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The Star Entertainment Group

Key Site Master Plan

Transport Assessment

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September 2021

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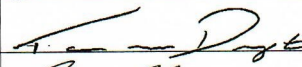

Key Site Master Plan Transport Assessment

The Star Entertainment Group

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Executive summary

Proposed development

The Star Entertainment Group is preparing a Key Site Master Plan under the Pyrmont Peninsula Place Strategy. The Master Plan covers development at two sites as well as changes in the surrounding area to support the Strategy. The development includes a new six-star hotel (referred to as the North Tower) and additional food and beverage floorspace on the Main Site (20–80 Pyrmont Street, Pyrmont) and a second hotel and apartments on a site that has been identified for possible acquisition for a Metro rail station (37–69 Union Street, Pyrmont, referred to as the South Tower).

Pedestrian improvements

A large focus has been placed on improving the pedestrian accessibility surrounding The Star as part of this Master Plan. Initiatives include:

- The widening of the footpath on Union Street to support its role as a key active transport corridor (identified in the Pyrmont Peninsula Place Strategy, Direction #7 Making it easier to move around)
- Creation of kerb-extensions on surrounding streets to provide additional pedestrian space and reduce street crossing distances
- The application of a Complete Streets treatment of Pirrama Road between The Star and Pyrmont Bay Park
- Footpath widening on Edward Street to reinforce it as a pedestrian link to the foreshore
- Improved way-finding and internal pedestrian connections through The Star to increase pedestrian permeability
- A new through-site link from Pirrama Road to Jones Bay Road to reduce the barrier effect of The Star.

Parking changes

The strategy for parking is to make better use of existing parking facilities within The Star rather than providing additional parking for the proposed development. This strategy recognises the existing high transport mode share for non-car travel (66% use of public and active transport for Pyrmont workers and 76% for residents) and the potential increase to 90% with the introduction of a new station for the Sydney Metro West rail line.

The reallocation of road space for pedestrian movement mentioned above will reduce the number of parking spaces by 36 spaces. This change forecasts the need for additional space with the increasing walk mode share, the needs of the Union Street active transport corridor and the reduction in parking demand with the introduction of the new Metro rail line.

Development access

The new six-star hotel in the North Tower would be supported by the relocation of an existing taxi porte cochere on Pirrama Road to the hotel frontage, closer to Jones Bay Road. This would open-up the current location, making the existing light rail stop more visible and allowing The Star to improve its connection to Pyrmont Bay Park through the proposed shared space along Pirrama Road. A loading dock would be provided for the new hotel with access via the internal service road within The Star. The hotel and apartments in the South Tower would be provided with a new loading dock with access via Edward Street.

Other changes

To support the Complete Streets treatment on Pirrama Road, the existing set-down and pick-up stops for bus Route 389 would be amalgamated to the location of the current set-down stop with a dedicated bus bay provided. Approximately 50% of the coach and minibus parking on the east side of Pirrama Road would be relocated to the internal service road with a reallocation of kerb space in the internal service road to make better use of the kerbspace available. The open-top tourist bus stop would be relocated north to assist the creation of the shared area on Pirrama Road.

Taxi operations would be reinforced at the current Pyrmont Street porte cochere with improved queuing arrangements, facilities and surveillance for drivers to reduce the impact on surrounding residents. The new Pirrama Road porte cochere would provide for taxi and limousine services and valet parking, with a feeder taxi rank on the east side of Pirrama Road.

Transport impact

An assessment of the likely impact on traffic, public transport and active transport has indicated that there would only be minor impacts that would fall outside the normal daily variations in traffic conditions. From a public transport and active transport perspective, the improved walking environment (supporting the Pyrmont Peninsula Place Strategy) and increased capacity from the proposed Metro rail line would complement each other to make the surrounding streets more active.

1 Introduction

This report has been prepared on behalf of The Star Entertainment Group (The Star) in support of its Key Site Master Plan under the Pyrmont Place Strategy.

The Master Plan is developed under the framework established under the Pyrmont Peninsula Place Strategy (PPPS), where The Star has been identified as one of four ‘key sites’. The PPPS creates a 20-year vision and planning framework to support the NSW Government’s vision to transform the Pyrmont Peninsula to ‘*be an innovative, creative and cultural precinct and an engine room of the Eastern Harbour CBD*’ while meeting the aspirations of the business, industry, visitors, local and future residents.

The Master Plan ultimately seeks to inform updated planning controls related to 20–80 Pyrmont Street and 37–69 Union Street, Pyrmont to facilitate redevelopment of both sites and enable the Star’s contribution to the Precinct as ‘*a renowned and treasured cultural and entertainment precinct*’.

In particular this report assesses the transport impact of the two sites in line with the principles outlined in the Transport Assessment. Changes to the surrounding streets are proposed to support the improvements to active transport and place, including the application of a ‘Complete Streets’ treatment of Pirrama Road.

It should be acknowledged this report has been prepared based on the provided information in the PPPS and the technical consultant reports that accompany the document. Assumptions have been made in order to make a reasonable assessment of the precinct-wide matters related to:

- Site permeability/strategies to improve walkability around and across the site
- Traffic and parking
- Access and management of buses, coaches and taxis
- Loading dock and servicing.

1.1 Project background

The PPPS provides a 20-year framework that identifies areas that can accommodate growth in Darling Island, Blackwattle Bay, Tumbalong Park and Ultimo sub-precincts, while enabling more growth in the Pyrmont Village and Wentworth Park sub-precincts. The PPPS is implemented in the statutory planning system by a Ministerial Direction that requires all land use and planning proposals to be consistent with the Place Strategy.

The first phase in implementing the PPPS is the preparation of master plans for each of the seven sub-precincts that make up the Peninsula (Figure 1.1). As a ‘Key Site’ located in the Darling Island sub-precinct, The Star has been identified to progress its own Master Plan for its ‘Key Site’ alongside the broader Precinct-wide master planning being undertaken by the Department, in consultation with the location of the City of Sydney.

The Star within the Pyrmont Peninsula is shown in Figure 1.2.



Source: *Pyrmont Peninsula Place Strategy*

Figure 1.1 Pyrmont peninsula sub-precincts

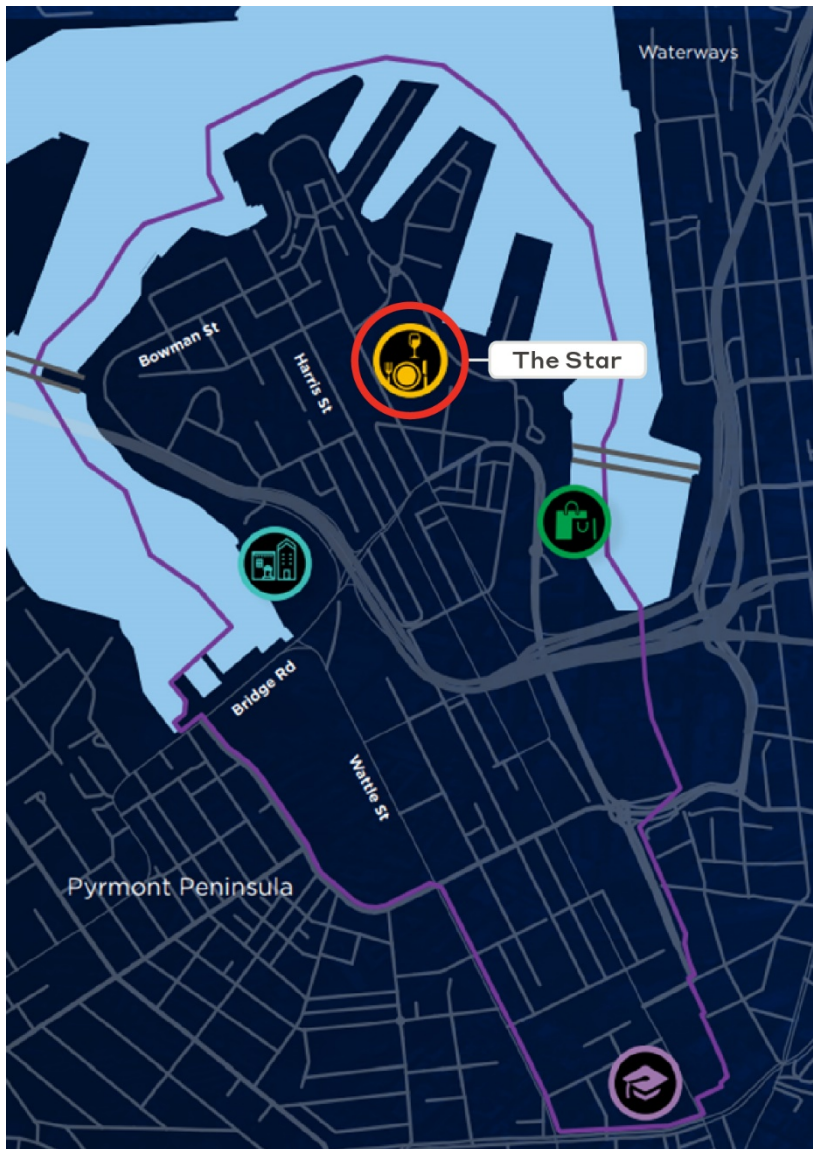


Figure 1.2 The Star key site

1.2 The Star

The Star is an ASX 100 listed company that owns and operates The Star Sydney, Treasury Brisbane and The Star Gold Coast.

The Star Sydney is Sydney's leading entertainment, dining and tourism destination. More than 11 million people, including locals, domestic visitors and international tourists visit The Star annually, facilitated by a workforce of approximately 4,500 people (pre-COVID). As Sydney's only integrated resort, The Star Sydney focuses on the development of tourism and entertainment products across four key segments – accommodation, F&B, gaming and entertainment.

1.3 The Proposal

The Star Key Site Master Plan is proposing to rezone 20–80 Pyrmont Street and 37–69 Union Street, Pyrmont to establish new planning controls to enable redevelopment on the site to accommodate future mixed uses including retail, commercial uses, hotel and residential. The site is outlined in Figure 1.3.



Source: Nearmap/Ethos Urban

Figure 1.3 Site aerial

The rezoning and proposed planning controls have been informed by detailed site planning considerations as well as existing and future local context analysis. The proposed new controls that comprise amendments to the Sydney Local Environmental Plan 2012 (Sydney LEP 2012) and a Design Guide, respond to the objectives for The Star site Master Plan as listed in the PPPS as well as the Strategy's directions, big moves and place priorities.

It should be noted that subsequent development applications will be required in line with the relevant provisions of the *Environmental Planning & Assessment Act 1979* to deliver the proposed developments.

The key development outcomes sought to be achieved for The Star site from the proposed Master Plan include:

Northern Site (20–80 Pyrmont Street)

- A new 27 storey six star hotel (capped at RL 110) on Pirrama Road (North Tower) comprising:
 - Six storey podium that retains the existing ground level setback on The Star site
 - 21 storey tower with 1.5 m street setback from podium and increased minimum 7 m street setback to the north in line with wind advice and view sharing principles
 - Total gross floor area of 26,000 m² (excluding through-site link)
 - New porte-cochere drop off servicing hotel
- Additional built form to Level 5 rooftop of the main Star site comprising:

- A collection of indoor and outdoor spaces with complementary functions such as indoor/outdoor dining opportunities, recreational spaces, wellness spaces and hotel amenities, including an existing hotel pool
- Total of approximately 3,000 m² (additional to existing)
- Opening up of Pirrama Road frontage to reveal light rail and to provide improved connectivity to public realm and waterfront including:
 - Active uses such as retail, food and beverage and wellness uses at street level; and
 - Total GFA of approximately 200 m² (additional to existing).
- New through-site link connecting Jones Bay Road and Pirrama Road
- Re-configured and expanded entry to the Lyric Theatre
- Façade upgrades to existing Astral Towers.

Southern Site (37–69 Union Street)

- A new 37 storey mixed use building (capped at RL 140) on Union Street (South Tower) comprising:
 - Five storey podium mixed use podium with a 3 m ground level setback along the Pyrmont Bridge Road boundary to increase footpath width, comprising uses such as retail, residential and hotel amenities and/or dedicated hotel levels
 - 32 storey tower generally setback 5–7 m from the podium, comprising uses such as retail, residential and hotel amenities and/or dedicated hotel levels and two plant levels
 - Total GFA of approximately 32,000 m².

1.3.1.1 Public realm

- Upgrades to corner of Edward Street and Union Street
- Upgrades to corner of Union Street and Pyrmont Street
- Improvements to public domain along Edward Street
- Improvements to public domain along Pirrama Road
- Upgrades to Union Street with potential for shared zone, including upgrades to walkway and cycleway.

Once new planning controls are adopted, The Star will progress with the detailed design and planning of the future development on the site, including progressing with a design competition and securing development approval for the winning design.

1.4 General requirements

This report has been prepared with reference to the *General Requirements for Preparing Key Site Master Plans under the Pyrmont Peninsula Place Strategy* and the alignment review prepared by the Department of Planning, Industry and Environment (DPIE) dated 26 April 2021.

This report sets out an assessment of the transport implications of the proposed development, including consideration of the following:

- Existing transport conditions surrounding the site
- The traffic generating characteristics of the proposed Master Plan
- The transport impact of the proposed Master Plan on the surrounding road network.

1.5 References

In preparing this assessment, the following documents have been referenced:

- Architectural Drawings prepared by FJMT Studios
- Australian Standards AS2890
- City of Sydney Local Environmental Plan (2012)
- City of Sydney Development Control Plan (2012)
- Cycling Aspects of Austroads Guides (Austroads, 2017)
- Guide to Traffic Generating Developments (Transport for NSW, 2002)
- Guide to Traffic Generating Developments – Updated Traffic Surveys (Transport for NSW, 2013)
- Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments (Austroads, 2020)
- NSW Planning Guidelines for Walking and Cycling (Department of Infrastructure, Planning and Natural Resources (DIPNR), 2004)
- Practitioner’s Guide to Movement and Place Department of Planning, Industry and Environment and Government Architect NSW Issue March 2020)
- Pyrmont Peninsula Place Strategy (NSW Department of Planning, Industry and Environment, December 2020)
- Pyrmont Peninsula Place-Based Transport Strategy (VIAE Consulting, October 2020)
- Urban design drawings prepared by Urbis.

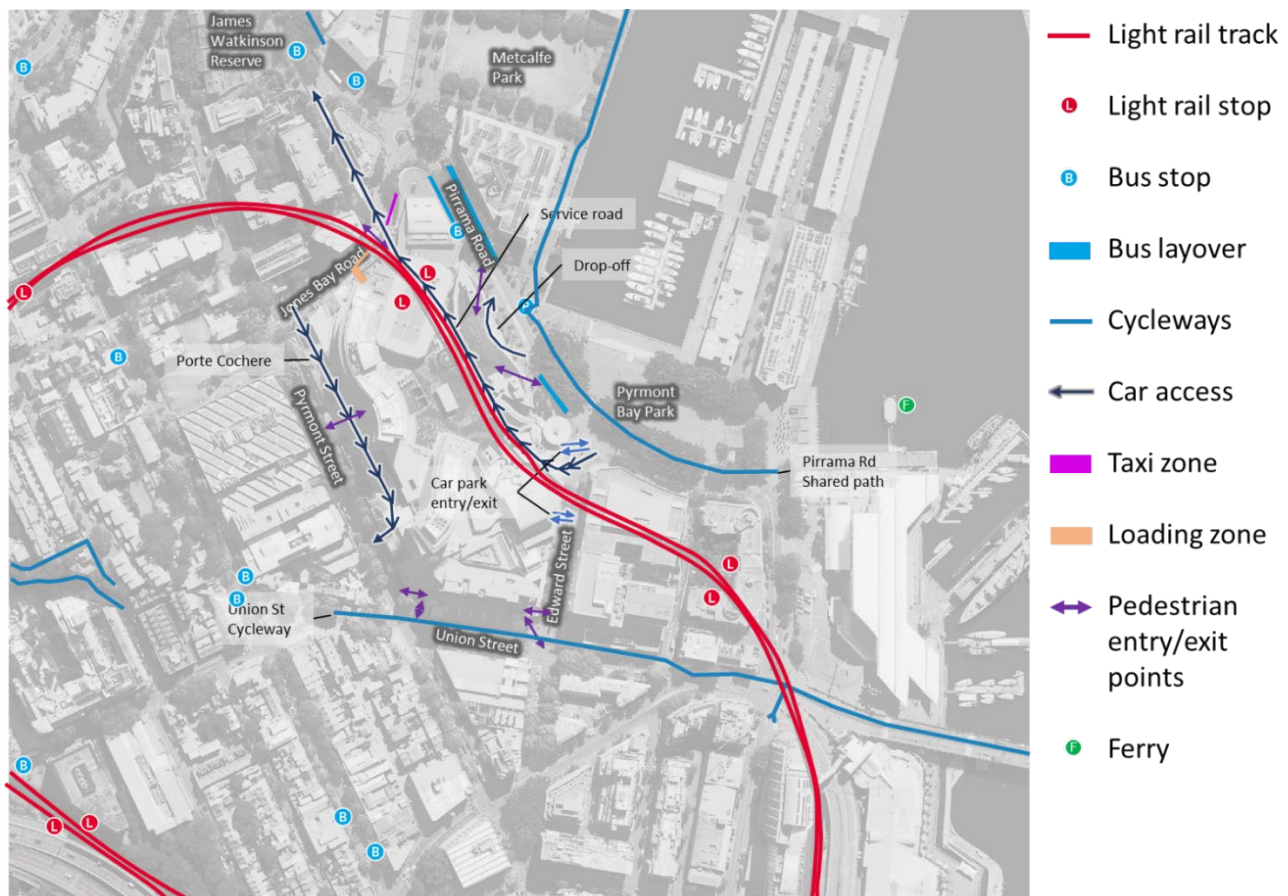
2 Existing transport conditions

2.1 Overview

The Star and its surrounding transport network are shown in Figure 2.1. The transport network comprises:

- Light rail line L1 to Dulwich Hill runs through the site, including a light rail stop at The Star
- Bus route 389 runs along Pirrama Road, with bus stops outside The Star and opposite
- Tourist bus stops on Pirrama Road
- Ferry services line F4 provided at Pyrmont Bay Wharf, located approximately 250 m to the east
- Separated on-street cycleway runs along Union Street
- Active transport connection to the CBD via Pyrmont Bridge, approximately 250 m to the east
- Two main car park entries, one on Pirrama Road and one on Edward Street
- A Porte Cochere supporting the Astral Hotel, one-way access in via Jones Bay Road and out via Pyrmont Street
- An additional car park entry for valet only, located at the end of the Pyrmont Street porte cochere
- An internal service road parallel to Pirrama Road which services The Star Express minibuses, as well as loading.

It is noted that the Union Street site has been identified as a potential location for Sydney Metro West, which will connect Pyrmont to Parramatta and the CBD via Metro. This process is ongoing.



Source: Nearmap

Figure 2.1 Transport network

2.2 Land use zoning

The site is zoned Commercial Core (B3) of the City of Sydney Local Environment Plan (LEP) 2012.

2.3 Road network

The site of 20–80 Pyrmont Street is bound by Pyrmont Street, Union Street, Edward Street, Pirrama Road and Jones Bay Road, while the site of 37–69 Union Street is bound by Edward Street, Union Street and Pyrmont Bridge Road.

Pyrmont Street is a local road which runs north to south. It has one traffic lane in each direction and has a speed limit of 40 km/h. Kerbside parking is provided as 1- and 2-hour parking.

Union Street is a local road running east to west with a speed limit of 40 km/h. It has one traffic lane in each direction and kerbside parking provided as 2-hour parking. There is also a separated two-way cycleway provided on the northern side of Union Street connecting to Pyrmont Bridge.

Edward Street is a north-south local road with one traffic lane in each direction. The speed limit is 40 km/h and provides kerbside parking primarily as 2-hour parking. Edward Street also provides access to The Star car park and The Darling loading dock.

Pirrama Road is a local road with one traffic lane in each direction. The speed limit is 40 km/h. No kerbside parking for general vehicles is provided, however, a number of bus stops and bus layover and parking spaces are provided on both sides of the road. One of the two main car park entrances is accessed off Pirrama Road via a signalised intersection.

Jones Bay Road is a local road running east to west. It has a speed limit of 40 km/h and one traffic lane in each direction. Kerbside parking on Jones Bay Road is provided generally as 1-hour parking. It also has a number of taxi and loading zones, including access to The Star loading dock.

Pyrmont Bridge Road in the vicinity of the site is a local road, with two traffic lanes in each direction and a speed limit of 40 km/h. It connects Pyrmont to the west via Anzac Bridge and Bank Street. No kerbside parking is provided.

2.4 Access, parking and loading

Pedestrian access to the current The Star complex is via entry points on Pyrmont Street, Jones Bay Road, Union Street and Pirrama Road (refer to Figure 2.1).

The Star has an off-street parking supply of 2,795 parking spaces provided in five basement levels. It has a maximum approval of 3,000 parking spaces (MP08_0098). The parking is accessed through one of two main entrances, either via Pirrama Road or Edward Street (refer to Figure 2.1). Additionally, access to and from the car park is provided for valet drivers in the Pyrmont Street porte cochere. There is currently ample parking capacity, with a parking review indicating that 2,400 of the 2,795 parking spaces were occupied at the peak time on a Saturday night.

Additionally, there are around 3,700 off-street parking spaces provided at other establishments within walking distance of The Star, such as at Harbourside, ICC Sydney and The Fish Markets. There are also over 1,200 on-street parking spaces within walking distance of The Star. As such, there is ample parking capacity provided at The Star and within walking distance.

There are three loading dock areas within The Star complex, including The Star loading dock (via Jones Bay Road), The Darling loading dock (via Edward Street), and The Star Events Centre loading dock (via Pirrama Road). Refer to Figure 2.1 for locations. Up to 120 deliveries use the main loading dock per day, while The Darling loading dock provides additional service docking and a waste removal area. The Star Events Centre is used to unload and reload production equipment for plays, concerts and special events (e.g. Aria awards). The loading docks can currently process the current delivery demands.

2.5 Intersection operation

It is noted that this assessment has been conducting during the COVID-19 pandemic, where typical travel patterns weren't observed and data collection couldn't be conducted. Therefore, the base case traffic volumes have been adopted from those presented in *The Star Modification 13 Traffic Impact Statement* prepared by Mott Macdonald in 2018.

The following peak traffic periods were assessed:

- AM peak, 8.00 am to 9.00 am
- PM peak, 5.30 pm to 6.30 pm.

The operation of the study intersections has been assessed using the SIDRA Intersection modelling software.

The Traffic Modelling Guidelines (Roads and Maritime Services, 2013) specifies that intersection operation is generally measured by degree of saturation, level of service and 95th percentile base of queue distance.

SIDRA Intersection measures these elements, with the intersection level of service being a measure of the average delay at the intersection, as defined by the criteria set out in Table 2.1.

Table 2.1 SIDRA intersection level of service criteria

Level of Service	Average delay (seconds per vehicle)	Criteria for traffic signals	Criteria for give way and stop signs
A	<14	Good operation	Good operation
B	15 to 28	Good operation with acceptable delays and spare capacity	Good operation with acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays	At capacity, requires other control mode
F	>70	Extra capacity required	At capacity, requires other control mode

Source: Adopted from *Guide to Traffic Generating Developments (Roads and Maritime Services, 2002)*

Table 2.2 and Table 2.3 present a summary of the base case intersection operations of the key study intersections during the weekday AM and PM peak hours.

It should be noted that the critical movement for level of service at a roundabout or priority-controlled intersection is the movement with the worst delay, whereas for a signalised intersection, the average movement delay and level of service over all movements should be adopted.

The intersection modelling results indicate the surrounding intersections are generally operating with some spare capacity during the assessed peak hours.

Table 2.2 AM peak intersection operation – Base case

Intersection	Degree of Saturation	Average delay (secs)	95 th percentile queue (m)				Level of Service
			South	East	North	West	
Pymont Street/Jones Bay Road	0.15	10	0	2	2	-	A
Pymont Street/ Union Street	0.26	12	5	8	29	8	A
Pymont Street/ Pymont Bridge Road	0.88	27	-	20	49	71	B
Union Street/ Edward Street	0.14	15	3	4	0	9	B
Pymont Bridge Road/ Union Street	0.11	6	-	0	0	0	A
Pymont Bridge Road/ Murray Street	0.42	32	24	36	21	27	C
Pirrama Road/ Car Park	0.19	5	2	-	4	2	A
Jones Bay Road/ Pirrama Road	0.25	11	4	1	2	4	A
Jones Bay Road/ Porte Cochere Entry	0.14	6	-	0	-	0	A
Pymont Street/ Porte Cochere Exit	0.15	13	0	1	0	-	A
Pymont Bridge Road/ Edward Street	0.16	5	-	4	0	0	A
Pirrama Road Crossing	0.29	5	44	-	4	-	A

Table 2.3 PM peak intersection operation – Base case

Intersection	Degree of Saturation	Average delay (secs)	95th percentile queue (m)				Level of Service
			South	East	North	West	
Pymont Street/ Jones Bay Road	0.31	9	0	4	2	-	A
Pymont Street/ Union Street	0.43	16	3	20	40	6	B
Pymont Street/ Pymont Bridge Road	0.73	29	-	20	82	43	C
Union Street/ Edward Street	0.16	16	2	4	0	12	B
Pymont Bridge Road/ Union Street	0.17	6	-	0	1	0	A
Pymont Bridge Road/ Murray Street	0.54	33	30	34	55	21	C
Pirrama Road/ Car Park	0.27	13	10	-	11	20	A
Jones Bay Road/ Pirrama Road	0.4	12	7	3	5	3	A
Jones Bay Road/ Porte Cochere Entry	0.27	6	-	0	-	0	A
Pymont Street/ Porte Cochere Exit	0.14	15	0	1	14	-	B
Pymont Bridge Road/ Edward Street	0.14	5	-	17	0	0	A
Pirrama Road Crossing	0.36	5	47	-	25	-	A

2.6 Public transport services

2.6.1 *Light Rail*

The Star light rail stop is located within The Star Building. It is located on the L1 Dulwich Hill to Central Line. Services operate from 6.12 am to 0.33 am (11.36 pm on weekends) with 8 minute headways in the weekday morning and afternoon peaks and 10 minute headways during the middle of the day. The line connects with other Sydney and NSW rail services at Central Station as well as other light rail and bus services.

2.6.2 *Bus*

Bus route 389 operates between the Star and Bondi Junction via Ultimo, Sydney CBD and Paddington. Services operate from approximately 5.00 am to 1.00 am with 5 to 6 minute headways in the weekday morning and afternoon peaks and 12 minute headways during the middle of the day.

2.6.3 *Ferry*

The F4 Pyrmont Bay to Circular Quay ferry service operates from 6.25 am to 0.12 am with a 15 to 20 minute headway in the weekday morning and afternoon peaks and 30 minute headways during the middle of the day.

2.6.4 *Future Sydney Metro West*

In May 2021, the NSW Government announced that it had selected a preferred site for a Metro Rail Station in Pyrmont. The site includes 37–69 Union Street, Pyrmont. However, this process is ongoing with an agreement yet to be made.

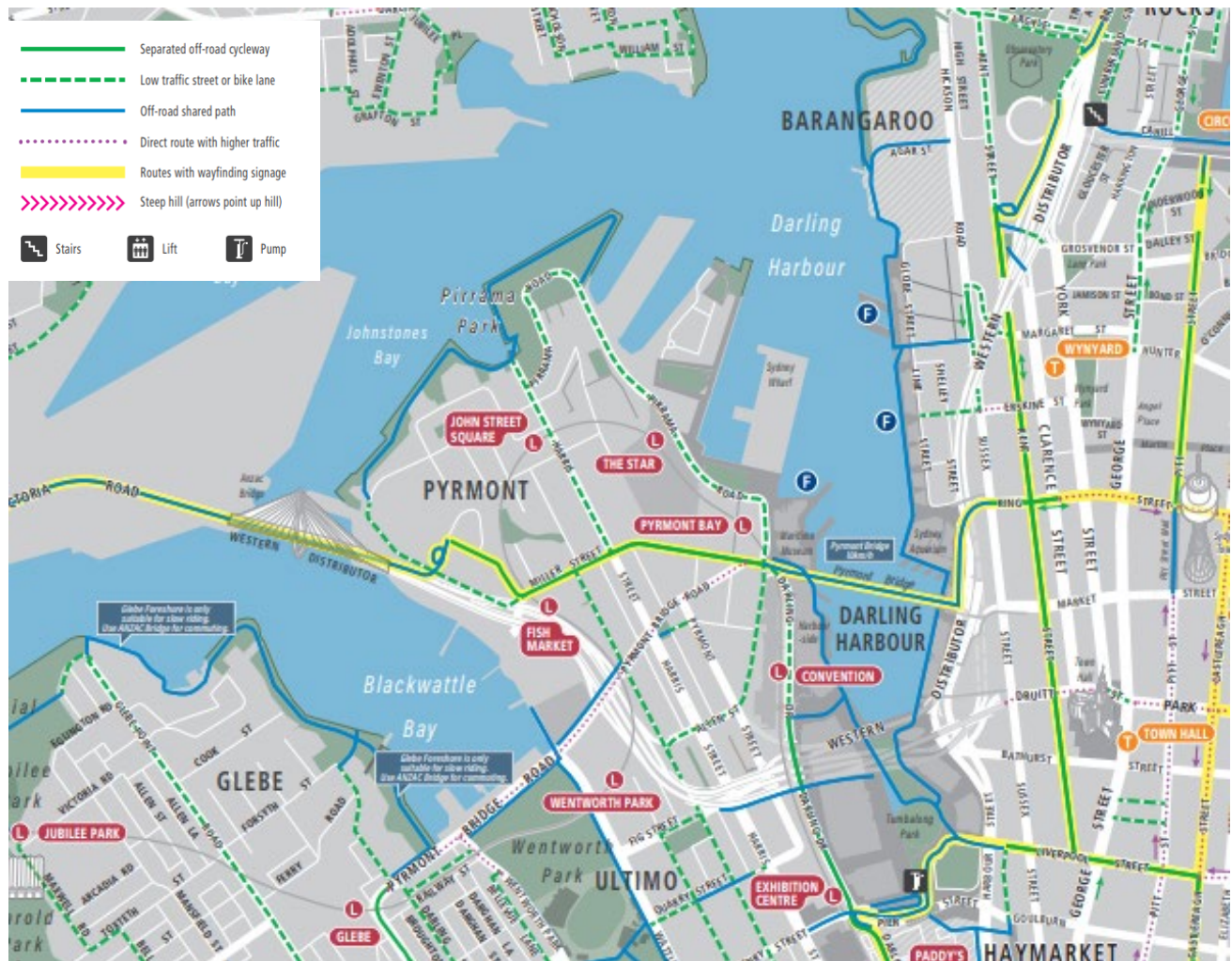
Based on other over-station developments, it is expected that The Star's plans for the site can still be realised. The Station can be accommodated by providing space for station entrances and equipment.

The Sydney Metro West line will offer frequent and rapid rail services from Pyrmont to Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays and Hunter Street, Sydney CBD.

2.7 Cycling

2.7.1 *Existing network*

A dedicated separated two-way cycleway is provided along the northern side of Union Street. This provides a cycling connection through the site of The Star Master Plan to the CBD to the east via Pyrmont Bridge and to the west via Miller Street and Anzac Bridge. A foreshore cycleway passes through Pyrmont Bay Park on the north side of Pirrama Road. An excerpt from the Sydney Cycling map is included in Figure 2.2.



Source: City of Sydney, Sydney Cycling Map

Figure 2.2 Cycle infrastructure in proximity to the development site

2.7.2 Sydney's Cycling Future

Sydney's Cycling Future (Transport for NSW, 2013) is a long-term plan for cycling in Sydney that proposes to create safe, connected cycling networks by:

- Creating new or improve existing infrastructure and facilities, particularly within 5 km of major centres or near key destinations
- Fixing missing links
- Creating hierarchy of safe cycling routes
- Delivering improvements with major infrastructure projects.

The Star will benefit from identified cycle network improvements including the North Shore links, Eastern Suburbs link and the Inner West links. The plan identifies that cycling links which feel safe and match cyclists' abilities are key to promoting increased cycling trips. These links are required outwards from centres and connecting to key routes and destinations such as other centres. Also identified is the importance of providing adequate end-of-trip facilities at key destinations. The infill of these missing cycling links will increase the cycling catchment of The Star.

2.8 Walking

2.8.1 Existing network

Pedestrians accessing The Star are well served with a good pedestrian network including wide footpaths, shared paths and important active transport connectors such as Pyrmont Bridge and Anzac Bridge. The pedestrian environment could be improved through targeted footpath widening and improved through-site links within the site.

2.8.2 Sydney's Walking Future

Sydney's Walking Future (Transport for NSW, 2013) is an action plan to promote more walking in Sydney. This will be provided for through:

- Design and development principles for interchanges prioritising walking routes
- Provision for walking links from the surrounding suburbs
- A focus on safety and access for disabled persons or the mobility impaired
- The walkability index which will lead to improved standards, guidelines and benchmarks for walking solutions
- Improved design of pedestrian infrastructure
- Education programs and conferences
- Involvement with community events and initiatives
- Improved trip planning information on the ground and online.

Sydney's Walking Future targets the removal of barriers to pedestrian movement within approximately 2 km of activity centres.

2.8.3 City of Sydney Walking Strategy and Action Plan 2015–2030

City of Sydney Walking Strategy and Action Plan 2015–2030 (City of Sydney, 2015) provides a vision for walking through to 2030. These includes targets such as:

- Walking to increase as the primary mode of transport for commute trips amongst City of Sydney residents from 29% to 33% by 2030
- Walking to account for 60% of local trips (within City of Sydney) by 2030
- Walking to account for 50% of all trips to and from late-night precincts, such as The Star, by 2030, up from 37% today.

3 Strategic planning context

This section of the report outlines the strategic planning context at the site.

3.1 Pyrmont Peninsula Place Strategy

The Pyrmont Peninsula Place Strategy (NSW Department of Planning, Industry and Environment, December 2020) outlines ten key directions for the precinct to harness the current quantum of investment, especially that linked to the development of the new metro station. Those key directions are as follows:

- 1 Jobs and industries of the future
- 2 Development that complements or enhances that area
- 3 Centres for residents, workers and visitors
- 4 A unified planning framework
- 5 A tapestry of greener public spaces and experiences
- 6 Creativity, culture and heritage
- 7 Making it easier to move around
- 8 Building now for a sustainable future
- 9 Great homes that can suit the needs of more people
- 10 A collaborative voice.

On top of the key directions, it further highlights five key moves to articulate the vision and to ensure the peninsula reaches its full potential. The five key moves listed are:

- 11 Build and link a world class foreshore
- 12 Enhance the opportunity to provide a vibrant 24-hour cultural and entertainment destination, with small bars, performance spaces, museums and other entertainment
- 13 Realise the benefits of a new Metro station by making Pyrmont a destination, rather than the point where journeys start
- 14 Create a low carbon and high-performance precinct, maintaining the shift to a place where people walk and use public transport to connect to other places
- 15 More, better and activated public spaces across the Peninsula.

The strategy identifies key sites to ensure the big moves required are enacted. The proposed development site is in one of these sites being a part of the star site at Darling Island.

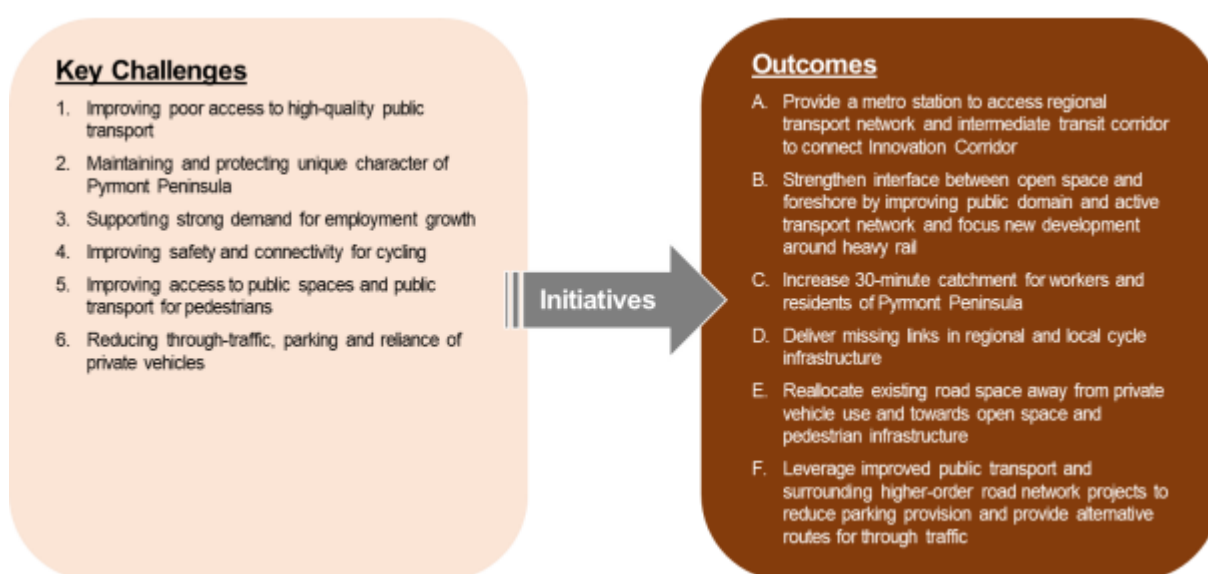
The place strategy establishes a framework for key sites that sit within the vision 10 and six moves framework, while being supported by infrastructure. These key sites will be able to advance under state led pathways.

3.2 Pymont Peninsula Place-Based Transport Strategy

The Pymont Peninsula Place-Based Transport Strategy (PBTS) is a strategic assessment of the transport needs of the Peninsula to support the Place Strategy. It sets a vision for how transport should change to match development over a 20-year timeframe.

The PBTS considered high and low employment density scenarios, both assuming a new Metro Station for the Peninsula. Employment was expected to grow from 36,900 in 2017 up to 60,000 by 2041 (a 63% increase). Of this growth, an additional 2,700 to 3,300 jobs were forecast to be added in the tourism and entertainment category (representing approximately 14% of the growth). The proposed hotels included in this Master Plan support the employment growth envisaged in this Strategy.

To accommodate the anticipated growth, the outcomes shown in Figure 3.1. This Master Plan addresses Outcomes B (strengthening the interface between the foreshore and the Peninsula), E (reallocating road space for pedestrians) and F (use public transport to reduce parking provision).



Source: Pymont Peninsula Place-Based Transport Strategy (VIAE Consulting, October 2020)

Figure 3.1 transport organisational concept

The PBTS prioritises Union Street as a key pedestrian/active transport and open space corridor, as shown in Figure 3.2. Along with Harris Street they form pedestrian ‘spines’. Focussing wider footpaths, space for cycle facilities and reducing vehicle conflicts on this corridor will support the Strategy.



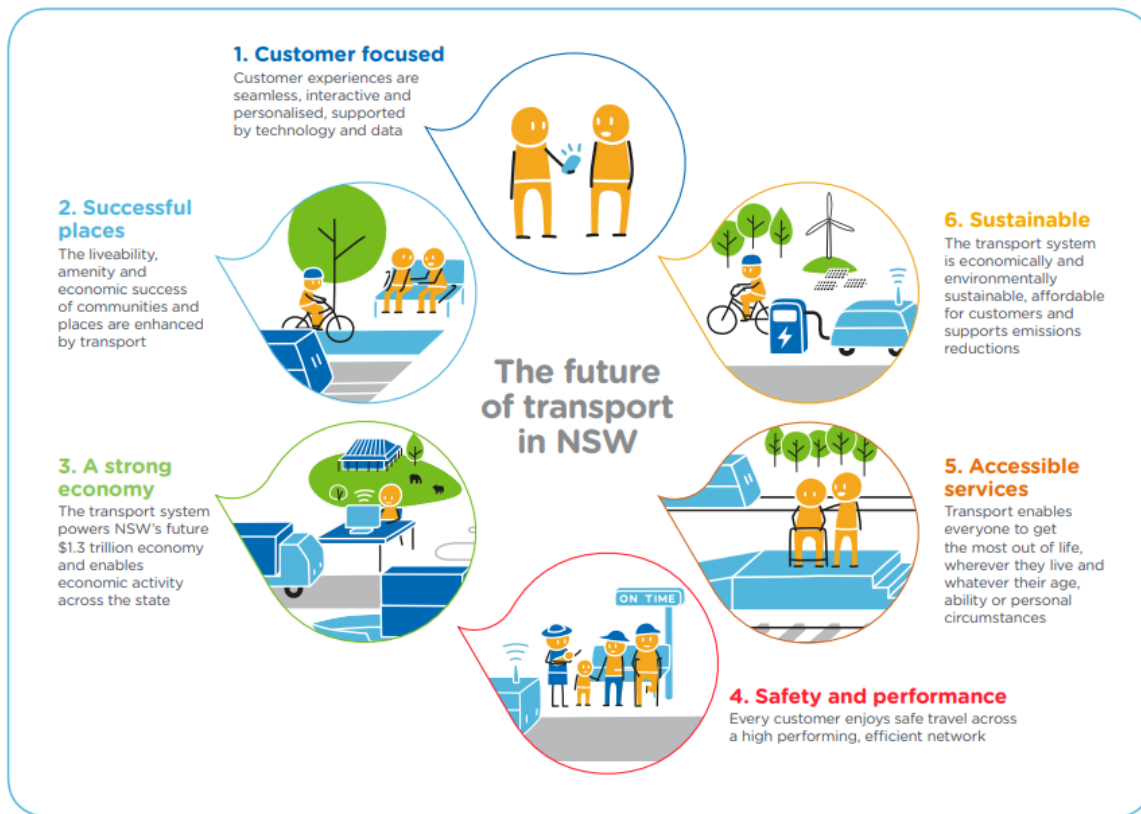
Source: *Pyrmont Peninsula Place-Based Transport Strategy (VIAE Consulting, October 2020)*

Figure 3.2 Pyrmont Peninsula Place-based transport organisational concept

3.3 Future Transport context

3.3.1 Future Transport 2056

The Future Transport 2056 strategy sets the 40-year vision, directions and framework for customer mobility in NSW. The strategy includes the Greater Sydney Services and Infrastructure Plan which aims to define the transport network required to achieve the desired service outcomes set out by the Greater Sydney Commission, in the Greater Sydney Regional Plan. Six key customer and network outcomes are identified as shown in Figure 3.3. These customer focused outcomes have been considered in preparing this transport impact assessment.



Source: *Future Transport 2056, Transport for NSW, 2017*

Figure 3.3 Future Transport's six state-wide outcomes

3.3.2 Greater Sydney Region Plan

The Greater Sydney Region Plan, *A Metropolis of Three Cities* is built on a vision that most of Greater Sydney's residents live within 30 minutes of jobs, education, services and great places. These three cities will be supported by metropolitan, strategic and local centres which will provide infrastructure and services as well as entertainment and cultural facilities for residents.

The Star is located within the Eastern City District Plan area of the Region Plan. The Eastern City District includes the broader City of Sydney LGA, stretching to the Strathfield LGA in the west and Bayside LGA in the south.

The Eastern City District's vision is supported by actions such as:

- Stimulating the night-time economy within a responsive regulatory environment
- Sustaining communities through vibrant public places, walking and cycling, and cultural, artistic and tourism assets.

As mentioned, The Star Key Site Master Plan is being prepared to accommodate additional growth, with a strong focus on the night-time economy, and increasing the vibrancy of its surrounding public realm.

3.3.3 Movement and Place considerations

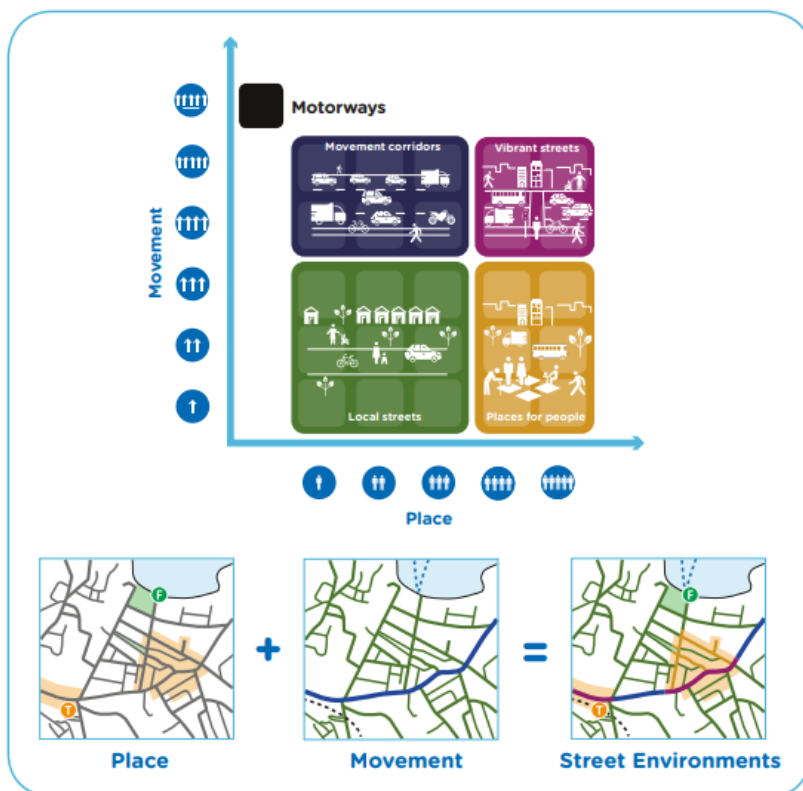
Discussed in both the Future Transport 2056 Strategy and the Greater Sydney Commissions Greater Sydney Regional Plan is the concept of a 'Movement and Place' approach to road network planning. The Movement and Place Framework acknowledges that our road network performs a dual function – it moves people and goods and features destinations (or places) in their own right.

The Future Transport 2056 Strategy states:

Roads through and around centres serve an important movement purpose, allowing people travel to and from the centre and move around easily within it. They also serve a place function by operating in a way that allows attractive places for people and strong local economies to develop and thrive.

The Greater Sydney Commission has established principles for making our places easier for walking and cycling. It is highlighted that a permeable and well-connected urban form is essential to support connectivity, accessibility and amenity of our centres.

Detailed in Figure 3.4 is the framework for strategically assessing and planning the road network.



Source: Future Transport 2056

Figure 3.4 Movement and Place framework

The roads around The Star are considered to have high place-oriented functions. However, some of these roads also need to facilitate movement functions not only for traffic but for all road users, including bus, cyclist and pedestrian movement. Therefore, all road network planning surrounding The Star needs to consider a balance between the place and movement needs across all modes.

4 Proposed Master Plan

The Star Key Site Master Plan covers development at two sites:

- Rezone 20–80 Pyrmont Street, Pyrmont within the Main Star Site. There are two components to this development including:
 - A new tower on the corner of Pirrama Road and Jones Bay Road. This is referred to as the North Tower.
 - Additional food and beverage floorspace on Level 5 roof of podium.
- Rezone 37–69 Union Street, Pyrmont. This site is referred to as the South Tower.

The two sites and the key elements within them are shown in Figure 4.1.

4.1 Main site

4.1.1 North Tower

The North Tower is proposed to contain a Six-Star Hotel with approximately 209 suites within 16,880 m² GFA. It will also contain 9,120 m² GFA including a sports bar, food and beverage, retail, etc. associated with the hotel.

Access will be via a relocated porte cochere on Pirrama Road, as well as access via Jones Bay Road and internally to the rest of The Star. This porte cochere will serve the Hotel guests and is not intended as a second facility for the Casino.

Valet parking will be provided at the porte cochere for guests arriving in private vehicles. It will also be used by taxis and limousines. A feeder rank on the north/east side is proposed to avoid taxis blocking the porte cochere. This would be in kerb space currently occupied by coach and minibus parking. Alternative coach and minibus parking is proposed in The Star internal service road.

No additional car parking is proposed for this development. It is planned that guest parking would be provided within The Star's current ample parking (2,795 spaces). A dedicated loading dock will be provided with access via The Star's internal service road.

The Hotel will be operated by an estimated 130 staff on site per day. Staff will have access to bicycle end of trip facilities for staff (bicycle storage, showers, etc.). They will also have access to light rail (L1 – Dulwich Hill Line), bus (Route 389), ferry (F4 – Pyrmont Bay) and the planned Pyrmont Metro station.

As part of the construction of the North Tower, a new public through-site link is proposed from Pirrama Road to Jones Bay Road. This will increase the pedestrian permeability of the area. An image of the link is shown in Figure 4.2.

4.1.2 Level 5 Roof of podium

The new space on the Level 5 roof of podium will contain indoor and outdoor spaces with complementary functions such as indoor/outdoor dining opportunities, recreational spaces, wellness spaces and hotel amenities, including an existing hotel pool. Of the 3,000 m² it has been assumed that half of this (approximately 1,500 m² GFA) will be traffic generating (primarily the new food and beverage).

4.1.3 Pirrama Road frontage

The activation of the Pirrama Road frontage will contain approximately 190 m² GFA of new retail, food and beverage and wellness uses at street level.

The Hotel retail floorspace, Level 5 roof of podium and Pirrama Road frontage traffic generating floorspace uses have been combined for this trip assessment.

Proposed Key Elements

Main Star Site

- 1 North Hotel Tower RL 110
- 2 New porte-cochere drop off serving hotel
- 3 Opening up of Pirrama Road frontage to reveal Light Rail and to provide improved connectivity to public realm and waterfront
- 4 Additional built form to Level 5 to facilitate indoor/ outdoor dining facilities and events
- 5 New Through-site Link
- 6 New Lyric Theatre Stairs
- 7 Facade Upgrades to The Star Grand Hotel and Residences
- 8 MUEF Modifications

Union Street

- 9 Southern Mixed-Use Tower RL 140

Public Realm Areas

- 10 Upgrade corner at Union Street and Edward Street
- 11 Upgrade corner at Union Street and Pyrmont Street
- 12 Improve public domain along Edward Street
- 13 Improve public domain along Pirrama Road
- 14 Upgrade to Union St with potential for improved shared zone, including upgrades to walkway and cycleway
- 15 Union Square



Aerial view of The Star Key Site masterplan from the East

Source: FJMT Studio – 13 September 2021

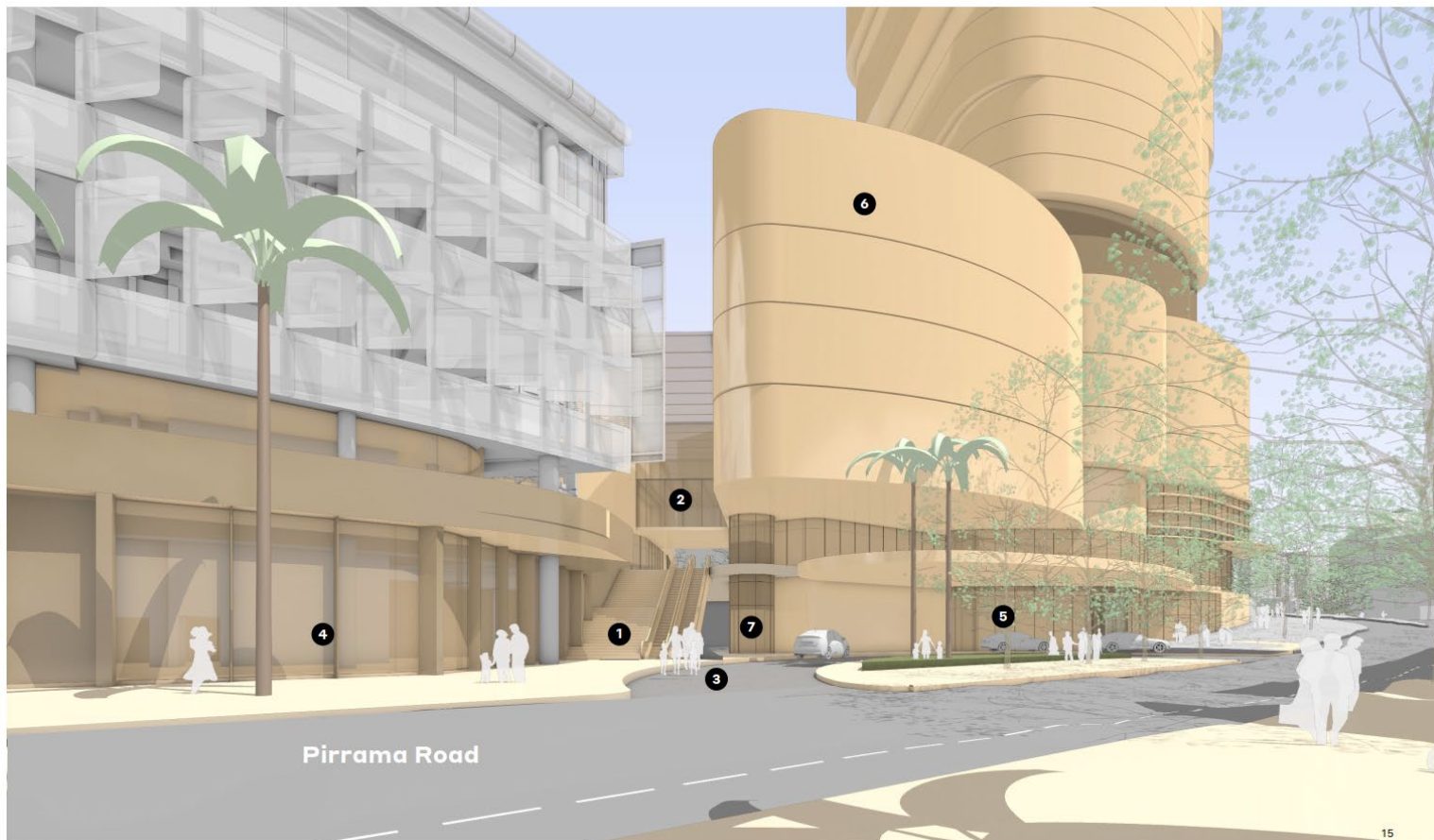
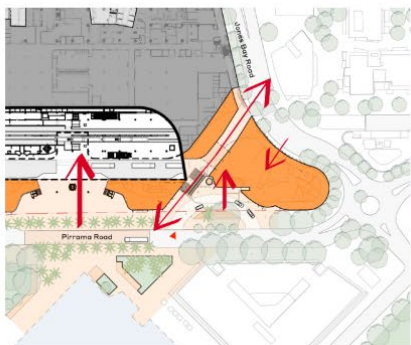
Figure 4.1 The Star Key Sites Master Plan elements

Site Permeability

Edge Porosity

Creating a **Through-site Link** at the northern corner of the precinct

- 1 Proposed through-site link
- 2 Footbridge connection to existing Sports Bar
- 3 Porte-Cochere
- 4 Proposed Pirrama Road Retail Interface
- 5 Proposed Hotel Lobby
- 6 Indicative North Tower and Podium
- 7 Publicly accessible Lift



Source: FJMT Studio – SDRP Meeting 2 – Presentation (12 August 2021)

Figure 4.2 Artists impression of new through-site link between Pirrama Road and Jones Bay Road

4.1.4 Pirrama Road Complete Streets

The SDRP requested that The Star prepare a Complete Streets Strategy to transition Pirrama Road to a shared zone. This Master Plan has adopted the request with changes proposed to the layout of Pirrama Road between The Star car park entrance and Jones Bay Road.

The proposed layout changes are shown in Figure 4.3. The aim is to improve the connection from the Light Rail station and The Star to Pirrama Park and Pyrmont Bay Wharf. This will include:

- Widen footpaths with space for place improvements including seating and bicycle parking. Ensure a clear path for people walking and cycling along major desire lines.
- Reduce space for vehicles to one lane in each direction to create more space for people walking, cycling, and dwelling.

To achieve this, street design treatments from the NSW Movement and Place typologies are used to enhance Pirrama Road's role as a Civic Space. These include, but not limited to:

- Footpath flush with road surface to increase pedestrian priority across the frontage of the Star property. Road space defined by street furniture.
- Changes in pavement texture and colour to differentiate between shared roadway space and designated footpath space.
- Visually narrowed carriageway with defined bays or integrated zones for kerbside vehicle access.
- Road space designed to limit vehicle speeds. Potential for introduction of 10 km/h Shared Zone.

Traffic will be maintained in both directions. However, the treatment will discourage its use through changes in road level, lane width and speed environment.

Create legible, consolidated transit stops south of the Star frontage:

- Consolidate Route 389 last stop, first stop, and layover in designated bus bay on Star side of the street, with clear wayfinding and walking connections to the Light Rail stop and other local destinations.
- Designated bus bay for tourist buses on waterfront side of the street.

4.1.5 Pirrama Road Porte Cochere

To achieve a five-star rating, a hotel needs a 'doorman-service or valet parking'¹. To achieve a six-star rating, the service needs to be higher. Many of Sydney's five star hotels have a covered porte-cochere entry for guests to have all-day, all-weather comfortable loading and unloading from their vehicle, including:

- | | | |
|--------------------------|-----------------------------------|---------------------------------------|
| — Hotel InterContinental | — Sofitel Sydney Wentworth | — Hyatt Regency |
| — Four Seasons Sydney | — Sheraton Grand Sydney Hyde Park | — Sofitel Sydney Darling Harbour |
| — Park Hyatt Sydney | — Hilton Sydney | — The Star Grand Hotel and Residences |
| — Shangri-La Sydney | | |

The proposed location is shown in Figure 4.4.

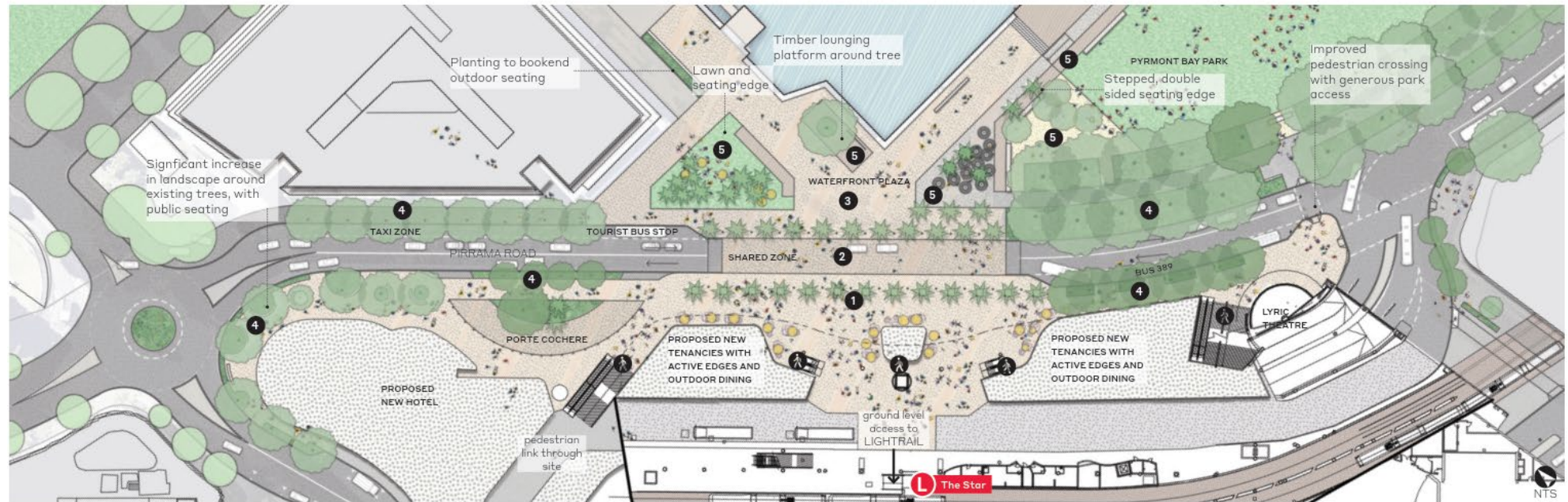
¹ <https://greatesthotelsoftheworld.wordpress.com/six-star-hotels-2/how-to-rate-a-6-star-hotel/>

Pirrama Road

A shared street that connects the Star and Light rail with the harbour foreshore

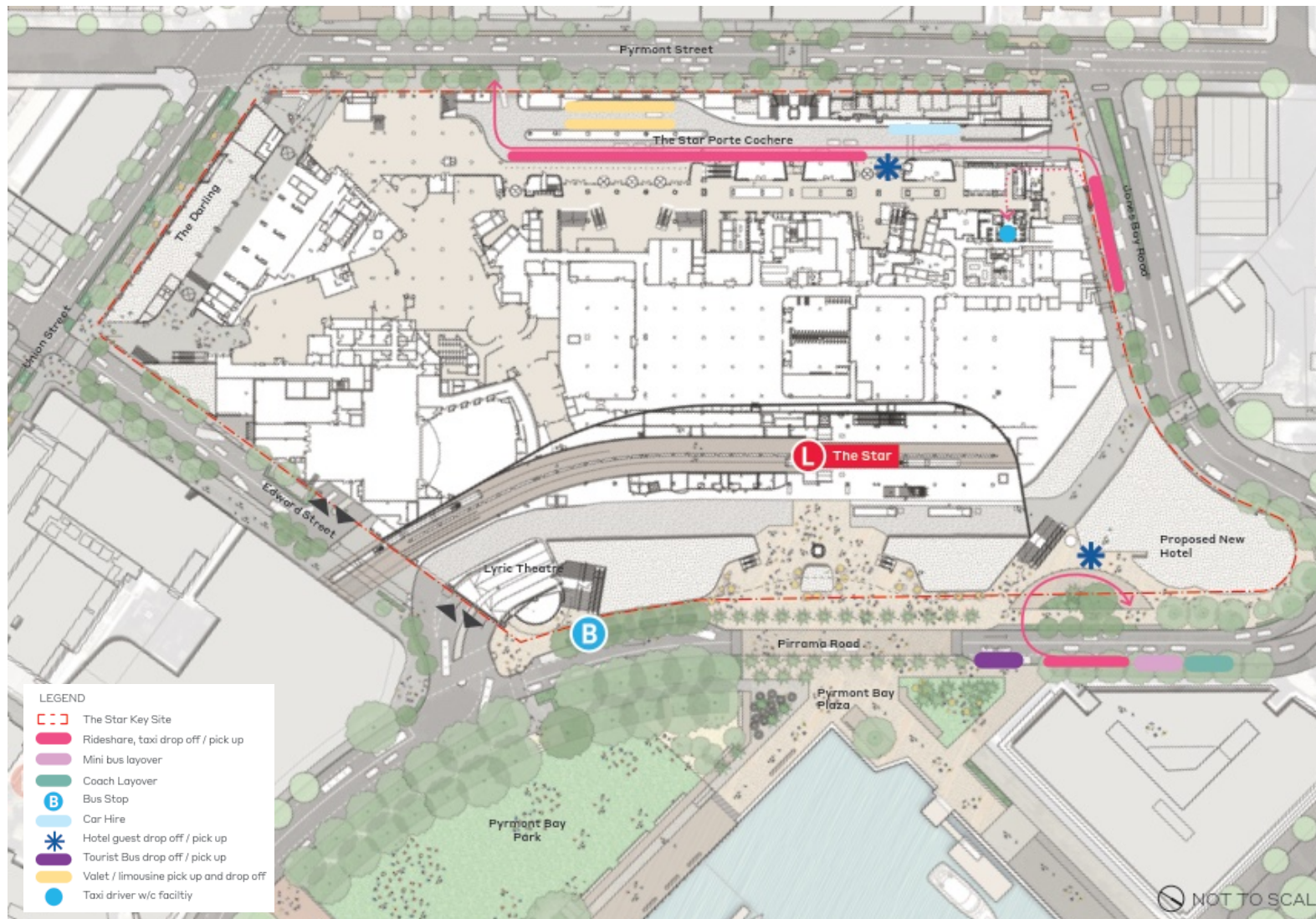
Key Moves

- 1 Provide a generous, at grade pedestrian connection to the waterfront from light rail and Star by introducing a shared zone with raised tabletop crossing frame by an avenue of palms (existing and proposed).
- 2 Provide consistent, high quality materiality to the new plaza space, with pedestrians as priority and slow speeds for vehicles. Space should seamlessly blend with the waterfront promenade
- 3 Maximise opportunity for flexible events and people gathering to compliment outdoor dining opportunities
- 4 Integrate existing figs where possible, adding a new avenue in front of the porte cochere and lyric theatre bookending the shared street
- 5 Create new public realm spaces (additional lawn, pop jets...) with generous, civic scale seating on their edges to inhabit the plaza



Source: FJMT Studio – SDRP Meeting 2 – Presentation (12 August 2021)

Figure 4.3 Pirrama Road shared area



Source: FJMT Studio – SDRP Meeting 2 – Presentation (12 August 2021)

Figure 4.4 Relocated Pirrama Road porte cochere and existing Pyrmont Street porte cochere

As part of this development, it is proposed that the existing porte cochere on the western side of Pirrama Road near the entry to the light rail station be relocated north to the frontage of the new North Tower hotel. The porte cochere would include:

- Set-down and pick-up
- Space for up to six taxis or two–three coaches
- Northbound left-in and southbound right-in entry from Pirrama Road
- Northbound left-out exit to Pirrama Road.

To protect pedestrian safety, the following design elements will be included:

- Change of material to clearly delineate roadway and footpath
- Header course or flush concrete kerb to accentuate the roadway
- Bollards for pedestrian/crash protection at similar spacings to the current taxi port cochere to the south
- Exit angle to promote driver vision of pedestrian and vehicles on Pirrama Road
- Sight lines are clear of obstructions at the entry and exit in accordance with AS2890.1.

The Pirrama Road porte cochere will not reduce pedestrian safety, as it:

- Replaces an existing taxi facility located further to the south that has a greater impact on passengers accessing the light rail station
- It is located away from major pedestrian desire lines between The Star/Light Rail stop and Pirrama Park/Foreshore Walk/Pymont Bay Wharf
- It will be bypassed by the new through-site link between Pirrama Road and Jones Bay Road, further reducing pedestrian numbers across it
- The design measures, listed above, provide clear visual cues to define pedestrian/vehicle transition zones.

The Pirrama Road porte cochere will be used for valet parking. Guests will drop-off their vehicle at the Pirrama Road porte cochere. The attendant will then drive the vehicle onto Pirrama Road northbound, turn into Jones Bay Road, into the current porte cochere and into the existing valet parking areas within The Star car park. The reverse journey will be used to deliver the vehicle to the Pirrama Road porte cochere for guest pick-up.

4.1.6 *Changes to Buses, Coaches and Minibuses*

Route 389

The public bus route is proposed to have minor changes to its operation. Currently, it has a final stop and layover is on the western side of Pirrama Road, north of The Star car park entry, and a first pick-up stop on Pirrama Road, south of Jones Bay Road (Transit Stop Number 200919). It is proposed that both of these locations would be amalgamated into one location, north of The Star car park entry – i.e. the current set-down and layover location.

It is also proposed that this arrangement would be formalised by a bus bay with sufficient space for two buses, shown in Figure 4.4. This would allow the location of the current pick-up stop to be used for a wider footpath. It also maintains a close proximity between the bus stop and the light rail stop, preserving the opportunity for interchange between the services.

Hop-On/Hop-Off Tourist Bus

The stop for the open-topped tourist bus is currently alongside Pymont Bay Park. To open-up the area for pedestrians, it is proposed that this stop be relocated approximately 50 metres north to the position shown in Figure 4.4.

Pirrama Road Coach and minibus parking

As part of the Complete Streets treatment for Pirrama Road, it is proposed to relocate some of the coach and minibus parking from Pirrama Road into the internal service road of The Star. There is currently a 'No Parking Buses Excepted' zone of approximately 56.5 m length on Pirrama Rad, south of Jones Bay Road/Darling Island Road.

Photos of this parking indicate that it is used by a mixture of minibuses (7.0 m to 9.0 m long) and coaches (12.5 m long). A typical mix of parking in this zone is two coaches and three minibuses. However, in theory, it can accommodate up to seven minibuses.

It is proposed that three spaces within The Star internal service road could be made available for some of this coach and minibus parking. Two of the three spaces proposed can accommodate 12.5 m buses. Therefore, the internal service road could take away between 43% (three out of seven) to 60% (three out of five) coach and minibus parking spaces.

Star Express

The Star Express is a free transport service for members of The Star Club. Five main routes are available, including services to Riverwood, Hurstville, Bankstown, Cabramatta/Fairfield and Auburn/Strathfield. Services start at 8.10 am, while the last service departs The Star at 2.30 am. Services operate from stops on the internal service road (see Photo 4.1). Minor changes to the position of minibus parking for The Star Express are proposed as part of the reorganisation of the internal service road.



Photo 4.1 The Star Express minibuses operating from the internal service road

4.1.7 Internal Service Road

The internal service road within The Star is used for a variety of purposes, including minibus, hire car rental, loading and priority parking. The internal service road is located in between the light rail station and the Pirrama Road entrance. Changes are planned along the internal service road to adjust to the new needs of the North Tower hotel and the Complete Streets treatment of Pirrama Road. These include:

- Reorganise the kerbside parking
- Improve the safety of the marked pedestrian crossings that provide pedestrian access to the light rail station.

The internal service road has one northbound lane with parking on both sides. The current allocation of kerbside space is shown in Table 4.1.

Table 4.1 The Star Internal Service Road – Existing allocation

Usage type	Number of spaces	Side of road	Comment
The Star Express	4 minibus spaces	left	Well used for active services
The Century Restaurant VIP Parking	5 car spaces	right	Under-utilised at most times
Minibus parking	5 minibus spaces	1 left, 4 right	Well used
Taxi space	7 car spaces	left	Not used (some used for car hire drop-off)
Car Hire	3 parking spaces	right	Well used for active businesses
Construction	Approx. 40 m	left	Temporary

With the need for construction space due to finish, The change from The Century Restaurant to be part of the new hotel and some under-utilised space, there is potential to use the space available more effectively. This includes removing coach and minibus parking from Pirrama Road to assist the Complete Streets transformation. The proposed space allocation is shown in Table 4.2.

Table 4.2 The Star Internal Service Road – Proposed allocation

Usage Type	Number of spaces	Side of road	Comment
The Star Express	4 minibus spaces	2 left, 2 right	Two active stands and two relocated layover
Hotel Guest	2 car spaces	right	Take over portion of former VIP parking
Rideshare (Uber)	3 car spaces	left	Take over former The Star Express layover
Minibus parking	5 minibus spaces	1 left, 4 right	Left space moved
Coaches	2 coach and 1 minibus	3 left 1 pickup left	Take over part of taxi bay and construction area, new pickup stop
Car Hire	5 parking spaces	2 left, 3 right	Formalise current use

Due to its increasing role as a mode of transport distinct from taxis, The Star is also planning to allocate space for rideshare vehicles. This initiative will reduce the use of on-street No Parking zones and conflicts between taxis and rideshare vehicles by allocating a designated space for these vehicles.

4.2 South Tower

The South Tower on the 37–69 Union Street will contain a mixture of residential apartments and a second hotel. Planning for this site is based on the proposed development put forward in the Draft Place Strategy, i.e. a 140RL mixed use tower. This site has been identified as the location for a potential Metro station, which has been taken into consideration in this assessment.

The residential component comprises 160 apartments covering 15,510 m² GFA. The numbers of bedrooms per apartment are outlined in Table 4.3.

Table 4.3 South Tower residential apartment numbers

Group	Levels	Apartments			Total
		1 Bedroom	2-Bedroom	3 Bedroom	
Upper Levels	9	3	4	1	8 (per level)
	Sub-total	27	36	9	72
Lower Levels	11	1	4	3	8 (per level)
	Sub-total	11	44	33	88
Total	20	38	80	42	160

Source: FJMT Studios, August 2021

The Hotel will cover 15,640 m² GFA and will have 254 rooms (keys). It will also have a retail component of 850 m² GFA. The level of staffing is still being evaluated. However, it is anticipated that the number of staff working across one day would be approximately 170 people.

The current site has driveway access via Union Street and Edward Street. For this redevelopment, it is proposed that all parking and loading dock access be limited to the Edward Street driveway. Subject to confirmation of the potential access arrangements of the Metro Rail station, this driveway would be located mid-block to provide space for pedestrians to wait to cross the street.

4.3 Through site pedestrian permeability

As part of the Master Plan, it is proposed that through-site pedestrian links will be made more visible and easier to use, to reduce the extent to which The Star is a barrier to pedestrian movement. Initiatives include:

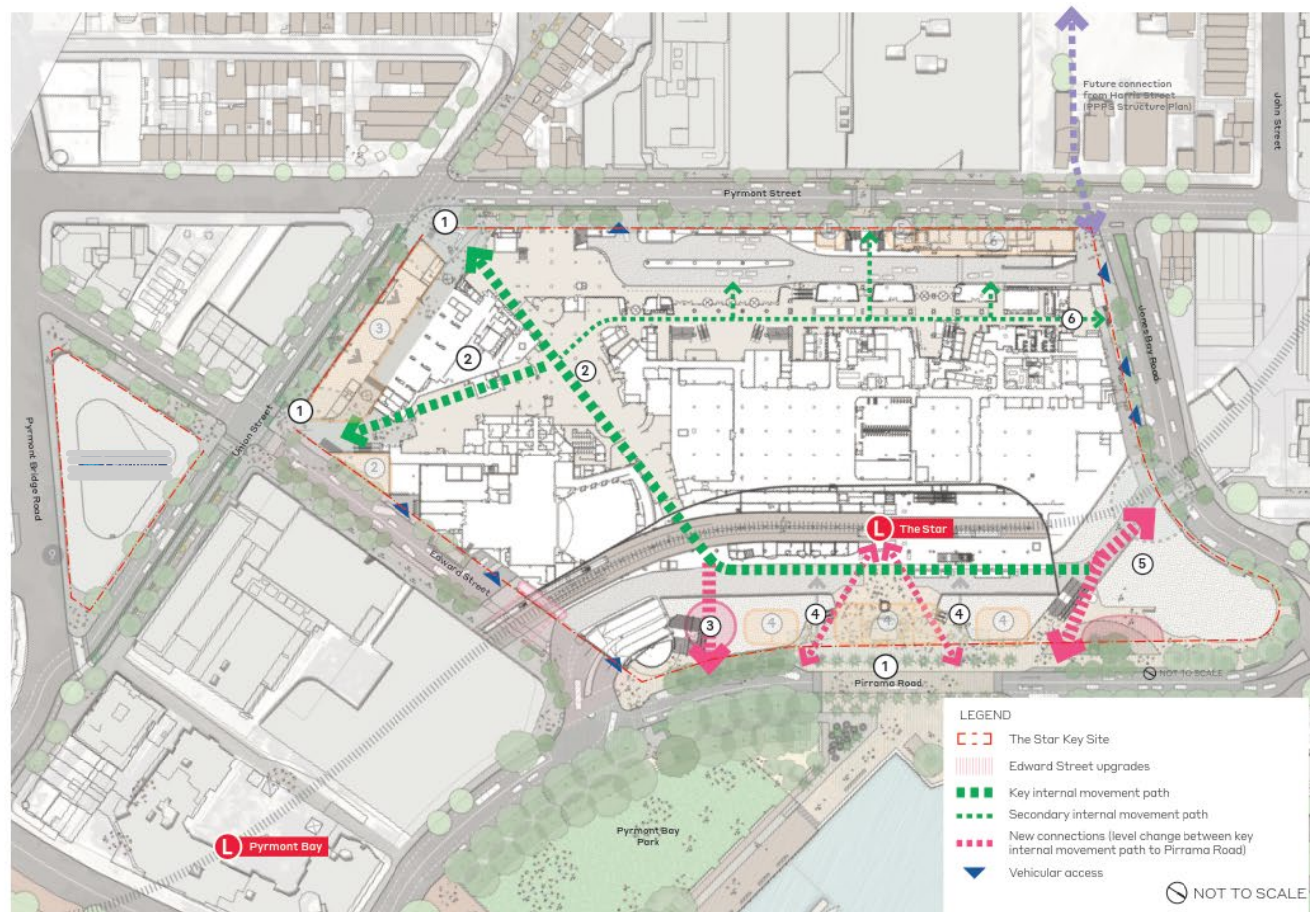
- New through-site link between Pirrama Road and Jones Bay Road
- Improved signage and wayfinding
- Increased connectivity between The Star internal routes and Pyrmont Bay Park
- More visible entrances, including on Jones Bay Road adjacent to the porte cochere entry.

The key moves below address the items raised around site permeability to improve walk ability across the site to align with Direction 7 of the PPPS (making it easier to move around)

- ① Upgrades to existing wayfinding to public transport
- ② Improved connectivity from key internal movement path down to foreshore.
- ③ Revise existing entry stair to increase visibility
- ④ Increased visibility to The Star light rail station
- ⑤ Connection from Jones Bay Road to Pirrama Road to facilitate improved movement to foreshore.
- ⑥ Improve visibility and access to secondary entry adjacent to Porte Cochere.



PPPS Structure Plan response to Direction 7 - Making it easier to move around



Source: FJMT Studio – SDRP Meeting 2 – Presentation (12 August 2021)

Figure 4.5 Relocated Pirrama Road porte cochere and existing Pyrmont Street porte cochere

4.4 Precinct pedestrian improvements

The Master Plan has sought to assist the PPPS to achieve improvements in active transport improvements and connectivity. Key improvements include:

- Pirrama Road Complete Streets treatment
- Wider footpaths on Union Street (northern side) through removal of kerbside parking and the shifting of the bi-directional cycle lanes to the former parking lane
- Kerb extensions at intersections to provide wider pedestrian waiting areas
- Kerb extensions near the intersection of Pyrmont Street and Jones Bay Road to assist in the creation of a possible future pedestrian link to Harris Street
- Footpath widening on Edward Street (east side) and improved visibility and signage of the pedestrian connections over the light rail line.

4.5 Cycling

The Master Plan proposes to deliver the end-of-trip cycle facilities required under the City of Sydney Development Control Plan 2012 and assist cycling on the surrounding street network by:

- Calming the surrounding streets including Pirrama Road and Union Street
- Using the Complete Streets treatment of Pirrama Road to improve the connection of The Star to the foreshore.

End of trip cycle facilities are proposed for both the North and South Towers, including secure areas for bike parking, change rooms and showers for staff and bicycle parking for visitors.

4.6 Parking

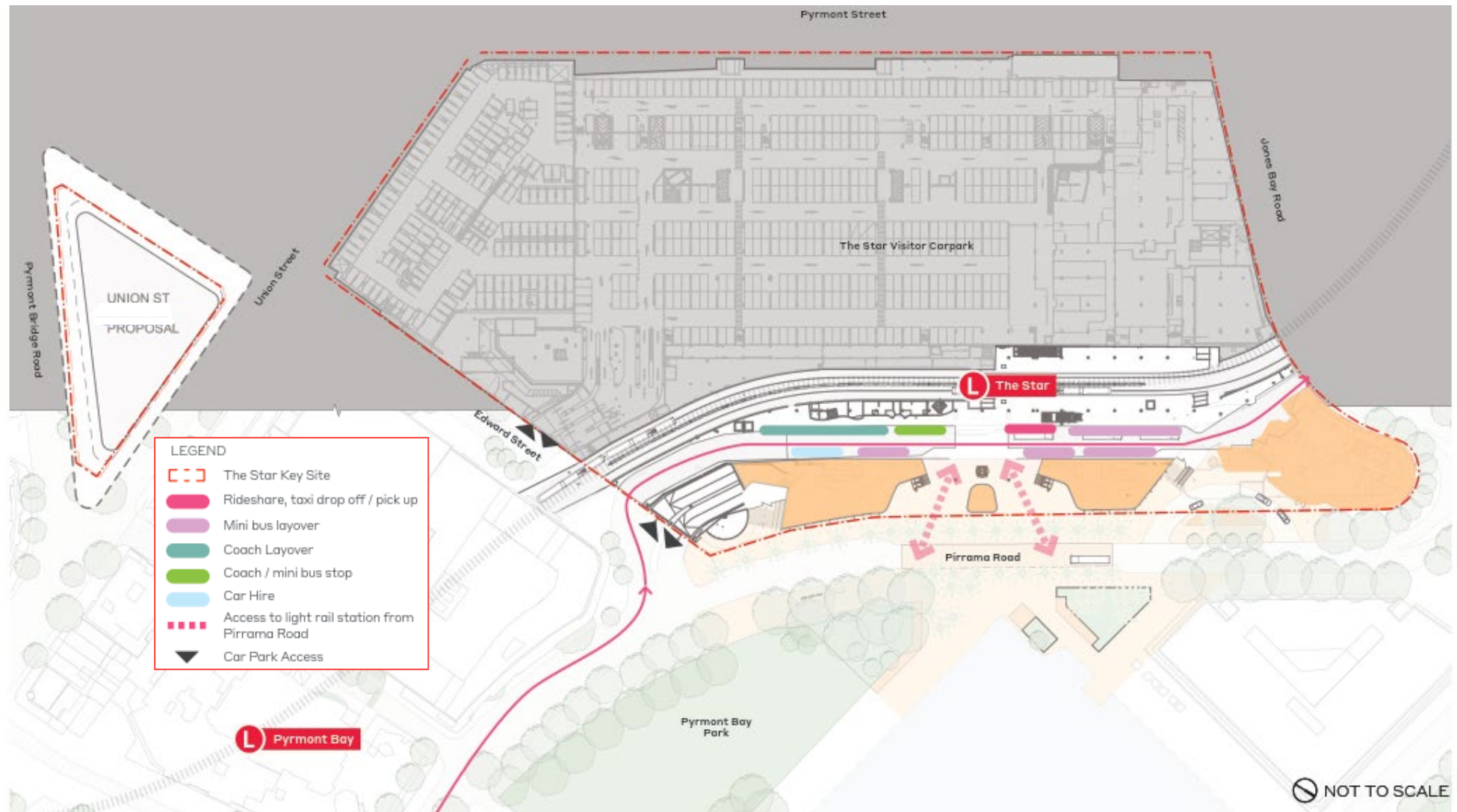
The PPPS Transport Strategy identifies that the area has a high level of use of public and active transport, and sets targets of 90% transport mode share for these modes once the new Metro Rail station is open. In recognition of this existing and proposed behaviour, The Star proposes to not increase the parking provision for the Master Plan. Instead, it plans to make better use of its existing parking for these additional uses.

To support the improvements in active transport, some on-street parking on Union Street, Edward Street, Pyrmont Street and Jones Bay Road is proposed to be removed. Given the new Metro Rail transport option, it is anticipated that the shift away from private vehicle travel for the Pyrmont Peninsula will reduce demand for parking and offset the reduction in on-street spaces.

4.7 Loading

Loading facilities are planned for both the North and South Towers. The proposed facilities include:

- Convert the existing loading dock for The Century Restaurant to a loading dock for the North Tower hotel. Supplement with additional kerbside space
- The new Level 5 Roof of Podium food and beverage area in the Main Site will use the existing loading dock facilities for The Star on Jones Bay Road
- The South Tower will include new loading dock with access via Edward Street at the existing ground-level driveway.



Source: FJMT Studio – SDRP Meeting 2 – Presentation (12 August 2021)

Figure 4.6 Internal service road layout

4.8 Taxi

A number of options for managing taxi operations have been investigated to improve the operation and minimise the disruption to adjacent land use. The preferred solution, shown in Figure 4.4, is to retain the main taxi rank at the existing Pymont Street porte cochere and reinstate the overflow rank on the south side of Jones Bay Road, east for Pymont Street during peak taxi times. This would return operation to the arrangements before the Jones Bay Road taxi rank was moved for temporary works.

This arrangement was preferred as taxis can see when they are required to move forward. Combined with a median to prevent right turns into the porte cochere, this is seen as a way of significantly reducing the potential for arguments from other taxis cutting the queue. It would involve swapping the current 1P parking with the taxi rank further east on Jones Bay Road.

To avoid previous anti-social behaviour, the return of the rank would be supported by:

- Driver toilet facilities within The Star through the adjacent Jones Bay Road entrance
- Increased surveillance from CCTV and possible secure taxi rank security personnel at peak times.

4.9 Multi-utility hub

The PPPS identifies the creation of multi-utility hubs. The Star is investigating the potential to apply this concept to its facilities, including:

- Arrangements to share The Star loading facilities at times when they are not at full-capacity for The Star operations
- Electric vehicle charging points within The Star car parking – where patrons could charge their vehicles
- Arrangements with surrounding businesses to use The Star parking during times of lower demand.

5 Parking assessment

The Master Plan has sought to make improved use of existing parking facilities and to reprioritise some existing on-street parking spaces for pedestrians to achieve the Place improvements envisaged in the PPPS.

5.1 Off-street parking

The City of Sydney Local Environment Plan (LEP) establishes maximum parking rates for developments within its area. Parking rates vary depending on the location's access to alternative transport options such as public transport and active transport. The Star is considered to have a Land Use and Transport Integration designation of Category 'B' and a Public Transport Accessibility Level of 'E'.

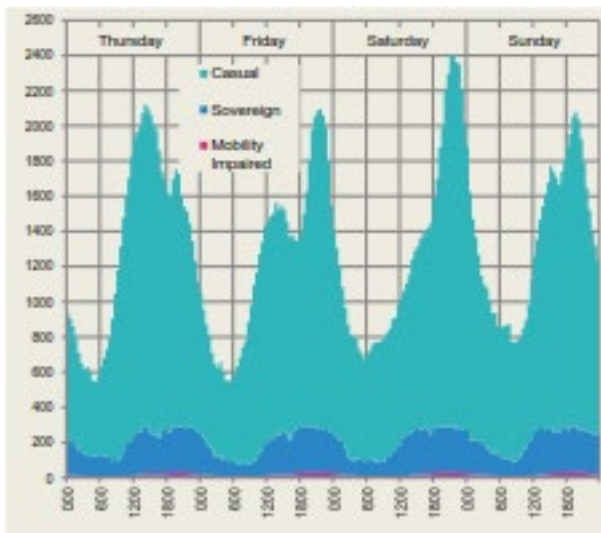
Based on the LEP rates for these two designations, the maximum parking for the Master Plan development is:

- Hotel:
 - One per four bedrooms – first 100 bedrooms
 - One per five bedrooms – thereafter
- Retail:
 - One per 60 m² GFA
- Residential apartments:
 - 0.4 spaces per one bedroom apartment
 - 0.8 spaces per two bedroom apartment
 - 1.1 spaces per three bedroom apartment
- Visitors:
 - 0.167 spaces per apartment – up to the first 30 apartments
 - 0.1 spaces per apartment for apartments 30 to 70
 - 0.05 spaces per apartment for apartments above 70
- Car share spaces at 1 space per 60 parking spaces for residential parking and at one space per 60 parking spaces (on top of other parking provision).

Based on these rates, the maximum parking for the North Tower would be 204 spaces, for the Level 5 additional food and beverage would be 29 spaces and 211 for the South Tower, i.e. a total of 443 additional spaces (maximum).

Due to its proximity to light rail, bus and ferry services as well as the Union Street active Transport corridor and nearby Pyrmont Bridge active transport route into Sydney CBD and the anticipated improvement to public transport accessibility with the opening of the planned Metro Rail Station, it is proposed that no additional parking will be provided as part of the Master Plan.

The Star currently has 2,795 parking spaces, with a maximum approval of 3,000 parking spaces (MP08_0098). An assessment of the recent parking utilisation of The Star car park (see Figure 5.1) indicated that 2,400 of the 2,795 parking spaces were occupied at the peak time on a Saturday night. This indicates that there is likely to be sufficient space to accommodate the additional demand for parking generated by the Master Plan development.



Source: *The Star Modification 13 Traffic Impact Statement, Mott Macdonald, undated*

Figure 5.1 Star Car Park utilisation, by type, Thu–Sun for week ending 29 May 2016

5.2 Bicycle parking

Residential

Based on the rates in the City of Sydney Development Control Plan (DCP) 2012, bicycle parking for the South Tower residences should be provided at a rate of one secure space per dwelling for owners/tenants and one space per 10 dwellings for visitors. For the 160 apartments in the South Tower, this equates to 160 resident spaces and 16 visitor spaces.

Hotel

The DCP requires bicycle parking for hotels at a rate of one per four staff members and one per 20 rooms for visitors. Assuming three shifts across a day and a maximum of two shifts in the building during changeover, this equates to:

- North Tower: 18 staff spaces and 10 visitor spaces
- South Tower: 22 staff spaces and 13 visitor spaces.

Retail

The DCP requires bicycle parking for retail space of one per 200 m² GFA for staff and one per 300 m² GFA for visitors. This equates to:

- North Tower: 46 staff spaces and 30 visitor spaces
- Level 5 food and beverage: eight staff spaces and four visitor spaces
- South Tower: four staff spaces and two visitor spaces.

Summary

The Master Plan makes provisions for bicycle parking as part of the development. Further details will be provided in the Development Application. Combined, the DCP requirements equate to:

- Main Site (North Tower and Level 5 food and beverage): 72 Class 2 bike facilities for staff and 46 Class 3 bike rails for visitors
- South Tower: 160 Class 1 bike lockers for residents, 26 Class 2 bike facilities for staff and 16 Class 3 bike rails for visitors.

5.3 Loading docks

Residential

Based on the rates in the City of Sydney Development Control Plan (DCP) 2012 Schedule 7, the South Tower will require one space for the first 50 residences and 0.5 for the next 50 thereafter. For the 160 residence building, this equates to 3.2 loading dock spaces.

Hotel

The DCP requires loading dock spaces to be provided for hotels at a rate of:

- One space per 50 hotel bedrooms, or part thereof, up to 100 bedrooms; then
- One space per 100 hotel bedrooms; plus
- One space per 400 m² of reception, lounge, bar and restaurant area GFA, or part thereof, for the first 2,000 m²; then
- One space per 8000 m² of reception, lounge, bar and restaurant area GFA thereafter.

This equates to:

- North Tower: nine loading dock spaces
- South Tower: 5.7 loading dock spaces.

Retail

The DCP requires one space per 350 m² GFA, or part thereof, up to 2,000 m². For the Level 5 food and beverage, this equates to 4.8 loading dock spaces. This requirement will be accommodated through consolidation with the existing loading dock facilities within The Star.

Summary

Loading docks will be provided as summarised below. Further details will be provided in the Development Application. Combined, the DCP requirements equate to:

- North Tower: nine loading dock spaces to be provided with access from the internal service road
- Level 5 food and beverage: accommodated within existing loading dock facilities
- South Tower: nine loading dock spaces. A new facility will be provided with access from Edward Street.

5.4 On-street parking

To accommodate improvements to pedestrian and cycle space, some on-street parking is proposed to be removed and not replaced on Union Street, Edward Street, Pyrmont Street and Jones Bay Road. This is in addition to the coach and minibus parking relocated from Pirrama Road to the internal service road.

The proposed on-street parking and a summary of the change from the existing situation are shown on Figure 5.2. The changes summarised by street are:

Union Street:

- Removal of 2 Hour parking on the north side between Pyrmont Street and Pyrmont Bridge Road, and relocation of car share parking, to create wider footpaths
- Removal of some 2 Hour parking on the south side of Union Street to create kerb extensions and accommodate displaced car share parking.

Union Street

- x11 2H car parks (-18)
- x4 Car share
- x2 Loading zones

Edward Street

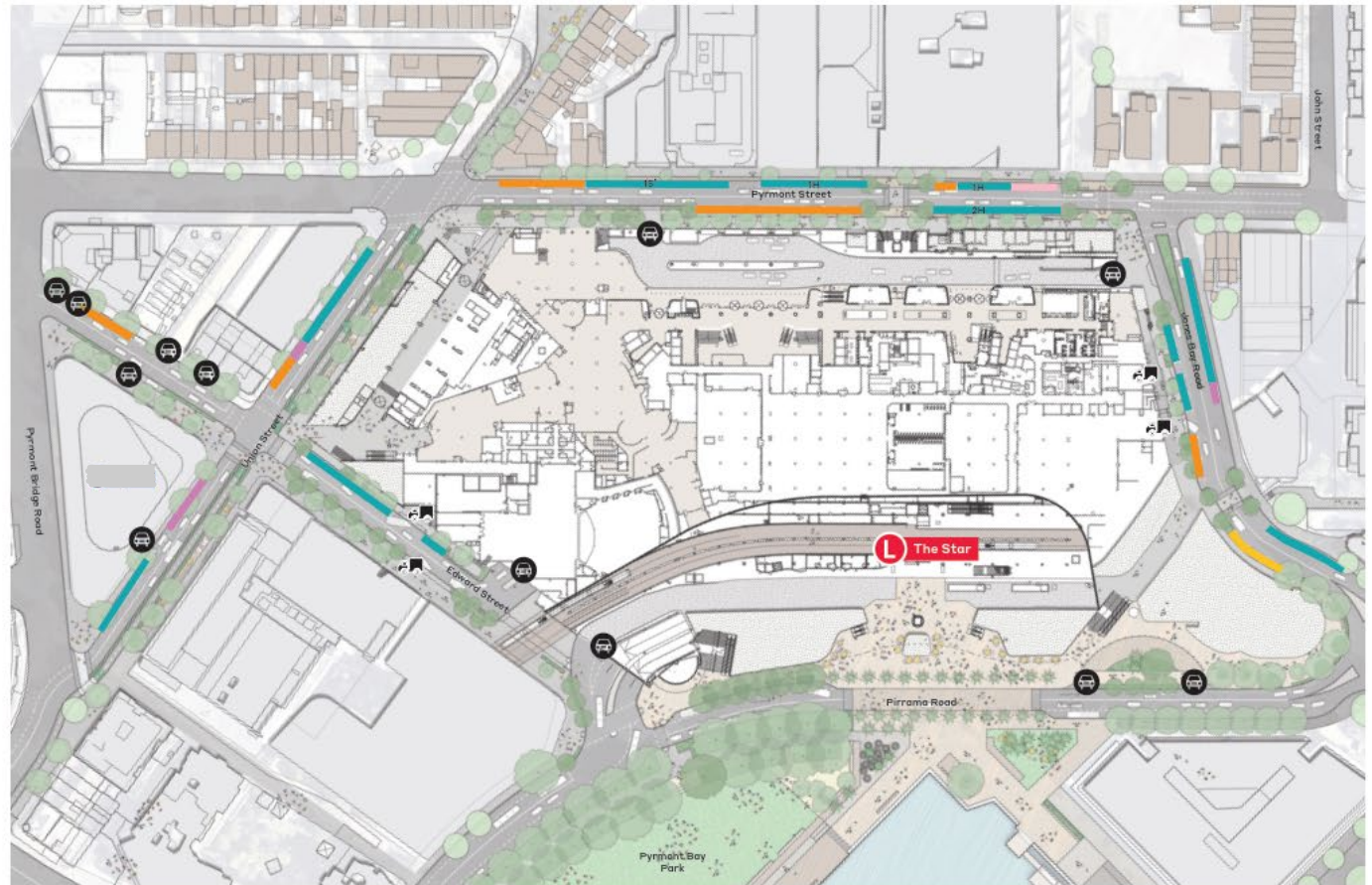
- x8 2H car parks (-12)
- x3 Loading zones

Pymont Street

- x7 2H car parks (-1)
- x9 1H car parks (-4)
- x8 15min car parks
- x12 Loading zones
- Funeral parking zone

Jones Bay Road

- x16 1H car parks (-1)
- x1 Car share
- x2 Loading/ Taxi zones
- x3 Taxi zones
- Car park driveway
- Loading dock entry/exit



Source: Urbis, 18 August 2021

Figure 5.2 Proposed on-street parking allocation

Edward Street:

- Removal of 2 Hour parking on the east side between Pyrmont Bridge Road and the light rail, and relocation of a car share parking space, to create a wider footpath.
- Removal of some 2 Hour parking on the west side between Union Street and the light rail to create kerb extensions.

Pyrmont Street:

- Removal of one 2 Hour parking on the north side between Union Street and Jones Bay Road to create kerb extensions.
- Relocate Funeral Parking outside St Bede's Catholic Church to adjacent location to create kerb extension for pedestrian crossing
- Removal of some 1 Hour parking on the south side between Union Street and Jones Bay Road to create kerb extensions.

Jones Bay Road:

- Swapping of 1 Hour Parking and Taxi Rank on the east side between Pyrmont Street and Pirrama Road to restore taxi rank operation.

Pirrama Road:

- Relocation of some coach and minibus parking to internal service road
- Amalgamation of two bus zones on the south side to a location east of The Star carpark entry
- Relocation of bus zone on the north side adjacent to Pyrmont Bay Park to a location further north
- Creation of a taxi zone between the remaining coach parking and the relocated bus stop on the north side.

Justification for parking reduction

The existing journey to work transport mode share for Pyrmont residents is 76% public and active transport and 66% for Pyrmont workers². The Pyrmont Peninsula Place Strategy proposes to increase this to 90% with a range of transport measures including active transport links (including the Union Street active transport corridor), improvements to existing public transport services and, most significantly, the introduction of a new Sydney Metro West station, announced on 12 May 2021. To allow this station to become a game-changer in the transport options for the Peninsula, it needs to be easily accessed by walking and cycling.

Changes to the streetscape of Union Street, Edward Street and Pyrmont Street are proposed to create more space for walk trips, supporting Direction #7 of the Pyrmont Peninsula Place Strategy. This includes kerb extensions at intersections, including the intersection of Edward Street and Union Street, creating space for people arriving from/to the potential new station. The wider footpaths along Union Street will reinforce it as an active transport corridor connecting Pyrmont Bridge to Union Square.

With fewer trips being made by private car, the reduced demand for parking offers the opportunity to re-prioritise the road space and encourage use of sustainable transport. In addition to improvements on Union Street and Edward Street, kerb build-outs are proposed on Pyrmont Street and Jones Bay Road to assist pedestrian crossings mid-block and at intersections. These will open up the potential for new pedestrian paths through the area, increasing its permeability for walk trips and creation of places for people to dwell.

The reduction of 36 out of 96 parking spaces (37% decrease) on the affected blocks supports the reduction in car mode share from 25% for residents/34% for workers down to 10% with the Metro station.

The main streets affected by the removal of parking are Union Street and Edward Street. The northern side of Union Street is fronted by The Star and 52 to 72 Union Street which both have off-street parking for customers.

² 2016 Census Journey to Work for Pyrmont

6 Traffic impact assessment

The proposed Master Plan would generate traffic due to the new land uses proposed, including additional hotel rooms, apartments and leasable mixed retail and food and beverage space.

The existing traffic patterns and demands associated with The Star in its current form are expected to be maintained, and new traffic will solely be generated by the additional land uses proposed as part of the Master Plan.

6.1 Traffic generation

The proposed Master Plan includes a number of land uses across the North Tower, South Tower and L05 Rooftop Podium. Table 6.1 shows a summary of the land uses proposed across the Master Plan, and their associated trip generation. The trip generation rates presented in this table reflect a number of sources, including trip generation surveys based on existing land use at The Star. It is noted that the trip generation presented in this table reflects existing mode shares. The PPPS has set a target mode share of active and public transport of 90%, factoring in changes due to the potential Metro station, as well as other improvements to public and active transport. The trip generation and traffic impact assessment provided in this section is a conservatively high estimate with no adjustment to mode share.

Table 6.1 Vehicle trip generation

Land Use	Quantity	Rate		Total vehicle trips per hour	
		AM	PM	AM	PM
Hotel Room (North Tower) ¹	209	0.13	0.29	27	61
Hotel Room (South Tower) ¹	254	0.13	0.29	33	74
Apartment (South Tower) ²	160	0.18	0.1	29	16
Additional mixed-use GFA (Main Site) ³	10,911 m ²	0.49 (per 100 m ²)	0.71 (per 100 m ²)	57	83
Total				146	234

1: Trip generation rate based on survey of existing Astral Hotel Porte-Cochere (Mott Macdonald, 2018)

2: Trip generation rate as per RMS Guide to Traffic Generating Developments (Transport for NSW, 2002)

3: Trip generation rate based on existing trip generation and existing GFA (Mott Macdonald, 2018)

Based on the provision of 463 hotel rooms, 160 apartments, and 11,655 m² additional gross floor area, the Master Plan would generate an additional 146 vehicles in the AM peak hour and an additional 234 vehicles in the PM peak hour.

Based on the observed split in directional traffic for the existing Star and Astral Hotel, and an assumed 20/80 in/out split for apartments in the AM peak and vice versa in the PM peak, Table 6.2 presents the total directional trip generation expected due to the proposed Master Plan.

Table 6.2 Directional trip generation

Land Use	AM (8.00 am to 9.00 am)			PM (5.30 pm to 6.30 pm)		
	In	Out	Total	In	Out	Total
Hotel Room (North Tower)	8	19	27	29	31	61
Hotel Room (South Tower)	10	23	33	36	39	74
Apartment (South Tower)	6	23	29	13	3	16
Additional mixed-use GFA	44	13	57	41	42	83
Total	68	78	146	118	115	233

6.2 Traffic assignment and distribution

For the purposes of this assessment, the following assumptions are made:

- Although limited additional parking is proposed as part of the Master Plan, a standard traffic generation rate has been applied to the apartments in the South Tower to provide a conservative assessment, and to cover a situation where taxi and rideshare trips could replace car trips. It is assumed that both hotel and apartment vehicles would use a pick-up/drop-off area on the southern side of Union Street, adjacent the South Tower.
- Changes to The Star beyond those identified in section 6.1 would have no impact on the existing trip generation.

6.2.1 North Tower traffic distribution and assignment

The following traffic assignments have been adopted for the hotel at the North Tower:

- Cars accessing the hotel in the North Tower would largely approach the new porte cochere on Pirrama Road from the south. Guests would then alight here, and the cars would be valet driven onto Jones Bay Road and into the existing porte cochere where they would be parked in existing underground parking via a ramp at the end of the porte cochere.
- Cars accessing Pirrama Road at the intersection of Murray Street/Pymont Bridge Road/Darling Drive would adopt similar patterns to existing traffic.
- Cars leaving the hotel in the North Tower would be valet driven from the car park exit on Pirrama Road to the porte cochere. From here, guests would turn onto Jones Bay Road before turning to the north or the south at Pymont Street, adopting similar patterns to existing traffic.

6.2.2 South Tower traffic distribution and assignment

The following traffic assignments have been adopted for the hotel and apartments at the South Tower:

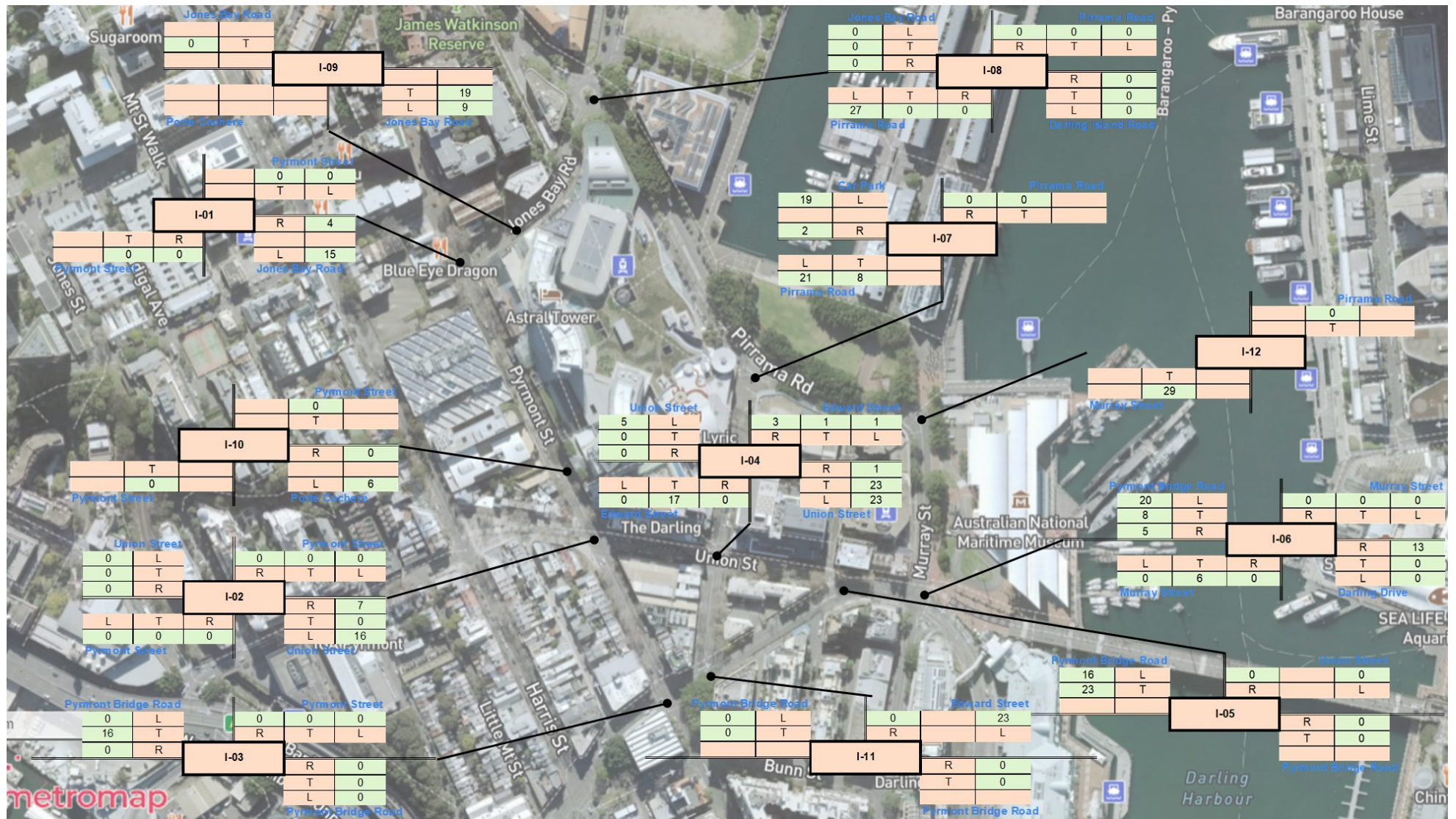
- Pick-up and drop-off for the South Tower occurs on the southern side of Union Street, adjacent the Tower. Given limited additional parking, all trip generation associated with the South Tower will access this area.
- Cars accessing the South Tower would turn left onto Union Street from Pymont Bridge Road, having joined Pymont Bridge Road outside the area of influence.
- Cars leaving the South Tower would either turn left at Edward Street and then left onto Pymont Bridge Road, or continue straight on Union Street, before diverging at Pymont Street.
- Diverging traffic at the intersections of Murray Street/Pymont Bridge Road/Darling Drive and Union Street/Pymont Street would largely follow existing traffic patterns.

6.2.3 Additional mixed-use development distribution and assignment

For the additional food and beverage floorspace on Level 5 of the Main Site, it has been assumed that the inbound and outbound trips would occur with a similar breakdown to existing trips at: the existing access points at the Pirrama Road car park entrance/exit, the Edward Road car park entrance/exit, and the Jones Bay Road/Pymont Street porte cochere entrance and exits.

6.2.4 Summary of traffic volume changes

Overall, the estimated additional traffic volume at the key intersections during the AM and PM peak hours are shown in Figure 6.1 and Figure 6.2, respectively.



Basemap source: Metromap

Figure 6.1 AM peak development traffic volume estimates



Basemap source: Metromap

Figure 6.2 PM peak development traffic volume estimates

6.3 Future intersection operation

Table 6.3 and Table 6.4 show the performance for key intersections for the ‘without development’ and the ‘with development’ scenarios in the AM and PM peaks respectively.

The traffic modelling assessment indicates that the anticipated traffic volumes associated with the development’s traffic generation would have limited impact on the surrounding road network. Table 6.3 and Table 6.4 show that most intersections would continue to operate with similar operating conditions during the AM and PM peak hours in the base year (8.00–9.00 am and 5.30–6.30 pm).

A comparison of the ‘with’ and ‘without’ development results indicates that all intersections would operate with the same level of service with or without the development. There are minor increases in the average delays per vehicle at some intersections. The changes are so small that they would be barely noticeable amongst normal daily fluctuations in traffic conditions.

Intersection of Union Street and Edward Street – Possible change to scramble pedestrian crossing

With the introduction of the new Metro Rail station at 37–69 Union Street, Pyrmont, there is likely to be a substantial increase in pedestrian numbers at the intersection of Union Street and Edward Street. To assist pedestrians in crossing these streets a pedestrian ‘scramble’ phase could be introduced within the traffic signal settings at this intersection. This phase stops all traffic, allowing pedestrians to cross to any corner in the one signal. This can reduce delays for pedestrians.

Preliminary testing of this traffic signal phasing plan indicated that it would increase average delays for vehicles from 17 or 18 seconds to around 25 seconds (similar for AM and PM). This increase is modest, with performance remaining in the Level of Service B range.

There is potential for this scramble crossing to be considered further in the planning for the Metro Rail station.

Table 6.3 Post development intersection performance – AM peak

Intersection	Without development intersection performance							With development intersection performance						
	Degree of saturation	Average delay (seconds)	95 th percentile queue (m)				Level of Service	Degree of saturation	Average delay (seconds)	95 th percentile queue (m)				Level of Service
			South	East	North	West				South	East	North	West	
Pymont Street/ Jones Bay Road	0.15	10	0	2	2	-	A	0.16	10	0	2	2	-	A
Pymont Street/ Union Street	0.26	12	5	8	29	8	A	0.27	14	6	12	31	8	A
Pymont Street/ Pymont Bridge Road	0.88	27	-	20	49	71	B	0.88	27	-	20	48	71	B
Union Street/ Edward Street	0.14	15	3	4	0	9	B	0.15	17	4	8	4	10	B
Pymont Bridge Road/ Union Street	0.11	6	-	0	0	0	A	0.13	6	-	0	0	0	A
Pymont Bridge Road/ Murray Street	0.42	32	24	36	21	27	C	0.44	32	25	39	21	28	C
Pirrama Road/ Car Park	0.19	5	2	-	4	2	A	0.2	6	2	-	4	5	A
Jones Bay Road/ Pirrama Road	0.25	11	4	1	2	4	A	0.27	11	5	1	2	4	A
Jones Bay Road/ Porte Cochere Entry	0.14	6	-	0	-	0	A	0.14	6	-	0	-	0	A
Pymont Street/ Porte Cochere Exit	0.15	13	0	1	0	-	A	0.15	13	0	1	0	-	A
Pymont Bridge Road/ Edward Street	0.16	5	-	4	0	0	A	0.16	5	-	4	0	0	A
Pirrama Road Crossing	0.29	5	44	-	4	-	A	0.31	5	47	-	6	-	A

Table 6.4 Post development intersection performance - PM peak

Intersection	Without development intersection performance							With development intersection performance						
	Degree of Saturation	Average delay (seconds)	95 th percentile queue (m)				Level of Service	Degree of Saturation	Average delay (seconds)	95 th percentile queue (m)				Level of Service
			South	East	North	West				South	East	North	West	
Pymont Street/ Jones Bay Road	0.31	9	0	4	2	-	A	0.34	9	0	2	2	-	A
Pymont Street/ Union Street	0.43	16	3	20	40	6	B	0.46	17	3	24	40	6	B
Pymont Street/ Pymont Bridge Road	0.73	29	-	20	82	43	C	0.74	28	-	20	81	58	B
Union Street/ Edward Street	0.16	16	2	4	0	12	B	0.17	18	2	10	12	12	B
Pymont Bridge Road/ Union Street	0.17	6	-	0	1	0	A	0.17	6	-	0	0	0	A
Pymont Bridge Road/ Murray Street	0.54	33	30	34	55	21	C	0.57	34	24	36	21	27	C
Pirrama Road/ Car Park	0.27	13	10	-	11	20	A	0.33	15	2	-	4	2	B
Jones Bay Road/ Pirrama Road	0.4	12	7	3	5	3	A	0.48	12	4	1	2	4	A
Jones Bay Road/ Porte Cochere Entry	0.27	6	-	0	-	0	A	0.32	6	-	0	-	0	A
Pymont Street/ Porte Cochere Exit	0.14	15	0	1	14	-	B	0.14	15	0	1	0	-	B
Pymont Bridge Road/ Edward Street	0.14	5	-	17	0	0	A	0.14	5	-	4	0	0	A
Pirrama Road Crossing	0.36	5	47	-	25	-	A	0.41	5	44	-	4	-	A

7 Public and active transport assessment

The proposed development will generate additional trips on public transport and walking and cycling. The proposed non-car mode share of 90% for the Peninsula following the introduction of the planned Metro Station indicates that these modes will play an important role in the transport network surrounding the development.

7.1 Public transport

The assessment of public transport trips has concentrated on those made by the residents and employees of the proposed development. The number of trips made by hotel guests and retail customers are more difficult to quantify due to the lack of data for these transport user groups.

7.1.1 Assumptions

The demand for public transport generated by The Star Master Plan have been developed based on the 2016 mode shares for the local area, as well as the assumptions documented in Table 7.1.

Table 7.1 Assumptions for public transport demand assessment

Assumption	Value	Source
Occupancy rate – 1 bedroom	1.3	City of Sydney DCP 2015
Occupancy rate – 2 bedrooms	1.9	City of Sydney DCP 2015
Occupancy rate – 3 bedrooms	1.7	City of Sydney DCP 2015
Employment rate	61%	2016 Census, Australian Bureau of Statistics
Peak hour conversion factor	0.56	
<u>Number of employees</u>	<u>Total: 516</u>	
North Tower Hotel	130	Based on existing employee density, and total GFA
South Tower Hotel	170	
South Tower Apartments	10	
Additional Mixed-use Development	20	

7.1.2 Resident demand

Approximately 315 people are expected to live within the 160 apartments proposed in the Master Plan. On average, around 108 of them would commute to work during the morning peak period.

Based on the existing mode share, about 11 would travel by train (~10%), 13 by bus (~12%), and 2 by light rail (~2%).

7.1.3 Employee demand

Approximately 516 additional employees are expected to travel to and from The Star as a result of the proposed Master Plan. Due to the nature of shift work, it is expected that only a maximum of 15% of this daily total would travel during the peak periods. This is around 77 trips during the peak period.

Adopting the existing mode share for employees, 17 would be expected to travel by train (~22%), and five each would take light rail (~6%) and bus (~6%).

7.1.4 *Public transport impact*

Based on the above calculations, there may be an increase of 53 additional customers taking public transport during peak hours. About 28 of these passengers would take the train, 18 would take the bus and seven would take light rail.

The existing bus and rail network have the capacity to accommodate an additional 18 and 28 trips respectively. The light rail network is the busiest, with up to 95% of total capacity utilised during peak periods. However, seven additional passengers is a modest number that could still be accommodated on the existing light rail services.

7.2 Pymont Metro Station

In May 2021, the NSW Government announced that it had selected a preferred site for a Metro Rail Station in Pymont. The site identified is the 37–69 Union Street, Pymont site. This could mean space at street level for station entrances and equipment. Based on other over-station developments, this would not preclude the potential for the development proposed in this Master Plan. The parking strategy proposed, without basement parking levels, also reduces the potential for conflict between the station and the development. We understand negotiations are ongoing as to the potential use of the Union Street site for the Metro.

Pymont Metro Station will form part of the Sydney Metro West line, and will offer frequent and rapid rail services from Pymont to Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays and Hunter Street, Sydney CBD.

It is expected that with the addition of a new Metro line providing such frequent services to previously hard to access areas such as Burwood North and The Bays, as well as the Sydney CBD, mode share for public transport modes would increase.

The PPPS targets a combined goal for active and public transport mode shares of 90%, and the Sydney Metro West line and Pymont Metro Station will support this goal.

While the provision of a Metro line will likely increase the mode share of public transport associated with the development, the capacity it will provide should be more than enough for the modest increase associated with this development. Moreover, the provision of a new public transport line will help spread the load from existing public transport services.

7.3 Active transport

7.3.1 *Pedestrian environment*

The Master Plan has sought to assist the PPPS to achieve improvements in active transport improvements and connectivity. These improvements will improve pedestrian amenity around The Star and the broader Pymont Peninsula. Key improvements include:

- Pirrama Road Complete Streets treatment
- Wider footpaths on Union Street (northern side) through removal of kerbside parking and the shifting of the bi-directional cycle lanes to the former parking lane
- Kerb extensions at intersections to provide wider pedestrian waiting areas
- Kerb extensions near the intersection of Pymont Street and Jones Bay Road to assist in the creation of a possible future pedestrian link to Harris Street
- Footpath widening on Edward Street (east side) and improved visibility and signage of the pedestrian connections over the light rail line.

7.3.2 *Through-site links*

Additionally, as part of the Master Plan, it is proposed that through-site pedestrian links will be made more visible and easier to use, to reduce the extent to which The Star is a barrier to pedestrian movement. Initiatives include:

- New through-site link between Pirrama Road and Jones Bay Road
- Improved signage and wayfinding
- Increased connectivity between The Star internal routes and Pyrmont Bay Park
- More visible entrances, including on Jones Bay Road adjacent to the porte cochere entry.

These changes support the street-level place-based activity surrounding and within The Star.

7.3.3 *Cycling environment*

The existing cycling network around The Star is strong, providing separated cycleways that connect Pyrmont to the Sydney CBD via Pyrmont Bridge, as well as to the west via Miller Street and Anzac Bridge. As such, no new cycling links in the public realm are proposed as part of the Master Plan.

The Master Plan does however propose to deliver the end-of-trip cycle facilities required under the City of Sydney Development Control Plan 2012, as well as assisting cycling on the surrounding street network by:

- Calming the surrounding streets including Pirrama Road and Union Street
- Using the Complete Streets treatment of Pirrama Road to improve the connection of The Star to the foreshore.

As mentioned in section 5.2, end-of-trip cycle facilities are proposed for both the North and South Towers, including secure areas for bike parking, change rooms and showers for staff and bicycle parking for visitors.

The provision of end-of-trip facilities and calmed streets would positively impact the cycling experience to and from The Star.

8 Conclusion

The Star Master Plan seeks to rezone 20–80 Pyrmont Street and 37–69 Union Street as part of a key site within the Pyrmont Peninsula Place Strategy (PPPS). The proposed Master Plan includes two new hotels, a new set of apartments, and some additional leasable mixed-use spaces including retail and food and beverage.

Noting that this assessment provides a high-level, early perspective on the transport considerations of the Master Plan, it is concluded that:

- While no new off-street parking is proposed, and some on-street parking will be removed, The Star's existing underground car park has sufficient capacity to accommodate the modest increase expected in association with the Master Plan. Moreover, the removal of on-street parking promotes lower private car mode share, in support of the mode share goals outlined in the PPPS. It is anticipated that the new Metro Rail station will offer an alternative transport mode for many trips and reduce the demand for parking, offsetting the reduction in the number of spaces.
- By converting some existing loading docks, together with the provision of additional kerbside space and a new loading dock for the South Tower, the loading requirements of the Master Plan are met. These improvements and new loading dock will provide an additional nine loading dock spaces for each the North Tower and South Tower.
- The bicycle parking requirements for the changes proposed in the Master Plan include a total of 160 Class 1 bike lockers for residents, 98 Class 2 bike facilities for staff and 62 Class 3 bike rails for visitors.
- Based on the provision of 463 hotel rooms, 160 apartments, and 11,655 additional square metres of gross floor area, the Master Plan would generate an additional 146 vehicles in the AM peak hour and an additional 233 vehicles in the PM peak hour.
- The traffic modelling assessment indicates that the anticipated traffic volumes associated with The Star Master Plan would have limited impact on the surrounding road network and all intersections would continue to operate with similar operating conditions during the AM and PM peak hours.
- The public transport assessment indicates that the anticipated demand for public transport associated with The Star Master Plan could be reasonably accommodated within the current public transport services. In addition, while the new Sydney Metro West line may increase public transport uptake, the additional capacity it provides should be sufficient to accommodate these demands, and moreover may help to share the load on the existing public transport network.
- Active transport amenity in the area will improve as a result of the Pirrama Road Complete Streets treatment and other pedestrian upgrades, such as widened footpaths on Union Street and Edward Street, and a number of kerb extensions around The Star, together with the delivery of a new through-site link connecting Pirrama Road and Jones Bay Road.

A test of scramble pedestrian phasing at the intersection of Union Street and Edward Street to reduce pedestrian delays and footpath crowding indicates that it could be introduced with a modest impact on vehicle delays. This could be considered as part of the planning of the future Metro Rail station.