



4-6 Bligh Street, Sydney Transport Impact Assessment

Prepared for:
Holdmark NSW Pty Ltd

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The Transport Planning Partnership

4-6 Bligh Street, Sydney

Transport Impact Assessment

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- B. ARCHITECTURAL LAYOUT PLANS
- C. BUS LAYOVER SWEPT PATH ANALYSIS
- D. LOADING DOCK ASSESSMENT – SWEPT PATHS AND GROUND CLEARANCE ASSESSMENT
- E. SIDRA INTERSECTION RESULTS

1 Executive Summary

This Transport Impact Assessment (TIA) has been prepared by The Transport Planning Partnership (TPPP) to accompany a detailed State Significant Development Application (SSDA) for the mixed-use redevelopment proposal at 4-6 Bligh Street, Sydney. The site is legally described as Lot 1 in Deposited Plan 1244245.

This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD-48674209).

This report concludes that the proposed mixed-use hotel and commercial development is suitable and warrants approval subject to the implementation of the following mitigation measures.

- provision of limited car parking due to the site's proximity to excellent public transport facilities
- activate the site frontage with good pedestrian links and high quality pavement to tie in with the existing streetscape
- provision of high quality bicycle parking and end of trip facilities to support cycling to/from the site
- implementation of a green travel plan to outline green travel initiatives prior to the occupation of the site
- encourage car sharing facilities within the immediate vicinity of the site
- management measures in place to advise all patrons / visitors travelling to/from the site by taxi or uber to use existing taxi drop-off/pick-up areas within the immediate vicinity of the site.

The implementation of the above mitigation measures satisfactorily address potential adverse traffic implications of the proposed development.

2 Introduction

2.1 Background

This report has been prepared to accompany an SSDA for the for the mixed-use redevelopment proposal at 4-6 Bligh Street, Sydney.

The Council of the City of Sydney, as delegate for the Minister for Planning and Public Spaces (the Minister), is the Consent Authority for the SSDA under an Instrument of Delegation issued by the Minister on 3 October 2019.

The application seeks consent for the construction of a 59-storey mixed-use hotel and commercial development. The purpose of the project is to revitalise the site and deliver new commercial floorspace and public realm improvements consistent with the City's vision to strengthen the role of Central Sydney as an international tourism and commercial destination.

A separate development consent (D/2018/892) relating to early works for the proposed application was granted for the site on 31 January 2020. Consent was granted for the demolition of the existing site structures, excavation and shoring of the site for three basement levels (to a depth of RL9.38m) to accommodate the proposed mixed-use hotel and commercial development. As such, this application does not seek consent for these components and instead seeks to rely upon and activate D/2018/892 for early works.

Specifically, development consent is sought for:

- Site establishment, including removal of three existing trees along the Bligh Street frontage and de-commissioning and removal of an existing substation (s2041) on the site.
- Construction of a 59-storey hotel and commercial office tower. The tower will have a maximum building height of RL225.88 (205m) and a total gross floor area (GFA) provision of 26,781sqm, and will include the following elements:
 - Five basement levels accommodating a substation, rainwater tank, hotel back of house, plant and services. A porte cochere and four service bays will be provided on basement level 1, in addition to a total of 112 bicycle spaces on the ground floor, basement level 1 and basement level 2, end-of-trip facilities on basement level 2 and a total of 28 car parking spaces on basement levels 4 and 5.
 - A 12-storey podium accommodating hotel concierge and arrival at ground level, conference facilities, eight levels of commercial floor space and co-working facilities, and hotel amenities including a pool and gymnasium at level 12.
 - 42 tower levels of hotel facilities including 421 hotel keys comprising standard rooms, suites and a penthouse.
 - Two tower levels accommodating restaurant, bar, back of house and a landscaped terrace at level 57.

- Plant, servicing and BMU at level 59 and rooftop.
- Increase to the width of the existing Bligh Street vehicular crossover to 4.25m and provision of an additional 4m vehicular crossover on Bligh Street to provide one-way access to the porte cochere and service bays on basement level 1.
- Landscaping and public domain improvements including:
 - Replacement planting of three street trees in the Bligh Street frontage,
 - Construction of a landscape pergola structure on the vertical façade of the north-eastern and south-eastern podium elevations,
 - Awning and podium planters, and
 - Provision of a feature tree at the level 57 terrace.
- Identification of two top of awning building identification signage zones with a maximum dimension of 1200mm x 300mm. Consent for detailed signage installation will form part of a separate development application.
- Utilities and service provision.
- Installation of public art on the site, indicatively located at ground level.

2.2 Secretary's Environmental Assessment Requirements

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 1 October 2022 and issued for the SSDA (SSD48674209). Specifically, this report has been prepared to respond to the SEARs requirement issued below.

The issues raised in the SEARs have been considered during the preparation of this transport assessment report and are summarised in Table 2.1.

Table 2.1: Review of Compliance with SEARs

Item	SEARS Transport, Traffic, Parking and Access	Report Reference
10. Traffic, Transport and Accessibility	Provide a transport and accessibility impact assessment, which includes:	
	<ul style="list-style-type: none"> ▪ an analysis of the existing transport network, including the road hierarchy and any pedestrian, bicycle or public transport infrastructure, current daily and peak hour vehicle movements, and existing performance levels of nearby intersections. 	Section 3
	<ul style="list-style-type: none"> ▪ details of the proposed development, including pedestrian and vehicular access arrangements (including swept path analysis of the largest vehicle and height clearances), parking arrangements and rates (including bicycle, end-of-trip facilities and bus/coach facilities), drop-off/pick-up-zone(s) and bus bays (if applicable), and provisions for servicing and loading/unloading. 	Section 4

Item	SEARS Transport, Traffic, Parking and Access	Report Reference
	<ul style="list-style-type: none"> analysis of the impacts of the proposed development during construction and operation (including justification for the methodology used), including predicted modal split, a forecast of additional daily and peak hour multimodal network flows as a result of the development (using industry standard modelling) and peak movements during events (if relevant), identification of potential traffic impacts on road capacity, intersection performance and road safety (including pedestrian and cyclist conflict) and any cumulative impact from surrounding approved developments. 	Section 7 and Refer to CTMP
	<ul style="list-style-type: none"> measures to mitigate any traffic impacts, including details of any new or upgraded infrastructure to achieve acceptable performance and safety and the timing, viability and mechanisms of delivery (including proposed arrangements with local councils or government agencies) of any infrastructure improvements in accordance with relevant standards. 	Section 7.3.4
	<ul style="list-style-type: none"> measures to promote sustainable travel choices for employees, guests and visitors, such as connections into existing walking and cycling networks, minimising car parking provision, encouraging car share and public transport, providing adequate bicycle parking and high quality end-of-trip facilities, and implementing a Green Travel Plan. 	Section 7.5, Refer to GTP
	Provide a Construction Traffic Management Plan detailing predicted construction vehicle routes, access and parking arrangements, coordination with other construction occurring in the area, and how impacts on existing traffic, pedestrian and bicycle networks would be managed and mitigated.	Section 7.6, Refer to CTMP

2.3 Consultation Summary

Several rounds of consultation has been undertaken since the commencement of the project including in 2019 and recently, in November 2022, as summarised in the following.

During the preparation of the Architectural Design Competition of the site, feedback was sought from City of Sydney Council in relation to the provision of two split single direction driveways serving the basement drop off pick up area. On 26 February 2019, City of Sydney Council provided the following key comments:

- The City has no issues with the proposed proposition of two separate driveways serving the basement drop off and pick up rather than one dual driveway.
- The City also support the removal of the bus layover in this location, subject to Transport's Sydney Coordination Office approval.

On this basis, TTPP met with TfNSW on 12 April 2019 to discuss the potential impacts of the bus layover area. Based on this, TfNSW may be prepared to support the relocation of the bus layover area if there is no net loss of bus layover capacity and a suitable alternative location is provided.

On 29 August 2019, TTPP met with City of Sydney Council and TfNSW Sydney CBD Coordination Authority to discuss the traffic and transport matters for the above site. The key outcomes of the meeting are summarised as follows:

- Buses will need to be able to adequately draw in and park in the relocated bus layover spaces.
- The lengths of the car parking areas will need to be measured between driveways to outline available parking lengths.
- TfNSW suggested that 80 per cent of loading dock occupation equates to full capacity.
- TfNSW would prefer the loading dock to be designed for a medium rigid vehicle as they had some concerns that a small rigid vehicle was not be able to adequately serve the proposed site. A loading dock management plan would need to be prepared to detail the proposed loading dock operations.
- It was recognised that buses could not be accommodated on-site, but further evidence would need to be provided to support the use of existing on-street bus drop off areas.
- TfNSW may consider the dual use of bus layovers for other parking at night.

In 2022 updated feedback was requested from the Customer Journey Planning team in TfNSW, to confirm the proposed on-street parking restrictions plan. TfNSW provided comments on the plan in an email dated 28 November 2022. In response to TfNSW, the parking arrangements have been modified as further discussed in Section 5.3.

2.4 Purpose of this Report

This report sets out an assessment of the anticipated transport impacts of the proposed development, including the following:

- existing transport conditions surrounding the site
- car parking, pedestrian and bicycle requirements
- the traffic generating characteristics of the proposed development
- suitability of the proposed access arrangements for the site
- the transport impact of the development on the surrounding road network.

2.5 References

In preparing this report, reference has been made to the following:

- architectural layout plans prepared by Woods and Bagot
- traffic and parking surveys undertaken by Matrix Traffic and Transport Data
- Sydney Local Environmental Plan 2012 (LEP)
- Sydney Development Control Plan 2012 (DCP)
- Australian Standard, Parking Facilities, Part:1 Off-Street Car Parking AS2890.1:2004
- Australian Standard, Parking Facilities, Part:2 Off-Street Car Parking AS2890.2:2018
- other documents and data as referenced in this report.

2.6 Report Structure

The remainder of the report is set out as follows:

- Chapter 3 discusses the existing conditions including a description of the subject site
- Chapter 4 provides strategic context of the future planned upgrades surrounding the site
- Chapter 5 provides a brief description of the proposed development
- Chapter 6 assesses the proposed on-site parking provision and internal layout
- Chapter 7 examines the traffic generation and resultant traffic implications arising from the proposed development
- Chapter 8 presents the conclusions of the assessment.

3 Existing Condition Assessment

3.1 Site Description

The site for the purposes of this SSDA is a single allotment identified as 4-6 Bligh Street, Sydney and known as Lot 1 in Deposited Plan 1244245. The site has an area of 1,218sqm, and is identified in Figure 3.1.

Figure 3.1: Site Identification Plan



Source: Urbis

The site is relatively flat, with a slight slope ranging from 21m AHD in the north-western corner to 19.5m AHD in the south-western corner.

The site is located within the north-eastern part of Central Sydney in a block bound by Bligh Street to the west, Hunter Street to the south, Chifley Square/Phillip Street to the east, and Bent Street to the north. The surrounding buildings are generally characterised by a mix of commercial office and hotel uses with ground level retail, restaurant and café uses and are of varying heights, ages and styles, including a number of State and local listed heritage buildings.

The site is also located in proximity to a number of Sydney Metro City & Southwest (opening 2024) and Sydney Metro West (opening 2030) station sites.

Specifically, the site is located to the immediate east of the Sydney Metro Hunter Street station (east site), which is located on the corner of Hunter Street and Bligh Street, and approximately 350m east of the Sydney Metro Hunter Street station (west site). The Hunter Street station sites are part of the Sydney Metro West project. SEARs for the preparation of Concept SSDAs for the sites were issued in August 2022.

Approximately 150m to the south of the site is Sydney Metro Martin Place Station site, located to the south of Hunter Street between Castlereagh Street and Elizabeth Street. The Martin Place Station site is currently under construction and forms part of the Sydney Metro City & Southwest project.

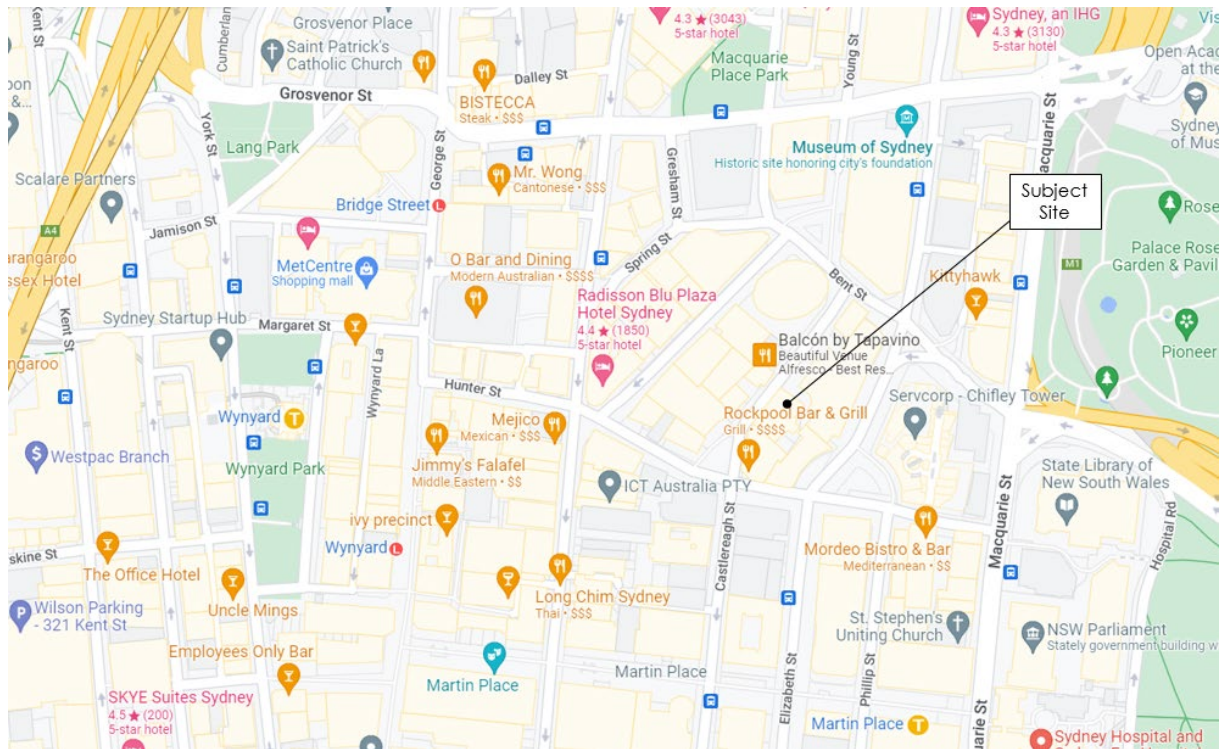
The site is occupied by a vacant commercial office building with ground floor retail and basement car parking known as “Bligh House”. Completed in 1964, Bligh House is a 17-storey tower inclusive of a three-storey podium with the podium levels built to the Bligh Street alignment and the tower setback from the street frontage. The building was designed by Peddle Thorp and Walker and was constructed as part of the post-World War II development boom in the Sydney CBD. The podium overhang along the footpath provides continuous pedestrian protection. Vehicle access to the site is off Bligh Street via a single 2.6m wide driveway that is restricted by a security gate under one-lane, two-way access arrangements. The driveway provides access to the basement car park, containing 21 car parking spaces.

The site contains no vegetation; however, two existing street trees are located adjacent to the site boundary on Bligh Street.

Development consent for the demolition of the existing site structures, excavation and shoring of the site for three basement levels (to a depth of RL9.38m) was granted by City of Sydney on 31 January 2022 (D/2018/892).

A locality map of the subject site is shown in Figure 3.2.

Figure 3.2: Locality Map



Source: Google Maps Australia, viewed online 15/12/2022

Land uses surrounding the site predominately comprise mixed commercial, retail, restaurant and hotel uses along Bligh Street. In addition to this, it is noted that the site is centrally located within Sydney CBD and close proximity to high frequency public transport services, notably the Wynyard and Martin Place railway stations.

3.2 Abutting Road Network

The site fronts Bligh Street along the west boundary and is surrounded by a number of local roads, including Bent Street and Hunter Street to the north and south respectively. A brief description of these roads is provided below.

3.2.1 Bligh Street

Bligh Street functions as a one-way southbound local road, generally aligned in a north-south direction. The road is generally configured with three lanes, with kerbside car parking and bus zone restrictions provided on either side. The road provides southbound connectivity from Bent Street to Hunter and Castlereagh Streets, with traffic signals provided on both Bent Street and Hunter Street intersections. In addition to this, it is noted that vehicle access to the existing site is currently provided off Bligh Street.

3.2.2 Hunter Street

Hunter Street functions as a two-way local road and travels in an east-west alignment. The road is generally configured with four lanes and extends between Macquarie Street and George Street. Ticketed kerbside car parking is generally provided along one side or both sides of the road.

3.2.3 Bent Street

Bent Street functions as a local road, generally aligned in an east-west direction. The road is generally configured with four lanes and extends between Macquarie Street and Pitt Street. The street provides direct vehicle access to Bligh Street along the northern end via traffic control signal arrangements.

3.3 Existing Vehicle Access

As indicated previously, vehicle access to the existing site is currently provided directly off Bligh Street via a single 2.6m wide driveway. Vehicle access is currently restricted by a security gate under one-lane, two-way access arrangements. The existing driveway provides direct access to the basement car park, comprising some 21 car parking spaces.

In addition to this, it is noted that no service vehicles are currently permitted to the basement car park and thus, all associated loading and unloading activities are understood to be currently carried out via existing on-street Loading Zones along Bligh Street.

The existing driveway is shown in Figure 3.3.

Figure 3.3: Existing Access Driveway



It is noted that the existing vehicle access has limited sight distance for egress vehicle movements but was observed to operate satisfactorily.

3.4 Pedestrian Infrastructure

Well-established pedestrian facilities are provided within the immediate vicinity of the site to provide good pedestrian access within the Sydney CBD. Paved pedestrian footpaths are generally provided on both sides of surrounding streets to provide good pedestrian connectivity between the site and wider Sydney CBD pedestrian network. In addition to this, signalised pedestrian crossings are provided on all legs at Hunter Street-Bligh Street and Bent Street-Bligh Street intersections.

The existing pedestrian footpaths on Bligh Street are presented in Figure 3.4 and Figure 3.5.

Figure 3.4: Bligh Street footpath (west side) Figure 3.5: Bligh Street footpath (east side)



3.5 Cycle Infrastructure

No signage or line-marking is currently provided within the immediate vicinity of the site to indicate any dedicated cycleways. The nearest off-road shared paths are provided along Macquarie Street and Cahill Expressway, as shown in Figure 3.6.

Figure 3.6: Existing Cycling Route Map



Source: City of Sydney Council, viewed online 15/12/2022

3.6 Public Transport Facilities

The site is located within a 500m catchment radius from the Wynyard and Martin Place railway stations, providing convenient access to a number of high frequency public transport services, pertinently rail and bus services.

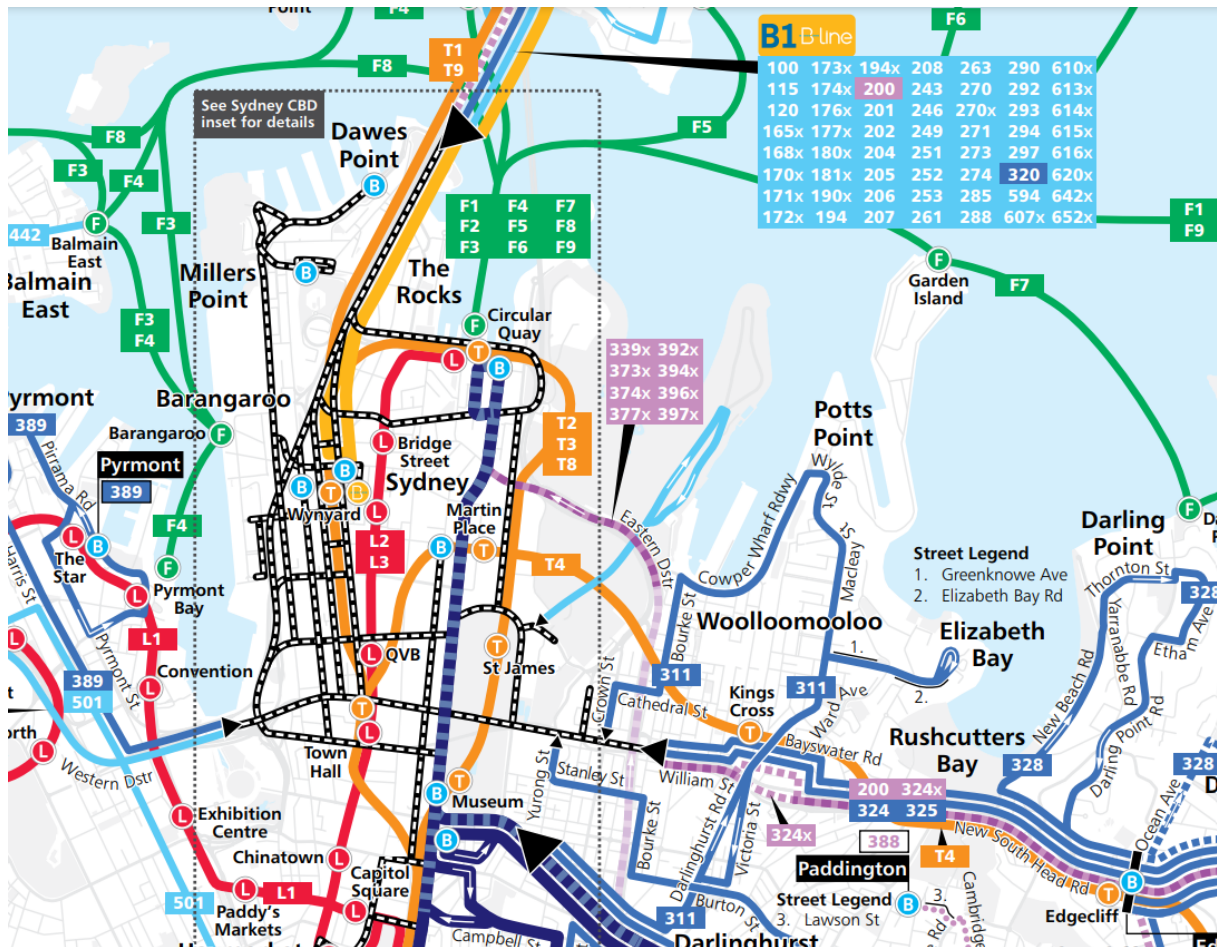
These railway stations provide good transport connectivity between the Sydney CBD and surrounding Sydney suburbs, with the following rail line services provided:

- T1 North Shore and Western Line
- T2 Inner West and Leppington Line
- T3 Bankstown Line
- T4 Eastern Suburbs & Illawarra Line
- T8 Airport and South Line
- T9 Northern Line
- Central Coast & Newcastle Line
- South Coast Line

These rail line services typically operate every 5-15 minutes during peak periods to provide good connectivity to surrounding Sydney suburbs, especially for commuters travelling to/from the Sydney CBD via Wynyard railway station.

In addition to the above, over 60 bus routes currently operate within the vicinity of the site, including a number of high frequency bus routes. The existing bus network map is shown in Figure 3.7.

Figure 3.7: Existing Bus Network Map



Source: Sydney Buses, viewed online 15/12/2022

3.7 Light Rail Services

The CBD and South East Light rail corridor is a 12km route featuring 19 stops, extending from Circular Quay along George Street to Central Station, through Surry Hills to Moore Park, then to Kensington and Kingsford via Anzac Parade and Randwick via Alison Road and High Street.

Regular services run every 4-8 minutes between Circular Quay and Moore Park, and every 8-12 minutes between Moore Park and Kingsford during 7am-7pm on weekdays.

The CBD and South East Light Rail route and stop locations is shown in Figure 3.8.

Figure 3.8: CBD and South East Light Rail Route



Source: TfNSW, viewed online 15/12/2022

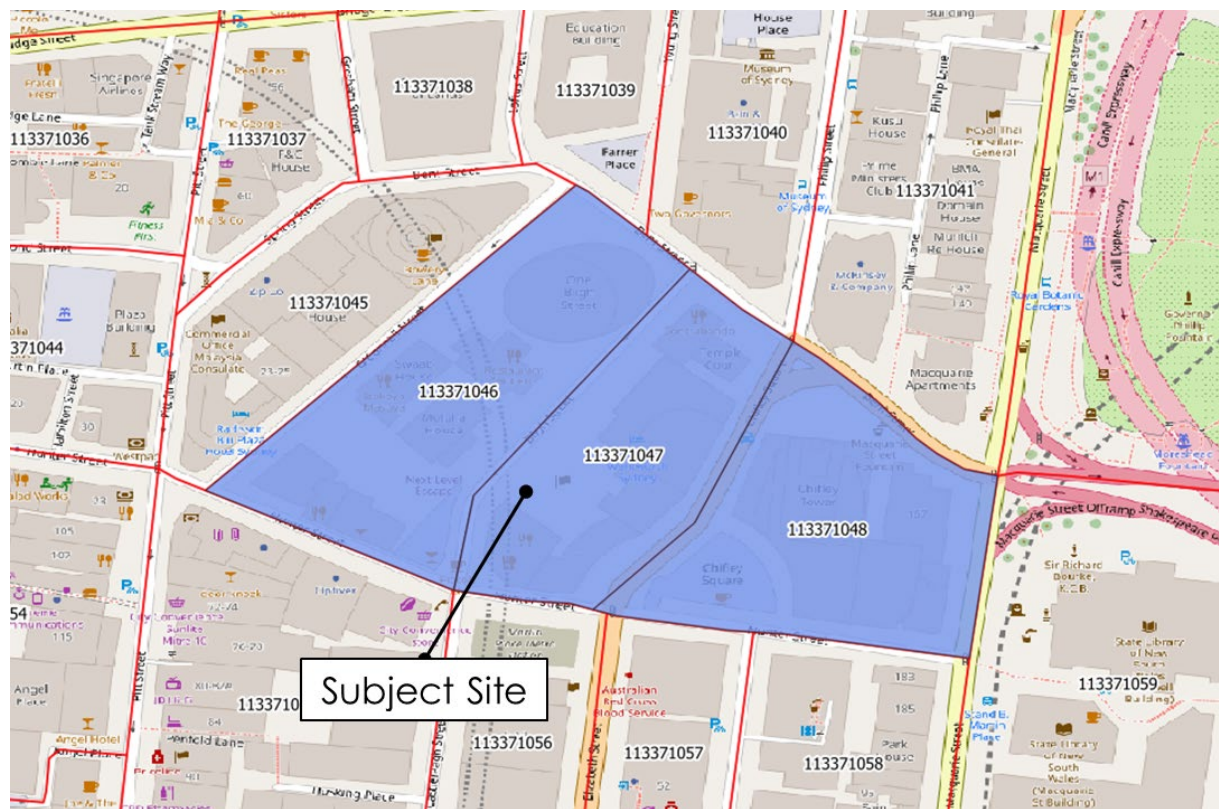
The Wynyard Light Rail stop is located on George Street, approximately 400m west of the site (or a five-minute walk). Following occupation of the site, hotel staff, commercial tenants and/or visitors to the site will benefit from the delivery of the CBD and South East Light Rail as it will provide better connectivity to surrounding suburbs, particularly Randwick and Kingsford areas.

3.8 Method of Travel to Work

Recent 2016 Census data has been obtained to understand existing journey to work trips to the existing site. Data was obtained from ABS Statistical Geography Maps and Census

Tablebuilder for employees travelling to the destination zones (DZN) 113371046, 113371047 and 113371048. The selected destination zones are shown in Figure 3.9.

Figure 3.9: Selected Destination Zones



Source: QGIS

A summary of the existing modal splits to the site and immediate surroundings is shown in Table 3.1. As a benchmark, the modal splits in the Greater Sydney Region have also been presented in Table 3.1.

Table 3.1: Method of Travel to Work Modal Splits (2016 Census)

Main Method of Travel	Proportion (%)	
	Site	Greater Sydney Region Benchmark
Train	48%	20%
Bus	24%	7%
Tram or Ferry	5%	0%
Car Driver	11%	61%
Car Passenger	2%	5%
Motorbike / Scooter	1%	1%
Bicycle	2%	1%
Taxi	1%	0%
Walk	6%	5%
Total	100%	100%

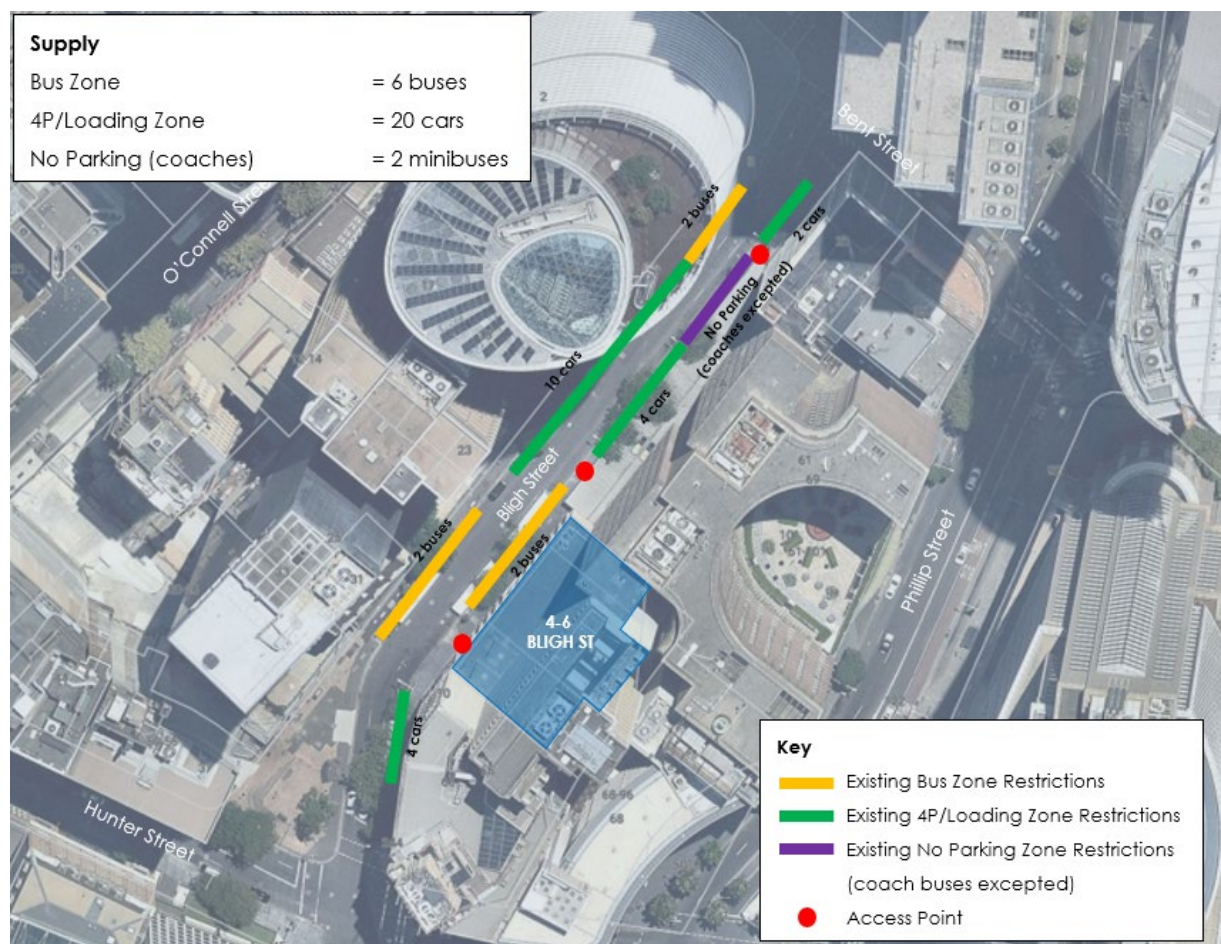
Table 3.1 indicates that 48% of employees and/or visitors to the destination zone travel via train, 24% by bus and 13% travelling by car (car driver and car passengers). Comparably with the Greater Sydney region, a total of 66% of working residents travel to work by car.

On this basis, the site and surrounding destination zones are considered to be well serviced by public transport facilities such that car trips are relatively low, particularly when compared to the wider Greater Sydney region. This is however not unusual as the site is centrally located within the Sydney CBD and benefits from high frequency public transport services.

3.9 Car Parking Provision

TTPP had undertaken a 7-day parking survey on Bligh Street between 5:00am and 12:00am (midnight) between 4 May and 11 May 2019. Based on this, the existing parking restrictions and associated supply is summarised in Figure 3.10.

Figure 3.10: Existing Parking Restrictions and Associated Supply



It is however understood that the work zone at the time of the parking surveys has since been converted back to 4P/Loading Zone restrictions. This means that the total 4P/Loading Zone

supply on Bligh Street has increased from 18 spaces to 20 spaces. On this basis, the parking occupancy associated with the works zone has been excluded in this assessment.

A summary of the existing Bus Zone and 4P/Loading Zone parking occupancy during the survey period is provided in Figure 3.11 and Figure 3.12 respectively. The detailed car parking occupancy surveys are provided Appendix A.

Figure 3.11: Existing Bus Zone Capacity

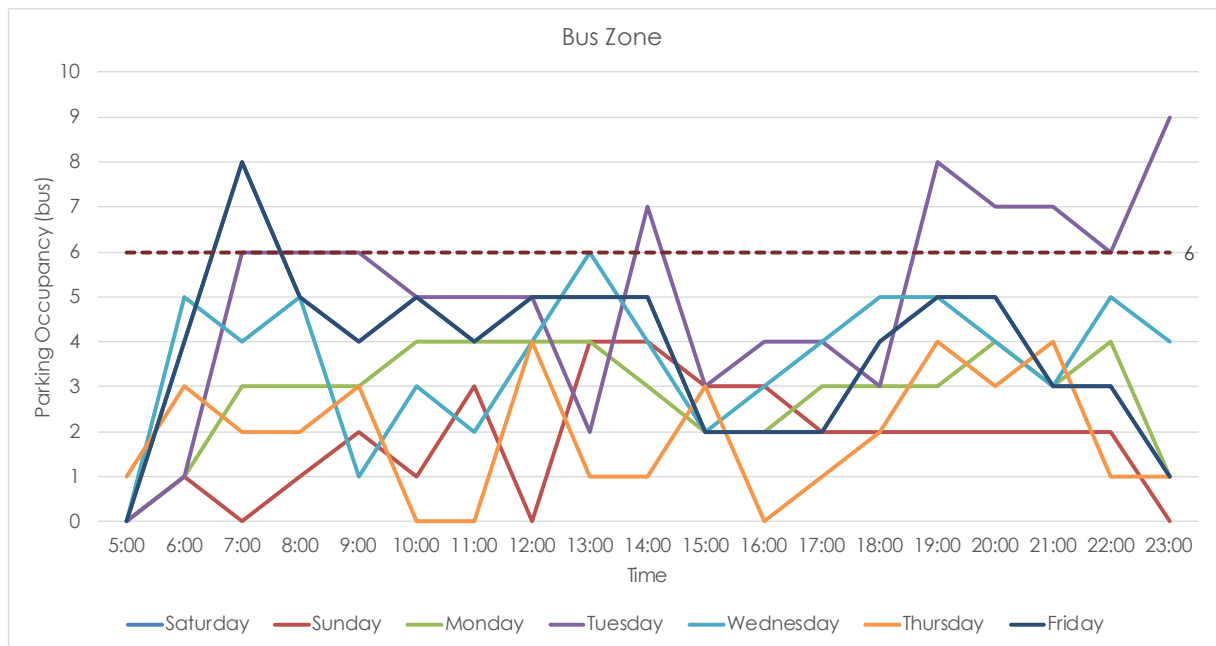
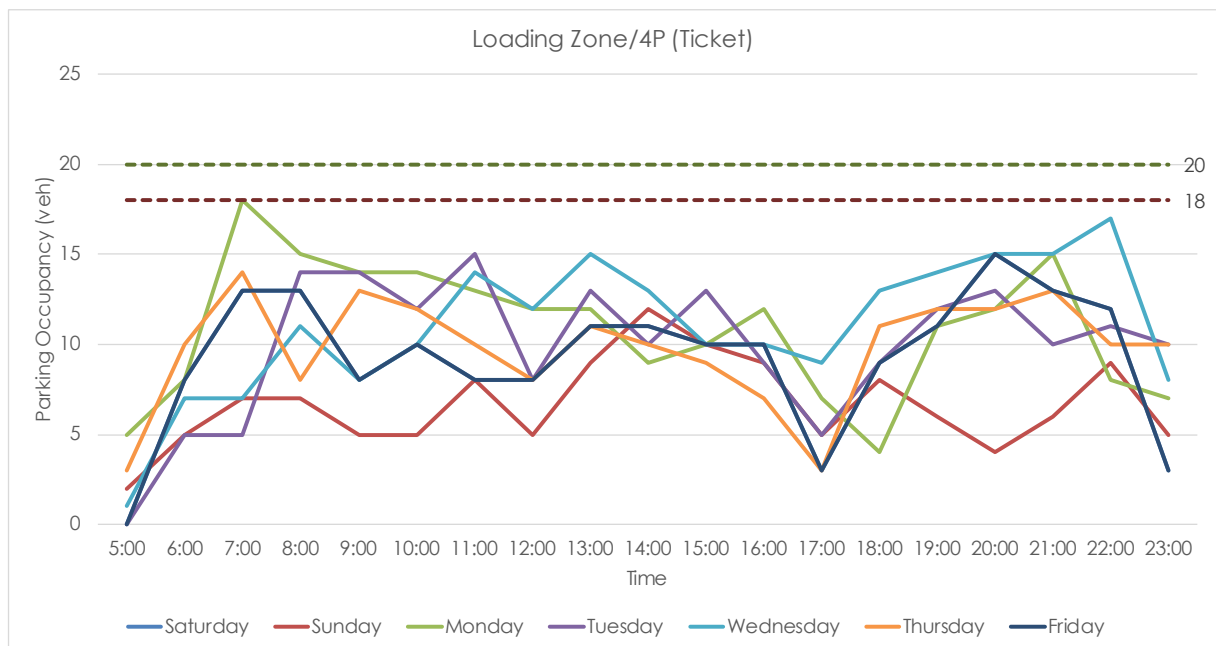


Figure 3.12: Existing 4P/Loading Zone Capacity



In summary, the existing bus zones currently operate near capacity throughout the day and can often exceed capacity throughout the week typically occurring after 7:00pm on Tuesdays. During this period, buses generally park elsewhere within existing parking areas or will queue on Bligh Street until the space becomes available (note, vehicles are able to pass a queued bus using the adjoining lane). The existing Loading Zone/4P zones generally operate within capacity with some space capacity throughout the day, particularly when considering the additional two 4P/Loading Zone spaces from the former works zone on Bligh Street.

It is however noted that TfNSW considers an 80 per cent occupancy as full capacity. On this basis, the existing loading capacity generally operates below capacity ("full capacity" recognised at 16 spaces), with the exception of two instances at 7:00am on Monday and 10:00pm on Wednesday. This however is not considered to be related to loading activities as the Loading Zone restrictions operate between 7am and 6pm Monday to Friday. The 4P restrictions operate between 6:00pm and 10:00pm Monday to Friday.

3.10 Traffic Volumes

TTPP commissioned intersection surveys on Thursday 20 October 2022 between 7:00am and 10:00am and between 4:30pm and 6:30pm at the following key surrounding intersections:

- Hunter Street-Bligh Street
- Bent Street-Hunter Street.

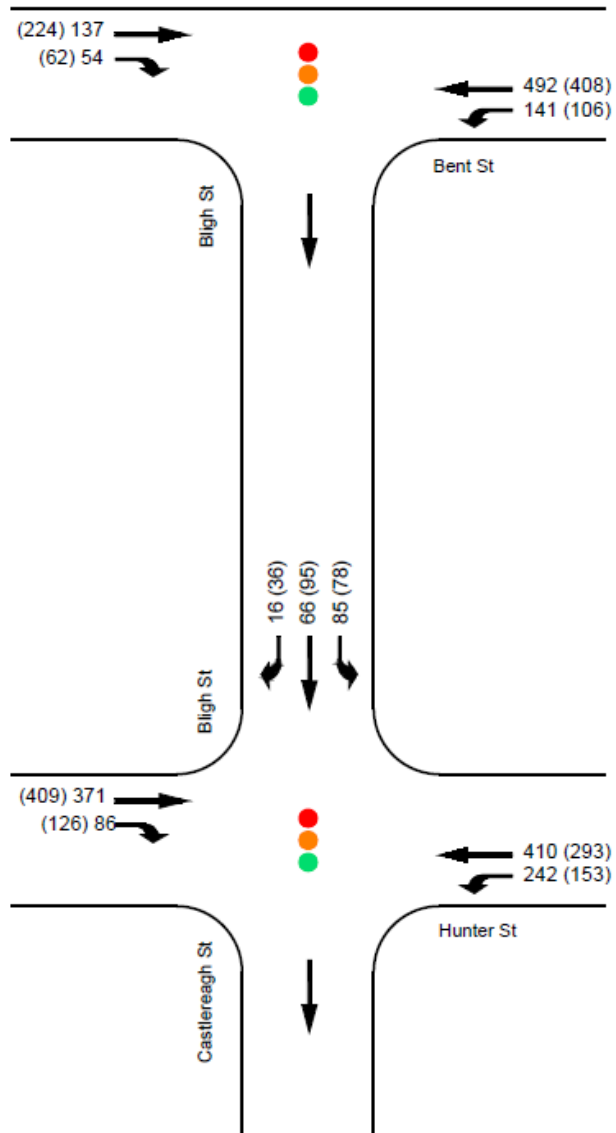
Based on these traffic surveys, the following network peak periods were identified:

- 9:00am-10:00am (morning peak period)
- 5:30pm-6:30pm (evening peak period)

A summary of the network peak traffic flows surrounding the site is shown in Figure 3.13.

Figure 3.13: Network Peak Hour Traffic Volumes

Existing Network Peak Hour Traffic Volumes
AM (PM) = 10 (10)



The existing network performance is further discussed in Section 7.3.

4 Key Strategic Planned Projects

4.1 City North Public Domain Plan

The City North Public Domain Plan (Draft, October 2022) is a plan to improve the open spaces and streets in the City North which is generally defined by the area bound by George Street to the west, Alfred Street to north, Macquarie Street to the east and King Street to the south. The key traffic and parking related improved options under investigation around the site include:

- Shareways and street closures on Hunter Street (between Pitt Street and George Street), Spring Street and Loftus Street, partial closure of O'Connell Street
- Expanded public space to the southern edges of Chifley Square and Richard Johnson Square
- The creation of a new public space – Tank Stream Square on Hunter Street
- Expanded footpaths and new tree planting on Hunter Street, Gresham Street, Bent Street and O'Connell Street
- Conversion of Bligh Street to a one-lane, one-way street
- Conversion of O'Connell Street to a two-lane, two-way street
- Conversion of Hunter Street between Phillip Street and Pitt Street from two-way to one-way westbound
- Conversion of sections of George Street, Hunter Street, Spring Street to a pedestrianised zone

The above options are still under investigation and the plan has not yet been approved. It is likely that some of the suggestions will require extensive city-wide traffic modelling to determine the feasibility of the options, in particular where changes to the road layout and capacity is proposed.

However, it is noted that the public domain plan suggests a general move towards creating a city that supports walking and cycling as primary mode of travel. The changes will likely have a positive impact to the proposed development and will assist with achieving the objectives of the site's Green Travel Plan which aims to minimise car travel.

4.2 Sydney Metro Services

The first stage of the Sydney Metro Northwest project opened on 26 May 2016, linking Rouse Hill to Chatswood. The second stage of the project will deliver new stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Pitt Street and Waterloo with new underground platforms at Central Station. This is expected to be delivered by 2024.

In addition to this, the Sydney Metro Sydenham to Bankstown upgrade has been approved subject to conditions based on extensive consultation with local people and councils.

The Sydney Metro will deliver a train every four minutes in the peak and every ten minutes at all other times. It is anticipated to provide additional capacity, with an increase of some 60% capacity across the network, to help meet existing and future demand, particularly to key rail bottleneck locations such as Bankstown.

The Sydney Metro route is shown in Figure 4.1.

Figure 4.1: Sydney Metro Route



Source: mysydney.nsw.gov.au

More specifically, the Martin Place metro station will be located south of Hunter Street between Castlereagh and Elizabeth Streets, approximately 100m south of the site (two-minute walk). Pedestrian access to the station will be provided off Castlereagh, Hunter and Elizabeth Streets and Martin Place.

Underground pedestrian connections to Bligh Street are being investigated in consultation with City of Sydney and local businesses.

The Sydney Metro will improve access to the site, particularly from north-western and western suburbs, including Rouse Hill and Bankstown suburbs.

In recognition of the above, TfNSW intends to deliver additional public transport capacity on the Sydney network to address existing deficiencies, as well as future growth and development in the CBD area.

5 Proposed Development

5.1 Proposal Description

The proposed development involves the construction of a mixed-use development, primarily comprising commercial, hotel (including a gymnasium for exclusive use by patrons of the hotel) and ground floor retail/F&B and function room uses at 4-6 Bligh Street, Sydney.

As indicated previously, the proposed development comprises the following uses:

- Commercial 6,166m² GFA
- Hotel 421 rooms
- Retail / Hotel F&B 758m² GFA
- Function room 1,132m² GFA

A basement porte-cochere and loading area is proposed to be provided to serve drop off/pick up activities associated with the hotel use and servicing requirements of the proposed development.

Limited on-site car parking is proposed to serve the proposed development. The on-site car park is to include 28 car spaces and would be managed by a valet operation, with guests expected to drop off and pick up their car from the porte-cochere, as further discussed in Section 5.4.

The ground floor and basement layout plans are provided in Appendix B.

5.2 Vehicle Access

Vehicle access to the basement porte cochere and loading area will be provided directly off Bligh Street, similar to existing vehicle access arrangements. However, as part of the proposed development, it is proposed to provide two separate entry and exit driveways on the north and south ends of the site.

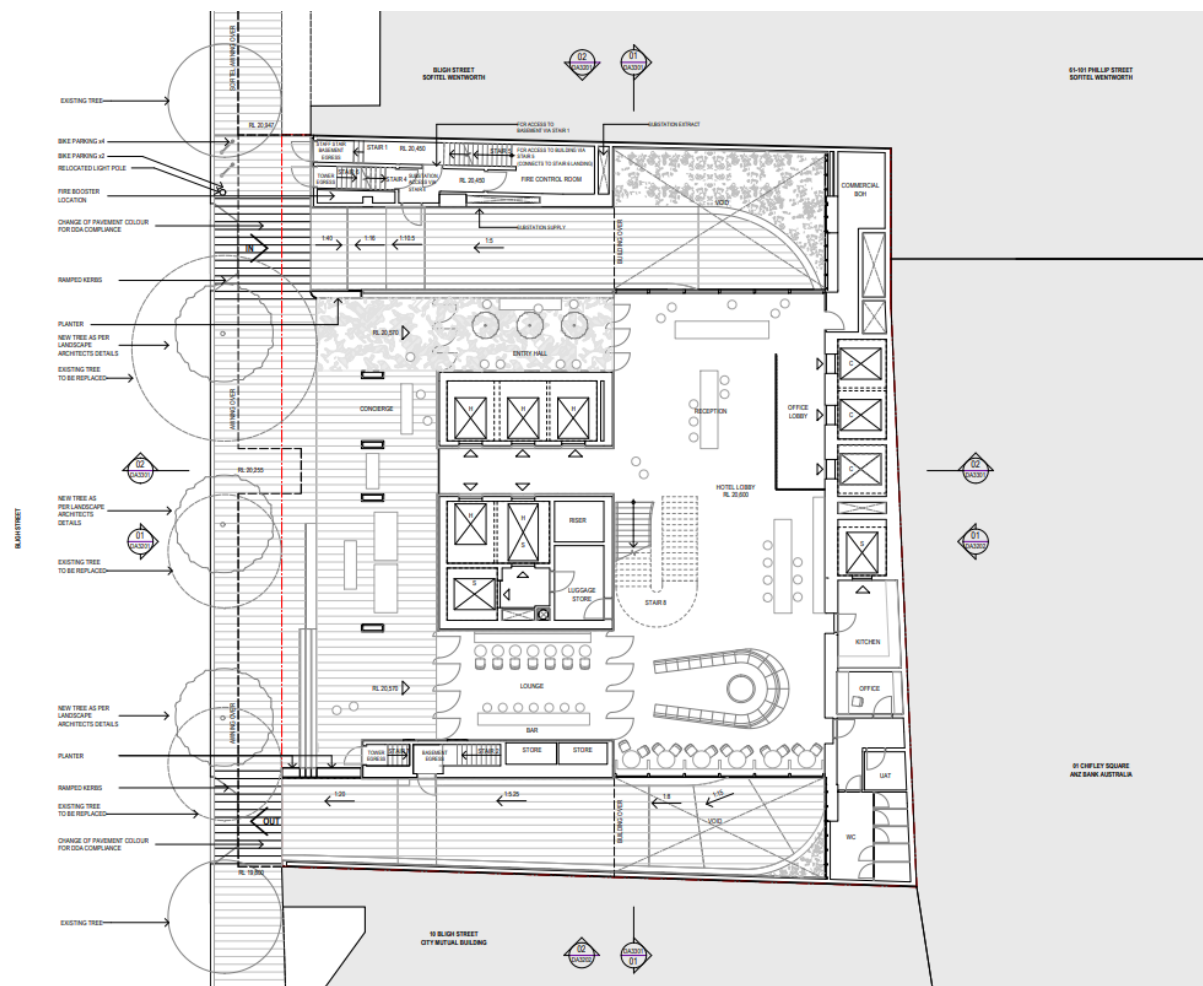
Based on the existing topography of the road, a minimum height clearance of 2.5m is provided at the entry ramp and a minimum height clearance of 3.5m is provided at the exit ramp to the basement. On this basis, access to the site is proposed to be limited to cars, commercial vans and site-specific service vehicles only.

This is considered acceptable for the site as the vast majority of servicing vehicles would generally be carried out by commercial vans. A loading dock management plan (LDMP) is to be prepared prior to occupation, which will stipulate guidelines for servicing of the site. A copy of the LDMP is to be provided to all tenants as well as the hotel operator.

Notwithstanding this, in the event that larger service vehicles would be required for specific deliveries, a standard 6.4m SRV could enter and exit the site from the exit ramp, which provides a minimum clearance of 3.5m. Such arrangements would need to be managed at all times by the hotel operator with appropriate management measures in place (e.g. traffic light system) to mitigate any vehicular conflicts. The proposed loading arrangements are further discussed in Section 6.4.

The proposed access arrangements are shown in Figure 5.1.

Figure 5.1: Proposed Driveway Access Arrangements



Source: Woods Bagot Architecture

5.3 Proposed Changes to On-Street Parking

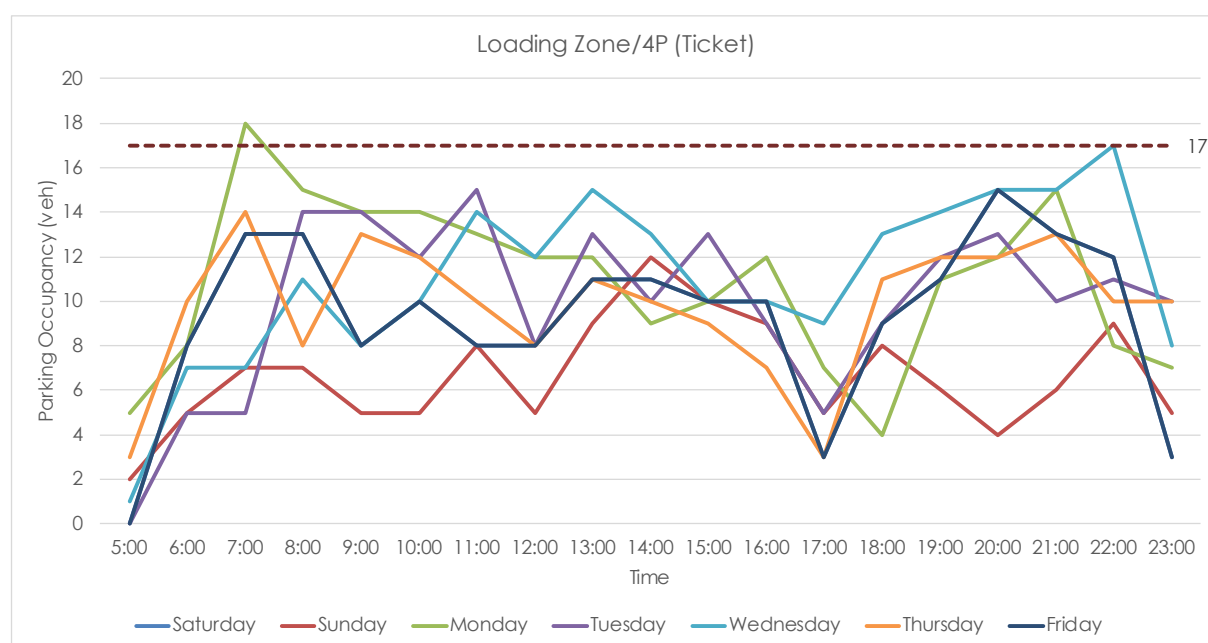
The proposed access arrangements (i.e. separate ingress and egress accesses) will require parking changes along Bligh Street. As discussed in Section 2.3, consultation has been undertaken with authorities to determine the most appropriate arrangements.

Swept path analysis has been undertaken to demonstrate appropriate draw-in and draw-out lengths of the proposed bus layover locations. This is shown in Appendix C.

Based on the parking analysis outlined in Section 3.9, the removal of the three spaces is unlikely to result in any adverse implications. There may however be a couple of times per week before the Loading Zone time restrictions where the car parking demand would exceed the supply (e.g. 7:00am on Monday), as shown in Figure 5.3. This however is not related to loading activities as loading activities only operate between 7:00am and 6:00pm Monday to Friday.

Therefore, the proposed vehicle access arrangement is considered satisfactory.

Figure 5.3: Future Estimated 4P/Loading Zone Capacity



It is however noted that TfNSW recognise that a parking occupancy of 80 per cent generally represents “full capacity”. On this basis, “full loading capacity” would occur at 14 spaces, rather than the supply of 17 spaces. In recognition of this, loading operations would therefore generally operate at and above capacity in the mornings between 7:00am and 1:00pm based on TfNSW comments.

Notwithstanding the above, it is noted that the proposed development includes the provision of dedicated on-site loading areas. Consequently, all loading and unloading activities associated with the site (which are currently undertaken on-street) would be displaced to occur on-site, which would assist alleviate the pressure on the existing on-street loading zones.

5.4 On-Site Parking Arrangements

The car parking is to be located within basement levels 2 and 3, with 14 spaces per level. The car parking levels are to be accessed via two car lifts, located within the loading dock.

The two car lifts are to be used as a combined car lift and loading bay with the car lift safety parapets (i.e. guards on either side of the lift) to be removable such that they would be removed when the bays are used as loading bays. The car lift system is to be sensor controlled such that the lift cannot operate unless the safety parapets are in place.

The car lift model (CSI Car Lift, model SJD) is to have a load capacity of 3,000kg, and an inner platform size of 5.84m long by 2.76m wide.

Access to the car lift and associated Basement 2 and Basement 3 car park will not be available to guests of the development. Access to the car parking is to be managed under valet operation, with the following procedure:

1. During drop-off, guests would drive in and stop at the porte cochere (valet drop-off point) as shown in Figure 5.4.
2. The valet driver would take the car from this point to the basement via the car lift as shown in Figure 5.5.
3. During pick-up time, the valet driver would bring the car up to the porte cochere (valet pick-up point) shown in Figure 5.6. This location is different to the drop-off point.
4. The guests would drive their vehicle out of the site in a forward direction as shown in Figure 5.7.

Guests who seek to park their vehicle on-site are to be instructed to book ahead, in order to manage car parking demand and arrival/departure times.

Figure 5.4: Entry to Valet Drop-Off Point

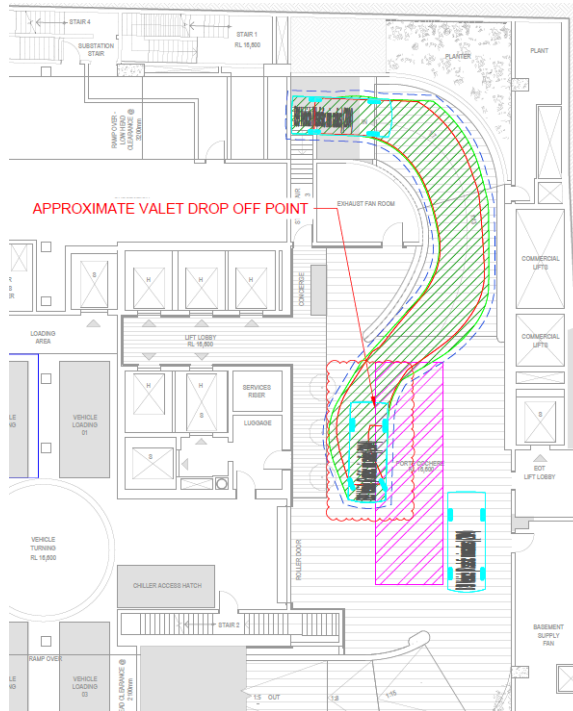


Figure 5.5: Valet transport to Car Lift/ Parking

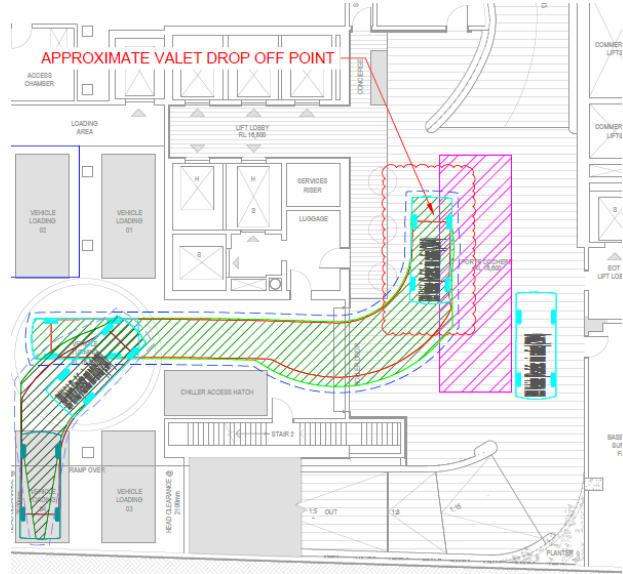


Figure 5.6: Car lift to Valet Pick-Up Point

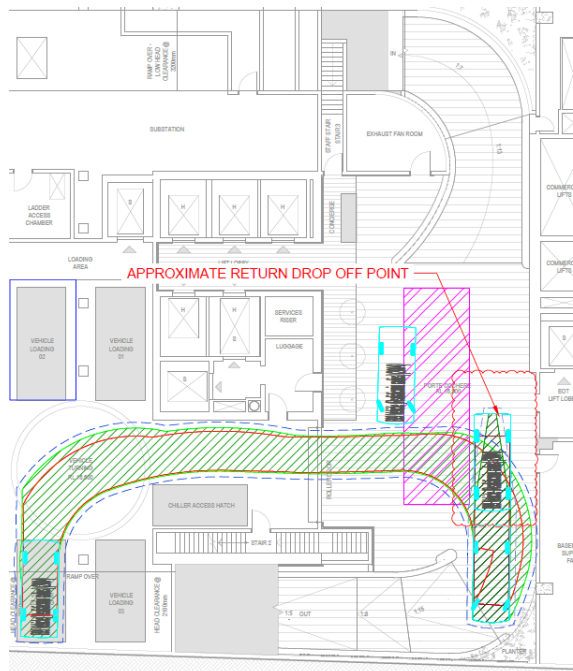
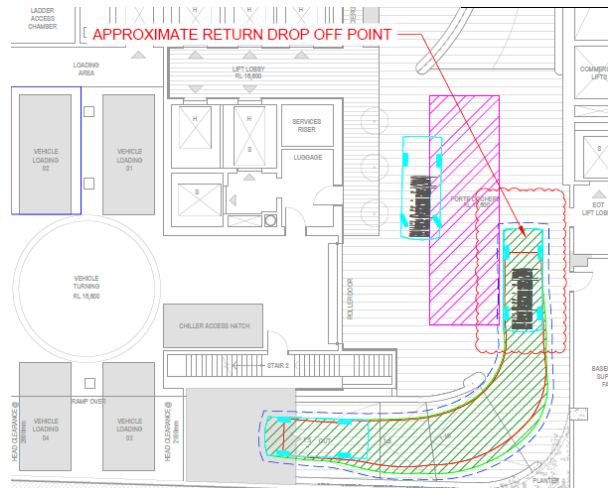


Figure 5.7: Valet Pick-up Point to Exit



Beyond the two car spaces at the porte-cochere, the site has a queuing capacity of five vehicles along the entry ramp. As such, the site can accommodate seven at one time on site, on entry. On exit, there is capacity for five vehicles to queue from the site boundary and

along the exit ramp. This analysis suggests that the site has capacity to hold 12 vehicles on-site while queuing for entry or exit.

Based on Table 7.2, the site is expected to generate around 46 vehicle trips per hour i.e. one vehicle every 1-2 minutes (in and out). It is not expected that this level of traffic would generate substantial queues. Majority of traffic would be taxis dropping off or picking up passengers. Valet operation may take up to two minutes to pick up the car park and drop off to the car lift via the turntable, however, the number of cars being dropped off at the valet parking would be minimal as the parking provision on-site is low and is to be managed by the hotel (i.e. guests would be encouraged to pre-book).

Based on the above, the site has excess capacity to accommodate vehicle queues.

6 Parking Assessment

6.1 Car Parking Requirement

The car parking requirements for the proposed development has been assessed against the following guidelines:

- Sydney Local Environmental Plan 2012 (SLEP 2012)
- Sydney Development Control Plan 2012 (SDCP 2012)

Based on this, the car parking requirement for the proposed development is summarised in Table 6.1.

Table 6.1: Car Parking Requirements

Land Use		Size	Maximum Car Parking Rate	Maximum Car Parking Requirement
Office, Business or Retail Premise	Commercial	6,166m ² GFA	$M = (G \times A) \div (50 \times T)$	7 spaces
	Retail / Hotel F&B	758m ² GFA		
	Function	1,132m ² GFA		
Hotel		421 rooms	(a) 1 space for every 4 bedrooms up to 100 bedrooms, and (b) 1 space for every 5 bedrooms more than 100 bedrooms.	89 car spaces
Total Maximum Car Parking Requirement				96 car spaces

* where M = maximum car parking
 G = GFA of proposed office and business / retail premises (8,056m² GFA)
 A = Site Area (1,218m²)
 T = Total GFA of all buildings on the site (26,796m² GFA)

Table 6.1 indicates a maximum of 96 car parking spaces could be provided to serve the proposed development, comprising a maximum of 7 retail/office spaces and 89 hotel parking spaces. It is proposed to provide 28 on-site car parking to serve the proposed development.

The LEP 2012 on-site parking rates are set as maximum parking rates. No minimum parking rates are required. Therefore, the provision of 28 on-site car parking is compliant with the LEP 2012.

Furthermore, the provision of limited on-site car parking is generally consistent with other mixed-use development sites in the Sydney CBD located near high frequency public transport services. The nature of the CBD location of the development would be such that employees and staff associated with the proposed development would be expected to use public transport to access the site. Similarly, hotel patrons would be expected to use taxis and/or public transport for trips to/from the hotel.

Therefore, the proposed provision of 28 on-site car parking is considered satisfactory for the proposed development.

6.1.1 Nearby Commercial Car Parking

Notwithstanding the above, it should be noted that some limited demand for car parking may be generated by guests of the proposed hotel development. For those guests who do wish to use a private motor vehicle, there is ample opportunities to park within one of the numerous public car parks within close proximity to the site, including directly adjacent to the site at the Sofitel Wentworth Wilson car park.

Within 200m walking distance of the site, there are seven privately operated car parks. Their proximity to site and operating hours are summarised in Table 6.2.

Table 6.2: Nearby Commercial Car Parks

Location	Operator	Proximity to Site	Standard Operating Hours
61-101 Phillip Street	Wilson Parking	< 50m	6:00am-12:00am Monday to Saturday 7:00am-12:00am Sunday and Public Holidays
6-10 O'Connell Street	Wilson Parking	80m	7:00am-12:00am Monday to Sunday and Public Holidays
1 Bligh Street	Wilson Parking	90m	6:00am-7:00am Monday to Friday 11:00am-2:00pm Saturday and Sunday
2 Chifley Square	Wilson Parking	100m	7:00am-9:30pm Monday to Friday 9:00am-8:30pm Saturday, Sunday and Public Holidays
3 Bent Street	Wilson Parking	140m	6:00am-10:00pm Monday to Friday 9:00am-10:00pm Saturday, Sunday and Public Holidays
100 Phillip Street	Secure Parking	150m	7:00am-7:00pm Monday to Friday
109 Pitt Street	Secure Parking	180m	6:30am-12:00am Monday to Sunday

In addition to public car parking stations, the proposed hotel development site is also well located to car share facilities should guests wish to access a vehicle while on stay in the CBD.

Figure 6.1 shows the location of the GoGet vehicle pods surrounding the site.

Figure 6.1: Location of Car Share Pods near Site



Source: GoGet Australia, viewed online 15/12/2022

6.2 Motorcycle Parking Requirement

In accordance with the City of Sydney's DCP 2012, motorcycle parking spaces are to be provided at a rate of 1 motorcycle parking space for every 12 car parking spaces. The development is providing valet parking only. It is anticipated that multiple motorcycles would be able to be parked in these car spaces under valet management. On this basis, separate motorcycle bays are not proposed.

6.3 Bicycle Parking Requirement

The bicycle parking rates stipulated in the DCP are minimum bicycle parking requirements. The bicycle parking requirements for the proposed development is summarised in Table 6.3.

Table 6.3: On-site bicycle parking requirement

Land Use	Category	Size	Parking Rate	Minimum Requirement
Hotel	Staff	90 staff	1 space per 4 staff	23
	Visitors	421 rooms	1 space per 20 rooms	21
Commercial	Staff	6,166m² GFA	1 per 150m² GFA	41
	Visitors		1 per 400m² GFA	15
Restaurant/ Bar	Staff	682m² GFA	1 space per 250m² GFA	3
	Visitors		2 spaces plus 1 space per 100m² over 100m² GFA	9
Total				112

Table 6.3 indicates that the proposed development would require at least 112 bicycle parking spaces in accordance with Council DCP requirements.

The DCP requires bicycle parking to be designed as Class 2 bike facilities for staff and class 3 bike rails for visitors. It is proposed to provide 112 bicycle parking spaces for staff and visitor use. This includes 106 bicycle parking provided within a secure area within the building with appropriate end of trip facilities to serve the anticipated use of the proposed development and six spaces on Bligh Street.

All proposed bicycle parking spaces are proposed to be designed in accordance with AS2890.3:2015 to ensure suitable bicycle parking provisions can be accommodated within the site.

In addition to this, appropriate end of trip facilities (e.g. showers and lockers) will be provided to support cycling to/from the site. End of trip facilities are to be provided in accordance with the DCP which requires:

- 1 personal locker for each bike space
- 1 shower and change cubicle for up to 10 bike parking spaces;
- 2 shower and change cubicles for 11 to 20 or more bike parking spaces are provided;
- 2 additional showers and cubicles for each additional 20 bike parking spaces or part thereof;

Based on a requirement of 67 staff spaces, the development is required 67 lockers and 12 shower/ change cubicles. The development will comply with this requirement.

6.4 Service Vehicle Requirements

The service vehicle loading bay requirements for the proposed development are set out in the City of Sydney's DCP 2012. The service vehicle loading bay requirements for the proposed development is summarised in Table 6.4.

Table 6.4: Service Vehicle Loading Bay Requirements

Land Use	Size	Minimum Service Vehicle Parking Rate	Minimum Service Vehicle Parking Requirement
Commercial	6,166m ² GFA	1 space per 3,300m ² GFA, or part thereof, for the first 50,000 m ²	2 loading spaces
Function	1,132m ² GFA		
Retail / Hotel F&B	758m ² GFA	(i) 1 space per 50 hotel bedrooms, or part thereof, up to 100 bedrooms; then (ii) 1 space per 100 hotel bedrooms; plus (iii) 1 space per 400sqm of reception, lounge, bar and restaurant area GFA, or part thereof, for the first 2,000sqm; then (iv) 1 space per 8000sqm of reception, lounge, bar and restaurant area GFA thereafter	2 loading spaces
Hotel	421 rooms		5 loading spaces
Total			11 loading spaces

Table 6.4 indicates that the proposed development would require at least 11 loading spaces to serve all the proposed uses of the site independently.

However, the DCP rates do not take into consideration that the various land uses would be able to share the loading spaces and would not generate enough loading activity to warrant their own loading facilities. Notably, the commercial land use key service vehicle generator is waste collection, otherwise servicing requirements are infrequent.

As such, it is proposed to provide four loading spaces on-site including two capable of accommodating up to a SRV and two able to accommodate up to a commercial van (B99 equivalent). A turntable will be provided within the basement to enable vehicles to enter and exit the loading bays.

It should be noted that all loading and unloading activities will primarily be undertaken on-site, rather than on-street, which is considered a beneficial outcome as current loading activities associated with the existing site are currently carried out on-street. Whilst the proposed provision of four loading spaces is less than the specified loading requirements as set out in Council's DCP, the proposed loading provision is considered adequate to serve the proposed development and will be managed under a loading dock management plan.

The loading dock management plan would be implemented to ensure that all deliveries to the site are appropriately managed throughout the day. The loading dock management plan will also include measures that specify that deliveries to the site are to be undertaken only during an allocated time slot and booked in advance with the loading dock manager. In addition, deliveries are to be undertaken outside of periods when the car lifts are in

operation. Guests who seek to park their vehicle on-site are to be instructed to book ahead, in order to manage car parking demand and arrival/departure times. All tenants will be made aware and agree to the measures and conditions noted in the loading dock management plan in relation to the use of the loading dock.

It is expected that any approval would require a condition of consent to provide a loading dock management plan for Council approval.

Generally, the vast majority of servicing vehicles would be carried out by commercial vans. Waste collection is proposed by a private waste contractor and limited to site specific small rigid vehicles due to site constraints.

Based on advice provided by the waste consultant, Waste Wise Environmental would be able to service the proposed development with their waste wise mini rear loader, which is 6.4m in length and 1.7 in width, with height of 2.08m. These waste vehicles are capable of entering and exiting ramp gradients of a maximum of 1:4.5.

A standard SRV would also be able to service the site for a small amount of larger deliveries. However, as indicated in Section 5.2, based on site constraints, these small rigid vehicles would need to enter and exit via the southern ramp. Height restrictions are to be included in the Loading Dock Management Plan (to be prepared prior to occupation), advising tenants of vehicle size and height restrictions.

Where the use of a larger vehicle (i.e. up to a 6.4m long SRV) is required and access from the southern ramp is required, the tenant/proponent must book in advance with the Loading Dock Manager to ensure appropriate allocation and management measures are in place.

In addition to this, it is noted that the maximum ramp grade along the southern ramp exceeds the maximum ramp grade of 1:6.5 for an SRV. However, AS2890.2:2018 notes that the maximum 1:6.5 gradient can be adjusted if vehicles are unlikely to stop on steeper gradients. Based on the anticipated servicing requirements, all trucks would be loaded upon arrival and only unload deliveries within the loading dock and therefore, at no time will be required to stop on the steeper grades.

TTPP has reviewed the proposed ramp to/from the site and confirm that the ramp grades have been generally designed to cater for the above expected service vehicles and associated loading arrangements.

Swept path analysis has also been undertaken for a B99 / commercial vehicle, site-specific waste vehicle (as specified above) and standard SRV, which demonstrate satisfactory access to/from the basement, subject to some minor modifications (e.g. kerb adjustments). The ramp grade and swept path assessment are provided in Appendix D.

6.5 Pick Up and Set Down Areas

The DCP specifies pick up and set down parking requirements for hotel uses. It indicates that for hotel developments containing more than 100 rooms, the parking requirements are as follows:

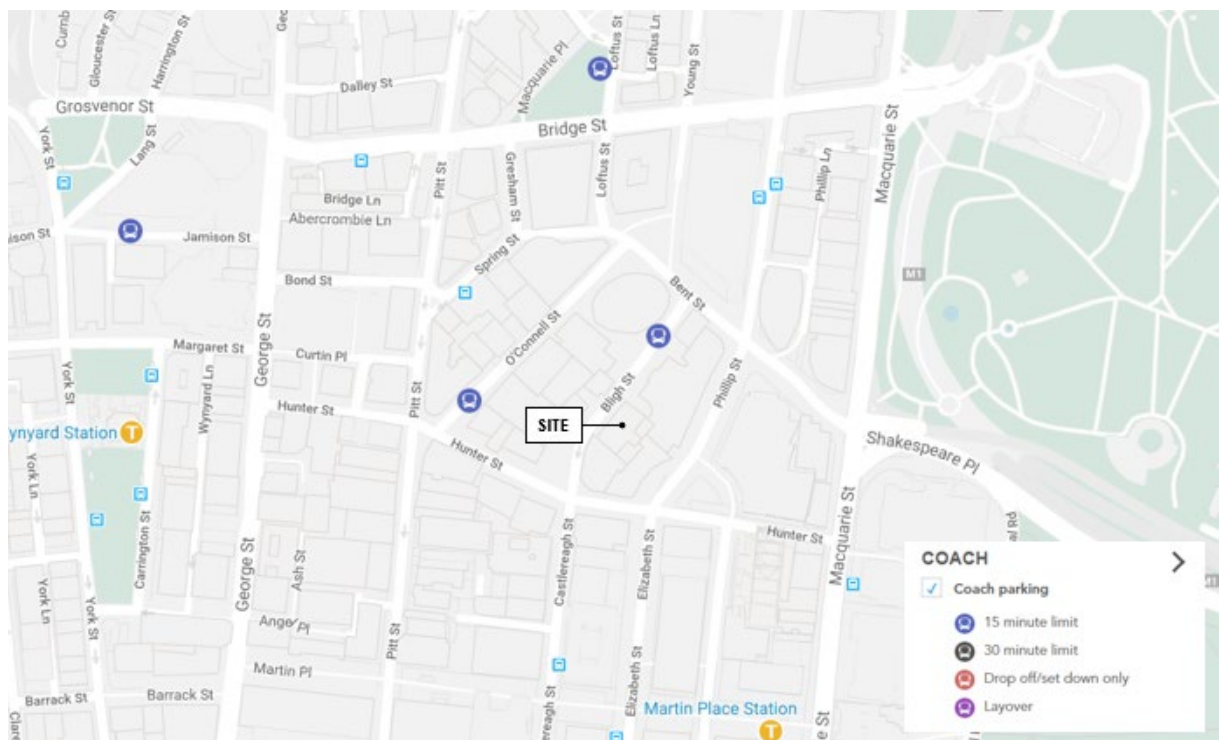
- 2 car spaces
- 1 bus/ coach space per 100 rooms.

Provision for tourist coach parking for hotels is to consider available off-site coach parking.

It is proposed to provide a porte cochere drop off/pick up area within the basement to accommodate two car parking spaces. The porte-cochere would be used by taxis as well as guests dropping off and picking up their car from the valet, as discussed in Section 5.4.

Due to site constraints, access by a bus/coach cannot be accommodated. On this basis, all bus/coach activities associated with the proposed development is proposed to be carried out on-street. In the immediate vicinity of the site, two coach parking areas are available on Bligh Street and O'Connell Street, as shown in Figure 6.2. On-site observations indicate that this drop off area on Bligh Street is generally in low demand, with some vacancies available throughout the day.

Figure 6.2: Existing Coach Parking Map



Source: mysydneycbd

The existing coach parking area on Bligh Street is designated as a No Parking (coaches excepted) zone. This zone can accommodate up to two coach/mini buses at any one time. The existing coach parking / No Parking zone is shown Figure 6.3.

Figure 6.3: Existing Bligh Street No Parking Zone



Based on site observations, the existing zone is also used by taxis and vans for drop-off/pick-up activities. A summary of the parking occupancy in the 2019 surveys within the existing No Parking (coaches excepted) zone is provided in Figure 6.4.

Figure 6.4: Existing No Parking Zones – Parking Occupancy Summary

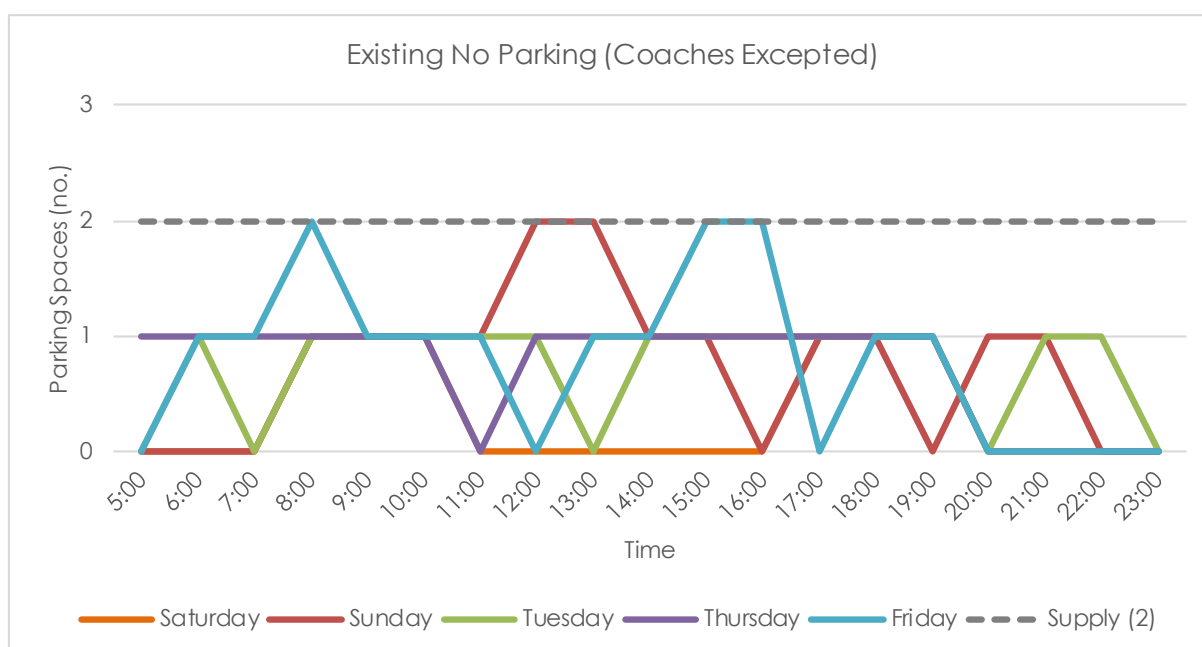


Figure 6.4 indicates that the existing No Parking zone generally operates near or at capacity, with at least one bus occupied within the zone during the weekday and on Sundays. On Saturdays, this zone is not used frequently, particularly during the midday between 11am and

3pm. Notwithstanding this, there may be some spare capacity within the No Parking Zone throughout the day.

Some photographs of the existing No Parking Zone are also shown below.

Figure 6.5: Bligh Street – No Parking Zone



Figure 6.6: Bligh Street – No Parking Zone



Figure 6.7: Bligh Street – No Parking Zone



Figure 6.8: Bligh Street – No Parking Zone



Figure 6.9: Bligh Street – No Parking Zone



Figure 6.10: Bligh Street – No Parking Zone



In summary, whilst the existing No Parking (coaches excepted) generally operates near and at capacity during weekday and Sundays, there are some instances when there is spare capacity, particularly on Saturday during the midday period.

On this basis, group bookings which rely on bus arrivals should not be encouraged by the hotel. However, if such bookings are required, hotel staff must be aware that there are limited opportunities for coach parking in the immediate vicinity of the site. The hotel operator should therefore ensure that all hotel staff carefully manage bus arrivals and departures and ideally coordinate bus parking activities/requirements with nearby hotels (e.g. Sofitel Wentworth) and ensure that bus parking durations are kept at a minimum by providing additional staff to help move luggage to the hotel as required. This should form part of the Plan of Management for the site.

7 Traffic Assessment

The proposed development will provide limited on-site car parking spaces.

The lack of on-site car parking will attract guests to the hotel who generally arrive and depart using public transport (bus, train, ferry) and taxi services. As such the proposed hotel development will not generate a significant volume of traffic to and from the site.

Furthermore, given the transient nature of the proposed hotel use, traffic movements typically vary throughout the day, generally with site peak traffic generated before 10am and after 2pm (typical check-out and check-in times of such developments).

The collection of refuse at late evening / early morning and the ability to time the delivery of goods and materials to the hotel will improve the existing conditions associated with deliveries to and from the existing site uses.

In summary, the operation of the proposed development will not have a discernible adverse impact on the surrounding road network. Furthermore, TTPP has prepared a green travel plan to accompany the SSDA (Ref: 22340-R01V01-221216-GTP). As part of this, the overall mode share targets for the proposed development is summarised in Table 7.1.

Table 7.1: Journey to Work Modal Splits (2016 Census)

Main Method of Travel	Proportion (%)	
	Site (based on 2016 Census)	Targets (by 2029)
Train	48%	54%
Bus	24%	23%
Tram or Ferry	5%	5%
Car Driver	11%	2%
Car Passenger	2%	3%
Motorbike / Scooter	1%	1%
Bicycle	2%	5%
Taxi	1%	1%
Walk	6%	6%
Total	100%	100%

However, an aspirational target of 0 per cent for the car driver mode should be targeted based on the site's proximity to existing and future high frequency public transport facilities. This should be considered for future GTP updates, once the 3% target has been reached.

It is expected that the additional future public transport upgrades in the area (i.e. Sydney Metro) will provide additional capacity to/from the Wynyard area. On this basis, it is expected that adequate public transport facilities would be available to cater for the additional public transport trips associated with the proposed development.

Further to this, it is proposed to activate the site frontage with good pedestrian links and high-quality pavement to tie in with the existing streetscape. It will be proposed to replace the existing asphalt pedestrian path with granite pavement, with continuous footpath treatments at the driveways to provide pedestrians with priority.

A concept design of the site frontage is shown in Figure 7.1

Figure 7.1: Proposed Site Frontage Concept Design



Source: Woods Bagot Architecture

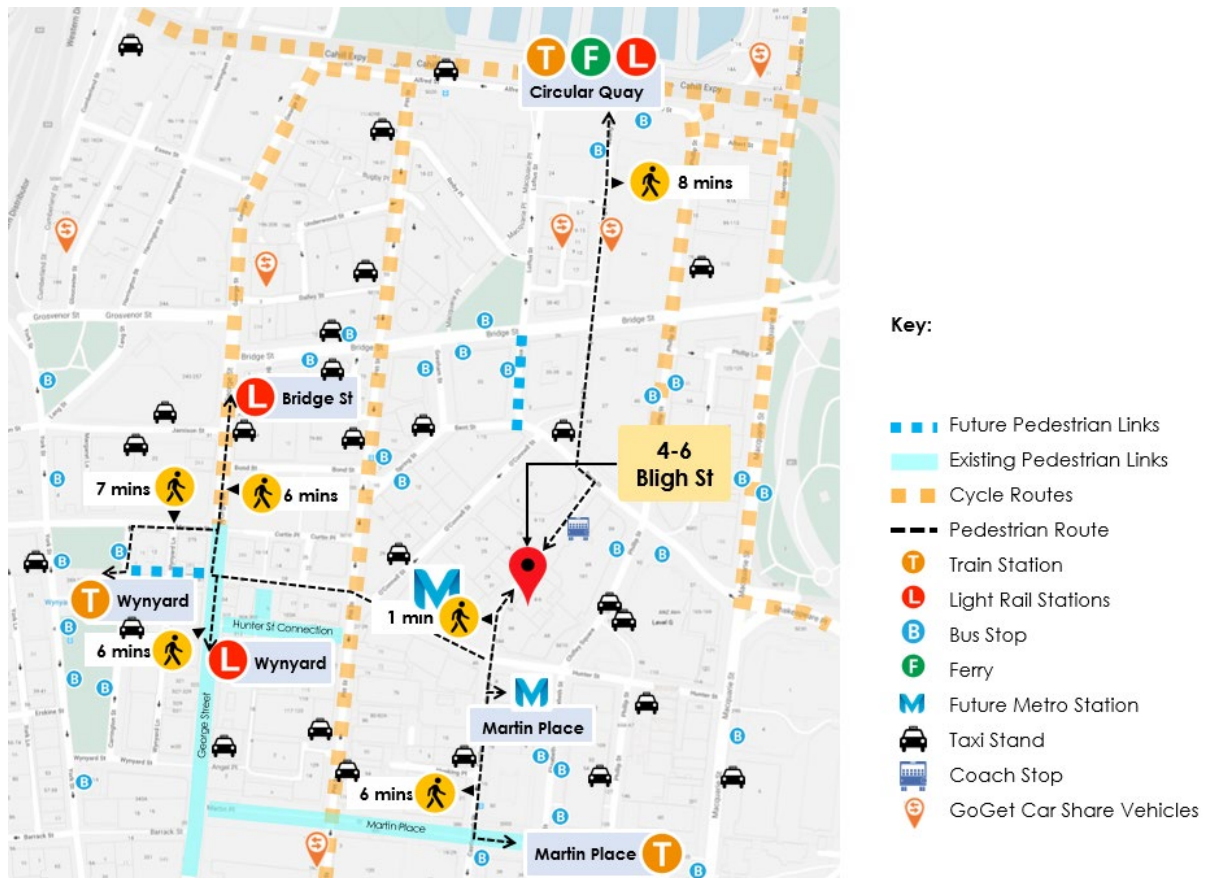
As such, the additional trips associated with the proposed development is expected to be satisfactorily accommodated on the surrounding network.

7.1 Pedestrian Route Assessment

As outlined in Section 4, public transport network upgrade are proposed in the future, including Sydney Metro services. The site is already located within good proximity to existing public transport services,

The existing and future pedestrian routes to surrounding public transport facilities are shown in Figure 7.2.

Figure 7.2: Existing and Future Pedestrian Routes



There are currently existing pedestrian paths provided to/from existing and future public transport facilities. Based on site observations, the condition of existing pedestrian facilities is considered satisfactory. In addition to this, it is understood that a new underground pedestrian connection between the Sydney Metro and Bligh Street are currently being investigated. This would provide a direct link to the Sydney Metro to/from the site.

On the above basis, the pedestrian routes between public transport nodes and the proposed development site are considered acceptable.

7.2 Proposed Development Traffic Generation

For the purpose of the traffic assessment, TPP has conducted traffic generation surveys at a comparable development at the Lumiere/Fraser Suites development at 101 Kent Street, Sydney, to determine the number of vehicles (e.g. taxis) dropping off and/or picking up passengers along the frontage of the site. It is however noted that a large portion of the taxi traffic generation is expected to be from existing taxi's already in the area.

The Lumiere/Fraser Suites development is understood to include the following uses:

- 447 residential apartments
- 140 hotel rooms/serviced apartments

- 3,048m² of commercial floor area
- 5,331m² of retail floor area.

The traffic survey was conducted on Wednesday 24 May 2017 for a 24-hour period at the existing drop off zone along the frontage of the site, with the number of pick up and/or drop offs recorded every 15-minute interval.

The results of the survey are summarised in Figure 7.3,

Figure 7.3: Traffic Generation of Pick Up/Drop Offs

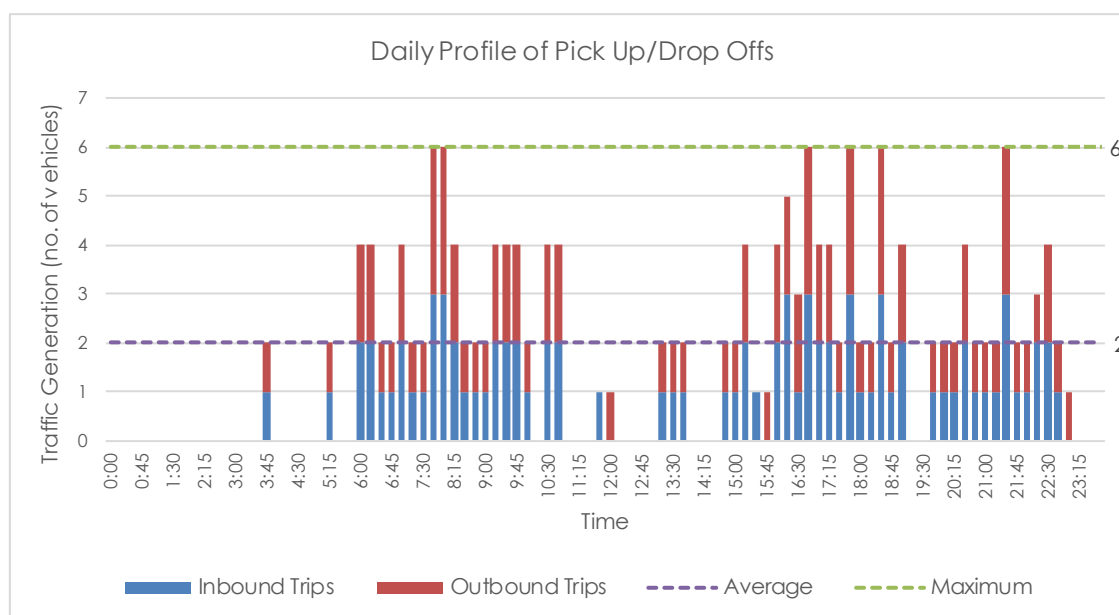


Figure 7.3 indicates that the existing Lumiere/Frasers Suites development generates a moderate level of pick up and drop off traffic, generally in the order of 2-6 two-way vehicles movements in any given 15-minute period. This equates to some 8-24 vehicles per hour.

Assuming that all pick up and drop offs are generally associated with the existing hotel / serviced apartment use, this would equate to an average trip generation rate of 0.11 vehicle trips per hotel room/serviced apartment.

Using this metric, the proposed development could be expected to generate some 46 pick up and drop off vehicle trips per hour. In this regard, the total traffic generation associated with the proposed development is summarised in Table 7.2.

Table 7.2: Proposed Development Traffic Generation Estimates

Description	Size (No. of Rooms)	Trip Rate	Trip Generation Estimate (Two-Way)
Hotel Pick up and Drop offs	421 hotel rooms	0.11 trips per hotel room	46 vehicle trips

Table 7.2 indicates that the proposed development could generate up to 46 two-way vehicle trips in the peak hour. The proposed development traffic has been distributed on the surrounding road network as shown in Figure 7.4.

A summary of the projected network peak hour traffic flows (i.e. existing traffic flows plus development traffic) is presented Figure 7.5.

Figure 7.4: Proposed Development Traffic Only

Additional Development Traffic Only
AM (PM) = 10 (10)

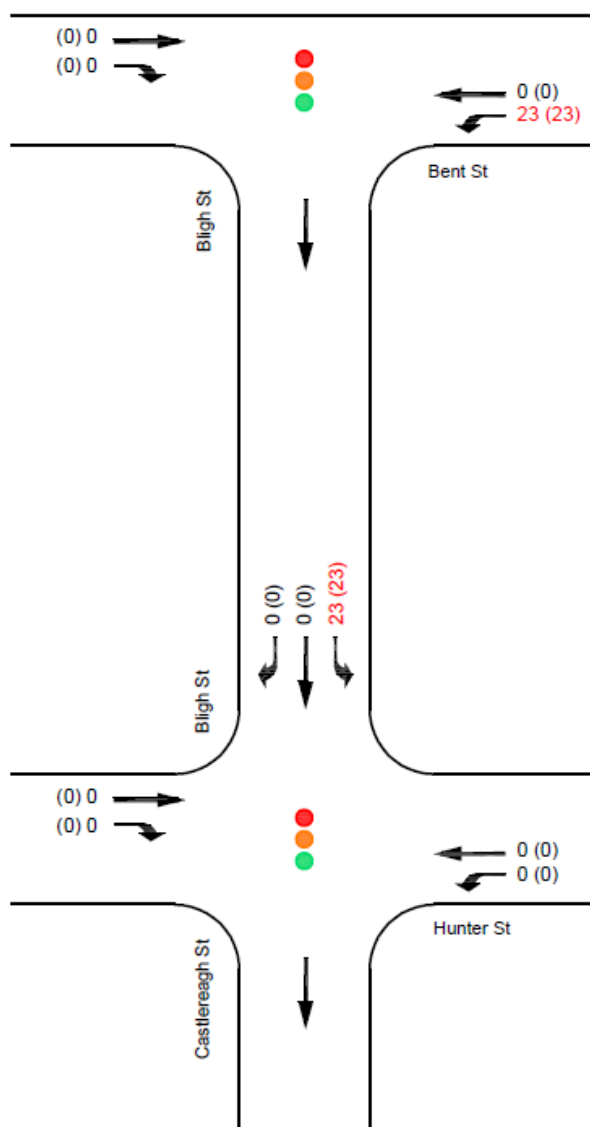
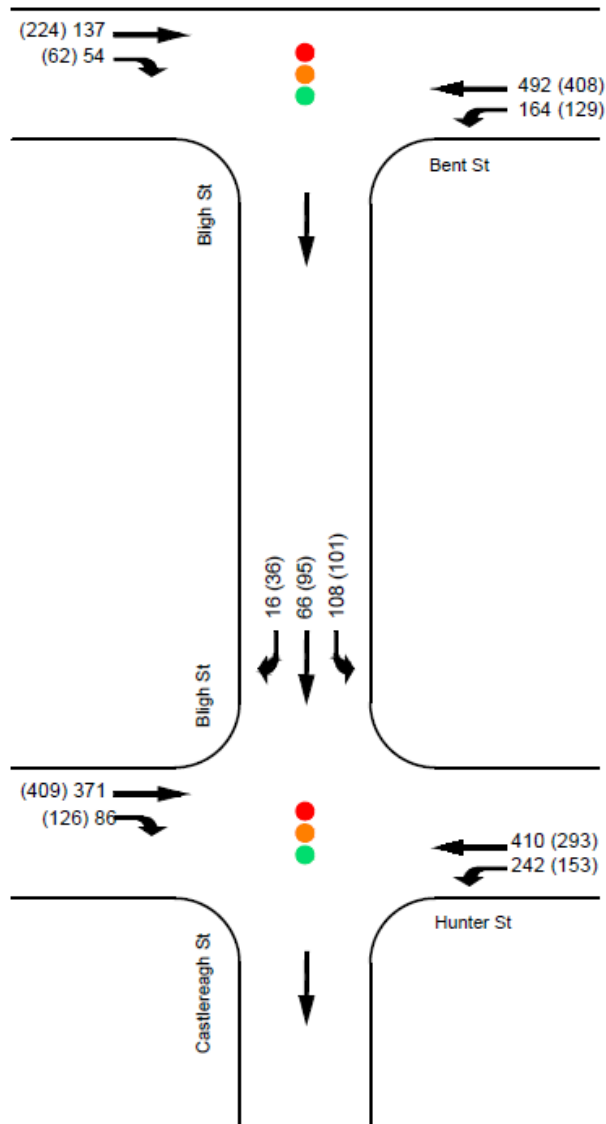


Figure 7.5: Proposed Development Network Peak Hour Traffic Volumes

Future Network Peak Hour Traffic Volumes
AM (PM) = 10 (10)



7.3 Intersection Capacity Analysis

7.3.1 Overview

Network capacity analysis has been conducted using SIDRA Intersection modelling software on key surrounding intersections to assess the traffic implications arising from the proposal. The following scenarios have been assessed:

- Scenario 1 (S1) – existing base case analysis using surveyed traffic flows in Figure 3.13
- Scenario 2 (S2) – S1 above plus the additional development traffic associated with the proposal as shown in Figure 7.5, noting that the existing traffic generation of the site has not been deducted as part of this analysis.

As indicated previously, as Bligh Street generally functions as a one-way local road, predominately servicing bus layover and loading activities associated with the adjacent properties, it is unlikely that any substantial background traffic growth will be experienced in the future along Bligh Street. On this basis, no future background traffic growth figures have been adopted in the traffic modelling.

7.3.2 Level of Service Criteria

The intersection capacity analysis has been undertaken using SIDRA Intersection 7 modelling software to ascertain the intersection performance of the key intersections surrounding the site.

TfNSW uses the performance measure level of service to define how efficient an intersection is operating under given prevailing traffic conditions. Level of service is directly related to the delays experienced by traffic travelling the intersection. Level of service ranges from LoS A to LoS F. LoS A indicates the intersection is operating with spare capacity, while LoS F indicates the intersection is operating above capacity. LoS D is the long term desirable level of service.

Table 7.3 shows the criteria that SIDRA Intersection adopts in assessing the level of service.

Table 7.3: TfNSW Level of Service Criteria

LoS	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Near capacity	Near capacity, accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode.
F	Greater than 70	Unsatisfactory, requires additional capacity	Unsatisfactory, requires other control mode or major treatment

7.3.3 S1 Existing Base Case (i.e. no development)

The modelling results of the existing base case are presented in Table 7.4, with full results enclosed in Appendix E.

Table 7.4: S1 Existing Base Case Analysis Results (i.e. no development)

Intersection	Peak Period	Degree of Saturation (DoS)	Average Delay (sec)	Level of Service (LoS)	95 th Percentile Queue Length (m)
Bligh Street-Hunter Street	Morning Peak	0.91	16	B	59
	Evening Peak	0.93	27	B	73
Bligh Street-Bent Street	Morning Peak	0.71	3	A	20
	Evening Peak	0.39	7	A	44

Table 7.4 indicates that the existing intersections currently operate well with acceptable delays at LoS B or better during both morning and evening peak periods.

7.3.4 S2 Proposed Development Case (i.e. with development)

The modelling results for the proposed development case are presented in Table 7.5, with full results enclosed in Appendix E. It is noted that the existing traffic volumes associated with the existing site has not been deducted as part of this traffic assessment and thus, the results are considered to represent a more conservative outcome on the surrounding key intersections.

Table 7.5: S2 Proposed Development Case Analysis Results (i.e. with development)

Intersection	Peak Period	Degree of Saturation (DoS)	Average Delay (sec)	Level of Service (LoS)	95 th Percentile Queue Length (m)
Bligh Street-Hunter Street	Morning Peak	0.98	18	B	63
	Evening Peak	0.98	31	C	80
Bligh Street-Bent Street	Morning Peak	0.72	4	A	24
	Evening Peak	0.39	7	A	44

Table 7.5 indicates that most key surrounding intersections will continue to operate at LoS B or better. However, the intersection between Bligh Street and Hunter Street in the PM peak will operate at LoS C in the future, which is still considered acceptable.

As indicated previously, it is unlikely that there would be any substantial background traffic growth along Bligh Street as this street predominately services bus layover and loading activities associated with the adjacent properties. On this basis, despite the construction and operation of the existing, approved and under construction projects as outlined in Section 4.1, it is expected that there would be adequate capacity on Bligh Street in the future scenario and no upgrades would be required at the assessed intersections (i.e. Bligh Street-Hunter Street and Bligh Street-Bent Street intersections).

Notwithstanding the above, in order to reduce the traffic impact associated with the proposed development, a green travel plan would be implemented to assist manage travel patterns to/from the site, while also minimising car trips (particularly single-occupancy car trips). This green travel plan will generally target staff and visitors to the proposed development to promote the use of more sustainable modes of transport, particularly given the site's proximity to high frequency public transport services.

The Green Travel Plan will ensure any impacts associated with the proposal are appropriately mitigated.

7.4 Cumulative Development Impact

There are a number of new towers being built or in design and planning stages in the Sydney CBD. These projects will likely increase traffic to the surrounding area. A review of the traffic studies for these projects have been reviewed and is summarised in Table 7.6.

Table 7.6: Approved Developments

Address	Development Description	Traffic Impact as noted in the TIA/ Project Documentation
2 Chifley Square, Sydney	Commercial / Retail	The site is expected to generate +70 trips per hour. It is expected that the traffic would not negatively impact the surrounding road network.
15-25 Hunter Street & 105-107 Pitt Street	Commercial, Retail	Up to 16 trips per hour is anticipated which is a negligible volume of traffic.
19-21 and 15-17 Hunter St	Hotel	The proposed hotel development will not generate a significant volume of traffic to and from the site.
1 Alfred St	Hotel, Retail and Residential	The estimated traffic is 67 trips per hour. This is a combination of residents, taxis and service vehicles. The traffic is expected to be minor, noting that the proposed transport facilities will reduce traffic generation of the site.
50-52 Phillip St, Sydney	Hotel and Residential	Under 30 trips per hour is anticipated which is a minor volume of traffic
Sydney Metro – Hunter Street Over Station Development (OSD)	Commercial	The traffic impact will be low, with the parking provision being low (50% of LEP maximum), its location above a Metro Station is expected to maximise rail trips. The road network is expected to continue with similar levels of service.
Sydney Metro – Martin Place Over Station Development (OSD)	Commercial	As no new car parking spaces are proposed, traffic generation will be related to servicing, deliveries etc and is expected to be negligible.

Table 7.6 details a combination of approved DAs, SSDAs and Planning Proposals. The traffic studies for each of these projects suggest that the development impact of each (individually) would be minor.

The low traffic impact is typically concluded from the fact that the site is within an area highly accessible by public transport, and parking provisions on these sites are low. Though it is noted that a number of the sites generate a higher floor area and traffic generation than the development. Notably, both Hunter Street and Martin Place OSDs are located above a Metro Station.

Similarly, it is expected that the traffic generation of the subject site would be reduced, given the proximity to the future Metro Stations.

It is expected that that the subject site and the above approved developments would generate a lower traffic generation than estimated using rates based on survey data, with the future CBD context supporting a greater capacity for public transport.

It is further noted that based on the site locality and Bligh Street functioning as a one-way local road, predominately servicing bus layover and loading activities associated with the adjacent properties, it is unlikely that any substantial vehicular traffic growth will be experienced in the future along Bligh Street. It is however expected that there would be an

increase in public transport usage as a result of the future growth and development in the Sydney CBD.

7.5 Green Travel Plan Mitigation Measures

A summary of the key measures outlined in the Green Travel Plan to mitigate the impacts of the proposed development are as follows:

- provision of limited car parking due to the site's proximity to excellent public transport facilities
- activate the site frontage with good pedestrian links and high quality pavement to tie in with the existing streetscape
- provision of high quality bicycle parking and end of trip facilities to support cycling to/from the site
- implementation of a green travel plan to outline green travel initiatives prior to the occupation of the site
- encourage car sharing facilities within the immediate vicinity of the site
- management measures in place to advise all patrons / visitors travelling to/from the site by taxi or uber to use existing taxi drop-off/pick-up areas within the immediate vicinity of the site.

Further details are provided in TTPP's Green Travel Plan, dated 22 December 2023.

7.6 Construction Traffic Management Measures

The potential construction traffic implications of the proposed development and the management measures to be implemented to address these implications have been addressed separately in the Construction Traffic Management Plan (CTMP) prepared by TTPP, dated 22 December 2022. The CTMP addresses the requirements of the SEARs.

The key findings of the CTMP were as follows.

- The construction of the proposed development is expected to generate up to six vehicles per hour (two-way) during the peak construction activities.
- Given the expected low volume of construction vehicles, construction vehicle movements to and from the site can be satisfactorily accommodated in the surrounding road network.
- No pedestrian or cyclist facilities will be impacted as a result of the proposed construction activities with existing pedestrian and cyclist access maintained throughout construction.

- It is proposed that loading/unloading of trucks to occur within the site and within a temporary work zone on Bligh Street, with construction vehicle access provided off Bligh Street.
- A number of driver protocols will be established as part of the site induction procedure for drivers to ensure the safety of motorists, pedestrians and cyclists.
- Truck drivers are to be instructed to use the designated truck routes to/from the site.
- Many of the known construction sites surrounding the site may be completed by the time the construction of the subject development commences, including the Sydney Metro station and over station developments which are anticipated to be completed by 2024/2031.
- The appointed contractor will be responsible to liaise with the relevant Project Site Engineer/Manager and/or check with authorised representatives from Sydney Metro project team for updates on a regular basis to mitigate any potential impacts and manage construction vehicle access to/from the site as required. In addition to this, the appointed contractor will be responsible to liaise with other contractors in the area.
- Consultation with Council / TfNSW will also be critical as Council / TfNSW will be able to inform the contractor of any proposed changes or approved adjoining construction sites that need to be considered in the management of these works.

8 Conclusion

This report examines the traffic and parking implications of the proposed development at 4-6 Bligh Street. The key findings of the report are presented below.

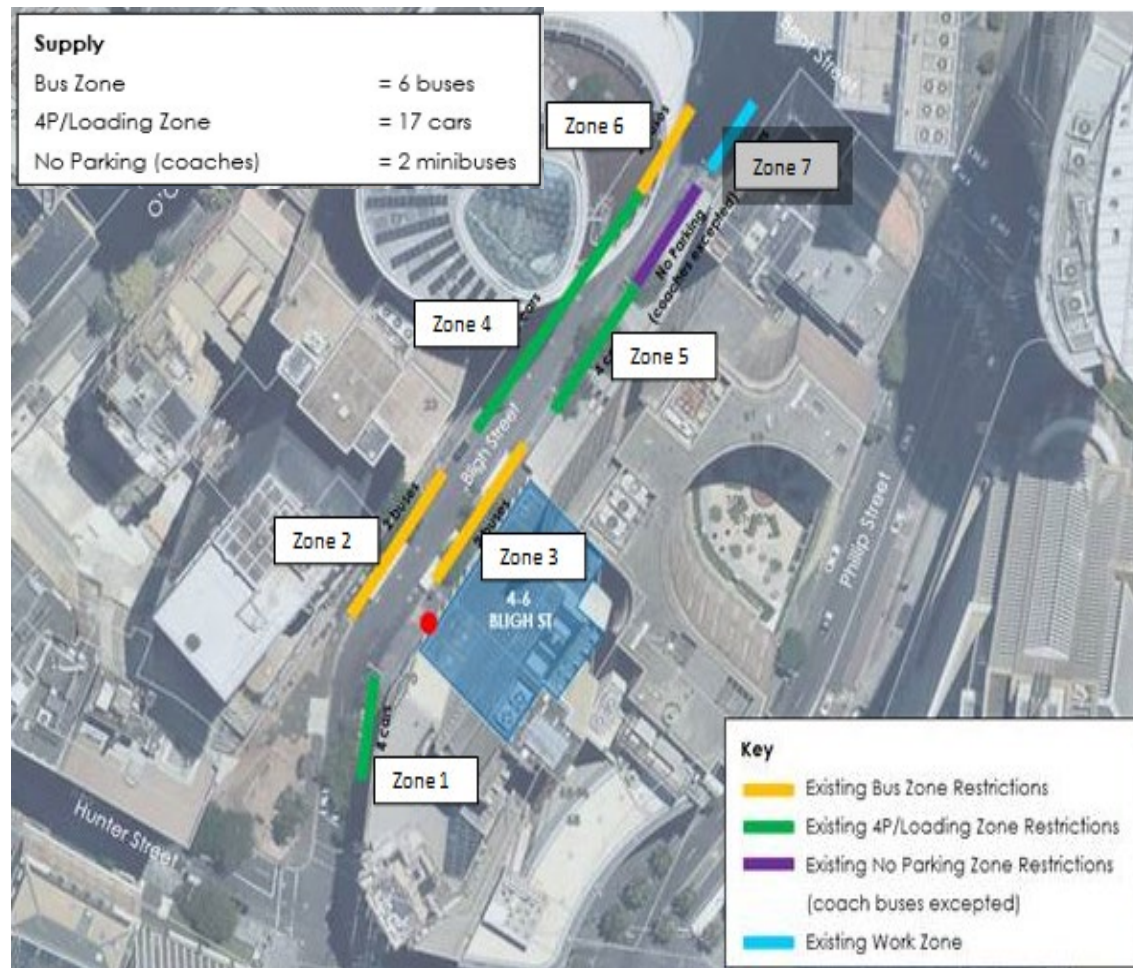
- At this stage, the proposed mixed-use development is envisaged to comprise of 6,166m² GFA of commercial, 421 hotel rooms with associated F&B space (758m²) and private gym use and 1,132m² of upper ground floor function room uses.
- It is proposed to provide 28 car spaces onsite and two drop off/pick up car spaces and four loading spaces within the basement car park.
- The proposed loading provision and drop off/pick up spaces are considered satisfactory to serve the anticipated use of the site, noting that all loading and unloading activities will be managed under a loading dock management plan to ensure appropriate and efficient operation of the loading dock.
- The proposed development is expected to generate circa 46 two-way vehicle trips from drop off/pick up activities associated with the hotel use during the busiest hour.
- Traffic modelling indicates that the surrounding key intersections will \ operate well with acceptable delays at LoS C or better in the future.
- A green travel plan would be implemented as part of the proposed development to facilitate a modal shift towards more sustainable modes of transport (e.g. public transport and/or car share) as opposed to single-occupancy car trips.
- The implementation of the GTP is expected to reduce the traffic impact associated with the proposed development.

Overall, it is concluded that the traffic and parking aspects of the proposed development would be satisfactory. The proposed development is not likely expected to generate any adverse traffic impact on the surrounding road network, nor any safety or operational issues.

Appendix A

Car Parking Occupancy Surveys

Client TTPP
Date Sat, 4th May 2019 to Sat, 11th May 2019 (5:00-24:00)
Description Occupancy Parking Survey



[Location]

Bligh St (Between Bent St and Hunter St)

[Survey Date]

Day 1. Sat, 4th May 2019 (5:00-24:00)
Day 2. Sun, 5th May 2019 (5:00-24:00)
Day 3. Mon, 6th May 2019 (5:00-24:00)
Day 4. Tue, 7th May 2019 (5:00-24:00)
Day 5. Wed, 8th May 2019 (5:00-24:00)
Day 6. Thu, 9th May 2019 (5:00-24:00)
Day 7. Fri, 10th May 2019 (5:00-24:00)
Day 8. Sat, 11th May 2019 (5:00-24:00)

Client TTPP
Location Princes St (Side Streets)
Date Day 1. Sat, 4th May 2019 (5:00-24:00)
Description Occupancy Parking Survey



Street	Zone	Restriction	Time Restriction	Supply	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Bligh St (Between Bent St and Hunter St)	1	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	1	0	2	2	1	1	2	2	1	3	4	2	2	2	3	4	4	4	2
	2	Bus zone		2	0	2	2	1	2	1	1	1	0	2	1	2	1	2	1	1	2	2	2
	3	Bus Zone	15 min Limit	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	4P (Ticket)	6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	10	3	5	6	11	12	10	11	7	10	9	12	9	9	7	12	15	16	16	15
	5	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	1	1	3	2	1	0	0	2	2	0	0	0	2	1	2	4	5	5	3
	6	Bus zone		2	0	1	2	2	2	2	2	0	1	1	1	0	0	0	1	1	0	1	0
	7	Work Zone	7am - 6pm (Mon - Fri) 7am - 10am (Sat)																				
	8	No Parking (Coaches Accepted)		2	0	0	0	1	1	1	0	0	0	0	0	0	1	1	1	0	0	0	0
Total				26	5	9	15	19	19	15	16	12	14	15	18	13	15	13	20	25	27	28	22
% Capacity				100%	19%	35%	58%	73%	73%	58%	62%	46%	54%	58%	69%	50%	58%	50%	77%	96%	104%	108%	85%

Client TTPP
Location Princes St (Side Streets)
Date Day 2. Sun, 5th May 2019 (5:00-24:00)
Description Occupancy Parking Survey



Street	Zone	Restriction	Time Restriction	Supply	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Bligh St (Between Bent St and Hunter St)	1	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	1	2	1	0	0	1	0	0	3	2	2	3	3	3	2	2	3	1
	2	Bus zone		2	0	0	0	0	0	0	1	0	3	3	2	3	1	2	2	1	1	1	0
	3	Bus Zone	15 min Limit	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	4	4P (Ticket)	6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	10	2	4	5	6	5	5	6	4	9	8	6	5	1	4	3	2	4	6	4
	5	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	0	0	0	0	0	1	1	0	1	2	2	1	1	0	0	0	0	0
	6	Bus zone		2	0	1	0	1	2	1	2	0	0	1	1	0	1	0	0	1	1	1	0
	7	Work Zone	7am - 6pm (Mon - Fri) 7am - 10am (Sat)																				
	8	No Parking (Coaches Accepted)		2	0	0	0	1	1	1	1	2	2	1	1	0	1	1	0	1	1	0	0
Total				26	2	6	7	9	8	7	12	7	15	17	14	12	8	11	8	7	9	11	5
% Capacity				100%	8%	23%	27%	35%	31%	27%	46%	27%	58%	65%	54%	46%	31%	42%	31%	27%	35%	42%	19%

Client TTPP
Location Princes St (Side Streets)
Date Day 3. Mon, 6th May 2019 (5:00-24:00)
Description Occupancy Parking Survey



Street	Zone	Restriction	Time Restriction	Supply	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Bligh St (Between Bent St and Hunter St)	1	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	1	2	3	2	3	3	3	2	3	3	2	0	1	1	2	3	3	3	3
	2	Bus zone		2	0	0	3	3	3	3	4	3	3	2	2	2	3	2	2	3	3	2	0
	3	Bus Zone	15 min Limit	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	4P (Ticket)	6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	10	4	5	13	11	9	9	7	7	6	5	8	10	6	3	9	6	8	3	3
	5	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	1	2	2	2	2	3	3	3	1	0	2	0	0	0	3	4	2	1
	6	Bus zone		2	0	1	0	0	0	1	0	1	1	1	0	0	0	1	1	1	0	2	1
	7	Work Zone	7am - 6pm (Mon - Fri) 7am - 10am (Sat)																				
	8	No Parking (Coaches Accepted)		2	0	1	1	1	1	1	2	2	0	1	2	2	1	2	1	0	0	0	0
Total			26	26	5	10	22	19	18	19	19	18	16	13	14	16	11	9	15	16	18	12	8
% Capacity				100%	19%	38%	85%	73%	69%	73%	73%	69%	62%	50%	54%	62%	42%	35%	58%	62%	69%	46%	31%

Client TTPP
Location Princes St (Side Streets)
Date Day 4. Tue, 7th May 2019 (5:00-24:00)
Description Occupancy Parking Survey



Street	Zone	Restriction	Time Restriction	Supply	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Bligh St (Between Bent St and Hunter St)	1	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	2	3	2	3	3	4	3	2	1	2	2	2	1	4	3	2	2	3
	2	Bus zone		2	0	1	2	3	2	2	2	2	0	2	0	2	1	1	3	3	4	3	2
	3	Bus Zone	15 min Limit	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	4P (Ticket)	6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	10	0	3	2	9	8	6	7	5	9	7	8	4	2	7	8	9	6	6	5
	5	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	0	0	3	3	3	4	0	2	2	3	3	1	1	0	1	2	3	2
	6	Bus zone		2	0	0	4	3	3	3	3	3	2	5	3	2	3	2	5	4	3	3	7
	7	Work Zone	7am - 6pm (Mon - Fri) 7am - 10am (Sat)																				
	8	No Parking (Coaches Accepted)		2	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0
Total			26	26	0	7	11	21	21	18	21	14	15	18	17	14	10	13	21	20	18	18	19
% Capacity				100%	0%	27%	42%	81%	81%	69%	81%	54%	58%	69%	65%	54%	38%	50%	81%	77%	69%	69%	73%

Client TTPP
Location Princes St (Side Streets)
Date Day 4. Tue, 7th May 2019 (5:00-24:00)
Description Occupancy Parking Survey



Street	Zone	Restriction	Time Restriction	Supply	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Bligh St (Between Bent St and Hunter St)	1	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	2	3	2	3	3	4	3	2	1	2	2	2	1	4	3	2	2	3
	2	Bus zone		2	0	1	2	3	2	2	2	2	0	2	0	2	1	1	3	3	4	3	2
	3	Bus Zone	15 min Limit	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4	4P (Ticket)	6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	10	0	3	2	9	8	6	7	5	9	7	8	4	2	7	8	9	6	6	5
	5	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	0	0	3	3	3	4	0	2	2	3	3	1	1	0	1	2	3	2
	6	Bus zone		2	0	0	4	3	3	3	3	3	2	5	3	2	3	2	5	4	3	3	7
	7	Work Zone	7am - 6pm (Mon - Fri) 7am - 10am (Sat)																				
	8	No Parking (Coaches Accepted)		2	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	0
Total			26	26	0	7	11	21	21	18	21	14	15	18	17	14	10	13	21	20	18	18	19
% Capacity				100%	0%	27%	42%	81%	81%	69%	81%	54%	58%	69%	65%	54%	38%	50%	81%	77%	69%	69%	73%

Client TTPP
Location Princes St (Side Streets)
Date Day 6. Thu, 9th May 2019 (5:00-24:00)
Description Occupancy Parking Survey



Street	Zone	Restriction	Time Restriction	Supply	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Bligh St (Between Bent St and Hunter St)	1	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	1	2	3	1	3	3	3	2	2	3	2	1	0	1	2	3	3	3	2
	2	Bus zone		2	1	1	1	2	3	0	0	3	0	0	1	0	1	0	3	2	3	0	0
	3	Bus Zone	15 min Limit	2	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0
	4	4P (Ticket)	6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	10	2	6	8	6	8	7	6	5	6	5	5	4	2	7	6	6	7	4	4
	5	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	2	3	1	2	2	1	1	3	2	2	2	1	3	4	3	3	3	4
	6	Bus zone		2	0	1	1	0	0	0	0	1	1	1	2	0	0	0	0	1	1	1	1
	7	Work Zone	7am - 6pm (Mon - Fri) 7am - 10am (Sat)																				
	8	No Parking (Coaches Accepted)		2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0	0	0
Total				26	5	14	17	11	17	13	10	13	13	12	13	8	5	14	17	15	17	11	11
% Capacity				100%	19%	54%	65%	42%	65%	50%	38%	50%	50%	46%	50%	31%	19%	54%	65%	58%	65%	42%	42%

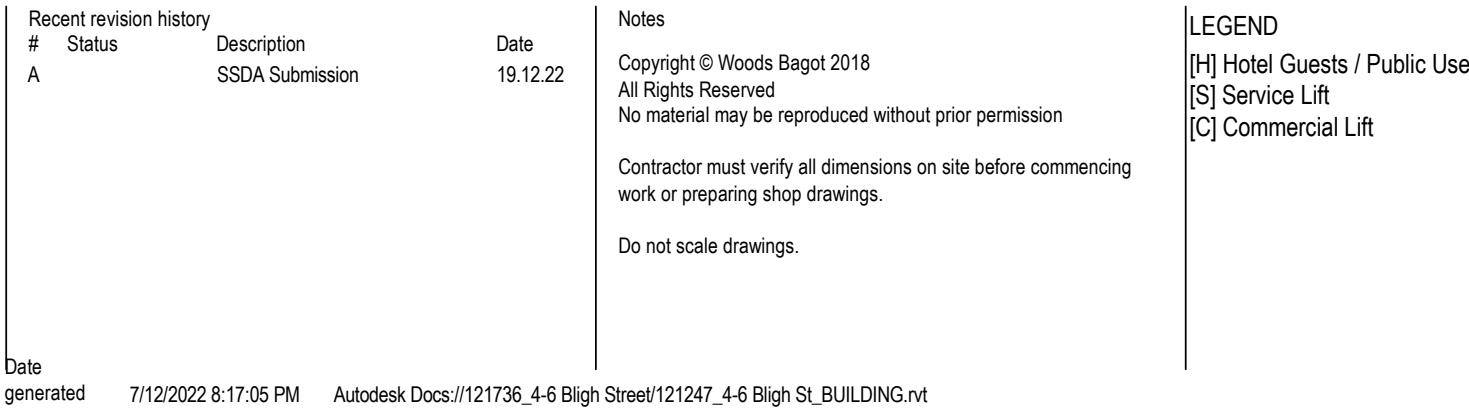
Client TTPP
Location Princes St (Side Streets)
Date Day 7. Fri, 10th May 2019 (5:00-24:00)
Description Occupancy Parking Survey



Street	Zone	Restriction	Time Restriction	Supply	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Bligh St (Between Bent St and Hunter St)	1	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	1	2	2	1	2	3	1	1	2	2	1	0	1	2	2	3	1	0
	2	Bus zone		2	0	1	2	0	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0
	3	Bus Zone	15 min Limit	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0
	4	4P (Ticket)	6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	10	0	6	7	8	6	3	2	5	7	7	6	6	2	5	6	9	7	7	2
	5	Loading Zone / 4P (Ticket)	Loading - 7am - 6pm (Mon - Fri) 7am - 10am (Sat) 4P - 6pm - 10pm (Mon - Fri), 10am - 10pm (Sat) and 8am - 10pm (Sun)	4	0	1	4	3	1	5	3	2	3	2	2	3	1	3	3	4	3	4	1
	6	Bus zone		2	0	3	6	5	3	4	3	4	4	4	1	1	1	3	4	3	3	2	1
	7	Work Zone	7am - 6pm (Mon - Fri) 7am - 10am (Sat)																				
	8	No Parking (Coaches Accepted)		2	0	1	1	2	1	1	1	0	1	1	2	2	0	1	1	0	0	0	0
Total				26	0	13	22	20	13	16	13	13	17	17	14	14	5	14	17	20	16	15	4
% Capacity				100%	0%	50%	85%	77%	50%	62%	50%	50%	65%	65%	54%	54%	19%	54%	65%	77%	62%	58%	15%

Appendix B

Architectural Layout Plans



Issuer

W-B™
WOODS BAGOT

Project number

121736

Size check

25mm

Checked

Approved

Sheet size

Scale

TD

KD

A1

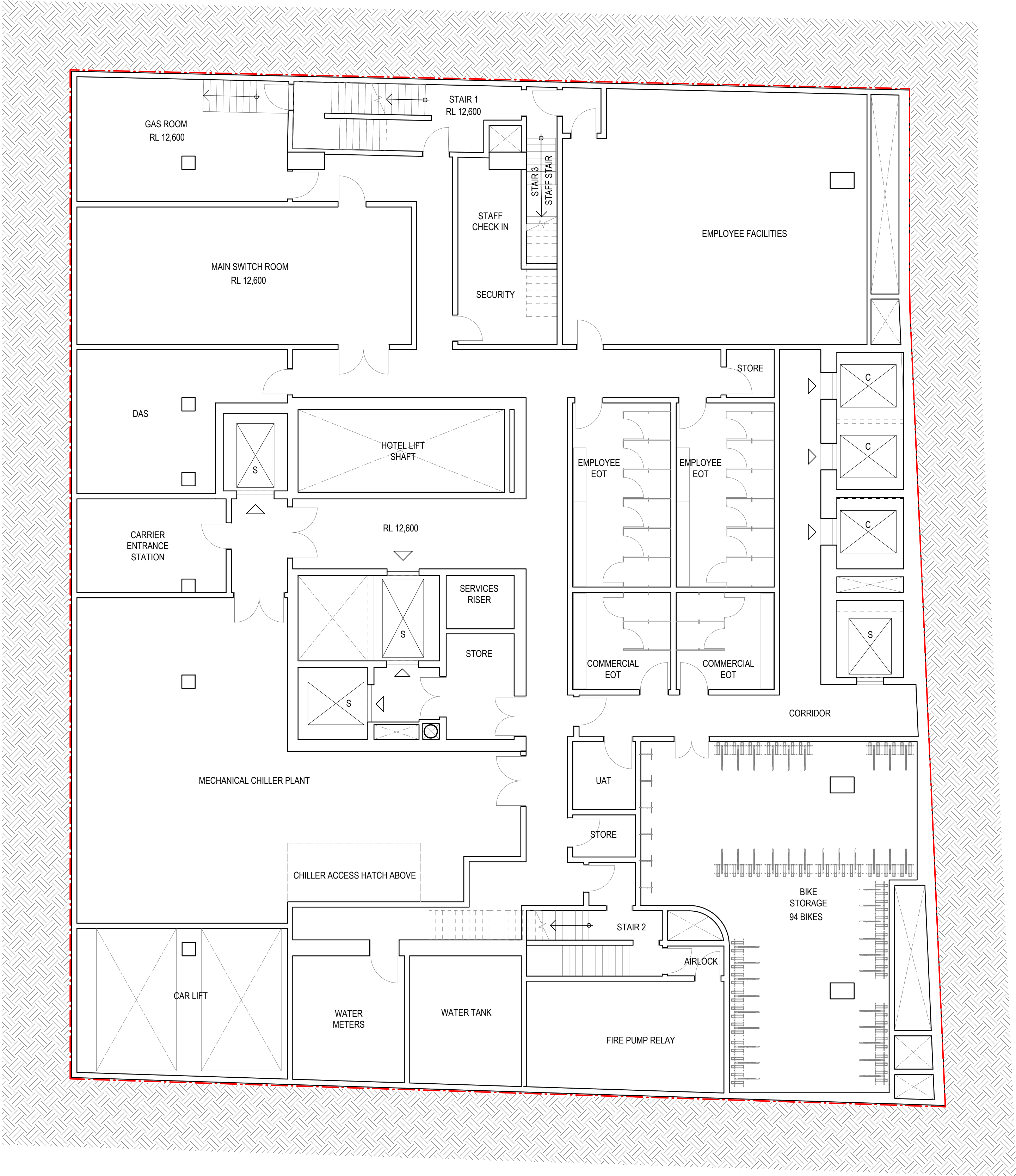
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Sheet title
Floor Plan
Basement Level 01

Sheet number
DA22B1

Revision
A

Status
FOR SSDA

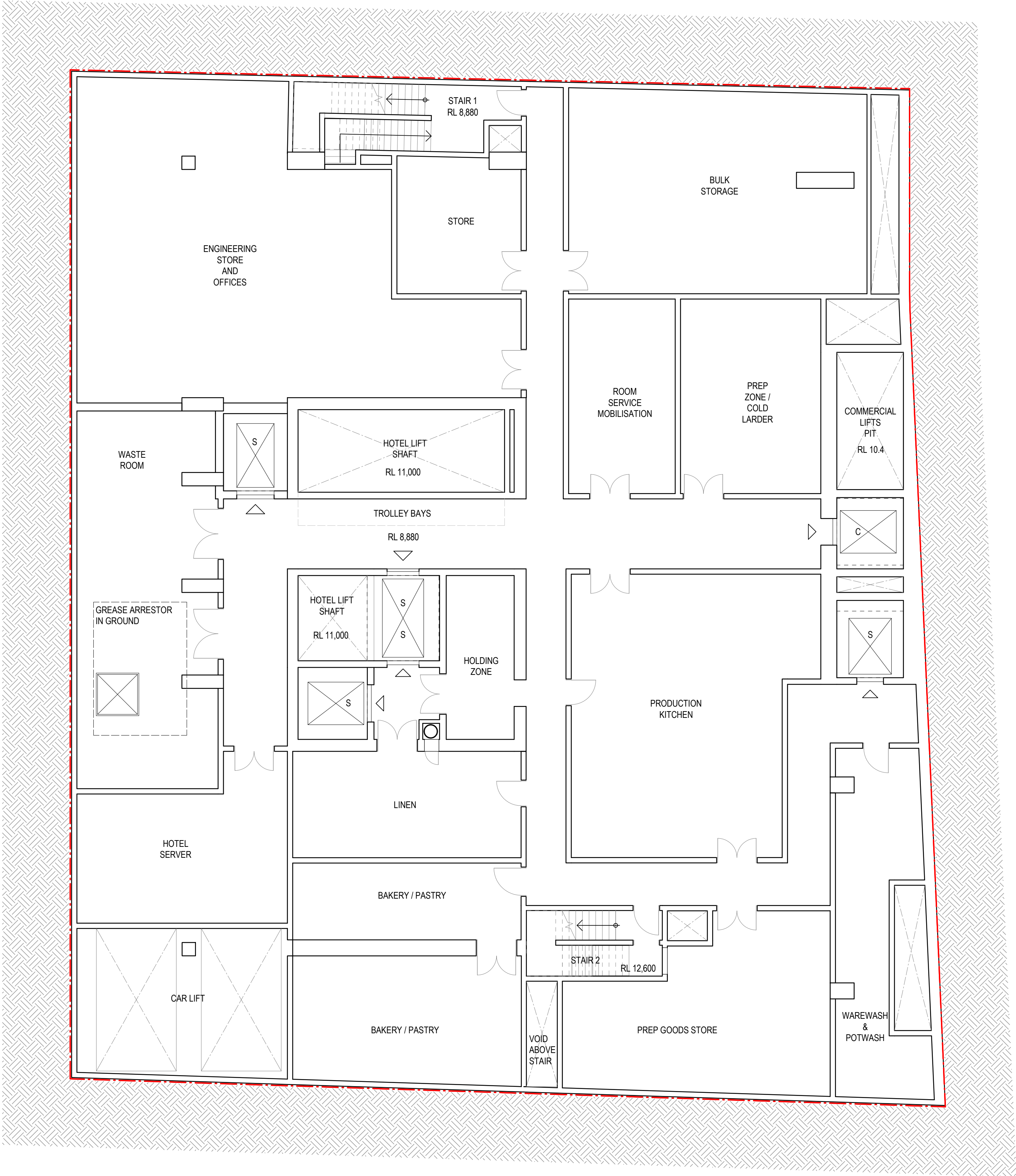


Recent revision history		Date	Notes
#	Status		
A	SSDA Submission	19.12.22	Copyright © Woods Bagot 2018 All Rights Reserved No material may be reproduced without prior permission Contractor must verify all dimensions on site before commencing work or preparing shop drawings. Do not scale drawings.

LEGEND	
[H]	Hotel Guests / Public Use
[S]	Service Lift
[C]	Commercial Lift

Date generated	7/12/2022 8:17:46 PM	Autodesk Docs://121736_4-6 Bligh Street/121247_4-6 Bligh SL BUILDING.rvt
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Project 4-6 Bligh Street		Issuer W-B WOODS BAGOT		Sheet title Floor Plan Basement Level 02	
Client Holdmark NSW Pty Ltd		Project number 121736		Sheet number DA22B2	
Checked TD		Approved KD		Status FOR SSDA	
Size check 25mm		Sheet size A1		Scale 1 : 100	
				Revision A	

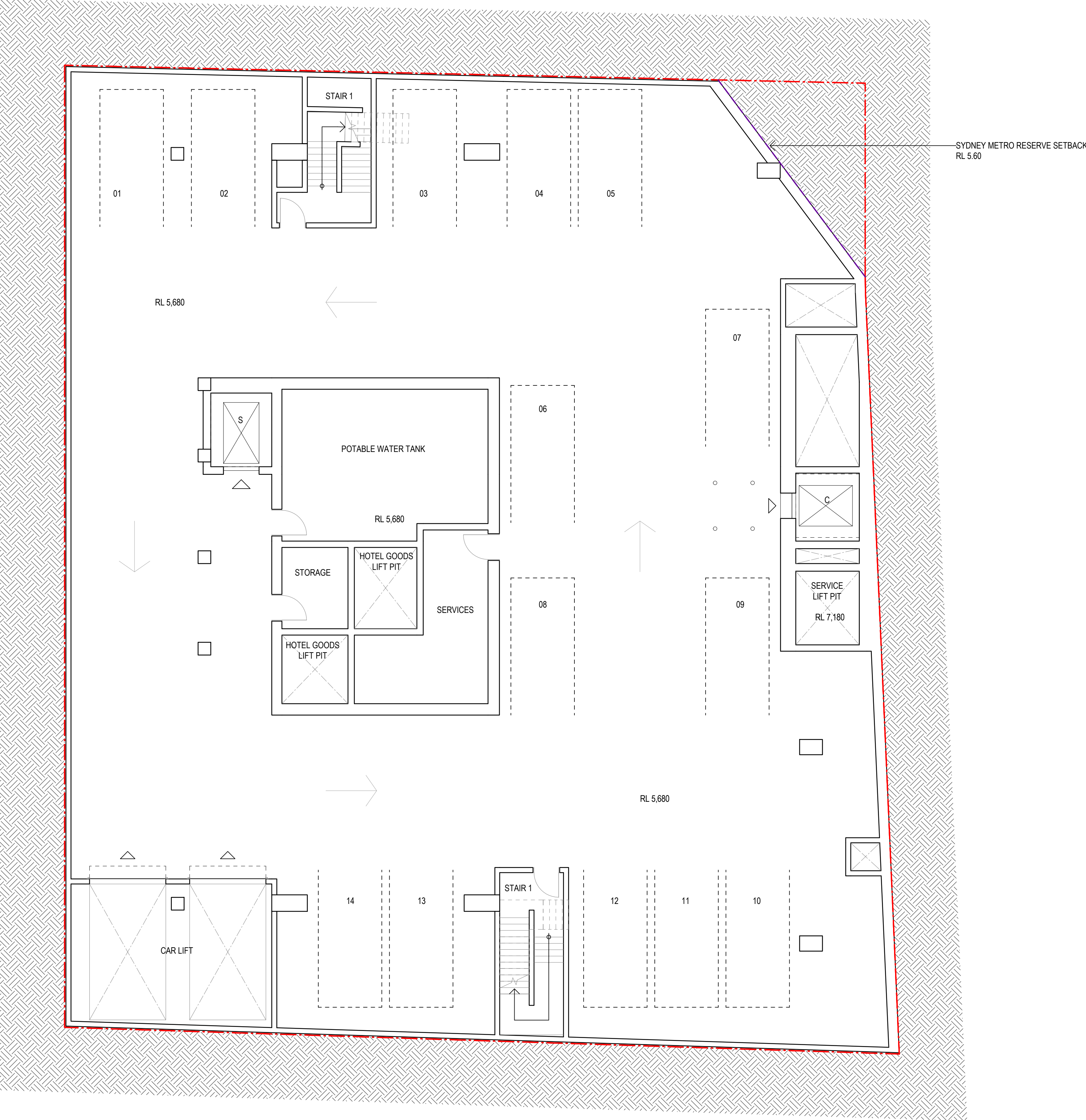


Recent revision history		Notes
#	Status	
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[S]	Service Lift
[C]	Commercial Lift

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Client Holdmark NSW Pty Ltd		Project number 121736		Sheet number DA22B3	
Checked TD		Approved KD		Status FOR SSDA	
Size check 25mm		Sheet size A1		Scale 1 : 100	
				Revision A	



Recent revision history		Notes
#	Status	
A	SSDA Submission	Copyright © Woods Bagot 2018 All Rights Reserved No material may be reproduced without prior permission Contractor must verify all dimensions on site before commencing work or preparing shop drawings. Do not scale drawings.

LEGEND	
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[S]	Service Lift
[C]	Commercial Lift

Date generated	8/12/2022 7:40:17 PM	Autodesk Docs://121736_4-6 Bligh Street/121247_4-6 Bligh SL_BUILDING.rvt
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Project
4-6 Bligh Street

Client
Holdmark NSW Pty Ltd

Issuer
W-B
WOODS BAGOT

Project number
121736

Checked
JN

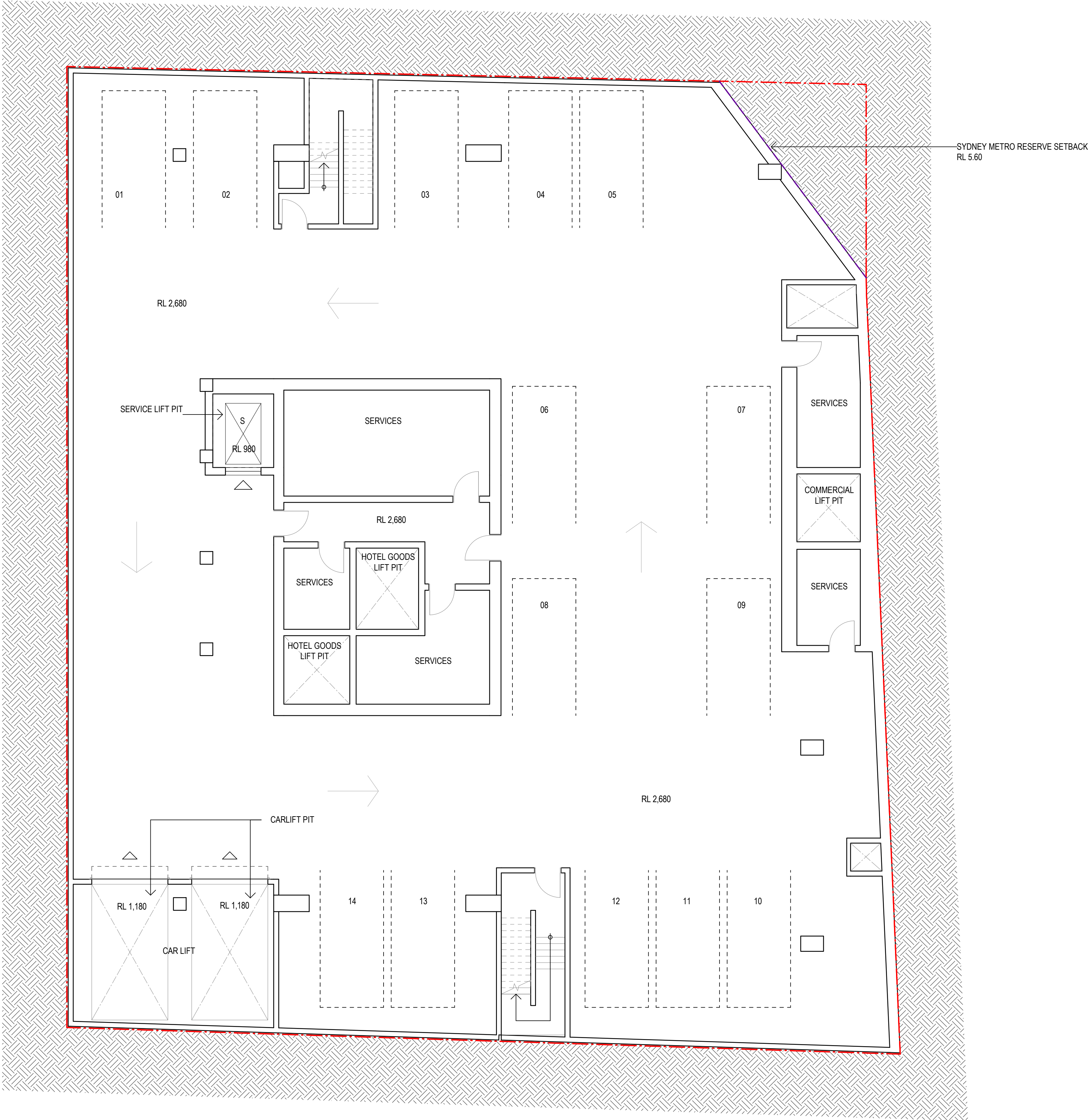
Size check
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Approved
KD

Sheet size
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Scale
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Sheet title	
Floor Plan Basement Level 04	
Sheet number DA22B4	Revision A
Status FOR SSDA	



Recent revision history		Notes
#	Status	
A	SSDA Submission	Copyright © Woods Bagot 2018 All Rights Reserved No material may be reproduced without prior permission Contractor must verify all dimensions on site before commencing work or preparing shop drawings. Do not scale drawings.

LEGEND	
[H]	Hotel Guests / Public Use
[S]	Service Lift
[C]	Commercial Lift

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Project		4-6 Bligh Street	
Client		Holdmark NSW Pty Ltd	

Issuer		W-B WOODS BAGOT	
Project number		121736	
Checked		JN	
Approved		KD	
Sheet size		A1	
Scale		1 : 100	





Sheet title		Floor Plan Basement Level 05	
Sheet number		DA22B5	
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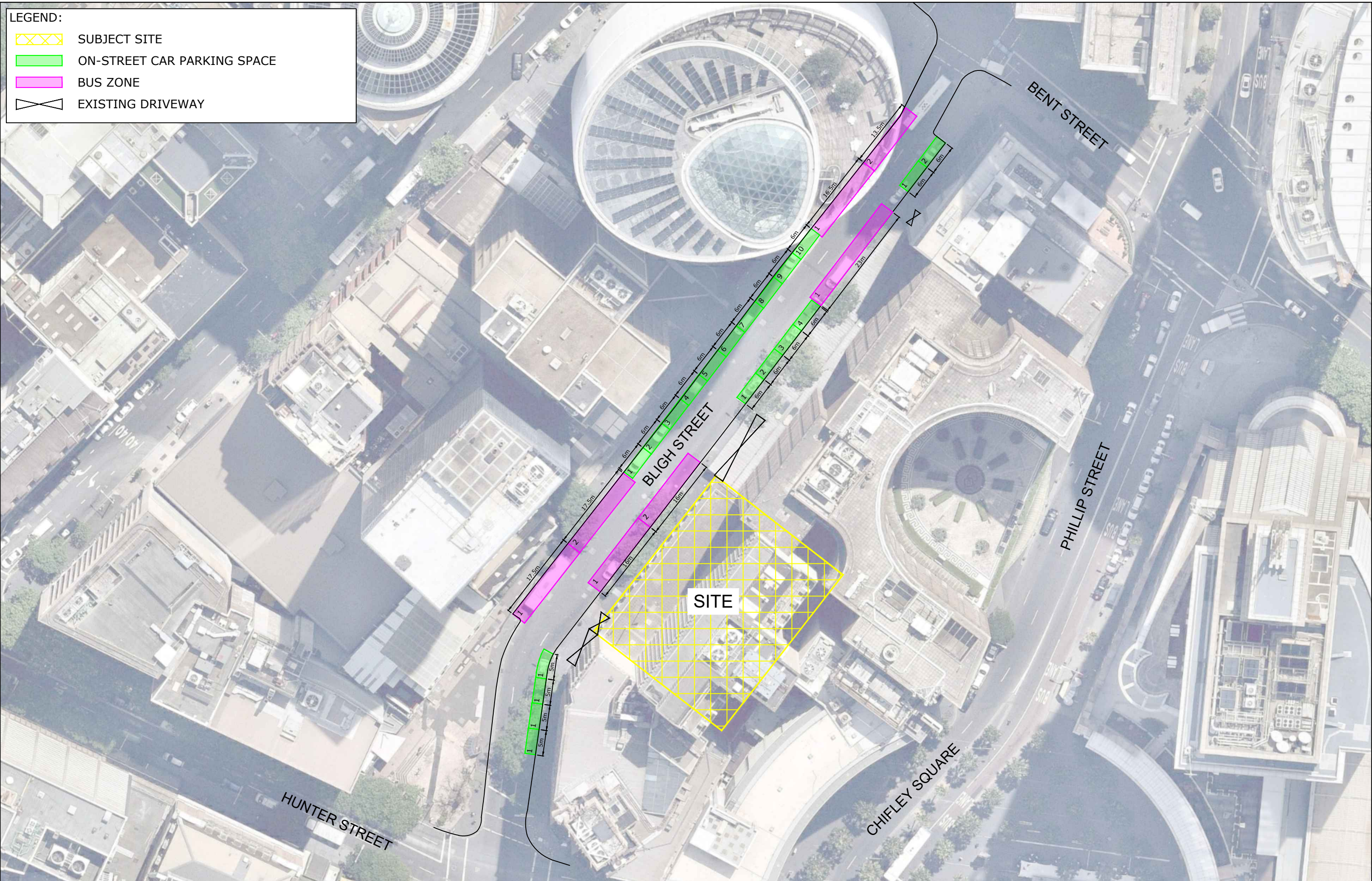
Revision		A	
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Appendix C

Bus Layover Swept Path Analysis

LEGEND:

	SUBJECT SITE
	ON-STREET CAR PARKING SPACE
	BUS ZONE
	EXISTING DRIVEWAY



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22

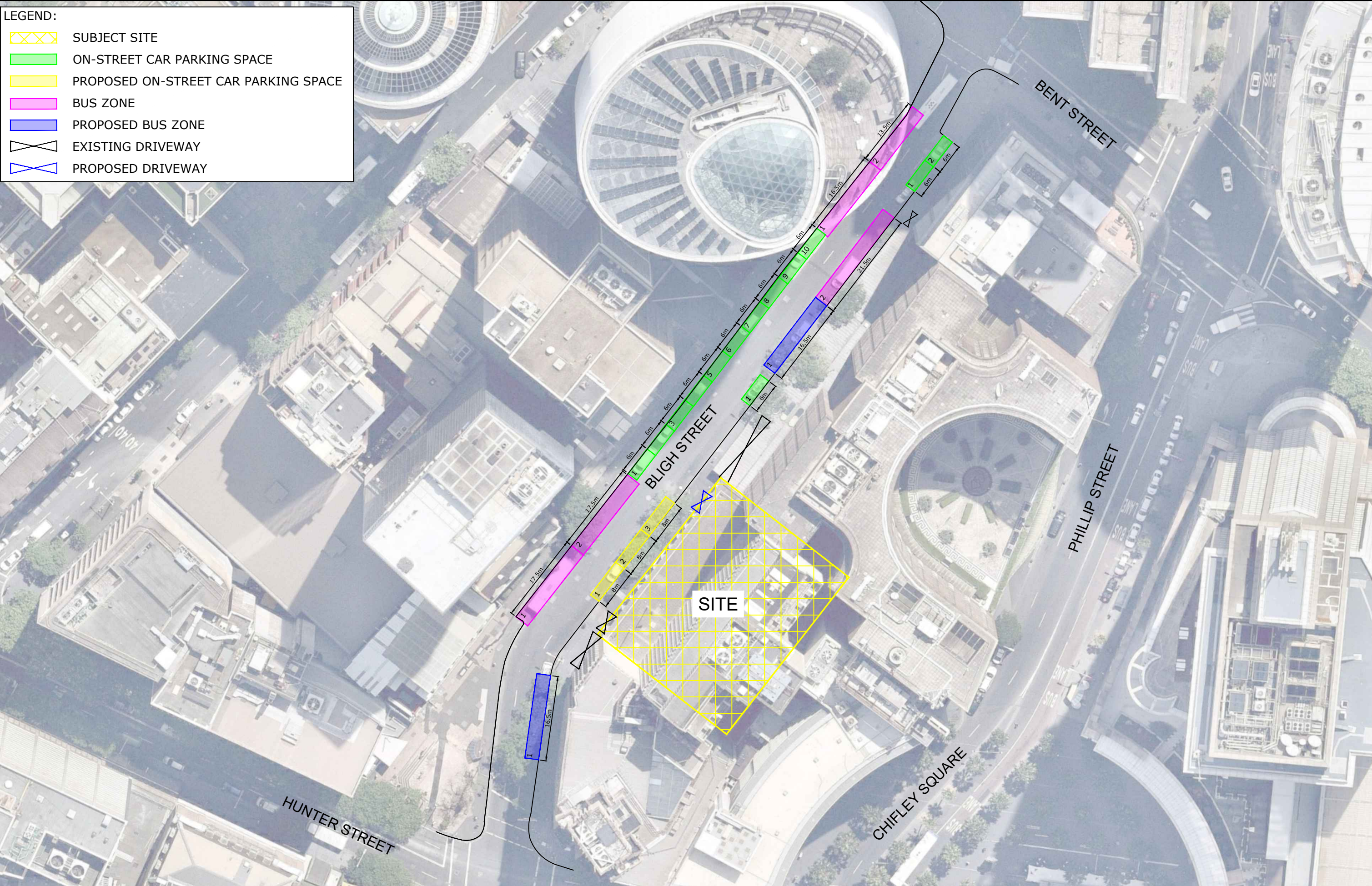


PROJECT	4-6 BLIGH STREET SYDNEY
TITLE	EXISTING CAR PARKING LOCATIONS

DWG No.			22340CAD004		
			FIGURE 1		
DATE STAMP					
15 DECEMBER 2022					
PROJECT No.		SCALE		REV.	
22340		NTS		A	

LEGEND:

- SUBJECT SITE
- ON-STREET CAR PARKING SPACE
- PROPOSED ON-STREET CAR PARKING SPACE
- BUS ZONE
- PROPOSED BUS ZONE
- EXISTING DRIVEWAY
- PROPOSED DRIVEWAY



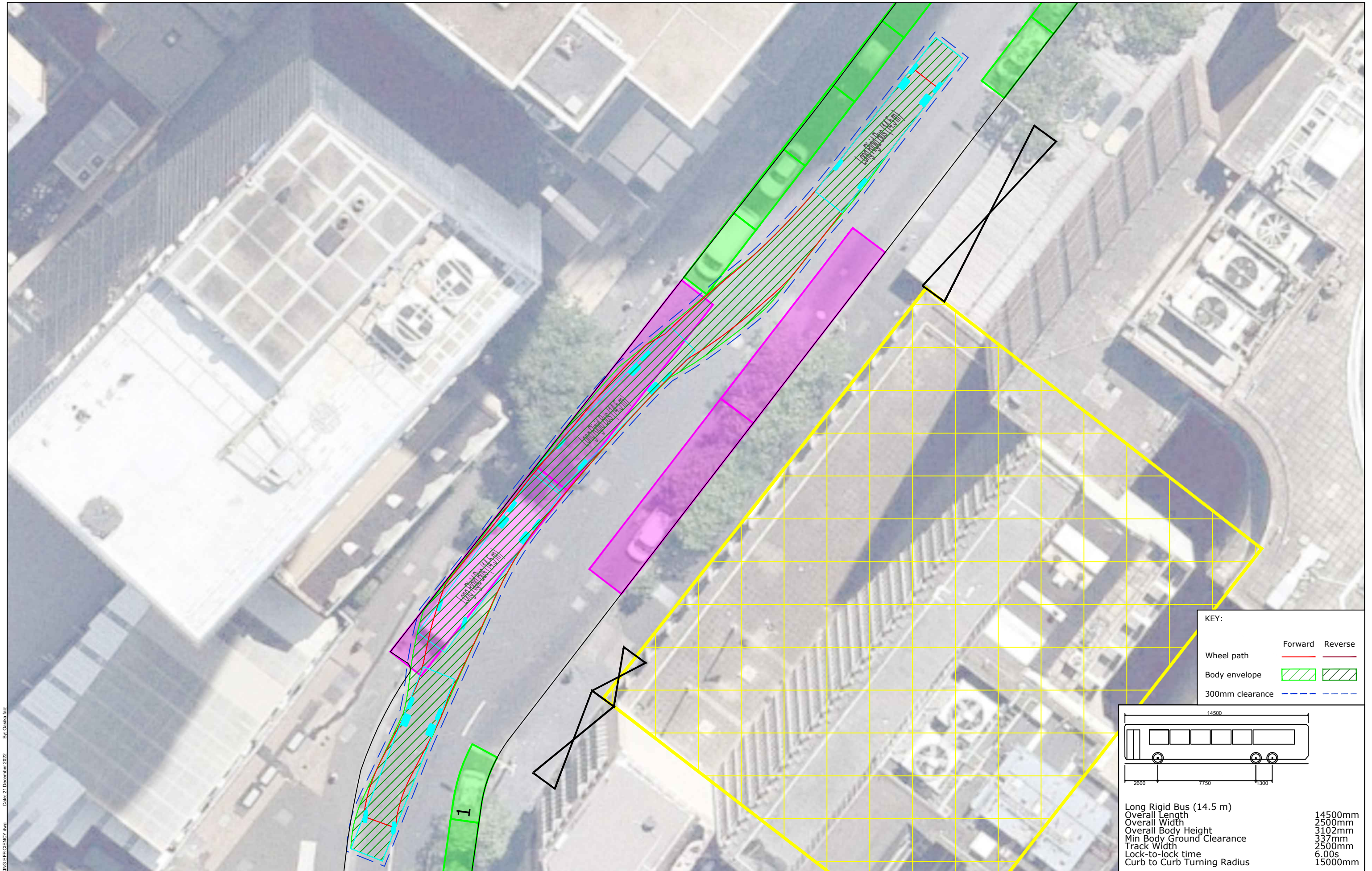
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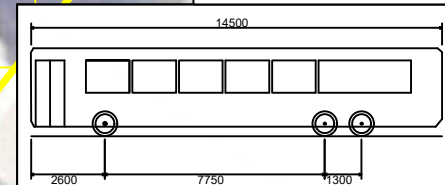
PROJECT	4-6 BLIGH STREET SYDNEY	
TITLE	PROPOSED CAR PARKING LOCATIONS	

DWG No. 22340CAD004		
FIGURE 2		
DATE STAMP 15 DECEMBER 2022		
PROJECT No. 22340	SCALE NTS	REV. A

Filename: 22340CAD004-221215 PARKING EFFICIENCY.dwg Date: 21 December 2022 By: Orlana Igo



KEY:		
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Wheel path	---	---
Body envelope	/ / /	\ \ \
300mm clearance	---	---



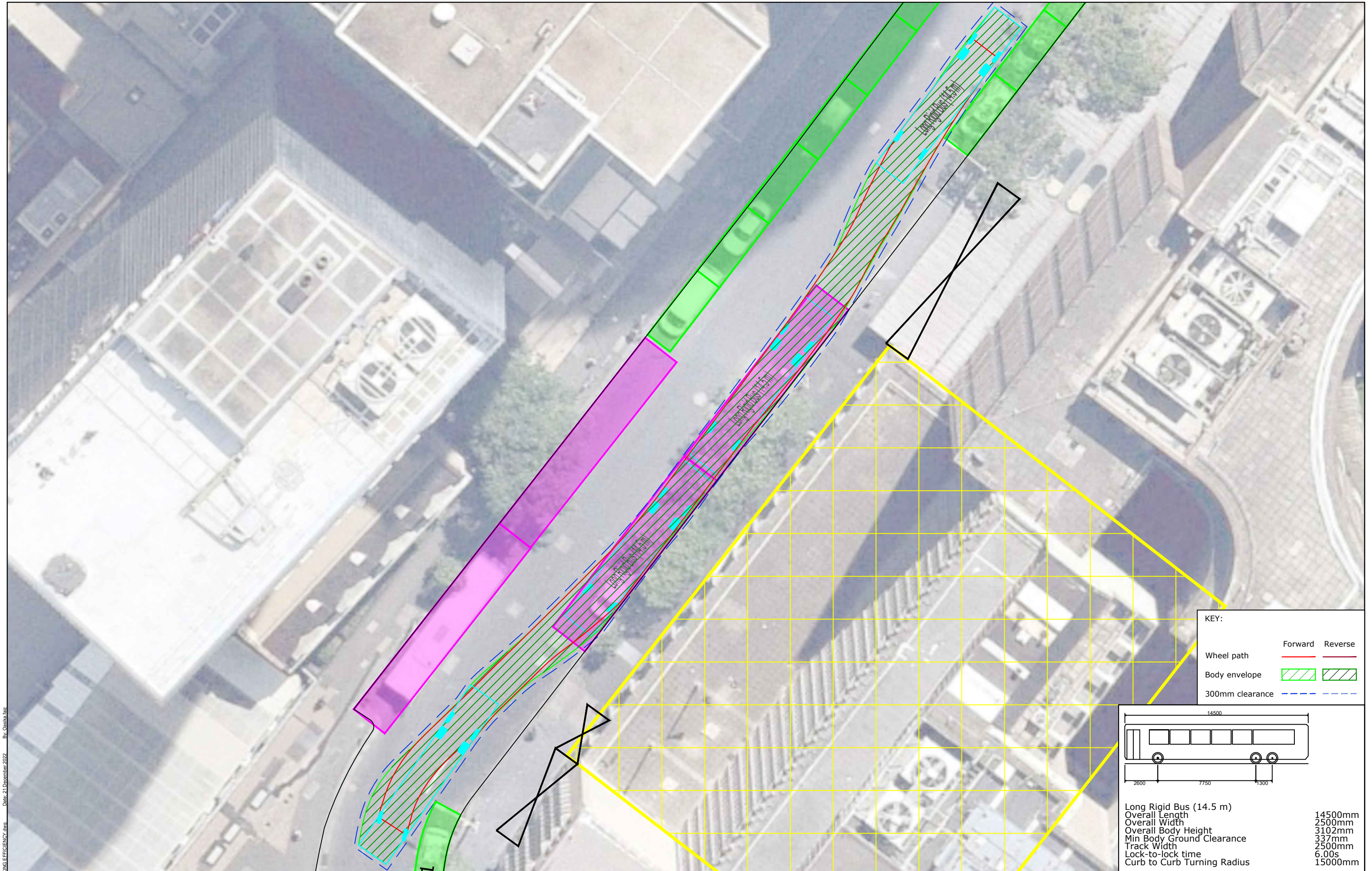
Long Rigid Bus (14.5 m)	
Overall Length	14500mm
Overall Width	2500mm
Overall Body Height	3102mm
Min Body Ground Clearance	337mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	15000mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET SYDNEY
TITLE	SWEPT PATH ANALYSIS 14.5m LONG RIGID BUS VEHICLE - EXISTING BUS ZONE

DWG No.	22340CAD004
FIGURE 3	
DATE STAMP 15 DECEMBER 2022	
PROJECT No.	22340
SCALE	1:250 @ A3
REV.	A

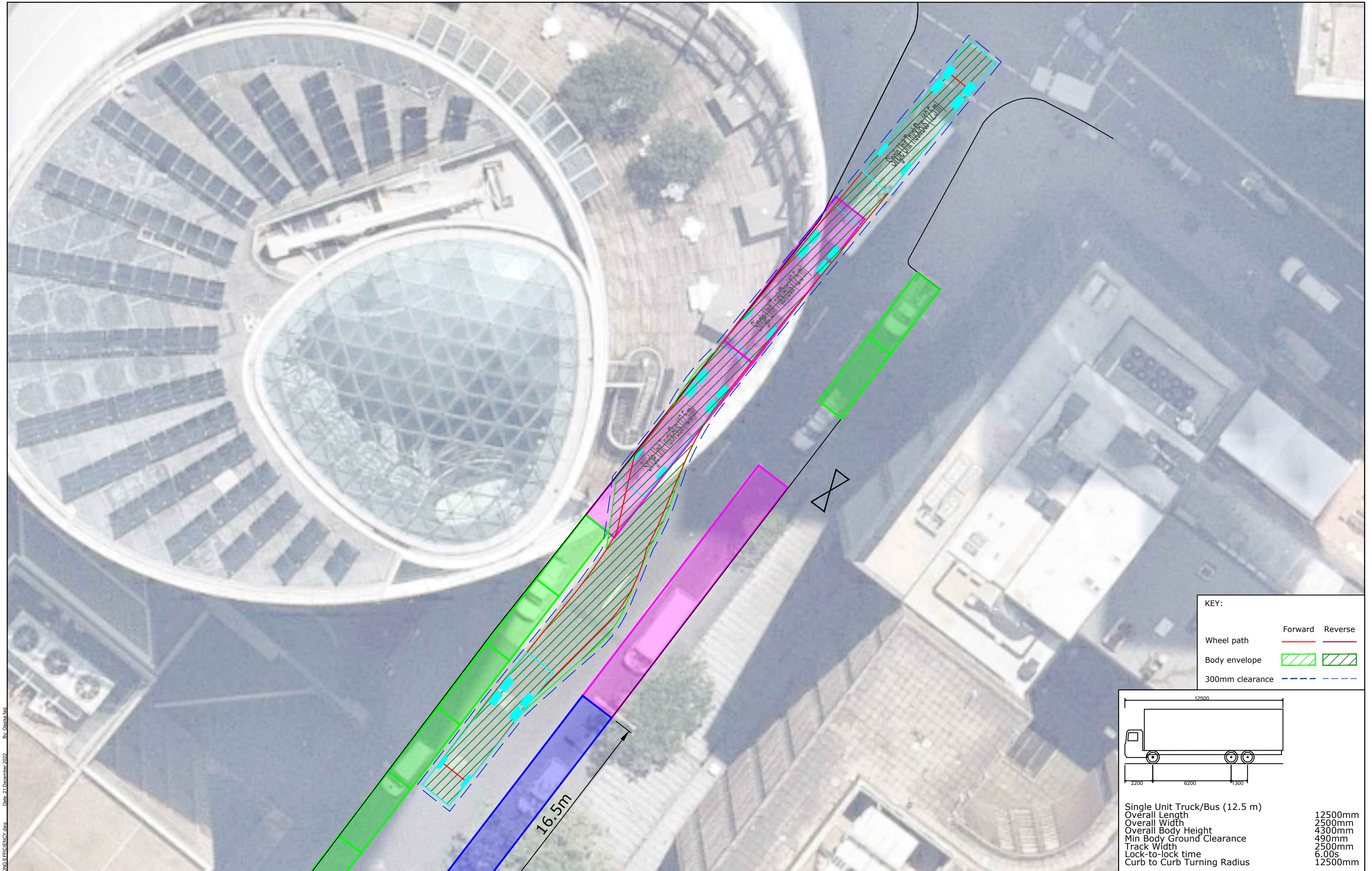


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET SYDNEY	
TITLE	SWEPT PATH ANALYSIS 14.5m LONG RIGID BUS VEHICLE - EXISTING BUS ZONE	

DWG No. 22340CAD004	
FIGURE 4	
DATE STAMP 15 DECEMBER 2022	
PROJECT No. 22340	SCALE 1:250 @ A3
REV. A	

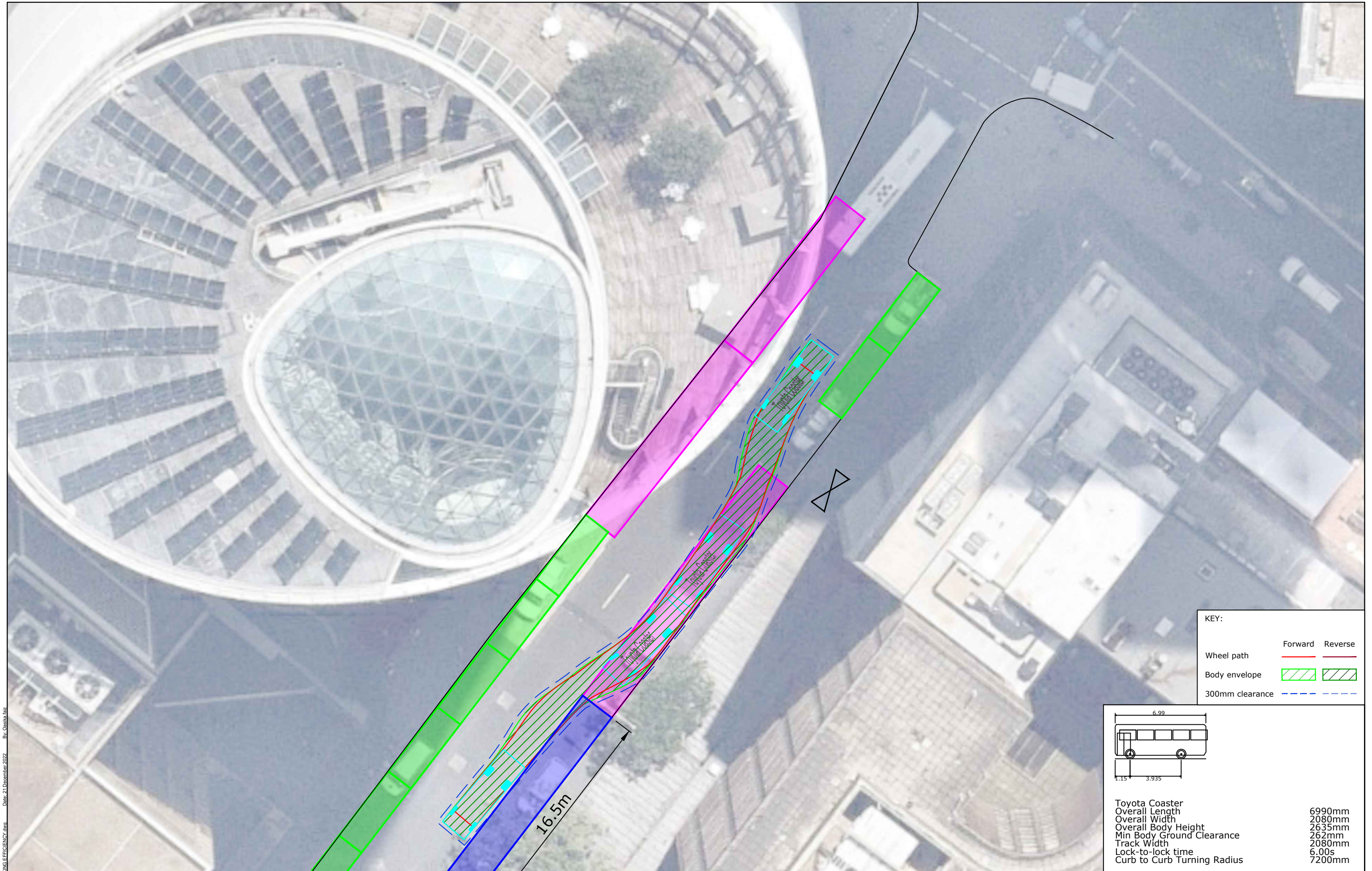


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET SYDNEY	
TITLE	SWEPT PATH ANALYSIS 12.5m SINGLE UNIT TRUCK/BUS - PROPOSED BUS ZONE	

DWG No. 22340CAD004 FIGURE 5	
DATE STAMP 15 DECEMBER 2022	
PROJECT No. 22340	SCALE 1:250 @ A3
REV. A	

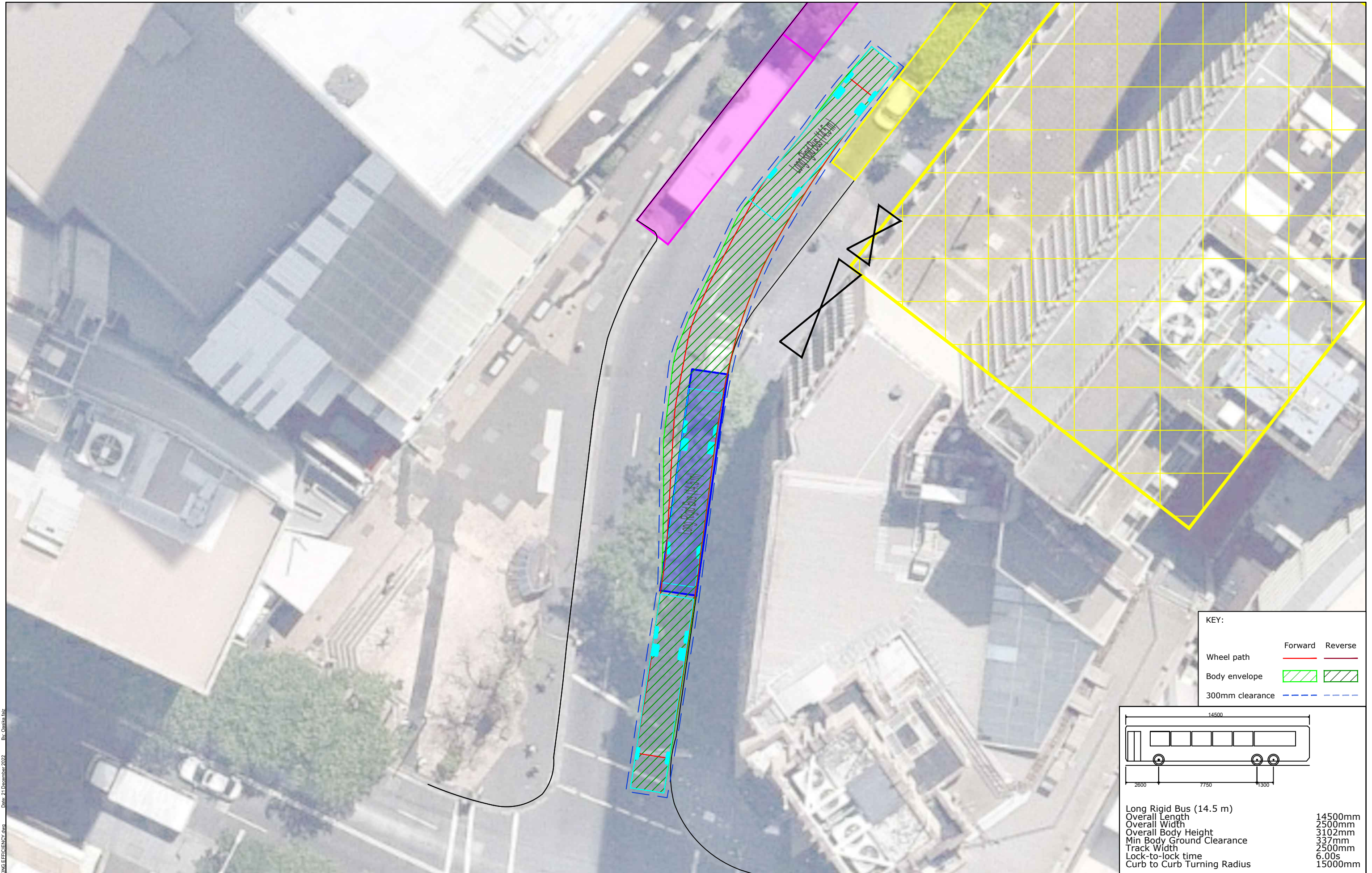


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET SYDNEY	
TITLE	SWEPT PATH ANALYSIS 6.99m TOYOTA COASTER	

DWG No. 22340CAD004 FIGURE 6	
DATE STAMP 15 DECEMBER 2022	
PROJECT No. 22340	SCALE 1:250 @ A3
REV. A	

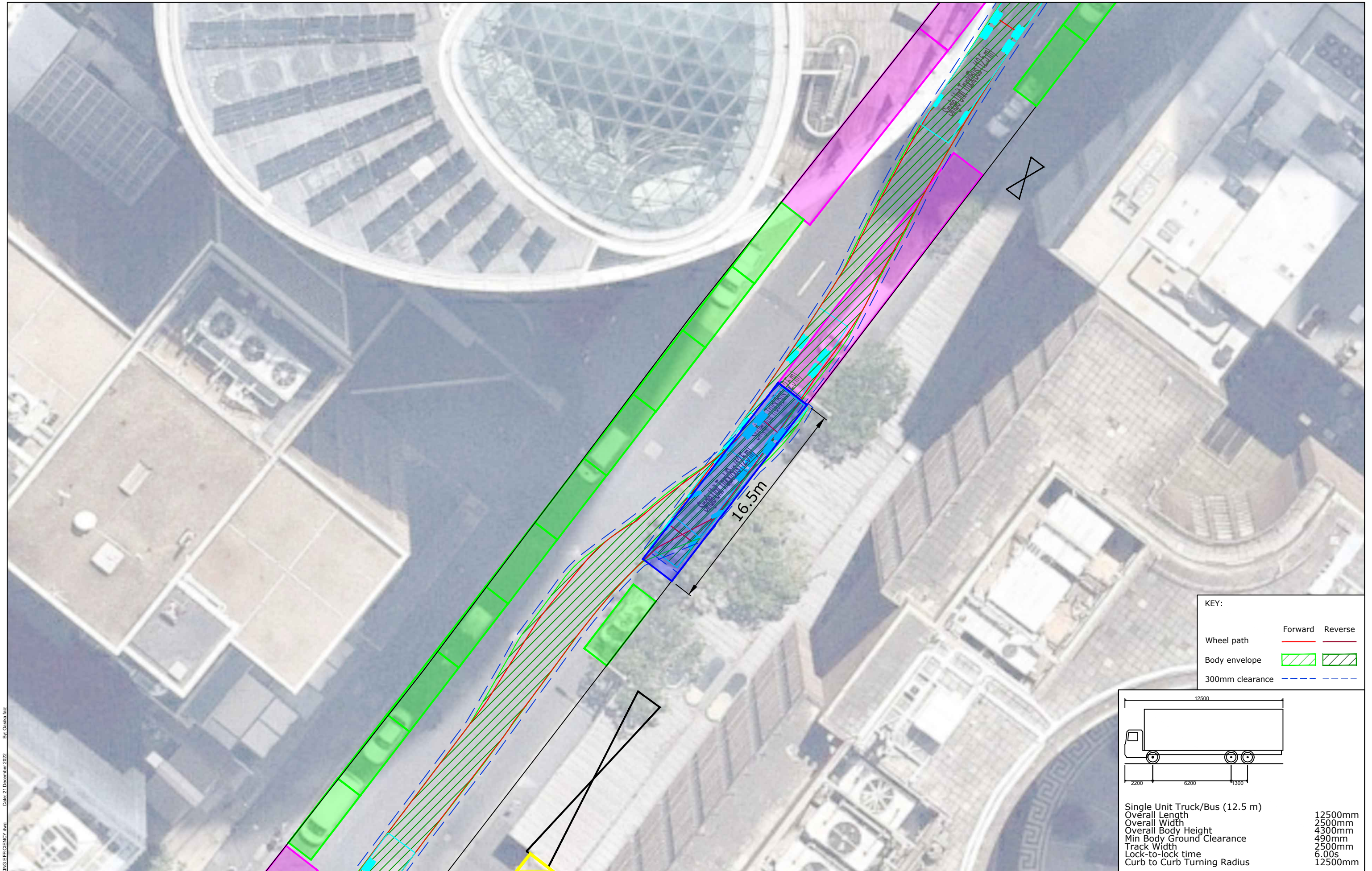


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET SYDNEY
TITLE	SWEPT PATH ANALYSIS 14.5m LONG RIGID BUS - PROPOSED BUS ZONE

DWG No.	22340CAD004
FIGURE 7	
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:250 @ A3
REV.	A



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22

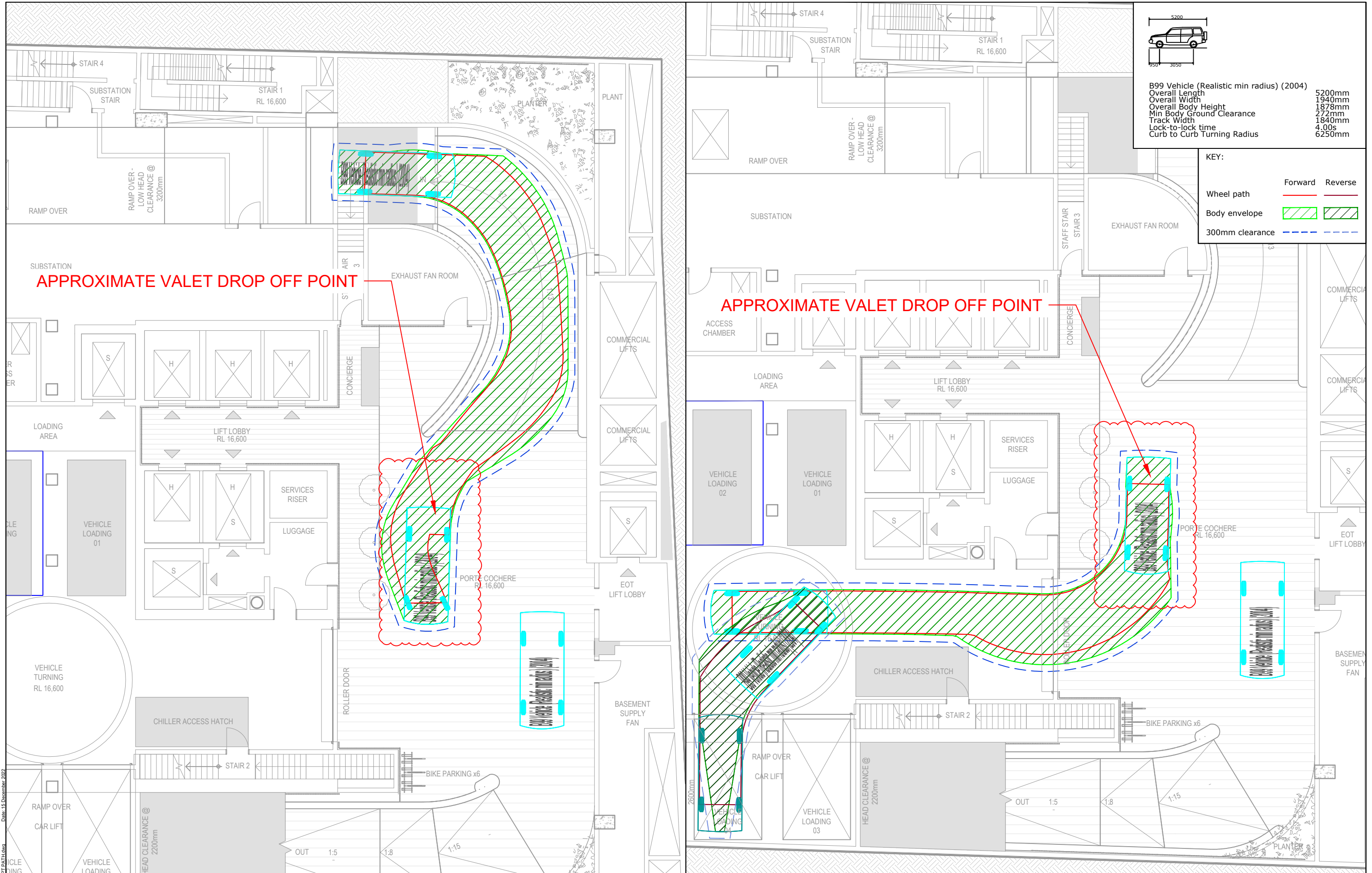


PROJECT	4-6 BLIGH STREET SYDNEY
TITLE	SWEPT PATH ANALYSIS 12.5m SINGLE UNIT TRUCK/BUS - PROPOSED BUS ZONE

DWG No.	22340CAD004
FIGURE 8	
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:250 @ A3
REV.	A

Appendix D

Loading Dock Assessment – Swept Paths and Ground Clearance Assessment



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



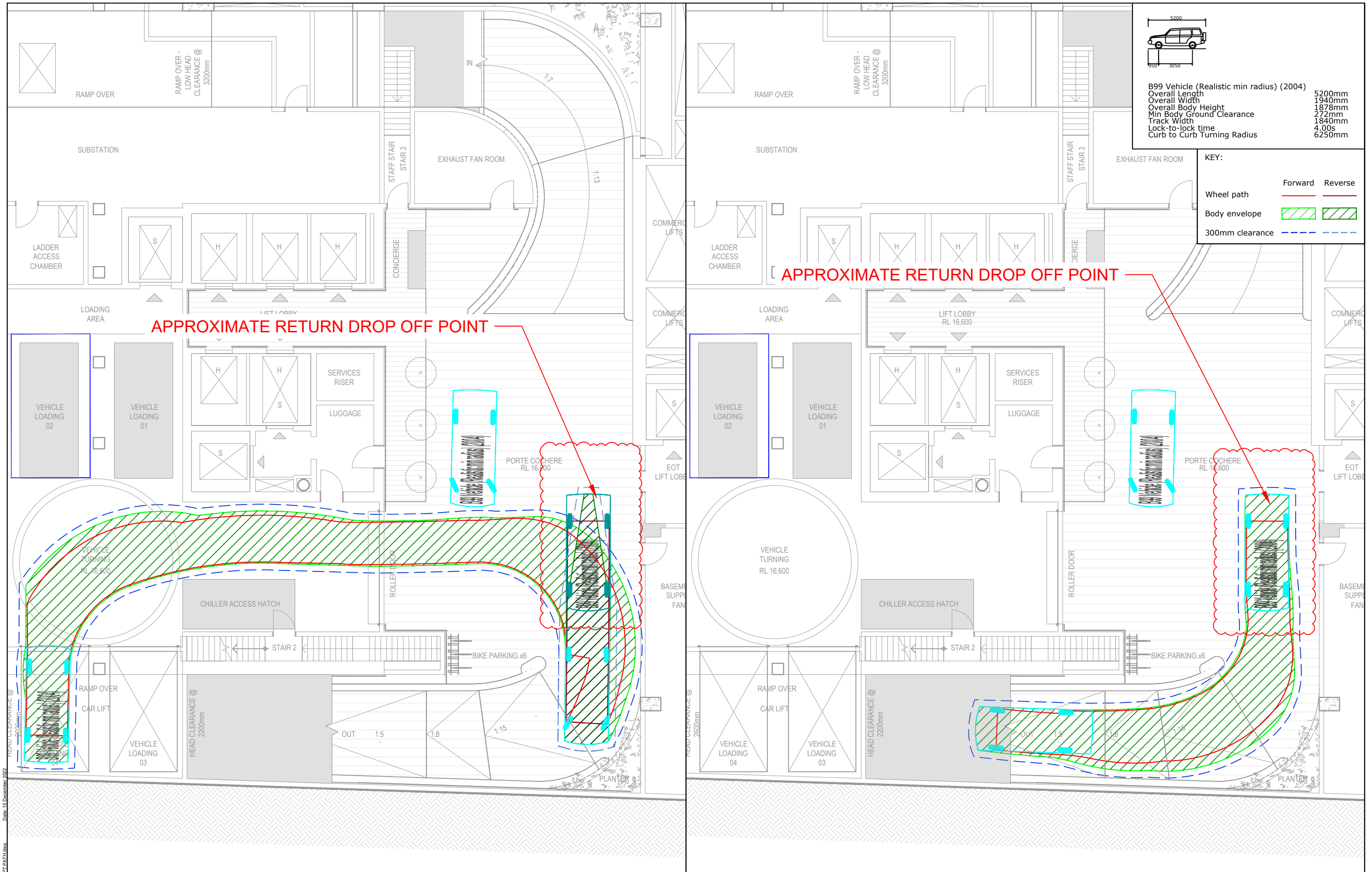
PROJECT

4-6 BLIGH STREET, SYDNEY

TITLE

SWEPT PATH ANALYSIS - BASEMENT 1 (LOADING BAY 2)
AS2890.2 6.4m SMALL RIGID VEHICLE

DWG No.	22340CAD003
FIGURE 1	
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:150 @A3
REV.	A

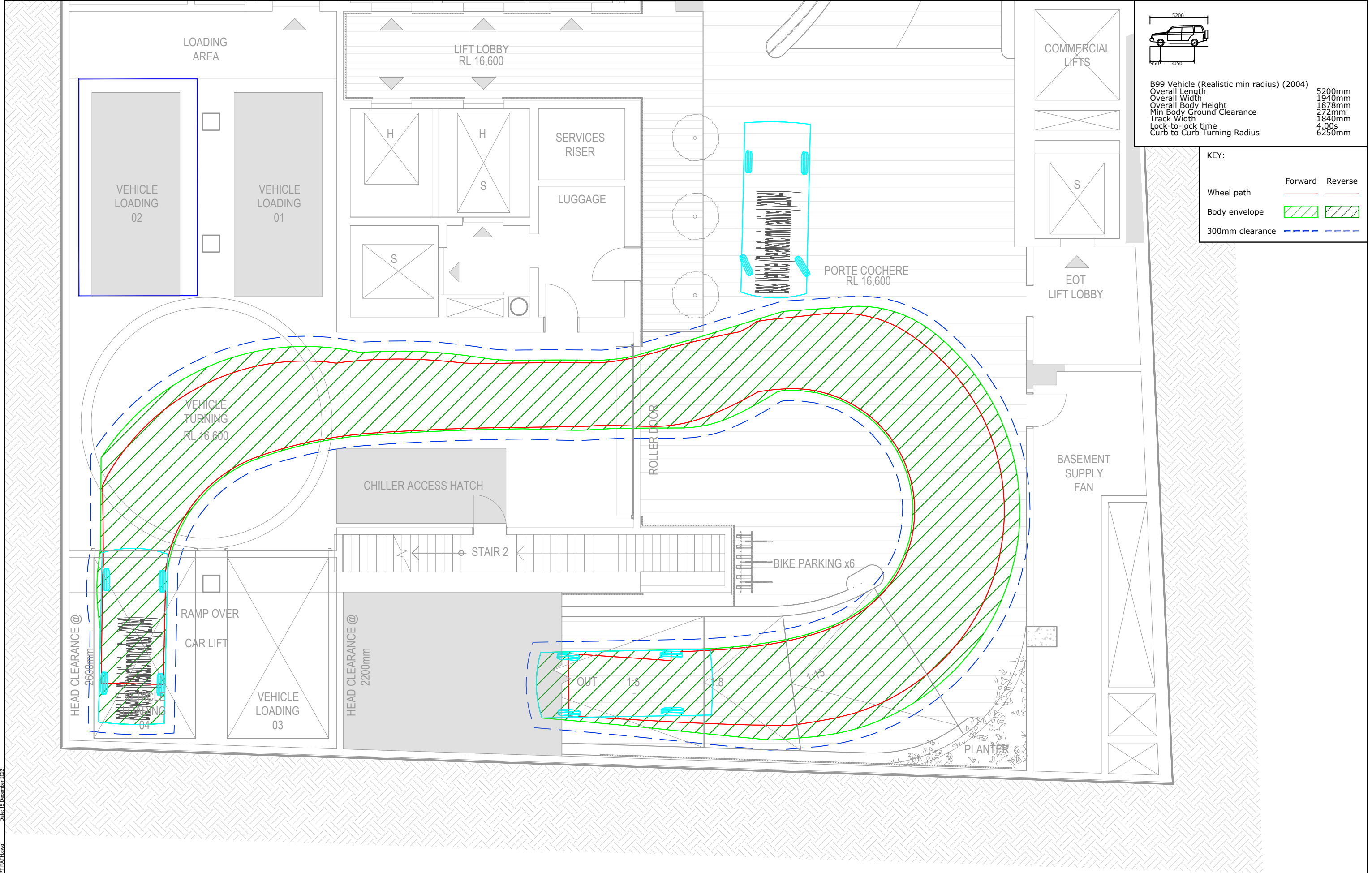


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET, SYDNEY		
TITLE	SWEPT PATH ANALYSIS - BASEMENT 1 (LOADING BAY 2) AS2890.2 6.4m SMALL RIGID VEHICLE		

DWG No.	22340CAD003 FIGURE 2	
DATE STAMP	15 DECEMBER 2022	
PROJECT No.	SCALE	REV.
22340	1:150 @A3	A



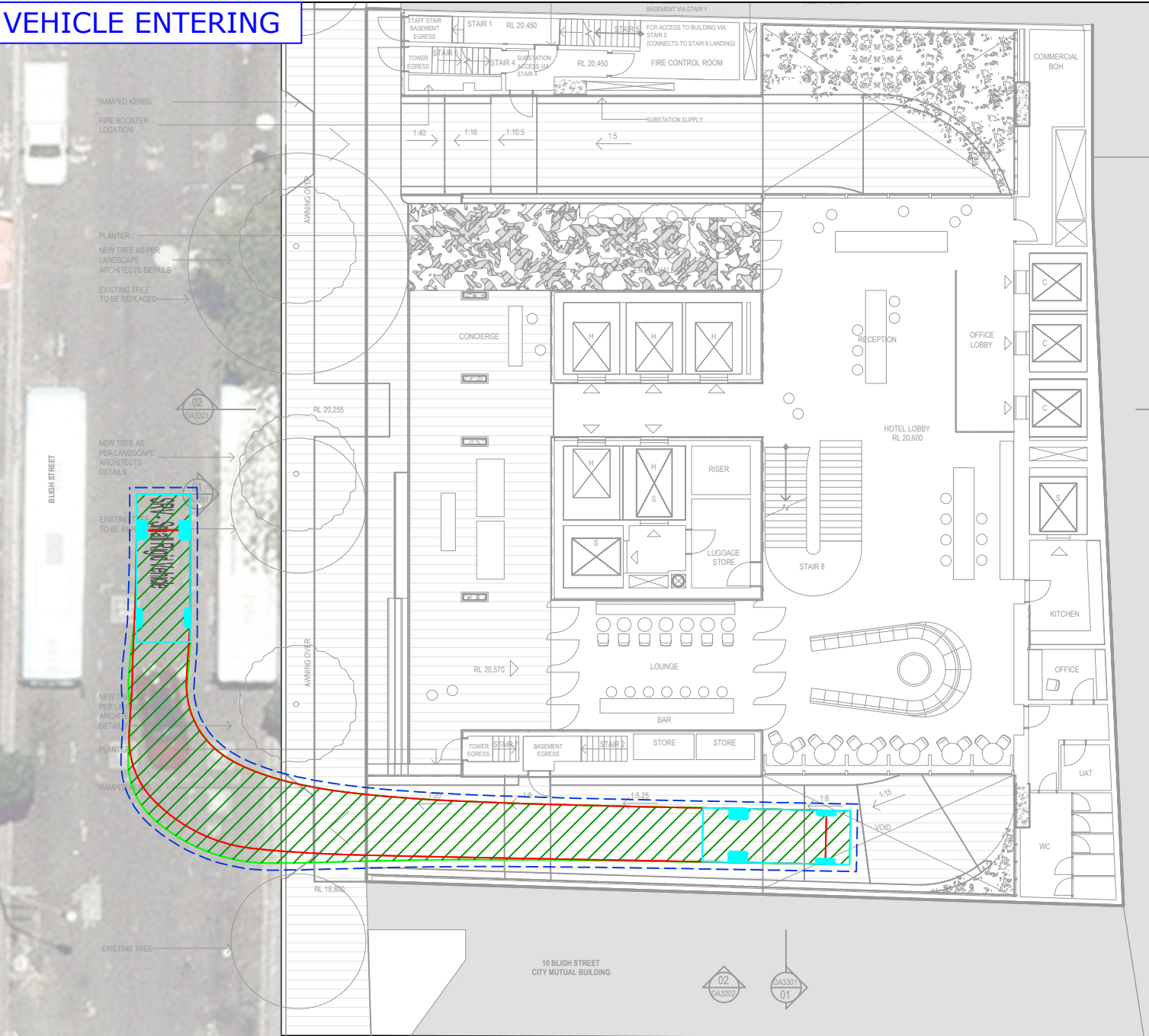
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A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



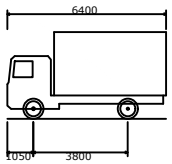
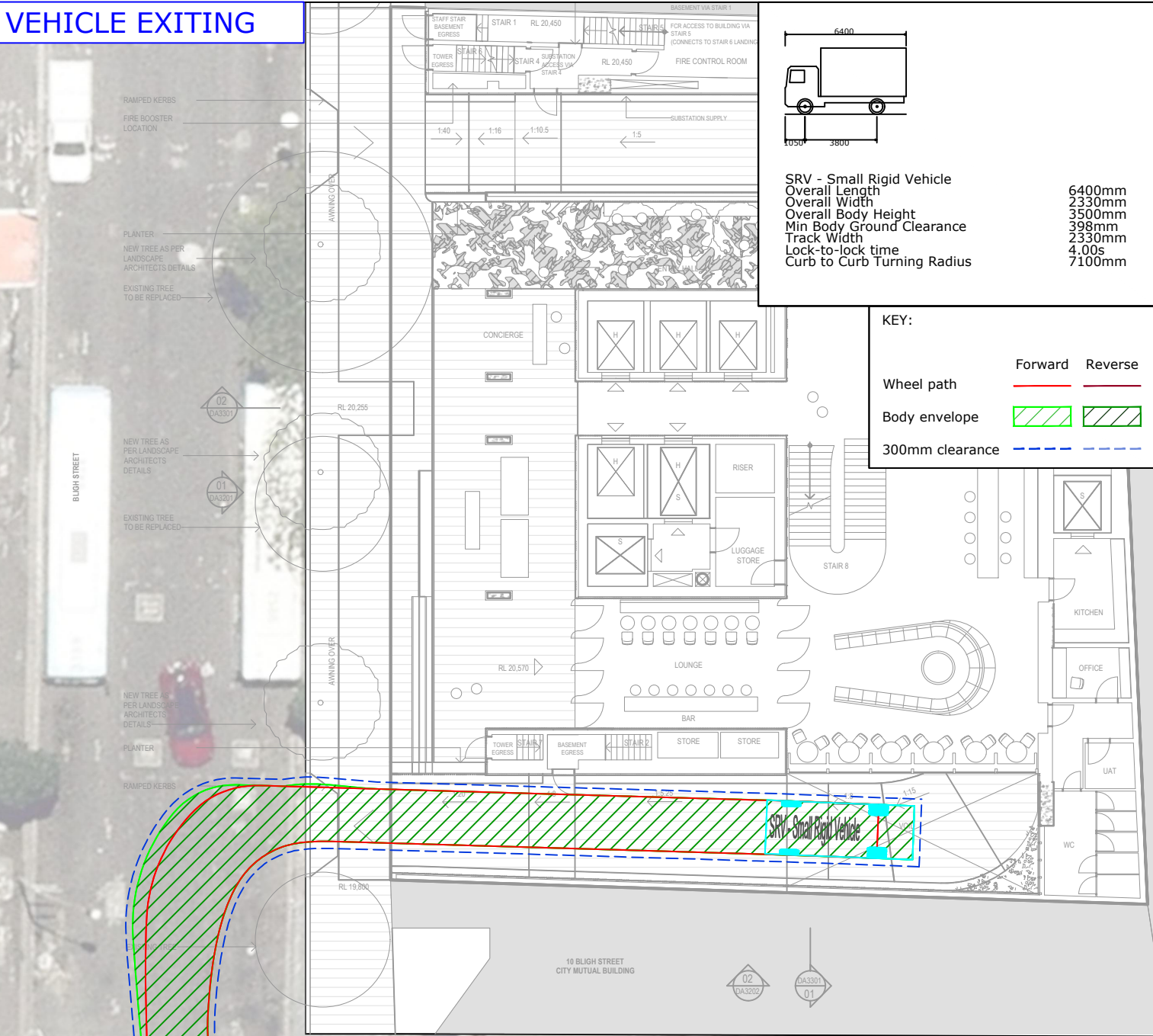
PROJECT	4-6 BLIGH STREET, SYDNEY	
TITLE	SWEPT PATH ANALYSIS - BASEMENT 1 (LOADING BAY 2) AS2890.2 6.4m SMALL RIGID VEHICLE	

DWG No. 22340CAD003 FIGURE 3	
DATE STAMP 15 DECEMBER 2022	
PROJECT No. 22340	SCALE 1:100 @A3
REV. A	

VEHICLE ENTERING



VEHICLE EXITING



SRV - Small Rigid Vehicle
Overall Length 6400mm
Overall Width 2330mm
Overall Body Height 3500mm
Min Body Ground Clearance 398mm
Track Width 2330mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 7100mm

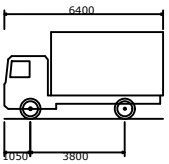
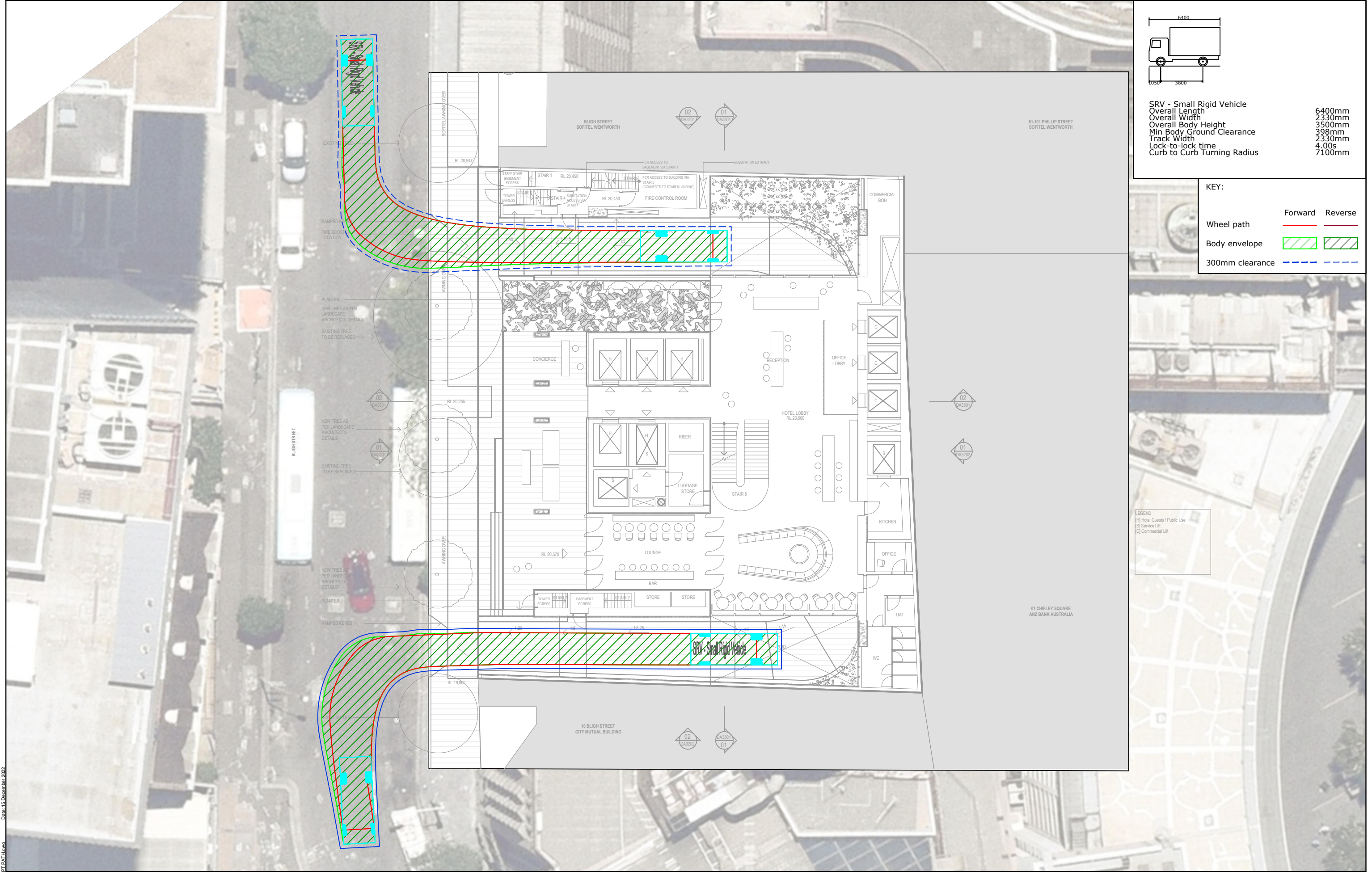
KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET, SYDNEY			DWG No.	22340CAD003 FIGURE 4	
TITLE	SWEPT PATH ANALYSIS - GROUND FLOOR AS2890.2 6.4m SMALL RIGID VEHICLE			DATE STAMP 15 DECEMBER 2022		
PROJECT No.		22340	SCALE	1:250 @A3	REV.	A



SRV - Small Rigid Vehicle
Overall Length 6400mm
Overall Width 2330mm
Overall Body Height 3500mm
Min Body Ground Clearance 398mm
Track Width 2330mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 7100mm

KEY:	
	Forward Reverse
Wheel path	<div></div> <div></div>
Body envelope	<div></div> <div></div>
300mm clearance	<div></div> <div></div>

LEGEND
[H] Hotel Guests / Public Use
[S] Service Lift
[C] Commercial Lift

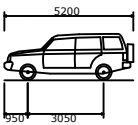
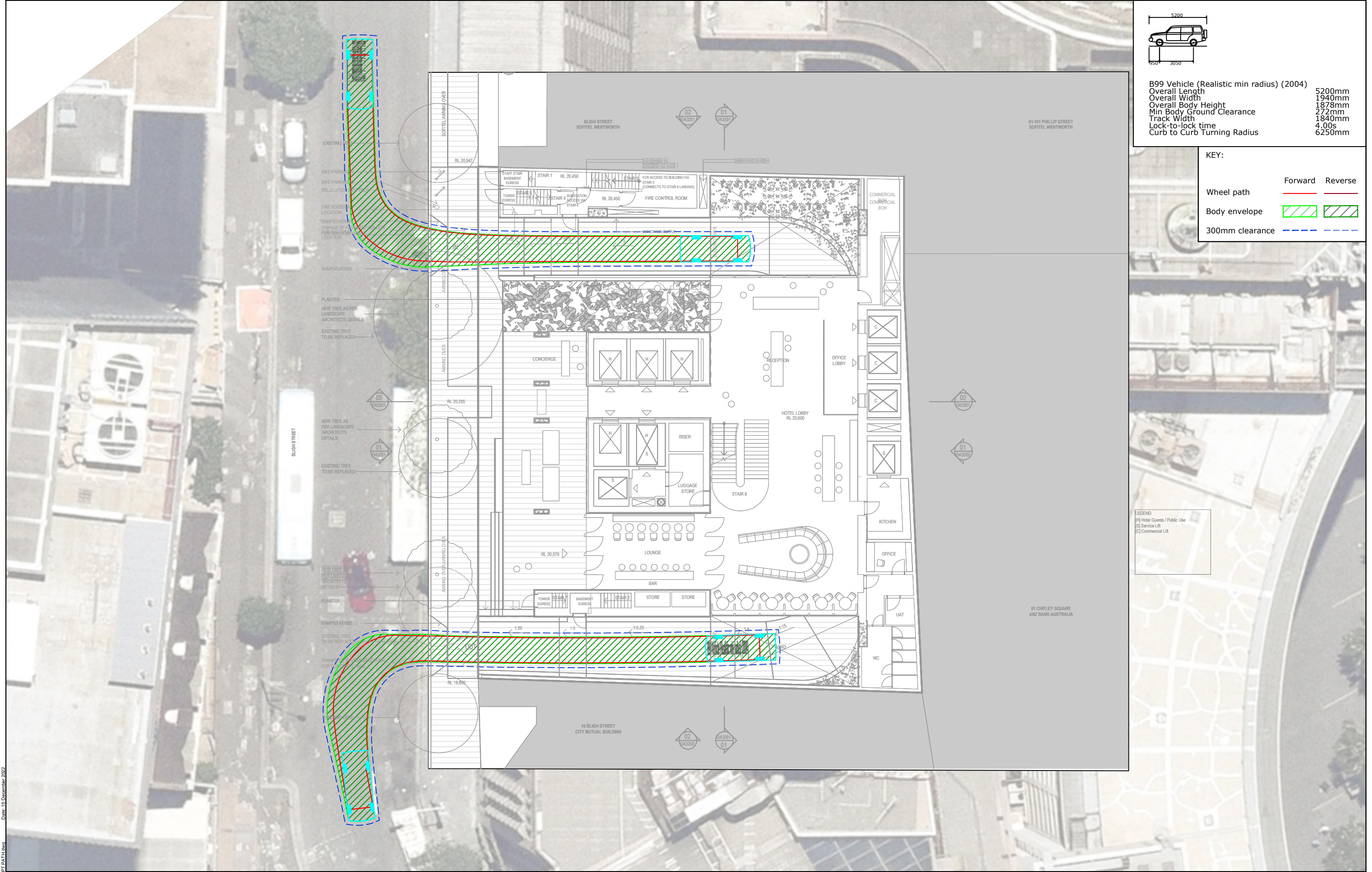
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET, SYDNEY
TITLE	SWEPT PATH ANALYSIS - GROUND FLOOR SITE SPECIFIC 6.4m SMALL RIGID VEHICLE (WASTE WISE MINI REAR LOADER)

DWG No.	22340CAD003
FIGURE 5	
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:250 @A3
REV.	A

Filename: 22340CAD003-221215-SWEPT PATH.dwg Date: 15 December 2022



B99 Vehicle (Realistic min radius) (2004)	
Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

LEGEND
[H] Hotel Guests / Public Use
[S] Service Lift
[C] Commercial Lift

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



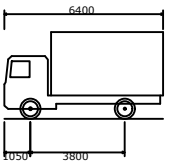
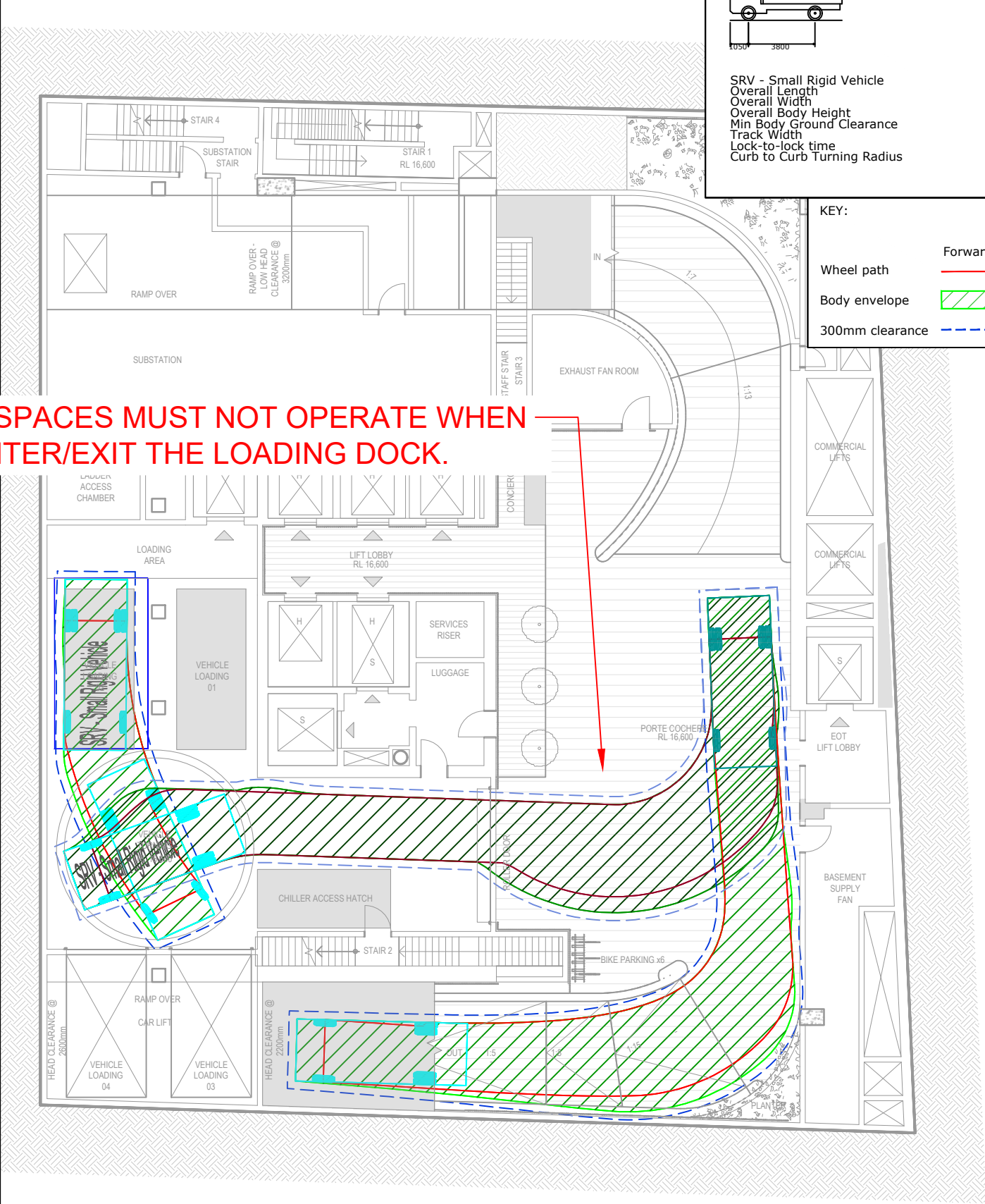
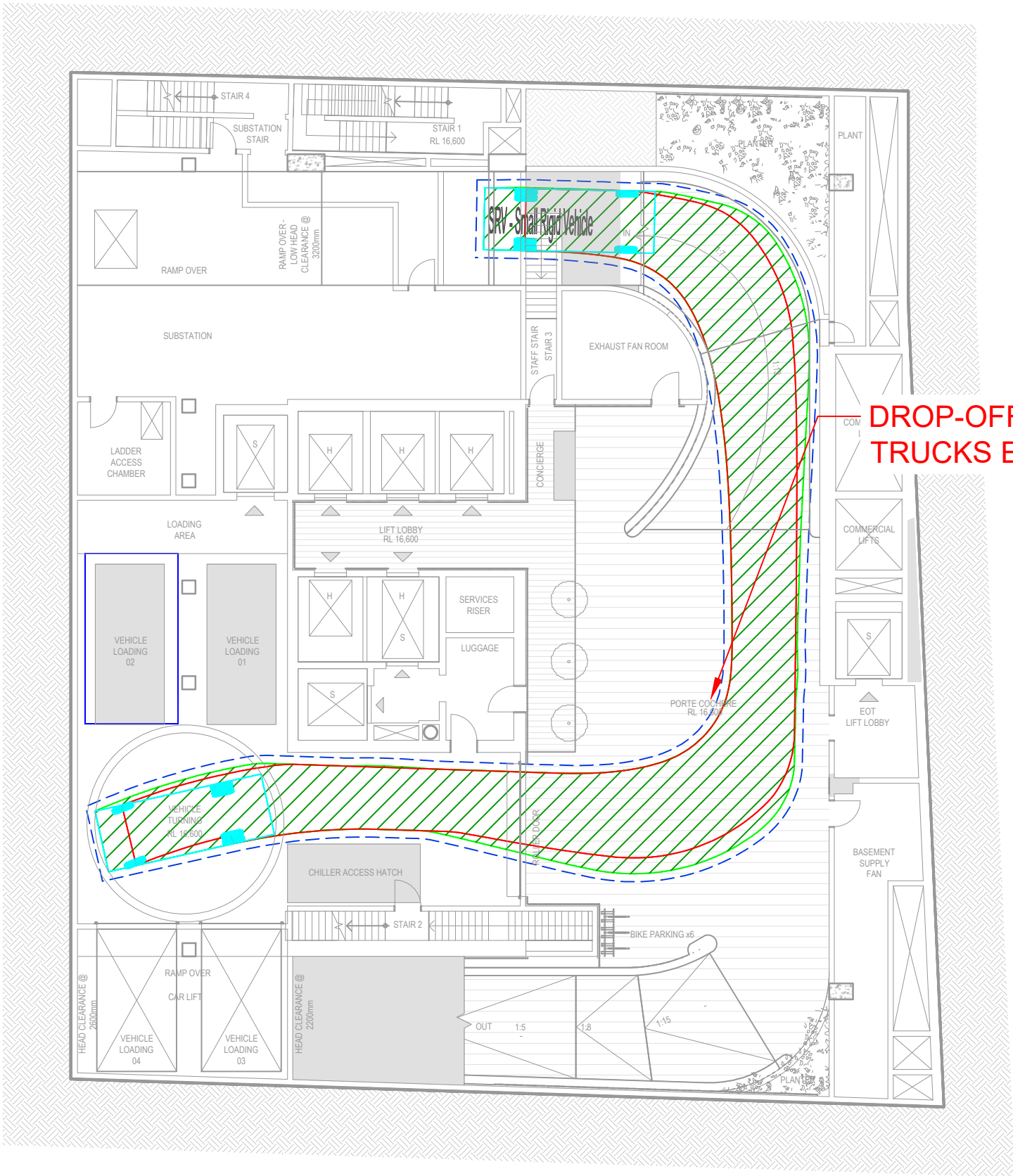
PROJECT	4-6 BLIGH STREET, SYDNEY
TITLE	SWEPT PATH ANALYSIS - GROUND FLOOR AS2890.1 5.2m B99 VEHICLE

DWG No.	22340CAD003
FIGURE 6	
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:250 @A3
REV.	A

Filename: 22340CAD003-221215-SWEPT PATH.dwg Date: 15 December 2022

VEHICLE ENTERING

VEHICLE EXITING



SRV - Small Rigid Vehicle
Overall Length 6400mm
Overall Width 2330mm
Overall Body Height 3500mm
Min Body Ground Clearance 398mm
Track Width 2330mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 7100mm

KEY:
Wheel path Forward Reverse
Body envelope
300mm clearance

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22

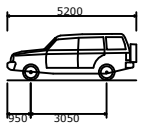
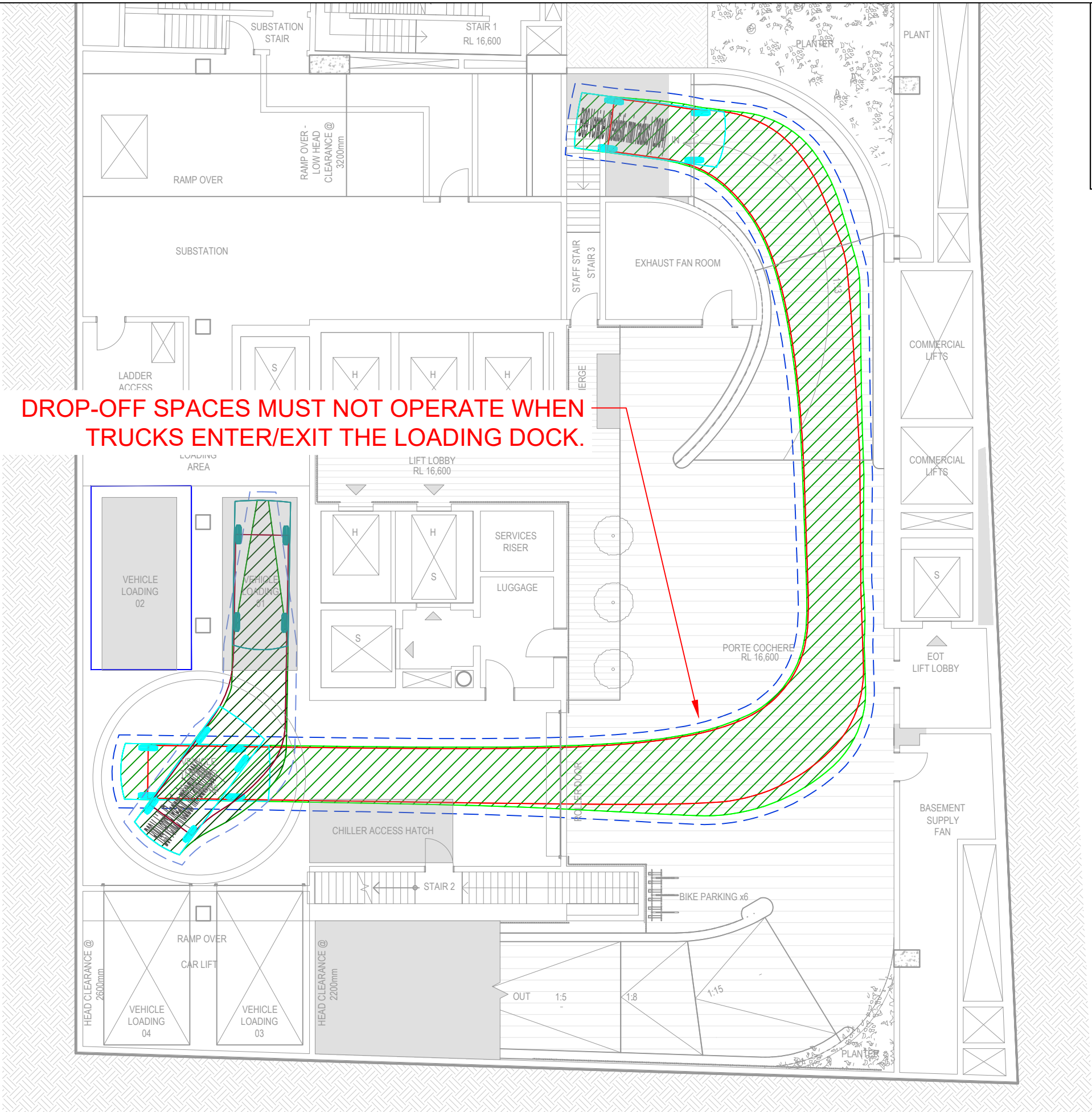


PROJECT
4-6 BLIGH STREET, SYDNEY

TITLE
SWEPT PATH ANALYSIS - BASEMENT 1 (LOADING BAY 2) - REVERSE OUT
SITE SPECIFIC 6.4m SMALL RIGID VEHICLE (WASTE WISE MINI REAR LOADER)

DWG No.	22340CAD003
FIGURE 7	
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:200 @A3
REV.	A

VEHICLE ENTERING



B99 Vehicle (Realistic min radius) (2004)
Overall Length 5200mm
Overall Width 1940mm
Overall Body Height 1878mm
Min Body Ground Clearance 272mm
Track Width 1840mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6250mm

KEY:

	Forward	Reverse
Wheel path	—	—
Body envelope	▨	▨
300mm clearance	- - -	- - -

DROP-OFF SPACES MUST NOT OPERATE WHEN TRUCKS ENTER/EXIT THE LOADING DOCK.

Filename: 22340CAD003-221215-SWEPT PATH.dwg Date: 15 December 2022

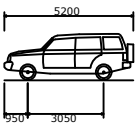
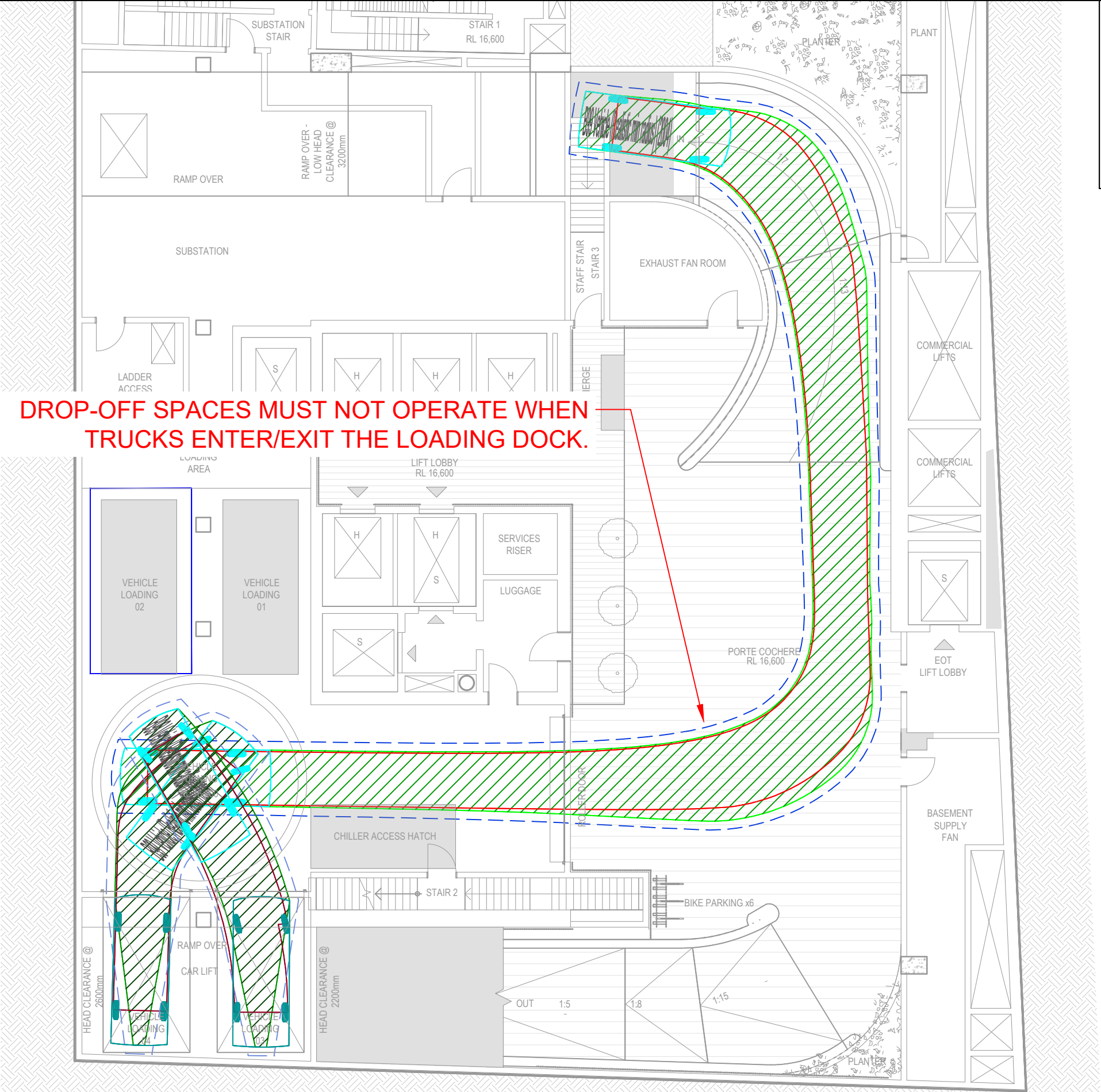
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET, SYDNEY
TITLE	SWEPT PATH ANALYSIS - BASEMENT LEVEL 1 (LOADING BAY 1) - FORWARD IN 5.2m B99 COMMERCIAL VAN VEHICLE

DWG No.	22340CAD003
	FIGURE 8
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:200 @A3
REV.	A

VEHICLE ENTERING



B99 Vehicle (Realistic min radius) (2004)
Overall Length 5200mm
Overall Width 1940mm
Overall Body Height 1878mm
Min Body Ground Clearance 272mm
Track Width 1840mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6250mm

KEY:

	Forward	Reverse
Wheel path	—	—
Body envelope	▨	▨
300mm clearance	- - -	- - -

DROP-OFF SPACES MUST NOT OPERATE WHEN TRUCKS ENTER/EXIT THE LOADING DOCK.

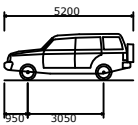
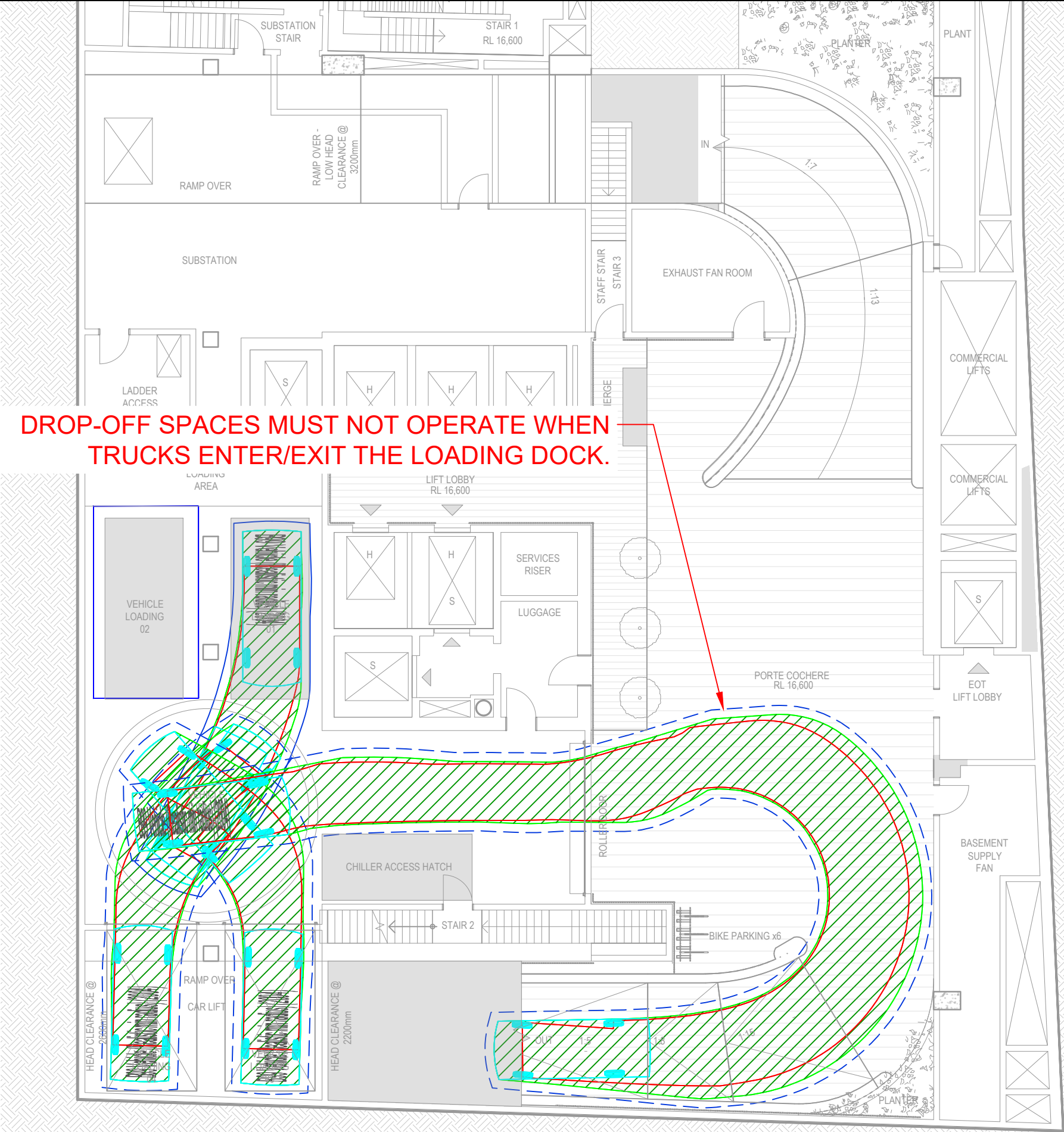
REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET, SYDNEY
TITLE	SWEPT PATH ANALYSIS - BASEMENT LEVEL 1 (LOADING BAY 3 & 4) - FORWARD IN 5.2m B99 COMMERCIAL VAN VEHICLE

DWG No.	22340CAD003
	FIGURE 9
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:200 @A3
REV.	A

VEHICLE EXITING



B99 Vehicle (Realistic min radius) (2004)
Overall Length 5200mm
Overall Width 1940mm
Overall Body Height 1878mm
Min Body Ground Clearance 272mm
Track Width 1840mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6250mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

DROP-OFF SPACES MUST NOT OPERATE WHEN TRUCKS ENTER/EXIT THE LOADING DOCK.

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	JG	OF	KH	15/12/22



PROJECT	4-6 BLIGH STREET, SYDNEY
TITLE	SWEPT PATH ANALYSIS - BASEMENT LEVEL 1 (LOADING BAY 1) - FORWARD OUT 5.2m B99 COMMERCIAL VAN VEHICLE

DWG No.	22340CAD003
FIGURE 10	
DATE STAMP	15 DECEMBER 2022
PROJECT No.	22340
SCALE	1:200 @A3
REV.	A

Appendix E

SIDRA Intersection Results

MOVEMENT SUMMARY

Site: 244 [Bligh St-Hunter St (Ex AM) (Site Folder: General)]

Network: N101 [Bligh St Network (Ex-AM) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Hunter St- E														
4	L2	255	10.3	255	10.3	0.315	21.1	LOS B	7.7	58.6	0.66	0.72	0.66	32.6
5	T1	432	4.4	432	4.4	* 0.434	4.3	LOS A	4.3	31.4	0.22	0.20	0.22	38.2
Approach		686	6.6	686	6.6	0.434	10.5	LOS A	7.7	58.6	0.39	0.39	0.39	35.9
North: Bligh St- N														
7	L2	89	24.7	89	24.7	* 0.910	68.3	LOS E	5.2	44.4	1.00	1.14	1.69	19.0
8	T1	69	9.1	69	9.1	0.206	43.3	LOS D	2.3	17.4	0.93	0.70	0.93	23.4
9	R2	17	25.0	17	25.0	0.206	50.3	LOS D	1.6	12.9	0.95	0.71	0.95	22.3
Approach		176	18.6	176	18.6	0.910	56.7	LOS E	5.2	44.4	0.97	0.92	1.32	20.9
West: Hunter St-W														
11	T1	391	11.6	391	11.6	0.383	6.6	LOS A	6.6	50.3	0.42	0.39	0.42	37.1
12	R2	91	9.3	91	9.3	* 0.383	12.9	LOS A	6.6	50.3	0.54	0.53	0.54	35.6
Approach		481	11.2	481	11.2	0.383	7.8	LOS A	6.6	50.3	0.45	0.42	0.45	36.8
All Vehicles		1343	9.8	1343	9.8	0.910	15.6	LOS B	7.7	58.6	0.48	0.47	0.53	33.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Castlereagh St- S											
P1	Full	660	45.4	LOS E	1.8	1.8	0.97	0.97	66.2	27.0	0.41
East: Hunter St- E											
P2	Full	274	43.7	LOS E	0.7	0.7	0.94	0.94	68.4	32.0	0.47
North: Bligh St- N											
P3	Full	561	45.2	LOS E	1.5	1.5	0.96	0.96	67.5	29.0	0.43
West: Hunter St-W											
P4	Full	443	45.0	LOS E	1.2	1.2	0.96	0.96	69.6	32.0	0.46
All Pedestrians		1938	45.0	LOS E	1.8	1.8	0.96	0.96	67.7	29.4	0.43

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1412 [Bligh St-Bent St (Ex AM) (Site Folder: General)]

Network: N101 [Bligh St Network (Ex-AM) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Bent St-E														
4	L2	148	18.4	148	18.4	0.141	9.0	LOS A	2.5	20.0	0.35	0.58	0.35	33.7
5	T1	518	10.4	518	10.4	* 0.707	0.7	LOS A	2.5	20.0	0.07	0.07	0.07	39.7
Approach		666	12.2	666	12.2	0.707	2.6	LOS A	2.5	20.0	0.14	0.18	0.14	38.8
West: Bent St- W														
11	T1	144	3.6	144	3.6	0.105	3.8	LOS A	1.9	14.0	0.30	0.25	0.30	38.4
12	R2	57	7.4	57	7.4	0.128	10.5	LOS A	1.0	7.8	0.39	0.62	0.39	32.6
Approach		201	4.7	201	4.7	0.128	5.7	LOS A	1.9	14.0	0.33	0.35	0.33	37.3
All Vehicles		867	10.4	867	10.4	0.707	3.3	LOS A	2.5	20.0	0.18	0.22	0.18	38.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Bligh St-S											
P1	Full	332	28.8	LOS C	0.7	0.7	0.89	0.89	50.3	28.0	0.56
East: Bent St-E											
P2	Full	181	44.5	LOS E	0.5	0.5	0.95	0.95	68.4	31.0	0.45
West: Bent St- W											
P4	Full	705	45.5	LOS E	1.9	1.9	0.97	0.97	69.4	31.0	0.45
All Pedestrians		1218	40.8	LOS E	1.9	1.9	0.94	0.94	64.0	30.2	0.47

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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Organisation: TTPP - THE TRANSPORT PLANNING PARTNERSHIP | Licence: NETWORK / 1PC | Processed: Thursday, 15 December 2022 12:04:43 PM

Project: C:\Users\61425\Documents\22340\22340_network peak _2212115.sip9

MOVEMENT SUMMARY

Site: 244 [Bligh St-Hunter St (Ex PM) (Site Folder: General)]

Network: N101 [Bligh St Network (Ex-PM) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Hunter St- E														
4	L2	161	22.2	161	22.2	0.421	38.8	LOS C	6.8	56.4	0.89	0.78	0.89	28.2
5	T1	308	0.3	308	0.3	* 0.534	22.6	LOS B	10.3	72.5	0.73	0.62	0.73	32.1
Approach		469	7.8	469	7.8	0.534	28.1	LOS B	10.3	72.5	0.78	0.67	0.78	30.6
North: Bligh St- N														
7	L2	82	28.2	82	28.2	* 0.933	82.2	LOS F	5.6	49.0	1.00	1.27	1.89	17.2
8	T1	100	11.6	100	11.6	0.612	41.4	LOS C	3.8	29.4	0.92	0.75	0.99	23.8
9	R2	38	0.0	38	0.0	0.245	48.0	LOS D	2.4	17.1	0.94	0.73	0.94	22.5
Approach		220	15.8	220	15.8	0.933	57.8	LOS E	5.6	49.0	0.95	0.94	1.32	20.7
West: Hunter St-W														
11	T1	431	6.1	431	6.1	0.656	10.9	LOS A	9.5	68.3	0.57	0.55	0.57	35.5
12	R2	133	0.8	133	0.8	* 0.656	21.3	LOS B	9.5	68.3	0.78	0.82	0.78	32.8
Approach		563	4.9	563	4.9	0.656	13.3	LOS A	9.5	68.3	0.62	0.61	0.62	34.8
All Vehicles		1253	7.9	1253	7.9	0.933	26.7	LOS B	10.3	72.5	0.74	0.69	0.80	30.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Castlereagh St- S											
P1	Full	756	45.6	LOS E	2.1	2.1	0.97	0.97	66.4	27.0	0.41
East: Hunter St- E											
P2	Full	373	41.1	LOS E	1.0	1.0	0.91	0.91	65.8	32.0	0.49
North: Bligh St- N											
P3	Full	804	45.7	LOS E	2.2	2.2	0.97	0.97	68.0	29.0	0.43
West: Hunter St-W											
P4	Full	600	45.3	LOS E	1.6	1.6	0.96	0.96	69.9	32.0	0.46
All Pedestrians		2533	44.9	LOS E	2.2	2.2	0.96	0.96	67.7	29.6	0.44

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1412 [Bligh St-Bent St (Ex PM) (Site Folder: General)]

Network: N101 [Bligh St Network (Ex-PM) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
East: Bent St-E														
4	L2	112	26.4	112	26.4	0.122	12.7	LOS A	2.3	19.9	0.46	0.62	0.46	31.5
5	T1	429	4.4	429	4.4	* 0.388	6.4	LOS A	6.0	43.6	0.31	0.28	0.31	37.4
Approach		541	8.9	541	8.9	0.388	7.7	LOS A	6.0	43.6	0.34	0.35	0.34	36.6
West: Bent St- W														
11	T1	236	0.4	236	0.4	0.309	4.8	LOS A	3.8	26.9	0.37	0.36	0.37	37.7
12	R2	65	1.6	65	1.6	* 0.309	9.1	LOS A	3.8	26.9	0.42	0.44	0.42	34.9
Approach		301	0.7	301	0.7	0.309	5.7	LOS A	3.8	26.9	0.38	0.38	0.38	37.3
All Vehicles		842	6.0	842	6.0	0.388	7.0	LOS A	6.0	43.6	0.36	0.36	0.36	36.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist m			sec	m	m/sec
South: Bligh St-S											
P1	Full	274	44.7	LOS E	0.7	0.7	0.95	0.95	66.2	28.0	0.42
East: Bent St-E											
P2	Full	169	44.5	LOS E	0.5	0.5	0.95	0.95	68.3	31.0	0.45
West: Bent St- W											
P4	Full	819	45.7	LOS E	2.3	2.3	0.97	0.97	69.6	31.0	0.45
All Pedestrians		1262	45.3	LOS E	2.3	2.3	0.96	0.96	68.7	30.3	0.44

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 244 [Bligh St-Hunter St (PD AM) (Site Folder: General)]

Network: N101 [Bligh St Network (PD-AM) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV veh/h	%				[Veh. veh	Dist] m				
East: Hunter St- E														
4	L2	255	10.3	255	10.3	0.315	21.1	LOS B	7.7	58.6	0.66	0.72	0.66	32.6
5	T1	432	4.4	432	4.4	* 0.434	4.3	LOS A	4.3	31.4	0.22	0.20	0.22	38.2
Approach		686	6.6	686	6.6	0.434	10.5	LOS A	7.7	58.6	0.39	0.39	0.39	35.9
North: Bligh St- N														
7	L2	114	19.4	114	19.4	* 0.981	86.8	LOS F	7.7	62.7	1.00	1.31	1.93	16.7
8	T1	69	9.1	69	9.1	0.190	42.2	LOS C	2.2	16.9	0.92	0.70	0.92	23.7
9	R2	17	25.0	17	25.0	0.190	49.0	LOS D	1.7	12.9	0.94	0.71	0.94	22.6
Approach		200	16.3	200	16.3	0.981	68.1	LOS E	7.7	62.7	0.97	1.04	1.50	19.0
West: Hunter St-W														
11	T1	391	11.6	391	11.6	0.393	7.2	LOS A	6.8	52.1	0.44	0.41	0.44	36.8
12	R2	91	9.3	91	9.3	* 0.393	13.9	LOS A	6.8	52.1	0.57	0.55	0.57	35.3
Approach		481	11.2	481	11.2	0.393	8.5	LOS A	6.8	52.1	0.46	0.43	0.46	36.5
All Vehicles		1367	9.6	1367	9.6	0.981	18.2	LOS B	7.7	62.7	0.50	0.50	0.58	33.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Castlereagh St- S											
P1	Full	660	45.4	LOS E	1.8	1.8	0.97	0.97	66.2	27.0	0.41
East: Hunter St- E											
P2	Full	274	42.8	LOS E	0.7	0.7	0.93	0.93	67.4	32.0	0.47
North: Bligh St- N											
P3	Full	561	45.2	LOS E	1.5	1.5	0.96	0.96	67.5	29.0	0.43
West: Hunter St-W											
P4	Full	443	45.0	LOS E	1.2	1.2	0.96	0.96	69.6	32.0	0.46
All Pedestrians		1938	44.9	LOS E	1.8	1.8	0.96	0.96	67.5	29.4	0.44

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1412 [Bligh St-Bent St (PD AM) (Site Folder: General)]

Network: N101 [Bligh St Network (PD-AM) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Bent St-E														
4	L2	173	15.9	173	15.9	0.156	9.5	LOS A	3.0	23.6	0.38	0.60	0.38	33.2
5	T1	518	10.4	518	10.4	* 0.715	0.7	LOS A	1.7	13.0	0.07	0.07	0.07	39.7
Approach		691	11.7	691	11.7	0.715	2.9	LOS A	3.0	23.6	0.15	0.20	0.15	38.6
West: Bent St- W														
11	T1	144	3.6	144	3.6	0.105	3.8	LOS A	1.9	14.0	0.30	0.25	0.30	38.4
12	R2	57	7.4	57	7.4	0.135	10.9	LOS A	1.1	8.0	0.40	0.63	0.40	32.3
Approach		201	4.7	201	4.7	0.135	5.8	LOS A	1.9	14.0	0.33	0.36	0.33	37.2
All Vehicles		892	10.2	892	10.2	0.715	3.6	LOS A	3.0	23.6	0.19	0.23	0.19	38.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Bligh St-S											
P1	Full	332	28.8	LOS C	0.7	0.7	0.89	0.89	50.3	28.0	0.56
East: Bent St-E											
P2	Full	181	44.5	LOS E	0.5	0.5	0.95	0.95	68.4	31.0	0.45
West: Bent St- W											
P4	Full	705	45.5	LOS E	1.9	1.9	0.97	0.97	69.4	31.0	0.45
All Pedestrians		1218	40.8	LOS E	1.9	1.9	0.94	0.94	64.0	30.2	0.47

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 244 [Bligh St-Hunter St (PD PM) (Site Folder: General)]

Network: N101 [Bligh St Network (PD-PM) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Hunter St- E														
4	L2	161	22.2	161	22.2	0.421	38.8	LOS C	6.8	56.4	0.89	0.78	0.89	28.2
5	T1	308	0.3	308	0.3	* 0.534	22.6	LOS B	10.3	72.5	0.73	0.62	0.73	32.1
Approach		469	7.8	469	7.8	0.534	28.1	LOS B	10.3	72.5	0.78	0.67	0.78	30.6
North: Bligh St- N														
7	L2	106	21.8	106	21.8	* 0.975	97.4	LOS F	8.1	67.4	1.00	1.38	2.01	15.5
8	T1	100	11.6	100	11.6	0.525	37.6	LOS C	3.3	25.9	0.89	0.69	0.89	24.7
9	R2	38	0.0	38	0.0	0.210	44.7	LOS D	2.6	18.0	0.92	0.73	0.92	23.3
Approach		244	14.2	244	14.2	0.975	64.7	LOS E	8.1	67.4	0.94	0.99	1.38	19.5
West: Hunter St-W														
11	T1	431	6.1	431	6.1	0.721	16.9	LOS B	11.1	79.9	0.62	0.66	0.70	33.5
12	R2	133	0.8	133	0.8	* 0.721	26.9	LOS B	11.1	79.9	0.84	0.91	0.89	31.3
Approach		563	4.9	563	4.9	0.721	19.2	LOS B	11.1	79.9	0.67	0.72	0.75	33.0
All Vehicles		1277	7.7	1277	7.7	0.975	31.2	LOS C	11.1	79.9	0.76	0.75	0.88	29.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Castlereagh St- S											
P1	Full	756	45.6	LOS E	2.1	2.1	0.97	0.97	66.4	27.0	0.41
East: Hunter St- E											
P2	Full	373	38.4	LOS D	0.9	0.9	0.88	0.88	63.1	32.0	0.51
North: Bligh St- N											
P3	Full	804	45.7	LOS E	2.2	2.2	0.97	0.97	68.0	29.0	0.43
West: Hunter St-W											
P4	Full	600	45.3	LOS E	1.6	1.6	0.96	0.96	69.9	32.0	0.46
All Pedestrians		2533	44.5	LOS E	2.2	2.2	0.96	0.96	67.3	29.6	0.44

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

MOVEMENT SUMMARY

Site: 1412 [Bligh St-Bent St (PD PM) (Site Folder: General)]

Network: N101 [Bligh St Network (PD-PM) (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 100 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Bent St-E														
4	L2	136	21.7	136	21.7	0.144	12.8	LOS A	2.9	23.8	0.46	0.63	0.46	31.4
5	T1	429	4.4	429	4.4	* 0.388	6.4	LOS A	6.0	43.6	0.31	0.28	0.31	37.4
Approach		565	8.6	565	8.6	0.388	7.9	LOS A	6.0	43.6	0.35	0.36	0.35	36.4
West: Bent St- W														
11	T1	236	0.4	236	0.4	0.311	4.8	LOS A	3.8	26.9	0.37	0.36	0.37	37.7
12	R2	65	1.6	65	1.6	* 0.311	9.2	LOS A	3.8	26.9	0.43	0.45	0.43	34.9
Approach		301	0.7	301	0.7	0.311	5.7	LOS A	3.8	26.9	0.38	0.38	0.38	37.3
All Vehicles		866	5.8	866	5.8	0.388	7.2	LOS A	6.0	43.6	0.36	0.37	0.36	36.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Bligh St-S											
P1	Full	274	44.7	LOS E	0.7	0.7	0.95	0.95	66.2	28.0	0.42
East: Bent St-E											
P2	Full	169	44.5	LOS E	0.5	0.5	0.95	0.95	68.3	31.0	0.45
West: Bent St- W											
P4	Full	819	45.7	LOS E	2.3	2.3	0.97	0.97	69.6	31.0	0.45
All Pedestrians		1262	45.3	LOS E	2.3	2.3	0.96	0.96	68.7	30.3	0.44

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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