Attachment A18

Transport Impact Assessment
Commercial Scheme

ARUP

Stockland

Stockland Piccadilly Complex Commercial Scheme

Transport Impact Assessment

Reference: Piccadilly Complex Commercial Scheme Transport Impact Assessment

07 | 12 January 2026

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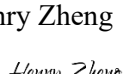
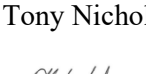
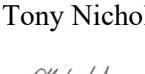
		Signature			

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1. Introduction

This Transport Impact Assessment accompanies a planning proposal seeking to amend the Sydney Local Environmental Plan 2012 (the LEP) relevant to the land known as 'Stockland Piccadilly Complex' located at 133-145 Castlereagh Street, Sydney (the site) and legally described as Lot 10 in DP828419.

The planning proposal seeks to prescribe site specific LEP provisions, including amending the floor space ratio development standard, as well as concurrently preparing a site specific Development Control Plan (DCP) to guide the future development. The DCP will establish building envelopes for the site, as well as other key assessment criteria including the establishment of a through-site link and parking and vehicular access.

The intended outcome of the proposed amendments to the LEP and DCP is to facilitate the redevelopment of the site for either an all commercial development or a mixed-use development, together with an activated ground plane, basement car parking and associated facilities. The proposal will retain the structure of the majority of the existing commercial tower as well as the basement structure. The proposal facilitates additional commercial floor space capacity in Central Sydney while also delivering improved public domain outcomes. Such outcomes will include a rectified Solar Access Plane breach to Hyde Park, a northerly aligned direct through-site link between Pitt and Castlereagh Street and enhanced pedestrian amenity and activation at the ground plane.

1.1 Subject site

The site currently comprises three buildings known as the 'Piccadilly Complex' completed in 1991 which has been the subject of progressive improvements to upgrade selected elements within the building. The buildings currently occupying the site are detailed in Table 1.

Table 1: Description of existing buildings and improvements

Building	Description
Piccadilly Court	Comprises a 14-storey office building completed in 1975 and first refurbished in 1991 with frontage to Pitt Street.
Piccadilly Shopping Centre	Comprises a 2-storey retail building and the Wesley Mission facilities including the Wesley Church, Lyceum, Wesley Theatre and office space predominately located at basement level. The Wesley Centre facilities comprise the following patron capacity: • Theatre – 950 • Lyceum – 277 • Chapel – 534 A footbridge over Pitt Street connects the building to 55 Market Street to the west.
Piccadilly Tower	Comprises a 31-storey commercial building comprising office floor space and end of trip facilities and four basement levels of car parking accessed from Castlereagh Street. The building includes two lobby spaces, the main Castlereagh Street entrance and a smaller northern entrance to the through site link. A footbridge over Castlereagh Street connects the building to the Sheraton on the Park located to the east of the site.

A Concept Reference Design accompanies the planning proposal within the Urban Design Study. The Concept Reference Design is indicative only and the final detailed design will be the subject of a competitive design process and detailed development application (DA) which will ultimately result in further refinement. The ground floor plan is shown in Figure 1.

Figure 1: Stockland Piccadilly Complex – Concept Reference Design - Ground plan (3XN, 550029, SK-11-100, 14/07/2025)

The Concept Reference Design includes the following elements:

- Basement car parking and building services plant;
- Wesley Mission facilities including the Church, Theatre and Lyceum, and supporting offices;
- Wesley Mission Office;
- End of trip, back of house area and plant;
- A northerly aligned east-west pedestrian through-site link connecting Pitt St and Castlereagh St;
- Podium levels comprising lobby, retail, commercial; and
- Tower levels comprising commercial and plant.

1.2 Purpose of report

The purpose of this TIA is to provide a review of relevant aspects of the proposed planning amendments and conceptual reference design, to evaluate their likely suitability, and requirements for future assessment and detailed design. As the planning submission does not seek consent for the specific development, a detailed quantitative assessment of the conceptual reference design is not considered to be warranted at this stage.

The report builds on, and where appropriate, updates the *Transport Impact Assessment for Planning Proposal* undertaken by Arup (dated: 12 August 2020) document produced for the proposed development by Arup.

Relevant to the TIA are the following aspects:

- Existing transport conditions;
- Proposed development description;
- Parking assessment;
- Transport assessment; and
- Outline Green Travel Plan.

Accordingly, this report:

- Reviews the existing transport conditions;
- Assesses the proposed development in the context of these conditions and relevant planning controls; and
- Proposes relevant mitigation strategies and measures to alleviate impacts.

2. Existing conditions

2.1 Site location

The Site is located within the centre of Sydney CBD, between Castlereagh Street and Pitt Street, on a site area of approximately 4,800m^2. The site is categorised as B8 Metropolitan Centre zone Sydney Local Environmental Plan (LEP) 2012.

The site is currently occupied by a mixed-use building including retail, commercial, Wesley Mission and childcare centre with vehicle access from Castlereagh Street (via one-way separated ramps to loading docks and car parking). Surrounding land uses are predominantly retail/commercial development with the Sheraton Hotel to the east, David Jones store to the north and Pitt Street to the west.

The key arterial and main roads in the vicinity of the Site include:

- Castlereagh Street;
- Pitt Street;
- Market Street; and
- Park Street.

The existing site area contains basement levels of car parking and loading area. There are approximately 270 existing public car parking spaces within the basement areas. An overview of the site location is shown in Figure 2.

Figure 2: Site location.

2.2 Walking and cycling

Footpaths are provided on each side of the road throughout the area for ease of walking. Signalised crossings are provided for all surrounding streets at Pitt Street, Castlereagh Street, Park Street, and Market Street intersections.

A new bi-directional, separated cycleway along Castlereagh Street is now open, forming part of a broader program to enhance walking and cycling access throughout the Sydney CBD. The new route provides a direct link between Circular Quay and Central station while connecting to existing cycleways on:

- Castlereagh Street between Hay and Liverpool streets;
- Liverpool Street between Castlereagh Street and Darling Harbour;
- King Street between Pitt Street and Queens Square; and
- Pitt and College streets.

The 2023 cycleway map shows the new cycleway along with other existing and planned cycle routes in Figure 3.

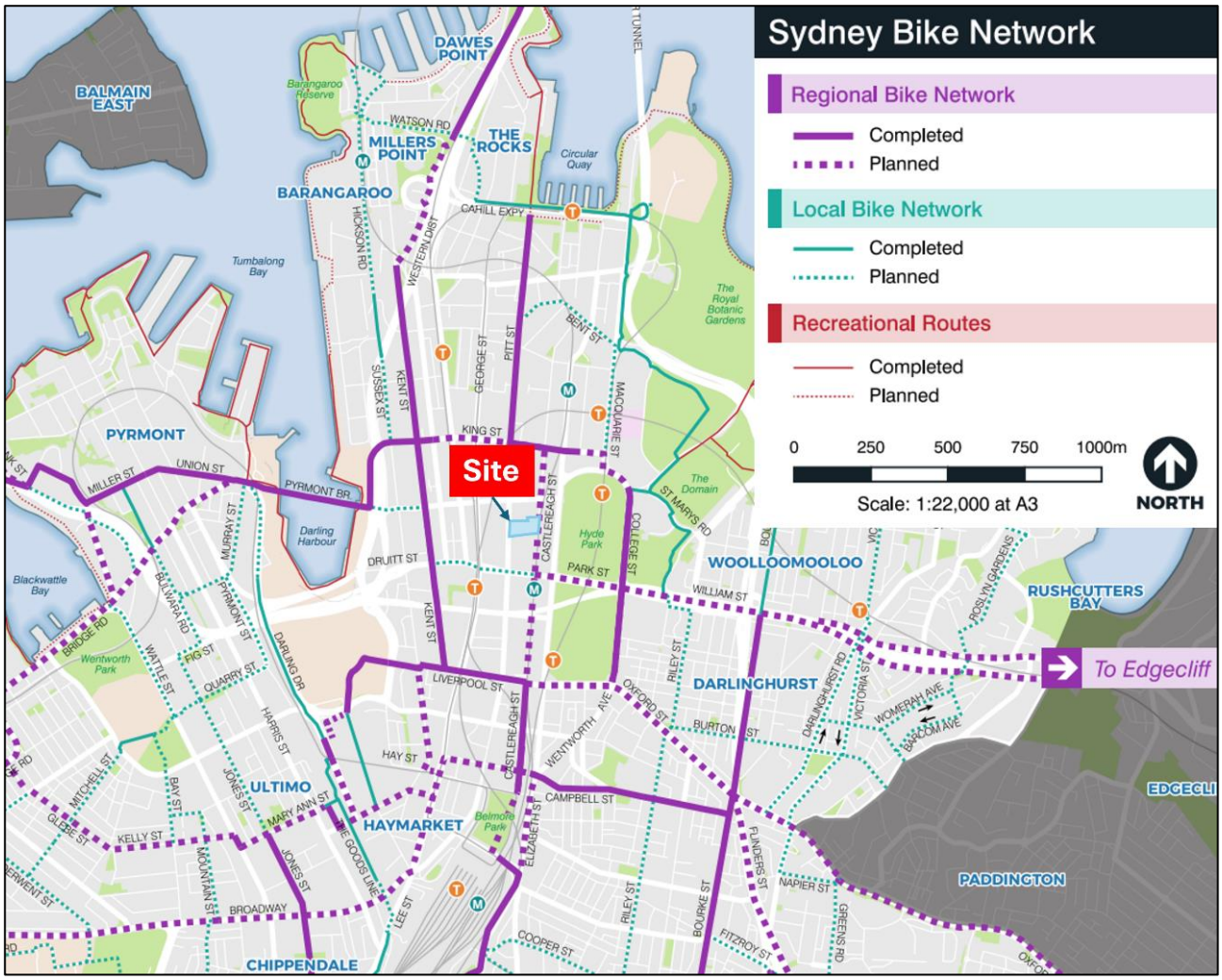


Figure 3: City of Sydney bike network map (City of Sydney 2023).

2.3 Public transport network

The site is well served by public transport, with access to multiple forms of public transport including the recently opened Gadigal Metro station, St James station, Town Hall station and a range of bus routes and stops located within a short walk to/from the site.

The public transport infrastructure within close proximity to the site is presented in Figure 4. The remainder of this section summarises each mode of public transport available to building users at the proposed development.

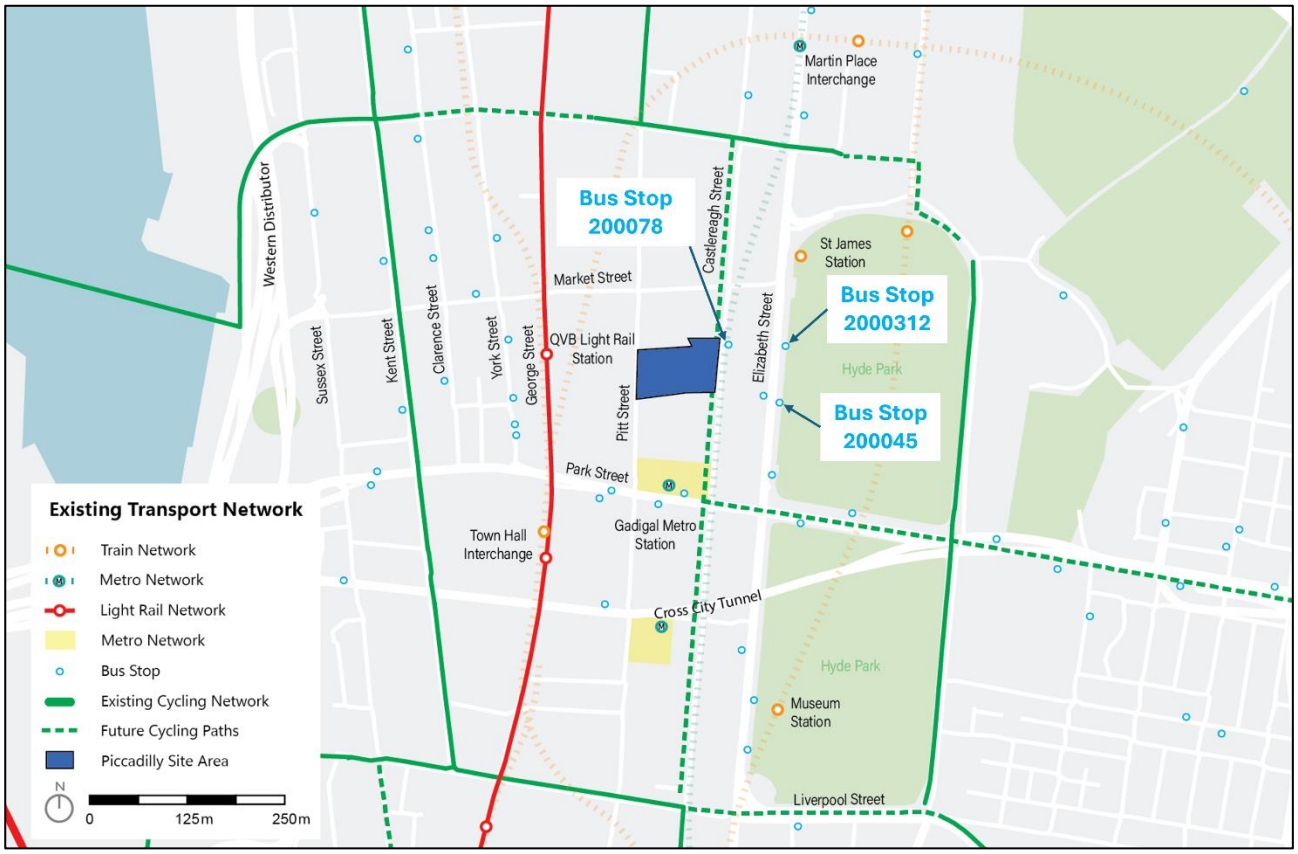


Figure 4: Public transport facilities within 400m of the Site.

2.3.1 Rail services

Gadigal Metro Station opened in August 2024 and has access points on Park Street and Bathurst Street, approximately 240m, and is less than a 5-minute walk from the site. The station is located below Pitt Street and Castlereagh Street, north of the Park Street intersection and south of the Bathurst Street intersection as shown in Figure 5. It forms part of the Sydney Metro network from Chatswood to Sydenham which features new Metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place and Waterloo, along with a new underground platform at Central and upgraded platforms at Sydenham. The Metro station has a "turn up and go" level of frequency that means services are every 4 minutes during peak times, and slightly less frequent servicers outside of the peaks.

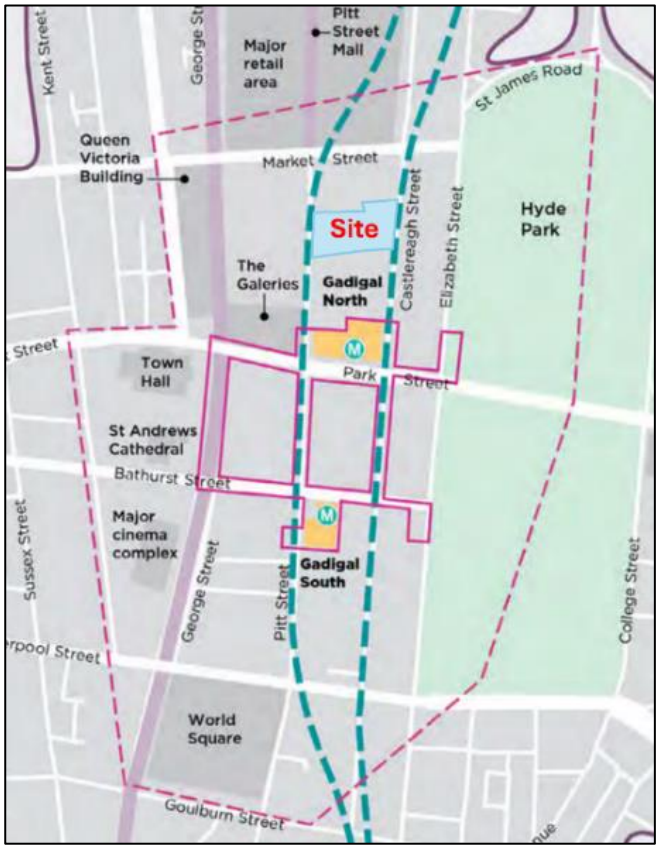


Figure 5: Gadigal Metro Station location (Sydney Metro 2024).

Town Hall Station and St James Station are located approximately 370 metres, and 170 metres walk of the site respectively, both within 5-minute walking distance. To accompany these stations, major rail lines within the Sydney Trains network can be directly accessed or transfers can be made at Central Station which is one station travel from Town Hall Station. Central Station allows travellers to access most of the rail network including CountryLink regional services.

Light Rail stops are located along George Street less than 350m, less than 5-minute walk to the west of the site, providing connections to Circular Quay and Randwick/Kingsford via Central with high frequency 6-minute services for the L2 and L3 route services during the peak periods. Interchange is also available at Central Light Rail Station for L1 route service to Dulwich Hill.

2.3.2 Bus services

The nearest Sydney Bus stops to the site are within a 240m or 3-minute walk. These stops are shown in Figure 4 and located on Castlereagh Street and Elizabeth Street. The bus stops are served by multiple services such as the 304, 333, 339X, 343, 373X, 374X, 377X, 396, 396X, 397X, 423, 423X, 426, 428, 428X, 430, 412, 431, 438X, and 470 routes. Bus services from these routes connect the Site with suburbs of the Inner South, Eastern Sydney, North Eastern Sydney, South Sydney, and Inner West.

A range of other bus routes are accessible within a 400m or 5-minute walk of the Site. These stops are located on Park Street to the south and west of the Site and Pitt Street to the south of the Site. Table 2 presents the peak hour services using these bus stops.

Table 2: Peak hour bus services within 400m walk of Site.

Route number	Bus stop location	Origin and destination of route
304	Elizabeth Street	City Circular Quay to Green Square
311	Park Street	Central Belmore Park to City Millers Point via Darlinghurst and Potts Point

Route number	Bus stop location	Origin and destination of route
324	Park Street	Watsons Bay to Walsh Bay via Old South Head Rd
325	Park Street	Watsons Bay to Walsh Bay via Vaucluse Rd
333	Elizabeth Street	North Bondi to City Circular Quay via Bondi Junction
339X	Elizabeth Street	Clovelly to City Museum
343	Elizabeth Street	Kingsford to City Circular Quay
373X	Castlereagh Street	Coogee to City, Martin Place
374X	Elizabeth Street	Coogee to City, Martin Place
377X	Castlereagh Street	Maroubra Beach to City, Martin Place
389	Park Street	Bondi Junction to Pyrmont
396	Elizabeth Street	Maroubra Beach to Circular Quay
397X	Elizabeth Street	South Maroubra to City Museum
412	Elizabeth Street	Campsie to City Martin Place via Earlwood & Dulwich Hill
423	Elizabeth Street	Kingsgrove to City Martin Place
426	Elizabeth Street	Dulwich Hill to City Martin Place
428	Elizabeth Street	Canterbury to City Martin Place
431	Elizabeth Street	Glebe Point to City Martin Place
438X	Elizabeth Street	Abbotsford to City Martin Place
441	Park Street	City Art Gallery to Birchgrove via QVB
470	Elizabeth Street	Lilyfield to City, Martin Place
500X	Park Street	West Ryde to City Hyde Park via Victoria Rd
502	Park Street	Cabarita Wharf to Drummoyne and City Town Hall
503	Park Street	City Town Hall to Drummoyne
504	Park Street	Chiswick to City Domain
505	Park Street	Woolwich to City Town Hall
506	Park Street	Macquarie University to City Domain via East Ryde
507	Park Street	Meadowbank to Gladesville via Putney & City Hyde Park

2.4 Road hierarchy

The road hierarchy in the vicinity of the site is shown in Figure 6, comprising state roads and regional roads. The remaining roads are local.

Adjacent to the site, Market Street is a one-way, three lane westbound street running from Elizabeth Street across the CBD to George Street. It then becomes a two-way street between George Street and Sussex Street, where it connects to the Western Distributor. Eastbound movement between York and George Streets is restricted to buses, taxis, service and QVB car park vehicles.

Castlereagh Street is a one-way southbound street running from Hunter Street, in the north, to Hay Street in the south. Castlereagh Street generally provides three traffic lanes, including a bus lane. George Street and Park Street are the main State classified roads in the area as shown in Figure 6.

Figure 6: Surrounding road network.

2.5 Existing travel characteristics

The current development is a mixed-use development containing retail/commercial floor space as well as childcare centre and Wesley Centre which includes a theatre and chapel.

2.5.1 Travel mode share distribution

Mode share patterns at the site were analysed using 2016 Method of Travel to Work Census data. Transport mode share for Journey to Work is estimated based on 2016 Census data for the Destination Zone (DZN) 113371093 that includes the Site. 2016 Census data has been used instead of 2021 Census data due to Covid-19 effects on the accuracy of 2021 Journey to Work data, which potentially doesn't capture some of the travel demands/trends of returning to the office.

The Destination Zone (DZN) 113371093 was used for the Site as a Place of Work for the commercial development and Sydney CBD Survey Area 2 (SA2) 117031337 was used as journey origin for the residential development. The result of the analysis is presented in Table 3.

Table 3: 2016 Journey to Work mode split (ABS 2024).

Mode	Inbound (distribution of people working in the DZN)
Train	49.3%
Bus	23.4%
Ferry	1.4%
Light rail	0.3%
Metro	5.8%
Car and taxi	12.6%
Cycle	1.0%
Walked only	6.1%

The data revealed that inbound trips by workers relied more on public transport (80%). Walking and cycling also featured highly (7%).

2.6 Existing site car park and access

The current car park operates as a public "car park use" and is not limited to building users only. It functions primarily as a casual public car park with some dedicated spaces allocated to the building uses. The flexible supply of on-site parking supports the out of hours and weekend usage by Wesley Mission, while providing parking that caters for both building tenants and visitors to the site.

Currently the Uniting Church operate with 35 permanently leased spaces, and a further 225 are dedicated for use by Wesley Mission patrons on a casual basis on dedicated days.

There are currently two (2) separate entry and exit accesses located on Castlereagh Street. Entry movements to the site are permitted from a parallel one-way ramp from Castlereagh Street, directing pedestrians via a set-back footpath around the structure. Exit movements from the site are permitted from a conventional perpendicular driveway at the south-eastern corner of the site to Castlereagh Street.

The access to the exiting car parking is internally provided with parallel ramps located at the south of the Stockland tower core as shown in Figure 7 (Castlereagh Street level) and in Figure 8 (Pitt Street level).

Figure 7: Existing parallel access ramps - Castlereagh Street level.

Figure 8: Existing parallel access ramps - Pitt Street level.

2.6.1 Existing site traffic flows

To gain an understanding of the traffic activity throughout the day on all days, boom gate counts/ticket data information from the 2020 study was used. Data from 1 July 2019 to 29 June 2020 at the access driveways was used as representative data, for current conditions, to understand existing traffic demand using the car park. The traffic flows show that the maximum occupancy occurred on 18 September 2019 and 17 December 2019 with the maximum carpark occupancy of 94% and 92% respectively.

Around 1,000 daily trips (entry and exit movements) were recorded for the highest turnover for the car park with the average parking duration of 5 hours 40 seconds. The average over the period (including Covid conditions) showed that each parking space turned over more than the parking capacity resulting in high turn-over of parking. The maximum two-way combined traffic flows (1 Dec 2019) for the morning peak hours were approximately 55 vehicles and for the evening peak hour were approximately 125 vehicles.

The minimum, average and maximum carpark occupancy percentage for the days between 2 July 2019 and 29 June 2020 is shown in Figure 9.

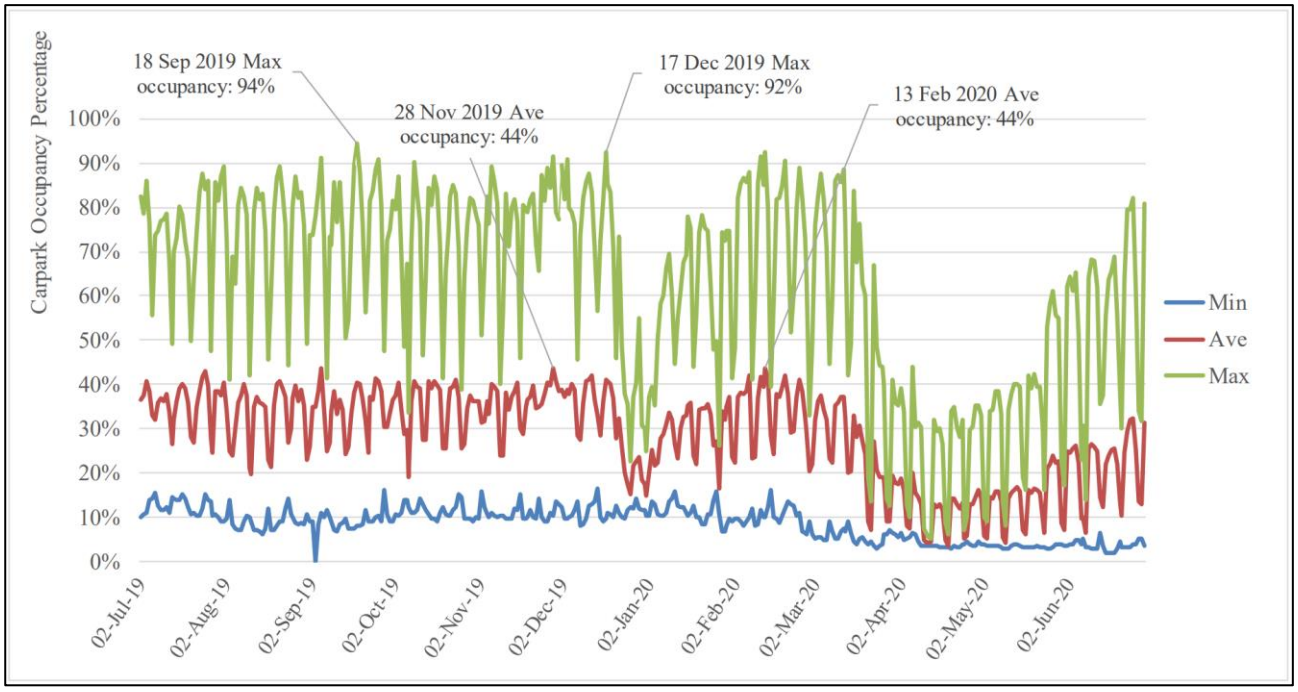


Figure 9: Carpark occupancy.

3. Proposed development

3.1 Description of proposed works

The proposal is planned to consist of the redevelopment of the site for commercial office spaces and retail, together with basement car parking and associated facilities. It also plans on delivering improved public domain outcomes. Such outcomes will include a direct through-site link between Pitt and Castlereagh Street and enhanced pedestrian amenity and activation at the ground plane.

For the purposes of this assessment and based on the Concept Reference Design the indicative development comprises:

- 98,244m^2 GFA commercial;
- 1,368m^2 GFA retail;
- 4,554m^2 GFA Wesley Mission facilities;
- Consolidated vehicle access from Castlereagh Street (via the existing exit driveway which will be upgraded);
- Through-site pedestrian link between Pitt Street and Castlereagh Street;
- Loading docks on Level S and Level P1; and
- Basement car parking

The site's location close to high-quality public transport services means it's well located to travel to and from the site by sustainable modes of travel rather than private car. The proposed development is consistent with following objectives:

- Supporting active, sustainable transport options;
- Improving the safety of people walking and cycling;
- Improving accessibility to employment and services by walking, cycling, and public transport;
- Improving the choice of transport and reducing dependence solely on cars for travel purposes;
- Moderating growth in the demand for travel and the distances travelled, especially by car; and
- Supporting the efficient and viable operation of public transport services.

3.2 Proposed site access

It is proposed to relocate the existing vehicular entry access to a location next to the current exit-only vehicular access to Castlereagh Street as illustrated in Figure 10, converting the access and making it as a combined entry and exit vehicle access driveway for the proposed development. The operation of the access will allow a mixture of 2-way access to the car parking and loading bays, with 1-way access at the entrance/exit point. To reduce the likelihood of queuing on Castlereagh Street, and to prioritise footpath space for walking and cycling, a waiting bay is provided for outbound traffic.

The existing basement 5-level shoring walls are proposed to be retained and integrated into the new construction. The access to the car parking will be greatly enhanced by removing major obstacles and intrusions for pedestrians with the removal of the existing parallel access ramp. It should be noted that a portion of the Castlereagh frontage (within the site) is currently dedicated as a public road and the existing building overhangs the ramp. This land is held in stratum (DP 804650).

The proposed redevelopment reverts the footpath to be tie in with the footway to the north and south of the site. The amendment (via LEP and DCP) would necessitate the extinguishment of this stratum lot with the intention to re-consolidate the area to the parent lot.

Traffic generation and swept path assessments have been undertaken to assess the current proposal with minimal impacts to road network and spill back onto the footpath or street. Swept path analysis has been provided in Appendix A.

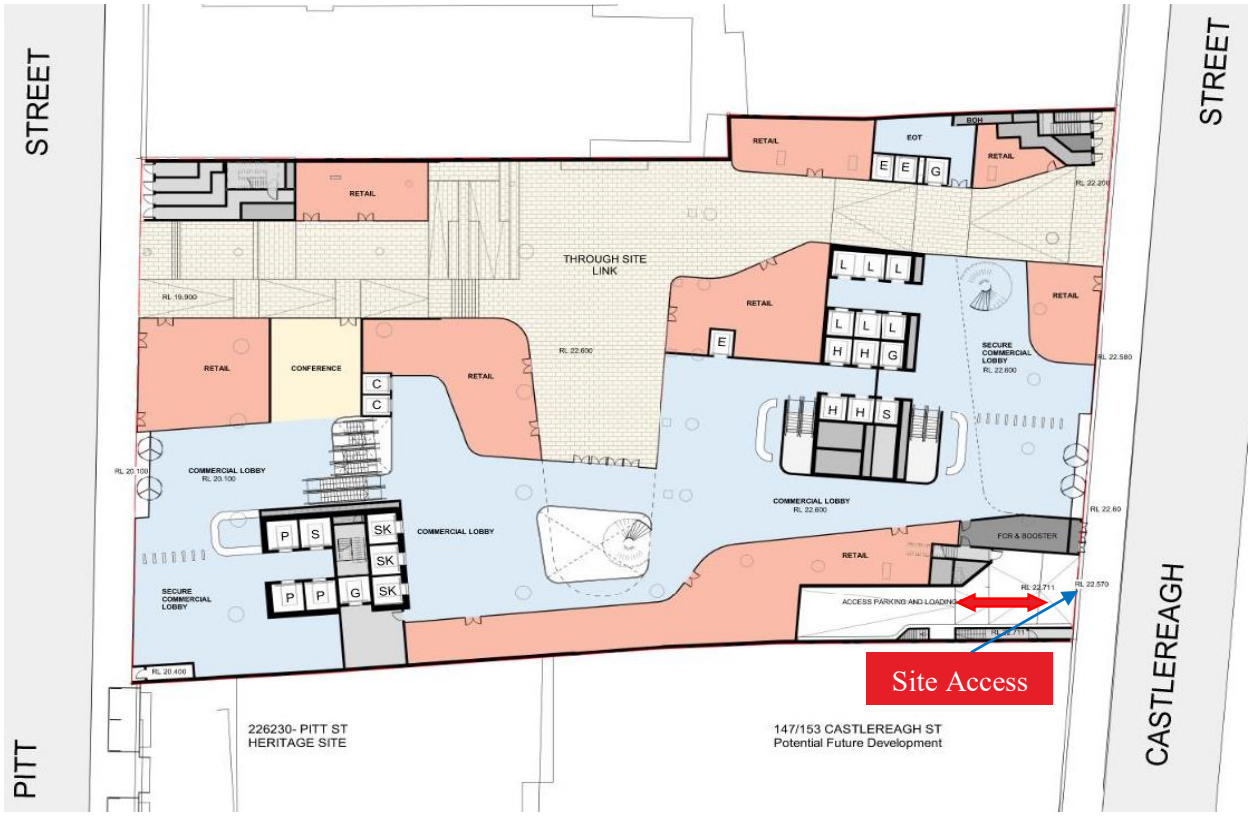


Figure 10: Proposed Site vehicle access.

3.3 Car parking and loading/servicing

Four levels of car parking are proposed within the site. All vehicular access to the site is proposed via a consolidated two-way driveway on Castlereagh Street. The ramp will connect loading and servicing on Basement Levels S and P1 as shown in Figure 11 and Figure 12. Beyond this area, car parking will be provided from Basement Levels P2 to P5 as shown in Figure 13 to Figure 16.

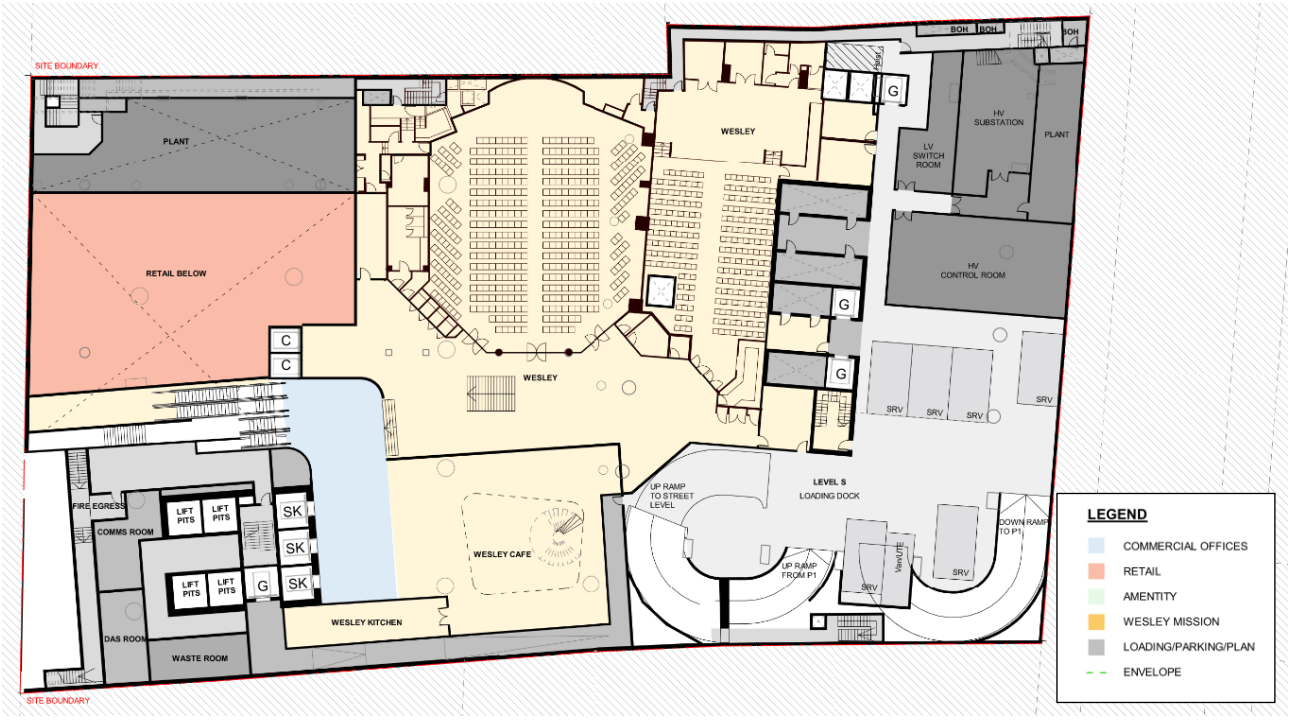


Figure 11. Parking layout - Level S.

Figure 12: Parking layout - Level P1.

Figure 13: Parking layout - Level P2.

Figure 14: Parking layout - Level P3.

Figure 15: Parking layout - Level P4.

Figure 16: Parking layout - Level P5.

4. Parking requirements

4.1 Parking and loading assessment

4.1.1 Car parking spaces

The proposed development provides 220 passenger vehicle parking spaces across the basement and ground floor levels and results in 19% reduction compared to the current provision of 270 car parking spaces on the site.

Further, the existing car park will cease to be available for casual public use and will be limited to use by tenants of the building or surrounding nearby developments through a lease/managed arrangement for times when usage by Wesley Mission patrons is not required. This will reduce the traffic generation caused by the existing public carpark and therefore using the site.

The basement car park levels will be subject to an operational management plan as the car parking spaces dedicated for use by the Wesley Church on Sundays or Christmas / Easter may be leased on weekdays. The planned breakdown of the proposed parking space distribution is shown in Table 4.

Table 4: Proposed parking space allocation.

Monday – Saturday	Sunday
185 total parking spaces for retail and commercial	-
35 parking spaces for Wesley Centre	220 parking spaces for Wesley Centre

4.1.2 Accessible parking space

Section 3.11.9 from the DCP and Part 4 of Section 7.8.5 from Schedule 7 of the Sydney DCP 2012, requires 1 space for every 20 car parking spaces or part thereof is to be allocated as accessible visitor parking.

According to Table D3.5 of the *NCC 2015 Building Code of Australia:*

- 1 space for every 100 carparking spaces or part thereof is required when the building falls in Class 5 category (commercial/office premises) or Class 7a (carpark); and
- 1 space for every 50 carparking spaces or part thereof is required when the building is in Class 6 (retail/shops) or Class 9b (assembly building).

The development, therefore, requires a minimum of 14 accessible parking spaces. The proposed development will provide 12 accessible parking spaces throughout basement levels.

4.1.3 Bicycle parking

Section 3.11.3 from the DCP requires bicycle parking for the respective uses of the development to be provided in accordance with the rates shown in Table 5.

Table 5: DCP bicycle parking rates and provision.

Type	Number/ GFA	Class	Minimum bicycle parking rate	Minimum spaces calculated*
Retail (Shop, Restaurant or café)	1,368 sqm GFA	Employees (Class B)	1 space per 250 m^2 GFA	5
		Customer (Class C)	1 space for every 100m^2 over 100 m^2 GFA + 2 spaces	16
Commercial (Office)	98,244 sqm GFA	Employees (Class B)	1 space per 150 m^2 GFA	655
		Customer (Class C)	1 space per 400 m^2 GFA	246
Wesley Centre Entertainment facility & Place of public worship	4,554 sqm GFA Total ~ 1761 seats (Theatre – 950 seats Lyceum – 277 seats and Chapel – 534 seats)	Employees (Class B)	-	-
		Customer (Class C)	Greater of 1 per 15 seats or 1 per 40 sqm GFA	117
Total			**660 employee/ resident bicycle spaces** **379 customer/ visitor bicycle spaces**	

*The minimum number of bike parking spaces is to be rounded up to the nearest whole number if it is not a whole number.

The quantum of secure bicycle spaces for employees will be provided in the basement levels of the development. Employee /staff facilities are to be provided in a secure caged area (Class B facility). Visitor / customer spaces are to be provided in an easily accessible area for the public as bicycle racks (Class C).

In addition, shower, change-room and locker facilities for bike parking will also need to be provided based on the DCP. The final bicycle parking requirements are to be confirmed and further addressed at future detailed DA stage.

4.1.4 Carshare parking spaces

Section 3.11.2 of Council's DCP 2012 contains the following relevant controls with regard to required car share provisions:

Office premises and retail premises on Category D Public Transport Accessibility Level (PTAL) land requires minimum 1 car share space per 30 car spaces provided. The final number of car share parking spaces depends on the number of carparking spaces ultimately allocated to office or retail premises. This will be further assessed at the Development Application stage.

Parking spaces allocated for car-share vehicles require to be publicly accessible by people who do not occupy the building throughout the entirety of the day. The spaces must be retained as the common property of the Owners Corporation and not sold or leased at any time. The spaces must be made available to car share operators without a fee or charge. The spaces must be well lit and signposted for use only by car share vehicles. The car share spaces are to be available at the same time that the building is occupied.

4.1.5 Motorcycle parking spaces

Section 7.8.4 from the Schedule 7 of the DCP requires a minimum of 1 motorcycle parking space per 12 car spaces provided. This amounts to a total of 23 motorcycle parking spaces which will be placed amongst the basement car parking levels. The proposed development will provide motorcycle 18 spaces across basement levels.

4.1.6 Loading and unloading facilities

For loading facilities, Section 7.8.1 of the DCP Schedule 7 lists service and loading bay rates. This is also mentioned in the TfNSW Guide to Traffic Generating Development (Section 5.2.3). These rates are based on historic data and unmanaged loading docks.

The Sydney DCP 2012 approach to loading and servicing requirements is based on historic data and an uncontrolled loading dock. It requires a minimum of 26 loading and servicing bays for the development, presented in Table 6. The level of loading activity is dependent on a number of factors and not simply the GFA of the building.

Table 6: Sydney DCP 2012 loading and servicing bay requirements.

Land use	Rate	Yield (m^2 GFA or dwellings)	Minimum provision
Retail	• 1 space per 350m^2 GFA up to 2,000m^2, then • 1 space per 800m^2 GFA thereafter	~1,368	4
Commercial (office)	• 1 space per 3,300m^2 GFA for the first 50,000m^2, plus • 1 space per 6,600m^2 for additional floor area over 50,000m^2 and under 100,000m^2, plus • 1 space per 13,200m^2 for additional floor area over 100,000m^2	~98,244	22
Total			**26**

The Urban Freight Forecasting Model (UFFM) provides a forecasting tool when assessing the loading and servicing requirements for the planned commercial and retail development. It models a non-managed dock operation whereas in practice the dock will be managed by a booking system allowing peak hour servicing demands to be managed.

UFFM indicates loading and servicing activity peaks in the middle of the day with the peak hour being 10-11am and an estimated 30 vehicle trips. This method recommends 20 bays to achieve 95% efficacy. Height restrictions allow only SRV vehicles to enter basement levels, therefore MRV bay requirements were assumed to be equivalent to 1.5 SRVs. The commercial, retail and Wesley Mission will share and be serviced by the same loading dock. A Delivery and Servicing Plan may be required given the complexity of the loading dock. Loading and servicing bay requirements using the UFFM forecasting tool is presented in Table 7.

Table 7: UFFM loading and servicing bay requirements.

Bay type	Sydney DCP	UFFM
B99s/Vans	-	12
SRVs	-	6
MRVs+*	-	2
Total	**26**	**20**

*MRV demand is met by SRV equivalent where 1.5 SRV equals an MRV.

For the purposes of this reference scheme, the design of the Level S and Level P1 loading bays have included 9 van bays and 6 SRV bays. No MRV loading bays are included in the design. The future

Development Application will be designed to meet the required loading and servicing bays as suggested by TfNSW's UFFM calculation. The UFFM loading requirements are derived from the GFAs for each land use.

The maximum height of a vehicle accessing the loading dock on Level P1 is proposed to be 4.5m to accommodate various delivery services. The largest vehicle expected to enter the basement levels is proposed to be a 6.4m long SRV. Swept paths are shown in Appendix A.

All loading dock layouts are indicative and will be developed further at the next planning stage. A Loading Dock Management Plan should be prepared for the site to explain how the proposed loading docks will manage the delivery of goods, waste collection given the constraints of the proposed scheme.

4.2 Loading dock management plan

A Loading Dock Management Plan will need to be prepared in consultation with the Council and Sydney Coordination Office prior to occupation of the building when tenancies are known to ensure adequate management of deliveries and waste collection. It is expected that the loading dock will be managed by a booking system. This plan will specifically include the following:

- access arrangements, including vehicle holding;
- driveway operations and safety;
- car parking and loading arrangements;
- delivery schedules and booking system;
- a traffic management strategy; and
- expected delivery vehicle activity.

The plan is to outline how the loading dock will be managed and used by development tenants to ensure all vehicles:

- can be received on-site;
- all loading and unloading including waste management will take place on-site; and
- ensure vehicles are not waiting to enter the site in surrounding public streets.

The management plan is prepared for distribution, once approved, to all relevant tenants and external users of the loading area.

5. Transport assessment

5.1 Traffic generation

Estimates of traffic generation of the proposed development are based on surveys of surrounding sites and the relevant TfNSW Guidelines.

The proposed total GFA (approx. 104,867 sqm) is almost double in scale of the existing mixed-use development on the site (approx. 58,000 sqm GFA) but with a smaller retail component (approx. 8,000 sqm retail existing compared to approx. 1,368 sqm retail proposed). Vehicle trip generation for the various components of the development are described in the following sections.

5.1.1 Commercial offices

Office traffic generation rates are directly proportional to the number of off-street parking spaces provided within the site. For the purpose of this report, it is assumed that all 126 car spaces will be occupied, with a conservative 50% of the car trips made during the road network peak hour.

With the maximum of 153 spaces allocated to the commercial and office component of the site, this equates to a traffic generation of 77 vehicles per peak hour with 80% in and 20% out during the morning AM Peak Hour and the reverse in the afternoon. This equates to 62 vehicles generated during the AM Peak Hour.

5.1.2 Retail

Speciality retail at the site would predominantly be smaller shops serving the local precinct. A majority of the trips made would be by customers walking in, as such, any traffic generation related to retail component of the site would be expected to be nominal. Due to there being no car parking provided for retail use, there is no vehicle traffic generation assumed for all retail uses accessing the site.

5.1.3 Trip generation associated with the Wesley Mission and Childcare Centre

The proposed development seeks to retain the existing capacity and activities for the Wesley Mission facilities. Therefore, traffic generation for this use is expected to remain the same.

5.1.4 Loading and servicing vehicle activities

Applying the UFFM freight forecasting model to estimate loading and servicing vehicle trip generation, it is determined that the commercial and retail development will generate up to 30 vehicles consisting of SRVs, vans, and utes, throughout the AM Peak Hour. This is shown in Figure 17 and Table 8.

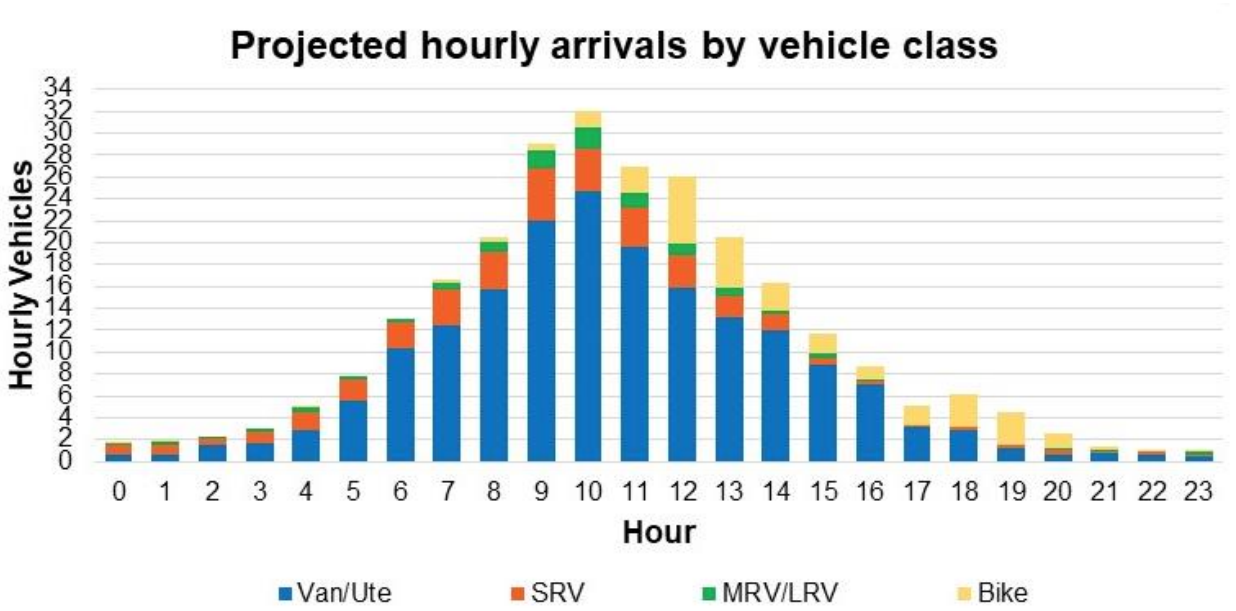


Figure 17: UFFM loading and servicing traffic profile (typical weekday).

Table 8: UFFM vehicle trip generation summary.

Land use	Vehicle trips (SRVs, cars, vans, utes)	
	Peak hour (10am – 11am)	Daily
Retail	4	30
Commercial	26	204

Land use	Vehicle trips (SRVs, cars, vans, utes)	
	Peak hour (10am – 11am)	Daily
Total	**30**	**234**

5.1.5 Expected traffic generation

Using the future development permissible under the building envelope sought within planning proposal the following traffic generation is estimated to result as shown in Table 9.

Table 9: Weekday trip generation summary.

Development type	Number	AM Peak Hour		PM Peak Hour	
		Rate	Vehicle Trips	Rate	Vehicle Trips
Commercial offices	153 Parking spaces	0.5 vehicles per hour (80% arrive during peak hour)	62	80% leave during peak hour	62
Loading/ servicing vehicle activities	30 heavy vehicle movements during peak hour	30 arrive during peak hour	30	3 arrive during peak hour	3
Total vehicle trips			92		92
Existing trip generation			55		125
Net vehicle trips generated			**+37**		**-33**

5.2 Road network assessment

The development will have a reduction of 33 vehicle trips during the PM peak period and is anticipated to generate an additional 37 vehicle trips per hour over existing conditions during AM peak period. The volumes during the AM peak period would equate to an additional vehicle trip being generated approximately every 2 minutes and is considered to result in minimal impacts on the surrounding road network. In summary, the traffic impacts for the development are considered negligible.

It should also be noted that the trip rates adopted in this analysis do not consider the access to high-quality public transport available within close proximity to the site, which is likely to offset traffic generation for employees and visitors of the site. In summary, the traffic impacts for the development are considered minimal.

5.3 Pedestrian assessment

The approach that was developed for the allocation of development demand (pedestrian demand) is as follows. Reference should be made to *133 Castlereagh Street - Footpath Analysis* provided by Arup separately. The results show:

- A total of six footpaths have been assessed based on the WSG assessment. Each of the existing footpaths (i.e. without the development) has an LoS of E or F meaning that an intervention would be needed to be provided to increase the footpath widths.
- When assessing the additional pedestrian volumes associated with development, the increase of between 0.5 PPMM to 5.5 PPMM are estimated. These increases are considered to be negligible in terms of their impact on the existing footpaths included within the study area.

- The proposed design removes the parallel driveway on Castlereagh Street and replaces vehicle entry and exit with a signalised perpendicular driveway with a waiting bay. It is a substantial improvement in terms of pedestrian experience and continuity of shoreline for people with disabilities.
- The proposed development includes a substantially improved through site link that is wider and has gentle ramps connecting Pitt Street and Castlereagh Street. It has the potential to take pedestrian traffic off busy Market Street, especially those coming from St James Station and heading south-west.

5.4 Through site link

A pedestrian through-site link (connecting Castlereagh Street to Pitt Street) is proposed along the northern part of the site, shown in Figure 18. This is planned to improve the pedestrian level of services as it will contribute to a better distribution of pedestrian using the surrounding footpaths.

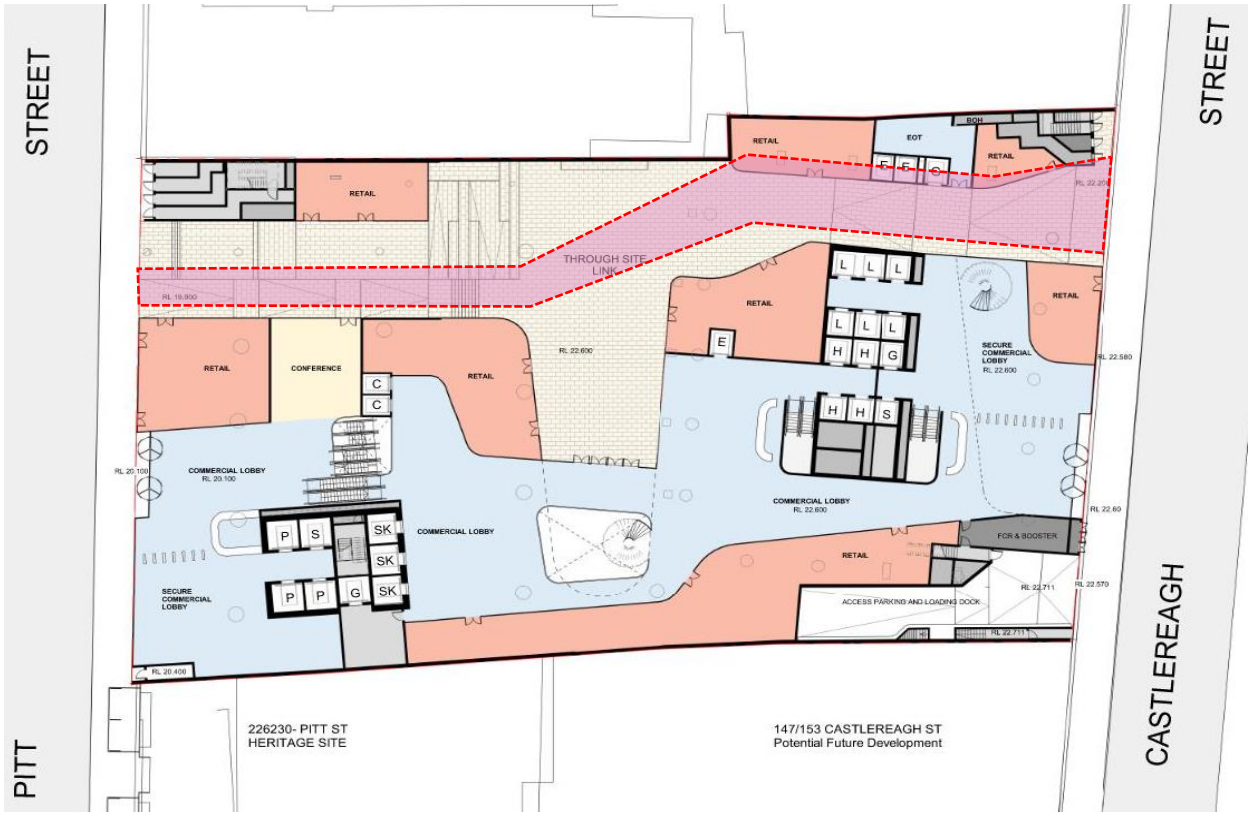


Figure 18: Ground floor, proposed through site link.

6. Outline Green Travel Plan

A Green Travel Plan (GTP) is a tool to minimise the negative impact of private vehicle travel on the environment. The Plan is a package of measures put in place to encourage more sustainable travel and should be prepared for construction. A GTP describes ways in which the use of sustainable transport may be encouraged. Using public transport, cycling, walking, working from home, carpooling, making business vehicles more fuel efficient and the use alternative fuels are all more sustainable means of transport than single occupant driving.

More generally, the principles of a GTP are applied to all people travelling to and from a site. Government authorities around the nation are placing increasing emphasis on the need to reduce the number and lengths of motorised journeys and in doing so encourage greater use of alternative means of travel which have less environmental impact than cars.

The main objectives of a Green Travel Plan are to reduce the need to travel and promotion of sustainable means of transport.

The more specific objectives include:

- To reduce the level of single occupancy car borne trips associated with commuting.
- To facilitate the sustainable and safe travel of visitors to the site.
- To reduce site traffic congestion and associated pollution in order to enhance, improve and make safe journeys of minority/sustainable transport mode users.
- To work in partnership with neighbouring organisations/developments, local authorities, retailers and other relevant bodies in achieving the maximum mode shift away from the private car.
- To continually develop, implement, monitor, evaluate and review the progress of the travel plan strategy.
- To facilitate all users' access to key facilities such as retail, leisure, and education.

Sustainable Sydney 2030 also includes an action to promote sustainable travel behaviour by developing Green Travel Plans (GTP) that will be implemented in new developments. A Travel Plan aims to manage transport demand through a series of measures that promote and facilitate more sustainable modes of travel with a view to reducing private motor vehicle use.

To encourage people to make greater use of public transport, cycling, walking and car sharing for commuting as well as to encourage people to leave their cars behind and use public transport services are major objectives of Green Travel Plan.

It is estimated that for the proposed development, there will be a decrease in the car driver mode percentages and an increase in other modes (Train, Bus, Walk and Cycling) percentages when comparing them with the existing Travel to Work percentages outlined in Section 2.5.1.

The site supports a low car mode share by providing 193 car parking spaces on site. The site also encourages alternative modes such as bicycles, public transport, car share, taxis, etc. Appropriate levels of bicycle parking are provided within the basement levels for visitors and staff.

Typically, visitors and staff to Sydney CBD utilise public transport.

A Transport Access Guide (TAG) will be distributed to staff, customers and visitors to the site with information regarding:

- Nearby train stations and bus stops;
- Key walking routes;
- Carshare spaces on-site, and
- Bicycle storage area and End of Trip Facilities.

It is recommended that Green Travel Plans are prepared prior to occupation of the building once tenants are known.

7. Conclusions

This assessment has described the potential traffic and transport impacts of the proposed development at Stockland Piccadilly Complex in Sydney's CBD. Key findings of the review are as follows:

- The site is located in the City of Sydney Council local government area (LGA) and subject to maximum parking rates.

- The development is located within a prime central location close to high-quality public transport nodes as Gadigal Metro, Town Hall and St James stations.

- Total car parking provision is less than the allowable provision under the City of Sydney DCP 2012 and the LEP 2012.

- Employee bicycle parking will be provided in accordance with the requirements of DCP 2012 and visitor parking can be considered as a public cycle facility.

- The car parking provision of 220 spaces will result in an overall reduction in comparison to the existing parking by approximately 18%.

- The development will have a reduction of 33 vehicle trips during the PM peak period and would generate an additional 37 vehicle trips per hour over existing conditions during AM peak period. The volumes during the AM peak period would equate to an additional vehicle trip being generated every three minutes and is considered to result in minimal impacts on the surrounding road network. In summary, the traffic impacts for the development are considered negligible.

- Access will be via an upgraded driveway access providing two-way traffic flow and includes the removal the parallel vehicle ramp along Castlereagh Street, improving the public domain.

- The proposed access arrangements are appropriate to cater for the estimated level of traffic generation.

- When assessing the additional pedestrian volumes associated with development, the increase of between 0.5 PPMM to 5.5 PPMM are estimated. These increases are considered to be negligible in terms of their impact on the existing footpaths included within the study area.

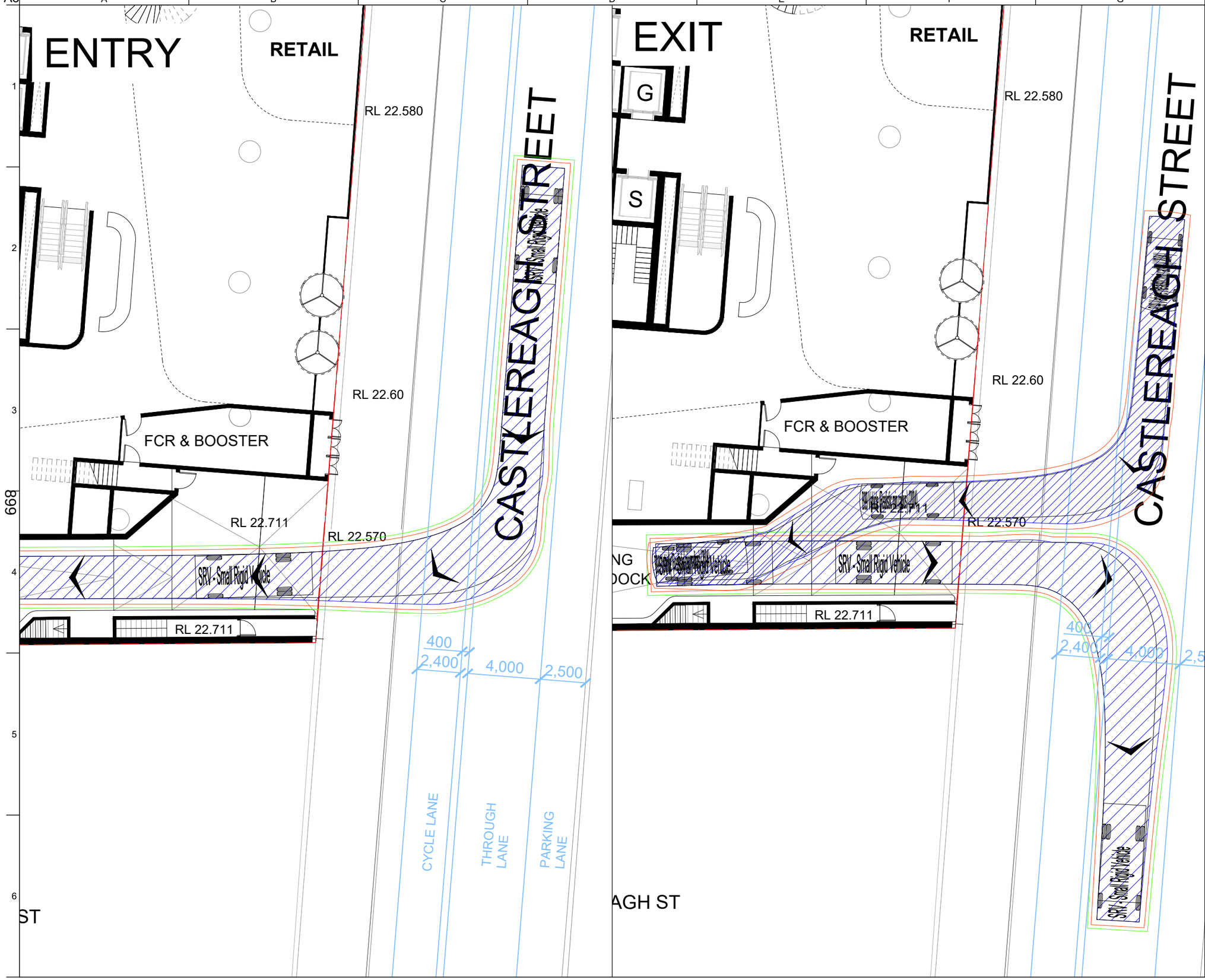
- 15 loading bays are proposed for the development which are proposed to be managed and cater for the peak service vehicle generation of the site.

- While an outline Loading Dock Management Plan and Green Travel Plan have been prepared, detailed versions of these plans will be required to be prepared at a later stage.

In summary, the proposed development is considered to have a minimal impact on the local transport network.

Appendix A

Swept Paths

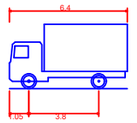


A3

Legend

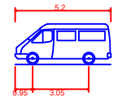
- Body Envelope
- 300mm Envelope
- 500mm Envelope
- Wheel Envelope

Design Vehicle(s)



SRV - Small Rigid Vehicle

Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	6.250m

Issue	Date	By	Chkd	Appd
A	12/01/26	WZ	WZ	WZ
For information				

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Client
STOCKLAND

Job Title
PICCADILLY COMPLEX

COMMERCIAL SCHEME

Drawing Title
SWEPT PATH ASSESSMENT

GROUND LEVEL

Scale at A3 1:200

Discipline TRAFFIC

Drawing Status
DRAFT

Job No	Drawing No	Issue
295375-00	**SKT004**	**A**

Do not scale

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