# AMP Capital

# AMP Precinct

# Transport Assessment

Issue | 13 November 2012

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.

Job number 222700

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# 1 Introduction

## 1.1 Background

This transport assessment has been prepared in support of a formal request to the City of Sydney for an amendment to the Sydney LEP 2012 (SLEP) and Sydney DCP 2012 (DCP) and forms part of the Planning Justification Report submission.

The proposed amendments to the SLEP and DCP seek to facilitate a significant redevelopment of the AMP Circular Precinct by enabling a reduction of achievable development density on the Young and Loftus block and a corresponding increase in achievable development density on the Bridge Street and Alfred Street block. The project will enable a significant transformation, reinforcing the economic viability and functionality of one of the key precincts of the City.

## 1.2 Site Description

The AMP Circular Quay Precinct comprises the properties listed below:

- 33 Alfred Street
- 50 Bridge Street
- 5-7 Young Street (known as Hinchcliff House)
- 9-13 Young Street
- 15-17 Young Street
- 2-10 Loftus Street
- 12 Loftus Street (known as the Gallipoli Club)
- 16-20 Loftus Street

The precinct contains within it some streets and laneways which are intended to be retained and enhanced. The precinct also contains three heritage items.

## 1.3 The Master Plan Concept

The Master Plan Concept seeks to redistribute the built form within the Precinct from the Young & Loftus block to the Bridge & Alfred Street block in order to provide an enhanced urban outcome and provide an overall net public benefit.

The design of the Young & Loftus block will comprise development with diversity in form, scale and materiality, with a mix of uses potentially comprising residential, commercial, education, retail, bars and restaurants. The existing heritage items being Hinchcliff House and the Gallopoli Club will be retained and enhanced. Loftus Lane will be retained and ideally pedestrianised with activated frontages.

The existing overall floor area within the Young & Loftus block will be reduced as a result of reducing the current built form. The reduced built form on the 2-10 Loftus Street site will create a material public benefit by improving sunlight

access to Macquarie Place across the winter months as well as enhancing the juxtaposition with Customs House to the immediate north.

It is proposed to redevelop the Bridge & Alfred block with an extension to the existing 50 Bridge Street tower and improved integration with the original AMP Tower at 33 Alfred Street. The existing tower would be retained but substantially altered to create a landmark tower in the Sydney CBD. AMP Tower at 33 Alfred Street as a heritage item would be refurbished and enhanced with improved connections through to 50 Bridge Street. Improved loading and vehicle access arrangements are also proposed.

The proposal involves the transfer of all unrealised floor space within the Young & Loftus block (approximately 22,000sqm GFA) for development within the Bridge & Alfred block. This transferred floor space will be accommodated within the proposed tower extension and new built form connections through to 33 Alfred Street.

The regeneration project will cement the precinct as a corporate headquarters and will assist in the global competitiveness and identity of Sydney.

# 2 Existing Transport Conditions

## 2.1 Site Location

The AMP Precinct is located at the northern end of the Sydney CBD, approximately 100m from Circular Railway Station and Ferry Interchange.

For the purposes of this study, the precinct has been sub-divided into two distinct areas, those being:

- Bridge & Alfred (B&A) block
- Young & Loftus (Y&L) block

The location of the precinct in the context of the CBD area is presented in Figure 1.

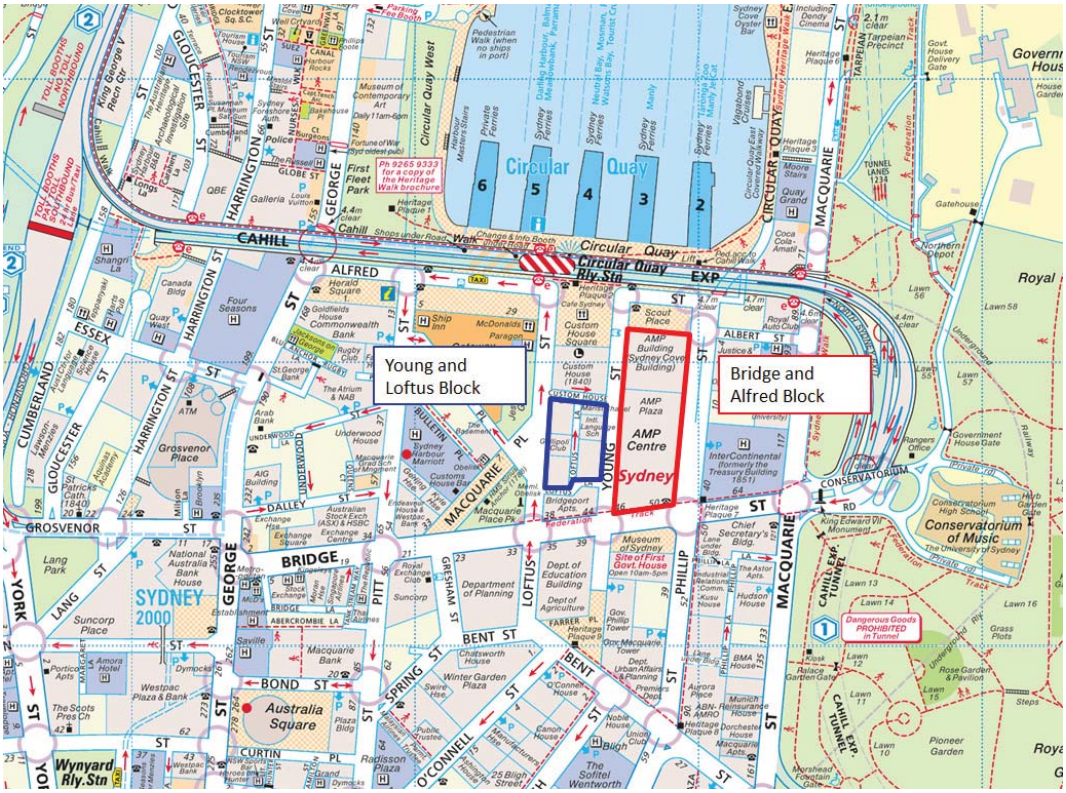


Figure 1 Site Location

## 2.2 Existing Travel Patterns

An assessment of existing travel patterns has been conducted using 2006 Journey to Work (JTW) data for the relevant travel zones[1] surrounding the AMP Precinct. The existing JTW mode share for all workers arriving to the AMP Precinct, compared with the average for the Sydney CBD, is summarised in Figure 2.

[1] Travel zones 0033 and 0034 utilised for the analysis

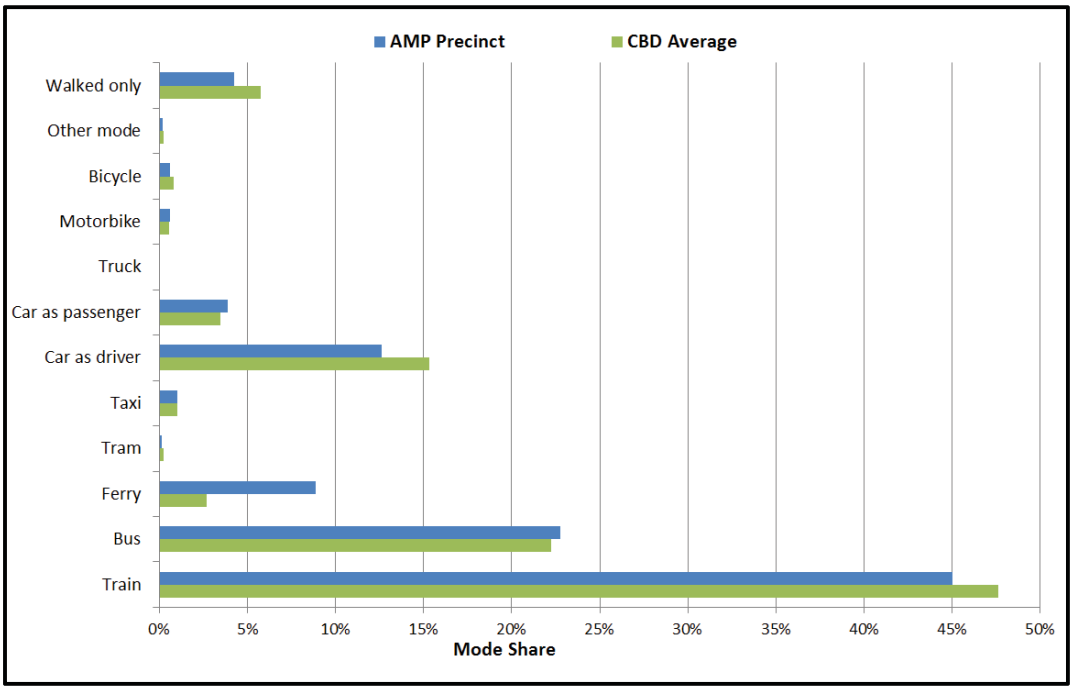


Figure 2 Existing Journey to Work Data for AMP Precinct

The data indicates the significant majority of people working in the AMP Precinct arrive via non-car modes of transport, mostly bus and train. The proportion of private vehicle trips is approximately 13% - lower than the average for the Sydney CBD. This reflects the good public transport availability in the precinct.

## 2.3 Vehicular Access

There are six existing vehicular access points into the AMP Precinct, three each for the Bride & Alfred and Young & Loftus sites. These are indicated in Figure 3.

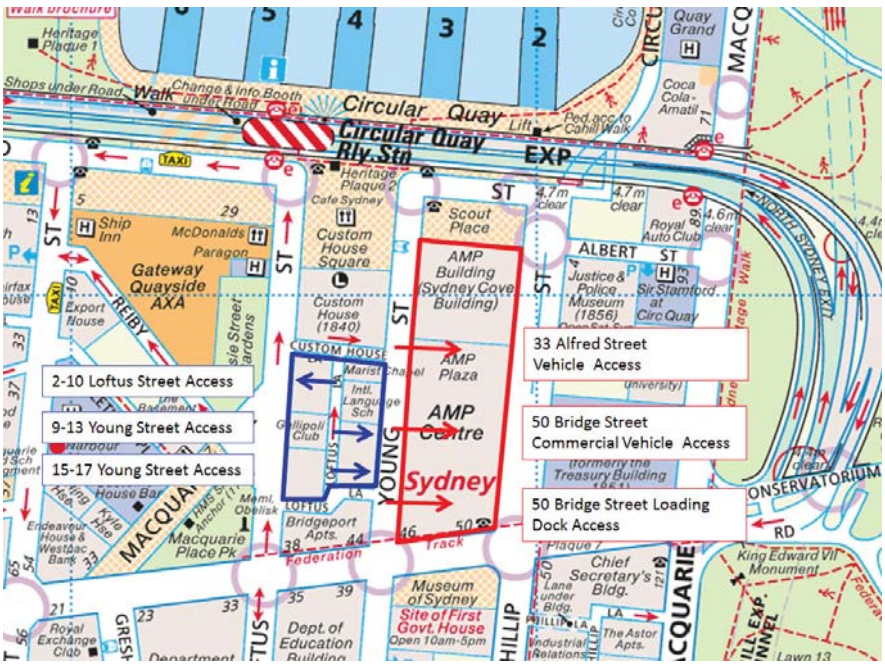


Figure 3 Existing Site Vehicle Access Points



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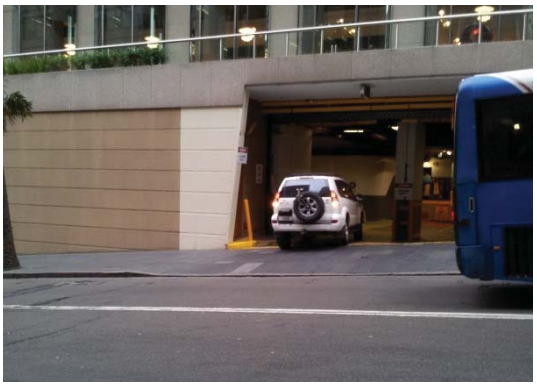
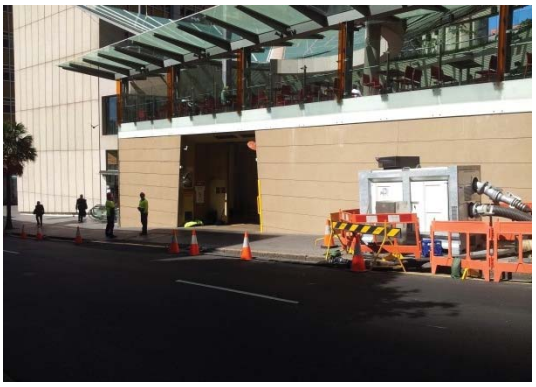
Photograph 1 50 Bridge Street Access



Photograph 2 33 Alfred Street Access



Photograph 3 2-10 Loftus Street Access


Photograph 4 15-17 Loftus Street Access

## 2.4 Parking

The AMP Precinct currently provides 289 basement car parking bays which are distributed between the two sites as follows:

- Bridge & Alfred block – 246 parking bays
- Young & Loftus block – 43 parking bays

## 2.5 Site Traffic Generation

Peak hour traffic counts were conducted on a typical weekday in October 2012 at the vehicle access locations into both the Bridge & Alfred and Young & Loftus blocks. These are summarised in Table 1.

Table 1 Existing Site Traffic Generation

| | Bridge & Alfred | | Young & Loftus | | Total Vehicle Movements | | |
|---|---|---|---|---|---|---|---|
| | In | Out | In | Out | In | Out | Total |
| AM Peak (8am -9am) | 52 | 4 | 10 | 0 | 62 | 4 | 66 |
| PM Peak (5pm – 6pm) | 5 | 44 | 0 | 9 | 5 | 53 | 58 |

The results of the survey show a maximum of 66 vehicles are generated in the peak hour across the two blocks. Based on the existing 289 car parking bays, the surveys indicate a peak hour traffic generation rate of 0.23 vehicle trips per car parking space.

## 2.6 Public Transport Access

The AMP Precinct is served by the high quality Circular Quay public transport interchange – which provides an environment where passengers may easily transfer between bus, rail and ferry modes.

Over 550,000 passenger journeys are made through the interchange every week[2]. A significant number of these journeys are made to access the AMP Precinct, with analysis indicating that public transport accounts for more ¾ of all work trips into the site (see Section 2.2). A summary of the key public transport modes serving the AMP Precinct is described below.

### 2.6.1 Train

Circular Quay Railway Station is located approximately 200m away from the precinct, equating to a walk of less than 5 minutes from the centre of the platform. The station is on the Bankstown, Airport/East Hills, Inner West and South lines, with services running every few minutes in each direction during the morning and afternoon peak hours.

### 2.6.2 Bus

The AMP Precinct is currently served by approximately 50 bus routes covering the Eastern Suburbs, Western Suburbs and Southern Region services. Western and Southern region inbound bus services use George Street via Town Hall and Wynyard to access Circular Quay, while Eastern region buses travel via Elizabeth Street. The existing bus arrangements provide set down and layover zones in Phillip Street, Young Street and Loftus Street to feed into pick up zones in Alfred Street in both directions as shown in Figure 4.

[2] Transport for NSW Press Release – May 2011


Figure 4 Existing Bus Arrangements

### 2.6.3 Ferry

Located within a 5 minute walk of the AMP Precinct, Circular Quay provides over eight regular ferry routes serving the Eastern Suburbs, lower North Shore (Manly, Taronga Zoo, Mosman and Neutral Bay) and wharves along the Parramatta River area. The journey to work mode share by ferry for the AMP Precinct is approximately 3 times higher than the Sydney CBD average – indicating it's convenience for site users.

## 2.7 Pedestrian Access

The AMP Precinct is well connected via a network of good quality, wide pedestrian footpaths with signalised crossings of main roads. The northern end of the site through the Circular Quay precinct and along Alfred Street is a pedestrianised environment conducive to walking trips. The wait times experienced at signalised crossings of collector roads such as Bridge Street and Macquarie Street can act as a barrier to pedestrian movement.

## 2.8 Cycling Network

There are a number of key cross-city cycle routes which form part of City of Sydney Council's new cycling network which provide linkages to the AMP Precinct. These routes, indicated in Figure 5, are as follows:

- Kent Street (separated, bi-directional cycleway)
- King Street (separated, bi-directional cycleway)
- Pyrmont Bridge (shared cycle path)
- Macquarie Street (mixed street environment)
- Alfred Street north (shared cycle path)
- College Street (separated, bi-directional cycleway)

In addition to the above facilities, the following routes are planned as part of Council's upcoming cycleway program construction:

- King Street between York Street and Phillip Street (separated, bi-directional cycleway)
- Macquarie Street between Bent Street and Alfred Street (shared cycle path)

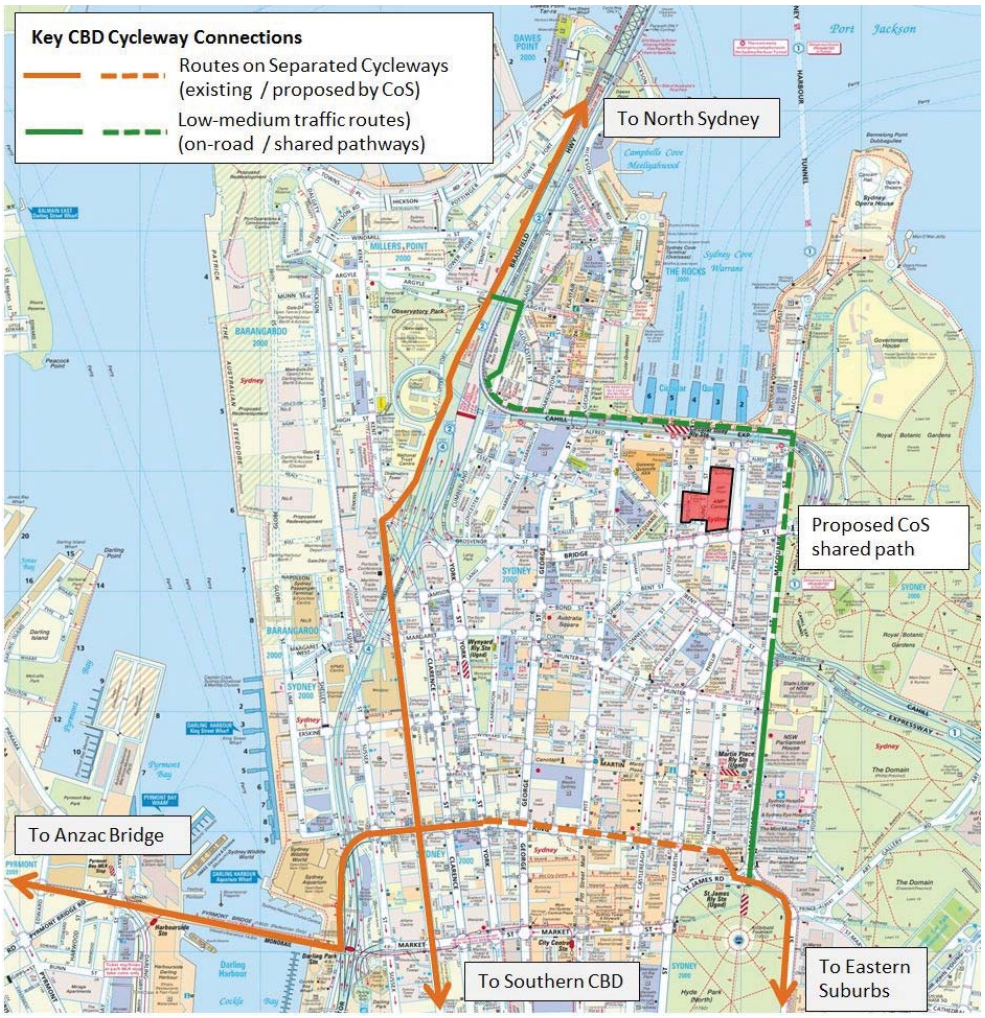



Figure 5 Existing Cycling Network

# 3 Transport Assessment

## 3.1 Indicative Land Use Mix

The traffic and access analysis contained in this report is based on the following land use mixes:

- **Bridge & Alfred Block:** Primarily commercial, retail, residential, bars or restaurants
- **Young & Loftus Block:** Mixed use development which may include residential, retail, commercial, hotel, serviced apartments, educational, bars or restaurants

## 3.2 Vehicular Site Access

### 3.2.1 Bridge & Alfred Block

The preferred vehicle access strategy for the Bridge & Alfred block is presented in Figure 6 and involves:

- An entry only via Young Street (located at the existing access point to 50 Bridge Street)
- An exit only via Phillip Street

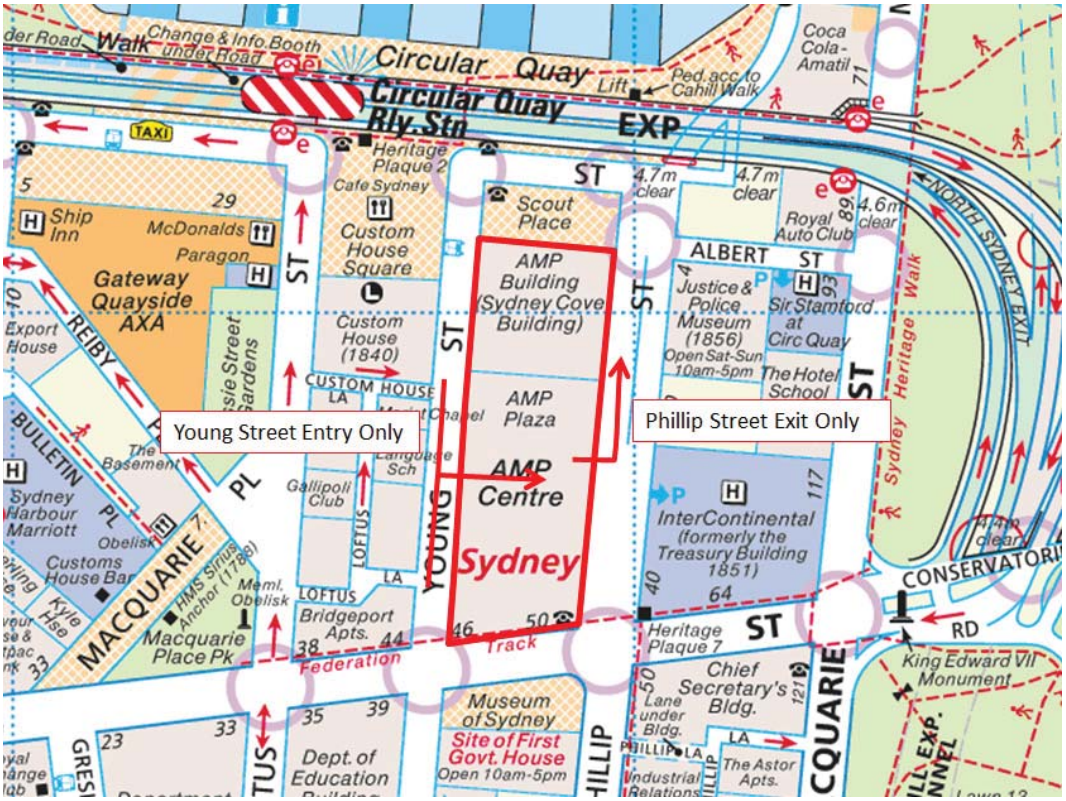



Figure 6 Preferred Bridge & Alfred Block Site Access

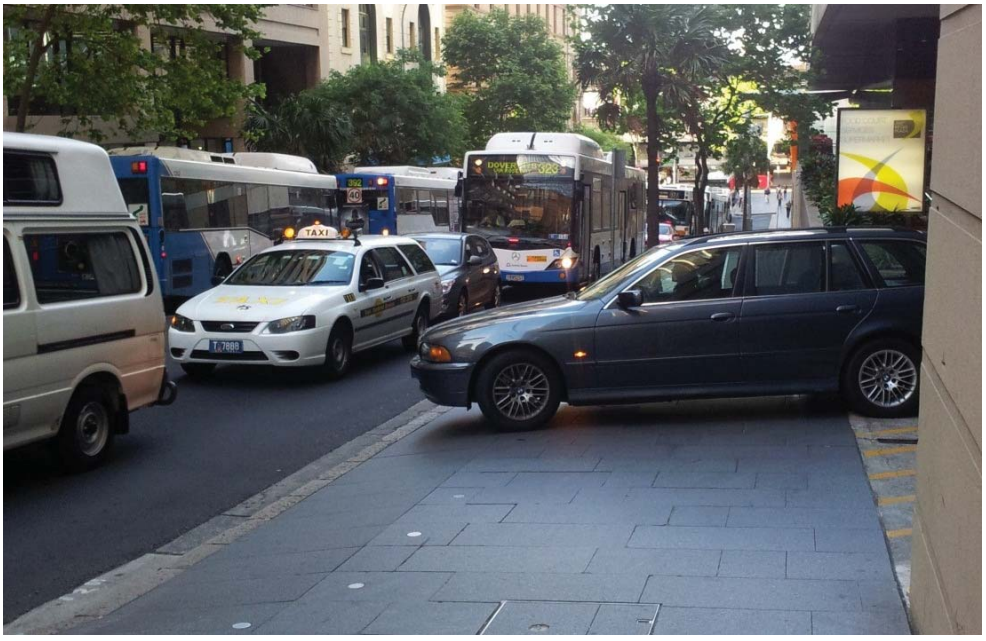
Due to the existing bus layover area in the middle of Phillip Street (see Photograph 5), it is likely a left only restriction would be implemented at the new egress location. Vehicles would travel north on Phillip Street before turning right onto Albert Street or continuing through onto Alfred Street.

Photograph 5 Phillip Street Bus Layover

The proposed egress location would require a change in vehicle and bus parking arrangements on Phillip Street. To accommodate the access point and provide an adjacent drop off location, it is likely between 2 and 3 bus bays would be lost. AMP Capital are currently exploring opportunities with Transport for NSW to improve bus operations in the Circular Quay precinct, which would include strategies to mitigate the impact of the potential loss of bus bays on Phillip Street.

This preferred access strategy provides an improvement in terms of traffic movement through the precinct, particularly in the evening peak hour on Young Street. Currently vehicle queues on Young Street can extend north from Bridge Street back to the traffic signals at Alfred Street in the PM peak. This prevents vehicles from entering the Young Street carriageway– often waiting across the footpath on and impeding pedestrian movement (see Photograph 6).

Photograph 6 Young Street Vehicle Egress – PM Peak



The preferred arrangement is unlikely to induce similar issues as vehicles will be turning left onto Phillip Street and travelling northbound - the counter-peak direction in the evening peak hour.

It should be noted that in the event the preferred access strategy is not feasible, the existing site access arrangement into the Bridge & Alfred block would be utilised. Further development of site access arrangements for the development will occur at a subsequent stage of the planning process – to be confirmed prior to the lodgement of the initial development application for the site.

### 3.2.2 Young & Loftus Block

The preferred vehicle access strategy for the Young & Loftus block involves the introduction of a single site entry and exit point at the western end of Loftus Lane as indicated in Figure 7.

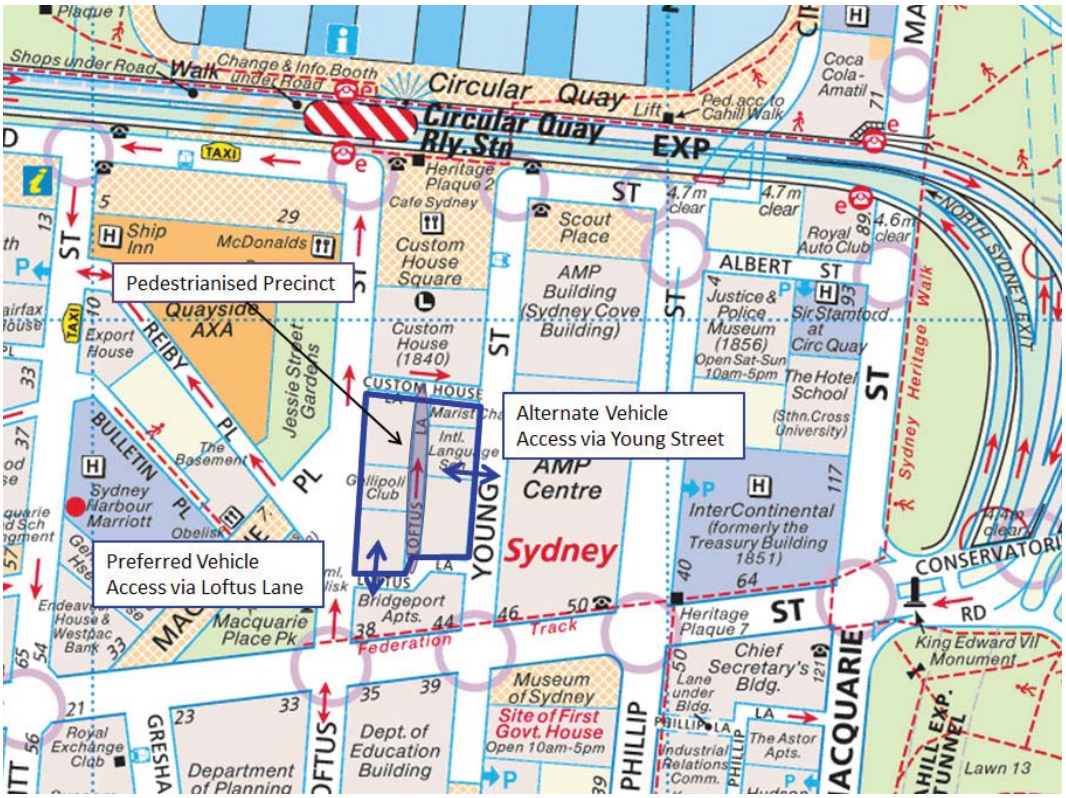



Figure 7 Preferred Young & Loftus Block Site Access

This arrangement provides an improvement on the existing situation in that it consolidates the number of site access points into the Y&L block from three down to one. As a component of the development, it is proposed to close Loftus Lane (south of Customs House) to vehicular traffic and create a pedestrianised precinct.

It should be noted that as the design of the Y&L block progresses, it may not be feasible to provide a vehicle access point on Loftus Lane. In the event that this occurs, an alternative access has been identified on Young Street.

The final vehicular access location into the Y&L block will be confirmed prior to the lodgement of the Stage 1 development application for the site.

# 3.3 Service Vehicle Access

## 3.3.1 Bridge & Alfred Block

The preferred service vehicle access strategy into the Bridge & Alfred block is to be via:

- Young Street (existing access point, dedicated for service vehicles)
- Phillip Street (new access point, shared with commercial vehicles)

This arrangement is indicated in Figure 8.

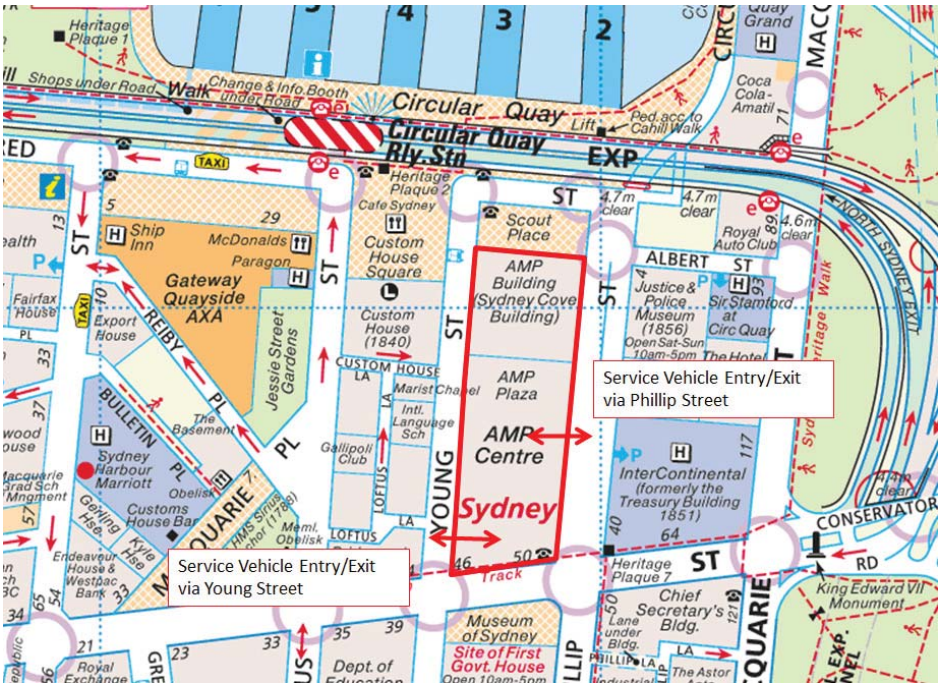



Figure 8 Proposed Service Vehicle Access – Bridge & Alfred

The proposal involves an improvement to existing loading arrangements. The existing loading dock requires trucks to reverse from Young Street due to the constrained size of the dock. This impedes the path of vehicles and pedestrians on Young Street as shown in Photograph 7.

Photograph 7 Existing Young Street Loading Arrangements


It is proposed to improve the operation of the loading dock by installing a truck turntable allowing trucks to enter and leave the site in a forwards direction. This arrangement is shown in Figure 9.


Figure 9 Young Street Loading Dock Arrangement

### 3.3.2 Young & Loftus Block

Service vehicle access into the Young & Loftus block will be shared with access for building tenants. As described in Section 3.2, this is envisaged to be located off the western end of Loftus Lane (preferred access) or via Young Street (alternate access).

## 3.4 Parking

The proposed car parking provision across the two blocks is outlined in Table 2.

Table 2 Proposed Car Parking Provision

| Block | Existing Parking Provision | Future Parking Provision | Difference |
|---|---|---|---|
| Bridge & Alfred | 246 | 246* | 0 |
| Young & Loftus | 43 | 69** | +26 |
| **Total** | **289** | **315** | **+26** |

* Based on current basement with no excavation

** Indicative value based on draft Sydney LEP2011 and draft Sydney DCP 2010

No change in the overall parking provision of 246 bays is proposed for the Bridge & Alfred block. Parking rates for the Young & Loftus block are to be based on the draft Sydney LEP 2011 and DCP 2010. For the purposes of this planning assessment 69 parking spaces are assumed to be located in the Young & Loftus block – an increase of 26 spaces compared with the existing situation.

Further development of appropriate parking rates for the precinct will occur at a subsequent stage of the planning process. The rates will be in line with relevant Council requirements and take into consideration the proximity of the precinct to public transport facilities.

## 3.5 Traffic Generation

Traffic generation rates are heavily influenced by factors such as public transport provision, availability and cost of parking, mixed use and complementary nature of various land use components and peak traffic generation hours.

The key factor however when considering future traffic generation for a development is the level of on-site parking provided. It is a widely accepted notion that the more parking a development provides, the higher the traffic generation level. Constraining parking so that employees must adopt alternative transport modes, particularly for sites with good public transport availability such as the AMP Precinct, reduces the number of peak hour vehicle trips.

Given the close proximity of the precinct to existing public transport services, as well as the constrained parking environment in CBD area, Arup undertook independent surveys for this assessment to obtain site specific traffic generation rates. These survey results are outlined in detail in section 2.5 of this report. The calculated traffic generation rate using the survey data is 0.23 peak hour vehicle trips per parking space.

For the purposes of this assessment, it has been assumed the additional 23 parking bays in the Young & Loftus block are to be occupied by commercial tenants. This is considered a worst case scenario as other possible land uses, particularly residential, generate lower levels of traffic in the peak hour compared with commercial uses.

Section 3.5 of the Roads and Traffic Authority (RTA) *Guide to Traffic Generating Developments* provides the following typical rates for commercial developments:

- A peak hour traffic generation rate of 2 vehicle trips / 100m$^2$ GFA *(from Section 3.5)*
- 2.5 off street parking spaces per 100m$^2$ GFA *(from Section 5.6)*

Using the rates above, this implies a peak hour traffic generation rate of 0.8 vehicle trips per space, significantly higher than the surveyed rate for the AMP Precinct. This lower rate surveyed is reflective of:

- The good public transport availability in the precinct;
- The constrained parking environment; and
- The fact that most employees with a parking space in the AMP Precinct generally start work earlier and finish later compared with a typical 9am-5pm office worker

The RTA guide notes that "*surveys of existing developments similar to the proposal, can also be undertaken and comparisons may be drawn*". The RTA Guide's standard trip rates are generally based on situations with unrestrained parking – not the case for the AMP Precinct. The surveyed generation rate of 0.23 trips / parking space is therefore considered appropriate for use in this analysis.

The proposal intends to increase the on-site parking provision from 289 spaces to 315 spaces. Using the surveyed generation rate, there would be an increase of 6 vehicle trips during the commuter peak periods. Even using the higher generation rate recommended in the RTA guide, there would be only an increase of 21 peak hour trips. In the context of existing traffic volumes in the northern CBD, this increase is considered negligible and would not impact on the operation of intersections surrounding the site.

# 3.6 Public Transport

## 3.6.1 Re-direction of Bus Services via Bridge Street

In September 2012 the NSW Government announced that more than 7% of current morning bus services coming over the Harbour Bridge will be re-directed via the Cahill Expressway and Bridge Street. This is indicated in Figure 10 below.


Figure 10 Re-directed bus route via Bridge Street

Approximately 60 morning peak hour buses will be impacted by this arrangement. Buses will travel down Bridge Street after exiting the Cahill Expressway before turning left onto Pitt Street.

This alternate arrangement will improve accessibility for bus users into the AMP Precinct and does not impact on the proposed vehicular access into either the Bridge & Alfred or Young & Loftus blocks.

## 3.6.2 CBD Light Rail

The recently released draft NSW Long Term Transport Masterplan identifies George Street as a future light rail corridor through the CBD, terminating at the northern end of Loftus Street. This will provide another transport alternative for people arriving to the precinct.

The preferred route for the future light rail project as presented in the draft Long Term Transport Masterplan is shown in Figure 11.

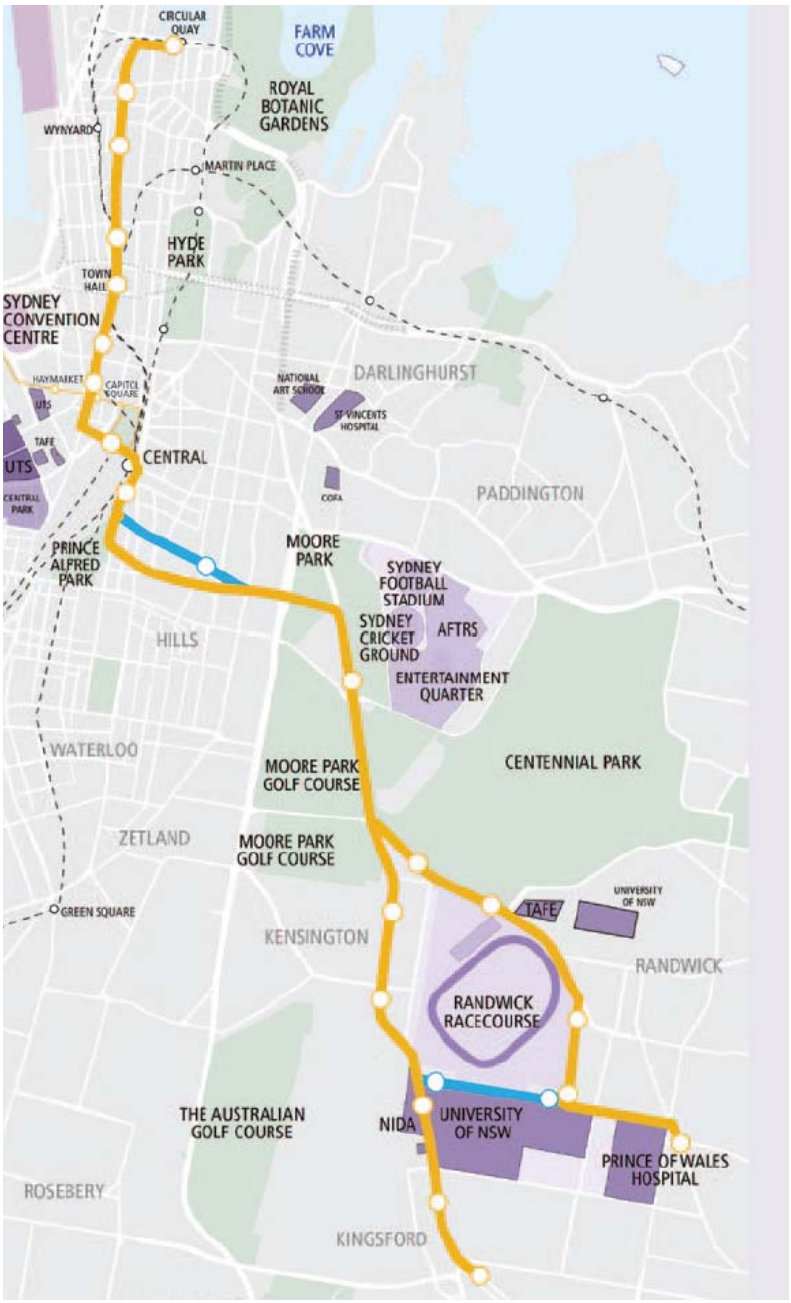



Figure 11 Proposed Light Rail Corridor

Source: Draft NSW Long Term Transport Masterplan (Transport for NSW, 2012)

## 3.7 Walking and Cycling

A key objective of the AMP Precinct masterplan is to activate street frontages and improve connectivity between the two blocks - creating a pedestrian friendly environment.

Options are currently being investigated with Transport for NSW to reduce the impact of bus operations on Young Street. The preferred option involves the potential removal of 3-4 bus layover spaces in the top section of Young Street and the introduction of kerb extensions to create an improved pedestrian crossing movement. This option, shown in Figure 12, provides opportunities to restrict general traffic intrusion into the Circular Quay precinct.

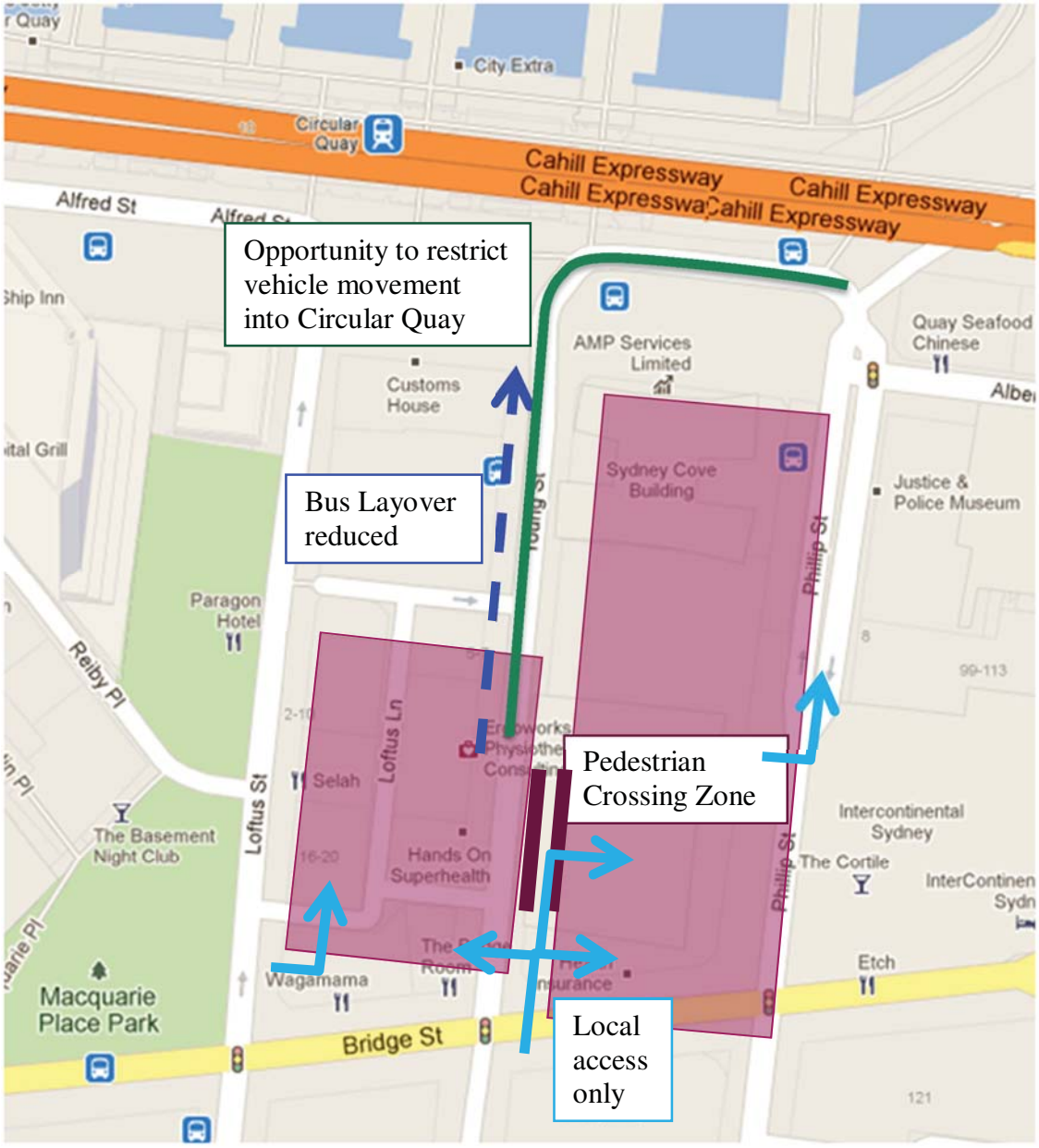



Figure 12 Pedestrian Crossing Zone on Young Street



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Following the introduction of a future light rail line on George Street, it is envisaged that the majority of the western and southern region bus services will terminate or be redirected at Central or Town Hall stations – not continuing on to Circular Quay. This will provide opportunities for an improved pedestrian environment in the AMP Precinct. With the potential removal of the bus layover areas on Loftus Street, the section of road between Alfred Street and Bridge Street could become a pedestrianized precinct, allowing for improved access for cyclists and pedestrians.

The existing cycling network as described in Figure 5 provides good access for cyclists into the AMP Precinct from different areas across the Sydney CBD. The proposed cycle network in the AMP Precinct itself aims to provide direct linkages with these routes and complement the City's existing and planned network of high quality cycleway facilities.

The key routes proposed as part of the bicycle strategy for the AMP Precinct are presented in Figure 13 and are as follows:

- Loftus Street (potential shared pathway following completion of light rail terminus and closure to vehicular traffic)
- Young Street (low speed mixed traffic environment)
- Loftus Lane (low speed mixed traffic environment and shared path which connects the Young & Loftus and the Bridge & Alfred blocks)

These proposed routes provide connections with existing and proposed facilities on Alfred Street, Macquarie Street and Phillip Street, as shown in the figure below

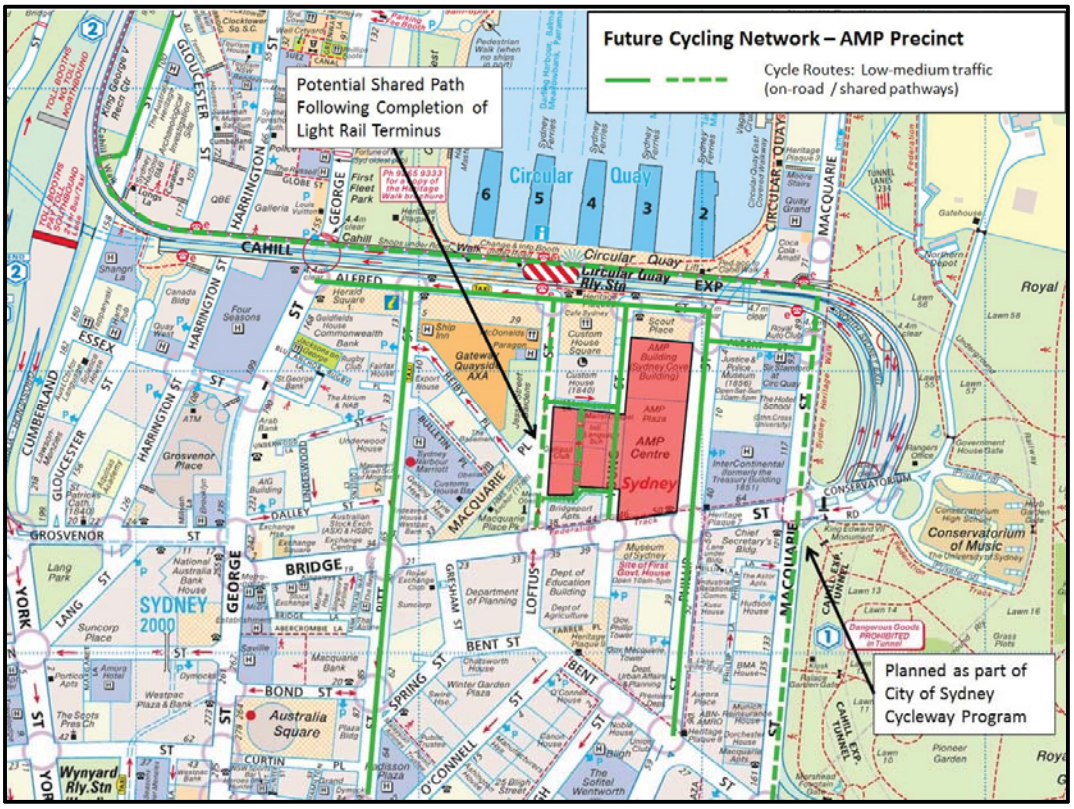


Figure 13 Proposed Cycling Network



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# 4 Conclusions

This report describes the existing situation and proposed transport access scheme for the proposed amendment to the Sydney LEP 2012 (SLEP) and Sydney DCP 2012 (DCP) which will facilitate the redevelopment of the AMP Circular Precinct. It provides a preliminary assessment of site access and parking rates, public transport, walking and cycling.

The preferred access strategy consolidates the number of vehicle access locations while maintaining existing bus and pedestrian movement through the precinct. There will be opportunities to activate the AMP Precinct through future changes to bus operations in the area – particularly with the introduction of a future CBD light rail line.

The proposal involves a minor increase in peak hour traffic of between 6 and 21 vehicles which is considered negligible and would not impact on the operation of intersections surrounding the site. Parking rates for the precinct would be provided in accordance with the draft Sydney LEP 2011 and DCP 2010.

It is concluded that, subject to further analysis to be conducted prior to the submission of a development application for the site, the traffic impacts arising from the proposed redevelopment are acceptable and can be appropriately managed.