

Lend Lease Pty Ltd
Barangaroo South - Building R7
Transport Assessment

Rev A | 1 September 2014

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1 Introduction

The following report has been prepared by Arup for Lend Lease Pty Ltd to support a State Significant Development Application (SSD14_6623) seeking approval for construction of a retail and commercial building (known as the R7 building) and associated works at Barangaroo South.

The R7 building will be located in the south-western corner of Barangaroo South, adjacent to the public domain Transport Place. This position provides one of the first opportunities for a human scale connection to Barangaroo South from Shelley Street and King Wharf.

The R7 building will provide approximately 1,500m² of retail space and 340m² commercial space, as well as complementary open space, over 4 levels. Inclusive of public amenities, 1,927m² of floor space is proposed.

2 Transport Assessment

2.1 Site Access

The significant majority of staff and visitors travelling to the R7 building will arrive via non-car modes of transport, i.e. public transport, walking and cycling. The R7 building will be located adjacent to 'Transport Place', served by the following transport infrastructure:

- **Wynyard Walk** - a new high-volume pedestrian tunnel and bridge from Barangaroo to Wynyard rail and bus interchange (currently under construction, scheduled for completion mid 2016)
- **Barangaroo Ferry Wharf** – To be delivered in 2016, a new ferry wharf at Barangaroo will support regular services anticipated from the east and north, as well as the existing western ferry catchments
- **Cycling** – The roads within the Barangaroo South precinct will be low speed environments conducive to cycling movement. Lime Street will act as a low speed recreational cycle route, connecting R7 with the remainder of the precinct. Employees will use the basement bicycle parking facilities with access from Hickson Road and patrons will use bicycle rails in the public domain nearby to the R7 Building.
- **Taxi Ranks** – Taxi ranks will be provided throughout the precinct, including nearby on Shelley Street and Lime Street

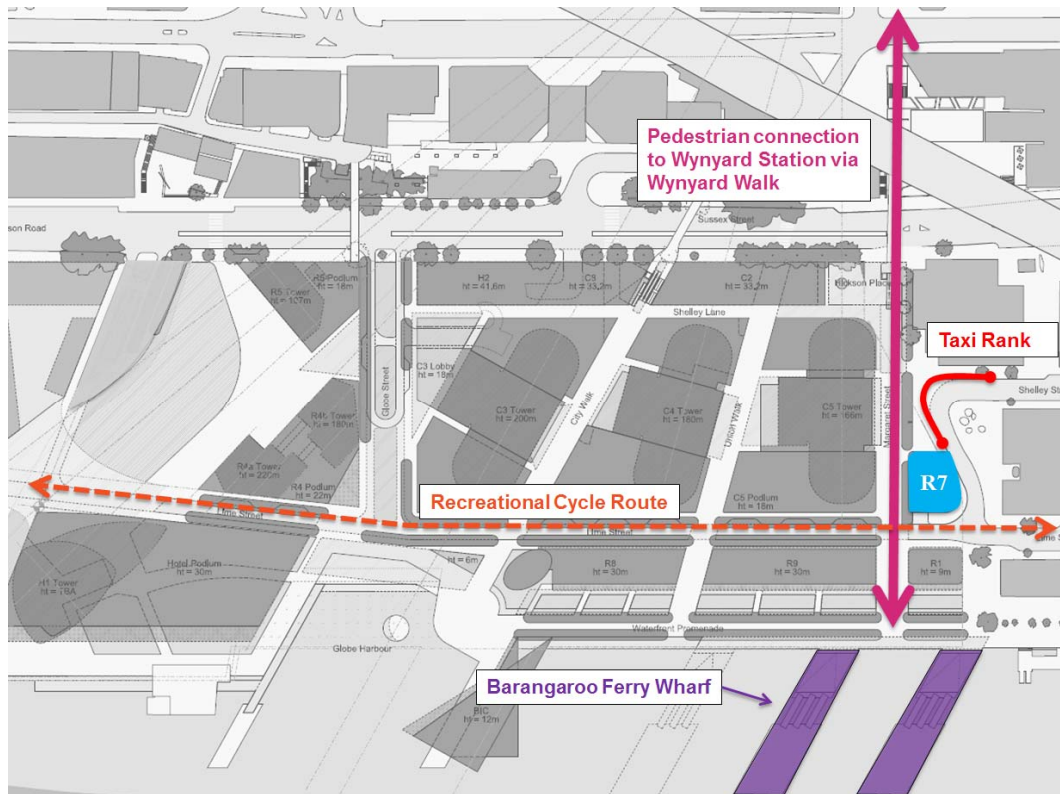


Figure 1 Transport Accessibility to the R7 Building

2.2 Car Parking

2.2.1 Retail Component

Condition C4(c) of the approved Barangaroo Concept Plan advises parking rates other than commercial or residential land uses are to be in accordance with City of Sydney (LEP 2005) car parking rates. Based on a site area of 894.5m², the 1,499m² of retail can provide up to:

$$\text{Max number of cars} = \frac{1,499 (\text{Total Other FSA})}{1,927 (\text{Total FSA})} \times \frac{894.5 (\text{Site Area})}{50} = 14 \text{ spaces}$$

Up to 14 car spaces may be provided as part of the overall retail provision on-site. The majority of visitors and workers arriving to the R7 building will travel by public transport, walking or cycling.

2.2.2 Commercial Component

Commercial parking is provided at 1/600m² GFA in accordance with the Barangaroo Concept Plan. 338m² of commercial office space is proposed within the R7 building, which results in a parking provision of one space.

2.3 Bicycle Parking

2.3.1 Retail Component

In line with Statement of Commitment No. 47 of the modified concept plan (MP06-0162 MOD6), off-street bicycle parking and shower facilities will be provided within buildings in line with the minimum rate for of Other Uses of 6 bicycle spaces for every 100 Other Uses car parking spaces. This equates to 0.66 bicycle spaces, rounded up to 1 bicycle space.

2.3.2 Commercial Component

In line with Statement of Commitment No. 47, off-street bicycle parking and shower facilities will be provided within buildings in line with the minimum rate for commercial uses of 4% of the commercial GFA/20m². Based on the proposed 200m² of commercial office space, 1 bicycle parking space is required.

2.3.3 Visitor Parking

Bicycle parking for visitors to the R7 building will be provided within the adjacent public domain (subject to separate approval). Provision for visitor bicycle parking in Barangaroo South is detailed in the Stage 1A public domain project application (SSD6303).

2.4 Traffic Generation

Traffic generation rates for the R7 building have been adopted based on those utilised in the Masson Wilson Twiney Modified Concept Plan (July 2008) which informed the September 2008 TMAP. A peak hour vehicle trip rate of 0.40 vehicles / car space for the retail component and 0.26 vehicles / car space for the commercial component has been utilised – **equating to only 6 cars during peak hours**. This traffic increase is considered negligible in the context of future traffic volumes in the CBD precinct and would not result in any additional impacts on surrounding intersections.

2.5 Road Network Impacts

A full assessment of future road network operations following the full development of the Barangaroo precinct has recently been outlined in the Concept Plan Modification for the site (MP06_0162 Mod 8). This assessment included the provision of the R7 building. The results of the modelling undertaken for this study forecast minimal changes in the operation of key intersections surrounding the site as a result of the concept plan modification (including the R7 building), compared with that forecast (and subsequently approved) in the Barangaroo TMAP Stage 1 published by the NSW Government in September 2008.

2.6 Service Vehicle Access

All deliveries and garbage collection associated with the R7 building will occur in the approved Stage 1A basement at a designated loading and pick-up area. This activity will be scheduled in as a component of all activity in the combined basement facility. Truck access to the basement is on Globe Street.

2.7 Emergency Vehicle Access

The R7 building is located adjacent to Lime Street which provides direct access for emergency vehicles.

2.8 Construction Traffic

2.8.1 Construction Routes

The predominant traffic routes that construction vehicles utilise to Barangaroo are presented in Figure 2 and Figure 3 on the following pages, and summarised below.

From the north and north-west:

- Harbour Bridge – Western Distributor – Bathurst Street – Liverpool Street – Harbour Street – Shelley Street – Erskine Street – Sussex Street (inbound); and
- Hickson Road – Napoleon Street – Kent Street – Western Distributor – Harbour Bridge (outbound)

This southbound truck activity would occur during peak hours as there is no access for general traffic from the Harbour Bridge to York Street between 6.30am – 9.30am (Monday – Friday).

From the west and south-west:

- Anzac Bridge – Western Distributor – Sussex Street – Hickson Road (inbound); and
- Hickson Road – Sussex Street – Western Distributor – Anzac Bridge (outbound).

From the south and east:

- Eastern Distributor – Cross City Tunnel – Western Distributor – Wattle Street – Western Distributor – Sussex Street – Hickson Road (inbound); and
- Sussex Street – Harbour Street – Cross City Tunnel (outbound).

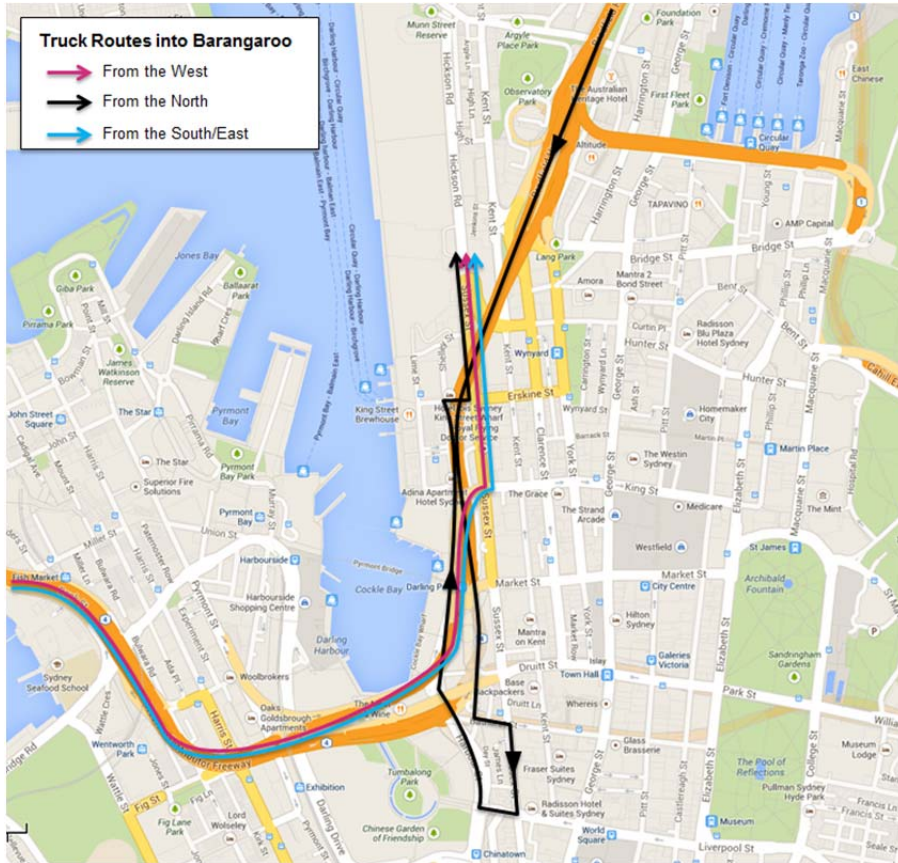


Figure 2 Inbound Traffic Routes to Barangaroo

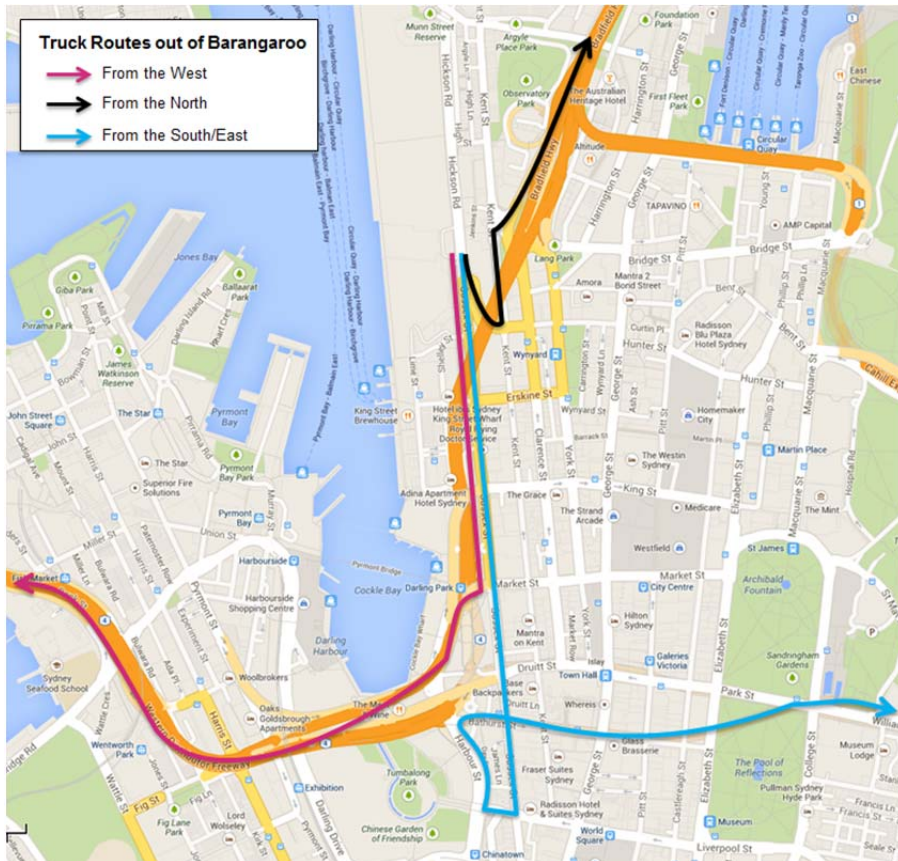


Figure 3 Outbound Traffic Routes from Barangaroo

2.8.2 Construction Timetable

The works associated with construction of the R7 building are expected to commence in June 2015. The worksite is anticipated to generate 8 construction vehicle movements per day, with no more than 2 per hour forecast to access the site. This represents a negligible increase in overall construction activity when considered in the context of ongoing works in the Barangaroo precinct. The total forecast construction traffic movements per hour for the following worksites are summarised in Figure 4:

- Basement Construction
- T2 Commercial Building
- T1 Commercial Building
- T3 Commercial Building
- R8/R9 Residential Buildings
- Concrete Batch Plant Operation
- Block 4 Remediation
- Block 5 Remediation
- Headland Park Main Works
- Wynyard Walk Bridge Works
- Barangaroo Central Waterfont Promenade
- City Walk Bridge
- R1 Building

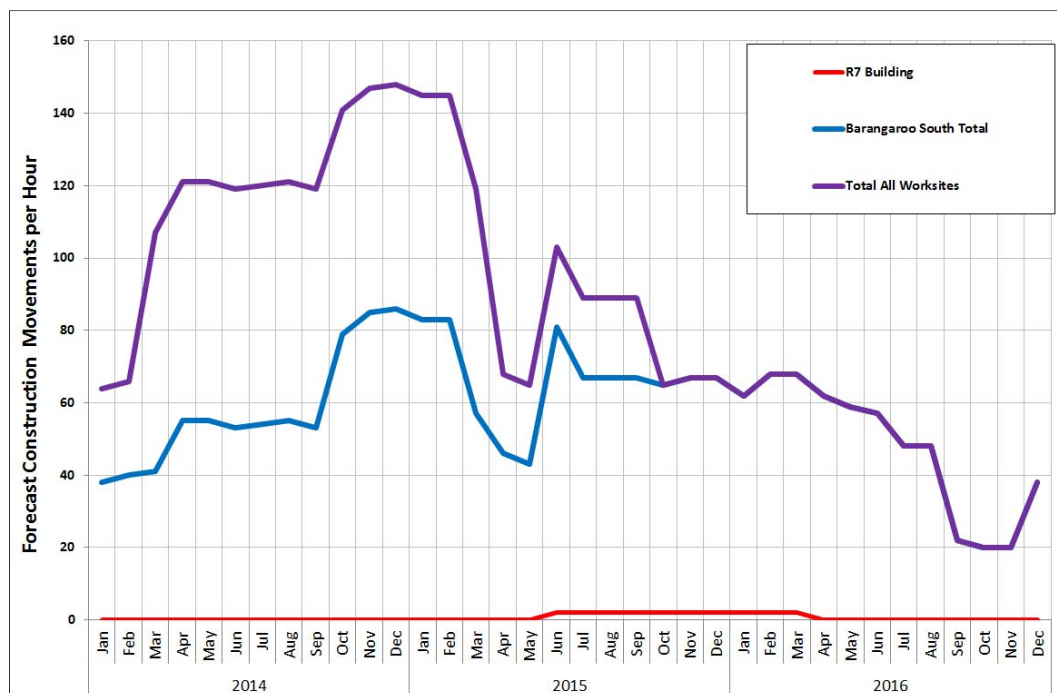


Figure 4 Cumulative Construction Activity

Note: Construction timeframes are indicative only and subject to change

Previous construction traffic management plans prepared for the Barangaroo South site have identified that the majority of construction vehicle activity takes place outside the commuter peak hours of 8am-9am and 5pm-6pm (see Figure 5). Most notably, only 2% of daily construction vehicle activity typically occurs in the critical PM peak hour (5pm – 6pm). During the morning peak period (8am – 9am) the road network supporting Barangaroo generally operates satisfactorily and requires no further works to accommodate the levels of construction traffic arising from the R7 building.

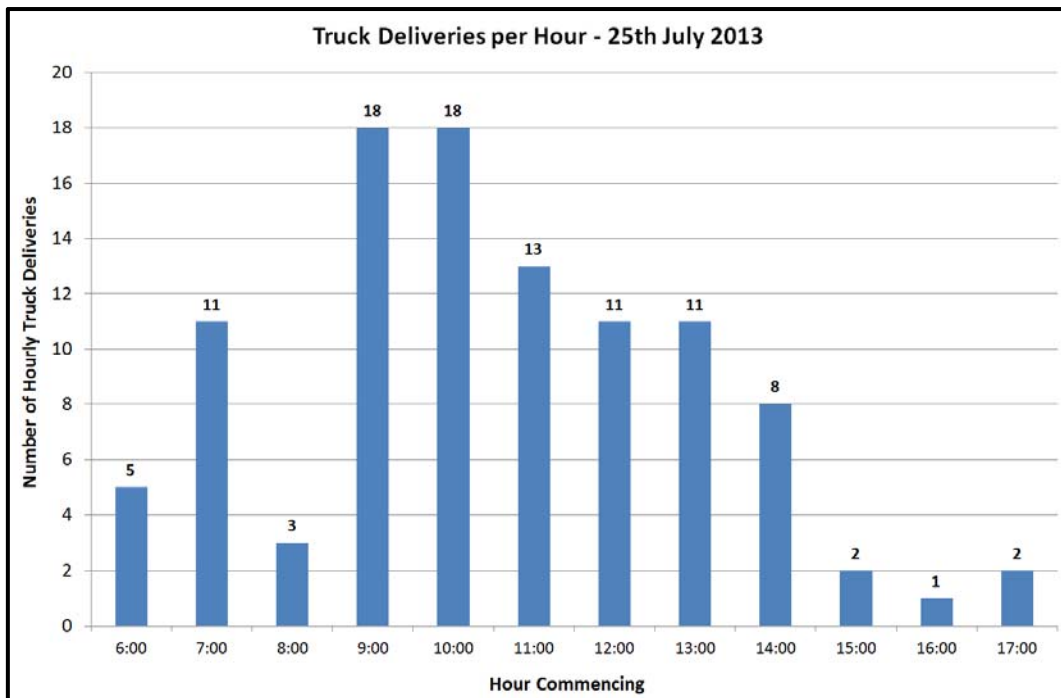


Figure 5 Existing Construction Activity for Barangaroo South (July 2013)

2.9 Travel Demand Management

Arup has previously prepared a series of Travel Demand Management Plans for the commercial and residential buildings in Barangaroo South. These plans outline measures to support sustainable modes of travel to Barangaroo and reduce car dependency.

Some travel demand measures relevant to the R7 building which could be implemented include:

- Providing travel information on any website of the R7 tenant, including links to public transport timetables and walking and cycling routes. This would inform the travel choice of visitors accessing the R7 building;
- Inform new staff members of travel options to the R7 building as part of their induction process, including access to bicycle parking and end of trip facilities;
- Participate in events such as Walk to Work and Ride to Work day, in conjunction with other tenants at Barangaroo South; and
- For staff who choose to drive to work, encourage car-pooling to increase vehicle occupancy rates.

3 Summary

This report has summarised the transport implications arising from the proposed development of a retail building (known as the R7 building) and associated works at Barangaroo South (SSD14_6623). The site is well located with respect to public transport, walking and cycling, supporting the objective of the Barangaroo development in encouraging travel via sustainable transport modes. The assessment concludes the existing and future transport network will adequately support the construction and operation of the proposed development.