

4.6 Active Waterfront

4.6.1 An Active Waterfront

Barangaroo provides a rare opportunity in Sydney to integrate the harbour foreshore with a major new urban development extending from the CBD. An active waterfront will boost Barangaroo's value as a living, working, tourism and recreational precinct.

An active waterfront will open more of the harbour to public access and provide Sydney with stronger connections to its maritime history. There will also be opportunities for complementary water-based activities, including leisure ship berthing, water-based public transport, and special events such as tall ship visits. Improving Barangaroo's accessibility through improved transport services and facilities will be an integral part of an active waterfront.

Numerous examples of waterfront development in Australia and overseas have highlighted the opportunities that foreshore activity can bring to urban renewal precincts. Melbourne Docklands, Auckland, Barcelona, San Francisco, New York and Vancouver have variously demonstrated the benefits of public access to the waterfront, major new parks and recreational facilities, development of commercial, residential and tourism purposes, and enhanced transport services.



The current King St Wharf in East Darling Harbour is an example of active waterfront in Sydney



Current water's edge at Barangaroo has significant potential for waterfront activities

4.6.1 An Active Waterfront *continued...*

Most importantly, the waterfront will continue to be held in perpetuity by the NSW Government.

An active and mutually supportive relationship is expected between businesses in Barangaroo's major buildings and the waterfront, including transport activities. The relationship will include design and functional integration.



Cockle Bay in East Darling Harbour caters for an active waterfront

4.6.2 Proposed Waterfront Activities

Opportunity

Based on a review of local, national and international examples of waterfront development, as well as careful consideration and preliminary assessment of the Barangaroo site, it is clear that land/water interface uses can successfully be co-located with the land uses proposed at Barangaroo to create an active waterfront.

A matrix of uses has been developed to complement the three broad categories of the proposed adjacent land uses, the Commercial Core, Mixed Use Precinct, and the Headland Park.

The key features are:

- Urban Waterfront – cruise terminal;
- Central Public Domain – temporary berthing for super yachts, yacht charter;
- Headland Park and Northern Cove – wharf for charter and water taxi drop off.

The features of the proposed strategy are further described in the table below:

Precinct	Sub-precinct	Activities	Comment	Supporting infrastructure
Urban waterfront	Blocks 1 to 3/4 inclusive	Cruise Terminal	Replacement terminal	Similar to existing
Central public domain	Blocks 4 to 5/6	Super yachts (short stay)		
	Blocks 5/6 to 8	Vessels of interest Tall ships		None
Headland Park – Northern Cove	Park	Wharf for charter and water taxi drop off		None
	Basin	Passive recreation	Breakwater required to provide calm water	Wave attenuation structures at the western inlet

4.6.3 Supporting Infrastructure – Other Facilities

Playing Fields

This area is envisaged predominantly as a display area for visiting tall ships, heritage displays, Navy Week style events, etc. The existing sea wall is adequate for this use.

Northern Cove

This area should allow for a pontoon structure for pick-up and set-down for water taxis and visiting yachts no more than 15m in length.

Active Waterfront – Conclusions for TMAP

- The waterfront at Barangaroo will be activated by facilities for maritime vessels and the interrelationship between land and water based activities.

4.7 Cycling

High levels of cycle use will help achieve the low mode share for car travel which is central to making Barangaroo sustainable. Cycling by Barangaroo's workers and visitors will add to the precinct's vitality, and encourage active streets. More cycling promotes a stronger and safer community. It also encourages healthy lifestyles and helps improve environmental quality.

The committed mode share target for "Other" (which includes pedestrians and cyclists) is 12% for the JTW to Barangaroo. While mode share for cycle access to the CBD is currently low (at around 0.5%), there is substantial opportunity for growth in the journey to work and social trips. Growth opportunities are reinforced by rising fuel and parking costs, increased health and environmental awareness, and traffic congestion. The challenge is to provide a safe and accessible cycling environment.

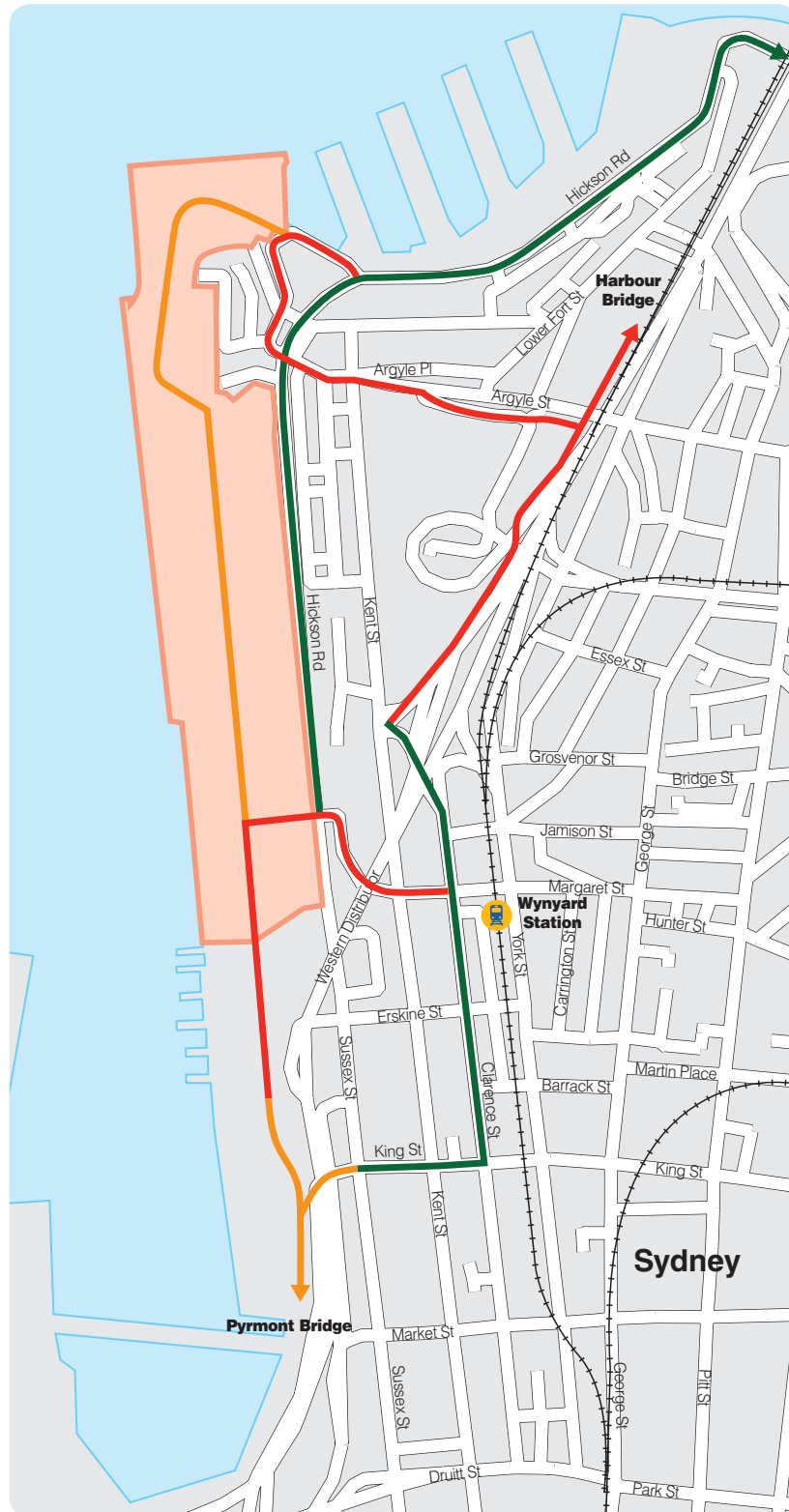


The flat grade and width of Hickson Road is conducive to cycling

The mainly flat Barangaroo site is suited to cycling. The development of Barangaroo requires cycling connectivity with surrounding areas principally Sydney CBD, and regional cycle networks. Within Barangaroo, cycle access will be important for the commercial and retail areas, the Headland Park, and the waterfront including along the promenade.

There is some cycling infrastructure around the precinct at present but there is a lack of activities that attract cycling. The main barrier to connecting cyclists at Barangaroo to the CBD and the regional cycling network is the steeply-rising gradient up to York Street. Cycling is also discouraged by lack of secure bike parking and constraints on carrying bikes on other transport modes as part of the trip to Barangaroo.

4.7 Cycling *continued...*



Proposed cycle network for Barangaroo

Legend

- Dedicated on road bike lane
- Dedicated Off road pedestrian and Cycle path
- Shared traffic/bike lane
- Barangaroo Site



4.7 Cycling *continued...*

In this context and building on earlier work inputs to the Concept Plans, a new Barangaroo Cycle Strategy (Appendix G) has been developed. The main elements are:

Cycle Routes:

- The Clarence Street cycleway, accessible by Napoleon and Margaret Streets;
- The King Street cycleway, which links to Pyrmont Bridge and Clarence Street;
- The Hickson Road Cycleway, mainly providing access to the Headland Park;
- The shared cycle and pedestrian path along Barangaroo's harbour foreshore;
- Shared cycle and traffic lanes along Globe Street within Barangaroo, providing the connection between the foreshore path and City.

Cycle Parking:

- Secure, safe and convenient parking to be provided on-site;
- Cycle racks for visitors and recreation users in areas of high demand;
- Showers, lockers and change rooms for cyclists within all new development.

Other potential measures:

- Public cycle hire schemes in key locations;
- Managing potential cycle/pedestrian conflict through design and signage;
- Managing cycle/bus routes conflicts through design and lane marking;
- Dealing with the differences in levels between some city streets and the Barangaroo site through grade separated crossings, shared with pedestrians.

Cycling – Conclusions for TMAP

- The Stage 1 RFDP Proponents must include measures to increase the use of cycling;
- Proposals must consider local cycle networks, and CBD and regional connections;
- Proposals must also include facilities for cyclists within the Barangaroo development

4.8 Light Rail

Light rail to service the Barangaroo development is a possibility and is not excluded by the lack of a full investigation as part of this TMAP. Light rail servicing the western CBD corridor will be examined prior to the construction of Barangaroo. However, it is acknowledged that while it will provide complementary services to the site, it is not considered an essential element in achieving Barangaroo's mode share targets. Any consequent study of light rail options will be done in full consideration of the Barangaroo development.

Light Rail – Conclusions for TMAP

- Light rail is not an essential element in achieving Barangaroo's mode share targets;
- Light rail services could be provided in Hickson Road in the future. The development of light rail is a matter for further NSW Government investigation.

4.9 Other (Taxis and Coaches)

Many of the activities in Barangaroo Stage 1 will generate demand for taxi services. Proponent TMAPs must include taxi ranks of appropriate capacity and location, with clear routes for taxis entering and leaving the precinct. Access for taxis must be available 24 hours a day as well as clear signage directing people to taxi ranks.

Coach traffic will be generated by guests arriving at and leaving hotels. Coach access facilities at hotels should be provided, and a minimum of two parking spaces for hotel-generated coaches.

Coaches are likely to come to Barangaroo also for tourists to use shopping, recreation and entertainment facilities, and to visit the waterfront and headland park. There may be some need for coach layover facilities but the main demand will be for short stay coach parking for vehicles bringing and collecting tourist visitors to the precinct.

Similarly, proponents must consider access for service and delivery vehicles (pick up, drop off and some parking) to the site especially during early mornings and working hours.

Taxis and Coaches – Conclusions for TMAP

- Stage 1 RFDP Proponents are to include appropriate provision of facilities for taxis, coaches and service vehicles.

5 Summary of Requirements

5.1 Transport and Accessibility Framework

The next step for Barangaroo Stage 1 is the submission of detailed proposals by the short listed Proponents. The Proponents need to demonstrate the planning and delivery of relevant transport infrastructure and services to meet the NSW Government's objectives for development of Barangaroo Stage 1.

In respect of transport and accessibility, these objectives and outcomes and the assessments on which they are based are presented in this framework TMAP. There are three aspects that must be addressed by the Stage 1 Proponents: the overarching objectives and specific commitments, the detailed "modal" requirements, and the timing and funding of relevant transport infrastructure and services.

5.1 Transport and Accessibility Framework *continued...*



An overview of transport initiatives for Barangaroo development

5.2 Overarching Requirements

The starting points for transport and accessibility planning for Barangaroo are the maximum potential GFA of 508,000m², its component developments and the distribution of activities within the precinct. For this development, the NSW Government has adopted targets for each transport mode for the journey to work. These are:

- 83% by public transport (63% rail, 20% bus);
- 12% walking and cycling;
- 4% car;
- 1% ferry.

Meeting these targets is essential to ensure the development of Barangaroo Stage 1 is sustainable and successful. In particular it is critical that the development utilises existing public transport to the optimum extent, and that transport performance in the existing CBD – people using public transport, and the movement of traffic – is not reduced or degraded.

The key service principle for Barangaroo Stage 1 is ensuring that everyone using Barangaroo has safe and convenient access, including the mobility impaired. Other service principles and transport initiatives are to ensure that the development:

- Includes a high volume, safe and attractive pedestrian connection with Wynyard;
- Takes optimal advantage of the proposed North West Metro;
- Is served with high frequency bus services;
- Includes an active waterfront and considers the opportunity for multi-modal interchange of bus, ferry and rail services;
- Encourages cycling through appropriate facilities and bike network.

The Proponent detailed proposals should be prepared in the context of the Statement of Commitments for Barangaroo. These provide detailed guidance on the assessment of transport and accessibility for the development, and the kinds of infrastructure and services that will need to be provided.

5.3 Detailed Requirements

Section 4 of this TMAP reviews each mode or aspect of transport and accessibility for Barangaroo Stage 1 to identify the key detailed requirements for the Proponent detailed proposals. These are summarised briefly below however Proponents should refer to Section 4 which provides the details:

Road network

- The mode share targets including the low share for car travel must be implemented;
- Supporting policies including stringent parking requirements must be provided;
- The proposed road transport infrastructure must be based on the road network modelling;
- The proposed network must provide cohesive connections from Barangaroo to CBD streets and regional roads with minimal alterations to the existing network;
- Timely delivery and funding of the required road and intersection upgrades is essential.
- All proposed road network changes and improvements are subject to approval by the RTA.

Car parking

- Limitations on parking supply are crucial to achieving the mode share targets;
- The parking provision rates adopted in this TMAP based on an assumed land use mix are to be applied;
- On-street parking supply must be short stay only and limited in number.
- Limited parking is to be provided at Headland Park by the Foreshore Authority to cater for leisure and tourist requirements.

Pedestrian connections

- Pedestrian links must be upgraded for transport mode share targets to be achieved;
- The main route to Wynyard requires a major upgrade with new infrastructure;
- Design and delivery of the pedestrian tunnel to Wynyard is to be undertaken by the NSW Government.
- A possible extension of the tunnel to Australia Square and connection with the new Metro station will be considered in planning.
- Upper level grade separated connection(s) between existing streets and Barangaroo should be considered.

Rail services

- The proposed North West Metro scheduled to start in 2017 and will support the achievement of the mode share targets;
- An integrated transport hub comprising the two rail systems, bus services and the Wynyard - Barangaroo pedestrian link will need to be created.

5.3 Detailed Requirements *continued...*

Bus services

- Barangaroo will receive substantially upgraded bus service levels including direct services to enable the mode share targets to be achieved;
- Stage 1 Proponents will need to address the implementation of changes to bus routes, including traffic management and bus infrastructure needs;
- Detailed design of development must accommodate bus routes, stops, driver facility and a layover.

Active waterfront

- The waterfront at Barangaroo will be activated by facilities for maritime vessels and the interrelationship between land and water based activities.

Cycling

- The Stage 1 RFDP Proponents must include measures to increase the use of cycling to ensure mode share targets are met;
- Proposals must include connections to local cycle networks, and CBD and regional connections;
- Proposals must also include facilities for cyclists within development in Barangaroo.

Light rail

- Light rail is not essential to achieving Barangaroo's mode share targets;
- Light rail is a matter for further NSW Government investigation and not for inclusion in proposals.

Coaches, taxis and service vehicles

- Stage 1 RFDP Proponents are to include appropriate provision of facilities for taxis, coaches and service vehicles.

Travel Planning

- Stage 1 RFDP Proponents are to consider Green Travel Plans for employees and residents for both intra and inter-site travel.

5.4 Timing and Funding

Timing of transport infrastructure of construction and availability, initiation of services and implementation of supporting policies is critical to achieving the accessibility objectives for Barangaroo. In some cases, what has to be done is the responsibility of the Stage 1 Proponent, while some infrastructure and services are matters for the NSW Government.

Glossary

BSC	Barangaroo Steering Committee
CBD	Central Business District
CCP	Consolidated Concept Plan
DoP	Department of Planning
East Darling Harbour	Barangaroo
EOI	Expression of Interest
ESD	Environmentally Sustainable Development
Foreshore Authority	Sydney Harbour Foreshore Authority
GFA	Gross Floor Area
JTW	Journey to Work
MoT	Ministry of Transport
OCG	Office of the Coordinator General
RFDP	Request for Detailed Proposal
RTA	Roads and Traffic Authority
SHFA	Sydney Harbour Foreshore Authority
TAWG	Transport and Access Working Group
TIDC	Transport Infrastructure Development Corporation
TMAP	Transport Management and Accessibility Plan

Appendices

	Title	Date	Author
A	East Darling Harbour – Concept Plan – Transport Report	Sept 2006	Masson Wilson Twiney (MWT)
B	Barangaroo – Road System Report	May 2008	MWT
C	Barangaroo – Modified Concept Plan – Transport Report	July 2008	MWT
D	Statement of Commitments – Transport and Access	March 2008	TAWG
E	Barangaroo Pedestrian Strategy	June 2008	ARUP
F	Barangaroo Bus Service Strategy	April 2008	Transport and Traffic Planning Associates
G	Barangaroo Cycle Strategy	June 2008	ARUP