CITY OF SYDNEY

16 October 2023

At the conclusion of the Corporate, Finance, Properties and Tenders Committee

Transport, Heritage and Planning Committee

Agenda

1. **Confirmation of Minutes**
2. **Statement of Ethical Obligations and Disclosures of Interest**
3. **Erskineville and Alexandria Traffic and Transport Study**
4. **Post Exhibition - Planning Proposal - 90 and 100-104 Brougham Street, Potts Point - Sydney Local Environmental Plan 2012 Amendment**
5. **Fire Safety Reports**

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1. Register to speak by calling Secretariat on 9265 9702 or emailing secretariat@cityofsydney.nsw.gov.au before 10.00am on the day of the meeting.

2. Check the recommendation in the Committee report before speaking, as it may address your concerns so that you just need to indicate your support for the recommendation.

3. Note that there is a three minute time limit for each speaker (with a warning bell at two minutes) and prepare your presentation to cover your major points within that time.

4. Avoid repeating what previous speakers have said and focus on issues and information that the Committee may not already know.

5. If there is a large number of people interested in the same item as you, try to nominate three representatives to speak on your behalf and to indicate how many people they are representing.

Committee meetings can continue until very late, particularly when there is a long agenda and a large number of speakers. This impacts on speakers who have to wait until very late, as well as City staff and Councillors who are required to remain focused and alert until very late. At the start of each Committee meeting, the Committee Chair may reorder agenda items so that those items with speakers can be dealt with first.

Committee reports are available at www.cityofsydney.nsw.gov.au

Item 1.
Confirmation of Minutes

Minutes of the following meetings of the Transport, Heritage, Environment and Planning Committee are submitted for confirmation:

Meeting of 11 September 2023

Item 2.

Statement of Ethical Obligations

In accordance with section 233A of the Local Government Act 1993, the Lord Mayor and Councillors are bound by the Oath or Affirmation of Office made at the start of the Council term to undertake their civic duties in the best interests of the people of the City of Sydney and the City of Sydney Council and to faithfully and impartially carry out the functions, powers, authorities and discretions vested in them under the Local Government Act 1993 or any other Act, to the best of their ability and judgement.

Disclosures of Interest

Pursuant to the provisions of the Local Government Act 1993, the City of Sydney Code of Meeting Practice and the City of Sydney Code of Conduct, Councillors are required to disclose and manage both pecuniary and non-pecuniary interests in any matter on the agenda for this meeting.

In both cases, the nature of the interest must be disclosed.

This includes receipt of reportable political donations over the previous four years.

Item 3.

Erskineville and Alexandria Traffic and Transport Study

File No: X083814

Summary

This report summarises outcomes of community consultation on the Alexandria and Erskineville Traffic and Transport Study.

On 29 March 2021, Council resolved to undertake an area wide Transport Study (Study) in Alexandria and Erskineville following the opening of the Westconnex M8 St Peters Interchange and representations from the community.

The City engaged a specialist consultant in April 2021 to carry out the Study. The Study area is bounded by Henderson Road, Railway Parade, Swanson Street, Copeland Street, Mitchell Road, Sydney Park Road, Euston Road, McEvoy Street and Botany Road (refer to Attachment A) and builds on the previous 2018 Alexandria Local Areas Traffic Management Plan.

The Study especially reviewed Park Street, Henderson Road, Mitchell Road, Maddox and Harley Streets where residents have previously raised particular concerns.

The City presented the findings of the Study at community forums on 22 February 2023 and 21 September 2023 and carried out community consultation on the proposed treatments from 1 May 2023. The community consultation period was extended to 30 June 2023. Notification letters were sent to all properties within the study area, and the consultation was published on Sydney Your Say webpage. In addition, 7,000 letters were distributed.

This report seeks Council's endorsement for the preferred walking, cycling and traffic calming treatments in Erskineville and Alexandria.

Pedestrian, cycling and traffic calming projects are prioritised for funding taking into consideration safety issues and traffic conditions, walking and cycling access, and the overall community benefit of the project.

Based on current priorities and availability of funding and resources, if supported, the design and construction of the recommended treatments are expected to be carried out between financial years 2023/24 and 2026/27 at the earliest.

Recommendation

It is resolved that Council:

(A) receive and note the community engagement outcomes on the Erskineville and Alexandria Traffic and Transport Study, as summarised in Attachments B, C, D and E to the subject report;

(B) note that City staff will undertake further investigations, design and community consultation, and liaise with Transport for NSW where applicable, on the following treatments:

(i) traffic calming scheme in Maddox Street, taking into consideration feedback from the community engagement, including the preference for chicanes, suggestions for improved pedestrian access at the intersections, and the need to allow for a future planned cycleway link along Maddox Street;

(ii) upgrade the intersection of Mitchell Road, Harley Street and Ashmore Street to a signalised intersection;

(iii) improvements to either make Harley Street one-way eastbound from Mitchell Road to McEvoy Street; or a half closure to traffic at the intersection of Harley Street and McEvoy Street so that vehicles cannot enter via McEvoy Street but maintaining left out to McEvoy Street;

(iv) continuous footpath treatment on Belmont Street at Fountain Street;

(v) intersection narrowing and kerb build-outs at Dadley Street intersections with Renwick Street and Lyne Street;

(vi) identify excessively wide intersections in the study area and design and implement treatments to address these issues progressively as funding allows;

(vii) review positions and visibility of signage and line marking along Mitchell Road between Fountain Street and Anderson Street, including side streets; and

(viii) widening the footpath on both sides of Copeland Street between Fox Avenue and Clara Street, subject to Transport for NSW approval;

(C) note that traffic signals at the intersection of Mitchell Road and Maddox Street will be delivered as part of the development of the adjacent Ashmore Precinct development site;

(D) take no further action with regard to the following traffic management treatments based on the community engagement outcomes:

(i) full closure of Maddox Street to traffic at Euston Road or a no left turn from Euston Road into Maddox Street; and

(ii) full closure of Harley Street to traffic at either Mitchell Road or McEvoy Street;

(E) note that traffic counts will be undertaken in Park Street over three months after the completion of the current roadworks to monitor vehicle volumes, types, speeds and movements, and whether any further review is needed;

(F) note that traffic counts will be undertaken in Mitchell Road once all other treatments as recommended in the subject report are implemented in the Erskineville and Alexandria Traffic and Transport Study, to review the need for traffic calming in Mitchell Road; and

(G) note that the City will request Transport for NSW to consider reinstating the right turn from Euston Road northbound into Maddox Street (east), including modifying the lanes on Euston Road to remove the left turn lane and create a right turn bay instead, to avoid heavy vehicles using other local roads such as Maddox Street (west) to access their sites.

Attachments

Attachment A. Map of Study Area

Attachment B. Recommendations Summary Report

Attachment C. Community Engagement Summary Report

Attachment D. Responses to Key Themes Raised in Submissions - Interactive Map Comments

Attachment E. Responses to Key Themes Raised in Written Submissions

Attachment F. Summary and Final Report - Erskineville and Alexandria Traffic and Transport Study 2022, Bitzios Consulting

Background

1. In February 2018, the City received a petition from 300 signatories seeking a traffic study to investigate potential options for minimising or preventing trucks and heavy vehicles using Maddox Street between Euston Road and Mitchell Road. Maddox Street has a "No Trucks - 3 Tonne and over" limit which prohibits access for trucks 3 tonnes or heavier that do not have a genuine destination via that route (NSW Road Rule 104).

2. In April 2018, the City developed a Local Area Traffic Management (LATM) plan for Alexandria, Erskineville and St Peters to mitigate the flow of increased traffic from the WestConnex (M8) St Peters interchange.

3. The 2018 Local Area Traffic Management plan considered a suite of treatments in Alexandria including road closures, traffic calming and streetscape improvements to protect local amenity, maintain property access; and apply a precinct-wide approach to collectively manage traffic rather than street-by-street. Of the 20 treatments proposed from the 2018 Local Area Traffic Management plan, 13 treatments are complete at a total cost of approximately $3.6 million, which includes:

    - Seven continuous footpath treatments on Power Avenue at Wyndham Street; Loveridge Street and Brennan Street at Power Avenue; Buckland Lane at Mitchell Road; Belmont Street at Fountain Street; and Renwick Street and Brown Street at Mitchell Road

    - Two single lane slow points in Belmont Street and Lawrence Street between Harley Street and Fountain Street

    - Four traffic closure treatments in Lawrence Street, between Harley Street and Fountain Street; Anderson Street at Mitchell Road; Loveridge Street at Power Avenue; and Brennan Street at McEvoy Street

4. The status of the outstanding recommended treatments is as follows:

    - One set of new traffic signals are scheduled to be installed by the City this financial year at the Fountain Street and Lawrence Street intersection, pending Transport for NSW approval.

    - Two signalised pedestrian crossing improvements are scheduled to be installed by the City this financial year at the existing signalised intersections at Mitchell Road and Fountain Street; and Mitchell Road and Copeland Street, pending Transport for NSW approval.

    - One set of new traffic signals are scheduled to be delivered in 2026 as part of adjacent development at the intersection of Michell Road and Maddox Street.

5. Three road closures were not approved by Transport for NSW - on Maddox Street at Euston Road; Harley Street at McEvoy Street; and Harley Street at Mitchell Road.

6. The M8 St Peters Interchange opened in mid-2020. On 29 March 2021, Council resolved to undertake an area wide Transport Study in Alexandria and Erskineville.

7. The City engaged a specialist consultant in April 2021 to carry out the Study. The Study area is bounded by Henderson Road, Railway Parade, Swanson Street, Copeland Street, Mitchell Road, Sydney Park Road, Euston Road, McEvoy Street and Botany Road (refer to Attachment A) and builds on the 2018 Local Area Traffic Management plan.

8. The Study especially reviewed Park Street, Henderson Road, Mitchell Road, Maddox and Harley Streets where residents have raised particular concerns. Options for a "No Right Turn" from Park Street into Henderson Road or a road closure in Park Street at Henderson Road were modelled and assessed.

9. Due to the large geographical extent of the Study area, extensive traffic data collection, consideration and modelling of pedestrian, cycleway and transport movements were required. Traffic data collection was undertaken immediately after the 2021 school Term 1 holidays in April and May to ensure the measured movements were representative of the usual situation. The data collection also took place before the 2021 Covid-19 Delta variant outbreak and subsequent effects on traffic and transport movements.

10. The traffic movement data suggests that vehicular traffic had returned to around pre-Covid levels and that WestConnex Stage 2 (the new M8) traffic volumes had stabilised since opening. Therefore, the modelling for this Study is based on sound data that will also be useful for future modelling, such as when WestConnex Stage 3 opens, expected in late 2023.

11. The Study (refer Attachment F) modelled 15 transport management options in two scenarios to address the key issues within the study area and assess their impact on the broader road network. Based on the outcomes of the modelling, the Study recommended nine traffic management treatments for the City to consider. In addition, the Study also recommended eight road space reallocation works that do not impact traffic capacity, but improve safety, access and amenity for people walking and cycling.

12. Community engagement was undertaken between February and September 2023 including community forums on 22 February 2023 and 21 September 2023, notification letters to 7,000 properties within the study area, and a project page on sydneyyoursay.com.au including an interactive map and surveys.

13. The community engagement sought community feedback on the key proposals recommended from the Study, as well as all three road closures originally proposed in the 2018 Alexandria Local Area Traffic Management plan, to help inform preferred walking, cycling and traffic calming treatments in Erskineville and Alexandria.

Proposals considered in the Study

Park Street

14. Residents of Park Street had raised concerns about increases in traffic in their street since Railway Parade was converted from two-way traffic to one-way westbound between Swanson Street and Sydney Road in 2020.

15. In response to these concerns, the City installed temporary traffic calming, including angle parking and chicanes, in Park Street in 2021. In 2023, the City commenced works to formalise these treatments with permanent barriers, garden beds, kerb and gutter, improve footpaths and upgrade stormwater infrastructure.

16. It should be noted that Railway Parade was converted back to two-way traffic on 16 May 2023 in response to previous feedback from the community, and the left turn from Erskineville Road into Swanson Street was reinstated as part of these works, with the addition of "No Left Turn Vehicles Under 6m Excepted" as required by Transport for NSW due to the constrained road space for larger vehicles to turn.

17. In addition, options for a closure to traffic in Park Street at Henderson Road; or a right turn ban from Park Street into Henderson Road were considered as part of the Study to reduce the amount of through traffic using Park Street.

Maddox Street - traffic restrictions at Euston Road

18. Residents of Maddox Street had raised concerns about the volumes of trucks including heavy vehicles using Maddox Street between Euston Road and Mitchell Road.

19. The Study considered options to close Maddox Street to traffic at Euston Road or ban the left turn (or no left turn vehicles under 6m Excepted) from Euston Road into Maddox Street.

20. The closure was previously considered in the 2018 Alexandria Local Area Traffic Management plan and generally supported by the community but not by Transport for NSW.

21. While the Study recommends the left turn ban instead of the full closure to traffic at Euston Road, there was general support for the full closure at the time of the 2018 Alexandria Local Area Traffic Management plan and therefore both options were proposed in the 2023 community engagement.

Maddox Street - traffic calming options

22. Traffic calming in Maddox Street was considered as an alternative to the traffic restrictions at Euston Road. The Study recommends traffic calming for Maddox Street to reduce vehicle speeds and deter through traffic, while maintaining sufficient access and egress routes for residents and businesses within the study area.

23. Two concept options for raised intersection platforms or chicanes along Maddox Street were included in the community engagement material.

Harley Street / Ashmore Street / Harley Street - traffic signals

24. Residents have previously raised concerns about safety at the intersection of Mitchell Road and Harley Street, due to the offset geometry of the intersection, existing roundabout control, lack of pedestrian crossings and concerns for pedestrian safety at the crossing on Mitchell Road at Harley Street.

25. The Ashmore-Harley Street cycleway was installed in 2022. Due to drainage considerations at the detailed design stage, the pedestrian crossing on Mitchell Road at Harley Street could not be raised as was originally intended as part of these works.

26. To address these concerns, the Study recommends replacing the roundabout and pedestrian crossing with a signalised intersection to better balance vehicle queuing and provide dedicated and protected crossing phases for pedestrians.

Harley Street - closure to traffic

27. To reduce through traffic on Harley Street, the Study considered options to close Harley Street to traffic either west of McEvoy Street or east of Mitchell Road. These options were also proposed as part of the 2018 Alexandria Local Area Traffic Management plan and generally supported by the community, but not supported by Transport for NSW.

28. The Study recommends pursuing the closure west of McEvoy Street as it would have the least impact on the surrounding road network. However, both options were proposed in the 2023 community engagement based on the previous community support.

Mitchell Road Traffic Calming

29. The Study recommends traffic calming in Mitchell Road to improve conditions and safety for people walking and cycling along Mitchell Road, with the aim to reduce traffic speeds to below 30km/h.

30. As Mitchell Road is a bus route traffic calming would most likely be achieved with road narrowing treatments such as kerb extensions and raised thresholds at pedestrian crossings.

31. It is expected that the two proposed traffic signals on Mitchell Road at its intersections with Maddox Street and Ashmore Street may discourage some traffic using Mitchell Road and also reduce speeds to an extent, and so the need for traffic calming would be considered after these signals are installed.

Road Space Reallocation Works

32. The study recommends the following road reallocation works to improve safety, access and amenity for people walking and cycling, without impacting on traffic capacity.

- Initiate a program of identifying excessively wide intersections in the study area and design and implement treatments to address these issues progressively as funding allows.
- Reduce the trafficable footprint of the intersections at Renwick Street and Dadley Street; and Lyne Street and Dadley Streets with kerb extensions and road narrowing.
- Initiate a review of the positions and visibility of signage and line marking along Mitchell Road between Fountain Street and Anderson Street, including side streets.
- A continuous footpath treatment across Belmont Street north of Fountain Street.
- Consider installing Bicycle Awareness Zone (BAZ) pavement markers on Mitchell Road south of Ashmore Street.
- In the short term and before the intersection is signalised, implement a pedestrian refuge island in Maddox Street near Mitchell Road.
- Widen the footpath on both sides of Copeland Street between Fox Avenue and Clara Street, as funding permits.

Key Implications

Strategic Alignment - Sustainable Sydney 2030-2050 Continuing the Vision

33. Sustainable Sydney 2030-2050 Continuing the Vision renews the communities' vision for the sustainable development of the city to 2050. It includes 10 strategic directions to guide the future of the city, as well as 10 targets against which to measure progress. This report is aligned with the following strategic directions and objectives:

    (a) Direction 5 - A city for walking, cycling and public transport - the traffic management treatments recommended for Alexandria and Erskineville improve conditions and safety for people walking and cycling in the area by reducing traffic volumes and speeds on local roads, providing safer crossings, and maintain access for people using public transport.

Organisational Impact

34. Investigation, consultation, approvals and delivery of the recommended treatments will involve use of existing staff resources, as well as external consultants and contractors.

Risks

35. Several of the recommended treatments require approval by Transport for NSW, including traffic signals, turning restrictions and closures to traffic. City staff will continue to work with Transport for NSW, to seek their endorsement for these proposals, where they are supported by the community.

36. All proposals will require design, community consultation and endorsement by the Local Pedestrian, Cycling and Traffic Calming Committee which will require significant lead times.

Social / Cultural / Community

37. The recommended treatments aim to reduce traffic volumes and speeds on local roads which will improve road safety outcomes for people living, working, and visiting the area.

Environmental

38. The traffic treatments considered will improve access, safety and conditions for people walking and cycling and further encourage a shift away from private vehicles which reduces emissions and improves air quality.

Economic

39. The traffic treatments maintain access to local businesses.

Financial Implications

40. The Maddox Street/ Mitchell Road traffic signals delivered by the developer for the adjacent development.

41. The estimated cost of the recommended treatments is in the order of $6.5 million and the estimated timeframe for implementation is between 2023/24 and 2026/27.

42. There is provision within the City's Long Term Financial Plan for implementation of the treatments proposed in the subject report.

Relevant Legislation

43. Transport for NSW is responsible for the control of traffic on all NSW roads and has delegated to Council certain functions to regulate traffic on local and regional roads.

44. The Transport for NSW delegation gives Council authority to approve the regulation of traffic under Part 8, Division 2 of the Roads Act 1993. This delegation is subject to a number of conditions and limitations, including the advice of Council's Local Pedestrian, Cycling and Traffic Calming Committee.

45. Section 116 (Part 8, Division 2 of the Roads Act 1993) for permanent road closures and turn bans requires a public notice to be published in a local newspaper and 28 days be provided for feedback; and application to Transport for NSW including preparation of a Traffic Management Plan. This delegation can only be exercised by the elected Council, with approval from Transport for NSW.

46. The Transport for NSW delegation does not give Council authority to approve traffic signals. Only Transport for NSW are authorised to approve traffic signals.

Critical Dates / Time Frames

47. Where supported by the community, the design, approval and construction of treatments will be subject to availability of funding as part of future years' works programs.

48. Based on current priorities and availability of funding and resources, the design and construction of the treatments is expected to be carried out between financial years 2023/24 and 2026/27 at the earliest.

Public Consultation

49. The City presented the findings of the Study at a community forum on 22 February 2023.

50. The City consulted residents and businesses in the area from Monday 1 May to Monday 30 June 2023. Notification letters were sent to 7,000 properties within the study area.

51. A project page was available at sydneyyoursay.com.au and was viewed 3,307 times.

52. There were 1,794 unique users on the interactive map and 845 comments were made.

53. 232 people completed 350 survey responses.

54. 180 written submissions were received.

55. The City presented the outcomes of the community engagement at a second community forum on 21 September 2023.

56. The community engagement outcomes are summarised in the Community Engagement Summary Report and Responses to key themes raised in submissions (Attachments C, D and E) and have been used to inform the preferred walking, cycling and traffic calming treatments within the study area as recommended in the subject report and summarised in Attachment B.

Community feedback on targeted proposals and City's response

Park Street - traffic restrictions at Railway Parade/ Henderson Road

57. Overall, there was strong opposition to the proposals for either a closure or no right turn from Park Street into Railway Parade/ Henderson Road.

58. The majority of respondents from Park Street supported either of the options, with most preferring the full closure to traffic.

59. The impact of the closure or no right turn on access to surrounding streets also needs to be considered.

60. The area most impacted by the changes is the residential area bounded by and inclusive of Railway Parade, Park Street, Swanson Street. The survey did not reveal a clear majority for changes, with 50 per cent supporting no change and 50 per cent preferring one of the options. The majority of written submissions from residents within the area of impact, apart from residents in Park Street, were opposed to the proposed changes.

61. In response to the feedback, given that there was strong overall opposition to any changes to Park Street at Railway Parade/ Henderson Road, and that submissions from residents within the area of impact did not indicate clear majority support for any changes, a no right turn or closure to traffic in Park Street at Railway Parade/ Henderson Road may not be warranted.

62. It is expected that the recent conversion of Railway Parade back to two-way traffic and current roadworks to formalise the traffic calming treatments in Park Street will help to reduce traffic volumes in Park Street.

63. The City will continue to monitor traffic conditions after roadworks in Park Street are completed to see if traffic and heavy vehicle volumes, speeds and movements are within a typical range for a local road, and whether any further review is needed.

Maddox Street - traffic restrictions at Euston Road

64. Overall, there was strong opposition to the proposals for either a closure to traffic or no left turn from Euston Road into Maddox Street.

65. There were only three submissions that identified as residents of Maddox Street, all in support of the closure to traffic.

66. The impact of the closure on access to surrounding streets also needs to be considered. The area most impacted by the changes is the residential portion adjoining Maddox Street to the west. The majority of submissions from residents in streets adjoining Maddox Street were opposed to any changes.

67. A number of submissions noted that some heavy vehicles travelling north on Euston Road tend to use Maddox Street to turn around at Lawrence Street and travel through to Maddox Street west, as they cannot turn right into Maddox Street (east) at Euston Road. Euston Road is a state road under the control of Transport for NSW.

68. Given that there was strong opposition to either the closure to traffic of Maddox Street at Euston Road or a left turn ban from Euston Road into Maddox Street, the small response from residents in Maddox Street in support of the closure, and objections from residents adjoining Maddox Street, it is recommended that the City does not pursue the closure to traffic or the left turn ban.

69. The City can request Transport for NSW to consider reinstating the right turn from Euston Road northbound into Maddox Street (east) to avoid heavy vehicles using other local roads such as Maddox Street (west) to access their sites. This could be achieved by modifying the lanes on Euston Road to remove the left turn lane and create a right turn bay instead.

Maddox Street - traffic calming options

70. Overall, there was support for some form of traffic calming in Maddox Street.

71. Of those supporting traffic calming, the majority preferred a chicane option.

72. More generally, there were 24 comments submitted via the interactive map with 406 total engagements concerning Maddox Street generally (other than targeted proposals), with just over half of those comments having a neutral sentiment, mostly suggesting more pedestrian facilities needed in Maddox Street.

73. There were 13 submissions concerning Maddox Street generally, mostly regarding alternate suggestions for traffic restrictions, traffic flow improvements or pedestrian infrastructure improvements.

74. A traffic calming scheme in Maddox Street may assist to discourage some through traffic, including heavy vehicles, and slow traffic.

75. Based on the feedback, it is recommended that the City develop concept plans for traffic calming in Maddox Street, incorporating the feedback from the community engagement, including the preference for chicanes, suggestions for improved pedestrian access at the intersections, and the need to allow for a future planned cycleway link. The concept plans will be used for further consultation with the community, and if supported, implementation will be subject to approval by the Local Pedestrian, Cycling and Traffic Calming Committee, and availability of funding.

Mitchell Road / Ashmore Street / Harley Street - traffic signals

76. Overall, there was strong opposition to replacing the roundabout and pedestrian crossing with a signalised intersection.

77. Despite the opposition to traffic signals, many of the submissions also acknowledged safety concerns, particularly for people walking across Mitchell Road and Ashmore Street.

78. It is recognised that improvements to the intersection are needed. While many respondents suggested upgrading the existing roundabout with raised pedestrian crossings on all legs, raising the existing pedestrian crossing was not feasible during the Ashmore-Harley cycleway works due to drainage considerations.

79. The offset geometry of the intersection, mix of road users, and multiple decision points for people negotiating the intersection and crossing points creates a potential safety risk. A signalised intersection would improve pedestrian access and safety with dedicated phasing and formal crossings on each approach, and cycling crossing signals, while moderating traffic flows.

80. It should be noted that traffic signals are also subject to Transport for NSW approval, in addition to endorsement by the Local Pedestrian, Cycling and Traffic Calming Committee

Harley Street - closure to traffic

81. Overall, the majority of submissions were opposed to closing Harley Street at either end.

82. Of those that did support a closure, most supported closing Harley Street west of McEvoy Street or suggested a half closure at McEvoy Street with the left turn out of Harley Street into McEvoy Street maintained. Some respondents also suggested making Harley Street one way.

83. Given the strong opposition to the closure of Harley Street to traffic at either Mitchell Road or McEvoy Street, it is recommended that the City not pursue either of these options.

84. More generally, there were 52 comments submitted via the interactive map with 565 total engagements concerning Harley Street generally (other than targeted proposals), with just over half of those comments having a negative or mixed sentiment, and of those, safety was the most prominent theme.

85. There were 51 written submissions concerning Harley Street generally, mostly concerned with the safety of the existing arrangements.

86. The community feedback suggests that a review of traffic arrangements in Harley Street is required given its constrained width and the interaction between all types of road users. Other options may discourage the amount of through traffic using Harley Street or minimise the impact of the traffic that does use it without fully restricting access to the street.

87. In response to the feedback, it is recommended that the City investigate either making Harley Street one way eastbound from Mitchell Road to McEvoy Street, or a half closure to traffic at McEvoy Street so that vehicles cannot enter via McEvoy Street. If feasible, this will be subject to further consultation with the affected community, Transport for NSW approval of a Traffic Management Plan, and endorsement by the Local Pedestrian, Cycling and Traffic Calming Committee.

Mitchell Road Traffic Calming

88. Overall, there was mixed feedback to the proposal for traffic calming in Mitchell Road, with just over half of the submissions supporting traffic calming, and the others either opposing or needing more information on the type of treatment proposed and its impacts on parking.

89. The intersection treatments on Mitchell Road at Maddox Street and at Ashmore and Harley Streets are likely to reduce traffic volumes and speeds.

90. Given these factors, it is recommended that the City review the need for traffic calming on Mitchell Road once all other recommended proposals have been implemented in the study area. If post-implementation traffic counts reveal a need for further traffic calming, the City can develop concept plans for further consultation with the affected community.

91. The concept plans will incorporate Bicycle Awareness Zone (BAZ) pavement markers within the traffic lanes on Mitchell Road south of Ashmore Street.

Dadley Street - kerb extensions and road narrowing at Renwick and Lyne Streets

92. Overall, there was general support for the proposed narrowing of the intersections with kerb buildouts.

93. Given the support and intersection narrowing and kerb build-outs at Dadley Street intersections with Renwick Street and Lyne Street, the City will progress these proposals to detailed design and Local Pedestrian, Cycling and Traffic Calming Committee endorsement.

Belmont Street continuous footpath treatment at Fountain Street

94. Overall, there was general support for a proposed continuous footpath treatment in Belmont Street at Fountain Street.

95. Given the support for the continuous footpath treatment on Belmont Street at Fountain Street, the City will progress this proposal to detailed design and Local Pedestrian, Cycling and Traffic Calming Committee endorsement.

Other feedback and the City's response

96. 582 comments were submitted via the interactive map, and 115 of the written submissions included comments that were not directly related to the proposals targeted through the community engagement or raised other issues further to those considered by the Study. The key issues are outlined below and are summarised in the Recommendations Summary Report (Attachment B) Community Engagement Summary Report (Attachment C) and responses to key themes (Attachments D and E).

Mitchell Road and Maddox Street – traffic signals

97. The upgrading of the roundabout controlled intersection at Mitchell Road and Maddox Street to a signalised intersection will be delivered as part of the adjacent development site. The Study notes this commitment, and it was included in the base traffic model assumptions. As these works are committed, this proposal was not part of the targeted community engagement. Nonetheless, there was significant community feedback on this proposal.

98. There were 17 comments submitted via the interactive map relating to the proposed traffic signals. Of these, 12 were opposed and three were in support of the signals. There were 533 total engagements, including up-votes and down-votes, on these comments on the interactive map. Fifty four per cent of the total engagements indicated support for the signals, while 44 per cent indicated opposition.

99. There were 11 written submissions that commented on the proposed traffic signals. Nine of those were opposed to the signals and two were in support.

100. Those in support of signals were concerned for safety of people walking at the existing crossing and intersection. Those opposed to the signals were concerned about reduced priority and safety for people walking compared to the existing zebra crossing. Some suggested upgrading the existing roundabout and adding zebra crossings on each approach.

101. Overall, the majority of the comments in the interactive map and written submissions were opposed to the traffic signals, although a significant number of up-votes and down-votes on the interactive map suggests there is more community support for installing traffic signals at the intersection than there is opposition.

102. Traffic signals at the intersection of Maddox Street and Mitchell Road will be delivered through the development of the adjacent Ashmore precinct development site, to address traffic impacts of the major development including increased residential density and retail developments. The new adjacent development will also add an extra street to the intersection, being the extension of McDonald Street to Mitchell Road. This will introduce further vehicle turning movements to the intersection.

103. Under existing conditions, residents have raised concerns about pedestrian safety at the existing intersection and pedestrian crossing.

104. The traffic signals are expected to improve pedestrian access and safety, while moderating traffic flows, including increased traffic anticipated to be generated from the Ashmore Precinct development. The signals are expected to be installed by the developer by 2026 at their cost. The community feedback is noted, and it is recommended that Council note that the traffic signals are a requirement of the development consent.

105. In the interim, the City will implement a pedestrian refuge island in Maddox Street near Mitchell Road to improve pedestrian access until such time that the intersection is upgraded with traffic signals.

Mitchell Road

106. There were 43 comments submitted via the interactive map with 654 total engagements concerning Mitchell Road generally (other than targeted proposals), with approximately 70 per cent of those comments having a negative or mixed sentiment, and of those, safety was the most prominent theme.

107. There were eight written submissions concerning Mitchell Road generally, mostly concerned with safety.

108. It is expected that the proposed intersection upgrades along Mitchell Road will assist to calm traffic including reducing volumes and speeds, and also provide additional designated formal crossings for people walking.

Belmont Street

109. There were 38 comments submitted via the interactive map with 419 total engagements concerning Belmont Street generally, with just over half of those comments having a neutral sentiment, mostly concerned with pedestrian safety.

110. There was one written submission concerning Belmont Street requesting pedestrian infrastructure along the route to Alexandria Park Community School.

111. The community feedback concerning Belmont Street is noted. A single lane slow point traffic calming treatment was installed in Belmont Street, between Huntley Street and Fountain Street, as part of the 2018 Alexandria Local Area Traffic Management plan. There are also existing mid-block closures to traffic in Belmont Street, between Huntley and Maddox Streets, and Maddox and Harley Streets.

112. The recommendations for additional traffic treatments in Harley Street and Maddox Street should help to reduce traffic and improve safety and access for people walking along Belmont Street and crossing at these intersections.

Lawrence Street

113. There were 34 comments submitted via the interactive map with 315 total engagements concerning Lawrence Street generally, with just over half of those comments having a negative or mixed sentiment, and of those, safety was the most prominent theme.

114. There was one written submission concerning Lawrence Street suggesting more traffic calming needed.

115. The community feedback concerning Lawrence Street is noted. A mid-block closure to traffic, between Maddox and Harley Streets, and a single lane slow point traffic calming treatment, between Harley and Fountain Streets, were installed in Lawrence Street as part of the 2018 Alexandria Local Area Traffic Management plan. There is also an existing mid-block closure to traffic in Lawrence Street, between Huntley and Maddox Streets.

116. The planned traffic signals in Fountain Street at Lawrence Street scheduled for installation this financial year will improve safety for vehicles turning from Lawrence Street into Fountain Street and provide designated crossings to improve access and safety for people walking across Fountain Street.

Railway Parade

117. There were 31 comments submitted via the interactive map with 616 total engagements concerning Railway Parade generally, with around 60 per cent those comments having a negative or mixed sentiment, mostly relating to the traffic flow arrangements in Railway Parade.

118. There were 34 written submissions concerning Railway Parade generally, mostly relating to the traffic flow arrangements.

119. The community feedback concerning Railway Parade is noted. Two-way traffic was reinstated in Railway Parade in May 2023 during the consultation period, which addresses the majority of the community concerns and feedback.

Huntley Street

120. There were 25 comments submitted via the interactive map with 231 total engagements concerning Huntley Street generally, with the majority having a negative or neutral sentiment, mostly commenting on cycling and walking infrastructure.

121. The community feedback concerning Huntley Street is noted. The Huntley Street cycleway works were completed in June 2023. This along with Sydney Park Gateway project will reduce the traffic function of Mitchell Road and Sydney Park Road to improve walking and cycling networks and access and reduce volume of through traffic. New infrastructure on Mitchell Road and Huntley Street to Belmore Street is currently being monitored.

Fountain Street

122. There were 24 comments submitted via the interactive map with 287 total engagements concerning Fountain Street generally, mostly negative or neutral sentiment, with the majority concerned about traffic flow and congestion or suggesting improved pedestrian access needed.

123. There were 21 submissions concerning Fountain Street generally. Thirteen raised concerns about the lack of a pedestrian crossing or difficulty turning out of Lawrence Street at Fountain Street. Three suggested a pedestrian crossing is needed on Fountain Street at Belmont Street.

124. The community feedback concerning Fountain Street is noted. Fountain Street is a state road under the control of TfNSW. The City is planning to install new traffic signals at the intersection of Fountain Street and Lawrence Street this financial year, subject to TfNSW approval. This will address much of the community concerns about pedestrian access and safety on Fountain Street.

Henderson Road

125. There were 19 comments submitted via the interactive map with 199 total engagements concerning Henderson Road generally, with just over half having a negative or mixed sentiment, mostly concerned about general traffic safety and noise.

126. There were 23 written submissions concerning Henderson Road. Most were concerned that the traffic conditions were ineffective, or the speed cushions are noisy.

127. The community feedback concerning Henderson Road is noted. Removing the roundabouts has improved the safety and priority for pedestrians crossing side streets. The speed humps were installed in response to previous feedback from the community.

128. The City will continue to monitor traffic conditions in Henderson Road.

Buckland Street and Buckland Lane

129. There were 18 comments submitted via the interactive map with 170 total engagements, concerning Buckland Street and Buckland Lane generally. The majority having a negative sentiment and mostly concerned about driving access and safety for pedestrians. There were four comments suggesting the right turn from Mitchell Road into Buckland Street be reinstated (with a total of 38 upvotes and 8 downvotes); and one comment opposing the removal of the existing No Right Turn from Mitchell Road into Buckland Street (with a total of 10 upvotes and 4 downvotes).

130. There were four written submissions concerning Buckland Street and Buckland Lane. Two suggested reinstating the right turn from Mitchell Road into Buckland Street and two stated that the existing no right turn should be retained.

131. Those requesting the right turn to be reinstated noted that some traffic turns right at Buckland Lane instead, since Anderson Street was closed to traffic at Mitchell Road as part of the 2018 Alexandria Local Area Traffic Management plan.

132. Overall, the community feedback was mixed with some wanting to retain the no right turn and some wanting it removed. There is no significant feedback to suggest that the majority of affected residents or Alexandria Public School want the existing no right turn at Buckland Street reviewed.

133. The community feedback concerning Buckland Street and Buckland Lane is noted. Alexandria Public School and the residents of Buckland Street originally requested the right turn ban from Mitchell Road into Buckland Street to improve safety and local amenity.

134. Transport for NSW (TfNSW) is responsible for the right turn ban at the traffic signals from Mitchell Road to Buckland Street, and the City does not have authority to remove it.

135. The City does not support reinstating the right turn from Mitchell Road to Buckland Street to decrease traffic in Buckland Lane. The traffic counts the City completed in April 2021 showed Buckland Lane is mostly used by local traffic, and not as a short-cut route. Traffic volume, speed and vehicle size on this local street remains low and appropriate for the conditions.

136. Removing the right turn ban from Mitchell Road to Buckland Street would open a bypass to the east via Wyndham and Wellington Streets. These are local roads and should remain free of through traffic. Right-turning traffic should use the signalised intersection at Mitchell Road and Fountain Street, which are both state roads and designed to carry through traffic. Lifting the ban would also increase traffic and delays on Buckland Street, which is a local road providing access to several community facilities and it does have a high volume of people walking and cycling along it.

137. A continuous footpath across Buckland Lane at the intersection with Mitchell Road gives priority to pedestrians over traffic, calms traffic as it enters and leaves the lane, and emphasises that Buckland Lane is a quiet, local road.

138. As part of its future works program, the City is investigating installing another continuous footpath treatment across Buckland Lane at its intersection with Phillips Street to improve pedestrian access and safety, and calm traffic in the laneway. If approved, the works are expected to be constructed in the 2025/26 financial year at the earliest, based on current priorities, subject to community consultation and approval by the Local Pedestrian, Cycling and Traffic Calming Committee.

Road Space Reallocation Works

139. In addition to the recommendations outlined above, the City will undertake further investigations with regard to the following recommendations from the Study:

- Initiate a program of identifying excessively wide intersections in the study area and design and implement treatments to address these issues progressively as funding allows.

- Review the position and visibility of signage and line marking on Mitchell Road including side roads.

- Seek Transport for NSW approval to widen the footpath on both sides of Copeland Street between Fox Avenue and Clara Street, as funding permits.

KIM WOODBURY **VERONICA LEE**

Chief Operating Officer Director City Services

Michaela Kemp, Traffic Operations Manager

Attachment A

Map of Study Area

Erskineville and Alexandria Traffic and Transport Study Area

Attachment B

Recommendations Summary Report

CITY OF SYDNEY

Recommendations - Proposed improvements for traffic and transport in Alexandria and Erskineville

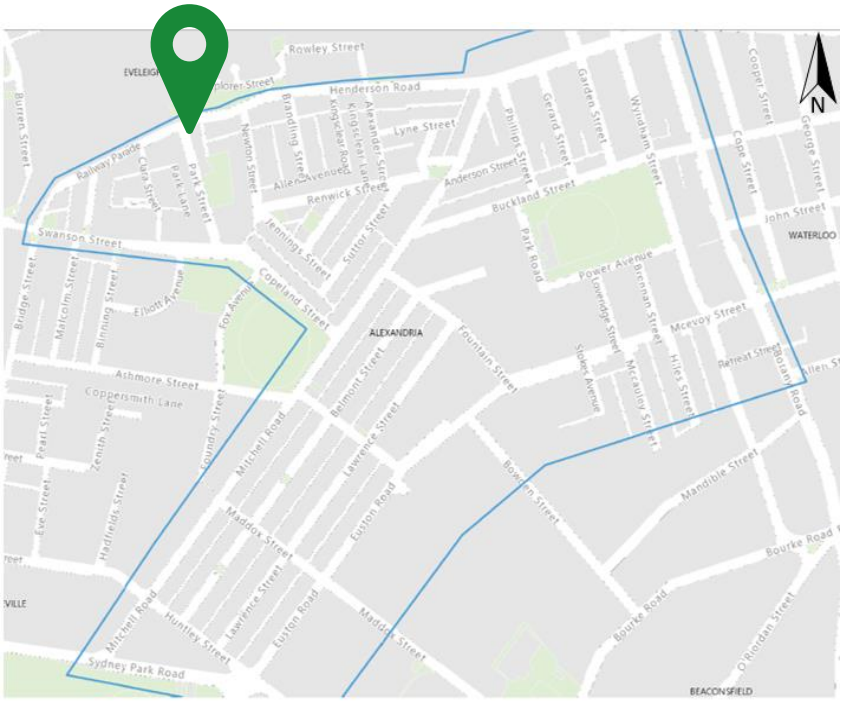
Contents

Recommendations

Park Street

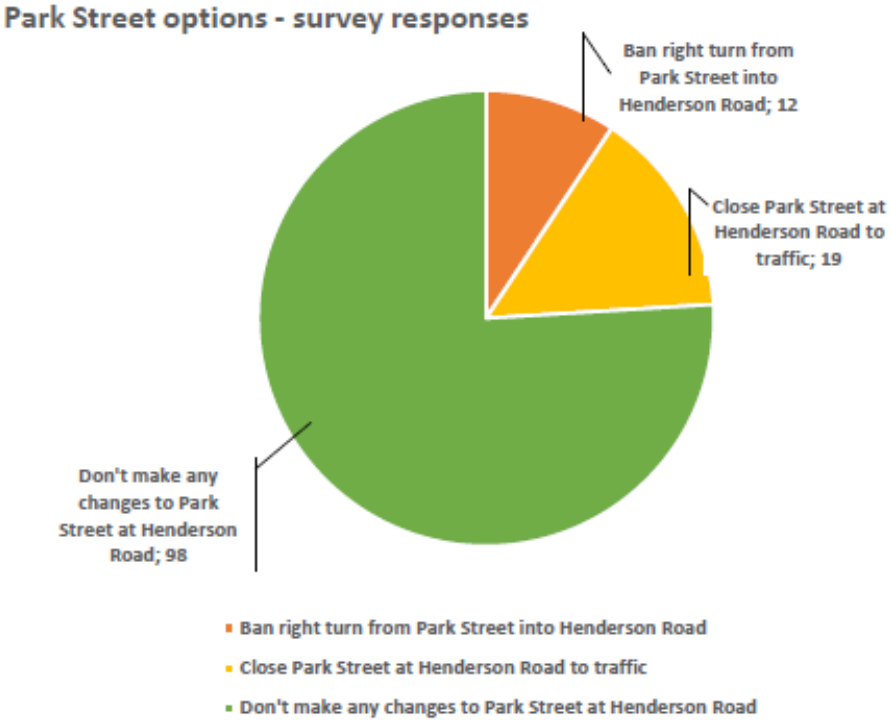
What we proposed:

- Closure to traffic; OR
- No right turn from Park Street



What we heard – all respondents:

- Overall, strong opposition to either option
    - Survey: 76% support no change
    - Comments: 78% support no change/oppose one or both options
    - Written submissions: 72% oppose both or either option



What we heard – residents bound by Railway Parade, Park Street and Swanson Street:

- 50% support no change
- 50% support options (35% support closure)
- Majority of Park Street respondents (67%) support both/either options, with preference for full closure

Considerations:

- Railway Parade reverted to two-way traffic during consultation period.
- Streetscape improvements underway in Park Street to formalise angle parking, landscaping and traffic calming.

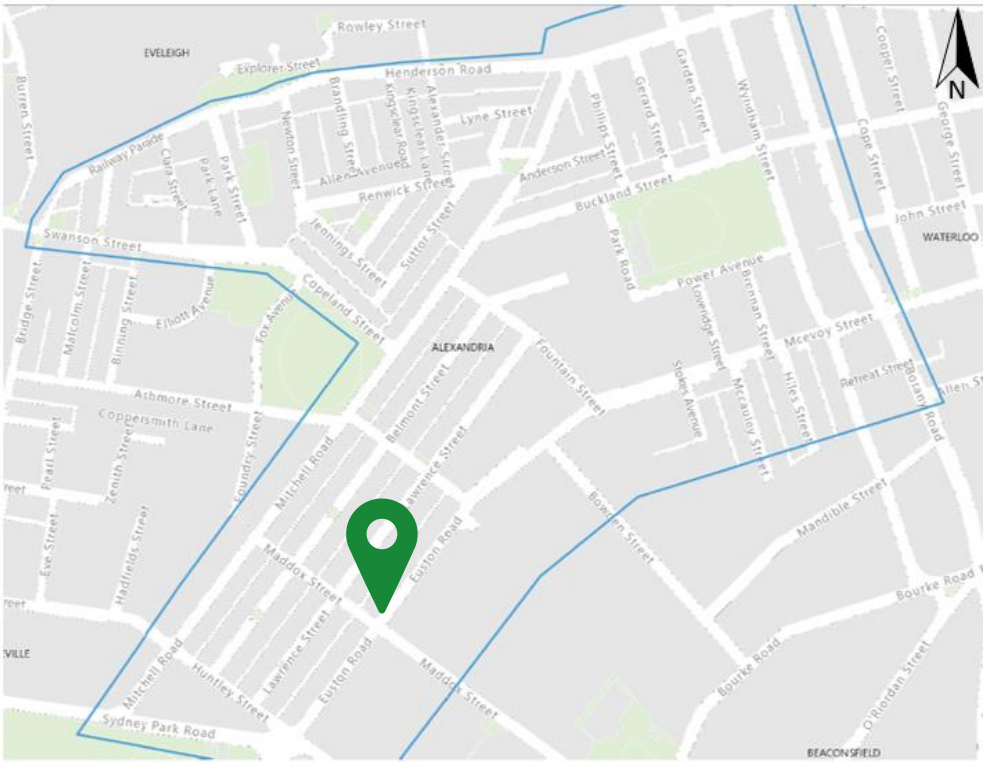
What we're recommending:

- Conduct further traffic counts in Park Street, for 3 months after completion of the current works to monitor volumes, speeds and movements.
- Further recommendations, if required to be made following the traffic counts.

Maddox Street

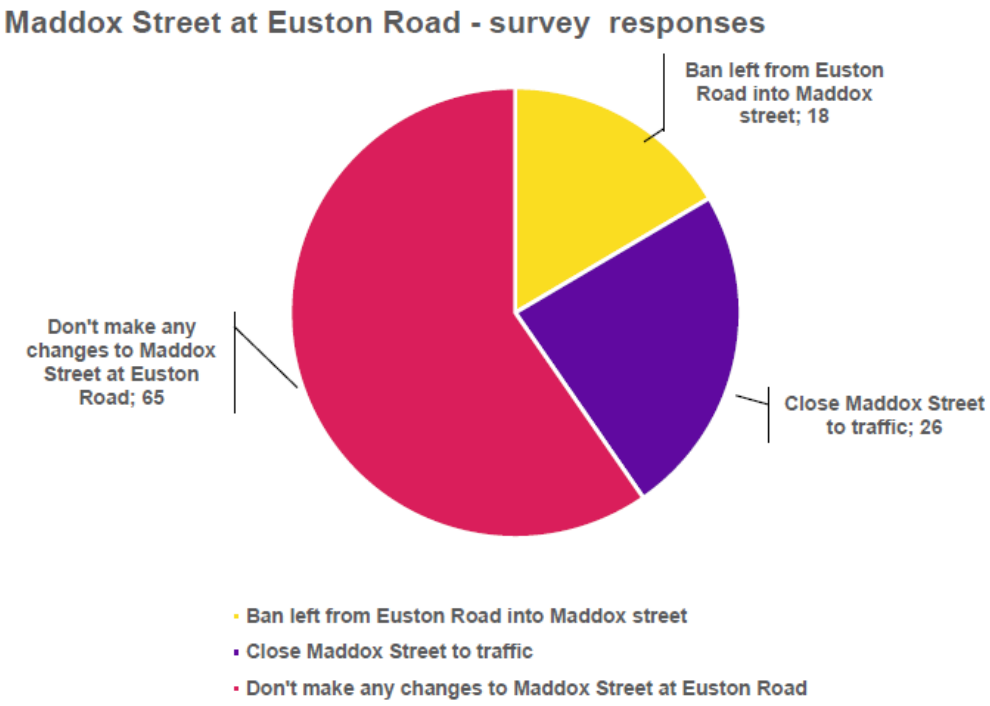
What we proposed:

- Close Maddox Street to traffic at Euston Road; OR
- No left hand turn into Maddox Street from Euston Road.
  AND
- Chicanes on Maddox Street; OR
- Raised intersection thresholds.



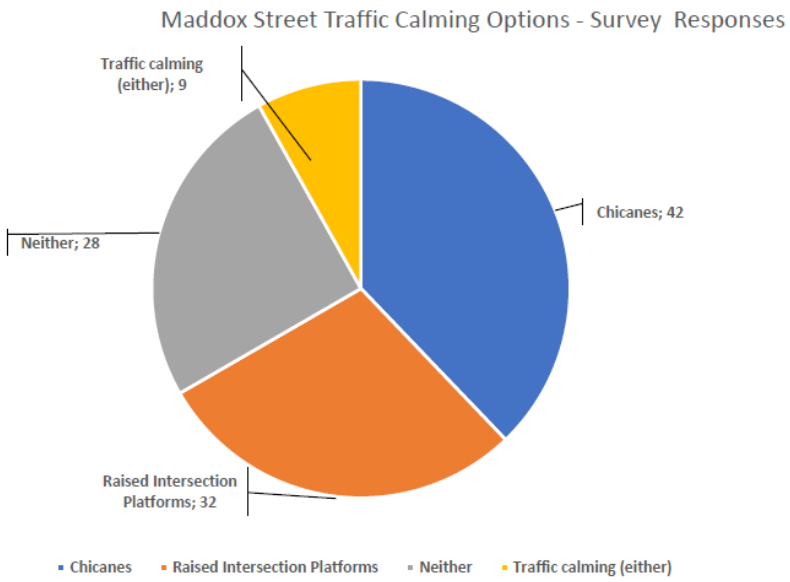
What we heard – closure/turn ban:

- Overall strong opposition (survey 60%; comments 61%; written submissions 40% (21% support options)
- 53% of survey respondents in Maddox Street & adjoining streets oppose changes.
- Three Maddox Street residents all support closure to traffic.



What we heard – traffic calming:

- Overall majority support for traffic calming, with preference for chicanes
- Survey 75% support (51% chicanes); comments 38% opposed, 30% support; written submissions 10 support, 12 opposed



What we're recommending:

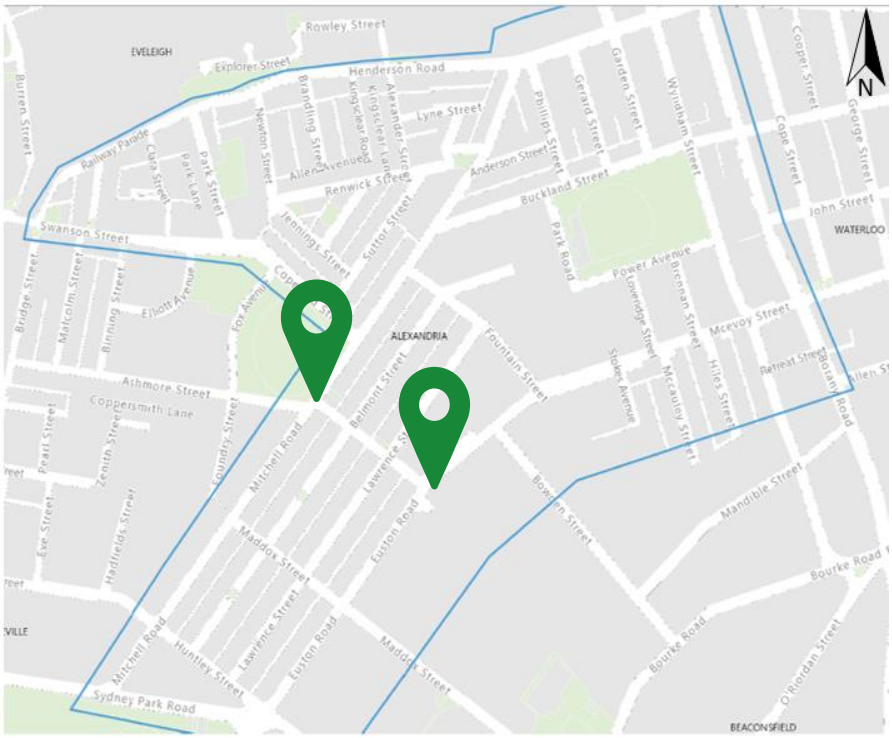
- Develop traffic calming scheme for Maddox Street, for further consultation with community and subject to Local Pedestrian, Cycling and Traffic Calming Committee approval, including:
  - Preference for chicanes
  - Improved walking facilities at intersections
  - Provision of future cycling link
- Request Transport for NSW to remove no right turn from Euston Road northbound into Maddox Street eastbound

For illustration purposes only

Harley Street

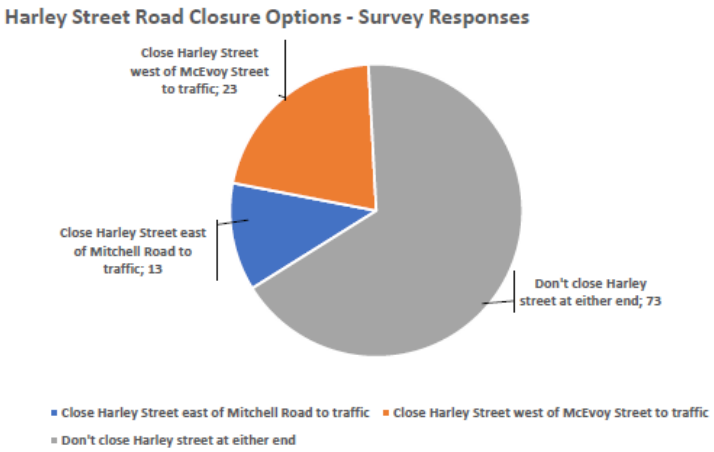
What we proposed:

- Close Harley Street to traffic at McEvoy Street; OR
- Close Harely Street to traffic at Mitchell Road



What we heard:

- Overall, strong opposition to closing Harley Street to traffic at either end
  - Survey 67% opposed; comments 42% opposed, 24% support; written submissions 44% opposed.
- Other feedback:
  - General safety concerns for people walking, cycling & driving.
  - Review of traffic arrangements needed to minimise/ restrict traffic movements.



What we're recommending:

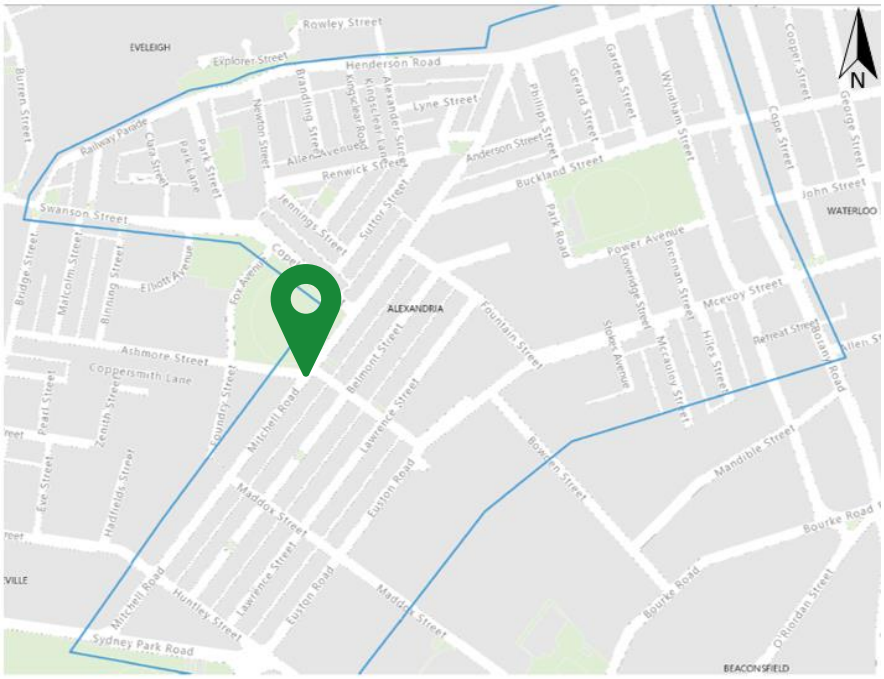
- Investigate options to either:
  - Make Harley Street one-way eastbound; OR
  - Half closure to traffic at McEvoy Street (left out only)

Subject to further community consultation, Transport for NSW approval and endorsement by Local Pedestrian, Cycling and Traffic Calming Committee and Council.

Mitchell Road, Ashmore Street and Harley Street intersection

What we proposed:

Replace existing roundabout and pedestrian crossing at the intersection with traffic signals.



What we heard:

- Overall strong opposition to replacing roundabout/ zebra crossing with signals.
  - 64% of comments opposed.
  - 64% written submissions opposed.
- Reasons for opposition include delays to vehicle traffic and reduce priority/safety for people walking.
- However, many acknowledged current safety concerns, particularly for people walking.
- Some suggested upgrading the existing roundabout and adding more zebra crossings.

Considerations:

- Acknowledge improvements are needed due to the type of intersection and many types of road users.
- Roundabouts are less accommodating for people walking and cycling.
- Drainage considerations
- Traffic signals provide a dedicated crossing phase and should improve walking access and safety while moderating traffic speeds.

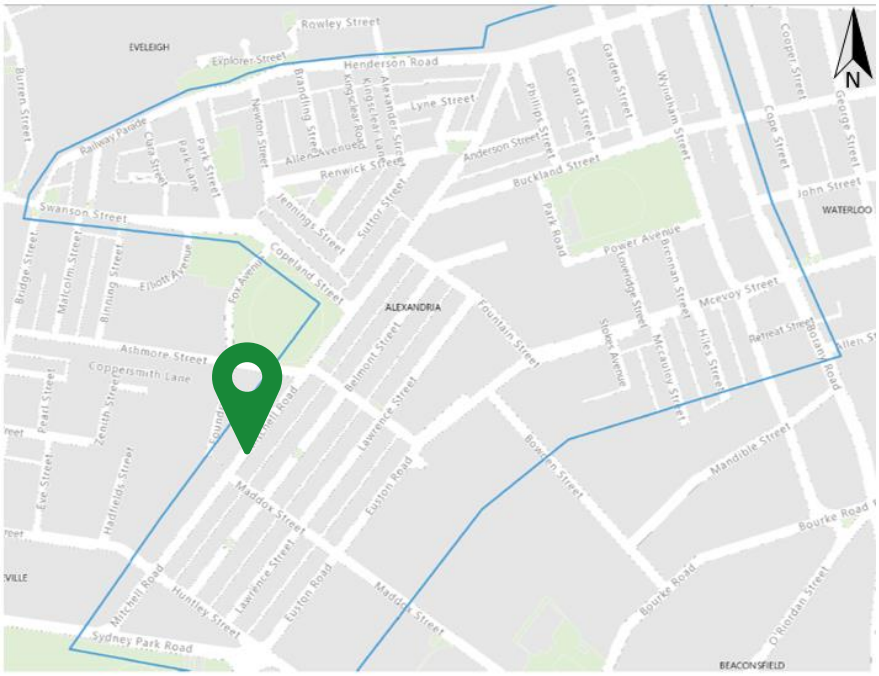
What we're recommending:

- Replace existing roundabout and zebra crossing with traffic signals, due to safety risk.
- Subject to Transport for NSW approval and endorsement by Local Pedestrian, Cycling and Traffic Calming Committee.

Mitchell Road

What we proposed:

Traffic Calming



What we heard:

- Mixed response to traffic calming
- Comments: 71% supportive
- Written submissions: 50% opposed; 32% support
- 5 respondents from Mitchell Road – 3 support and 2 opposed
- Some said more information needed to form a view including type of treatment, and impacts on parking
- General safety concerns along Mitchell Road

Considerations:

- Proposed intersection upgrades along Mitchell Road expected to calm and reduce vehicle volumes & speeds
- They will also provide additional dedicated formal crossings for people walking

What we're recommending:

Monitor & undertake traffic counts on Mitchell Road once all other treatments recommended for the study area are implemented to see if further traffic calming is needed

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Minor intersection improvements

What we proposed:

- Belmont Street at Fountain Street – Continuous footpath treatment.
- Dadley Street – Intersection narrowing and kerb build outs at Renwick Street and Lyne Street.

What we heard:

- Overall support for proposed continuous footpath treatment, intersection narrowing & kerb build outs

What we're recommending:

Proceed with proposed treatments – undertake design, consultation, and endorsement by Local Pedestrian, Cycling and Traffic Calming Committee.

Traffic signals and Mitchell Road and Maddox Street

What we proposed:

Traffic signals as part of the redevelopment on the western side of Mitchell Road.

What we heard:

- 71% of comments opposed planned traffic signals at Mitchell Road at Maddox Street; 18% supported.
- 9 written submissions opposed; 2 supported.
- Those in support concerned for safety of people walking and crossing at the intersection.
- Those opposed concerned about reduced priority and safety for people walking.
- Some suggested upgrading existing roundabout and adding more zebra crossings.

Considerations:

- Signals to be delivered as part of consent conditions for adjacent development site to:
    - Address traffic impacts associated with major development, increased residential density and major retail.
    - Manage increased turning movements at the intersection from new McDonald Street road extension.
- Traffic signals expected to improve walking access and safety while moderating traffic flows

What we're recommending:

- Community feedback noted.
- Implement pedestrian refuge in Maddox Street to improve access until signals are installed.

Other key feedback

Belmont Street

What we heard:

Concerns about pedestrian safety and access along Belmont Street

City response:

Traffic treatment recommendations for Harley Street and Maddox Street should help reduce traffic, improve safety & access for people walking and crossing at these intersections with Belmont Street.

Lawrence Street

What we heard:

Concerns about safety generally

City response:

- Traffic calming was installed in Lawrence Street as part of 2018 Local Area Traffic Management.
- Planned traffic signals for Fountain Street at Lawrence Street (2024 financial year) will improve safety for vehicles turning into Fountain & people walking across Fountain Street.

Railway Parade

What we heard:

General comments mostly about traffic flow

- Comments: 32% preferred two-way; 19% preferred one-way
- Written submissions: 55% preferred two-way; 29% preferred one-way

City response:

Railway Parade reverted to two-way traffic in May 2023

Huntley Street

What we heard:

General comments about existing cycling and walking infrastructure

City response:

- Community feedback is noted.
- Huntley Street cycleway works completed June 2023 and currently being monitored.
- This along with Sydney Park Junction project will improve walking & cycling networks and reduce traffic speeds.

Fountain Street

What we heard:

- Traffic flow/congestion concerns.
- Walking access concerns.
- Lack of pedestrian crossing or difficulty turning out of Lawrence Street.
- Need for pedestrian crossing at Belmont Street.

City response:

- Community feedback noted.
- Fountain Street is a state road controlled by Transport for NSW.
- City planning to install traffic signals at Fountain Street at Lawrence Street (2024 financial year) subject to Transport for NSW approval, which will address much of the walking access and safety concerns.

Henderson Road

What we heard:

- Concerns about general traffic safety and noise
- Current traffic calming ineffective compared to roundabouts, or speed cushions are noisy.

City response:

- Community feedback noted.
- Removal of roundabouts has improved safety and priority for people crossing at side streets.
- Speed cushions were installed in response to previous community feedback.

Buckland Street and Buckland Lane

What we heard:

- Driving access concerns due to:
  - no right turn from Mitchell Road into Buckland Street and
  - closure to traffic at Anderson Road
- Pedestrian safety concerns in Buckland Lane

City response:

- Buckland Street no right turn (NRT) from Mitchell Road:
  - No significant feedback from affected community to support a review.
  - Transport for NSW responsible and manage the signals.
  - Removing NRT would increase traffic volumes on Buckland Street, a significant walking & cycle route; and open traffic west-east bypass via Wyndham and Wellington Streets.
- Buckland Lane:
  - Mostly local traffic; volumes, speed and vehicle size remain low and appropriate for conditions.
  - Continuous footpath treatment (CFT) at Mitchell Road gives walking priority, calms traffic and highlights quiet, local road function.
  - Investigating CFT across Buckland Lane at Phillips Street to improve walking access, safety and traffic calming.

Background

The City of Sydney has worked with community to address a series of traffic impacts since the inception of Westconnex, now known as M8. These projects are a part of a Local Area Traffic Management Plan.

We have previously investigated solutions developed as party of traffic studies, observations of traffic changes and community requests.

These solutions included:

- Partial road closures
- Full road closures
- Mid block closures
- Continuous footpath treatments at intersections
- Traffic lights

Community have let us know what they support and utilising their local knowledge, what they believe will work. The City then took these solutions to Transport for NSW for approval. While most were not approved, we have implemented changes at Belmont Street, Lawrence Street, Brennan Street and Loveridge Street.

Since the closure of two way traffic on Railway Parade at Swanson Street, residents on Park Street have told us that there has been an increase in traffic.

The City has commissioned a new traffic and transport study and the findings were shared with the community in February 2023. The community were briefed at a forum hosted by the Lord Mayor and then provided initial feedback on the study.

That feedback lead to the proposal of the following solutions:

- closing Park Street at Henderson Road or introducing a new right turn ban from Park Street into Henderson Road
- a traffic calming scheme for Maddox Street west of Euston Road
- closing Maddox Street or banning the left turn from Euston Road into Maddox Street
- closing Harley Street west of McEvoy Street or east of Mitchell Road
- installing a signalised crossing at Mitchell Road and Ashmore Street
- a traffic calming scheme on Mitchell Road
- minor changes at some intersections to calm traffic and improve safety.

Issues raised during initial consultation but not included as proposals:

- **Increase in traffic on Buckland Lane arising from closure of Anderson Street and right-hand turn bans at Buckland Street**
  The no right turn on Mitchell Road at Buckland Street was originally installed at request of residents to reduce volumes on Buckland Street. Removing the no right turn will encourage more traffic on Buckland St.
- **The pedestrian crossing of Mitchell Road at Harley Street should be raised**
  A raised pedestrian crossing was proposed as part of the cycleway works but due to drainage considerations during detailed design, it was not possible to raise the crossing. Signals at the intersection will provide a safer designated crossing for people walking instead of a raised zebra crossing.

- **Mitchell Road between Sydney Park Road and Coulson Street is too narrow to accommodate the cycleway currently under construction**
  The cycleway uses space previously used for parking and does not reduce traffic lanes.
- **Temporary speed humps on Henderson Road and Railway Parade are loud and need to be replaced with permanent, quieter ones**
  The material and locations can be considered but permanent speed humps will not create less noise.

Engagement summary

We asked the community for feedback on the proposals

Consultation ran between 1 May and 30 June 2023 and provided an opportunity for stakeholders and the community to review proposals

This report outlines the community engagement activities that took place to support the consultation and summarises the key findings from the consultation.

Purpose of the engagement

The purpose of the engagement was to:

- Get feedback on the proposals
- Determine if anything had been missed by calling on local and specific knowledge

Engagement activities

Sydney Your Say webpage
A Sydney Your Say webpage was created. The page included a summary of the proposals and link to the Study.

Interactive map
The Sydney Your Say page included a link to an interactive map highlighting the proposals, surveys and pins that could be dropped with any additional comments.

The community and stakeholders could insert their feedback directly onto the map and surveys or email a submission.

Consultation letter
Letters were posted to residents on 1 May and on 29 May, inviting them to give feedback on the proposal. 7000 letters were distributed on each occasion.

Outcomes from the engagement

Feedback was received through the interactive map, an online survey and via email.

- The Sydney Your Say page was visited 3307 times during the consultation period.
- There were 1794 unique users on the interactive map
- 232 people completed 350 survey responses
- There were 845 comments dropped on the map
- 180 email submissions were received from individuals

Link: Traffic Study and Survey Responses Report

Attachment C

Community Engagement Summary Report

CITY OF SYDNEY

Engagement report – Proposed improvements for traffic and transport in Alexandria and Erskineville

Contents

Background

The City of Sydney has worked with community to address a series of traffic impacts since the inception of Westconnex, now known as M8. These projects are a part of a 2018 Local Area Traffic Management Plan which has been progressively implemented since then.

We have previously investigated solutions developed as part of traffic studies, observations of traffic changes and community requests.

These solutions included:

- Partial road closures
- Full road closures
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- Continuous footpath treatments at intersections
- Traffic lights

Community have let us know what they support and utilising their local knowledge, what they believe will work. The City then took these solutions to Transport for NSW for approval. While most were approved, we have implemented changes at Belmont Street, Lawrence Street, Brennan Street, Power Avenue and Loveridge Street.

Since the closure of two-way traffic on Railway Parade at Swanson Street, residents on Park Street have told us that there has been an increase in traffic in their street.

The City has commissioned a new Erskineville & Alexandria Traffic and Transport Study (the Study) and the findings were shared with the community in February 2023. The community were briefed at a forum hosted by the Lord Mayor and then provided initial feedback on the study.

That feedback led to the proposal of the following solutions:

- **closing Park Street at Henderson Road or introducing a new right turn ban from Park Street into Henderson Road**
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- **closing Maddox Street or banning the left turn from Euston Road into Maddox Street**
- **closing Harley Street west of McEvoy Street or east of Mitchell Road**
- **installing a signalised crossing at Mitchell Road and Ashmore Street**
- **a traffic calming scheme on Mitchell Road**
- **minor changes at some intersections to calm traffic and improve safety.**

Issues raised during initial consultation but not included as proposals:

- **Increase in traffic on Buckland Lane arising from closure of Anderson Street and right-hand turn bans at Buckland Street**
  The no right turn on Mitchell Road at Buckland Street was originally installed at request of residents to reduce volumes on Buckland Street. Removing the no right turn will encourage more traffic on Buckland St.
- **The pedestrian crossing of Mitchell Road at Harley Street should be raised**
  A raised pedestrian crossing was proposed as part of the cycleway works but due to drainage considerations during detailed design, it was not possible to raise the crossing. Signals at the intersection will provide a safer designated crossing for people walking instead of a raised zebra crossing.

- **Mitchell Road between Sydney Park Road and Coulson Street is too narrow to accommodate the cycleway currently under construction**
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- There were 1794 unique users on the interactive map
- 232 people completed 350 survey responses
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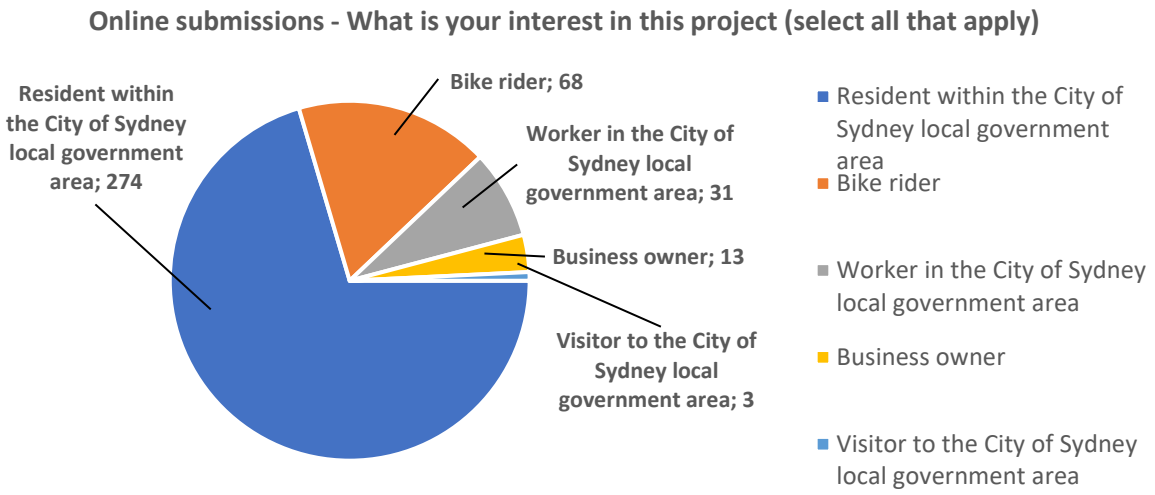
Respondent Demographics

Participants of the online survey and interactive map comments were required to complete a demographic survey to understand what their interest was and where they are from. This was only required once per user and more than one option could be selected. A total of 279 people completed the demographics survey and the majority indicated they were a resident within the City of Sydney local government area.



Respondents were also asked to provide their postcode as part of the online demographics survey. The majority of respondents indicated they were from Alexandria or Erskineville.

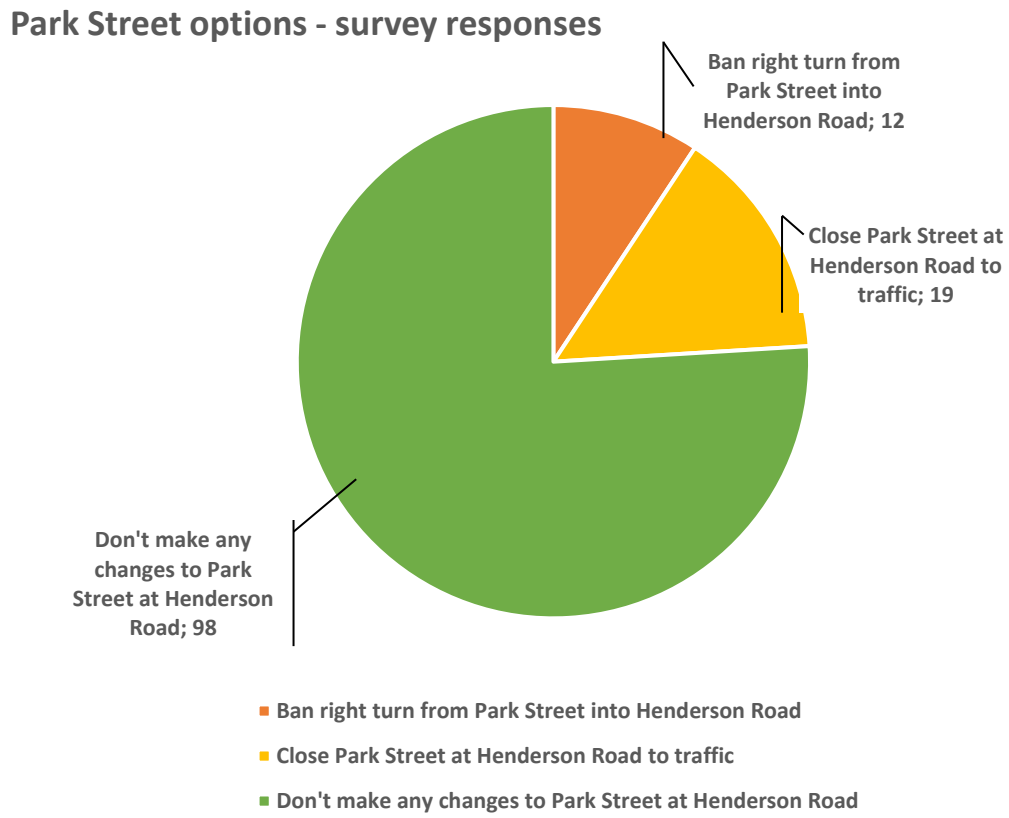
Postcode	Suburb	Count	%
2015	Alexandria	190	68%
2043	Erskineville	69	25%
2042	Newtown/Enmore	7	2%
2017	Zetland	2	1%
2000	Sydney	2	1%
2010	Surry Hills/ Darlinghurst	1	0.4%
2016	Redfern	1	0.4%
2032	Kingsford/Daceyville	1	0.4%
2033	Kensington	1	0.4%
2203	Dulwich Hill	1	0.4%
2222	Penshurst	1	0.4%
	Interstate	2	1%
	No info	3	1%

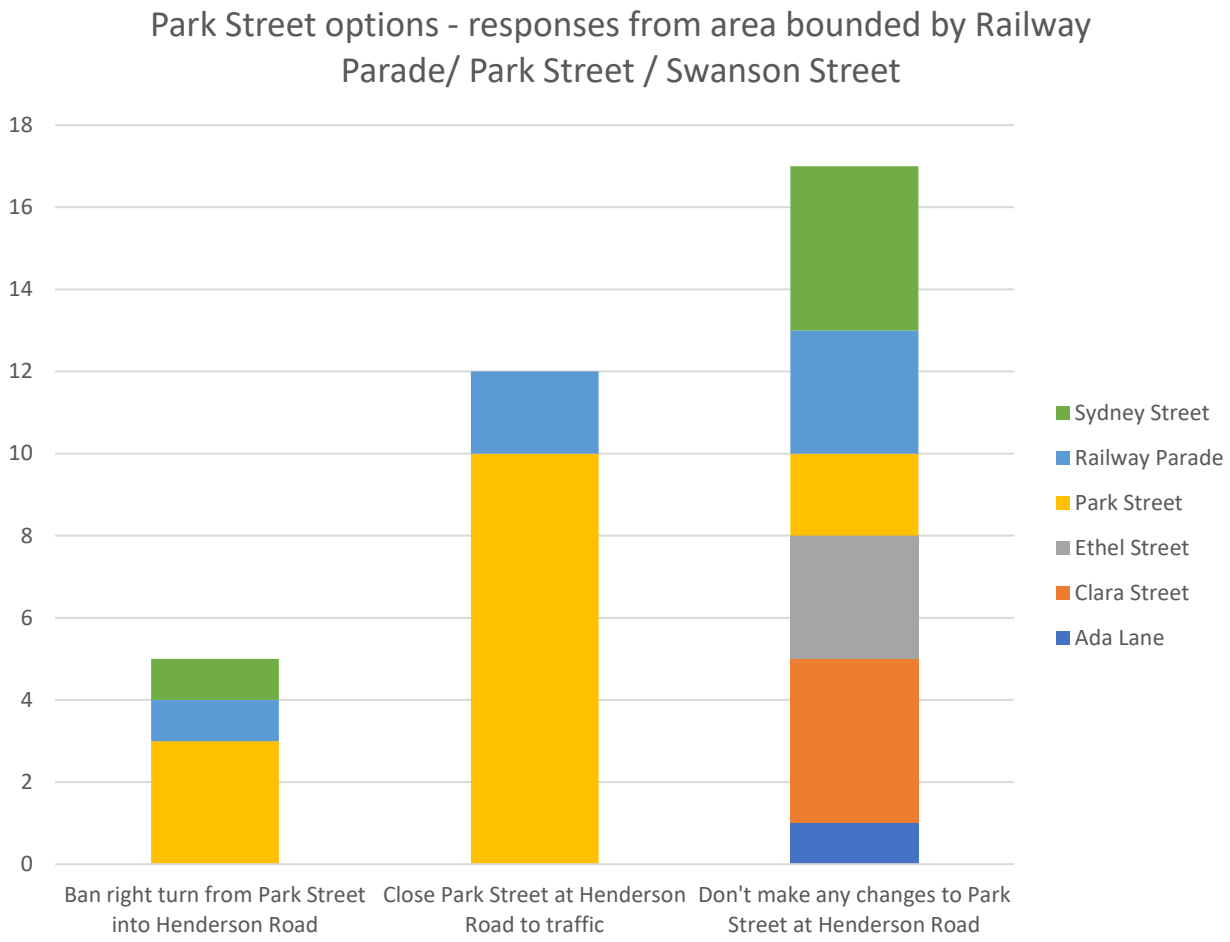
Survey responses

Within the online survey, submitters were asked for their location of residence. Below is a table presenting the number of submissions from each street. Those who did not enter their location when completing the online survey have been categorised as “not provided”. Overall, there were 350 survey responses.

	Number of Survey Submissions			
	Harley Street options	Maddox Street options	Park Street options	Grand Total
Grand Total	**109**	**112**	**129**	**350**
Respondent Residence				
Alexandria	**71**	**79**	**65**	**215**
Belmont Street	18	17	4	39
Brandling Street			4	4
Brennan Street	1	1	1	3
Buckland Street	1	1	1	3
Campbell Road		1		1
Copeland Street	1	1	2	4
Dibbs Street	1		1	2
Euston Road	4	12		16
Fountain Street	1		1	2
Gerard Street			1	1
Henderson Lane	1		1	2
Henderson Road	1	2	18	21
Huntley Street		1		1
Jennings Street	1	1	2	4
Kingsclear Road			6	6
Lawrence Street	19	24	1	44
Lyne Street	1		4	5
Maddox Street		4	1	5
McEvoy Street	4	1		5
Mitchell Road	11	8	4	23
Newton Street	3	2	3	8
Park Street			1	1
Phillips Street	1		1	2
Renwick Street	1	1	6	8
Suttor Street		1	2	3
Not provided	1	1		2
Erskineville	**27**	**25**	**52**	**104**
Ada Lane			1	1
Amy Street	1	1		2
Ashmore Street	2	3	1	6
Binning Street	1	1	1	3
Bridge Street	4	3	2	9
Burren Street	1	2	1	4
Charles Street	1	1	1	3

Clara Street	1	1	4	6
Coulson Street	1			1
Ethel Street			3	3
Eve Street	3	2	2	7
Foundry Street		1		1
MacDonald Street	3	1	3	7
Mitchell Road	2	1	1	4
Morrissey Road	1	1	1	3
Park Street	2	3	14	19
Pleasant Avenue		1		1
Prospect Street	2	1	2	5
Railway Parade		1	6	7
Rochford Street	1		2	3
Stovemaker Lane	1	1	1	3
Swanson Street			1	1
Sydney Street			5	5
Eveleigh	**1**		**6**	**7**
Carriageworks Way	1		1	2
Henderson Road			5	5
Kingsford		**1**		**1**
Middle Street		1		1
Darlington	**1**	**1**		**2**
Abercrombie Street	1	1		2
Newtown	**3**	**3**	**1**	**7**
Gowrie Street	2	1	1	4
Union Street		1		1
Not provided	1	1		2
Waterloo	**2**	**2**	**2**	**6**
Cope Street			1	1
George Street	1	1		2
Raglan Street	1	1	1	3
North Bondi	**2**	**1**	**1**	**4**
Glenayr Avenue	2	1	1	4
Other	**2**		**2**	**4**
Middle Street	1			1
Morrell Street			1	1
Not provided	1		1	2
Grand Total	**109**	**112**	**129**	**350**

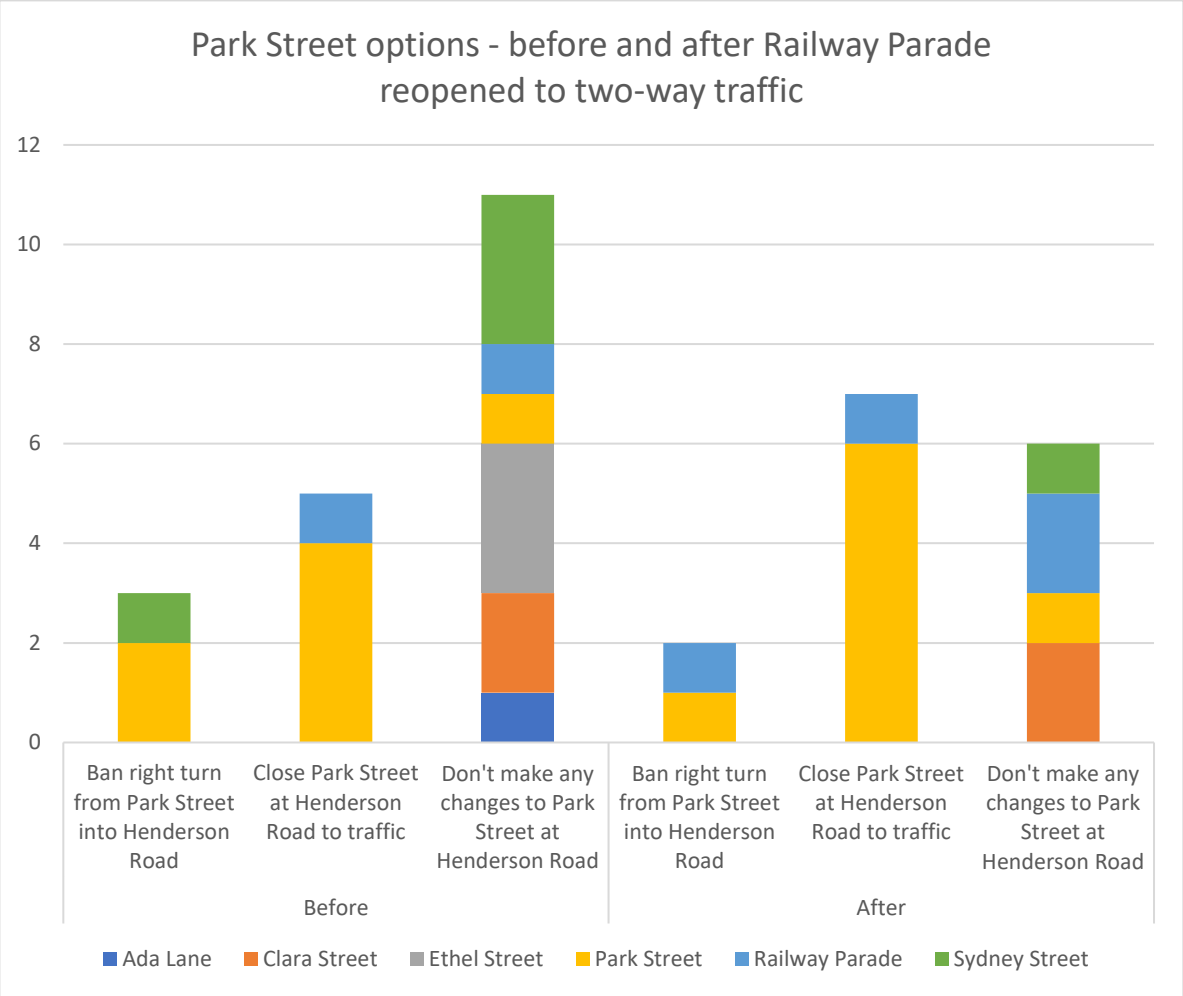

Park Street options - survey responses
Ban right turn from Park Street into Henderson Road; 12
Close Park Street at Henderson Road to traffic; 19
Don't make any changes to Park Street at Henderson Road; 98
Ban right turn from Park Street into Henderson Road
Close Park Street at Henderson Road to traffic
Don't make any changes to Park Street at Henderson Road

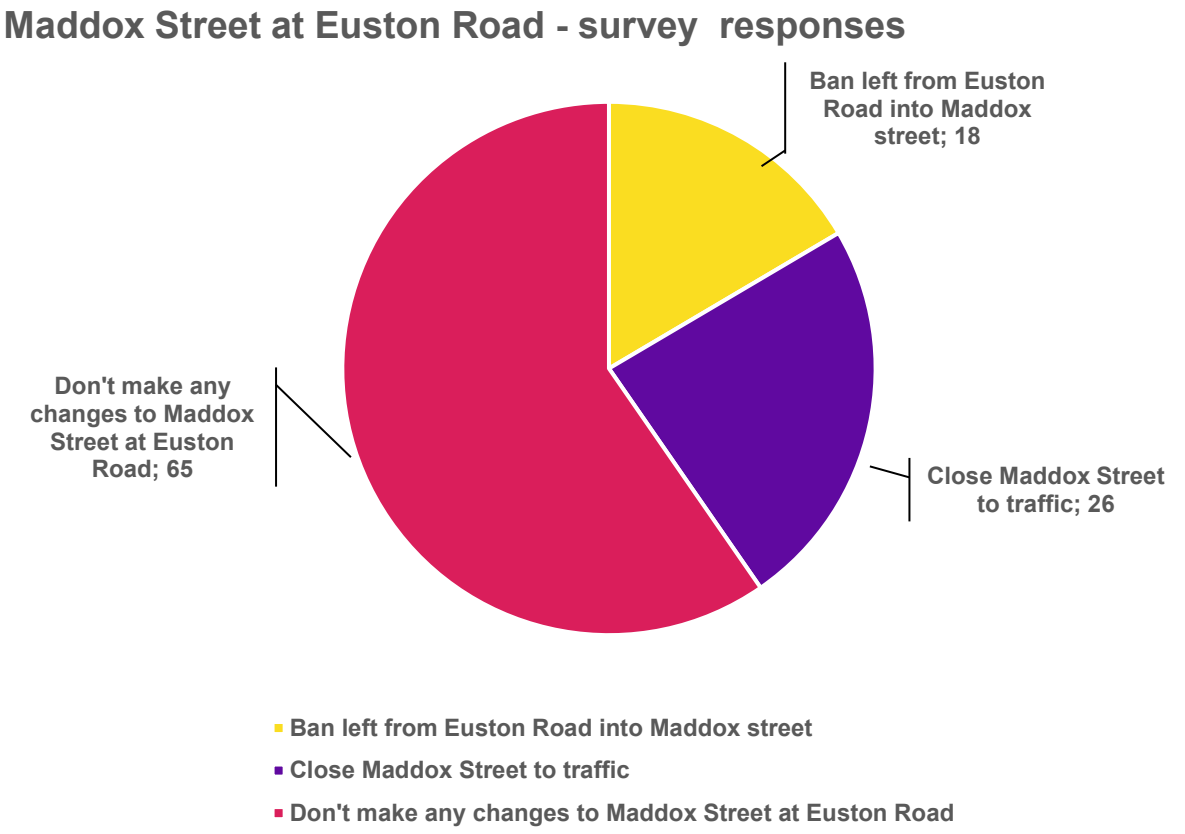

Park Street options - responses from area bounded by Railway Parade/ Park Street / Swanson Street
18
16
14
12
10
8
6
4
2
0
Ban right turn from Park Street into Henderson Road
Close Park Street at Henderson Road to traffic
Don't make any changes to Park Street at Henderson Road
Sydney Street
Railway Parade
Park Street
Ethel Street
Clara Street
Ada Lane

Railway Parade was reopened to two-way traffic between Swanson Street and Sydney Road on 16 May 2023 in response to previous feedback from the community.

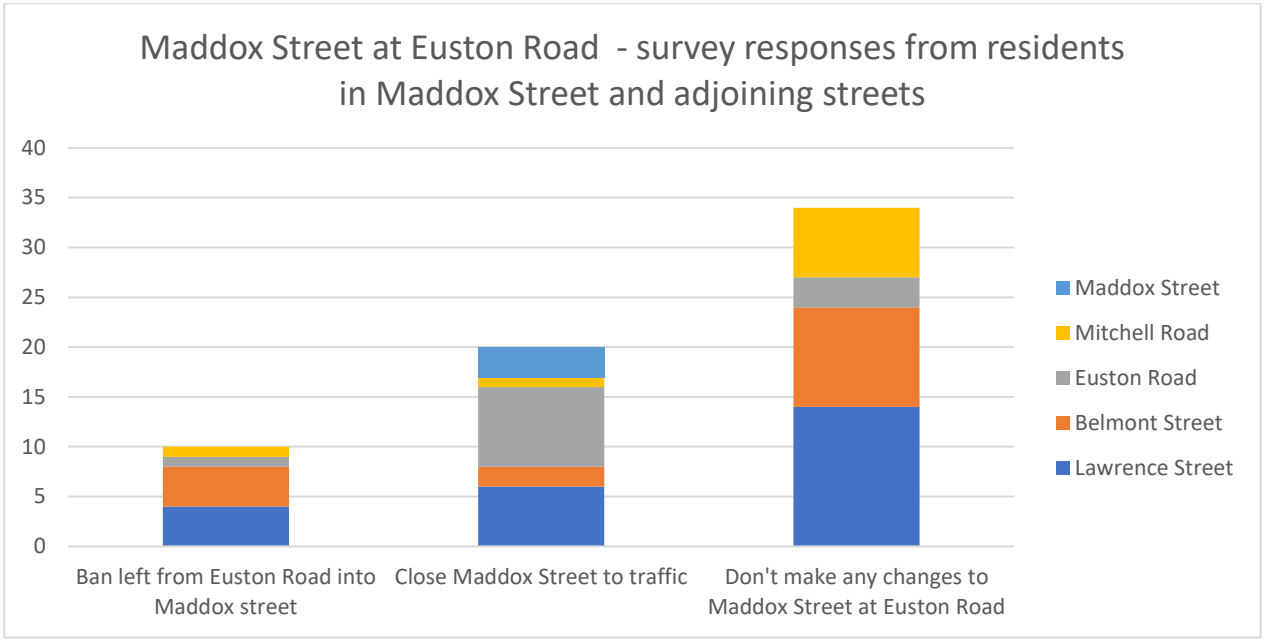
As this change was made during the community engagement period, responses received before and after the change were separated for the purpose of this analysing any change in community opinion.

On a street-by-street basis, there was negligible swing in the preference for the proposed options for Park Street for responses received before vs after Railway Parade was changed back to two-way traffic.

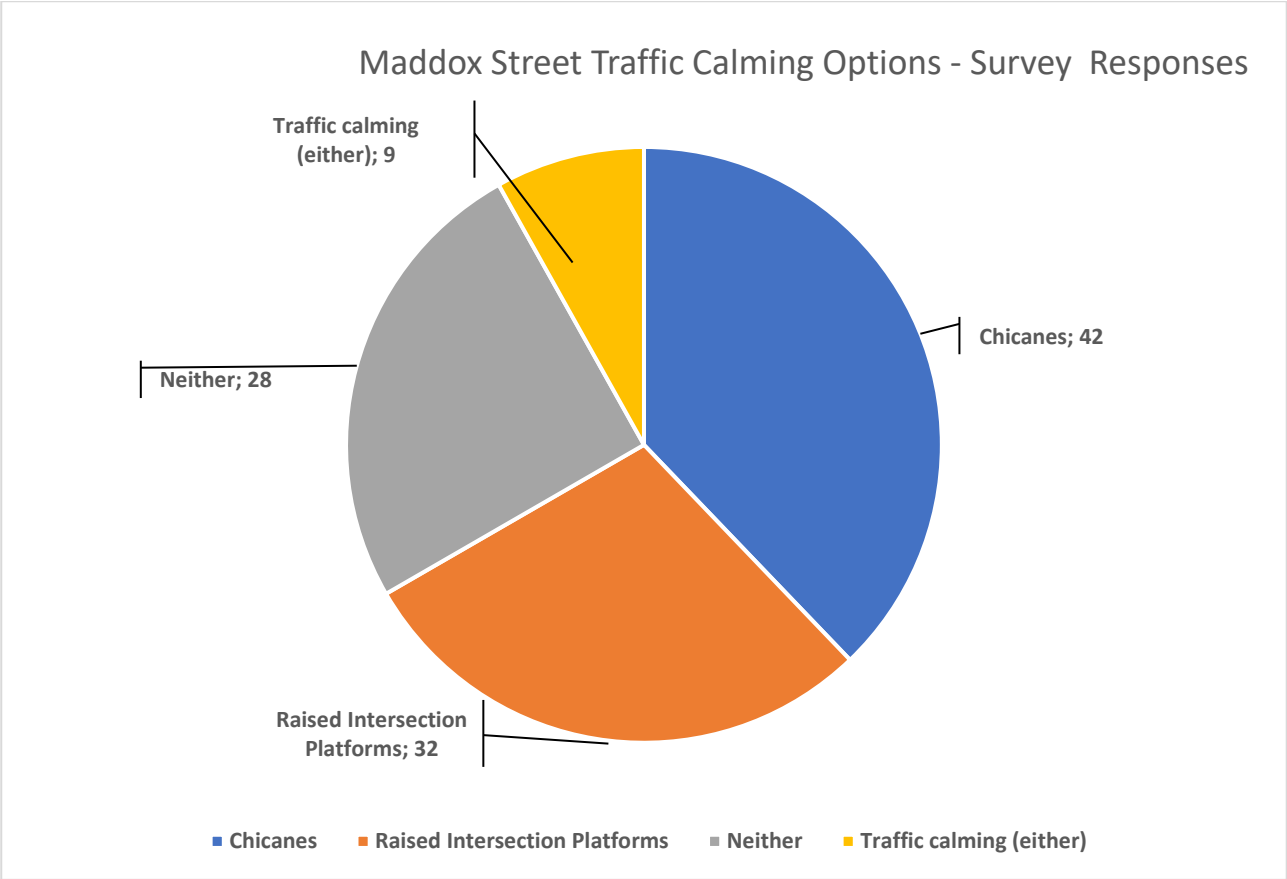




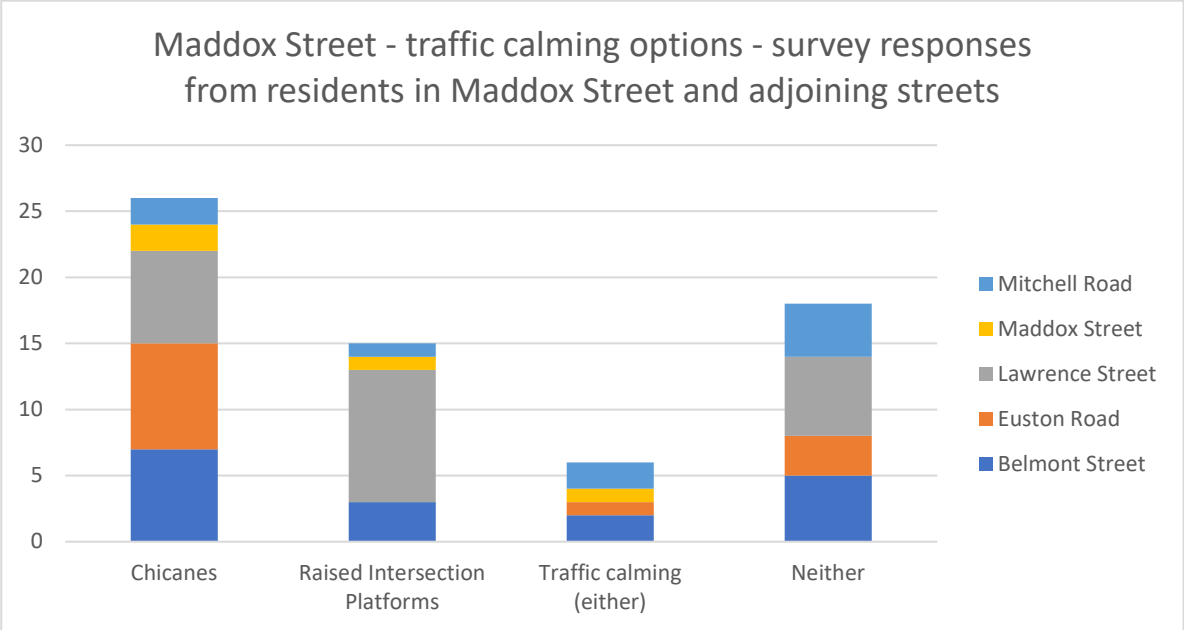
There were 109 respondents to the survey on proposals in Maddox Street at Euston Road. Overall, 60% of survey respondents opposed changes to Maddox Street at Euston Road. 24% supported a closure west of Maddox Street and 16% supported a left turn ban from Euston Road into Maddox Street.



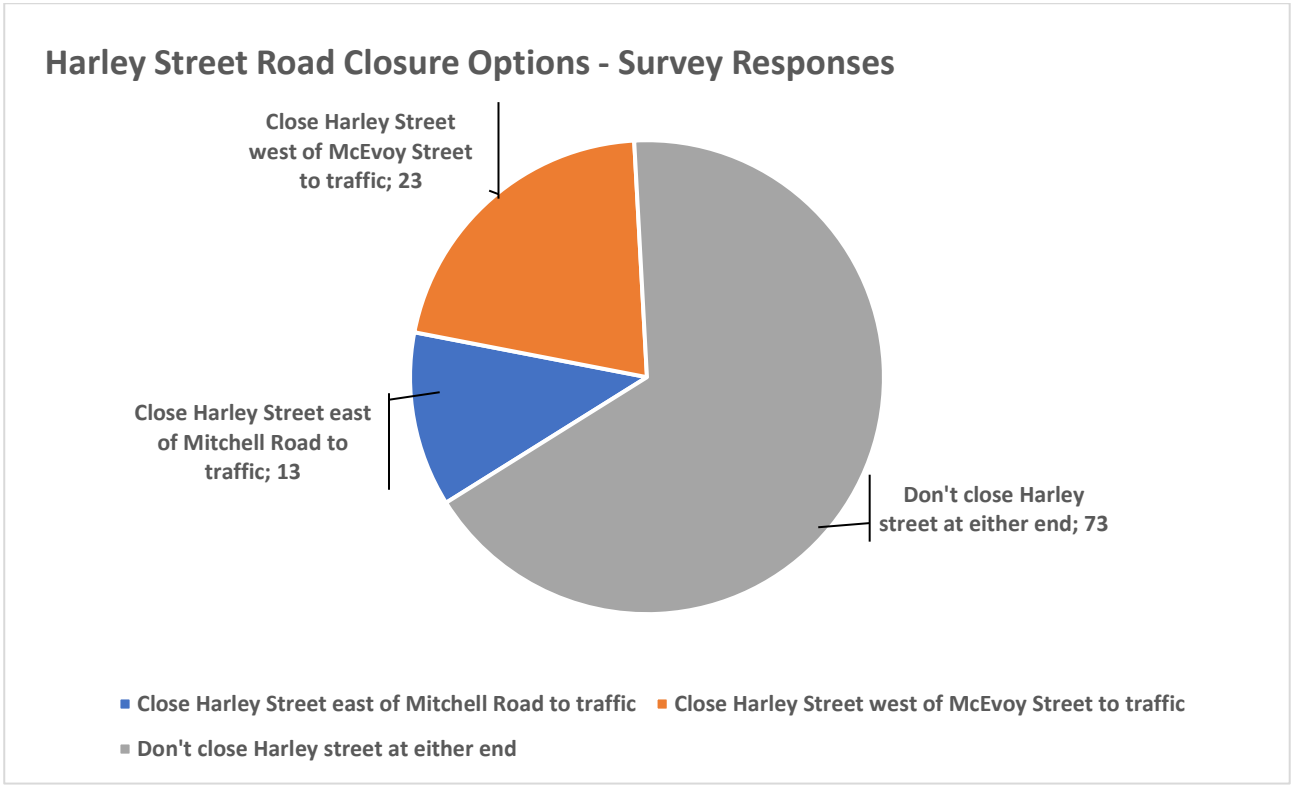
There were 64 survey respondents from Maddox Street and adjoining streets. There were 3 survey respondents from Maddox Street and all supported closing Maddox Street to traffic west of Euston Road. 34 respondents from street adjoining Maddox Street (53%) oppose any traffic restrictions in Maddox Street. 20 respondents from Maddox Street and adjoining streets (31%) support closing Maddox Street and 16% support banning the left turn.

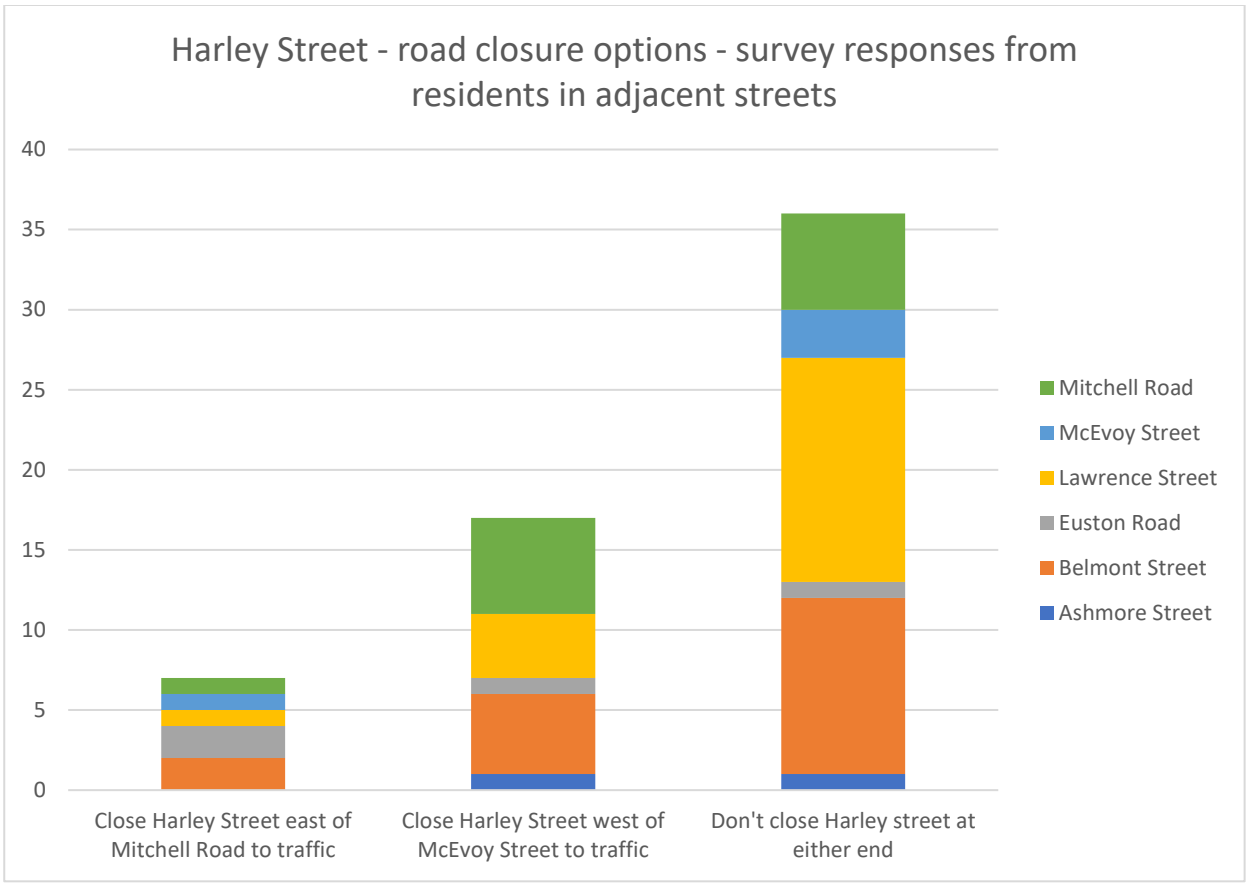


Overall, 75% of survey respondents support some form of traffic calming in Maddox Street and 25% do not support either option. Of those who supported traffic calming, 42 (51%) prefer chicanes and 32 (39%) prefer raised intersection platforms.



There were 65 survey respondents from Maddox Street and adjoining streets. There were 4 respondents from Maddox Street who all supported traffic calming generally, 2 supported chicanes and 1 supported raised intersection platforms. 47 (72%) of respondents from Maddox Street and surrounding streets supported traffic calming generally. 26 (40%) supported chicanes, 15 (23%) supported raised intersection platforms, 6 (9%) supported either option.


Harley Street Road Closure Options - Survey Responses
Close Harley Street west of McEvoy Street to traffic; 23
Close Harley Street east of Mitchell Road to traffic; 13
Don't close Harley street at either end; 73
Close Harley Street east of Mitchell Road to traffic
Close Harley Street west of McEvoy Street to traffic
Don't close Harley street at either end

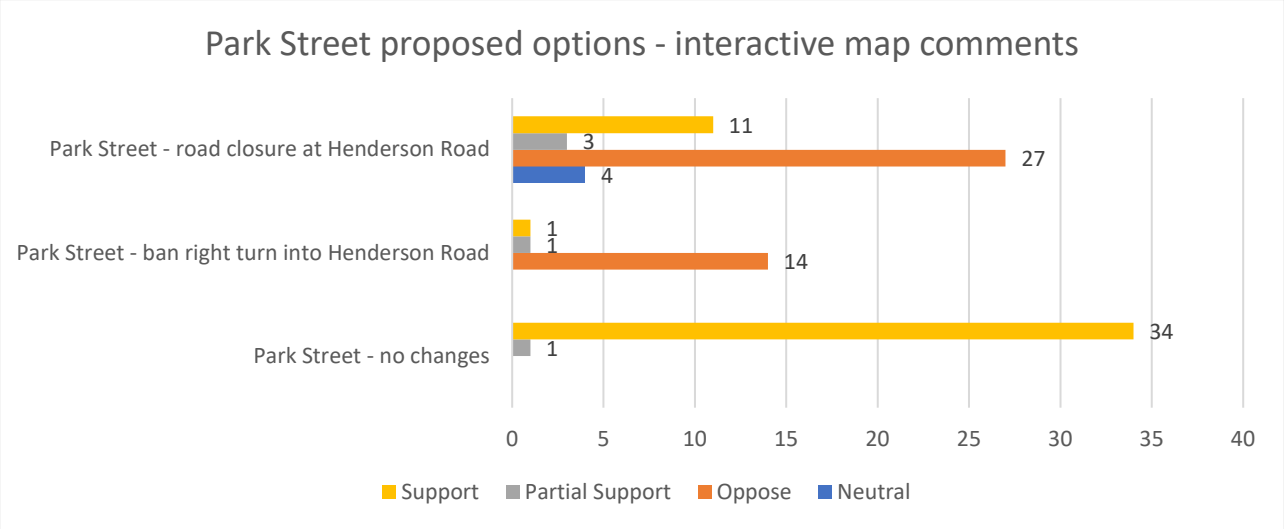

Harley Street - road closure options - survey responses from residents in adjacent streets
40
35
30
25
20
15
10
5
0
Close Harley Street east of Mitchell Road to traffic
Close Harley Street west of McEvoy Street to traffic
Don't close Harley street at either end
Mitchell Road
McEvoy Street
Lawrence Street
Euston Road
Belmont Street
Ashmore Street

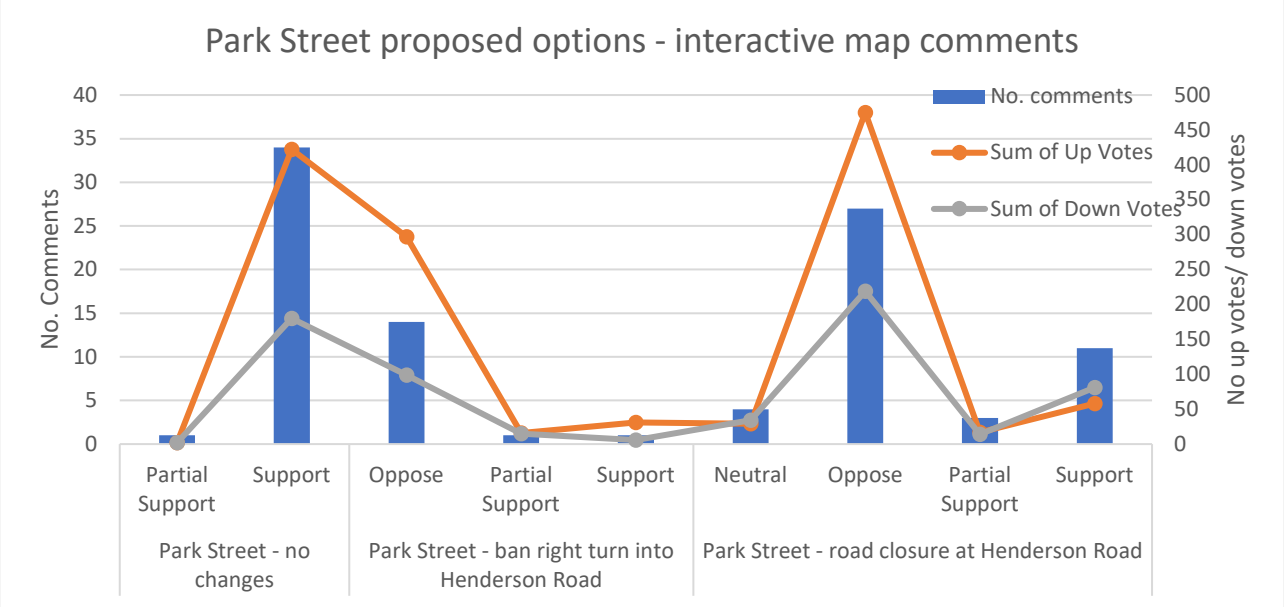
Interactive map comments

Respondents could submit more than one comment. Users could also like (up vote) or dislike (down vote) individual comments.

Comments on the proposed options

There were 265 comments submitted on the interactive map that were directly related to the options proposed from the Study.



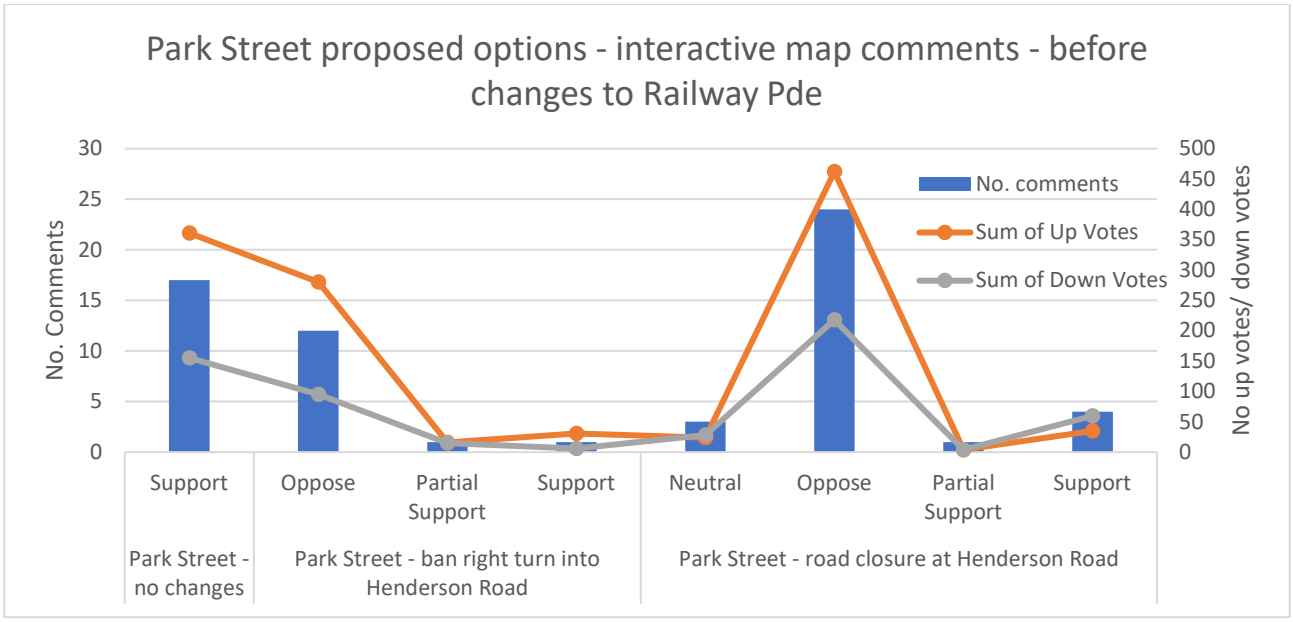


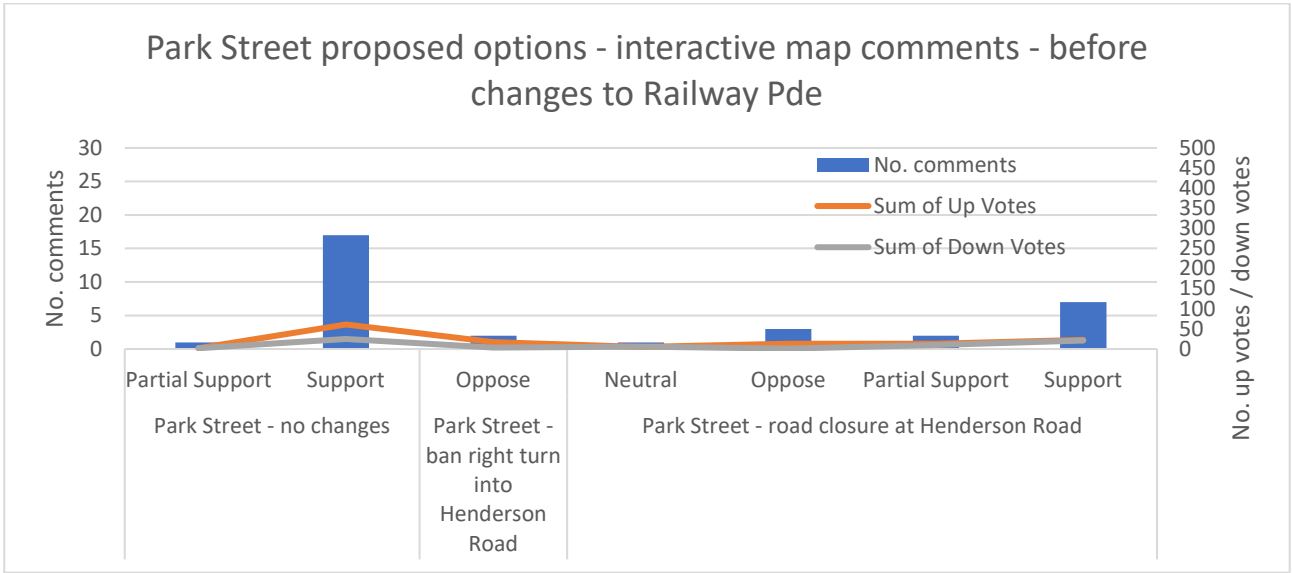
96 comments were added to the interactive map that related directly to the proposed traffic restrictions in Park Street. 34 (35%) of comments were supportive of retaining the existing traffic access in Park Street. 27 (28%) were opposed to the proposed closure of Park Street to traffic at Henderson Road and 14 (15%) were opposed to the right turn ban.

Comments opposing the restrictions were generally concerned about local access or impacts to adjacent streets from the diverted traffic.

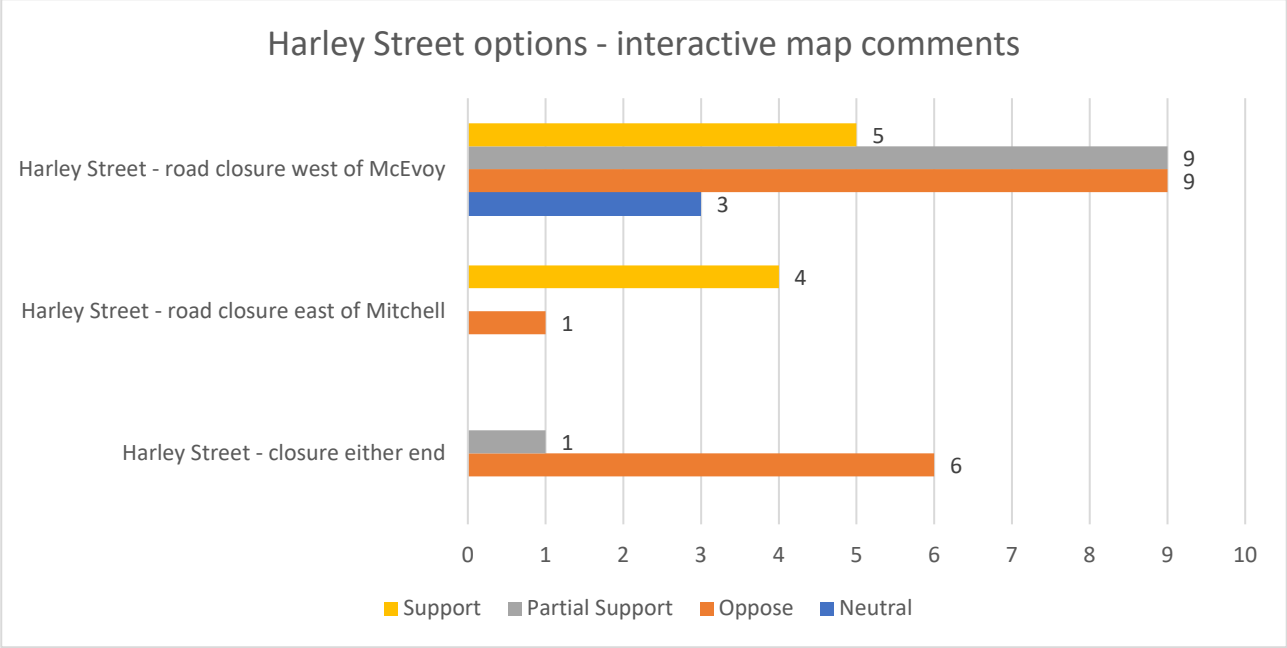
Railway Parade was reopened to two-way traffic between Swanson Street and Sydney Road on 16 May 2023 in response to previous feedback from the community.

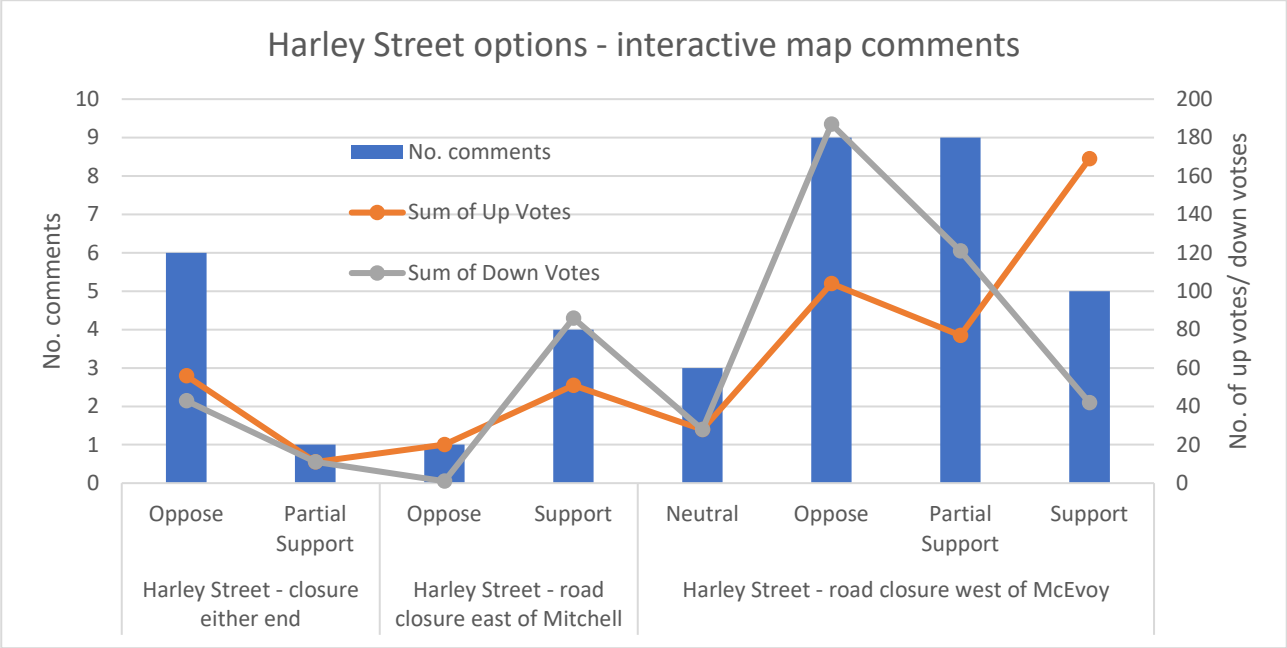
As this change was made during the community engagement period, responses received before and after the change were separated for the purpose of this analysing any change in community opinion.





Most comments were pinned prior to the changes to Railway Parade on 16 May. There was negligible swing in the preference for the proposed options for Park Street for responses pinned before vs after Railway Parade was changed back to two-way traffic.

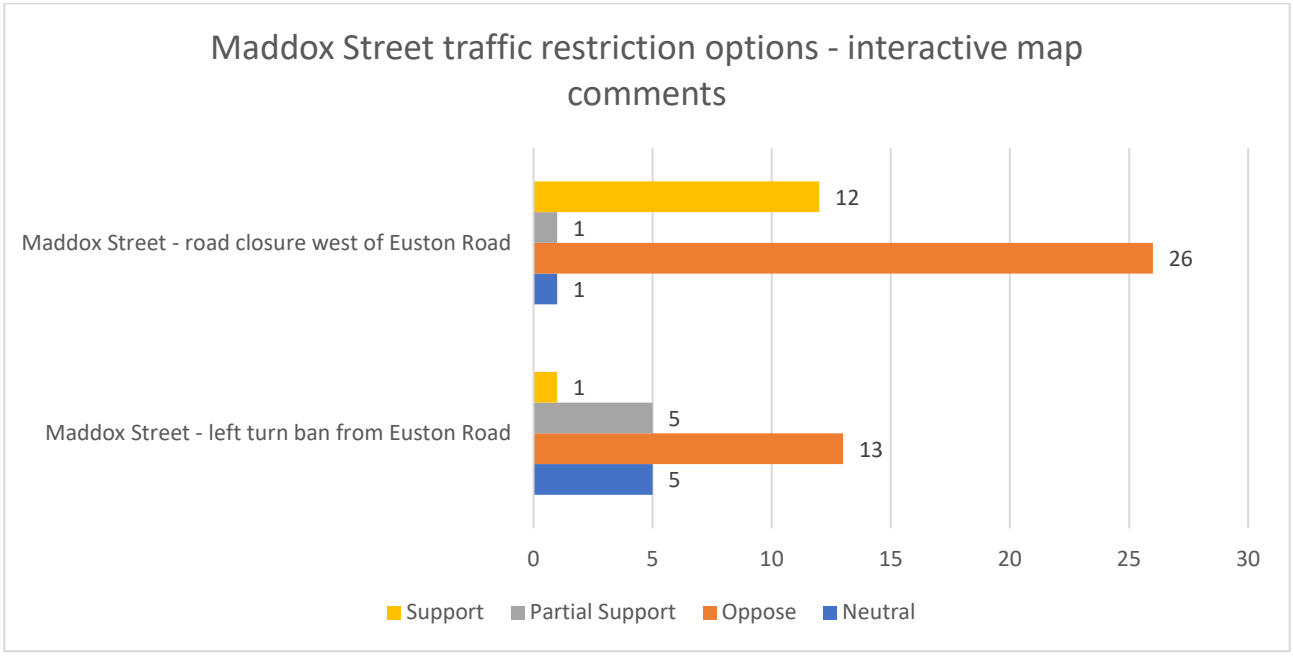


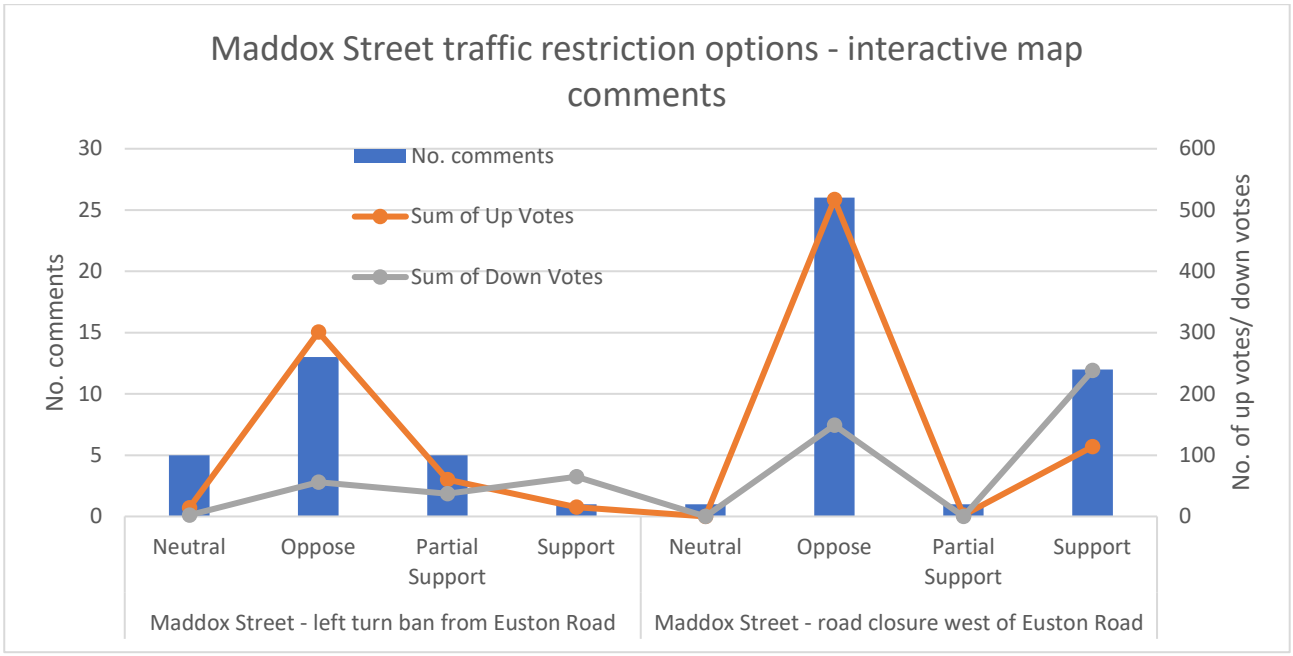


38 comments were added to the interactive map that related directly to the proposed traffic restrictions in Harley Street. 16 (42%) of the comments were opposed to closures in Harley Street at one or either end. 9 (24%) supported a closure, with 5 of those supporting the closure west of McEvoy Street and 4 supporting a closure east of Mitchell Road. 9 (24%) partially supported a closure west of McEvoy Street, with most of those suggesting a partial closure to traffic entering Harley Street from McEvoy Street while maintaining the left out onto McEvoy Street.

Comments opposing the proposed traffic restrictions in Harley Street were generally concerned about local access, increased travel times or impacts to adjacent streets from the diverted traffic.

Comments supporting the proposed closures in Harley Street were generally concerned about existing traffic conditions on Harley Street including volumes, narrow travel lanes and safety.

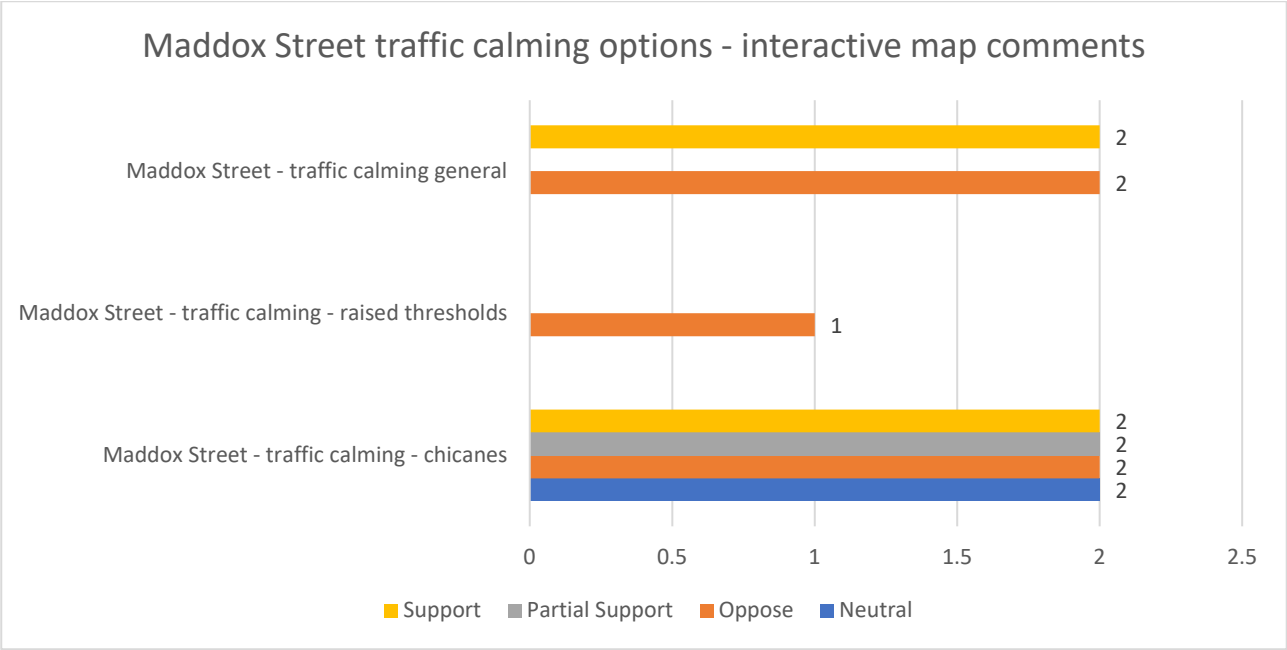




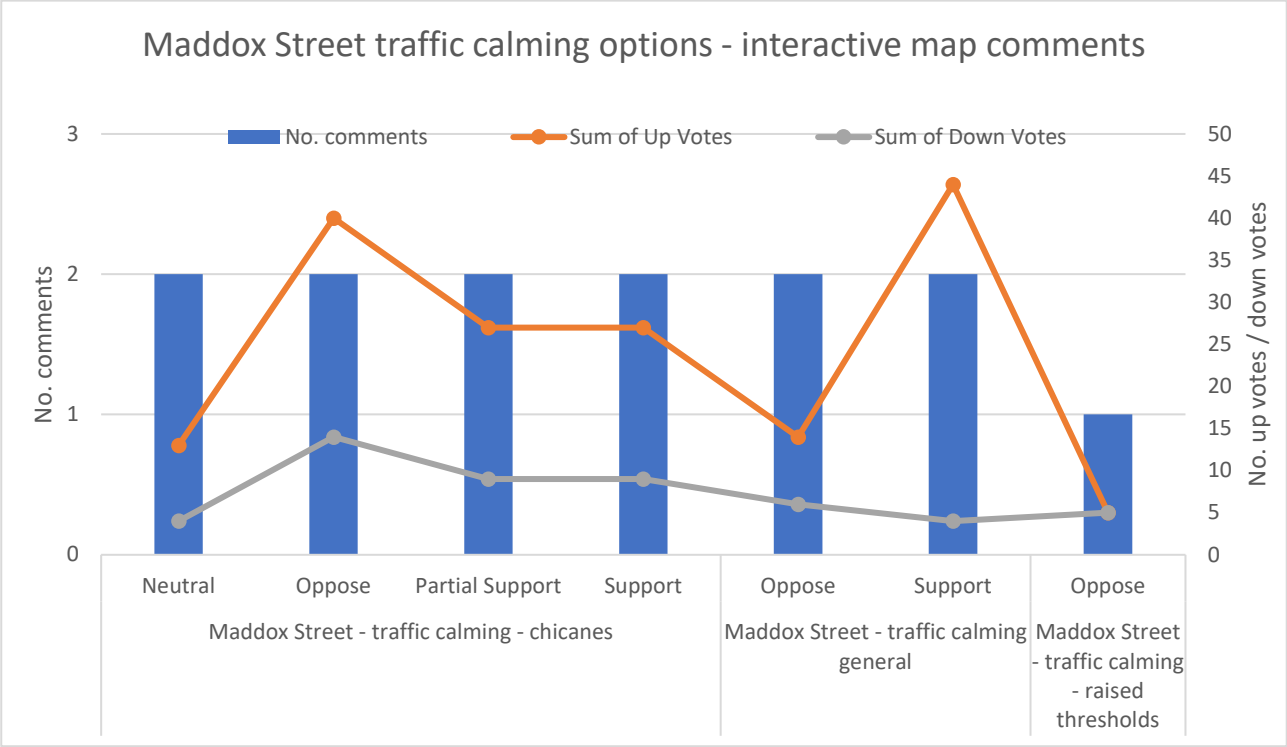
64 comments were added to the interactive map that related directly to the proposed traffic restrictions in Maddox Street (i.e. a closure west of Euston Road or left turn ban from Euston Road). 26 (41%) of the comments were opposed to the closure of Maddox Stret west of Euston Road. 13 (20%) opposed a left turn ban from Maddox Street into Euston Road. 12 (19%) supported a closure of Maddox Street west of Euston Road.

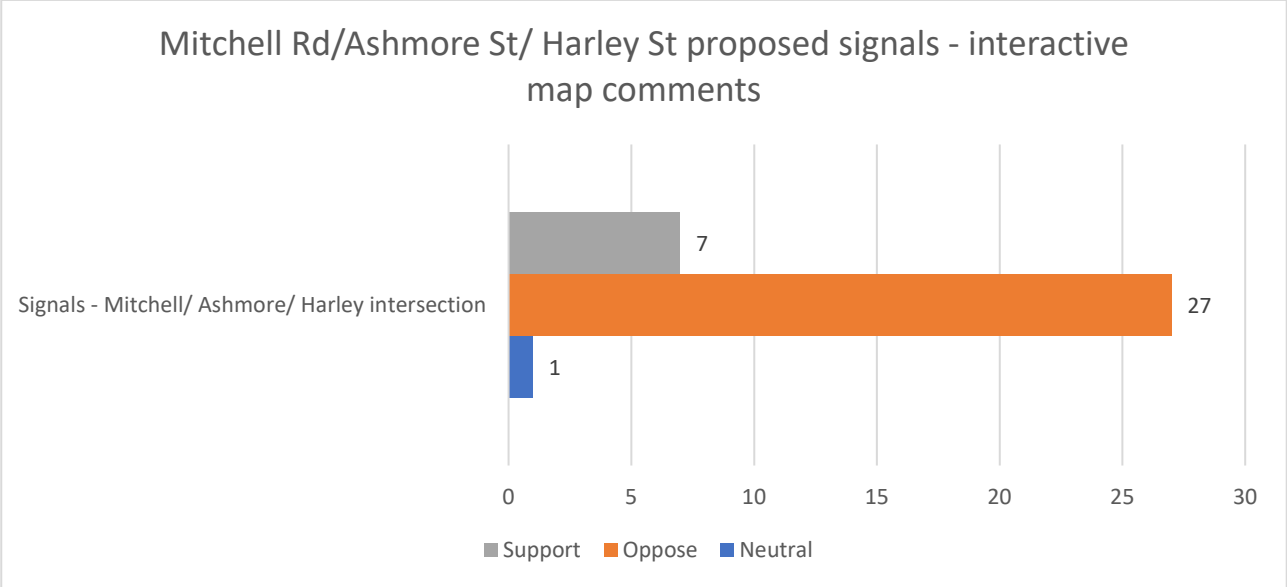
Comments opposing the proposed traffic restrictions in Maddox Street were generally concerned about local access, increased travel times or impacts to adjacent streets from the diverted traffic.

Comments supporting the proposed closures in Maddox Street were generally concerned about existing traffic conditions on Maddox Street including volumes, heavy vehicle volumes and safety.



There were 13 comments added to the interactive map that related directly to the proposed traffic calming options in Maddox Street. 5 (38%) were opposed to either option or traffic calming generally. 4 (30%) supported traffic calming including 2 preferring chicanes. 2 (15%) partially supported chicanes with 1 suggesting the chicanes need to be more substantial or higher to discourage heavy vehicles driving over them, and 1 commenting that any chicanes or road narrowing should incorporate cycle lanes.

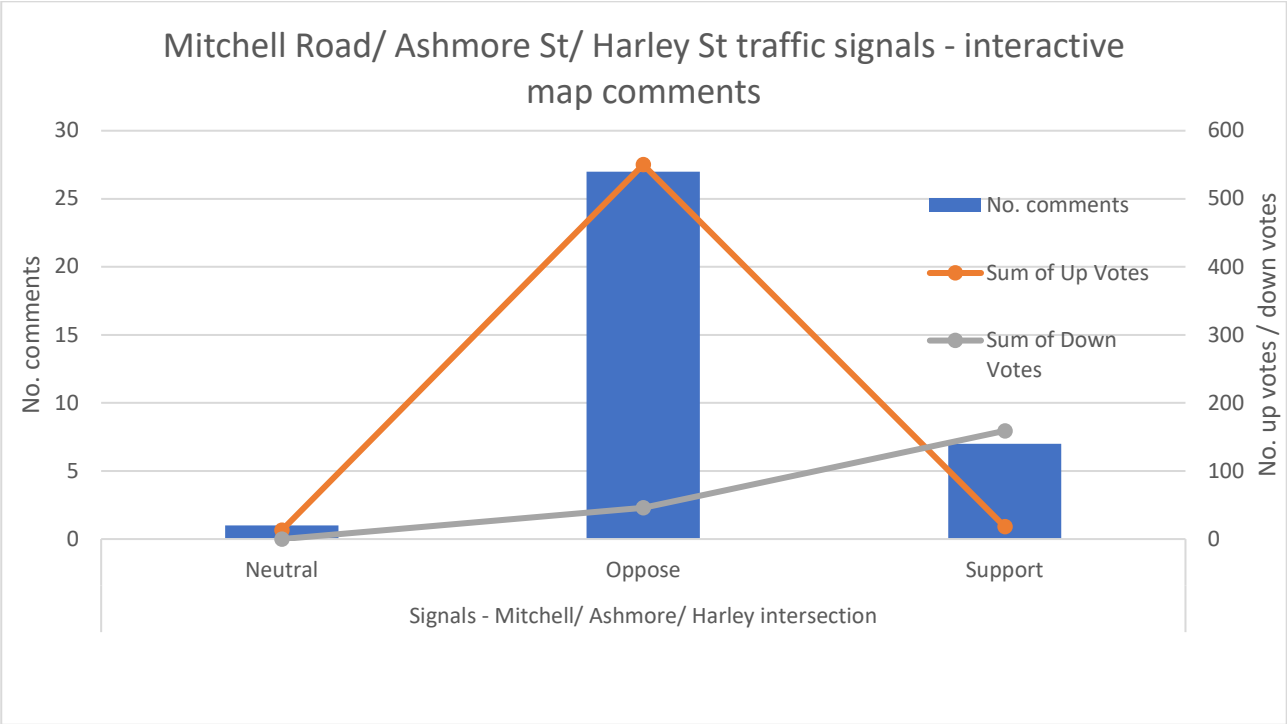


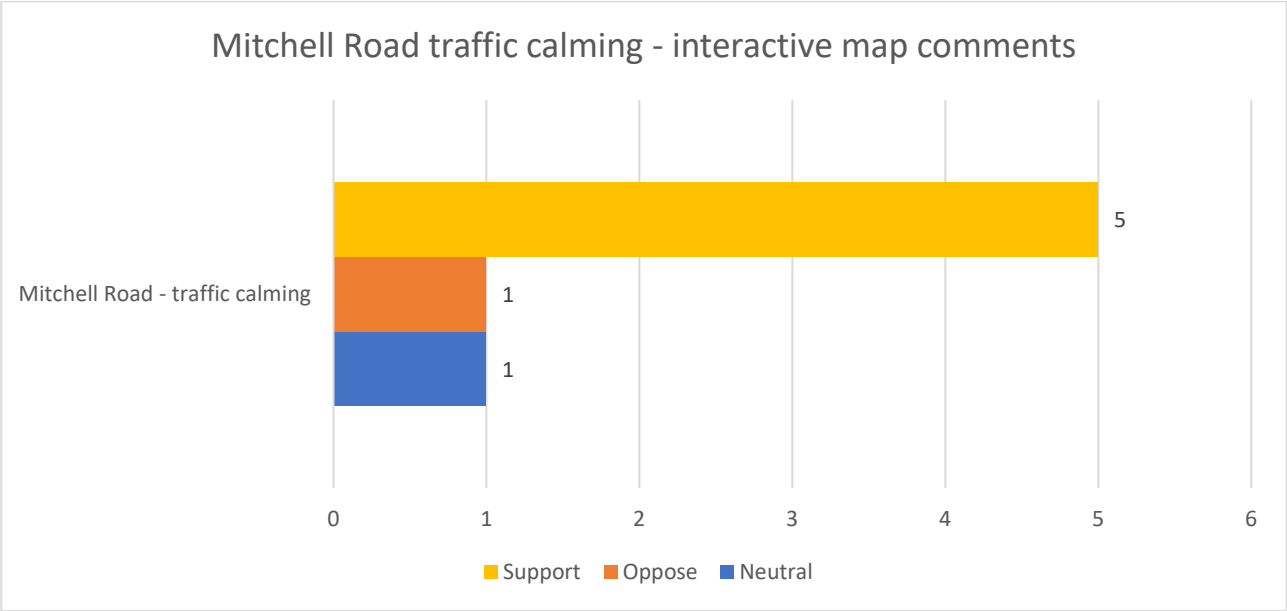


There were 35 comments relating to the proposal to install traffic signals at the intersection of Mitchell Road, Ashmore Street and Harley Street. 27 (77%) were opposed to the proposal and 7 (20%) were supportive.

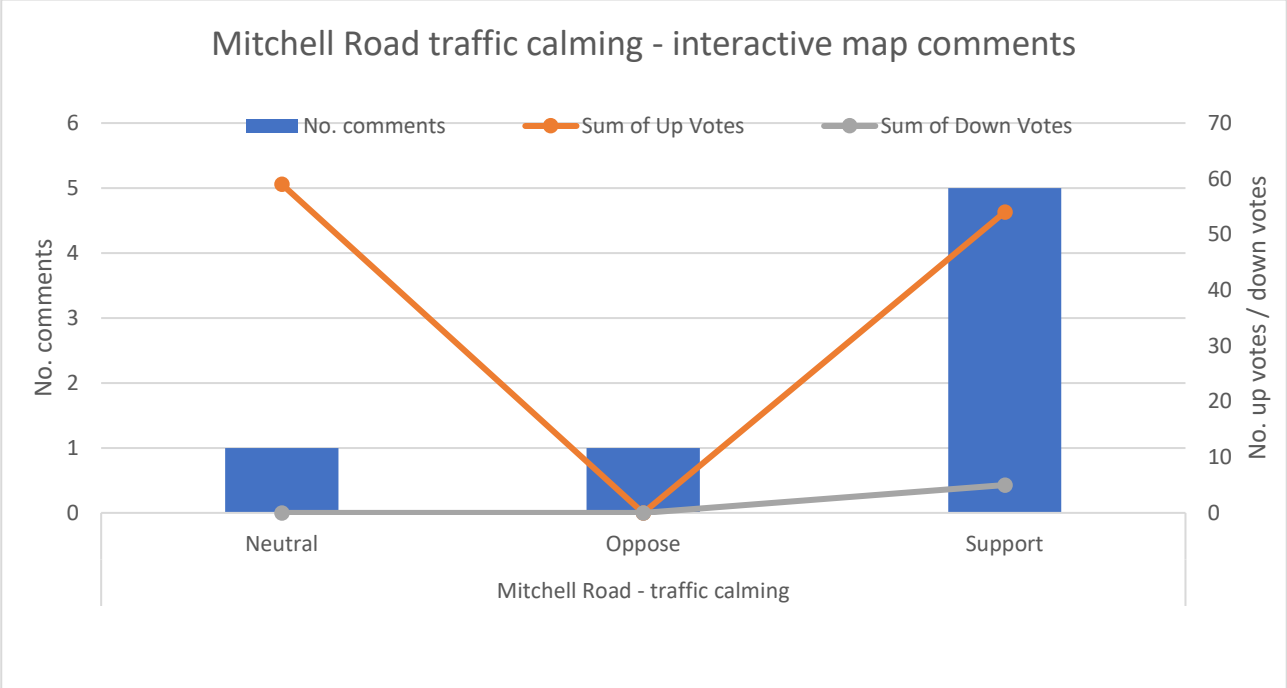
Comments opposing the signals were generally concerned about delays to vehicle traffic, and reduced priority and safety for people walking.

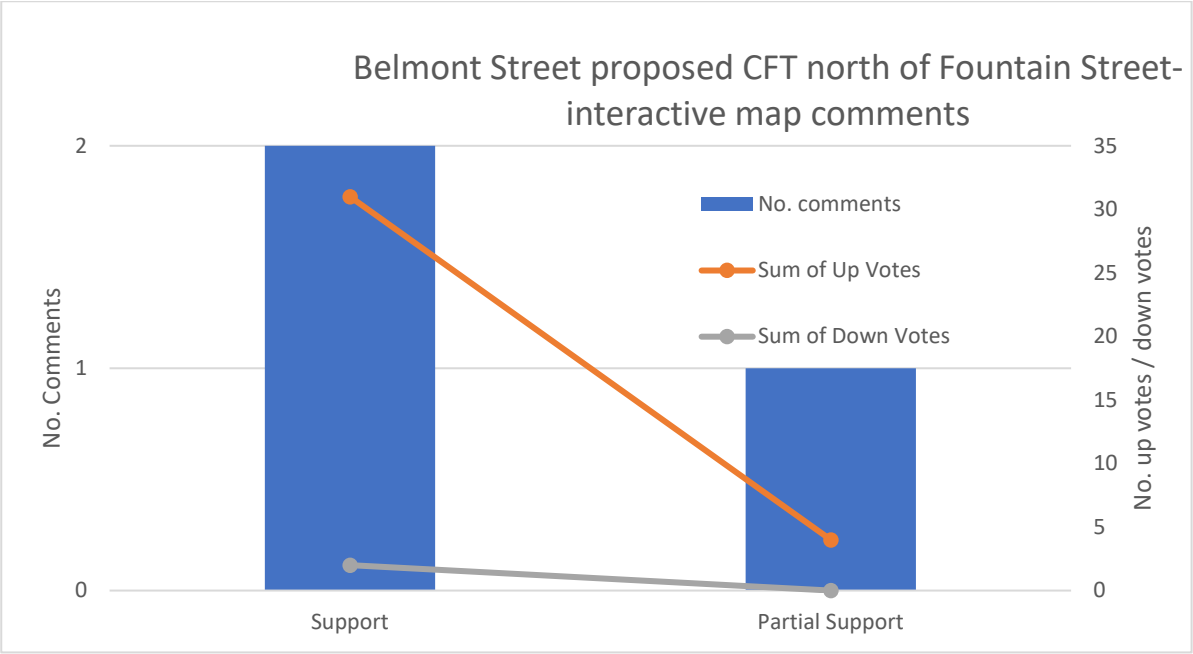
Comments supporting the signals were generally concerned about safety of the current roundabout and pedestrian crossing for people walking, cycling and driving.



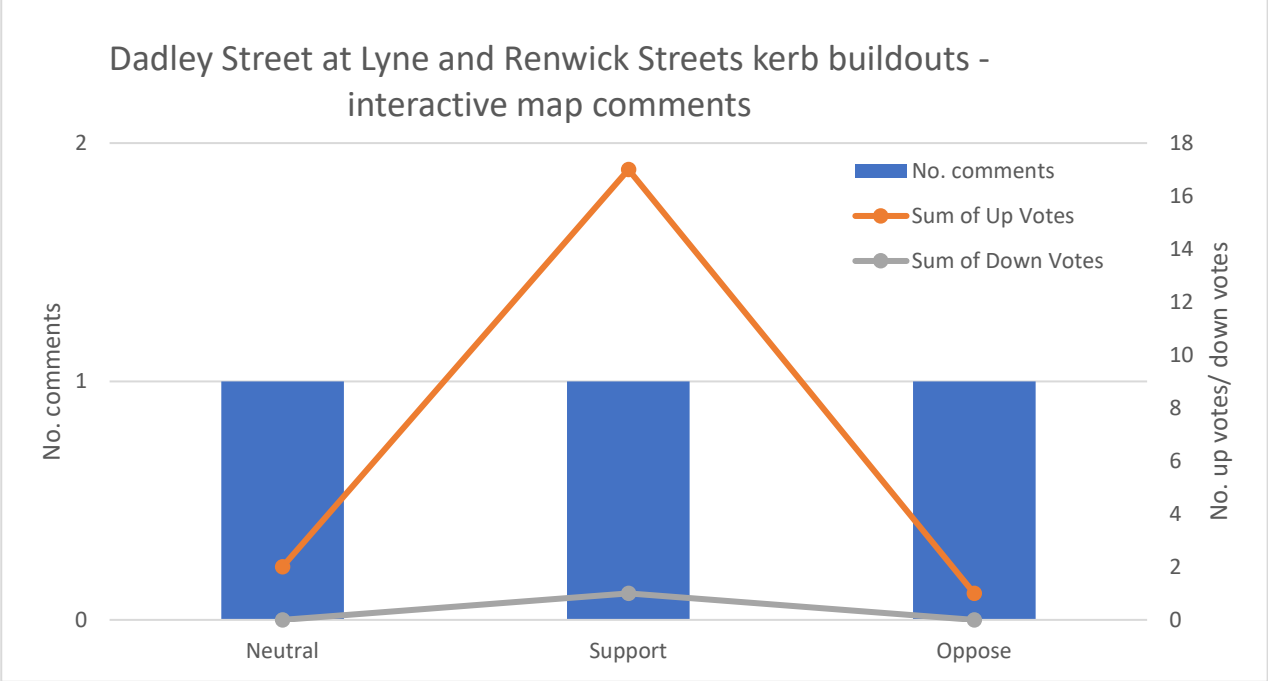


There were 7 comments added to the interactive map that related directly to the proposal for traffic calming along Mitchell Road. 5 (71%) were supportive of traffic calming in Mitchell Road and 1 (14%) was opposed. 1 requested more detail on the proposed treatments.





There were 3 comments in relation to the proposed continuous footpath treatment on Belmont Street, north of Fountain Street. 2 were in support and 1 partial support, suggesting CFTs need clearer signage that cars need to give way to pedestrians.



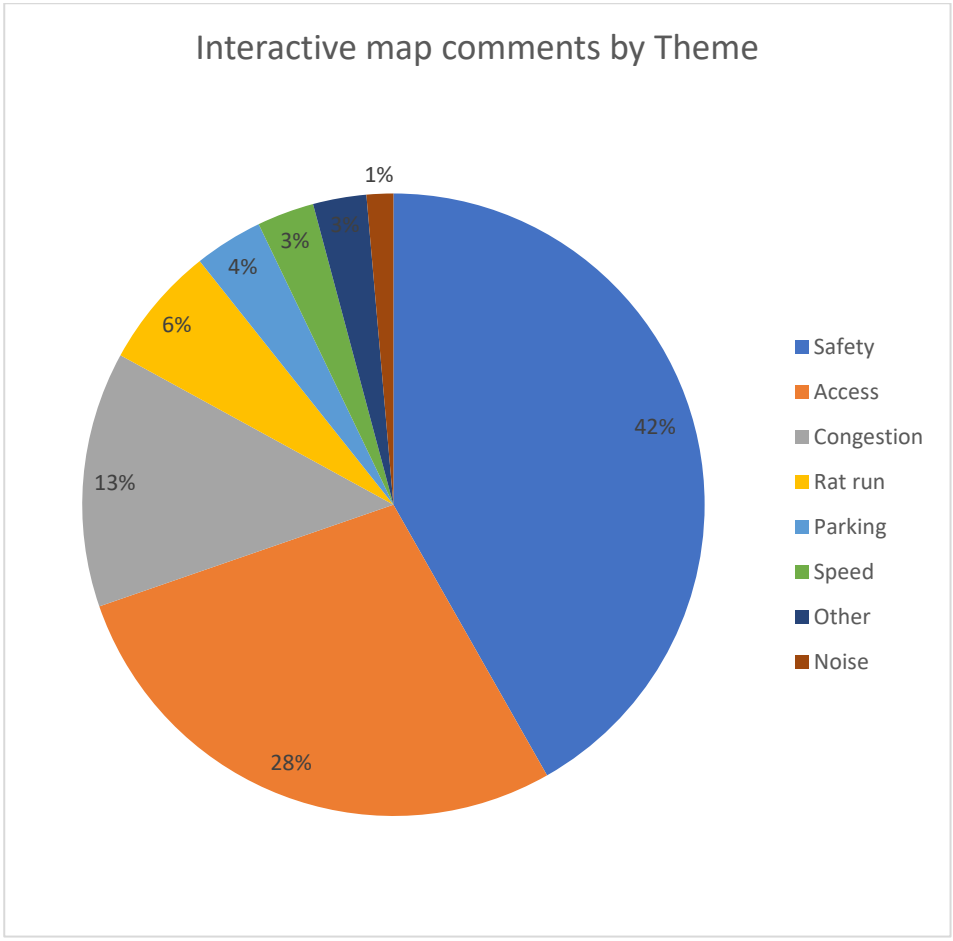
There were 3 comments added to the interactive map related to the proposal for kerb buildouts at the intersections of Dadley Street at Lyne and Renwick Streets with one in support, one opposed and one neutral.

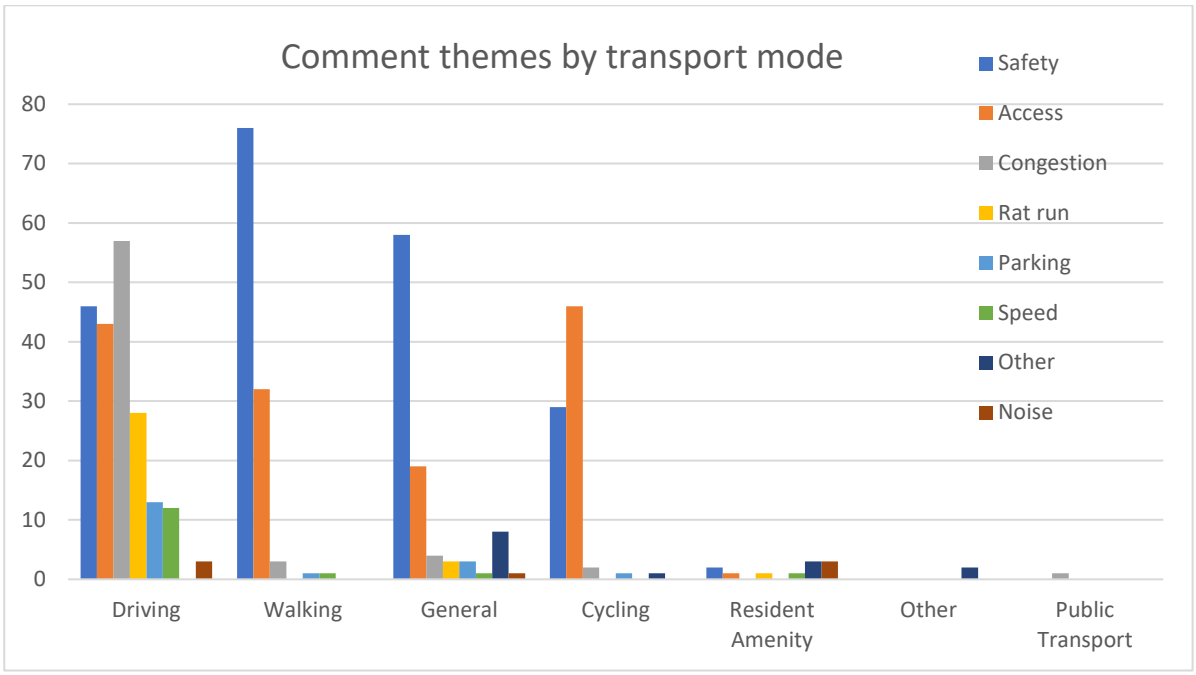
Key themes and comments not related to the proposed options

There were 582 comments submitted via the interactive map that were not directly related to the proposed options from the Traffic Study with 6878 total engagements. The comments were categorised by street according to where the pin was dropped and by primary transport mode and theme. 504 comments related to locations within the study area and 87 were outside of the scope of the study area.

Street	Number of comments	Sum of Up Votes	Sum of Down Votes
Mitchell Road	48	541	259
Maddox Street	36	468	241
Harley Street	52	420	93
Railway Parade	31	341	275
Belmont Street	38	300	81
Fountain Street	24	230	33
Lawrence Street	34	224	57
Huntley Street	25	184	47
Henderson Road	19	147	33
Swanson Street	9	142	35
Sydney Park Road	17	129	22
Park Street	11	119	44
Buckland Street	19	115	37
Lawrence Lane	11	70	32
Power Avenue	9	67	14
Euston Lane	13	59	63
Wyndham Street	13	51	10
McEvoy Street	8	49	6
Copeland Street	13	48	47
Euston Road	5	48	19
Belmont Lane	5	38	67
Alexander Street	4	35	0
Kingsclear Road	3	28	7
Buckland Lane	5	27	7
Equity Lane	3	25	9
Ada Street	1	22	22
Renwick Street	3	18	1
Ashmore Street	2	9	1
Other - minor feedback (24 streets)*	34	123	34
Outside Study Area (30 streets)	87	380	97
Grand Total	**582**	**4457**	**1693**

* ”Other – minor feedback” includes streets with less than 5 comments and less than 30 total engagements



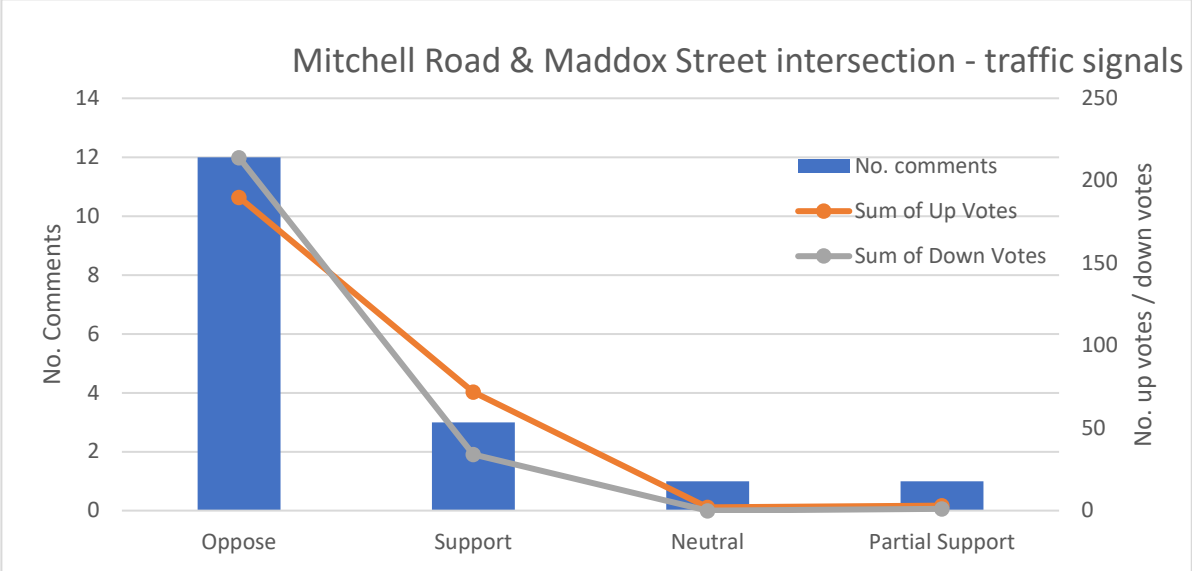


Mitchell Road and Maddox Street – traffic signals

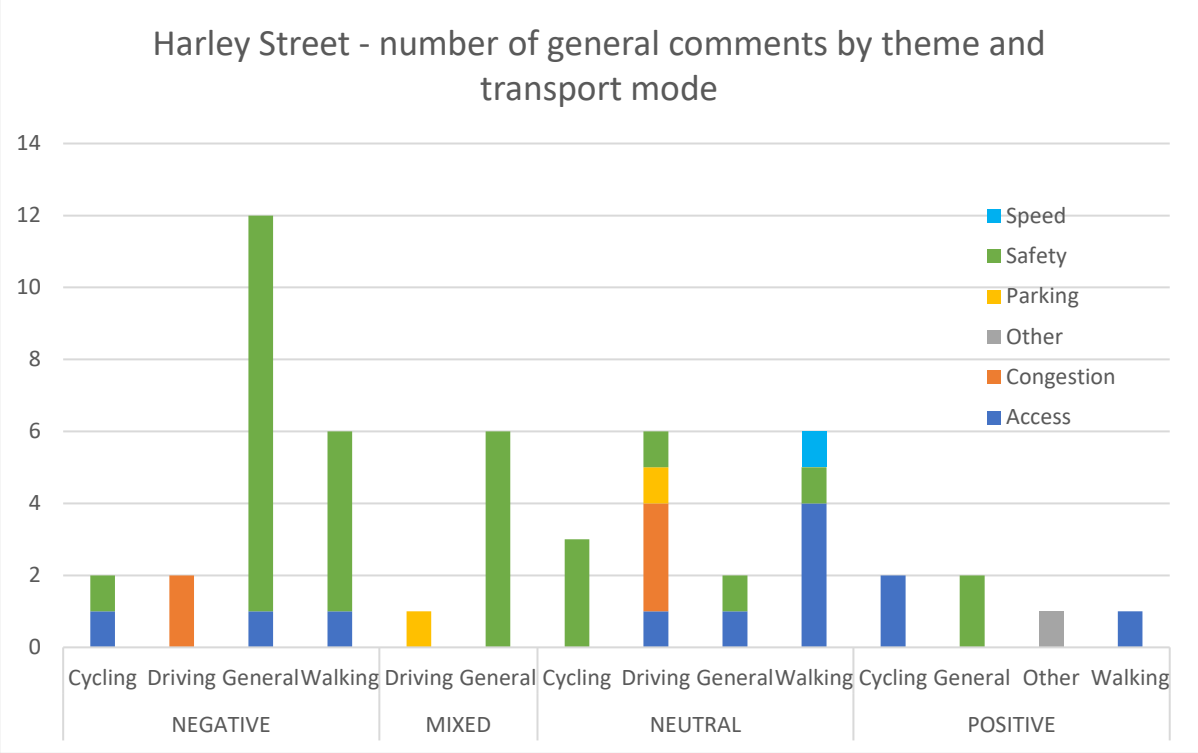
The upgrading of the roundabout controlled intersection at Mitchell Road and Maddox Street to a signalised intersection has been imposed as a condition of development consent on the adjacent development site. The Study notes this commitment, and it was included in the base traffic model assumptions. As these works are committed, this proposal was not part of the targeted community engagement.

Although this was not a proposal that the City invited feedback on, there were 17 comments submitted via the interactive map relating to the proposed traffic signals.

12 were opposed and 3 were in support of the signals. There were 533 total engagements, including upvotes and downvotes, on these comments on the interactive map. 54% of the total engagements indicated support for the signals, while 44% indicated opposition to signals.

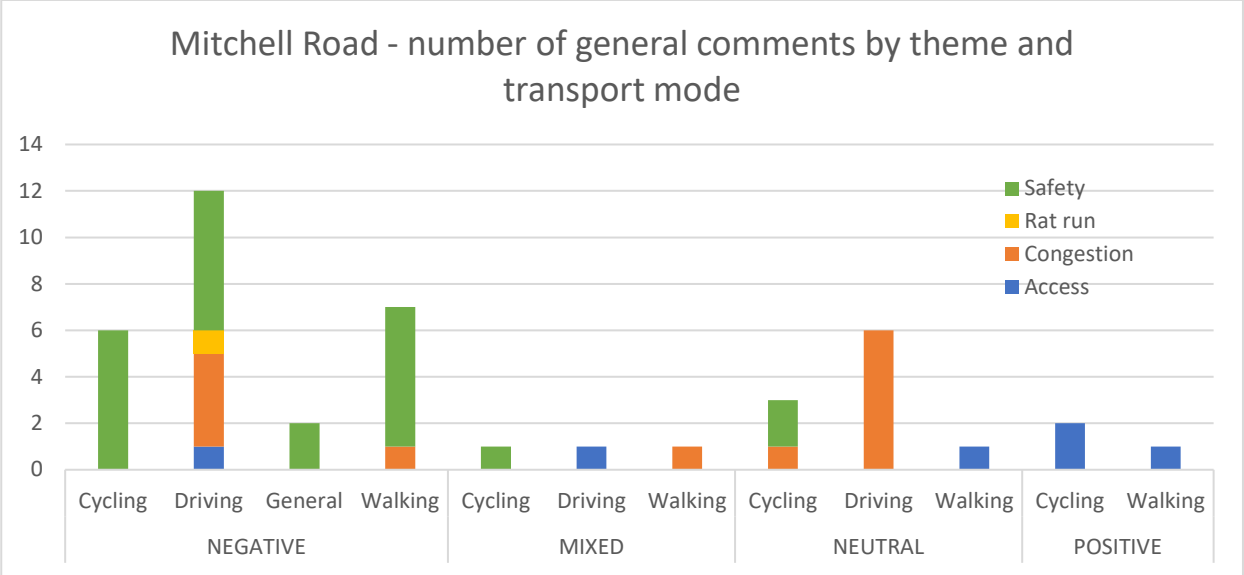


Harley Street



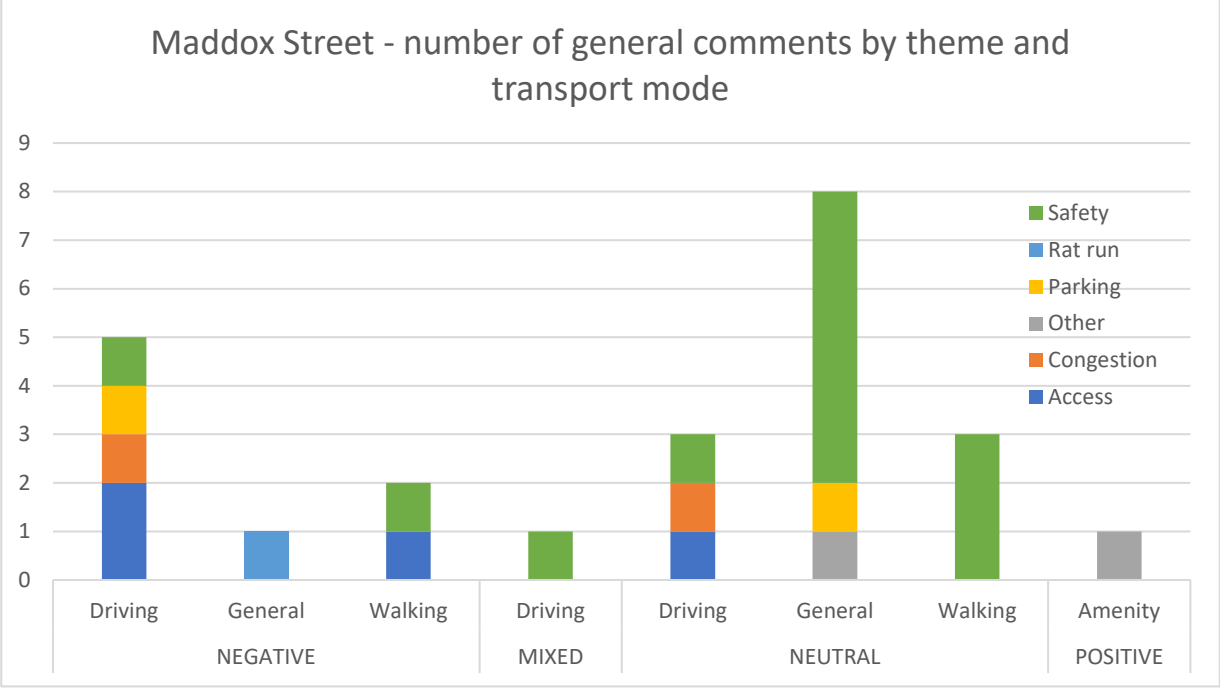
There were 52 comments submitted via the interactive map with 565 total engagements concerning Harley Street generally (other than targeted proposals), with just over half of those comments having a negative or mixed sentiment, and of those, safety was the most prominent theme.

Mitchell Road



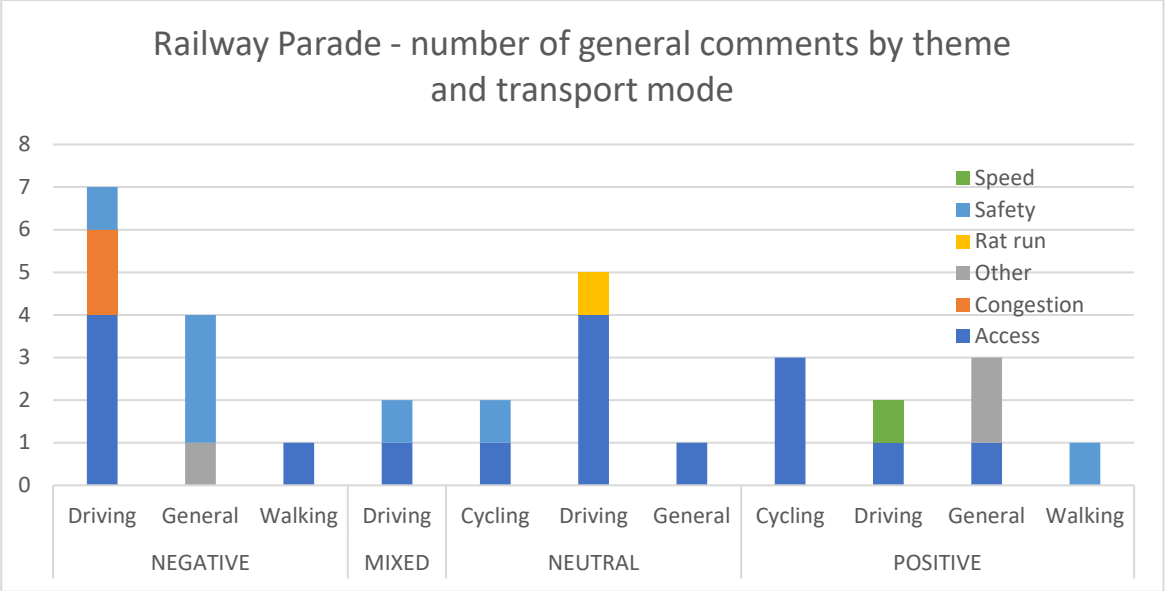
There were 43 comments submitted via the interactive map with 654 total engagements concerning Mitchell Road generally (other than targeted proposals), with approximately 70% of those comments having a negative or mixed sentiment, and of those, safety was the most prominent theme.

Maddox Street



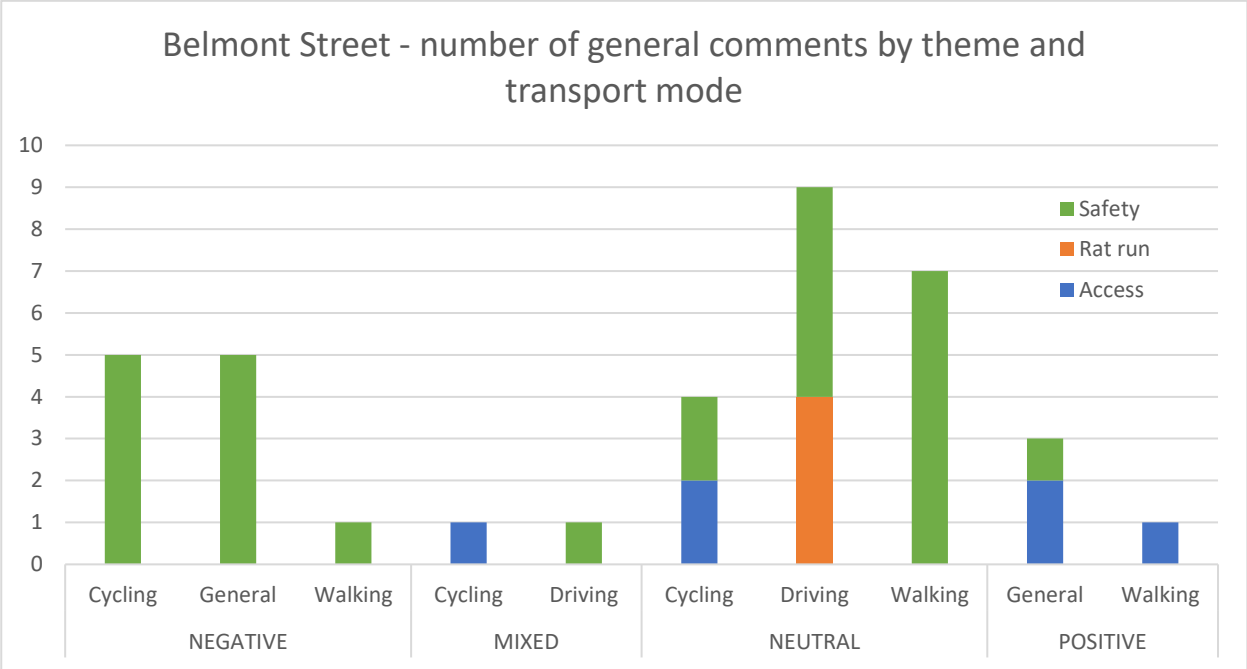
There were 24 comments submitted via the interactive map with 406 total engagements concerning Maddox Street generally (other than targeted proposals), with just over half of those comments having a neutral sentiment, mostly suggesting more pedestrian facilities needed in Maddox Street.

Railway Parade



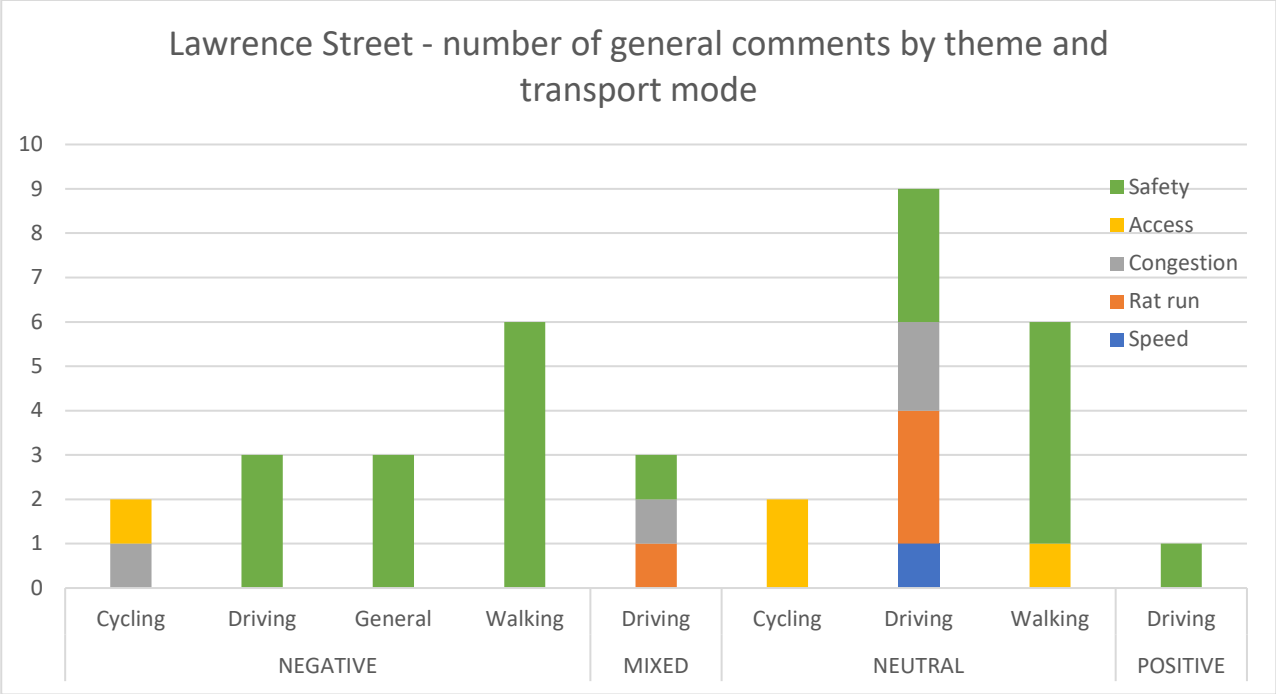
There were 31 comments submitted via the interactive map with 616 total engagements concerning Railway Parade generally, with around 60% those comments having a negative or mixed sentiment, mostly concerned with the traffic flow arrangements in Railway Parade.

Belmont Street



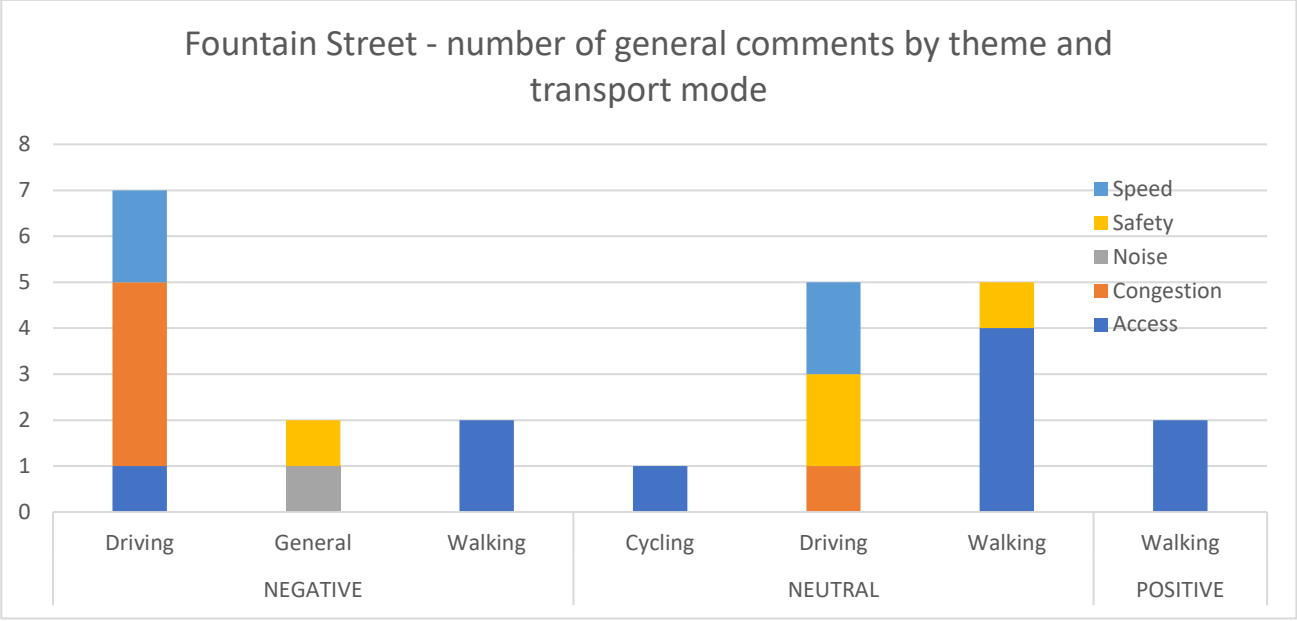
There were 38 comments submitted via the interactive map with 419 total engagements concerning Belmont Street generally, with just over half of those comments having a neutral sentiment, mostly concerned with pedestrian safety at intersections along Belmont Street.

Lawrence Street



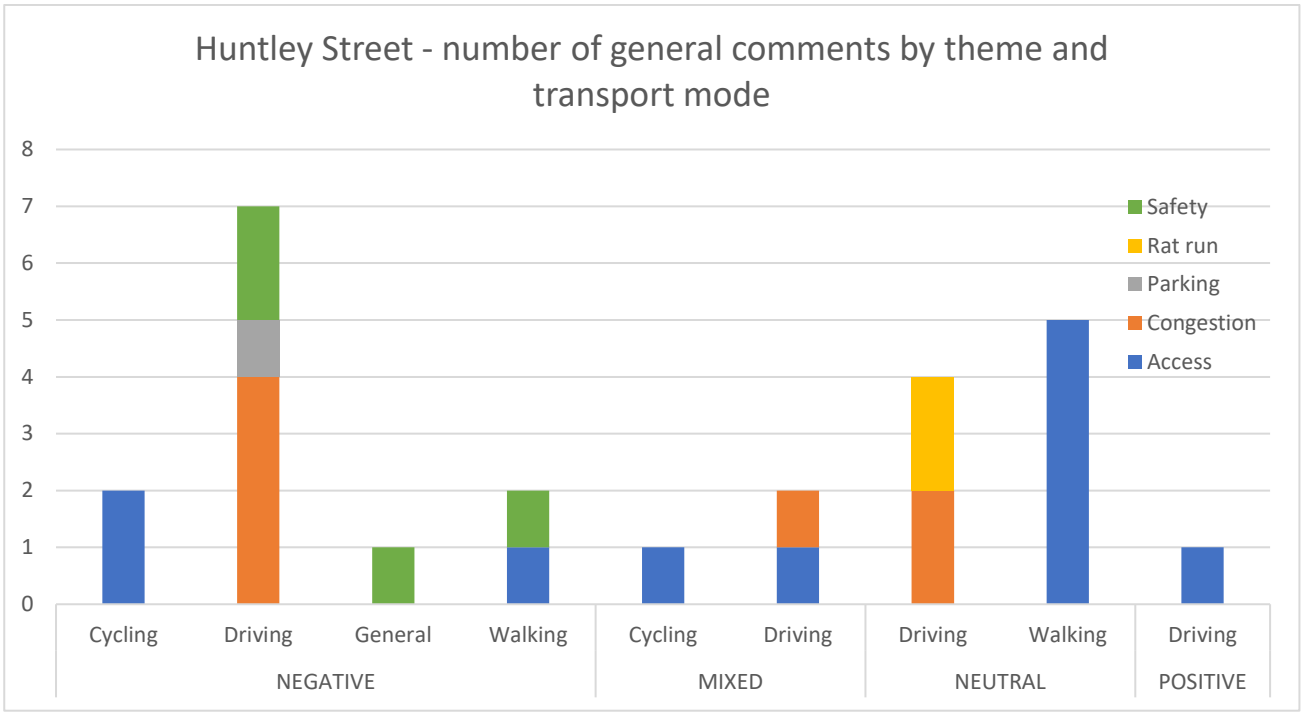
There were 35 comments submitted via the interactive map with 315 total engagements concerning Lawrence Street generally, with just over half of those comments having a negative or mixed sentiment, and of those, safety was the most prominent theme.

Fountain Street



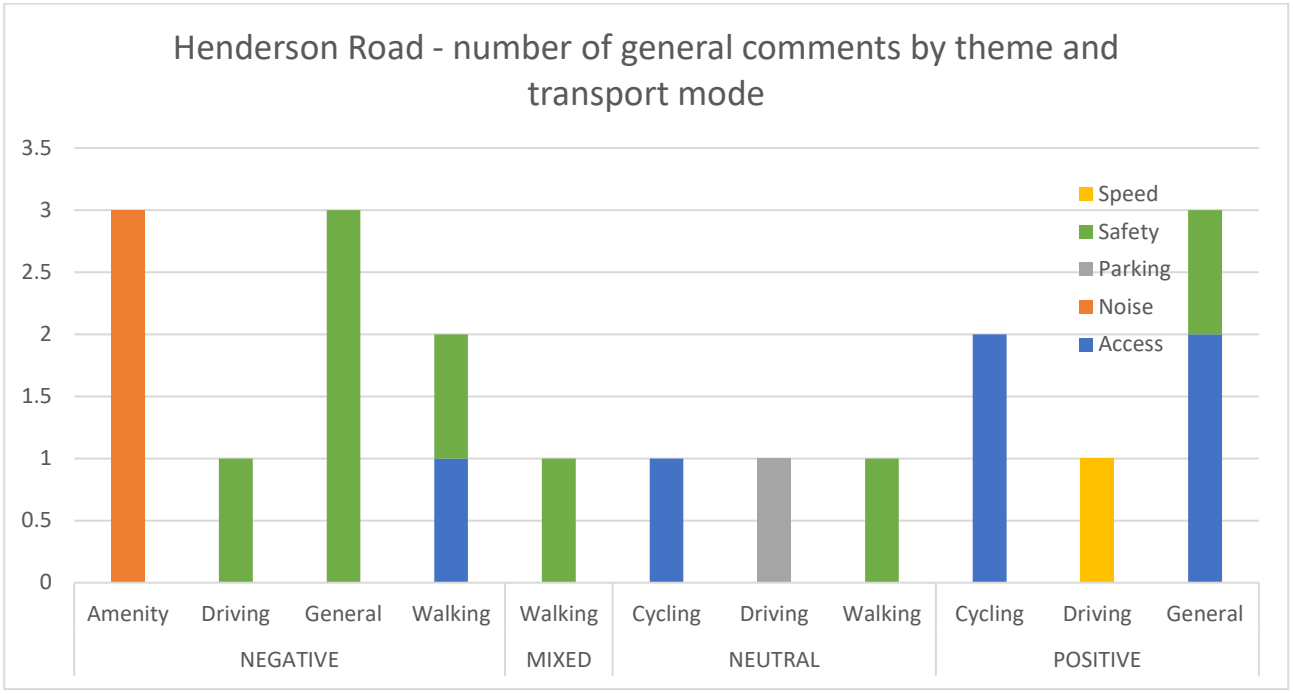
There were 24 comments submitted via the interactive map with 287 total engagements concerning Fountain Street generally, mostly negative or neutral sentiment, with the majority concerned about traffic flow and congestion or suggesting improved pedestrian access needed.

Huntley Street



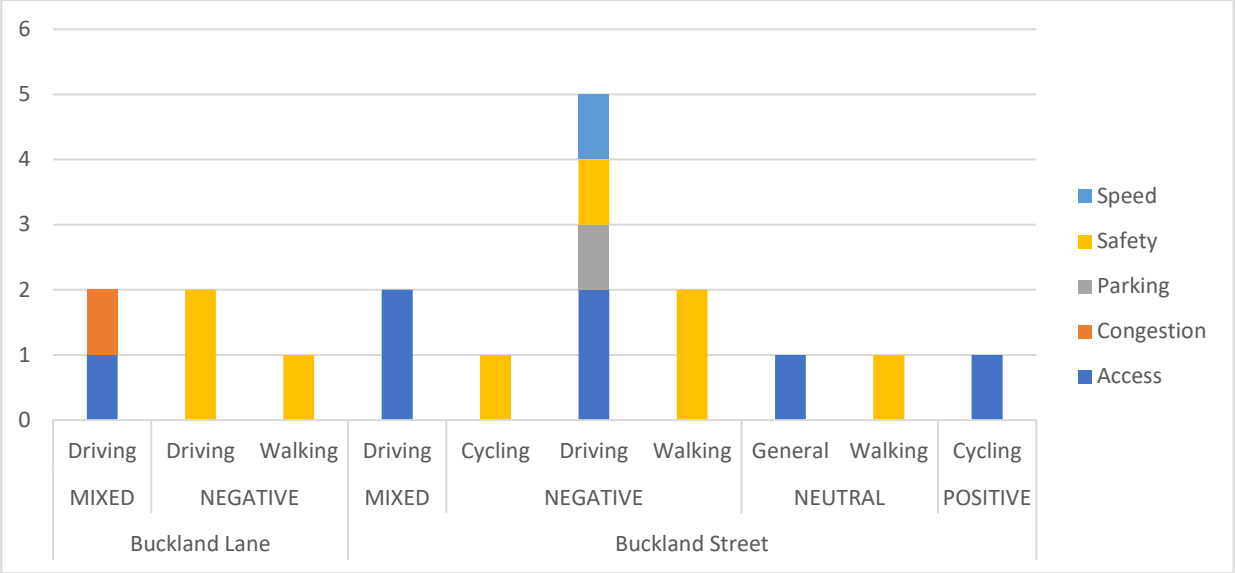
There were 25 comments submitted via the interactive map with 231 total engagements concerning Huntley Street generally, with the majority having a negative or neutral sentiment, mostly commenting on cycling and walking infrastructure.

Henderson Road



There were 19 comments submitted via the interactive map with 199 total engagements concerning Henderson Road generally, with just over half having a negative or mixed sentiment, mostly concerned about traffic safety and noise.

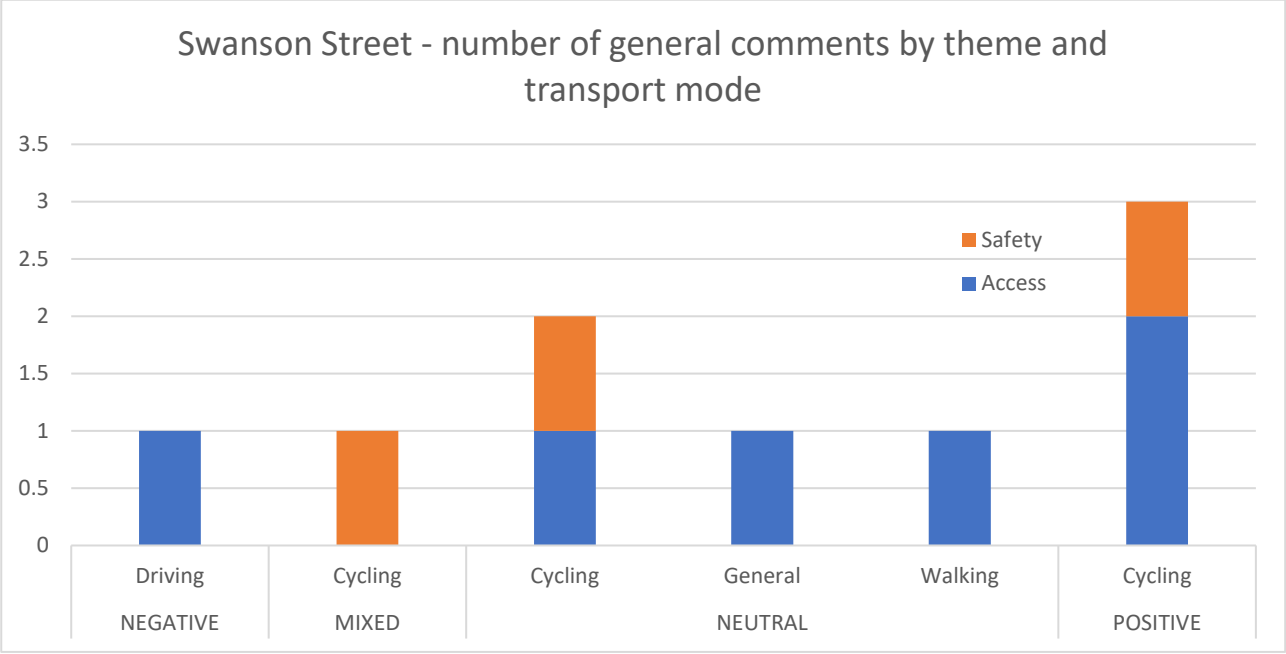
Buckland Street and Buckland Lane



There were 18 comments submitted via the interactive map with 170 total engagements, concerning Buckland Street and Buckland Lane generally, The majority having a negative sentiment and mostly concerned about driving access and safety for pedestrians.

There were four comments suggesting the right turn from Mitchell Road into Buckland Street be reinstated (with a total of 38 upvotes and 8 downvotes); and one comment opposing the removal of the existing No Right Turn from Mitchell Road into Buckland Street (with a total of 10 upvotes and 4 downvotes).

Swanson Street



There were 9 comments submitted via the interactive map with 186 total engagements concerning Swanson Street generally, with the majority having a neutral or positive sentiment relating to safety and access for people walking and cycling.

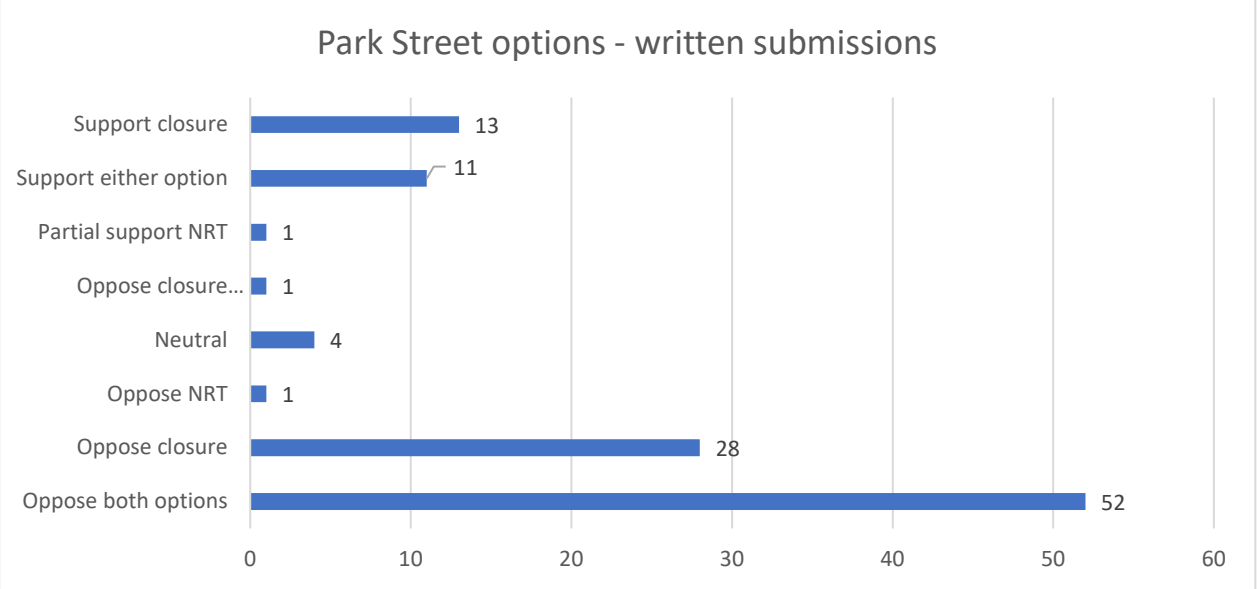
Written Submissions

There were 180 written submissions received during the community engagement period. Where identified in their submission, respondents were classified into their street of residence.

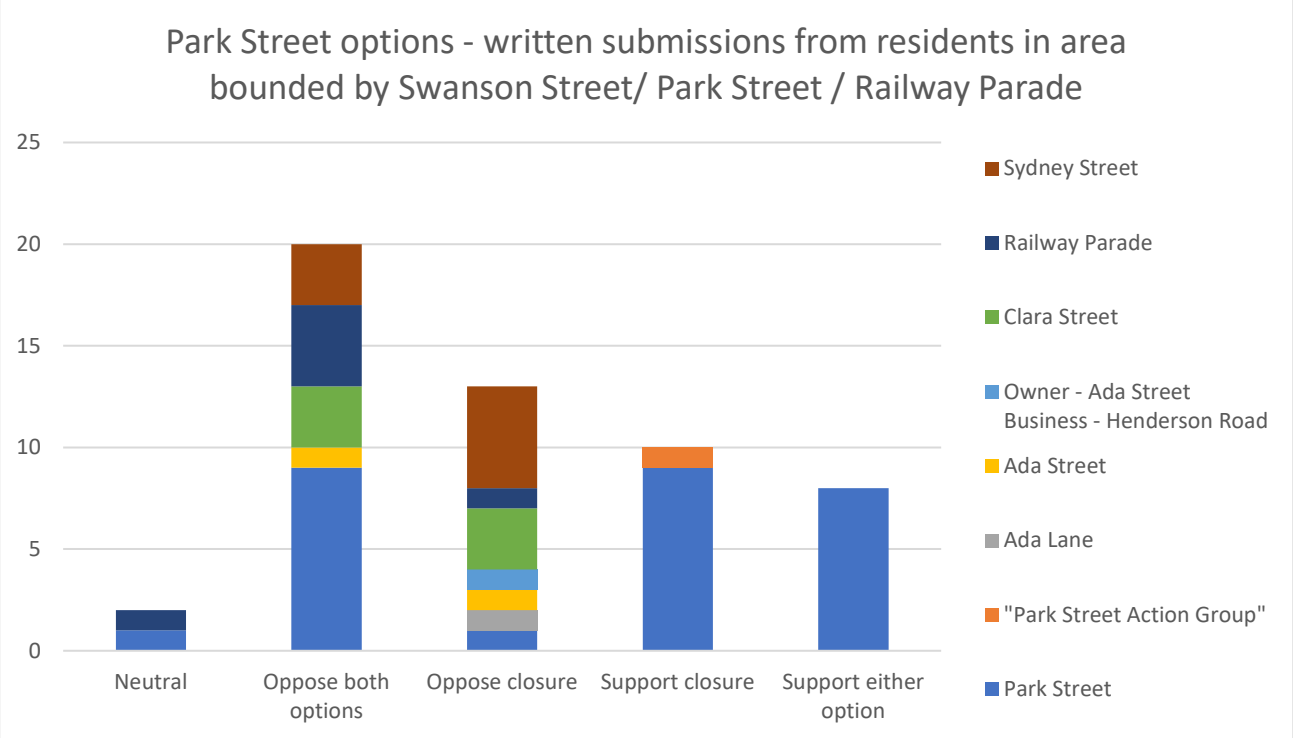
Respondent street address	No. submissions
Ada Lane	1
Ada Street	2
Anderson Street	3
Belmont Street	11
Brandling Street	2
Buckland Street	1
Clara Street	6
Copeland Street	1
Coulson Street	1
Erskineville Road	1
Ethel Street	2
Euston Road	3
Gerard Street	2
Henderson Road	8
Jenning Street	1
Kingsclear Road	7
Lawrence Street	17
McEvoy Street	1
Mitchell Road	11
Newton Street (owner)	1
Owner - Ada Street Business - Henderson Road	1
Park Street	30
Railway Parade	9
Renwick Street	1
Swanson Street	1
Sydney Park Village	1
Sydney Street	8
Wyndham Street	1
Ashmore Precinct Developer	1
"Park Street Action Group"	1
Friends of Erskineville	1
Not provided	43
Grand Total	**180**

Written submissions related to the proposed options

There were 111 written submissions relating to the proposed closure to traffic or no left turn from Park Street into Railway Parade/ Henderson Road.



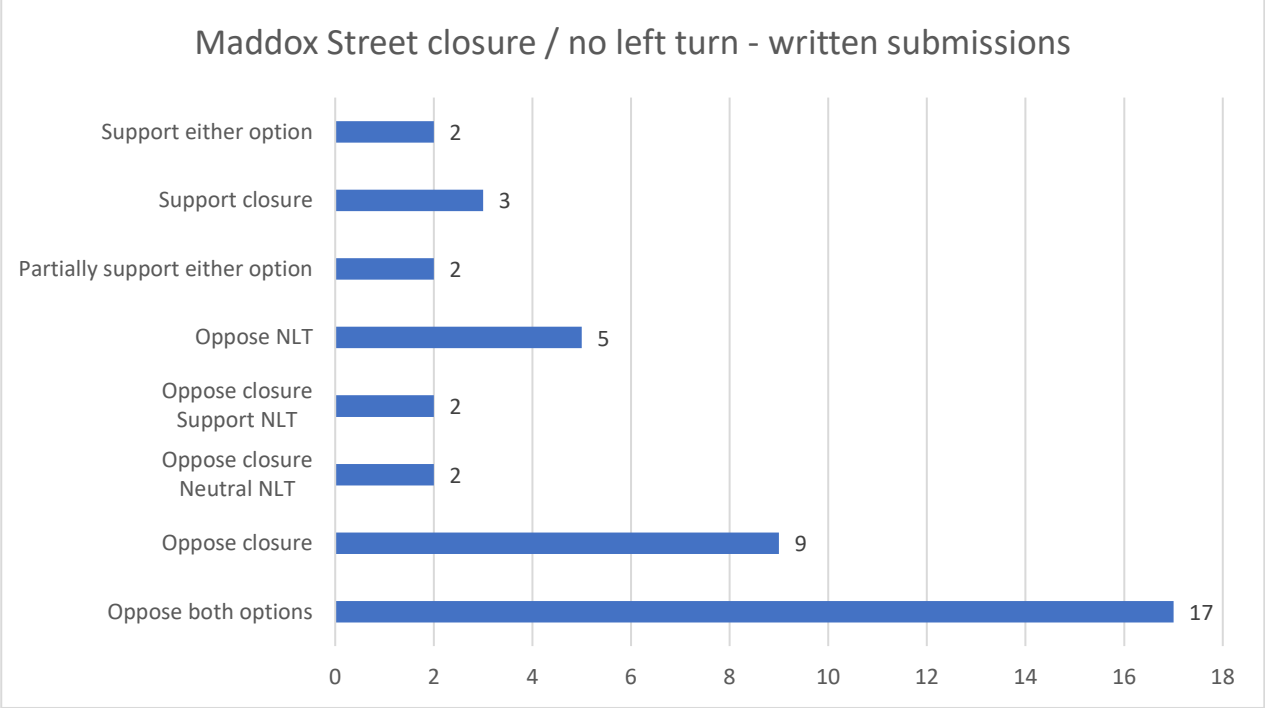
81 (72%) opposed both or either option. 26 (23%) supported one or both options, with 13 (12%) supporting the closure.



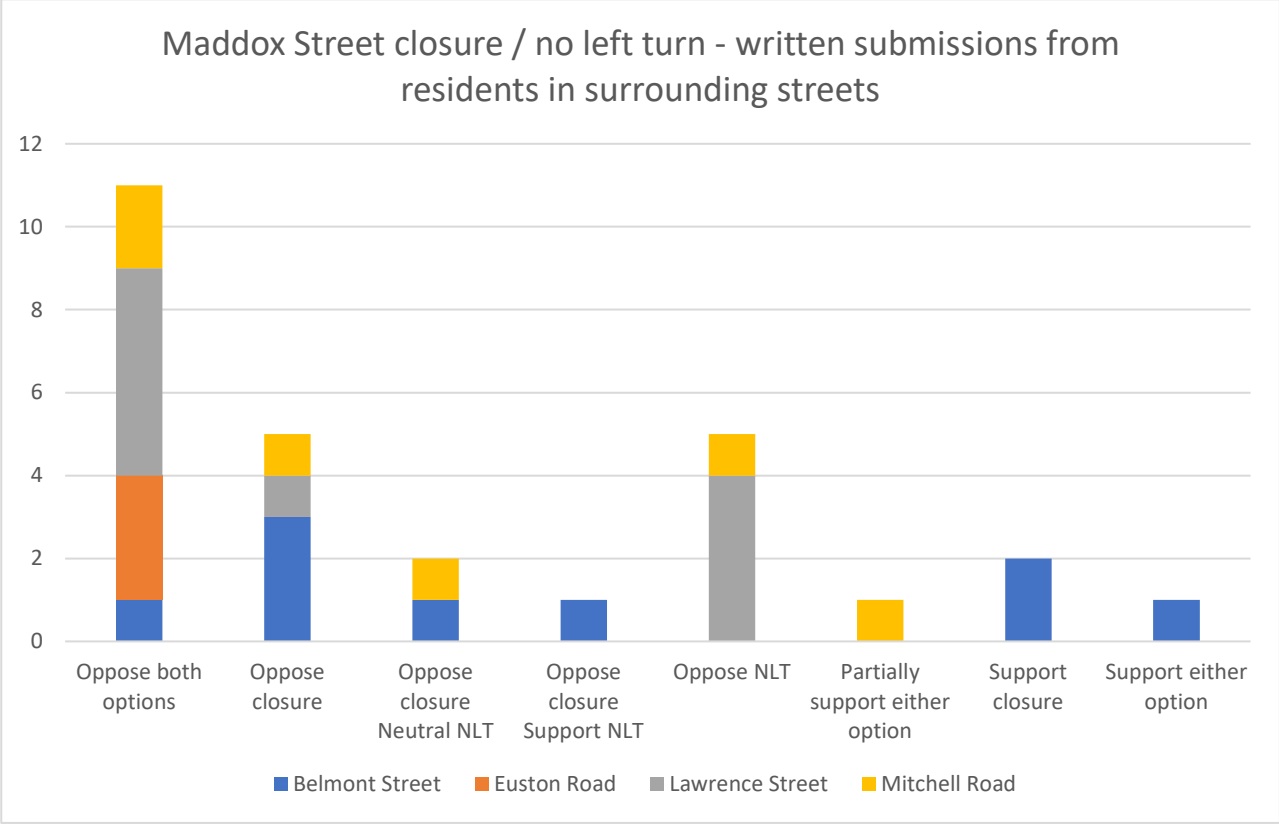
The majority of Park Street respondents (n=28) 17 (61%) **supported one or either option, including 9 (32%) supporting the closure**. 9 (32%) stated they opposed both options.

The majority 33 (62%) of respondents in area bounded by Railway Pde/ Park St/ Swanson St (n=53) **opposed both options or the closure**. 18 (34%) supported either option, including 10 (19%) supporting the closure.

There were 42 written submissions relating to the proposed closure to traffic or left turn from Euston Road into Maddox Street.



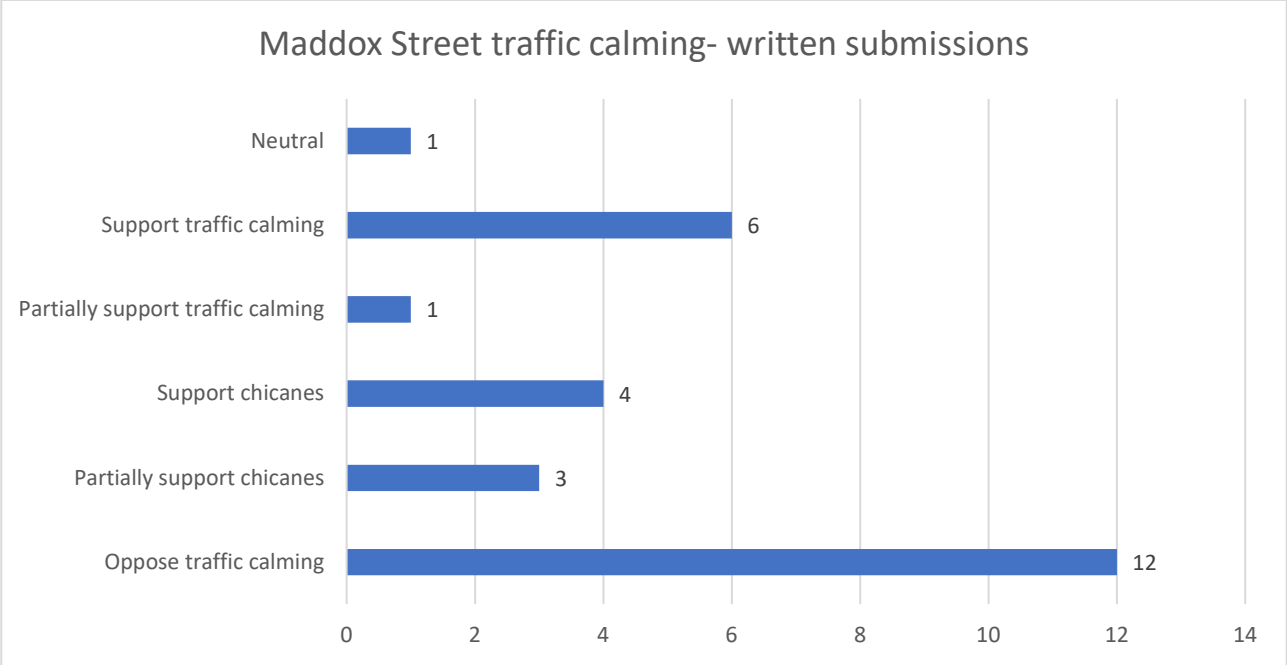
17 (40%) opposed both options. Only 9 (21%) indicated support for either option, including 3 preferring the closure, 2 preferring the no left turn.



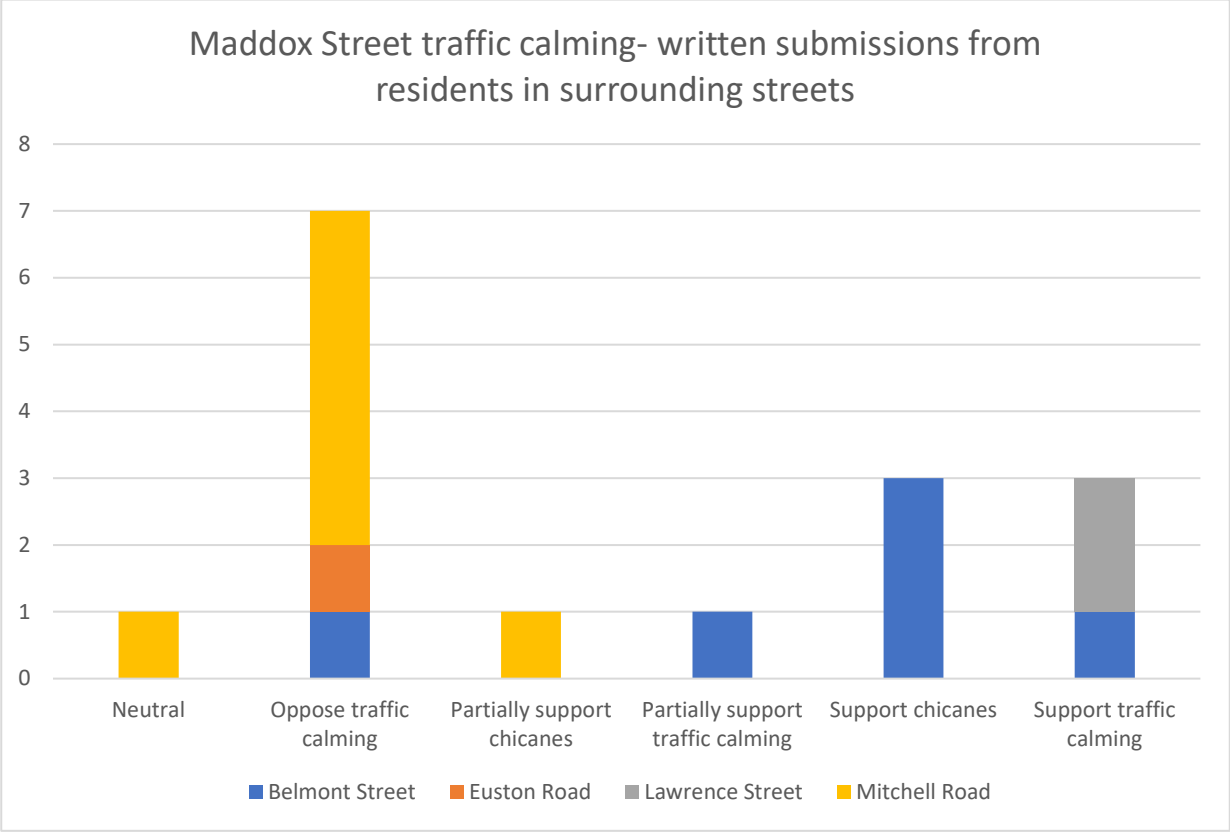
There were no written submissions from residents of Maddox Street.

Of the written submissions from residents in streets adjoining Maddox Street (n = 28), 11 (39%) **opposed both options**. Only 5 (18%) indicated support for either option, including 2 preferring the closure, 1 preferring the no left turn.

There were 27 written submissions relating to proposed traffic calming in Maddox Street.



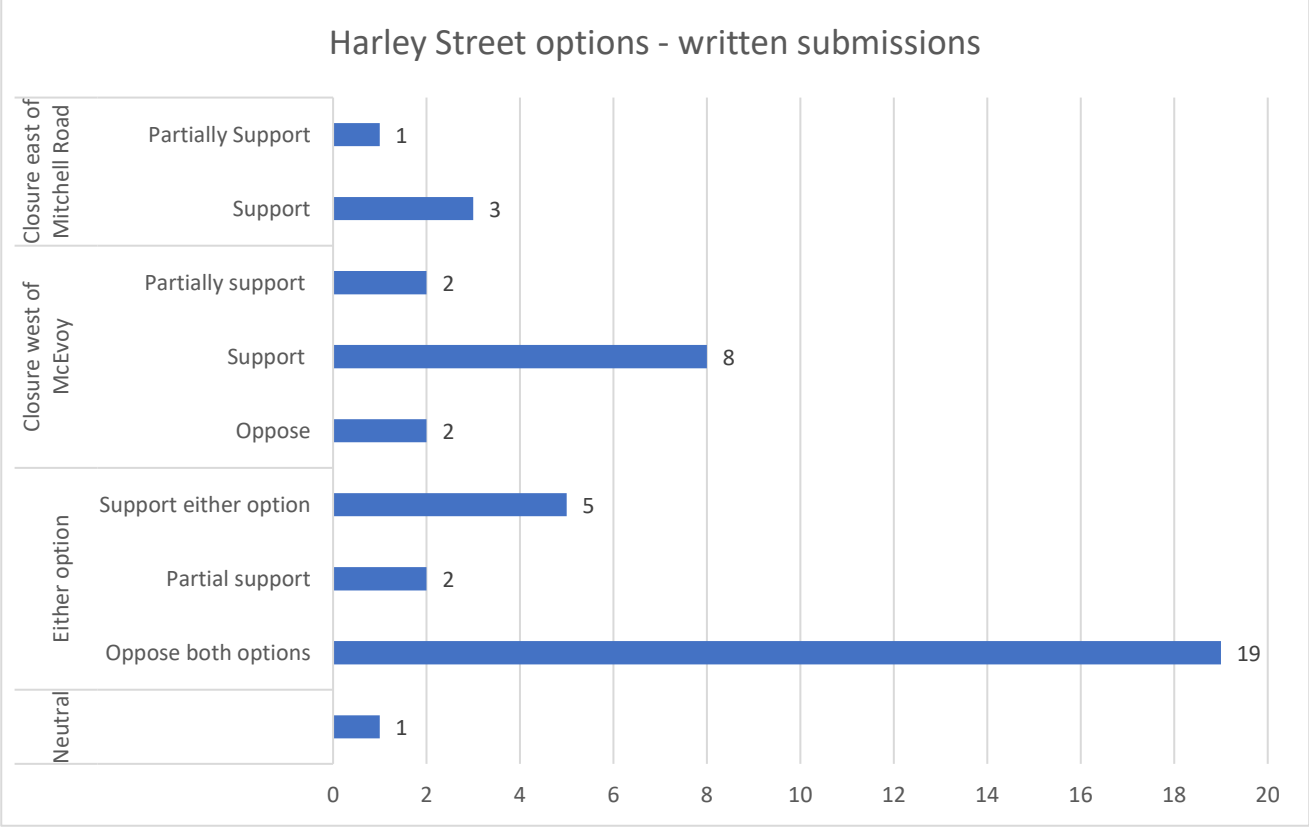
Overall, **10 fully supported traffic calming (4 preferred chicanes), 4 partially supported** traffic calming (3 chicanes). 12 opposed traffic calming.



There were no written submissions from residents of Maddox Street.

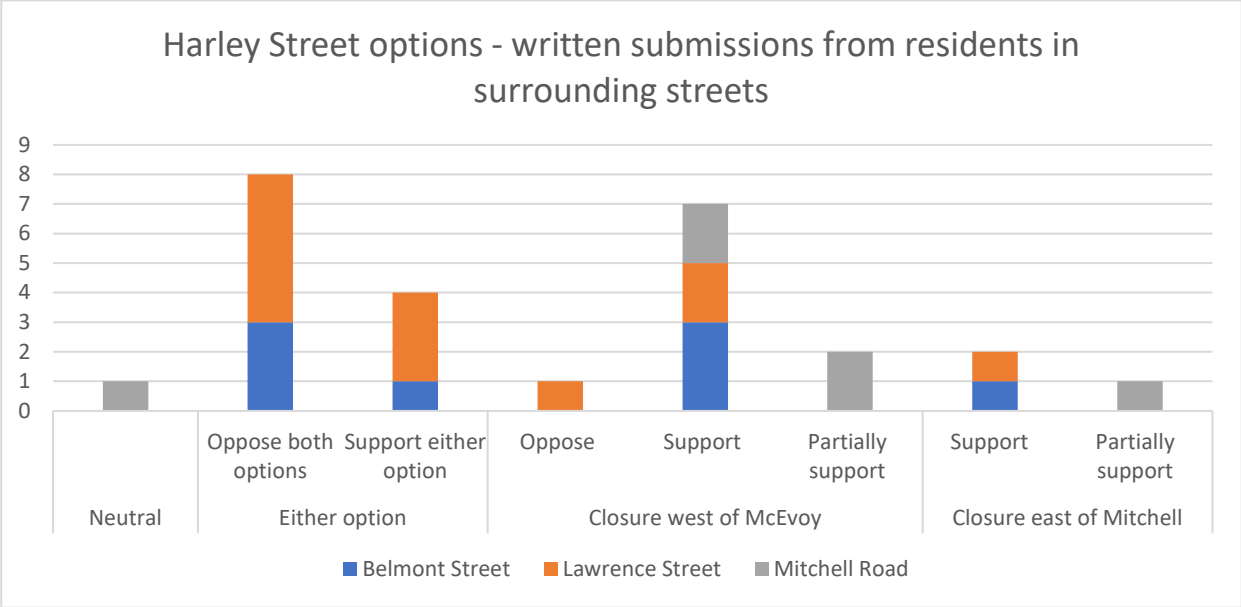
Of the written submissions from residents in streets adjoining Maddox Street (n = 16), **6 (37.5%) supported traffic calming**, including 3 supporting chicanes. **2 (12.5%) partially supported** traffic calming, including 1 partially supporting chicanes. 7 (44%) opposed any traffic calming in Maddox Street.

There were 43 written submissions relating to the proposed closures to traffic in Harley Street at Mitchell Road or McEvoy Street.



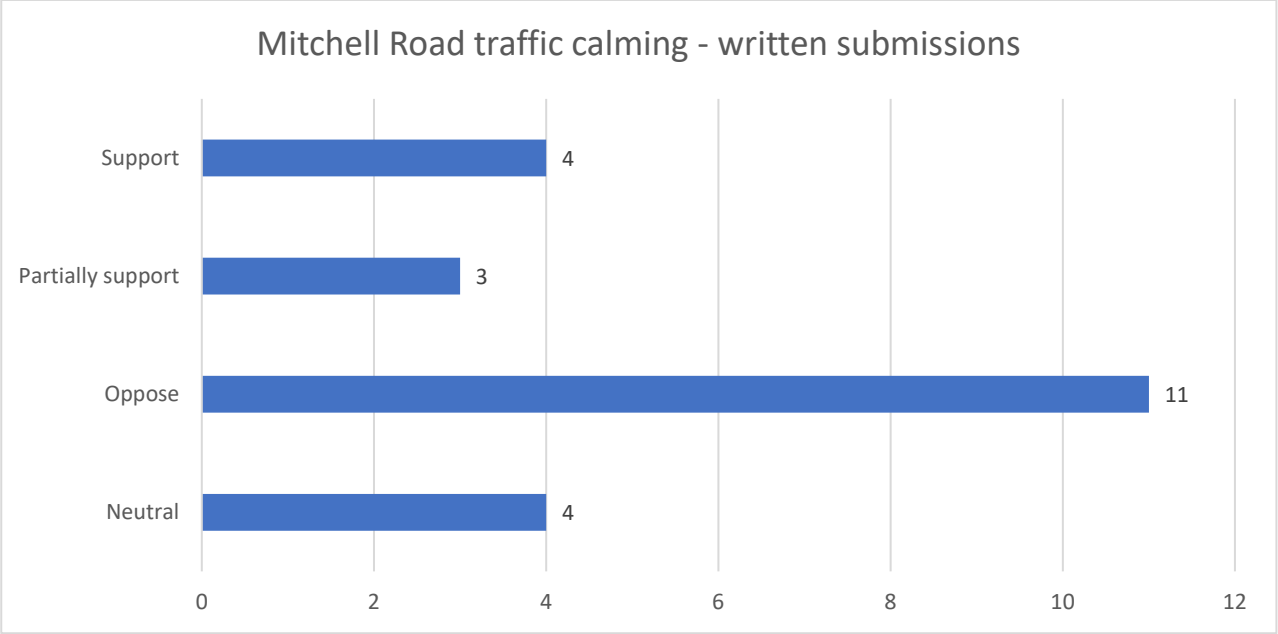
Overall, 19 (44%) opposed both options. 2 (5%) opposed a closure west of McEvoy Street.

16 (37%) supported the closure of Harley Street (8 preferred west of McEvoy and 4 preferred east of Mitchell Road). 3 partially supported a closure (2 suggested a half closure with the left turn out of Harley Street into McEvoy Street maintained; 1 supported closure at Mitchell Road but suggested additional modal filters required to prevent traffic diverting to other streets).

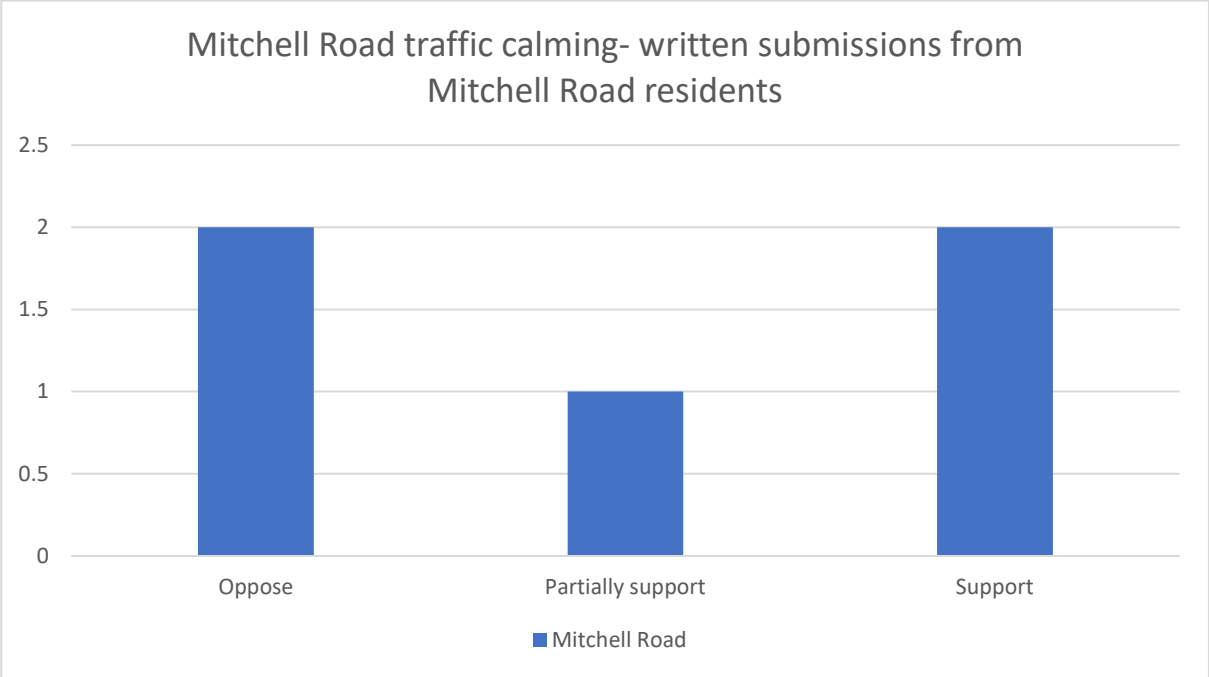


There were no written submissions who identified as residents of Harley Street. Of the written submissions from residents in streets adjoining Harley Street (n =26), **13 supported closing Harley Street (7 preferred west of McEvoy Street**; 2 supported east of Mitchell Road). **2 suggested a half closure at McEvoy Street with left turn out maintained.** 9 opposed closing Harley Street.

There were 22 written submissions relating to proposed traffic calming in Mitchell Road.

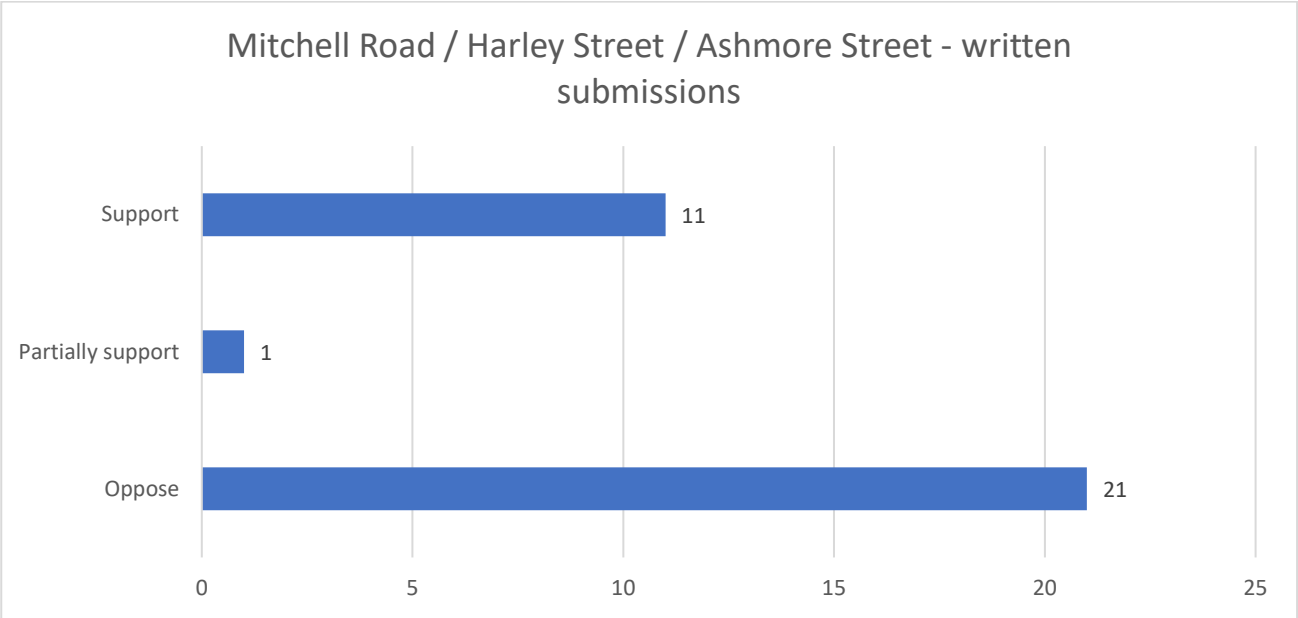


11 (50%) opposed to traffic calming. 7 (32%) support traffic calming including 3 partial support (more detail needed). 4 (18%) were neutral, stating that more information was needed about proposed treatments and impacts on parking.

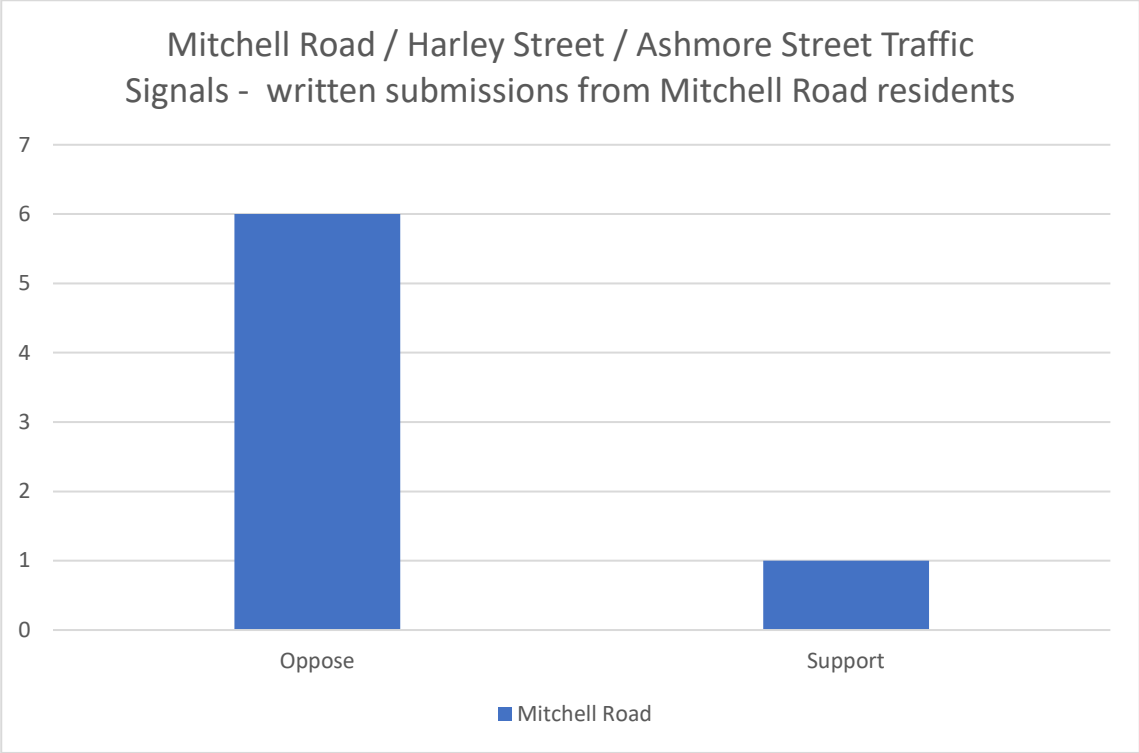


Of the 5 submissions from residents of Mitchell Road, **3 supported traffic calming,** including 1 suggested a 30km/h design speed, 2 opposed.

There were 33 written submissions relating to proposed traffic signals at the intersection of Mitchell Road, Harley Street and Ashmore Street.



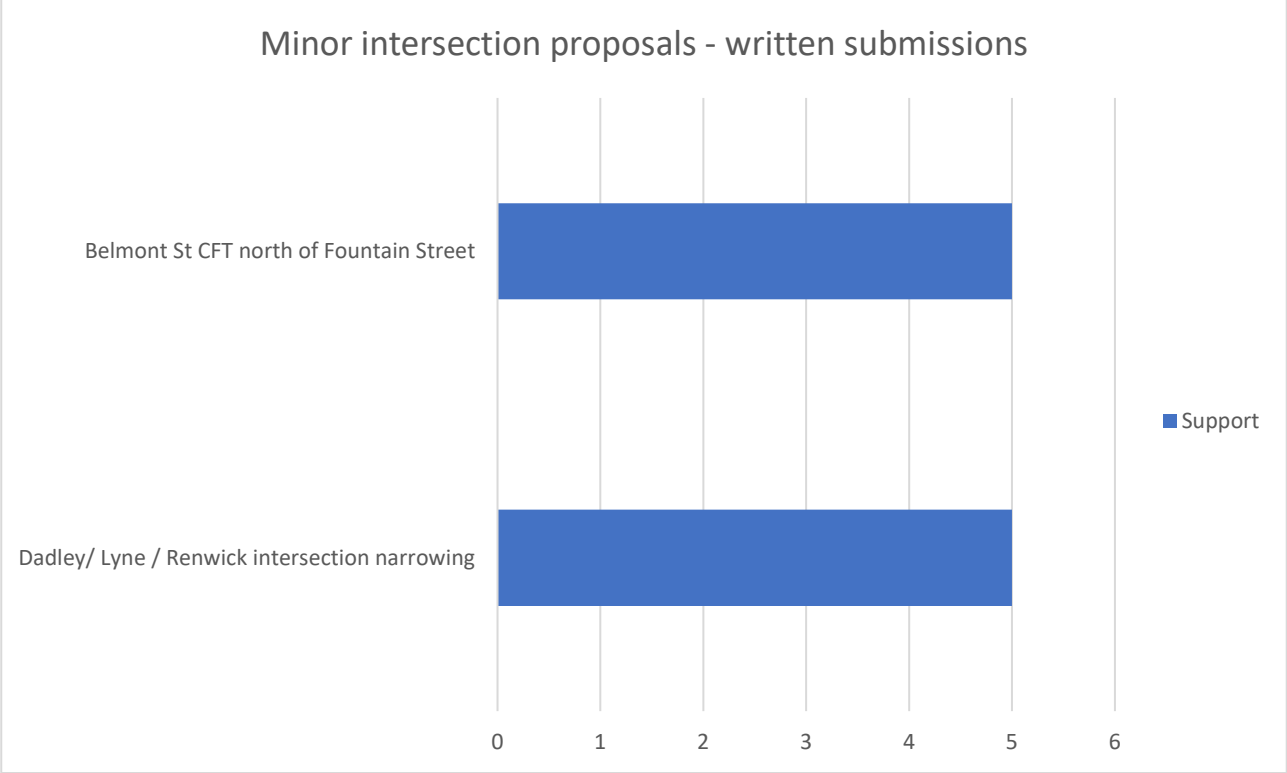
21 (64%) opposed traffic signals. 12 (36%) supported or partially supported signals.



There were no written submissions from residents in Harley Street or Ashmore Street.

Of the 7 written submissions from residents in Mitchell Road, **6 were opposed to the signals** and 1 supported signals.

There were 5 written submissions relating to the proposed continuous footpath treatment in Belmont Street north of Fountain Street; and 5 written submissions relating to the proposed intersection narrowing and kerb buildouts at Dadley Street intersections with Lyne Street and Renwick Street.



All written submissions regarding proposed continuous footpath in Belmont Street were supportive of the proposal.

All written submissions regarding proposed intersection narrowing at Dadley, Lyne and Renwick Streets were supportive of the proposal.

Key themes from written submissions not related to the proposed options

115 of the written submissions included comments that were not directly related to the proposals targeted through the community engagement, or raised other issues further to those considered by the Study. The summary of these submissions are detailed in the summary of responses to submissions and the key themes are outlined below.

Mitchell Road and Maddox Street intersection

There were 11 written submissions relating to planned traffic signals at the intersection of Mitchell Road and Maddox Street. 9 submitters stated they do not support proposed traffic signals at Mitchell Road and Maddox Street. 2 stated they do support traffic signals at the intersection.

Those in support of signals were concerned for safety of people walking at the existing crossing and intersection. Those opposed to the signals were concerned about reduced priority and safety for people walking compared to the existing zebra crossing. Some suggested upgrading the existing roundabout and adding zebra crossings on each approach.

Harley Street

There were 51 written submissions concerning Harley Street generally, mostly concerned with safety of the existing arrangements.

Railway Parade – Traffic Flow

There were 34 written submissions that commented on Railway Parade. 19 of those indicated they supported two-way traffic (or opposed one-way traffic) flow in Railway Parade. Conversely 10 submitters indicated they supported one-way traffic (or opposed two-way traffic) flow in Railway Parade.

Henderson Road

There were 23 written submissions concerning Henderson Road which were generally concerned about the existing traffic conditions and arrangements in the street. 10 submitters commented that the existing speed cushions are ineffective and 3 commented that they are noisy, some suggesting the speed cushions be replaced with full width speed humps or more traffic calming. 4 suggested that the roundabouts along Henderson Road be reinstated.

Fountain Street

There were 21 submissions concerning Fountain Street generally. 13 raised concerns about lack of pedestrian crossing or difficulty turning out of Lawrence Street at Fountain Street. 3 suggested a pedestrian crossing needed on Fountain Street at Belmont Street.

Maddox Street

There were 13 submissions concerning Maddox Street generally, mostly regarding alternate suggestions for traffic restrictions, traffic flow improvements or pedestrian infrastructure improvements.

Mitchell Road

There were 8 written submissions concerning Mitchell Road generally, mostly concerned with safety.

Mitchell Road/ Harley Street/ Ashmore Street

There were 8 written submissions concerning Mitchell Road, Harley Street and Ashmore Street generally. 3 suggested traffic calming and wombat crossings on all approaches to the existing roundabout, improving sight lines and lighting; 3 stated that the existing pedestrian crossing on Mitchell Road is dangerous. 3 suggested additional infrastructure to improve the existing crossing or relocating the crossing away from the intersection.

Buckland Street and Buckland Lane

There were 4 written submissions concerning Buckland Street and Buckland Lane. Two suggested reinstating the right turn from Mitchell Road into Buckland Street and two stated that the existing no right turn should be retained.

Attachment D

Responses to Key Themes Raised in Submissions – Interactive Map Comments

Engagement summary of most engaged/voted* interactive map comments - additional ideas and issues (further to proposals)

** includes comments with more than 17 upvotes*

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
Belmont Street	I support a continuous footpath here. All side streets should have them.	Walking	Access	POSITIVE	26	2	The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. CFTs will be considered in the context of the action plan for walking improvements.
Coulson Street	Consider more traffic calming along Coulson St as it is becoming the rat run to King St & Princes Hwy	Driving	Rat run	NEUTRAL	22	1	Coulson Street is still used by large trucks and road widenings would reduce the kerb side parking. Road narrowing and CFTs along Coulson Street at Eve Street were carried out in 2019. Similar treatments are already proposed at Hadfield Street. These works are already committed as part of forward works programs.
Erskineville Road at Railway Bridge	Please widen the pedestrian path over Erskineville railway bridge and include a bike path here so cyclists going up Henderson rd can turn right and continue straight down Burren st without having to turn right into the traffic on Erskineville rd and then right again to cross the other lane of traffic.	Cycling	Access	NEUTRAL	50	3	Transport for NSW is developing a safe link along Swanson Street for walking and riding, that will increase space on the northern side.
Erskineville Road at	In addition to keeping Railway Pde one way as it currently is, it would be great to remove the left	Cycling	Access	POSITIVE	21	13	Transport for NSW is developing a safe link along Swanson Street for

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
Railway Bridge	lane on Erskineville Bridge and replace with a widened footpath and bike lane. It is currently quite tight on that side of the bridge, particularly with passing prams and people with dogs. It would also create a safe passage for cyclists travelling from Railway Pde around to Burren St/up Erskineville Rd. I also love the fixed/widened pedestrian corner here now, much easier to navigate now!						walking and riding, that will increase space on the northern side.
Euston Road	Whilst the traffic on Maddox street can get congested at peak times, I don't believe blocking the right hand turn is the correct solution. Members of the community will still need to access Mitchell Road from Euston Road and if the right hand turn is blocked, this will instead occur via a right hand turn from Sydney Park Road into Mitchell Road, and this section of road is already heavily congested. Simply shifting traffic to another congested area isn't the solution	Driving	Congestion	NEGATIVE	49	7	There is already a no right turn on Euston Road at Maddox Street. The proposals were for a left turn ban from Euston Road or closure to traffic. Notwithstanding, given the limited support for either of the proposals to restrict access, the City will consider alternative proposals to reduce the impacts of through traffic in Maddox Street.
Euston Road at Maddox Street	Excess traffic turning left here then u turning at the maddox/lawrence roundabout because you cant turn right from euston rd (heading citybound)	Driving	Access	NEUTRAL	24	3	Euston Road is a state road under the control of Transport for NSW. Any changes to the signals need TfNSW approval. The City will request TfNSW consider this suggestion to reduce

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	onto maddox st. So why not put a signalised right turn from euston rd into maddox st, and contine to allow the left hand turn lane for residents.						traffic volumes, including heavy vehicles using Maddox Street west.
Fountain Street between Lawrence Street and McEvoy Street	A lot of pedestrians cross between the shops on each side of Fountain St, and this is also a very wide road with busy traffic, and cars turning in and out of the car park. A pedestrian crossing or pedstrian refuge in the middle would make this much safer, and slow cars down a little.	Walking	Access	NEUTRAL	36	1	Fountain Street is a state road under the control of Transport for NSW. The City cannot make changes to Fountain Street without TfNSW approval. The City is planning to install signals at Fountain Street/Lawrence Street intersection in FY23/24 as proposed in the 2018 LATM, which will provide additional formal crossings for people walking.
Fountain Street	Traffic calming measures are needed along the length of Fountain St. The traffic lanes are 5.5 metres in places, which is wider than a standard motorway lane. This encourages speeding and associated traffic noise and danger.	Driving	Safety	NEUTRAL	32	2	Fountain Street is a state road under the control of Transport for NSW. The City is not authorised to install traffic calming devices on state roads.
Fountain Street	There really has to be some form of crossing on fountain either at Lawrence or Belmont. People cross this road all the time, to the get to and from the school, and to shops on either side. Mitchell and Euston are too far away to cross at, it's too much of a deviation, everyone just crosses fountain	Walking	Access	NEGATIVE	22	0	Fountain Street is a state road under the control of Transport for NSW. The City cannot make changes to Fountain Street without TfNSW approval. The City is planning to install signals at Fountain Street/Lawrence Street intersection in FY23/24 as proposed in the 2018 LATM, which will provide

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	regardless. And with the curve in the road it's a bit dangerous too						additional formal crossings for people walking.
Fountain Street	I support this continuous footpath. We need more continuous footpaths	Walking	Access	POSITIVE	20	2	Noted. The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. CFTs will be considered in the context of the action plan for walking improvements.
Fountain Street at Belmont Street	A raised pedestrian/bicycle crossing of Fountain St is needed at Belmont St. This route is used by many children attending Alexandria Park Community School.	Walking	Safety	NEUTRAL	64	2	Fountain Street is a TfNSW State road. The City is planning to install signals at Fountain Street/Lawrence Street intersection in FY23/24 as proposed in the 2018 LATM
Harley Street	Make this left only exit from harley st onto mitchell rd.	Driving	Access	NEUTRAL	47	2	The City will instead consider alternative options for Harley Street as suggested by the community that discourage through traffic while maintaining local access (eg. one way eastbound or partial closure to traffic at McEvoy Street – left out only)
Harley Street	Photo: 8.45am any weekday. The queuing of traffic (from bunnings and mcevoy st) is a hazard for pedestrians trying to cross harley st and the laneways. It is also a noise hazard for residents - we can hear from our house if the traffic is queued because of all the beeping. This morning cars queued along the entire block length (mitchell to mc evoy). Propose (1) disallow bunnings traffic to exit onto harley st and (2) left-only exit from harley to mitchell.	General	Access	NEUTRAL	37	1	

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
Harley Street	Harley st traffic congestion is a problem of the council's own making. The artists impression for the cycleway work showed 2 lanes of traffic on Harley St (not the 1 that we ended up with) which is what is needed to keep it moving. Classic CoS make a problem that didn't previously exist then go out for sham consultatation to push an already decided agenda.	Driving	Congestion	NEGATIVE	27	1	The purpose of narrowing the road is to slow traffic to reduce rat running and make the road safer, especially for people crossing the road. Onsite observations indicate the design is working well, and as intended.
Harley Street	The bike lanes are so dangerous. There is no line of sight when leaving the lanes to turn onto Harley St or Pass over it. Even travelling very slowly bushes, cars and even bike rider riding in the wrong direction can not be seen. Either fix the issues, remove the bike lanes or put them on one side of the road. There is bound to be an accident involving a bike rider and a car eventually and the bike rider will come of second best as a direct result of your inability to create a safe environment	Cycling	Safety	NEGATIVE	26	2	Before the bike lanes were there, when driving from the lanes into or across Harley Street, there were parked cars which blocked sight lines. Now that the parked cars are further out, simply exercise the same caution that you previously used. We don't believe it is necessary to remove the parking.
Harley Street	Remove single carpark on Harley Street op the Parkview - this solo car park means that when we turn left from Mitchell Road on Harley St there is often a traffic jam due	Driving	Congestion	NEUTRAL	26	2	The City will instead consider alternative options for Harley Street as suggested by the community that discourage through traffic while maintaining local access (eg. one way

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	to there not being enough space for two cars to pass due to the bike lanes and this carpark. Removing one carpark is far more benefit than more traffic congestion.						eastbound or partial closure to traffic at McEvoy Street – left out only)
Harley Street	Bike pathways installed on both sides of the road is completely over kill (one side would have been consistent with Ashmore Street). You've just created blind spots and more dangers for pedestrians crossing Harley street. between cars.	Cycling	Safety	NEGATIVE	24	0	It is safer to walk across Harley Street because the traffic is moving more slowly. Seeing around the parked cars has always been an issue but we don't believe it is necessary to remove the parking.
Henderson Road	I've had four mirrors smashed on my car since the cycle way was installed due to large trucks using Henderson Rd. The new narrow width doesn't allow two trucks >4.5t pass safely. I've recorded several crashes here on my security camera and neighbours frequently ask for footage due to cars being hit. Please consider a weight limit to this road or increase the width.	General	Safety	NEGATIVE	26	0	Weight limits don't apply to trucks with a local destination. Delivery trucks, removal trucks, emergency vehicles, waste trucks and railyard trucks with a genuine destination in Henderson Road will still be able to travel even with a weight limit.
Henderson Road (near Alexander Street)	Need a pedestrian crossing here. Childcare center across the road and drivers don't know what to do around that awful island thing that's been installed with pedestrians around.	Walking	Safety	NEGATIVE	26	1	There is a pedestrian refuge and car movements have been limited to make crossing the intersection safer than the previous roundabout. The City is currently finalising its Draft Walking Strategy and Action Plan,

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
							which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. Pedestrian crossings will be considered in the context of the action plan for walking improvements.
Huntley Street	Need to consider solution for right hand turn from Mitchell Rd into Huntley St in a safe manner. This currently blocks all traffic when a car needs to turn right.	Driving	Congestion	NEGATIVE	20	2	The intersection was upgraded in 2023 with the signal plans as approved by TfNSW.
Lawrence Lane at Harley Street	Continuous footpath needed here.	Walking	Safety	NEUTRAL	20	2	The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. CFTs will be considered in the context of the action plan for walking improvements.
Lawrence Street at Fountain Street	Need to improve pedestrian safety at this intersection crossing fountain street	Walking	Safety	NEGATIVE	18	0	Fountain Street is a TfNSW State road. The City is planning to install signals at Fountain Street/Lawrence Street intersection in FY23/24 as proposed in the 2018 LATM
Lawrence Street at Maddox Street	Zebra/wombat pedestrian crossings are needed on all arms of the roundabout.	Walking	Access	NEUTRAL	18	4	The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. Pedestrian crossings will be considered in the context of the action plan for walking improvements.

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
Maddox Street	There are very limited turn offs already. There were plans to close off right turn access to Mitchell road from Sydney Park road as well (assuming it is still the plan). Closing off Maddox as well could lead to massive detours for residents on the Sydney park end of Mitchell road when. Maybe consider putting in some kind of archway over the road that limits height if you want to stop trucks entering Maddox.	Driving	Access	NEGATIVE	79	5	Given the limited support for either of the proposals to restrict access in Maddox Street at Euston Road, the City will consider alternative proposals to reduce the impacts of through traffic in Maddox Street.
Maddox Street	There are two parking spots here which essentially block the intersection when only one or two cars are attempting to turn right into Euston Rd. If the cars turning right cannot clear the intersection due to oncoming traffic, no eastbound cars can clear the intersection at all, creating unnecessary congestion. The parking spots should be removed or at the very least turned into peak hour clearways.	Driving	Access	NEGATIVE	38	0	The parking space reduces capacity at the intersection which helps reduce the amount of through traffic on Maddox Street, which is a local road.
Maddox Street	One parking space (2h timed) on northern side of Maddox Street (eastbound) between Euston Road & Euston lane stops traffic flow as cars turn right from maddox onto Euston road. This creates so much road rage from	Driving	Congestion	NEGATIVE	24	1	

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	drivers and people start using horns. It's ridiculous for one space. This immediately needs to be no stopping and traffic will improve flow.						
Maddox Street near Euston Road	To add to the earlier comment- re: left hand lane going eastbound from Maddox across Euston. Please remove the 1 car space as this blocks the through traffic whenever a car is also turning right from Maddox onto Euston Rd towards Huntley rd. this is causing large traffic backlogs. Especially as people are parking illegally on both sides of this one designated car space, including blocking Euston Lane access.	Driving	Parking	NEUTRAL	20	1	
Maddox Street (west of Euston Road)	Big trucks turn left here and then realise they're on a small road and do a 180 at the roundabout. They end up driving all over the plants in the middle, up onto curbs, and it can take them up to five minutes to get themselves out. This happens almost daily, I WFH and can see the roundabout all day. Something has to be done to stop large vehicles from turning into Maddox	Driving	Access	NEUTRAL	26	2	Euston Road is a state road under the control of Transport for NSW. The City will request TfNSW consider introducing a right turn from Euston Road northbound into Maddox Street east to reduce traffic volumes, including heavy vehicles using Maddox Street west.
Maddox Street at	Zebra/wombat pedestrian crossings are needed on all arms of the roundabout. This is a	Walking	Safety	NEUTRAL	26	2	The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
Belmont Street	walking route to Alexandria Park School.						provide an overarching position on improving connectivity and safety for people walking. Pedestrian crossings will be considered in the context of the action plan for walking improvements.
McEvoy Street between Loveridge and Brennan Streets	NEED a pedestrian crossing on McEvoy here. There is a long walk either side to get across busy MCEvoy and lots of people are forced to dodge cars trying to get across with heavy traffic.	Walking	Safety	NEGATIVE	33	0	McEvoy Street is a state road under the control of Transport for NSW.
Mitchell Road	Council say that the "cycleway uses space previously used for parking and does not reduce traffic lanes." This is not entirely true. The intersection used to be two lanes (as cars cannot park at an intersection) and is now being reduced to one lane. This will create blockages and congestion when cars are turning left into Coulson St (waiting for pedestrians) or right into Huntley St (waiting for oncoming traffic). And more cars will need to turn right into Huntley if you close Maddox St too.	Driving	Congestion	NEUTRAL	42	8	Yes there is some impact on traffic capacity at the intersection if there is a turning vehicle, which has been necessary to make safe space for people riding. The changes by Transport for NSW to reclassify Princes Highway, Sydney Park Road and Mitchell Road from being state roads carrying regional traffic to local roads will reduce through traffic on Mitchell Road and ease congestion here.
Mitchell Road	There should be an additional pedestrian crossing somewhere on Mitchel Road between Ashmore and Maddox (probably here at Stovemaker Lane). This provides a better pedestrian link	Walking	Access	NEUTRAL	26	0	The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. Pedestrian crossings

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	between residents in Park Sydney, residents in the laneway blocks, businesses on the Alexandria side, and Park Sydney shopping village. Both of the two nearest existing pedestrian crossings require additional side road crossings and a detour long enough that people cross in the middle of the road anyway.						will be considered in the context of the action plan for walking improvements.
Mitchell Road (south of Harley Street)	Perhaps a better alternative is to move the pedestrain crossing to right about here (near the fish & chip shop) instead. This way it won't be so close to cars exiting Harley St. It will make little to no different for cars going towards Maddox and pedestrian crossing will actually allow more chances for cars to exit Ashmore St	Driving	Congestion	NEUTRAL	61	8	It is recognised that improvements to the intersection are needed. While many respondents suggested upgrading the existing roundabout with raised pedestrian crossings on all legs, raising the existing pedestrian crossing was not feasible during the Ashmore-Harley cycleway works due to drainage considerations. The offset geometry of the intersection, mix of road users, and multiple decision points for people negotiating the intersection and crossing points creates a potential safety risk. A signalised intersection would improve pedestrian access and safety with dedicated phasing and formal crossings on each approach, and cycling crossing signals, while moderating traffic flows.
Mitchell Road	The bus stop advertisement blocks sight-lines for vehicles	Driving	Safety	NEGATIVE	21	2	The shelter replaced the previous shelter that had been in place for close

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	exiting Brown Lane. Cars are forced to push out into the left hand lane of Mitchell Road into the path of speeding vehicles (who usethe left lane to pass cars turning right into Fountain Street). It's an accident waiting to happen. I objected to council when they revamped the bus stops and they said it would be set back further to improve sight lines. It wasn't. Then council added more signs and poles to make the problem even worse.						to 20 years in the same position. The shelter was subject to a development approval process, TfNSW guidelines, accessibility guidelines and sightlines were considered as part of this process. Moving the shelter back further from the kerb line would result in the shelter not being compliant from an accessibility perspective as the vision impaired require a clear path of travel along the building line.
Mitchell Road at Brown Street	Just adding a photo to show the ridiculously poor sight lines exiting Brown St. Council seems to value advertising dollars over community safety.	Driving	Safety	NEGATIVE	18	2	
Mitchell Road at Coulson Street	It was not clever Loosing one lane of traffic which allows vehicles to turn left easier for the installation of this 10m(if that) cycle lane that connects to nothing- what happened here!!	Driving	Congestion	NEGATIVE	20	4	Transport for NSW is due to complete the cycleway by extending it down to, and along Sydney Park Road, as part of their changes to reclassify Princes Highway, Sydney Park Road and Mitchell Street to local roads, for local traffic.
Mitchell Road at Maddox Street	This crossing is a major safety hazard - drivers are focussed on other vehicles as they approach the round about. The crossing should be relocated further up	Walking	Safety	NEGATIVE	26	22	Traffic signals at the intersection of Maddox Street and Mitchell Road were identified and committed through development consent and planning approvals of the adjacent Ashmore

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	Mitchell road to mitigate the risk and not impact the traffic flows						precinct development site, to address traffic impacts of the major development including increased residential density and retail developments. Under existing conditions, residents have raised concerns about pedestrian safety at the existing intersection and pedestrian crossing. The traffic signals are expected to improve pedestrian access and safety, while moderating traffic flows.
	NOBODY stops at this pedestrian crossing. it's a nightmare. put lights in and remove the roundabout	Walking	Safety	NEGATIVE	63	9	
	NO to more traffic signals! Do we want our neighbourhoods to become like the CBD where you spend more time waiting at traffic signals than actually walking? Don't punish pedestrians for safety issues created by cars, SUVs etc. Improve safety by calming/reducing traffic, improving sightlines and installing raised pedestrian crossings.	Driving	Congestion	NEUTRAL	53	1	
	I strongly object to the proposal to signalise this intersection. Traffic signals prioritise motor vehicle traffic over pedestrians and encourage people to drive instead of walk for short, local trips. This is at odds with City of Sydney's strategic plan direction 5: A city for walking, cycling and public transport.	General	Safety	NEUTRAL	33	63	
	Traffic lights here will not help anything. The flow is fine as it is - it blocks up because of the mess at Sydney park village.	General	Safety	NEGATIVE	25	45	

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	Make the crossing more obvious for drivers with lights or signs						
	The roundabout should be retained with raised pedestrian/bicycle crossings on each arm (i.e., a protected roundabout), improved sightlines and a 30 km/h design speed on Mitchell Rd to increase safety and driver compliance.	General	Safety	NEUTRAL	23	4	
	Traffic signals here would: a. Impose delays and inconvenience on people walking (i.e., having to activate a beg button and wait for the signal (two signals if crossing diagonally). b. Induce/encourage additional peak motor vehicle traffic on Mitchell Rd, Harley St and MacDonald St. c. Remove the traffic calming effect of the existing roundabout and wombat crossing.	Driving	Congestion	NEUTRAL	22	40	
Mitchell Road at Sydney Park Village	Councils removal of the lane exiting the village via a left hand turn has caused traffic build up exiting. Delays in traffic coming down Mitchell Rd then making it difficult to turn right. This has made it more dangerous for pedestrians as cars build up having to act quickly to take a gap in traffic and may not see	Driving	Congestion	NEGATIVE	23	7	The development had illegally added a second lane on their driveway exit which was a hazard for people walking, if one car blocked the view of another.

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
	pedestrians attempting to squeeze ahead of the built up cars						
Park Street	I suggest an education/information strategy to explain to residents how we can't have quiet, low-traffic streets AND enable everyone to drive between their home and local destinations by the most direct route possible.	General	Access	NEUTRAL	23	2	Noted
Power Avenue at Wyndham Street	We need a proper pedestrian crossing here as cars either don't know there is a crossing here or don't care. Me and my kids and other pedestrians have had close calls with cars trying to overtake a turning car or car that has given way due to traffic congestion and almost hitting us. The extended footpath doesn't help if we can't cross properly.	Walking	Safety	NEGATIVE	23	1	The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. Pedestrian crossings will be considered in the context of the action plan for walking improvements.
Railway Parade	Re-open the 2 way traffic on Railway Parade ASAP and retain the left hand turn lane from the railway bridge. If this lane is lost leaving only one lane open heading south a bottle neck will be created by the turning traffic. The current road barrier configuration will make the left turn extremely difficult and will likely require modification to the new barriers.	Driving	Access	NEUTRAL	35	33	Railway Parade was reopened to two-way traffic on 16 May 2023.

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
Railway Parade	Keep this end of Railway Parade, between Sydney Street and Swanson Road one way only.	Driving	Access	NEUTRAL	30	22	Railway Parade was reopened to two-way traffic on 16 May 2023 in response to previous feedback from the affected community.
Railway Parade	Thankyou for widening this corner of the footpath. Standing here with a pram used to be very unsafe and awkward as someone is always forced onto the road as it's just too narrow. Keeping this section of Railway Parade one way will help keep it a safe corner for pedestrians and cyclists.	Walking	Safety	POSITIVE	26	3	Railway Parade was reopened to two-way traffic on 16 May 2023 in response to previous feedback from the affected community. Transport for NSW are developing further improvements here which will widen the northern side of Swanson Street for people walking and riding.
Railway Parade	Maintain Railway Parade to be two way traffic between Sydney Street and Monks Lane to match Henderson Road to the east	Driving	Access	NEUTRAL	22	22	Railway Parade was reopened to two-way traffic on 16 May 2023 in response to previous feedback from the affected community.
Railway Parade	Please keep this one way and continue to add traffic calming. Much safer and nicer for local residents and pedestrians (including children travelling to school)	Driving	Speed	POSITIVE	20	29	Railway Parade was reopened to two-way traffic on 16 May 2023 in response to previous feedback from the affected community.
Railway Parade	Please consider retention of one way here for all residents, of both Henderson Rd and Park St. Opening this will double peak hour traffic rates, ensuring Henderson and Park Rd see more traffic in the AM. This closure ensures a safe environment for most of the day (afternoon peak hour is still quite busy)	Driving	Rat run	NEUTRAL	19	18	Railway Parade was reopened to two-way traffic on 16 May 2023 in response to previous feedback from the affected community.

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
Railway Parade	The new works here have made this significantly less safe for pedestrians and cyclists. Why have a high quality cycle path running the full length of Henderson Rd and Railway Pde except for a 50m stretch of shared path which is narrower than the cycle path was. Not only that but the pavement is obstructed by signage making it effectively narrower just at the junction with Erskineville Rd. Very poor design and doesn't meet aim to "improve access, safety, particularly for walking and cycling"	General	Safety	NEGATIVE	18	6	Railway Parade was reopened to two-way traffic on 16 May 2023 in response to previous feedback from the affected community. Transport for NSW are developing further improvements here which will widen the northern side of Swanson Street for people walking and riding.
Renwick Street	Park St closure makes this the only entry point into the triangle if travelling from Newtown/west. This brings extra traffic into this area where there is a school, pedestrian crossing with school students crossing regularly, and a children's playground. This stretch of road is already heavily congested so it seems unnecessary to add local residential traffic to that.	Driving	Congestion	MIXED	20	2	Given the limited support and strong objections from the affected community for either option to restrict traffic access from Park Street into Henderson Road, these options will not be pursued at this time.
Swanson Street	Please widen the pedestrian bridge over the railway tracks opposite erskineville station	Walking	Access	NEUTRAL	29	1	Transport for NSW are developing further improvements here which will widen the northern side of Swanson Street for people walking and riding.

Location	Comment	Theme	Sub-Theme	Sentiment	Up-votes	Down-votes	City of Sydney Response
Swanson Street near Park Street	Could we please reduce the greenery in the area close to the pedestrian crossing - this is in a school zone and used by many kids and families. Often children may get ahead of their parents on scooters/bikes and aren't visible to drivers in oncoming traffic. Am all for greenery but suggest removing this as it obscures visibility as a safety hazard	Walking	Safety	NEUTRAL	19	2	Hedge height are kept to below 900mm as standard ie to allow vision of unaccompanied children

Attachment E

Responses to Key Themes Raised in Written Submissions

Engagement summary of written submissions - additional ideas and issues (further to proposals)

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
Railway Parade	Support two-way traffic or oppose one-way traffic in Railway Parade	19	Positive	Two-way operation was reinstated in Railway Parade on 16 May 2023.
	Support one-way traffic or oppose two-way traffic in Railway Parade	10	Negative	Railway Parade was converted back to two-way operation in May 2023 in response to previous feedback from the affected community.
	Concerns that residents were not consulted on changes on Railway Parade from two-way to one-way and back to two-way	3	Negative	We did consultation for the permanent cycleway on Railway-Henderson, including a proposal for one-way traffic on Railway Parade from 20 November to 18 December 2020, for which we sent letters to 9,750 residents and businesses in the area. We received 599 submissions. It was in response to this feedback that council decided to return Railway Parade to two-way.
	Oppose Railway Parade cycleway	1	Negative	Noted.
	Suggest enforcement of parking in Railway Parade as some still parking in the wrong direction since reopened to two-way	1	Neutral	Rangers have conducted targeted patrols at this location, focusing on vehicles that are not correctly parking in the direction of travel. Rangers will continue to monitor and issues fines.
Park Street	Satisfied with current conditions/ angle parking has slowed traffic / current volume of traffic and heavy vehicles are acceptable	3	Positive	Noted
	Railyard trucks use Park Street to access their site despite the weight limit	2	Negative	Load limits are installed for amenity reasons. Trucks can use Park Street if there is no other route to which a load limit applies. It's noted that the only available route to the Railyard without load limits is via Mitchell Road and Henderson Road which is a 2.5km detour. The City will continue to monitor.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
	Concerned about illegal activities if Park Street is closed off	1	Negative	Noted
	Concerns about diversion of traffic to other local streets if Park Street is closed	1	Neutral	Noted
	Park Street existing/proposed alignment works should be on hold until Park Street residents surveyed.	1	Negative	Park Street residents told us they wanted the works done earlier. The works are now nearing completion.
	Suggest the City measures improvements in Park Street since Railway Parade converted back to two-way	1	Neutral	Traffic counts can be arranged after completion of current road works to assess if a further review is needed.
	Park Street does not intersect with Henderson Road, it intersects with Railway Parade (Henderson Road doesn't commence until Monks Lane). Will House numbers between Park Street and Monks Lane need to be changed?	1	Neutral	Noted. There is no proposal to change the naming of the roads or house numbers. While the proposal stated the closure of Park Street at Henderson Road, it would be more correct to say Park Street at Railway Parade. The existing street sign at the intersection states Henderson Road, however a check of Council's records shows that the road becomes Henderson Road at Monks Lane.
Harley Street	Suggest partial closure of Harley Street at McEvoy Street – no entry from McEvoy and left out only into McEvoy	2	Neutral	The City will not pursue either of the proposed closures of Harley Street, based on general opposition from engagement with the community. The City will instead consider alternative options for Harley Street as suggested by the community that discourage through traffic while maintaining local access (eg. one way eastbound or partial closure to traffic at McEvoy Street – left out only)
	Support closure of Harley Street at Mitchell Road but suggest additional modal filters also needed on Belmont Ln, Belmont St, Lawrence Ln, Lawrence St & Euston Ln to discourage through traffic diverting	1	Neutral	
	Has Petbarn access been considered with proposed closure of Harley Street?	1	Neutral	
	Only support closure of Harley Street if signals or sight line improvements are made at Lawrence Street & Fountain Street	2	Neutral	Signals at Fountain & Lawrence Streets are scheduled for installation in the current financial year, subject to TfNSW approval.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
	Suggest no right turn from Harley Street into Mitchell Road	8	Negative	The City will consider alternative options for Harley Street as suggested by the community that discourage through traffic while maintaining local access (eg. one way eastbound or partial closure to traffic at McEvoy Street – left out only)
	Love the cycleway and narrow road which slows cars	1	Positive	Noted.
	Concerns about safety with current traffic, cycleway and parking configuration / difficult access for people walking, cycling or driving.	14	Negative	The purpose of narrowing the road is to slow traffic to make the road safer, especially for people crossing the road. Onsite observations indicate the design is working well, and as intended.
	Suggest Harley Street cycleway be reconfigured to provide more clearance to traffic/ parked cars or be changed to one shared cycle lane and/or remove parking on either side	8	Negative	We decided to retain parking on both sides to narrow the road to slow traffic, to make the road safer and deter rat running. There is sufficient clearance from doors in the cycleway.
	Suggest Harley Street be made one-way for vehicles	3	Negative	The configuration is designed to retain both travel and parking lanes to narrow the road to slow traffic to make the road safer and deter rat running.
	Suggest Harley Street be made into a quiet way	1	Neutral	Noted.
	Suggest chicanes in Harley Street	1	Negative	Noted.
	Suggest remove single car space on Harley Street opposite Park View Hotel to improve flow	3	Negative	The City will consider alternative options for Harley Street as suggested by the community that discourage through traffic while maintaining local access (eg. one way eastbound or partial closure to traffic at McEvoy Street – left out only)
	Suggest reduce/remove parking near Lawrence Lane and other lanes to improve visibility	1	Negative	
	Suggest remove cycleway	1	Negative	Noted.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
	Vehicles run over concrete median when turning left into Mitchell Road	1	Negative	There is sufficient space for drivers to make the turn properly.
	Bike paths are rarely used	1	Negative	We expect usage on Harley Street to increase substantially when the cycleway between Bowden Street cycleway and Geddes Avenue cycleway is opened next year.
Mitchell Road/ Harley Street Ashmore Street	Oppose replacing existing roundabout and zebra crossing with traffic signals (reduced priority & safety for pedestrians; roundabouts provide traffic calming	21	Negative	It is recognised that improvements to the intersection are needed. While many respondents suggested upgrading the existing roundabout with raised pedestrian crossings on all legs, raising the existing pedestrian crossing was not feasible during the Ashmore-Harley cycleway works due to drainage considerations. The offset geometry of the intersection, mix of road users, and multiple decision points for people negotiating the intersection and crossing points creates a potential safety risk. A signalised intersection would improve pedestrian access and safety with dedicated phasing and formal crossings on each approach, and cycling crossing signals, while moderating traffic flows.
	2 additional signals (including proposed signals at Mitchell/ Maddox) in close proximity to 6 existing signals along Mitchell Road	1	Negative	
	Support replacing existing roundabout and zebra crossing with traffic signals	9	Positive	
	Only support replacing existing roundabout and zebra crossing with traffic signals if it will improve traffic flow	1	Neutral	
	Suggest traffic calming on all approaches to existing roundabout; improve sightlines and lighting; install wombat crossings on all arms	3	Neutral	
	Existing pedestrian crossing is dangerous	3	Negative	
	Suggest moving pedestrian crossing further away from roundabout or add additional crossings	1	Neutral	
	Suggest flashing lights or zig zag strips to warn drivers approaching pedestrian crossings	1	Neutral	
	Suggest raise existing pedestrian crossing	1	Neutral	

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
Mitchell Road/ Maddox Street	Oppose replacing existing roundabout and zebra crossing with traffic signals	9	Negative	Traffic signals at the intersection of Maddox Street and Mitchell Road were identified and committed through development consent and planning approvals of the adjacent Ashmore precinct development site, to address traffic impacts of the major development including increased residential density and retail developments. Under existing conditions, residents have raised concerns about pedestrian safety at the existing intersection and pedestrian crossing. The traffic signals are expected to improve pedestrian access and safety, while moderating traffic flows.
	Support replacing existing roundabout and zebra crossing with traffic signals	2	Positive	
	Suggest make pedestrian crossing across Mitchell Road at Maddox Street safer	2	Neutral	
	Suggest closing Maddox Street at Mitchell Road	1	Neutral	This was not supported by the community in the previous 2018 LATM due to impacts on Mitchell Road from Ashmore estate traffic.
Mitchell Road	Suggest reduce speed limit to 30km/h	1	Neutral	The study recommends reducing Mitchell Road to 40km/h to match surrounding local roads. The City will request TfNSW to consider a 40km/h speed limit.
	Suggest reduce speed limit to 40km/h	2	Positive	
	Suggest road resurfacing	1	Neutral	Resurfacing of Mitchell Road between Sydney Park Road and Copeland Street has been identified for 24/25 FY Capital works program. In the meantime, The City will arrange to undertake some maintenance works to address some defects identified, which fall within the scope of maintenance activities
	Existing roundabouts on Mitchell Road should be retained/ upgraded	1	Negative	Noted
	Mitchell Road not wide enough for bikes to cycle between traffic and parked cars	1	Neutral	If riding on Mitchell Road, the safest road position is generally in the centre of the traffic lane. Alternatively, the regional bike route is parallel and only a block away, on Belmont Street.
	Oppose Mitchell Road cycleway	2	Neutral	Noted

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
Mitchell Road at Buckland Street	Suggest reinstate right turn from Mitchell Road into Buckland Street	2	Negative	The no right turn on Mitchell Road at Buckland Street was originally installed at request of residents to reduce volumes on Buckland Street. Removing the no right turn will encourage more traffic on Buckland St. Community feedback is mixed with some wanting to retain the no right turn and some wanting it removed. There is no significant feedback to suggest that the majority of affected residents or the school want the existing no right turn reviewed. No further action proposed.
	Retain no right turn from Mitchell Road into Buckland Street	2	Positive	
Belmont Street (at Fountain Street)	Introduce a raised pedestrian/bicycle crossing on Belmont Street along route to Alexandria Park Community School	1	Neutral	Fountain Street is a state road under the control of TfNSW. The City cannot make changes to Fountain Street without TfNSW approval. TfNSW did not support a combined pedestrian/cycle crossing on Fountain Street at Belmont Street. However signals at Fountain & Lawrence Streets are scheduled for installation in the current financial year, subject to TfNSW approval.
Fountain Street at Lawrence Street	Oppose installation of traffic signals at the intersection	1	Negative	Traffic signals were proposed and endorsed as part of the 2018 Alexandria LATM and were included as a committed project in the base model for the 2022 Traffic Study. The signals are scheduled for installation in the current financial year, subject to TfNSW approval.
	There will be 3 sets of signals within approx. 250m of each other on Fountain Street	1	Neutral	
	Support installation of traffic signals at the intersection	3	Positive	
	Pedestrian crossing needed	4	Positive	
	Request for update on Lawrence Street/ Fountain Street signals	1	Neutral	
	Difficult/ unsafe turning right from Lawrence Street into Fountain Street	5	Negative	

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
Fountain Street at Belmont Street	Suggest raised pedestrian crossing on Fountain Street at Belmont Street	3	Neutral	Fountain Street is a state road under the control of TfNSW. Signals at Fountain Street & Belmont Street were rejected by TfNSW. However, traffic signals at Fountain & Lawrence Streets were proposed and endorsed as part of the 2018 Alexandria LATM and were included as a committed project in the base model for the 2022 Traffic Study. The signals are scheduled for installation in the current financial year, subject to TfNSW approval.
Fountain Street	Suggest traffic calming / wider footpaths / pedestrian island	2	Neutral	Fountain Street is a state road under the control of Transport for NSW. The City cannot make changes to Fountain Street without TfNSW approval.
	Suggest 40km/h school zone	1	Neutral	TfNSW is the only authority who can approve and install speed limits, including School Zones. Fountain Street is also a state road under the control of TfNSW.
Belmont Lane / Lawrence Lane/ Euston Lane	Mitigation treatments needed to avoid traffic diverting to narrow laneways	4	Neutral	Speeds humps were installed in these lanes in 2018 as part of the 2018 Alexandria LATM.
	Install speed humps at each end of these lanes	1	Neutral	
	Close laneways or make them one-way	1	Neutral	
	Restrict laneways to residents/ local access only.	1	Neutral	
Maddox Street	Request loading zone for businesses in lieu of any parking loss	1	Neutral	Noted. Parking impacts will be taken into consideration as part of detailed design and further consultation with the affected residents and businesses.
	Install No Stopping between Euston Lane and Euston Road to improve traffic flow	2	Neutral	The parking space reduces capacity at the intersection which helps reduce the amount of through traffic on Maddox Street, which is a local road.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
	Suggest No Parking near intersections to improve sight lines	1	Neutral	The City will develop concept plans for traffic calming incorporating the feedback from the community engagement, including the preference for chicanes, suggestions for improved pedestrian access at the intersections, and the need to allow for a future planned cycleway link.
	Suggest improved roundabouts and pedestrian crossings	2	Neutral	
	Suggest limit access / left turn from Euston Road to vehicles under 6m / 9m only	4	Neutral	This would be difficult to enforce.
	Suggest installation of cycleway	1	Neutral	The City's Cycling Strategy and Action Plan identifies Maddox Street for a cycleway, to connect the MacDonald Street cycleway with Bourke Road.
	Suggest one-way chicane on Maddox Street near Euston Road / Make Maddox Street single lane one-way from Euston Road to Mitchell Road	1	Neutral	The City will develop concept plans for traffic calming incorporating the feedback from the community engagement, including the preference for chicanes, suggestions for improved pedestrian access at the intersections, and the need to allow for a future planned cycleway link.
	Suggest flowers and garden beds in Maddox Street	1	Neutral	
Huntley Street	Suggest limit access to vehicles under 6m only	1	Neutral	This would be difficult to enforce.
	Oppose closure of Huntley Street	1	Neutral	There is no current proposal to close Huntley Street to traffic.
Euston Road at Huntley Street	Suggest increasing signal timing for right hand turn from Euston Road into Huntley Street	1	Neutral	Euston Road (state road) and all traffic signals are under the care and control of TfNSW.
Maddox Street/ Euston Road	Suggest introduce right turn/lane on Euston Road (northbound) at Maddox Street east – as vehicles turn left and use roundabout at Lawrence to turn around and continue eastbound	4	Neutral	Euston Road is a state road under the control of Transport for NSW. Any changes to the signals need TfNSW approval. The City will request TfNSW consider this suggestion to reduce traffic volumes, including heavy vehicles using Maddox Street west.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
Lawrence Street	Suggest traffic calming needed	1	Negative	Traffic calming was installed in 2020 as part of the 2018 Alexandria LATM.
Henderson Road	Existing speed cushions are ineffective – more traffic calming required or replace with full width speed humps	6	Negative	Noted
	Existing speed cushions are noisy	3	Negative	Noted
	Existing speed cushions are ineffective - replace speed cushions and reinstate roundabouts	4	Negative	Roundabouts are generally less safe for people walking.
	No right turn from Alexandria Street has introduced more traffic into Kingsclear Road	1	Negative	Noted
	Current conditions work well	2	Positive	Noted
	Oppose bike lanes	1	Negative	Noted
	Suggest close Henderson Road/ Railway Parade at Park Street	2	Neutral	Noted
	Concerned about disruptive, ineffective changes to Henderson Road in last three years/ costs of the works. Turning onto Henderson Road from any side streets is hazardous since roundabouts were removed	2	Negative	Noted. The project was funded by Transport for NSW.
	Henderson Road is risky for pedestrians to cross and negotiate side streets	1	Negative	Removing the roundabouts has improved the safety and priority for pedestrians crossing side streets.
	Concerns about engagement. Henderson Road residents excluded	1	Negative	Letters were sent to all properties within the study area. We understand that some residents did not receive the first letter or received it later than anticipated. A second letter was sent to all properties within the study area and the engagement period extended to 30 June. There has been an overwhelming response to the engagement.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
				We are aware that some resident groups also conducted their own engagement, which the City was not involved in.
Swanson Street	Suggest removal of bike lane on Swanson Street – link is unsafe for cyclists	1	Negative	Transport for NSW is developing a safe link for people walking and riding on Swanson Street (it is State Road).
Swanson Street at Park Street	Existing crossing and narrowing at Park Street is good	1	Positive	Noted
	Suggest hedge height be reduced at road crossings	1	Neutral	Hedge height are kept to below 900mm as standard ie to allow vision of unaccompanied children
	Suggest relocate pedestrian crossing on Park Street further away from Swanson Street	1	Neutral	The existing crossing is located on the pedestrian desire line. Moving the crossing further away is not supported as pedestrians would not use the crossing.
Swanson Street at Railway Parade	Footpath on northern side of Swanson Street is too narrow. Left turn lane unnecessary and should have been retained for pedestrians and cyclists/	2	Negative	Transport for NSW is developing a safe link along Swanson Street for walking and riding, that will increase space on the northern side.
	Suggest use way-finding traffic signs to direct traffic to the preferred route	1	Neutral	Noted. Railway Parade has been reinstated to two-way traffic so the majority of vehicles can now turn left at Railway Parade via the shortest route to Henderson Road.
Renwick & Coulson Streets	Suggest kerb buildouts/ intersection narrowing on side streets	3	Neutral	Road narrowings are planned at Renwick/Suttor Street. Dadley/Renwick road narrowing to be included in future works program. Coulson Street is still used by large trucks and road widenings would reduce the kerb side parking. Road narrowing and Continuous footpath treatments along Coulson Street at Eve Street were carried out in 2019. Similar treatments are already proposed at Hadfield

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
				Street. These works are already committed as part of forward works programs.
Coulson Street and Mitchell Road	Suggest mid-block crossings	2	Neutral	The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. Pedestrian crossings will be considered in the context of the action plan for walking improvements.
Gillespie & Birmingham Streets	Lack of control of entry from Gillespie into Birmingham Street. Rat run and high traffic	1	Negative	Noted. This is outside the study area.
Coulson Street	Why is Coulson Street and intersection upgrades not included in the current proposal	2	Neutral	Coulson Street is still used by large trucks and road widenings would reduce the kerb side parking. Road narrowing and Continuous footpath treatments along Coulson Street at Eve Street were carried out in 2019. Similar treatments are already proposed at Hadfield Street. As these are already committed as part of forward works programs, the City did not seek specific feedback as part of this community engagement.
	Suggest road narrowing along Coulson Street	1	Neutral	
	Suggest CFT along Coulson Street at Hadfield Street	1	Neutral	
Gerard Street & Garden Street	Traffic has increased as a result of turn bans on contiguous streets eg. Phillip at Henderson	1	Negative	Noted. The turn bans was implemented after Residents requested this ban to stop their street being used as a short-cut. Also there was an accident history of right turn accidents at the intersection of Phillip and Henderson.
Fox Street at Copeland Street	Suggest safer pedestrian crossing needed or a pedestrian crossing connecting Harry Noble and Erskineville Oval	1	Neutral	A continuous footpath treatment was installed on Fox Street at Copeland Street in 2021.
Clara Street	Heavy traffic on Clara Street	1	Neutral	Noted
	Suggest moving child care centre pick-up zone on Clara Street closer to Swanson Street	1	Neutral	The existing 5 minute parking zone is located closest to the entry to the childcare centre.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
	Clara Street speed hump near Swanson Street is damaged	1	Neutral	The City's maintenance team inspected the speed hump and will undertake temporary repairs. This been added to the maintenance program for restoration.
	2 Hour parking needs more enforcement	1	Neutral	Rangers will continue to conduct additional patrols of Clara Street and the surrounding area, focusing on vehicles overstaying the 2 hour parking restrictions.
Erskineville Road	Suggest more resident parking restrictions needed on southern side to offset parking demand in Clara Street area	1	Neutral	Noted
Wyndham Street	Proposals will push more traffic onto Wyndham Street. Frequently gridlocked. Suggest improvements needed for Wyndham Street	1	Negative	Noted. Proposals for turn bans and road closures are unlikely to proceed based on overall community feedback.
Maddox Street at Lawrence Street	Suggest hedge height be reduced at road crossings	1	Neutral	Hedge height are kept to below 900mm as standard ie to allow vision of unaccompanied children
Maddox Street at Bourke Street	Remove shrubs to improve sight lines	1	Neutral	Landscaping height can be reduced to not impede sightlines
General	Suggest more dedicated cycle paths needed – various street within and outside study area	2	Neutral	Noted. The City's Cycling Strategy and Action Plan shows our planned bike network.
	Suggest continuous footpath treatments or wombat crossings should be installed on all side streets in Erskineville & Alexandria	2	Neutral	The City is currently finalising its Draft Walking Strategy and Action Plan, which once adopted by Council will provide an overarching position on improving connectivity and safety for people walking. Continuous footpath treatments and pedestrian crossings will be considered in the context of the action plan for walking improvements.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
	Suggest all roads reduced to 30km/h	2	Neutral	The study recommends reducing Mitchell Road to 40km/h to match surrounding local roads. The City will request TfNSW to consider a 40km/h speed limit.
	Concerns that many of the bike lanes installed in the area have created hazardous driving conditions – should be reconsidered	2	Negative	Crash data from the NSW Centre of Road Safety shows that injury crashes involving all road users (including drivers) are reduced after adding cycleways.
	Suggest don't replace roads/parking for cars to install bike lanes	4	Neutral	Cycleways currently use approximately 1.25% of the City's road space, to improve safety for the many residents who ride, or who order food deliveries.
	Cycleways on Mitchell Road/ Huntley Street/ Sydney Park Road/ Bridge Street are underutilised	1	Negative	The volumes on these cycleways will increase substantially as nearby bike network connections are completed.
	Suggest providing better access to footpaths – ie maintenance, trim overgrown shrubs	2	Neutral	Residents are encouraged to contact the City directly by phone, email or online to report and request footpath maintenance, including details of specific locations
	Suggest reducing kerb radius at all side streets to reduce turning speeds	1	Neutral	Noted
	Concerns letter dated 1 May was received much later in May	2	Neutral	Letters were sent to all properties within the study area. We understand that some residents did not receive the first letter or received it later than anticipated. A second letter was sent to all properties within the study area and the engagement period extended to 30 June. There has been an overwhelming response to the engagement.
	Traffic model does not include impact of extra traffic in study area since opening of WestConnex St Peters interchange in late February 2023.	1	Negative	This was a complex study covering a large geographical area while Westconnex is still under construction. The Westconnex St Peters Interchange opened in mid-2020. The available traffic data from 2016 and 2021 was analysed to understand the impacts of the opening of WestConnex in the study area, however the Study was

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
				completed before the M4-M8 extension was opened to traffic. TFNSW is also required to undertake post-opening traffic studies to assess impacts on surrounding road network at each stage as per the State Significant Development approval conditions.
	TfNSW should attend community meetings so they can hear residents' concerns first hand	1	Negative	Noted
	Traffic study – page 56 - Why was through traffic on Euston Road – McEvoy Street excluded?	1	Neutral	Euston Road – McEvoy Street are State Roads under the control of Transport for NSW. The aim of this study is to understand the impacts of Westconnex on local roads and propose treatments which will encourage through traffic to use the State Road network rather than diverting through local roads. To do this, the modelling considered the proportion of trips that have a local origin or destination within the study area.
	How will closures benefit local residents and amenity if trips are longer	1	Negative	Noted. Road closures are proposed to reduce through traffic, noise and improve access and safety for people walking. They can increase distance of trips for local access. The City consults residents to gauge the level of support given these impacts.
	Public transport needs improving	1	Neutral	Noted. Public transport services are administered by the NSW state government
	There is no mention of the changes that will occur with the opening of the Green Square to Ashmore connector. This will introduce traffic lights and further pedestrian crossings which will cross the predominant north-south traffic flow.	1	Neutral	This connector road starts at the intersection of Bowden Street with Bourke Road which is outside the Study Area. The Connector Road will not be opened initially as a through road.

Location	Comment/ Theme	No. people making the comment	Sentiment	City of Sydney Response
	Suggest improve lighting on footpaths	1	Neutral	Residents are encouraged to contact the City directly by phone, email or online with specific locations

Attachment F

Summary and Final Report – Erskineville and Alexandria Traffic and Transport Study 2022 - Bitzos Consulting

Erskineville and Alexandria Traffic and Transport Study

Summary Report

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20 February 2023

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P4411.001R Erskineville and Alexandria Traffic and Transport Study_Summary Report	A. Ahmed	D. Bitzios	A. Ahmed	11/8/2022	Michaela Kemp MKemp@cityofsydney.nsw.gov.au
P4411.002R Erskineville and Alexandria Traffic and Transport Study_Summary Report	A. Ahmed	D. Bitzios	A. Ahmed	2/9/2022	Michaela Kemp MKemp@cityofsydney.nsw.gov.au
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P4411.004R Erskineville and Alexandria Traffic and Transport Study_Summary Report	A. Ahmed	D. Bitzios	A. Ahmed	20/2/2023	Michaela Kemp MKemp@cityofsydney.nsw.gov.au

CONTENTS

Figures

1. INTRODUCTION

Study Area

The Study area is shown in Figure 1.1.

Figure 1.1: Study Area

Objectives

The objectives that informed the Traffic and Transport Study are:

- Maximise accessibility, safety and amenity for walking and cycling, including to/from bus stops
- Limit through traffic on local streets and particularly those streets used for filtering between Mitchell Road and Euston Road-McEvoy Street
- Encourage through traffic to use state roads instead of local roads
- Minimise turn bans and/or closures for other alternatives to restrain through traffic
- Minimise consequential traffic impacts from any proposed traffic management measures.

Background

The WestConnex (M8) St Peters Interchange opened in mid-2020 and resulted in a change in traffic patterns in Alexandria-Erskineville. At its meeting of 29 March 2021, the Council of the City of Sydney (Council) resolved to undertake an area wide transport study for the suburbs of Erskineville and Alexandria. The Study builds on the 2018 Alexandria LATM study prepared by Bitzios Consulting to forecast, assess and mitigate impacts of WestConnex. The works recommended in that study have mostly been implemented to date.

Residents and councillors raised a number of items that the Study had to address, including:

- TfNSW's proposal for a 'No Right Turn' from Mitchell Road into Sydney Park Road
- Deferring the one-way road closure of Railway Parade to northbound traffic between Swanson Street and Sydney Road
- Exploring additional traffic calming measures to slow down vehicles and deter trucks from entering Maddox Street
- Investigating options to improve pedestrian safety at the intersection of Maddox Street and Mitchell Road.

Key inputs into the study include:

- Traffic counts that were collected in May 2021
- A traffic model, that was created during the 2018 Alexandria LATM study
- Works that will be implemented by mid-2023, as shown in Figure 1.2, including reinstatement of two-way traffic in Railway Parade.

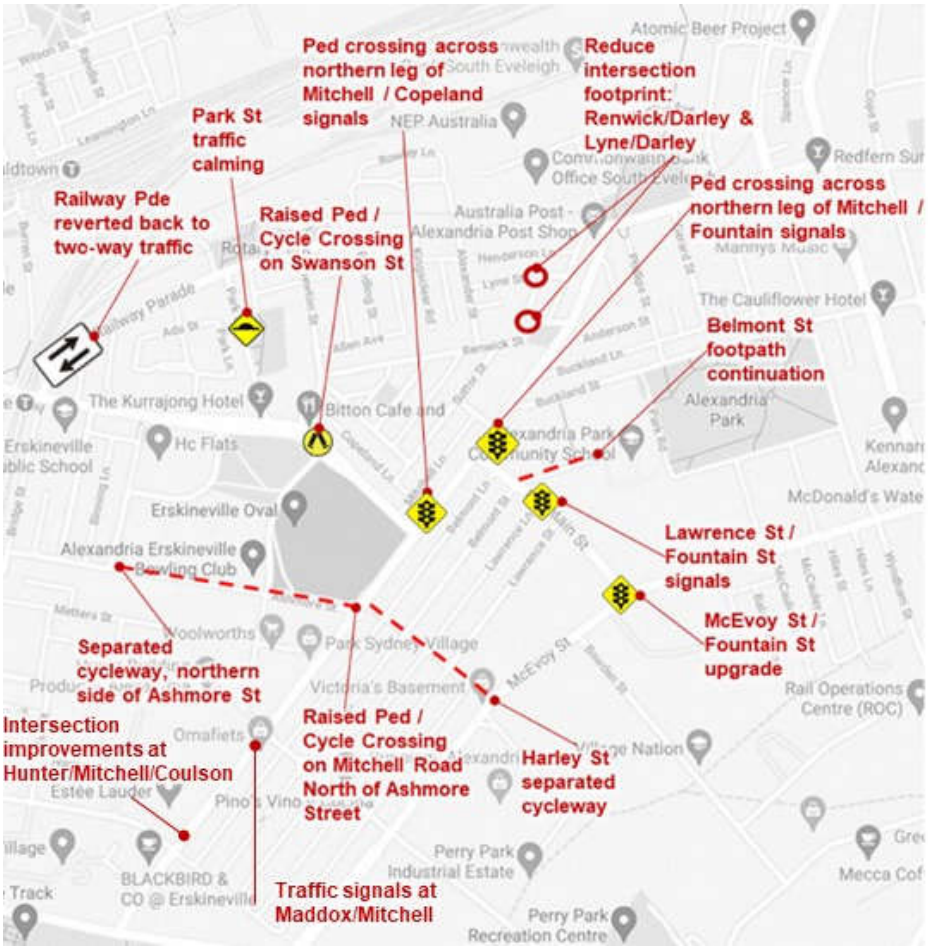


Figure 1.2: Base Assumptions: Committed or Recently Constructed Works

2. RECOMMENDED WORKS PACKAGE

The study recommends that Council pursues a package of works as shown in Figure 2.1. Together, the works incorporated into the package aim to:

- Improve walking and cycling safety and connectivity in the study area, encouraging more walking and cycling, and adding value to nearby footpaths, shared paths and cycleways facilities already (or soon to be) constructed by Council
- Reduce motor vehicle speeds and volumes on local roads by discouraging through-traffic using local roads, especially in off-peak periods.
- Maintain vehicle access for local residents and businesses in the study area.

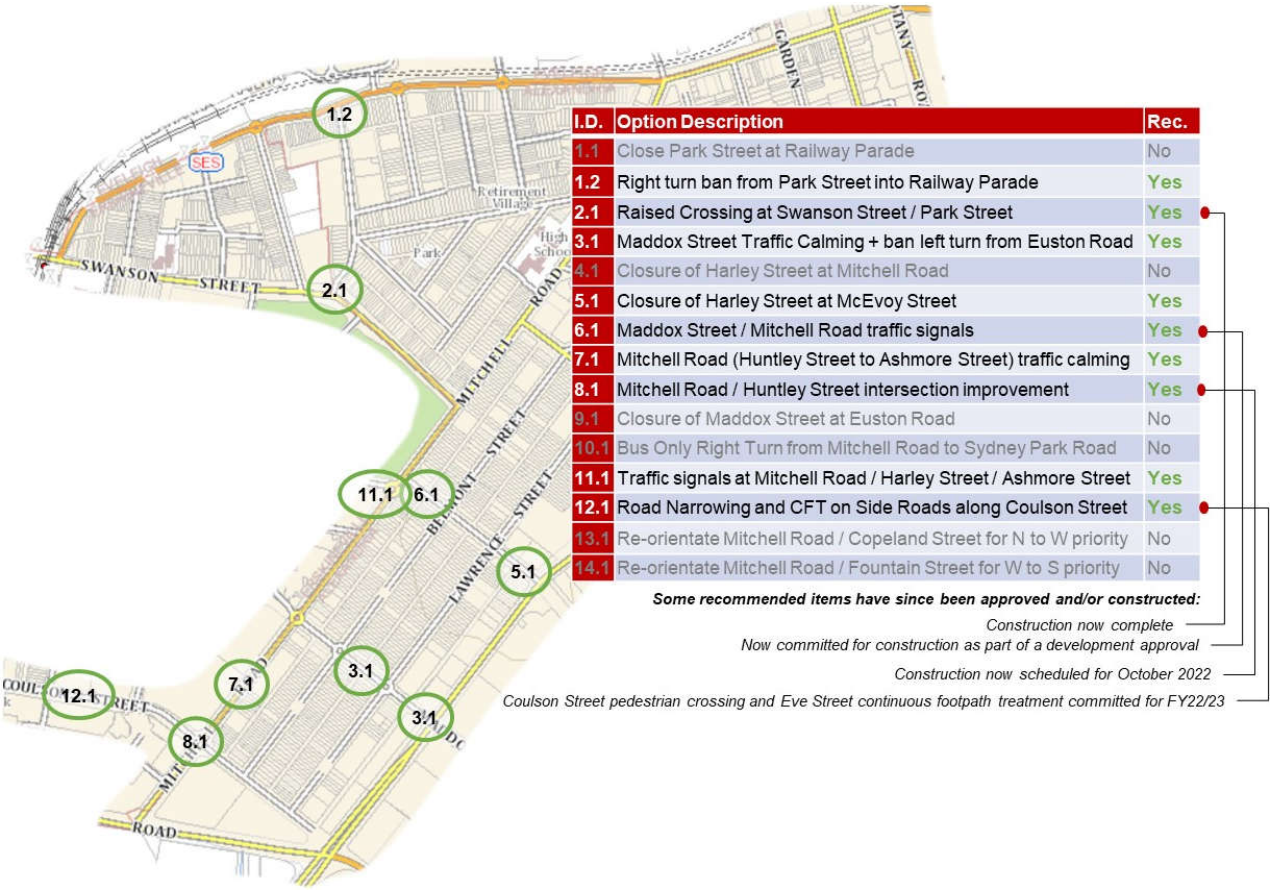


Figure 2.1: Recommended Works Package

A network traffic model was used to assess the recommended works package compared to a 'Do Nothing' case. This assessment found:

- On the entire study area road network that was assessed, results in a negligible change in peak period delays to traffic in the morning and afternoon peak periods
- On local roads:
  - Reduces the volume of non-local traffic, including trucks, in periods outside of commuter traffic peaks
  - Reduces the speed of all traffic in peak periods, and reduce delays and improve safety for walking and cycling

Overall, the recommended works package provides significant local benefits to walking, cycling, public transport and street amenity and without any meaningful changes to peak period traffic congestion on local roads (controlled by City of Sydney) or major roads (controlled by NSW Government).

The study also recommends that where speed limits in the study area are greater than 40 km/h they be investigated for a reduction to 40 km/h.

3. CURRENT SITUATION

A detailed analysis of the existing traffic and transport conditions within the study area was completed and it found:

- Traffic volumes and patterns:
  - As part of the WestConnex project, TfNSW introduced traffic signals at the Euston Road / Sydney Park Road intersection. These works removed the ability to turn right from Euston Road into Sydney Park Road. Some of this traffic now makes this connection via roads within Alexandria
  - Traffic surveys reveal that just over half of the traffic in the study area in peak periods is locally generated. Local traffic does not necessarily refer to traffic from the same street and means traffic to/from the suburbs of Alexandria and Erskineville.
- Public transport:
  - The study area is well serviced by public transport, with frequent bus services and stops along key roads such as McEvoy Street–Euston Road and along Mitchell Road; as well as two train stations within 850m of the study area
  - Bus stops on Botany Road, Fountain Street and McEvoy Street show the highest movements, aligned with the location of key routes in the study area and most likely due to residential unit densities on Lawrence Street and Lawrence Lane
- Walking and cycling:
  - There are two existing zebra crossings on Mitchell Road at Harley Street and at Maddox Street which require traffic to stop when pedestrians use them
  - Cycling on the recently opened, separated off-road cycleway along Railway Parade is increasing steadily
  - There is a mix of on-road cycling lanes and off-road shared paths throughout the study area and Council is planning to introduce more cycling lanes and shared paths on Ashmore Street and on Harley Street.
- Traffic and transport safety:
  - In the five-year period ending December 2019, a total of 186 crashes were reported within the study area. This represents a little over 37 crashes per year. One (1) was a fatality, 140 crashes resulted in injury and 45 crashes involved property damage only. The 186 crashes involved 18 pedestrians and 26 cyclists. The yearly crash statistics show a downward trend with a sharp decline in 2019
  - Vehicle collisions with people walking are scattered across the study area but with a relatively high concentration on the section of McEvoy Street between Botany Road and Foundation Street
  - A safety review of the section of Mitchell Road between Harley Street and Maddox Street identified a number of instances where people walking and cycling are placed at risk of being hit by vehicles due to a wide roadway, sightlines obscured by parked vehicles and car doors opening into cyclists. Examples are shown in Figure 3.1.

Figure 3.1: Safety Issues Due to the Road Environment (Mitchell Road, Harley to Maddox)

4. Options and Evaluation Process

Options

In addition to the *committed or recently constructed works* identified in Figure 1.2, Council identified fifteen (15) additional *proposed options* to evaluate, as presented in Figure 4.1. Further details of the *proposed options* are provided in Sections 5 and 6. The study grouped options into two scenarios and used a traffic model to inform an assessment of the impacts of each scenario on overall traffic flows:

- **Scenario A**: All *committed or recently constructed works* (as per Figure 1.2) plus *proposed options* that (mostly) use traffic management to discourage through traffic using residential streets. "Traffic management" includes traffic calming, some turn bans and traffic signals on local (Council) roads
- **Scenario B**: All *committed works or recently constructed works* (as per Figure 1.2) plus *proposed options* that (mostly) use traffic restrictions to discourage through traffic using residential streets. "Traffic restrictions" include street closures and turn bans.

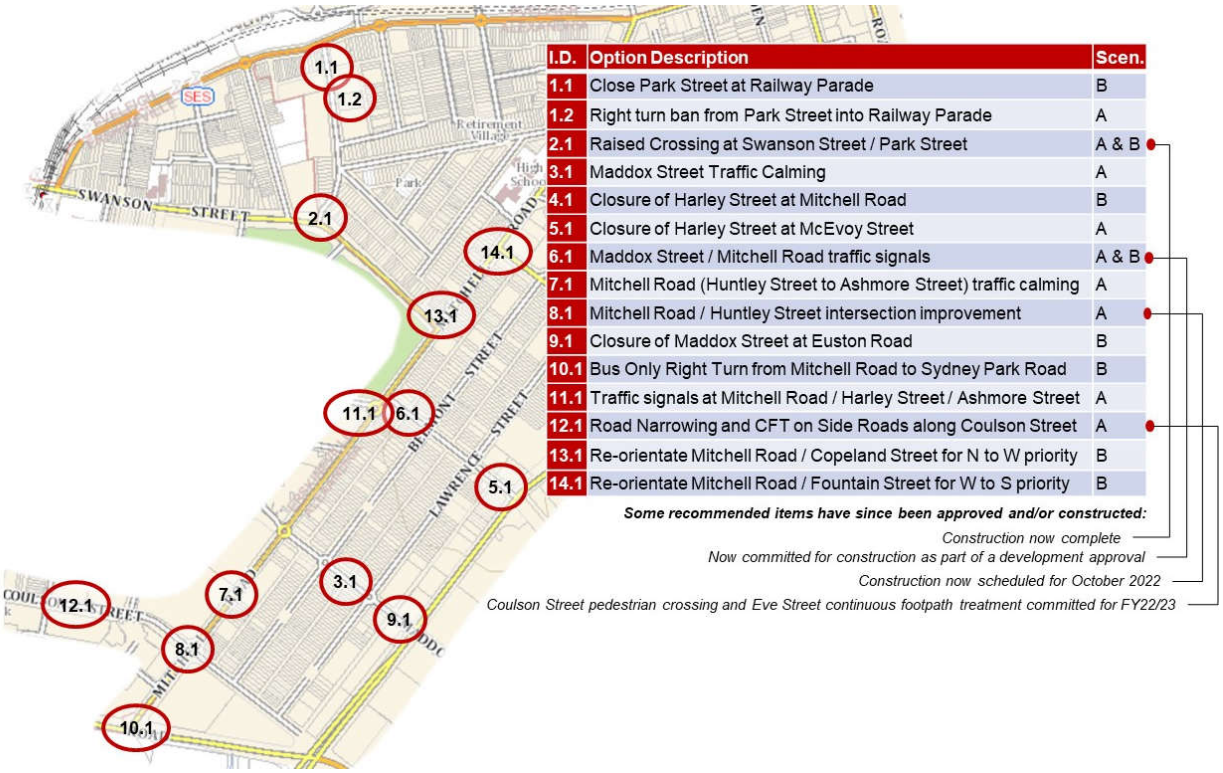


Figure 4.1: Options evaluated in each Scenario

Key Principles for Evaluating Scenarios and Options

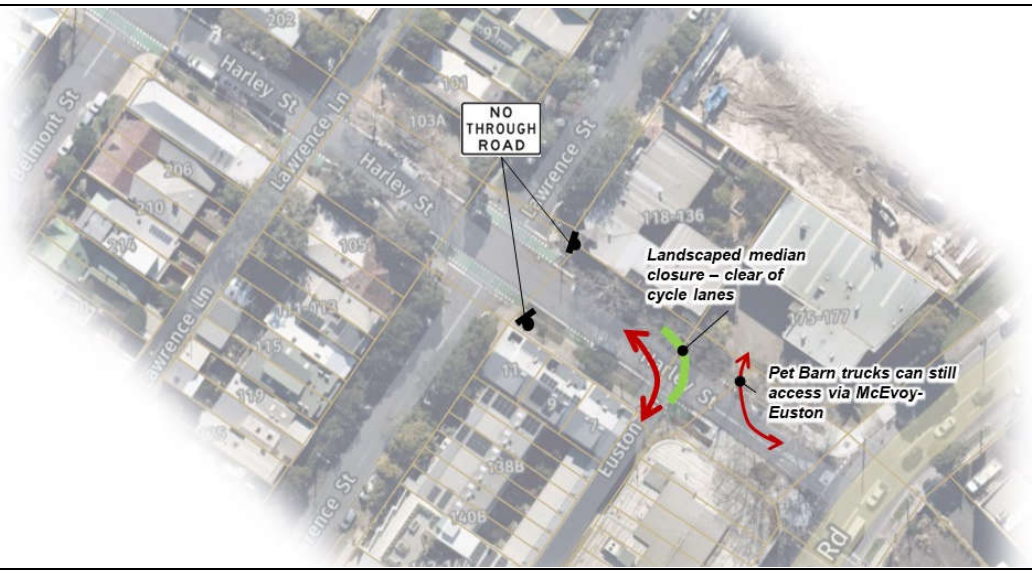
The study evaluated scenarios and options using traffic modelling outputs and the following principles:

- Maintain vehicle access to / from destinations in the study area
- Tolerate through traffic during weekday peak periods to avoid impacting local and state road networks but actively deter through traffic outside weekday peak periods.
- Ensure traffic speeds on all streets in the study area are managed to 40km/h or less (depending on the situation)
- Recognise that local road closures and turn bans can have consequential impacts on other local roads and on local residents and should be minimised where the impacts outweigh the benefits
- Prioritise safety for people walking and cycling over traffic speeds and street parking where conflicts exist
- Consider that diversion of traffic onto major roads could result in increases in traffic congestion on the broader road network (state and local).

5. OPTIONS TO INCLUDE IN THE WORKS PACKAGE

This section describes the options that the study recommends for inclusion in the works package, their reasons for inclusion, their impacts and benefits and further considerations in their design.

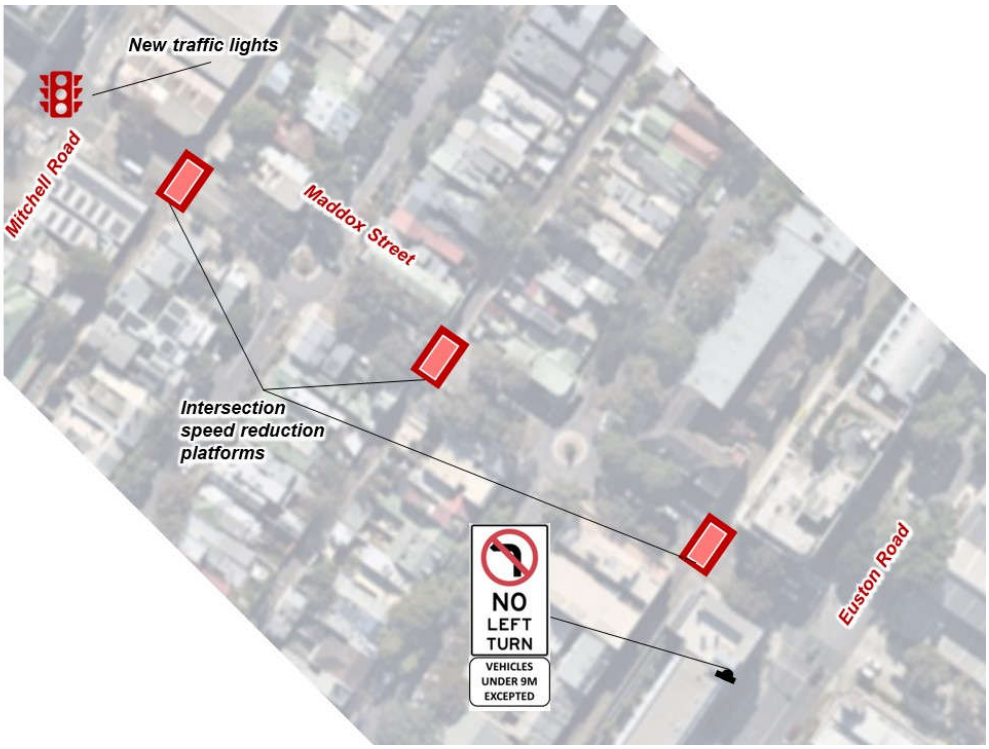
Harley Street

Recommendation:	Close Harley Street west of McEvoy Street (I.D. 5.1)
Reasoning:	Restricts through traffic from Harley Street which is a residential street. It is already left in/out at McEvoy Street. There are plenty of other routes available to replace the left turn into Harley Street from McEvoy Street and the right turn out of Harley Street into McEvoy Street.
Impacts and benefits:	In the AM peak, this recommendation would result in minor increases in traffic along Mitchell Road and along Fountain Street (approx. 8% or 49 veh/hr). It will result in small reductions in traffic along Euston Road (vehicles diverted to Mitchell Road) and in Harley Street
Design considerations:	Potentially close it just east of Euston Lane to still allow trucks to access the Pet Barn loading area via Euston Road – McEvoy Street.
Concept layout (indicative):	

Mitchell/Harley/Ashmore and Mitchell/Maddox

Recommendation:	Signalise the intersections of and Mitchell/Maddox and Mitchell/Harley/Ashmore (I.D. 6.1 and 11.1)
Reasoning:	This recommendation supports the key principle of prioritising the safety of people walking and cycling. In peak periods, the proposed traffic signals would better balance vehicle queue lengths compared to the existing roundabouts and give different road users and movements 'a fair go' at these intersections. In off peak periods, the signals would 'disrupt' the ease of through traffic movements and discourage them from using Mitchell Road where a reasonable alternative is available for the trip. The signals would also create platoons of vehicles which will provide more gaps between them for people to cross Mitchell road either side of the traffic signals.
Impacts and benefits:	In the AM peak, this recommendation would result in an approximately 2.5 minute saving in northbound vehicle travel times on Mitchell Road and reduce bus travel times and improve the reliability of buses using Mitchell Road. In the PM peak, the traffic signals will have a minimal change to southbound vehicle travel times as queues are not as long as in the AM peak northbound.
Design considerations:	The signalisation of Mitchell/Harley/Ashmore is expected to be constructed by 2026 as part of a local development

Maddox Street

Recommendation:	Introduce traffic calming into Maddox Street (*but don't close it at Euston*) (I.D. 3.1) and introduce a no left turn from Euston Road into Maddox Street (new)
Reasoning:	Maddox Street is an important route for people to drive between Euston Road and McEvoy Street to access residences and businesses, particularly in peak periods. The local network needs Maddox Street open with the recommended closure of Harley Street (Item 5.1) otherwise there won't be enough traffic routes for local traffic to enter and exit the local area. The signalisation of Mitchell / Maddox also discourages through traffic to an level which means that Maddox Street does not have to be closed. The proposed traffic calming measures will reduce vehicle speeds and deter 'rat-running', particularly by heavy vehicles and especially during peak periods.
Impacts and benefits:	In the PM peak, modelling indicates that this recommendation would reduce traffic on Maddox Street by approximately 20% or 122 veh/hr. It would have minimal influence on traffic flows along Fountain Street (the nearest parallel route) and would result in a minor increase in traffic along Mitchell Road. It will add a negligible amount of traffic on Euston Road - McEvoy Street in peak periods.
Design considerations:	Traffic flows are already interrupted by two roundabouts on Maddox Street between Mitchell Road and Euston Road . There is an existing speed platform just east of the Maddox/Mitchell intersection which would have to be removed with the signalisation of this intersection. Introducing raised intersection platforms at the intersections of Maddox Street with Euston Lane, with Lawrence Lane and with Belmont Lane would help establish a speed environment closer to 20kph-30kph compared to the current 40kph (approx.) and act to further deter through traffic, particularly trucks.
Other considerations:	To further reduce truck movements, a 'No Left Turn' sign or a 'No left turn – vehicles under 9m excepted' sign could be introduced for the currently-permitted left turn from Euston Road into Maddox Street. This would essentially force these movements to use the alternative route via Sydney Park Road – Mitchell Road to access the local area and the businesses along Mitchell Road.
Concept layout (indicative)	

Mitchell Road

Recommendation:	Introduce traffic calming into Mitchell Road between Huntley Street and Ashmore Street (I.D. 7.1)
Reasoning:	Mitchell Road will continue to play an important role in supporting local access to residential areas and businesses either side of it, as well as providing a minor relief route function in peak periods. The proposed traffic calming will reinforce its residential character, will result in reduced traffic speeds, will discourage off peak traffic from using it for through movements (as faster routes exist) and will improve walking and cycling conditions along and across it.
Impacts and benefits:	Depending on the configuration of the design of the calming devices, this may result in localised losses of on-street parking. Reduced speeds will however provide benefits to cyclists, pedestrians, side street traffic and residents along Mitchell Road, as well as further discourage through traffic, particularly outside of peak periods.
Design considerations:	A design for this item has not yet been prepared. The design should aim to reduce average traffic speeds along this section to below 30kph and where possible, provide marked cycling lanes. Given that Mitchell Road is a bus route, speed reduction platforms are more likely than chicanes or similar lateral path-change treatments due to the inability for buses to pass through these types of calming measures.
Typical cross-section:	

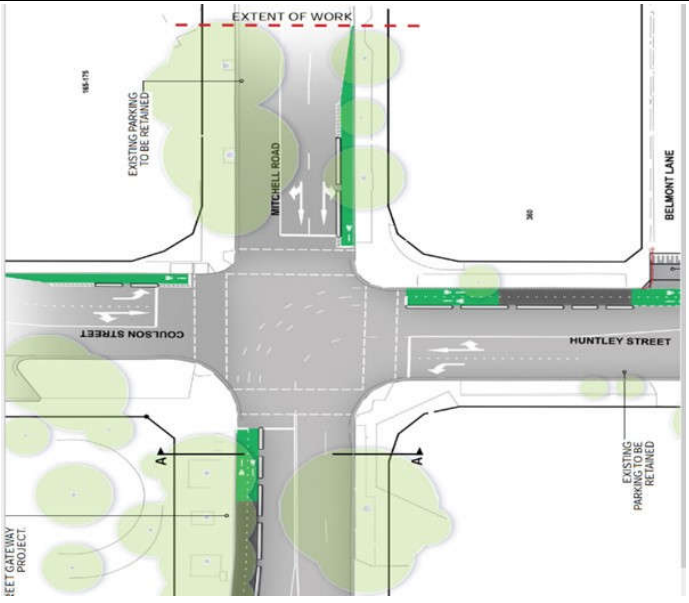
Coulson Street

Recommendation:	Introduce a continuous footpath treatment and road narrowing along Coulson Street between Mitchell Road and Eve Street (I.D. 12.1)
Reasoning:	Coulson Street has evolved into primarily a residential street but still carries reasonably high volumes of non-local traffic, including trucks. The management of vehicle speeds along and turning into / out of Coulson Street will improve conditions for pedestrians and cyclists whilst discouraging the use of this street by through traffic.
Impacts and benefits:	Raised footpath treatments crossing Hadfield Street and Eve Street will improve pedestrian safety and convenience at these locations and reduce the speed of turns into and out of these side streets. Road narrowing through physical measures or line-marking will also reinforce a slower speed environment and better delineate traffic-able areas.
Design considerations:	The design for this item is being progressed in parts with the Eve Street 'Continuous Footpath Treatment' and pedestrian crossing to be constructed by mid-2023.
Example of growing traffic versus pedestrian conflicts:	

Park Street

Recommendation:	Introduce a right turn ban from Park Street into Railway Parade (*i.e. not a full closure*) as Railway Parade is returned to two-way operations (I.D. 1.2)
Reasoning:	The right turn ban restricts the through traffic using Park Street to 'bypass' the Swanson Street / Railway Parade intersection. Local residents can still head east from Park Street via a left turn at Swanson Street. Full closure of Park Street is unnecessary and undesirable for two key reasons: ▪ All 'rat-running' routes using the right turn out, left turn in or left turn out movement would take much longer via Park Street than via Swanston Street and/or Railway Parade. ▪ It could force local residents heading towards Newtown to turn right from Park Road into Swanson Street. Heavy westbound traffic on Swanson Steet in peak periods means there are sometimes long delays to find a gap to turn right in to..
Impacts and benefits:	Restricts through traffic for the most likely 'rat running' movement without significantly impacting local residents' access.
Design considerations:	A design for this item has not yet been prepared. The design would need to resolve how to physically restrict right turns out but still allow right turns into Park Street. A curved / triangular central island to direct all turns out of Park Street to the left may be an option.

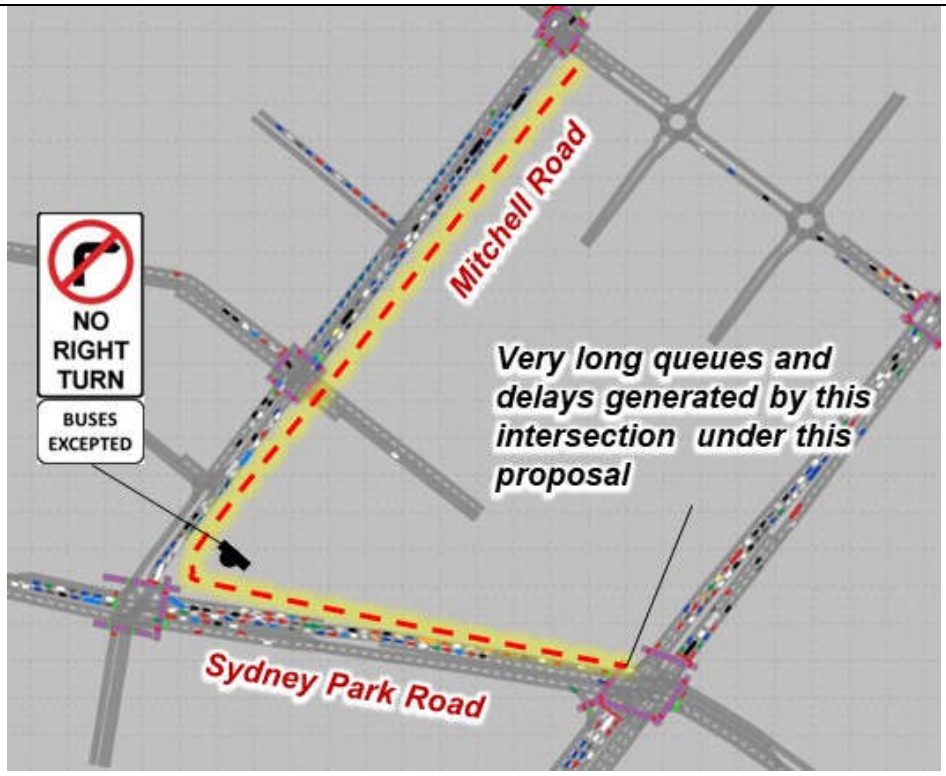
Mitchell Road / Huntley Street

Recommendation:	Upgrade Mitchell Road / Huntley Street / Coulson Street to the Council-proposed configuration (I.D. 8.1)
Reasoning:	The proposed configuration introduces dedicated cycle lanes at the intersection to improve safety for people riding and contributes to a continuous cycleway between of the Huntley Street and Sydney Park Road (proposed) cycleways.
Impacts and benefits:	This item reduces the Mitchell Road approach from the south from two lanes (now) to one lane to allow for the introduction of cycling lanes and to reduce pedestrian crossing distances. Traffic modelling of the proposal shows that this would have no impacts on traffic queues because the only vehicles that use this approach come from either the left turn or the right turn pocket from Sydney Park Road at its intersection with Mitchell Road.
Design considerations:	Council has prepared a design for this upgrade, and construction of it is programmed to commence in October 2022.
Design concept:	

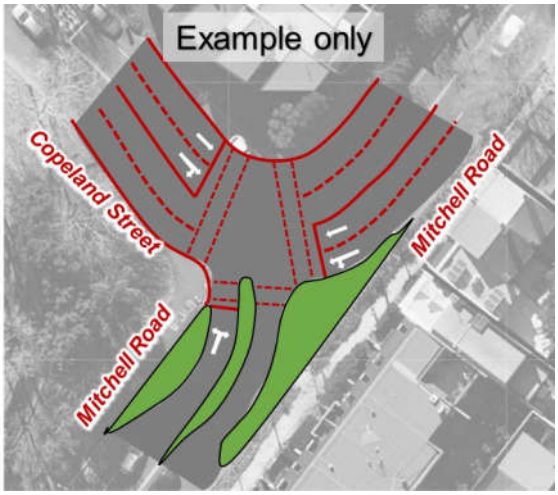
6. OPTIONS NOT INCLUDED IN THE WORKS PACKAGE

This section describes the options that the study does not recommend for inclusion in the works package and why.

Bus Only Right Turn: Mitchell Road into Sydney Park Road

Recommendation:	**Do not restrict the right turn from Mitchell Road into Sydney Park Road to buses only (I.D. 10.1)**
Reasoning:	TfNSW banned the right turn from Euston Road (southbound) into Sydney Park Road (westbound) as part of its changes to their intersection. This has attracted drivers moving south through the study area to rat-run via Mitchell Road and turn right at its intersection with Sydney Park Road. Banning this traffic movement (but allowing buses only) would divert some of this through traffic from Mitchell Road but it would also: ▪ Divert some of this through traffic into other local roads like Coulson Street, Ashmore Street and Copeland Street, which is undesirable ▪ Force some of this through traffic to stay on Euston Road to turn right further south at Campbell Road ▪ Force some local traffic that currently uses Mitchell Road to turn right into Sydney Park Road to instead turn left out of Mitchell Road and then right into Euston Road to take a more circuitous route to turn right further south, say at Campbell Street. Traffic modelling indicated that this recommendation would cause significant delays to vehicles using the road network, particularly at the Euston Road /Sydney Park Road intersection which, according to a local area model would not have sufficient capacity in peak periods to serve the extra movements through it. The modelling indicates that the traffic impacts of this proposal significantly outweigh its benefits and it should only be reconsidered if TfNSW provides a right turn from Euston Road into Sydney Park Road in the future.
Impacts and benefits:	In the afternoon peak, the proposal reduces traffic on Mitchell Road by 30%-40% and southbound traffic on Euston Road increases by over 100 veh/hr (or +11%) and the right turn movement from Sydney Park Road to Euston Road increases by 170 veh/hr (or 41%). The changes creates queues on the Sydney Park Road approach to Euston Road which spill back into Mitchell Road as far as Huntley Street, also affecting bus travel times.
Typical queuing impacts of the proposal:	

Mitchell / Copeland and Mitchell / Fountain

Recommendation:	Do not re-orientate the intersections of Mitchell Road / Copeland Street or Mitchell Road / Fountain Street (I.D. 13.1 and 14.1)
Reasoning:	The 're-orientation' of these intersections involves works to make the movements between Copeland Street and Fountain Street appear to drivers to be the main through movement path at each intersection. An example of the proposal at Mitchell / Copeland is show below. Mitchell Road to the south of Copeland Street and to the north of Fountain Street would be the 'minor' legs of these T intersections under this scheme with the aim of interrupting through traffic movements along Mitchell Road from north of Fountain Street to south of Copeland Street and hence making this a less desirable movement. However, the re-orientation works required at these intersections (essentially to 'twist' them 90 degrees) would require property resumptions which would create significant local impacts and be at a significant capital cost that would outweigh the benefits.
Example of intersection 're-orientation'.	

Mitchell at McEvoy

Recommendation:	Do not close Harley Street at Mitchell Road
Reasoning:	Harley Street has been recommended to be closed at McEvoy Street instead of at Mitchell Road and there is no benefit in closing Harley Street at both ends. Closing Harley Street at Mitchell instead of at McEvoy would allow more traffic into Harley from McEvoy-Euston and would divide the local area into those streets that are accessible east of Mitchell and those that are accessible west of Mitchell. Both of these outcomes are worse for the street amenity and traffic accessibility of local residents.
Preferred location to close Harley Street	

Erskineville and Alexandria Traffic and Transport Study

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21 September 2022

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P4411.002R Erskineville and Alexandria Traffic and Transport Study	A. Ahmed	D. Bitzios	A. Ahmed	19/01/2022	Col Warne cwarne@cityofsydney.nsw.gov.au
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P4411.004R Erskineville and Alexandria Traffic and Transport Study	A. Ahmed	D. Bitzios	A. Ahmed	2/09/2022	Michaela Kemp MKemp@cityofsydney.nsw.gov.au
P4411.005R Erskineville and Alexandria Traffic and Transport Study	A. Ahmed	D. Bitzios	A. Ahmed	21/09/2022	Michaela Kemp MKemp@cityofsydney.nsw.gov.au

EXECUTIVE SUMMARY

Scope and Purpose of this Document

The Council of the City of Sydney (Council) has commissioned Bitzios Consulting to build on its 2017 work and assess future traffic and transport management needs in a widened study area that now extends into part of Erskineville, as shown in **Figure ES1**. Since the recommendations in the 2017 study, Council has constructed a number of traffic management, pedestrian and cycling improvements within the study area with more to come by mid-2023. These works are shown in **Figure ES2.**

Figure ES1: Study Area

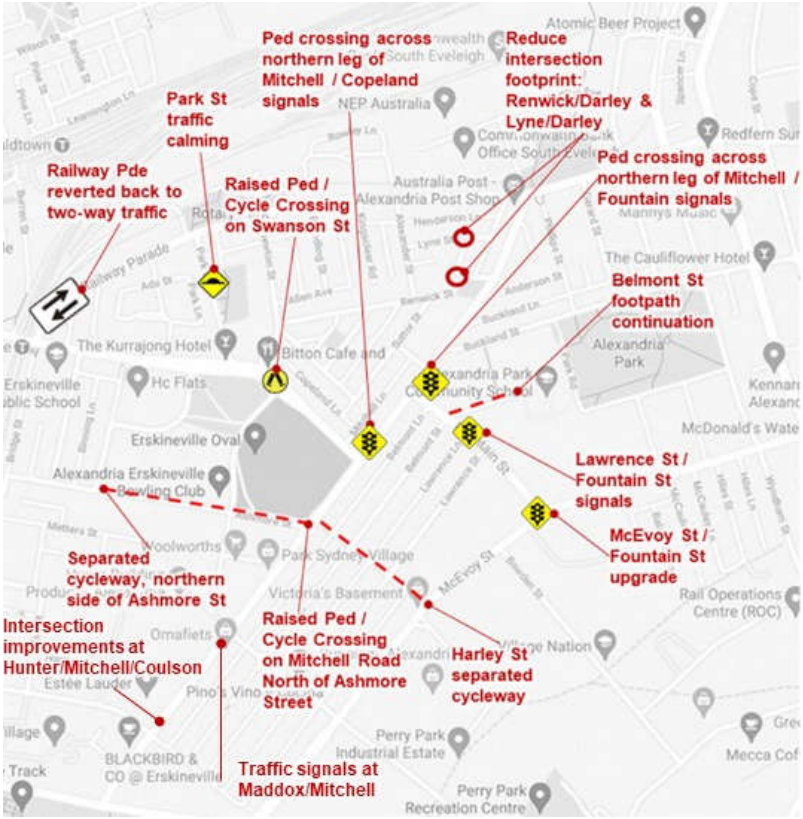


Figure ES2: Recently Constructed or Committed-to-be-Constructed Works

Summary of the Key Outcomes of the Assessment of the Year 2019 Network and Services

This study has undertaken a detailed analysis of the Year 2021 traffic and transport conditions within the study area with key findings including:

- As part of the WestConnex project, TfNSW introduced traffic signals at the Euston Road / Sydney Park Road intersection. These works removed the ability to turn right from Euston Road into Sydney Park Road. Some of this traffic now makes this connection via roads within Alexandria
- Most of the roads, with the exception of Euston Road-McEvoy Street, are one traffic lane in each direction
- The study area includes frequent bus services and multiple stop locations along McEvoy Street-Euston Road and Mitchell Road, as well as two train stations within 850m of the study area
- There are two existing zebra crossings on Mitchell Road at Harley Street and at Maddox Street which require traffic to stop when pedestrians use them
- There is a mix of on-road cycling lanes and off-road shared paths throughout the study area and Council is planning to introduce more cycling lanes and shared paths on Ashmore Street and on Harley Street

To understand current travel patterns, extensive traffic surveys including intersection turning counts, travel time surveys and Origin-to-Destination (OD) surveys were undertaken. The data was analysed to establish the current travel patterns. Key highlights include:

- A comparison of hourly traffic flow data on Mitchell Road shows that the 2021 data is not 'COVID-affected' and is a reasonable source to update the traffic models for the study area
- Traffic flows between 8am and 9am represent the AM peak while the flows between 5pm and 6pm represent the PM peak
- The OD data suggests that in the two peak hours, excluding Euston Road-McEvoy Street, that just over half of the traffic in the study area is generated by the study area meaning that the other half is through traffic
- Bus stops on Botany Road, Fountain Street and McEvoy Street show the highest passenger movements, aligned with the location of key routes in the study area and likely due to residential unit densities on Lawrence Street and Lawrence Lane
- Cycling demands on the recently opened, separated off-road cycleway along Railway Parade have shown an upward trend
- In the five-year period ending December 2019, a total of 186 crashes were reported within the study area. This represents a little over 37 crashes per year. One (1) was a fatality, 140 crashes resulted in injury and 45 crashes involved property damage only. The 186 crashes involved 18 pedestrians and 26 cyclists. The yearly crash statistics show a downward trend with a sharp decline in 2019
- Vehicle collisions with people walking are scattered across the study area but with a relatively high concentration on the section of McEvoy Street between Botany Road and Foundation Street
- A safety review of the section of Mitchell Road between Harley Street and Maddox Street identified a number of instances where people walking and cycling are placed at risk of being hit by vehicles due to a wide roadway, sightlines obscured by parked vehicles and car doors opening into cyclists.

Summary of the Process to Develop, Assess and Recommend Options

Bitzios Consulting, in consultation with Council representatives, developed a set of transport strategy objectives for the study area. They were:

- Maximise accessibility, safety and amenity for walking and cycling, including to/from bus stops
- Limit through traffic on local streets and particularly those streets used for filtering between Mitchell Road and Euston Road-McEvoy Street
- Encourage through traffic to use state roads instead of local roads
- Minimise turn bans and/or closures for other alternatives to restrain through traffic
- Minimise consequential traffic impacts from any proposed traffic management measures.

Once the objectives were agreed, and from what was revealed thought the review of 2019 conditions, a number of new local improvement options were devised with input from Council (some of which was from resident input). The improvement options were then grouped into two scenarios so that they could be evaluated as integrated works packages. The options development, evaluation, selection and finalisation process is summarised in **Figure ES3**.

Figure ES3: Process to Develop, Assess and Recommend Options

Traffic models were created assess the scenarios, as follows:

- **2021 Base Model**: From traffic survey data to replicate 2021 AM/PM peak hour traffic conditions
- **2022 Base Model:** Same as the 2021 Base Model but incudes all of the measures estimated by Council to be constructed by mid-2022.

Options and Scenarios

The options were grouped into the following three types:

- **10 x Committed Works**: Improvement proposals that weren't constructed in 2021 but were likely to be implemented by mid-2023 (as per **Figure ES2**). Each committed works item was identified with a one-digit unique number preceded by a 'C' (e.g. C1, C2 and C3)
- **15 x Transport Management Options**: Improvement proposals this study had identified for assessment. For each option, a two-digit unique identifier was used (e.g. 1.1, 1.2 and 2.1)
- **8 x Road Space Reallocation Options**: Improvement proposals that are likely to have no impact on traffic. Each general option is identified by capital letters (e.g. A, B and C).

The 15 x Transport Management Options are listed in **Table ES1**. It would have taken a long time to model each option individually. Also, some options needed to be modelled together anyway because they influence other options in the study area. Accordingly, in consultation with Council, Bitzios Consulting grouped the long list of options into *Scenarios* for traffic modelling and evaluation purposes and this grouping is shown in **Table ES1**. The scenarios were:

- **Scenario A**: All *committed or recently constructed works* (as per **Figure ES2)** plus *proposed options* that (mostly) use traffic management to discourage through traffic using residential streets. "Traffic management" includes traffic calming, some turn bans and traffic signals on local (Council) roads
- **Scenario B**: All *committed works or recently constructed works* (as per **Figure ES2)** plus *proposed options* that (mostly) use traffic restrictions to discourage through traffic using residential streets. "Traffic restrictions" include street closures and turn bans.

Table ES1: Proposed Options Grouped into Scenarios

Option I.D.	Option description	Scenario A	Scenario B
1.1	Close Park Street at Railway Parade		Yes
1.2	Right turn ban from Park Street into Railway Parade	Yes	
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)	Yes	Yes
3.1	Maddox Street Traffic Calming	Yes	
4.1	Closure of Harley Street at Mitchell Road		Yes
5.1	Closure of Harley Street at McEvoy Street	Yes	
6.1	Maddox Street / Mitchell Road traffic signals	Yes	Yes
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming	Yes	
8.1	Mitchell Road / Huntley Street intersection improvement	Yes	
9.1	Closure of Maddox Street at Euston Road		Yes
10.1	Bus Only Right Turn from Mitchell Road to Sydney Park Road		Yes
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street	Yes	
12.1	Road Narrowing and CFT on Side Roads along Coulson Street	Yes	
13.1	Re-orientate Mitchell Road / Copeland Street for N to W priority (single lanes to / from Mitchell)		Yes
14.1	Re-orientate Mitchell Road / Fountain Street priority (single lanes to / from Mitchell)		Yes

Figure ES3 shows the option locations and identifies their source and if they could be assessed using the traffic model or not. For example, footpath widenings and additional signs and line markings have a minimal effect on traffic flow and are not modelled.

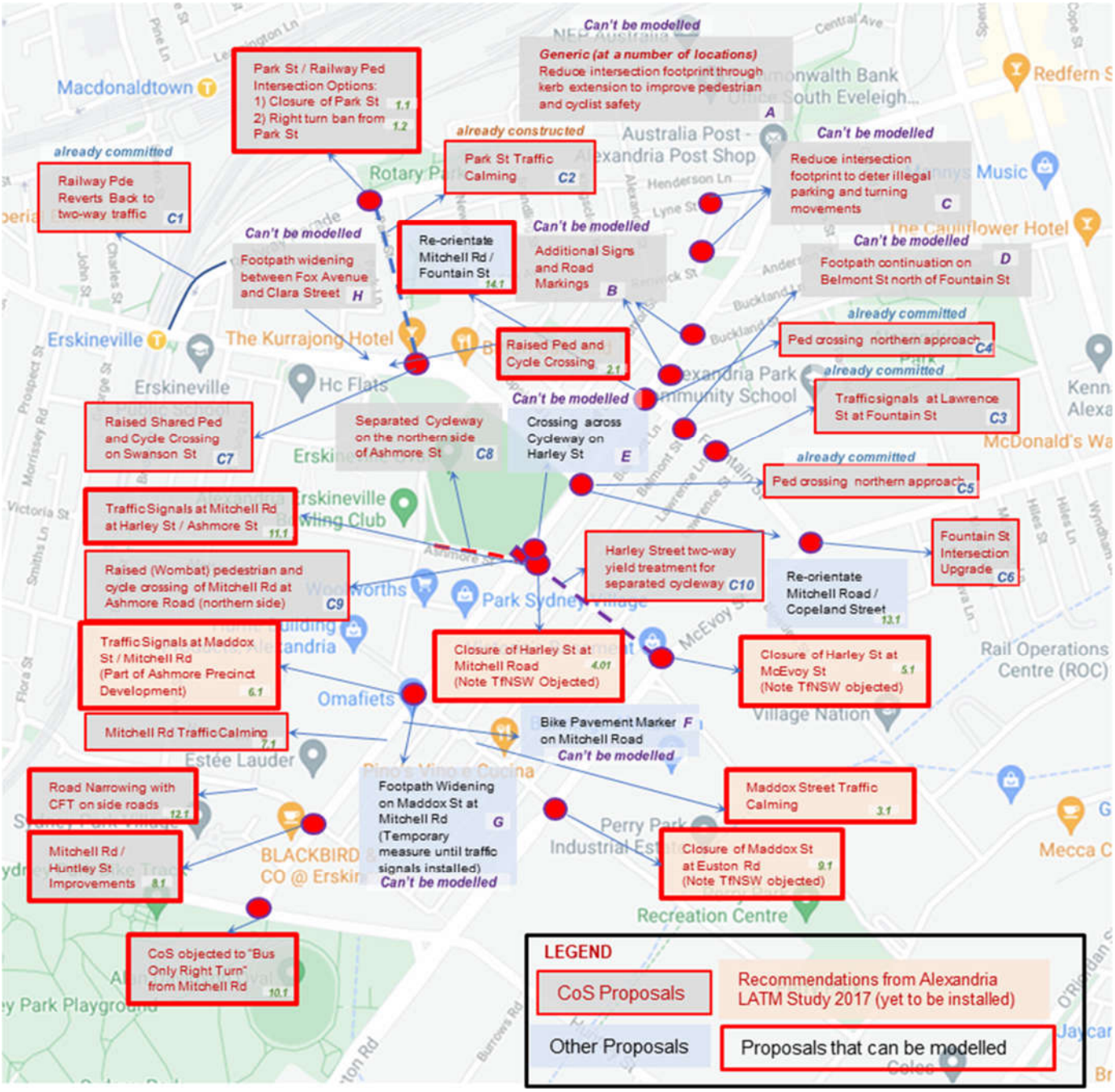


Figure ES3: Options, their source and if they can be modelled or not

The study evaluated scenarios and options using traffic modelling outputs and the following principles:

- Local traffic access: Maintain vehicle access to / from destinations in the study area
- Through traffic: Tolerate through traffic during weekday peak periods to avoid impacting local and state road networks but actively deter through traffic outside weekday peak periods.
- Ensure traffic speeds on all streets in the study area are managed to 40km/h or less (depending on the situation)
- Recognise that local road closures and turn bans can have consequential impacts on other local roads and on local residents and should be minimised where the impacts outweigh the benefits
- Prioritise safety for people walking and cycling over traffic speeds and street parking where conflicts exist
- Consider that diversion of traffic onto major roads could result in increases in traffic congestion on the broader road network (state and local).

Summary of Key Outcomes of the Assessment of Scenario A Compared to the Base Case

Option I.D.	Option inclusions in Scenario A
1.2	Right turn ban from Park Street into Railway Parade
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)
3.1	Maddox Street Traffic Calming
5.1	Closure of Harley Street at McEvoy Street
6.1	Maddox Street / Mitchell Road traffic signals
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures
8.1	Mitchell Road / Huntley Street intersection improvement
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street
12.1	Road Narrowing and CFT on Side Roads along Coulson Street

Network Modelling Outputs: Key Network Statistics

- Average delay and Vehicle Hours Travelled (VHT) are similar
- AM Peak: Scenario A measures would not impact the travel times.
- PM Peak: Scenario A would increase network travel times by 7%.

Network Modelling Outputs: Vehicle Travel Times

- The AM peak northbound travel time on Mitchell Road would reduce by over 2.5 minutes
- The AM peak southbound trave time on Mitchell Road would increase by over one minute
- The AM and PM peak northbound travel times on Euston Road / McEvoy Street would increase by 1.5 minutes.

Network Modelling Outputs: Traffic Volume Changes

- Traffic flows on Park Street would reduce by 59% or 160 veh/hr (AM peak) and 70% or 214 veh/hr (PM peak) due to the Park Street right turn out ban
- AM peak traffic on Fountain Street would increase by 8% or 49 veh/hr due to traffic diverted from the Harley Street closure
- AM peak traffic on Euston Road will reduce by 7% or 181 veh/hr due to the cumulative effects of the options in this scenario
- Traffic on Swanson Street will reduce by 15% or 143 veh/hr (AM Peak) and 28% or 278 veh/hr (PM peak) due to reduced eastbound traffic as a result of the Railway Parade two-way operation.

Network Modelling Outputs: Maintaining Local Vehicle Access While Reducing Through Traffic

- The option for a right turn ban from Park Street into Railway Parade will reduce Park Street traffic by over 70% with minimal local vehicle accessibility impacts
- The option for traffic calming in Maddox Street will reduce its PM peak traffic by 20%
- The closure of Harley Street at McEvoy Street will reduce Harley Street traffic by 70% while maintaining local accessibility via Maddox Street, Fountain Street and Mitchell Road. Due to the combined benefits of the other improvement options in this scenario, the traffic displaced from the closure will not worsen traffic congestion elsewhere.

Network Modelling Outputs: Outcomes for Other Road Users

- Reduced traffic on Park Street, Maddox Street and Harley Street will improve walking and cycling comfort and safety on these streets
- The two controlled crossings on Mitchell Road and the raised crossing on Swanson Street will improve pedestrian and cyclist safety for crossing at these locations
- Reduced traffic speeds along Mitchell Road will improve the safety and comfort for cycling
- Reduced delays at the intersection of Mitchell Road with Maddox Street and with Harley Street will reduce bus travel times and improve bus travel time reliability.

Options to Take Forward

All nine improvement options included in Scenario A are recommended for implementation. A description of each option and their contributions to traffic and transport performance are summarised in **Table ES2**.

Summary of Key Outcomes of the Assessment of Scenario B Compared to the Base Case

Option I.D.	Option description
1.1	Close Park Street at Railway Parade
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)
4.1	Closure of Harley Street at Mitchell Road
6.1	Maddox Street / Mitchell Road traffic signals
9.1	Closure of Maddox Street at Euston Road
10.1	Bus Only Right Turn from Mitchell Road to Sydney Park Road
13.1	Re-orientate Mitchell Road / Copeland Street for N to W priority (single lanes to / from Mitchell)
14.1	Re-orientate Mitchell Road / Fountain Street priority (single lanes to/from Mitchell)

Network Modelling Outputs: Key Network Statistics

- Average delay across the study area would increase on average by 38% or 35 seconds (AM peak) and 71% or 51 seconds (PM peak) due to extra congestion.

Network Modelling Outputs: Vehicle Travel Times

- The southbound travel time on Mitchell Road will increase by 10 minutes in the AM peak and 9 minutes in the PM peak due to excessive congestion at the southern end of Mitchell Road stemming from the Euston Road / Sydney Park Road traffic signals which are heavily congested by the changes
- The AM peak and the PM peak travel times along the Euston Road / McEvoy Street route will increase substantially due to increased congestion resulting from extra traffic diverted from Mitchell Road
- The re-orientation of Mitchell Road's intersections with Copeland Street and with Fountain Street (Options 13.1 and 14.1) introduces substantial delays to Mitchell Road in the PM peak. The re-routing caused by these changes adversely impacts the Sydney Park Road / Euston Road / Huntley Street intersection.

Network Modelling Outputs: Traffic Volume Changes

- Changing the right turn from Mitchell Road into Sydney Park Road to buses only will increase southbound traffic on Euston Road by 11% or 100 veh/hr (PM Peak). The right turn movement from Sydney Park Road into Euston Road will increase by 41% or 170 veh/hr (PM Peak) and the right turn movement from Botany Road (north) to McEvoy Street will increase by 10% or 50 veh/hr (PM Peak)
- The closure of Maddox Street at Euston Road will reduce its traffic by 54% or 327 veh/hr (AM peak) and 61% or 404 veh/hr (PM peak)
- The closure of Harley Street at Mitchell Road will reduce its traffic by 60% or 106 veh/hr (AM peak) and 74% or 232 veh/hr (PM peak).

Network Modelling Outputs: Maintaining Local Vehicle Access While Reducing Through Traffic

- The full closure of Park Street at Railway Parade will limit access for its residents to be via the Copeland Street intersection only, with much longer travel times, particularly to travel west
- The closure of both Maddox Street at Euston Road and Harley Street at Mitchell Road do not substantially reduce local traffic access because a number of other streets are available.

Network Modelling Outputs: Outcomes for Other Road Users

- Reduced traffic on Park Street, Maddox Street and Harley Street will improve pedestrian comfort and safety
- The controlled crossings at Maddox Street and at Mitchell Road and raised crossing on Swanson Street will improve pedestrian and cyclist safety
- Much longer delays along Mitchell Road will impact bus travel times and reduce bus travel time reliability.

Options to Take Forward

The eight options considered as part of Scenario B and their evaluation outcomes are summarised in ***Table ES2***. Options 2.1 and 6.1 have been recommended for implementation. The restriction of right turns from Mitchell Road to Sydney Park Road to bus only is the dominant influence on the modelled performance of the local network in Scenario B. Without upgrades to the Sydney Park Road / Euston Road intersection, the modelling outputs suggest that its impacts into the local network are substantial. This option is not recommended to proceed.

Summary of the Options Evaluation Recommendations

Table ES2 summarises the evaluation of each option item within each Scenario

Table ES2: Individual Options - Evaluation Summary

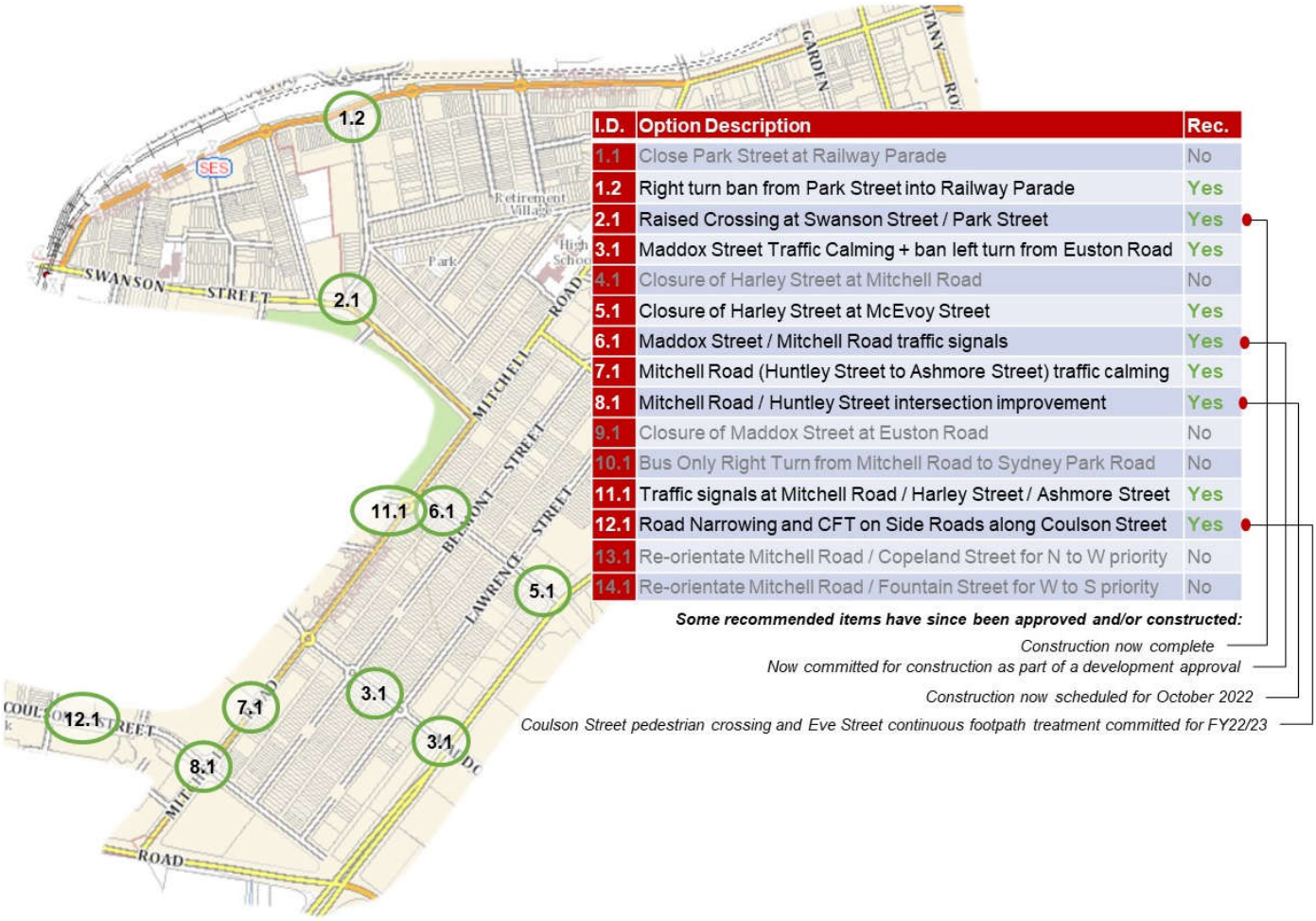
ID	Location	Option	Proceed?	Why/ Why Not?
1.1	Park Street / Railway Parade	Close Park Street at Railway Parade	No	Reduces traffic flows on Park Street significantly but significantly impacts resident access, particularly to travel west. Rat running in Park Street is a northbound issue - there is no logical travel pattern to rat run southbound for.
1.2	Park Street / Railway Parade	Right turn ban from Park Street into Railway Parade	**Yes**	Reduces traffic flows on Park Street significantly by 70% or 214 veh/hr in the PM peak. No noticeable impacts of the traffic diverted elsewhere.
2.1	Swanson Street / Park Street	Raised Ped/ Cycle Crossing (Swanson Street / Park Street)	**Yes**	Improves active transport safety with practically no impacts on traffic.
3.1[1]	Maddox Street	Maddox Street Traffic Calming Scheme	**Yes**	Reduces PM peak traffic flows by 20% or 122 veh/hr, improving walking and cycling conditions and street amenity. Most of diverted traffic shifts to Euston Road-McEvoy Street.
4.1	Mitchell Road /Harley Street	Closure of Harley Street at Mitchell Road	No	Reduces traffic on Harley Street and improves the safety of walking and cycling along this street but reduces traffic access by locals. Closure at McEvoy Street is preferred because it maintains traffic access from Mitchell Road, a lower order (local) road.
5.1	McEvoy Street / Harley Street	Closure of Harley Street at McEvoy Street	**Yes**	Reduces traffic on Harley Street by 70%. With no through traffic, walking and cycling safety and street amenity are improved. Does not generate excessive traffic diversion impacts elsewhere.
6.1	Maddox Street / Mitchell Street	Maddox Street / Mitchell Road traffic signals	**Yes**	Better 'equalises' delays and queues currently experienced at the roundabout and reduces overall delays and queues too. Pedestrians and cyclists have a safer signalised crossing. Supports passive traffic calming on Mitchell Road by how the signal times are set to discourage through traffic.
7.1	Mitchell Road	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures	**Yes**	Reduces traffic speeds making it safer for parking manoeuvres, for cyclists and for pedestrians cross mid-block. Supports the broader intent of reducing through traffic usage of Mitchell Road.
8.1	Mitchell Road / Huntley Street	Mitchell Road / Huntley Street intersection narrowing	**Yes**	No significant impacts on intersection capacity. Improves pedestrian and cyclist safety by reducing the length of crossing conflict with vehicles.
9.1[1]	Euston Road / Maddox Street	Closure of Maddox Street at Euston Road	No	Substantially reduces traffic on Maddox Street (60%) but the displaced traffic significantly impacts the wider road network, particularly if Item 5.1 is implemented.
10.1	Sydney Park Road / Mitchell Road	Right Turn from Mitchell Road to Sydney Park Road as Bus Only	No	Reduces traffic on Mitchell Road by 30%-40% in peak hours but diverts and focusses this traffic on the Euston Road / Sydney Park Road intersection, pushing it to its capacity and propagating a queue back up Sydney Park Road and then well into Mitchell Road. Should only be contemplated if a right turn is provided by TfNSW from Euston Road into Sydney Park Road.
11.1	Mitchell Rd / Harley Street / Ashmore St	Traffic signals at Mitchell Rd / Harley Street / Ashmore St	**Yes**	Reduces intersection delays and queues at this complex set of staggered intersections. Clarifies movement priorities too. Signal-controlled pedestrian/cyclist crossing facilities improves safety for these users. Supports the broader intent of reducing through traffic usage of Mitchell Road.
12.1	Coulson Street	Road Narrowing and Continuous Footpath Treatment at side road intersections along Coulson Street	**Yes**	Reduces traffic speeds and improves walking and cycling safety without any significant consequential impacts.
13.1	Mitchell Road / Copeland Street	Re-orientate Mitchell Road / Copeland Street for N to W priority	No	Mitchell Road still attracts a large volume of turn movements and too large an intersection would be required to make this work without very long queues.
14.1	Mitchell Road / Fountain Street	Re-orientate Mitchell Road / Fountain Street priority	No	Mitchell Road still attracts a large volume of turn movements and too large an intersection would be required to make this work without very long queues.

[1] *Following the scenario evaluation, and in consultation with Council, added to Item 3.1 was the banning the left turn from Euston Road into Maddox Street. Traffic making this left turn movement can instead be made diverted via Sydney Park Road and Mitchell Road to reach the same destinations.*

Summary of Works Recommended for Council to Implement

The recommended works package is summarised in **Figure ES4.** Together, the works incorporated into the package aim to:

- Improve walking and cycling safety and connectivity in the study area, encouraging more walking and cycling, and adding value to nearby footpaths, shared paths and cycleways facilities already (or soon to be) constructed by Council
- Reduce motor vehicle speeds and volumes on local roads by discouraging through-traffic using local roads, especially in off-peak periods.
- Maintain vehicle access for local residents and businesses in the study area.



I.D.	Option Description	Rec.
1.1	Close Park Street at Railway Parade	No
1.2	Right turn ban from Park Street into Railway Parade	Yes
2.1	Raised Crossing at Swanson Street / Park Street	Yes
3.1	Maddox Street Traffic Calming + ban left turn from Euston Road	Yes
4.1	Closure of Harley Street at Mitchell Road	No
5.1	Closure of Harley Street at McEvoy Street	Yes
6.1	Maddox Street / Mitchell Road traffic signals	Yes
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming	Yes
8.1	Mitchell Road / Huntley Street intersection improvement	Yes
9.1	Closure of Maddox Street at Euston Road	No
10.1	Bus Only Right Turn from Mitchell Road to Sydney Park Road	No
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street	Yes
12.1	Road Narrowing and CFT on Side Roads along Coulson Street	Yes
13.1	Re-orientate Mitchell Road / Copeland Street for N to W priority	No
14.1	Re-orientate Mitchell Road / Fountain Street for W to S priority	No

Some recommended items have since been approved and/or constructed:

Construction now complete

Now committed for construction as part of a development approval

Construction now scheduled for October 2022

Coulson Street pedestrian crossing and Eve Street continuous footpath treatment committed for FY22/23

Figure ES4: Recommended Works Package

Overall, the recommended works package provides significant local benefits to walking, cycling, public transport and street amenity and without any meaningful changes to peak period traffic congestion on local roads (controlled by City of Sydney) or major roads (controlled by NSW Government).

The recommended projects are listed in priority order and with indicate construction costs in **Table ES3**.

Table ES3: Recommended Projects and Costs (in Priority Order)

ID	Works Item	Indicative Construction Cost (2021 dollars)
5.1	Closure of Harley Street at McEvoy Street	$39,900
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street[4]	$369,700
3.1	Maddox Street Traffic Calming and left turn ban from Euston Road	$78,600
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures	$126,100
6.1	Maddox Street / Mitchell Road traffic signals[3]	-
12.1	Road narrowing and CFT on side roads intersecting Coulson Street[5]	$108,600
1.2	Right turn ban from Park Street into Railway Parade[1]	$15,900
2.1	Raised pedestrian / cyclist crossing at Swanson Street / Park Street[2]	-
8.1	Mitchell Road / Huntley Street intersection improvement[4]	-
	Total Indicative Cost to Council:	**$738,800**

[1] Low-Cost item for a specific residential catchment. May be suitable for early implementation
[2] Construction now complete
[3] Committed for construction by 2026 as part of a nearby development approval
[4] Construction scheduled for October 2022
[5] Coulson Street pedestrian crossing and Eve Street continuous footpath treatment committed for FY22/23

Recommendations for Minor Works items and further investigations are listed in **Table ES4.**

Table ES4: Recommended Minor Works and Further Investigations (not in priority order)

ID	Road Space Reallocation Options
[A]	Initiate a program of identifying excessively wide intersections in the study area and design and implement treatments to address these issues progressively as funding allows
[B]	Undertake concept design, including community consultation activities to develop a scheme to reduce the trafficable footprint of the Renwick / Dadley and Lyne / Dadley intersections, as funding permits
[C]	Initiate a 'signs and lines' review of Mitchell Road between Fountain Street and Anderson Street, including into its side roads in this section such as Brown Street, Buckland Street and Buckland Lane
[D]	Undertake concept design and develop a scheme to introduce footpath continuation across Belmont Street north of Fountain Street, as funding permits
[E]	Include the N-S cycleway crossing of Harley Street just east of Mitchell Road as part of the project to close Harley Street, should this be approved
[F]	Consider installing Bicycle Awareness Zone (BAZ) pavement markers on Mitchell Road south of Ashmore Street
[G]	In the short term and before the intersection is signalised (pas per item 6.1), implement a pedestrian refuge island in Maddox Street near Mitchell Road
[H]	Widen the footpath on both sides of Copeland Street between Fox Avenue and Clara Street

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1. INTRODUCTION

1.1 Background

In 2017, Bitzios Consulting was commissioned by the council of the City of Sydney (Council) to undertake traffic modelling and option assessments for Local Area Traffic Management (LATM) proposals within Alexandria. This work forecast the potential impacts of the (then) WestConnex St Peters Interchange proposal and assessed 11 traffic management measures to mitigate expected traffic re-routing impacts. The measures that were assessed included: street closures, road narrowing, pedestrian refuge islands and new traffic signals.

The measures were combined into five traffic management 'network options' as follows:

- **Option 1**: the closure of Harley Street to through traffic
- **Option 2**: the closure of Maddox Street to through traffic
- **Option 3**: the combination of Options 1 and 2
- **Option 4**: the closure of Loveridge Street and Brennan Street to through traffic
- **Option 5**: combination of Options 3 and 4.

The assessment identified that Option 5 would provide the best outcomes for reducing traffic volumes on local streets. Option 5 included the closure of Maddox Street, Harley Street, Loveridge Street and Brennan Street. Since the study was completed, Council has closed both Loveridge Street and Brennan Street just north of their intersections with McEvoy Street. Council did not progress with the closures of Maddox Street and Harley Street.

Since 2017, Council has been investigating and implementing new and improved cycleways, active transport crossing facilities and traffic management measures in parts of Alexandria and Erskineville. As part of these ongoing investigations, Council has commissioned Bitzios Consulting to build on its 2017 work and assess a variety of traffic and transport management proposals in a widened study area that extends into part of Erskineville. Figure 1.1 shows the study area boundary from the 2017 study and its extension for this study.

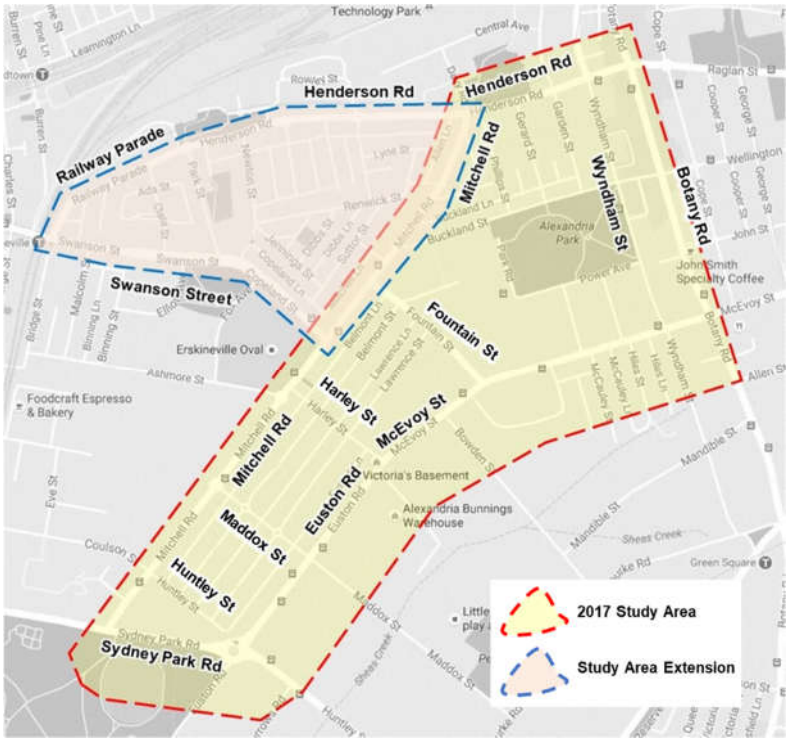


Figure 1.1: Study Area

1.2 Study Process

The study has included four stages, as follows:

- **Stage 1:** Involving the collection of travel pattern, traffic volume, travel time, public transport usage and active transport usage data and assessment of existing traffic and transport issues. The VISSIM traffic microsimulation model created in 2017, was extended, calibrated and validated as part of Stage 1
- **Stage 2:** Developing a 2022 base case traffic model, reflecting all of the recent works completed in the study area, and those proposed for completion before mid-2023. The objectives for this traffic and transport strategy were agreed in Stage 2 as the basis for criteria for option evaluation
- **Stage 3:** Creating a long list of treatment measures (or options), evaluating the long list and organising the shortlisted measures into two integrated network 'scenarios'. These scenarios were then modelled, evaluated and workshopped with Council, with a combination of the selected measures forming a draft preferred scenario which was optimised
- **Stage 4:** Costing and ranking/prioritising the measures within the draft preferred scenario to inform the recommended works program.

The M4-M5 link is expected to open in 2023 and this may introduce a number of traffic volume and traffic pattern changes around the St Peters Interchange. These changes have not been explicitly considered in the modelling and options assessment for this study.

2. CURRENT SITUATION

2.1 Existing Network and Services

A review of the existing (2021) traffic and transport conditions within the study area has been completed. The outcomes described in this section of the report are:

- *As part of the WestConnex project, TfNSW introduced traffic signals at the Euston Road / Sydney Park Road intersection. The intersection works included removal of the right turn movement from Euston Road to Sydney Park Road. This right turn removal has diverted traffic from Euston Road - McEvoy Street onto local streets, including onto Mitchell Road*
- *Most of the roads in the study area, with the exception of Euston Road - McEvoy Street, are one traffic lane in each direction*
- *The study area is well serviced by public transport, with frequent bus services and stop locations along Euston Road - McEvoy Street and along Mitchell Road*
- *The zebra crossings on Mitchell Road at Harley Street and at Maddox Street are heavily used in peak periods*
- *There is a mix of on-road and off-road cycling facilities throughout the study area and Council is planning to introduce more facilities on Ashmore Street, Harley Street and Railway Parade.*

2.1.1 Roads and Streets

Euston Road-McEvoy Street is the primary north-south road through the study area and Sydney Park Road is the primary east-west connection. There are limited alternative and direct east-west routes, and non-local traffic regularly uses routes such as McEvoy Street-Fountain Street-Mitchell Road-Swanson Street, Railway Parade, Ashmore Street, Maddox Street and Harley Street to 'filter' east-west through the Alexandria-Erskineville area.

As part of the WestConnex project, TfNSW upgraded the roundabout intersection of Euston Road and Sydney Park Road to a signalised intersection. As part of the upgrade, TfNSW removed the right turn from Euston Road into Sydney Park Road. This right turn removal aimed to increase north-south capacity at this intersection. Removal of this turn has had a two-fold effect, namely:

- Increasing the volume of 'through traffic' filtering through local streets in Alexandria-Erskineville for east-west movements
- Increasing the volume of right turns from Mitchell Road into Sydney Park Road, meaning an increase in traffic on Mitchell Road generally.

Key roads and intersections in the study area are shown in Figure 2.1. Most roads, with the exception of the Euston Road-McEvoy Street, which is a State-controlled road, are one traffic lane in each direction, with residential property frontages and local street environments which are poorly suited to increasing through traffic movements.

Sources: Six Maps, Nearmap

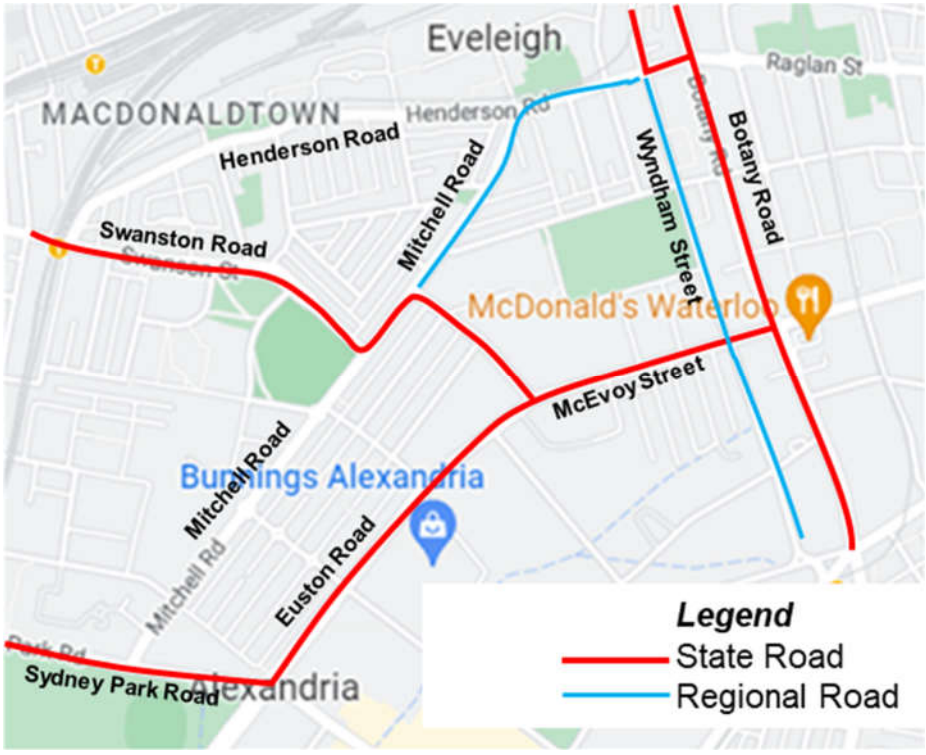
Figure 2.1: Key Roads

2.1.2 Road Hierarchy

The road network within the study area contains a mix of local, regional and state roads. Some of the local and regional roads are used as connections between the eastern suburbs and the inner western suburbs of Sydney, for access to and from the Princes Highway, by visitors to Sydney Park and by workers and residents of the study area. The classification of the roads within the study area are:

- State Roads:
  - Euston Road
  - Fountain Street
  - McEvoy Street
  - Mitchell Road (between Fountain Street and Copeland Street)
  - Henderson Road (between Wyndham Street and Botany Road)
  - Sydney Park Road
- Regional Local Government Roads:
  - Mitchell Road (between Fountain Street and Henderson Road)
  - Henderson Road (between Mitchell Road and Wyndham Street)
  - Wyndham Street.
- Local Roads:
  - all other streets.

The study area's road hierarchy is shown in Figure 2.2.



Note:
Roads not shown in blue or red are local roads
Sydney Park Road is being re-classified as a Local Road

Figure 2.2: Road Hierarchy

2.1.3 Public Transport

The study area is well serviced by public transport. The nearest train stations to the study area are Erskineville Station located at the western boundary of the study area and Green Square Station located approximately 500m east of the study area.

Erskineville Station services the T3 Bankstown Line (Liverpool or Lidcombe to City via Bankstown) with a 5 to 10 minute frequency during morning and afternoon peak periods. Green Square Station services the T8 Airport & South Line (Macarthur to City via Airport) with a 5 to 10 minute frequency during morning and afternoon peak periods. The train routes and station locations are shown in Figure 2.3. The train frequencies are summarised in Table 2.1 and Table 2.2.

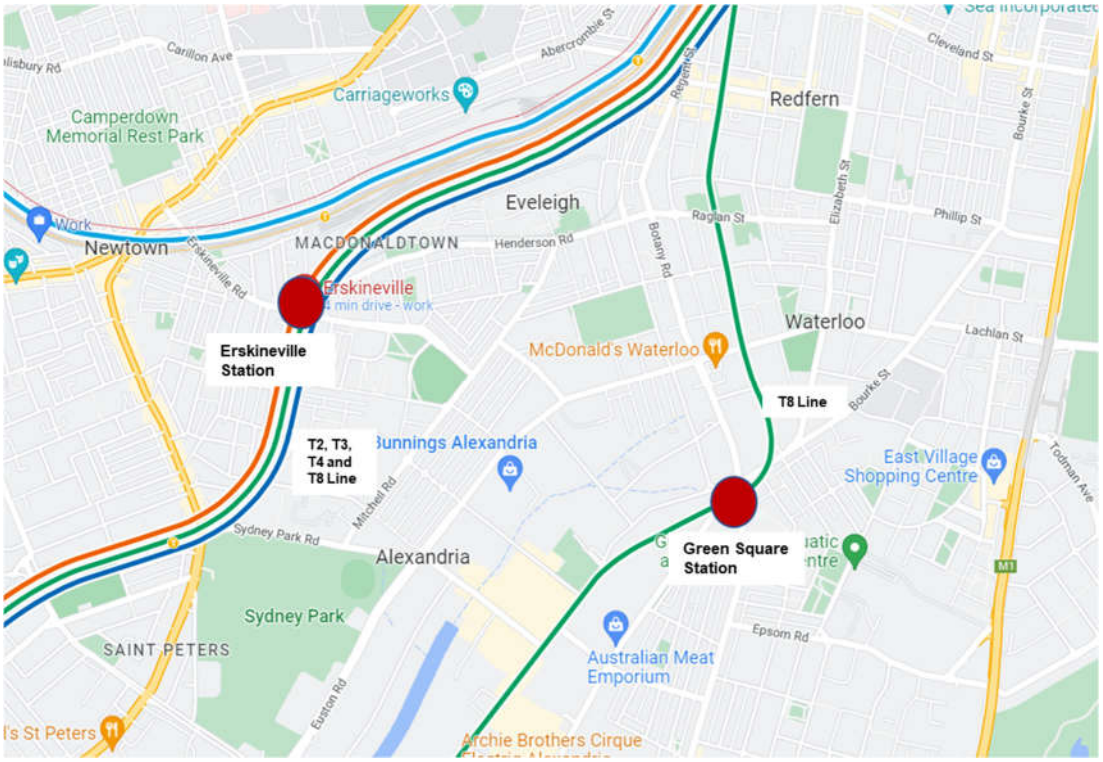


Figure 2.3: Train Routes

Table 2.1: Train Frequency - Weekday

Time Periods	Time Periods	Frequency (minutes)	
		T3 (Erskineville Station)	T8 (Green Square Station)
Morning	6am – 10am	5 to 10	5 to 10
Daytime	10am – 3pm	5 to 10	5 to 10
Afternoon	3pm – 7pm	5 to 10	5 to 10
Night	7pm – 10pm	5 to 15	5 to 10

Table 2.2: Train Frequency - Weekend

Time Periods	Time Periods	Frequency (minutes)	
		T3 (Erskineville Station)	T8 (Green Square Station)
Morning	6am – 10am	15	5 to 10
Daytime	10am – 3pm	15	5 to 10
Afternoon	3pm – 7pm	15	5 to 10
Night	7pm – 10pm	15	5 to 10

A number of bus routes pass through the study area, most of which are destined for Regent Street enroute to the Sydney CBD, as shown in Figure 2.4. There is a good coverage of bus stops in the study area with most stops located along Mitchell Road, Swanson Street and Fountain Street.

The weekday and weekend bus frequencies are summarised in Table 2.3 and Table 2.4. Route 370 (Coogee to Leichhardt) which passes through the study area and services McEvoy Street, Fountain Street and part of Mitchell Road is the most frequent service within the study area. It runs in 10-minute frequency during the morning and afternoon peak periods. Most other bus services operate at a 30-minute frequency.

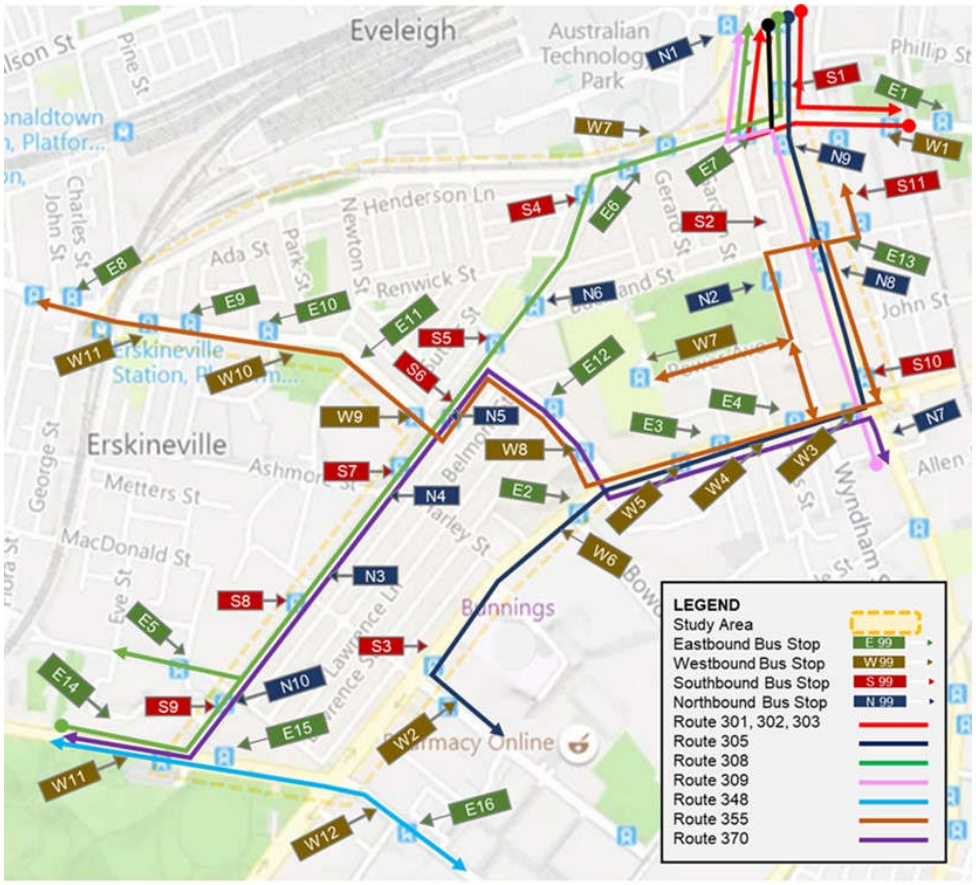


Figure 2.4: Bus Routes

Table 2.3: Bus Frequency - Weekday

Time Periods	Hours	Frequency (minutes) by Service Number								
		301	302	303	305	308	309	348	355	370
Morning	6am – 10am	30	60	30	30	30	10	20	30	10
Daytime	10am – 3pm	30	60	60	n/a	30	10	30	30	15
Afternoon	3pm – 7pm	15	n/a	15	30	15	10	15	30	10
Night	7pm – 10pm	30	n/a	30	n/a	30	15	20	n/a	25

Table 2.4: Bus Frequency - Weekend

Time Periods	Hours	Frequency (minutes) by Service Number								
		301	302	303	305	308	309	348	355	370
Morning	6am – 10am	60	60	30	n/a	30	10	20	30	10
Daytime	10am – 3pm	30	60	60	n/a	30	10	30	30	15
Afternoon	3pm – 7pm	30	60	30	n/a	30	12	30	30	15
Night	7pm – 10pm	30	n/a	30	n/a	60	15	30	n/a	30

2.1.4 Walking

Site visits have identified a high level of pedestrian activity at the following locations:

- Along and across **McEvoy Street** with retail, businesses and restaurants located on both sides of the road
- **Swanson Street** especially near Park Street with pedestrians crossing between Harry Noble Reserve and the residential properties to the north
- **Mitchell Road** between Harley Street and Maddox Street with business and restaurants located on the eastern side. The zebra crossings, one on each side of this section of Mitchell Road, are frequently used by pedestrians
- **Fountain Street** with this area used mostly by students accessing the school precinct to the north.

Pedestrian crossings are provided at all approaches to all signalised intersections within the study area, with the exception of the Fountain Street and Copeland Street 'T' intersections where pedestrian crossings are provided only on one side of Mitchell Road. A number of zebra crossings are located on Mitchell Road, with the ones located near Harley Street and Maddox Road heavily used. The key locations where pedestrian traffic interact with traffic movements and otherwise high pedestrian activity areas are shown in Figure 2.5.

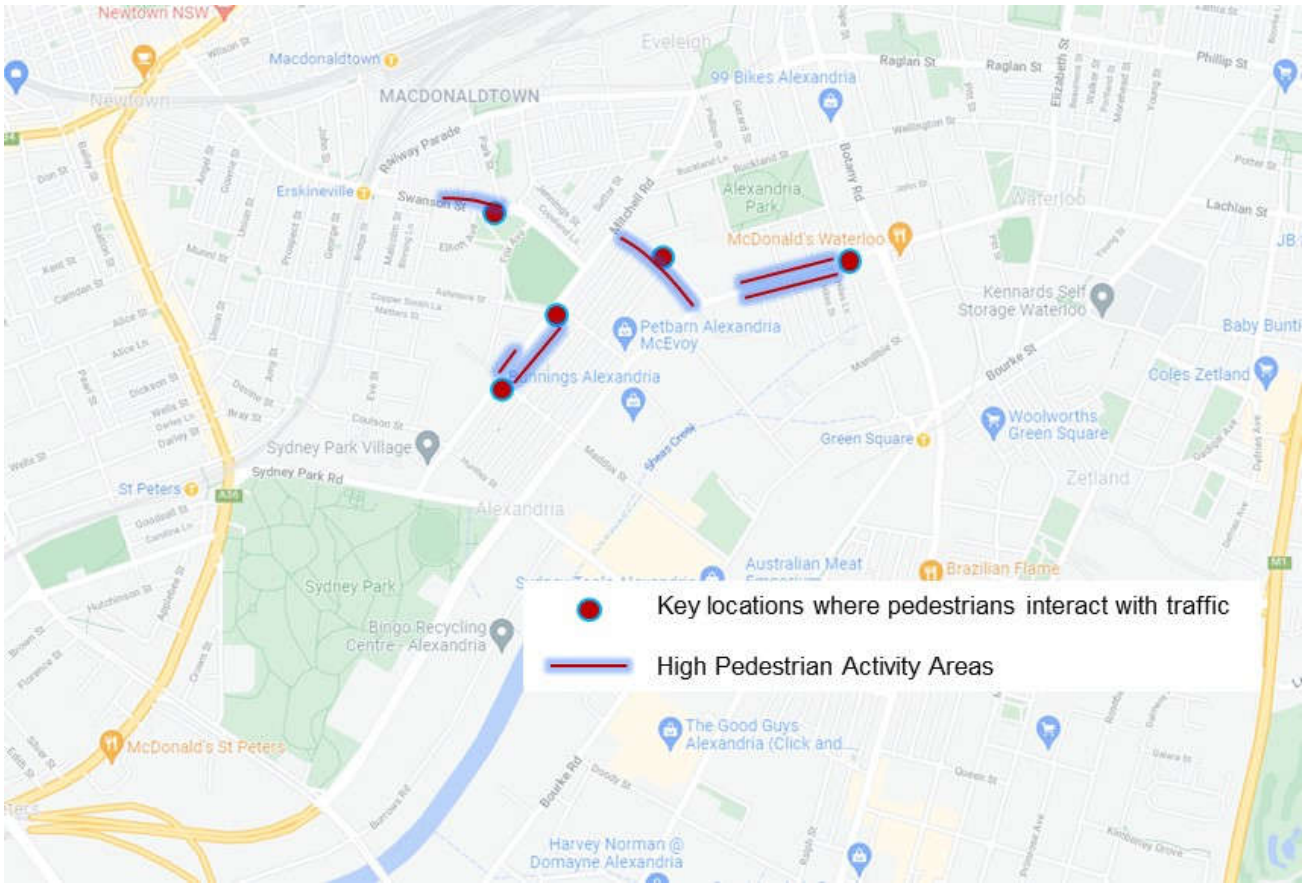
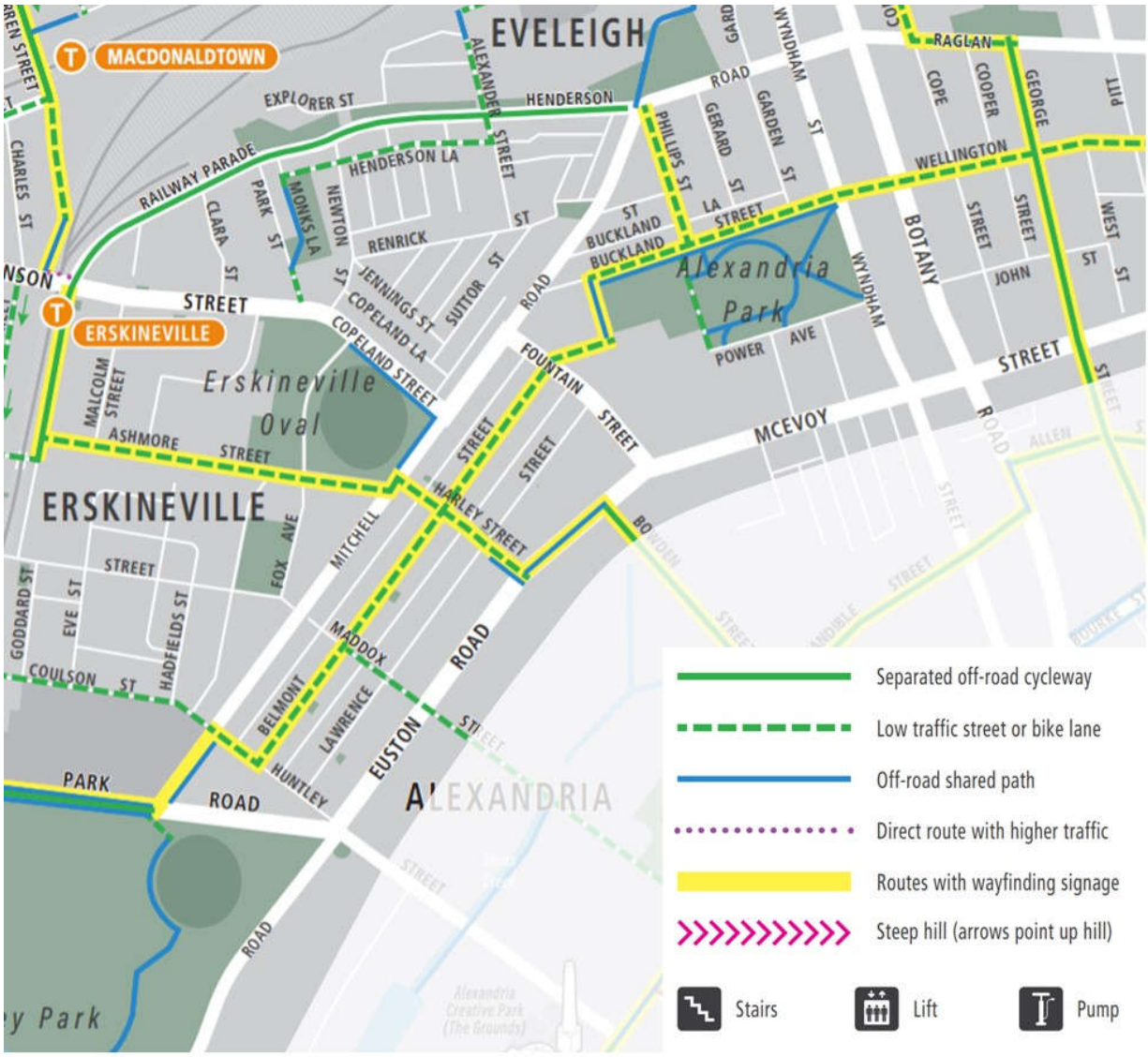


Figure 2.5: High Pedestrian and Traffic Interactions and High Pedestrian Activity Areas

2.1.5 Cycling

As shown in Figure 2.6, as at June 2021, there was a mix of on-road and off road cycling facilities throughout the study area. Council was, at that time, constructing additional cycleway in the study area such as along Railway Parade. Council has also advanced the planning of a number of cycleways and shared paths, including the Ashmore Street / Harley Street separated cycleway as shown in Appendix A.



Source: City of Sydney Cycling Map (3 June 2021)

Figure 2.6: Cycling Routes

2.2 Current Travel Patterns

Intersection turning volume counts, travel time surveys and Origin-to-Destination (OD) surveys were undertaken as part of this study. This data has been analysed and supplemented by site visit observations to understand the current (2021) travel patterns. The key findings were:

- *A comparison of hourly traffic flow data on Mitchell Road suggests that the 2021 survey data is not 'COVID-affected' and is a reasonable source to update the traffic models*
- *The AM peak for traffic movements is 8am to 9am and the PM peak is 5pm to 6pm*
- *The Origin-Destination (OD) data analysis shows that of the of traffic entering or leaving the study area:*
  - *In the AM Peak: 59% either starts or finishes its trip within the study area*
  - *In the PM Peak: 62% either starts or finishes its trip within the study area*
  - *This means that in peak periods about 40% of traffic in the study area (excluding Euston Road-McEvoy Street traffic) is traffic passing through it*
- *Bus stops on Botany Road, Fountain Street and McEvoy Street show the highest usage I the study area aligned with the location of bus routes and near medium density residential densities on Lawrence Street and Lawrence Lane*
- *Cycling demands on the recently opened separated off-road cycleway along Railway Parade have been steadily rising*
- *In the five-year period ending December 2019, a total of 186 crashes were reported within the study area. This represents a little over 37 crashes per year. One (1) was a fatality, 140 crashes resulted in injury and 45 crashes involved property damage only. The 186 crashes involved 18 pedestrians and 26 cyclists. The yearly crash statistics show a downward trend with a sharp decline in 2019*
- *Vehicle collisions with people walking are scattered across the study area but with a relatively high concentration on the section of McEvoy Street between Botany Road and Foundation Street*
- *A safety review of the section of Mitchell Road between Harley Street and Maddox Street identified a number of instances where people walking and cycling are placed at risk of being hit by vehicles due to a wide roadway, sightlines obscured by parked vehicles and car doors opening into cyclists.*

2.2.1 Traffic Surveys

The traffic surveys conducted in April/May 2021 for input into the study included:

- Intersection Turning Counts: At 35 intersections (for matrix estimation / model calibration)
- Travel Time Data: Along 4 x routes (for model validation)
- Tube Counts: At eight locations (primarily used to determine traffic profiles)
- Origin-to-Destination Surveys: At 12 locations (for traffic demands development).

In addition, SCATS data was collated for 19 signalised intersections for signal coding / replication in the traffic model. The intersection count locations are shown in Figure 2.7 and the travel time data routes are shown in Figure 2.8.

Figure 2.7: Intersection Count Locations

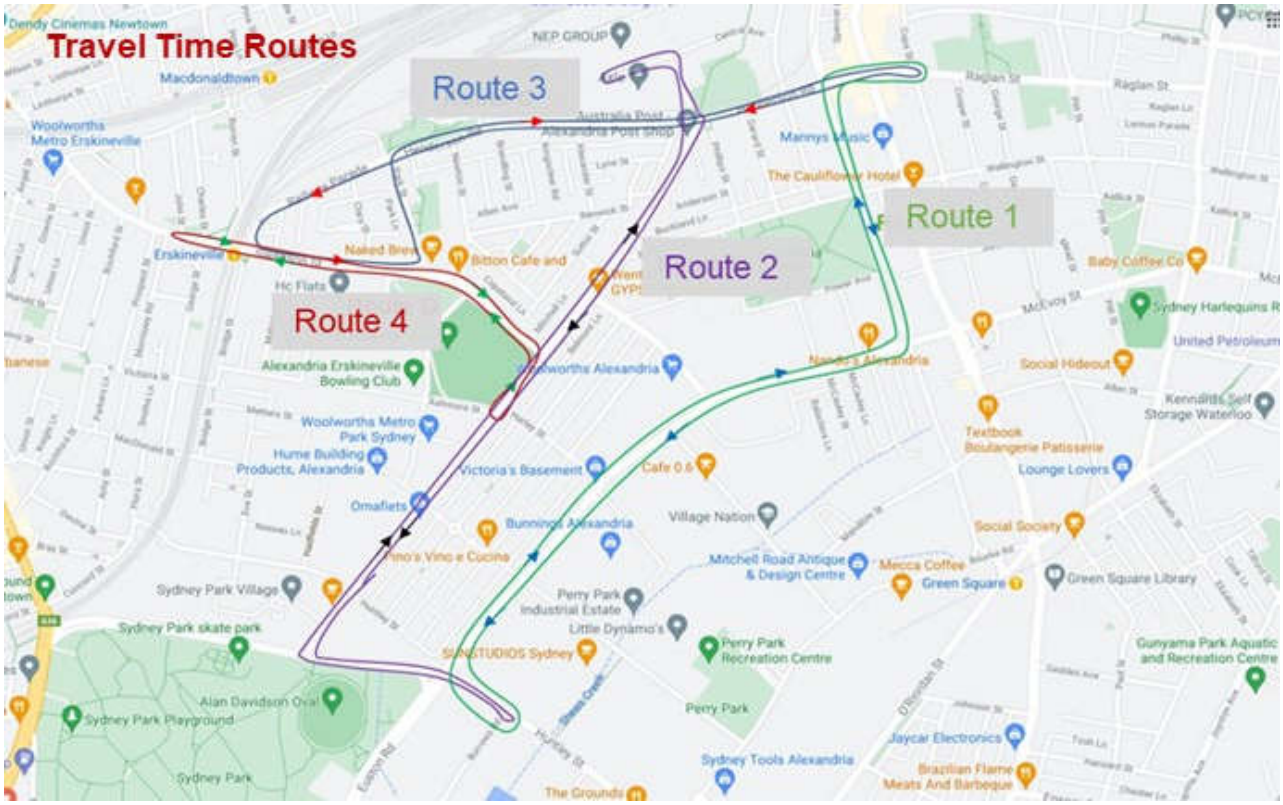


Figure 2.8: Travel Time Routes

Intersection turning volume counts (via camera) were conducted at 35 intersections on the following days and times:

- AM peak: Thursday 29 April 2021, 7:30am-9:30am
- PM peak: Thursday 29 April 2021, 4:30pm-6:30pm
- Weekend Peak: Saturday, 1 May 2021, 10:30am - 12:30pm.

The counts were classified into light vehicles, rigid heavy vehicles, articulated heavy vehicles, cyclists and pedestrians, and recorded in 15-minute intervals.

Road tube-based traffic data was made available by Council. The tube count data was collected between 6 May 2021 and 27 May 2021 at the following locations:

- Park Street, Erskineville - Outside Property 37
- Henderson Road, Alexandra - Outside Property 106-108
- Henderson Road, Alexandra - Outside Property 234
- Mitchell Road, Alexandria - Outside Property 138
- Swanson Street, Erskineville - Outside Property 38
- Maddox Street, Alexandria - Outside Property 296
- Maddox Street, Alexandria - Outside Property 299
- Railway Parade, Erskineville - Outside Property 93.

The tube count locations are shown in Figure 2.9.

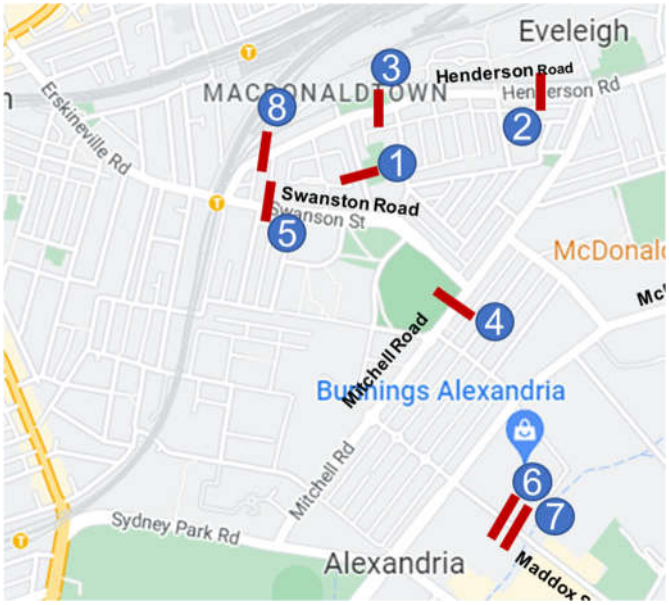


Figure 2.9: Tube Count Locations

The Origin-to-Destination (OD) survey was undertaken at 12 locations for:

- AM peak: Thursday 29 April 2021, 8:00am-9:00am
- PM peak: Thursday 29 April 2021, 5:00pm-6:00pm
- Weekend Peak: Saturday 1 May 2021, 11:00am - 12:00pm.

OD data was used to understand the travel movement patterns within the study area. The data demonstrates the magnitude of through traffic with both their origins and destinations outside the study area and those movements that are locally generated (traffic having their origins or destinations or both within the study area).

2.2.2 Daily Profiles, Peak Periods and COVID19 Influences

The tube count data was compiled and assessed to:

- Determine the study area peak hours (AM, PM) and if the weekend peak was relevant to the assessment
- Understand the potential COVID 19 influences on year 2021 traffic in the study area by comparing it to pre-COVID levels in 2019.

Figure 2.10 identifies the weekday traffic flow profile for Mitchell Road and confirms that the weekday one-hour peak occurs between 8:00am-9:00am and 5:00pm-6:00pm. The weekend (Saturday) peak data was also reviewed. Whilst Saturday traffic models were created, traffic within them is far less than in the weekday peak periods and it was identified that the weekend peak does not present a design case for option evaluation. For this reason, Saturday data is not presented in this report.

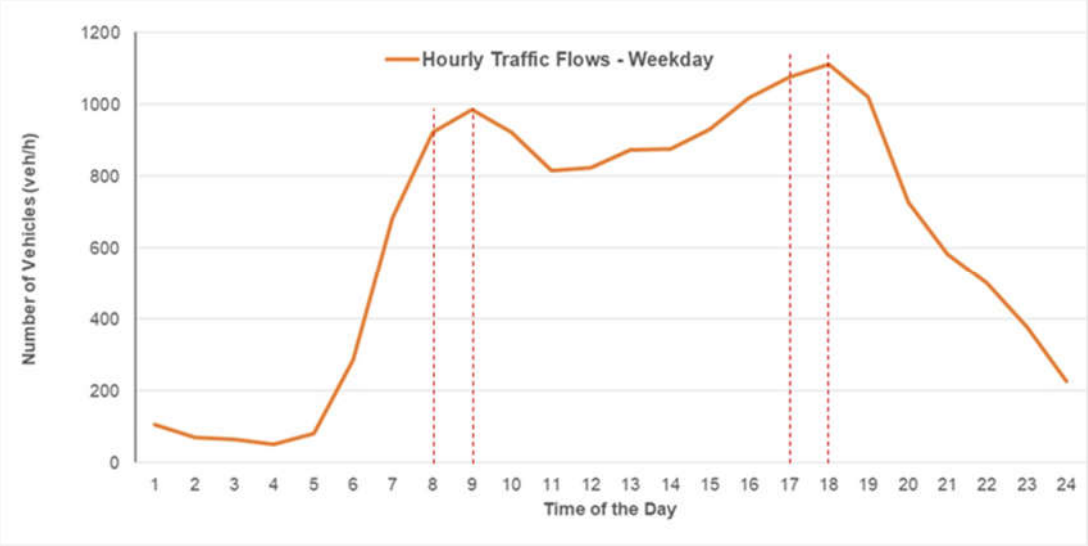


Figure 2.10: Traffic Flow Profile, Mitchell Road between Harley Road and Henderson Road

Figure 2.11 compares 2021 and 2019 data for Mitchell Road between Harley Road and Henderson Road. This figure shows a minor increase in the AM peak between 2019 and 2021 and a minor decrease in the PM peak. Overall, however, the differences are marginal in the context of usual day-to-day variations in traffic. The 2021 data was not 'COVID-affected' and was a reasonable source to update the traffic models for the study area.

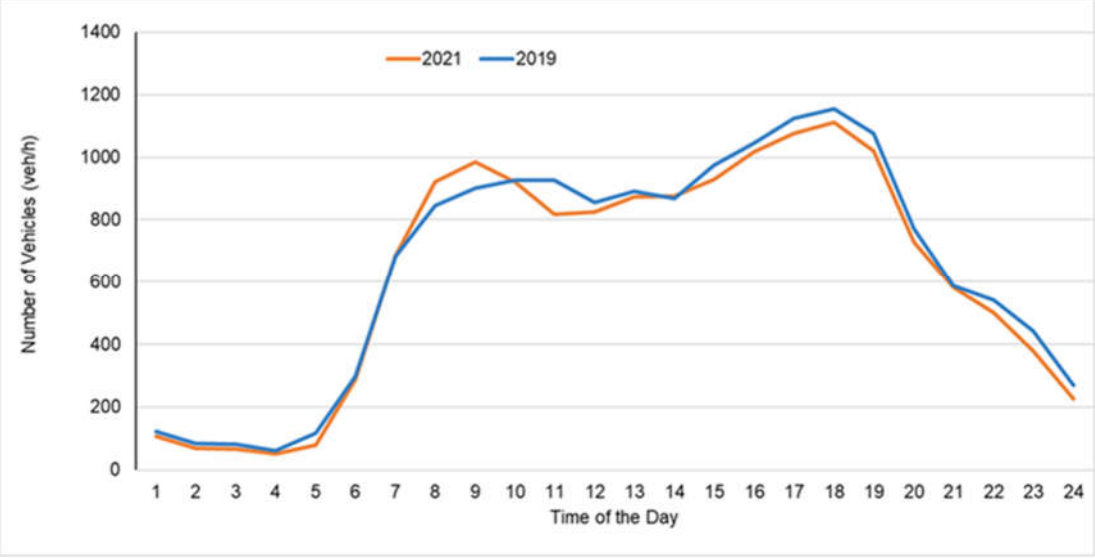


Figure 2.11: Comparison of Traffic Volumes Before and During COVID19 Pandemic

2.2.3 Peak Period Traffic Movement Patterns (OD)

Figure 2.12 shows the locations used for the OD survey. Table 2.5 highlights some of the key 'through' movements in the study area in the peaks as:

- Botany Road southbound (AM and PM)
- Euston Road - McEvoy Street (inbound – AM, outbound - PM)
- Sydney Park Road to Huntley Street (eastbound – AM, westbound-PM)

Table 2.5: Origin Destination Movements

Peak Period	Origin (OD Zone)	Destination (OD Zone)	OD Survey
AM 1 Hr	Euston Road (9)	McEvoy Street (3)	268
	McEvoy Street (3)	Euston Road (9)	120
	Sydney Park Road (10)	McEvoy Street (3)	85
	McEvoy Street (3)	Sydney Park Road (10)	14
	Erskineville Station (11)	Henderson Road North (12)	45
	Henderson Road North (12)	Erskineville Station (11)	5
	Botany Road North (1)	Botany Road South (4)	669
	Botany Road North (1)	Wyndham Street (5)	155
	Botany Road North (1)	McEvoy Street (3)	73
	Sydney Park Road (10)	Huntley Street (8)	299
	Huntley Street (8)	Sydney Park Road (10)	174
PM 1 Hr	Euston Road (9)	McEvoy Street (3)	135
	McEvoy Street (3)	Euston Road (9)	189
	Sydney Park Road (10)	McEvoy Street (3)	86
	McEvoy Street (3)	Sydney Park Road (10)	19
	Erskineville Station (11)	Henderson Road North (12)	12
	Henderson Road North (12)	Erskineville Station (11)	27
	Botany Road North (1)	Botany Road South (4)	649
	Botany Road North (1)	Wyndham Street (5)	103
	Botany Road North (1)	McEvoy Street (3)	67
	Sydney Park Road (10)	Huntley Street (8)	157
	Huntley Street (8)	Sydney Park Road (10)	541

OD Zone refers to the corresponding VISSIM Model Zone

Figure 2.12: Origin – Destination Survey Station Locations

2.2.4 Peak Period Traffic Flows

Peak period traffic flows on roads within the study area are presented in Table 2.6.

Table 2.6: Key Street Peak Hour Traffic Counts

Location	AM (1 hr)		PM (1 hr)		AADT
	WB/NB	EB/SB	WB/NB	EB/SB	
Euston Road	1,224	519	646	1,075	17,320
McEvoy Street	780	777	1,075	730	16,810
Henderson Road	609	836	801	697	14,715
Mitchell Road (north of Fountain Street)	805	365	624	661	12,275
Sydney Park Road	354	763	833	465	12,075
Swanson Street	458	609	472	511	10,250
Copeland Street	344	473	408	392	8,085
Wyndham Street (south of Power Avenue)	623	123	621	230	7,985
Fountain Street	378	251	395	284	6,540
Mitchell Road (south of Copeland Street)	740	542	650	778	13,550
Maddox Street	259	321	234	205	5,095
Harley Street	221	47	128	45	2,205
Railway Parade	149	0	239	0	1940

'State' road or 'Regional' local government road

The key observations include:

- The road sections that are part of State or Regional road network carry relatively high traffic volumes compared to local roads. The exception is the Mitchell Road south of Copeland Street which carries in excess of 13,500 veh/day
- The 'left in' and 'left out' only movements at Euston Road / Harley Street and the banned right turn-in movement from Mitchell Road into Harley Street, along with traffic calming measures, have contributed to (relatively) lower traffic flows on Harley Street and a higher westbound flow than eastbound flow in both peaks
- The volumes on Maddox Street are at the upper end of what is usually desirable for residential street amenity on local streets; which is typically 5,000 veh/day
- Traffic flows on Fountain Street are likely to have increased since its upgrade was completed after the date of the surveys
- Sydney Park Road currently carries very high traffic volumes considering that it is proposed to be re-designated as a local road.

2.2.5 Impact of WestConnex

The available traffic data was analysed to understand the impacts of the opening of WestConnex in the study area. The 2016 pre-WestConnex traffic survey data was compared with the 2021 post-WestConnex traffic data at (see Table 2.7):

- Euston Road just to the north of its intersection with Sydney Park Road
- A combination of traffic flows on Maddox Street, Harley Street and Fountain Street.

The analysis shows that traffic on Euston Road has increased by over 17% post-WestConnex. Although not able to be substantiated by data, this is likely to be due to the proximity of the WestConnex St Peters Interchange and its use by traffic travelling to/from Sydney City suburbs of Redfern, Surry Hills and Waterloo use Euston Road via WestConnex.

The data shows an increase in post-WestConnex traffic on key residential streets of about 10%.

Table 2.7: Pre and Post WestConnex Traffic Flows

Locations	AADT		Difference	
	2016	2021	Abs	%
Euston Road	17,320	20,335	3,015	17%
Maddox Street, Harley Street and Fountain Street	12,625	13,840	1,215	10%

2.2.6 Public Transport Usage

The boarding and alighting profiles at the six busiest six stops in the study area, excluding Mitchell Road stops (see Figure 2.14), are presented in Figure 2.13. The data used to create the figures is from is from Opal card records for August 2019.

Stops on Botany Road, Fountain Street and McEvoy Street show the highest activity aligned with the location of high frequency routes in the study area and aligned with residential unit densities on Lawrence Street and Lawrence Lane.

Figure 2.13: Selected Bus Stop Daily Boardings plus Alighting

Boarding and alighting data for key stops along Mitchell Road are presented in Figure 2.14.

Stops in the southern part of Mitchell Road where there is higher density residential development have more bus stop usage than further north. In general, weekend bus usage is minimal.

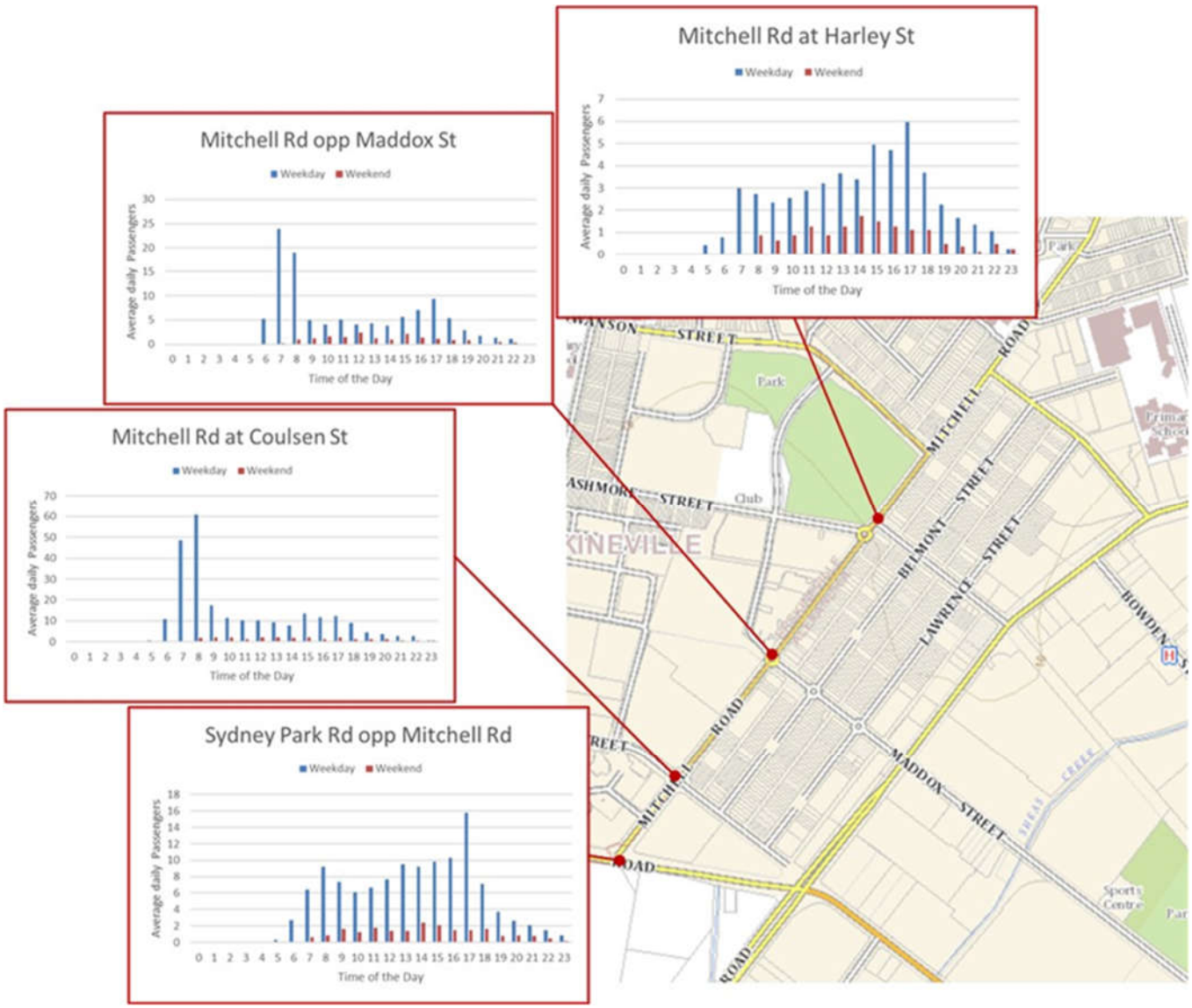
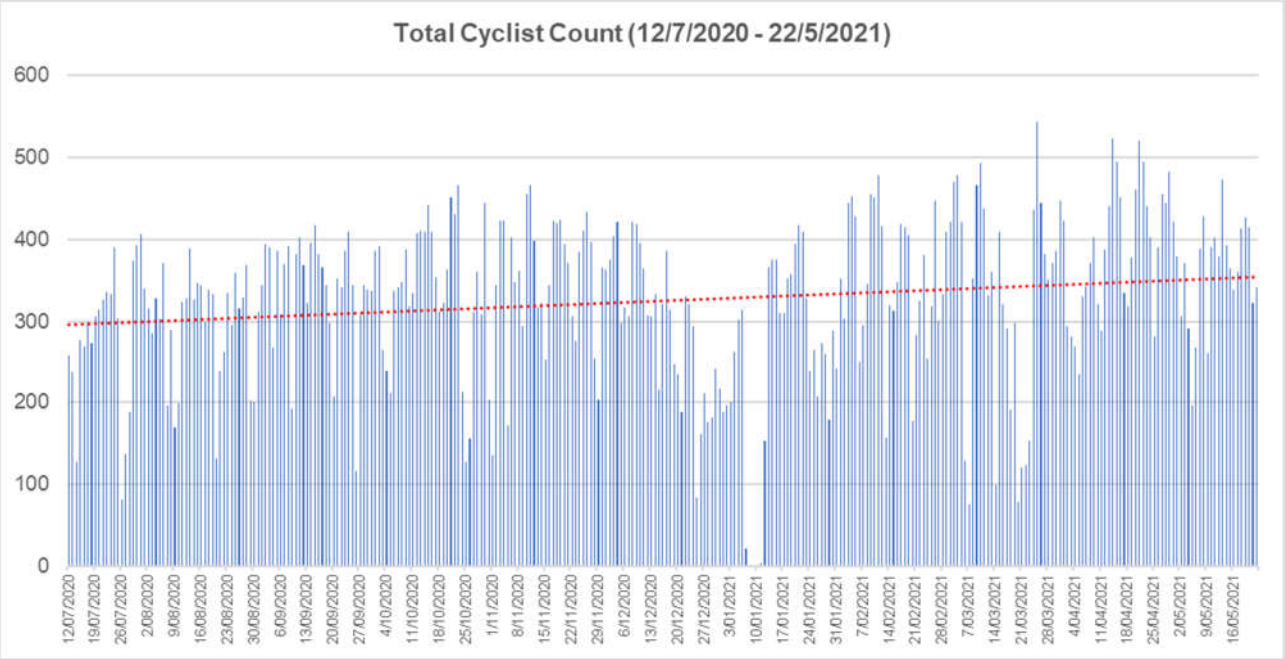


Figure 2.14: Mitchell Road Stops - Boardings and Alighting

2.2.7 Cycling

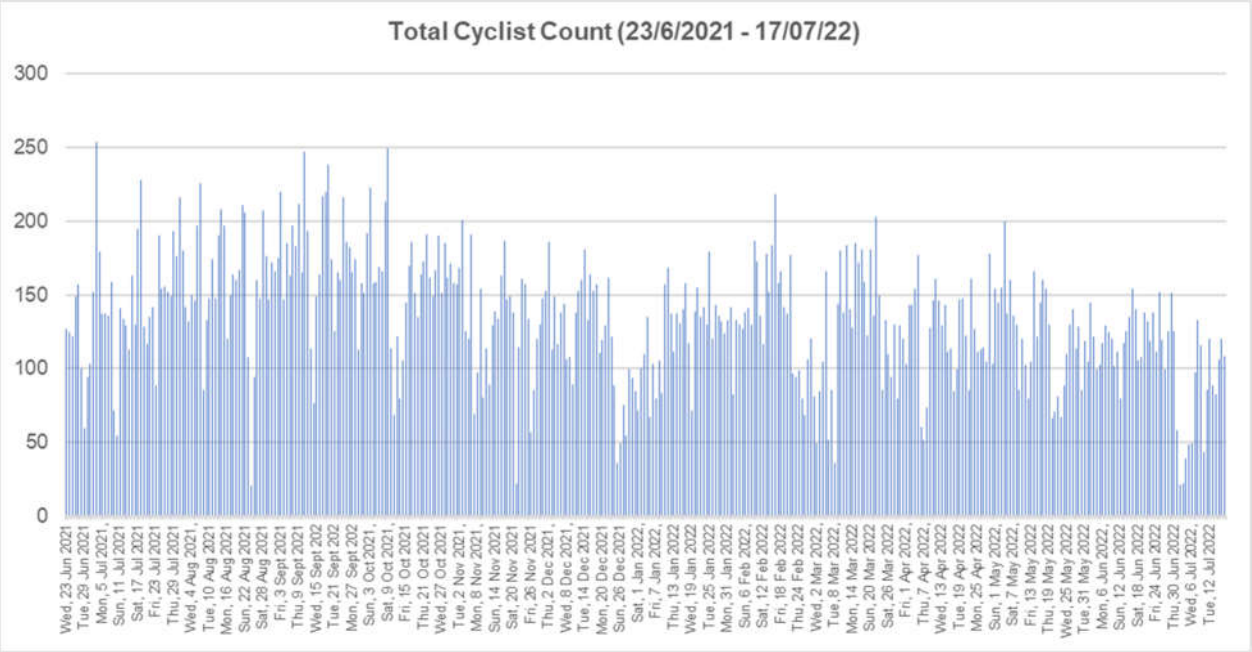
There is limited reliable cyclist count data in the study area. Railway Parade data provided by Council for between July 2020 and June 2021, as presented in Figure 2.15, shows a clear upward trend in cycling demand in this corridor (15% increase in 12 months), which is expected to be reflective of the general cycling growth trend in the study area.



Source: City of Sydney

Figure 2.15: Railway Parade Daily Cyclist Count and Trend

TfNSW data for the usage of the Sydney Park Road cycleway between June 2021 and July 2022 shows an average of 134 bike trips per day. Noting that the cycleway was not yet connected at either end when the data was captured.



Source: TfNSW

Figure 2.16: Railway Parade Daily Cyclist Count and Trend

2.3 Crash Data Analysis and Safety Review

Five-years of crash data for the study area was analysed to identify any crash trends and crash clusters. A safety assessment was also completed for the section of Mitchell Road between Ashmore Street and Maddox Street. The key outcomes as presented in this section of the report include that:

- *In the five-year period assessed, a total of 186 crashes were recorded within the study area. This represents a little over 37 crashes per year*
- *The yearly crash rate shows a downward trend with a sharp decline in 2019*
- *16 of the crashes involved at least one pedestrian (19% of the total crashes recorded) with a relatively high concentration of pedestrian crashes on the section of McEvoy Street between Botany Road and Foundation Street*
- *McEvoy Street and Euston Road show the highest concentration of injury crashes in the study area which is expected as they are the highest volume roads in the study area*
- *Pedestrians and cyclists are at risk of being impacted by vehicles at the Harley Street and Maddox Street intersections with Mitchel Road and along Mitchell Road due to a wide roadway, sightlines obscured by parked vehicles and car doors opening into cyclists*

2.3.1 Crash Data Analysis

Five-year crash data ending December 2019 for the study area was provided by Council. In the five-year period, a total of 186 crashes were recorded within the study area. The number of crashes per year and the severity of crashes are shown in Figure 2.17 and Table 2.8. The data shows:

- A downwards trend in the number of crashes
- Only one fatal crash was recorded, and it occurred in 2016.

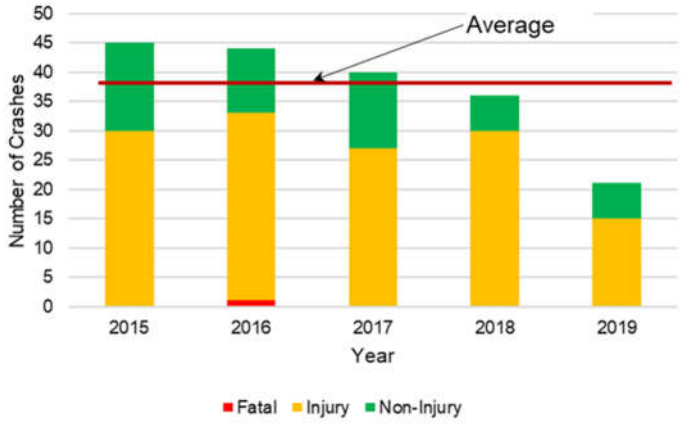


Figure 2.17: Crashes by Year

Table 2.8: Crash Severity by Year

Year	Crash Severity			Total
	Fatal	Injury	Non-Injury	
2015	0	30	15	45
2016	1	32	11	44
2017	0	27	13	40
2018	0	30	6	36
2019	0	15	6	21

The 186 recorded crashes were classified into Road User Movement (RUM) codes in Table 2.9 and in Figure 2.18.

Table 2.9: Crash Data Classified into RUM Codes

Crash Type	RUM Code	No. of Crashes	Percentage of Total
Crashes involving pedestrians	00 - 09	16	9%
Crashes involving vehicles from adjacent directions	10 - 19	35	19%
Crashes involving vehicles from opposing directions	20 - 29	26	14%
Crashes involving vehicles from the same direction	30 - 39	63	34%
Crashes involving manoeuvring vehicles	40 - 49	6	3%
Crashes involving vehicles overtaking	50 - 59	1	1%
Crashes involving vehicles on path – vehicles hitting parked vehicles or objects on the roadway (e.g. animals, temporary objects)	60 - 69	9	5%
Crashes involving vehicles leaving the roadway on a straight length of road	70 - 79	22	12%
Crashes involving vehicles leaving the roadway on a curve	80 - 89	8	4%
Crashes involving vehicle passengers and miscellaneous crashes	90 - 99	0	0%
Total		186	100%

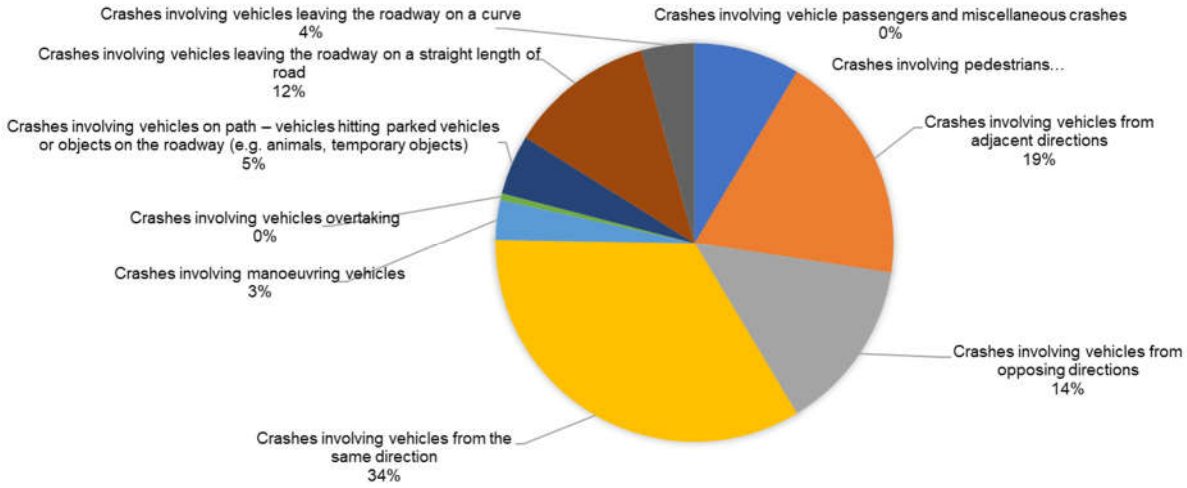


Figure 2.18: Crash Data Classified into RUM Codes

A total of 166 cars were involved in the 186 recorded crashes. The involvement of other road users is summarised in Table 2.10 and in Figure 2.19.

Table 2.10: Road Users Involved in Crashes

Road Users involved	No. of Crashes
Cars	166
Trucks	51
Motorcycles	41
Bicycles	26
Pedestrians	18
Buses	4
Emergency Vehicles	2

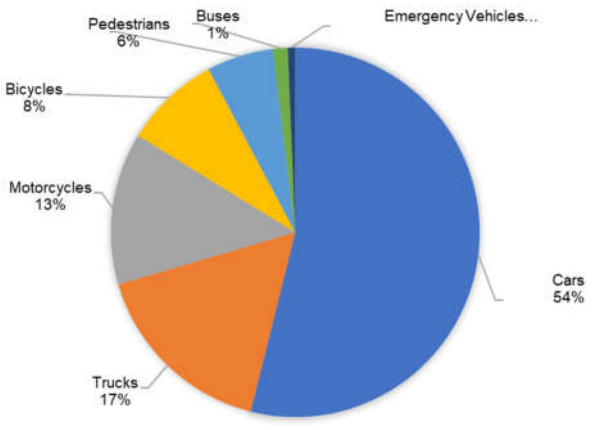


Figure 2.19: Road Users Involvement in Crashes

Of the 186 crashes recorded, the predominant crashes within the study area were crashes including vehicles from:

- The same direction: 34%
- Opposing directions: 14%
- From a right angled movement, such as at T intersection: 19%
- Other movements: 33%.

Of the 186 crashes, one resulted in a fatality, 140 resulted in injuries and the remaining 45 were damage only crashes.

2.3.2 Crash Locations

Crash locations by crash type are shown in Figure 2.20. The figure includes Road Use Movement (RUM) code for each crash. Generally, crashes involving at least one pedestrian are scattered across the study area but with relatively high concentration on the section of McEvoy Street between Botany Road and Fountain Street. With businesses located on both sides of this section of McEvoy Street, large numbers of pedestrians crossing in this area have been observed compared to other parts of the study area.

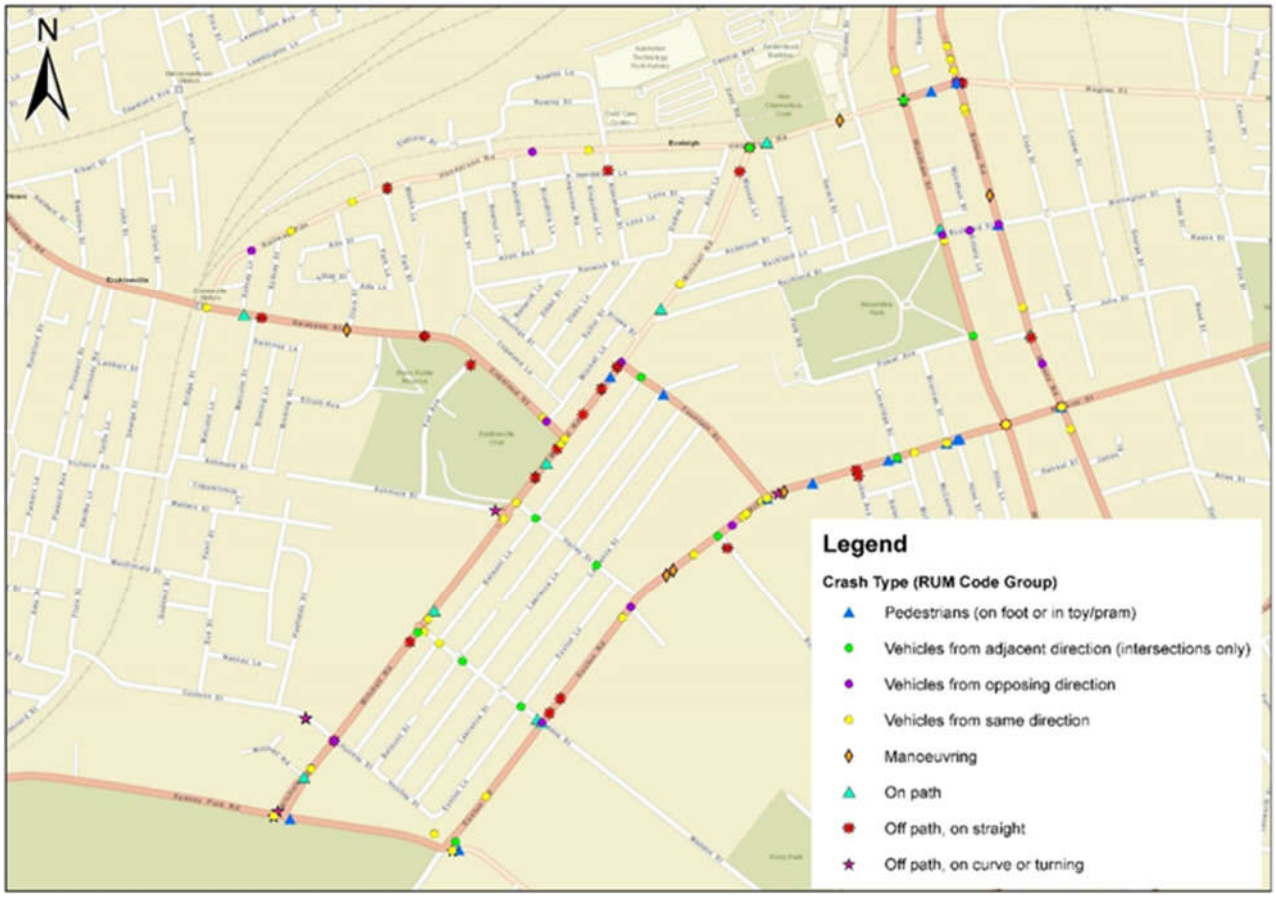


Figure 2.20: Crash Location by Crash Type

Crash locations by crash severity are shown in Figure 2.21.

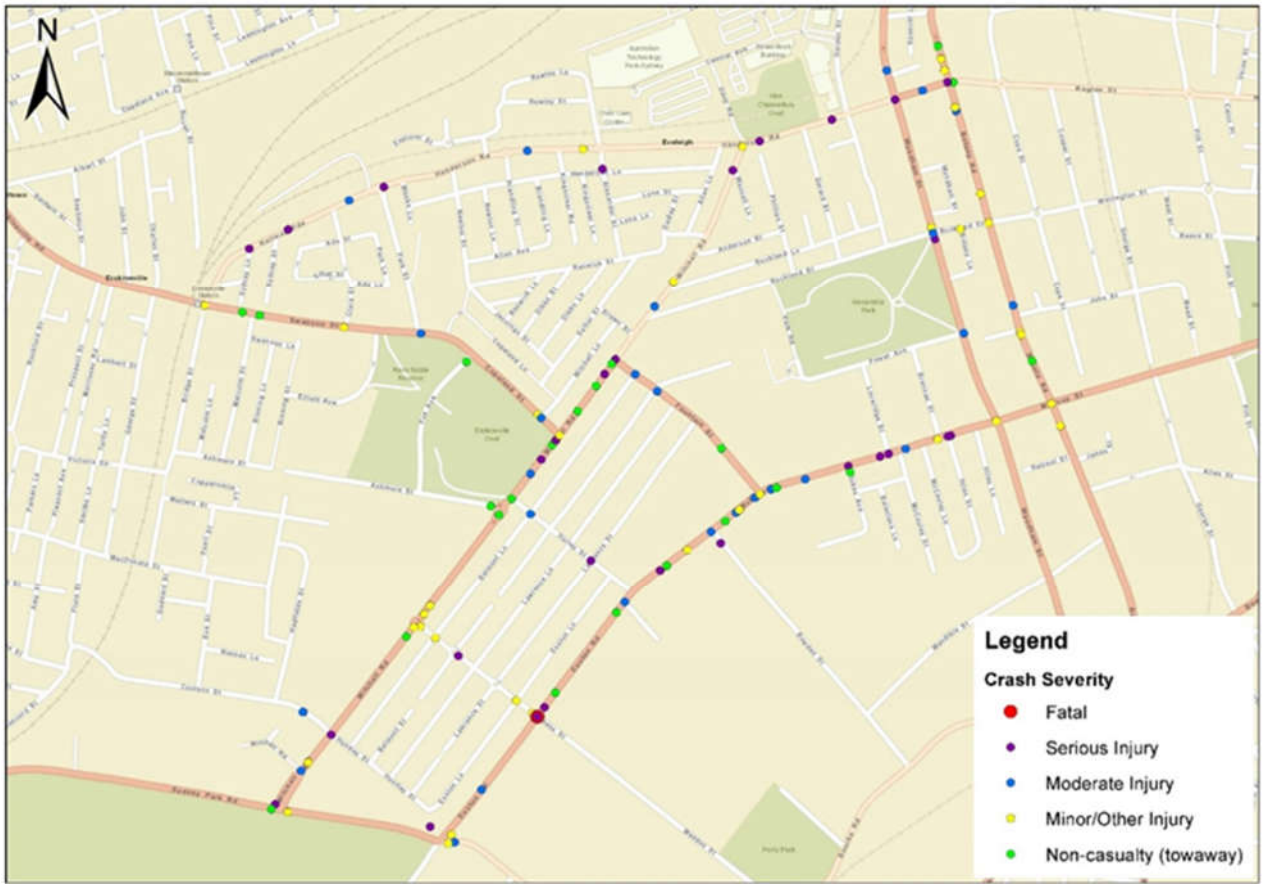


Figure 2.21: Crash Location by Crash Severity

2.3.3 Mitchell Road (Harley to Maddox) Safety Review

A safety review of Mitchell Road (Harley Street - Maddox Street) was an early investigation item in the study. The investigation included a site visit, crash data analysis and a short technical note documenting the outcomes. The study extents are shown in Figure 2.22 with key findings including:

- Crash data analysis:
  - A total of 8 crashes were identified in the 5-year period ending September 2020 on the 240m section of Mitchell Road between Maddox Street and Harley Street
  - Four of the crashes resulted in minor injuries
  - Cyclists were involved in one crash.
- Site observations:
  - There is a lack of roadside features that alert drivers to the presence of cyclists
  - There is a high risk of cyclists being hit by opening car doors given narrow parking and traffic lane widths
  - Sight lines and short decision-making distances highlight a collision risk between pedestrians and cyclists at the zebra crossing near Harley Road
  - Pedestrians crossing Harley Street and Maddox Street are exposed to turning traffic from Mitchell Road which occur close to their intersections.

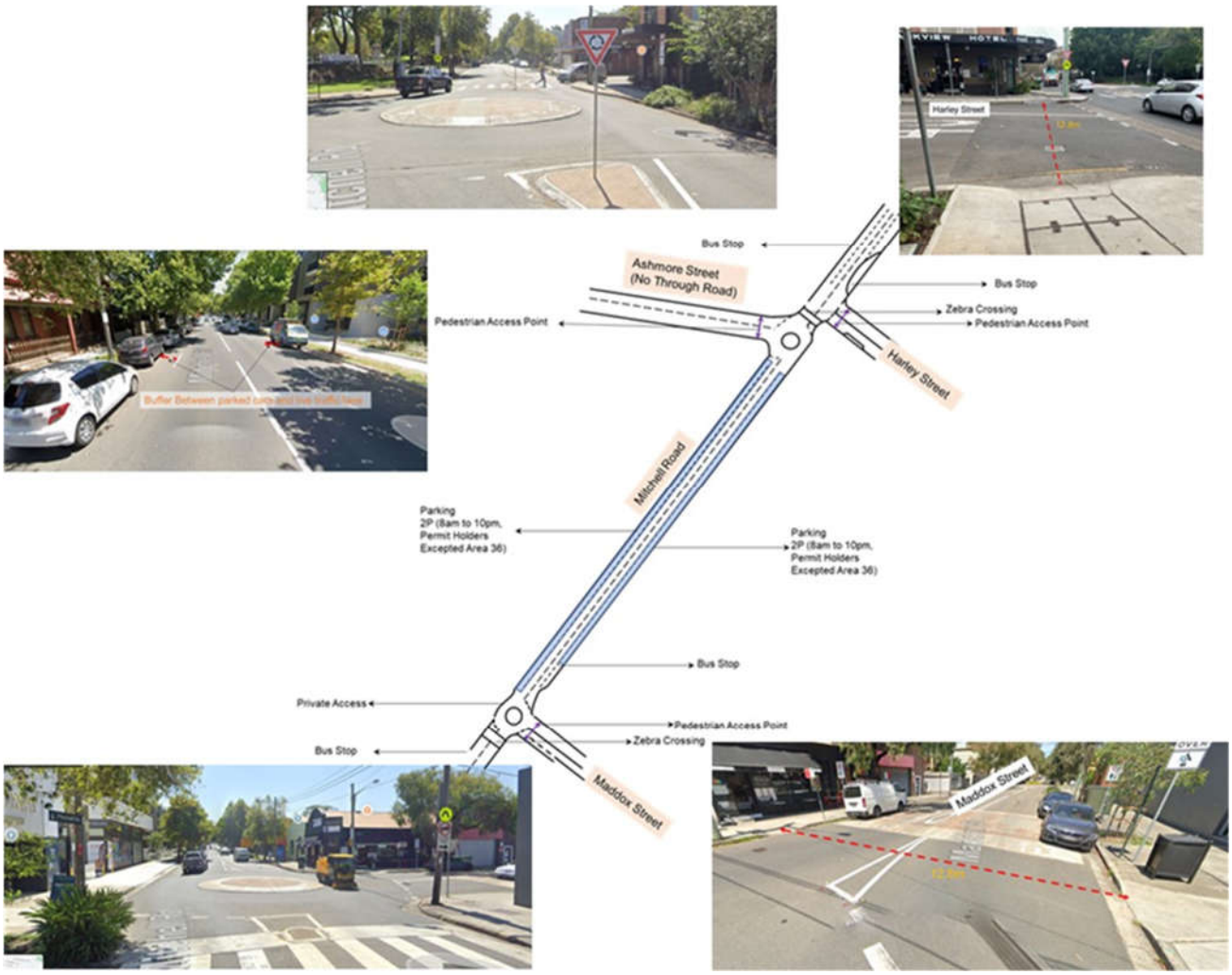


Figure 2.22: Mitchell Road Safety Review Findings

Further details regarding the safety review outcomes are provided in the Bitzios Consulting document: *P4411.001T Mitchell Road Safety Assessment Summary*.

3. TRAFFIC MODEL DEVELOPMENT

3.1 Overview

As part of the project the following base models were developed:

- **2021 Base Model**: Reflecting 2021 traffic conditions
- **2022 Base Model**: The 2021 base model but with all road upgrade measures identified by Council to be completed by mid-2023 added.

Bitzios Consulting used the recent traffic survey data, including intersection turning count data, OD data, travel time data and traffic signal data, to prepare a 2021 base model for the study area. The 2021 base model represents the AM, PM and weekend peak traffic conditions. Council identified the works for implementation by mid-2023 within the study area that was added to create the 2022 Base Model.

3.2 2021 Base Traffic Model

Key details regarding the 2021 base traffic model are:

- *The VISSIM software was used to create traffic microsimulation models*
- *The models include all key roads and streets within the study area*
- *The models include 50 traffic zones which are locations where vehicles enter or leave the study area road network*
- *The model represents the following time periods:*
  - *Weekday AM Peak: 7.30am – 9.30am*
  - *Weekday PM Peak: 4.30pm – 6.30pm*
  - *Weekend Peak: 10.30am – 12.30am.*
- *The model is calibrated and validated to 2021.*

Bitzios Consulting established the 2021 Base Model from the model created in 2017. The model was extended, updated, calibrated and validated to the Transport for New South Wales (TfNSW) Microsimulation Modelling Guidelines. Council appointed an independent consultant to review the 2021 base model. The reviewer accepted the model as being fit for purpose for testing options in the study area. The details of the model calibration and validation are included in the Bitzios Consulting report titled: *P4411.002R VISSIM Model Calibration Validation Report.*

The 'links' in the model network and the location of its traffic zones are presented in Figure 3.1.

Figure 3.1: **Vissim Base Model Zones and Links**

3.3 Recent / Imminent Network Changes and the 2022 Base Model

A number of works have been identified by Council for implementation within the study area by mid-2023 as shown in Figure 3.2.

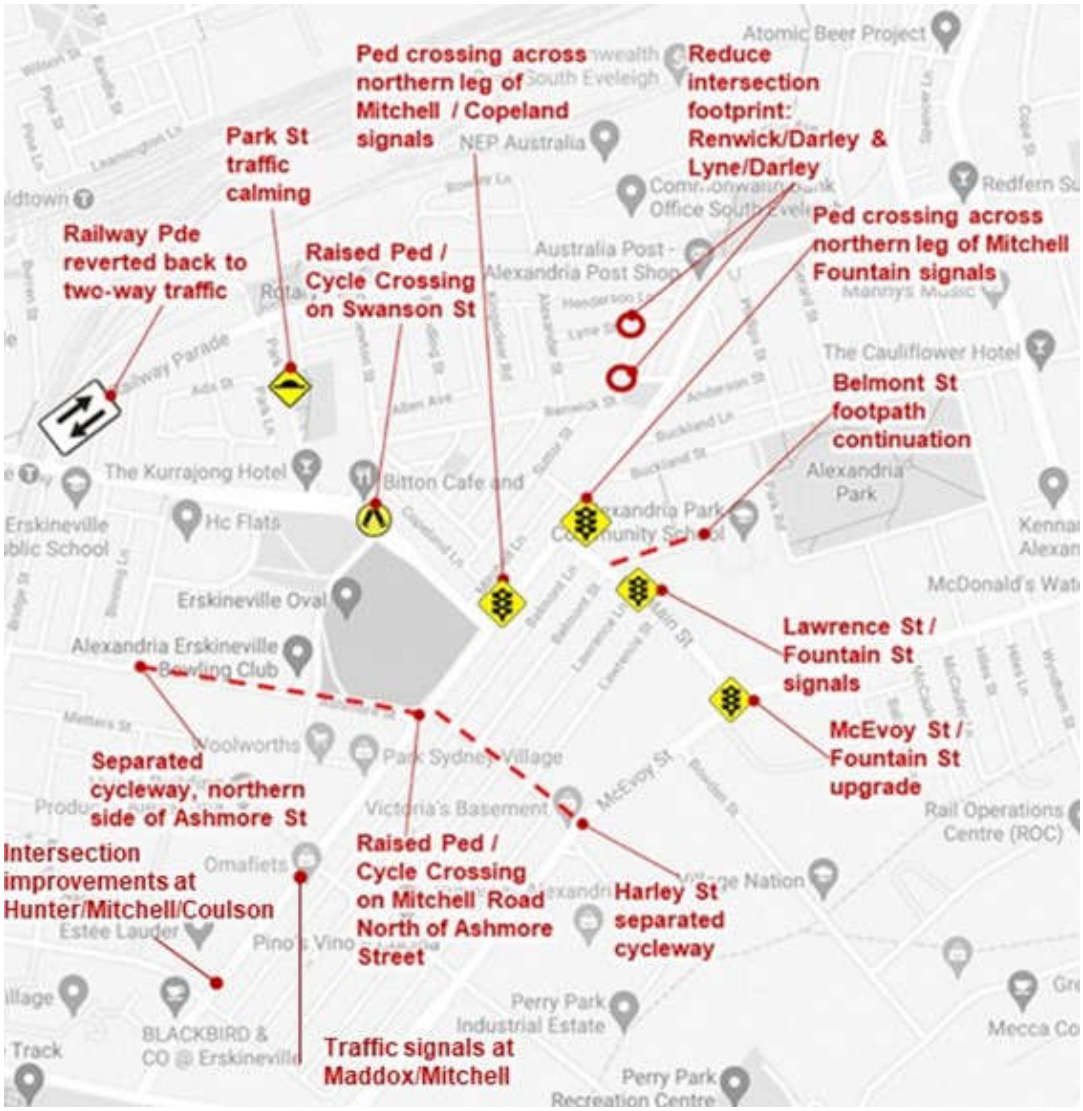


Figure 3.2: Committed Works in the Study Area between 2021 and mid-2023

The McEvoy Street / Harley Street intersection upgrade was completed in late 2021 and was not included in the 2021 base model. It has been included in the 2022 base model.

Not all of the above measures influence the traffic modelling. The measures that do have an effect on traffic delays (such as signals, traffic calming and directional changes) have been incorporated into the 2022 base model, used as a reference case from which to compare alternative upgrade scenarios with the additional works options within them.

These measures are identified as '*committed projects'* in the following chapter.

3.4 Existing and Emerging Congestion Issues

Locations which have been identified through site investigations as current source points for peak period congestion-related issues and which have then been replicated in the traffic modelling, are presented in Figure 3.3.

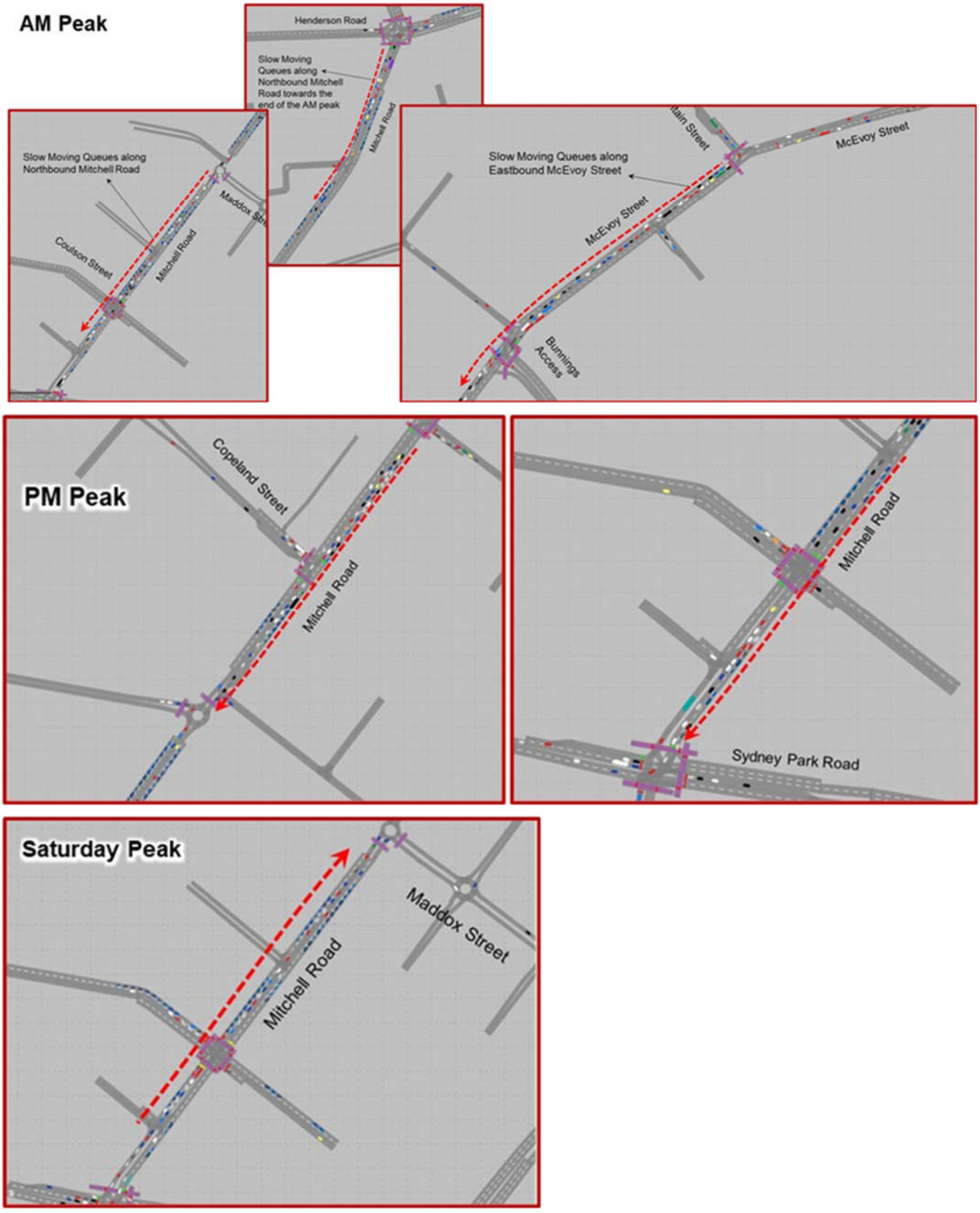


Figure 3.3: 2021 Congestion Source Locations

Between 2021 and 2022, and with the committed works shown in Figure 3.2 included in the microsimulation model, the following effects of those measures were noticed:

- Increases in westbound flows in the AM peak and eastbound flows in the PM peak in Maddox Street, Harley Street and Fountain Street. This was because the upgrade at McEvoy/Fountain reduced contra-peak directional travel times on McEvoy Street, making it a slightly more attractive route than Mitchell Road to / from the north compared to before the upgrade
- Reductions (generally) in peak direction traffic in Maddox Street, Harley Street and Fountain Street with the schemes proposed along Mitchell Road acting to marginally deter through traffic usage of the streets.

The volume changes between 2021 and 2022 associated with the above points, and an example of the associated travel time changes in Euston Road-McEvoy Street northbound in the PM peak that influenced the changes, are shown in Figure 3.4.

Location	AM		PM	
	EB	WB	EB	WB
Fountain Street	-4%	1%	4%	-4%
Harley Street	-6%	8%	11%	-3%
Maddox Street	-5%	0%	1%	4%

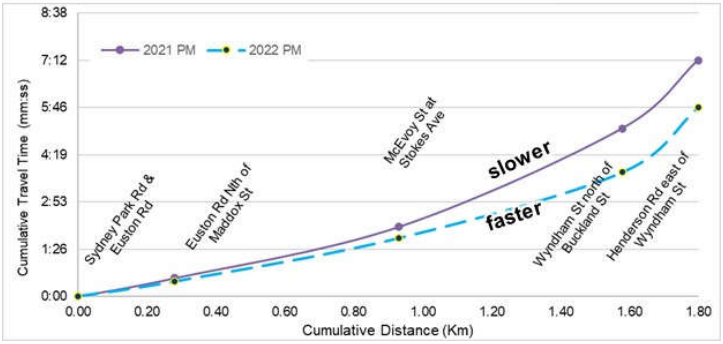


Figure 3.4: 2022 Network Key Traffic Volume and Travel Time Changes

The upgrade of the McEvoy Street / Fountain Street signalised intersection to provide a dedicated right turn pocket from north to west was a key change between the 2021 and 2022 models and resulted in this pinch point being 'released' (northbound, AM peak). The consequence of this though was the release of more vehicles northwards and the creation of a consequential pinch point at the Wyndham Street intersection with McEvoy Street, as shown in Figure 3.5.

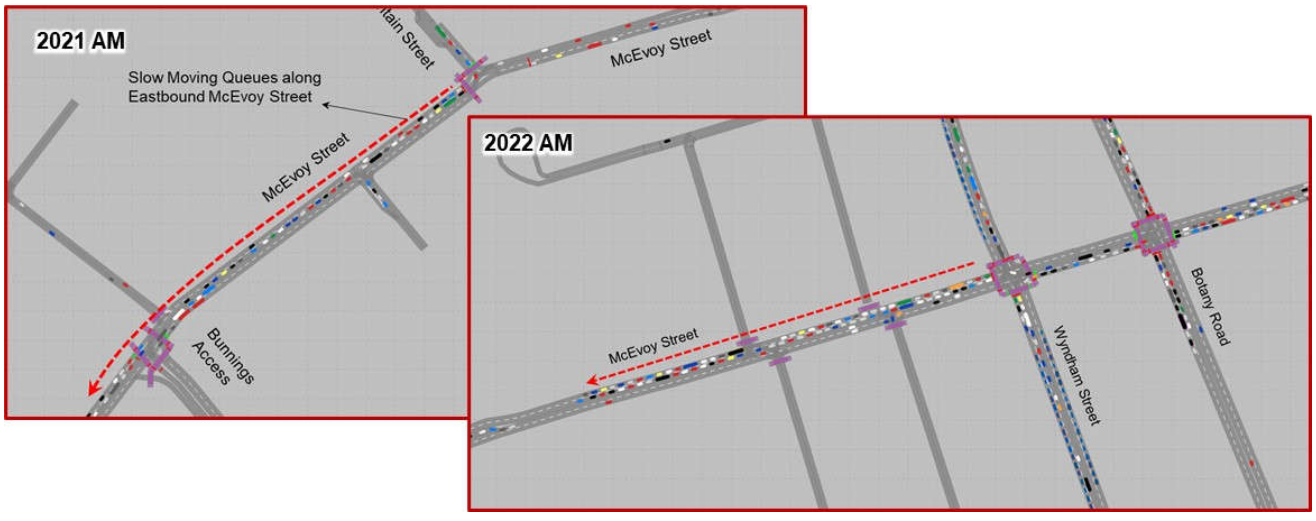


Figure 3.5: 2021 V 2022 AM Peak Northbound Pinch Point Changes along McEvoy Street

4. PROCESS TO DEVELOP, ASSESS AND RECOMMEND INTERVENTIONS

4.1 Overview

Bitzios Consulting, in consultation with Council representatives, developed a set of transport strategy objectives for the study area. This was followed by the identification of a number of improvement options. The improvement options were then grouped into scenarios for testing in the traffic model. The study objectives also informed the creation of a Multi-Criteria Assessment (MCA) framework to assess the improvement proposals. The process is shown in Figure 4.1.

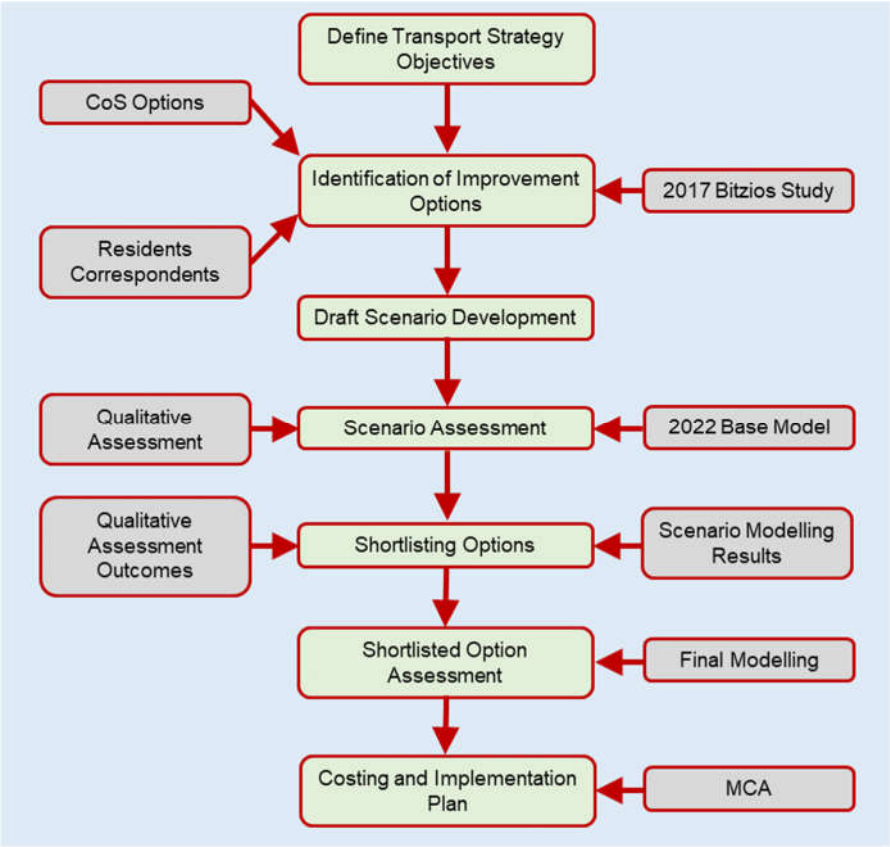


Figure 4.1: Process to Develop, Assess and Recommend Options

4.2 Transport Strategy Objectives

The objectives that informed the Traffic and Transport Study are:

- Maximise accessibility, safety and amenity for walking and cycling, including to/from bus stops
- Limit through traffic on local streets and particularly those streets used for filtering between Mitchell Road and Euston Road-McEvoy Street
- Encourage through traffic to use state roads instead of local roads
- Minimise turn bans and/or closures for other alternatives to restrain through traffic

Minimise consequential traffic impacts from any proposed traffic management measures. The MCA framework was based on the above objectives and then used to score and rank the preferred options for implementation staging recommendation purposes (see Section 7.3).

4.3 Options Definition and Categorisation

The key terms used to define the difference sources and types of options are:

- **New Options:** Improvement proposals this study has identified for assessment. For each option, a two-digit unique number is allocated (e.g. 1.1, 1.2 and 2.1). These options are expected to have impacts on traffic flows and are included in the traffic model for assessment
- **Committed Works:** Improvement proposals that are to be implemented by mid-2023. For each committed works item, a one-digit unique number is allocated, preceded by a 'C' (e.g. Comm1', C2 and C3). These items are included in traffic model for all scenarios
- **General Options:** Improvement proposals that are likely to have no impact on traffic flows and traffic performance, such as off road shared path improvements. These options are not included for assessment in the traffic models. Rather a qualitative assessment was undertaken for each option. Each general option is identified by a capital letter (e.g. A, B and C).
- **Scenarios:** The options have been grouped into one or more scenarios.

For the new options, Council identified a number of traffic and transport measures that it has been considering based on its own investigations and community input. There were also options in the Bitzios Consulting 2017 work that have not been implemented yet or committed to be implemented yet. Also, new options were identified during this study through assessment of the recently-collected data and site visit findings.

All of the options (collectively) are shown in Figure 4.2, along with their type/source, including which ones can and cannot be assessed using the traffic model. A number of upgrade options have had concept drawings prepared for them by Council and the ones that have are in **Appendix A**.

4.4 Scenario Development

Modelling each of the options individually and then cumulatively would have required dozens of model runs and was deemed to be excessive. Also, many of options works items interact with each other and it is important to understand how they operate as a network to achieve the study objectives. In consultation with Council, Bitzios Consulting grouped the options into two scenarios for traffic modelling and evaluation purposes. The study grouped options into two scenarios, as follows:

- **Scenario A**: All recently constructed works or committed (by mid-2023) works plus new options that use traffic management to discourage through traffic using residential streets. "Traffic management" includes traffic calming, some turn bans and traffic signals on local (Council) roads
- **Scenario B**: All recently constructed works or committed (by mid-2023) works plus new options that (mostly) use restrict through traffic using residential streets. "Traffic restrictions" include street closures and turn bans.

In addition to the above themes, some options in specific parts of the network were included in one scenario and not the other to understand the localised impacts and benefits of one option over another in these areas.

The allocation of localised options into scenarios for traffic modelling purposes are shown in Table 4.1 along with the recently constructed or committed (by mid-2023) measures which are included in both scenarios.

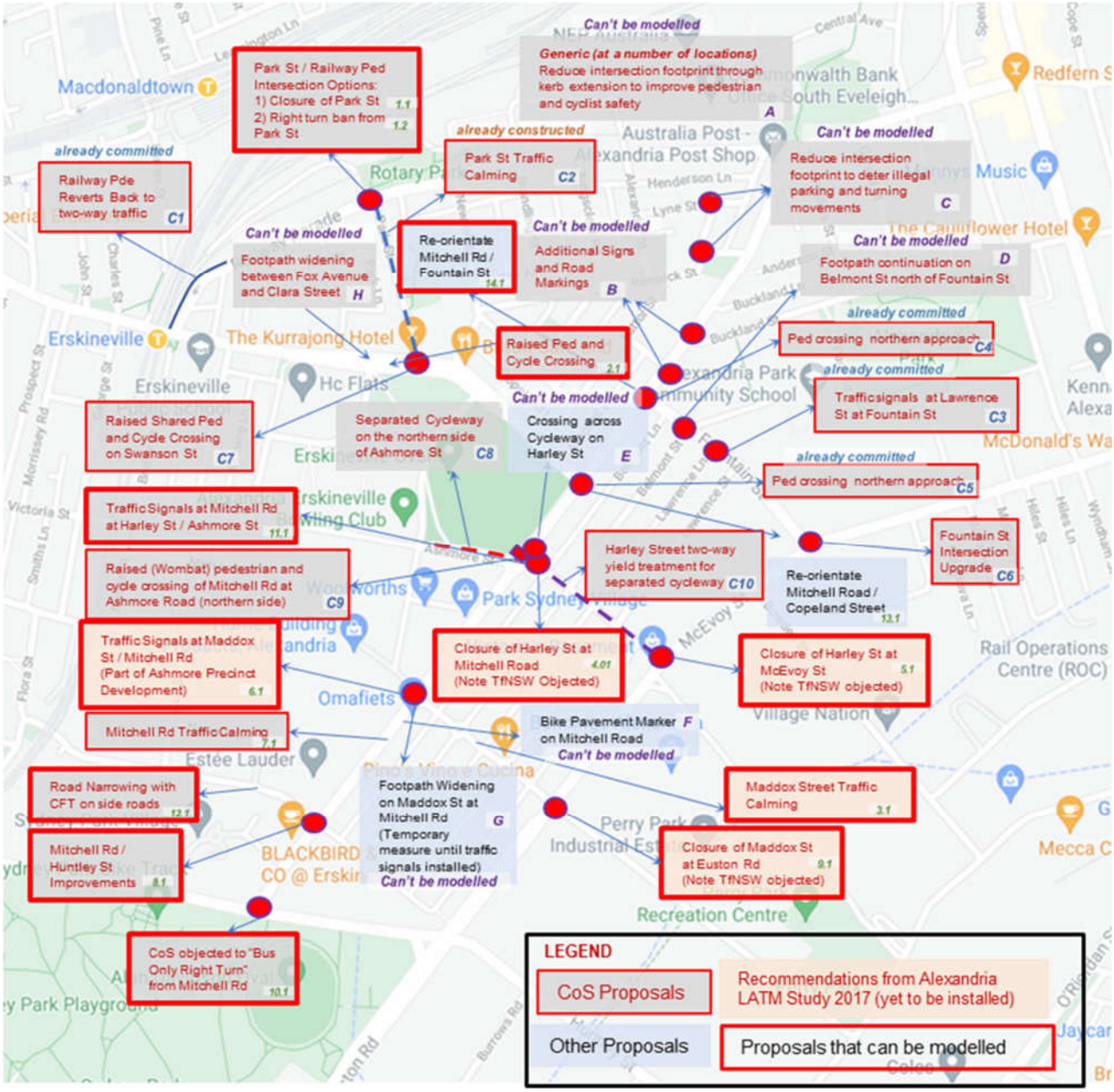


Figure 4.2: Options and Their Categorisation

Table 4.1: Scenario Inclusions

I.D.	Option Description	Scenario A	Scenario B
1.1	Close Park Street at Railway Parade		Yes
1.2	Right turn ban from Park Street into Railway Parade	Yes	
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)	Yes	Yes
3.1	Maddox Street Traffic Calming	Yes	
4.1	Closure of Harley Street at Mitchell Road		Yes
5.1	Closure of Harley Street at McEvoy Street	Yes	
6.1	Maddox Street / Mitchell Road traffic signals	Yes	Yes
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming	Yes	
8.1	Mitchell Road / Huntley Street intersection improvement	Yes	
9.1	Closure of Maddox Street at Euston Road		Yes
10.1	Bus Only Right Turn from Mitchell Road to Sydney Park Road		Yes
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street	Yes	
12.1	Road Narrowing and CFT on Side Roads along Coulson Street	Yes	
13.1	Re-orientate Mitchell Road / Copeland Street for N to W priority (single lanes to / from Mitchell)		Yes
14.1	Re-orientate Mitchell Road / Fountain Street priority (single lanes to / from Mitchell)		Yes
C 1	Railway Parade Two Way	Yes	Yes
C 2	Park Street Traffic Calming	Yes	Yes
C 3	Traffic signals at Lawrence Street / Fountain Street	Yes	Yes
C 4	Ped crossing at Mitchell Road / Fountain Street	Yes	Yes
C 5	Ped crossing at Mitchell Road / Copeland Street	Yes	Yes
C 6	Fountain Street / McEvoy Street Intersection Upgrade	Yes	Yes
C 7	Raised shared ped / cycle crossing of Park Street at Swanson Street	Yes	Yes
C 8	Separated cycleway on the northern side of Ashmore Street with raised ped crossing east of Fox Avenue	Yes	Yes
C 9	Raised (wombat) ped / cycle crossing of Mitchell Road at Ashmore Street (northern side)	Yes	Yes
C	Harley Street two-way yield treatment for separated cycleway	Yes	Yes
[A]	General - reduce intersection footprints	Not able to be modelled	
[B]	Additional signs and lines (Mitchell, Buckland-Brown)	Not able to be modelled	
[C]	Footprint reductions (Renwick / Dadley, Lyne / Dadley)	Not able to be modelled	
[D]	Footprint continuation on Belmont Street north of Fountain Street	Not able to be modelled	
[E]	N-S cycleway crossing at Mitchell Road / Harley Street	Not able to be modelled	
[F]	Cycle markings (Mitchell Road, south of Ashmore)	Not able to be modelled	
[G]	Footpath widening (Maddox Street at Mitchell Road, temporary)	Not able to be modelled	
[H]	Footpath Widening Copeland Street (Fox Avenue to Clara Street)	Not able to be modelled	

Comm: Committed projects assumed to be in place in 2022
[X] : Projects that are not yet committed but do not influence traffic congestion or route choice and hence have not been modelled. These options have been evaluated qualitatively instead.

4.5 Options Evaluation Metrics

Scenario A and **Scenario B** were run in the models and overall network statistics/performance results were extracted to understand the cumulative network impacts and benefits of each scenario. The evaluation used travel time comparisons to understand the route-specific impacts and benefits of each scenario and to provide some insights into the performance of individual options within each scenario.

This was followed by evaluation of more detailed intersection delay and Level of Service (LoS) outputs along with queue visualisation outputs. This allowed, in most locations, the determination of the benefits and impacts of individual options to be identified within each scenario.

4.6 Options Unrelated to Traffic Congestion

The option items presented in Table 4.1 that are unrelated to traffic congestion, cannot be modelled and have therefore been assessed qualitatively are:

- [A] General - reduce intersection footprints
- [B] Additional signs and lines (Mitchell, Buckland-Brown)
- [C] Footprint reductions (Renwick / Dadley, Lyne / Dadley)
- [D] Footprint continuation Belmont Street
- [E] N-S cycleway crossing at Mitchell Road / Harley Street
- [F] Cycle markings (Mitchell Road, south of Ashmore)
- [G] Footpath widening (Maddox at Mitchell Road, temporary)
- [H] Footpath Widening Copeland Street (Fox Avenue to Clara Street).

The outcomes of the qualitative assessment are as follows.

A: General: Reduce intersection footprints

Council should initiate a program of identifying excessively wide intersections in the study area and design and implement treatments to address these issues progressively as funding allows.

Council identified the need to reduce intersection footprints generally throughout the study area, primarily through kerb extensions. There are a number of very wide un-marked intersections in the study area which makes it very difficult for turning vehicles to judge appropriate give-way hold positions, turning paths and right of way. Also, wide intersection and long crossing distances make it much more difficult for pedestrians, and particularly slower younger or mobility impaired pedestrians, to identify appropriate gaps in traffic.

B: Additional Signs and Lines

Council should initiate a 'signs and lines review' of Mitchell Road between Fountain Street and Anderson Street including into the side roads in this section such as Brown Street, Buckland Street and Buckland Lane.

In some places along Mitchell Road between Fountain Street and Anderson Street there are obscured road signs and worn-out line marking. These issues are also evident on some of the side roads in this section such as Brown Street, Buckland Street and Buckland Lane. Improving signs and line-markings in these areas will reduce driver confusion regarding traffic and parking restrictions, road closures and one-way operations.

C: Footprint reductions at Renwick / Dadley and Lyne / Dadley

Council should undertake concept design including community consultation activities to develop a scheme to reduce the trafficable footprint of the Renwick/Dadley and Lyne/Dadley intersections, as funding permits.

As specific examples of the issues raised in Item [A] above, the wide intersections of Renwick/Dadley and Lyne/Dadley have received complaints from nearby residents, such as:

"*Corner of Dadley St and Lyne St. Dangerous u turn or cut through activity by cars, trucks all hours of day and night. Given the inability to turn right after Swanson Street with the closure of Anderson, this corner's openness in an area of narrow streets has now become a u turn bay for cars/in particular large trucks to get back south on Mitchell. There is a day care adjacent to this corner and many children, families and dogs in this area who are at risk. There is also constant double parking by utility trucks who are not servicing the houses but are just resting there vehicles because of the openness of the street. The cut through activity starts ramping up from 5.30am with cars every few minutes*".

Site observations have revealed that the wide, unmarked footprint at the intersection of Lyne Street / Dadley Street generates the following issues:

- Allows "U" turns to be undertaken in an uncontrolled (and often unexpected) way
- Makes double-parking seem to be less of a contentious issue for drivers as there is still plenty of passing room
- Compromises pedestrian and cyclist safety with long crossing distances and vehicle-conflict exposure times
- Makes it difficult for drivers to comprehend propping locations and turning paths.

D: Footpath continuation Belmont Street north of Fountain Street

Council should design and implement this measure to improve active transport safety.

The proposed Continuous Footpath Treatment (CFT) on Belmont Street north of Fountain Street will reduce vehicle speeds turning in and out of Belmont Street thereby improving active transport safety.

E: N-S cycleway crossing at Mitchell / Harley

Council should include the N-S cycleway crossing of Harley Street just east of Mitchell Road as part of the project to close Harley Street, should this be approved.

This crossing proposal is aligned with the option to close Harley Street at Mitchell Road. It is logical for these works to be completed at the same time.

F: Cycle markings (Mitchell Road, south of Ashmore)

Council should consider installing Bicycle Awareness Zone (BAZ) pavement markers on Mitchell Road south of Ashmore Street.

One of the key issues identified in the Mitchell Road safety review presented in this report is that cyclists travel in mixed traffic, close to parked cars, because of lane width limitations. On both sides of Mitchell Road, the 'buffer' between parked cars and passing traffic is only about 800mm to 900mm wide. Cyclists are at risk of being hit by opening car doors if they cycle in this zone as vehicles pass them. Also, there is a general absence of warnings to motorists of the presence of cyclists on Mitchell Road.

G: Footpath Widening (pedestrian refuge), Maddox Street at Mitchell Road (temporary)

Council should implement a pedestrian refuge island in Maddox Street approaching Mitchell Road in the short term.

One of the key issues identified in the Mitchell Road safety review presented in this report is that the pedestrian crossing distance across Maddox Street is about 12.8m. Pedestrians are exposed to turning and approaching traffic for a long period of time because of this crossing length and because of the proximity of this intersection to other turning movements, there is a heightened risk of vehicle-pedestrian collisions. A refuge island within Maddox Street would reduce this risk by splitting the crossing task into two discrete and much shorter 'stages'.

The options evaluation presented in later sections of this report identifies a commitment to signalise the Mitchell / Maddox intersection. The signals are expected to be introduced by 2026 and would include pedestrian crossings on all approaches. The refuge island should be implemented as an interim measure in any case.

H: Footpath widening on Copeland Street between Fox Avenue and Clara Street

Council should widen the footpath on both sides of Copeland Street between Fox Avenue and Clara Street.

There is significant visually-observed pedestrian demand along both sides of Copeland Street between Fox Avenue and Clara Street due the activity generated by existing businesses along the northern side of Copeland Street and also the parkland on its southern side. This level of demand warrants consideration for widening of the footpath in this location.

5. NETWORK SCENARIO A – OUTCOMES OF THE MODELLING ASSESSMENT

I.D.	Option inclusions in Scenario A
1.2	Right turn ban from Park Street into Railway Parade
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)
3.1	Maddox Street Traffic Calming
5.1	Closure of Harley Street at McEvoy Street
6.1	Maddox Street / Mitchell Road traffic signals
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures
8.1	Mitchell Road / Huntley Street intersection improvement
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street
12.1	Road Narrowing and CFT on Side Roads along Coulson Street

Network Modelling Outputs: Key Network Statistics

- Average delay and Vehicle Hours Travelled (VHT) are similar
- AM Peak: Scenario A measures would not impact the travel times.
- PM Peak, Scenario A would increase network travel times by 7%.

Network Modelling Outputs: Vehicle Travel Times

- The AM peak northbound travel time on Mitchell Road would reduce by over 2.5 minutes
- The AM peak southbound travel time on Mitchell Road would increase by over one minute
- The AM and PM peak northbound travel times on Euston Road / McEvoy Street would increase by 1.5 minutes.

Network Modelling Outputs: Traffic Volume Changes

- Traffic flows on Park Street would reduce by 59% or 160 veh/hr (AM peak) and 70% or 214 veh/hr (PM peak) due to the Park Street right turn out ban
- AM peak traffic on Fountain Street would increase by 8% or 49 veh/hr due to traffic diverted from the Harley Street closure
- AM peak traffic on Euston Road will reduce by 7% or 181 veh/hr due to the cumulative effects of the options in this scenario
- Traffic on Swanson Street will reduce by 15% or 143 veh/hr (AM Peak) and 28% or 278 veh/hr (PM peak) due to reduced eastbound traffic as a result of the Railway Parade two-way operation
- No noticeable changes to traffic on Mitchell Road.

Network Modelling Outputs: Maintaining Local Vehicle Access While Reducing Through Traffic

- The option for a right turn ban from Park Street into Railway Parade will reduce Park Street traffic by over 70% with minimal local vehicle accessibility impacts
- The option for traffic calming in Maddox Street will reduce its PM peak traffic by 20%
- The closure of Harley Street at McEvoy Street will reduce Harley Street traffic by 70% while maintaining local accessibility via Maddox Street, Fountain Street and Mitchell Road. Due to the combined benefits of the other improvement options in this scenario, the traffic displaced from the closure will not worsen traffic congestion elsewhere.

Network Modelling Outputs: Outcomes for Other Road Users

- Reduced traffic on Park Street, Maddox Street and Harley Street will improve walking and cycling amenity and safety on these streets
- The two controlled crossings on Mitchell Road and the raised crossing on Swanson Street will improve pedestrian and cyclist safety for crossing at these locations
- Reduced traffic speeds along Mitchell Road will improve cycling safety and amenity
- Reduced delays at the intersection of Mitchell Road / Maddox Street and Mitchell Road / Harley Street will reduce bus travel times and improve bus travel time reliability.

Options to Take Forward

All nine improvement options included in Scenario A are recommended for implementation.

5.1 Modelling Results

The Scenario A improvement options were added to the 2022 base traffic model and the model was run. The full results are included in **Appendix B** and summaries follow.

5.1.1 Network Statistics

Table 5.1 and Table 5.2 present the AM peak and PM peak network statistics for Scenario A compared to Base Case conditions.

Table 5.1: Scenario A, AM Peak, Network Statistics

Parameters	Base Case 2021	Base Case 2022	Scenario A
Average Delay (s)	96	93	89
Average Network Speed (km/h)	17.6	17.8	17.8
Vehicle Kilometres Travelled (VKT)	23,228	23,241	23,196
Vehicle Hours Travelled (VHT)	1,371	1,355	1,338
Stops (Per Vehicle)	3.1	3.0	2.6
Completed Trips	26,186	26,541	27,246
Incomplete Trips	309	349	314
Unreleased Vehicles	-	2	-
Total Trips	26,495	26,892	27,560

Table 5.2: Scenario A, PM Peak, Network Statistics

Parameters	Base Case 2021	Base Case 2022	Scenario A
Average Delay (s)	70	71	77
Average Network Speed (km/h)	20.9	20.9	19.6
Vehicle Kilometres Travelled (VKT)	23,329	23,301	23,341
Vehicle Hours Travelled (VHT)	1,124	1,125	1,203
Stops (Per Vehicle)	2.4	2.4	2.4
Completed Trips	25,826	25,813	25,454
Incomplete Trips	311	307	324
Unreleased Vehicles	-	-	0
Total Trips	26,137	26,120	27,778

Comparing the 2021 and 2022 Base Cases to Scenario A identifies:

- Average delay and VHT is similar
- The Scenario A traffic management measures including a 40km/h zone on Mitchell Street, the Park Street closure at Railway Parade and the Harley Street closure at McEvoy Street would not impact the AM peak network travel times. However, in the PM Peak, Scenario A would increase network travel times, expressed as VHT, by 7%. This level of change is minimal.

5.1.2 Travel Times

The Scenario A AM and PM peak travel times are compared with the 2022 Base Case travel times in Table 5.3 and Table 5.4 for the following four routes:

- Route 1: Mitchell Road Corridor
- Route 2: Euston Road / McEvoy Street and Wyndham Street Corridor
- Route 3: Henderson Road Corridor
- Route 4: Swanson Street / Copeland Street Corridor.

Figure 5.1: Travel Time Results Routes

Table 5.3: Scenario A, AM Peak, Travel Time

Routes	Direction	Base 2021	Base 2022	Scenario A
Route 1 – Mitchell Road	Northbound	7:10	8:14	5:44
	Southbound	4:25	4:37	6:03
Route 2 – Euston Road / McEvoy / Wyndham Street	Northbound	10:35	8:21	9:49
	Southbound	5:58	5:51	7:06
Route 3 – Henderson Road	Northbound	5:56	6:02	5:18
	Southbound	4.03	4:00	4:14
Route 4 – Swanson Street / Copeland Street	Northbound	2.37	2:35	1:46
	Southbound	1.15	1:15	1:18

Table 5.4: Scenario A, PM Peak, Travel Time

Routes	Direction	Base Year 2021	Base Year 2022	Scenario A
Route 1 – Mitchell Road	Northbound	5:08	5:03	5:38
	Southbound	6:08	7:03	7:14
Route 2 – Euston Road / McEvoy / Wyndham Street	Northbound	5:54	5:46	6:35
	Southbound	5:28	5:27	4:43
Route 3 – Henderson Road	Northbound	5:56	3:45	2:54
	Southbound	4.03	4:17	4:01
Route 4 – Swanson Street / Copeland Street	Northbound	3.16	2:12	1:52
	Southbound	1:59	2:06	3:07

The key influences of Scenario A relative to the Base Case include:

- The northbound AM peak travel time on Mitchell Road (Route 1) would reduce by over 2.5 minutes primarily due to improved intersection performance at the Maddox Street and Harley Street intersection due to the traffic signals in this scenario
- The Route 1 AM peak southbound travel time would increase by over one minute. This is due to the introduction of the 40km/h zone on Mitchell Road
- The AM and PM peak northbound travel times on Euston Road / McEvoy Street (Route 2) would increase substantially by 1.5 minutes. This is due to delays at the Fountain Street intersection as a result of increased traffic diverted from the proposed Harley Street closure under this scenario.

5.1.3 Traffic Volumes

The changes in traffic volumes at key locations within the study area during the AM and PM peak periods are shown in Figure 5.2 and Figure 5.3. The key observations include:

- Traffic volumes on Park Street will reduce by 59% (AM peak) and 70% (PM peak) or 160 to 214 veh/hr as a result of the proposed ***right turn ban*** into and out of Park Street at its intersection with Railway Parade
- The AM peak traffic volumes on Fountain Street will increase by 8% (or 49 veh/hr). This is due to diverted traffic from the ***Harley Street closure***
- The AM peak traffic volumes on Euston Road are predicted to reduce by 7% (or 181 veh/hr). This is due to a reduction of northbound volumes. The proposed ***closure of Harley Street*** will divert a proportion of northbound traffic from Euston Road (south), currently using Harley Street from Euston Road to Mitchell Road
- Traffic volumes on Swanson Street will reduce by 15% (AM Peak) and 28% (PM peak) or 143 to 278 veh/hr. This is due to a reduction of eastbound traffic as a result of the ***Railway Parade two-way operation***. Traffic currently using Swanson Street will be diverted to Railway Parade
- The closure of Harley Street will reduce the through traffic volume to zero.

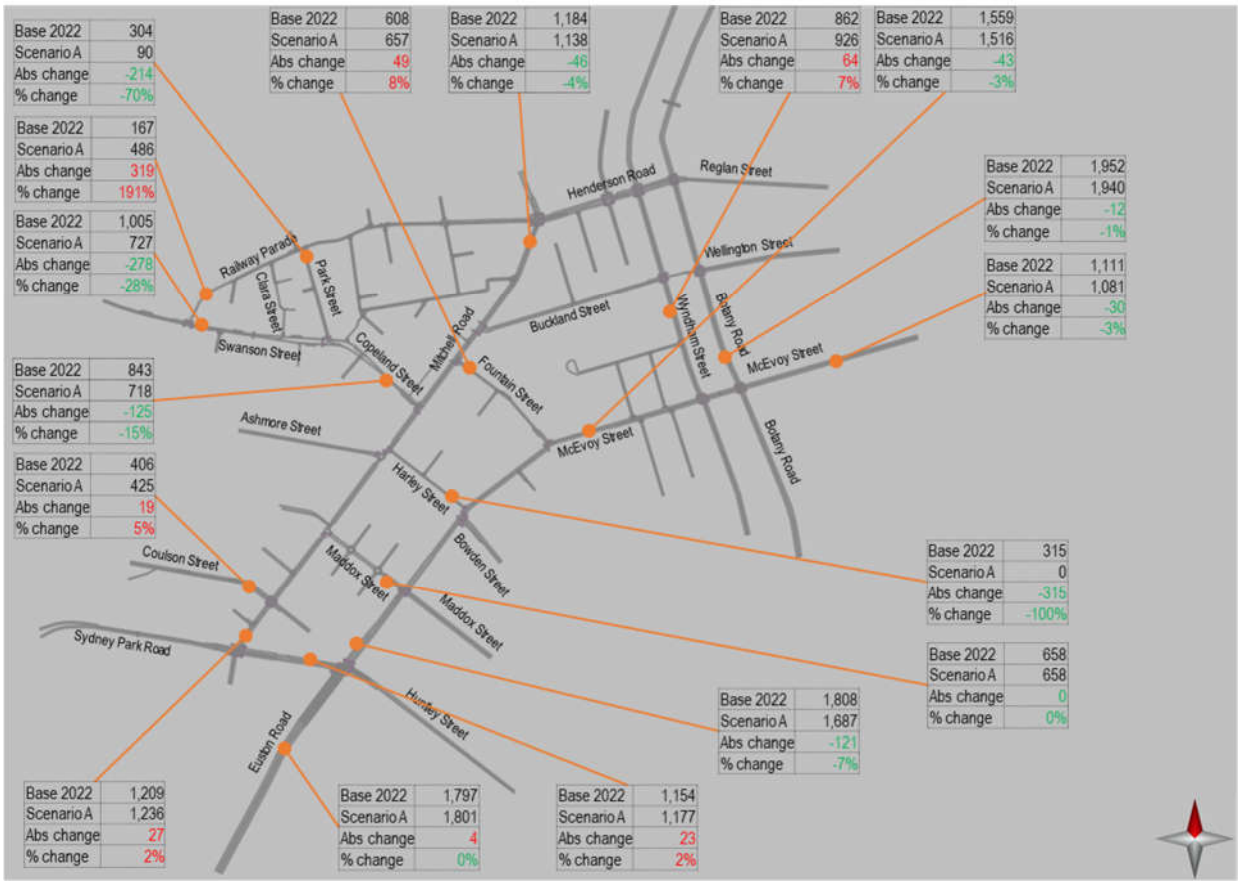


Figure 5.2: Changes in Traffic Volumes – AM Peak, Scenario A

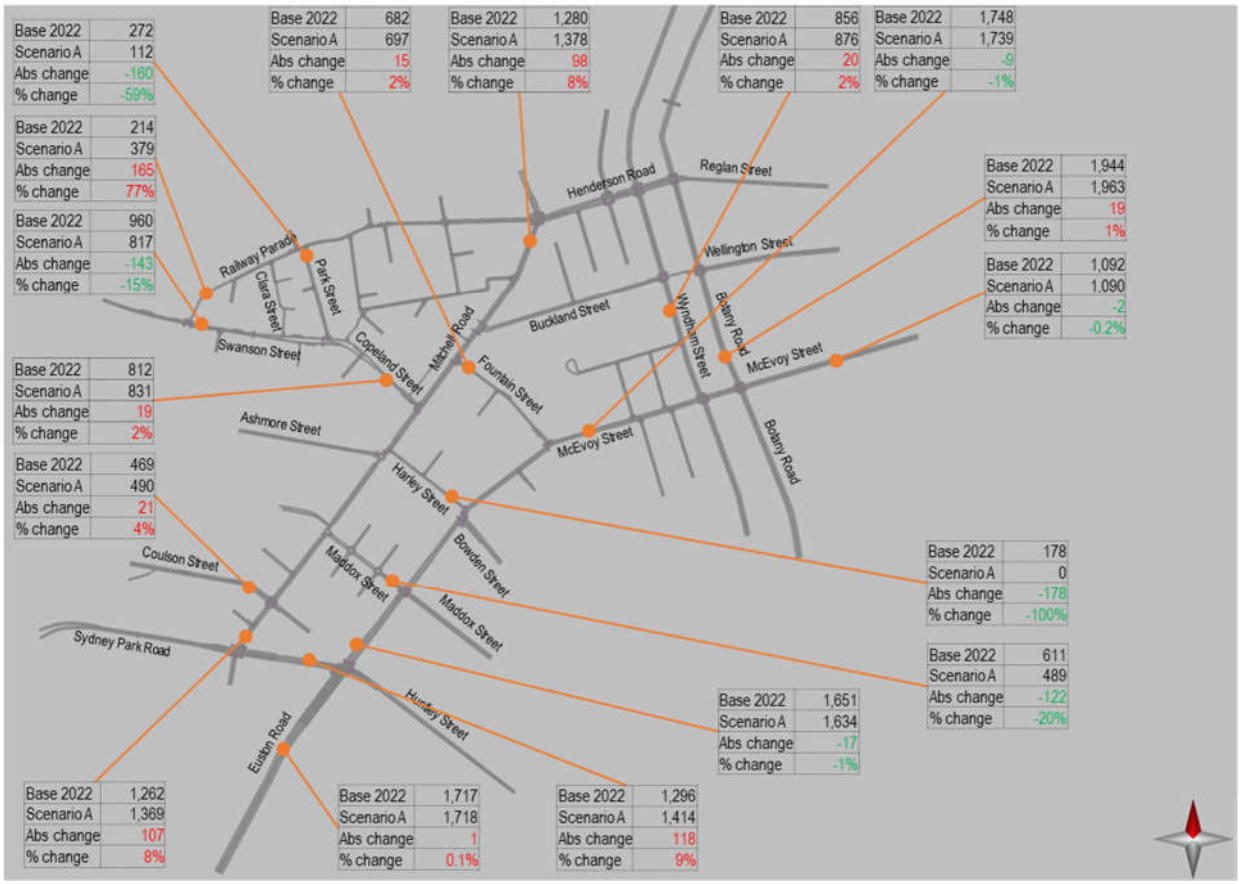


Figure 5.3: Changes in Traffic Volumes – PM Peak, Scenario A

5.2 Pinch Points, Local Access and Through Traffic

The introduction of traffic signals at the Mitchell Road intersections with Maddox Street and Ashmore Street will help in reducing maximum traffic delays at these two locations by providing all approaches to the intersection 'a fair go'. The heavily 'tidal' flow at the existing roundabouts means that long delays can occur on some approaches and not others at times.

The closure of Harley Street at McEvoy Street will increase traffic flows on Mitchell Road and Fountain Street. However, this will not contribute to increased delays to traffic at these locations.

The proposed Harley Street closure will also reduce the number of available access routes for residents and local businesses with the Mitchell Road / Harley Street intersection becoming the primary access point. Some residents may also use Maddox Street and access Harley Street via the existing laneways including the Euston Lane and Lawrence Lane.

Traffic flows on Harley Street are already low compared to other east-west streets between Mitchell Road and Euston Road – McEvoy Street. The complete removal of through traffic would further improve the residential amenity of Harley Street.

5.3 Public Transport Considerations

The introduction of traffic signals at the Mitchell Road intersections with Maddox Street and with Ashmore Street will reduce AM peak northbound travel times on Mitchell Road by over 2.5 minutes. This will improve bus travel times and travel time reliability.

5.4 Walking Considerations

The introduction of a raised shared pedestrian and cycle crossing on Swanson Street near Park Street will reduce traffic speeds on Swanson Street, thereby improving pedestrian safety.

Traffic calming in Maddox Street will reduce vehicle speeds on Maddox Street making this street safer and more pleasant for walking along and crossing.

The introduction of traffic signals at the Mitchell Road intersections with Maddox Street and with Ashmore Street will provide controlled crossing facilities for pedestrians. This will improve pedestrian and cyclist safety at these two locations.

The proposed Coulson Road narrowing will reduce traffic speeds, thereby improving pedestrian conditions. The provision of a Continuous Footpath Treatment (CFT) will reduce the risk and severity of vehicle-pedestrian collisions.

5.5 Cycling Considerations

The proposed traffic calming on Mitchell Road between Harley Street and Ashmore Street will improve cyclist safety. The speed reduction would also be likely to reduce the likelihood and consequence of crashes in this area.

The introduction of a raised shared pedestrian and cycle crossing on Swanson Street near Park Street will reduce traffic speeds on Swanson Street, thereby improving its safety for cycling

Traffic calming in Maddox Street will reduce vehicle speeds on Maddox Street making this street safer and more pleasant for cycling.

The traffic signals at the Mitchell Road intersections with Maddox Street and with Ashmore Street will provide controlled crossing facilities for cyclists. This is likely to improve cyclists' safety at these two locations.

The improvements at the Mitchell Road / Huntley Street intersection and particularly the provision of a segregated cycleway along the eastern side of Mitchell Road will improve cyclists safety.

The proposed Coulson Road narrowing will help reduce traffic speeds, thereby improving cyclists transport conditions.

5.6 Option Specific Findings

In general, Scenario A improves traffic performance within the study area. Relatively minor increases in traffic flows on Fountain Street and on Mitchell Road as a result of the Harley Street closure at McEvoy Street will be offset by local network traffic volume reduction, most notably on Harley Street, plus a range of active transport benefits associated with slower moving traffic through the area. Specific impacts and benefits of Scenario A are detailed below.

5.6.1 Park Street Right Turn Ban (1.2)

The right turn closure in and out of Park Street at its intersection with Railway Parade will substantially reduce through traffic on Park Street. Traffic flows on Park Street will be reduced by 59% to 70% (or 160 to 214 veh/hr).

5.6.2 Traffic Signals at Mitchell / Maddox (6.1) and Mitchell / Ashmore (11.1)

The existing roundabout intersections at Mitchell / Maddox and Mitchell / Ashmore operate at or near capacity in peak periods, resulting in long queues of slow-moving traffic in both the northbound and southbound directions along Mitchell Road.

The proposed introduction of traffic signals will improve the operation of both intersections and more equitably balance queues and delays, whilst better catering for walking and cycling movements. There is a reduction in travel time along the Mitchell Road corridor under this scenario.

5.6.3 Other Measures (12.1, 7.1 and 3.1)

The following measures will improve the safety and convenience of walking and cycling:

- Road narrowing and CFT at Coulson Street by reducing traffic speeds
- Traffic calming at Mitchell Road and Maddox Street by reducing traffic speeds
- Mitchell Road / Hartley Street intersection improvements via a separated cycleway east of Mitchell Road.

5.7 Options to Take Forward

A total of nine improvement options were considered as part of Scenario A. A short description of each option and their contribution to traffic performance and active transport safety are summarised in Table 5.5.

All nine improvement options will contribute to improved traffic performance and active transport safety / convenience. The closure of Harley Street at McEvoy Street will limit the access options to local residents and businesses. However, the closure will eliminate through traffic, resulting in a 70% reduction of Harley Street traffic. Importantly, due to various other network improvement measures, the displaced traffic from the closure will not contribute to a decline in network performance elsewhere. All nine improvement options have been recommended.

Table 5.5: Scenario A - Assessment Outcomes Summary

Item	Improvements	Impacts	Recommended?
1.2	Right turn bans at the Park Street / Railway Parade intersection	Reduces traffic flows on Park Street significantly (over 70%). Increases traffic on Henderson Road but this will have no impacts on travel time	**Yes**
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)	Improves active transport safety. The measure does not have any measurable impacts on traffic	**Yes**
3.1	Maddox Street Traffic Calming	Reduces PM traffic flows by 20% (or 122 veh/hr)	**Yes**
5.1	Closure of Harley Street at McEvoy Street	Reduces traffic flows on Harley Street by 70%. Improves active transport safety and accessibility.	**Yes**
6.1	Maddox Street / Mitchell Road Street traffic signals	Reduces intersection delays and queues. The provision of controlled crossing facilities will also improve active transport safety	**Yes**
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures	Reduces traffic speeds but with limited impacts on travel time. Improves cyclist safety	**Yes**
8.1	Mitchell Road / Huntley Street intersection improvement	No significant impacts on intersection capacity. Improves active transport safety by reducing crossing widths	**Yes**
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street	Reduces intersection delays and queues. The provision of controlled crossing facilities will also improve active transport safety	**Yes**
12.1	Road narrowing and CFT on side roads along Coulson Street	Reduces traffic speeds and would improve active transport safety	**Yes**

6. NETWORK SCENARIO B - OUTCOMES OF THE MODELLING ASSESSMENT

I.D.	Option description
1.1	Close Park Street at Railway Parade
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)
4.1	Closure of Harley Street at Mitchell Road
6.1	Maddox Street / Mitchell Road traffic signals
9.1	Closure of Maddox Street at Euston Road
10.1	Bus Only Right Turn from Mitchell Road to Sydney Park Road
13.1	Re-orientate Mitchell Road / Copeland Street for N to W priority (single lanes to / from Mitchell)
14.1	Re-orientate Mitchell Road / Fountain Street priority (single lanes to / from Mitchell)

Network Modelling Outputs: Key Network Statistics

- Average delay across the study area would increase on average by 38% or 35 seconds (AM peak) and 71% or 51 seconds (PM peak) due to extra congestion

Network Modelling Outputs: Vehicle Travel Times

- The southbound travel time on Mitchell Road will increase by 10 minutes in the AM peak and 9 minutes in the PM peak due to congestion at the southern end of Mitchell Road stemming from the Euston Road / Sydney Park Road traffic signals which are heavily congested by the changes
- The AM peak and the PM peak travel times along the Euston Road / McEvoy Street route will increase substantially due to increased congestion resulting from extra traffic diverted from Mitchell Road
- The re-orientation of Mitchell Road's intersections with Copeland Street and with Fountain Street (Options 13.1 and 14.1) introduces substantial delays to Mitchell Road in the PM peak. The re-routing caused by these changes adversely impact the Sydney Park Road / Euston Road / Huntley Street intersection.

Network Modelling Outputs: Traffic Volume Changes

- Changing the right turn from Mitchell Road into Sydney Park Road to buses only will increase southbound traffic on Euston Road by 11% or 100 veh/hr (PM Peak). The right turn movement from Sydney Park Road into Euston Road will increase by 41% or 170 veh/hr (PM Peak) and the right turn movement from Botany Road (north) to McEvoy Street will increase by 10% or 50 veh/hr (PM Peak)
- The closure of Maddox Street at Euston Road will reduce its traffic by 54% or 327 veh/hr (AM peak) and 61% or 404 veh/hr (PM peak)
- The closure of Harley Street at Mitchell Road will reduce its traffic by 60% or 106 veh/hr (AM peak) and 74% or 232 veh/hr (PM peak).

Network Modelling Outputs: Maintaining Local Vehicle Access While Reducing Through Traffic

- The full closure of Park Street at Railway Parade will limit access for its residents to be via the Copeland Street intersection only with much longer travel times, particularly to travel west
- The closure of both Maddox Street at Euston Road and Harley Street at Mitchell Road do not substantially reduce local traffic access because a number of other streets are available.

Network Modelling Outputs: Outcomes for Other Road Users

- Reduce traffic on Park Street, Maddox Street and Harley Street will improve pedestrian comfort and safety
- The controlled crossings at Maddox Street and Mitchell Road and raised crossing on Swanson Street will improve pedestrian and cyclist safety
- Much longer delays along Mitchell Road will impact bus travel times and reduce bus travel time reliability.

Options to Take Forward

Of the eight options considered as part of Scenario B, Options 2.1 and 6.1 have been recommended for implementation.

The restriction of right turns from Mitchell Road to Sydney Park Road to bus only is the dominant influence on the performance of the local network in Scenario B. Without upgrades to the Sydney Park Road / Euston Road intersection, its impacts into the local traffic network are substantial. This option is not recommended to proceed.

6.1 Alternative Route Assumptions Needed for Option 10.1

Option 10.1 which is the proposed 'bus only right turn lane' from Mitchell Road to Sydney Park Road will displace traffic to alternative routes. Some parts of these routes are outside of the boundary of the traffic model.

For the purpose of this assessment, the following three alternative routes have been identified and assumed in the Scenario B modelling:

- **Route A:** Botany Road / McEvoy Street / Euston Road
- **Route B:** Section of Mitchell Road / Fountain Street / Euston Road
- **Route C:** Mitchell Road / Sydney Park Road.

These routes are shown in Figure 6.1.

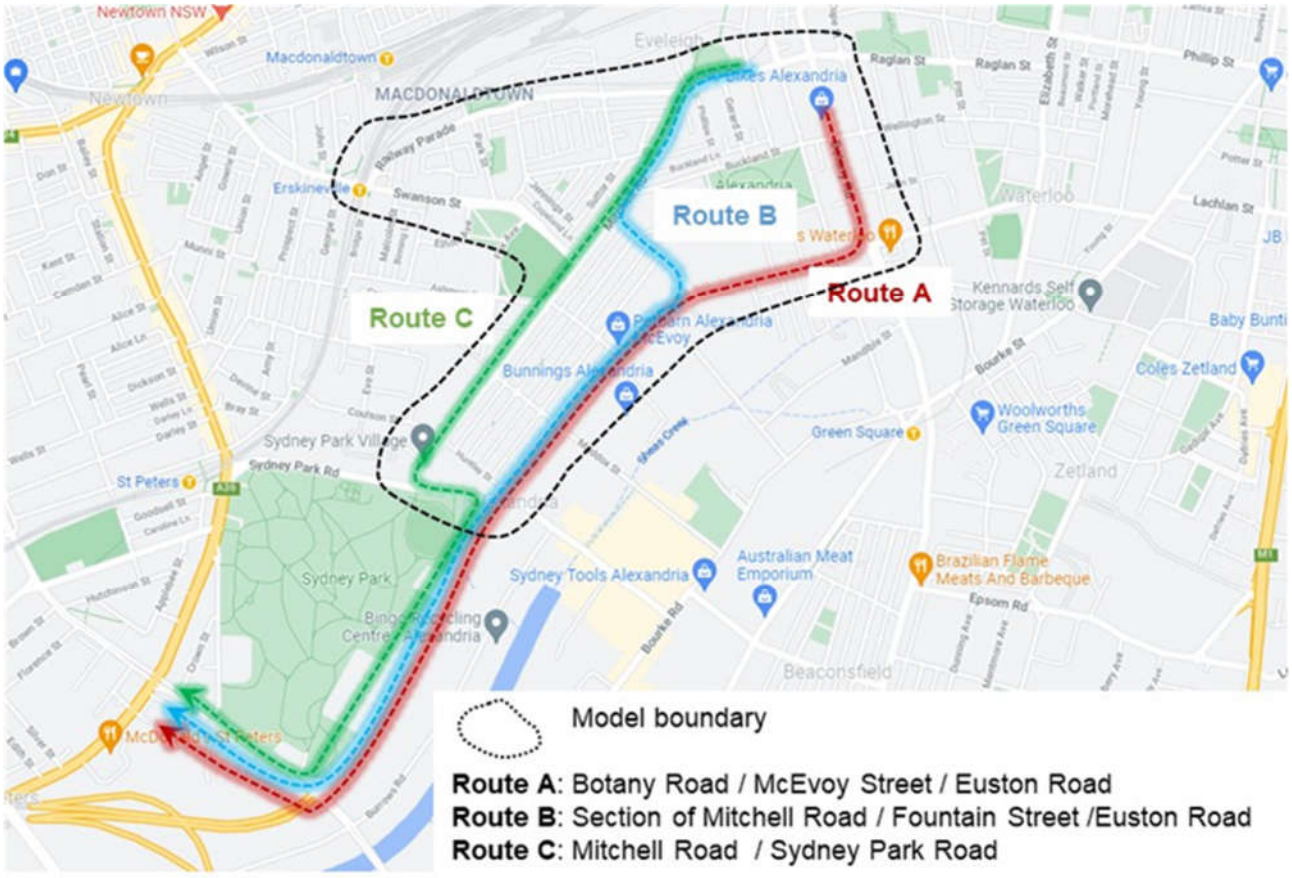


Figure 6.1: Alternative Local Routes with the Closure of the Right Turn from Mitchell Road

In addition to the above three routes, if right turns from Mitchell Road into Sydney Park Road were banned for general traffic, drivers have the option to choose the following routes:

- **The Swanson Street - Erskineville Road route:** However, known congestion in the Erskineville - Newtown areas would limit this demand
- **The Coulson Street route:** However, congestion at the Concord Street / King Street intersection would limit this demand.

The three Routes (A, B and C) were assumed in the modelling to be the only routes that diverted traffic due to Option 10.1 would take.

6.2 Modelling Results

The Scenario B improvement options were added to the 2022 base traffic model and this model was run. Full modelling results are included in **Appendix C** and a summary is provided below.

6.2.1 Network Statistics

Table 6.1 and Table 6.2 present the AM peak and PM peak network statistics for Scenario B compared to the Base Case.

Table 6.1: Scenario B, AM Peak, Network Statistics

Parameters	Base Case 2021	Base Case 2022	Scenario B
Average Delay (s)	96	93	128
Average Network Speed (km/h)	17.6	17.8	15.0
Vehicle Kilometres Travelled (VKT)	23,228	23,241	23,661
Vehicle Hours Travelled (VHT)	1,371	1,355	1,744
Stops (Per Vehicle)	3.1	3.0	4.0
Completed Trips	26,186	26,541	26,608
Incomplete Trips	309	349	1,256
Unreleased Vehicles	-	2	182
Total Trips	26,495	26,892	28,046

Table 6.2: Scenario B, PM Peak, Network Statistics

Parameters	Base Case 2021	Base Case 2022	Scenario B
Average Delay (s)	70	71	122
Average Network Speed (km/h)	20.9	20.9	16.0
Vehicle Kilometres Travelled (VKT)	23,329	23,301	24,045
Vehicle Hours Travelled (VHT)	1,124	1,125	1,637
Stops (Per Vehicle)	2.4	2.4	4.0
Completed Trips	25,826	25,813	25,821
Incomplete Trips	311	307	436
Unreleased Vehicles	-	-	0
Total Trips	26,137	26,120	26,257

Key findings include:

- The average delay across the network would increase substantially due to increased congestion within the network: 35 seconds (or +38%) in the AM peak and 51 seconds (or +71%) in the PM peak
- Vehicle Hours Travelled (VHT) would increase between 29% (AM peak) and 46% (PM peak) when compared with Base Case in 2022.

6.2.2 Travel Times

The AM peak and PM peak travel times are compared in Table 6.3 and Table 6.4. The key observations include:

- The southbound travel time on Mitchell Road will increase substantially; about ten minutes in the AM peak and nine minutes in the PM peak. This is due to congestion at the southern end of Mitchell Road with traffic queued to turn left to then turn right from Sydney Park Road into Euston Road

- Travel times along the Euston Road / McEvoy Street route will increase substantially in the both the AM and PM peaks. This is due to increased congestion resulting from diverted traffic from Mitchell Road due to the 'bus only right turn' at the Mitchell Road / Sydney Park Road intersection.

Table 6.3: Scenario B, AM Peak, Travel Times

Routes	Direction	Base 2021	Base 2022	Scenario A
Route 1 – Mitchell Road	Northbound	7:10	8:14	7:18
	Southbound	4:25	4:37	14:26
Route 2 – Euston Road / McEvoy / Wyndham Street	Northbound	10:35	8:21	10:55
	Southbound	5:58	5:51	9:20
Route 3 – Henderson Road	Northbound	5:56	6:02	5:07
	Southbound	4.03	4:00	3:28
Route 4 – Swanson Street / Copeland Street	Northbound	2.37	2:35	1:56

Table 6.4: Scenario B, PM Peak, Travel Times

Routes	Direction	Base 2021	Base 2022	Scenario A
Route 1 – Mitchell Road	Northbound	5:08	5:03	6:08
	Southbound	6:08	7:03	16:15
Route 2 – Euston Road / McEvoy / Wyndham Street	Northbound	5:54	5:46	6:39
	Southbound	5:28	5:27	7:45
Route 3 – Henderson Road	Northbound	5:56	3:45	2:26
	Southbound	4.03	4:17	5:34
Route 4 – Swanson Street / Copeland Street	Northbound	3.16	2:12	1:37

6.2.3 Traffic Volumes

The changes in traffic volumes at various key locations within the study area during the AM and PM peak periods are shown in Figure 6.2 and Figure 6.3. The key observations include:

- The proposed ***closure of Park Street*** at Railway Parade means Park Street will only be used for access to local residents
- As in Scenario A, the opening of ***Railway Parade to two-way operation*** will reduce traffic volumes on Swanson Street by 23% (AM peak) and 24% (PM peak), or 217 and 237 veh/hr
- The ***Bus Only Right Turn*** will increase the PM peak southbound traffic on Euston Road by over 100 veh/hr (or +11%). The right turn ban will also increase eastbound traffic on Sydney Park Road between Mitchell Road and Euston Road. In the PM peak, the right turn movement from Sydney Park Road to Euston Road will increase by 170 veh/hr (or 41%), resulting in long queues on this approach
- The PM peak right turn movement from Botany Road (north) to McEvoy Street will increase by 50 veh/hr (or 10%) resulting in long queues on the Botany Road approach
- The closure of Maddox Street at Euston Road will reduce traffic volumes by 54% (AM peak) and 61% (PM peak), or 327 and 404 veh/hr which is substantial, but comes with a consequence of significantly impacting the ease to which local residents can leave the local area
- The closure of Harley Street at Mitchell Road will reduce traffic volumes by 60% (AM peak) and 74% (PM peak) or 106 and 232 veh/hr.

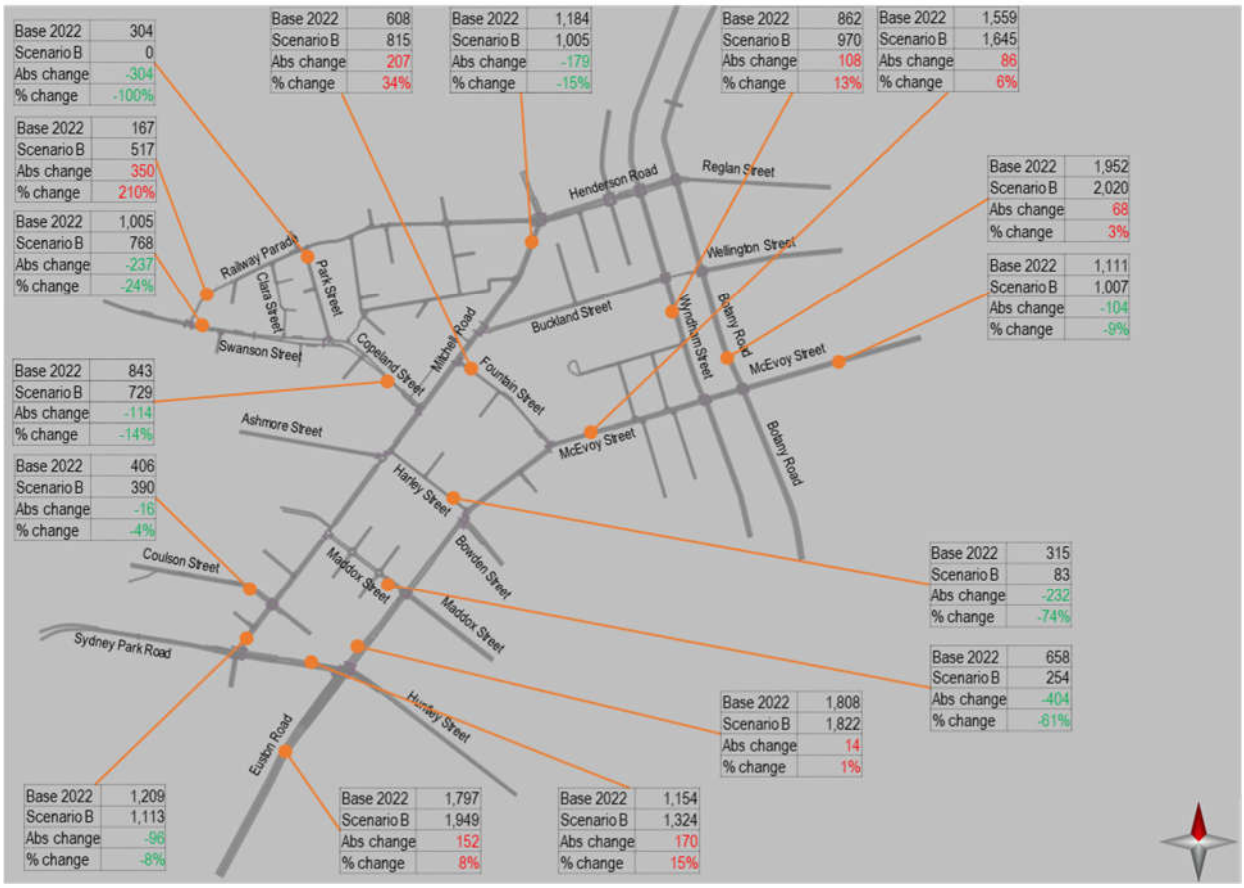


Figure 6.2: Changes in Traffic Volumes - AM Peak, Scenario B

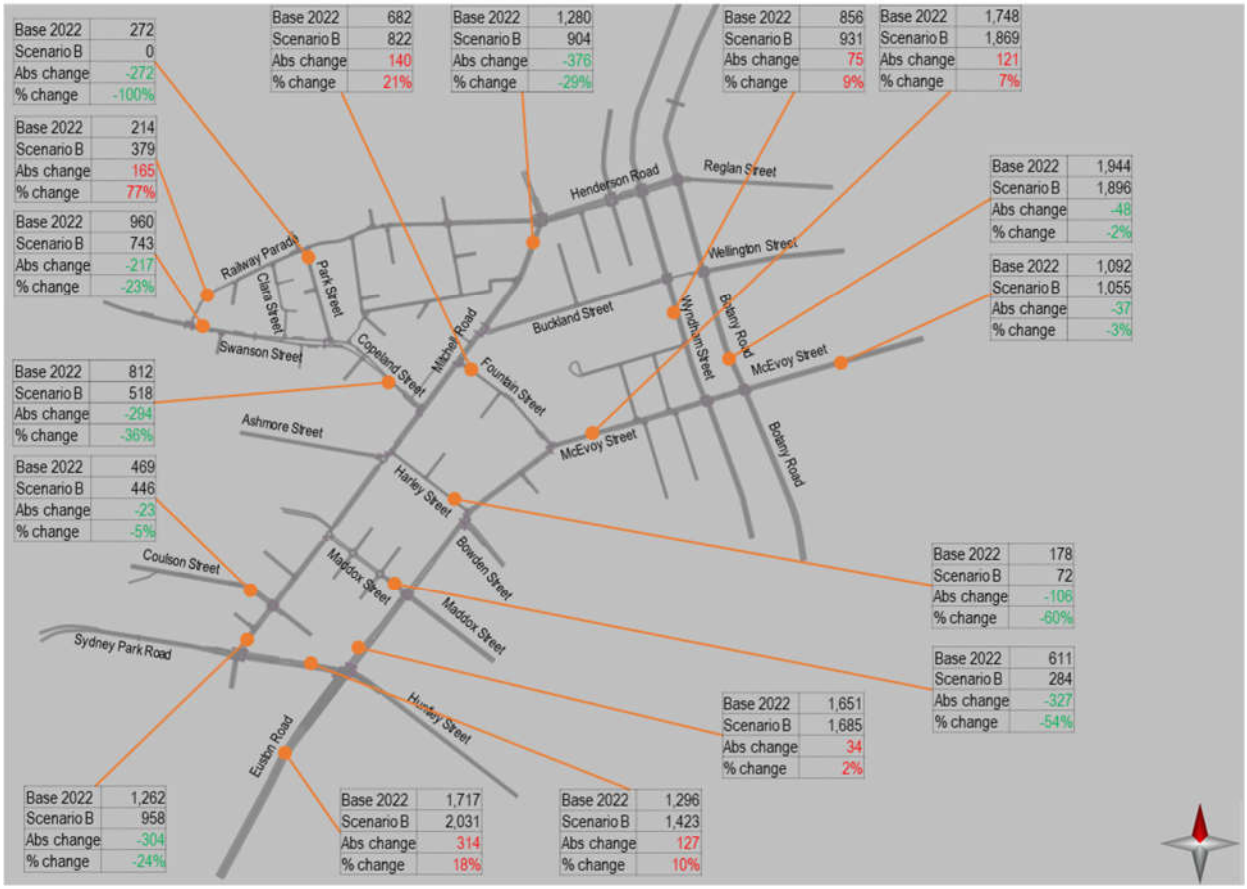


Figure 6.3: Changes in Traffic Volumes – PM Peak, Scenario B

6.3 Pinch Points, Local Access and Through Traffic

6.3.1 Pinch Points

The increased right turn flows from Sydney Park Road to Euston Road are shown in the modelling to result in long queues on the Sydney Park Road approach. The queues will extend back along Mitchell Road up to Maddox Street resulting in long delays to the southbound traffic and consequently affecting side street exits from Coulson Street, as shown in Figure 6.4.

Figure 6.4: Queues of Right Turn Traffic along Mitchell Road – PM Peak, Scenario B

Delays and queues on Euston Road due to queues-back from Fountain Street from the traffic model are shown in Figure 6.5. The left turn volume into Fountain Street would increase substantially (200-300 veh/hr) due to the closure of Maddox Street at Euston Road and Harley Street at Mitchell Road.

Figure 6.5: Queues on Euston Road, Scenario B

Delays and queues to Botany Road southbound traffic due to the increased right turn flows from Botany Road to McEvoy Street as identified in the traffic model are shown in Figure 6.6.

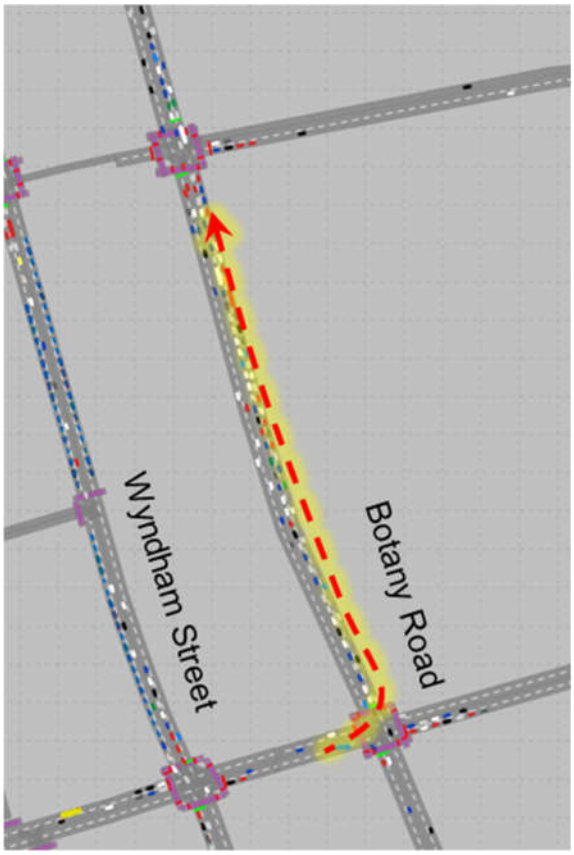


Figure 6.6: Queues on Botany Road, Scenario B

Additional right turn traffic is shown in the modelling to result in long queues in Fountain Street as shown in Figure 6.7.

Figure 6.7: Queues on Fountain Road, Scenario B

6.4 Public Transport and Active Transport

The introduction of a raised shared pedestrian and cycle crossing on Swanson Street near Park Street will reduce traffic speeds on Swanson Street, thereby improving walking and cycling convenience and safety.

The options to re-orientate the Mitchell Road intersections with Copeland Street and with Fountain Street will reduce the pedestrian crossing distances, resulting in shorter crossing times.

The reduction in traffic flows on Maddox Street, Harley Street and Park Street as a result of closures will reduce pedestrian-vehicle and cyclist-vehicle conflicts.

The modelling shows that the traffic signals at Mitchell Road / Maddox Street will reduce congestion (compared to the roundabout there now) and improve travel times for northbound traffic on Mitchell Road during the AM peak which will also reduce northbound bus travel times. However, the proposed 'bus only right turn' at Mitchell Road will substantially increase southbound travel times on Mitchell Road. Long queues on this approach will also increase southbound bus travel times and block access to the bus only right turn.

6.5 Option-Specific Findings

6.5.1 Park Street Closure (1.1)

The closure of Park Street at Railway Parade will result in:

- Increased traffic flows on Railway Parade between Swanson Street and Park Street by 200 to 300 veh/hr (PM Peak)
- No significant impacts on travel time along the Railway Parade / Henderson Road corridor
- Railway Parade intersections with Swanson Street and Henderson Road / Mitchell Road operating well within their capacity with delays remaining similar to the Base Case.

6.5.2 Mitchell Road to Sydney Park Road Bus Only Right Turn (10.1)

The traffic route diversions due to the Mitchell Road to Sydney Park Road right turn closure would:

- **Botany Road / McEvoy Street**: Increase Botany Road to McEvoy Street right turn vehicles by 50 to 70 veh/hr, substantially increasing delays
- **McEvoy Street / Wyndham Street**: Increase southbound volumes on McEvoy Street
- **Euston Road / Sydney Park Road**: Increase southbound traffic on Euston Road by 15%-26% (100 to 150 veh/hr)
- **Euston Road / Sydney Park Road**: Substantially increase the right turn from Sydney Park Road to Euston Road by 200% in the AM peak and 400% in the PM peak (or 100-170 veh/hr)
- **Fountain Street**: Increase the right turn from Fountain Street by 20-50% (or 40-60 veh/hr)
- **Mitchell Road**: Reduce southbound traffic 30%-40% (or 130-290 veh/hr).

6.6 Options to Take Forward

A total of eight improvement options were considered as part of Scenario B. A short description of each option and their contribution to traffic performance and active transport safety are summarised in Table 6.5. The key outcomes include:

- Two of the eight options will contribute to improved traffic performance and active transport safety: Item 2.1, Raised Pedestrian and Cycle Crossing at Swanson Street near Park Street and Item 6.1, Maddox Street / Mitchell Road Traffic Signals. These options were also included in the Scenario A assessment
- The proposed closure of Park Street at Railway Parade will significantly reduce Park Street traffic flows. However, this will limit access options for local residents to be via the Copeland Street intersection only and introduce much longer re-routing distances, particularly for local traffic heading west. The proposed right turn ban to and from Park Street which was included in Scenario A assessment is preferred over its complete closure
- The proposed closure of Maddox Street will significantly reduce traffic flows in this street. However, the displaced traffic would contribute significantly to congestion and delays in the wider road network. The Bitzios Consulting 2017 assessment identified similar traffic impacts stating that "*the two-way traffic movement on Fountain Street would increase by over 600 vehicles/ hour, a 90% increase".* Additionally, 600 vehicles could not enter into the study area from Euston Road and these vehicles are likely to queue back to the St Peters interchange.

  Although the closure of Maddox Street was recommended in the 2017 study along with the closure of Harley Street, the objectives of that study were far more heavily weighted towards removing peak period through traffic off local streets without over-emphasising the cumulative impacts of multiple closures on state roads. The report did however document the state road impacts should Maddox Street and Harley Street both be closed. TfNSW subsequently opposed the closure of both Maddox Street and Harley Street. Taking a more balanced and more pragmatic approach in this study, only one of these streets has been recommended to be closed, and the preferred street is Harley Street. For Maddox Street, traffic calming measures have been proposed instead with the objective of managing the speed and types of through traffic in Maddox Street in peak periods and discourage it in off peak periods.
- The Bus Only Right Turn from Mitchell Road to Sydney Park Road will substantially alter traffic flows in the wider area network. The displaced traffic will substantially increase congestion and delays on Botany Road, Euston Road / McEvoy Street southbound, Mitchell Road and the section of Sydney Park Road between Mitchell Road and Euston Road. Whilst it achieves its purpose of a reduction in traffic on Mitchell Road, it puts additional pressure on other local east-west routes for traffic to travel westwards. Also, the queues that propagate back up Mitchell Road from Sydney Park Road block other accesses, to the detriment of local accessibility. This option is not recommended
- The objective of the proposed re-orientation of the Mitchell Road intersections with Copeland Street and Fountain Street was to deter traffic from the Mitchell Road corridor south of Copeland Street by reducing through traffic capacity and promoting the dog-leg movement between Fountain Street and Copeland Street. However, the proposed Bus Only Right Turn at Mitchell Road, which is included in Scenario B, substantially reduced through traffic from the Mitchell Road corridor anyway
- A supplementary model scenario (Scenario C) revealed that under the Scenario A network, the two intersection orientations would operate with significant congestion primarily because there would still be reasonably high traffic demand to / from Mitchell Road. The intersection footprint requirements to address queuing and congestion impacts with these revised orientations would be prohibitive in terms of costs and impacts. These options are not being recommended.

Table 6.5: Scenario B Assessment Outcomes Summary

Item	Improvements	Impacts	Recommended?
1.1	Close Park Street at Railway Parade	Reduces traffic flows on Park Street significantly. Increases traffic on Henderson Road but this will have no impacts on the travel time. Limits resident access. The alternative proposal of 'Right Turn Ban' is preferred.	No
2.1	Raised Ped/ Cycle Crossing on Swanson Street near Park Street	Improves active transport safety. The measure does not have any measurable impacts on traffic.	Yes
4.1	Closure of Harley Street at Mitchell Road	Reduces traffic flows on Harley Street and improves active transport safety and accessibility but reduces vehicular accessibility. Closure at McEvoy Street is preferred.	No
6.1	Maddox Street / Mitchell Road traffic signals	Reduces intersection delays and queues. The provision of controlled crossing facilities will also improve active transport safety.	Yes
9.1	Closure of Maddox Street at Euston Road	Substantially reduces traffic flows on Maddox Street (60%). However, the displaced traffic would impact the wider road network. The alternative of traffic calming measures is preferred.	No
10.1	Bus Only Right Turn from Mitchell Road to Sydney Park Road (Council objected)	Substantially reduces traffic flows on Mitchell Road (30-40%). However, the displaced traffic would significantly impact the wider road network. Traffic flows at Euston Road / SPR would increase by 5-7% pushing this vulnerable intersection to operate close to capacity during the PM peak (LoS E). Congestion on McEvoy Street and Mitchell Road would increase substantially.	No
13.1	Re-orientate Mitchell Road / Copeland Street for N to W priority (single lanes to / from Mitchell)	Benefits active transport users as the crossing widths are expected to reduce. Intersection upgrade footprint requirements are excessive. Should TfNSW provide further upgrades to increase PM peak southbound capacity on Euston Road at Sydney Park Road, then the opportunities to re-orientate Mitchell Road / Copeland Street and Mitchell Road / Fountain Street could be re-investigated.	No
14.1	Re-orientate Mitchell Road / Fountain Street priority (single lanes to / from Mitchell)	Benefits active transport users as the crossing widths are expected to reduce. Intersection upgrade footprint requirements are excessive. Should TfNSW provide further upgrades to increase PM peak southbound capacity on Euston Road at Sydney Park Road, then the opportunities to re-orientate Mitchell Road / Copeland Street and Mitchell Road / Fountain Street could be re-investigated.	No

Following consultation with Council on the draft options for recommendation, and the exclusion of the closure of Maddox Street from those recommendations, a further measure to deter through traffic, and particularly trucks, was proposed as an addition to Item 3.1 in Scenario A. The left turn from Euston Road into Maddox Street has been proposed to be closed and these movements from the south would be re-directed via Sydney Park Road and Mitchell Road which is a route with sufficient capacity to accommodate this traffic without excessive congestion.

7. OPTIONS PRIORITISATION

7.1 Options for Implementation

From the Scenario A and Scenario B modelling, the new options recommended are:

- **Option 1.2:** Right turn ban from Park Street into Railway Parade
- **Option 2.1:** Raised Ped / Cycle Crossing (Swanson Street / Park Street)
- **Option 3.1:** Maddox Street Traffic Calming (plus left turn ban from McEvoy into Maddox)
- **Option 5.1:** Closure of Harley Street at McEvoy Street
- **Option 6.1:** Maddox Street / Mitchell Road traffic signals
- **Option 7.1:** Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures
- **Option 8.1:** Mitchell Road / Huntley Street intersection improvement
- **Option 11.1:** Traffic signals at Mitchell Road / Harley Street / Ashmore Street
- **Option 12.1:** Road Narrowing and CFT on side roads along Coulson Street.

7.2 Indicative Cost Estimates

'High-level' Cost estimates have been prepared for the traffic-upgrades items listed in Table 7.1. The Cost estimates were based on the following key assumptions:

- The unit rates were based on a number of sources and generally based on our experience of working in similar projects in and around Sydney
- The final estimated Cost was adjusted for inflation using Consumer Price Index (CPI) data
- A 30% allowance was made for 'Contingency and Design'.

Table 7.1 provides the item-based Cost estimates.

Table 7.1: High Level Cost Estimates (2021 dollars)

Item	Improvements	Implementation Cost
1.2	Right turn bans at the Park Street / Railway Parade intersection[1]	$15,900
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)[2]	-
3.1	Maddox Street Traffic Calming and left turn ban from Euston Road	$78,600
5.1	Closure of Harley Street at McEvoy Street	$39,900
6.1	Maddox Street / Mitchell Road traffic signals[3]	-
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures	$126,100
8.1	Mitchell Road / Huntley Street intersection improvement[4]	-
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street	$369,700
12.1	Road Narrowing and CFT on Side Roads along Coulson Street[5]	$108,600
Total		**$738,800**

[1] *Low-Cost item for a specific residential catchment. May be suitable for early implementation*
[2] *Construction now complete*
[3] *Committed for construction by 2026 as part of a nearby development approval*
[4] *Construction scheduled for October 2022*
[5] *Coulson Street pedestrian crossing and Eve Street continuous footpath treatment committed for FY22/23*

No cost estimates have been prepared for the projects that are not associated with traffic-influencing improvements (i.e. not modelled) because those projects are mostly either minor works / maintenance items or require separate scoping studies to detail the extent of works, such as the intersection footprint narrowing recommendations.

7.3 Staging and Trigger Considerations

An MCA was undertaken by assigning a score for each of the key criteria established for each of the six transport strategy objectives as discussed in Section 4.1. The detailed score sheets for the nine improvement options is included in **Appendix D**. The summary is provided in Table 7.2 with key findings as follows:

- The proposed traffic signals at Mitchell / Ashmore and Mitchell / Maddox Street rank as one and two respectively, providing benefits across many criteria
- The closure of Harley Street at McEvoy Street and Maddox Street traffic calming also rank highly as these will improve safety and accessibility for active transport users.

Table 7.2: MCA Results (excluding Cost)

I.D.	Improvements	MCA Score (/5)	Rank
1.2	Right turn bans at the Park Street / Railway Parade intersection	2.35	7
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)	2.3	8
3.1	Maddox Street Traffic Calming and left turn ban from Euston Road	3.15	4
5.1	Closure of Harley Street at McEvoy Street	3.5	3
6.1	Maddox Street / Mitchell Road traffic signals	3.95	2
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures	3.05	5
8.1	Mitchell Road / Huntley Street intersection improvement	2.15	9
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street	4.05	1
12.1	Road Narrowing and CFT on Side Roads along Coulson Street	3	6

Following the initial ranking, construction costs were included and given a weighting of 20% versus the 'benefits' (i.e. as per the MCA above) weighting of 80%. At the options analysis phase, it is common to have a much lower weighting on construction cost compared to benefits given the uncertainties in the cost estimates and given that the primary purpose of the assessment is to create a relative ranking of projects to further investigate and develop more detailed funding cases for. That is, funding should be considered less of a limiting factor in this stage of planning. The overall score and ranking (including construction Cost) is presented in Table 7.3.

Table 7.3: Overall Ranking (Including Construction Cost)

I.D	Traffic Upgrade Item	Benefits (/5)	Costs (/5)	Overall (/5)	Rank
5.1	Closure of Harley Street at McEvoy Street	3.50	4.73	3.75	1
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street	4.05	1.04	3.45	2
3.1	Maddox Street Traffic Calming	3.15	4.47	3.41	3
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures	3.05	3.77	3.19	4
6.1	Maddox Street / Mitchell Road traffic signals	3.95	0.00	3.16	5
12.1	Road Narrowing and CFT on Side Roads along Coulson Street	3.00	3.40	3.08	6
1.2	Right turn ban from Park Street into Railway Parade[1]	2.35	5.00	2.88	7
2.1	Raised Ped / Cycle Crossing (Swanson Street / Park Street)	2.30	4.31	2.70	8
8.1	Mitchell Road / Huntley Street intersection improvement	2.15	4.09	2.54	9

[1] *Low-Cost item for a specific residential catchment. May be suitable for early implementation*

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 Key Conclusions

The opening of the WestConnex St Peters Interchange, and the road and intersection changes constructed in association with the interchange, has seen changes in traffic patterns in Alexandria – Erskineville. Council projects in the area in recent years and those proposed to be completed by mid-2023 will improve walking and cycling conditions into the future.

The origin-destination data collected for this study revealed that, excluding through traffic on Euston Road – McEvoy Street, that approximately 60% of AM and PM peak period traffic entering or leaving the study area has an origin or a destination within the area. Also, traffic movements that both start and end within the study area were not able to be captured in the survey. This means that more restrictive measures to remove traffic from the study area, like street closures, will also affect local trips and create long re-routing distances are likely when entering and leaving the area. Much of this locally generated, re-routed traffic will also be on local streets in the study area, introducing other impacts.

More 'passive' measures such as traffic signals, traffic management schemes, reduced road widths, more pedestrian/cyclist priority locations and some turn prohibitions, aim to deter rather than remove through traffic whilst providing a slower speed environment to the benefit of walking and cycling safety. These measures, as included in Scenario A, provided network benefits while reducing traffic volumes in residential streets.

Indicative cost estimates have been prepared and of the recommended projects and an MCA-based ranking process completed to generate a prioritised list of projects, as listed in the following section.

8.2 Recommendations

Figure 8.1 shows the projects recommended for Council to implement and the projects are listed in priority order in Table 8.1:

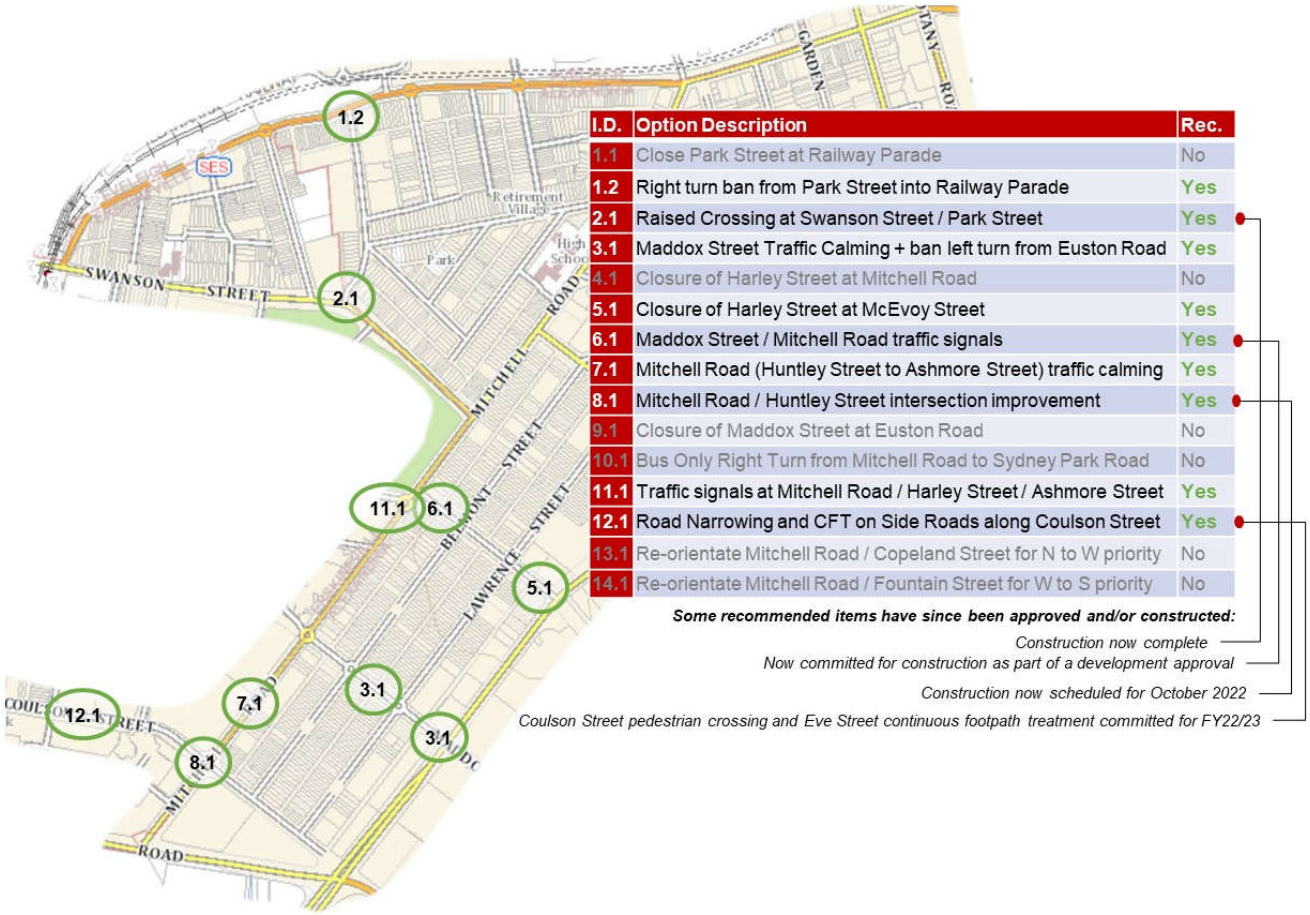


Figure 8.1: Recommended Works Package

Table 8.1: Recommended Projects and Costs in Priority Order

ID	Works Item	Indicative Construction Cost (2021 dollars)
5.1	Closure of Harley Street at McEvoy Street	$39,900
11.1	Traffic signals at Mitchell Road / Harley Street / Ashmore Street[4]	$369,700
3.1	Maddox Street Traffic Calming and left turn ban from Euston Road	$78,600
7.1	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures	$126,100
6.1	Maddox Street / Mitchell Road traffic signals[3]	-
12.1	Road narrowing and CFT on side roads intersecting Coulson Street[5]	$108,600
1.2	Right turn ban from Park Street into Railway Parade[1]	$15,900
2.1	Raised pedestrian / cyclist crossing at Swanson Street / Park Street[2]	-
8.1	Mitchell Road / Huntley Street intersection improvement[4]	-
	Total Indicative Cost to Council:	**$738,800**

[1] *Low-Cost item for a specific residential catchment. May be suitable for early implementation*
[2] *Construction now complete*
[3] *Committed for construction by 2026 as part of a nearby development approval*
[4] *Construction scheduled for October 2022*
[5] *Coulson Street pedestrian crossing and Eve Street continuous footpath treatment committed for FY22/23*

Recommendations for Minor Works items and further investigations are listed in Table 8.2.

Table 8.2: Recommended Minor Works and Further Investigations (not in priority order)

Road Space Reallocation Options	ID
Initiate a program of identifying excessively wide intersections in the study area and design and implement treatments to address these issues progressively as funding allows	[A]
Undertake concept design, including community consultation activities to develop a scheme to reduce the trafficable footprint of the Renwick / Dadley and Lyne / Dadley intersections, as funding permits	[B]
Initiate a 'signs and lines' review of Mitchell Road between Fountain Street and Anderson Street, including into its side roads in this section such as Brown Street, Buckland Street and Buckland Lane	[C]
Undertake concept design and develop a scheme to introduce footpath continuation across Belmont Street north of Fountain Street, as funding permits	[D]
Include the N-S cycleway crossing of Harley Street just east of Mitchell Road as part of the project to close Harley Street, should this be approved	[E]
Consider installing Bicycle Awareness Zone (BAZ) pavement markers on Mitchell Road south of Ashmore Street	[F]
In the short term and before the intersection is signalised (pas per item 6.1), implement a pedestrian refuge island in Maddox Street near Mitchell Road	[G]
Widen the footpath on both sides of Copeland Street between Fox Avenue and Clara Street	[H]

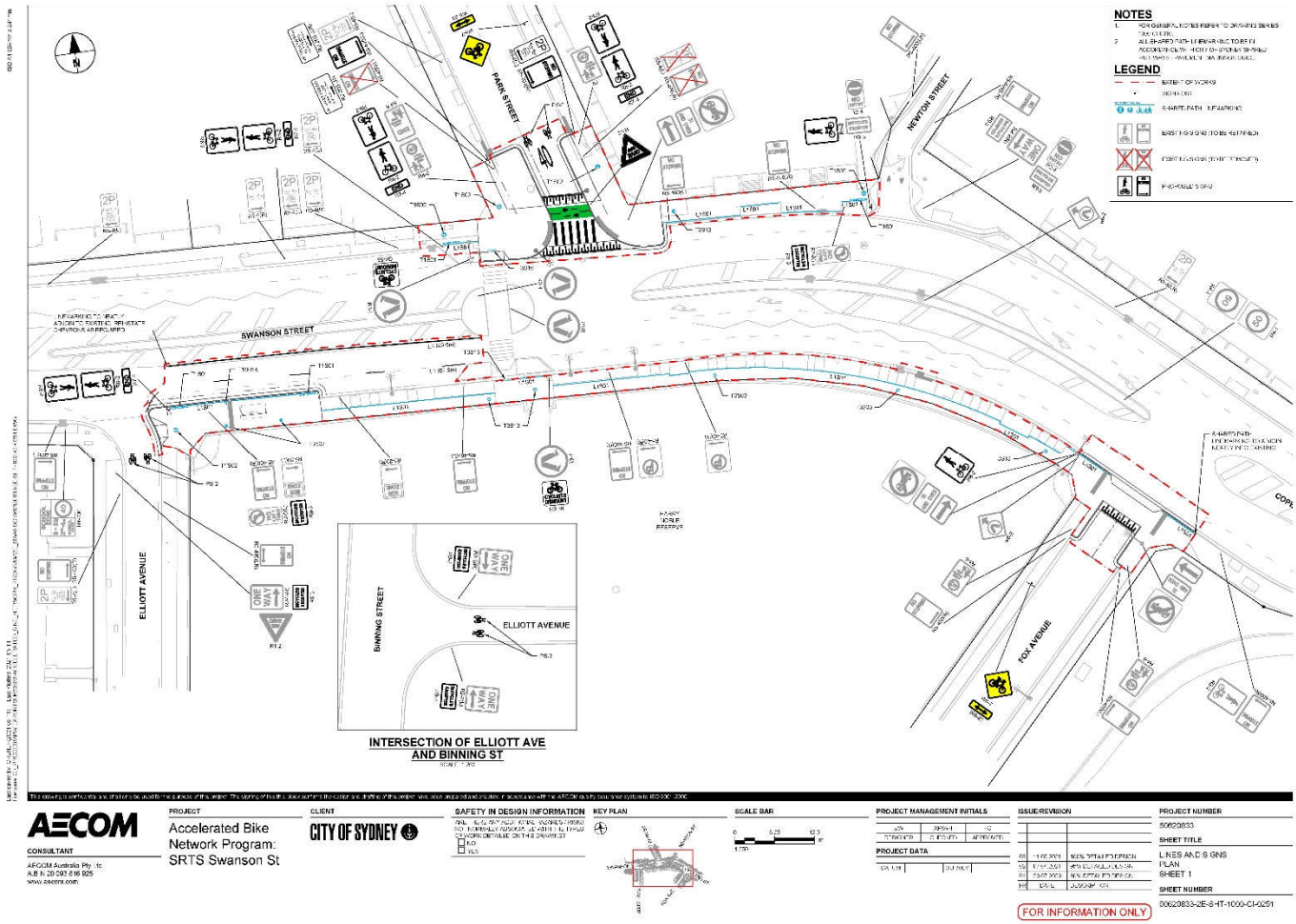
8.3 Further Work and Monitoring Program

Council should undertake design development through to implementation for the recommended projects, as funding permits.

With the opening of the M4-M5 Link in 2023, it is inevitable that there will be some further changes in traffic patterns in the study area. A regular traffic monitoring program would be beneficial in the study area to assess the benefits of the recommendations as they are implemented and then to determine the need to investigate any unforeseen issues once the M4-M5 link is opened.

Appendix A: Option Concepts

Option ID:	2.01
Option description:	Swanston Street raised pedestrian and cyclists crossing
Source:	CoS



Option ID:	4.01
Option description:	Closure of Harley Street at Mitchell Road
Source:	CoS

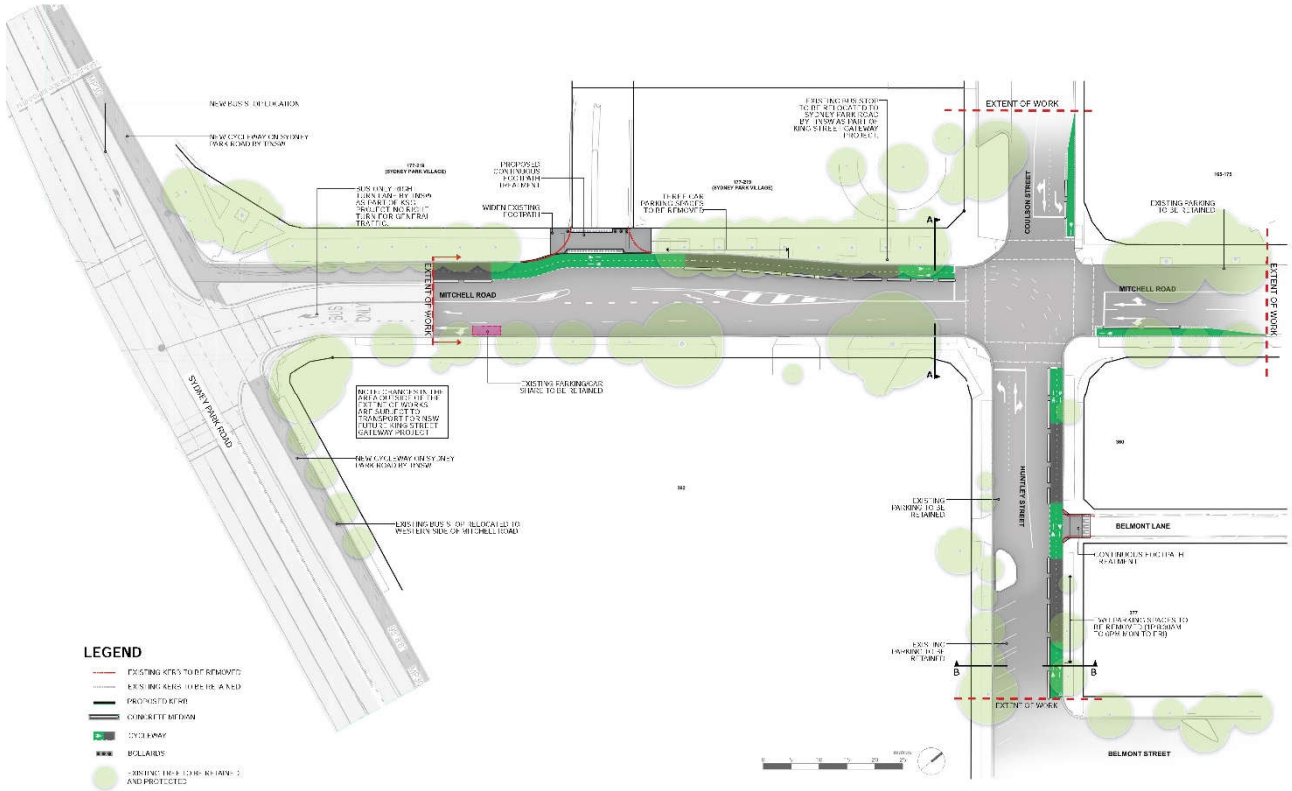
No Through Road Harley Street at Mitchell Road Medium Priority – Proposed (Option 1)

Option ID:	5.01
Option description:	Closure of Harley Street at McEvoy Street
Source:	CoS

No Through Road Harley Street at McEvoy Street Medium Priority – Proposed (Option 1)

Option ID:	8.01, 10.01
Option description:	Mitchell Road / Huntley Street signals and Bus Only Right Turn from Mitchell Road to Sydney Park Road
Source:	CoS

Improving Mitchell Road and Huntley Street
Mitchell Road and Huntley Street



Option ID:	9.01
Option description:	Closure of Maddox Street at Euston Road
Source:	CoS

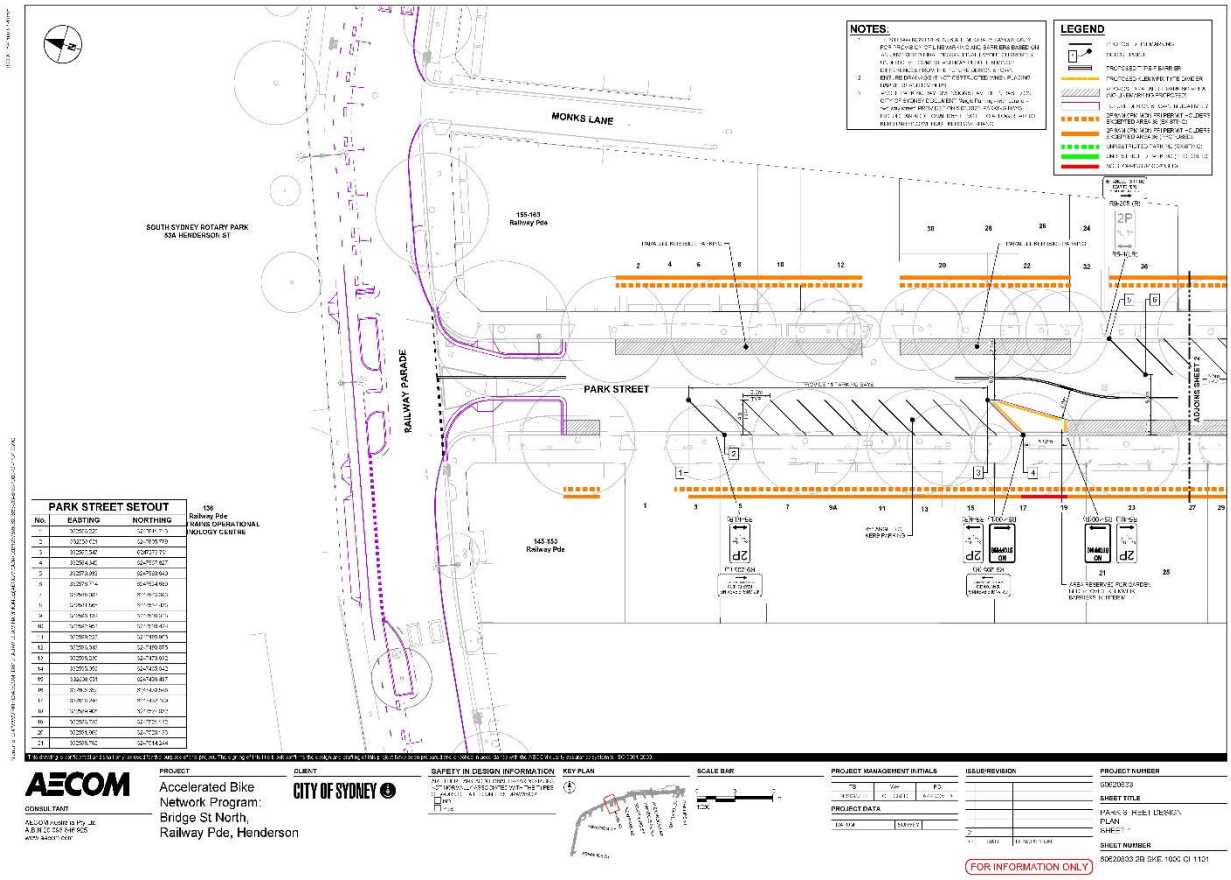
No Through Road Maddox Street at Euston Road Medium Priority – Proposed (Option 2)

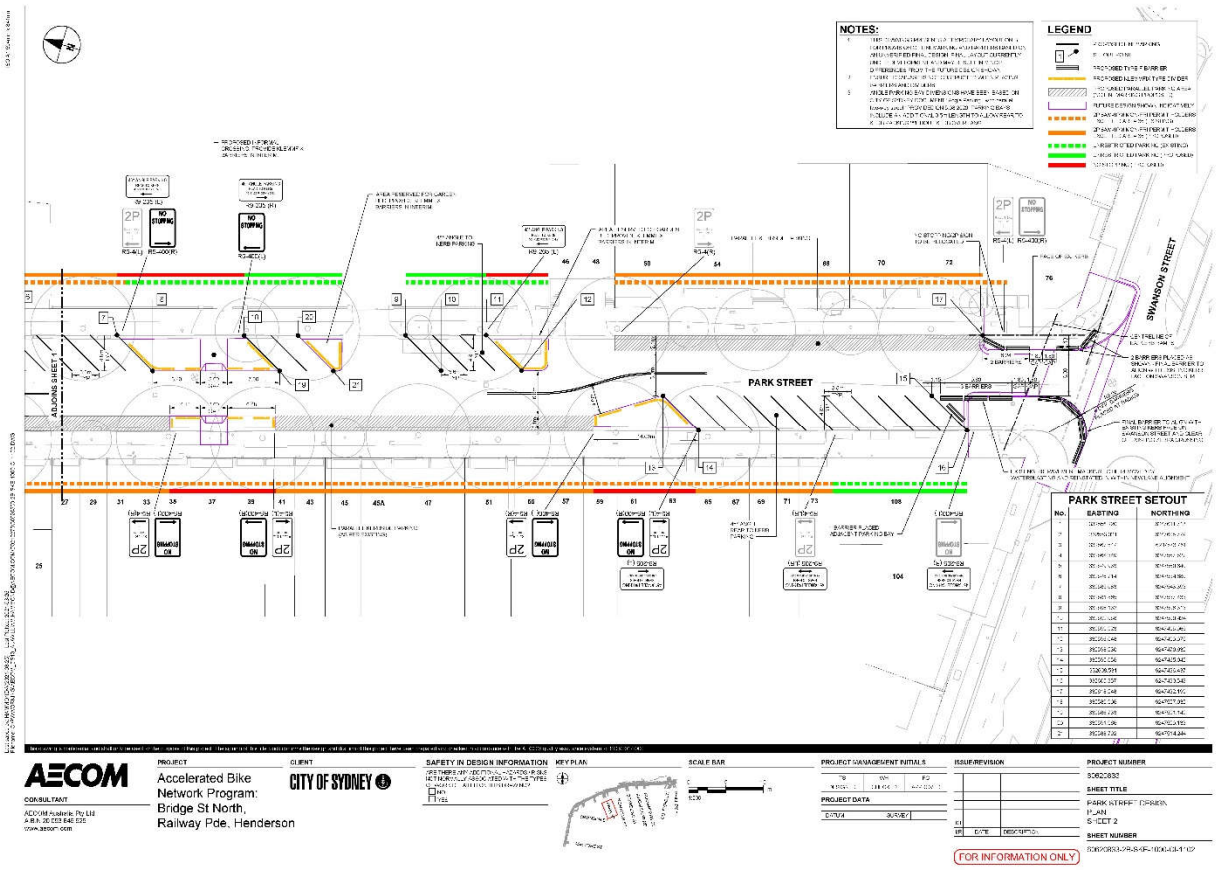
Option ID:	13.01
Option description:	Re-orientate Mitchell Road / Copeland Street
Source:	Bitzios Consulting

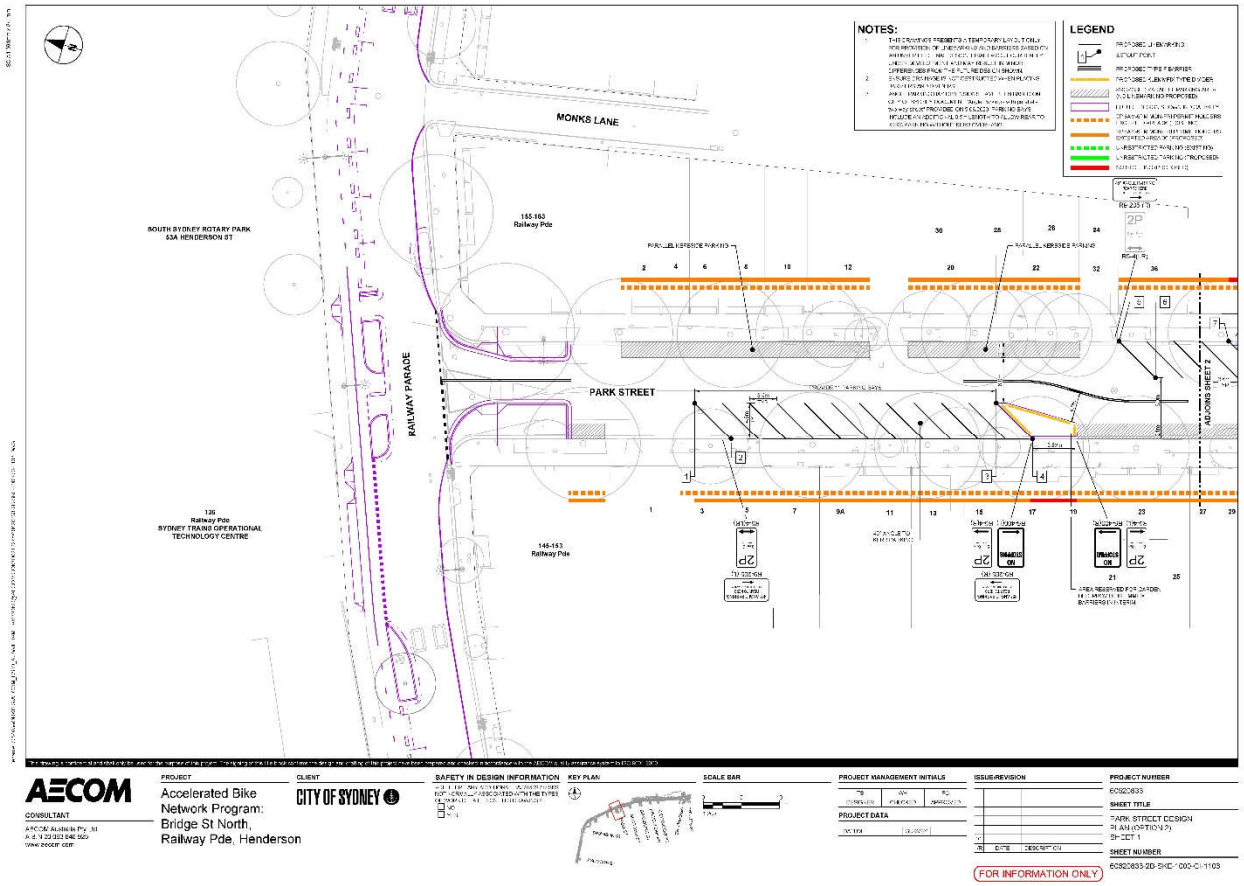
Option ID:	Comm 1
Option description:	Railway Street two -way (with cycleway)
Source:	CoS

Improving Bridge Street, Railway Parade and Henderson Road
Railway Parade

Option ID:	Comm 2
Option description:	Park Street Traffic Calming
Source:	CoS






NOTES:
LEGEND
MONKS LANE
SOUTH SYDNEY ROTARY PARK
63A HENDERSON ST
155-163
Railway Pde
RAILWAY PARADE
PARK STREET
135
Railway Pde
SYDNEY TRAINS OPERATIONAL
TECHNOLOGY CENTRE
145-153
Railway Pde
AECOM
CONSULTANT
PROJECT
Accelerated Bike
Network Program:
Bridge St North,
Railway Pde, Henderson
CLIENT
CITY OF SYDNEY
SAFETY IN DESIGN INFORMATION
KEY PLAN
SCALE BAR
PROJECT MANAGEMENT INITIALS
PROJECT DATA
ISSUE/REVISION
PROJECT NUMBER
60920633
SHEET TITLE
PARK STREET DESIGN
PLAN (OPTION 2)
SHEET 1
SHEET NUMBER
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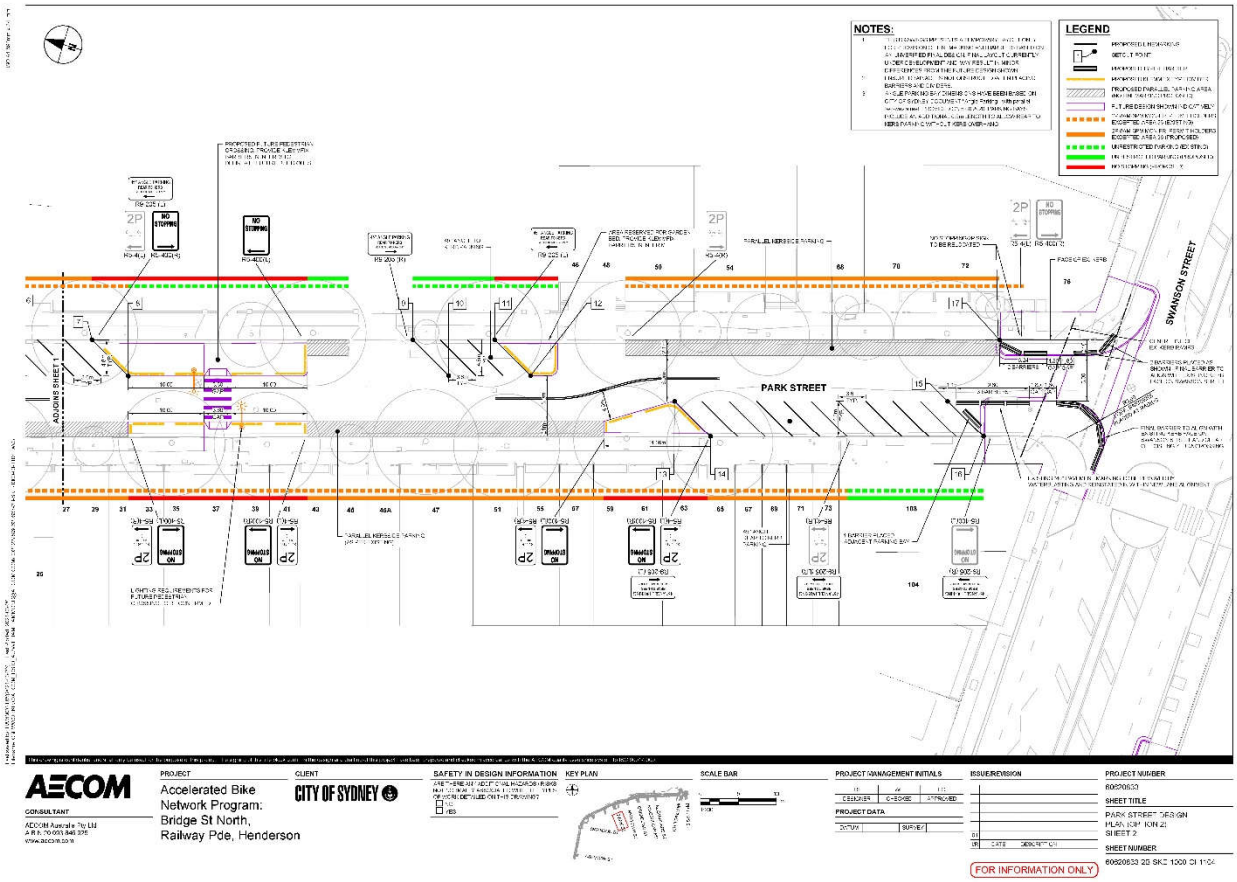
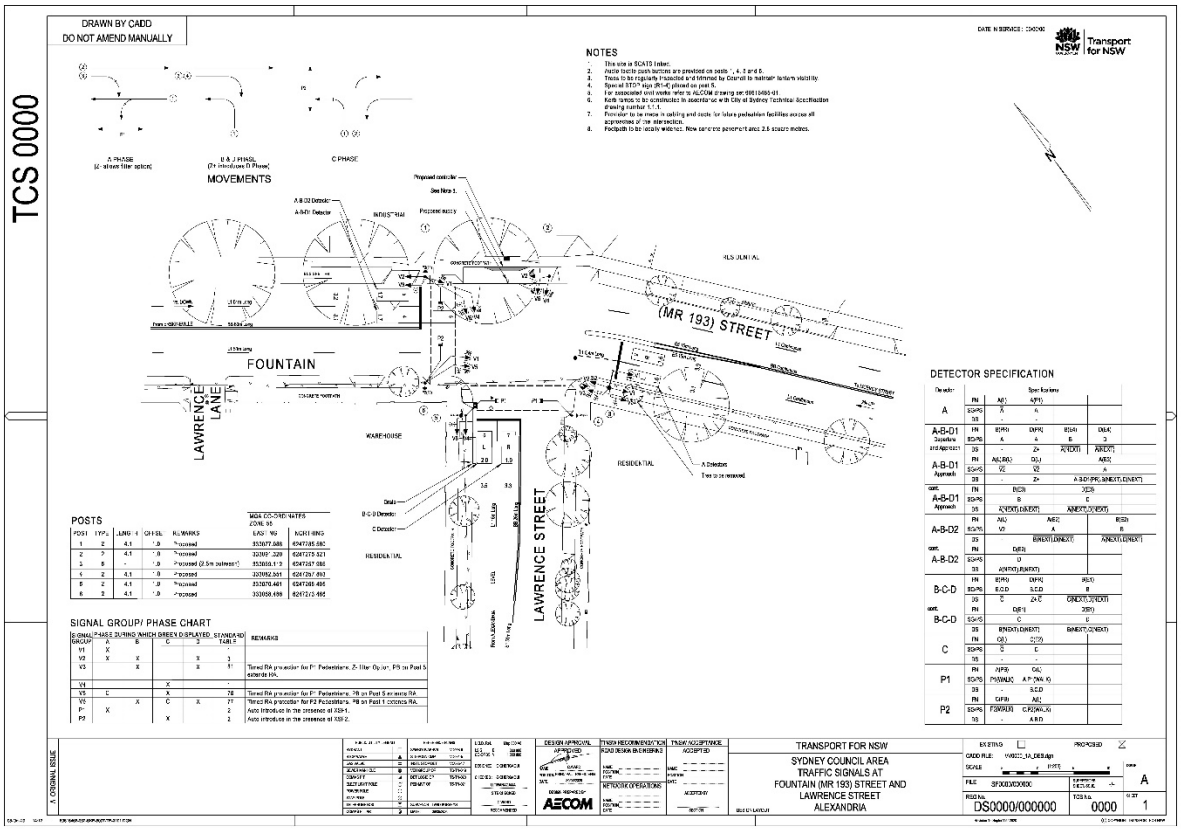
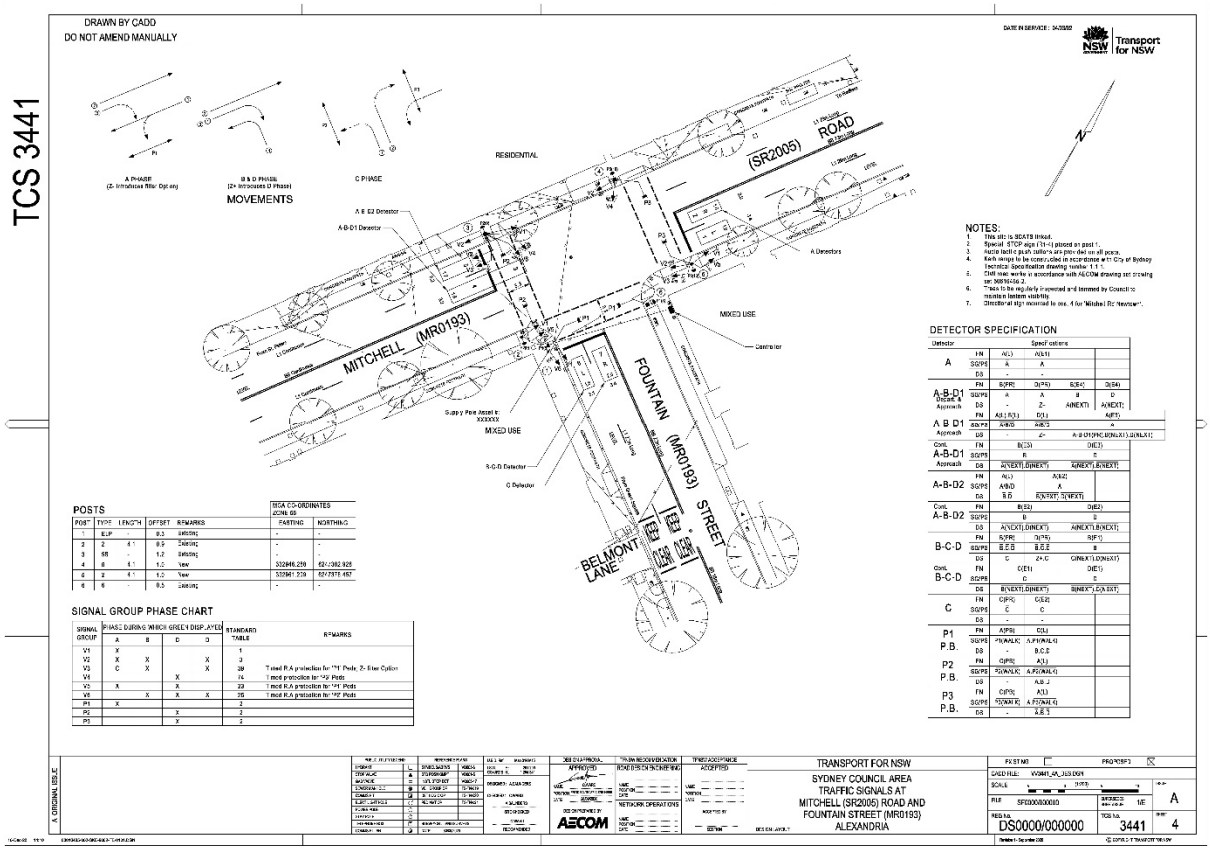
FOR INFORMATION ONLY


NOTES:
LEGEND
SWANSON STREET
PARK STREET
AECOM
CONSULTANT
PROJECT
Accelerated Bike
Network Program:
Bridge St North,
Railway Pde, Henderson
CLIENT
CITY OF SYDNEY
SAFETY IN DESIGN INFORMATION
KEY PLAN
SCALE BAR
PROJECT MANAGEMENT INITIALS
PROJECT DATA
ISSUE/REVISION
PROJECT NUMBER
60920633
SHEET TITLE
PARK STREET DESIGN
PLAN (OPTION 2)
SHEET 2
SHEET NUMBER
60920633 2D SKC 1000 CI 1104
FOR INFORMATION ONLY

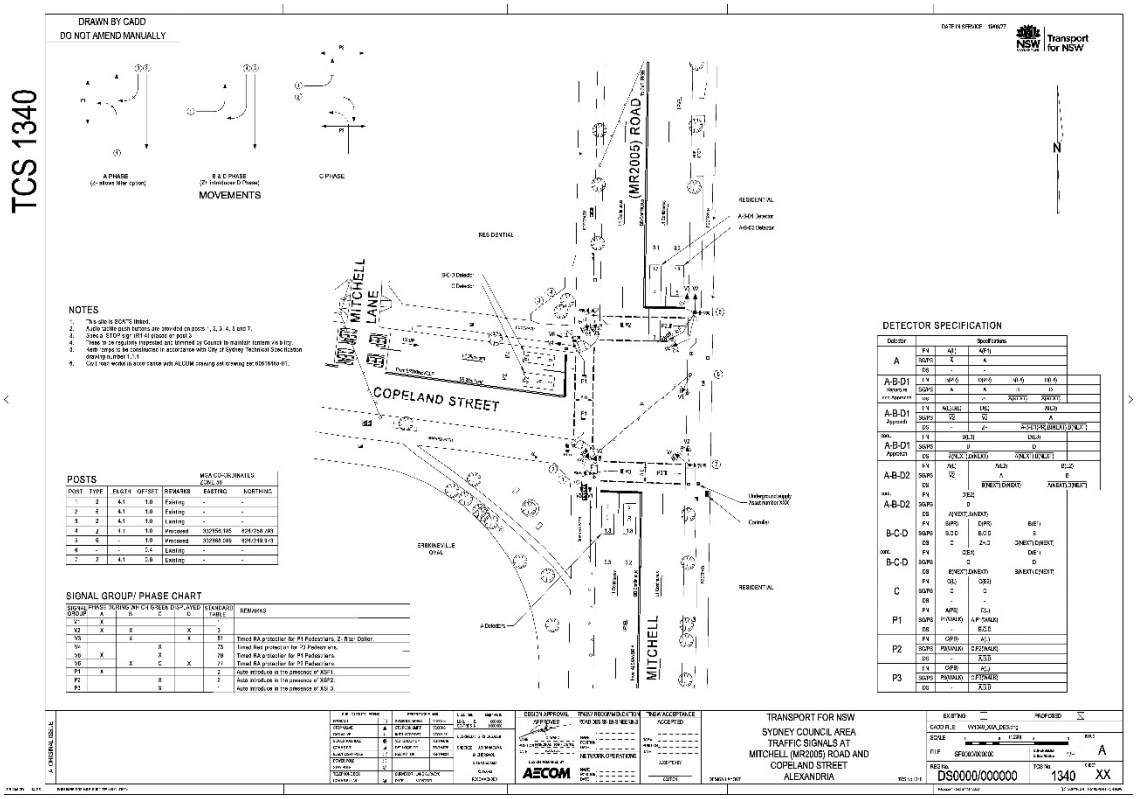
Option ID:	Comm 3
Option description:	Traffic signals at Fountain Street / Lawrence Street
Source:	CoS



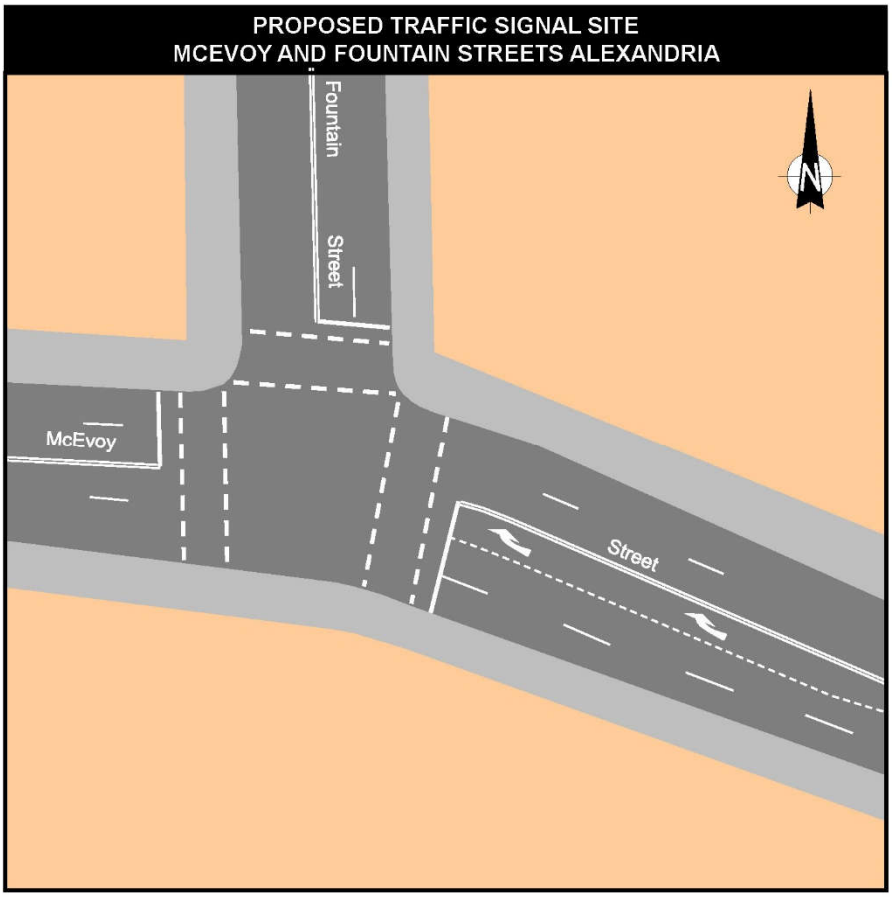
Option ID:	Comm 4
Option description:	Mitchell Road / Fountain Street additional signalised pedestrian crossing
Source:	CoS



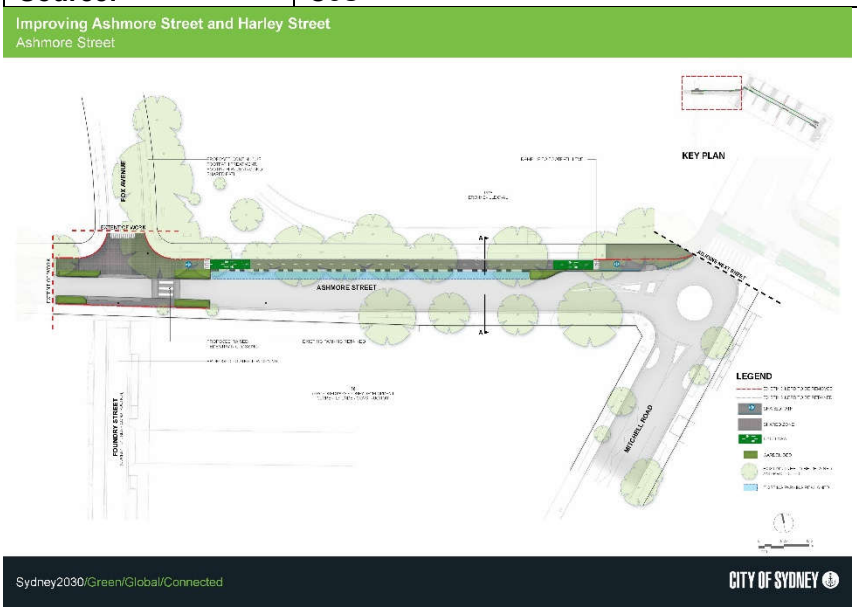
Option ID:	Comm 5
Option description:	Mitchell Road / Copeland Street additional signalised pedestrian crossing
Source:	CoS

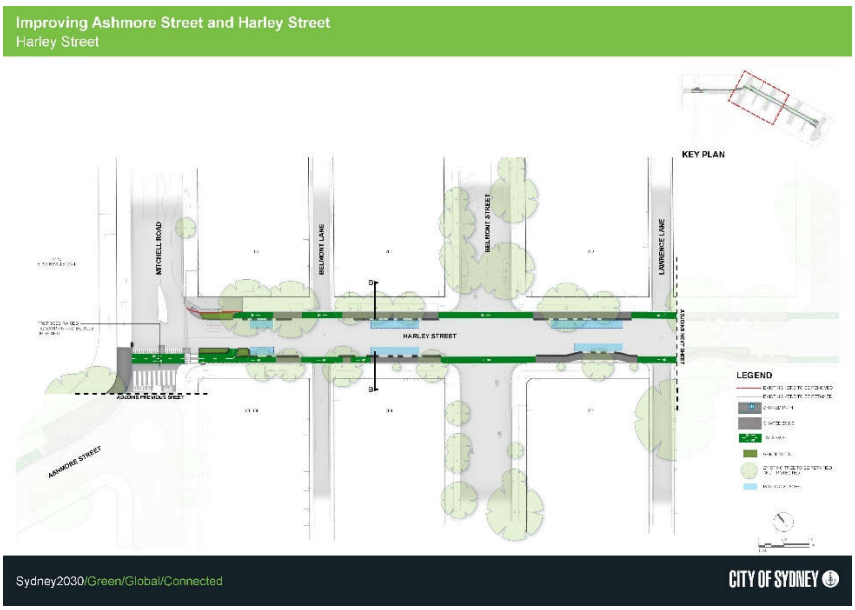


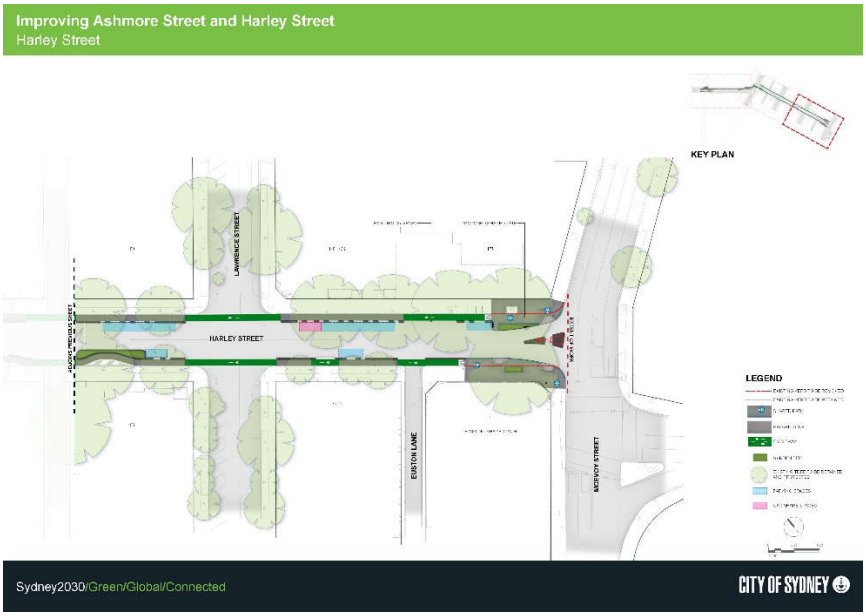
Option ID:	Comm 6
Option description:	McEvoy Street / Fountain Street
Source:	CoS



Option ID:	Comm 8, Comm 9, Comm 10
Option description:	Ashmore Road – Harley Street separated cycleway
Source:	CoS







Appendix B: Scenario A Modelling Results

P4411 Henderson Road Alexandria Traffic Study
VISSIM Data Analysis - Node Scenario A -AM
AM Peak 0800-0900

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Sydney Park Road	Mitchelle Road (N)	Sydney Park Road (W)	R	243	277	27.4	B	149.1
	Mitchell Road		Sydney Park Carpark (S)	T	25	11	50.6	D	149.1
			Sydney Park Road (E)	L	160	206	40.7	C	149.1
		Sydney Park Road (E)	Mitchelle Road (N)	R	104	121	91.5	F	67.5
			Sydney Park Road (W)	T	226	218	14.8	A	44.8
			Sydney Park Carpark (S)	L	24	40	14.0	A	44.8
		Sydney Park Carpark (S)	Sydney Park Road (E)	R	20	11	53.9	D	29.3
			Mitchelle Road (N)	T	9	26	44.2	D	29.3
			Sydney Park Road (W)	L	16	9	48.9	D	29.3
		Sydney Park Road (W)	Sydney Park Road (E)	T	575	595	26.9	B	103.7
			Mitchelle Road (N)	L	474	500	16.4	B	177.4
1015		All			1876	2,074	29.0	B	177.4
	Mitchell Road	Mitchelle Road (N)	Coulson Street (W)	R	79	111	47.2	D	172.1
	Huntley Street		Mitchelle Road (S)	T	313	364	23.1	B	172.1
	Coulson Street		Huntley Street (E)	L	12	6	17.1	B	172.1
		Huntley Street (E)	Mitchelle Road (N)	R	13	9	31.2	C	27.4
			Coulson Street (W)	T	20	22	22.8	B	22.0
			Mitchelle Road (S)	L	20	27	31.3	C	29.1
		Mitchelle Road (S)	Huntley Street (E)	R	28	28	32.4	C	137.1
			Mitchelle Road (N)	T	490	598	22.5	B	136.9
			Coulson Street (W)	L	76	55	9.1	A	136.9
		Coulson Street (W)	Mitchelle Road (S)	R	89	106	36.7	C	45.4
			Huntley Street (E)	T	38	39	32.0	C	45.4
			Mitchelle Road (N)	L	100	92	29.0	C	45.4
1016		All			1278	1,456	26.1	B	172.1
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	376	429	8.7	A	31.9
	Maddox Street		Maddox Street (E)	L	185	234	9.3	A	32.0
		Maddox Street (E)	Mitchell Road (N)	R	217	266	44.0	D	148.9
			Mitchell Road (S)	L	42	85	44.8	D	148.8
		Mitchell Road (S)	Maddox Street (E)	R	73	81	43.5	D	170.3
			Mitchell Road (N)	T	484	615	21.1	B	170.3
1017		All			1377	1,710	22.2	B	170.3
	Mitchell Road	Mitchelle Road (N)	Ashmore Street (W)	R	74	81	14.3	A	30.4
	Ashmore Street		Mitchelle Road (S)	T	493	589	2.1	A	30.4
		Mitchelle Road (S)	Mitchelle Road (N)	T	575	767	12.6	A	183.7
			Ashmore Street (W)	L	126	102	16.8	B	183.7
		Ashmore Street (W)	Mitchelle Road (S)	R	71	78	40.6	C	36.1
			Mitchelle Road (N)	L	23	35	36.9	C	36.1
1018		All			1362	1,652	11.0	A	183.7
	Harley Street	Mitchell Road (N)	Mitchell Road (S)	T	473	627	7.7	A	66.9
	Mitchell Road		Harley Street (E)	L	56	49	4.6	A	81.1
		Harley Street (E)	Mitchell Road (N)	R	127	0	0.0	A	6.1
			Mitchell Road (S)	L	94	45	11.9	A	6.1
		Mitchell Road (S)	Mitchell Road (N)	T	597	801	0.2	A	19.4
1019		All			1347	1,522	11.9	A	81.1
	Mitchell Road	Mitchell Road (N)	Copeland Street (W)	R	189	174	38.0	C	66.1
	Copeland Street		Mitchell Road (S)	T	326	480	9.5	A	66.1
		Mitchell Road (S)	Mitchell Road (N)	T	585	662	7.8	A	75.8
			Copeland Street (W)	L	155	136	8.8	A	75.8
		Copeland Street (W)	Mitchell Road (S)	R	216	197	12.0	A	37.0
			Mitchell Road (N)	L	257	211	8.0	A	37.0
1001		All			1728	1,859	11.6	A	75.8
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	305	345	17.0	B	58.8
	Fountain Street		Fountain Street (E)	L	60	52	14.2	A	59.2
		Fountain Street (E)	Mitchell Road (N)	R	168	98	67.1	E	192.1
			Mitchell Road (S)	L	210	315	43.0	D	192.1
		Mitchell Road (S)	Fountain Street (E)	R	197	192	17.5	B	66.5
			Mitchell Road (N)	T	637	672	2.5	A	66.7
1020		All			1577	1,674	19.0	B	192.1
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	298	285	11.8	A	54.6
	Buckland Street		Buckland Street (E)	L	42	136	13.7	A	54.6
		Buckland Street (E)	Mitchell Road (S)	L	51	112	202.7	F	106.9
		Mitchell Road (S)	Mitchell Road (N)	T	798	789	4.5	A	37.3
1002		All			1189	1,323	24.0	B	106.9
	Mitchell Road	Mitchell Road (N)	Ranwick Street (W)	R	19	32	8.1	A	35.2
	Ranwick Street		Mitchell Road (S)	T	321	400	0.6	A	24.0
		Mitchell Road (S)	Mitchell Road (N)	T	690	678	2.1	A	40.8
			Ranwick Street (W)	L	44	106	1.4	A	48.4
		Ranwick Street (W)	Mitchell Road (S)	R	21	26	5.7	A	12.0
			Mitchell Road (N)	L	35	44	7.7	A	12.0
1003		All			1130	1,287	8.1	A	48.4

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Mitchell Road	Davy Road (N)	Henderson Road (W)	R	14	20	39.3	C	23.0
	Henderson Road		Mitchelle Road (S)	T	27	35	42.4	C	23.0
	Davy Road		Henderson Road (E)	L	44	42	23.7	B	23.0
		Henderson Road (E)	Davy Road (N)	R	155	124	81.1	F	80.1
			Henderson Road (W)	T	190	252	47.8	D	104.4
			Mitchelle Road (S)	L	264	321	27.5	B	104.4
		Mitchelle Road (S)	Henderson Road (E)	R	609	556	40.2	C	159.9
			Davy Road (N)	T	94	132	38.7	C	159.9
			Henderson Road (W)	L	17	17	24.8	B	159.9
		Henderson Road (W)	Mitchelle Road (S)	R	40	77	49.2	D	114.2
			Henderson Road (E)	T	183	239	58.7	E	114.2
			Davy Road (N)	L	42	30	48.3	D	114.2
1004		All			1679	1,845	44.1	D	159.9
	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	583	687	3.3	A	40.8
	Gerard Street		Gerard Street (S)	L	36	42	2.7	A	48.0
		Gerard Street (S)	Henderson Road (W)	L	33	32	7.9	A	7.5
		Henderson Road (W)	Henderson Road (E)	T	835	831	16.7	B	96.2
1021		All			1,487	1,592	16.7	B	96.2
	Henderson Road	Garden Street (N)	Henderson Road (W)	R	61	73	51.7	D	39.5
	Garden Street		Henderson Road (E)	L	41	35	53.7	D	39.5
		Henderson Road (E)	Garden Street (N)	R	159	109	62.6	E	90.0
			Henderson Road (W)	T	541	637	20.0	B	88.9
			Garden Street (S)	L	14	17	22.9	B	88.9
		Garden Street (S)	Henderson Road (W)	L	19	20	66.4	E	20.5
		Henderson Road (W)	Henderson Road (E)	T	688	617	54.5	D	82.6
			Garden Street (N)	L	149	199	8.5	A	82.6
1022		All			1672	1,706	36.5	C	90.0
	Henderson Road	Henderson Road (E)	Wyndham Street (N)	R	707	784	16.7	B	88.1
	Wyndham Street		Henderson Road (W)	T	700	701	8.8	A	88.1
			Wyndham Street (S)	L	151	162	8.3	A	88.1
		Wyndham Street (S)	Henderson Road (E)	R	3	43	43.9	D	236.7
			Wyndham Street (N)	T	435	426	45.2	D	236.7
			Henderson Road (W)	L	19	62	64.0	E	236.7
		Henderson Road (W)	Henderson Road (E)	T	248	168	61.2	E	90.5
			Wyndham Street (N)	L	492	460	75.0	F	90.8
1023		All			2755	2,806	32.3	C	236.7
	Henderson Road	Botany Road (N)	Henderson Road (W)	R	606	670	49.3	D	118.6
	Botany Road		Botany Road (S)	T	1,085	1,008	7.6	A	118.6
	Raglan St		Raglan St (E)	L	62	66	11.9	A	125.7
		Raglan St (E)	Henderson Road (W)	T	236	233	49.7	D	87.1
			Botany Road (S)	L	10	21	57.7	E	92.2
		Botany Road (S)	Henderson Road (W)	L	710	754	79.1	F	214.0
		Henderson Road (W)	Botany Road (S)	R	44	18	53.8	D	33.0
			Raglan St (E)	T	205	192	34.2	C	33.0
1024		All			2958	2,962	41.0	C	214.0
	Botany Road	Botany Road (N)	McEvoy Street (W)	R	339	323	83.4	F	229.7
	McEvoy Street		Botany Road (S)	T	772	741	32.5	C	229.7
			McEvoy Street (E)	L	97	117	22.4	B	229.7
		McEvoy Street (E)	McEvoy Street (W)	T	455	431	167.1	F	386.2
			Botany Road (S)	L	11	11	177.6	F	386.6
		Botany Road (S)	Botany Road (N)	T	701	738	26.2	B	123.9
			McEvoy Street (W)	L	149	151	29.4	C	123.9
		McEvoy Street (W)	Botany Road (S)	R	85	91	121.0	F	109.7
			McEvoy Street (E)	T	571	522	59.7	E	109.7
			Botany Road (N)	L	63	21	54.2	D	109.7
1025		All			3243	3,147	61.9	E	386.6
	Wyndham Street	Wyndham Street (N)	Buckland Street (W)	R	7	22	29.4	C	45.2
	Buckland Street		Wyndham Street (S)	T	134	139	9.2	A	45.1
			Buckland Street (E)	L	8	0	0.0	A	45.3
		Wyndham Street (S)	Buckland Street (E)	R	61	86	21.7	B	166.4
			Wyndham Street (N)	T	438	486	27.8	B	166.4
			Buckland Street (W)	L	72	123	36.2	C	166.4
		Buckland Street (W)	Wyndham Street (S)	R	51	92	30.9	C	80.5
			Buckland Street (E)	T	51	69	32.5	C	80.5
			Wyndham Street (N)	L	26	55	44.2	D	80.5
1026		All			848	1,072	27.3	B	166.4
	Wyndham Street	Wyndham Street (N)	Power Avenue (W)	R	60	52	17.0	B	80.6
	Power Avenue		Wyndham Street (S)	T	123	176	1.9	A	74.1
		Wyndham Street (S)	Wyndham Street (N)	T	487	631	2.5	A	113.4
			Power Avenue (W)	L	136	94	-0.2	A	116.3
		Power Avenue (W)	Wyndham Street (S)	R	86	74	92.7	F	142.3
			Wyndham Street (N)	L	76	71	90.2	F	142.3
1027		All			968	1,098	92.7	F	142.3

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Wyndham Street	Wyndham Street (N)	McEvoy Street (W)	R	27	66	159.9	F	134.1
	McEvoy Street		Wyndham Street (S)	T	129	91	77.0	F	134.0
			McEvoy Street (E)	L	59	69	156.9	F	133.9
		McEvoy Street (E)	Wyndham Street (N)	R	134	203	37.1	C	106.4
			McEvoy Street (W)	T	686	536	26.0	B	106.4
			Wyndham Street (S)	L	138	158	33.7	C	106.4
		Wyndham Street (S)	McEvoy Street (E)	R	37	37	196.5	F	297.6
			Wyndham Street (N)	T	317	304	39.7	C	297.6
			McEvoy Street (W)	L	67	56	34.2	C	298.1
		McEvoy Street (W)	McEvoy Street (E)	T	631	530	61.3	E	92.5
			Wyndham Street (N)	L	146	222	61.0	E	92.5
1028		All			2371	2,271	54.0	D	298.1
	McEvoy Street	McEvoy Street (E)	McEvoy Street (W)	T	740	633	0.5	A	34.4
	Brennan Street		Hiles Street (S)	L	33	25	2.3	A	39.2
	Hiles Street	Hiles Street (S)	McEvoy Street (E)	R	11	12	49.4	D	12.1
			McEvoy Street (W)	L	29	33	3.2	A	12.1
		McEvoy Street (W)	Hiles Street (S)	R	21	40	49.5	D	107.4
			McEvoy Street (E)	T	786	756	50.2	D	107.4
1029		All			1620	1,499	50.2	D	107.4
	McEvoy Street	McEvoy Street (E)	McEvoy Street (W)	T	729	621	0.2	A	4.3
	Loveridge Street		McCauley Street (S)	L	37	41	0.9	A	4.3
	McCauley Street	McCauley Street (S)	McEvoy Street (E)	R	22	24	31.9	C	11.8
			McEvoy Street (W)	L	16	19	2.5	A	11.8
		McEvoy Street (W)	McCauley Street (S)	R	16	40	61.5	E	224.4
			McEvoy Street (E)	T	799	796	52.1	D	224.4
1030		All			1619	1,540	61.5	E	224.4
	McEvoy Street	Fountain Street (NW)	McEvoy Street (S)	R	98	125	81.9	F	133.5
	Fountain Street		McEvoy Street (E)	L	153	175	64.1	E	133.5
		McEvoy Street (E)	Fountain Street (NW)	R	205	189	52.3	D	82.3
			McEvoy Street (S)	T	538	448	7.3	A	78.7
		McEvoy Street (S)	McEvoy Street (E)	T	671	704	42.2	C	223.4
			Fountain Street (NW)	L	118	231	44.8	D	223.7
1031		All			1783	1,871	39.8	C	223.7
	McEvoy Street	McEvoy Street (N)	Euston Road (S)	T	600	473	15.3	B	63.9
	Harley Street	McEvoy Street (S)	McEvoy Street (N)	T	836	1,024	0.6	A	26.0
			Harley Street (W)	L	226	0	0.0	A	29.0
		Harley Street (W)	McEvoy Street (N)	L	46	0	0.0	A	0.0
1032		All			1708	1,497	15.3	B	63.9
	Euston Road	Euston Road (N)	Euston Road (S)	T	446	404	0.5	A	12.2
	Bunnings Access		Bunnings Access (E)	L	156	69	2.7	A	12.6
		Bunnings Access (E)	Euston Road (N)	R	126	144	43.1	D	66.2
			Euston Road (S)	L	72	62	1.5	A	9.4
		Euston Road (S)	Bunnings Access (E)	R	144	168	18.2	B	117.2
			Euston Road (N)	T	942	882	11.2	A	117.2
1035		All			1886	1,729	11.4	A	117.2
	Euston Road	Euston Road (N)	Euston Road (S)	T	437	373	6.3	A	39.9
	Maddox Street		Maddox Street (E)	L	80	85	5.5	A	39.9
		Maddox Street (E)	Euston Road (N)	R	52	53	59.5	E	48.1
			Maddox Street (W)	T	117	128	31.8	C	48.0
			Euston Road (S)	L	24	34	37.8	C	48.5
		Euston Road (S)	Euston Road (N)	T	1055	937	10.4	A	100.1
			Maddox Street (W)	L	192	235	10.0	A	100.1
		Maddox Street (W)	Euston Road (S)	R	72	108	43.3	D	49.3
			Maddox Street (E)	T	192	114	27.8	B	49.3
			Euston Road (N)	L	57	73	25.4	B	49.3
1033		All			2278	2,141	15.5	B	100.1
	Euston Road	Euston Road (N)	Sydney Park Road (W)	R	0	0	0.0	A	87.9
	Sudney Park Road		Euston Road (S)	T	388	370	39.4	C	87.9
	Huntley Street		Huntley Street (E)	L	131	142	50.0	D	88.0
		Huntley Street (E)	Euston Road (N)	R	56	105	48.8	D	55.1
			Sydney Park Road (W)	T	248	240	33.2	C	55.7
			Euston Road (S)	L	100	87	19.4	B	55.9
		Euston Road (S)	Huntley Street (E)	R	274	267	58.2	E	97.8
			Euston Road (N)	T	934	808	25.8	B	97.8
			Sydney Park Road (W)	L	106	144	7.9	A	93.7
		Sydney Park Road (W)	Euston Road (S)	R	98	125	50.8	D	160.5
			Huntley Street (E)	T	431	406	42.7	C	160.5
			Euston Road (N)	L	234	262	68.6	E	160.8
1034		All			3000	2,955	39.1	C	160.8

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Henderson Road	Alexander Street (N)	Henderson Road (E)	L	30	31	2.7	A	8.4
	Alexander Street	Henderson Road (E)	Henderson Road (W)	T	199	249	5.1	A	51.0
			Alexander Street (S)	L	16	39	5.0	A	51.0
		Alexander Street (S)	Henderson Road (W)	L	18	7	2.1	A	0.0
		Henderson Road (W)	Henderson Road (E)	T	233	324	1.5	A	24.6
			Alexander Street (N)	L	31	37	1.4	A	24.6
1005		All			527	687	5.1	A	51.0
1006	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	187	245	1.8	A	28.3
	Brandling Street		Brandling Street (S)	L	14	11	1.6	A	28.3
		Brandling Street (S)	Henderson Road (E)	R	6	5	7.2	A	2.2
			Henderson Road (W)	L	9	7	2.0	A	2.2
		Henderson Road (W)	Brandling Street (S)	R	5	5	1.0	A	6.1
			Henderson Road (E)	T	251	356	0.3	A	6.1
1006		All			472	629	7.2	A	28.3
	Henderson Road	Progress Road (N)	Henderson Road (W)	R	24	10	4.0	A	3.5
	Progress Road		Henderson Road (E)	L	41	51	2.2	A	3.5
		Henderson Road (E)	Progress Road (N)	R	33	27	1.8	A	26.2
			Henderson Road (W)	T	155	224	0.2	A	21.0
		Henderson Road (W)	Henderson Road (E)	T	211	310	0.4	A	0.0
			Progress Road (N)	L	24	18	1.2	A	6.1
1007		All			488	639	4.0	A	26.2
1008	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	162	222	0.0	A	0.0
	Newton Street		Newton Street (S)	L	17	12	0.4	A	0.0
		Newton Street (S)	Henderson Road (E)	R	14	57	3.3	A	9.0
			Henderson Road (W)	L	15	28	2.1	A	9.0
		Henderson Road (W)	Newton Street (S)	R	8	3	3.7	A	9.6
			Henderson Road (E)	T	225	270	0.2	A	2.8
1008		All			441	592	3.7	A	9.6
	Henderson Road	Henderson Road (E)	Railway Parade (W)	T	160	209	1.1	A	11.8
	Railway Parade		Park Street (S)	L	17	41	0.9	A	11.8
	Park Street	Park Street (S)	Henderson Road (E)	R	209	0	0.0	A	3.4
			Railway Parade (W)	L	42	23	1.6	A	3.4
		Railway Parade (W)	Park Street (S)	R	13	26	2.7	A	40.7
			Henderson Road (E)	T	24	273	1.3	A	43.0
1009		All			465	572	2.7	A	43.0
	Railway Parade	Railway Parade (E)	Railway Parade (W)	T	169	174	0.4	A	0.9
	Clara Street		Clara Street (S)	L	15	15	0.9	A	5.6
		Clara Street (S)	Railway Parade (E)	R	2	12	3.8	A	3.9
			Railway Parade (W)	L	1	0	0.0	A	3.9
		Railway Parade (W)	Clara Street (S)	R	0	36	1.5	A	22.7
			Railway Parade (E)	T	17	283	0.7	A	12.0
1010		All			204	520	3.8	A	22.7
	Railway Parade	Railway Parade (N)	Swanson Street (W)	R	118	149	58.9	E	84.5
	Swanson Street		Swanson Street (E)	L	31	21	61.6	E	84.5
		Swanson Street (E)	Railway Parade (N)	R	0	18	14.7	A	68.2
			Swanson Street (W)	T	458	449	16.1	B	68.1
		Swanson Street (W)	Swanson Street (E)	T	578	257	13.1	A	89.1
			Railway Parade (N)	L	0	294	17.0	B	89.0
1011		All			1185	1,188	21.8	B	89.1
	Swanson Street	Clara Street (N)	Swanson Street (W)	R	5	35	6.8	A	8.4
	Clara Street		Swanson Street (E)	L	11	7	2.6	A	8.4
		Swanson Street (E)	Swanson Street (W)	T	468	444	0.8	A	3.5
		Swanson Street (W)	Swanson Street (E)	T	666	345	2.7	A	0.0
1012		All			1150	831	6.8	A	8.4
	Swanson Street	Park Street (N)	Swanson Street (W)	R	10	31	9.6	A	14.3
	Park Street		Swanson Street (E)	L	30	42	3.6	A	14.6
		Swanson Street (E)	Park Street (N)	R	61	24	3.8	A	9.2
			Swanson Street (W)	T	434	391	2.3	A	42.8
		Swanson Street (W)	Swanson Street (E)	T	494	353	3.0	A	51.3
			Park Street (N)	L	200	0	0.0	A	51.3
1013		All			1229	840	9.6	A	51.3
	Copeland Street	Newton Street (N)	Copeland Street (E)	L	27	22	7.2	A	8.1
	Newton Street	Copeland Street (E)	Copeland Street (W)	T	508	415	0.3	A	0.0
		Copeland Street (W)	Copeland Street (E)	T	525	394	0.3	A	0.0
1014		All			1060	831	7.2	A	8.1

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ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Sydney Park Road	Mitchelle Road (N)	Sydney Park Road (W)	R	556	525	21.1	B	155.0
	Mitchell Road		Sydney Park Carpark (S)	T	38	56	22.8	B	155.0
			Sydney Park Road (E)	L	104	136	25.9	B	155.0
		Sydney Park Road (E)	Mitchelle Road (N)	R	183	251	98.6	F	188.9
			Sydney Park Road (W)	T	633	600	12.4	A	83.2
			Sydney Park Carpark (S)	L	24	22	26.7	B	83.2
		Sydney Park Carpark (S)	Sydney Park Road (E)	R	23	21	72.3	F	58.0
			Mitchelle Road (N)	T	28	32	78.2	F	58.0
			Sydney Park Road (W)	L	27	28	77.5	F	58.0
		Sydney Park Road (W)	Sydney Park Road (E)	T	339	369	43.4	D	59.2
			Mitchelle Road (N)	L	454	410	20.6	B	166.6
1015		All			2409	2,551	33.0	C	188.9
	Mitchell Road	Mitchelle Road (N)	Coulson Street (W)	R	131	112	48.8	D	241.4
	Huntley Street		Mitchelle Road (S)	T	642	641	26.4	B	241.4
	Coulson Street		Huntley Street (E)	L	22	10	28.0	B	241.4
		Huntley Street (E)	Mitchelle Road (N)	R	8	10	39.7	C	24.8
			Coulson Street (W)	T	34	33	35.2	C	24.7
			Mitchelle Road (S)	L	26	25	40.8	C	24.7
		Mitchelle Road (S)	Huntley Street (E)	R	14	29	25.0	B	133.8
			Mitchelle Road (N)	T	476	522	12.2	A	133.0
			Coulson Street (W)	L	140	137	11.8	A	135.9
		Coulson Street (W)	Mitchelle Road (S)	R	86	94	49.2	D	42.7
			Huntley Street (E)	T	17	18	46.8	D	42.7
			Mitchelle Road (N)	L	105	96	41.2	C	42.7
1016		All			1701	1,727	25.1	B	241.4
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	711	753	12.7	A	30.6
	Maddox Street		Maddox Street (E)	L	124	135	2.9	A	30.7
		Maddox Street (E)	Mitchell Road (N)	R	159	114	68.8	E	93.4
			Mitchell Road (S)	L	75	59	93.4	F	93.4
		Mitchell Road (S)	Maddox Street (E)	R	63	64	30.7	C	51.0
			Mitchell Road (N)	T	525	558	8.1	A	51.0
1017		All			1657	1,683	17.7	B	93.4
	Mitchell Road	Mitchelle Road (N)	Ashmore Street (W)	R	47	49	5.9	A	30.4
	Ashmore Street		Mitchelle Road (S)	T	744	835	4.9	A	30.4
		Mitchelle Road (S)	Mitchelle Road (N)	T	562	546	22.6	B	193.0
			Ashmore Street (W)	L	109	115	24.4	B	193.0
		Ashmore Street (W)	Mitchelle Road (S)	R	82	NA	NA	A	NA
			Mitchelle Road (N)	L	27	NA	NA	A	NA
1018		All			1571	1,652	24.4	B	193.0
	Harley Street	Mitchell Road (N)	Mitchell Road (S)	T	719	852	24.6	B	144.8
	Mitchell Road		Harley Street (E)	L	53	42	20.0	B	159.8
		Harley Street (E)	Mitchell Road (N)	R	56	0	0.0	A	4.2
			Mitchell Road (S)	L	72	35	22.1	B	4.2
		Mitchell Road (S)	Mitchell Road (N)	T	589	579	0.2	A	18.2
1019		All			1489	1,508	24.6	B	159.8
	Mitchell Road	Mitchell Road (N)	Copeland Street (W)	R	228	269	34.0	C	136.0
	Copeland Street		Mitchell Road (S)	T	606	735	26.7	B	136.0
		Mitchell Road (S)	Mitchell Road (N)	T	470	410	13.0	A	99.7
			Copeland Street (W)	L	180	164	15.0	B	99.7
		Copeland Street (W)	Mitchell Road (S)	R	172	177	14.5	A	34.5
			Mitchell Road (N)	L	220	221	5.4	A	34.5
1001		All			1876	1,977	20.4	B	136.0
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	555	672	10.9	A	63.3
	Fountain Street		Fountain Street (E)	L	106	99	6.8	A	63.7
		Fountain Street (E)	Mitchell Road (N)	R	116	64	82.0	F	252.5
			Mitchell Road (S)	L	279	355	56.3	D	252.5
		Mitchell Road (S)	Fountain Street (E)	R	187	179	19.7	B	50.1
			Mitchell Road (N)	T	508	451	2.2	A	50.3
1020		All			1751	1,819	20.7	B	252.5
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	611	749	11.2	A	79.3
	Buckland Street		Buckland Street (E)	L	33	126	7.8	A	85.5
		Buckland Street (E)	Mitchell Road (S)	L	44	25	51.0	D	17.5
		Mitchell Road (S)	Mitchell Road (N)	T	621	521	3.1	A	31.2
1002		All			1309	1,421	8.6	A	85.5
	Mitchell Road	Mitchell Road (N)	Ranwick Street (W)	R	15	29	4.4	A	24.8
	Ranwick Street		Mitchell Road (S)	T	629	845	0.5	A	14.8
		Mitchell Road (S)	Mitchell Road (N)	T	535	491	0.2	A	0.0
			Ranwick Street (W)	L	33	30	0.7	A	4.9
		Ranwick Street (W)	Mitchell Road (S)	R	13	35	10.8	A	10.8
			Mitchell Road (N)	L	32	10	4.3	A	10.8
1003		All			1257	1,441	10.8	A	24.8

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Mitchell Road	Davy Road (N)	Henderson Road (W)	R	29	24	38.6	C	61.0
	Henderson Road		Mitchelle Road (S)	T	103	129	45.5	D	61.0
	Davy Road		Henderson Road (E)	L	65	65	26.9	B	61.0
		Henderson Road (E)	Davy Road (N)	R	59	55	46.0	D	27.5
			Henderson Road (W)	T	239	208	45.4	D	103.4
			Mitchelle Road (S)	L	503	655	30.7	C	103.4
		Mitchelle Road (S)	Henderson Road (E)	R	496	443	32.4	C	108.3
			Davy Road (N)	T	48	55	35.0	C	108.3
			Henderson Road (W)	L	17	3	29.7	C	108.3
		Henderson Road (W)	Mitchelle Road (S)	R	32	93	57.5	E	52.3
			Henderson Road (E)	T	118	105	36.2	C	52.3
			Davy Road (N)	L	10	12	34.4	C	52.3
1004		All			1719	1,846	36.0	C	108.3
	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	788	903	4.4	A	77.4
	Gerard Street		Gerard Street (S)	L	24	30	4.2	A	84.6
		Gerard Street (S)	Henderson Road (W)	L	21	22	23.6	B	8.9
		Henderson Road (W)	Henderson Road (E)	T	689	610	0.8	A	15.0
1021		All			1,522	1,565	23.6	B	84.6
	Henderson Road	Garden Street (N)	Henderson Road (W)	R	64	78	55.1	D	37.0
	Garden Street		Henderson Road (E)	L	56	35	46.0	D	37.0
		Henderson Road (E)	Garden Street (N)	R	65	101	19.5	B	37.3
			Henderson Road (W)	T	755	852	12.8	A	84.3
			Garden Street (S)	L	13	24	17.3	B	84.3
		Garden Street (S)	Henderson Road (W)	L	7	7	70.3	F	8.9
		Henderson Road (W)	Henderson Road (E)	T	582	478	10.1	A	75.2
			Garden Street (N)	L	105	124	2.8	A	75.2
1022		All			1647	1,699	14.6	A	84.3
	Henderson Road	Henderson Road (E)	Wyndham Street (N)	R	618	603	15.2	B	95.0
	Wyndham Street		Henderson Road (W)	T	800	889	7.9	A	95.0
			Wyndham Street (S)	L	187	92	8.9	A	94.8
		Wyndham Street (S)	Henderson Road (E)	R	5	16	35.9	C	235.1
			Wyndham Street (N)	T	503	560	37.3	C	235.1
			Henderson Road (W)	L	18	95	47.1	D	235.1
		Henderson Road (W)	Henderson Road (E)	T	271	163	42.4	C	76.5
			Wyndham Street (N)	L	367	341	64.9	E	76.8
1023		All			2769	2,759	26.1	B	235.1
	Henderson Road	Botany Road (N)	Henderson Road (W)	R	716	677	50.0	D	122.2
	Botany Road		Botany Road (S)	T	1,107	1,158	9.6	A	122.2
	Raglan St		Raglan St (E)	L	56	69	14.0	A	129.3
		Raglan St (E)	Henderson Road (W)	T	293	273	48.2	D	91.1
			Botany Road (S)	L	18	17	56.2	D	91.4
		Botany Road (S)	Henderson Road (W)	L	593	642	69.9	E	126.1
		Henderson Road (W)	Botany Road (S)	R	53	0	0.0	A	22.5
			Raglan St (E)	T	231	179	18.5	B	22.5
1024		All			3067	3,015	35.9	C	129.3
	Botany Road	Botany Road (N)	McEvoy Street (W)	R	350	402	62.5	E	222.2
	McEvoy Street		Botany Road (S)	T	873	759	15.6	B	222.2
			McEvoy Street (E)	L	90	92	14.5	A	222.2
		McEvoy Street (E)	McEvoy Street (W)	T	644	572	52.6	D	110.6
			Botany Road (S)	L	18	22	60.3	E	110.9
		Botany Road (S)	Botany Road (N)	T	587	585	25.9	B	99.8
			McEvoy Street (W)	L	116	120	28.6	B	99.8
		McEvoy Street (W)	Botany Road (S)	R	93	102	54.6	D	106.3
			McEvoy Street (E)	T	519	404	28.6	B	106.3
			Botany Road (N)	L	59	125	17.8	B	106.3
1025		All			3349	3,183	33.8	C	222.2
	Wyndham Street	Wyndham Street (N)	Buckland Street (W)	R	11	0	0.0	A	21.5
	Buckland Street		Wyndham Street (S)	T	159	92	10.9	A	21.4
			Buckland Street (E)	L	22	0	0.0	A	21.5
		Wyndham Street (S)	Buckland Street (E)	R	69	28	28.6	B	169.8
			Wyndham Street (N)	T	480	676	35.0	C	169.8
			Buckland Street (W)	L	55	11	52.7	D	169.8
		Buckland Street (W)	Wyndham Street (S)	R	52	69	22.7	B	49.7
			Buckland Street (E)	T	33	60	16.0	B	49.5
			Wyndham Street (N)	L	21	22	32.5	C	49.5
1026		All			902	958	30.6	C	169.8
	Wyndham Street	Wyndham Street (N)	Power Avenue (W)	R	48	44	4.2	A	17.3
	Power Avenue		Wyndham Street (S)	T	163	114	0.3	A	17.3
		Wyndham Street (S)	Wyndham Street (N)	T	556	637	5.7	A	89.3
			Power Avenue (W)	L	65	26	5.3	A	94.0
		Power Avenue (W)	Wyndham Street (S)	R	47	27	24.2	B	38.8
			Wyndham Street (N)	L	69	88	25.6	B	38.8
1027		All			948	938	25.6	B	94.0

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Wyndham Street	Wyndham Street (N)	McEvoy Street (W)	R	41	18	63.9	E	31.2
	McEvoy Street		Wyndham Street (S)	T	141	85	26.3	B	31.3
			McEvoy Street (E)	L	48	39	33.7	C	31.2
		McEvoy Street (E)	Wyndham Street (N)	R	70	88	16.6	B	57.4
			McEvoy Street (W)	T	944	900	5.3	A	57.4
			Wyndham Street (S)	L	89	105	11.1	A	57.7
		Wyndham Street (S)	McEvoy Street (E)	R	33	42	61.7	E	135.5
			Wyndham Street (N)	T	424	402	49.2	D	135.5
			McEvoy Street (W)	L	90	55	47.4	D	135.9
		McEvoy Street (W)	McEvoy Street (E)	T	603	553	25.8	B	87.0
			Wyndham Street (N)	L	127	174	27.6	B	87.0
1028		All			2610	2,461	22.8	B	135.9
	McEvoy Street	McEvoy Street (E)	McEvoy Street (W)	T	1,068	948	0.4	A	39.1
	Brennan Street		Hiles Street (S)	L	14	25	2.1	A	43.9
	Hiles Street	Hiles Street (S)	McEvoy Street (E)	R	15	16	13.5	A	10.5
			McEvoy Street (W)	L	25	24	4.0	A	10.5
		McEvoy Street (W)	Hiles Street (S)	R	8	23	8.3	A	42.5
			McEvoy Street (E)	T	724	709	3.1	A	42.5
1029		All			1854	1,745	13.5	A	43.9
	McEvoy Street	McEvoy Street (E)	McEvoy Street (W)	T	1,068	948	0.3	A	0.0
	Loveridge Street		McCauley Street (S)	L	18	24	0.7	A	0.0
	McCauley Street	McCauley Street (S)	McEvoy Street (E)	R	16	6	4.6	A	11.0
			McEvoy Street (W)	L	33	42	4.5	A	11.0
		McEvoy Street (W)	McCauley Street (S)	R	16	9	4.4	A	57.2
			McEvoy Street (E)	T	718	731	1.1	A	57.2
1030		All			1869	1,761	4.6	A	57.2
	McEvoy Street	Fountain Street (NW)	McEvoy Street (S)	R	113	187	92.0	F	183.3
	Fountain Street		McEvoy Street (E)	L	171	113	88.4	F	183.3
		McEvoy Street (E)	Fountain Street (NW)	R	296	246	51.0	D	109.9
			McEvoy Street (S)	T	820	741	9.5	A	123.9
		McEvoy Street (S)	McEvoy Street (E)	T	542	639	29.7	C	121.4
			Fountain Street (NW)	L	133	199	30.4	C	121.4
1031		All			2075	2,124	33.7	C	183.3
	McEvoy Street	McEvoy Street (N)	Euston Road (S)	T	972	981	3.7	A	57.7
	Harley Street	McEvoy Street (S)	McEvoy Street (N)	T	623	806	0.1	A	20.5
			Harley Street (W)	L	117	0	0.0	A	24.3
		Harley Street (W)	McEvoy Street (N)	L	41	0	0.0	A	0.0
1032		All			1753	1,787	3.7	A	57.7
	Euston Road	Euston Road (N)	Euston Road (S)	T	937	897	0.3	A	10.3
	Bunnings Access		Bunnings Access (E)	L	84	83	0.6	A	10.8
		Bunnings Access (E)	Euston Road (N)	R	142	143	42.1	C	56.6
			Euston Road (S)	L	95	93	4.6	A	11.7
		Euston Road (S)	Bunnings Access (E)	R	67	74	18.8	B	57.0
			Euston Road (N)	T	616	663	4.7	A	57.0
1035		All			1941	1,954	5.8	A	57.0
	Euston Road	Euston Road (N)	Euston Road (S)	T	957	916	3.3	A	48.5
	Maddox Street		Maddox Street (E)	L	45	73	5.1	A	48.5
		Maddox Street (E)	Euston Road (N)	R	79	94	68.5	E	66.8
			Maddox Street (W)	T	212	192	34.1	C	66.7
			Euston Road (S)	L	45	46	34.6	C	67.1
		Euston Road (S)	Euston Road (N)	T	569	569	7.7	A	60.6
			Maddox Street (W)	L	66	43	10.0	A	60.6
		Maddox Street (W)	Euston Road (S)	R	56	74	40.2	C	46.1
			Maddox Street (E)	T	111	104	32.3	C	46.1
			Euston Road (N)	L	38	76	29.9	C	46.1
1033		All			2178	2,187	14.4	A	67.1
	Euston Road	Euston Road (N)	Sydney Park Road (W)	R	0	0	0.0	A	113.0
	Sudney Park Road		Euston Road (S)	T	994	930	37.0	C	113.0
	Huntley Street		Huntley Street (E)	L	81	92	35.6	C	113.2
		Huntley Street (E)	Euston Road (N)	R	58	56	53.1	D	36.3
			Sydney Park Road (W)	T	709	737	45.3	D	336.8
			Euston Road (S)	L	145	111	40.7	C	337.1
		Euston Road (S)	Huntley Street (E)	R	96	82	49.6	D	43.1
			Euston Road (N)	T	408	349	19.7	B	43.1
			Sydney Park Road (W)	L	124	159	4.8	A	39.0
		Sydney Park Road (W)	Euston Road (S)	R	53	87	52.9	D	123.3
			Huntley Street (E)	T	232	224	56.8	D	123.3
			Euston Road (N)	L	180	207	96.9	F	126.8
1034		All			3080	3,034	42.1	C	337.1

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Henderson Road	Alexander Street (N)	Henderson Road (E)	L	30	31	1.7	A	6.1
	Alexander Street	Henderson Road (E)	Henderson Road (W)	T	254	232	3.9	A	27.9
			Alexander Street (S)	L	11	2	1.9	A	27.9
		Alexander Street (S)	Henderson Road (W)	L	9	8	1.6	A	1.2
		Henderson Road (W)	Henderson Road (E)	T	131	180	1.1	A	12.1
			Alexander Street (N)	L	6	9	1.1	A	12.1
1005		All			441	462	3.9	A	27.9
1006	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	251	235	1.7	A	1.6
	Brandling Street		Brandling Street (S)	L	3	5	1.3	A	1.6
		Brandling Street (S)	Henderson Road (E)	R	7	1	3.5	A	0.0
			Henderson Road (W)	L	3	12	1.9	A	0.0
		Henderson Road (W)	Brandling Street (S)	R	6	2	0.6	A	1.1
			Henderson Road (E)	T	115	190	0.2	A	23.7
1006		All			385	445	3.5	A	23.7
	Henderson Road	Progress Road (N)	Henderson Road (W)	R	25	32	2.9	A	5.9
	Progress Road		Henderson Road (E)	L	21	24	1.5	A	5.9
		Henderson Road (E)	Progress Road (N)	R	23	55	1.3	A	28.9
			Henderson Road (W)	T	232	192	0.4	A	19.7
		Henderson Road (W)	Henderson Road (E)	T	99	168	0.3	A	0.0
			Progress Road (N)	L	20	1	1.3	A	1.3
1007		All			420	472	2.9	A	28.9
1008	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	249	210	0.0	A	0.0
	Newton Street		Newton Street (S)	L	6	13	0.4	A	0.0
		Newton Street (S)	Henderson Road (E)	R	4	12	2.2	A	6.3
			Henderson Road (W)	L	14	12	1.5	A	6.3
		Henderson Road (W)	Newton Street (S)	R	21	18	1.6	A	10.4
			Henderson Road (E)	T	115	158	0.2	A	1.9
1008		All			409	423	2.2	A	10.4
	Henderson Road	Henderson Road (E)	Railway Parade (W)	T	228	190	0.3	A	1.0
	Railway Parade		Park Street (S)	L	34	32	0.7	A	1.0
	Park Street	Park Street (S)	Henderson Road (E)	R	122	0	0.0	A	7.3
			Railway Parade (W)	L	46	49	1.5	A	7.3
		Railway Parade (W)	Park Street (S)	R	6	31	3.1	A	23.3
			Henderson Road (E)	T	16	176	1.0	A	22.9
1009		All			452	478	3.1	A	23.3
	Railway Parade	Railway Parade (E)	Railway Parade (W)	T	244	198	0.4	A	1.2
	Clara Street		Clara Street (S)	L	34	25	1.2	A	8.5
		Clara Street (S)	Railway Parade (E)	R	1	9	1.9	A	0.0
			Railway Parade (W)	L	1	0	0.0	A	0.0
		Railway Parade (W)	Clara Street (S)	R	0	23	1.5	A	20.1
			Railway Parade (E)	T	9	153	0.6	A	5.8
1010		All			289	408	1.9	A	20.1
	Railway Parade	Railway Parade (N)	Swanson Street (W)	R	212	165	53.2	D	75.1
	Swanson Street		Swanson Street (E)	L	27	12	51.4	D	75.1
		Swanson Street (E)	Railway Parade (N)	R	0	13	37.8	C	87.5
			Swanson Street (W)	T	472	489	47.4	D	87.4
		Swanson Street (W)	Swanson Street (E)	T	484	316	16.4	B	79.2
			Railway Parade (N)	L	0	159	22.4	B	79.2
1011		All			1195	1,154	36.3	C	87.5
	Swanson Street	Clara Street (N)	Swanson Street (W)	R	8	21	114.3	F	13.8
	Clara Street		Swanson Street (E)	L	9	9	41.7	C	13.8
		Swanson Street (E)	Swanson Street (W)	T	518	520	19.2	B	66.3
		Swanson Street (W)	Swanson Street (E)	T	510	353	1.4	A	0.0
1012		All			1045	902	114.3	F	66.3
	Swanson Street	Park Street (N)	Swanson Street (W)	R	17	7	19.2	B	15.4
	Park Street		Swanson Street (E)	L	26	55	4.4	A	15.6
		Swanson Street (E)	Park Street (N)	R	42	54	3.4	A	13.5
			Swanson Street (W)	T	458	474	4.4	A	63.1
		Swanson Street (W)	Swanson Street (E)	T	405	362	3.1	A	45.0
			Park Street (N)	L	123	0	0.0	A	45.0
1013		All			1071	953	19.2	B	63.1
	Copeland Street	Newton Street (N)	Copeland Street (E)	L	28	30	15.4	B	4.7
	Newton Street	Copeland Street (E)	Copeland Street (W)	T	501	528	0.8	A	13.4
		Copeland Street (W)	Copeland Street (E)	T	430	416	0.7	A	0.0
1014		All			959	974	15.4	B	13.4

P4411 Henderson Road Alexandria Traffic Study

VISSIM Data Analysis

Network Performance of AM Peak Scenario A

Average Delay (s)	103
Average Network Speed (km/hr)	17.3
VKT	15,563
VHT	911
Stops (per vehicle)	3.06
Completed Trips	15,773
Incompleted Trips	314
Unreleased Vehicles	-
Total Trips	16,087

P4411 Henderson Road Alexandria Traffic Study

VISSIM Data Analysis

Network Performance of PM Peak Scenario A

Average Delay (s)	90
Average Network Speed (km/hr)	19.1
VKT	15,868
VHT	835
Stops (per vehicle)	2.88
Completed Trips	15,658
Incompleted Trips	324
Unreleased Vehicles	-
Total Trips	15,982

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 1: Mitchell Road

AM Peak (0800 - 0900)

Northbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Sydney Park Rd west of Euston Rd		0.00	0.00	0:00	0:00	0:00	0:00
Mitchell Rd north of Maddox St	Route 1 NB-1	0.65	0.65	3:44	3:49	4:35	3:08
Mitchell Rd at Anderson St	Route 1 NB-2	0.75	1.40	6:51	6:15	6:57	4:45
Mitchell Rd at Henderson St	Route 1 NB-3	0.19	1.59	8:19	7:10	8:14	5:44

Southbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Mitchell Rd at Henderson St		0.00	0.00	0:00	0:00	0:00	0:00
Mitchell Rd at Anderson St	Route 1 SB-1	0.19	0.19	0:19	0:14	0:14	0:14
Mitchell Rd north of Maddox St	Route 1 SB-2	0.75	0.94	1:59	2:08	2:13	2:14
Sydney Park Rd west of Euston Rd	Route 1 SB-3	0.65	1.59	3:31	4:25	4:37	6:03

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 2: McEvoy Street

AM Peak (0800 - 0900)

Northbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Sydney Park Rd & Euston Rd		0.00	0.00	0:00	0:00	0:00	0:00
Euston Rd Nth of Maddox St	Route 2 NB-1	0.28	0.28	0:34	1:04	0:31	0:30
McEvoy St at Stokes Ave	Route 2 NB-2	0.65	0.93	4:21	4:58	2:24	2:59
Wyndham St north of Buckland St	Route 2 NB-3	0.65	1.58	8:13	8:19	6:21	7:32
Henderson Rd east of Wyndham St	Route 2 NB-4	0.22	1.80	9:54	10:35	8:21	9:49

Southbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Henderson Rd east of Wyndham St		0.00	0.00	0:00	0:00	0:00	0:00
Wyndham St north of Buckland St	Route 2 SB-1	0.22	0.22	0:29	0:31	0:28	0:27
McEvoy St at Stokes Ave	Route 2 SB-2	0.65	0.87	2:34	2:59	3:06	4:30
Euston Rd Nth of Maddox St	Route 2 SB-3	0.65	1.52	3:35	4:23	4:24	5:48
Sydney Park Rd & Euston Rd	Route 2 SB-4	0.28	1.80	4:54	5:58	5:51	7:06

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 3: Railway Pde and Henderson Road

AM Peak (0800 - 0900)

Eastbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Railway Pde at Swanson St		0.00	0.00	0:00	0:00	0:00	0:00
Park St at Swanson St	Route 3 EB-1	0.35	0.35	0:52	0:46	0:49	0:42
Park St at Railway Pde	Route 3 EB-2	0.25	0.60	1:36	1:08	1:11	1:04
Henderson Rd at Alexander St	Route 3 EB-3	0.40	1.00	2:23	1:47	1:50	1:42
Henderson Rd at Mitchell St	Route 3 EB-4	0.24	1.24	4:05	2:55	3:20	3:02
Henderson Rd at Wyndham St	Route 3 EB-5	0.27	1.51	5:19	5:56	6:02	5:18

Westbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Henderson Rd at Wyndham St			0.00	0:00	0:00	0:00	0:00
Henderson Rd at Mitchell St	Route 3 WB-1	0.27	0.27	1:10	1:23	1:18	1:31
Henderson Rd at Alexander St	Route 3 WB-2	0.24	0.51	1:42	1:50	1:44	1:58
Railway Pde at Park St	Route 3 WB-3	0.40	0.91	2:33	2:27	2:21	2:36
Railway Pde at Swanson St	Route 3 WB-4	0.35	1.26	4:11	4:03	4:00	4:14

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 4: Swanson Street

AM Peak (0800 - 0900)

Eastbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Railway St		0.00	0.00	0:00	0:00	0:00	0:00
Park St	Route 4 EB-1	0.35	0.35	0:54	0:46	0:49	0:42
Mitchell Rd	Route 4 EB-2	0.30	0.65	2:36	2:37	2:35	1:46

Westbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Mitchell Rd			0.00	0:00	0:00	0:00	0:00
Park St	Route 4 WB-1	0.30	0.30	0:31	0:23	0:23	0:23
Railway Pde	Route 4 WB-2	0.35	0.65	1:34	1:15	1:15	1:18

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 1: Mitchell Road

PM Peak (1700 - 1800)

Northbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Sydney Park Rd west of Euston Rd		0.00	0.00	0:00	0:00	0:00	0:00
Mitchell Rd north of Maddox St	Route 1 NB-1	0.65	0.65	2:13	2:39	2:29	3:00
Mitchell Rd at Anderson St	Route 1 NB-2	0.75	1.40	4:58	4:26	4:15	4:50
Mitchell Rd at Henderson St	Route 1 NB-3	0.19	1.59	5:47	5:08	5:03	5:38

Southbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Mitchell Rd at Henderson St		0.00	0.00	0:00	0:00	0:00	0:00
Mitchell Rd at Anderson St	Route 1 SB-1	0.19	0.19	0:19	0:14	0:18	0:14
Mitchell Rd north of Maddox St	Route 1 SB-2	0.75	0.94	2:24	3:30	4:15	3:12
Sydney Park Rd west of Euston Rd	Route 1 SB-3	0.65	1.59	4:35	6:08	7:03	7:14

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 2: McEvoy Street

PM Peak (1700 - 1800)

Northbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Sydney Park Rd & Euston Rd		0.00	0.00	0:00	0:00	0:00	0:00
Euston Rd Nth of Maddox St	Route 2 NB-1	0.28	0.28	0:34	0:27	0:27	0:27
McEvoy St at Stokes Ave	Route 2 NB-2	0.65	0.93	2:07	2:06	1:46	1:48
Wyndham St north of Buckland St	Route 2 NB-3	0.65	1.58	5:07	4:01	3:47	4:33
Henderson Rd east of Wyndham St	Route 2 NB-4	0.22	1.80	7:12	5:54	5:46	6:35

Southbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Henderson Rd east of Wyndham St		0.00	0.00	0:00	0:00	0:00	0:00
Wyndham St north of Buckland St	Route 2 SB-1	0.22	0.22	0:27	0:27	0:29	0:27
McEvoy St at Stokes Ave	Route 2 SB-2	0.65	0.87	2:51	3:14	3:21	2:38
Euston Rd Nth of Maddox St	Route 2 SB-3	0.65	1.52	4:25	4:28	4:25	3:43
Sydney Park Rd & Euston Rd	Route 2 SB-4	0.28	1.80	5:03	5:28	5:27	4:43

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 3: Railway Pde and Henderson Road

PM Peak (1700 - 1800)

Eastbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Railway Pde at Swanson St		0.00	0.00	0:00	0:00	0:00	0:00
Park St at Swanson St	Route 3 EB-1	0.35	0.35	0:52	0:45	0:48	0:45
Park St at Railway Pde	Route 3 EB-2	0.25	0.60	1:26	1:07	1:09	1:06
Henderson Rd at Alexander St	Route 3 EB-3	0.40	1.00	2:10	1:46	1:48	1:06
Henderson Rd at Mitchell St	Route 3 EB-4	0.24	1.24	2:41	2:50	2:49	2:03
Henderson Rd at Wyndham St	Route 3 EB-5	0.27	1.51	3:56	4:00	3:45	2:54

Westbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Henderson Rd at Wyndham St			0.00	0:00	0:00	0:00	0:00
Henderson Rd at Mitchell St	Route 3 WB-1	0.27	0.27	0:52	1:21	1:22	1:26
Henderson Rd at Alexander St	Route 3 WB-2	0.24	0.51	1:23	1:48	1:48	1:52
Railway Pde at Park St	Route 3 WB-3	0.40	0.91	2:15	2:26	2:26	2:30
Railway Pde at Swanson St	Route 3 WB-4	0.35	1.26	4:24	4:42	4:17	4:01

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 4: Swanson Street

PM Peak (1700 - 1800)

Eastbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Railway St		0.00	0.00	0:00	0:00	0:00	0:00
Park St	Route 4 EB-1	0.35	0.35	0:43	0:45	0:48	0:45
Mitchell Rd	Route 4 EB-2	0.30	0.65	2:54	3:16	2:12	1:52

Westbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario A
Mitchell Rd			0.00	0:00	0:00	0:00	0:00
Park St	Route 4 WB-1	0.30	0.30	0:31	0:23	0:23	0:25
Railway Pde	Route 4 WB-2	0.35	0.65	2:06	1:59	2:06	3:07

Appendix C: Scenario B Modelling Results

P4411 Henderson Road Alexandria Traffic Study
VISSIM Data Analysis - Node Scenario B -AM
AM Peak 0800-0900

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Sydney Park Road	Mitchelle Road (N)	Sydney Park Road (W)	R	243	4	55.0	D	155.5
	Mitchell Road		Sydney Park Carpark (S)	T	25	10	50.6	D	155.5
			Sydney Park Road (E)	L	160	306	58.9	E	155.5
		Sydney Park Road (E)	Mitchelle Road (N)	R	104	87	56.1	D	81.4
			Sydney Park Road (W)	T	226	220	15.0	A	63.9
			Sydney Park Carpark (S)	L	24	40	15.9	B	63.9
		Sydney Park Carpark (S)	Sydney Park Road (E)	R	20	24	43.8	D	19.5
			Mitchelle Road (N)	T	9	13	40.7	C	19.5
			Sydney Park Road (W)	L	16	10	37.8	C	19.5
		Sydney Park Road (W)	Sydney Park Road (E)	T	575	693	32.1	C	508.9
			Mitchelle Road (N)	L	474	375	12.9	A	56.4
1015		All			1876	1,844	31.8	C	508.9
	Mitchell Road	Mitchelle Road (N)	Coulson Street (W)	R	79	90	62.5	E	231.9
	Huntley Street		Mitchelle Road (S)	T	313	186	69.6	E	231.9
	Coulson Street		Huntley Street (E)	L	12	6	63.0	E	231.9
		Huntley Street (E)	Mitchelle Road (N)	R	13	9	15.2	B	23.0
			Coulson Street (W)	T	20	21	17.8	B	17.7
			Mitchelle Road (S)	L	20	26	53.5	D	24.7
		Mitchelle Road (S)	Huntley Street (E)	R	28	29	23.3	B	44.8
			Mitchelle Road (N)	T	490	431	15.1	B	44.2
			Coulson Street (W)	L	76	44	0.2	A	50.9
		Coulson Street (W)	Mitchelle Road (S)	R	89	118	71.9	F	62.0
			Huntley Street (E)	T	38	37	24.6	B	62.0
			Mitchelle Road (N)	L	100	80	29.7	C	62.0
1016		All			1278	1,077	37.0	C	231.9
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	376	273	7.8	A	30.7
	Maddox Street		Maddox Street (E)	L	185	158	8.2	A	30.7
		Maddox Street (E)	Mitchell Road (N)	R	217	70	34.7	C	57.1
			Mitchell Road (S)	L	42	66	33.5	C	57.2
		Mitchell Road (S)	Maddox Street (E)	R	73	46	21.2	B	88.8
			Mitchell Road (N)	T	484	471	7.6	A	88.8
1017		All			1377	1,084	11.6	A	88.8
	Mitchell Road	Mitchelle Road (N)	Ashmore Street (W)	R	74	109	3.7	A	21.3
	Ashmore Street		Mitchelle Road (S)	T	493	400	1.7	A	21.3
		Mitchelle Road (S)	Mitchelle Road (N)	T	575	476	15.4	B	210.0
			Ashmore Street (W)	L	126	59	8.6	A	210.0
		Ashmore Street (W)	Mitchelle Road (S)	R	71	36	101.3	F	111.7
			Mitchelle Road (N)	L	23	80	98.9	F	111.7
1018		All			1362	1,160	17.7	B	210.0
	Harley Street	Mitchell Road (N)	Mitchell Road (S)	T	473	509	8.6	A	95.7
	Mitchell Road		Harley Street (E)	L	56	0	0.0	A	94.8
		Harley Street (E)	Mitchell Road (N)	R	127	0	0.0	A	0.0
			Mitchell Road (S)	L	94	0	0.0	A	0.0
		Mitchell Road (S)	Mitchell Road (N)	T	597	556	3.0	A	93.2
1019		All			1347	1,065	8.6	A	95.7
	Mitchell Road	Mitchell Road (N)	Copeland Street (W)	R	189	266	21.3	B	98.9
	Copeland Street		Mitchell Road (S)	T	326	301	27.2	B	98.9
		Mitchell Road (S)	Mitchell Road (N)	T	585	452	22.9	B	140.3
			Copeland Street (W)	L	155	100	19.2	B	140.6
		Copeland Street (W)	Mitchell Road (S)	R	216	210	9.7	A	33.4
			Mitchell Road (N)	L	257	153	7.6	A	33.3
1001		All			1728	1,482	19.8	B	140.6
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	305	247	50.7	D	67.8
	Fountain Street		Fountain Street (E)	L	60	42	37.1	C	68.2
		Fountain Street (E)	Mitchell Road (N)	R	168	242	52.3	D	245.3
			Mitchell Road (S)	L	210	332	34.5	C	245.3
		Mitchell Road (S)	Fountain Street (E)	R	197	199	31.4	C	102.6
			Mitchell Road (N)	T	637	401	35.1	C	102.8
1020		All			1577	1,463	40.0	C	245.3
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	298	222	85.3	F	107.9
	Buckland Street		Buckland Street (E)	L	42	151	15.0	A	107.9
		Buckland Street (E)	Mitchell Road (S)	L	51	78	146.5	F	68.5
		Mitchell Road (S)	Mitchell Road (N)	T	798	664	1.7	A	31.5
1002		All			1189	1,115	30.2	C	107.9
	Mitchell Road	Mitchell Road (N)	Ranwick Street (W)	R	19	34	5.9	A	17.6
	Ranwick Street		Mitchell Road (S)	T	321	349	0.4	A	5.6
		Mitchell Road (S)	Mitchell Road (N)	T	690	571	0.5	A	0.0
			Ranwick Street (W)	L	44	93	0.9	A	14.8
		Ranwick Street (W)	Mitchell Road (S)	R	21	28	4.4	A	12.3
			Mitchell Road (N)	L	35	53	6.7	A	12.3
1003		All			1130	1,128	6.7	A	17.6

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Mitchell Road	Davy Road (N)	Henderson Road (W)	R	14	17	35.0	C	25.3
	Henderson Road		Mitchelle Road (S)	T	27	35	42.8	C	25.3
	Davy Road		Henderson Road (E)	L	44	44	25.1	B	25.3
		Henderson Road (E)	Davy Road (N)	R	155	126	83.8	F	58.3
			Henderson Road (W)	T	190	174	21.2	B	77.8
			Mitchelle Road (S)	L	264	256	17.6	B	77.8
		Mitchelle Road (S)	Henderson Road (E)	R	609	478	35.5	C	120.3
			Davy Road (N)	T	94	121	33.9	C	120.3
			Henderson Road (W)	L	17	23	31.1	C	120.3
		Henderson Road (W)	Mitchelle Road (S)	R	40	92	50.4	D	118.2
			Henderson Road (E)	T	183	258	53.7	D	118.2
			Davy Road (N)	L	42	37	39.5	C	118.2
1004		All			1679	1,661	38.3	C	120.3
	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	583	530	0.8	A	10.2
	Gerard Street		Gerard Street (S)	L	36	40	1.1	A	17.4
		Gerard Street (S)	Henderson Road (W)	L	33	32	2.1	A	5.2
		Henderson Road (W)	Henderson Road (E)	T	835	773	6.7	A	55.8
1021		All			1,487	1,375	6.7	A	55.8
	Henderson Road	Garden Street (N)	Henderson Road (W)	R	61	62	50.8	D	45.4
	Garden Street		Henderson Road (E)	L	41	41	62.0	E	45.4
		Henderson Road (E)	Garden Street (N)	R	159	123	41.8	C	85.0
			Henderson Road (W)	T	541	490	20.1	B	88.9
			Garden Street (S)	L	14	17	29.5	C	88.9
		Garden Street (S)	Henderson Road (W)	L	19	18	47.6	D	20.1
		Henderson Road (W)	Henderson Road (E)	T	688	583	33.7	C	84.8
			Garden Street (N)	L	149	174	6.7	A	84.8
1022		All			1672	1,508	28.4	B	88.9
	Henderson Road	Henderson Road (E)	Wyndham Street (N)	R	707	801	16.7	B	85.4
	Wyndham Street		Henderson Road (W)	T	700	579	5.7	A	85.4
			Wyndham Street (S)	L	151	216	8.0	A	85.4
		Wyndham Street (S)	Henderson Road (E)	R	3	50	62.5	E	239.5
			Wyndham Street (N)	T	435	413	47.0	D	239.5
			Henderson Road (W)	L	19	54	43.1	D	239.5
		Henderson Road (W)	Henderson Road (E)	T	248	196	51.8	D	88.6
			Wyndham Street (N)	L	492	410	71.2	F	88.9
1023		All			2755	2,719	30.4	C	239.5
	Henderson Road	Botany Road (N)	Henderson Road (W)	R	606	632	48.7	D	126.5
	Botany Road		Botany Road (S)	T	1,085	1,054	7.5	A	126.5
	Raglan St		Raglan St (E)	L	62	70	13.1	A	133.6
		Raglan St (E)	Henderson Road (W)	T	236	217	51.4	D	71.0
			Botany Road (S)	L	10	30	59.5	E	76.1
		Botany Road (S)	Henderson Road (W)	L	710	759	94.0	F	222.4
		Henderson Road (W)	Botany Road (S)	R	44	56	103.3	F	61.4
			Raglan St (E)	T	205	187	29.8	C	61.4
1024		All			2958	3,005	45.0	D	222.4
	Botany Road	Botany Road (N)	McEvoy Street (W)	R	339	382	105.2	F	320.2
	McEvoy Street		Botany Road (S)	T	772	730	28.4	B	320.2
			McEvoy Street (E)	L	97	115	27.1	B	320.2
		McEvoy Street (E)	McEvoy Street (W)	T	455	403	201.8	F	460.7
			Botany Road (S)	L	11	10	198.5	F	461.1
		Botany Road (S)	Botany Road (N)	T	701	741	28.8	B	125.5
			McEvoy Street (W)	L	149	143	32.6	C	125.5
		McEvoy Street (W)	Botany Road (S)	R	85	79	77.6	F	106.9
			McEvoy Street (E)	T	571	479	59.0	E	106.9
			Botany Road (N)	L	63	52	60.6	E	106.9
1025		All			3243	3,134	67.3	E	461.1
	Wyndham Street	Wyndham Street (N)	Buckland Street (W)	R	7	8	37.6	C	42.7
	Buckland Street		Wyndham Street (S)	T	134	207	26.6	B	42.6
			Buckland Street (E)	L	8	0	0.0	A	42.8
		Wyndham Street (S)	Buckland Street (E)	R	61	84	40.8	C	176.3
			Wyndham Street (N)	T	438	495	29.9	C	176.3
			Buckland Street (W)	L	72	96	33.5	C	176.3
		Buckland Street (W)	Wyndham Street (S)	R	51	88	99.7	F	291.3
			Buckland Street (E)	T	51	57	114.1	F	291.3
			Wyndham Street (N)	L	26	35	94.7	F	291.3
1026		All			848	1,070	42.9	C	291.3
	Wyndham Street	Wyndham Street (N)	Power Avenue (W)	R	60	44	20.6	B	194.7
	Power Avenue		Wyndham Street (S)	T	123	226	10.7	A	188.3
		Wyndham Street (S)	Wyndham Street (N)	T	487	663	4.4	A	162.8
			Power Avenue (W)	L	136	89	-0.3	A	165.7
		Power Avenue (W)	Wyndham Street (S)	R	86	45	188.9	F	204.1
			Wyndham Street (N)	L	76	42	138.4	F	204.1
1027		All			968	1,109	188.9	F	204.1

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Wyndham Street	Wyndham Street (N)	McEvoy Street (W)	R	27	101	275.7	F	161.0
	McEvoy Street		Wyndham Street (S)	T	129	100	36.5	C	160.9
			McEvoy Street (E)	L	59	54	48.0	D	160.8
		McEvoy Street (E)	Wyndham Street (N)	R	134	175	38.2	C	106.0
			McEvoy Street (W)	T	686	615	24.8	B	106.0
			Wyndham Street (S)	L	138	126	31.2	C	106.0
		Wyndham Street (S)	McEvoy Street (E)	R	37	40	148.2	F	226.6
			Wyndham Street (N)	T	317	335	41.2	C	226.6
			McEvoy Street (W)	L	67	64	40.7	C	227.1
		McEvoy Street (W)	McEvoy Street (E)	T	631	523	46.2	D	92.6
			Wyndham Street (N)	L	146	260	63.9	E	92.6
1028		All			2371	2,393	51.4	D	227.1
	McEvoy Street	McEvoy Street (E)	McEvoy Street (W)	T	740	755	0.5	A	33.7
	Brennan Street		Hiles Street (S)	L	33	22	1.7	A	38.4
	Hiles Street	Hiles Street (S)	McEvoy Street (E)	R	11	9	10.2	A	11.5
			McEvoy Street (W)	L	29	33	3.5	A	11.5
		McEvoy Street (W)	Hiles Street (S)	R	21	38	11.5	A	104.6
			McEvoy Street (E)	T	786	791	24.3	B	104.6
1029		All			1620	1,648	24.3	B	104.6
	McEvoy Street	McEvoy Street (E)	McEvoy Street (W)	T	729	742	0.2	A	7.9
	Loveridge Street		McCauley Street (S)	L	37	41	1.0	A	7.9
	McCauley Street	McCauley Street (S)	McEvoy Street (E)	R	22	23	12.7	A	12.2
			McEvoy Street (W)	L	16	18	4.1	A	12.2
		McEvoy Street (W)	McCauley Street (S)	R	16	40	10.1	A	102.5
			McEvoy Street (E)	T	799	828	7.2	A	102.5
1030		All			1619	1,692	12.7	A	102.5
	McEvoy Street	Fountain Street (NW)	McEvoy Street (S)	R	98	179	128.7	F	288.9
	Fountain Street		McEvoy Street (E)	L	153	75	81.1	F	288.9
		McEvoy Street (E)	Fountain Street (NW)	R	205	162	46.5	D	70.9
			McEvoy Street (S)	T	538	596	7.0	A	80.0
		McEvoy Street (S)	McEvoy Street (E)	T	671	812	43.9	D	272.7
			Fountain Street (NW)	L	118	422	48.6	D	273.0
1031		All			1783	2,246	43.2	D	288.9
	McEvoy Street	McEvoy Street (N)	Euston Road (S)	T	600	707	17.2	B	81.2
	Harley Street	McEvoy Street (S)	McEvoy Street (N)	T	836	1,268	3.0	A	34.9
			Harley Street (W)	L	226	34	-1.1	A	38.6
		Harley Street (W)	McEvoy Street (N)	L	46	49	43.3	D	21.0
1032		All			1708	2,058	43.3	D	81.2
	Euston Road	Euston Road (N)	Euston Road (S)	T	446	650	0.4	A	12.2
	Bunnings Access		Bunnings Access (E)	L	156	56	3.2	A	12.7
		Bunnings Access (E)	Euston Road (N)	R	126	122	43.8	D	67.2
			Euston Road (S)	L	72	83	1.9	A	6.2
		Euston Road (S)	Bunnings Access (E)	R	144	154	51.1	D	246.1
			Euston Road (N)	T	942	1,180	36.5	C	246.1
1035		All			1886	2,245	25.3	B	246.1
	Euston Road	Euston Road (N)	Euston Road (S)	T	437	562	6.5	A	61.1
	Maddox Street		Maddox Street (E)	L	80	170	5.7	A	61.1
		Maddox Street (E)	Euston Road (N)	R	52	168	136.5	F	122.8
			Maddox Street (W)	T	117	0	0.0	A	122.6
			Euston Road (S)	L	24	41	43.0	C	123.1
		Euston Road (S)	Euston Road (N)	T	1055	1,069	36.1	C	252.3
			Maddox Street (W)	L	192	109	14.6	A	252.3
		Maddox Street (W)	Euston Road (S)	R	72	0	0.0	A	33.1
			Maddox Street (E)	T	192	0	0.0	A	33.1
			Euston Road (N)	L	57	145	36.9	C	33.1
1033		All			2278	2,264	33.1	C	252.3
	Euston Road	Euston Road (N)	Sydney Park Road (W)	R	0	0	0.0	A	95.2
	Sudney Park Road		Euston Road (S)	T	388	480	39.9	C	95.2
	Huntley Street		Huntley Street (E)	L	131	111	54.2	D	95.4
		Huntley Street (E)	Euston Road (N)	R	56	110	41.4	C	54.8
			Sydney Park Road (W)	T	248	237	33.6	C	57.3
			Euston Road (S)	L	100	84	20.1	B	57.5
		Euston Road (S)	Huntley Street (E)	R	274	266	54.0	D	200.1
			Euston Road (N)	T	934	777	39.3	C	200.1
			Sydney Park Road (W)	L	106	125	5.7	A	196.1
		Sydney Park Road (W)	Euston Road (S)	R	98	217	93.0	F	261.6
			Huntley Street (E)	T	431	401	57.6	E	261.6
			Euston Road (N)	L	234	344	107.8	F	261.5
1034		All			3000	3,152	52.4	D	261.6

ID	Intersection	From	To	Turn	Surveyed	Modelled	Delay (s)	LoS	Queue (m)
	Henderson Road	Alexander Street (N)	Henderson Road (E)	L	30	28	3.1	A	5.2
	Alexander Street	Henderson Road (E)	Henderson Road (W)	T	199	177	3.0	A	24.6
			Alexander Street (S)	L	16	38	4.2	A	24.6
		Alexander Street (S)	Henderson Road (W)	L	18	6	4.7	A	0.0
		Henderson Road (W)	Henderson Road (E)	T	233	367	1.5	A	30.8
			Alexander Street (N)	L	31	32	2.1	A	30.8
1005		All			527	648	4.7	A	30.8
1006	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	187	166	1.6	A	36.0
	Brandling Street		Brandling Street (S)	L	14	16	1.2	A	36.0
		Brandling Street (S)	Henderson Road (E)	R	6	7	5.1	A	5.6
			Henderson Road (W)	L	9	5	1.9	A	5.6
		Henderson Road (W)	Brandling Street (S)	R	5	0	0.0	A	5.0
			Henderson Road (E)	T	251	393	0.3	A	5.0
1006		All			472	587	5.1	A	36.0
	Henderson Road	Progress Road (N)	Henderson Road (W)	R	24	11	4.6	A	6.0
	Progress Road		Henderson Road (E)	L	41	48	2.3	A	6.0
		Henderson Road (E)	Progress Road (N)	R	33	32	1.5	A	12.2
			Henderson Road (W)	T	155	139	0.1	A	0.0
		Henderson Road (W)	Henderson Road (E)	T	211	345	0.4	A	0.0
			Progress Road (N)	L	24	12	0.8	A	6.0
1007		All			488	587	4.6	A	12.2
1008	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	162	136	0.0	A	0.0
	Newton Street		Newton Street (S)	L	17	13	0.5	A	0.0
		Newton Street (S)	Henderson Road (E)	R	14	38	2.4	A	7.3
			Henderson Road (W)	L	15	31	1.8	A	7.3
		Henderson Road (W)	Newton Street (S)	R	8	0	0.0	A	0.0
			Henderson Road (E)	T	225	319	0.1	A	0.0
1008		All			441	537	2.4	A	7.3
	Henderson Road	Henderson Road (E)	Railway Parade (W)	T	160	164	1.6	A	0.0
	Railway Parade		Park Street (S)	L	17	0	0.0	A	0.0
	Park Street	Park Street (S)	Henderson Road (E)	R	209	0	0.0	A	0.0
			Railway Parade (W)	L	42	0	0.0	A	0.0
		Railway Parade (W)	Park Street (S)	R	13	0	0.0	A	28.3
			Henderson Road (E)	T	24	319	1.1	A	43.5
1009		All			465	483	1.6	A	43.5
	Railway Parade	Railway Parade (E)	Railway Parade (W)	T	169	116	0.4	A	0.0
	Clara Street		Clara Street (S)	L	15	13	1.0	A	5.3
		Clara Street (S)	Railway Parade (E)	R	2	12	4.7	A	8.1
			Railway Parade (W)	L	1	0	0.0	A	8.1
		Railway Parade (W)	Clara Street (S)	R	0	40	1.1	A	24.4
			Railway Parade (E)	T	17	309	0.6	A	9.8
1010		All			204	490	4.7	A	24.4
	Railway Parade	Railway Parade (N)	Swanson Street (W)	R	118	86	41.5	C	40.6
	Swanson Street		Swanson Street (E)	L	31	34	36.9	C	40.6
		Swanson Street (E)	Railway Parade (N)	R	0	42	15.9	B	61.7
			Swanson Street (W)	T	458	490	16.2	B	61.6
		Swanson Street (W)	Swanson Street (E)	T	578	244	14.4	A	79.6
			Railway Parade (N)	L	0	305	15.5	B	79.5
1011		All			1185	1,201	18.0	B	79.6
	Swanson Street	Clara Street (N)	Swanson Street (W)	R	5	35	7.5	A	6.3
	Clara Street		Swanson Street (E)	L	11	8	1.8	A	6.3
		Swanson Street (E)	Swanson Street (W)	T	468	494	0.9	A	0.0
		Swanson Street (W)	Swanson Street (E)	T	666	331	2.9	A	0.0
1012		All			1150	868	7.5	A	6.3
	Swanson Street	Park Street (N)	Swanson Street (W)	R	10	1	7.8	A	6.5
	Park Street		Swanson Street (E)	L	30	5	2.1	A	6.3
		Swanson Street (E)	Park Street (N)	R	61	2	3.4	A	5.5
			Swanson Street (W)	T	434	470	2.9	A	76.0
		Swanson Street (W)	Swanson Street (E)	T	494	341	3.1	A	55.9
			Park Street (N)	L	200	0	0.0	A	55.9
1013		All			1229	819	7.8	A	76.0
	Copeland Street	Newton Street (N)	Copeland Street (E)	L	27	19	11.1	A	12.0
	Newton Street	Copeland Street (E)	Copeland Street (W)	T	508	474	0.4	A	9.0
		Copeland Street (W)	Copeland Street (E)	T	525	345	0.3	A	0.0
1014		All			1060	838	11.1	A	12.0

P4411 Henderson Road Alexandria Traffic Study
VISSIM Data Analysis - Node Scenario B -PM
PM Peak 1700-1800

ID	Intersection	From	To	Turn	Surveyed	Modelled	Accept	Delay (s)	LoS	Queue (m)
	Sydney Park Road	Mitchelle Road (N)	Sydney Park Road (W)	R	556	5	N	42.0	C	152.3
	Mitchell Road		Sydney Park Carpark (S)	T	38	48	Y	35.1	C	152.3
			Sydney Park Road (E)	L	104	368	N	35.4	C	152.3
		Sydney Park Road (E)	Mitchelle Road (N)	R	183	227	Y	73.2	F	165.8
			Sydney Park Road (W)	T	633	600	Y	8.1	A	69.6
			Sydney Park Carpark (S)	L	24	21	Y	27.1	B	69.6
		Sydney Park Carpark (S)	Sydney Park Road (E)	R	23	22	Y	69.5	E	53.7
			Mitchelle Road (N)	T	28	31	Y	68.8	E	53.7
			Sydney Park Road (W)	L	27	28	Y	70.9	F	53.7
		Sydney Park Road (W)	Sydney Park Road (E)	T	339	279	Y	80.6	F	311.6
			Mitchelle Road (N)	L	454	484	Y	25.4	B	336.1
1015		All			2409	2,215		37.2	C	336.1
	Mitchell Road	Mitchelle Road (N)	Coulson Street (W)	R	131	98	Y	33.4	C	191.0
	Huntley Street		Mitchelle Road (S)	T	642	328	N	17.7	B	191.0
	Coulson Street		Huntley Street (E)	L	22	10	Y	15.3	B	191.0
		Huntley Street (E)	Mitchelle Road (N)	R	8	10	Y	44.4	D	24.7
			Coulson Street (W)	T	34	33	Y	35.8	C	24.7
			Mitchelle Road (S)	L	26	25	Y	43.5	D	24.7
		Mitchelle Road (S)	Huntley Street (E)	R	14	28	Y	11.6	A	55.9
			Mitchelle Road (N)	T	476	566	Y	7.8	A	55.1
			Coulson Street (W)	L	140	109	Y	3.8	A	55.1
		Coulson Street (W)	Mitchelle Road (S)	R	86	96	Y	57.6	E	47.5
			Huntley Street (E)	T	17	18	Y	39.8	C	47.5
			Mitchelle Road (N)	L	105	92	Y	41.2	C	47.5
1016		All			1701	1,414		19.2	B	191.0
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	711	436	N	4.1	A	30.8
	Maddox Street		Maddox Street (E)	L	124	158	Y	3.9	A	30.9
		Maddox Street (E)	Mitchell Road (N)	R	159	65	N	47.7	D	30.3
			Mitchell Road (S)	L	75	36	N	36.9	C	30.3
		Mitchell Road (S)	Maddox Street (E)	R	63	137	N	30.0	C	133.0
			Mitchell Road (N)	T	525	522	Y	15.1	B	133.0
1017		All			1657	1,354		13.9	A	133.0
	Mitchell Road	Mitchelle Road (N)	Ashmore Street (W)	R	47	65	Y	6.3	A	21.3
	Ashmore Street		Mitchelle Road (S)	T	744	537	N	1.8	A	21.3
		Mitchelle Road (S)	Mitchelle Road (N)	T	562	507	Y	11.6	A	155.4
			Ashmore Street (W)	L	109	63	Y	5.5	A	155.4
		Ashmore Street (W)	Mitchelle Road (S)	R	82	65	Y	39.6	C	69.6
			Mitchelle Road (N)	L	27	34	Y	31.6	C	69.6
1018		All			1571	1,271		39.6	C	155.4
	Harley Street	Mitchell Road (N)	Mitchell Road (S)	T	719	602	Y	10.8	A	129.4
	Mitchell Road		Harley Street (E)	L	53	0	N	0.0	A	128.5
		Harley Street (E)	Mitchell Road (N)	R	56	0	N	0.0	A	0.0
			Mitchell Road (S)	L	72	0	N	0.0	A	0.0
		Mitchell Road (S)	Mitchell Road (N)	T	589	540	Y	2.6	A	60.4
1019		All			1489	1,142		10.8	A	129.4
	Mitchell Road	Mitchell Road (N)	Copeland Street (W)	R	228	212	Y	58.3	E	165.4
	Copeland Street		Mitchell Road (S)	T	606	438	N	78.3	F	165.4
		Mitchell Road (S)	Mitchell Road (N)	T	470	NA	#######	NA	A	NA
			Copeland Street (W)	L	180	NA	#######	NA	A	NA
		Copeland Street (W)	Mitchell Road (S)	R	172	164	Y	11.9	A	34.5
			Mitchell Road (N)	L	220	142	N	8.6	A	34.6
1001		All			1876	1,487		41.2	C	165.4
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	555	270	N	39.8	C	66.1
	Fountain Street		Fountain Street (E)	L	106	129	Y	59.6	E	66.5
		Fountain Street (E)	Mitchell Road (N)	R	116	103	Y	55.8	D	246.5
			Mitchell Road (S)	L	279	401	N	37.8	C	246.5
		Mitchell Road (S)	Fountain Street (E)	R	187	189	Y	104.6	F	153.8
			Mitchell Road (N)	T	508	314	N	25.1	B	154.0
1020		All			1751	1,405		47.7	D	246.5
	Mitchell Road	Mitchell Road (N)	Mitchell Road (S)	T	611	392	N	84.4	F	169.7
	Buckland Street		Buckland Street (E)	L	33	99	N	39.7	C	176.0
		Buckland Street (E)	Mitchell Road (S)	L	44	17	Y	133.8	F	22.2
		Mitchell Road (S)	Mitchell Road (N)	T	621	424	N	0.2	A	15.3
1002		All			1309	932		42.2	C	176.0
	Mitchell Road	Mitchell Road (N)	Ranwick Street (W)	R	15	12	Y	66.3	E	183.8
	Ranwick Street		Mitchell Road (S)	T	629	465	N	104.2	F	171.9
		Mitchell Road (S)	Mitchell Road (N)	T	535	387	N	0.1	A	0.0
			Ranwick Street (W)	L	33	38	Y	0.6	A	8.3
		Ranwick Street (W)	Mitchell Road (S)	R	13	49	N	46.5	D	18.6
			Mitchell Road (N)	L	32	10	Y	5.6	A	18.6
1003		All			1257	961		104.2	F	183.8

ID	Intersection	From	To	Turn	Surveyed	Modelled	Accept	Delay (s)	LoS	Queue (m)
	Mitchell Road	Davy Road (N)	Henderson Road (W)	R	29	30	Y	42.7	C	85.4
	Henderson Road		Mitchelle Road (S)	T	103	121	Y	89.5	F	85.4
	Davy Road		Henderson Road (E)	L	65	65	Y	28.2	B	85.4
		Henderson Road (E)	Davy Road (N)	R	59	50	Y	59.6	E	32.7
			Henderson Road (W)	T	239	237	Y	61.3	E	108.8
			Mitchelle Road (S)	L	503	272	N	106.7	F	108.8
		Mitchelle Road (S)	Henderson Road (E)	R	496	344	N	30.3	C	71.7
			Davy Road (N)	T	48	49	Y	35.4	C	71.7
			Henderson Road (W)	L	17	4	Y	29.5	C	71.7
		Henderson Road (W)	Mitchelle Road (S)	R	32	114	N	209.0	F	127.9
			Henderson Road (E)	T	118	132	Y	41.9	C	127.9
			Davy Road (N)	L	10	14	Y	39.6	C	127.9
1004		All			1719	1,431		71.7	F	127.9
	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	788	584	N	43.9	D	99.0
	Gerard Street		Gerard Street (S)	L	24	26	Y	41.7	C	106.2
		Gerard Street (S)	Henderson Road (W)	L	21	10	Y	46.3	D	72.2
		Henderson Road (W)	Henderson Road (E)	T	689	540	N	0.6	A	1.5
1021		All			1,522	1,160		46.3	D	106.2
	Henderson Road	Garden Street (N)	Henderson Road (W)	R	64	74	Y	71.1	F	44.1
	Garden Street		Henderson Road (E)	L	56	37	Y	46.5	D	44.1
		Henderson Road (E)	Garden Street (N)	R	65	105	Y	14.1	A	39.5
			Henderson Road (W)	T	755	548	N	35.1	C	87.1
			Garden Street (S)	L	13	21	Y	51.7	D	87.1
		Garden Street (S)	Henderson Road (W)	L	7	6	Y	84.4	F	8.9
		Henderson Road (W)	Henderson Road (E)	T	582	429	N	7.0	A	62.4
			Garden Street (N)	L	105	108	Y	3.7	A	62.4
1022		All			1647	1,328		24.6	B	87.1
	Henderson Road	Henderson Road (E)	Wyndham Street (N)	R	618	598	Y	15.1	B	98.7
	Wyndham Street		Henderson Road (W)	T	800	614	N	18.2	B	98.7
			Wyndham Street (S)	L	187	167	Y	17.8	B	98.6
		Wyndham Street (S)	Henderson Road (E)	R	5	15	Y	40.1	C	232.4
			Wyndham Street (N)	T	503	577	Y	36.0	C	232.4
			Henderson Road (W)	L	18	75	N	53.2	D	232.4
		Henderson Road (W)	Henderson Road (E)	T	271	163	N	38.8	C	76.6
			Wyndham Street (N)	L	367	299	Y	60.0	E	76.8
1023		All			2769	2,508		29.0	C	232.4
	Henderson Road	Botany Road (N)	Henderson Road (W)	R	716	506	N	65.1	E	483.4
	Botany Road		Botany Road (S)	T	1,107	1,177	Y	41.4	C	483.4
	Raglan St		Raglan St (E)	L	56	63	Y	38.1	C	490.4
		Raglan St (E)	Henderson Road (W)	T	293	262	Y	53.7	D	117.8
			Botany Road (S)	L	18	23	Y	70.2	F	118.0
		Botany Road (S)	Henderson Road (W)	L	593	628	Y	80.0	F	152.5
		Henderson Road (W)	Botany Road (S)	R	53	2	N	43.5	D	20.9
			Raglan St (E)	T	231	176	Y	14.8	A	20.9
1024		All			3067	2,838		53.7	D	490.4
	Botany Road	Botany Road (N)	McEvoy Street (W)	R	350	437	Y	96.6	F	325.8
	McEvoy Street		Botany Road (S)	T	873	682	N	29.7	C	325.8
			McEvoy Street (E)	L	90	80	Y	29.9	C	325.8
		McEvoy Street (E)	McEvoy Street (W)	T	644	573	Y	51.6	D	109.6
			Botany Road (S)	L	18	22	Y	60.0	E	110.0
		Botany Road (S)	Botany Road (N)	T	587	577	Y	26.8	B	103.1
			McEvoy Street (W)	L	116	126	Y	30.9	C	103.1
		McEvoy Street (W)	Botany Road (S)	R	93	106	Y	60.2	E	104.9
			McEvoy Street (E)	T	519	380	N	30.2	C	104.9
			Botany Road (N)	L	59	120	N	20.0	B	104.9
1025		All			3349	3,103		43.6	D	325.8
	Wyndham Street	Wyndham Street (N)	Buckland Street (W)	R	11	23	Y	29.6	C	38.6
	Buckland Street		Wyndham Street (S)	T	159	143	Y	9.6	A	38.5
			Buckland Street (E)	L	22	0	N	0.0	A	38.6
		Wyndham Street (S)	Buckland Street (E)	R	69	28	N	25.4	B	166.8
			Wyndham Street (N)	T	480	664	N	33.1	C	166.8
			Buckland Street (W)	L	55	11	N	49.2	D	166.8
		Buckland Street (W)	Wyndham Street (S)	R	52	85	Y	24.4	B	52.8
			Buckland Street (E)	T	33	46	Y	22.4	B	52.7
			Wyndham Street (N)	L	21	26	Y	34.3	C	52.7
1026		All			902	1,026		28.6	B	166.8
	Wyndham Street	Wyndham Street (N)	Power Avenue (W)	R	48	41	Y	4.4	A	23.1
	Power Avenue		Wyndham Street (S)	T	163	186	Y	0.2	A	23.1
		Wyndham Street (S)	Wyndham Street (N)	T	556	660	Y	2.7	A	67.8
			Power Avenue (W)	L	65	24	N	2.0	A	72.5
		Power Avenue (W)	Wyndham Street (S)	R	47	65	Y	11.5	A	33.7
			Wyndham Street (N)	L	69	49	Y	15.3	B	33.7
1027		All			948	1,025		15.3	B	72.5

ID	Intersection	From	To	Turn	Surveyed	Modelled	Accept	Delay (s)	LoS	Queue (m)
	Wyndham Street	Wyndham Street (N)	McEvoy Street (W)	R	41	68	Y	231.9	F	80.8
	McEvoy Street		Wyndham Street (S)	T	141	123	Y	32.2	C	80.9
			McEvoy Street (E)	L	48	59	Y	36.8	C	80.8
		McEvoy Street (E)	Wyndham Street (N)	R	70	90	Y	15.9	B	68.3
			McEvoy Street (W)	T	944	994	Y	5.6	A	68.3
			Wyndham Street (S)	L	89	53	Y	12.1	A	68.6
		Wyndham Street (S)	McEvoy Street (E)	R	33	37	Y	88.8	F	148.3
			Wyndham Street (N)	T	424	400	Y	60.7	E	148.3
			McEvoy Street (W)	L	90	62	Y	50.9	D	148.8
		McEvoy Street (W)	McEvoy Street (E)	T	603	512	Y	25.8	B	87.4
			Wyndham Street (N)	L	127	195	N	29.4	C	87.4
1028		All			2610	2,592		30.6	C	148.8
	McEvoy Street	McEvoy Street (E)	McEvoy Street (W)	T	1,068	1,101	Y	0.5	A	52.4
	Brennan Street		Hiles Street (S)	L	14	21	Y	2.3	A	57.2
	Hiles Street	Hiles Street (S)	McEvoy Street (E)	R	15	15	Y	13.1	A	7.2
			McEvoy Street (W)	L	25	25	Y	4.5	A	7.2
		McEvoy Street (W)	Hiles Street (S)	R	8	22	Y	10.4	A	53.7
			McEvoy Street (E)	T	724	690	Y	3.4	A	53.7
1029		All			1854	1,875		13.1	A	57.2
	McEvoy Street	McEvoy Street (E)	McEvoy Street (W)	T	1,068	1,107	Y	0.3	A	5.6
	Loveridge Street		McCauley Street (S)	L	18	20	Y	0.9	A	5.6
	McCauley Street	McCauley Street (S)	McEvoy Street (E)	R	16	4	Y	21.8	B	11.3
			McEvoy Street (W)	L	33	44	Y	5.7	A	11.3
		McEvoy Street (W)	McCauley Street (S)	R	16	8	Y	8.8	A	41.3
			McEvoy Street (E)	T	718	712	Y	0.9	A	41.3
1030		All			1869	1,894		21.8	B	41.3
	McEvoy Street	Fountain Street (NW)	McEvoy Street (S)	R	113	244	N	161.3	F	327.7
	Fountain Street		McEvoy Street (E)	L	171	62	N	144.2	F	327.7
		McEvoy Street (E)	Fountain Street (NW)	R	296	217	Y	51.7	D	119.3
			McEvoy Street (S)	T	820	925	Y	10.4	A	147.2
		McEvoy Street (S)	McEvoy Street (E)	T	542	665	N	39.5	C	182.1
			Fountain Street (NW)	L	133	292	N	48.0	D	182.1
1031		All			2075	2,406		45.5	D	327.7
	McEvoy Street	McEvoy Street (N)	Euston Road (S)	T	972	1,239	N	4.8	A	127.2
	Harley Street	McEvoy Street (S)	McEvoy Street (N)	T	623	912	N	0.2	A	23.1
			Harley Street (W)	L	117	37	N	-1.1	A	26.9
		Harley Street (W)	McEvoy Street (N)	L	41	35	Y	5.9	A	6.4
1032		All			1753	2,223		5.9	A	127.2
	Euston Road	Euston Road (N)	Euston Road (S)	T	937	1,168	N	0.4	A	10.8
	Bunnings Access		Bunnings Access (E)	L	84	68	Y	0.7	A	11.3
		Bunnings Access (E)	Euston Road (N)	R	142	143	Y	41.9	C	56.1
			Euston Road (S)	L	95	93	Y	7.7	A	14.6
		Euston Road (S)	Bunnings Access (E)	R	67	77	Y	23.7	B	62.1
			Euston Road (N)	T	616	807	N	4.5	A	62.1
1035		All			1941	2,357		5.4	A	62.1
	Euston Road	Euston Road (N)	Euston Road (S)	T	957	1,118	Y	4.4	A	112.5
	Maddox Street		Maddox Street (E)	L	45	142	N	7.2	A	112.5
		Maddox Street (E)	Euston Road (N)	R	79	139	N	356.4	F	268.8
			Maddox Street (W)	T	212	0	N	0.0	A	268.7
			Euston Road (S)	L	45	51	Y	245.4	F	269.1
		Euston Road (S)	Euston Road (N)	T	569	500	Y	7.9	A	55.4
			Maddox Street (W)	L	66	35	Y	7.7	A	55.4
		Maddox Street (W)	Euston Road (S)	R	56	0	N	0.0	A	76.2
			Maddox Street (E)	T	111	0	N	0.0	A	76.2
			Euston Road (N)	L	38	249	N	43.8	D	76.2
1033		All			2178	2,233		36.0	C	269.1
	Euston Road	Euston Road (N)	Sydney Park Road (W)	R	0	0	Y	0.0	A	136.8
	Sudney Park Road		Euston Road (S)	T	994	1,091	Y	39.9	C	136.8
	Huntley Street		Huntley Street (E)	L	81	60	Y	36.6	C	137.0
		Huntley Street (E)	Euston Road (N)	R	58	62	Y	51.6	D	35.1
			Sydney Park Road (W)	T	709	730	Y	48.3	D	339.6
			Euston Road (S)	L	145	111	Y	42.1	C	339.8
		Euston Road (S)	Huntley Street (E)	R	96	82	Y	50.5	D	45.5
			Euston Road (N)	T	408	367	Y	20.4	B	45.5
			Sydney Park Road (W)	L	124	141	Y	4.6	A	41.4
		Sydney Park Road (W)	Euston Road (S)	R	53	239	N	219.0	F	267.3
			Huntley Street (E)	T	232	208	Y	175.9	F	267.3
			Euston Road (N)	L	180	105	N	122.8	F	267.2
1034		All			3080	3,197		63.5	E	339.8

ID	Intersection	From	To	Turn	Surveyed	Modelled	Accept	Delay (s)	LoS	Queue (m)
	Henderson Road	Alexander Street (N)	Henderson Road (E)	L	30	31	Y	2.3	A	6.1
	Alexander Street	Henderson Road (E)	Henderson Road (W)	T	254	257	Y	5.1	A	48.7
			Alexander Street (S)	L	11	13	Y	6.6	A	48.7
		Alexander Street (S)	Henderson Road (W)	L	9	8	Y	1.6	A	1.2
		Henderson Road (W)	Henderson Road (E)	T	131	249	N	1.3	A	13.4
			Alexander Street (N)	L	6	8	Y	1.3	A	13.4
1005		All			441	566		6.6	A	48.7
1006	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	251	260	Y	1.7	A	0.0
	Brandling Street		Brandling Street (S)	L	3	5	Y	1.3	A	0.0
		Brandling Street (S)	Henderson Road (E)	R	7	1	Y	3.3	A	1.1
			Henderson Road (W)	L	3	12	Y	2.2	A	1.1
		Henderson Road (W)	Brandling Street (S)	R	6	2	Y	1.6	A	7.5
			Henderson Road (E)	T	115	259	N	0.2	A	23.4
1006		All			385	538		3.3	A	23.4
	Henderson Road	Progress Road (N)	Henderson Road (W)	R	25	22	Y	3.8	A	6.2
	Progress Road		Henderson Road (E)	L	21	33	Y	1.6	A	6.2
		Henderson Road (E)	Progress Road (N)	R	23	50	Y	1.4	A	29.3
			Henderson Road (W)	T	232	222	Y	0.4	A	20.9
		Henderson Road (W)	Henderson Road (E)	T	99	228	N	0.3	A	0.0
			Progress Road (N)	L	20	1	N	0.6	A	0.0
1007		All			420	556		3.8	A	29.3
1008	Henderson Road	Henderson Road (E)	Henderson Road (W)	T	249	218	Y	0.0	A	0.0
	Newton Street		Newton Street (S)	L	6	26	Y	0.4	A	0.0
		Newton Street (S)	Henderson Road (E)	R	4	12	Y	2.6	A	6.5
			Henderson Road (W)	L	14	23	Y	1.8	A	6.5
		Henderson Road (W)	Newton Street (S)	R	21	37	Y	2.1	A	16.9
			Henderson Road (E)	T	115	219	N	0.3	A	5.7
1008		All			409	534		2.6	A	16.9
	Henderson Road	Henderson Road (E)	Railway Parade (W)	T	228	240	Y	0.3	A	1.2
	Railway Parade		Park Street (S)	L	34	0	N	0.0	A	1.2
	Park Street	Park Street (S)	Henderson Road (E)	R	122	0	N	0.0	A	0.0
			Railway Parade (W)	L	46	0	N	0.0	A	0.0
		Railway Parade (W)	Park Street (S)	R	6	0	Y	0.0	A	20.4
			Henderson Road (E)	T	16	257	N	1.3	A	23.1
1009		All			452	497		1.3	A	23.1
	Railway Parade	Railway Parade (E)	Railway Parade (W)	T	244	217	Y	0.4	A	0.0
	Clara Street		Clara Street (S)	L	34	11	Y	0.9	A	2.4
		Clara Street (S)	Railway Parade (E)	R	1	5	Y	2.1	A	0.0
			Railway Parade (W)	L	1	0	Y	0.0	A	0.0
		Railway Parade (W)	Clara Street (S)	R	0	36	N	1.5	A	30.6
			Railway Parade (E)	T	9	206	N	0.7	A	15.7
1010		All			289	474		2.1	A	30.6
	Railway Parade	Railway Parade (N)	Swanson Street (W)	R	212	192	Y	87.6	F	128.7
	Swanson Street		Swanson Street (E)	L	27	24	Y	79.8	F	128.7
		Swanson Street (E)	Railway Parade (N)	R	0	51	N	38.6	C	87.6
			Swanson Street (W)	T	472	452	Y	41.3	C	87.4
		Swanson Street (W)	Swanson Street (E)	T	484	267	N	16.3	B	81.1
			Railway Parade (N)	L	0	208	N	24.0	B	81.1
1011		All			1195	1,193		40.9	C	128.7
	Swanson Street	Clara Street (N)	Swanson Street (W)	R	8	22	Y	5.5	A	6.0
	Clara Street		Swanson Street (E)	L	9	12	Y	2.0	A	6.0
		Swanson Street (E)	Swanson Street (W)	T	518	485	Y	1.6	A	12.3
		Swanson Street (W)	Swanson Street (E)	T	510	300	N	1.5	A	0.0
1012		All			1045	820		5.5	A	12.3
	Swanson Street	Park Street (N)	Swanson Street (W)	R	17	0	N	0.0	A	4.7
	Park Street		Swanson Street (E)	L	26	3	N	1.4	A	4.8
		Swanson Street (E)	Park Street (N)	R	42	7	N	1.2	A	4.7
			Swanson Street (W)	T	458	446	Y	1.9	A	43.9
		Swanson Street (W)	Swanson Street (E)	T	405	313	Y	2.1	A	34.6
			Park Street (N)	L	123	0	N	0.0	A	34.6
1013		All			1071	768		2.1	A	43.9
	Copeland Street	Newton Street (N)	Copeland Street (E)	L	28	40	Y	27.4	B	5.6
	Newton Street	Copeland Street (E)	Copeland Street (W)	T	501	453	Y	0.2	A	0.0
		Copeland Street (W)	Copeland Street (E)	T	430	315	N	0.7	A	0.0
1014		All			959	808		27.4	B	5.6

P4411 Henderson Road Alexandria Traffic Study

VISSIM Data Analysis

Network Performance of AM Peak Scenario B

Average Delay (s)	137
Average Network Speed (km/hr)	14.7
VKT	15,410
VHT	1,110
Stops (per vehicle)	4.38
Completed Trips	15,062
Incompleted Trips	1,256
Unreleased Vehicles	182
Total Trips	16,500

P4411 Henderson Road Alexandria Traffic Study

VISSIM Data Analysis

Network Performance of PM Peak Scenario B

Average Delay (s)	122
Average Network Speed (km/hr)	15.7
VKT	24,045
VHT	1,637
Stops (per vehicle)	4.09
Completed Trips	25,821
Incompleted Trips	436
Unreleased Vehicles	-
Total Trips	26,257

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 1: Mitchell Road

AM Peak (0800 - 0900)

Northbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Sydney Park Rd west of Euston Rd		0.00	0.00	0:00	0:00	0:00	0:00
Mitchell Rd north of Maddox St	Route 1 NB-1	0.65	0.65	3:44	3:49	4:35	2:27
Mitchell Rd at Anderson St	Route 1 NB-2	0.75	1.40	6:51	6:15	6:57	6:25
Mitchell Rd at Henderson St	Route 1 NB-3	0.19	1.59	8:19	7:10	8:14	7:18

Southbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Mitchell Rd at Henderson St		0.00	0.00	0:00	0:00	0:00	0:00
Mitchell Rd at Anderson St	Route 1 SB-1	0.19	0.19	0:19	0:14	0:14	0:17
Mitchell Rd north of Maddox St	Route 1 SB-2	0.75	0.94	1:59	2:08	2:13	6:05
Sydney Park Rd west of Euston Rd	Route 1 SB-3	0.65	1.59	3:31	4:25	4:37	14:26

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 2: McEvoy Street

AM Peak (0800 - 0900)

Northbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Sydney Park Rd & Euston Rd		0.00	0.00	0:00	0:00	0:00	0:00
Euston Rd Nth of Maddox St	Route 2 NB-1	0.28	0.28	0:34	1:04	0:31	1:29
McEvoy St at Stokes Ave	Route 2 NB-2	0.65	0.93	4:21	4:58	2:24	4:41
Wyndham St north of Buckland St	Route 2 NB-3	0.65	1.58	8:13	8:19	6:21	8:42
Henderson Rd east of Wyndham St	Route 2 NB-4	0.22	1.80	9:54	10:35	8:21	10:55

Southbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Henderson Rd east of Wyndham St		0.00	0.00	0:00	0:00	0:00	0:00
Wyndham St north of Buckland St	Route 2 SB-1	0.22	0.22	0:29	0:31	0:28	0:28
McEvoy St at Stokes Ave	Route 2 SB-2	0.65	0.87	2:34	2:59	3:06	6:33
Euston Rd Nth of Maddox St	Route 2 SB-3	0.65	1.52	3:35	4:23	4:24	7:59
Sydney Park Rd & Euston Rd	Route 2 SB-4	0.28	1.80	4:54	5:58	5:51	9:20

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 3: Railway Pde and Henderson Road

AM Peak (0800 - 0900)

Eastbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Railway Pde at Swanson St		0.00	0.00	0:00	0:00	0:00	0:00
Park St at Swanson St	Route 3 EB-1	0.35	0.35	0:52	0:46	0:49	0:41
Park St at Railway Pde	Route 3 EB-2	0.25	0.60	1:36	1:08	1:11	0:41
Henderson Rd at Alexander St	Route 3 EB-3	0.40	1.00	2:23	1:47	1:50	1:20
Henderson Rd at Mitchell St	Route 3 EB-4	0.24	1.24	4:05	2:55	3:20	2:51
Henderson Rd at Wyndham St	Route 3 EB-5	0.27	1.51	5:19	5:56	6:02	5:07

Westbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Henderson Rd at Wyndham St			0.00	0:00	0:00	0:00	0:00
Henderson Rd at Mitchell St	Route 3 WB-1	0.27	0.27	1:10	1:23	1:18	1:02
Henderson Rd at Alexander St	Route 3 WB-2	0.24	0.51	1:42	1:50	1:44	1:26
Railway Pde at Park St	Route 3 WB-3	0.40	0.91	2:33	2:27	2:21	2:04
Railway Pde at Swanson St	Route 3 WB-4	0.35	1.26	4:11	4:03	4:00	3:28

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 4: Swanson Street

AM Peak (0800 - 0900)

Eastbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Railway St		0.00	0.00	0:00	0:00	0:00	0:00
Park St	Route 4 EB-1	0.35	0.35	0:54	0:46	0:49	0:41
Mitchell Rd	Route 4 EB-2	0.30	0.65	2:36	2:37	2:35	1:56

Westbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Mitchell Rd			0.00	0:00	0:00	0:00	0:00
Park St	Route 4 WB-1	0.30	0.30	0:31	0:23	0:23	0:23
Railway Pde	Route 4 WB-2	0.35	0.65	1:34	1:15	1:15	1:17

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 1: Mitchell Road

PM Peak (1700 - 1800)

Northbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Sydney Park Rd west of Euston Rd		0.00	0.00	0:00	0:00	0:00	0:00
Mitchell Rd north of Maddox St	Route 1 NB-1	0.65	0.65	2:13	2:39	2:29	2:31
Mitchell Rd at Anderson St	Route 1 NB-2	0.75	1.40	4:58	4:26	4:15	5:20
Mitchell Rd at Henderson St	Route 1 NB-3	0.19	1.59	5:47	5:08	5:03	6:08

Southbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Mitchell Rd at Henderson St		0.00	0.00	0:00	0:00	0:00	0:00
Mitchell Rd at Anderson St	Route 1 SB-1	0.19	0.19	0:19	0:14	0:18	2:35
Mitchell Rd north of Maddox St	Route 1 SB-2	0.75	0.94	2:24	3:30	4:15	9:07
Sydney Park Rd west of Euston Rd	Route 1 SB-3	0.65	1.59	4:35	6:08	7:03	16:15

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 2: McEvoy Street

PM Peak (1700 - 1800)

Northbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Sydney Park Rd & Euston Rd		0.00	0.00	0:00	0:00	0:00	0:00
Euston Rd Nth of Maddox St	Route 2 NB-1	0.28	0.28	0:34	0:27	0:27	0:27
McEvoy St at Stokes Ave	Route 2 NB-2	0.65	0.93	2:07	2:06	1:46	2:00
Wyndham St north of Buckland St	Route 2 NB-3	0.65	1.58	5:07	4:01	3:47	4:35
Henderson Rd east of Wyndham St	Route 2 NB-4	0.22	1.80	7:12	5:54	5:46	6:39

Southbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Henderson Rd east of Wyndham St		0.00	0.00	0:00	0:00	0:00	0:00
Wyndham St north of Buckland St	Route 2 SB-1	0.22	0.22	0:27	0:27	0:29	0:36
McEvoy St at Stokes Ave	Route 2 SB-2	0.65	0.87	2:51	3:14	3:21	5:34
Euston Rd Nth of Maddox St	Route 2 SB-3	0.65	1.52	4:25	4:28	4:25	6:42
Sydney Park Rd & Euston Rd	Route 2 SB-4	0.28	1.80	5:03	5:28	5:27	7:45

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 3: Railway Pde and Henderson Road

PM Peak (1700 - 1800)

Eastbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Railway Pde at Swanson St		0.00	0.00	0:00	0:00	0:00	0:00
Park St at Swanson St	Route 3 EB-1	0.35	0.35	0:52	0:45	0:48	0:41
Park St at Railway Pde	Route 3 EB-2	0.25	0.60	1:26	1:07	1:09	0:41
Henderson Rd at Alexander St	Route 3 EB-3	0.40	1.00	2:10	1:46	1:48	0:41
Henderson Rd at Mitchell St	Route 3 EB-4	0.24	1.24	2:41	2:50	2:49	1:44
Henderson Rd at Wyndham St	Route 3 EB-5	0.27	1.51	3:56	4:00	3:45	2:26

Westbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Henderson Rd at Wyndham St			0.00	0:00	0:00	0:00	0:00
Henderson Rd at Mitchell St	Route 3 WB-1	0.27	0.27	0:52	1:21	1:22	2:22
Henderson Rd at Alexander St	Route 3 WB-2	0.24	0.51	1:23	1:48	1:48	2:49
Railway Pde at Park St	Route 3 WB-3	0.40	0.91	2:15	2:26	2:26	3:27
Railway Pde at Swanson St	Route 3 WB-4	0.35	1.26	4:24	4:42	4:17	5:34

P4411 Henderson Road Alexandria Traffic Study

Travel Time Data Analysis

Rote 4: Swanson Street

PM Peak (1700 - 1800)

Eastbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Railway St		0.00	0.00	0:00	0:00	0:00	0:00
Park St	Route 4 EB-1	0.35	0.35	0:43	0:45	0:48	0:41
Mitchell Rd	Route 4 EB-2	0.30	0.65	2:54	3:16	2:12	1:37

Westbound

Sections	Vissim Section	Distance (km)	Cumulative Distance (km)	Observed	Base 2021	Base 2022	Scenario B
Mitchell Rd			0.00	0:00	0:00	0:00	0:00
Park St	Route 4 WB-1	0.30	0.30	0:31	0:23	0:23	0:22
Railway Pde	Route 4 WB-2	0.35	0.65	2:06	1:59	2:06	2:04

Appendix D: MCA Outputs

Alexandria Traffic and Transport Study
Traffic and Transport Improvement Evaluation

	Criterion ID	1	2	3	4	5	6		
	Criterion	Maximise accessibility, safety and amenity for walking and cycling	Improve accessibility to bus stops	Limit through traffic on local streets and particularly those streets used for filtering between Mitchell Road and Euston Road-McEvoy Street	Encourage through traffic to use the State Roads instead of Local Roads	Minimise turn bans and/or closures when there are other alternatives available to achieve the other objectives	Minimise traffic congestion impacts from future traffic management measures		
	Weight	25%	10%	25%	15%	15%	10%	SCORE	RANK
1.02	Right turn ban from Park Street into Railway Parade	2	1	3	1	3	4	2.35	7
2.01	Raised Ped/ Cycle Crossing (Swanson St / Park St)	4	2	2	1	1	3	2.30	8
3.01	Maddox Street Traffic Calming	3	2	4	3	3	3	3.15	4
5.01	Closure of Harley Street at McEvoy Street	5	2	5	3	1	2	3.50	3
6.01	Maddox Street / Mitchell Street traffic signals	4	3	4	4	5	3	3.95	2
7.01	Mitchell Road (Huntley Street to Ashmore Street) traffic calming measures	3	1	3	2	5	4	3.05	5
8.01	Mitchell Road / Huntley Street intersection improvement	1	1	2	1	5	4	2.15	9
11.01	Traffic signals at Mitchell Rd / Harley St / Ashmore St	4	4	4	4	5	3	4.05	1
12.01	Road Narrowing and CFT on Side Roads along Coulson Street	3	3	4	3	2	2	3.00	6

Alexandria Traffic and Transport Study
Traffic and Transport Improvement Evaluation

	ID	1	2	3	4	5	6
	Criterion	Maximise accessibility, safety and amenity for walking and cycling	Improve accessibility to bus stops	Limit through traffic on local streets and particularly those streets used for filtering between Mitchell Road and Euston Road-McEvoy Street	Encourage through traffic to use the State Roads instead of Local Roads	Minimise turn bans and/or closures when there are other alternatives available to achieve the other objectives	Minimise traffic congestion impacts from future traffic management measures
	Weight	**25%**	**10%**	**25%**	**15%**	**15%**	**10%**
Scoring Guide	**5**	Protected, separated facility and/or removes through traffic	Direct link to bus stop, separated and/ or removed through traffic	Substantial reduction in 'rat run' traffic	Substantial shift in through traffic	No turn bans at all (that re-route local traffic)	Minor increases in road congestion expected
	4	Separated facility and reduces through traffic	Direct route to bus stop, not separated and/ or reduced through traffic	Noticeable reduction in 'rat run traffic'	Noticeable shift on through traffic	Minimal turn bans / closures that re-route some local traffic	Minimal increases in congestion expected
	3	Separated facility, and/ or reduces through traffic	Direct route to bus stop, and/ or reduced through traffic	Moderate reduction in 'rat run' traffic	Moderate shift in through traffic	Some turn bans / closures that re-route some local traffic	Moderate increases in congestion expected
	2	Partly separated with minimal traffic changes	Direct route to bus stop with minimal traffic changes	Slight reduction in 'rat run traffic'	Slight shift on through traffic	Noticeable number of turn bans and/or closure that re-route a large % of local traffic	Noticeable increases in congestion expected
	1	Minor line marking and /or signage only, minimal traffic changes	Missing link to a bus stop, or minor improvement	Minimal reduction in 'rat run traffic'	Minimal shift on through traffic	A number of turn bans and/or closure that re-route a large % of local traffic	Major increases in congestion expected
	0	No relevant works	No relevant works	No reduction in 'rat run' traffic	N/A or no shift on through traffic	-	-

Item 4.

Post Exhibition - Planning Proposal - 90 and 100-104 Brougham Street, Potts Point - Sydney Local Environmental Plan 2012 Amendment

File No: X096329.002

Summary

Planning for a diverse visitor accommodation offering that does not rely on a dwelling rental platform in the City of Sydney is an important part of supporting the local, regional and national economies. New hotels create jobs, benefit Sydney's tourism economy, host major events visitors and support local economies.

Prior to Covid-19 Sydney hotels were running at over 80 per cent occupancy per year. This declined to as low as 25 per cent during 2019 and 2020 but saw a revival to around 65 per cent through 2022. In 2023 occupancy rates have edged up towards 80 per cent, with events such as World Pride and the FIFA Women's World Cup seeing peaks of 95 per cent.

The City's Sustainable Sydney 2030-2050 Continuing the Vision and Visitor Accommodation Action Plan (2015) support development of additional visitor accommodation. This planning proposal allows for additional hotel accommodation in a highly accessible location. It will assist in the conservation and activation of the vacant and heritage listed Piccadilly Hotel.

This report follows the public exhibition of a planning proposal to amend Sydney Local Environmental Plan 2012 (the LEP) as it applies to the properties at 90 and 100-104 Brougham Street Potts Point. The amendment will allow for the properties to be used as 'hotel and motel accommodation' subject to a future development application. The Planning Proposal is shown at Attachment B.

The Planning Proposal was approved by Council on 15 May 2023 and the Central Sydney Planning Committee (CSPC) on 11 May 2023 to be submitted for Gateway Determination and for public exhibition. The Council and Central Sydney Planning Committee resolutions are shown at Attachment C.

Exhibition occurred from 12 July to 9 August 2023, during which time the City received 19 submissions. Matters raised in submissions include concerns about a loss of dwelling stock, housing affordability, increased noise and traffic and the effects of construction. A summary of submissions and the City's responses are provided below. A detailed account of and responses to matters raised in submissions is provided at Attachment A.

This report recommends Council and the Central Sydney Planning Committee approve the planning proposal. If approved, then the City will request that Parliamentary Counsel draft the amendment to the Local Environmental Plan.

Recommendation

It is resolved that:

(A) Council note matters raised in response to the public exhibition of the Planning Proposal, detailed in the Summary of Submissions at Attachment A to the subject report;

(B) Council approve the Planning Proposal - 90 and 100-104 Brougham Street, Potts Point at Attachment B to the subject report to be made as a local environmental plan under s.3.36 of the Environmental Planning and Assessment Act 1979; and

(C) authority be delegated to the Chief Executive Officer to make minor variations to the Planning Proposal - 90 and 100-104 Brougham Street, Potts Point to correct any minor errors prior to finalisation.

Attachments

Attachment A. Summary of Submissions

Attachment B. Planning Proposal - 90 and 100-104 Brougham Street, Potts Point

Attachment C. Resolutions of Council and Central Sydney Planning Committee

Attachment D. Gateway Determination

Background

1. This report follows the public exhibition of a planning proposal to amend Sydney Local Environmental Plan 2012 (Sydney LEP) as it applies to the properties at 90 and 100-104 Brougham Street. 90 Brougham Street is a three-storey modern dwelling, with a rear single car garage and two-storey secondary dwelling above. 100-104 Brougham Street is a four-storey apartment building with 24 studio apartments. The location of the properties is shown in Figure 1. Photographs of 90 and 100-104 Brougham Street are at Figures 2 and 3 respectively.

2. The Piccadilly Hotel at 171-173 Victoria Street, shown in red outline in Figure 1, is a local heritage item which has been vacant since 2015 and is in poor condition. The Hotel, along with 92-98 Brougham Street and 169 Victoria Street, received development consent for use as a hotel in December 2022. The area to which the development consent applies is shown in Figure 1 as orange.

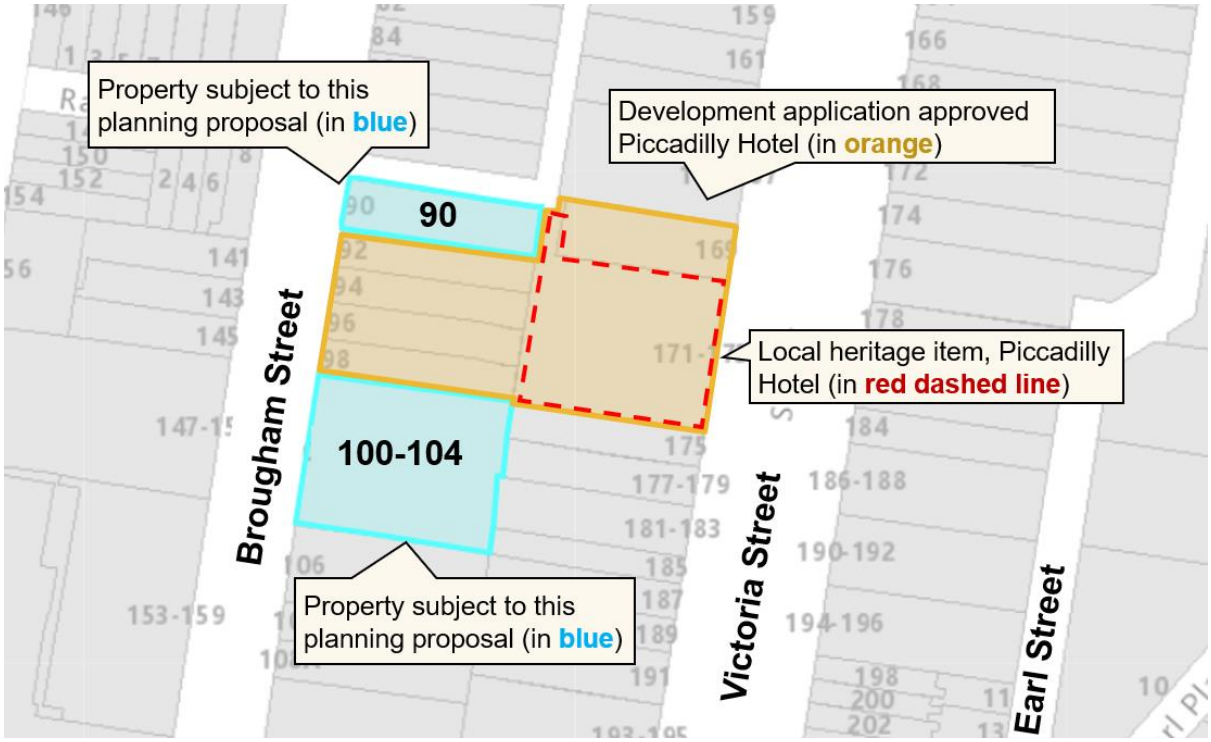


Figure 1. A location plan showing the properties affected by this planning proposal outlined in blue, and the approved Piccadilly Hotel outlined in orange

Figure 2. 90 Brougham Street looking east from Brougham Street

Figure 3. 100-104 Brougham Street looking east from Brougham Street

Planning proposal

3. This planning proposal would enable expansion of the future hotel to the adjacent sites at 90 Brougham Street and 100-104 Brougham Street, which are shown blue in Figure 1 and in the images in Figures 2 and 3.

4. The exhibited planning proposal is to amend Sydney Local Environmental Plan to include 'hotel and motel accommodation' as a permissible use of the properties. The properties are in the R1General Residential zone where hotel and motel accommodation is not permitted. The proposal will enable 26 additional accommodation rooms to the Piccadilly Hotel development.

5. The planning proposal supports the City's strategic planning objectives for a tourist economy, local employment and the efficient and adaptive reuse of buildings. It will contribute to expanded employment opportunities within the City Fringe area identified as an important focus for jobs in City Plan 2036.

6. The hotel use of the larger consolidated site and its design and operation will be subject to a future development application and detailed assessment, including public consultation.

7. Further details regarding the site, its current planning controls, and the proposal's strategic merit are in the pre-exhibition report to the Transport, Heritage, Environment and Planning Committee and the Central Sydney Planning Committee, available at: https://city.sydney/brougham-preexreport.

8. Council on 15 May 2023 and the Central Sydney Planning Committee (CSPC) on 11 May 2023 resolved to approve the planning proposal for public exhibition in accordance with any conditions imposed under the Gateway Determination. Council and the CSPC's resolutions are shown at Attachment C.

9. On 23 June 2023, the Department of Planning and Environment (Department) issued a Gateway Determination for the planning proposal. The Gateway Determination is shown at Attachment D. The Gateway Determination authorises Council to exercise its delegation and liaise directly with Parliamentary Counsel to draft and make the new Local Environmental Plan should the proposed planning controls be approved by Council and the Central Sydney Planning Committee.

10. This report recommends that Council and Central Sydney Planning Committee approve the planning proposal to amend Sydney Local Environmental Plan.

Public Exhibition

11. The planning proposal was exhibited between 12 July and 9 August 2023, in accordance with the Gateway Determination and the City of Sydney Community and Engagement Strategy and Community Participation Plan. The City sent 1,196 letters to landowners and occupants of neighbouring properties within 75 metres of the site, notifying recipients of the planning proposal's exhibition. The exhibition was also advertised on the City's Sydney Your Say webpage. Public authorities were not notified because this was not required by the Gateway Determination.

12. In response to exhibition, 19 submissions were received including one from the 2011 Residents' Association. Seven submissions expressed support for the planning proposal, 11 raised matters for further consideration, and one requested information about the approved development application for the hotel. Concerns raised in the submissions mainly related to a loss of dwelling stock and affordable housing, the effects of construction, and amenity impacts such as noise and traffic during operation. A detailed account of and responses to matters raised in submissions is shown at Attachment A.

Support

13. Eight submissions supported the planning proposal. Supporting points stated that the planning proposal will:

    (a) add to the area's liveability, amenity and culture;

    (b) create jobs and boost tourism in the area;

    (c) improve the area's character; and

    (d) help conserve the heritage-listed Piccadilly Hotel.

Housing loss and housing affordability

14. Seven submissions raised concerns that the planning proposal will cause a loss of rental housing stock and lead to a rise in rents and cause significant social impacts. The City's housing audit records 13,064 dwellings in the Macleay Street and Woolloomooloo village area in June 2022. The 24 apartments at 100-104 Brougham Street comprise just 0.18 per cent of the area's dwelling stock. The loss of such a small proportion of the area's housing is not likely to have a noticeable impact on rents and the intended use makes up for the significant loss of hotels converted to residential use over the years..

15. The City's population and housing forecasts expect net growth in the number of dwellings in Macleay Street and Woolloomooloo of 1,035 dwellings to 14,099 in 2041. The City's Housing Monitor notes that 423 private dwellings are in the development pipeline for the area as at June 2022, with the remainder to be completed over the subsequent period.

16. The planning proposal does not prevent the buildings from being used as housing. The land will continue to be zoned R1 General Residential and residential flat buildings and other dwellings will continue to be a permissible use of the land. The planning proposal will allow a hotel use on the land but does not prohibit residential uses.

17. Four submissions expressed concern that the planning proposal would result in a loss of 'affordable housing'. The apartments at 100-104 Brougham Street are not classed as affordable housing. They are not owned or managed by a community housing provider but are privately owned and leased at market rates.

18. Rental rates are considered 'affordable' when they are less than 30 per cent of a household's income. The market rent for the apartments is expected to be above $650 per week, which is more than 30 per cent of Potts Point's median weekly household income of $2,041.

19. In this instance, where there is a long-standing hotel use adjacent, the conversion of apartments to additional hotel rooms benefits the local economic development of Kings Cross by providing visitor accommodation that attracts people to the area and its other businesses. The Potts Point area has seen the loss of at least 750 hotel rooms to residential accommodation since 2000. This loss of hotel rooms also impacts supporting businesses such as restaurants, cafes and entertainment and provides characterful diversity.

Landowner consent

20. The proponent owns 23 of the 24 units at 100-104 Brougham Street. The outstanding owner has indicated they do not support the proposal to include 100-104 Brougham Street within the future Piccadilly Hotel.

21. Under the Environmental Planning and Assessment Act 1979 there is no requirement for landowners' consent to be given for a planning proposal. The planning proposal will not allow any construction nor operation of the hotel – a development application is required for that. Landowners' consent is a requirement for development applications. The City has provided this advice to the outstanding owner and is a matter for any future DA.

22. Local governments do not have a role in the process of terminating a strata scheme, which is outside of the planning system. The application to restructure the strata is a private matter separate to the planning proposal process. Subject to process work by the strata committee and owners corporation, a strata scheme may be terminated where the owner(s) of 75 per cent of the lots agree. The termination of a strata plan is also subject to further consideration from the Land and Environment Court. Strata schemes are administered by the Strata Schemes Development Act 2015.

Residential and neighbourhood character

23. Five submissions raised concerns about the impacts of a hotel use or development with Brougham Street's predominantly residential character.

24. The planning proposal will not result in any significant change to the character of Brougham Street. It does not allow any additional building height or development for any of the affected properties on Brougham Street. Any future development will be subject to detailed assessment as part of a future development application. Impacts on the character of Brougham Street from the proposed hotel will be considered as part of that assessment.

Traffic, parking and servicing

25. Six submissions raised concerns about potential traffic impacts to Brougham Street. particularly additional vehicle congestion on Brougham Street, increased competition for car parking spaces and the future hotel's access and servicing.

26. The planning proposal is not expected to generate significant traffic impacts to Brougham Street. The subject properties are 150 metres northeast of Kings Cross Station and in a restricted parking area with limited on-site parking available for the hotel. The approved DA requires the hotel's servicing, including deliveries, waste collection and guest pick up and drop off to occur from Victoria Street rather than Brougham Street. The same arrangement is expected to be part of the future DA.

27. Traffic, parking and servicing will be considered in detail as part of any future development application for operation of the hotel. The proponent will be required to supply a transport impact study as part of that subsequent development application.

Noise

28. Three submissions raised concerns about adverse noise impacts from operation of the hotel. The inclusion of 90 and 100-104 Brougham Street as part of the future hotel will enclose the hotel's central courtyard, allowing for an effective buffer between the hotel use and surrounding residential properties. The subject properties will be used for accommodation rooms and are unlikely to expand the use of the courtyard or food and beverage activities.

29. Noise from the hotel use will be considered as part of any future development application. The future hotel operations will be subject to a Plan of Management and Noise Management Plan which will include noise minimisation strategies for the hotel. An onsite manager will also be available at all times that guests are on the premises, to respond to noise complaints. The development consent for the Piccadilly Hotel, including 92-98 Brougham Street, requires separate approvals to be sought for food and drink premises uses on the site, which will involve the assessment and management of noise. The operator will need to manage this noise for the benefit of their own guests as well as neighbours.

Hotel demand

30. Three submissions said there was no demand for hotel accommodation in the area. The City of Sydney is an important visitor destination and tourism key industry sector contributing to the City's economy. City Plan 2036, the City's Local Strategic Planning Statement notes a need for a variety of visitor accommodation options in the City, including areas outside Central Sydney. The Potts Point area in particular has seen a loss of hotel rooms to residential apartments, with at least 750 rooms lost since 2000.

Other submissions

31. Other issues addressed in the Response to Submissions at Attachment A include:

    (a) construction impacts;

    (b) the impact of building demolitions;

    (c) consistency with State Environmental Planning Policy (Housing) 2021, as well as Ministerial Direction 6.1 Residential Zones;

    (d) the creation of a 'third place';

    (e) tree poisoning on Brougham Street; and

    (f) links between the proponent and the Queensland State Government.

32. No changes are recommended to the planning proposal on the basis of submissions.

Key Implications

Strategic Alignment

33. Sustainable Sydney 2030-2050 Continuing the Vision renews the community's vision for the sustainable development of the City to 2050. It includes 10 strategic directions to guide the future of the City, as well as 10 targets against which to measure progress. The proposed planning controls are aligned with the strategic directions and objectives.

    (a) Direction 4 - Design excellence and sustainable development - the planning proposal facilitates the sustainable renewal and reuse of existing buildings for employment purposes.

    (b) Direction 9 - A transformed and innovative economy - the planning proposal supports the City's objectives to grow the City's tourist and visitor economy and to support employment in the City Fringe area.

34. The proposed planning controls give effect to priorities within the Greater Sydney Commission's Greater Sydney Region Plan and Eastern City District Plan, as well as the City's Local Strategic Planning Statement.

Relevant Legislation

35. Environmental Planning and Assessment Act 1979.

36. Environmental Planning and Assessment Regulation 2021.

37. Strata Schemes Development Act 2015.

Critical Dates / Time Frames

38. The Gateway Determination requires the planning proposal to be made by 23 December 2023.

39. The amendment to the Local Environmental Plan will come into effect when published on the NSW Legislation website.

GRAHAM JAHN AM

Director City Planning, Development and Transport

Ben Schneider, Cadet Planner

David Fitzpatrick, Manager Planning Policy

Attachment A

Summary of Submissions

Planning Proposal: 90 and 100-104 Brougham Street Submissions Summary

Theme	Matter	Response
Support	The planning proposal will: • add to the area's liveability, amenity and culture; • create jobs and boost tourism in the area; • improve the area's character. • Help conserve the heritage listed Piccadilly Hotel	Supporting submissions are noted. **Recommended action: no change**.
Loss of dwellings	The planning proposal will cause a large loss of housing, during a City-wide shortage in rental housing.	The City's Housing Audit records 13,064 dwellings in the Macleay Street and Woolloomooloo Village as at June 2022. The 24 apartments at 100-104 Brougham Street comprise 0.18 per cent of the area's dwelling stock. The conversion of this small number of dwellings in the area to a hotel use is unlikely to cause a significant impact on the rental market. The planning proposal does not prevent the properties from being used as dwellings. The land will continue to be zoned R1 General Residential and residential flat buildings and other dwellings will continue to be a permissible use of the land. The planning proposal will allow a hotel use on the land, but does not require that it is used only for a hotel. **Recommended action: no change.**

	The number of residential dwellings in the area should be increased.	The City's population and housing forecasts expect the number of dwellings in Macleay Street and Woolloomooloo area to grow overall by 1,035 dwellings to 14,099 in 2041. The City's Housing Monitor notes that 423 private dwellings are in the development pipeline for the area as at June 2022. The current development pipeline represents 40 per cent of the forecast growth, which is likely to be delivered over the next five years. The remaining 612 forecast dwellings will be delivered over the following 15 years, with a possibility that growth could be exceeded. The loss of the dwellings affected by this proposal will not significantly affect the supply of dwellings to meet demand from forecast population growth. **Recommended action: no change.**
	The proportion of dwellings in the area used for short-term rental accommodation (eg Airbnb) in the area has increased, reducing the stock of available dwellings.	Noted. The dwellings on the site can be used as short-tern rental accommodation under their current residential zoning. The planning framework for short term rental accommodation is set by the NSW Government. The City is investigating the effect of short-term rental accommodation on the availability of rental properties across the City in accordance with a Council resolution (15 May 2023, Item 11.4: https://city.sydney/15may-straresolution). The dwellings that comprise the site can be used as short-tern rental accommodation under their current residential zoning. **Recommended action: no change.**
Affordable housing	The planning proposal will cause a loss of affordable housing. There is an undersupply of affordable housing in the area. The proposal should retain affordable housing in the area.	The apartments at 100-104 Brougham Street are not considered affordable housing. They are privately-owned market housing subject to market rental rates. Rental rates are considered affordable when they are less than 30 per cent of a household's income. While the apartments are small with a studio format, some have car spaces and harbour views. Comparable apartments in the area currently achieve rental rates of around $650 and above per week. The 2021 Census identified Potts Point's median weekly household income as $2,041, with the 30 per cent threshold for affordable rental being $610 per week. These apartments would rent above the affordable threshold, despite being studios.

		The apartments are also not classified as low-rental dwellings by State Environmental Planning Policy (Housing) 2021 (the SEPP). The SEPP defines low-rental dwellings as having a rental rate lower than the local government area median. Median rent for a studio apartment in the City of Sydney during Q2 2023 was $478 per week, significantly less than the rent expected to be achieved for the apartments, which would be above $650 per week. **Recommended action: no change.**
Residential and neighbourhood character	The future hotel will be too large in massing and scale for Brougham Street. Brougham Street's streetscape should be improved. Brougham Street's character, charm and way of life will be lost.	The planning proposal does not grant any additional building height or development for any of the affected properties on Brougham Street. The proponent's planning proposal report states that for the existing buildings on Brougham Street 'built form, orientation and arrangement,' will remain unchanged through the subsequent Development Application. The design of the hotel and its impact on the streetscape of Brougham Street will be considered as part of any future development application. **Recommended action: no change.**
	The future hotel will adversely impact Victoria Street's character. The planning proposal will facilitate further unwanted development on Victoria Street. The area should not be turned into a hotel precinct.	This planning proposal is for the properties at 90 and 100-104 Brougham Street. It does not affect any properties on Victoria Street. Development Application D/2021/927 was approved 16 December 2022. It allows a hotel use at 169 and 171-173 Victoria Street (the Piccadilly Hotel building) and facilitates the restoration of the Piccadilly Hotel. The application was assessed as making a positive contribution to the streetscape of Victoria Street. Victoria Street currently presents a mixed-use character, with a number of restaurants, cafes and existing tourist and visitor accommodation uses. **Recommended action: no change.**
	The planning proposal will cause a loss of community and residents.	The dwellings affected by the planning proposal make up a very small part of the overall dwelling stock in the Macleay Street and Woolloomooloo Village. Census data (2021) show that 62.8 per cent of dwellings in Potts Point are a studio layout or have one bedroom, compared with the NSW average, which is 7.3 per

	It will make the community less economically diverse and displace residents.	cent. The same data show that, of all dwellings in Potts Point, 64.1 per cent are rented (NSW average 32.6 per cent). The conversion of a small fraction of studio apartments is unlikely to significantly change the area's mix of dwelling types and tenures or its demographic character. **Recommended action: no change.**
Traffic, parking, servicing	The planning proposal will adversely impact traffic flow and congestion on Brougham Street. The planning proposal will increase competition for street parking, making it harder for existing residents to park their vehicles. Additional traffic generated by the future hotel will worsen air quality and street noise.	The planning proposal is not expected to generate significant additional car trips or traffic impacts to Brougham Street. The subject properties are located near to Kings Cross Station and local buses, with a taxi rank on Victoria Street. On-site parking and local on-street parking are limited, further restricting the potential for a significant number of additional vehicles. A further development application will be required to allow hotel use for the properties. Detailed assessment of any additional traffic impacts on Brougham Street from the hotel use will be undertaken as part of the development application. **Recommended action: no change.**
	Concern about servicing, in particular traffic impacts to Brougham Street.	The approved development application requires all loading and servicing to be accommodated within the existing loading zone on Victoria Street. Any changes to the approved arrangement would be subject to detailed assessment as part of any development application for hotel use at the properties. The proponent will be required to submit a further traffic study as part of that assessment. The study will need to demonstrate that development will not cause unacceptable local traffic impacts. **Recommended action: no change.**
Noise	Concern about noise generated by the operation of the future hotel.	The operation of the hotel and any food and drink premises will be subject to assessment as part of a future development application. Neighbourhood impacts such as noise will be considered as part of that detailed assessment. The approved development application for the Piccadilly Hotel requires a Plan of Management and

		a Noise Management Plan to minimise impacts of the proposal on neighbourhood amenity. This will need to be amended to consider operation of the future hotel in its entirety. Incorporation of the properties in this planning proposal into the larger Piccadilly Hotel development will allow for better management of noise by creating a stronger buffer between the hotel use and surrounding residential uses. The development approval for the Piccadilly Hotel allows the development of a dining area in the central courtyard in the location of the backyards to the terraces at 92-98 Brougham Street. Expanding the hotel to include 90 and 100-104 Brougham Street will allow the future courtyard to be 'enclosed,' avoiding conflicts to sensitive receptors that would have arisen otherwise. **Recommended action: no change.**
Hotel demand	There is no need for a large hotel in the area.	The City's Visitor Accommodation Action Plan notes a loss of visitor and tourist accommodation in the Potts Point area, with many converted to residential apartments. At least 750 hotel rooms have been lost to apartment buildings over time, along with a significant loss of hospitality jobs. Hotel rooms lost to apartments include: • The Chateau Hotel, 92 rooms (2000); • Rex Hotel, 255 rooms (2001); • The Mansion Hotel, 80 rooms (2011); • Hampton Court Hotel, ~100 rooms (2011); and • The Crest Hotel, 227 rooms (2016). City Plan 2036, the City's Local Strategic Planning Statement notes a need for a variety of visitor accommodation options in highly visited areas of the City, including areas outside Central Sydney. The re-opening of the Piccadilly Hotel will bring another visitor accommodation option to the area, along with increased hospitality employment opportunities and economic activity to the local area. **Recommended action: no change.**

Sustainability	Demolishing the existing buildings would be unsustainable.	The planning proposal does not allow the demolition of the existing buildings at 90 and 100-104 Brougham Street. The landowner's intention for the subsequent DA is to retain and upgrade all of the existing the buildings. **Recommended action: no change.**
Construction impacts	Concern about adverse amenity impacts arising during construction.	Construction impacts will be managed through a Construction Management Plan, to be submitted by the proponent at the DA stage. This will include dust, noise and vibration management and hours of work. Any traffic impacts from workers and deliveries that may arise during the construction period will be appropriately managed through a Construction Traffic Management Plan, to be required at the development application stage. **Recommended action: no change.**
Social impacts	The planning proposal states that there will be no significant social impacts, despite the loss of dwellings.	The dwellings affected by the planning proposal make up a very small part of the dwelling stock in the Macleay Street and Woolloomooloo Village area. Loss of this small number of dwellings is not considered a significant impact. There has been a significant loss of hotel rooms to dwellings for an extended period in Potts Point, and there is expected to be continued growth in the number of dwellings, with 423 to be delivered over the next five years. The planning proposal could also generate positive social impacts: • Generating employment, including both through the construction phase and longer-term hospitality jobs through the operations • Attracting economic activity from hotel guests to support other businesses in the area • Improvements to the character and streetscape of the area through investment in the conservation of the Piccadilly Hotel and in the other buildings that comprise the future redevelopment. **Recommended action: no change.**
Landowner consent	The remaining owner in 100-104 Brougham Street	Noted.

	will not give consent to the redevelopment.	The proponent owns 23 of the 24 units at 100-104 Brougham Street. The outstanding owner has indicated they do not support the proposal to include 100-104 Brougham Street within the future Piccadilly Hotel. Under the Environmental Planning and Assessment Act 1979 there is no requirement for landowners' consent to be given for a planning proposal. The planning proposal will not allow any construction nor operation of the hotel – a development application is required for that. Landowners' consent is a requirement for development applications. The City has provided this advice to the outstanding owner. Local governments do not have a role in the process of winding up a strata scheme, which is outside of the planning system. Subject to process work by the strata committee and owners corporation, a strata scheme may be terminated where the owner(s) of 75 per cent of the lots agree. The termination of a strata plan is also subject to further consideration from the Land and Environment Court. Strata schemes are administered by the Strata Schemes Development Act 2015. **Recommended action: no change.**
Planning proposal viewed in isolation	This proposal is being viewed in isolation, not as part of a larger proposal involving 92-98 Brougham Street.	The Planning Proposal describes the relationship between this proposal and the larger redevelopment of the Piccadilly Hotel at pages 11-12. It recognises that these properties will be incorporated into the Piccadilly Hotel along with the terraces at 92-98 Brougham Street. The planning proposal does not allow operation of the properties as part of the hotel. That would be part of a future development application which would consider issues such as neighbourhood character, amenity, noise, privacy and traffic. Assessment of the development application would have to consider those impacts for the operation of the hotel in its entirety. **Recommended action: no change.**
Other	Concern about links between the proponent and the Queensland State Government.	Noted.

Query regarding the accuracy of the zoning map within the planning proposal.	One submission queried whether the zoning map in the planning proposal was accurate. The zoning map in the planning proposal shows the properties at 92-98 Brougham Street as being zoned R1 General Residential. The submission asked if the R1 General Residential zoning was still correct? The properties will still be zoned R1 General Residential if the planning proposal is supported by Council. The planning proposal will add an additional permitted use of tourist and visitor accommodation specific to the properties without changing the underlying residential zone. Residential development will still be permissible on the properties. **Recommended action: no change.**
Query regarding the planning proposal's alignment with the planning framework	A submission queried the consistency between the planning proposal and State Environmental Planning Policy (Housing) 2021 (the SEPP) and Ministerial Direction 6.1 Residential Zones (Direction 6.1). The SEPP guides development applications for certain types of residential use including boarding uses, co-living and build-for-rent developments. It does not mandate that all planning proposals must provide housing. The planning proposal remains consistent with the SEPP as the properties will retain their R1 General Residential zoning and dwellings will continue to be a permitted use on the land. The planning proposal is consistent with Ministerial Direction 6.1. The objectives of Direction 6.1 are to encourage a variety of housing types, and make efficient use of existing infrastructure. Specifically, the Direction states that a planning proposal must not contain provisions which reduce the permissibility of residential development on the land. As noted above, the properties will retain their R1 General Residential zoning and dwellings will continue to be a permitted use on the land. **Recommended action: no change.**
Query about 'third space'	One submission requested further information about the 'Third Place' referred in the social benefits section (p5) of the proponent's Economic and Social Impact Assessment, which was exhibited with the planning proposal. The 'third space' is not part of this planning proposal. The third space benefit refers to an additional space (besides home and work) for the community to congregate and

	socialise. If the Piccadilly Hotel is to provide such a space it will be considered as part of any future development application. **Recommended action: no change.**
Request for information	One submission requested detailed plans for the approved development application at 92-98 Brougham Street. These details were provided by email. **Recommended action: no change.**
Tree poisoning	Two submissions raised concerns about suspected street tree poisoning on Brougham Street. One submission stated the trees were opposite the planning proposal properties. City arborist have confirmed that two mature trees on Brougham Street were removed after poisoning. The trees were opposite numbers 66 and 74 Brougham Street, approximately 100 metres north of the planning proposal properties. Two Water Gums have been planted as replacements. **Recommended action: no change.**

Attachment B

Planning Proposal – 90 and 100-104 Brougham Street, Potts Point

CITY OF SYDNEY

Planning Proposal – 90 and 100-104 Brougham Street, Potts Point

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area.

Contents

Table of figures

Executive Summary

The City of Sydney (the City) has prepared this planning proposal in relation to two properties at 90 and 100-104 Brougham Street, Potts Point (the site) following a request from Harrphil Pty Ltd (Harrphil).

The properties are currently zoned R1 General Residential, which prohibits the use of the land for hotel and motel accommodation. The purpose of this planning proposal is to insert hotel and motel accommodation into Schedule 1 of the Sydney Local Environmental Plan 2012 (Sydney LEP) as an additional permitted use for the sites. In doing so this would allow for the consolidation of the site and adjoining properties at 92-98 Brougham Street and 171-173 Victoria Street, that together comprise a concept proposal for a hotel development called the ‘Piccadilly Hotel’.

This planning proposal is subsequent to a previous planning proposal, PP-2020-1128, that was also part of the Piccadilly Hotel concept proposal. The purpose of this previous planning proposal was to permit hotel accommodation uses on the properties at 92-98 Brougham Street, which are in-between the properties subject to this planning proposal. The previous planning proposal was made in 2021.

This planning proposal explains the intent and justification for the proposed amendments to the Sydney LEP as applied to the site. It also provides a more detailed assessment of the proposal’s strategic and site-specific merit.

1. Background

1.1. Proponent request

The City of Sydney has received a request from Harphill Pty Ltd seeking to amend the Sydney LEP 2012 to permit 'hotel and motel accommodation' uses on the properties at 90 and 100-104 Brougham Street, Potts Point.

Under the existing R1 General Residential zoning that applies to the land, 'hotel and motel accommodation' is a prohibited use on the subject sites. The proposed amendment is to remove the prohibition.

The proponent intends to repurpose the properties as hotel accommodation rooms. The proponent has not requested any change to the site's existing zoning or built form controls including maximum height of building or floor space ratio (FSR).

1.2. Site identification

This planning proposal relates to the properties at 90 and 100-104 Brougham Street, Potts Point. The legal definitions of these properties are summarised in below in Table 1.

Table 1: Legal descriptions of the affected properties

Address	Legal definition	Area (sqm)
90 Brougham Street	Lot 15 Sec 4 DP 28 Lot 1 DP 456813	190.3
100-104 Brougham Street	Lots 1, 3-4, 6-12, 14-22 and 24 SP 1560 Lots 25-28 SP 10531	556.4

90 Brougham Street is currently occupied by two contemporary three storey dwellings separated by a courtyard. The existing building at 100-104 Brougham Street is a four storey building with a total of 24 studio apartments above a ground-level covered carpark. The location of the properties is shown in Figure 1.

Figure 1. Aerial image showing the site's location

The site is located in Potts Point approximately two kilometres east of Central Sydney. Uses along Brougham Street are predominantly residential, and the most common building type is three storey terrace dwellings with dormer roofs. There is approval for a hotel use at 92-98 Brougham Street, which sits between these two properties.

The properties are highly accessible. They are 90 metres northwest of the Kings Cross train station, and close to Darlinghurst Road and William Street, which are both well serviced by bus routes.

The site’s context is shown below in Figure 2.

Figure 2. Indicative plan showing the site's context and suburb boundaries

2. Existing planning controls

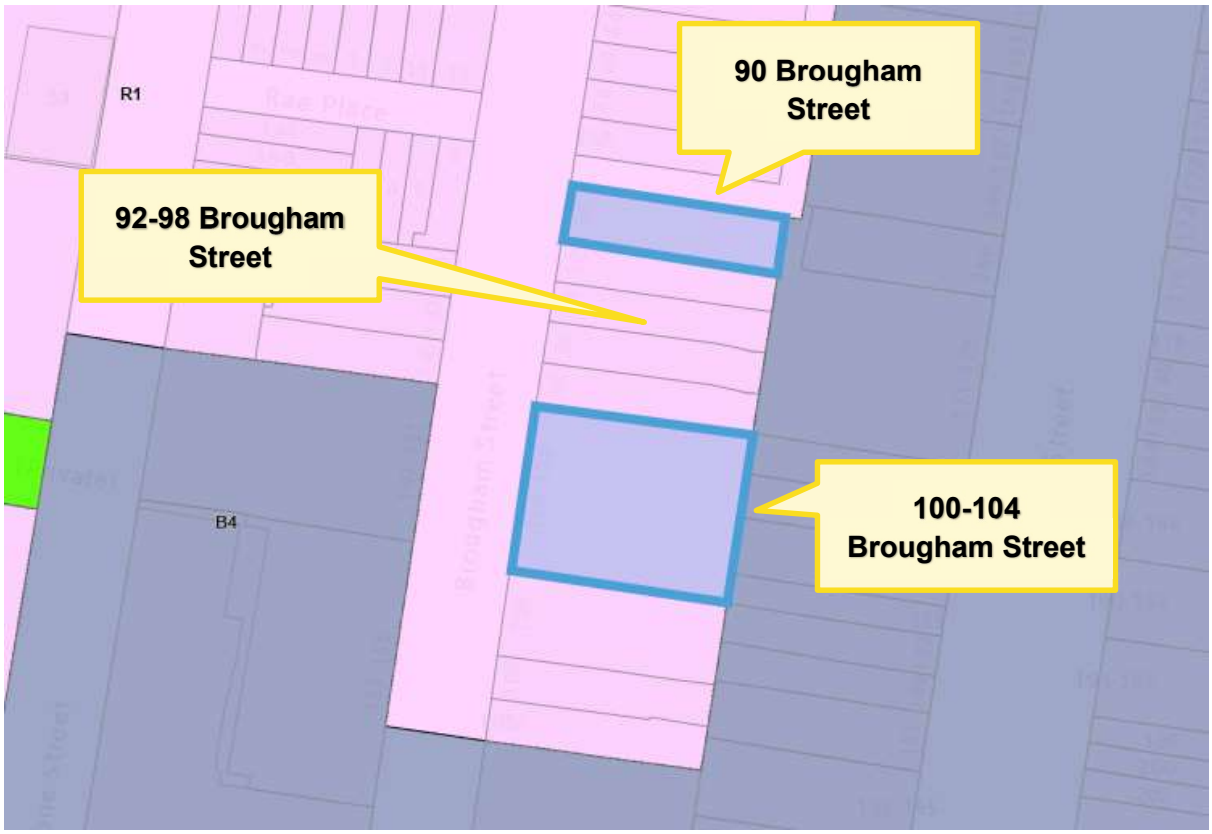
2.1 Zoning

The properties are currently zoned R1 Residential in Sydney LEP. Figure 3 shows the two properties outlined in blue. The pink area is the R1 General residential zone and the purple area is the B4 Mixed Use zone.

It is noted this planning proposal is subsequent to a previous planning proposal, PP-2020-1128, that came into effect 2021 and permitted hotel and motel accommodation on the properties at 92-98 Brougham Street, which are in-between the properties subject to this planning proposal, despite their RE1 zoning.

The R1 General residential zone permits a range of uses including residential, as well as neighbourhood shops, bed and breakfast accommodation, community facilities, hostels, shops, and food and drink premises. Hotel and motel accommodation is a prohibited use in the zone.

Figure 3. Excerpt of Sydney LEP zoning map



2.2 Development standards

The Sydney LEP determines principal development standards which apply to the properties. These include:

- a maximum building height of 12 metres, and;
- a maximum FSR applied of is 1.5:1.

2.3 Heritage

The subject properties, shown in blue at Figure 4, are not heritage items. They are located within the C71 Woolloomooloo conservation area, with 100-104 Brougham identified as a detracting element and 90 Brougham Street a neutral element in Sydney DCP 2012.

This planning proposal will not change any heritage controls that are applied to the land.

Figure 4. Indicative plan showing the locations of heritage items and the boundary of the heritage conservation area

3. Objectives and intended outcomes

The objective and intended outcome of this planning proposal is to amend Sydney LEP to allow hotel and motel accommodation on land comprising 90 and 100-104 Brougham Street, Potts Point. The land is zoned R1 General residential.

This will be achieved by adding ‘hotel and motel accommodation’ as an additional permitted use in Schedule 1 of Sydney LEP.

4. Explanation of provisions

To achieve the intended outcomes of this planning proposal, it is proposed to amend Schedule 1 of Sydney LEP to include 'hotel or motel accommodation' as an additional permitted use at 90 and 100-104 Brougham Street. A draft of the proposed amendment to Schedule 1 of the Sydney LEP is shown in **bold**, and ~~strikethrough~~ below:

9 Use of certain land at ~~92-98~~ **90-104** Brougham Street, Potts Point—

1. This clause applies to the following land at ~~92-98~~ **90-104** Brougham Street, Potts Point—
   - **a) Lot 15 Sec 4 DP 28, Lot 1 DP 456813,**
   - b) Lot 1, DP 724376,
   - c) Lot 1, DP 904094,
   - d) SP 17354,
   - e) Lot 100, DP 613011,
   - **f) Lots 25-28 in SP 10531 and Lots 1, 3-4, 6-12, 14-22, 24 in SP 1560**
2. Development for the purposes of hotel or motel accommodation is permitted with development consent.

5. Justification

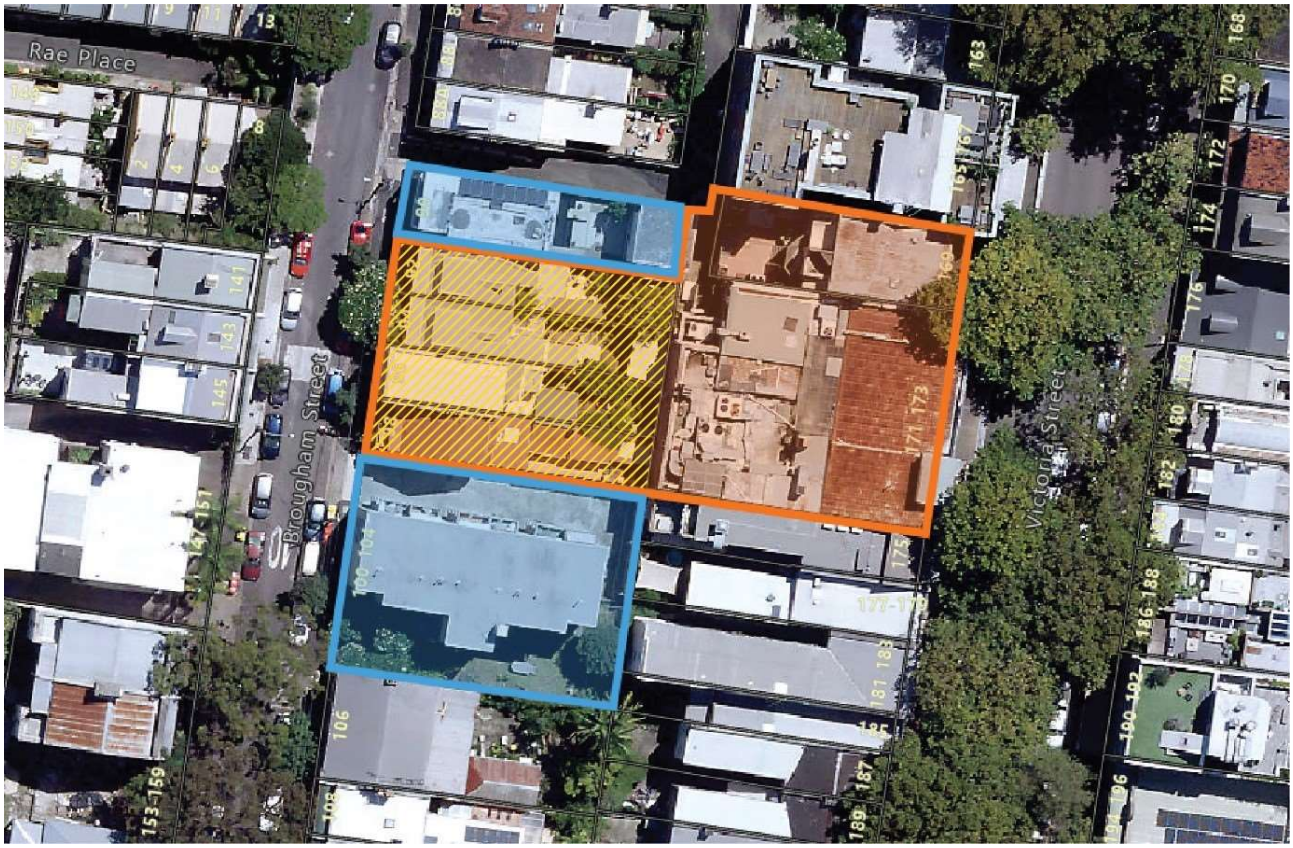
Harphill Pty Ltd seek to incorporate their properties at 90 Brougham Street and 100-104 Brougham Street as part of an expanded hotel proposal for the Piccadilly Hotel (169-173 Victoria Street & 92-98 Brougham Street). Allowing ‘hotel and motel accommodation’ as additional uses on 90 Brougham Street and 100-104 Brougham Street would enable hotel use subject to future development consent.

The intention is to repurpose these properties as hotel accommodation rooms.

The extent of the future hotel is indicated in Figure 5 showing.

- The area within the orange outline comprises 169-173 Victoria Street & 92-98 Brougham Street. 169-173 Victoria Street is the original Piccadilly Hotel. These properties have development consent for a hotel use (D2021/927, approved 14 December 2022).
- The orange hatched area are former terrace houses at 92-98 Brougham Street.
- The blue coloured area is the properties subject to this planning proposal.

Figure 5. The Piccadilly Hotel



Strategic merit

This planning proposal would provide additional hotel accommodation rooms in a highly accessible location, contributing to the City's tourist and visitor accommodation supply. By providing a buffer to nearby residences it will allow for an improved experience for hotel patrons by allowing greater use of courtyard space for eating and dining.

The proposal is consistent with the City's Tourism Action Plan (2013) and Visitor Accommodation Action Plan (2015) which aim to facilitate development of additional visitor accommodation. It also aligns with The Eastern City District Plan which seeks to strengthen and grow a more competitive Harbour CBD through the growth of targeted industry sectors, including tourist and visitor accommodation. It will support priorities and actions in City Plan 2036 to drive job creation in the City Fringe area.

The properties at 90 and 100-104 Brougham Street currently comprise 2 contemporary three-bed dwellings and 24 private market studio apartments. The loss of these dwellings is and will not impact the overall supply of dwellings against the City's housing targets.

Site-specific merit

Incorporating these properties in to an expanded hotel would provide a buffer between the future approved hotel use and neighbouring residences. It will allow for use of the courtyard area proposed for the hotel for outdoor dining without impacting on residential neighbours. The buffer between the expanded hotel and neighbouring residential properties will allow for easier management of any noise and privacy impacts that could arise. These will be assessed as part of any development application against the relevant planning controls. Any impacts will be managed through design approaches and plans of management which is partly made possible by the orientation of the apartments at 100-104 Brougham Street away from neighbouring properties.

This proposal does not propose any changes to the heritage, FSR or building height controls in Sydney LEP. No additional development potential is created through this proposal.

Section A – Need for the planning proposal

Question	City response
Q1. Is the planning proposal a result of any strategic study or report?	The planning proposal is consistent with the City's Tourist and Visitor Action Plan and Visitation Action Plan. It supports the priorities and actions in City Plan 2036 and Sustainable Sydney 2030-2050.
Q2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?	Yes. The main objective of this planning proposal is to allow hotel and motel accommodation uses on the site. A planning proposal is required to amend the Sydney LEP and insert this use into Schedule 1, which contains the Additional Permitted Uses.

Section B – Relationship to the strategic planning framework

Question	City response
Q3. Is the planning proposal consistent with the objectives and actions of the applicable regional or sub-regional strategy (including the Sydney Metropolitan Strategy and the exhibited draft strategies)?	Yes. The Greater Sydney Region Plan and the Eastern District City Plan are both prepared by the NSW Government and are the regional plans relevant to the site. This proposal will help support growth in the tourist and visitor economy sector.
Q4. Is the planning proposal consistent with a council's local strategy or other local strategic plan?	Yes. The City's vision for land use and planning is set out within City Plan 2036, the City's local strategic planning statement, and Sustainable Sydney 2030-2050. It supports the City Plan 2036 for job growth, particularly within the City Fringe. The site is located in close proximity to the Oxford Street Cultural and Creative precinct. In adding to the supply of visitor accommodation nearby to this area, this planning proposal would support the City's strategic priorities for the precinct.
Q5. Is the planning proposal consistent with applicable State Environmental Planning Policies (SEPPs).	Yes, the planning proposal is consistent with applicable SEPPs. See section B2.
Q6. Is the planning proposal consistent with applicable Ministerial Directions (s9.1 directions)?	Yes, the planning proposal is consistent with applicable Ministerial Directions. See section B3.

Section B2 – Assessment of planning proposal against applicable SEPPs

SEPP	Comment
SEPP (Biodiversity and Conservation) 2021	This planning proposal is consistent.
SEPP (Building Sustainability Index: BASIX) 2004	Not applicable to this proposal.
SEPP (Exempt and Complying Development Codes) 2008	This planning proposal is consistent.
SEPP (Housing) 2021	This planning proposal is consistent.
SEPP (Industry and Employment) 2021	This planning proposal is consistent.
SEPP (Planning Systems) 2021	This planning proposal is consistent.

SEPP	Comment
SEPP (Precincts–Central River City) 2021	Not applicable to this proposal.
SEPP (Precincts–Eastern Harbour City) 2021	This planning proposal is consistent.
SEPP (Precincts–Regional) 2021	Not applicable to this proposal.
SEPP (Precincts–Western Parkland City) 2021	Not applicable to this proposal.
SEPP (Primary Production) 2021	Not applicable to this proposal
SEPP (Resilience and Hazards) 2021	This planning proposal is consistent.
SEPP (Resources and Energy) 2021	This planning proposal is consistent
SEPP No 65 - Design Quality of Residential Flat Development	Not applicable to this proposal.
SEPP (Transport and Infrastructure) 2021	This planning proposal is consistent

Section B3 – Assessment of planning proposal against applicable Ministerial Directions

Ministerial Direction	Response
Ministerial Direction 1.1 Implementation of Regional Plans	Consistent. The planning proposal will give effect to objectives and priorities of the Greater Sydney Region Plan as detailed in response to Q3 above.
Ministerial Direction 1.2 Development of Aboriginal Land Council Land	Not applicable.
Ministerial Direction 1.3 Approval and Referral Requirements	Consistent. The planning proposal does not include provisions that require the concurrence, consultation or referral of any future development application to a Minister or public authority. Future development in accordance with the proposed amendments will not be designated development.
Ministerial Direction 1.4 Site Specific Provisions	Consistent. The planning proposal will not further restrict the range of uses permissible on the site. Rather, it seeks to expand the existing range of permitted uses.
Ministerial Direction 1.5 Parramatta Road Urban Transformation Strategy	Not applicable.

Ministerial Direction	Response
Ministerial Direction 1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	Not applicable.
Ministerial Direction 1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	Not applicable.
Ministerial Direction 1.8 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	Not applicable.
Ministerial Direction 1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor	Not applicable.
Ministerial Direction 1.10 Implementation of the Western Sydney Aerotropolis Plan	Not applicable.
Ministerial Direction 1.11 Implementation of Bayside West Precincts 2036 Plan	Not applicable.
Ministerial Direction 1.12 Implementation of Planning Principles for the Cooks Cove Precinct	Not applicable.
Ministerial Direction 1.13 Implementation of St Leonards and Crows Nest 2036 Plan	Not applicable.
Ministerial Direction 1.14 Implementation of Greater Macarthur 2040	Not applicable.
Ministerial Direction 1.15 Implementation of the Pyrmont Peninsula Place Strategy	Not applicable.

Ministerial Direction	Response
Ministerial Direction 1.16 North West Rail Link Corridor Strategy	Not applicable.
Ministerial Direction 1.17 Implementation of the Bays West Place Strategy	Not applicable.
1.18 Implementation of the Macquarie Park Innovation Precinct	Not applicable.
Ministerial Direction 1.19 Implementation of the Westmead Place Strategy	Not applicable.
Ministerial Direction 1.20 Implementation of the Camellia-Rosehill Place Strategy	Not applicable.
Ministerial Direction 1.21 Implementation of the South West Growth Area Structure Plan	Not applicable.
Ministerial Direction 1.22 Implementation of the Cherrybrook Station Place Strategy	Not applicable.
Ministerial Direction 3.1 Conservation Zones	Not applicable.
Ministerial Direction 3.2 Heritage Conservation	Consistent. No heritage items are identified on the site and the planning proposal does not alter existing heritage controls applied to the site. The planning proposal forms a part of a broader concept proposal for the Piccadilly Hotel, which involves the sensitive refurbishment of an existing local heritage item.
Ministerial Direction 3.3 Sydney Drinking Water Catchments	Not applicable.
Ministerial Direction 3.4 Application of C2 and C3 Zones and Environmental Overlays in Far North Coast LEPs	Not applicable.
Ministerial Direction 3.5	Not applicable.

Ministerial Direction	Response
Recreation Vehicle Area	
Ministerial Direction 3.6 Strategic Conservation Planning	Not applicable.
Ministerial Direction 3.7 Public Bushland	Not applicable.
Ministerial Direction 3.8 Willandra Lakes Region	Not applicable.
Ministerial Direction 3.9 Sydney Harbour Foreshores and Waterways Area	Not applicable.
Ministerial Direction 3.10 Water Catchment Protection	Not applicable.
Ministerial Direction 4.1 Flooding	Consistent. The sites are not identified as flood-affected
Ministerial Direction 4.2 Coastal Management	Not applicable.
Ministerial Direction 4.3 Planning for Bushfire Protection	Not applicable.
Ministerial Direction 4.4 Remediation of Contaminated Land	Consistent. The sites are already used for residential purposes. A preliminary site assessment for contamination was undertaken on the adjoining sites as part of the previous planning proposal. This assessment concluded the land was suitable for a hotel use. A detailed site investigation can be undertaken as part of a development application.
Ministerial Direction 4.5 Acid Sulfate Soils	Consistent.
Ministerial Direction 4.6 Mine Subsidence and Unstable Land	Not applicable.
Ministerial Direction 5.1 Integrating Land Use and Transport	Consistent. The site is located in an area that is well serviced by existing public and private transport options.
Ministerial Direction 5.2	Not applicable.

Ministerial Direction	Response
Reserving Land for Public Purpose	
Ministerial Direction 5.3 Development Near Regulated Airports and Defence Airfields	Not applicable.
Ministerial Direction 5.4 Shooting Ranges	Not applicable.
Ministerial Direction 6.1 Residential Zones	Consistent. The planning proposal does not prevent a residential use from occurring on the site. The site is within a residential zone and development for that purpose will continue to be permissible.
Ministerial Direction 6.2 Caravan Parks and Manufactured Home Estates	Not applicable.
Ministerial Direction 7.1 Business and Industrial Zones	Consistent. The planning proposal will encourage employment growth in a suitable location, as well as protect and support the viability of an area prioritised for hotel accommodation uses.
Ministerial Direction 7.2 Reduction in non-hosted short-term rental accommodation period	Not applicable.
Ministerial Direction 7.3 Commercial and Retail Development along the Pacific Highway, North Coast	Not applicable.
Ministerial Direction 8.1 Mining, Petroleum Production and Extractive Industries	Not applicable.
Ministerial Direction 9.1 Rural Zones	Not applicable.
Ministerial Direction 9.2 Rural Lands	Not applicable.
Ministerial Direction 9.3 Oyster Aquaculture	Not applicable.
Ministerial Direction 9.4	Not applicable.

Ministerial Direction	Response
Farmland of State Regional Significance on the NSW Far North Coast	

Section C – Environmental, social and economic impact

Question	City response
Q7. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?	No. The planning proposal will not result in any significant ecological impacts.
Q8. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?	No. The planning proposal is would not result in any other environmental effects.
Q9. Has the planning proposal adequately addressed any social and environmental effects?	The proposal is for the expansion of a small-scale and existing hotel use on an adjacent property. No significant social or environmental effects are likely as an outcome of this proposal.

Section D – State and Commonwealth interests

Question	City response
Q10. Is there adequate public infrastructure for the planning proposal?	Yes, there is adequate public infrastructure to support this planning proposal. It is noted that the site is located within close proximity to existing public and active transport infrastructure.
Q11. What are the views of the State and Commonwealth public authorities consulted in accordance with the Gateway determination?	The Gateway Determination will identify the public authorities to be consulted as part of the planning proposal process and any views expressed will be included in this planning proposal following consultation. Formal consultation has not yet commenced.

6. Mapping

No amendments to the current Sydney LEP maps are proposed.

7. Community consultation

This planning proposal is to be exhibited in accordance with the Gateway Determination once issued by the Department of Planning and Environment.

It is anticipated that the Gateway Determination will require public exhibition for a period of not less than 20 working days in accordance with the Environmental Planning and Assessment Act 1979 and s4.5 of the Department's guide to Preparing Local Environmental Plans.

Notification of the public exhibition will be consistent with the Gateway Determination and the City's Community Participation Plan. This will include publication on the City of Sydney website and notification via letters to surrounding owners and occupiers.

Consultation with relevant NSW agencies, authorities, and other referred entities will be undertaken if and where needed and in accordance with the Gateway Determination.

8. Project timeline

The anticipated timeline for the completion of the planning proposal is as follows:

Stage	Timeframe
Commencement / Gateway Determination	June 2023
Government agency consultation	July 2023
Public exhibition	July 2023
Consideration of submissions	August-September 2023
Post-exhibition consideration of proposal	October 2023
Draft and finalise LEP	November-December 2023
LEP made	January 2024
Plan forwarded to the Department of Planning and Environment for notification	January 2024

Attachment C

Resolutions of Council and the Central Sydney Planning Committee

Resolution of Council

15 May 2023

Item 8.4

Public Exhibition - Planning Proposal - 2, 2A-8 Arundel Street and 6-12 Parramatta Road, Forest Lodge, 90 and 100-104 Brougham Street, Potts Point, and 85-93 Commonwealth Street, Surry Hills - Sydney Local Environmental Plan 2012 Amendment

It is resolved that:

(A) Council approve the Planning Proposal - 2, 2A-8 Arundel Street and 6-12 Parramatta Road, Forest Lodge as shown at Attachment A to the subject report:

(i) for submission to the Department of Planning and Environment with a request for Gateway Determination; and

(ii) for public authority consultation and public exhibition in accordance with any conditions imposed under the Gateway Determination;

(B) Council approve the Planning Proposal - 90 and 100-104 Brougham Street, Potts Point as shown at Attachment B to the subject report:

(i) for submission to the Department of Planning and Environment with a request for Gateway Determination; and

(ii) for public authority consultation and public exhibition in accordance with any conditions imposed under the Gateway Determination;

(C) Council approve the Planning Proposal - 85-93 Commonwealth Street, Surry Hills, as shown at Attachment C to the subject report:

(i) for submission to the Department of Planning and Environment with a request for Gateway Determination; and

(ii) for public authority consultation and public exhibition in accordance with any conditions imposed under the Gateway Determination;

(D) Council seek authority from the Department of Planning and Environment to exercise the delegation of all the functions under section 3.36 of the Environmental Planning and Assessment Act 1979 to make the local environmental plan and to put into effect Planning Proposals: 2, 2A-8 Arundel Street and 6-12 Parramatta Road, Forest Lodge; 90 and 100-104 Brougham Street, Potts Point; and 85-93 Commonwealth Street, Surry Hills; and

(E) authority be delegated to the Chief Executive Officer to make any minor variations to Planning Proposals: 2, 2A-8 Arundel Street and 6-12 Parramatta Road, Forest Lodge; 90 and 100-104 Brougham Street, Potts Point; and 85-93 Commonwealth Street, Surry Hills, to correct any drafting errors or to ensure consistency with the Gateway Determination.

Clause (A) was carried on the following show of hands:

Ayes (7) The Chair (the Lord Mayor), Councillors Davis, Gannon, Jarrett, Kok, Scott and Worling

Noes (2) Councillors Ellsmore and Weldon.

Clauses (B) to (E) were carried unanimously.

X082392

Resolution of Central Sydney Planning Committee

11 May 2023

Item 6

Public Exhibition - Planning Proposal - 2, 2A-8 Arundel Street and 6-12 Parramatta Road, Forest Lodge, 90 and 100-104 Brougham Street, Potts Point, and 85-93 Commonwealth Street, Surry Hills - Sydney Local Environmental Plan 2012 Amendment

Moved by the Chair (the Lord Mayor), seconded by Councillor Kok –

It is resolved that:

(A) the Central Sydney Planning Committee approve the Planning Proposal - 2, 2A-8 Arundel Street and 6-12 Parramatta Road, Forest Lodge as shown at Attachment A to the subject report:

(i) for submission to the Department of Planning and Environment with a request for Gateway Determination; and

(ii) for public authority consultation and public exhibition in accordance with any conditions imposed under the Gateway Determination;

(B) the Central Sydney Planning Committee approve the Planning Proposal - 90 and 100-104 Brougham Street, Potts Point as shown at Attachment B to the subject report:

(i) for submission to the Department of Planning and Environment with a request for Gateway Determination; and

(ii) for public authority consultation and public exhibition in accordance with any conditions imposed under the Gateway Determination;

(C) the Central Sydney Planning Committee approve the Planning Proposal - 85-93 Commonwealth Street, Surry Hills, as shown at Attachment C to the subject report:

(i) for submission to the Department of Planning and Environment with a request for Gateway Determination; and

(ii) for public authority consultation and public exhibition in accordance with any conditions imposed under the Gateway Determination;

(D) the Central Sydney Planning Committee note the recommendation to Council's Transport, Heritage, Environment and Planning Committee on 8 May 2023 that Council seek authority from the Department of Planning and Environment to exercise the delegation of all the functions under section 3.36 of the Environmental Planning and Assessment Act 1979 to make the local environmental plan and to put into effect Planning Proposals: 2, 2A-8 Arundel Street and 6-12 Parramatta Road, Forest Lodge; 90 and 100-104 Brougham Street, Potts Point; and 85-93 Commonwealth Street, Surry Hills; and

(E) authority be delegated to the Chief Executive Officer to make any minor variations to Planning Proposals: 2, 2A-8 Arundel Street and 6-12 Parramatta Road, Forest Lodge; 90 and 100-104 Brougham Street, Potts Point; and 85-93 Commonwealth Street, Surry Hills, to correct any drafting errors or to ensure consistency with the Gateway Determination.

Carried unanimously.

X082392

Attachment D

Gateway Determination

Gateway Determination

Planning proposal (Department Ref: PP-2023-724): to amend the Sydney LEP 2012 to *by inserting* 'hotel or motel accommodation' *as a permissible use at 90 and 100-104 Brougham Street, Potts Point, under Schedule 1*.

I, the Director, Eastern District City of Sydney, at the Department of Planning and Environment, as delegate of the Minister for Planning and Public Spaces, have determined under section 3.34(2) of the *Environmental Planning and Assessment Act 1979* (the Act) that an amendment to the Sydney Local Environmental Plan 2012 to insert *'hotel or motel accommodation'* as a permissible use at 90 and 100-104 Brougham Street Potts Point, through a site specific clause under Schedule 1 should proceed subject to the following conditions should proceed subject to the following conditions:

1. Public exhibition is required under section 3.34(2)(c) and schedule 1 clause 4 of the Act as follows:

   (a) the planning proposal is categorised as standard as described in the *Local Environmental Plan Making Guidelines* (Department of Planning and Environment, 2021) and must be made publicly available for a minimum of **20 working days**; and

   (b) the planning proposal authority must comply with the notice requirements for public exhibition of planning proposals and the specifications for material that must be made publicly available along with planning proposals as identified in *Local Environmental Plan Making Guidelines* (Department of Planning and Environment, 2021).

2. A public hearing is not required to be held into the matter by any person or body under section 3.34(2)(e) of the EP&A Act. This does not discharge Council from any obligation it may otherwise have to conduct a public hearing (for example, in response to a submission or if reclassifying land).

3. Given the nature of the planning proposal, Council is authorised to be the local plan-making authority to make this plan.

4. The LEP should be completed on or before 23 December 2023.

Dated 23 day of June 2023.

Katie Joyner
Director, City of Sydney and Eastern District

Planning and Land Use Strategy
Department of Planning and Environment

Delegate of the Minister for Planning and Public Spaces

Item 5.

Fire Safety Reports

File No: S105001.002

Summary

The City of Sydney regularly receives building reports from Fire and Rescue NSW in relation to inspections carried out by Fire and Rescue NSW Authorised Officers. These inspection reports are to be reported to Council and Council is required to determine whether to exercise its power to issue fire safety orders under Division 9.3 and Schedule 5 of the Environmental Planning and Assessment Act 1979 (the Act).

In response to Fire and Rescue NSW reports City staff undertake inspections to ensure fire safety measures are in full operation and that building exits are clear and unimpeded. Fire and Rescue NSW inspections revealed fire safety concerns that require Council as the appropriate regulatory authority to use its discretion and address the concerns observed at the time of the inspection.

Fire and Rescue NSW has powers under the Act to carry out inspections of buildings and it is required to forward its findings to the City.

Fire and Rescue NSW reports received by the City are required to be tabled before Council.

Attached are details of four reports received by the City from Fire and Rescue NSW. The attachments deal with four properties and includes the Fire and Rescue NSW report and the findings (preliminary or final) by the City's Officer, along with other documentation relevant to that property.

Recommendation

It is resolved that:

(A) note the contents of the Fire Safety Report Summary Sheet, as shown at Attachment A to the subject report;

(B) note the inspection reports by Fire and Rescue NSW, as shown at Attachments B to E of the subject report;

(C) note the contents of Attachment B and exercise its power under the Environmental Planning and Assessment Act 1979 to issue a Fire Safety Order at 262-264 Glebe Point Road, Glebe

(D) note the contents of Attachment C and not exercise its power under the Environmental Planning and Assessment Act 1979 to issue a Fire Safety Order at 847 South Dowling Street, Waterloo at this time;

(E) note the contents of Attachment D and not exercise its power under the Environmental Planning and Assessment Act 1979 to issue a Fire Safety Order at 1-5 Sterling Circuit, Camperdown at this time; and

(F) note the contents of Attachment E and not exercise its power under the Environmental Planning and Assessment Act 1979 to issue a Fire Safety Order at 289-295 Sussex Street, Sydney at this time.

Attachments

Attachment A. Fire Safety Report Summary Sheet

Attachment B. Inspection Report - 262-264 Glebe Point Road, Glebe

Attachment C. Inspection Report - 847 South Dowling Street, Waterloo

Attachment D. Inspection Report - 1-5 Sterling Circuit, Camperdown

Attachment E. Inspection Report - 289-295 Sussex Street, Sydney

Background

1. The City receives inspection reports and recommendations from Fire and Rescue NSW in relation to inspections carried out on buildings located within the City's local government area.

2. Under the Environmental Planning and Assessment Act 1979, (the Act), Fire and Rescue NSW has the power to carry out inspections of buildings to determine if the building has adequate provision for fire safety and/or is compliant with legislation.

3. On average, the City receives approximately 50 such reports each year. They can be prompted by reports from the Police or others who have a concern relating to fire safety in a building.

4. The inspection was undertaken to ensure fire safety measures were in full operation and that building exits were clear and unimpeded.

5. When Fire and Rescue NSW carries out such an inspection, a report and any recommendations must be provided to the City.

6. Under the Act, Council is then required to table the report and make a determination as to whether it will exercise its power to issue a Fire Safety Order 1 or 2 in Schedule 5, Part 2 of the Act. Fire Safety Order 1 requires a person to do or stop doing certain specified things to improve fire safety; Fire Safety Order 2 requires a person to cease conducting an activity on premises where that activity constitutes, or is likely to constitute, a life-threatening hazard or a threat to public health or public safety.

7. Attached are the details of the reports received from Fire and Rescue NSW, including recommendations for further action. The properties have also been reviewed by City Officers.

8. Personal information has been redacted from the reports in accordance with the Privacy and Personal Information Protection Act 1998.

Relevant Legislation

9. Environmental Planning and Assessment Act 1979

GRAHAM JAHN AM

Director City Planning, Development and Transport

Andrew Thomas, Executive Manager Planning and Development

Attachment A

Fire Safety Report Summary Sheet

Fire Safety Report Summary Sheet
Cl.17, Schedule 5 of the Environmental Planning and Assessment Act 1979, reports to Council, S105001.002

Total number of properties tabled: 4

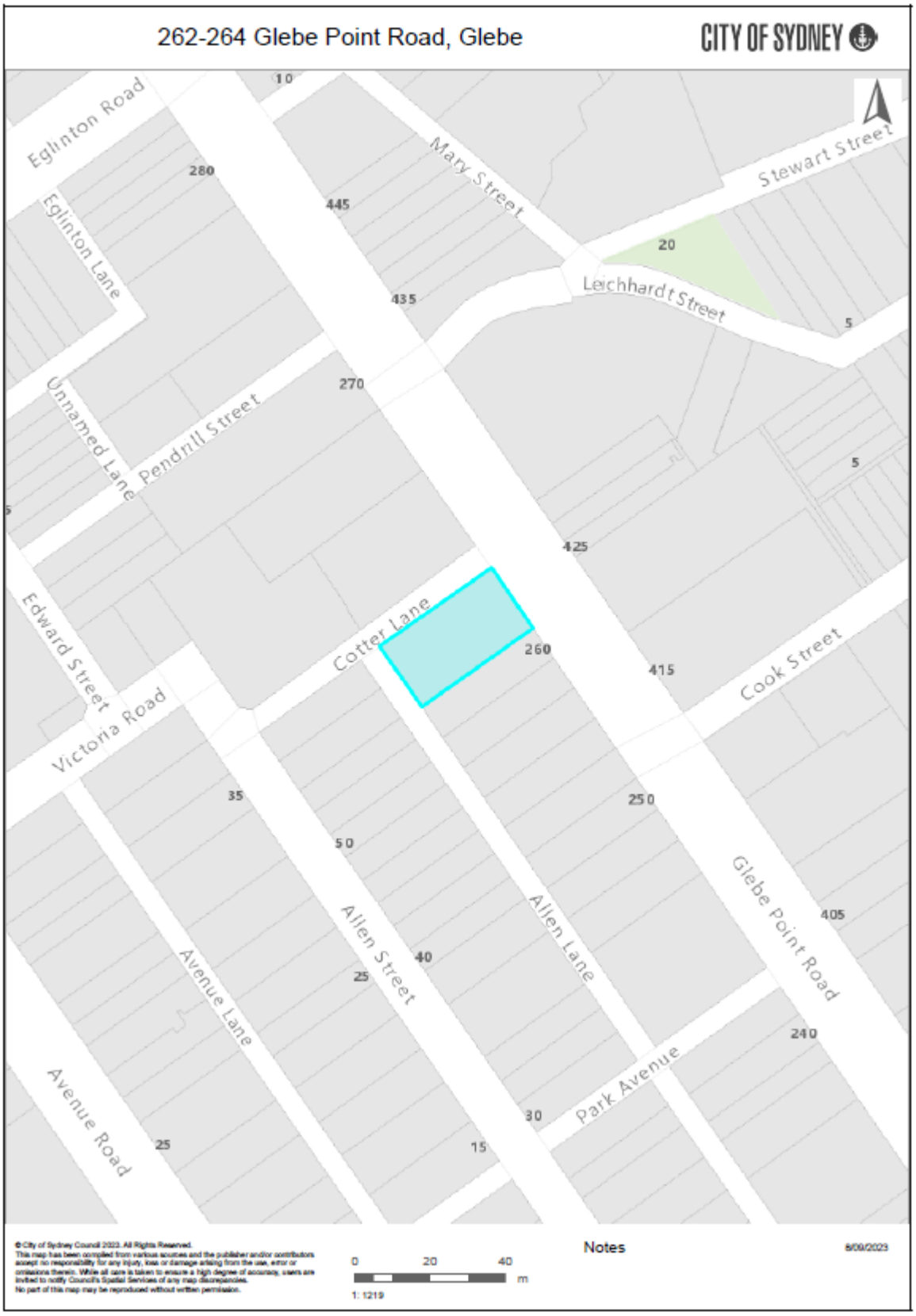
Report – October 2023

Summary table

Att. (A-E)	Premises Specifics	Actions/ Recommendation
A	Not applicable – Summary Sheet	Summary of clause 17, Schedule 5 matters tabled at Council meeting.
B	262-264 Glebe Point Road, Glebe	Premises inspected; owners have been issued with a Notice of Intention to give a Fire Safety Order; follow up compliance site inspections are to be undertaken to ensure fire safety works are satisfactorily completed.
C	847 South Dowling Street, Waterloo	Premises inspected; owners have been issued with corrective action correspondence; follow up compliance site inspections are to be undertaken to ensure fire safety works are satisfactorily completed.
D	1-5 Sterling Circuit, Camperdown	Premises inspected; owners have been issued with corrective action correspondence; follow up compliance site inspections are to be undertaken to ensure fire safety works are satisfactorily completed.
E	289-295 Sussex Street, Sydney	Premises inspected; matters raised have been rectified, no further action required.

Attachment B

Inspection Report –
262-264 Glebe Point Road, Glebe



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Council investigation officer Inspection and Recommendation Report
Clause 17(2), Part 8 of Schedule 5, of the Environmental Planning and Assessment Act 1979 (the Act)

File: CSM 3027671 **Officer: T McCann** **Date: 08 September 2023**

Premises: 262-264 Glebe Point Road, Glebe

Executive Summary:

Council received correspondence from the Commissioner of Fire and Rescue NSW (FRNSW) on 02 August 2023 in relation to the premises 262-264 Glebe Point Road, Glebe with respect to matters of fire safety. FRNSW inspected the premises after a member of the public raised concerns regarding a number of potential fire safety issues.

The premises (known as The Village Glebe) is located on Glebe Point Road and consists of a six storey building used for short-term tourist / visitor accommodation.

An inspection of the premises undertaken by a Council investigation officer on 29 August 2023, in the presence of the building operators revealed that the premises are deficient in fire safety measures and egress provisions in the following areas:

i. Lack of suitable fire resisting construction to prevent the spread of fire.
ii. Lack of safe and dignified emergency egress for occupants to evacuate the building in the event of a fire.
iii. Poor fire safety management systems (signs/notices/not displayed etc.) in place.

Council investigations have revealed that the premises is deficient in the provisions for fire safety and that a Fire Safety Order is to be issued under Schedule 5 of the Environmental Planning and Assessment Act, 1979 so as to ensure and promote adequate facilities for fire safety/fire safety awareness.

Observation of the external features of the building did not identify the existence of any combustible composite cladding on the façade of the building.

Chronology:

Date	Event
02/08/2023	FRNSW correspondence received regarding premises “The Village Glebe” 262-264 Glebe Point Road, Glebe. The correspondence was initiated by correspondence from a member of the public.
21/08/2023	A review of City records showed that the fire safety schedule for the premises contains nine (9) essential fire safety measures, including an automatic fire detection system, and other fire safety measures typical for a building of this classification all of which have been certified as operational and compliant until 11 March 2024 when due for recertification.
29/08/2023	An inspection of the subject premises was undertaken by a Council Officer on 29 August 2023 in the presence of the building operators. All common areas of buildings were inspected, and access was also provided to a number of dormitory rooms on each level. The dormitory rooms inspected appeared compliant in relation to fire safety. No further deficiencies other than those raised by FRNSW were noted during the inspection. Issues specifically raised by FRNSW and responses to those issues, are summarised in the following table.
11/09/2023	Notice of Intention to Give an Order (NOI) issued (reference 2023/457260-01).

FIRE AND RESCUE NSW REPORT:

References: BFS22/4950 (23946)

Fire and Rescue NSW conducted an inspection of the subject premises after becoming aware of cladding through the Government's Project Remediate.

Issues

The report from FRNSW detailed a number of issues, in particular noting:

Ref.	Issues identified	City response
1. Essential Fire Safety Measures		
1A	The building has a rise in storeys of 6 and is not provided with a sprinkler system, contrary to the current requirements of Clause E1D6 of the NCC	The applicable regulation at the time of construction was Ordinance 70 which did not require the installation of a sprinkler system. Notwithstanding this, it is considered that a sprinkler system is not required as the building is of solid construction i.e. masonry walls and concrete slabs that will maintain the structural stability enabling occupants to safely evacuate the building in the event of a fire emergency.
1B	A number of fire hose reels within the building did not have their nozzles interlocked, contrary to the requirements of Section 5 of AS 2441-2005	This is a maintenance item and has been addressed.
1C	The Automatic Fire Detection and Alarm System is not monitored by Alarm Signalling Equipment, contrary to the requirements of Clause 8 of Specification 20 of the NCC.	The Automatic Fire Detection and Alarm System is monitored by Alarm Signalling Equipment; however, the location of the equipment is not clearly identified and will be addressed in the proposed fire safety order.
1D	The Emergency Lighting fitting located outside room 207 is damaged.	This has been addressed in the Notice of Intention to Give an Order (NOI).
2. Access and Egress		
2A	Bags of rubbish were located on each landing of the fire-isolated stairs at the rear of the premises, contrary to the requirements of Section 109 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.	At the time of the inspection this was no evident, however, it has been communicated to the operators to remind the cleaning staff and occupants not to store bags of rubbish (for any length of time) on any of the landings of the fire stairs throughout the premises.
2B	The fire-isolated stairway located at the front of the premises does not provide egress directly to a road of open space, contrary to the requirements of Clause D2D12 of the NCC.	This has been addressed in the Notice of Intention to Give an Order (NOI).
2C	The occupiable outdoor area on the roof of the premises is served by 1 exit, which is not within 20 metres of all points of the floor, contrary to the requirements of Clauses G6D4 and D2D5 of the NCC.	This has been addressed in the Notice of Intention to Give an Order (NOI).
2D	The head height within the stair leading to the lower ground level is less than 2 metres, contrary to the requirements of Clause D2D7 of the NCC.	This has been addressed in the Notice of Intention to Give an Order (NOI).

Ref.	Issues identified	City response
2E	The external exit stairs at the rear of the premises are constructed such that the nosing of each tread is hard to distinguish.	This has been addressed in the Notice of Intention to Give an Order (NOI).
3. Compartmentation		
3A	The entry doorways of the sole-occupancy units and other rooms opening to the public corridors were not provided with fire-rated doorsets, contrary to the requirements of Clause C4D12 of the NCC.	This has been addressed in the Notice of Intention to Give an Order (NOI).
3B	The fire-rated doors to the fire-isolated stairway located at the front of the premises are held in the open position. It appears that these doors may be provided with electronic closers that activate on the detection of smoke, however, this could not be confirmed.	This has been addressed in the Notice of Intention to Give an Order (NOI).
3C	The public corridors on each floor are greater than 40 metres in length and are not provided with smoke separation, contrary to the requirements of Clause C3D15 of the NCC.	This has been addressed in the Notice of Intention to Give an Order (NOI).
3D	The fire-isolated stairway located at the rear of the premises contains air conditioning and other service penetrations, contrary to the requirements of C4D10 of the NCC.	This has been addressed in the Notice of Intention to Give an Order (NOI).
4. Generally		
4A	Other Identified Issues – The building appears to have been originally constructed with an open courtyard at its centre, connecting 3 storeys. At some stage, the courtyard has been covered with a large awning and consequently, concerns are raised that this courtyard area may act as an atrium. In this regard, compliance may not be achieved with the relevant requirements of Part G3 of the NCC or the relevant Performance Requirements.	The ‘open courtyard’/ lightwell is not substantially enclosed at the top, as it is open on all sides, the "roof" is a parapet which sits approximately two metres above the finishing level of the ‘open courtyard’/ lightwell and therefore, does not fit the definition of an atrium under the BCA and no further action is warranted by Council.

FRNSW is therefore of the opinion that there are inadequate provisions for fire safety within the building.

FRNSW Recommendations

FRNSW have made recommendations within their report. FRNSW have made fourteen (14) recommendations within their report. In general, FRNSW have requested that Council:

a. Inspect and address item no. 1 of this report.
b. Address any other deficiencies identified on “the premises”.

This matter is referred to Council as the appropriate regulatory authority. FRNSW therefore awaits Council’s advice regarding its determination in accordance with Schedule 5, Part 8, Section 17 (4) of the *Environmental Planning and Assessment Act 1979*.

COUNCIL INVESTIGATION OFFICER RECOMMENDATIONS:

Issue Order (NOI)	~~Issue emergency Order~~	~~Issue a compliance letter of instruction~~	~~Cited Matters rectified~~	~~Continue to undertake compliance action in response to issued Council correspondence~~	~~Continue with compliance actions under the current Council Order~~	~~Other (to specify)~~

As a result of site inspections undertaken by a Council investigation officer it was determined that concern for public safety requires the giving of a notice of intention (NOI) for a Fire Safety Order to be issued under Part 2 of Schedule 5 of the Environmental Planning and Assessment Act, 1979 without any further delay.

It is recommended that Council note the exercise of powers by Council's investigation officer, to issue a Notice of Intention to give a Fire Safety Order on 11 September 2023 in accordance with the above Act, prior to the resolution of Council.

The issue of a Notice of Intention to Give an Order (NOI) prior to the resolution of Council, will accelerate the compliance response from building owners in rectifying fire safety deficiencies and will assist to ensure that occupants are not exposed to unnecessary fire safety risks. That the Commissioner of FRNSW be advised of Council's actions and determination.

Referenced/Attached Documents:

1	A copy of the correspondence from FRNSW (2023/457260)
2	A copy of the Notice of Intention to Give an Order (NOI)

Trim Reference: 2023/457260-01 **CSM reference No#:** 3027671

File Ref. No: BFS22/4950 (23946)
TRIM Ref. No: D23/64876
Contact: [redacted]

2 August 2023

General Manager
City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Email: council@cityofsydney.nsw.gov.au

Attention: Manager Compliance/Fire Safety

Dear Sir / Madam

Re: INSPECTION REPORT
'THE VILLAGE'
262 GLEBE POINT ROAD GLEBE ("the premises")

Fire and Rescue NSW (FRNSW) received correspondence on 24 September 2022 concerning the adequacy of the provision for fire safety in connection with 'the premises'.

The correspondence stated that:

- *The building is a backpacker hostel of 3 floors with 20 rooms on each floor around a central corridor. There is a sign saying it's licenced for 150 people.*
- *There are fire doors to the (only) central staircase for guests to use.*
- *None of the fire doors have closers on them and doors are jammed permanently open.*

Pursuant to Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW inspected 'the premises' on 3 July 2023.

On behalf of the Commissioner of FRNSW, the comments in this report are provided under Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act.

The items listed in the comments of this report are based on the following limitations:

- A general overview of the building was obtained without using the development consent conditions or approved floor plans as a reference.

- Details of the Provisions for Fire Safety and Fire Fighting Equipment are limited to a visual inspection of the parts in the building accessed and the fire safety measures observed at the time.

- The items listed are limited to observations of the building accessed during the inspection and identify possible nonconformities with the National Construction Code 2022, Volume 1 Building Code of Australia (NCC) and provisions for fire safety. The items are not an exhaustive list of non-compliances. FRNSW acknowledges that the differences observed at the time may contradict development consent approval or relate to the building's age. Therefore, it's the Council's discretion as the appropriate regulatory authority to consider the most appropriate action.

COMMENTS

The following items were identified during the inspection:

1. Essential Fire Safety Measures

   1A. The building has a rise in storeys of 6 and is not provided with a sprinkler system, contrary to the requirements of Clause E1D6 of the NCC.

   1B. A number of fire hose reels within the building did not have their nozzles interlocked, contrary to the requirements of Section 5 of AS 2441-2005.

   1C. The Automatic Fire Detection and Alarm System is not monitored by Alarm Signalling Equipment, contrary to the requirements of Clause 8 of Specification 20 of the NCC.

   1D. The Emergency Lighting fitting located outside room 207 is damaged.

2. Access and Egress

   2A. Bags of rubbish were located on each landing of the fire-isolated stairs at the rear of the premises, contrary to the requirements of Section 109 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.

   2B. The fire-isolated stairway located at the front of the premises does not provide egress directly to a road of open space, contrary to the requirements of Clause D2D12 of the NCC.

   2C. The occupiable outdoor area on the roof of the premises is served by 1 exit, which is not within 20 metres of all points of the floor, contrary to the requirements of Clauses G6D4 and D2D5 of the NCC.

   2D. The head height within the stair leading to the lower ground level is less than 2 metres, contrary to the requirements of Clause D2D7 of the NCC.

2E. The external exit stairs at the rear of the premises are constructed such that the nosing of each tread is hard to distinguish.

3. Compartmentation

3A. The entry doorways of the sole-occupancy units and other rooms opening to the public corridors were not provided with fire-rated doorsets, contrary to the requirements of Clause C4D12 of the NCC.

3B. The fire-rated doors to the fire-isolated stairway located at the front of the premises are held in the open position. It appears that these doors may be provided with electronic closers that activate on the detection of smoke, however, this could not be confirmed.

3C. The public corridors on each floor are greater than 40 metres in length and are not provided with smoke separation, contrary to the requirements of Clause C3D15 of the NCC.

3D. The fire-isolated stairway located at the rear of the premises contains air conditioning and other service penetrations, contrary to the requirements of C4D10 of the NCC.

4. Generally

4A. Other Identified Issues – The building appears to have been originally constructed with an open courtyard at its centre, connecting 3 storeys. At some stage, the courtyard has been covered with a large awning and consequently, concerns are raised that this courtyard area may act as an atrium. In this regard, compliance may not be achieved with the relevant requirements of Part G3 of the NCC or the relevant Performance Requirements.

FRNSW believes that there are inadequate provisions for fire safety within the building.

RECOMMENDATIONS

FRNSW recommends that Council:

a. Review items 1 to 4 of this report and conduct an inspection.

b. Address any other deficiencies identified on “the premises”.

Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting. This matter is referred to Council as the appropriate regulatory authority. FRNSW awaits the Council’s advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the EP&A Act.

Please do not hesitate to contact [redacted] of FRNSW's Fire Safety Compliance Unit at FireSafety@fire.nsw.gov.au or call [redacted] if there are any questions or concerns about the above matters. Please refer to file reference BFS22/4950 (23946) regarding any correspondence concerning this matter.

Yours faithfully

[redacted]

[redacted]
Fire Safety Compliance Unit

Attachment C

Inspection Report
847 South Dowling Street, Waterloo


847 South Dowling Street Waterloo
CITY OF SYDNEY
REDFERN
Phillip Street
Bourke Lane
Bourke Street
Charles Moore Avenue (Private)
Bourke Street
Crescent Street
Danks Street
Crystal Park
Crystal Street
Crown Park
Broome Street
Corning Park
Moore Park
WATERLOO
Potter Street
Eastern Distributor
MOORE PARK
Gadigal Avenue
South Dowling Street
Lachlan Street
Dacey Avenue
Murray Street
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Notes
16/08/2023

Council investigation officer Inspection and Recommendation Report
Clause 17(2), Part 8 of Schedule 5, of the Environmental Planning and Assessment Act 1979 (the Act)

File: CSM 3034224 **Officer:** Andrew Porter **Date:** 16 August 2023

Premises: 847 South Dowling Street Waterloo

Executive Summary:
Council received correspondence from the Commissioner of Fire and Rescue NSW (FRNSW) in relation to the subject site on 10 August 2023 with respect to matters of fire safety.

The site known as 'Chevron Apartments' consists of 4 buildings. The buildings are a mix of 14 and 6 storeys used for residential apartments, and with one building containing a childcare centre. All buildings are constructed over a common basement carpark.

Inspections of the buildings undertaken by a Council investigation officer in the presence of the appointed Fire Services Contractor revealed that the premises have some minor fire safety maintenance matters to be attended to.

The buildings are otherwise equipped with numerous fire safety systems (both active and passive) that provide adequate provision for fire safety.

Council investigations have revealed that whilst there remains several minor fire safety "maintenance and management" works to attend to, the overall fire safety systems provided within the subject buildings are considered adequate in the circumstances.

It is considered that the above fire safety works are of a degree which can be addressed by routine preventative and corrective maintenance actions undertaken by the owner's fire service contractor(s) through written instruction from Council.

Observation of the external features of the building identified the existence of potential combustible composite cladding on the entry awnings of the building. The building owners are being instructed to provide an expert assessment of the cladding to determine the risk posed.

Chronology:

Date	Event
10/08/2023	FRNSW correspondence received regarding premises 'Chevron Apartments' 811, 847 South Dowling Street Waterloo, 2, 10 & 12 Broome Street, Waterloo. Premises are identified in Council records as 847 South Dowling Street Waterloo.
24/08/2023	An inspection of the subject premises was undertaken by a Council officer and revealed the following fire safety issues at the time of inspection: - Automatic fire detection and alarm block plan not provided in the fire control room. - Automatic fire suppression sprinkler system maximum allowable inlet pressure and plan of risk block plan not provided as required. - Fire hydrant system booster assembly access doors jamming, and block plan not provided as required. - Fire control room external access door not provided with identification signage. - Fire hose reel nozzles locked in non-compliant box. - Smoke doors separating public corridors that are greater than 40 m in length not provided with required smoke seals. - Fire isolated stairs not provided with handrails that are continuous between stair flights and no performance solution was found on record.

Date	Event
	- Final fire exit doors from fire isolated stairs missing required signage 'Fire safety door, do not obstruct' on the exterior of the door. The building owners have completed rectification of some fire safety issues raised by FRNSW in their correspondence, - Emergency warning and intercom system faults have been rectified and the system is now free from faults and isolations. - Fire hydrant system diesel pump set has been repaired and is no longer offline. - The missing smoke alarm outside of the access door to the pool area to be reinstated, the inspection revealed that this smoke alarm has been reinstated as required. - The annual fire safety statement is displayed within the building.
29/08/2023	Corrective action letter issued, requiring the building owners to address all relevant maintenance/non-compliant issues to ensure that fire safety measures are being maintained to the required standard of performance.

FIRE AND RESCUE NSW REPORT:

References: [BFS23/285 (25984); D/23/72792]

Fire and Rescue NSW conducted inspections of the subject site on 12 July 2023 and 3 August 2023 in response to correspondence received on 24 January 2023 concerning the adequacy of the provision of fire safety in connection with 'the premises'.

Issues The report from FRNSW detailed several issues:

Issue	City response
The automatic fire detection and alarm system: A. A permanent, water and fade resistant zone block plan with all relevant details is not provided adjacent to the fire indicator panel as required by Clause 3.10 of AS1670.1-2018.	The owners of the building were given written instructions on 29 August 2023 directing them to install the required block plan as by the required standard of performance.
Emergency warning and intercom system (EWIS): A. EWIS was displaying 'System fault' with multiple audio line and BGA/fire phone faults.	Inspection confirmed that the EWIS system was free of faults and isolations and maintained to the required standard of performance. No additional compliance action required to address this issue.
The sprinkler system: A. No signage located at the sprinkler booster assembly to indicate the maximum allowable inlet pressure contrary to the requirements of Clause 4.4.3 of AS2118.1-1999; and B. A plan of risk (block plan) was not installed at the sprinkler booster assembly, contrary to the requirements of Clause 8.3 of AS2118.1-1999.	Inspection confirmed that required signage is not installed as required. The owners of the building were given written instructions on 29 August 2023 directing them to install the required maximum allowable inlet pressure signage and plan of risk block plan as required by the standard of performance.
Fire hydrant system: A. The doors to the booster assembly enclosure were jammed and hard to open and a block plan of the fire hydrant system containing all the required details in accordance with Clause 7.11 of AS 2419.1-2005 was not provided at the booster assembly;	Inspection confirmed A. that the doors providing access to the hydrant booster assembly enclosure are jamming when opening and require maintenance. B. That a block plan containing the required information is not installed at the hydrant booster assembly, fire

Issue	City response
B. A block plan of the fire hydrant system containing all the required details in accordance with Clause 7.11 of AS 2419.1-2005 was not provided in the fire hydrant pumproom; and C. The pump controller for diesel hydrant pump set, was displaying a warning label stating, “Warning pump has failed, offline dated 3/07/2023”.	control room and hydrant pump room as required. C. The pump controller for the diesel hydrant pump set was operational and no longer offline. The owners of the building were given written instructions on 29 August 2023 directing them to address the issues identified in A, and B.
Fire control room: A. Access door does not have indication signage contrary to clause S19C12 of the National Construction Code ‘NCC’.	Inspection confirmed that the identification signage is not installed on the external door providing access to the fire control room as required. The owners of the building were given written instructions on 29 August 2023 directing them to install the required signage.
Fire hose reels: A. Fire hose reels within the basement carpark are secured within a keyed nozzle lock box and not positioned in the interlocking device contrary to clause 10.4.4 and clause 11 of AS2441-2005.	Inspection confirmed that the hose reel nozzles were secured in a lock box within the car park levels. The owners of the building were given written instructions on 29 August 2023 directing them to return the fire hose reel nozzles within the car park levels to the interlocking device as required by the relevant standard of performance or to install hose reels in a secure cabinet that is permissible by the standard of performance.
Smoke doors: A. Smoke doors provided in the public corridors of building c were found to be missing smoke seals, contrary to clause S12C4 of the NCC.	Inspection confirmed that the smoke doors are not provided with smoke seals is required by the NCC. The owners of the building were given written instructions on 29 August 2023 directing them to install the smoke seals required by the NCC.
Annual fire safety statement and fire safety schedule: A. The building annual fire safety statement and fire safety schedule was not prominently displayed within the building in accordance with section 89 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.	Inspection undertaken confirmed that the annual fire safety statement was displayed within the main entrance lobby.
Fire isolated stairs: A. Handrails within the fire isolated stairs throughout the building are not continuous between stair flight landings; and B. The final exit doors from the fire isolated stairs of Buildings B & C have not been provided with external signage to alert persons to the operation of the exit door contrary to clause D3D28 of the NCC.	Inspection undertaken A. Identified that handrails within all fire isolated stairs are not continuous between stair flight landings. B. Identified that the final fire exit doors were not provided with the signage required by the NCC on the exterior of the door. The owners of the building were given written instructions on 29 August 2023 directing them to,

Issue	City response
	A. Modify the handrail to be continuous between stair flights or provide justification (demonstration of NCC performance requirement D1P2 being met) of the non-compliance provided to Council. B. Install the required signage to the final fire exit doors.

FRNSW is therefore of the opinion that there are inadequate provisions for fire safety within the building.

FRNSW Recommendations

FRNSW have made number of recommendations within their report. In general, FRNSW have requested that Council;

1. Inspect the subject premises and review and suitably address item no.1 & 2 of their report.
2. Give consideration to and address any other deficiencies identified on the premises.
3. Advise them in writing of its determination in relation to this matter in accordance with the provisions of clause 17(4) of Schedule 5 of the Environmental Planning and Assessment Act 1979.

COUNCIL INVESTIGATION OFFICER RECOMMENDATIONS:

~~Issue Order (NOI)~~	~~Issue emergency Order~~	~~Issue a compliance letter of instruction~~	~~Cited Matters rectified~~	Continue to undertake compliance action in response to issued Council correspondence	~~Continue with compliance actions under the current Council Order~~	~~Other (to specify)~~

As a result of site inspections undertaken by a Council investigation officer the owners of the building were issued with written instructions to rectify the identified fire safety deficiencies noted by FRNSW and the Council investigation officer.

The written instructions direct the owners of the premises to carry out remedial actions to the existing fire systems to cause compliance with the required standards of performance.

Follow-up compliance inspections will be undertaken by the Council investigation officer to ensure the identified fire safety matters are suitably addressed and compliance with the terms of Councils correspondence and the recommendations of FRNSW are satisfied.

It is recommended that Council not exercise its powers to give a fire safety order at this time.

That the Commissioner of FRNSW be advised of Council's actions and determination.

Referenced/Attached Documents:

2023/529888-01	FRNSW S9.32 report dated 10 August 2023.
2023/529888-02	Copy of written instructions to building owners dated 29 August 2023.

Trim Reference: 2023/529888 **CSM reference No#:** 3034224

File Ref. No: BFS23/285 (25984)
TRIM Ref. No: D23/72793
Contact: [redacted]

10 August 2023

General Manager
City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Email: council@cityofsydney.nsw.gov.au

Attention: Manager Compliance/Fire Safety

Dear Sir/Madam,

Re: INSPECTION REPORT
'CHEVRON APARTMENTS'
811 & 847 SOUTH DOWLING STREET, WATERLOO ("the premises")
[INCLUDES: 2, 10 & 12 BROOME STREET, WATERLOO]

Fire and Rescue NSW (FRNSW) received correspondence on 24 January 2023 concerning the adequacy of the provision for fire safety in connection with 'the premises'.

The correspondence stated that:

- *The building is a Class 2 residential high rise building. On 23.01.2023 at approximately 11:00 PM, general fire alarm activated and FRNSW personnel attended the building shortly after.*

  The issue I am concern about was the emergency lights within the fire stairs of one of the Meriton buildings (847 South Dowling St). There were no functional lights within the stairs. Each landing was provided with an emergency light but none of them were functional during evacuation and we had to evacuate in the dark. This prolonged the travel time and subsequently the required safe escape time greatly as there were occupants worried to trip and had to walk extremely slowly within the stairs.

Pursuant to Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW inspected 'the premises' on 12 July 2023.

On behalf of the Commissioner of FRNSW, the comments in this report are provided under Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act.

The items listed in the comments of this report are based on the following limitations:

- A general overview of the building was obtained without using the development consent conditions or approved floor plans as a reference.
- Details of the Provisions for Fire Safety and Fire Fighting Equipment are limited to a visual inspection of the parts in the building accessed and the fire safety measures observed at the time.

COMMENTS

Please be advised that the items in this report are limited to observations of the building accessed during the inspection and identify possible nonconformities with the National Construction Code 2022, Volume 1 Building Code of Australia (NCC) and provisions for fire safety. The items are not an exhaustive list of non-compliances. FRNSW acknowledges that the differences observed at the time may contradict development consent approval or relate to the building's age. Therefore, it's the Council's discretion as the appropriate regulatory authority to consider the most appropriate action.

1. Essential Fire Safety Measures

   1A. The Automatic Fire Detection and Alarm System:

      A. Zone Block Plan - a permanent, water and fade resistant zone block plan, depicting all the relevant information of the installation, was not securely mounted adjacent to the Fire Brigade Panel (FBP), contrary to the requirements of Clause 3.10 of AS 1670.1-2018.

   1B. Emergency Warning and Intercom System (EWIS):

      A. The evacuation system control panel was displaying a 'System Fault', with multiple audio line and BGA/fire phone faults.

         Authorised Officers of FRNSW informed the Operations Manager of these matters at the time of the inspection. The Operation Manager advised FRNSW that the matters were to be attended to as a matter of urgency.

         On 3 August 2023, Authorised Officers of FRNSW undertook a reinspection of 'the premises' and can confirm item 1B had been rectified.

         Notwithstanding this, it would be at Council's discretion as the appropriate regulatory authority, to determine whether further investigation is required in this instance.

1C. Fire Hydrant System:

A. The hydrant booster assembly:

i. The doors to the booster enclosure had not been maintained. In this regard, when attempting to open the doors, the door leaves were jamming and could not be freely opened.

ii. A permanent water and fade resistant block plan of the fire hydrant system had not been provided at the booster assembly, contrary to the requirements of Clause 7.11 of AS 2419.1-2005. In this regard, the block plan on display was a schematic plan only and did not include a floor plan layout of the building and the hydrant system, contrary to the requirements of Clause 7.11 of AS 2419.1-2005. Furthermore, the block plan on display failed to depict all the relevant information pertaining to the installation stipulated in parts (a), (b) (i) to (xiii) and (c) (i) to (iii) of Clause 7.11 of AS 2419.1-2005.

B. The pumproom:

i. A block plan of the fire hydrant system had not been provided within the pumproom, contrary to the requirements of Clause 7.11 of AS 2419.1-2005.

C. The hydrant pumpset:

i. The pump controller for diesel hydrant pumpset, was displaying a warning label stating "Warning – Pump has failed. Offline", indicating the pump was not operational. The label was dated 3/07/2023.

Authorised Officers of FRNSW informed the Operations Manager of these matters at the time of the inspection. The Operation Manager advised FRNSW that the matters were to be attended to as a matter of urgency.

On 3 August 2023, Authorised Officers of FRNSW undertook a reinspection of 'the premises' and can confirm item 1C.C had been rectified.

Notwithstanding this, it would be at Council's discretion as the appropriate regulatory authority, to determine whether further investigation is required in this instance.

1D. Automatic Fire Suppression System

A. The sprinkler booster assembly:

i. A sign marked with the maximum allowable inlet pressure at the connection was not provided at the booster assembly, contrary to the requirements of Clause 4.4.3 of AS 2118.1–1999.

ii. A plan of risk (block plan) of the sprinkler system was not provided at the booster assembly, contrary to the requirements of Clause 8.3 of AS 2118.1-1999.

1E. Fire Control Room

A. Signage to the external door providing direct access to the fire control room (on South Dowling Street) has not been provided, contrary to Clause S19C12 of the NCC.

1F. Fire Hose Reels (FHR's)

A. The nozzles to the fire hose reels located in the basement carpark are secured within a keyed nozzle lock box and not positioned in the interlocking device, contrary to Clause 10.4.4 and Clause 11 of AS 2441-2005.

1G. Smoke Doors

A. Smoke doors provided in the public corridors of building C were found to be missing smoke seals, contrary to Clause S12C4 of the NCC.

1H. Annual Fire Safety Statement (AFSS) and Fire Safety Schedule (FSS) – A copy of the current AFSS and FSS was not prominently displayed within the building in accordance with Section 89 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 (EPAR 2021).

2. Access and Egress

2A. Handrails – the handrails within the fire isolated stairways in Building C were not continuous between stair flight landings, contrary to the requirements of Clause D3D22 of the NCC.

2B. Signs on doors - The exit doors leading from the fire isolated stairways of Buildings B and C have not been provided with external signage to alert persons to the operation of the exit door, contrary to Clause D3D28 of the NCC.

FRNSW believes that there are inadequate provisions for fire safety within the building.

RECOMMENDATIONS

FRNSW recommends that Council:

a. Review items 1 to 2 of this report and conduct an inspection.

b. Address any other deficiencies identified on "the premises".

Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting. This matter is referred to Council as the appropriate regulatory authority. FRNSW awaits the Council's advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the EP&A Act.

Please do not hesitate to contact [redacted] of FRNSW's Fire Safety Compliance Unit at FireSafety@fire.nsw.gov.au or call [redacted] if there are any questions or concerns about the above matters. Please refer to file reference BFS23/285 (25984) regarding any correspondence concerning this matter.

Yours faithfully

[redacted]

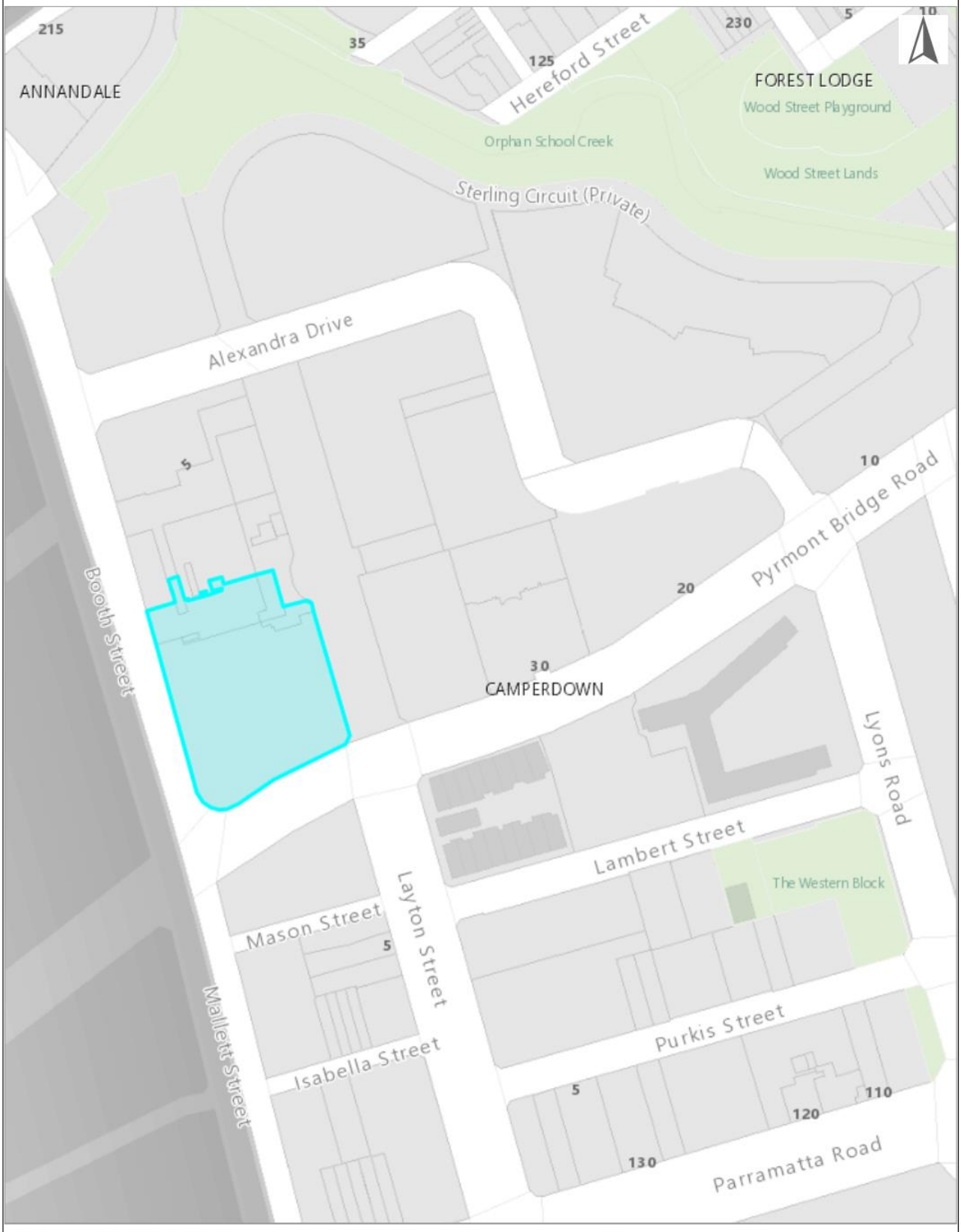
Fire Safety Compliance Unit

Attachment D

Inspection Report
1 – 5 Sterling Circuit, Camperdown

1 - 5 Sterling Circuit, Camperdown

CITY OF SYDNEY



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21/08/2023

Council investigation officer Inspection and Recommendation Report
Clause 17(2), Part 8 of Schedule 5, of the Environmental Planning and Assessment Act 1979 (the Act)

File: 3035905 **Officer: A Chaudhary** **Date: 29 August 2023**

Premises: 1 – 5 Sterling Circuit, Camperdown NSW 2050

Executive Summary:

Council received correspondence from the Commissioner of Fire and Rescue NSW (FRNSW) in relation to the subject premises on 11 August 2023 with respect to matters of fire safety.

Fire and Rescue NSW (FRNSW) received correspondence on 13 June 2023 concerning the adequacy of the provision for fire safety in connection with 'the premises.

The premises consists of three residential towers known as Building A, B and C containing basement carparking and used for residential and commercial tenancies.

The premises is fitted with external combustible cladding. The City's cladding compliance team have issued a Fire Safety Order requiring cladding removal and replacement. Appropriate precautionary interim fire safety measures are currently in place to assist in safeguarding occupants whilst cladding removal and replacement works are scheduled. The interim measures include raising site cladding risk awareness with all building occupants; the removal of potential fire hazards/processes from critical potential fire start areas; the introduction of site management procedure plans and temporary rules to carefully manage hot/building maintenance works and the implementation of any expert recommendations.

An inspection of the premises undertaken by a Council investigation officer, in the presence of the building manager, revealed that there were no significant fire safety issues occurring within the building.

The premises are equipped with numerous fire safety systems (both active and passive) that would provide adequate provision for fire safety for occupants in the event of a fire. The annual fire safety certification is current and compliant and is on display within the building in accordance with the requirements of the Environmental Planning and Assessment Regulation (Development Certification and Fire Safety) 2021.

City investigations have revealed that whilst there remains several minor fire safety "maintenance and management" works to attend to, the overall fire safety systems provided within the subject premises are considered adequate in the circumstances.

It is considered that the above fire safety works are of a degree which can be addressed by routine preventative and corrective maintenance actions undertaken by the owner's fire service contractor(s) through written instruction from the City.

Chronology:

Date	Event
11/08/2023	FRNSW correspondence received regarding premises 1 – 5 Sterling Circuit, Camperdown NSW 2025. The correspondence was initiated by fire alarm and a FRNSW inspection on 27 July 2023 (reference 2023/487230).
24/08/2023	A review of City records show the fire safety schedule for the premises contains twenty-four (24) fire safety measures, including an automatic fire detection and alarm system, fire hydrant system, automatic fire suppression system (sprinklers), fire engineering reports and other fire safety measures typical for a building of this classification, due for recertification on 21 December 2023.
29/08/2023	An inspection of the subject premises was undertaken by a Council officer with the building manager present on 29 August 2023, when the following items were noted: 1. All fire doorsets have been tagged in accordance with AS/NZS 1905.1 – 2005; 2. The hydrant booster assembly was located at the rear of the building fronting Booth Street contrary to the requirements of Clause 7.3.1 of AS 2419.1-2021; 3. At the time of the inspection, the paths of travel leading to the fire exits, along with the fire exits and fire exit doors were all clear and unobstructed; 4. The sliding gate in the basement carpark level had been maintained, the sliding gate satisfied to open to the fully opened position when tested; 5. The glass door to enter the lift area in the carpark had a door open button located adjacent to the subject door, the glass door satisfied to open to the fully opened position when tested. 6. At the time of inspection, Alarm Signalling Equipment, the primary link' LED did not show any faults or other issues and the system appeared normal in operation; 7. At the time of inspection, the building Sound System and Intercom System for Emergency (SSISE) did not display "charger fault" and appeared normal operation; 8. The building Automatic Fire Detection and Alarm System were not displaying any system faults or other issues observed and the system appeared normal operation; 9. The mechanism to the door of the fire hydrant booster cabinet was damaged, and the door was not able to be held open, contrary to the requirements of Clause 11.2.2 of AS 2419.1-2021; 10. The fire safety statement is prominently displayed at the premises and is current; *11.* Other fire safety measures in the building appeared adequately maintained.
1/09/2023	Fire Safety instructions issued (reference 2023/515347-01)

FIRE AND RESCUE NSW REPORT:

References: BFS23/3209; 2023/487230

Fire and Rescue NSW conducted an inspection of the subject premises after receiving a fire alarm in the building.

Issues

The report from FRNSW detailed a number of issues, in particular noting:

Issue	City response
1A. Fire Hydrant System A. The mechanism to the door of the fire hydrant booster cabinet was damaged, and the door was not able to be held open, contrary to the requirements of Clause 11.2.2 of AS 2419.1-2021.	The building owners were asked to fix the door mechanism in the corrective action letter.
B. The fire hydrant and sprinkler boosters are located at the rear of the building fronting Booth Street, contrary to the requirements of Clause 7.3.1 of AS 2419.1-2021.	The building owners were asked to provide signage to indicate the location of the fire hydrant and sprinkler boosters in the corrective action letter.

FRNSW believes that there are inadequate provisions for fire safety within the building.

FRNSW Recommendations

FRNSW have made (3) recommendations within their report. In general, FRNSW have requested that Council:

a. Review item 1A A of this report and conduct an inspection.

b. Ensure signage is provided in a prominent location readily visible to fire-fighters attending the Sterling Street side of the building stating: “FIRE HYDRANT / SPRINKLER BOOSTER LOCATED AT REAR OF BUILDING ON BOOTH STREET.” in uppercase letters of not less than 25 mm high in a colour contrasting with that of the background.

c. Address any other deficiencies identified on “the premises”.

This matter is referred to Council as the appropriate regulatory authority. FRNSW awaits the Council’s advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the Environmental Planning and Assessment Act 1979.

COUNCIL INVESTIGATION OFFICER RECOMMENDATIONS

~~Issue Order (NOI)~~	~~Issue emergency Order~~	~~Issue a compliance letter of instruction~~	~~Cited Matters rectified~~	Continue to undertake compliance action in response to issued Council correspondence	~~Continue with compliance actions under the current Council Order~~	~~Other (to specify)~~

As a result of the above site inspection undertaken by a Council investigation officer it was determined to issue written fire safety compliance instructions to rectify the identified fire safety deficiencies noted by Council and FRNSW.

The instruction has requested that building management engage a fire services contractor to carry out remedial works to existing fire systems to ensure compliance with required standards of performance.

Follow-up compliance inspections are currently being undertaken and will continue to be undertaken by the City to ensure already identified fire safety matters are suitably addressed and that compliance with the terms of Council’s correspondence and the recommendations of FRNSW occur.

It is recommended that Council not exercise its powers to give a fire safety order at this time.

Referenced/Attached Documents:

2023/487230	Fire & Rescue NSW letter dated 11 August 2023

Trim Reference: 2023/515347 **CSM reference No#: 3035905**

File Ref. No: BFS23/3209 (28831)
TRIM Ref. No: D23/075955
Contact: [redacted]

11 August 2023

General Manager
City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Email: council@cityofsydney.nsw.gov.au

Attention: Manager Compliance/Fire Safety

Dear Sir / Madam

Re: INSPECTION REPORT
TRIO APARTMENTS
1-5 STERLING CIRCUIT, CAMPERDOWN ("the premises")

Fire and Rescue NSW (FRNSW) received correspondence on 13 June 2023 concerning the adequacy of the provision for fire safety in connection with 'the premises'.

The correspondence stated, in part, that:

> *Whilst attempting to locate the Sprinkler room - sprinkler head off, no signage, requiring some 10 minutes of random wandering to locate the room - In a large sprawling multiple building complex, I entered a section of garage carpark with an open sliding gate. After I entered, the door slid shut preventing me from returning. The adjacent glass door to enter the lift area and evacuate was locked, the sliding gate was locked and I was stuck. My firefighters on the other side could not open the gage for me without a FOB.*

Pursuant to Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW inspected 'the premises' on 27 July 2023.

On behalf of the Commissioner of FRNSW, the comments in this report are provided under Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act.

The items listed in the comments of this report are based on the following limitations:

- A general overview of the building was obtained without using the development consent conditions or approved floor plans as a reference.
- Details of the Provisions for Fire Safety and Fire Fighting Equipment are limited to a visual inspection of the parts in the building accessed and the fire safety measures observed at the time.

COMMENTS

The following items were identified during the inspection:

1. Essential Fire Safety Measures

   1A. Fire Hydrant System

      A. The mechanism to the door of the fire hydrant booster cabinet was damaged, and the door was not able to be held open, contrary to the requirements of Clause 11.2.2 of AS 2419.1-2021.

      B. The fire hydrant and sprinkler boosters are located at the rear of the building fronting Booth Street, contrary to the requirements of Clause 7.3.1 of AS 2419.1-2021.

FRNSW believes that there are inadequate provisions for fire safety within the building.

RECOMMENDATIONS

FRNSW recommends that Council:

a. Review item 1A A of this report and conduct an inspection.

b. Ensure signage is provided in a prominent location readily visible to fire-fighters attending the Sterling Street side of the building stating: “FIRE HYDRANT / SPRINKLER BOOSTER LOCATED AT REAR OF BUILDING ON BOOTH STREET.” in uppercase letters of not less than 25 mm high in a colour contrasting with that of the background.

c. Address any other deficiencies identified on “the premises”.

Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting. This matter is referred to Council as the appropriate regulatory authority. FRNSW awaits the Council’s advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the EP&A Act.

Please do not hesitate to contact [redacted] of FRNSW's Fire Safety Compliance Unit at FireSafety@fire.nsw.gov.au or call [redacted] if there are any questions or concerns about the above matters. Please refer to file reference BFS23/3209 (28831) regarding any correspondence concerning this matter.

Yours faithfully

[redacted]

[redacted]
Fire Safety Compliance Unit

Attachment E

Inspection Report
289–295 Sussex Street, Sydney


289-295 Sussex Street, Sydney
CITY OF SYDNEY
Western Distributor
Western Distributor
265
Sands Street
Day Street
150
Druitt Lane
60
Western Distributor
Bathurst Street
Cross City Tunnel
Harbour Street
5
Sussex Street
Kent Street
James Lane
Darling Harbour
James Street
Tumbalong Park
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6/09/2023

Council investigation officer Inspection and Recommendation Report
Clause 17(2), Part 8 of Schedule 5, of the Environmental Planning and Assessment Act 1979 (the Act)

File: CSM 3037588 **Officer:** M Privett **Date:** 7 September 2023

Premises: 289–295 Sussex Street, Sydney - 'Millenium Towers'

Executive Summary:

Council received correspondence from the Commissioner of Fire and Rescue NSW (FRNSW) in relation to the subject premises on 21 August 2023 with respect to matters of fire safety.

The premises consists of a strata titled twenty one storey building known as Millenium Towers which includes a seven storey basement carpark, ground floor shops, twenty levels of residential units above and has been subject to several fire safety Orders in the past.

An inspection of the premises undertaken by a Council investigation officer in the presence of the building manager revealed that there were no significant fire safety issues occurring within the building.

The premises are equipped with numerous fire safety systems (both active and passive) that would provide adequate provision for fire safety for occupants in the event of a fire. The annual fire safety certification is on display within the building in accordance with the requirements of the *Environmental Planning and Assessment (Development Certification and Fire Safety Regulation 2021)* (the Reg).

Council investigations have revealed that whilst there remains several minor fire safety "maintenance and management" works being attended to by the property owner, the overall fire safety systems provided within the subject premises are considered adequate in the circumstances.

It is considered that the above fire safety works are of a degree which can be addressed by routine preventative and corrective maintenance actions undertaken by the owner's fire service contractor(s).

Observation of the external features of the building did not identify the existence of any combustible composite cladding on the façade of the building.

Council investigations have revealed that the overall fire safety systems provided within the building are considered adequate.

Chronology:

Date	Event
21/08/2023	FRNSW correspondence received by Council, regarding premises 'Millenium Towers' 289 – 295 Sussex Street, Sydney [289 – 295 Sussex Street, Sydney]
23/08/2023	A desktop review revealed the following: • A historical Fire Safety Order dated 20 September 2004 [S023289-01] was completed on 20 April 2006 • A historical Fire Safety Order dated 29 January 2014 [S107287] was completed on 3 October 2014, which upgraded/certified a number of fire safety measures including but not limited to egress systems within the building

Date	Event
	• Council officer verified that the fire egress / fire escape provisions in the building as mentioned in FRNSW correspondence were the same issues as they previously raised to Council in their 'Report of Inspection' dated 26 April 2013 (Ref: 2013/135107) and Council's investigation at the time resulted in a Fire Safety Order dated 29 January 2014 being issued which was completed on 3 October 2014
29/08/2023	An inspection of the subject premises was undertaken by a Council officer in the presence of the building manager where the following items were noted: • annual fire safety statement (AFSS), fire safety schedule and evacuation plan present • fire safety systems appeared generally well maintained throughout the building with all fire panels clear of faults & isolations • hydrant block plans were located at the Hydrant Booster cupboard and also inside the Fire Control Room (FCR) • hydrant valves throughout premises fitted with threaded connections which were found to be compliant with the original installation standard • fire hose reel cupboards at lobby levels did not contain non-firefighting items • rooftop sprinkler tank did not have a device fitted to indicate depth of water within tank, but the Officer noted that it was not required to be provided under the sprinkler systems installation standard • the plastic covers fitted to sprinkler heads in rooftop pump room as mentioned in FRNSW correspondence had been removed • door hardware to exit doors within fire isolated stairs were verified as spherical knobs and compliant with the applicable version of the National Construction Code (NCC) • handrails within fire isolated stairs were original, continuous along the stair flights and compliant with the applicable building regulation • The Officer noted that the same fire egress provisions in the building included such measures as break glass activation release buttons, fail safe automatic door release mechanisms, and that the provisions appeared compliant with the applicable NCC and were being certified by the owners accredited practitioner (fire safety) as part of the annual fire safety statement submissions to Council

FIRE AND RESCUE NSW REPORT:

References: [BFS22/1168, D2023/075225]

Fire and Rescue NSW conducted an inspection of the subject premises on 28 May 2023 after receiving an enquiry about the adequacy of the provision for fire safety at the premises.

Issues

The report from FRNSW detailed a number of issues, in particular noting:

Issue	City response
Hydrant Block Plan on display did not include a floor plan layout of the building	No further action required. Council inspection verified that the original hydrant block plan was on display at the booster assembly which is adequate and compliant with the installation standard
Existing fire hydrant valves are not provided with storz coupling fittings required in the latest fire hydrant standard	No further action required. Council inspection revealed that the existing hydrant valves are adequate and compliant with the original standard of installation

Issue	City response
Hydrant pressure gauges did not appear to be installed at the hydraulically most disadvantaged fire hydrant	No further action required. Council inspection revealed that pressure gauges were in fact installed at the hydraulically most disadvantaged fire hydrants within the building.
Non-firefighting equipment was stored within fire hose reel cabinet in the lobby	No further action required. Councils' inspection found that the non-fire equipment had been removed from the fire hose reel cabinet
The rooftop sprinkler water tank did not appear to be fitted with a device to indicate the depth of water	No further action required. Council inspection verified that the roof top sprinkler tank did not have a device to indicate the depth of water, but is not required to have the device under the applicable installation standard
Plastic protectors fitted to several sprinkler heads in the rooftop pump room contrary to the sprinkler system standard	No further action required. Council's inspection found that the plastic protectors had been removed from the sprinkler heads in the rooftop pump room
Handrails in the fire-isolated stairs had obstructions and were not continuous between stair landings in accordance with NCC	No further action required. Council's inspection did not reveal any obstructions to the handrails in the fire-isolated stairs and verified that the handrails are compliant with the original building code applicable at the time of installation
Spherical door handles within the fire stairs not complying with the NCC	No further action required. Council officer verified that existing spherical door handles were provided to fire doors within the fire stairs. The officer noted that the fire safety measure 'automatic fail-safe devices' were installed throughout the fire stairs and are listed on the buildings fire safety schedule + certified on the annual fire safety statement (AFSS) to meet the required minimum standard of performance. Furthermore, the inspection confirmed that spherical door handles were permitted (instead of lever handles) under the NCC given the presence of 'automatic fail-safe devices'
Data cabling penetrating building elements within the FCR do not appear to be adequately fire stopped	No further action required. Council's inspection verified that the FCR was compliant with regard to fire stopping

FRNSW Recommendations

FRNSW have made two recommendations within their report. In general FRNSW have requested that Council:

1. Inspect and address any other deficiencies identified on 'the premises' and require item nos. 1 to 3 of their report to be reviewed;
2. Advise them in writing of its determination in relation to this matter in accordance with the provisions of clause 17(4) of Schedule 5 of the Environmental Planning and Assessment Act 1979

COUNCIL INVESTIGATION OFFICER RECOMMENDATIONS:

~~Issue Order (NOI)~~	~~Issue emergency Order~~	~~Issue a compliance letter of instruction~~	Cited Matters rectified	~~Continue to undertake compliance action in response to issued Council correspondence~~	~~Continue with compliance actions under the current Council Order~~	~~Other (to specify)~~

Inspections undertaken by a Council investigation officer in the presence of the building manager verified that the deficiencies identified by FRNSW on their inspection had been rectified and that essential fire safety measures (including exit doors) within the building are being maintained.

It is recommended Council not exercise its powers to give a fire safety order at this time.

That the Commissioner of FRNSW be advised of Council's actions and determination.

Referenced/Attached Documents:

2023/496131-01	FRNSW S9.32 report dated 21 August 2023

Trim Reference: 2023/496131 **CSM reference No#:** 3037588

File Ref. No: BFS22/1168
TRIM Ref. No: D2023/075225
Contact: [redacted]

21 August 2023

General Manager
City of Sydney
GPO Box 1591
SYDNEY NSW 2001

Email: council@cityofsydney.nsw.gov.au

Attention: Manager Compliance/Fire Safety

Dear Sir / Madam

Re: INSPECTION REPORT
MILLENIUM TOWERS
289-295 SUSSEX STREET SYDNEY ("the premises")

Fire and Rescue NSW (FRNSW) received correspondence on 18 March 2022 concerning the adequacy of the provision for fire safety in connection with 'the premises'. The correspondence stated that:

> *While attending a call to "Smell of Smoke and Alarm Ringing" I was concerned by the unusual Fire Escape access. 2 Fire doors in corridors containing units were locked. Egress could only be made by using a key or by accessing the Fire Hose Reel cupboard about 4 meters away and pushing a button inside. Signage on the Fire Door was unclear (see Attached photos). The majority of occupants in this building are short term rentals and foreign students.*

Pursuant to Section 9.32(1) of the *Environmental Planning and Assessment Act 1979* (EP&A Act), Authorised Fire Officers from the Fire Safety Compliance Unit of FRNSW inspected 'the premises' on 28 May 2023.

On behalf of the Commissioner of FRNSW, the comments in this report are provided under Section 9.32(4) and Schedule 5, Part 8, Section 17(1) of the EP&A Act.

The items listed in the comments of this report are based on the following limitations:

- A general overview of the building was obtained without using the development consent conditions or approved floor plans as a reference.

- Details of the Provisions for Fire Safety and Fire Fighting Equipment are limited to a visual inspection of the parts in the building accessed and the fire safety measures observed at the time.

COMMENTS

This report is limited to observations and sections of the building accessed during the inspection. As such, this report lists potential deviations from the National Construction Code 2022 Building Code of Australia – Volume One (NCC). Please be advised that whilst the report is not an exhaustive list of non-compliances, the items listed may relate to the building's age or contradict development consent approval. In this regard, it is at the council's discretion as the appropriate regulatory authority to consider the most appropriate action and determine whether an investigation is required.

1. Essential Fire Safety Measures

1A. Fire Hydrant System:

i. Hydrant Block Plan – A complete water and fade-resistant block plan of the fire hydrant system had not been provided at the booster assembly, contrary to the requirements of Clause 7.11 of AS 2419.1-2005. In that regard, the block plan on display was an isometric drawing only and did not include a floor plan layout of the building or all the information prescribed by Clause 7.11(b) & (c).

ii. Storz - Storz couplings, compatible with FRNSW firefighting hose connections, have not been provided to all fire hydrant valves throughout the premises, in accordance with the requirements of Clause 7.1 and 8.5.11.1 of AS2419.1 and 'FRNSW Fire safety guideline, Technical information – FRNSW Compatible hose connections – Document no. D15/45534 – Version 09 – Issued 10 January 2019'.

iii. Pressure Gauge - A pressure gauge did not appear to be installed at the hydraulically most disadvantaged fire hydrant, contrary to Clause 9.3.2 of AS 2419.1–2005 requirements.

1B. Fire Hose Reel - Non-firefighting equipment was stored within the fire hose reel cabinet in the lobby, contrary to Clause 10.4.4 of AS2441–2005.

1C. Sprinkler Tank - The rooftop sprinkler water tank did not appear to be fitted with a device to indicate the depth of water, contrary to the requirements of Clause 4.6 of AS2118.1-2017.

1D. Sprinkler Heads - Several sprinkler heads in the rooftop pump room had fire sprinkler head plastic protectors fitted, which may prevent the activation of the sprinkler head in an emergency.

2. Access & Egress

   2A. Handrails - Handrails in the fire-isolated stairs were not continuous between stair flight landings and had obstructions that would tend to break a hand-hold, contrary to the requirements of Clause D3D22 of the NCC.

   2B. Operation of Latch – Multiple exit doors within the fire-isolated stair incorporate a round tulip-style handle instead of a lever handle, contrary to the requirements of Clause D3D26 of the NCC.

3. Compartmentation

   3A. Fire Stopping – Data cabling penetrating building elements within the Fire Control Room do not appear to be adequately fire stopped, contrary to the requirements of Clause S19C8, Clause C4D15 and Specification 13 of the NCC.

FRNSW believes that there are inadequate provisions for fire safety within the building.

RECOMMENDATIONS

FRNSW recommends that Council:

a. Review items 1 to 3 of this report and conduct an inspection.

b. Address any other deficiencies identified on "the premises".

Please be advised that Schedule 5, Part 8, Section 17(2) requires any report or recommendation from the Commissioner of FRNSW to be tabled at a Council meeting. This matter is referred to Council as the appropriate regulatory authority. FRNSW awaits the Council's advice regarding its determination under Schedule 5, Part 8, Section 17 (4) of the EP&A Act.

Please do not hesitate to contact [redacted] of FRNSW's Fire Safety Compliance Unit at FireSafety@fire.nsw.gov.au or call [redacted] if there are any questions or concerns about the above matters. Please refer to file reference BFS22/1168 regarding this correspondence.

Yours faithfully

[redacted]

Fire Safety Compliance Unit