Attachment 9 – Updated Transport Assessment, Aecom

Blackwattle Bay

Response to Submissions

June 2022

NSW GOVERNMENT

Prepared for
Infrastructure NSW
ABN: 85 031 302 516

Blackwattle Bay SSP Study - Updated Transport Assessment

Addendum to Transport Accessibility and Management Plan (TMAP)

03-Jun-2022
Renewal of Blackwattle Bay
Doc No. 1

Blackwattle Bay SSP Study - Updated Transport Assessment

Client: Infrastructure NSW

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1.0 Introduction

1.1 Blackwattle Bay State Significant Precinct Study

The Blackwattle Bay State Significant Precinct (SSP) Study is proposing to rezone Blackwattle Bay with a new planning framework and planning controls to enable its future urban renewal.

The rezoning proposal has been revised based on feedback received during the public exhibition period (from 2 July 2021 to 20 August 2021). The revised Blackwattle Bay Precinct Plan ('Precinct Plan') provides a conceptual layout to guide the development of planning controls for the precinct and has informed this report. Key characteristics of the revised Precinct Plan include:

- New homes, jobs and services close to the Sydney city centre including:
  - 5,645 jobs (reduction of 265 jobs from exhibited Precinct Plan)
  - 2,014 residents (reduction of 836 residents from exhibited Precinct Plan)
  - 1,203 dwellings (reduction of 377 dwellings from exhibited Precinct Plan)
- A continuous waterfront promenade – the missing link in an otherwise 15-kilometre foreshore walk from Woolloomooloo to Rozelle
- New active transport connections to bring the neighbourhood closer to the harbour through new and improved pedestrian and cycling links
- Improved public transport options and minimised vehicle usage strategies including:
  - Minimising car parking spaces with limited on-street parking.
  - Ferry wharf
  - Opportunity for buses to service through-site link
  - Connections to the existing light rail
  - Access to a future metro station in Pyrmont
- New parks and green space with 30,000 square metres of new open space
- An authentic, and world class new Sydney Fish Market at the heart of Blackwattle Bay
- An authentic place that builds on Indigenous and industrial stories and celebrating the local character.

1.2 AECOM scope

AECOM prepared the Blackwattle Bay Transport Management and Accessibility Plan (TMAP) to support the exhibited Blackwattle Bay SSP Study. The purpose of this Updated Transport Assessment is to respond to feedback received during the public exhibition period. This assessment forms part of the revised Blackwattle Bay SSP Study, which seeks a rezoning for new planning controls.

AECOM used a variety of data sources to prepare this Updated Transport Assessment such as 2016 Census data for Journey To Work trips, trip generation from the Transport for NSW *Guide to Traffic Generating Developments,* forecast demand from the Sydney Motorway Project Model, pedestrian survey counts and outputs from the new *Sydney Fish Market Environmental Impact Statement.*

This diverse range of sources has informed the development of an evidence-based and data-driven Updated Transport Assessment that has a clear vision to achieve a high sustainable mode share target for trips to and from Blackwattle Bay.

The outcomes identified in this report indicate a mode share of 85% for public transport, walking and cycling will benefit both the new residents, workers and visitors in Blackwattle Bay, and the vibrant existing community in the Pyrmont Peninsula.

1.3 Report structure

This Updated Transport Assessment Report has been prepared by AECOM to address the feedback received during the public exhibition period, and to support the finalisation of the Blackwattle Bay SSP Study. The report is structured as follows:

- **Section 2.0: Revised Precinct Plan** provides an overview of the revised rezoning application and the consequent trip generation and traffic modelling outcomes
  - **Section 2.1: Revised trip generation** identifies the impact of the reduced development yields on trip generation and demand for different transport modes
  - **Section 2.2: Revised traffic modelling** outlines the impact of the reduced development yields on traffic generation and distribution
- **Section 3.0: Response to submissions** responds to the feedback received during the public exhibition period:
  - **Section 3.1: Stakeholder feedback** presents a summary of the feedback received from various stakeholders
  - **Section 3.2: Mode share analysis** provides further mode share analysis to justify the 85% target for walking, cycling and public transport
  - **Section 3.3: Footpath capacity analysis** details the footpath capacity analysis on Pyrmont Bridge Road to cater for the anticipated demand in the morning peak hour
  - **Section 3.4: Updated maximum parking provision** details the updated parking provision based on the revised development yields and further downward pressure on parking rates
  - **Section 3.5: Traffic modelling clarifications** provides clarifications on the traffic modelling assumptions
  - **Section 3.6: Freight considerations** details the number of freight trips generated by the revised development yields and how these can be accommodated
- **Section 4.0: Next steps** outlines the next steps for the renewal of Blackwattle Bay
  - **Section 4.1: State Significant Precinct Study** outlines the determination process for the Blackwattle Bay SSP Study.
  - **Section 4.2: Pyrmont Ultimo Transport Plan** introduces the next step in preparing a holistic transport plan for the Pyrmont Peninsula

2.0 Revised Precinct Plan

2.1 Revised trip generation

2.1.1 Approach

A detailed four-step methodology was used to undertake the revised trip generation assessment. This approach took the trip generation and mode share work developed by Arup in the new *Sydney Fish Market Environmental Impact Statement* and combined it with existing trip generation and mode share behaviour for Pyrmont-Ultimo. This trip generation assessment includes Journey To Work trips as well as other trip types such as education, recreation and shopping. It covers both the new Sydney Fish Market location (Site 1) and the Blackwattle Bay SSP Study Area (Site 2).

The combined trips were re-allocated based on the preferred scenario which aims to achieve 85% of all trips in the AM peak period (7:00am to 9:00am) by walking, cycling and public transport, and the remaining 15% to be taken by private vehicle. This process is shown in Figure 2-1.

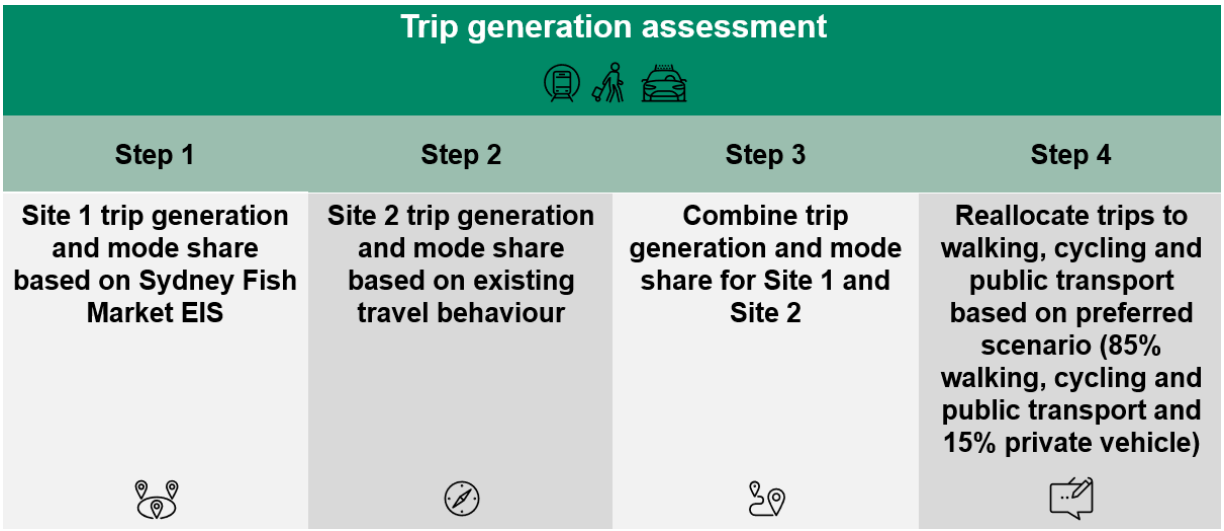

Figure 2-1 Trip generation assessment approach

2.1.2 Step 1: Site 1 trip generation and mode share

The Traffic Impact Assessment prepared for the new *Sydney Fish Market Environmental Impact Statement* expects a combination of employees, buyers/distributors and visitors will travel to Site 1 in the AM peak period. As shown in Table 2-1, it is anticipated that 50% of Site 1 trips will be by private vehicle.

Table 2-1 Site 1 weekday AM peak period mode share

Mode	Trips	Percentage
Walking	685	32%
Light rail	158	7%
Private vehicle	1,061	50%
Bicycle, coach, bus and taxi	211	10%
Total	**2,115**	**100%**

Source: *New Sydney Fish Market Environmental Impact Statement*, Traffic Impact Assessment, Arup, 2019

2.1.3 Step 2: Site 2 trip generation and mode share

Assuming future residents, employees and visitors of Site 2 follow existing travel behaviours of the broader Pyrmont-Ultimo peninsula, it is expected that Site 2 would generate 2,900 public transport trips, 2,000 private vehicle trips and 1,280 walking and cycling trips in the AM peak period. A breakdown of the anticipated trip generation and subsequent mode share for Site 2, as revised in the response to submissions, is shown in Table 2-2.

Table 2-2 Site 2 weekday AM peak mode share

Mode	AM peak period demand					
	Resident trips	%	Employee trips	%	Total trips	%
Walking & cycling	790	45%	490	11%	1,280	21%
Public transport	510	29%	2,390	54%	2,900	47%
Private vehicle	450	26%	1,550	35%	2,000	32%
Total	**1,750**	**100%**	**4,430**	**100%**	**6,180**	**100%**

There are 2.8 planned jobs for every planned resident at Blackwattle Bay. This means the dominant transport task during the morning peak period will be to accommodate people travelling to Blackwattle Bay from other parts of Sydney. A multi-modal transport network which prioritises walking and cycling for shorter trips and metro, light rail and bus for longer trips will support the aspirational sustainable mode share target.

2.1.4 Step 3: Combined Site 1 and Site 2 trips and mode share

Table 2-3 provides a summary of the combined trips and mode shares for Site 1 and Site 2. The mode share breakdown in this table reflects:

- The anticipated number of trips and mode share for Site 1
- The application of existing 'Journey to Work' travel behaviour for residents and workers in Pyrmont-Ultimo.

The new Sydney Fish Market and Scenario 2 have 8,295 trips combined in the AM peak period.

Table 2-3 Blackwattle Bay anticipated weekday AM peak period mode share

Scenario		Private vehicle	Active & public Transport	Total
Site 1				
New Sydney Fish Market TIA	Trips	1,061	1,054	2,115
	Mode share	50%	50%	100%
Site 2				
Scenario 2	Trips	2,000	4,180	6,180
	Mode share	32%	68%	100%
New Sydney Fish Market + Scenario 2	**Trips**	**3,061**	**5,234**	**8,295**
	Mode share	**37%**	**63%**	**100%**

2.1.5 Step 4: Reallocate trips based on preferred scenario

The above analysis indicates existing travel behaviours are likely to result in a mode share of 63% active and public transport and 37% private vehicle. Modal strategies have been developed to achieve an 85% active and public transport and 15% private vehicle mode share target for Blackwattle Bay. Table 2-4 shows the anticipated number of trips by mode using these targets for Blackwattle Bay.

Table 2-4 Blackwattle Bay anticipated number of trips by mode with 85% by active and public transport and 15% by private vehicle

Blackwattle Bay	Private vehicle	Public transport, walking and cycling	Total
Number of trips	1,245	7,050	8,295
Mode share	15%	85%	100%

The reallocation of trips to walking, cycling and public transport has been broken down further into walking and cycling trips and public transport trips. This reallocation was undertaken using the proportions identified in Table 2-2, which showed 68% of trips would be taken by a sustainable mode, of which 21% would be taken by walking and cycling, and 47% by public transport.

This means of all sustainable transport trips:

- 31% would be undertaken by walking and cycling
- 69% would be undertaken on metro, light rail or bus

Applying these proportions to the 85% target for the Blackwattle Bay SSP Study Area indicates 4,860 trips (or 59%) would be taken on metro, bus or light rail, and 2,190 trips (or 26%) would be undertaken by walking or cycling. This is shown in Table 2-5.

Table 2-5 Blackwattle Bay anticipated number of trips by mode

Blackwattle Bay	Private vehicle	Walking and cycling	Public transport	Total
Number of trips	1,245	2,190	4,860	8,295
Mode share	15%	26%	59%	100%

2.2 Revised traffic modelling

The exhibited Precinct Plan was supported by traffic modelling for the morning peak hour (8:00am to 9:00am) which was undertaken for four different scenarios:

- **Scenario 1:** 2017 existing conditions
- **Scenario 2:** 2033 with no development and no transport interventions
- **Scenario 3:** 2033 with development and no transport interventions
- **Scenario 4:** 2033 with development and transport interventions.

The revised Precinct Plan has lower development yields than the exhibited Precinct Plan. As a result, the traffic generation has been updated for Scenario 3 (2033 with development and no transport interventions) and Scenario 4 (2033 with development and transport interventions) to reflect the lower development yields.

Note that in the remainder of this section:

- Inbound traffic distribution refers to car trips to Blackwattle Bay
- Outbound traffic distribution refers to car trips from Blackwattle Bay.
- A 50% factor has been applied to focus the AM peak period trip generation from Section 2.1 on the AM peak hour (8:00am to 9:00am).

2.2.1 Inbound traffic distribution for Scenario 3: with development and no transport interventions

Figure 2-2 shows the morning peak hour (8:00am to 9:00am) inbound traffic distribution for Scenario 3 under the revised Precinct Plan. In the morning peak hour (8:00am to 9:00am), the highest number of car trips are anticipated to access Blackwattle Bay from the west via the Anzac Bridge (132 movements) followed by the north and east via the Western Distributor (92 movements) and from the south via Wattle Street (73 movements).

Figure 2-2: Morning peak hour (8:00am-9:00am) inbound traffic distribution to Blackwattle Bay

Table 2-6 compares the Scenario 3 inbound trip generation to Blackwattle Bay for the exhibited and revised Precinct Plans. The exhibited Precinct Plan generated a total of 395 inbound trips to Blackwattle Bay during the morning peak hour (8:00am to 9:00am). The revised Precinct Plan generates a total of 380 inbound trips during the morning peak hour (8:00am to 9:00am). The revised Precinct Plan generates 15 fewer car trips during the morning peak hour (8:00am to 9:00am) than the exhibited Precinct Plan, a decrease of 4%.

Table 2-6: Comparison of Scenario 3 inbound trip generation to Blackwattle Bay for the exhibited and revised Precinct Plan

To Blackwattle Bay from	Inbound traffic generation for the morning peak hour (8:00am-9:00am)		
	Exhibited Precinct Plan	Revised Precinct Plan	Difference
Anzac Bridge	138	132	-6
Bank Street	2	2	0
Bridge Road	50	49	-1
Pyrmont Bridge Road	10	10	0
Wattle Street	76	73	-3
Wentworth Park Road	23	22	-1
Western Distributor	96	92	-4
Total	**395**	**380**	**-15**

2.2.2 Outbound traffic distribution for Scenario 3: with development and no transport interventions

Figure 2-3 shows the morning peak hour (8:00am to 9:00am) outbound traffic distribution for Scenario 3 under the revised Precinct Plan. In the morning peak hour (8:00am to 9:00am), the highest number of car trips are anticipated to egress from Blackwattle Bay to the west via the Anzac Bridge (118 movements) followed by the east via the Western Distributor (93 movements) and to the south via Wattle Street (79 movements).

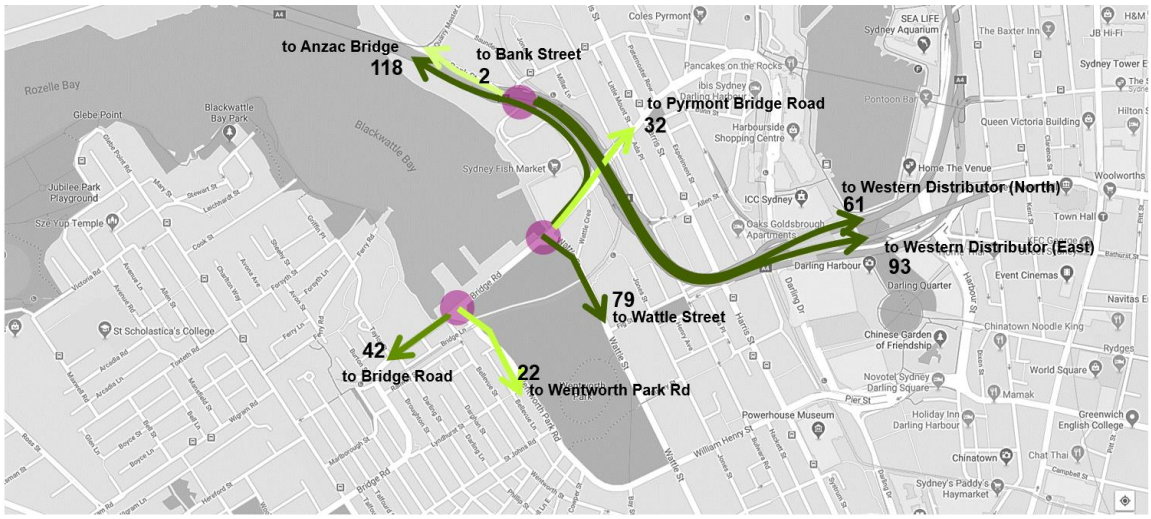

Figure 2-3: Morning peak hour (8:00am-9:00am) outbound traffic distribution from Blackwattle Bay

Table 2-7 compares the Scenario 3 outbound trip generation from Blackwattle Bay for the exhibited and revised Precinct Plans. The exhibited Precinct Plan generated a total of 527 outbound trips from Blackwattle Bay during the morning peak hour (8:00am to 9:00am). The revised Precinct Plan generates a total of 449 outbound trips during the morning peak hour (8:00am to 9:00am). The revised Precinct Plan generates 78 fewer car trips during the morning peak hour (8:00am to 9:00am) than the exhibited Precinct Plan, a decrease of 15%.

Table 2-7: Comparison of Scenario 3 outbound trip generation from Blackwattle Bay for the exhibited and revised Precinct Plans

From Blackwattle Bay to	Outbound traffic generation for the morning peak hour (8:00am-9:00am)		
	Exhibited Precinct Plan	Revised Precinct Plan	Difference
Anzac Bridge	139	118	-21
Bank Street	2	2	0
Bridge Road	49	42	-7
Pyrmont Bridge Road	37	32	-5
Wattle Street	93	79	-14
Wentworth Park Road	25	22	-3
Western Distributor (East)	110	93	-17
Western Distributor (North)	72	61	-11
Total	**527**	**449**	**-78**

2.2.3 Inbound traffic distribution for Scenario 4: with development and transport interventions

Figure 2-4 shows the morning peak hour (8:00am to 9:00am) inbound traffic distribution for Scenario 4 under the revised Precinct Plan. In the morning peak hour (8:00am to 9:00am), the highest number of car trips are anticipated to access Blackwattle Bay from the west via the Anzac Bridge (90 movements) followed by the north and east via the Western Distributor (65 movements) and from the south via Wattle Street (51 movements).

Figure 2-4: Morning peak hour (8:00am-9:00am) inbound traffic distribution to Blackwattle Bay

Table 2-8 compares the Scenario 4 inbound trip generation to Blackwattle Bay for the exhibited and revised Precinct Plans. The exhibited Precinct Plan generated a total of 353 inbound trips to Blackwattle Bay during the morning peak hour (8:00am to 9:00am). The revised Precinct Plan generates a total of 266 inbound trips during the morning peak hour (8:00am to 9:00am). The revised Precinct Plan generates 87 fewer car trips during the morning peak hour (8:00am to 9:00am) than the exhibited Precinct Plan, **a decrease of 25%.**

Table 2-8: Comparison of Scenario 4 inbound trip generation to Blackwattle Bay for the exhibited and revised Precinct Plans

To Blackwattle Bay from	Inbound traffic generation for the morning peak hour (8:00am-9:00am)		
	Exhibited Precinct Plan	Revised Precinct Plan	Difference
Anzac Bridge	122	90	-32
Bank Street	2	2	0
Bridge Road	45	35	-10
Pyrmont Bridge Road	8	6	-2
Wattle Street	69	51	-18
Wentworth Park Road	21	17	-4
Western Distributor	86	65	-21
Total	**353**	**266**	**-87**

2.2.4 Outbound traffic distribution for Scenario 4: with development and transport interventions

Figure 2-5 shows the morning peak hour (8:00am to 9:00am) outbound traffic distribution for Scenario 4 under the revised Precinct Plan. In the morning peak hour (8:00am to 9:00am), the highest number of car trips are anticipated to egress from Blackwattle Bay to the west via the Anzac Bridge (95 movements) followed by the east via the Western Distributor (73 movements) and to the south via Wattle Street (63 movements).

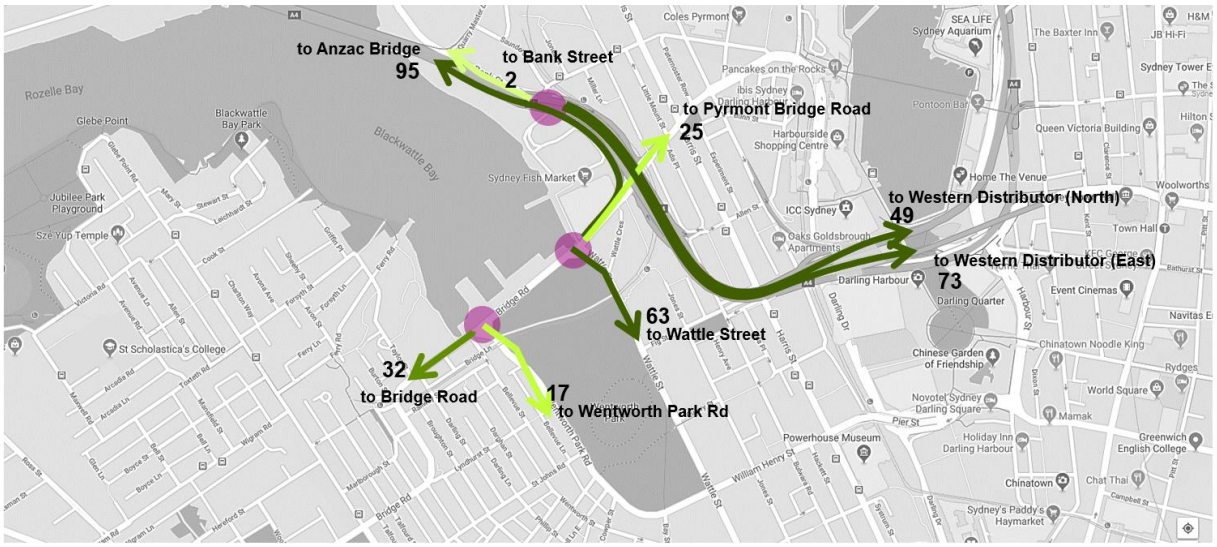

Figure 2-5: Morning peak hour (8:00am-9:00am) outbound traffic distribution from Blackwattle Bay

Table 2-9 compares the Scenario 4 outbound trip generation from Blackwattle Bay for the exhibited and revised Precinct Plans. The exhibited Precinct Plan generated a total of 476 outbound trips from Blackwattle Bay during the morning peak hour (8:00am to 9:00am). The revised Precinct Plan generates a total of 356 outbound trips during the morning peak hour (8:00am to 9:00am). The revised Precinct Plan generates 120 fewer car trips during the morning peak hour (8:00am to 9:00am) than the exhibited Precinct Plan, **a decrease of 25%**.

Table 2-9: Comparison of Scenario 4 outbound trip generation from Blackwattle Bay for the exhibited and revised Precinct Plans

From Blackwattle Bay to	Outbound traffic generation for the morning peak hour (8:00am-9:00am)		
	Exhibited Precinct Plan	Revised Precinct Plan	Difference
Anzac Bridge	124	95	-29
Bank Street	2	2	0
Bridge Road	44	32	-12
Pyrmont Bridge Road	34	25	-9
Wattle Street	84	63	-21
Wentworth Park Road	24	17	-7
Western Distributor (East)	99	73	-26
Western Distributor (North)	65	49	-16
Total	**476**	**356**	**-120**

3.0 Response to submissions

3.1 Stakeholder feedback

A summary of the feedback received from various stakeholders including the Department of Planning and Environment, Transport for NSW, City of Sydney and public submissions are shown from Table 3-1 to Table 3-3. It also identifies the relevant sections where this feedback has been addressed in this report.

Table 3-1: Public exhibition feedback from Transport for NSW

Public Transport		
Transport for NSW issue	**TMAP content**	**Updated Transport Assessment**
• 85% active and public transport mode share needs to be further developed in the TMAP. • Non-private vehicle mode share is high and unclear how this will be achieved. Reduced parking will not on its own allow for the desired public transport mode share.	• The mode share target for walking and cycling is set at 29%, public transport at 56% and private vehicle (PV) at 15%.	• This is addressed in Section 3.2, where two “big shifts” are identified and key TMAP recommendations are reinforced.
• A connection to the future Pyrmont Metro Station needs to be progressed in the very short term as part of the Pyrmont Metro Station design. • Can be provided as part of the Pyrmont metro station design.	• A dedicated walking network with pedestrian footpaths on all roads and streets. • Consideration of a high amenity environment for walking throughout the precinct, which provides for priority access to, from and within Blackwattle Bay, particularly from new Pyrmont metro station and the new Sydney Fish Market.	• This analysis is detailed in Section 3.3, where we use Transport for London and Transport for NSW guidance to assess the key pedestrian connection on Pyrmont Bridge Road
• Opportunity for Light Rail to be key factor in delivering 53% public transport mode share. i.e. improvement to wayfinding to the precinct from light rail stops.	• Light rail and buses would remain the dominant public transport modes. • Improved public transport options and minimised vehicle usage strategies including: • Minimising limited on-street parking • Ferry wharf • Opportunity for buses to service through site link • Connections to the existing light rail - Access to a future metro station in Pyrmont	• This is addressed in Section 3.2, where key TMAP recommendations are reinforced. • Sydney Metro represents the greatest opportunity to deliver the revised 59% public transport mode share target.
• The continuous waterfront promenade will connect the Glebe foreshore with the Pyrmont Peninsula completing the foreshore walkway linking Glebe and Woolloomooloo for pedestrians and cyclists. The continuous promenade is strongly supported.		• The project team has widened the continuous waterfront promenade.
• Provision of new ferry wharves (including use of wharves or overnight ferry berthing) for the new fish markets and ‘Site 2’ (commercial and residential land use components) suitable for low-wash ferry vessels and which are future proofed for servicing. • Provision of providing charging for electric ferries should be considered	• There is potential for a privately operated ferry stop in Blackwattle Bay with provision of a ferry wharf at the New Sydney Fish Market. A public ferry service is not proposed. • Future wharves can be accommodated within Blackwattle Bay in accordance with the recommendations of the Navigation Study.	• Noted. No changes are proposed to ferry operations in the Updated Transport Assessment.

Traffic Modelling		
Transport for NSW issue	**TMAP content**	**Updated Transport Assessment**
• Unclear if the traffic modelling approach used to assess the impact of the proposal on the road network includes major transport infrastructure including WestConnex, future Metro West Pyrmont Station, western harbour tunnel and beaches link	The TMAP includes the following: • Trips generation assessment • Transport capacity assessment • Traffic impacts • WestConnex, Sydney Metro West, Western Harbour Tunnel are only discussed in future land use context.	This is addressed in Section 3.5. Traffic modelling: • Included WestConnex, Western Harbour Tunnel and Beaches Link. It did not include Pyrmont Station on the Sydney Metro West Line. • Outputs that included a Pyrmont Station were unavailable at the time of analysis. It is anticipated that the Sydney Metro West Line could reduce local traffic generation.
• Unclear if modelling considered uplift in employment and residential land use and densification proposed under Pyrmont Peninsula Place Strategy and Bays West Strategy. Clarification is sought on the assumptions	The operational traffic impacts of the Blackwattle Bay precinct were assessed against following three scenarios: • 2033 without development • 2033 with development (extrapolation of existing travel behaviour) • 2033 with development and traffic and transport interventions (85% walking, cycling and public transport mode share, 15% private vehicle mode share).	This is addressed in Section 3.5. To summarise: • Employment and residential land use and densification was consistent with that applied in the version of the Sydney Motorway Project Model (SMPM) that was provided • Both strategies outline the potential future. Neither strategy provides specific information on timing, quantum and mix of floor space uplift to include in the traffic modelling approach. However, as stated in the first bullet point, general future densification has been captured.
Freight servicing		
Transport for NSW issue	**TMAP content**	**Updated Transport Assessment**
• Limited acknowledgement of the need for servicing this precinct other than the fish market (subject to its own planning processes)	• Access to an underground parking and loading space at the new Sydney Fish Market via a signalised intersection will help to separate pedestrians and cyclists from vehicular movements and create a more appealing arrival point.	• Freight servicing and the difference between the freight task in the exhibited Precinct Plan and the revised Precinct Plan are detailed in Section 3.6.
• Recommend the delivery of combined loading dock for the entirety of ‘Site 2’ which services both the residential and commercial developments should be considered.	• The TMAP doesn’t discuss the need for a combined loading dock.	• This recommendation is adopted in Section 3.6.
• The development (excluding fish market) will generate approx. 835 freight vehicle arrivals per day and require a significant amount of space to accommodate it. This hasn’t been considered in the precinct study.	• The TMAP doesn’t include assessment of freight trips.	• AECOM updated the Transport for NSW freight analysis for the revised Precinct Plan. Sites 1 and 2 are estimated to generate 816 daily freight arrivals under the revised Precinct Plan, a reduction of 13%. This is detailed in **Section 3.6**.

Parking		
Transport for NSW issue	**TMAP content**	**Updated Transport Assessment**
• Parking rates are too high for the precinct.	• The Blackwattle Bay SSP Study Area is currently classified as a Category B in the City of Sydney Local Environmental Plan (2012) for residential private vehicle parking rates under Land Use and Transport Integration. It is also identified as a Category F for commercial private vehicle parking rates under Public Transport Accessibility. • Residential – max 932 parking spaces (if reclassifying to category A) • Commercial – max 474 parking spaces (if reclassifying to category D)	Parking rates have been further reduced, based on benchmarking against commercial parking rates for Central Park. This has resulted in a 25% reduction in total proposed carparking, from 1,440 parking spaces to 1,075 parking spaces. This analysis is detailed in Section 3.4.
• The Pyrmont Peninsula Place Strategy identified decoupled parking in this precinct and a need for reduced on-street parking in the precinct in order to encourage active travel and a safer environment for all users. The TMAP has not addressed how this site will address de-coupled parking in the precinct.	• The TMAP does not address de-coupled parking.	• Additional research was undertaken to investigate the benefit of decoupled parking in reducing private vehicle mode share. • Section 2.1.4 shows existing travel patterns would likely result in a 63% mode share split for walking, cycling and public transport. • The revised Precinct Plan retains an 85% mode share target for walking, cycling and public transport. Therefore, based on existing travel patterns, a 22% shift is required to achieve the mode share target. • Parramatta CBD Planning Review – Sustainability and Infrastructure Study 2015 shows the introduction of reduced parking rates can reduce car use by up to 35%. • Therefore, the reduced parking rates are supported by real-world evidence in successfully reducing car use. • Reduced car use is supported by a range of other recommendations to increase walking, cycling and public transport mode share, as reinforced in Section 3.2 • As such, decoupled parking is not required in the revised Precinct Plan.

School Infrastructure		
Transport for NSW issue	**TMAP content**	**Updated Transport Assessment**
• Consideration should be given to assessing the need for new primary school (and potentially high school) within or in close proximity to the Pyrmont peninsula to ensure that adequate supply of education is available to meet demand generated by this proposal and future residential uplift proposed elsewhere in the Pyrmont Peninsula under the *Pyrmont Peninsula Place Strategy* and within the Bays West Precinct as proposed under the *Bays West Place Strategy*. • Insufficient supply of education facilities with acceptable walking distance or good public transport accessibility will likely generate private vehicle trips (for education purpose) above the aspirational 15% maximum private vehicle mode share target.	• N/A	• Noted. Schools Infrastructure NSW confirmed a new school is not currently being planned for.

A summary of the feedback received from the Department of Planning and Environment is shown in Table 3-2. It also identifies the relevant sections where this feedback has been addressed in this report.

Table 3-2: Public exhibition feedback from the Department of Planning and Environment

Movement		
Issue	**DPE recommendation**	**Updated Transport Assessment**
• Traffic and roads were referenced in 246 or 29% of total submissions. Comments raised concern around the existing level of vehicle traffic particularly at peak hour many referencing traffic carried on the Western Distributor. Further comments reflected concerns around peak travel times for the Sydney Fish Market and safe travel to schools during the morning peak. Schools Infrastructure NSW also raised the issue of safe routes to school in its submission. • The TMAP does not clearly identify if the traffic modelling approach used to assess the impact of the proposal on the road network includes: - Major transport infrastructure including WestConnex, future Metro West Pyrmont Station, western harbour tunnel and beaches link; and - Uplift in employment and residential land use and densification proposed under Pyrmont Peninsula Place Strategy and Bays West Strategy. • As identified in the Transport Management and Accessibility Plan (TMAP), the mode share target for walking and cycling is set at 29%, public transport at 56% and private vehicle at 15%. The non-private vehicle mode share is considered high for proposed plans for the precinct and preliminary assessment has found insufficient evidence regarding how this will be achieved.	• Provide evidence to demonstrate that measures to place downward pressure on private vehicle mode share and measures to increase active and public transport mode share will enable the target mode share split.	• This is addressed in Section 3.2, where two “big shifts” are identified and key TMAP recommendations are reinforced.
	• The TMAP should be updated to identify and confirm modelling and assumptions.	This is addressed in Section 3.5. To summarise: • Employment and residential land use and densification was consistent with that applied in the version of the Sydney Motorway Project Model (SMPM) that was provided • AECOM received outputs from SMPM in mid-2018 and undertook traffic modelling prior to the release of the Pyrmont Peninsula Place Strategy and the Bays West Strategy.

Movement		
Issue	**DPE recommendation**	**Updated Transport Assessment**
• Approximately 14% of submissions commented on parking provisions. These comments included concerns regarding the availability of on-street parking resulting from the new development and impacts related to visitors to the Sydney Fish Market. • It is noted the proposal applies standard parking rates within the City of Sydney LEP. Preliminary assessment has found however that the proposed standard parking rates do not align with the ambitious targeted private vehicle mode share or with the provision of a new city-serving Metro station.	• Provide evidence to demonstrate that measures to place downward pressure on private vehicle mode share and measures to increase active and public transport mode share will enable the target mode share split.	This is addressed in Section 3.2, where two “big shifts” are identified and key TMAP recommendations are reinforced. The parking rates have been further reduced, based on: • Reduced development yields • Benchmarking against commercial parking rates for Central park. This analysis is detailed in Section 3.4.
	• Benchmark against other precincts such as Barangaroo, Rhodes Peninsula or other precincts with similar mode share targets.	• Commercial parking rates for Central Park were determined to be the most suitable benchmark for Blackwattle Bay due to its comparable geographic context and mode share targets (80% walking, cycling and public transport). This analysis is detailed in Section 3.4. • It was determined that the geographic context (on the edge of the Sydney city centre) and mode share aspirations for Barangaroo (96% walking, cycling and public transport) were not comparable to Blackwattle Bay. • Similarly, it was determined that the geographic context (16km from the Sydney city centre) and existing mode share for Rhodes (44% of residents and 62% of workers drive to work) were not comparable to Blackwattle Bay.
	• Provide response to PPPS place priority to provide decoupled parking.	• Additional research was undertaken to investigate the benefit of decoupled parking in reducing private vehicle mode share. Refer to response in Table 3-5.

Movement		
Issue	**DPE recommendation**	**Updated Transport Assessment**
• Approximately 14% of submissions commented on parking provisions. These comments included concerns regarding the availability of on-street parking resulting from the new development and impacts related to visitors to the Sydney Fish Market. • It is noted the proposal applies standard parking rates within the City of Sydney LEP. Preliminary assessment has found however that the proposed standard parking rates do not align with the ambitious targeted private vehicle mode share or with the provision of a new city-serving Metro station.	• Provide response to PPPS place priority to provide decoupled parking.	
• Approximately 14% of total submissions noted the need for improvements to pedestrian and/or cycle networks. • The TMAP is based on an ambitious mode share target that requires minimal private vehicle use and places emphasis on active and public transport. Preliminary assessment indicates that there is insufficient evidence to demonstrate that the surrounding pedestrian and cycle network provides sufficient capacity to accommodate the expected number of pedestrian and cycle trips, to ensure the safety and comfort of pedestrians and cyclists and to promote desired place outcomes.	• Update the TMAP to identify and confirm that there is sufficient capacity of major pedestrian routes between the precinct, especially the new Sydney Fish Market, and the Pyrmont Metro station.	The revised Precinct Plan provides for: • A detailed analysis of the capacity of Pyrmont Bridge Road to accommodate a significantly higher number of pedestrians walking between Blackwattle Bay and Pyrmont Station (which will require additional space to accommodate demand). This analysis is detailed in Section 3.3. • A wider continuous waterfront promenade to complete the missing link in the harbour foreshore walk between Woolloomooloo and the Anzac Bridge.
	• Provide additional detail of pedestrian access paths to light rail and locations for wayfinding features and ensure that these features are incorporated into the draft Design Code.	• The provision of a new through-site link will simplify pedestrian access paths between Blackwattle Bay, the New Sydney Fish Market and the light rail stations. New wayfinding provisions have been included in the revised Design Code.

A summary of the feedback received from the City of Sydney and the community during the public exhibition period is shown in Table 3-3. It also identifies the relevant sections where this feedback has been addressed in this report.

Table 3-3: Public exhibition feedback from the City of Sydney and the community

Transport – Traffic / parking	
Issue	**Response**
• Suggestion to include more parking - Concern of further impacts on existing on-street parking issues in Pyrmont and Glebe. • Suggestion for new cars to be discouraged from the development, such as reducing parking. • Residential streets should be car free • Suggest targeting a near zero-parking precinct in which parking for private vehicles is not provided for except for those categories that need to be provided by exception (such as carers, disabled, visitors and appropriately scaled car share). A near zero parking precinct supports Key Move 4 of the PPPS, to provide multi-utility hubs as precinct infrastructure to reduce the need for on-site parking noting that the multi-utility hubs can provide additional benefits. (CoS)	• A range of submissions were received regarding the provision of parking. Some respondents wanted increased parking, whereas other respondents wanted reduced parking. • The project team worked through these issues with the Department of Planning and Environment and the Technical Working Group (which includes Transport for NSW and the City of Sydney). It was ultimately decided that further reductions to parking were required in order to achieve the 85% walking, cycling and public transport mode share target. • In the revised Precinct Plan, the number of parking spaces has been reduced by 25% to 1,075 parking spaces, when compared with the exhibited Precinct Plan. This analysis is detailed in Section 3.4.
• The rezoning should seek to achieve a reconfiguration of road capacity to reduce traffic capacity and provide more capacity for other travel modes on Pyrmont Bridge Road (reduction in travel lanes between Wattle Street and Darling Drive). • Concern existing road network is unable to accommodate new vehicles from development due to an already congested area. • Concern cars for 6,000 new residents will result in additional traffic congestion • Congestion impacts at Bank Street intersection, with the intersection already at capacity in peak hour (can take 15 mins to exit) • Too many people proposed in a small area and choke traffic. • Further information required as to how street traffic will be safely managed. • Concern the traffic assessment hasn't considered COvid-19 changes, PM peak hours, and 2017 data is too out of date, doesn't consider Bank St modelling. • Providing minimal parking seems to be an excuse for not providing adequate parking, making housing more affordable.	• A range of submissions were received regarding road capacity and impacts on traffic congestion. • These submissions reinforce the importance of achieving a high walking, cycling and public transport mode share target, to mitigate impacts on traffic congestion. Our analysis shows that **based on existing travel patterns within the Pyrmont-Ultimo area,** 63% of all trips in the morning peak period would be by walking, cycling and public transport, and the remaining 37% would be by private vehicle. The challenge is to encourage even more people to walk, cycle and use public transport. The revised Precinct Plan aims to do this through leveraging the new Pyrmont Station on the Sydney Metro West Line, better catering for safe, legible and permeable walking and cycling trips, and reducing the amount of parking provided on site. • The revised Precinct Plan has reduced development yields (2,014 residents), which will reduce the number of people travelling to/from the site when compared with the exhibited Precinct Plan.. • Section 3.2 makes recommendations that, if implemented, will enhance safety for pedestrians, cyclists and private vehicles on the road network. For example, reducing pedestrian wait times at signalised intersections is likely to reduce the incidence of jaywalking. Another example is the delivery of the Eastern Harbour City strategic cycleway corridors would better separate cyclists from buses, trucks and private vehicles. • It is unlikely the COVID-19 pandemic will have a significant impact on 2033 travel patterns. It is already apparent traffic congestion across Sydney is comparable to pre-pandemic levels. The Project Working Group agreed to focus the traffic assessment on the morning peak hour as it is the most concentrated peak hour for travel demand, and unlike the afternoon peak hour, is both an employment and education peak. The traffic modelling assessment was undertaken as the Precinct Plan was developed. It is unlikely that an existing conditions assessment undertaken based on 2017 data would result in a significantly different future conditions assessment for 2033 (noting a future conditions assessment forms the basis for supporting the Precinct Plan). The traffic assessment considers Bank Street, Pyrmont, the new Sydney Fish Market and parts of Glebe and Ultimo.

Transport – Traffic / parking	
Issue	**Response**
• Concern the assumption of 10-20% owning a car is in contrary to Motorway projects where car ownership is a long term proposition. • Concern with traffic assumptions – unrealistic to assume people will rely on active transport. • Concern high rise do not help parking shortages • Concern traffic modelling doesn't address cumulative impact of the new Sydney Fish Markets with the redevelopment. • Request for information about SFM parking and where public bus facilities will be located. Need an appropriate plan to manage tourist coaches to the new fish markets. Part of the site should be set aside for tourist coach parking and transport trucks.	• The traffic modelling approach does not assume 10-20% own a car, it aims to achieve a maximum 15% mode share split for private vehicles in the morning peak period. This is achievable if the recommendations identified in Section 3.2 are implemented. • If existing travel patterns from Census data are applied to the anticipated trip generation for the revised Precinct Plan, 63% of people will walk, cycle or use public transport to travel to/from Blackwattle Bay. An 85% mode share target for walking, cycling and public transport is achievable if the recommendations identified in Section 3.2 are implemented. • The traffic modelling approach incorporates the cumulative impact of the new Sydney Fish Market, Pyrmont and parts of Glebe and Ultimo. • Information on new Sydney Fish Market parking and public bus facilities are provided in the New Sydney Fish Market Environmental Impact Statement. • The new Sydney Fish Market has already been approved by the Department of Planning and Environment with a range of conditions. This submission is outside the remit of the Blackwattle Bay SSP Study.
• Lack of improved road infrastructure proposed within the redevelopment. • Suggestion for changes to road network – additional eastbound lane between Miller St and freeway entry U-shaped intersection, and redesign the 3 intersections between Pyrmont Bridge Road and Miller Street to reduce the required numbers of phases. • Concern of additional traffic on Bulwara Road, Bridge Road, Bowman Street to Harris Street, Pirrama Road. • Secondary College P&C submission notes that any increase in traffic generated by the proposal would increase hazards for students travelling to school and recommends: - Signalised crossing at Bridge Road and Wentworth Road - Signalised crossing augmented to include the western side of Wattle Street, Darling Street and Bridge Road, and - Traffic minimisation and/or calming measures be investigated for Taylor Street.	• No changes are proposed to road infrastructure to facilitate the renewal of Blackwattle Bay. The best approach to integrate Blackwattle Bay into the fabric of Pyrmont is to encourage a walking, cycling and public transport use to mitigate impacts on the existing road network. • Changes to the intersection of Bridge Road and Wentworth Park Road (including signalised north-south crossings for pedestrians) are approved under the New Sydney Fish Market Environmental Impact Statement. • The intersection of Bridge Road and Wattle Street is proposed with two signalised north-south crossings for pedestrians). • Taylor Street and the intersection of Bridge Road and Darling Street are outside the Blackwattle Bay SSP Study Area.
• Parking to include bicycle, scooter and motorcycle parking. • Concern no disabled car parking is provided.	• Bicycle parking requirements are detailed in Section 3.4.6. Scooter and motorcycle parking requirements are captured by maximum parking provisions in Section 3.4. • Accessible parking requirements are detailed in Section 3.4.5.

Transport – Public transport	
Issue	**Response**
• Should be integrated/co-located within site • Suggestions for metro locations; proposed location too far from site (especially for people with reduced mobility) • PT at capacity/insufficient bus stops/ferry trial was too $ and not well used – will need further services (various suggestions) • Reliance on PT and cycles unrealistic - especially SFM visitors • Bus routes quoted not near site • Ferry wharf should be located closer to residential area • Transport modelling doesn't account for SFM + residents • Lack of clarity around bus services • Light rail already at capacity in the AM and PM peaks	• Pyrmont Station is located within an 800 metre walk of the developable Blackwattle Bay SSP study area. The most dense built form is concentrated in the southern portion of the site, within a 400 metre walk of Pyrmont Station, light rail stops and bus stops. This provides an excellent level of public transport accessibility. • Public transport recommendations are reinforced in Section 3.2. • Trip generation and traffic modelling approach takes into consideration the New Sydney Fish Market and residents. This is reinforced in Section 2.1**.** • Our analysis of light rail loading indicates there is capacity on the L1 Dulwich Hill Line during peak hours, though it is acknowledged that some doors on some services can be at capacity during peak hours. We recommend increasing L1 Dulwich Hill line frequencies in Section 3.2**.**
Transport – Active transport – cycle / pedestrian	
Issue	**Response**
• Suggestion for Glebe Island Bridge connection to be included in the redevelopment. • Cycling connections not well thought through – should be more direct, wider and built to Austroads standards • Residential streets should be car free • Active transport connections to surrounding areas not adequately addressed Priority of active transport over vehicles • Pedestrian tunnels be constructed under Bank Street and Bridge Road, with potential connections to the Pyrmont Metro station, to improve pedestrian safety and comfort.	• Recommendations to improve walking, cycling and public transport accessibility and connectivity (including the reopening of the Glebe Island Bridge) are reinforced in Section 3.2. • Public streets, public spaces and service lanes are planned within the Blackwattle Bay SSP study area to ensure equitable mobility for all, and to enable loading/servicing functions. • Reallocation of road space is preferred to pedestrian tunnels. Reallocation of road space (particularly on Pyrmont Bridge Road) will be explored in the Pyrmont Ultimo Transport Plan, as discussed in Section 4.2.
• Request for cycle parking at Dragon Boats.	• Bicycle parking will be provided at the Bank Street open space
• Concern with cycling path along the foreshore and suggestion for the cycle route to be away from pedestrians. • Shared paths don't work and not supported – separate paths wherever possible	• The waterfront promenade will complete the missing link between Woolloomooloo and the Anzac Bridge. • The waterfront promenade has been widened in the revised Precinct Plan, and this is discussed in Section 3.4. • The intention of the waterfront promenade is to facilitate a continuation of recreational activities – including cycling, jogging and walking – along the harbour foreshore. This is consistent with the City of Sydney's designation of the existing waterfront promenade as recreational cycling routes.

Transport – Active transport – cycle / pedestrian	
Issue	**Response**
• Reclaim traffic lane for separate cycleway • Temporary Bridge Rd cycleway should be made permanent • Footpaths on PBR are not sufficient • Transport study doesn't seem to consider detailed traffic movements	• Support for a permanent separated cycleway is noted. • The recently released *Eastern Harbour City Strategic Cycleway Corridors* includes a potential strategic connection from Burwood to the Sydney city centre via Ashfield, Leichhardt and Pyrmont. • Footpath capacity is assessed in Section 3.2. Reallocation of road space (particularly on Pyrmont Bridge Road) will be explored in the Pyrmont Ultimo Transport Plan, as discussed in Section 4.2. • The traffic modelling approach provides a detailed assessment of existing and future traffic movements in the morning peak period in Pyrmont, Ultimo and Glebe. This is consistent with the study requirements.
• Road infrastructure inadequate • Further resolution for motorway leading up to the Anzac Bridge - improving the area around the motorway is key to a successful outcome • Bridge Road/Wentworth Rd should be signalised • Concern that road widening will impact WWP	• Changes to the intersection of Bridge Road and Wentworth Park Road (including signalised north-south crossings for pedestrians) are approved under the New Sydney Fish Market Environmental Impact Statement.
Transport – Other comments	
Issue	**Response**
• The need to further develop the Transport Management and Accessibility Plan to identify specific actions to improve walking, cycling and public transport infrastructure particularly to link the site to the new Metro • Clarifications relating to traffic modelling and cumulative impact of development on the transport network to help determine transport infrastructure needs and funding • The need for a combined loading and servicing plan to help meet freight and servicing demands in the precinct, including consideration of a combined loading dock to service both residential and commercial developments	• This is addressed in Section 3.2, where two "big shifts" are identified and key TMAP recommendations are reinforced. • Clarifications relating to traffic modelling are provided in Section 3.5. To summarise: - Employment and residential land use and densification was consistent with that applied in the version of the Sydney Motorway Project Model (SMPM) that was provided - AECOM received outputs from SMPM in mid-2018 and undertook traffic modelling prior to the release of the Pyrmont Peninsula Place Strategy and the Bays West Strategy.
• Reduce car parking rates even further than proposed to help ensure the mode target of 85% active transport is achieved	• In the revised Precinct Plan, the number of parking spaces has been reduced by 25% to 1,075 parking spaces, when compared with the exhibited Precinct Plan. This analysis is detailed in Section 3.4.
• … ensure the SFM is appropriately integrated into planning for the metro is highlighted as is the need to provide a direct ferry service to the markets.	• The new Sydney Fish Market has already been approved by the Department of Planning and Environment with a range of conditions. • Provisions for a deregulated ferry service have been retained in the revised Precinct Plan.

3.2 Mode share analysis

Based on existing travel patterns in Pyrmont-Ultimo, the Blackwattle Bay SSP Study development yields would result in 63% of people walking, cycling and catching public transport during the AM peak period (7:00am-9:00am), with the remaining 37% of people driving.

The Blackwattle Bay TMAP set a target of 85% of people walking, cycling and catching public transport during the AM peak period (7:00am-9:00am) with the remaining 15% of people driving.

Feedback during the public exhibition period (summarised in Section 3.1) suggests more evidence is required to support the target of 85% of people walking, cycling and catching public transport during the AM peak period. Two “big shift” have been identified to further reinforce these mode share targets, in addition to the nine other recommendations to achieve the mode share targets from the TMAP, as shown in Table 3-4.

Big Shift 1: The maximum parking provision has been reduced by 365 spaces (or 25%) as part of the revised Blackwattle Bay SSP Study. A link between generous parking provision and high car use is well known. The exhibited Blackwattle Bay SSP Study proposed 1,440 parking spaces to support mobility needs. The revised Blackwattle Bay SSP Study proposes 1,075 parking spaces. This is a result of reduced development yields, and referencing other urban renewal projects with ambitious mode share targets. Changes to the maximum parking provision are described in Section 3.4.

Big Shift 2: The Eastern Harbour City Strategic Cycle Corridors have been announced. The Eastern Harbour City Strategic Cycle Corridors is a 10-year vision to deliver dedicated cycling infrastructure. A dedicated network of strategic cycle corridors will be the backbone of a safe, legible cycling network that enables people travelling to/from Blackwattle Bay to ride a bike. Figure 3-1 indicates Pyrmont is a node where two strategic cycle corridors meet;

- Top Ryde to the City (via The Bays and Pyrmont)
- Burwood to the City (via Pyrmont)

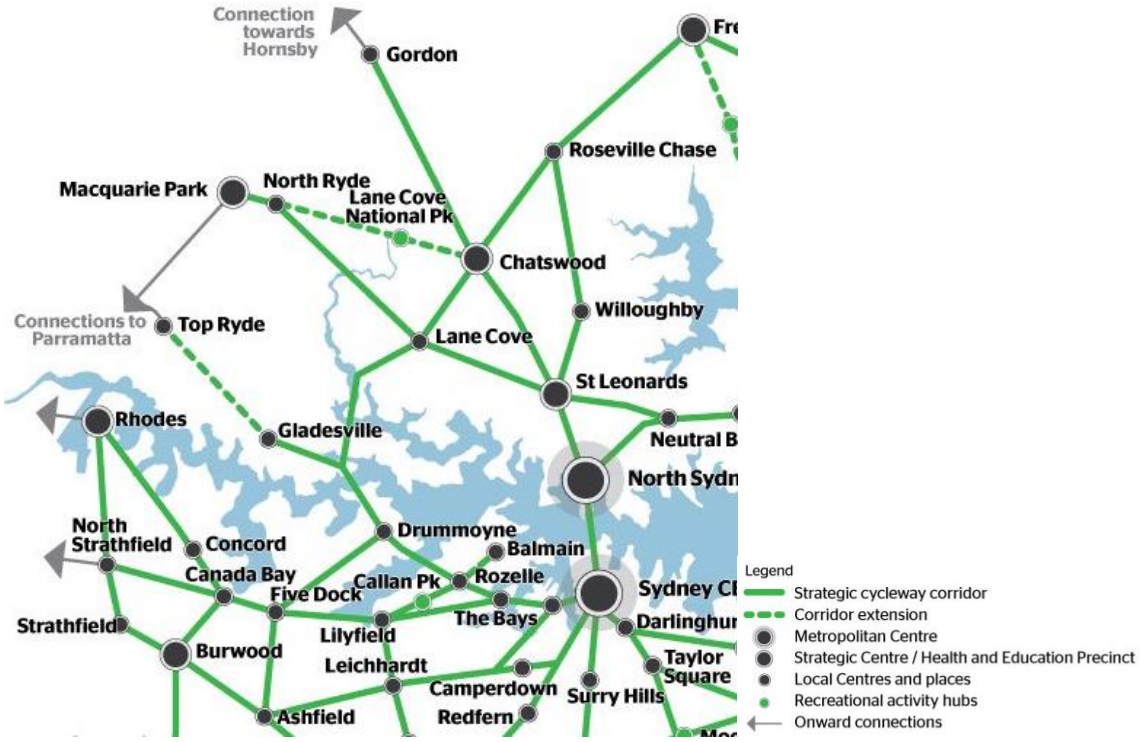

Figure 3-1: Eastern Harbour City strategic cycle corridors

These two “big shift” reflect progress made on recommendations in Section 9.0 of the Blackwattle Bay TMAP. Nine other recommendations from Section 9.0 of the Blackwattle Bay TMAP would be a step-change in enabling the mode share targets. All would require further analysis and coordination between various state and local government departments.

Table 3-4: Recommendations identified in Section 9.0 of Blackwattle Bay TMAP

Recommendation	Description
1	Provide improved walking facilities along Bridge Road and Miller Street to make walking a more attractive option.
2	Reallocation of road space on Pyrmont Bridge Road to better cater for the anticipated increase in pedestrians walking between the Sydney CBD, Pyrmont Station and the Blackwattle Bay SSP Study Area.
3	Provide improved walking facilities along Bank Street to connect to Glebe Island via the Glebe Island Bridge to provide a strong connection across the harbour to Bays West.
4	Provide improved pedestrian connectivity to Broadway and Central Station.
5	Investigate reducing the existing signal cycle time at the intersections of the new through-site link with Bank Street and Miller Street, and Bridge Road, Pyrmont Bridge Road and Wattle Street to reduce pedestrian waiting times at signalised intersections.
6	Leverage planned mass transit infrastructure (Pyrmont Metro Station)
7	Increase L1 Dulwich Hill Line peak hour service frequency to reduce journey times and congestion.
8	Reconfigure the bus network to improve connections to Bays West, Central, Redfern and the Inner West.
9	Provide a deregulated ferry service between Blackwattle Bay and the northern Sydney CBD.

3.3 Footpath capacity analysis

Four scenarios have been analysed to determine whether the width of the existing footpaths on Pyrmont Bridge Road are sufficient to cater for the anticipated increase in demand as a result of the Blackwattle Bay SSP Study:

- **Scenario 1: 2022 existing** – Current day demand based on survey outputs from Sydney Metro and site observations undertaken in March 2022.
- **Scenario 2: 2033 with no development or transport interventions** – Future demand without the Blackwattle Bay SSP Study or transport interventions (such as those recommended in Section 9.0 of the Blackwattle Bay TMAP).
- **Scenario 3: 2033 with development and no transport interventions** – Future demand with the Blackwattle Bay SSP Study and no transport interventions (such as those recommended in Section 9.0 of the Blackwattle Bay TMAP).
- **Scenario 4: 2033 with development and transport interventions** – Future demand with the Blackwattle Bay SSP Study and transport interventions (such as those recommended in Section 9.0 of the Blackwattle Bay TMAP).

Table 3-5 identifies the number of pedestrians walking along the northern footpath on Pyrmont Bridge Road (at the intersection with Bank Street) during the AM peak hour (8:00am-9:00am). This forms the basis of the footpath capacity analysis.

Table 3-5 Existing and proposed building AM peak hour (8:00am-9:00am) flows

Scenario	Conditions	Arrivals	Departures
Scenario 1	2022 Existing	59	127
Scenario 2	2033 No Development, No Transport Interventions	64	138
	Increase from 2022 Existing	**+5**	**+11**
Scenario 3	2033 With Development, No Transport Interventions	1,424	871
	Increase from 2022 Existing	**+1,365**	**+744**
Scenario 4	2033 With Development, No Transport Interventions	1,546	980
	Increase from 2022 Existing	**+1,487**	**+853**

In 2033, it is estimated that approximately 1,546 pedestrians will access and 980 pedestrians will egress from the Blackwattle Bay SSP Study Area in the AM peak hour.

The *Sydney Metro West Environmental Impact Statement for rail infrastructure, stations, precincts and operations* projects approximately 1,026 pedestrians will access and 3,944 pedestrians will egress from Pyrmont Station during the AM peak hour (8:00am-9:00am). It is anticipated that a notable portion of people using Pyrmont Station will walk between the station and the Blackwattle Bay SSP Study Area.

The anticipated pedestrian demand for each scenario is shown for intersections along Pyrmont Bridge Road in Figure 3-2.

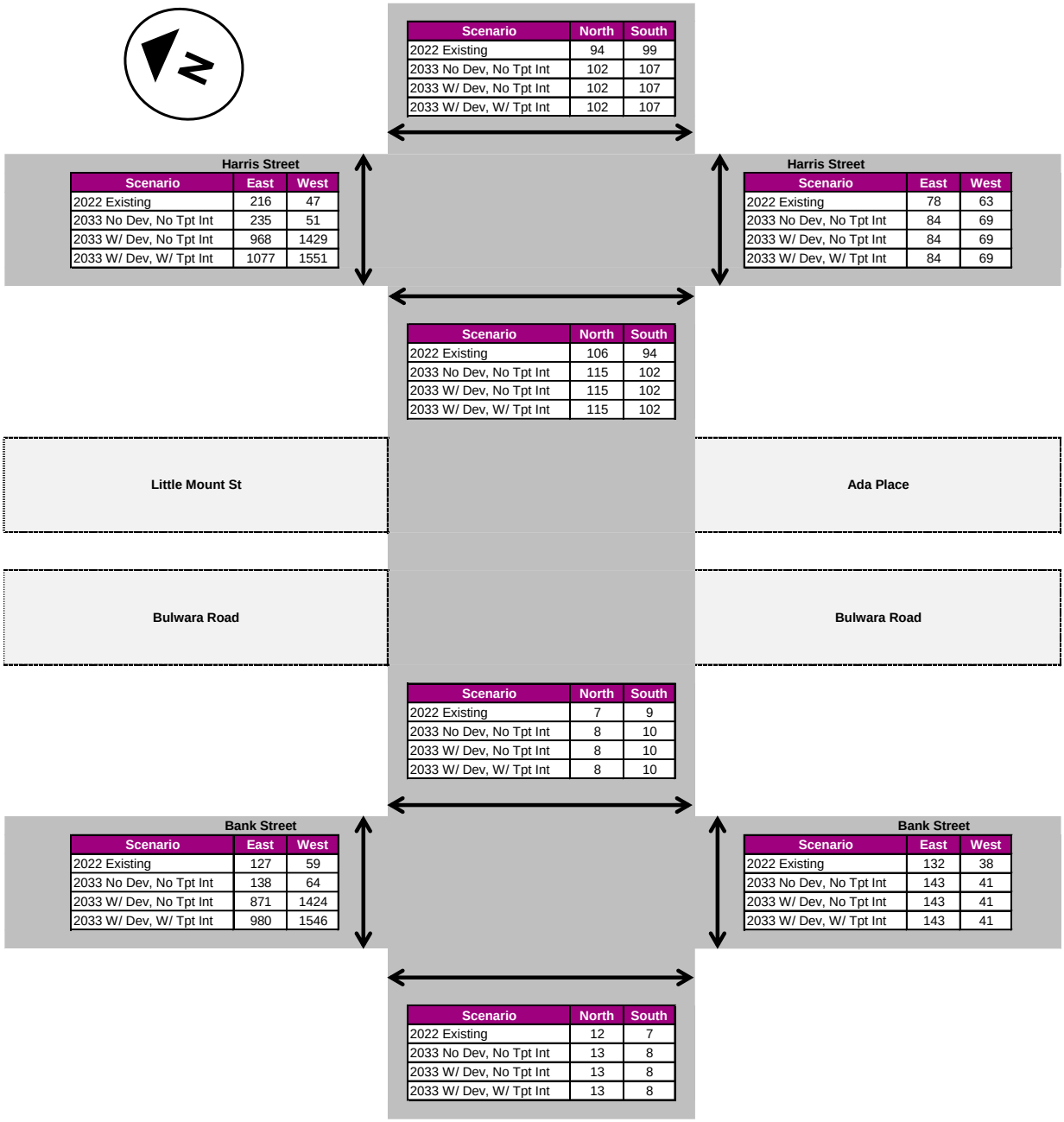

Figure 3-2 AM peak hour (8:00am-9:00am) Pyrmont Bridge Road pedestrian flows

3.3.1 Walking performance for footpaths based on Transport for London guidance

To assess the performance of walkways, the total bi-directional flow at locations of interest on Pyrmont Bridge Road between Bank Street/Western Distributor and Harris Street are considered. Figure 3-3 presents the walkways performance for the narrowest point of mid-block locations along Pyrmont Bridge Road on the eastern and western side of:

- Bulwara Road (north)
- Little Mount Street
- Ada Place
- Bulwara Road (south)

The footpath performance presented here is for the peak hour using Transport for London's Pedestrian Comfort Guidance tool ("TfL Guide") to calculate the average Pedestrian Comfort Level (PCL). In accordance with the Guide, an edge effect of 0.40m (0.20m at the kerb and property line) is removed from useable footpath space, as well as the width of any street furniture and footpath sections less than 0.6m wide.

Street furniture is present East of Little Mount Street (Location #1), East of Ada Place (Location #3) and West of Ada Place (Location #4), with all other mid-block locations unobstructed.

PCL is a measure of the average number of people using the footpath per minute per metre, with a LoS between A+ and E awarded on the basis of the results falling within lower and upper limits of each classification. Table 3-6 presents the lower and upper limit of people per minute per metre for each LoS.

Table 3-6 Lower and upper limits for PCL LoS

Lower Limit (ppl/min/m)	Upper Limit (pp/min/m)	LoS
0	3	A+
3	6	A
6	9	A-
9	12	B+
12	15	B
15	18	B-
18	21	C+
21	24	C
24	27	C-
27	35	D
36	-	E

The TfL Guide primarily focuses on assessing whether the peak hour flow or people per hour are reasonably distributed to provide an appropriate level of comfort and minimal queuing or overcrowding, rather than having a main focus on the available footpath width.

The results presented in Figure 3-3 warrant an acknowledgement that the Guide originates from London where pedestrian flows are considerably higher than current and projected volumes on Pyrmont Bridge Road. All available footpath space is also more likely to be utilised in London when compared to Sydney.

Under the TfL Guide, all mid-block locations observe a LoS A+ for Scenario 1 and 2. This is maintained for all mid-blocks on the southern side of Pyrmont Bridge Road for Scenario 3 and 4 due to there being no increase in pedestrian volumes from Scenario 2. The following locations observe a decrease in LoS:

- East of Little Mount Street: LoS C+ for Scenario 3, declining to a LoS C for Scenario 4.
- West of Little Mount Street: LoS D is observed for Scenario 3 and 4.
- East of Bulwarra Road (north): LoS B+ for Scenario 3, declining to a LoS B for Scenario 4
- West of Bulwarra Road (north): LoS B+ is observed for Scenario 3 and 4

Figure 3-3 illustrates the performance of footpath mid-blocks on Pyrmont Bridge Road between Bank Street/Western Distributor and Harris Street during the AM peak hour (8:00am to 9:00am), as per the TfL Guide.

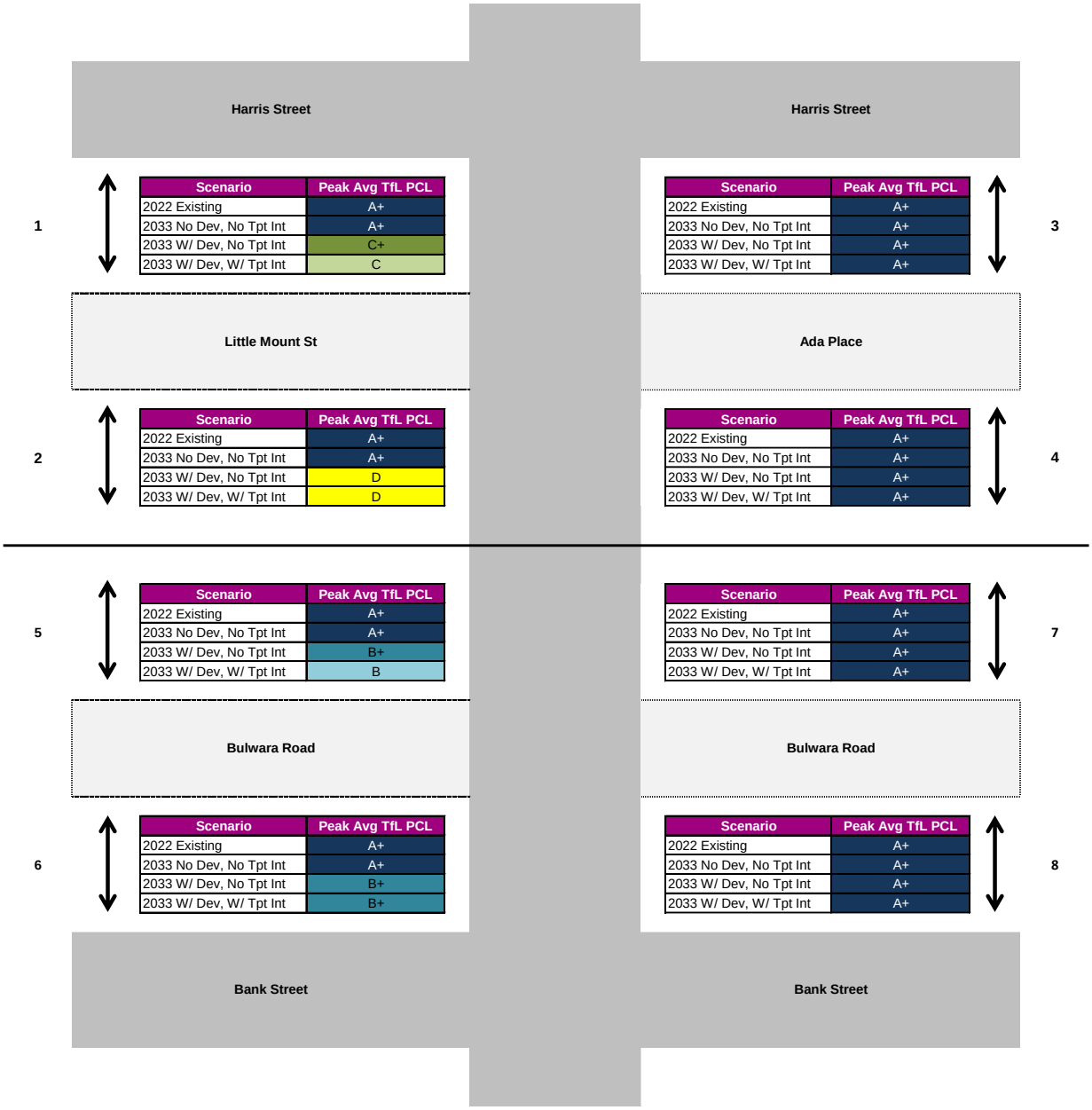

Figure 3-3 AM peak hour (8:00am-9:00am) footpath walkway average PCL, as per TfL Guide

3.3.1.1 Walking performance for footpaths based on Transport for NSW guidance

An alternative metric to assess the walking performance for footpaths is to use Transport for NSW's Walking Space Guide ("TfNSW Guide") to calculate the applicable Fruin LoS.

To assess the performance of walkways, the total bi-directional flow at locations of interest on Pyrmont Bridge Road between Bank Street/Western Distributor and Harris Street are considered.

In accordance with the Guide, a minimum "kerbside traffic buffer" is required for footpaths directly adjacent to live traffic lanes. Any portion of a footpath within this buffer is not considered to be useable walking space by the Guide. The required width of footpaths to achieve a LoS A through F increases as pedestrian volumes increase.

It is noted that this consideration is not made by the TfL Guide, given that all useable footpath space is likely to be utilised under the base pedestrian conditions in London, whether this is directly adjacent to traffic lanes or not.

The availability of footpath width is also much more of a primary consideration in the TfNSW Guide than the TfL Guide, regardless of whether pedestrian volumes are relatively low. Figure 3-4 illustrates all exclusions to be made from usable walking space under the TfNSW Guide.

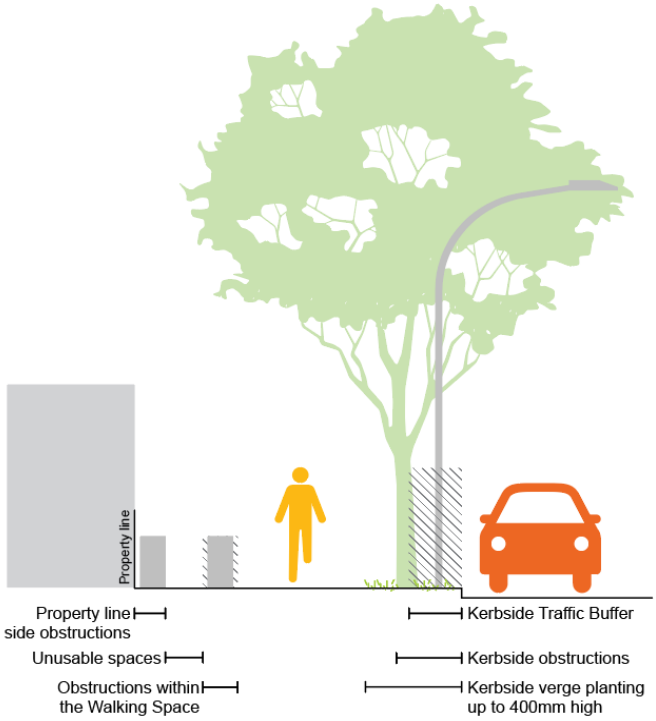

Figure 3-4 Exclusion from usable walking space under the Guide

Source: TfNSW

Whilst there was a relatively even distribution of low pedestrian volumes along Pyrmont Bridge Road during the AM peak hour (8:00am-9:00am), all footpaths are located directly adjacent to a traffic lane with a 40 kilometres per hour posted speed limit, warranting a non-negotiable kerbside traffic buffer of 1.2 metres. Due to the generally narrow footpath corridor along Pyrmont Bridge Road, the traffic buffer adversely impacts the observed LoS under the Guide. The following locations observe LoS F under the current footpath configuration for Scenario 1 to 4:

- Eastern and western side of Little Mount Street
- West of Ada Place
- Eastern and western side of Bulwara Road (south)

East of Bulwara Road (north), the footpath observed LoS E for Scenario 1 and 2, degrading to a LoS F for Scenario 3 and 4 as pedestrian volumes increase. West of Bulwara Road (north), the footpath observed a LoS D for Scenario 1 and 2, degrading to a LoS E for Scenario 3 and 4. East of Ada Place, the footpath observed LoS C for Scenario 1 to 4. This is the best performing location within the study area. This can be attributed to the wide footpath corridor between Ada Place and Harris Street.

3.3.2 Queueing performance for crossing storage based on Transport for London guidance

To assess the performance of the footpath storage space for pedestrian crossings, the directional flow at each crossing arm, footpath dimensions and signal phasing are considered. A uniform arrival at the crossings has been assumed over the peak hour. The indicative pedestrian storage space assumed for each crossing arm and direction is provided in Table 3-7. This area generally provides for a 1.5 metre corridor for non-crossing pedestrians to pass.

Table 3-7 Pedestrian crossing indicative storage area

Crossing Arm	Pedestrian storage area (m^2)	
	Northbound / eastbound	Southbound / westbound
Pyrmont Bridge Road / Harris Street intersection		
North arm	23	14
East arm	48	14
South arm	30	48
West arm	30	23
Pyrmont Bridge Road / Bank Street intersection		
North arm	23	18
East arm	30	18
South arm	27	30
West arm	27	23

All storage areas observe a Fruin LoS A during the AM Peak under existing conditions. Under the future 2033 scenarios, LoS A is maintained for all storage areas supporting northbound and southbound movements at each intersection. A LoS A is also maintained for all storage areas supporting eastbound and westbound movements on the ***southern*** crossing legs as no further increases to pedestrian flows beyond the volumes in Scenario 2 are projected.

As noted in Section 3.3, all movements generated by the proposed development are assumed to be completed on the ***northern*** side of Pyrmont Bridge Road. It is acknowledged that some pedestrians may cross to the southern side of the corridor during footpath closures or over-crowding, however this has not been considered as part of this assessment.

The performance of storage areas supporting eastbound and westbound movements on the ***northern*** crossing legs at Bank Street and Harris Street is noticeably impacted by increased pedestrian volumes in Scenario 3 and Scenario 4.

At both intersections, the north crossing arms observe a Fruin LoS D for westbound movements during the AM Peak in Scenario 3 and 4. For eastbound movements, a Fruin LoS C is observed for Scenario 3 and 4 at Bank Street and Harris Street. LoS C will result in an increased likelihood for queuing outside of the indicative storage space and obstruction to other movements.

Figure 3-5 illustrates the performance of crossing storage areas on Pyrmont Bridge Road at Bank Street/Western Distributor and Harris Street during the AM peak hour (8:00am to 9:00am).

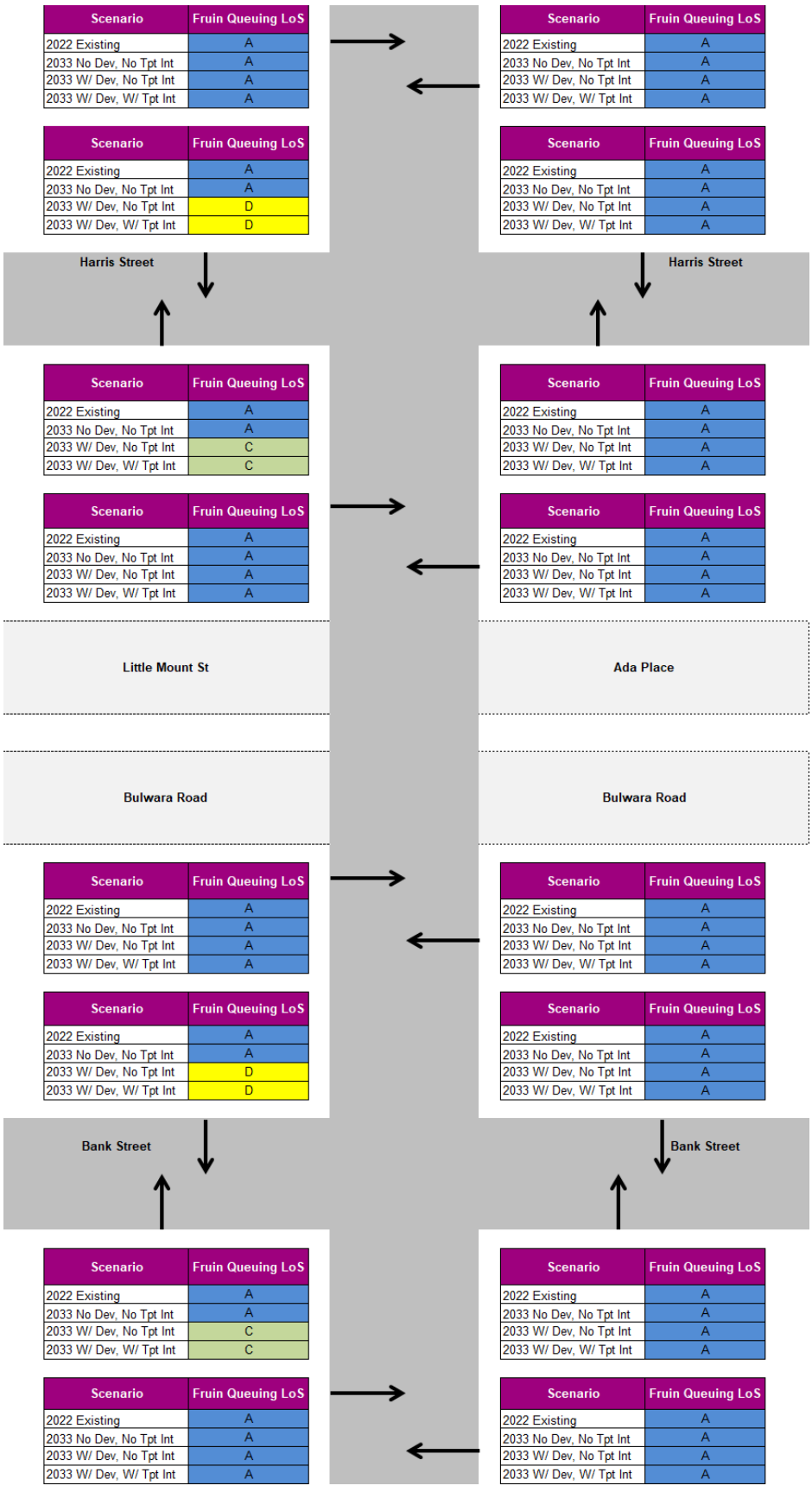

Figure 3-5 AM peak hour (8:00am-9:00am) crossing storage queuing performance

3.3.3 Analysis inclusions and assumptions

As part of the analysis, a site inspection was conducted in March 2022 to observe pedestrian movements at Bank Street and Harris Street over a 30-minute period between 08:15 and 08:45. Following the completion of the site inspection, a series of growth factors were applied to the observed volumes to derive the volumes for **Scenario 1** and **Scenario 2**, as illustrated in Figure 3-6.

Figure 3-6 Pedestrian volume growth factors for footpath capacity analysis

Based on the volumes presented in Section 3.3, pedestrian flows were further increased in **Scenario 3** and **Scenario 4** in accordance with the following inbound (towards the Blackwattle Bay SSP Study Area) and outbound (away from the Blackwattle Bay SSP Study Area) movements generated by the proposed development:

- **Scenario 3:** 1,424 inbound; 871 outbound
- **Scenario 4:** 1,546 inbound; 980 outbound

As discussed in Section 3.3.2, pedestrian movements along the southern side of Pyrmont Bridge Road are assumed to remain the same.

Pedestrian movements in and out of side streets on the northern side of Pyrmont Bridge Road also remain the same as **Scenario 2** as it is assumed that no additional background growth will occur, other than that already derived through the application of the growth factor to **Scenario 1**.

Known increases and decreases to pedestrian volumes along the northern side of Pyrmont Bridge Road, as derived from **Scenario 2**, were also applied to **Scenario 3** and **Scenario 4**, as follows:

Inbound (towards the Blackwattle Bay SSP Study Area)

- **-13** between northern crossing leg at Harris Street and eastern side of Little Mount Street
- **-5** between eastern side of Little Mount Street and western side of Bulwara Road
- 50/50 split of loss (**-5**) down Little Mount Street and Bulwara Road (assumed)
- **+13** between western side of Bulwara Road and northern crossing leg at Bank Street
- Pedestrians on the western crossing leg at Bank Street (northbound) all turn right (assumed)

Outbound (away from the Blackwattle Bay SSP Study Area)

- **+26** between western side of Bulwara Road and eastern side of Little Mount Street
- 50/50 split of gain (**+26**) from Little Mount Street and Bulwara Road (assumed)
- **+71** between eastern side of Little Mount Street and northern crossing leg at Harris Street

Measurements of mid-block locations and pedestrian waiting areas at both intersections were also taken during the site inspection which have been used for the walking and queueing performance assessments.

3.3.4 Conclusion

This footpath capacity analysis used two metrics for assessment:

- Walking performance for footpaths
- Queuing performance for crossing storage

The TfL Guide was used for both metrics. The footpath capacity analysis identified the following issues on the northern footpath on Pyrmont Bridge Road:

- West of Little Mount Street, the walking performance for Scenario 3 (with development and no transport interventions) and Scenario 4 (with development and transport interventions) results in a LoS D in the morning peak hour (8:00am-9:00am).
- At the intersection of Pyrmont Bridge Road and Bank Street, and the intersection of Pyrmont Bridge Road and Harris Street, the queuing performance for Scenario 3 (with development and no transport interventions) and Scenario 4 (with development and transport interventions) results in a TfL LoS D in the morning peak hour (8:00am-9:00am).

The TfNSW Guide was also used to assess walking performance for footpaths, and to apply a Sydney perspective. The availability of footpath width is much more of a primary consideration in the TfNSW Guide than the TfL Guide, regardless of pedestrian volumes.

The application of the TfNSW Guide shows the generally narrow footpath corridor along Pyrmont Bridge Road adversely impacts the observed LoS for walking performance, even for existing conditions. The following locations observe LoS F under the current northern footpath configuration on Pyrmont Bridge Road for all scenarios:

- Eastern and western side of Little Mount Street
- West of Ada Place
- Eastern and western side of Bulwara Road (south)

East of Bulwara Road (north), the footpath observed LoS E for Scenario 1 and 2, degrading to a LoS F for Scenario 3 and 4 as pedestrian volumes increase. West of Bulwara Road (north), the footpath observed a LoS D for Scenario 1 and 2, degrading to a LoS E for Scenario 3 and 4.

East of Ada Place, the footpath observed LoS C for Scenario 1 to 4. This is the best performing location within the study area. This can be attributed to the wide footpath corridor between Ada Place and Harris Street.

This analysis shows that the revised Precinct Plan results in a marginal deterioration in Level of Service in the morning peak hour (8:00am to 9:00am), without a reallocation of road space to widen the northern footpath on Pyrmont Bridge Road.

The reallocation of road space is consistent with the vision and objectives established in the Pyrmont Peninsula Place Strategy. Figure 3-7 shows the Place Strategy vision and objectives that are relevant to the reallocation of road space. The Place Strategy provides the strategic context to undertake the reallocation of road space on Pyrmont Bridge Road.

The Pyrmont Ultimo Transport Plan will explore the potential reallocation of road space in more detail. The Pyrmont Ultimo Transport Plan is described in more detail in Section 4.2.

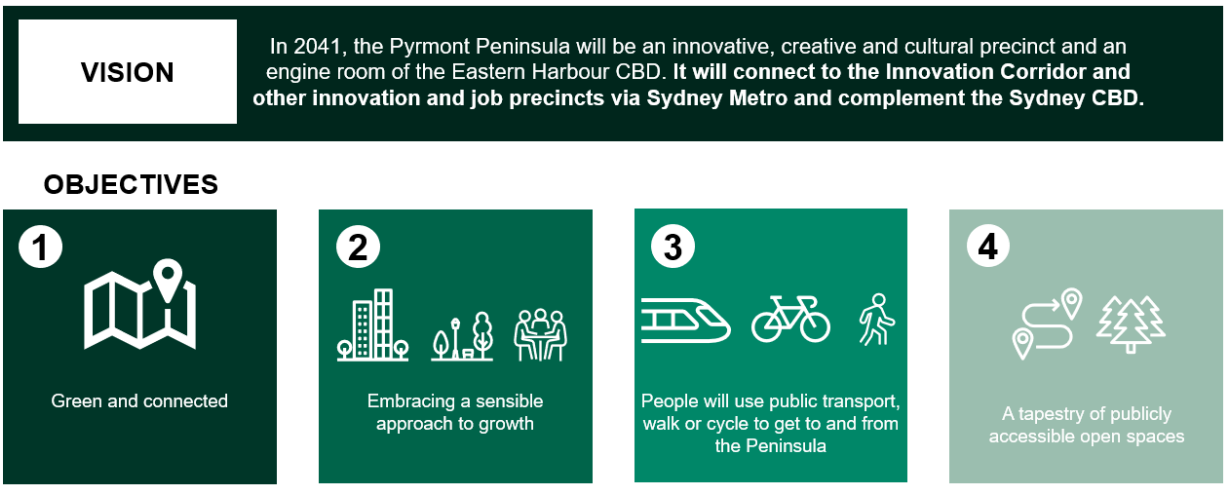

Figure 3-7: Pyrmont Peninsula Place Strategy vision and relevant objectives

3.4 Updated maximum parking provision

The greater the restrictions placed on private vehicle parking, the less likely people will use private vehicles. Examples such as requiring payment for parking, restricting time limits and reducing the amount of parking available, have all been proven to deter people from driving to their destinations, which aids the shift towards public transport, walking and cycling. However, this must be balanced against the fundamental mobility needs of a diverse community.

The Blackwattle Bay SSP Study Area is currently classified as a Category B in the *City of Sydney Local Environmental Plan* (2012) for residential private vehicle parking rates under Land Use and Transport Integration. It is also identified as a Category F for commercial, retail and accommodation private vehicle parking rates under Public Transport Accessibility.

Following stakeholder engagement with the NSW Department of Planning and Environment, Infrastructure NSW, Transport for NSW and the City of Sydney, it was determined that parking should be reclassified under both Land Use and Transport Integration and Public Transport Accessibility. The construction of Pyrmont Station on the Sydney Metro West Line, along with improvements to walking and cycling infrastructure, are the catalysts for this reclassification.

Whilst this report suggests the restriction of parking will ultimately reduce the maximum number of permissible parking spaces, the private vehicle modal split will still be a small proportion of the overall number of Journey To Work trips. It is anticipated that car ownership for this demographic would be largely based on convenience.

3.4.1 Maximum residential parking provision

The exhibited Precinct Plan proposed the application of Category A parking rates under Land Use and Transport Integration. The application of Category A parking rates to the proposed 1,581 residential dwellings resulted in a maximum provision of 932 residential parking spaces.

Feedback on parking provision received during the public exhibition period (summarised in Section 3.1) indicated the proposed maximum parking provision was too high. As such, the revised Precinct Plan (which has reduced development yields) and case studies from other comparable urban renewal projects have been analysed to reduce the maximum parking provision.

The revised Precinct Plan retains the proposed application of Category A parking rates under Land Use and Transport Integration. The application of Category A parking rates to the proposed 1,203 residential dwellings results in a maximum of 710 residential parking spaces.

Table 3-8 shows a detailed breakdown of the change in maximum residential parking provision by dwelling type from the exhibited Precinct Plan to the revised Precinct Plan. **The revised Precinct Plan results in 222 fewer residential parking spaces, a reduction of approximately 24%.**

Table 3-8: Change in maximum residential parking provision

Exhibited Precinct Plan – Maximum residential parking provision				
Dwelling Type	Studio	1 Bedroom	2 Bedroom	3 Bedroom
No. of dwellings	79	553	632	316
% of total	5%	35%	40%	20%
Spaces per dwelling	0.1 spaces	0.3 spaces	0.7 spaces	1 space
Max. parking spaces	8	166	442	316
Total maximum residential parking spaces: 932				

Revised Precinct Plan Maximum residential parking provision				
Dwelling Type	Studio	1 Bedroom	2 Bedroom	3 Bedroom
No. of dwellings	60	421	481	241
% of total	5%	35%	40%	20%
Spaces per dwelling	0.1 spaces	0.3 spaces	0.7 spaces	1 space
Max. parking spaces	6	126	337	241
Total maximum residential parking spaces: 710				
Change in maximum residential parking provision				
Max. parking spaces	**-2**	**-40**	**-105**	**-75**
Change in maximum residential parking spaces: -222				

3.4.2 Maximum commercial parking provision

The exhibited Precinct Plan proposed the application of Category D parking rates under Public Transport Accessibility. The application of Category D parking rates to the proposed 84,768 square metres of commercial space resulted in a maximum of 420 commercial parking spaces.

Feedback on parking provision received during the public exhibition period (summarised in Section 3.1) indicated the proposed maximum parking provision was too high. As such, the revised Precinct Plan (which has reduced development yields) and case studies from other comparable urban renewal projects have been analysed to reduce the maximum parking provision.

This response considers the *Central Park Concept Plan* to reassess maximum parking provision for commercial uses.

The *Central Park Concept Plan* recognised the precinct's strategic location on the fringe of the Sydney city centre, and the need to minimise car use in favour of more sustainable travel modes, identifying a mode share aspiration of 80% of city trips to be by modes other than car.

The *Central Park Concept Plan*, which was approved in 2007, included 235,000 square metres of Gross Floor Area (GFA), including 92,738 square metres of commercial and retail GFA. In support of the mode share ambition, the *Central Park Concept Plan* proposed **380 spaces for commercial and retail purposes**, or approximately **one parking space per 244 square metres of commercial GFA**.

The revised Precinct Plan has a higher mode share aspiration than the *Central Park Concept Plan*. As such, a more ambitious maximum commercial parking provision is proposed. One parking space per 300 square metres of commercial GFA is also more ambitious than the Category D parking rates under Public Transport Accessibility in the *City of Sydney LEP 2012.*

Table 3-9 shows a detailed breakdown of the change in maximum permissible commercial parking provision from the exhibited Precinct Plan to the revised Precinct Plan. **The revised Precinct Plan**, which adopts the metric of one parking space per 300 square metres of commercial GFA, **results in 114 fewer commercial parking spaces, a reduction of approximately 27%.**

Table 3-9 Change in maximum commercial parking provision

Exhibited Precinct Plan – maximum commercial parking provision		
Total Gross Floor Area (GFA)	84,768m^2	
Spaces	**Requirement**	**Calculation**
	(Commercial GFA x Site Area)/ (50 x Total GFA)	(84,768 x 57,598) / (50 x 232,623)
Total maximum commercial parking spaces		**420**
Revised Precinct Plan – maximum commercial parking provision		
Total Gross Floor Area (GFA)	91,926m^2	
Spaces	**Requirement**	**Calculation**
	1 space per 300m^2 commercial GFA	91,926 / 300
Total maximum commercial parking spaces		**306**
Change in maximum commercial parking provision		
Change in maximum commercial parking spaces		**-114**

Commercial parking at Blackwattle Bay could potentially be made available to support other uses such as catering for peak periods at the new Sydney Fish Market (around Easter and Christmas), as well as supporting the night-time economy within the surrounding precinct.

3.4.3 Maximum retail and accommodation parking provisions

The exhibited Precinct Plan proposed the application of Category D parking rates under Public Transport Accessibility. The application of Category D parking rates to the proposed 10,813 square metres of retail space and 9,000 square metres of accommodation space, resulting in a maximum of 88 parking spaces combined.

Feedback on parking provision received during the public exhibition period (summarised in Section 3.1) indicated the proposed maximum parking provision was too high. As such, the revised Precinct Plan (which has reduced development yields) and case studies from other comparable urban renewal projects have been analysed to reduce the maximum parking provision.

The revised SSP study retains the proposed application of Category D parking rates under Public Transport Accessibility. The application of Category A parking rates to the proposed 10,154 square metres of retail space results in a maximum of 59 retail parking spaces. Accommodation space is not proposed as part of the revised SSP study.

Table 3-10 shows a detailed breakdown of the change in maximum retail and accommodation parking provision from the exhibited Precinct Plan to the revised Precinct Plan. **The revised Precinct Plan study results in 29 fewer parking spaces, a reduction of approximately 33%.**

Table 3-10: Change in maximum retail and accommodation parking provision

Exhibited Precinct Plan – maximum retail and accommodation parking provision		
Total retail GFA	10,813m^2	
Retail spaces	**Requirement**	**Calculation**
	(Retail GFA x Site Area)/ (50 x Total GFA)	(10,813 x 57,598) / (50 x 232,623)
Total maximum retail parking spaces		**54**
Total accommodation GFA	9,000m^2 or 144 rooms/serviced apartments	
Accommodation spaces	Requirement	Calculation
	Maximum number of car parking spaces for a building used for the purposes of serviced apartments or hotel or motel accommodation is – (a) 1 space for every 4 bedrooms up to 100 bedrooms and (b) 1 space for every 5 bedrooms more than 100 bedrooms	(0.25 x 100) + (0.20 x 44)
Total maximum accommodation parking spaces		**34**
Total maximum retail and accommodation parking spaces: 88		
Revised Precinct Plan – maximum permissible retail and accommodation parking provision		
Total retail GFA	10,154m^2	
Retail spaces	**Requirement**	**Calculation**
	(Retail GFA x Site Area)/ (50 x Total GFA)	(10,154 x 57,598) / (50 x 199,513)
Max. parking spaces		**59**
Total accommodation GFA	0m^2	
Accommodation spaces	**Requirement**	**Calculation**
	Maximum number of car parking spaces for a building used for the purposes of serviced apartments or hotel or motel accommodation is – 1 space for every 4 bedrooms up to 100 bedrooms and 1 space for every 5 bedrooms more than 100 bedrooms	(0.25 x 0) + (0.20 x 0)
Max. parking spaces		**0**
Total max. parking spaces (retail and accommodation): 59		
Change in maximum retail and accommodation parking spaces		**-29**

3.4.4 Decoupled and unbundled parking

Decoupled and unbundled parking are increasingly prevalent strategies being adopted for new developments in dense urban areas across the world. The intention of both strategies is reducing private vehicle ownership by making parking an optional extra for property owners, rather than being a standard inclusion at the time of purchase, as well as offering incentives for developers to provide less parking in a project[1]. The successful implementation of either strategy often relies upon the adoption of other parking controls in parallel, such as reduced parking rates or carsharing programs.

Decoupled parking is provided on a separate parcel of land from a development and made available for rent or purchase by property owners. This option has been increasingly considered at a strategic level across Greater Sydney, however implementation remains relatively limited at this time. Pyrmont has been identified as a perfect precinct to test decoupled parking, along with other parking strategies, in an accelerated way across all new residential development[2]. The benefits of decoupled parking include cheaper construction of buildings, avoiding under-utilised parking under buildings, and future-proofing parking areas for different uses if car usage declines[3]. A planning review of Parramatta CBD conducted in 2015 found that decoupled parking, in conjunction with reduced parking rates, could reduce car use by up to 50%, create greater opportunity for investment in car share, and up to $5,000 less expenditure in household costs per year[4].

Unbundled parking is provided on the same site as a development, but remains as an optional add-on for property owners rather than a standard inclusion. The provision of parking on site incurs additional construction costs when compared to decoupled parking, however it also removes the need to consider a separate parcel of land for the provision of parking, leaving more land available for development. This strategy has been widely adopted in San Francisco, with unbundled parking required for all developments greater than 10 units. Paired with other strategies including car share, where vehicles are rented as required rather than being owned, unbundled parking can support a significant reduction in vehicle ownership for residential developments, as well as the shared benefit with decoupled parking of reduced household expenditure per year[5].

Decoupled and/or unbundled parking are precluded at the rezoning stage for the revised Precinct Plan, but could be considered as conditions of consent for individual Development Applications to maximise usage of the provided parking spaces.

3.4.5 Summary of changes to maximum parking provision

When combining the proposed land uses (excluding the new Sydney Fish Market site, which is already approved and under construction), the revised Blackwattle Bay Precinct Plan has a maximum parking provision of 1,075 parking spaces for residential, commercial, retail and accommodation uses. This is a reduction of 365 parking spaces (or 25%) from the exhibited Precinct Plan. It is also a reduction of 686 parking spaces (or 39%) from the current parking controls for the site under the City of Sydney Local Environmental Plan. These changes are summarised in Table 3-11.

Table 3-11: Summary of changes to maximum parking provision

Land use	Current Parking Controls	Exhibited Precinct Plan	Revised Precinct Plan	Change from Current Parking Provision	Change from Exhibited Precinct Plan
Residential	1,091	932	**710**	**-381**	**-222**
Commercial	420	420	**306**	**-114**	**-114**
Retail and accommodation	250	88	**59**	**-191**	**-29**
Total	**1,761**	**1,440**	**1,075**	**-686**	**-365**

[1] Capital City Development Corp (2012), *Downtown Boise Parking Strategic Plan – Appendix D3,* pp.14
[2] Kinesis (2020), *Pyrmont Peninsula Sustainability Framework – Scoping Report*, pp.12
[3] Urban Growth NSW (2015), *Draft Study Night 9 September 2015 – Central to Eveleigh Urban Transformation and Transport Program,* pp.3
[4] City of Parramatta / Kinesis (2015), *Parramatta CBD Planning Review – Sustainability and Infrastructure Study,* pp.23
[5] Schure et al. (2012), *Cumulative Impacts of Carsharing and Unbundled Parking on Vehicle Ownership and Mode Choice,* Transportation Research Record: Journal of the Transportation Research Board

The *Revised Blackwattle Bay Design Code* requires 15% of the total dwellings to be adaptable in developments with over 30 dwellings. The *Design Code* also requires one accessible parking space for each adaptable dwelling. As such, the revised Precinct Plan generates 180 accessible parking spaces. These are proposed to be allocated within the maximum residential parking provision of 710 residential parking spaces for the revised Precinct Plan.

The *Design Code* identifies accessible parking is not a requirement where a parking service is provided and direct access to any of the car parking spaces is not available to the general public or occupants. As such, these are proposed to be allocated within the maximum commercial and retail parking provision of 365 parking spaces for the revised Precinct Plan.

3.4.6 Bicycle parking

Provisions will be made for bicycle parking in accordance with the *City of Sydney DCP 2012*. The *City of Sydney DCP 2012* stipulates a requirement of one residential space per dwelling (this equates to 1,203 bicycle parking spaces) and one visitor space per ten dwellings (this equates to 120 bicycle parking spaces). Therefore, a total of 1,303 bicycle parking spaces are required to support the revised Precinct Plan.

3.5 Traffic modelling clarifications

During the public exhibition period, two key issues were identified for clarification (as shown in Section 3.1):

- Unclear if traffic modelling approach considered major projects such as WestConnex, Sydney Metro West Line (with a Pyrmont Station), Western Harbour Tunnel and Beaches Link
- Unclear if traffic modelling approach considered uplift in employment and residential land use and densification proposed under Pyrmont Peninsula Place Strategy and Bays West Strategy.

Clarifications are provided in Table 3-12.

Table 3-12: Traffic modelling clarifications

Issue	Clarification
• Unclear if the traffic modelling approach used to assess the impact of the proposal on the road network includes major transport infrastructure including WestConnex, future Metro West Pyrmont Station, western harbour tunnel and beaches link	• The traffic modelling approach was informed by outputs from a version of the Sydney Motorway Project Model (SMPM). • This version of SMPM included WestConnex (Stages 1, 2 and 3), Western Harbour Tunnel and Beaches Link. It also included Sydney Gateway and the M6 (Stage 1). • This version of SMPM did not include a Pyrmont Station on the Sydney Metro West Line. • Outputs from other modelling platforms (such as the Public Transport Project Model (PTPM) and the Sydney Strategic Transport Model (STM) were requested but were unavailable at the time of analysis.
• Unclear if modelling considered uplift in employment and residential land use and densification proposed under Pyrmont Peninsula Place Strategy and Bays West Strategy. Clarification is ought on the assumptions	• The employment and residential land use and densification was consistent with that assumed in the version of SMPM that was used • AECOM received outputs from SMPM in mid-2018 and undertook the traffic modelling approach prior to the release of the Pyrmont Peninsula Place Strategy (finalised in late 2020) and the Bays West Strategy (finalised in late 2021).

3.6 Freight considerations

3.6.1 Freight trip generation

During the public exhibition period, feedback was received to undertake additional freight trip analysis. Transport for NSW provided guidance for freight trip analysis based on surveys for 30 mixed-use sites in 2020 and 2021, and subsequent regression analysis and other statistical techniques.

Table 3-13 summarises the inputs used to determine the freight trip generation for the exhibited Precinct Plan.

Table 3-13: Exhibited Precinct Plan metrics for freight consideration

Input	Value
Number of floors	36
Commercial area	100,500m^2
Residential area	123,000m^2
Number of apartments	1,550
Retail area	21,978
Availability of a dedicated goods lift	Yes
Primary use type	Residential
Freight trip generation	0.17 trips per apartment per day
Bike / food trip generation	0.23 trips per apartment per day
Commercial and retail trip generation	0.0026 trips per m^2 commercial and retail GFA

The exhibited Precinct Plan would have generated 935 freight trips in a typical day. 620 trips (such as parcel, furniture and food deliveries) would service the residential uses. The remaining 315 trips would have serviced the commercial and retail uses.

Table 3-14 summarises the inputs used to determine the freight trip generation for the revised Precinct Plan.

Table 3-14: Revised Precinct Plan metrics for freight consideration

Input	Value
Number of floors	36
Commercial area	107,572m^2
Residential area	97,432m^2
Number of apartments	1,203
Retail area	21,259m^2
Availability of a dedicated goods lift	Yes
Primary use type	Residential
Freight trip generation	0.17 trips per apartment per day
Bike / food trip generation	0.23 trips per apartment per day
Commercial and retail trip generation	0.0026 trips per m^2 commercial and retail GFA

The revised Precinct Plan is projected to generated 816 freight trips in a typical day. This reduction is consistent with reduced development yields and represents a 13% decrease in freight trips when compared with the exhibited Precinct Plan. 481 trips (such as parcel, furniture and food deliveries) are projected to service the residential uses. The remaining 335 trips are projected to service commercial and retail uses. Table 3-15 summarises the changes to freight trip generation as a result of the revised Precinct Plan.

Table 3-15: Summary of changes to freight trip generation

Land use	Exhibited Precinct Plan	Revised Precinct Plan	Change
Residential	620	481	**-139**
Commercial	315	335	**+20**
Total	**935**	**816**	**-119**

3.6.2 Freight parking requirements

The mixed-use site surveys, and subsequent regression analysis and other statistical techniques, indicate that freight trip generation (and subsequent demand for freight parking space) peaks between 9:00am and 12:00pm. The exhibited Precinct Plan would require 37 freight parking spaces to accommodate the anticipated peak demand, as Table 3-16 shows.

Table 3-16: Freight parking spaces required to support exhibited Precinct Plan

Space type	Number of spaces
Small spaces	23
Medium spaces	9
Large spaces	5
Total	**37**

The revised Precinct Plan is likely to experience peak freight trip generation (and subsequent demand for freight parking space) between 9:00am and 12:00pm. The revised Precinct Plan would require 31 freight parking spaces to accommodate the anticipated peak demand, as Table 3-17 shows.

Table 3-17: Freight parking spaces required to support revised Precinct Plan

Space type	Number of spaces
Small spaces	19
Medium spaces	8
Large spaces	4
Total	**31**

It is recommended that the feasibility of a combined loading dock is investigated for the entirety of ‘Site 2’ which services residential, commercial and retail uses during the detail design phase.

4.0 Next steps

4.1 State Significant Precinct Study

To unlock the precinct for urban renewal, Infrastructure NSW has followed a State Significant Precinct planning process.

In July 2021, the State Significant Precinct Study was placed on public exhibition, providing a formal opportunity for the community and stakeholders to provide feedback on the precinct plan and proposed planning framework.

The purpose of this Updated Transport Assessment is to provide a response to submissions as part of step five illustrated in Figure 4-1.

Once the response to submissions process has been finalised and submitted, the Department of Planning and Environment will make a recommendation and draft State Environmental Planning Policy (SEPP) and maps to submit to the Minister for Planning. The Minister is responsible for determining the new planning framework.

Any renewal within Blackwattle Bay will follow the planning framework and controls. For example, new residential buildings will need to follow a Development Application planning process as outlined in the Determined framework.

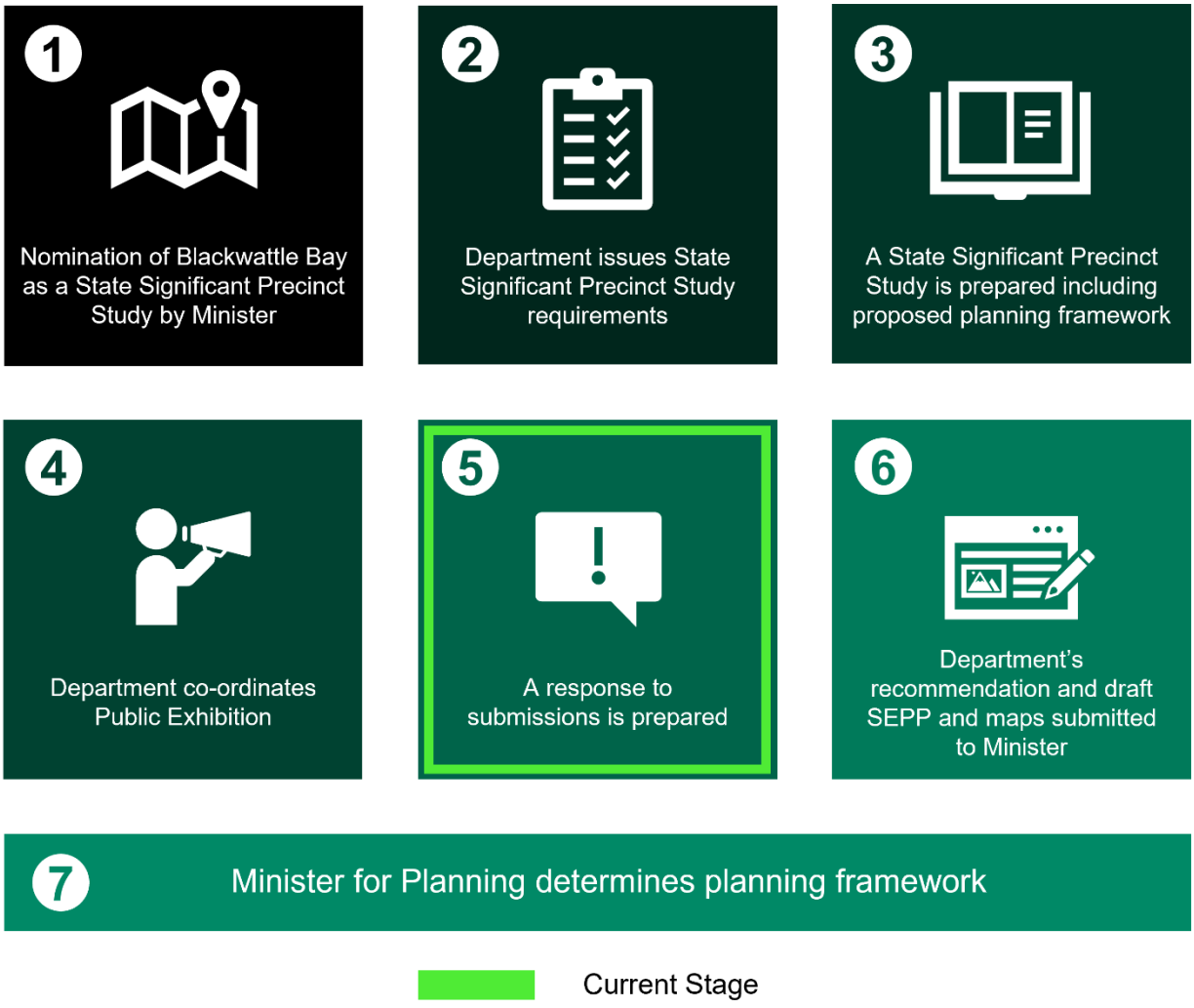

Figure 4-1: State Significant Precinct Study process

4.2 Pyrmont Ultimo Transport Plan

The Blackwattle Bay Precinct Plan is capable of accommodating 5,645 jobs and 1,203 new homes. This represents approximately 25% of the 23,000 jobs and 30% of the 4,000 new homes possible under the 20-year Pyrmont Peninsula Place Strategy.

The Blackwattle Bay TMAP and this Updated Transport Assessment both provide recommendations for this study area to achieve ambitious mode share targets for walking, cycling and public transport. These are highlighted in Section 9.0 of the TMAP and reinforced in Section 3.2 of the Updated Transport Assessment.

These recommendations will be provided to Transport for NSW, who are responsible for the development of the Pyrmont Ultimo Transport Plan. The Pyrmont Ultimo Transport Plan will holistically consider and respond to the needs of the Pyrmont Peninsula in order to accommodate the 23,000 jobs and 4,000 new homes possible under the 20-year Pyrmont Place Strategy.