

MATERIALS

PAVING

A variety of high quality and robust paving materials will be used throughout the public realm of Barangaroo South that highlight particular spaces, movement patterns, and define the various streets and urban places.

Lime and Globe Streets will adopt the City of Sydney standard paving palette, while the Walks, laneway and places will use a reconfigured 'of the city' palette.

Hickson Place is proposed to create a strong ground plane geometry experienced primarily from the elevated view of Wynyard Walk.

The Waterfront Promenade and Globe Square contain a combination of paving materials that reflect their site specific qualities as waterfront spaces which will have an ageless quality including in-situ poured concrete honed with exposed aggregate, precast concrete, recycled wharf timber decking, marine bronze inserts and panels as accents to define pedestrian movement zones and site interpretation.

The adaptive reuse of recycled materials will be fundamental to the design process for the public realm. Recycled concrete will be used as aggregates in the concrete paving units aligning the Waterfront Promenade, Globe Square and Southern Entry.

1. Stone Paving

- 1.1 Granite Paver - Exfoliated Finish
- 1.2 Black Granite Paver - Exfoliated Finish
- 1.3 Grey Granite Paver - Scratched Finish
- 1.4 Grey Granite Paver - Bush Hammered Finish
- 1.5 Black Granite - Exfoliated Finish

2. Concrete Paving

- 2.1 Custom Pre-Cast Units w/ Aggregate - Grit \Blast Finish
- 2.2 Cast-Insitu Concrete w/ Aggregate & Saw Cuts - Grit Blast Finish

3. Paving Inserts

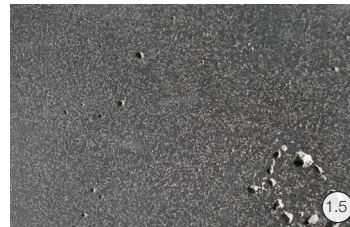
- 3.1 Bronze Heelguard Strip Drain
- 3.2 Waterjet Cut Granite Paver Dish Drain - Exfoliated Finish
- 3.3 Pre-Cast Brass Inlays

4. Timber Boardwalk

- 4.1 Reclaimed Wharf Timber Boardwalk

Refer to Lighting Consultants Drawings & Specification

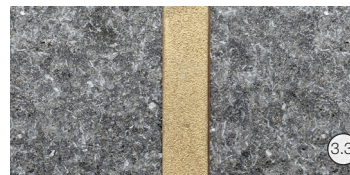
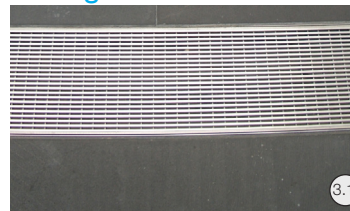
Stone Paving



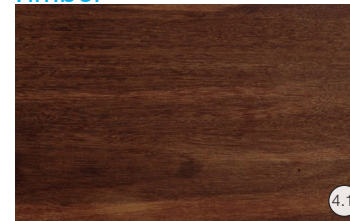
Concrete Paving

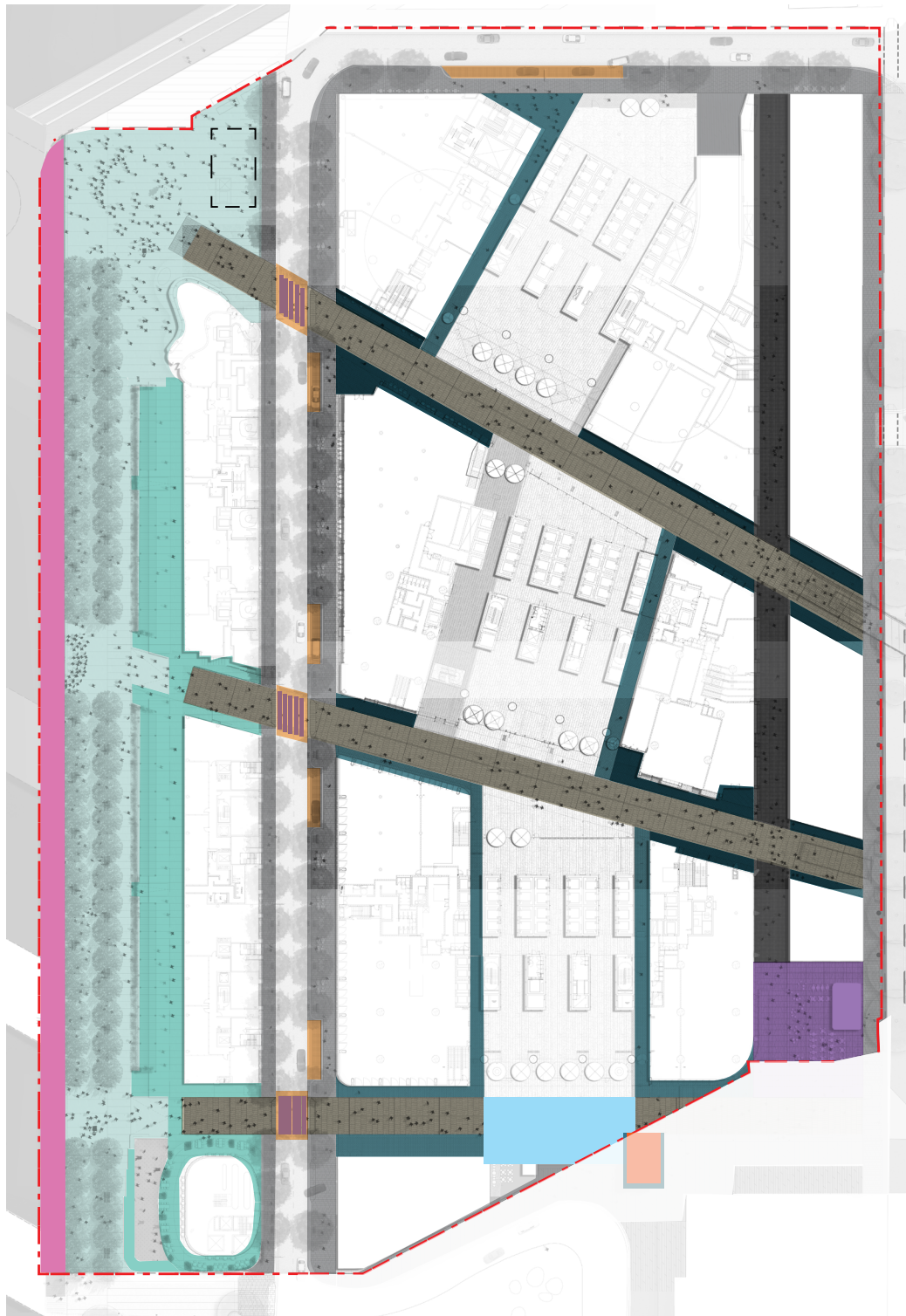


Paving Inserts



Timber



**KEY**

- PAVING - 01
CoS Granite Unit Paving
- PAVING - 02
CoS Stone set Paving
- PAVING - 03
Stone Set Paving
- PAVING - 04
CoS Granite Unit Paving
- PAVING - 05
Granite Unit Paving
- PAVING - 06
Stone Set Paving
- PAVING - 08
Precast Concrete Pavers
- PAVING - 09
Granite Unit Paving
- PAVING - 10
Plinth Stone Set Paving
- WATERFRONT - CAST INSITU
CONCRETE
- WATERFRONT - PRECAST
CONCRETE PAVING
- WATERFRONT - BOARDWALK
- SITE BOUNDARY
- TEMPORARY LANDSCAPE
FOR FUTURE DEVELOPMENT

FURNITURE AND LIGHTING

The furniture specified throughout Barangaroo South will be variety of high quality and robust urban elements that will be used throughout the public realm to highlight particular spaces and reflect the paving palette of the various streets and urban places.

Lime and Globe Streets will adopt the City of Sydney standard furniture palette, which has been developed by Tzannes Associates. Barangaroo South will be the first large scale roll out of this new range of street furniture.

Existing wharf timbers have been extracted from the site and will be reused across the site in the furniture and ground plane.

An art and interpretation overlay will be included within the furniture and materials palette and will be developed to tell the story of Barangaroo South.

The lighting design palette is being designed by Spiers and Major and seeks to use low energy usage light sources and adopts the City of Sydney standards alongside specific installations for the walks, laneways, places and waterfront.

4. Furniture

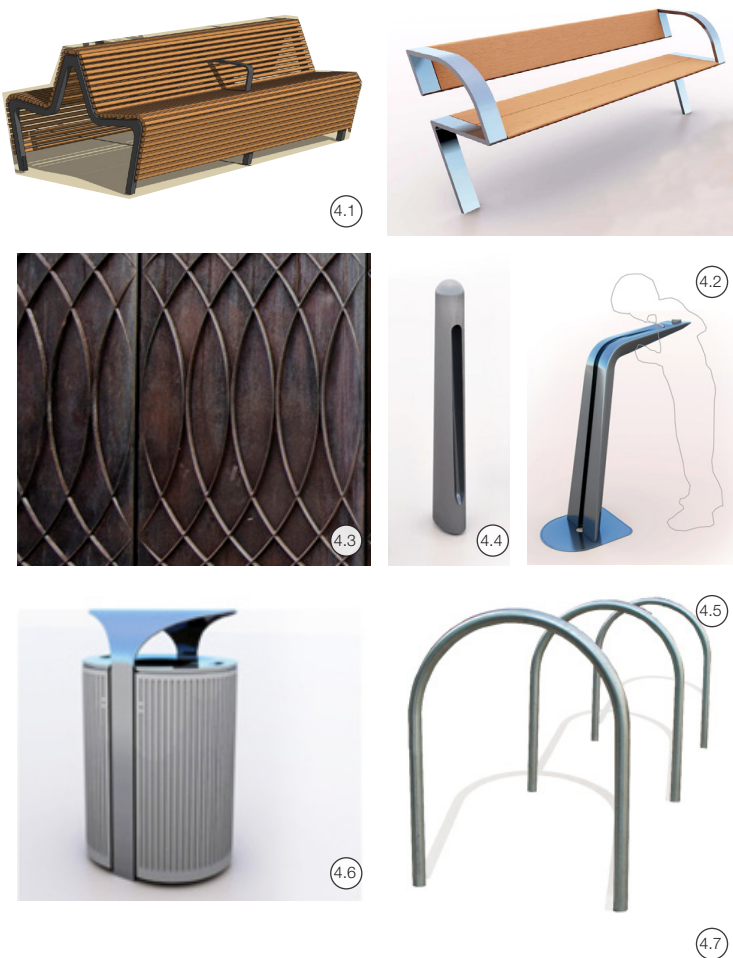
- 4.1 Custom Furniture - Reclaimed Wharf Timber & Powdercoated Steel
- 4.2 Bench Seat - City Of Sydney
- 4.3 Custom Cast-Iron Tree Grate
- 4.4 Bollards - City Of Sydney
- 4.5 Water Bubbler City Of Sydney
- 4.6 Bins - City Of Sydney
- 4.7 Stainless Steel Bicycle Hoops

5. Timber

- 5.1 Custom Furniture - Reclaimed Wharf Timber & Powdercoated Steel
- 5.2 Bench Seat - City Of Sydney

Refer to Lighting Consultants Drawings & Specification

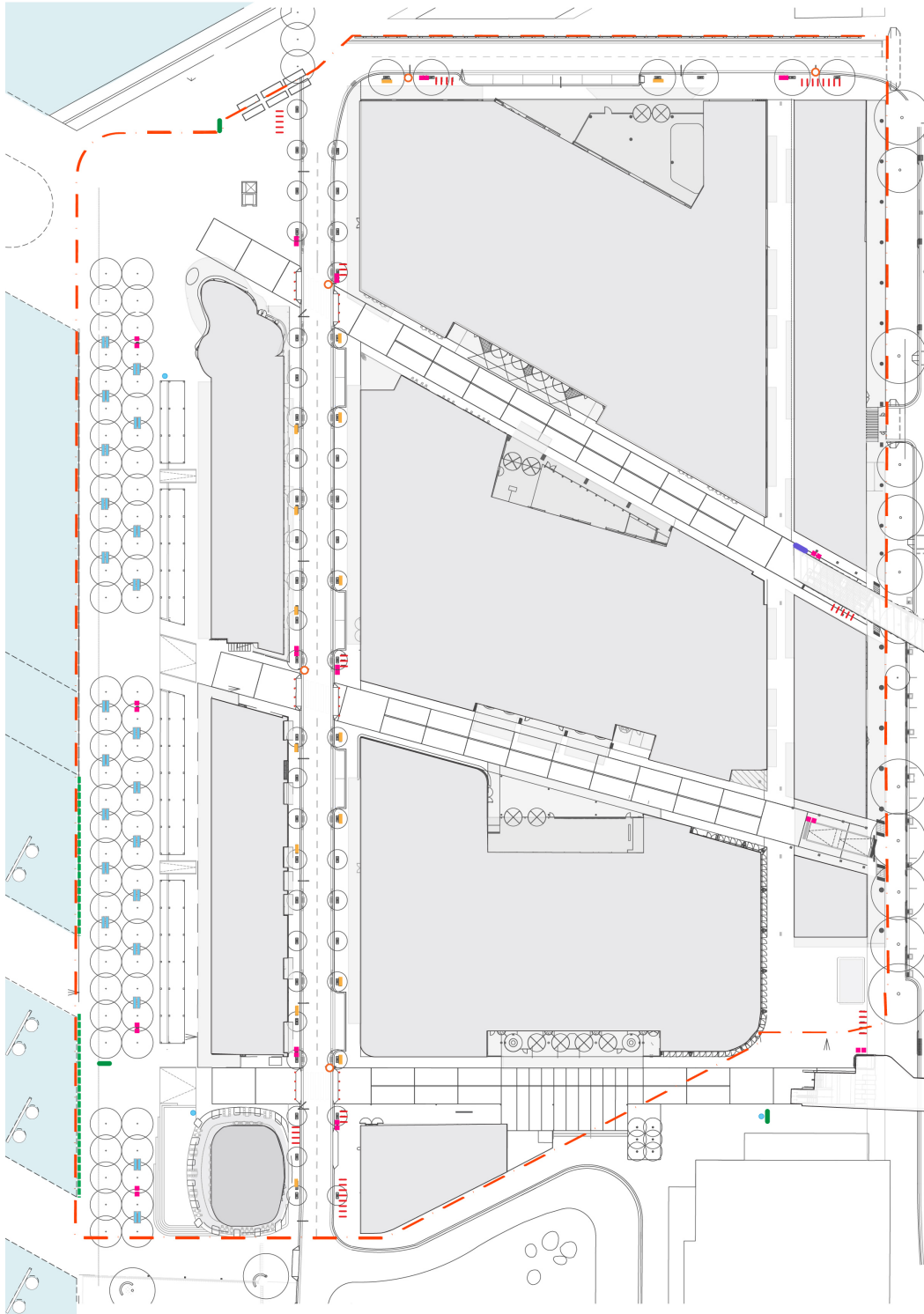
Furniture



Timber



Diagram - Furniture and Lighting

**Seating:**

- Bench Seat With Backrest (no. 16)
City of Sydney
- Custom Individual Seat (no. 44)
Waterfront

Furniture:

- |||| Visitor Bike Parking
Total: 84 spaces overall (42 bike racks)
- Rubbish Bins
Total: no. 30
- Water Fountain
Total: no. 3
- Balustrade to Ferries
- ... Bollards
Total: no. 24

Signage: (By others)

- Digital Node (D1)
Total no. 3
- Secondary (S1)
Total no. 1
- City Of Sydney (T1)
Total no. 5

PLANTING

TREE PLANTING

The tree planting throughout the public domain has been underpinned by the development and coordination with qualified arborists, soil specialists and growers. It has been updated from the original MOD 6 layout due to changes in the masterplan and subsequent available soil depths and spatial characteristics to allow the successful growth of the appropriate tree species.

The Waterfront Promenade is proposed to be planted with a double row of Honey Locust (*Gleditsia triacanthos* ‘shademaster’). The compact form and deciduous habit will provide consistency with the waterfront tree planting to the north whilst providing an all - year round specimen tree which will create a connected canopy and cover to outdoor public seating areas.

Tulipwood, a rain forest trees from southern Queensland will be used as the main street tree along Lime Street. These trees have a distinctive columnar form appropriate to the scale of the 16m wide street. They will allow passive surveillance from the R8 and R9 residential towers, while providing amenity to the street below.

Globe Street, the green street will use *Flindersia australis*. These have a broad elliptical clear trunked habit. They are a large NSW rainforest tree and are well proven as a street tree in Sydney. Due to its size it would be well suited to Globe Street with clear sight lines and broad open canopy.

Transport Place uses *Waterhousia floribunda* which is a good street tree that is highly adaptable to different urban conditions. They provide a medium shade and will grow in full sun or semi shade. It has cream blooms that appear in early summer

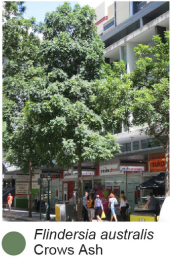
Tree Schedule:

	BOTANICAL NAME	COMMON NAME	SIZE	QTY
	<i>Flindersia australis</i>	Crows Ash	800L	6
	<i>Harpulia pendula</i>	Tulipwood	800L	45
	<i>Ulmus parvifolia</i>	Chinese Elm	800L	6
	<i>Gleditsia triacanthos</i>	Honey Locust	800L	64
	<i>Existing trees</i>			

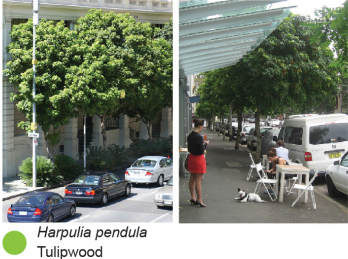
Waterfront



Globe Street



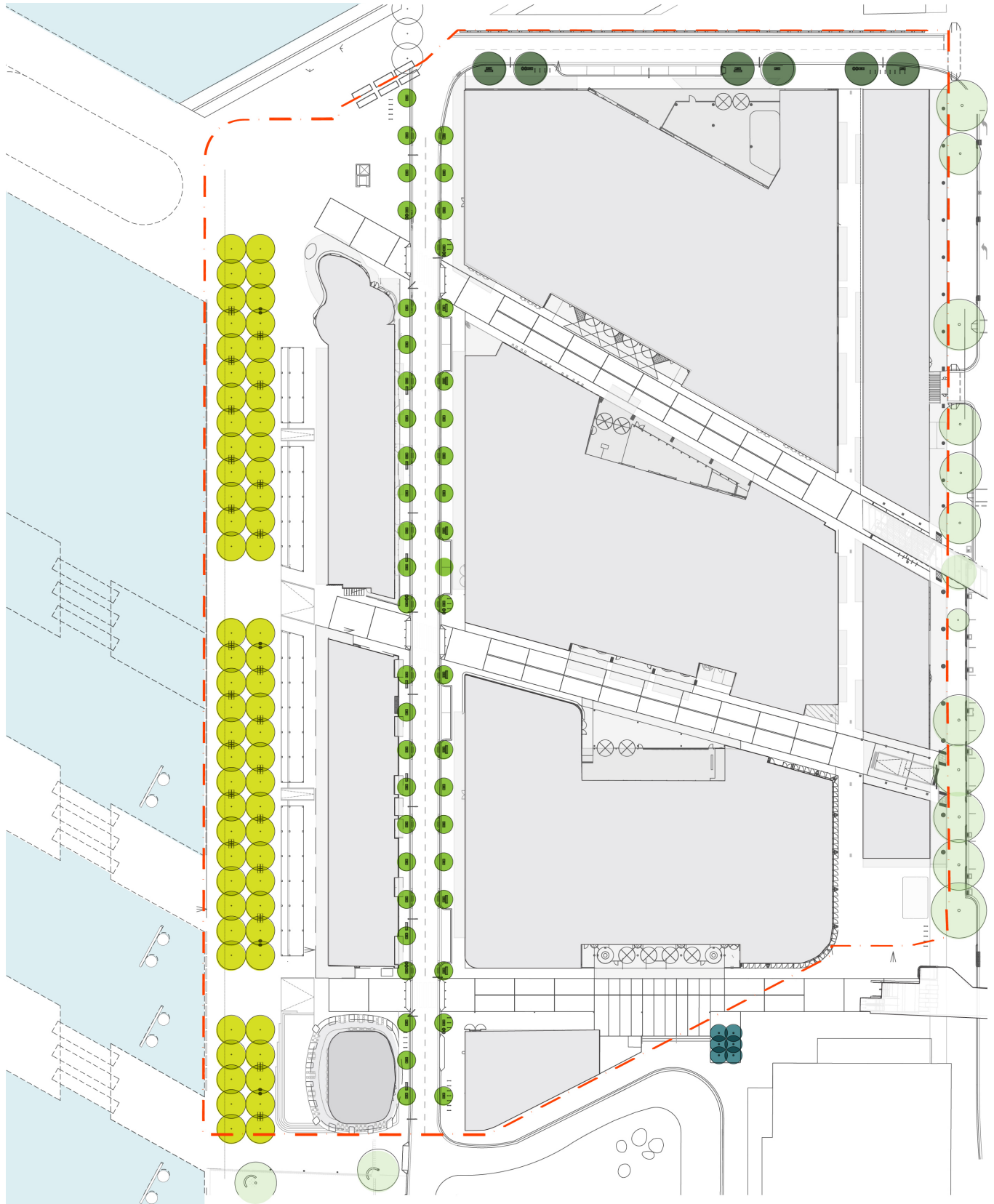
Lime Street



Transport Place



Diagram - Tree Plan



UNDERSTOREY PLANTING

The planting strategy aims to respect and enhance the waterfront character of the site and to respond to its maritime environment. It also recognises the site as being a highly pedestrianised and the scale of proposed buildings by reinforcing the framework of street and feature trees. The planting will consist of a combination of low shrubs and groundcovers which are predominantly native and will add texture, scent, form and colour. Planting will also include low water use native plants that will complement and add to the richness of the plant material palette.

Waterfront Structure:



Southern Waterfront Planters



