

Attachment A10

Traffic and Transport Assessment

MIRVAC PROJECTS PTY LTD

TRANSPORT ASPECTS OF PLANNING
PROPOSAL FOR PROPOSED
COMMERCIAL DEVELOPMENT,
55 PITT STREET, SYDNEY

DECEMBER 2019

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I. INTRODUCTION

- I.1 Colston Budd Rogers & Kafes Pty Ltd has been commissioned by Mirvac Projects Pty Ltd to review the transport aspects of the planning proposal for a proposed commercial development at 55 Pitt Street, Sydney. The site is located within the block bounded by Pitt Street to the east, Underwood Street to the north and west, and Dalley Street to the south, as shown in Figure I.
- I.2 The site is currently occupied by a number of buildings on land parcels including:
- 37-47 Pitt Street;
 - 49-57 Pitt Street;
 - 6-8 Underwood Street;
 - 6 Dalley Street (Telstra Exchange building); and
 - 8-14 Dalley Street (Ausgrid substation site).
- I.3 The proposed commercial development (known as 55 Pitt Street), located on the amalgamated site, will provide some 70,000m² GFA of commercial office space and ground floor retail, with basement parking and loading facilities.
- I.4 As part of the proposed development, the existing public car park located at 37 Pitt Street and the existing tenant car park located at 51 Pitt Street will cease to operate. The Telstra Exchange building, at 6 Dalley Street, and the Ausgrid substation site, at 8-14 Dalley Street, will be retained. Access to the Telstra Exchange building will be relocated from the northern boundary to the western boundary of the exchange, to and from Underwood Street.
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- 1.5 The main pedestrian access to the site will be provided to/from Pitt Street. A through site pedestrian link will be provided along Queens Court between Dalley Street and Underwood Street.
- 1.6 The transport aspects of the proposed planning proposal are reviewed in the following chapter.

2. TRANSPORT ASPECTS OF THE PLANNING PROPOSAL

2.1. The transport aspects of the planning proposal development are reviewed through the following sections:

- site location and road network;
- scale of proposed development;
- other developments;
- public transport;
- pedestrians and cyclists;
- travel access guide;
- parking provision;
- access arrangements;
- internal layout and servicing;
- traffic generation and effects; and
- summary.

Site Location and Road Network

2.2. The site is located within the northern part of the Sydney CBD on the block bounded by Pitt Street to the east, Underwood Street to the north and west, and Dalley Road to the south, as shown on Figure 1. The site has frontage to these roads and is currently occupied by a number of commercial buildings, the Telstra Exchange building and the Ausgrid substation site. The 37 Pitt Street site also contains a public car park with access from Underwood Street and the 51 Pitt Street site contains a tenant car park with access from Queens Court.

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- 2.3. The site has good access to existing public transport and is close to major public transport nodes within the CBD. Wynyard, Martin Place and Circular Quay transport interchanges are within close walking distance to the site. These are major stations on the Cityrail network and provide two of the major stops within the CBD. This makes the site conveniently accessible to train, bus and ferry public transport services.
- 2.4. The site is located close the Sydney CBD and South East Light Rail (SLR) route (currently under construction). When completed this will connect Circular Quay with Kingsford and Randwick, via Central. Light rail stations will be located in George Street and Alfred Street, in close proximity to the site. Furthermore, as part of the future Sydney Metro, a station will be provided at Martin Place, in close proximity to the site.
- 2.5. Numerous bus services operate along streets within the vicinity of the site, with major bus facilities located at Wynyard Park and Circular Quay bus terminus. As part of the Sydney light rail, all bus routes were removed from George Street in October 2015 and relocated to other routes within the CBD. Bus services provide links to areas north, east, inner west and south. The site is also close to taxi ranks in Pitt Street and Alfred Street.
- 2.6. The road network in the vicinity of the site includes Pitt Street, George Street, Bridge Street, Alfred Street, Underwood Street, Dalley Street and Queens Court. Pitt Street, located adjacent to the eastern boundary of the site, provides a one-way southbound carriageway between Alfred Street and King Street. It generally provides two traffic lanes with kerbside parking permitted clear of intersections. The intersections of Pitt Street with Bridge Street and Alfred Street are controlled by traffic signals.
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- 2.7. George Street is located to the west of the site and provides the main north-south traffic route through the CBD. It generally provides a four lane undivided carriageway between Lower Fort Street to the north and Railway Square to the south. In the vicinity of the site it generally provides two traffic lanes in each direction with additional lanes for turning vehicles. The intersections of George Street with Bridge Street, Grosvenor Street, Essex Street and Alfred Street are traffic signal controlled.
- 2.8. As part of the Sydney light rail, George Street will be pedestrianized between Hunter Street and Bathurst Street, and general traffic will be limited for the remainder of the road. North of Hunter Street, two-way traffic arrangements will be maintained with one traffic lane in each direction (between Alfred Street and Hunter Street), in addition to the light rail alignment in the centre of George Street.
- 2.9. With the construction of the Sydney light rail, Alfred Street will be closed to general traffic and Pitt Street will have no through traffic from George Street. Traffic will circulate from Loftus Street and Reiby Place for access to Pitt Street. Pitt Street north of Bridge Street will be retained as one-way southbound.
- 2.10. Bridge Street is south of the site and provides an east-west connection between George Street and Macquarie Street. It generally provides a two-way undivided four lane carriageway with kerbside parking permitted clear of intersections with additional lanes for turning vehicles. The intersections of Bridge Street with George Street and Pitt Street are traffic signal controlled.
- 2.11. Alfred Street, at the northern end of Pitt Street, is a two-way street west of Pitt Street, between Pitt Street and George Street, and is one-way westbound (bus and taxis only) east of Pitt Street. With the construction of the Sydney light rail,
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Alfred Street will be closed to general traffic and Pitt Street will have no through traffic from George Street. The traffic effects of these changes to the road network are being assessed by the transport assessment for the light rail project.

- 2.12. Underwood Street, located adjacent to the northern boundary of the site, provides a one-way connection between Pitt Street and Dalley Street. All vehicles entering Underwood Street from Pitt Street are required to exit onto Pitt Street, via Dalley Street. It generally provides service access to adjacent developments and access to basement car parks beneath the buildings located within the block bounded by George Street, Bridge Street, Pitt Street and Alfred Street.
- 2.13. Dalley Street south of the site provides an undivided two-way carriageway between George Street and Pitt Street. The intersections of Pitt Street/Underwood Street, Pitt Street/Dalley Street and George Street/Dalley Street are priority controlled intersections, with Pitt Street and George Street having priority. Some on-street parking and loading are permitted on these streets, clear of intersections.
- 2.14. Queens Court is located in the south western corner of the site and provides a two-way service lane servicing adjacent buildings.

Scale of Development

- 2.15. The proposed development will provide some 70,000m² GFA of commercial office space and ground floor retail, with basement parking and loading facilities.
- 2.16. As part of the proposed development, the existing public car park located at 37 Pitt Street and the existing tenant car park located at 51 Pitt Street will cease to operate. The adjacent Telstra Exchange building and Ausgrid substation site will
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be retained. Access to the Telstra Exchange building will be relocated from the northern side to the western side of the exchange.

- 2.17. The main pedestrian access to the site will be provided to/from Pitt Street. A through site pedestrian link will be provided along Queens Court, between Dalley Street and Underwood Street.

Other Developments

- 2.18. Other developments in the vicinity of the site include:

- One Circular Quay by Yuhu Group at 1 Alfred Street, 19-31 Pitt Street and 31a Pitt Street, Sydney;
- Poly Centre by Poly Australia at 210-220 George Street, Sydney; and
- Circular Quay Tower by Lend Lease at 174-182 George Street and 33-35 Pitt Street, Sydney.

- 2.19. The traffic report⁽¹⁾ prepared for One Circular Quay assessed the development comprising 190 residential units, a 182 room hotel development and some 760m² ground floor retail space within two towers. Basement parking and servicing will be provided beneath the two towers with access provided from Pitt Street. Construction of the development has commenced.

⁽¹⁾ "Wanda Sydney Project, Traffic and Transport Assessment", 26 October 2016, Arup Pty Ltd.

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- 2.20. The traffic report⁽²⁾ prepared for Poly Centre assessed the development comprising 18,330m² GFA of commercial and 1,386m² GFA ground floor retail space, with basement parking and a lower ground level loading dock. Construction of the development has commenced.
- 2.21. The planning proposal for the Circular Quay Tower development assessed the development providing for up to 70,000m² GFA of commercial area, including retail area beneath the commercial tower. Basement parking and servicing will be provided with access via a combined entry/exit driveway at the eastern end of Underwood Street, west of Pitt Street.

Public Transport

- 2.22. The site is well served by public transport, as shown on Figure 2. It is located close to Circular Quay and Wynyard railway stations. These are major stations on the Cityrail network and provide two of the major stops within the CBD. All suburban rail services to and through the City stop at one or both of these stations. The site is also accessible to ferry services that operate from Circular Quay.
- 2.23. Rail services operate on the Airport and East Hills Line, Bankstown Line, Eastern Suburbs and Illawarra Line, Inner West Line, North Shore and Western Line, Northern Line and Southern Line. The proposed Sydney Metro is currently under construction with an estimated completion date of 2024. When completed this will significantly increase the capacity of the rail network to/from the CBD.

⁽²⁾ "Proposed Commercial Office Development, 210-220 George Street Sydney, Assessment of Traffic and Parking Implications", November 2017, Transport and Traffic Planning Associates.

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- 2.24. Numerous bus services operate along many of the streets within the vicinity of the site, with major bus facilities located at Circular Quay and Wynyard Park. Bus services provide links to areas north, east, inner west and south. A number of services also operate along Pitt Street, York Street, Clarence Street, Phillip Street and Elizabeth Street. As part of the CBD light rail, all bus routes were removed from George Street and relocated to alternative routes within the Sydney CBD.
- 2.25. The CBD light rail operates along George Street to the east of the site. This service provides a high frequency, high capacity service connecting Circular Quay with Kingsford and Randwick, via Central. The CBD light rail is within close walking distance of the site and provides a convenient and accessible public transport service access to the CBD.
- 2.26. The proposed development provides opportunities to strengthen demand for these public transport services. Public transport services offer viable alternatives to travel by modes other than car.
- 2.27. The site is therefore located to provide employees with a choice of mode of travel. This is consistent with government objectives of:
- providing accessibility to employment by public transport;
 - providing choice of transport mode and reducing dependence solely on cars for travel purposes;
 - restricting the amount of on-site parking. This will encourage public transport use and increase the proportion of journey to work trips by public transport;
 - being located within the CBD, which is readily accessible by public transport;
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- moderating growth in demand for travel and the distance travelled, especially by car;
 - increasing employment density to provide potential customers for the existing public transport services and hence supporting their efficient and viable operation;
 - encouraging cycling by providing safe and secure bicycle parking, including the provision of lockers and change facilities for employees and visitors;
 - providing a restrictive parking provision, consistent with appropriate City of Sydney Council/RMS controls and the objective of reducing traffic generation.

Pedestrians and Cyclists

2.28. The proposed development includes integration with the existing pedestrian and cycle links in the area. Existing pedestrian connections in the vicinity of the site, include:

- pedestrian footpaths along Pitt Street, Bridge Street, George Street, Dalley Street, Underwood Street and Alfred Street;
 - pedestrian paths along adjacent laneways, including Underwood Street, Queens Court and Crane Place;
 - through site pedestrian connection at 200 George Street;
 - at grade pedestrian crossings at the intersection of George Street/Grosvenor Street/Bridge Street and Pitt Street/Bridge Street.
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- 2.29. The City of Sydney bicycle network, as shown on Figure 3, includes a mix of on-road cycleways and shared cycle route. In the vicinity of the site these routes include Pitt Street, George Street, Bridge Street and Alfred Street.
- 2.30. The proposed development will be designed to provide good pedestrian access to the surrounding CBD. Pedestrian connections through the site linking to Pitt Street, Underwood Street and Dalley Street will be enhanced to improve pedestrian accessibility in the area. A through site pedestrian link will be provided along Queens Court between Dalley Street and Underwood Street. This will be designed to integrate with the existing pedestrian infrastructure. An undercover colonnade will be provided along the development frontage in Underwood Street (east-west), with footpath upgrades in Underwood Street (north-south) and adjacent to Telstra.
- 2.31. To support accessibility by bicycles, appropriate on-site bicycle parking and end-of-trip facilities will be provided in accordance with the requirements of the LEP and to support the City of Sydney Council's new network which provide linkages to the site along Pitt Street.

Travel Access Guide

- 2.32. To encourage travel modes other than private vehicle, a travel demand management approach should be adopted, through a travel access guide to meet the specific needs of the site, including visitors and employees. Once the tenants of the proposed development are known, the specific requirements and needs of the employees/visitors will be incorporated in a work place travel plan and transport access guide to support the objectives of encouraging the use of public transport.
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- 2.33. The principles of the work place travel plan and travel access guide will include the following:
- ❑ encourage the use of public transport, including rail services through Wynyard and Circular Quay, light rail services and bus services through the CBD;
 - ❑ work with public transport providers to improve services;
 - ❑ encourage public transport by employees and visitors through the provision of information, maps and timetables;
 - ❑ raise awareness of health benefits of walking (including maps showing walking and cycling routes, including through and adjacent to the site);
 - ❑ encourage cycling by providing safe and secure bicycle parking, including the provision of lockers and change facilities; and
 - ❑ provide a restrictive parking provision consistent with Council's controls and the government's objective of reducing traffic generation.
- 2.34. The travel access guide should be developed in accordance with the principles identified by TfNSW and RMS, and distributed with marketing material for the proposed development. The travel access guide would assist in delivering sustainable transport objectives by considering the means available for reducing dependence solely on cars for travel purposes, encouraging the use of public transport, cycling and walking and supporting the efficient and viable operation of public transport services.
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Parking Provision

- 2.35. The City of Sydney LEP 2012 specifies a maximum on-site parking provision for commercial developments of one space per 50m² of site area. With a site area of 4,295m², the allowable on-site parking provision would be a maximum of 86 spaces. Parking will be provided in accordance with this requirement, which is less than the existing parking provision on the site.
- 2.36. The City of Sydney DCP 2012 has the following requirements for bicycle and motorcycle parking for commercial developments:-
- Bicycle parking
 - one space per 150m² GFA for employees;
 - one space per 400m² GFA for visitors;
 - one space per 200m² GFA for retail employees;
 - one space per 300m² GFA for retail visitors;
 - Motorcycle parking
 - one car space for every 50 car parking spaces or part thereof.
- 2.37. On-site bicycle and motorcycle parking, including end trip facilities for employees and visitors, will be provided in accordance with the above requirements. Visitor bicycle parking will be distributed around the site in accessible locations.
- 2.38. With regards to service vehicles, Council's DCP 2012 for commercial developments requires one space per 3,300m² GFA for the first 50,000m², then 50% of this rate for the balance above 50,000m² and less than 100,000m², or part thereof.
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- 2.39. The on-site loading bays will comprise a mix of courier, small commercial and medium rigid trucks, located within the basement loading dock.

Access Arrangements

- 2.40. Vehicular access to the proposed development has been investigated via Queens Court and Dalley Street. The location of the driveway has been investigated taking into consideration traffic arrangements along these roads, site constraints as a result of the proposed development in terms of the provision of basement car parking and loading facilities, and traffic and pedestrian implications in the vicinity of the site on Queens Court and Dalley Street. With the proposed basement car parking and loading facilities, the preferred location for the access driveway is via Dalley Street.
- 2.41. The main benefits for providing the access driveway onto Dalley Street are:
- provides the most efficient design for a two-way vehicular ramp for cars and service vehicles;
 - provides for improved pedestrian amenity along Queens Court;
 - allows for appropriate sight lines and passing opportunities for vehicles turning into and out of the site.
- 2.42. An access driveway to/from Queens Court is not feasible given the length of the ramp required to access the basement loading dock, impact of the bend in the ramp and the height clearance required for service vehicles to get under the ground floor slab and impact on the loading dock layout as a result of the location of the ramp from Queens Court.
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- 2.43. Vehicular access to the basement parking and loading facilities is therefore proposed via a combined entry and exit driveway onto Dalley Street. The driveway will provide for cars and service vehicles to enter and exit the site in a forward direction, with appropriate passing opportunities. The detailed design and final configuration of the access driveway, including internal circulation and ramp connections to the basement levels, will be developed in association with the Stage 2 development application.
- 2.44. The proposed driveway will be located clear of adjacent intersections, and will be provided in accordance with the Australian Standard for Parking Facilities Part 1: Off-street car parking (AS2890.1-2004) and Part 2: Off-street commercial vehicle facilities (AS2890.2-2018).
- 2.45. The driveway will be designed to cater for the swept path of service vehicles ranging from small commercial vehicles to medium rigid trucks. The driveway and ramp accessing the basement car park and loading dock will be designed in accordance with the Australian Standards and will provide appropriate sight lines for traffic and pedestrian movements along Queens Court and Dalley Street.
- 2.46. As part of the proposed development, the existing driveway to the Telstra Exchange building, at 6 Dalley Street, will be relocated from the northern boundary to the western boundary of the exchange, to and from Underwood Street. The driveway will be located clear of the bend in Underwood Street and will provide for service vehicles, including small rigid trucks to enter and exit the site in a forward direction, via the use of a turntable. The driveway will be designed in accordance with the Australian Standards and will provide appropriate sight lines for traffic and pedestrian movements along Underwood Street and to/from the existing development at 200 George Street.
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Internal Layout and Servicing

- 2.47. Car parking for the proposed development will be provided in basement parking levels beneath the building. The basement levels will be linked to the proposed Dalley Street access driveway via internal ramps. Within the basement levels, parking space dimensions, aisle widths, ramp widths, ramp grades and transitions, column locations and height clearances will be provided in accordance with the Australian Standard AS2890.1-2004 and AS2890.6-2009.
- 2.48. The Australian Standard AS2890.1-2004 requires car parking to be provided with dimensions of 2.4 metres wide by 5.4 metres long for commercial tenant spaces. Spaces located adjacent to structures should be wider by 300mm to facilitate door opening, and columns should be set back 750mm from the front of the space. Circulation aisles, with parking on both sides, are required to be a minimum of 5.8 metres wide and 6.1 metres wide with parking on one side and structure on the other. Dead end aisles should incorporate a one metre extension to allow appropriate access to end parking spaces.
- 2.49. The Australian Standard AS2890.6-2009 requires disabled parking to be provided with dimensions of 2.4 metres wide by 5.4 metres long, with an adjacent 2.4 metre wide shared zone for wheelchair access. Height clearance within the car park should be a minimum of 2.5 metres above disabled parking spaces and 2.2 metres elsewhere within the car park.
- 2.50. The service area and loading docks located within the basement level I will be designed to cater for service vehicles ranging from couriers and small commercial vehicles to medium rigid trucks with a height clearance of 3.8 metres. A height clearance of 3.8 metres is typical of commercial developments in the city, including the recently completed development at 200 George Street. The height
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clearance will cater for the range of service vehicles that will service the development, including Council's waste vehicle.

- 2.51. The detailed design and final configuration of the basement car park and loading dock arrangements, including internal circulation and ramp connections to the basement levels, will be developed in association with the Stage 2 development application.

Traffic Generation and Effects

- 2.52. Traffic generated by the proposed development will have its greatest effects during weekday morning and afternoon peak periods when it combines with other traffic on the surrounding road network. Typically tenant car parks within the CBD generate between 0.2 to 0.3 trips per spaces during peak periods. The proposed development would therefore generate some 15 to 25 vehicles per hour two-way (in plus out) during peak periods.
- 2.53. The existing public car park located at 37 Pitt Street (91 parking spaces) and the existing tenant car park located at 51 Pitt Street (19 parking spaces) will cease to operate and will be replaced by the proposed development. These existing car parks have a combined traffic generation of some 20 to 30 vehicles per hour at peak times. As noted above, the existing parking provision on the site is more than the proposed provision. Hence the proposed development will have a similar or lesser traffic generation to the existing development on the site.
- 2.54. With regards to the Lend Lease Circular Quay Tower development, the traffic report estimated that the proposed development would generate some 20 to 30 vehicles per hour two-way (in plus out) during peak periods. However, the
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existing public car park located on the site, which will be replaced by the proposed development, currently has a similar traffic generation.

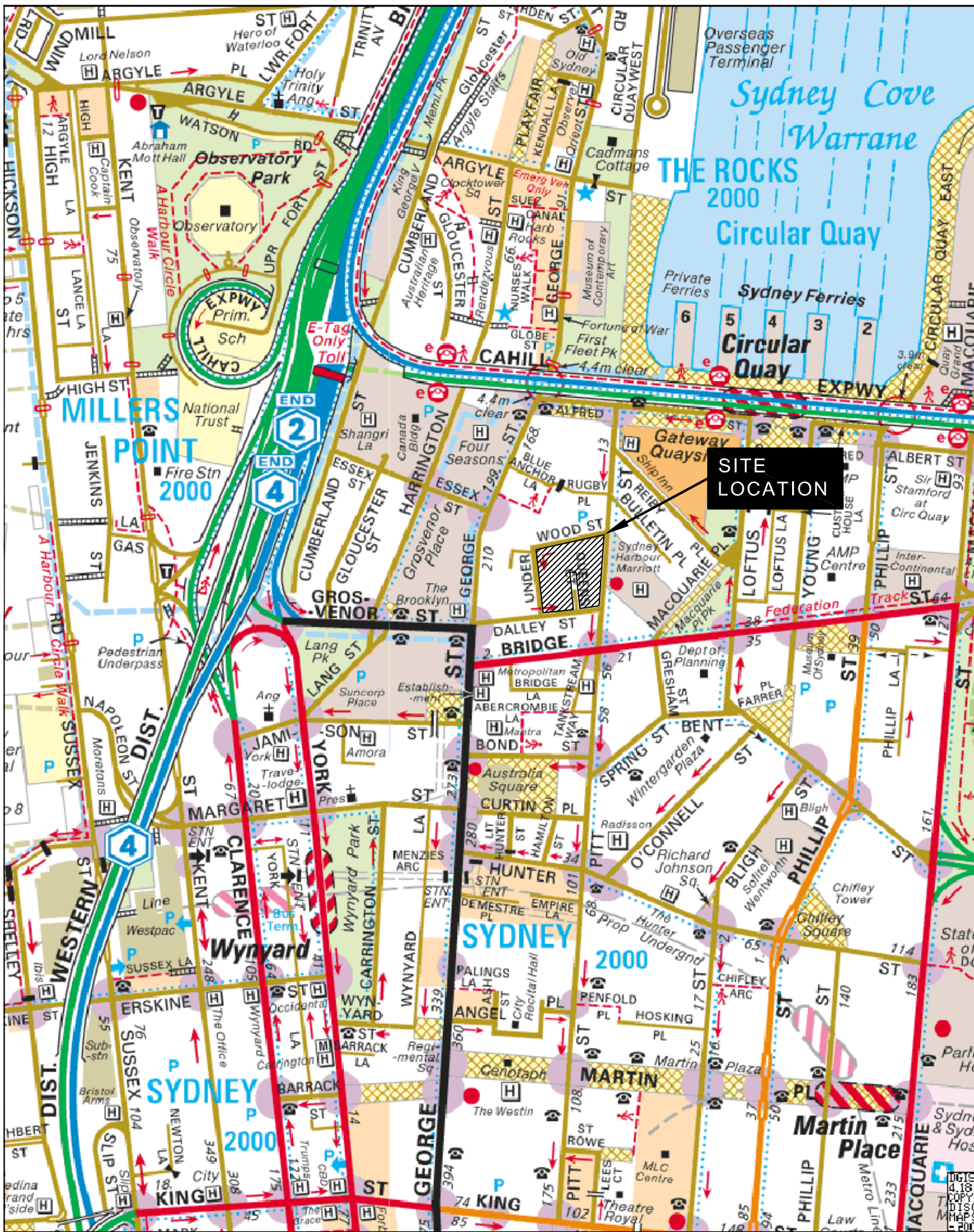
- 2.55. With regards to the Poly Centre development, the traffic report estimated that the proposed development would only generate some 10 vehicles per hour two-way (in plus out) during peak periods, compared to the traffic generation of some 50 vehicles per hour two-way of the existing commercial car park located on the site, which will be replaced by the proposed development.
- 2.56. Hence, the Mirvac, Lend Lease and Poly Centre developments will have a less of similar traffic generations to the existing developments on the three sites. Therefore traffic effects will be better or similar to today.
- 2.57. With regards to the One Circular Quay development, the traffic report estimated that the proposed development would generate some 70 vehicles per hour two-way (in plus out) during peak periods. This is a low traffic generation, which would have minimal effects.

Summary

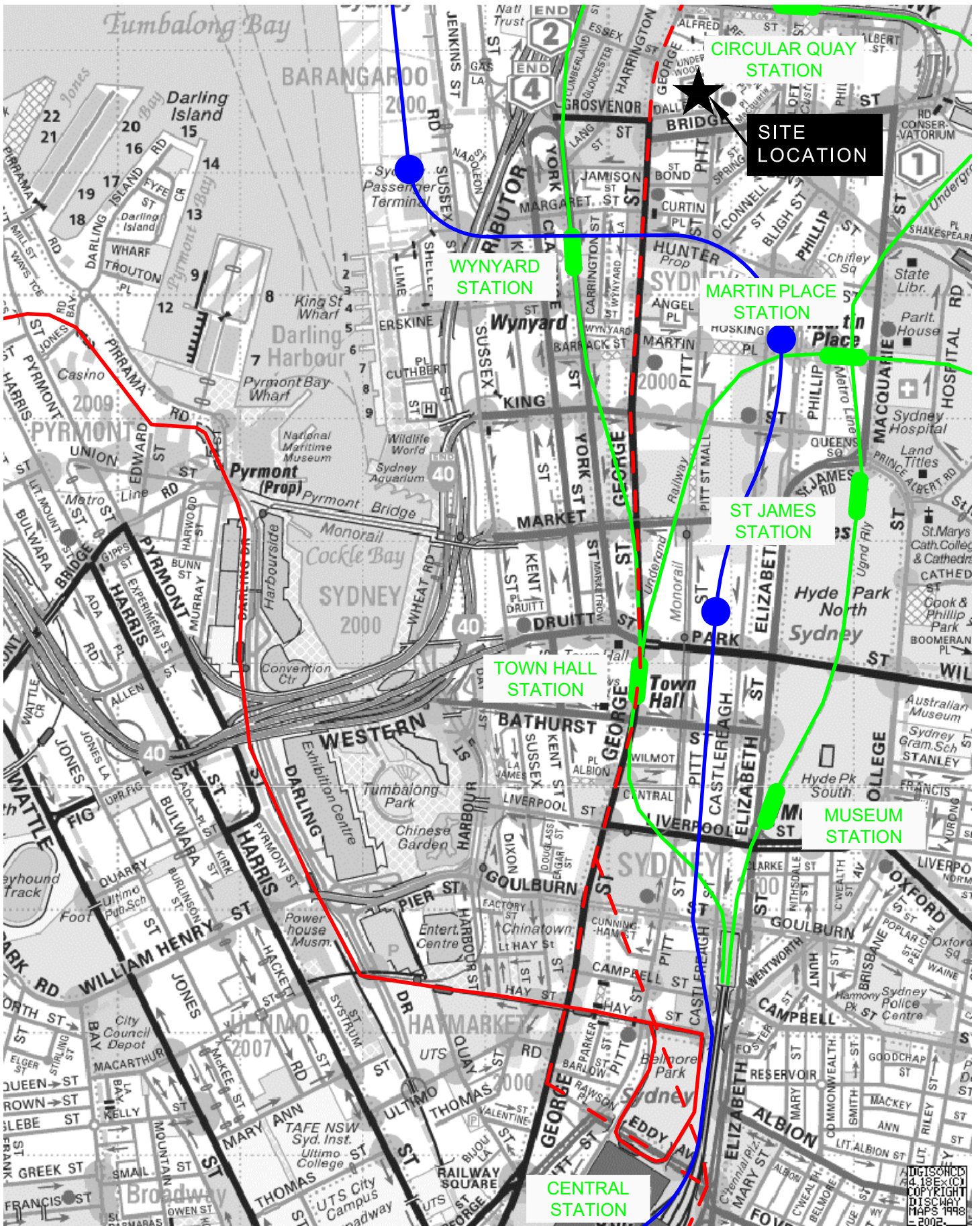
- 2.58. In summary, the main points relating to the transport aspects of the planning proposal are as follows:-
- i) the proposed development will provide some 70,000m² GFA of commercial office space and ground floor retail, with basement parking and loading facilities;
 - ii) the existing public car park located at 37 Pitt Street and the existing tenant car park located at 51 Pitt Street will cease to operate and will be replaced by the
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proposed development. The adjacent Telstra Exchange building and the Ausgrid substation site will be retained. Access to the Telstra Exchange building will be relocated from the northern side to the western side of the exchange;

- iii) the proposed development is highly accessible to existing public transport services and is consistent with government policy objectives to reduce private car travel and encourage public transport use;
 - iv) the proposed development will result in improved pedestrian connectivity in the vicinity of the site;
 - v) a travel access guide will be implemented for the site in association with the proposed development;
 - vi) parking provision (including bicycle and motorcycle parking) will be provided in accordance with Council's DCP 2012 requirements;
 - vii) access arrangements, internal circulation and servicing will be provided in accordance with the Australian Standards AS2890.1-2004, AS2890.2-2018 and AS2890.6-2009;
 - viii) the Mirvac, Lend Lease and Poly Centre developments will have a less of similar traffic generations to the existing developments on the three sites. Therefore traffic effects will be better or similar to today; and
 - ix) the One Circular Quay development will have a low peak period traffic generation of some 70 vehicles per hour, which would have minimal effects.
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Location Plan

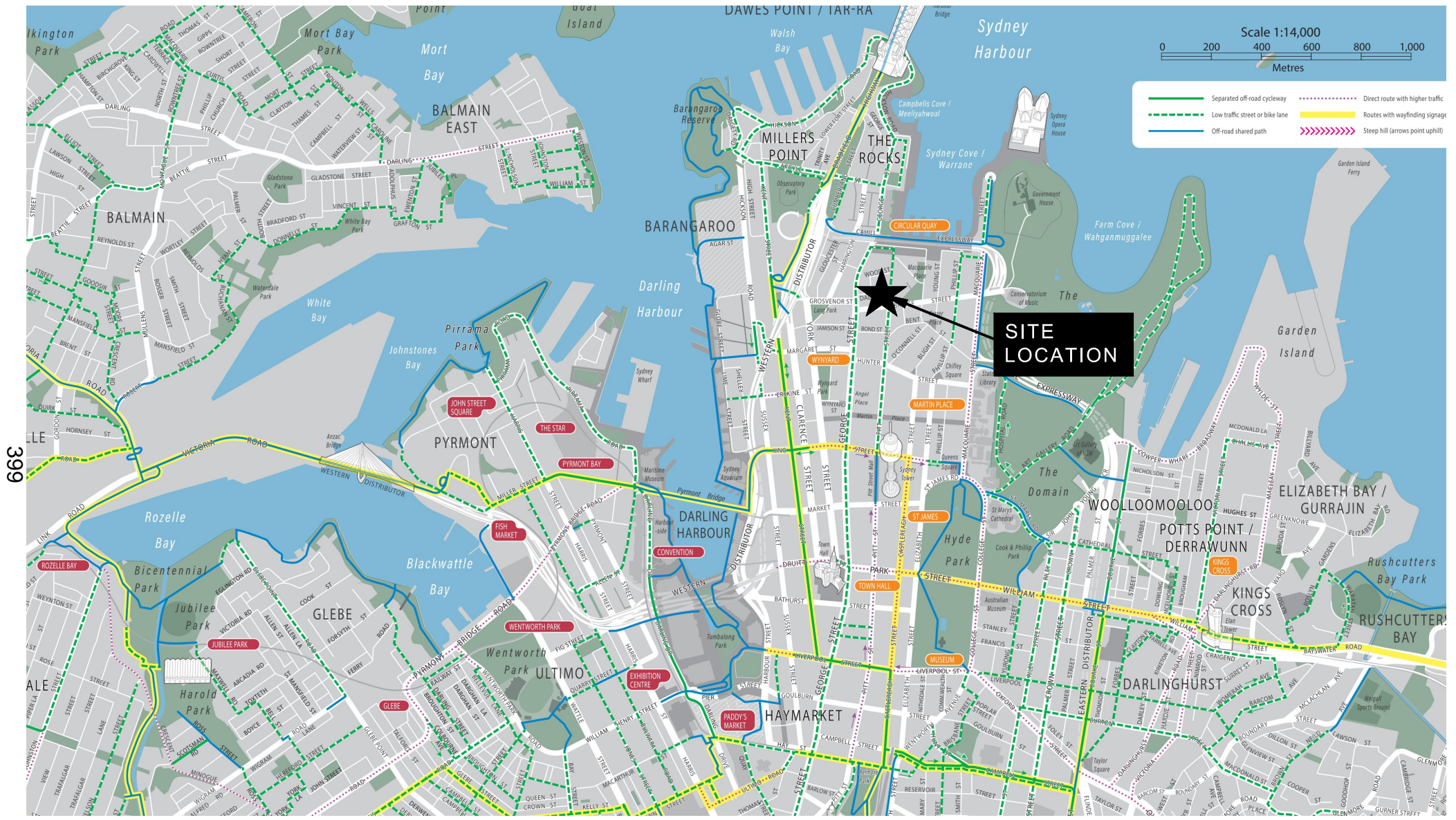


- Light Rail
 - - - CBD Light Rail
 - Railway Line
 - Proposed Sydney Metro
- Public Transport**

Colston Budd Rogers & Kafes Pty Ltd

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Figure 2



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Bicycle Network