

1 Introduction

This document provides responses to the submission made by Government Agencies in response to the new Sydney Fish Market Stage 2 State Significant Development (SSD) Application (SSD DA 8924 & 8925). The following sections provide a summary of the submission and the associated response from the project team. The agency submissions reviewed in this document are as follows:

- Transport for NSW
- Roads and Maritime (now known as Transport for NSW)

The full agency submissions is provided as Appendix A to this document

2 Response to Transport for NSW Submission

2.1 Freight and servicing

2.1.1 TfNSW recommendation

It is requested that the applicant provides the following, as part of the applicant's response to submissions:

- Traffic generation by heavy vehicles during the existing Fish Markets operation, including movement of heavy vehicles (by type and duration of stay) across a 24-hour period;
- Details of the development's freight and servicing profile, including the forecast freight and servicing traffic volumes by vehicle size, frequency, time of day and duration of stay;
- Assessment of the proposed loading and servicing facilities to adequately accommodate the future demand; and
- Details of the management of deliveries, including the scheduling of delivery times (outside of peak periods where possible), controls on duration of stay and queuing.

2.1.2 Response to TfNSW submission

Existing heavy vehicle traffic generation

Extensive surveys were undertaken in 2018 to understand the level of service vehicle traffic generated by the existing Sydney Fish Market site. This level of traffic generation, separated by vehicle type, is presented in Figure 1.

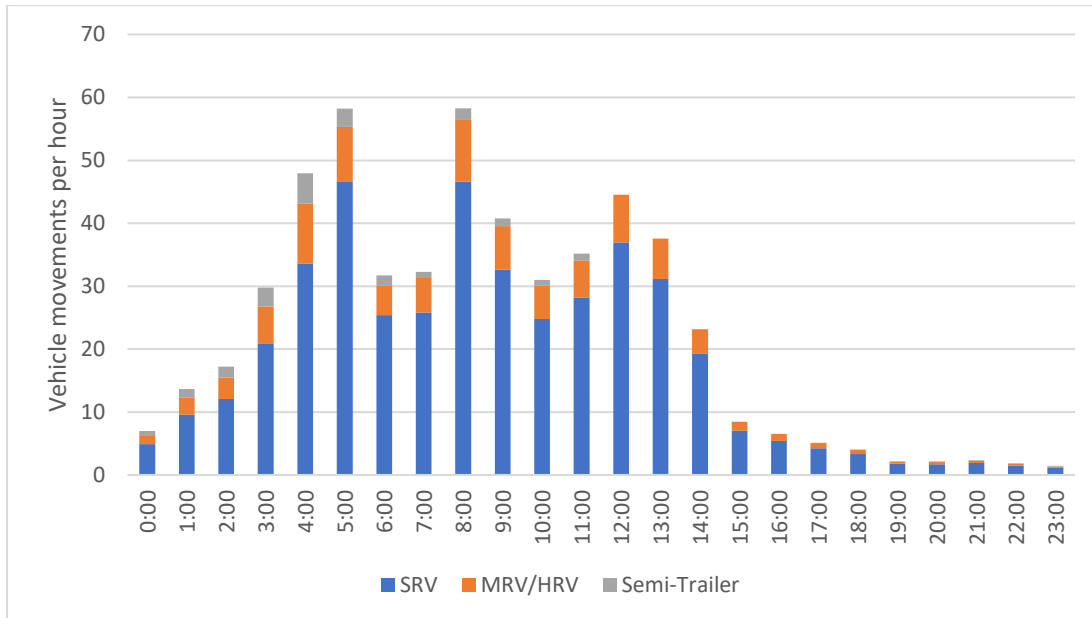


Figure 1 Existing heavy vehicle traffic generation

The typical duration of stay of heavy vehicles at the existing Sydney Fish Market site is shown in Figure 2. This indicates over half of all heavy vehicles typically remain on site for less than 30 minutes at a time, encouraging high turnover of car parking spaces.

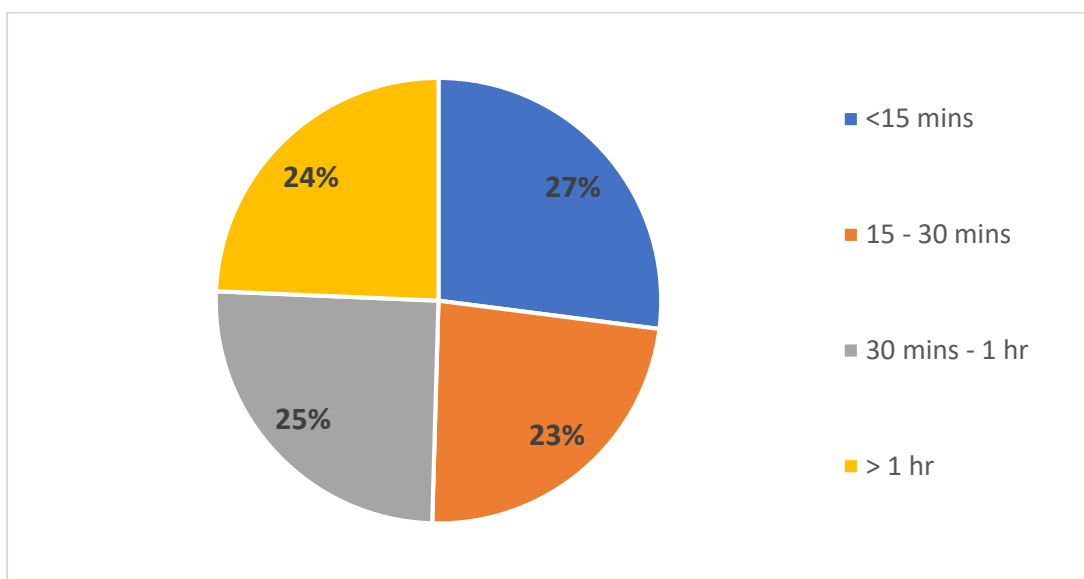


Figure 2 Existing heavy vehicle duration of stay

Future freight and servicing profile

The forecast number of service vehicle movements, separated by vehicle type, for the new Sydney Fish Market facility is shown in Figure 3. This follows a similar profile to the existing facility in the early morning period given the timing and extent of the wholesale auction remains largely unchanged from existing operations. Service vehicle movements are forecast to increase after 9am (compared to the current situation) as a result of the enhanced food and beverage offering provided in the new facility.

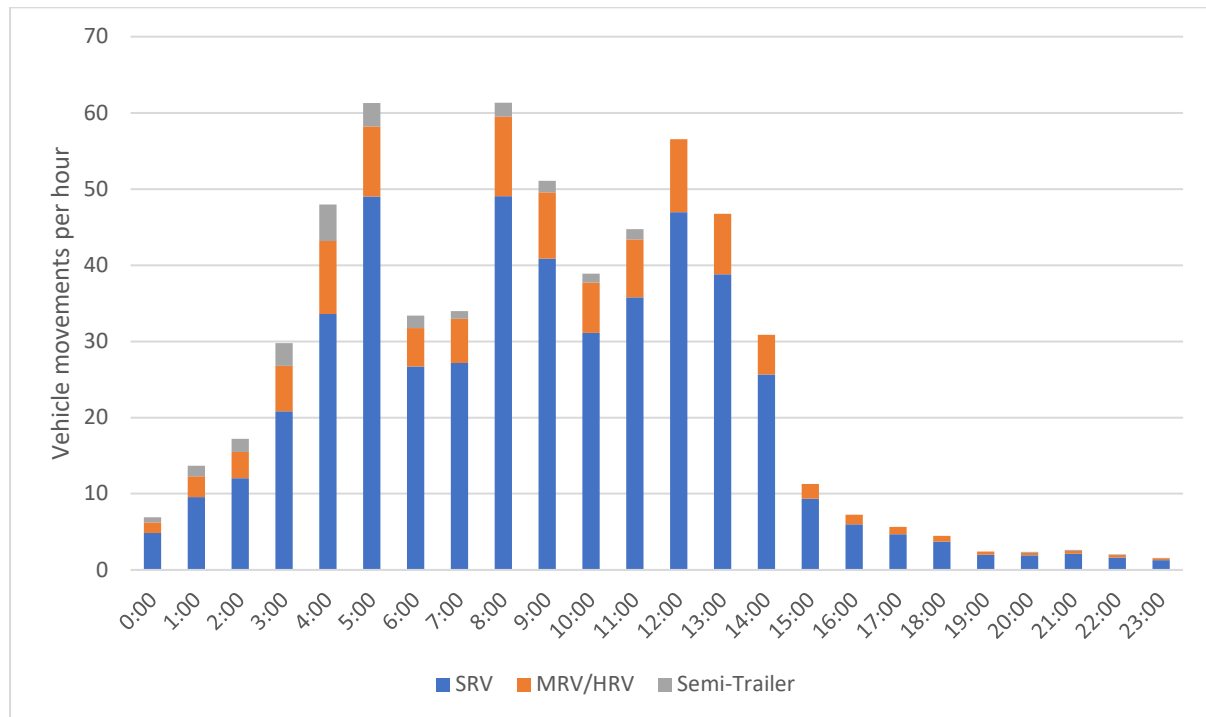


Figure 3 Forecast heavy vehicle movements

The duration of stay of heavy vehicles for the new Sydney Fish Market is likely to reflect that of the current facility. The exception to this will be the loading dock within the facility, where a strict 30 minute vehicle time limit will be enforced.

Ability to accommodate future demand

The new Sydney Fish Market provides the following provision for service vehicles:

- An on-site loading dock providing for 20 service vehicle parking spaces, comprising of:
 - 5 Semi / HRV parking spaces
 - 12 MRV parking spaces
 - 3 SRV parking spaces
- 137 parking spaces within the basement car park which can be utilised by SRVs. SRVs have the ability to enter the general car parking area due to the 3.5m height clearance that is provided, and would not enter the main loading dock area.

Based on the forecast service vehicle movements into the new Sydney Fish Market facility, the accumulation of SRVs and larger vehicles on a typical weekday can be determined. This accumulation profile is shown in Figure 4, and indicates that the likely service vehicle demand can be accommodated within the proposed design.

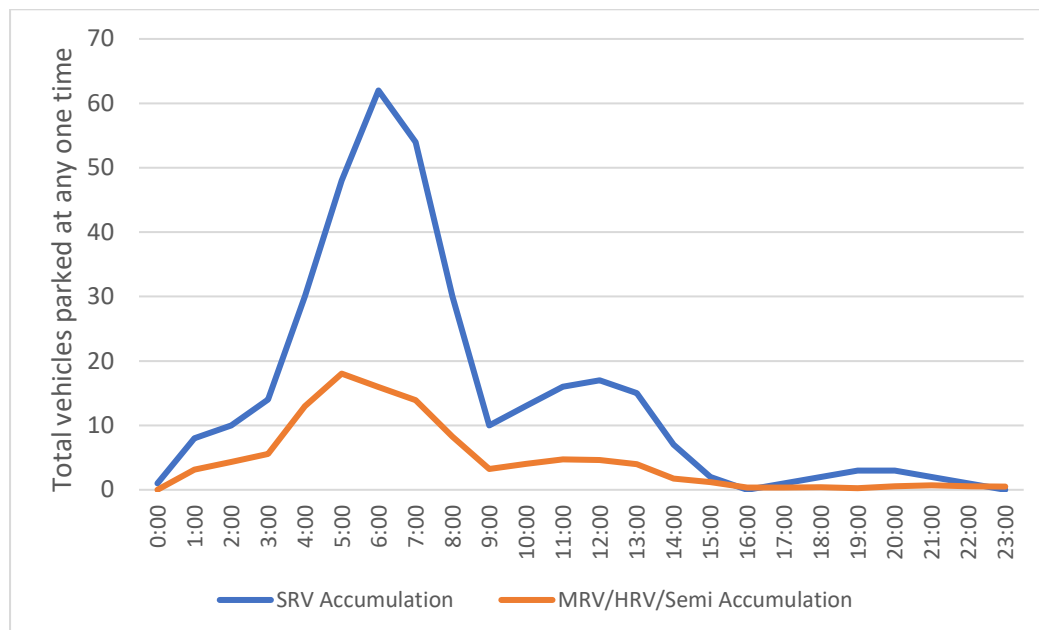


Figure 4 Forecast heavy vehicle accumulation

Management of deliveries

A dock master will be present within the loading dock to manage the movement of service vehicles and ensure drivers adhere to the proposed 30 minute time limit.

Sydney Fish Market previously utilised an online booking system to manage the movement of service vehicles into their current facility. It is envisaged that this management system will continue to be implemented in the new facility, which allows deliveries to be timed so as to avoid busy periods on the adjacent road network. Further, this management system also allows deliveries to be spread over the day to manage demand for the loading dock and ensure no queueing occurs onto the local road network.

2.2 Traffic and Transport Management for Seasonal Peaks

2.2.1 TfNSW recommendation

It is requested that the applicant be conditioned to prepare a Traffic and Transport Management Plan for seasonal peaks in consultation with the Sydney Coordination Office within TfNSW.

2.2.2 Response to TfNSW submission

Infrastructure NSW is happy to work with TfNSW to prepare a more detailed Traffic and Transport Management Plan for seasonal peaks prior to the opening of the new Sydney Fish Market.

2.3 Traffic Assessment

2.3.1 TfNSW recommendation

It is requested that the applicant addresses the issues raised by Roads and Maritime Services in the applicant's response to submissions.

2.3.2 Response to TfNSW submission

Issues raised by Roads and Maritime Services are addressed in Section 3 of this document

2.4 Drop off and Pick Up Area

2.4.1 TfNSW recommendation

It is requested that the applicant provides the following, as part of the applicant's response to submissions:

- Forecast bus, coach and point to point vehicle movements by vehicle size, frequency, time of day and duration of stay;
- Investigation into the provision of off-street bus and coach parking and vehicle drop off and pick up area, rather than reliance on on-street kerb space;
- Assessment of the proposed bus and coach parking and vehicle drop off and pick up area to adequately accommodate the forecast demand.

2.4.2 Response to TfNSW submission

Forecast vehicle movements

The forecast number of taxi and ride-share movements by hour on a typical weekday is presented in Figure 5, with total forecast coach / mini-bus movements shown in Figure 6.

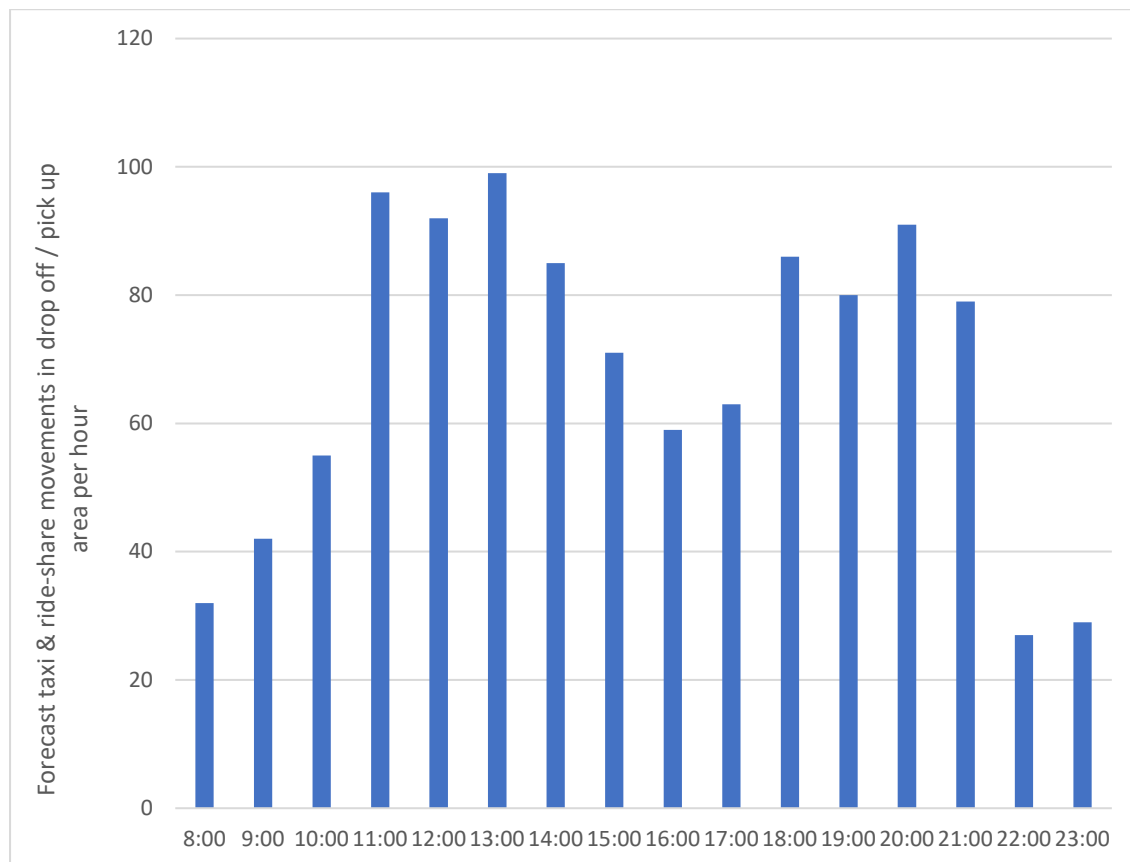


Figure 5 Forecast taxi and ride-share movements

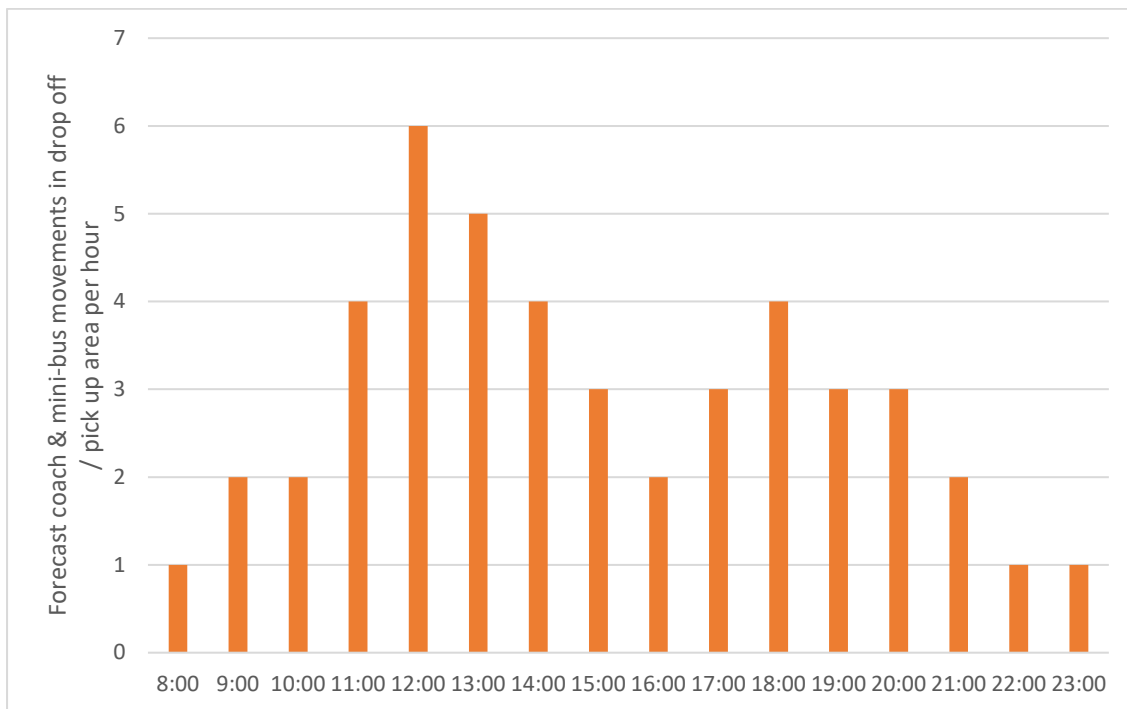


Figure 6 Forecast coach and mini-bus movements

The expected duration of stay of these vehicles is as follows:

- Taxis and ride-share vehicles: No more than two minutes ('No Parking' to be signposted along the kerbside)
- Coaches and mini-buses: No more than 15 minutes (to be used for pick up and drop off of passengers only. Layover to take place off-site).

Ability to accommodate future demand

The proposed pick up / drop off area is approximately 130m in length and therefore can accommodate the following number of vehicles at any one time:

- Taxis / ride-share: 5 vehicles
- Coach / minibus: 4-6 vehicles (dependent on vehicle type)

Based on the maximum duration of stays for these vehicle types as previously noted, the area can accommodate the following number of vehicles per hour:

- Taxis / ride-share: 150 vehicles / hour
- Coach / minibus: 8-12 vehicles / hour

These capacities are comfortably above the maximum forecast hourly demand.

Off-Street bus and coach parking

A key feature of the new Sydney Fish Market development is the provision of a drop off / pick up lane that sits outside of the current road reserve. This lane will facilitate vehicle drop off and pick up without relying on existing on-street kerbside space.

The shared loading dock proposed as part of the new Sydney Fish Market development presents an opportunity to improve arrangements for coach parking. This will involve using some parking spaces within the loading dock (during off-peak times) to provide for parking for coaches waiting to pick up their passengers. This strategy provides for an efficient utilisation of parking within the site and removes the need at certain times for coaches to locate parking on surrounding streets as is currently the case. It is envisaged this would be managed via a pre-booking system to ensure coaches are not preventing service vehicles from accessing the loading dock during busy periods.

Prior to the opening of the new facility, a management strategy is to be implemented to manage the movement of coaches within the site as well as offsite parking. This strategy will be developed in collaboration with the Western Harbour Alliance (led by Sydney Business Chamber, and including SFM, the Star and ICC as members). The Western Harbour Alliance have committed to developing a precinct parking strategy including consideration of the new Sydney Fish Market.

2.5 Active Transport

2.5.1 TfNSW recommendation

It is requested that the applicant:

- Investigates providing new off-road cycling connection on Bridge Road in accordance with the relevant Austroads cycling standards;
- Further details on the off-road cycling connection and how it integrates with the surrounding cycle network and an assessment of road safety at key intersections and locations subject to pedestrian / vehicle / bicycle conflicts along Bridge Road be provided as part of the applicant's response to submissions;
- Appropriate wayfinding and signage to assist staff and visitors in locating the light rail stops, bus stops and bicycle parking and end of trip facilities; and
- Bicycle parking and end of trip facilities in easily accessible locations.

2.5.2 Response to TfNSW submission

A key element of the project is to improve the pedestrian and cycling environment in and around the new Sydney Fish Market. The proposed shared

path on Bridge Road will facilitate safer journeys for cyclists to and from the new Sydney Fish Market, as well as more broadly to other parts of Sydney.

The shared path will provide an off-road environment where recreational and less confident cyclists can safely travel. The path will include advisory pavement marking (in line with City of Sydney standards) to encourage considerate behaviour by cyclists, including travelling at speeds of no more than 10km/h and giving way to pedestrians at all times. The level of pedestrian activity expected on Bridge Road will naturally reduce cyclist speeds, in a similar way to how Pitt Street Mall or Martin Place functions. Infrastructure NSW will work closely with stakeholders during the detailed design phase of the project to ensure the shared path is planned in a manner which minimises conflicts between cyclists and pedestrians and promotes a strong public realm outcome.

Due to the lower speed environment, more confident cyclists may choose to continue to utilise Bridge Road – particularly during periods of high pedestrian activity at the new Sydney Fish Market. It should be noted that during the morning weekday commuter peak hour, pedestrian activity on Bridge Road is expected to be low and conflicts reduced between pedestrians and commuters making their way into work.

The provision of a shared path along the northern side of Bridge Road, which will primarily cater for recreational and less confident cyclists, aligns with the broader City of Sydney bike network as shown in Figure 7. This plan indicates a planned recreational route along the northern side of Bridge Road and through the existing Sydney Fish Market site to connect with the regional bike network at Miller Street, as well as link up with the existing recreational route along Blackwattle Bay.

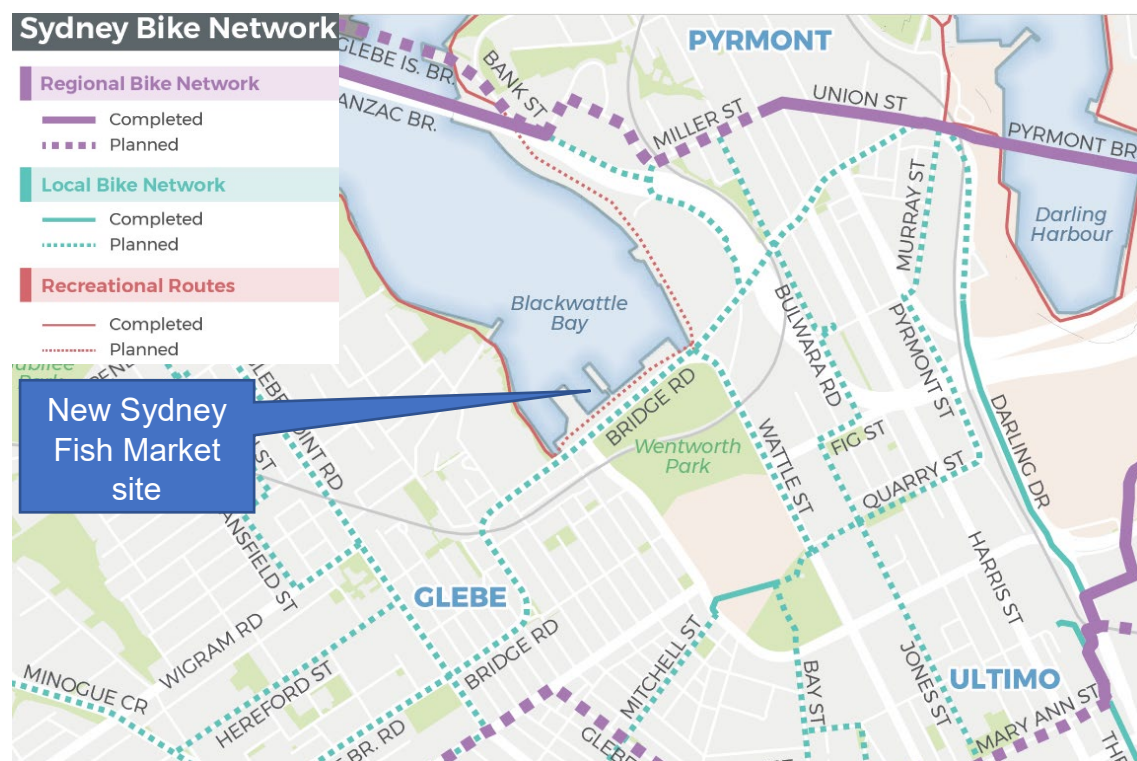


Figure 7 Sydney Bike Network

Source: City of Sydney Cycling Strategy and Action Plan 2018-2030

A number of options were considered in relation to the most appropriate cycling facility along Bridge Road, with the shared path option deemed to be the most suitable. These alternative options are discussed in the following sections.

(i) Separated cycleway on the northern side of Bridge Road

This option would involve providing a separated cycleway on the northern side of Bridge Road, adjacent to the traffic lane. While this option would have the benefit of separating pedestrians and cyclists, it would result in significant conflict points and safety concerns with the adjacent pick up and drop off lane. As the cycleway would run parallel to the pick up and drop off lane, significant numbers of coaches, minibuses, taxis and other vehicles would conflict with cyclists as they enter and exit the area (see Figure 8). A continuous roll-over kerb would be required along the length of the cycleway to permit vehicles to enter and exit the drop off/pick up lane, which limits the ability to physically separate cyclists from adjacent traffic. Less confident cyclists in particular would feel vulnerable in this environment.

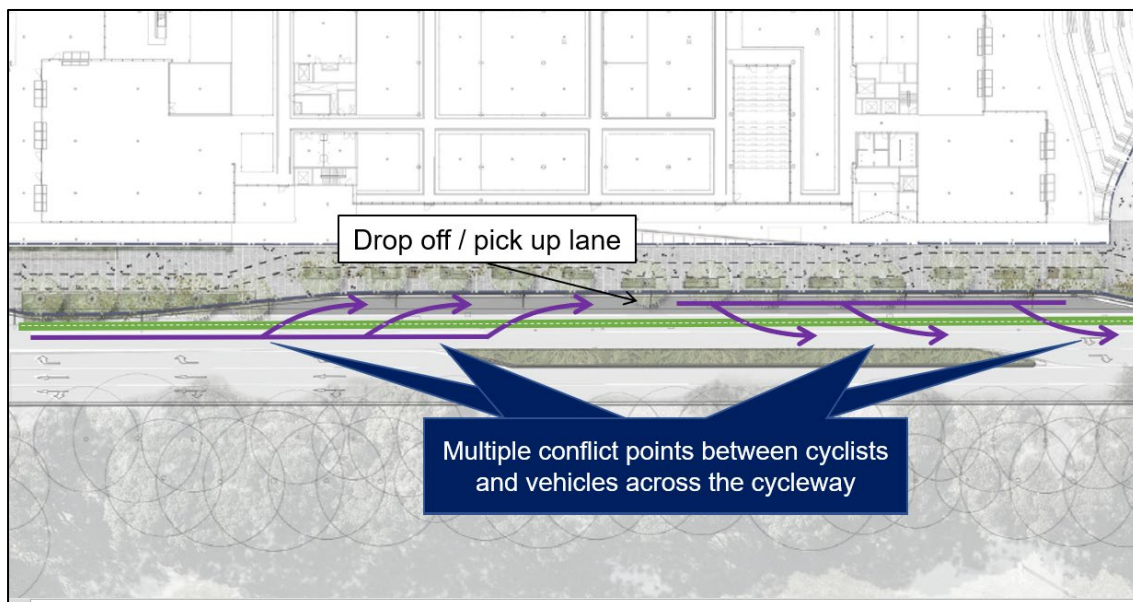


Figure 8 Vehicle / cyclist conflicts with dedicated cycleway on Bridge Road

Given these safety concerns the option of a dedicated cycleway on the northern side of Bridge Road was not considered viable.

(ii) Separated cycleway on the Bridge Road footpath

Another option considered was the provision of a separated cycleway on the footpath of Bridge Road, north of the traffic lane and pick up / drop off lane. This would allow cyclists to parallel to Bridge Road without conflicting with vehicles entering or exiting the drop off / pick up lane.

The provision of a separated cycleway at this location would facilitate cyclists to travel at speeds of 25km/h or more. While this may provide a good outcome for some cyclists, it would create significant safety issues with pedestrians walking across the cycleway between the drop off / pick up lane and the new Sydney Fish Market building (see Figure 9). The drop off / pick up lane will be used by coaches and minibuses carrying tourists walking in an unfamiliar environment, potentially unaware of cyclists travelling at high speeds along the cycleway. Due to this safety concern associated with the high level of cross-movements between pedestrians and cyclists, this option was not progressed further.

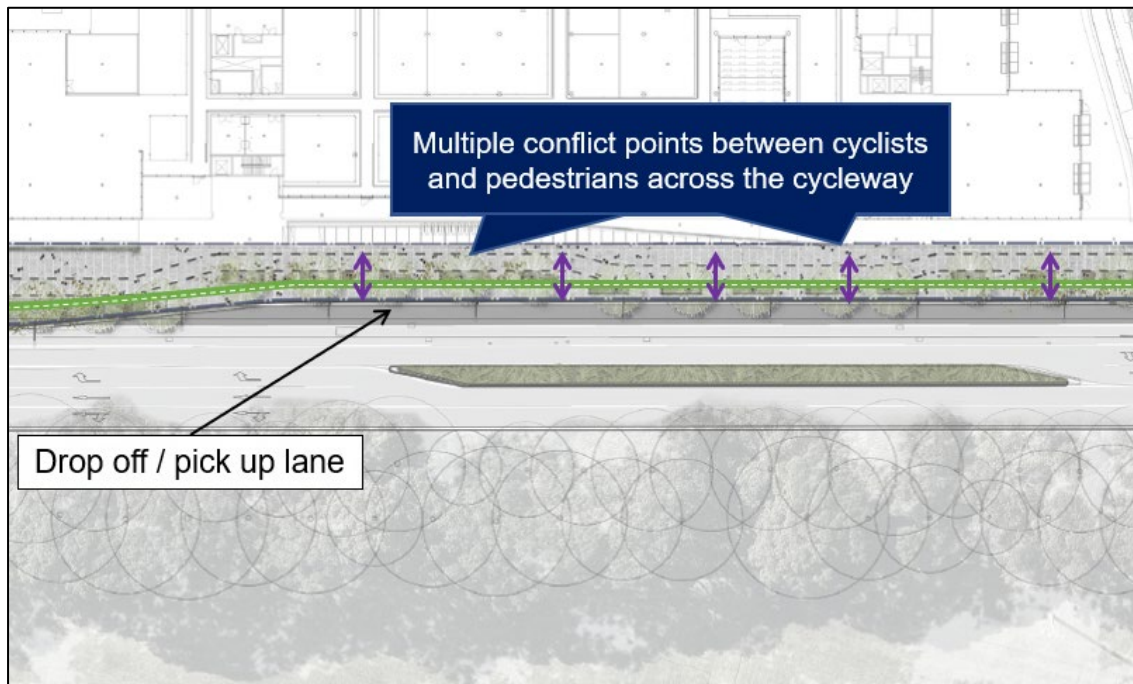


Figure 9 Vehicle / pedestrian conflicts with dedicated cycleway on Bridge Road footpath

(iii) Separated cycleway on the southern side of Bridge Road

A separated cycleway on the southern side of Bridge Road was considered however not deemed to provide a practical solution. It would require cyclists to cross Bridge Road at both the Wattle Street and (future) Wentworth Park Road traffic lights to access the broader cycling network. Given cyclists would only travel a few hundred metres before having to cross back across to the northern side of Bridge Road, it is unlikely that the cycleway would be heavily used. A cycling connection on the northern side of Bridge Road is therefore considered a much more suitable option.

Signage, wayfinding and bicycle parking

Wayfinding signage within the public domain of the site will be provide to direct people to nearby public transport nodes – including the three light rail stops within walking distance of the new Sydney Fish Market. The wayfinding signage will also direct people to bicycle parking and the taxi / coach pick up and drop off area.

Bicycle parking for both staff and visitors will be provided as part of the proposed development. Visitor bicycle parking will be located in clearly visible locations within the public domain.

2.6 Travel Plan

2.6.1 TfNSW recommendation

It is requested that the applicant be conditioned to prepare a Travel Plan in consultation with Sydney Coordination Office within TfNSW

2.6.2 Response to TfNSW submission

Infrastructure NSW is comfortable with wording of the draft condition put forward in the TfNSW letter.

2.7 Construction Pedestrian and Traffic Management

2.7.1 TfNSW recommendation

It is requested that the applicant be conditioned to prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with Roads and Maritime and the Sydney Coordination Office within TfNSW

2.7.2 Response to TfNSW submission

Infrastructure NSW is comfortable with wording of the draft condition put forward in the TfNSW letter.

3 Response to RMS Submission

3.1 Overview

This section of the document responds to the issues raised by Roads and Maritime Services (RMS), now known as Transport for NSW, in relation to the new Sydney Fish Market site. Specifically it summarises the outcomes of the updated traffic modelling undertaken for the project. Responses to all of the comments made by RMS

RMS Comment	Response
The proponent shall provide the electronic copies of all SIDRA model files for review. Any adjustments to the base values of the model shall be identified and supporting justification for each change provided. In addition, all signals shall be modelled on Masterlink mode and details provided on how the existing base model has been calibrated with on-site observations, for instance queue lengths and/or delays.	SIDRA models have been provided to Transport for NSW, with all signals modelled on 'master link' mode. The base model was calibrated based on on-site queue length observations
Survey data shall be provided to validate the volumes used for the SIDRA modelling. Roads and Maritime notes that the data collection was predominately in 2017 and as such may not provide a full representation of existing traffic conditions noting development that have subsequently occurred in the area (e.g. Glebe, Pyrmont and Ultimo). Justification shall be provided for use of any survey data that is not current.	Survey data has been provided to Transport for NSW, and justification for the use of 2017 is provided in Section 3.3 of this document
TCS1200 (Pyrmont Bridge/Wattle) is coordinated with TCS230 (Pyrmont Bridge/Western Distributor/Bank St). TCS1835 (Pyrmont Bridge Rd/Pyrmont Bridge St), TCS5 (Pyrmont Bridge/Harris) and TCS230 are also coordinated. Modelling is to be revised to reflect the TCS coordination. Also during peak periods (including weekend peak periods), the cycle time operates at the maximum cycle time of 120 seconds for all signalised intersections.	Following discussions with Transport for NSW, a SIDRA Network model has been developed which considers the operation of these intersections as a network rather than in isolation. The results of the SIDRA network modelling are detailed in Section 3.6 of this document.
The proposed new TCS at Wentworth Park Rd/Bridge Rd intersection is within close proximity to TCS1200 and TCS230. The new proposed signals will be need to be coordinated with TCS1200 and TCS230.	
While pedestrian amenity will be improved, the installation of a marked foot crossing on the eastern approach of Bridge Road along with the removal of the slip lane from Wattle Street will result in delays for all vehicles coming from Wattle Road due to the requirement for full pedestrian protection. An exemption of this pedestrian leg should be sought or use of flashing amber arrows used to increase traffic flow.	Traffic modelling has confirmed that the proposed changes to the Bridge Road / Wattle Street intersection result in acceptable impacts on the road network, as detailed in Section 3.6 of this document. Further justification for the removal of the slip lane is provided in Section 3.4.
Additional justification shall be provided for the removal of the left turn slip lane at TCS1200 considering the high importance of this section to the network.	

RMS Comment	Response
<p>Figures 75, 76 and 77 suggest that TCS230, TCS5 and TCS1835 will have negligible impacts when there are increased traffic volumes, new intersections and significant increases in inefficiencies at TCS1200. Currently traffic that approaches TCS1200 and traffic along Bridge Road must travel through TCS230. With the new proposed layout at TCS1200 significant increases in delays are expected at TCS230 if the new pedestrian crossing at TCS1200 is introduced. Also, the left turn from Wattle Street into Pyrmont Bridge Rd will further impact the network.</p>	<p>The traffic modelling indicates that all intersections on the Bridge Road corridor, including at the Western Distributor, operate at acceptable levels of service, with no major changes between the 'existing' and 'future' year scenarios.</p>
<p>Modelling has not been shown at the Pyrmont Bridge Rd / Western Distributor intersection. However, modelling results at Pyrmont Bridge Rd / Wattle St show that the future scenario queue lengths will extend beyond this intersection.</p>	<p>The updated traffic modelling has included the Pyrmont Bridge Rd / Western Distributor intersection</p>
<p>Pedestrian protection shall be provided for the dual right turns from Wattle Street into Bridge Road (TCS1200). The new pedestrian crossing at the northern approach of Pyrmont Bridge Road will also need to be reflected in the modelling.</p>	<p>The modelling has considered appropriate levels of pedestrian protection.</p>
<p>The proposed increase in road level along Bridge Road between Wattle Street and Wentworth Park Road will require removal of a significant amount of foliage from the established Moreton Bay fig trees. These are considered to be highly important to the community and should be protected where possible. Furthermore the increase in finished levels along Bridge Road will potentially exacerbate localised flooding on the surrounding road network.</p>	<p>Details of impacts to existing trees and flooding are addressed separately as part of the Response to Submissions document.</p>
<p>There is expected to be a high number of pedestrians walking throughout the front promenade. Consideration shall be provided for a dedicated cycle way as the shared path will likely introduce safety concerns when mixed with moderate to high speed commuter cyclists.</p>	<p>Justification for the introduction of a shared path along Bridge Road, rather than a dedicated cycleway, is discussed in Section 2.5 of this document.</p>

3.2 Traffic modelling methodology

A meeting was held between Infrastructure NSW and Transport for NSW on 14 January 2019 to discuss the scope of the additional traffic modelling required to address the comments raised during the exhibition of the SSDA. As agreed with Transport for NSW, the following methodology was undertaken:

- (i) Prepare an 'base year' SIDRA network model for the following intersections in the vicinity of the site which is reflective of existing traffic conditions. The intersections assessed are as follows:
 - Wentworth Park Road / Bridge Road
 - Bridge Road / Wattle Street
 - Bridge Road / Western Distributor
 - Pyrmont Bridge Road / Harris StreetThe models were prepared for the weekday morning/afternoon and Saturday peak hour periods
- (ii) Prepare a future year SIDRA network model for the identified intersections which considers the following:
 - Changes in traffic flows associated with the relocation of the Sydney Fish Market (including growth associated with the new development)
 - Proposed new vehicle access point (traffic lights) at Wentworth Park Road / Bridge Road
 - Proposed changes to the Bridge Road / Wattle Street intersection including the removal of the left turn slip lane
- (iii) Provide a summary of the traffic modelling outputs for each intersection, including:
 - Level of service
 - Degree of saturation
 - Queue length

3.3 Appropriateness of 2017 traffic data

Traffic data collected in March 2017 was used as the basis for the traffic modelling undertaken in the vicinity of the new Sydney Fish Market as part of the SSDA. This March 2017 traffic data was reviewed against more recent to confirm that it remained appropriate for use in the updated traffic modelling.

SCATS data for two days in November 2019 was obtained to compare total traffic flows through the Wattle Street / Bridge Road intersection (TCS 1200) with those recorded in March 2017. These flows are summarised in the tables below, and indicates volumes through the intersection have not changed substantially since 2017.

Bridge Road (West Approach)

Time Period	Mar-17	26/11/2019	27/11/2019
AM (7am - 9am)	1833	1808	1773
PM (4pm - 7pm)	1748	1654	1680

Bridge Road (East Approach)

Time Period	Mar-17	26/11/2019	27/11/2019
AM (7am - 9am)	1700	1885	1834
PM (4pm - 7pm)	3056	3329	3277

Wattle Street (South Approach)

Time Period	Mar-17	26/11/2019	27/11/2019
AM (7am - 9am)	1438	1325	1271
PM (4pm - 7pm)	2695	2557	2558

Total traffic flows (all approaches combined)

Time Period	14/03/2017	26/11/2019	27/11/2019
AM (7am - 9am)	4971	5018	4878
PM (4pm - 7pm)	7499	7540	7515

3.4 Road network changes

A summary of the road network changes adopted for the future year model are summarised in the sections below.

3.4.1 Wattle Street / Bridge Road

The following changes were made at the Wattle Street / Bridge Road intersection for the future year model.

- (i) Removal of the existing left turn slip lane from Wattle Street into Bridge Road; and
- (ii) Reallocation of existing exclusive through lane on Bridge Road (west) to become a shared through/right turn lane. This was identified in the modelling as a suitable measure to manage the increased right turning traffic flows from the new Sydney Fish Market development from Bridge Road onto Wattle Street.

The assumed layout is shown below in Figure 1

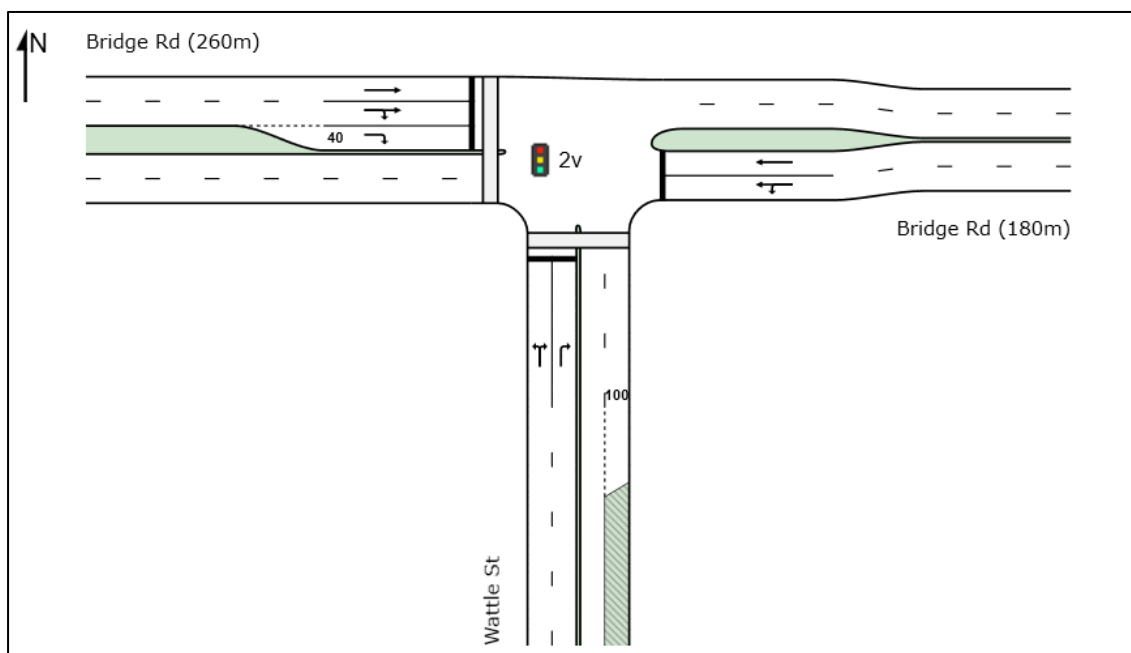


Figure 10 Future year Wattle Street / Bridge Road layout

Removal of the slip lane is required to improve pedestrian amenity and safety, particularly given that this crossing will form part of the primary pedestrian route between the new Sydney Fish Market and the Wentworth Park light rail stop (see Figure 11). It is forecast that over 900 pedestrians per hour may utilise this crossing, and the existing traffic island does not provide a safe environment to accommodate this volume of pedestrians.

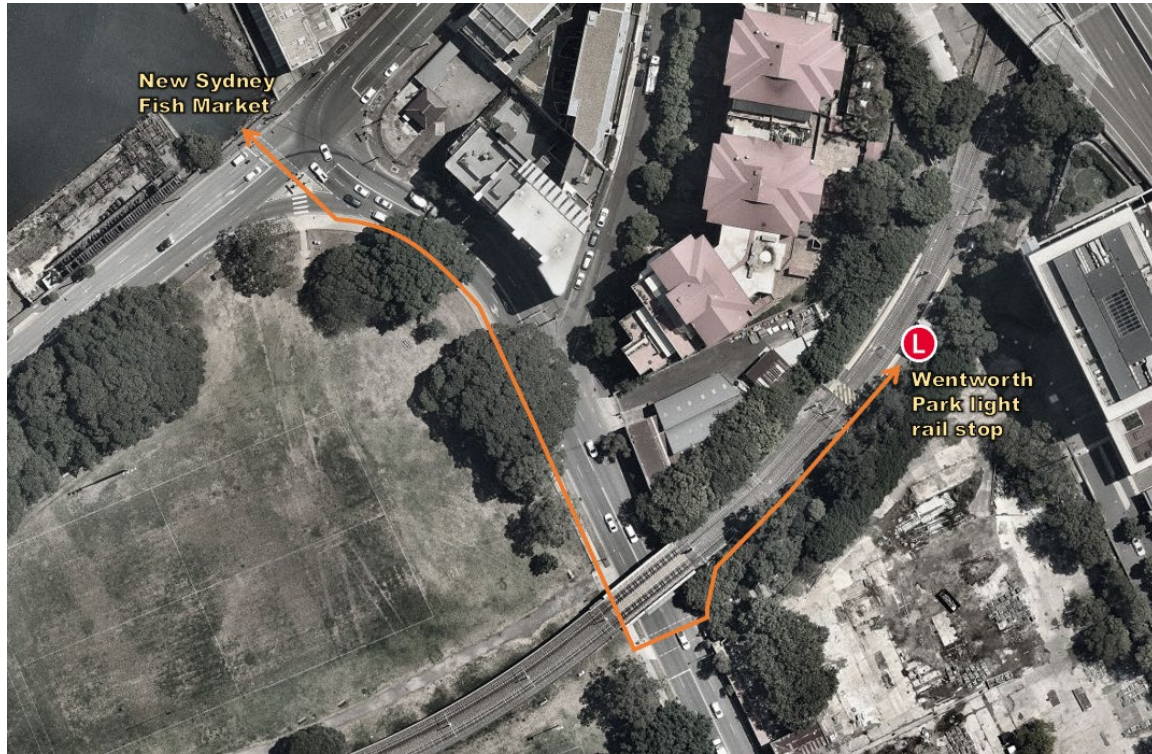


Figure 11 Pedestrian route between rail stop and nSFM

3.4.2 Bridge Road / Wentworth Park Road

To facilitate efficient vehicle access into the new Sydney Fish Market site, as well as to provide for enhanced pedestrian connectivity, traffic signals are proposed at the Bridge Road / Wentworth Park Road intersection. The assumed layout is illustrated in the figure below.

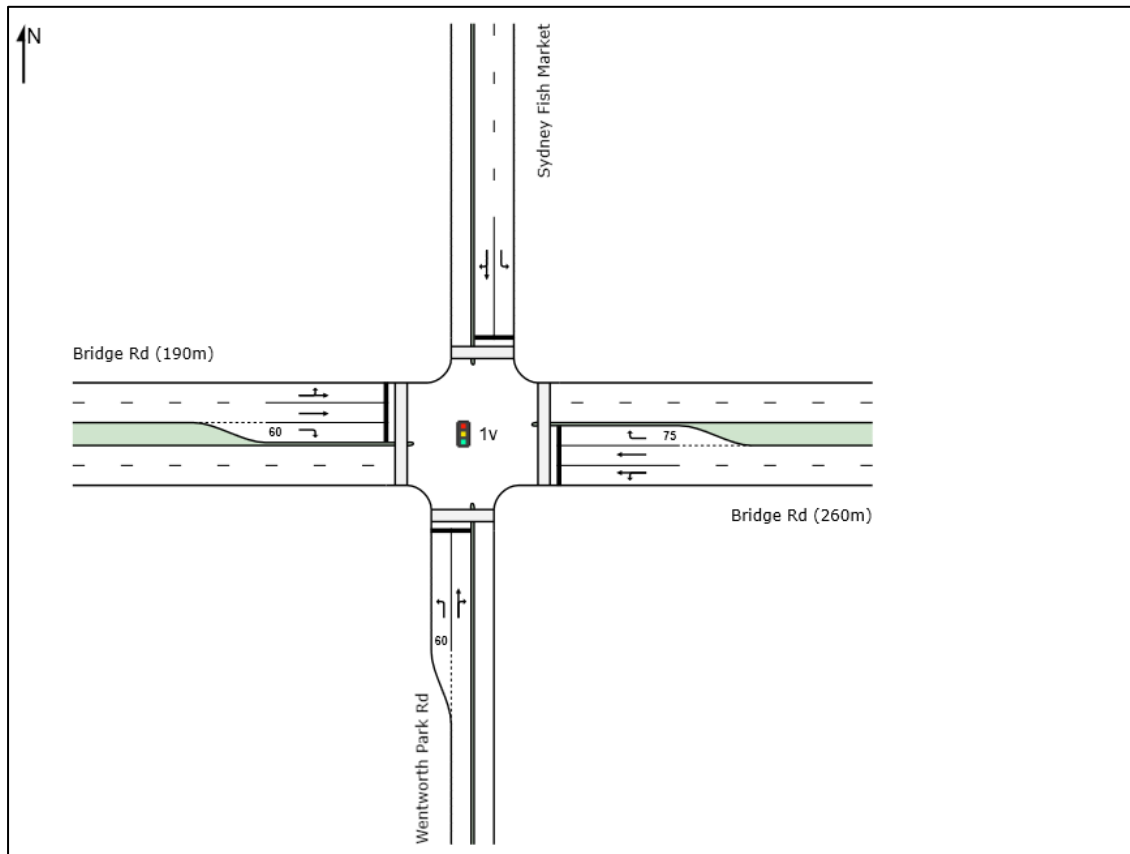


Figure 12 Future year Bridge Road / Wentworth Park Road layout

3.5 Traffic flow changes

The changes in traffic flows on the Bridge Road corridor as a result of the relocation of the Sydney Fish Market from its current site to the head of Blackwattle Bay is illustrated in the diagrams on the following pages. These traffic flow changes also consider the future increased traffic demands forecast with the new facility, particularly in the PM peak hour. Consistent with the analysis in the original Transport Impact Assessment, the modelling takes into account the maximum forecast visitation of the new SFM of 6 million visitors per year by 2034. Prior to this date, traffic flows associated with the new SFM will be lower than that reported in this analysis.

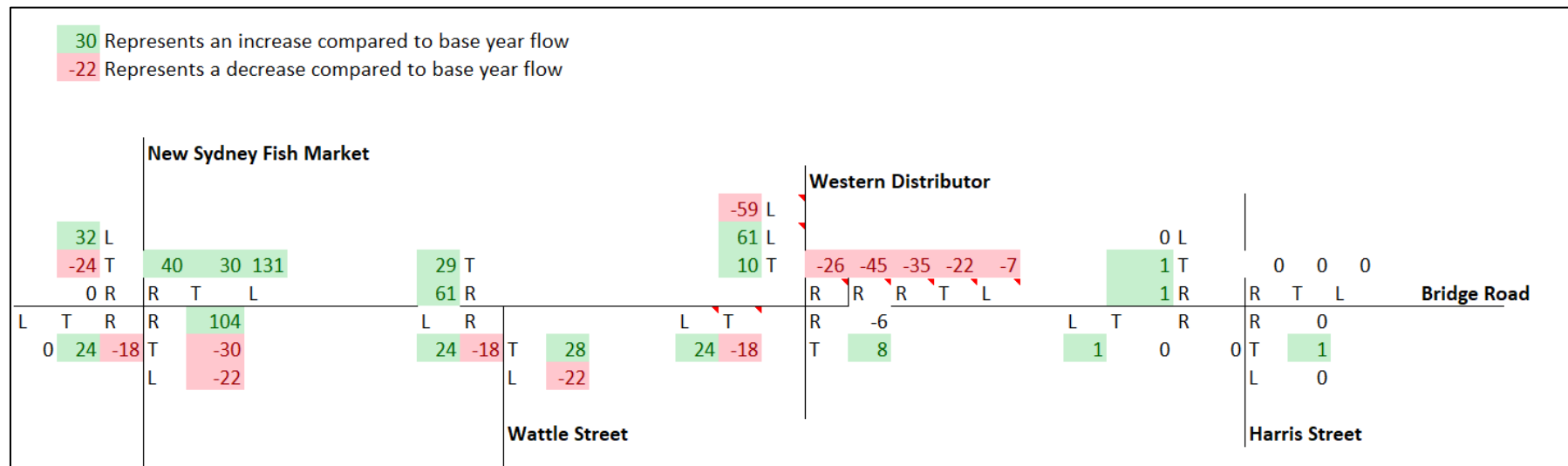


Figure 13 Change in traffic flows – AM peak hour

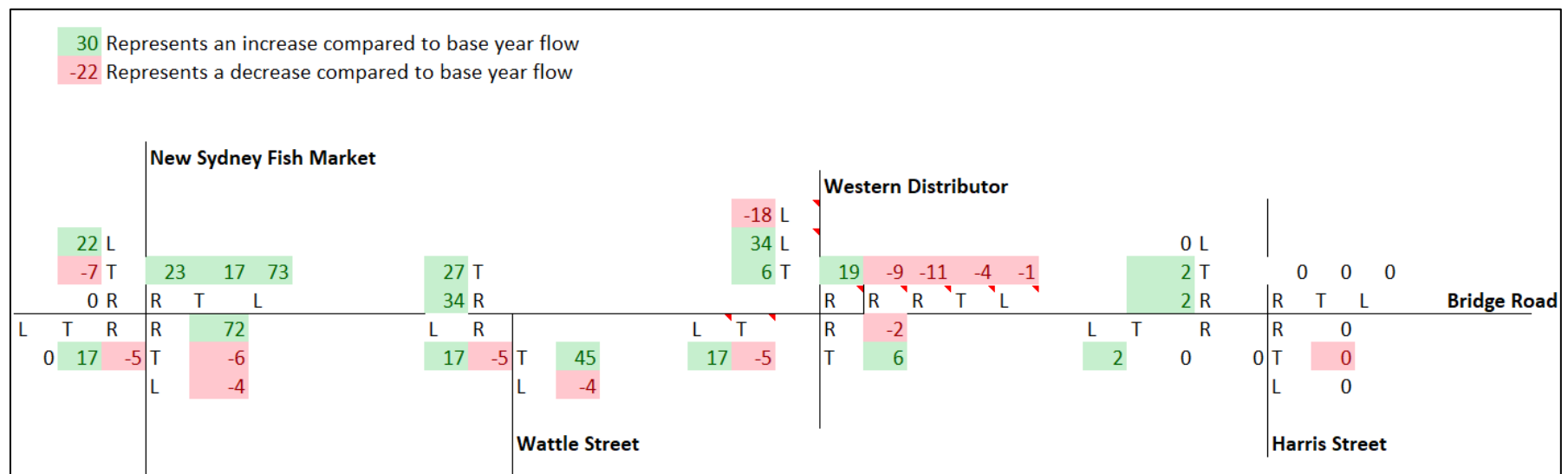


Figure 14 Change in traffic flows – PM peak hour

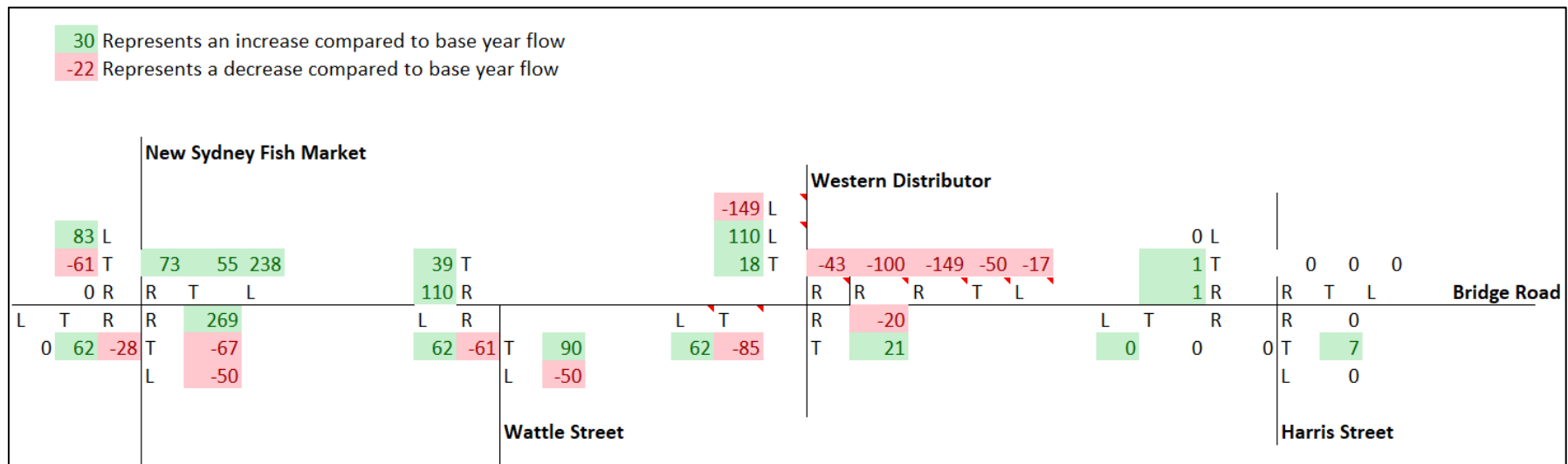


Figure 15 Change in traffic flows – Saturday peak hour

3.6 Traffic Modelling Results

A summary of the traffic modelling results are provided in the following tables for the identified intersections along Bridge Road. The modelling has considered the operation of these intersections under both the 'existing' and 'future' year scenarios, for the AM, PM and Saturday peak hour periods.

The modelling indicates the all intersections operate at acceptable levels of service, with no major changes between the 'existing' and 'future' year scenarios. This is largely the result of the traffic redistribution from the existing Fish Market site to the new site, rather than significant amounts of additional traffic being added to the network as a result of the proposal.

The proposed changes to be introduced at the Bridge Road / Wattle Street intersection, particularly the removal of the left turn slip lane, do not result in the intersection performing unacceptably during peak periods.

One noteworthy finding from the traffic modelling was at the proposed Wentworth Park Road / Bridge Road signalised intersection during the Saturday peak hour. Previous modelling undertaken for the TIA considered an 80 second cycle time for the new signalised intersection, which provides an optimal outcome in terms of vehicle delays and queue lengths.

Following advice from TfNSW however, the updated modelling has considered a 120 second cycle time. As a result of this increased cycle time, the modelling indicates that the maximum queue in the right turn bay on Bridge Road (turning into the new Sydney Fish Market) is forecast to be approximately 95m – exceeding the available bay length of 75m. Should TfNSW maintain the requirement to operate the proposed traffic lights at a 120 second cycle time during the weekend peak hour, it is recommended that investigations be undertaken into the feasibility of extending the turn bay by 20m.

It should also be noted that this issue is not forecast to arise during the AM and PM weekday peak hours, with the maximum queue length in the right turn bay less than the available 75m.

Table 1 Traffic modelling results – Bridge Road / Wentworth Park Road

Intersection approach / Scenario		Level of Service		Deg. of Saturation		Max Queue (m)	
		Existing	Future	Existing	Future	Existing	Future
AM Peak Hour	Bridge Road (East)	A	E	0.26	0.90	0	203
	Bridge Road (West)	A	C	0.34	0.94	0	161
	Went Park Road (South)	B	C	0.70	0.32	17	37
	Fish Market (North)	n/a	C	n/a	0.31	n/a	29
	Overall	D	D	0.70	0.94	17	203
PM Peak Hour	Bridge Road (East)	A	C	0.28	0.97	0	224
	Bridge Road (West)	A	C	0.19	0.97	0	77
	Went Park Road (South)	B	C	0.65	0.44	18	63
	Fish Market Access (North)	n/a	C	n/a	0.16	n/a	15
	Overall	B	C	0.65	0.97	18	224
SAT Peak Hour	Bridge Road (East)	A	D	0.25	0.92	0	176
	Bridge Road (West)	A	D	0.16	0.92	0	115
	Went Park Road (South)	B	C	0.51	0.37	12	56
	Fish Market (North)	n/a	C	n/a	0.45	n/a	52
	Overall	B	D	0.51	0.92	12	176

Table 2 Traffic modelling results – Bridge Road / Wattle Street

Intersection approach / Scenario		Level of Service		Deg. of Saturation		Max Queue (m)	
		Existing	Future	Existing	Future	Existing	Future
AM Peak Hour	Bridge Road (East)	E	D	0.92	0.85	252	232
	Bridge Road (West)	D	B	0.92	0.84	175	86
	Wattle Street (South)	E	D	0.89	0.74	189	153
	Overall	D	C	0.92	0.85	252	232
PM Peak Hour	Bridge Road (East)	D	D	0.84	0.85	231	247
	Bridge Road (West)	C	B	0.83	0.81	91	68
	Wattle Street (South)	D	D	0.83	0.80	205	211
	Overall	D	D	0.84	0.85	231	247
SAT Peak Hour	Bridge Road (East)	D	E	0.82	0.90	212	245
	Bridge Road (West)	C	A	0.86	0.50	124	60
	Wattle Street (South)	D	E	0.83	0.90	188	213
	Overall	D	D	0.85	0.90	212	245

Table 3 Traffic modelling results – Bridge Road / Western Distributor

Intersection approach / Scenario		Level of Service		Deg. of Saturation		Max Queue (m)	
		Existing	Future	Existing	Future	Existing	Future
AM Peak Hour	Bridge Road (East)	D	D	0.73	0.71	60	59
	Bridge Road (West)	B	B	0.87	0.79	140	156
	West. Distributor (South)	E	D	0.91	0.79	150	139
	West. Distributor off ramp	F	D	0.98	0.89	377	264
	Bank Street (North)	E	E	0.87	0.80	119	96
	Overall	D	C	0.98	0.89	378	264
PM Peak Hour	Bridge Road (East)	C	D	0.70	0.84	138	167
	Bridge Road (West)	B	B	0.57	0.60	107	64
	West. Distributor (South)	D	D	0.71	0.85	117	144
	West. Distributor off ramp	A	A	0.37	0.37	52	51
	Bank Street (North)	D	E	0.71	0.83	89	102
	Overall	C	C	0.71	0.85	138	167
SAT Peak Hour	Bridge Road (East)	D	D	0.71	0.75	83	98
	Bridge Road (West)	B	C	0.55	0.54	94	53
	West. Distributor (South)	D	C	0.71	0.72	115	124
	West. Distributor off ramp	A	A	0.40	0.39	61	55
	Bank Street (North)	D	D	0.70	0.75	98	91
	Overall	C	C	0.71	0.75	115	124

Table 4 Traffic modelling results – Bridge Road / Harris Street

Intersection approach / Scenario		Level of Service		Deg. of Saturation		Max Queue (m)	
		Existing	Future	Existing	Future	Existing	Future
AM Peak Hour	Bridge Road (East)	A	A	0.18	0.18	20	20
	Bridge Road (West)	A	A	0.55	0.55	162	144
	Harris Street (South)	D	D	0.56	0.56	66	66
	Harris Street (North)	D	D	0.52	0.52	74	73
	Overall	B	B	0.56	0.56	162	144
PM Peak Hour	Bridge Road (East)	B	B	0.30	0.35	65	68
	Bridge Road (West)	B	B	0.45	0.45	113	117
	Harris Street (South)	C	C	0.45	0.45	73	73
	Harris Street (North)	C	C	0.39	0.40	79	79
	Overall	B	B	0.45	0.45	113	117
SAT Peak Hour	Bridge Road (East)	A	A	0.15	0.15	30	31
	Bridge Road (West)	A	A	0.39	0.39	102	102
	Harris Street (South)	C	C	0.40	0.40	64	64
	Harris Street (North)	D	D	0.39	0.39	69	69
	Overall	B	B	0.40	0.40	102	102

3.7 Summary

The updated traffic modelling of the Bridge Road corridor, which considers the operation of four signalised intersections as a single network, has confirmed that the new Sydney Fish Market development will have acceptable impacts on the surrounding road network. The analysis indicates that key intersections on Bridge Road from Wattle Street to Harris Street will operate at the same level of service compared to existing conditions.

The modelling has also demonstrated that proposed enhancements to pedestrian safety and amenity at the Wattle Street / Bridge Road will not adversely impact the operation of the road network. This is consistent with the findings contained in the original transport report supporting the SSDA.

Modelling at the future Bridge Road / Wentworth Park Road traffic lights, utilising the recommended 120 second cycle time, indicates that the maximum queue in the right turn bay on Bridge Road will exceed the available length by approximately 20m during the weekend peak hour. Should TfNSW maintain the requirement to operate the proposed traffic lights at a 120 second cycle time during the weekend peak hour, it is recommended that investigations be undertaken into the feasibility of extending the future right turn bay by 20m.

Appendix A: Full Agency Submissions
