




Technical Advisory Note

Project	Double Bay Transport Study	Project Number	SCT_00041
Client	Woollahra Municipal Council		
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Background

SCT Consulting has been engaged by Woollahra Municipal Council (WMC) to undertake a transport study to support a review of existing planning controls for the Double Bay Town Centre. The objectives of the study include a need to:

- Obtain an understanding of the existing parking, traffic and transport conditions within the Double Bay Town Centre;
- Identify the potential parking, traffic and transport implications from additional mixed residential and non-residential development in selective parts of the Double Bay Town Centre;
- Identify what additional development the Double Bay Town Centre can accommodate before key intersections and road network cease to function efficiently;
- Identify strategies, policies and network improvement measures can mitigate those implications; and
- Identify measures to encourage active and public transport usage in association with people living, visiting and working in the Double Bay Town Centre.

This technical memo provides an overview of the findings of the modelling assessment and associated recommendations. A further detailed report will be provided to WMC in the near future.

Analysis

Potential Growth

As a result of the outcomes of the Double Bay Economic Feasibility Study (July 2015) WMC officers have undertaken a review of the existing planning controls for the Double Bay Town Centre. This review investigated a series of site-specific uplifts to both height and floor space ratio controls to facilitate more viable mixed use development.

WMC staff prepared a hypothetical development scenario based on the proposed amendment to the development controls. When compared to the current built form, the proposed amendments could facilitate:

- An uplift of approximately:
 - 34,000 square metres of commercial floor space
 - 3,200 square metres of retail floor space
 - 20,000 square metres of residential, providing 260 parking spaces .

Under the potential scenario construction of the uplift would be completed by 2033.

Trip Generation and Traffic Impacts

Overall the potential development supports best practice transit oriented development principles, by providing increased residential and employment density in proximity to existing transport infrastructure.

Internally the proposal encourages sustainable transport use with a permeable layout providing easy access to public transport and existing pedestrian and bicycle facilities. The town centre site has access to the public transport system via train, bus and ferry travelling immediately adjacent to the town centre and providing connections to surrounding sub-regional centres and to the City throughout the day.

At its completion, the potential development could generate up to 296 vehicle trips during the AM peak, 535 vehicle trips during the PM peak and 378 trips during the Saturday peak period. Vehicle access to and from the potential development will be via existing service roads throughout the town centre. These trips also include the assessment for developments that are currently being constructed within the study area. The number of trips from these sites equates to 44 vehicle trips during the AM peak, 81 vehicle trips during the PM peak and 60 trips during the Saturday peak period.

Modelling analysis indicates that with the forecast demands, most intersections within the network operate at an acceptable level of performance. However, the intersection of New South Head Road / Cross Street / Bellevue Road / Kiaora Road operates over capacity during the AM, PM and Saturday peak periods and is unable to meet the demand associated with background forecast traffic growth as well as with the proposed development yield. All other intersections are forecast to operate between LoS A and LoS C. These sites satisfactorily cater for forecast travel demands associated with full development.

Graphical illustrations of network performance for both the 'Do Nothing' and 'With development' scenarios can be found in Appendix A.

To identify strategies which mitigate adverse implications of the approved and potential development on the surrounding network performance, the following two sensitivity tests were proposed and assessed:

- Network modifications and internal trip redistribution, and
- Target mode shift of vehicle trips to sustainable modes of transport such as active transport (walking / cycling) and public transport.

The 'Network modifications and internal trip redistribution' proposed sensitivity scenario successfully mitigated identified impacts and resulted in all intersections operating within capacity. The proposed network modifications are presented in **Figure 1**. Under the revised assessment modelling indicates the intersection of New South Head Road / Cross Street / Bellevue Road / Kiaora Road operates within capacity across the AM, PM and Saturday peak periods.

Graphical illustrations of network performance for the 'Network modifications scenario can be found in Appendix B.

Figure 1 Proposed network modifications



The 'Target mode shift of vehicle trips' scenario identified a total of 44, 81 and 60 trips that were required to be removed from the network in the AM, PM and Saturday peak periods, respectively, to ensure the network was able to operate within capacity. However, these trips are only related to developments already approved and currently under construction within the Double Bay Town Centre. As a result the assessment found, in a differing outcome to the previously completed 2017-2020 study, that the proposed development yield will not be able to be developed on sustainable mode share shift alone. The network modifications highlighted in **Figure 1** are required to support the delivery of the development.

Active transport

In 2023 WMC exhibited its Active Transport Plan to the community. Projects included within this plan are integral to supporting the successful implementation of the approved and proposed developments. Specific projects relevant to the study area include:

- Walking
 - Walking improvements to Double Bay Ferry Wharf

- Bay Street Pedestrian Plaza upgrade
- Double Bay Foreshore and Darling Point Link
- Cycling
 - Cycleway on Ocean Avenue / William Street (Edgecliff to Double Bay)
 - Cycle link to Double Bay Ferry Wharf
 - Cycleway on New South Head Road (Edgecliff to Double Bay)
 - Cycle links within Double Bay centre (Cross Street / Bay Street)

Recommendations and next steps

Recommended Traffic and Transport Strategies

To mitigate adverse impacts associated with the increased level of trip generation associated with both currently approved, and not built, as well as potential development of the Double Bay Town Centre, the following series of strategies / policies have been identified for consideration:

- Provide additional car share (Go Get) spaces on street within WMC as well as in dedicated parking spaces within new developments and WMC car parks. WMC may also investigate the use of car share schemes in conjunction with certain residences not being eligible for access to residential parking permit schemes;
- Evaluate existing parking controls within the Woollahra Development Control Plan (2015) as well as considering pricing mechanisms to encourage reassignment of mode choice;
- Monitor public transport patronage to determine the needs of residents and evaluate the success of public transport improvements;
- Lobby Transport for NSW for additional services to the Double Bay Ferry Wharf to increase the attractiveness of the mode as a viable alternative to rail and bus connections to the Sydney CBD;
- Introduce a Travel Demand Management Program within Double Bay businesses;
- Consider expanding the current residential parking permit scheme beyond existing limits; and
- Introducing programs like walking groups promoted by the Heart Foundation and walk to school programs to help encourage a modal shift from private vehicles to walking and cycling.

In addition, there are several network improvements options available to WMC to ensure that traffic efficiency is improved within the Town Centre and an increased number of trips by active transport is supported, such as:

- Implement a timing ban, for the right turn movement from New South Head Road to Kiaora Road. This will improve the efficiency of the New South Head Road approach and the overall intersection performance of New South Head Road / Cross Street / Bellevue Road / Kiaora Road;
- Formalise Line Marking (Knox Street) to improve lane discipline and reduce the occurrence of vehicles queuing in the centre lane and reducing available storage space;
- Investigate opportunities to improve pedestrian and cycling safety, amenity and crossing opportunities along key routes as identified in the 2023 Woollahra Municipal Council Active Transport Plan.

Conclusion

The Double Bay Transport Study has centred on the assessment of a potential development scenario, two sensitivity tests and the identification of associated impacts for the Double Bay Town Centre. The assessment, which also included all trips from approved but not constructed developments, has found that:

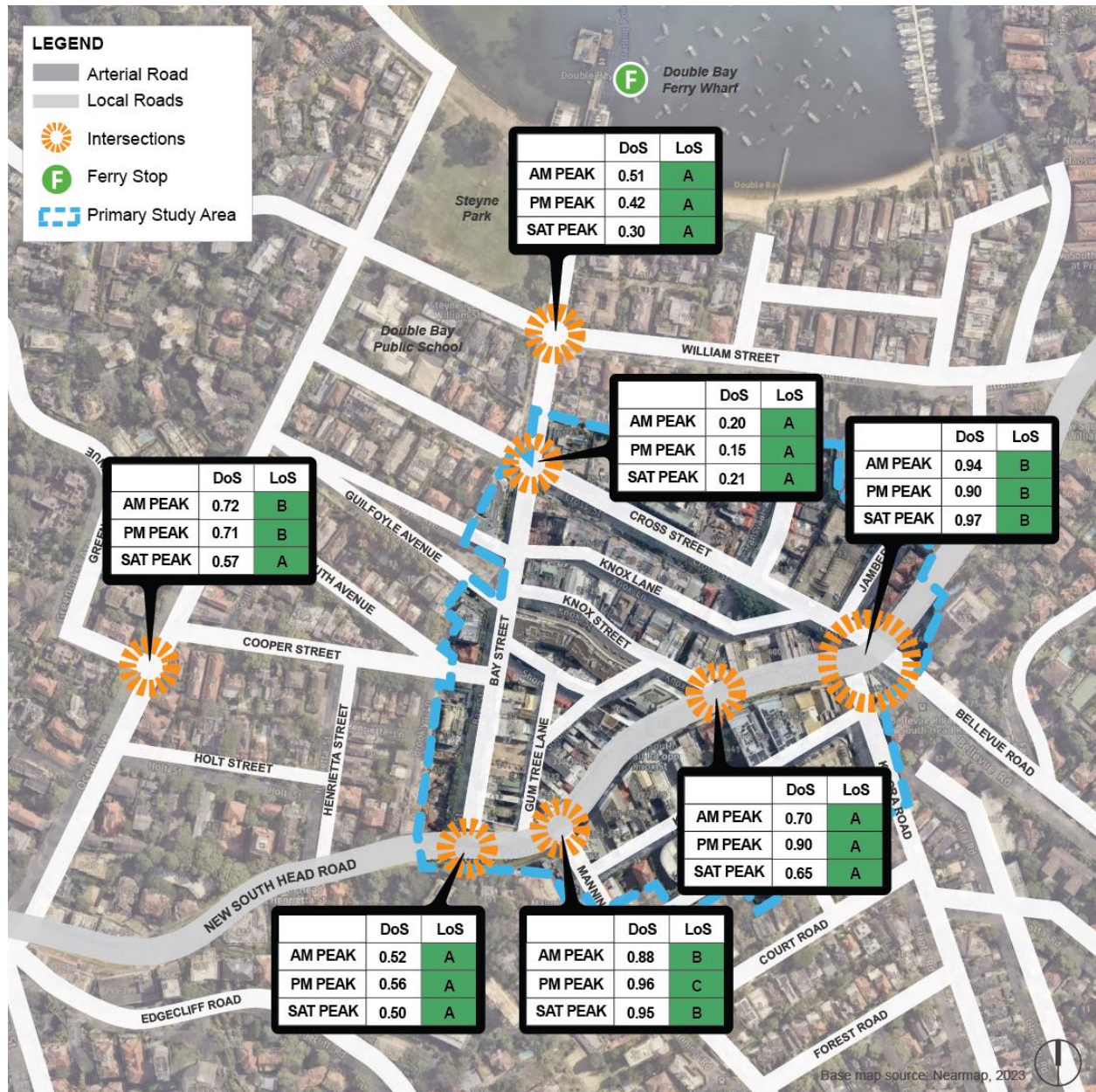
- Existing active transport infrastructure within and around the Double Bay Town Centre is suitable to cater for the increase in population caused by potential growth within the centre, however, further steps can be taken to increase active transport as a viable mode; and
- The Double Bay Town Centre will be able to successfully cater for the proposed expansion through the application of various strategies / policies, as noted above.

This assessment has found, in an alternate outcome to that of the previously completed 2017-2020 study, that the proposed development yield will not be able to be delivered on sustainable mode shift alone. The network modifications highlighted in **Figure 1** are required to support the delivery of the development by 2033.

APPENDIX A

INTERSECTION PERFORMANCES EXISTING NETWORK

2023 peak hour intersection performances



LEGEND

- Arterial Road
- Local Roads
- Intersections
- Ferry Stop
- Primary Study Area

Double Bay Ferry Wharf

	DoS	LoS
AM PEAK	0.51	A
PM PEAK	0.46	A
SAT PEAK	0.30	A

William Street

	DoS	LoS
AM PEAK	0.20	A
PM PEAK	0.15	A
SAT PEAK	0.21	A

Guilfoyle Avenue

	DoS	LoS
AM PEAK	0.73	A
PM PEAK	0.73	A
SAT PEAK	0.57	A

Cross Street

	DoS	LoS
AM PEAK	1.18	A
PM PEAK	1.95	F
SAT PEAK	1.18	C

Cooper Street

	DoS	LoS
AM PEAK	0.62	A
PM PEAK	0.91	A
SAT PEAK	0.64	A

Holt Street

	DoS	LoS
AM PEAK	0.52	A
PM PEAK	0.57	A
SAT PEAK	0.94	A

New South Head Road

	DoS	LoS
AM PEAK	0.87	B
PM PEAK	0.96	C
SAT PEAK	0.94	B

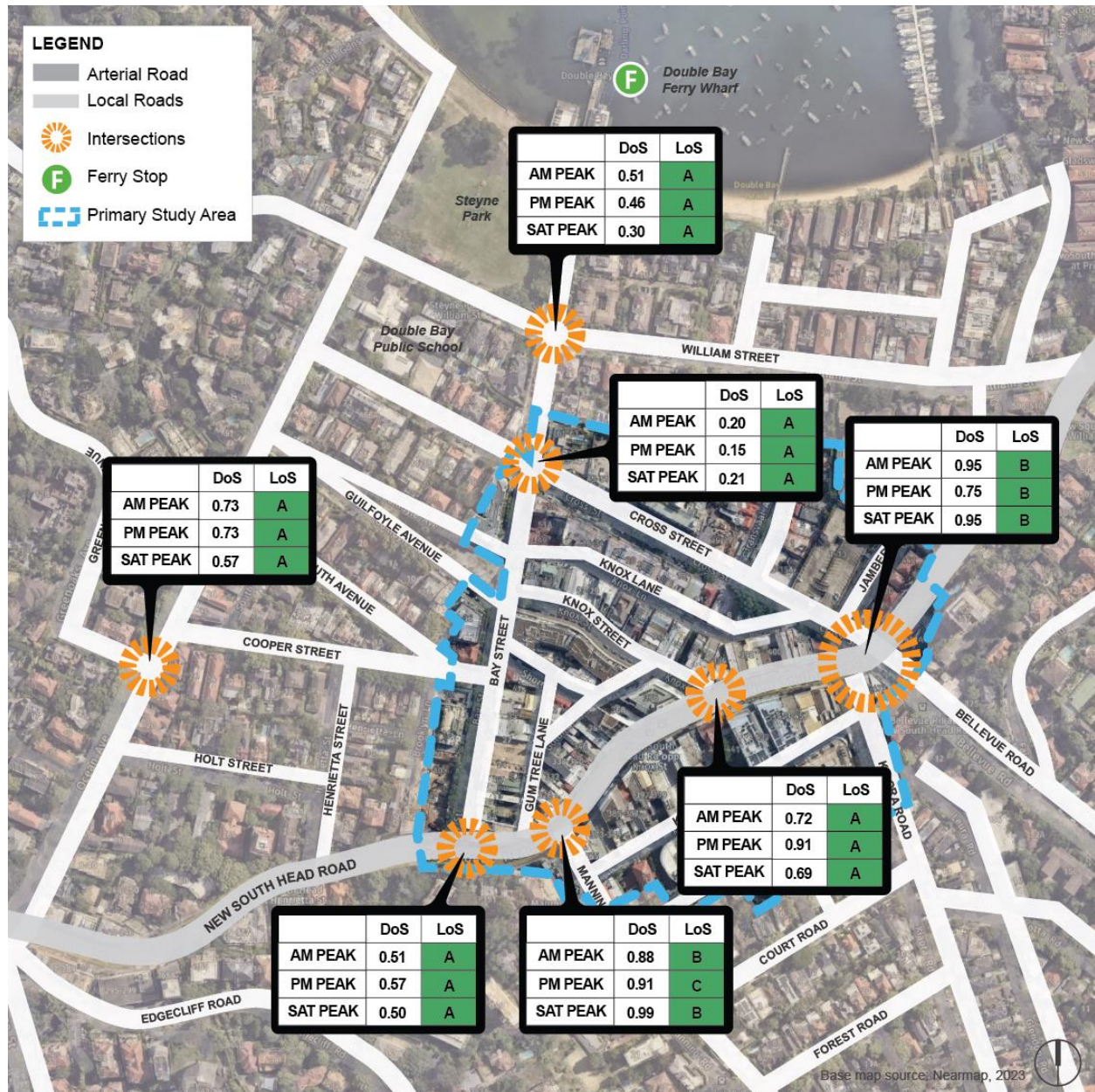
Edgecliff Road

Base map source: Nearthmap, 2023

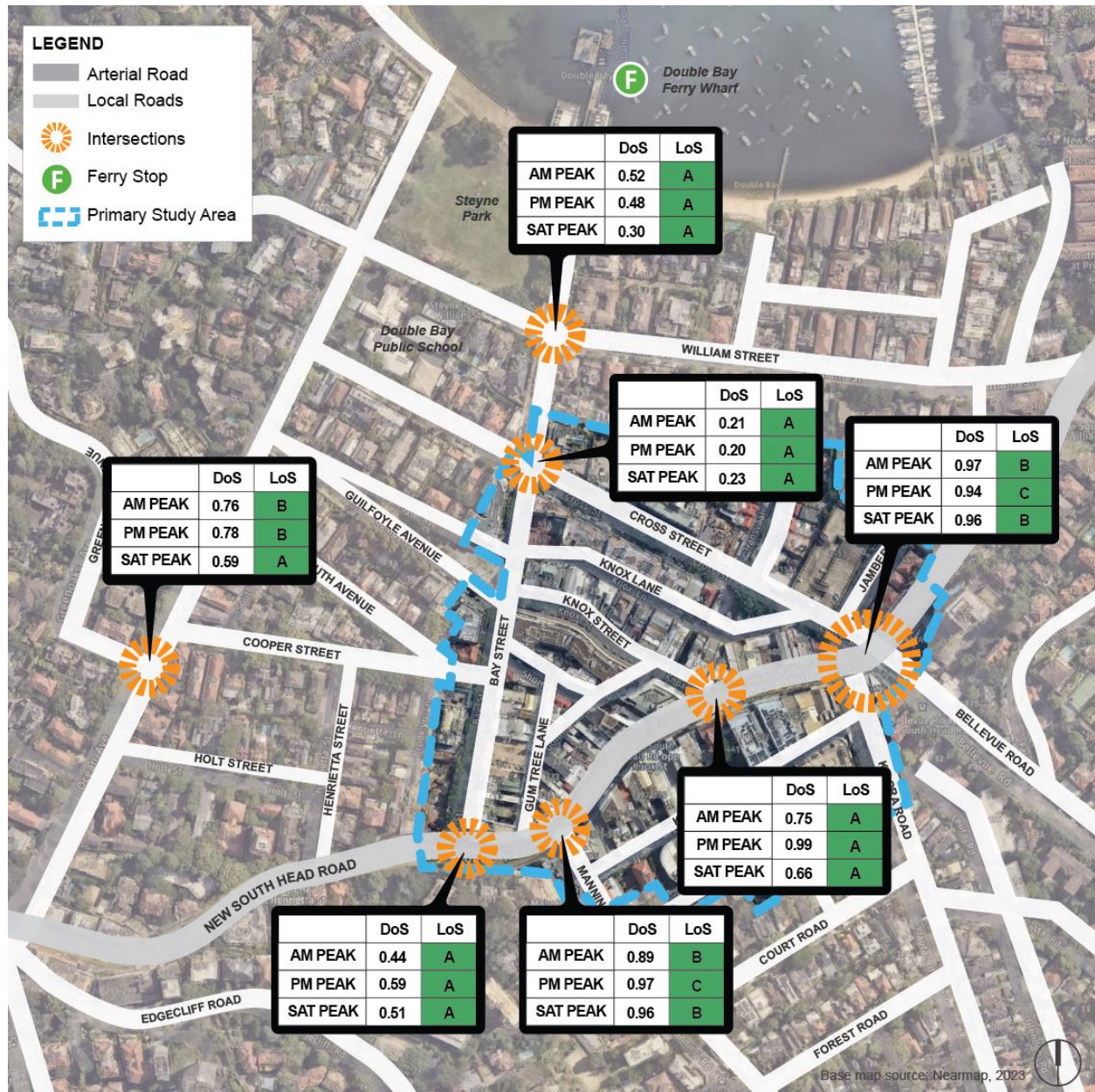
APPENDIX B

INTERSECTION PERFORMANCES PROPOSED NETWORK CHANGES

2033 peak hour forecast with committed developments and network changes



2033 peak hour forecast with proposed developments and network changes



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