PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2023/1374

Date: 06-Nov-2023

Queensland Government

Traffic Engineering Report

Proposed Commercial Development

At Albert Street Cross River Rail

On behalf of CRR Albert Street Pty Ltd as trustee for
CRR Albert Street Trust

About TTM

For 30 years, we've been at the centre of the Australian development and infrastructure industry. Our unique combination of acoustics, data, traffic and waste services is fundamental to the success of any architectural or development project.

We have over 50 staff, with an unrivalled depth of experience. Our industry knowledge, technical expertise and commercial insight allow us to deliver an exceptional and reliable service.

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Revision Record

No.	Author	Reviewed/Approved	Description	Date
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4.				

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1. Introduction

1.1. Purpose

TTM Consulting has been engaged by CRR Albert Street Pty Ltd as trustee for CRR Albert Street Trust to prepare a traffic engineering report investigating a proposed commercial development located at 101 Albert Street, Brisbane. It is understood that a Development Application (DA) will be lodged with Economic Development Queensland (EDQ).

1.2. Scope

This report investigates the transport aspects associated with the proposed development. The scope of the transport aspects investigated includes:

- Parking supply required to cater for development demand.
- Parking layout to provide efficient and safe internal manoeuvring.
- Identification of likely traffic impact of development on the public road network.
- Access configuration to provide efficient and safe manoeuvring between the site and the public road network.
- Internal facilities to provide for pedestrian and cyclist operation.
- Access to suitable level of public transport.

To assess the proposed transport arrangements, the development plans have been assessed against the following documents:

- Albert Street Cross River Rail Priority Development Area (PDA) Development Scheme (December 2019):
  - *Schedule 2 – Maximum Car Parking Rates.*

  Note: The Albert Street Cross River Rail PDA Development Scheme refers to the Brisbane City Council City Plan 2014 for guidance where standards are not otherwise specified.
- Brisbane City Council (BCC) Brisbane City Plan 2014 (City Plan) Planning Scheme, specifically:
  - *Bicycle Network Overlay Code.*
  - *Infrastructure Design Planning Scheme Policy* (Infrastructure Design PSP).
  - *Refuse Planning Scheme Policy* (Refuse PSP).
  - *Road Hierarchy Overlay Code.*
  - *Streetscape Hierarchy Overlay Code.*

- *Transport, Access, Parking and Servicing Code* (TAPS Code).
- *Transport, Access, Parking and Servicing Planning Scheme Policy* (TAPS PSP).

- *Australian Standards for Parking Facilities* (AS2890 series), namely:
  - *AS2890.1:2004 – Part 1: Off-street car parking* (AS2890.1).
  - *AS2890.2:2002 – Part 2: Off-Street Commercial Vehicle Facilities (AS2890.2).*
  - *AS2890.3:2015 – Part 3: Bicycle parking* (AS2890.3).
  - *AS2890.6:2009 – Part 6: Off-street parking for people with disabilities* (AS2890.6).
- Department of Transport and Main Roads *'Road Planning and Design Manual'.*
- Austroads '*Guide to Road Design*'.
- Austroads '*Guide to Traffic Management*'.

1.3. Site Location

The subject site is located at 101 Albert Street, Brisbane, as shown in Figure 1.1 and Figure 1.2. Key site characteristics from a planning perspective include:

- A total site area of 2,500m².
- Located within the EDQ Albert Street Cross River Rail PDA.

The site is currently occupied by a temporary warehouse building used as part of the Cross River Rail Albert Street Station constructed. The subject site has road frontages to Mary Street, as well as the future Albert Street Station development (Green Spine), with access to the site currently achieved from Mary Street.

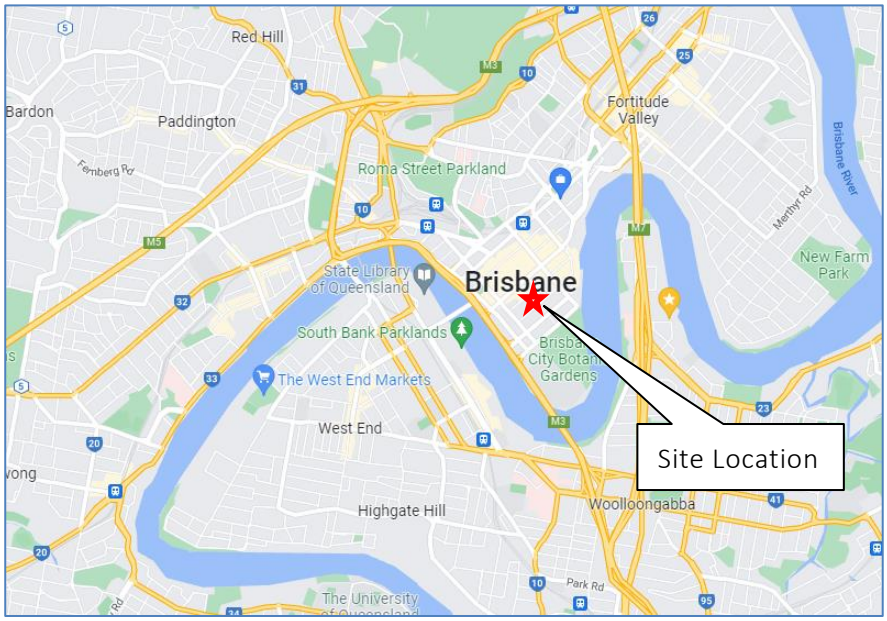


Figure 1.1: Site Location – Broader Context *Source: Google Maps (2022)*

Figure 1.2: Site Location – Local Context *Source: Nearmap Imagery (2022)*

1.4. Development Profile

The proposal involves demolition of the existing buildings provided over the site and the construction of a 40-storey commercial tower with a total GFA of 52,755m². The tower uses consist of office, food & drink outlet and retail uses.

It is noted that, for the purposed of the transport assessment, the applicable GFA for the various uses is 51,617m^2, as outlined in the Development Summary provided by Architectus, included in **Appendix A**.

On this basis, the proposed land uses for this development are summarised in Table 1.1.

Table 1.1: Proposed land uses

Use	Area/Qty
Office Uses	50,318m² GFA
Retail/Food & Drink Uses	1,299m² GFA
TOTAL COMMERCIAL USES	**51,617m² GFA**

A copy of the development plans, prepared by Architectus, is included in **Appendix A**.

1.5. Parking

The development plan includes the following parking provisions:

- 38 staff spaces, including 2 PWD spaces, which are located in Basement Level 02.
- 258 employee bicycle spaces, which are located on the Basement Mezzanine Level.
- 20 visitor bicycle spaces, which are located on the Ground Level, adjacent to the Albert Street Cross River Rail Station.

Further details regarding the proposed car and bicycle parking provisions are included in Section 3.

1.6. Access

The development plan includes the following access arrangements:

- A 7.5m Modified Type B1 access from Mary Street, accommodating access for cars and service vehicles, with all movements permitted.
- Pedestrian and cyclist access to the Albert Street and Mary Street frontages via footpath linkages.

Further details regarding the proposed access arrangements are included in Section 4.

1.7. Servicing

The development plan allows regular access for vehicles up to the size of an MRV/RCV. Formal loading provisions are provided on Basement Level 01, as follows:

- 1 MRV/RCV bay
- 1 MRV bay
- 2 SRV bays
- 6 VAN bays

Further details regarding the proposed servicing arrangements are included in Section 5.

2. Site Travel Environment

2.1. The Road Network

The majority of roads in the immediate vicinity of the site are administered by BCC. The hierarchy and characteristics of roads in the immediate vicinity of the site are shown below in Table 2.1.

Table 2.1: Local Road Hierarchy

Road	Speed Limit	Configuration	Classification	Authority
Edward Street	40kph	One-way (southbound), 2-4 lanes, plus dedicated bicycle lanes and parking	Suburban Road	BCC
George Street	40kph	One-way (northbound) north of Charlotte Street, two-way south of Charlotte Street, 3-4 lanes, plus parking	Suburban Road	BCC
Mary Street	40kph	Two-way, 2-4 lanes, plus parking	Neighbourhood Road	BCC
Albert Street	40kph	Two-way, 1-3 lanes, plus parking	Neighbourhood Road	BCC
Margaret Street	40kph	One-way (eastbound), 3-4 lanes, plus parking/bus stops	Suburban Road	BCC
Charlotte Street	40kph	One-way (westbound), 3-4 lanes, plus parking/bus stops	Neighbourhood Road	BCC

The majority of the major intersections surrounding the subject site operate under signal control.

2.2. Road Planning

Interactive Mapping

TTM has reviewed the BCC *Local Government Infrastructure Plan* (LGIP) and Queensland Government *Development Assessment Mapping System* (DAMS) for planning of the future road network in the vicinity of the subject site. Both the BCC LGIP and the Queensland Government DAMS do not specify any works in the vicinity of the site which will impact upon or be impacted by the proposed development.

Cross River Rail

The site is located adjacent to the 'Albert Street Station' of the proposed Queensland Government Cross River Rail project, which will be positioned between the intersections of Albert Street with Mary Street and Charlotte Street.

The Cross River Rail Albert Street Station results in the permanent road closure along the Albert Street frontage, with public transport infrastructure works associated with the Cross River Rail Albert Street Station provided along the Mary Street frontage.

Mary Street Vision

A concept brief has been released regarding the "Mary Street Vision", outlining a concept for upgrades to Mary Street to improve pedestrian connectivity. BCC notes that Mary Street plays an important role in connecting several key destinations in the city centre, along with connecting new developments, including the new Albert Street Station, Queen's Wharf Brisbane and Waterfront Brisbane. Currently, Mary Street is provided with narrow, inconsistent footpaths with a range of surface types and street elements.

The Mary Street Vision, prepared by Brisbane City Council, proposes changes to the configuration of Mary Street to enhance pedestrian capacity and amenity between George Street and Eagle Street. Figure 7 of the Mart Street Vision provides a diagram of possible changes at the Albert Street / Mary Street intersection, which includes a bus stop adjacent to the subject site, per Figure 2.1 below. The diagram also indicates a kerb buildout through the intersection.

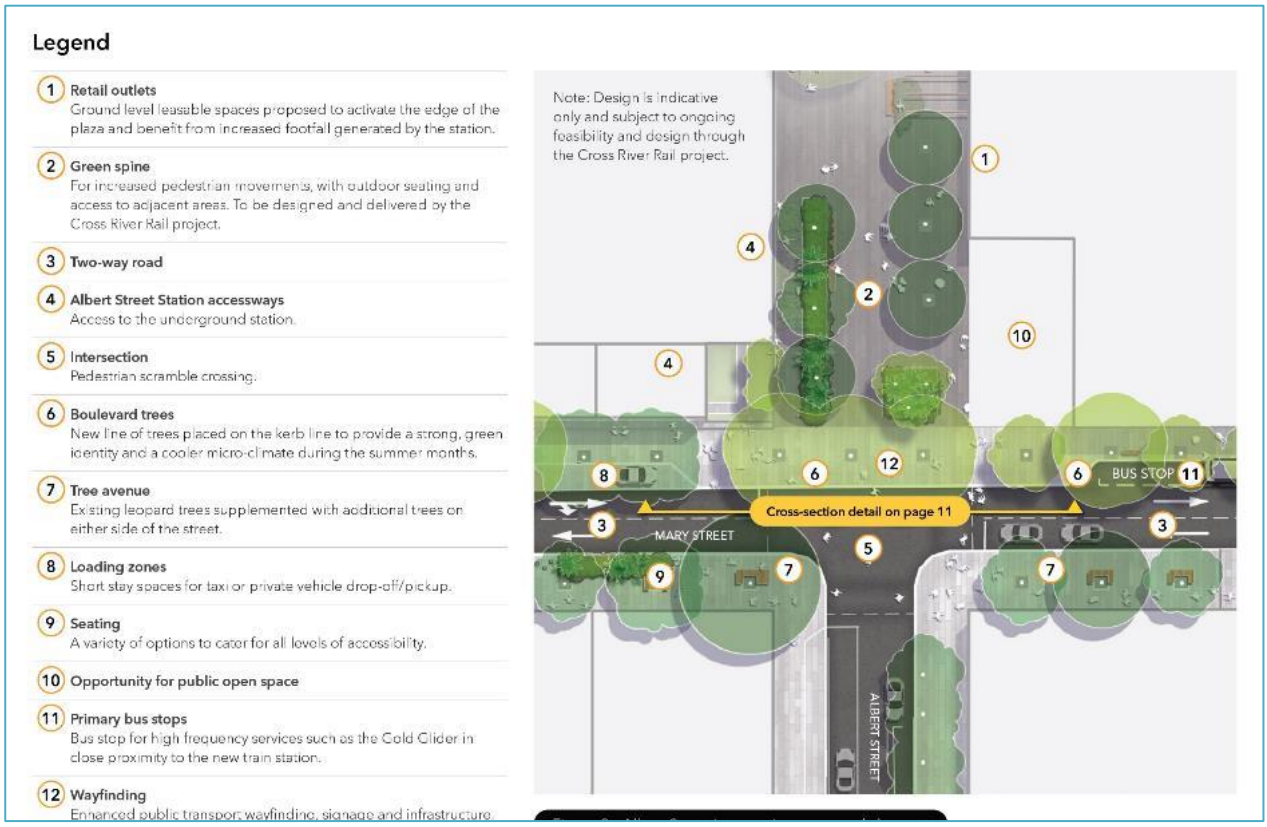


Figure 2.1: Excerpt from BCC's Bicycle Overlay *Source: Brisbane City Centre Master Plan 2014*

Whilst the proposed changes to the Mary Street frontage are still a "Vision" and not designed in any detail, TTM notes that there is approximately 30m between the edge of the proposed driveway and the pedestrian crossing at the Mary Street / Albert Street intersection, which is considered adequate to accommodate a single bus bay generally in the location indicated in the Mary Street Vision.

Based on this, infrastructure for bus stops on the Mary Street frontage will need to be cognisant of the access requirements for the subject site, such that they do not prejudice access for the site.

2.3. Public and Active Transport

Train

Central Train Station is located approximately 800m walk to the north of the subject site. This station services all train lines as part of the South-East Queensland Train Network. The station generally caters for approximately 750 trains on a typical weekday (two-way), with average peak hour frequencies of 1 train every minute.

It is noted that the site is located adjacent to the future Albert Street Cross River Rail Station that is under construction on Albert Street. The station is expected to service up to 67,000 passengers per weekday by 2036.

Buses

Given the site's location within the CBD area, there is a vast number of bus stops and stations which provide convenient access to the full span of Translink bus routes which service the Brisbane metropolitan area. In particular,

- Queen Street Bus Station is located approximately 400m walk to the northwest of the site. This station services in excess of 35 different bus routes, with in the order of 1,900 buses/services using this station on a typical day.
- King George Square Busway Station is located approximately 450m walk to the northwest of the subject site. This station services an additional 11 bus routes (not counting routes which also stop at Queen Street Bus Station), with in the order of 1,700 buses/services using this station on a typical day.

Ferry

North Quay Ferry Terminal is located approximately 550m walk to the west of the subject site. This ferry terminal services both the CityCat and CityHopper routes both upstream and downstream. The terminal generally caters for approximately 180 ferry services on a typical weekday (two way), with average peak hour frequencies of a ferry every 5 minutes.

Pedestrians

The subject site is adequately served with respect to pedestrian facilities, with pedestrian pathways on both sides of the road for all roads within the CBD. Formal kerb ramps and signalised crossings are also provided at all nearby signal-controlled intersections.

Pedestrian access to the site will be facilitated via the Albert Street and Mary Street frontages, with the Albert Street frontage to be integrated with the future Albert Street Cross River Rail Station, allowing for multiple pedestrian approaches to the site.

Cyclists

Mary Street and Albert Street are identified as a 'Secondary Cycle Routes' under the City Plan Bicycle Network Overlay Code. All streets provide on-road Bicycle Awareness Zone (BAZ) signage. The site is also located in close proximity to the Bicentennial Bikeway running along the river (accessible via the bicycle path running adjacent to North Quay), which is the primary bicycle and pedestrian route to/from the Brisbane CBD. The City Reach Boardwalk is also located 400m northeast of the site, connecting to Eagle Street Pier and the New Farm Riverwalk.

A summary of the cycle routes in the vicinity of the subject site are provided in Figure 2.2.

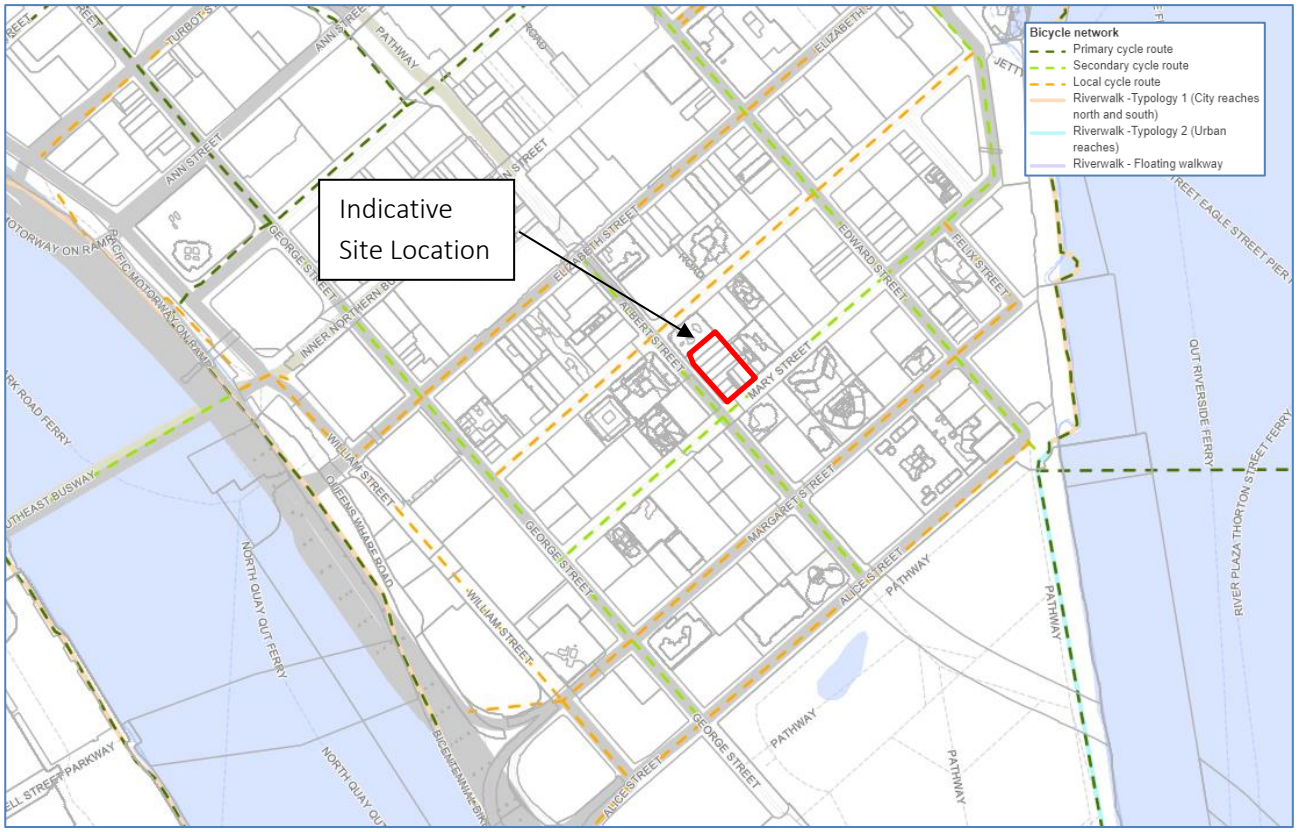


Figure 2.2: Excerpt from BCC's Bicycle Overlay *Source: BCC Interactive Mapping (2022)*

Conclusion

Overall, the subject site is ideally located in close proximity to a significant volume and range of public and active transport facilities.

3. Parking Arrangements

3.1. Parking Supply

3.1.1. EDQ Parking Supply Requirements

Table 5 of the *Albert Street Cross River Rail PDA Development Scheme* indicates that all non-residential uses (inclusive of the proposed Centre Activities uses for the proposed development) within the PDA provide a maximum car parking supply of 1 space per 200m² GFA.

The TAPS PSP also notes the following additional parking supply provisions:

- A minimum of 1 PWD space per 50 standard parking spaces is provided.

3.1.2. Proposed Provisions

The maximum car parking allowance for the proposed development is shown in Table 3.1.

Table 3.1: EDQ Parking Supply Requirements

Land Use	EDQ Requirement	Extent	Requirement	Provision
Office	1 space per 200m² GFA (max)	50,318m² GFA	252 parking spaces (max)	38 car spaces plus 2 motorcycle spaces (incl. 2 PWD bays & 2 small car bays)
Food & Drink Outlet		1,299m² GFA	6 parking spaces (max)	
Retail				
Total		**51,617m² GFA**	**258 parking spaces (max)**	**38 car spaces plus 2 motorcycle spaces (incl. 2 PWD bays & 2 small car bays)**

As seen in Table 3.1, a maximum supply of 258 parking spaces would be permitted under the *Albert Street Cross River Rail PDA Development Scheme* for the proposed development. The scheme proposes to provide 38 car spaces and 2 motorcycle spaces, which is within the maximum requirement.

2 PWD parking spaces will be provided as part of the development parking supply, which exceeds the BCC TAPS PSP requirements for PWD parking, and so is considered suitable in this instance.

It is proposed that 2 of the 38 car parking spaces will be designated as small car bays, which equates to 5.3% of reserved car parking provision and is within the 20% permitted by BCC TAPS PSP.

Overall, the parking supply for the proposed development complies with the requirements set out in the *Albert Street Cross River Rail PDA Development Scheme* and the TAPS PSP and is therefore considered acceptable.

3.2. Bicycle Parking Provisions

Cyclist access to the bicycle parking area will be facilitated via the entry ramp to Mary Street, with End-of-Trip-Facilities (EOTF) provided as part of the Basement Mezzanine Level. An assessment of the TAPS PSP bicycle parking/EOTF requirements is provided as follows.

Employee Bicycle Facilities

A summary of the employee bicycle parking requirements for the proposed development (in line with Table 21 of the TAPS PSP) is provided in Table 3.2.

Table 3.2: Bicycle Parking Requirements – Employees

Land Use	TAPS PSP Provision	Extent	Requirement	Provision
Office (Employee):	1 bicycle space per 200m² *	50,318m² GFA	252 bicycle spaces	258 employee bicycle spaces
Retail/Food & Drink Outlet (Employee):	1 bicycle space per 200m² ^	1,299m² GFA	6 bicycle spaces	
Total			**258 bicycle spaces**	**258 employee bicycle spaces**

*Where total GFA exceeds 2,500m².

^Where total GFA exceeds 1,000m², but less than 2,500m²

A summary of the employee EOTF requirements for the proposed development (in line with Table 21 of the TAPS PSP and the bicycle parking provisions for employees in line with Table 3.2) is provided in Table 3.3.

Table 3.3: EOTF Requirements – Employees

Bicycle Parking Component	TAPS PSP Provision	Extent	Requirement
Office (Employee):	2 lockers per 1 bicycle space* 2 showers + 1 shower per 10 bicycle spaces*	252 bicycle spaces~	504 lockers 28 shower cubicles
Retail/Food & Drink Outlet (Employee):	2 lockers per 1 bicycle space^ 2 showers^	6 bicycle spaces~	12 lockers 2 shower cubicles
Total		**258 bicycle spaces**	**516 lockers** **30 shower cubicles**

*Where total GFA exceeds 2,500m².

^Where total GFA exceeds 1,000m², but less than 2,500m²

~Per the employee bicycle parking supply required for each use as per Table 3.2.

Employee bicycle parking and the EOTF provision for the proposed development will take cognisance of the requirements set out in Table 3.2 and Table 3.3 respectively.

Visitor Bicycle Facilities

A summary of the employee bicycle parking requirements for the proposed development (in line with Table 21 of the TAPS PSP) is provided in Table 3.4.

Table 3.4: Bicycle Parking Requirements – Visitors

Land Use	TAPS PSP Provision	Extent	Requirement	Provision
Office (Visitors)	1 bicycle space per 500m² *	50,318m² GFA	101 bicycle space	20 bicycle spaces
Retail/Food & Drink Outlet (Visitors)	1 bicycle space per 500m² ^	1,299m² GFA	3 bicycle space	
Total			**104 bicycle spaces**	**20 bicycle spaces**

*Where total GFA exceeds 2,500m².

^Where total GFA exceeds 1,000m², but less than 2,500m²

Whilst the proposed development scheme requires 104 visitor bicycle parking spaces, TTM does not consider this requirement to be reflective of the visitor bicycle parking demands for offices within the CBD, based on the following:

- The primary cyclist demand for offices within the Brisbane CBD is from employees travelling to/from work in the peak hours.
- Considering the increase in availability of video conferencing software, the majority of visitors demands for offices in the CBD area will generally be generated within the CBD from nearby buildings.
- Given the short walking distances between offices in the CBD, there will be an increased likelihood that visitors will simply walk to/from the site.
- Visitors from locations within the fringe-CBD area/City Frame are more likely to travel to/from a site via a rideshare option, such as Uber, given convenience and travel time are typical factors in choosing travel options for visiting an office building for meetings, etc.
- Given the increase in E-Scooters in the CBD area, it is reasonable to assume a significant proportion of visitors will use this mode of transport to travel short distances between office buildings, as opposed to using bicycles, resulting in a decreased demand for visitor bicycle parking.

  It is noted that e-scooters/bicycles do not require dedicated EOTF, given e-scooters/bicycles are parked on-street to allow for the next customer to use them.
- The development is located in close proximity to a number of public transport options, including the future Cross River Rail – Albert Street station, a major transport hub, allowing for a convenient alternative transport option to/from the site.

Considering these factors, TTM considers it reasonable to expect that the demand for visitor bicycle parking will be negligible for this type of development in the CBD.

As such, the development proposes 20 visitor bicycle spaces on the ground level, which is considered adequate to accommodate the expected visitor bicycle parking demands generated by the development.

3.3. Parking Layout

Table 3.5 identifies the characteristics of the proposed parking layouts with respect to the TAPS PSP design provisions.

Table 3.5: TAPS PSP Parking Design Requirements

Design Aspect	TAPS PSP Provision	Proposed Provision	Compliance
Parking Space Length:			
• Standard Space (Class 1)	5.4m (min)	5.4m (min)	TAPS PSP Compliant
• PWD Space (Class 5)	5.4m (min)	5.4m (min)	TAPS PSP Compliant
• Parallel Space – open ended bays	5.4m (min)	6.5m (min)	TAPS PSP Compliant
• Parallel Space – closed-ended bays	6.6m (min)	6.4m (min)	Performance Solution
• Motorcycle Space	2.5m (min)	2.5m (min)	TAPS PSP Compliant
Parking Space Width:			
• Standard Space (Class 1)	2.4m (min)	2.4m (min)	TAPS PSP Compliant
• PWD Space (Class 5)	2.4m + 2.4m 'Shared Area'	2.4m + 2.4m 'Shared Area'	TAPS PSP Compliant
• Parallel Space	2.4m (min)	2.4m (min)	TAPS PSP Compliant
• Motorcycle Space	1.35m (min)	1.35m (min)	TAPS PSP Compliant
Aisle Width:			
• Parking Aisle	6.2m (min)	6.0m (min)	Performance Solution
• Circulation Road/Ramp	6.2m (min)	6.5m (min)	TAPS PSP Compliant
Parking Envelope Clearance	Spaces are 0.3m clear of wall	Spaces are 0.3m clear of wall	TAPS PSP Compliant
Blind Aisle Extension	2.0m aisle extension or 8.0m widening of aisle	10.0m widening of aisle	TAPS PSP Compliant
Maximum Gradients:			
• Parking Aisles	1:15 (6.7%)	Flat	TAPS PSP Compliant
• Parking Space	1:20 (5%)	Flat	TAPS PSP Compliant
• PWD Space	1:40 (2.5%)	Flat	TAPS PSP Compliant
• Ramps			
– Cars	1:6 (16.7%)	1:6 (16.7%)	TAPS PSP Compliant
– Shared Cars & Service Vehicles	1:6.5 (15.4%)	1:6.5 (15.4%)	TAPS PSP Compliant Further commentary below
Maximum Transitions (Per AS2890.1)	1:8 (12.5%) summit 1:6.67 (15.0%) sag	1:8 (12.5%) summit & sag	TAPS PSP Compliant
Height Clearance:			
• General Minimum	2.3m	2.3m	TAPS PSP Compliant
• Over PWD Space	2.5m	2.5m	TAPS PSP Compliant

The development parking layouts are generally consistent with the provisions of the TAPS PSP. Further details in relation to deemed compliance of required provisions, or justification for design aspects resolved with performance solutions, are provided below.

Parallel Bay Lengths – Closed-Ended Bays

It is acknowledged that the TAPS PSP requires a 6.6m bay length provision for parallel spaces that are obstructed at both ends. In this instance, 2 spaces on the car parking level are provided with columns at both ends, but with a length of 6.4m. As such, these spaces have been allocated as small car bays, with the provision considered suitable for small car access, based on swept path tests for these spaces to ensure accessibility.

Parking Aisle Widths

The development proposes the majority of parking spaces to be accessed from a reduced aisle width of 6.0m. Whilst slightly below the TAPS PSP requirements (6.2m), the provision is in accordance with the minimum requirement of AS2890.1, which requires a minimum 5.8m parking aisle width for Class 1 carparks. Furthermore, the 5.8m minimum width detailed in AS2890.1 is a suitable provision for manoeuvring into/out of 2.4m parking spaces. As such, the proposed aisle widths are provided in accordance with the requirements of AS2890.1, and so are considered 'fit for purpose'..

Further Commentary – Ramp Gradients

In order to properly activate the ground level and provide pedestrian activation on Albert Street (whilst maintaining suitable vertical height clearance for service vehicles), a maximum gradient of 1:6.5 (15.3%) is provided on the circulation ramp with maximum transitions of 1:20 (5.0%) provided along the ramp. These maximum grades and transitions (i.e. 15.3% and 5.0%) satisfy the requirements outlined in AS2890.2:2018-Parking Facilities Part 2: Off-Street Commercial Vehicle Facilities (AS2890.2) and the maximum transitions requirements outlined in BCC's TAPS PSP, and have been tested using Autotrack software to confirm the transitions are adequate to prevent ground clearance issues (i.e. scraping/bottoming out) for MRV's/RCV's.

It is noted that the size of properties within the CBD creates an issue with providing ramps at a maximum gradient of 1:10 (10%). In the case of the subject site, changing the ramp to a maximum gradient of 1:10 (10%) would result in an increase in ramp length of approximately 18.3m, which would either push the ramp into the neighbouring property or run further into the site through the bends, significantly impacting on the ability to provide a functional internal loading dock layout.

In addition, it should be noted that a maximum gradient of 1:6.5 (15.4%) on circulation ramps facilitating access by service vehicles has been accepted by BCC on numerous other mixed-use developments within the CBD/fringe area (Brisbane Square and Riverside Centre are two major loading docks that have ramps of 1:6.5 or steeper). Whilst AS2890.2 doesn't specifically refer to 1:6.5 being acceptable for refuse collection vehicles, it does specify that a fully loaded Articulated Vehicle can negotiate 1: 6.5, therefore it would be reasonable to assume that it is acceptable for a refuse collection vehicle.

Conclusions

Overall the proposed car parking layout is designed generally in accordance with the TAPS PSP, apart from some design performance solutions which are considered to be fit-for-purpose.

4. Access Arrangements

The development plan includes a 7.5m Modified Type B1 access to Mary Street, adjacent to the property boundary with 110 Mary Street. This access will accommodate access to the 38 car parking spaces and access for service vehicles up to an MRV/RCV. This driveway provides all movements access.

It is noted that the development provides an access control point (boom gates) on the ground level, prior to the ramp to Basement Level 1. This provision is considered necessary in the CBD area to control access to the car parking, restricting access to building employees/contractors only. The entry boom gate is located approximately 15m from the property boundary within the site, allowing for at least 2 vehicles to queue within the property boundary, which is considered suitable for a car park with 38 car spaces generating up to 16vph (approximately 1 vehicle every 3.5 minutes). Lanes at the boom gate are provided at a minimum width of 3.0m between kerbs, while the gradient across the standing area at the boom gate is 1:20 (5%), per the BCC TAPS PSP requirements.

The design provisions of the Mary Street access and the respective provisions of the TAPS PSP are detailed in Table 4.1.

Table 4.1: Mary Street Access Arrangements

Design Aspect	TAPS PSP Provision	Proposed Provision	Compliance
Width / Crossover Type to accommodate: • Cars[1 2] • Service vehicles[1 3]	 6.0-9.0m Type B2 7.0m Type B2	7.5m Modified Type B1	Performance Solution Further commentary below
Distance from: • minor intersection[1] • major intersection[1] • adjacent driveway[1]	 10m (min) 20m (min) 3m (min)	 25m (min) (Albert Street) 170m (min) (Edward Street) 0m (min) (110 Mary Street)	 TAPS PSP Complaint TAPS PSP Complaint Performance Solution
Sight Distance[1 4]	55m (desirable) 35m (minimum)	Minimum 35m in each direction	TAPS PSP Complaint
Driveway Sight Splays	2.0m wide x 2.0m deep (on each side)	2.0m wide x 2.0m deep (on exit side)	Performance Solution
Minimum Queuing Provisions[1]	2 vehicles / 12m	2 vehicles / 12m to boom gates	TAPS PSP Complaint
Maximum Driveway grade	1:20 (5%) maximum within first 6m	1:16 (6.25%) maximum within first 6m	Performance Solution

[1] Based on Mary Street being classed as a 'minor road' and speed limit of 40km/h.
[2] Based on the access servicing 38 low turnover car parking spaces.
[3] Based on the access servicing service vehicles up to the size of an MRV
[4] Based on the AS2890.1 requirements for 40kph road speed

In general, the proposed Mary Street access arrangements are generally consistent with the provisions of the TAPS PSP. Further details in relation to deemed compliance of required provisions, or justification for design aspects resolved with performance solutions, are provided below.

Crossover Type

The development scheme proposes a 7.5m Modified Type B1 crossover to Mary Street for general traffic and service vehicle access. Whilst the crossover width satisfies the BCC TAPS PSP requirements, the crossover splay provisions differ from the requirements of the BCC TAPS PSP

However, it is noted that the requirement for B2 flares is generally nominated on the basis that cars will turn in and out of the access from the kerbside lane (as a worst-case scenario). In this instance, the kerbside lane is provided with loading bays at/adjacent to the 110 Mary Street site, with the lane ending at the pedestrian crossing located 40m east of the proposed development access. As such, cars will not be turning into/out of the driveway from the kerbside lane, but instead from a much wider line.

It is noted that access along the Mary Street frontage is restricted to the proposed location based on the Cross River Rail development and the public transport infrastructure works associated with the Cross River Rail Albert Street Station along the Mary Street frontage. On this basis, B2 flares are not considered necessary and so instead modified Type B1 flares are proposed. Swept paths prepared by TTM, included in Appendix B (TTM Drawing Ref: 22BRT0276-01), demonstrate the suitability of the proposed crossover design for design service vehicle access.

Based on this assessment, the proposed 7.5m Modified Type B1 crossover is a suitable to satisfy the practical operation of the access.

Driveway Separation from Adjacent Property

The proposed access crossover for the development scheme is located immediately adjacent to the 110 Mary Street access driveway. Whilst this does not strictly comply with the TAPS PSP requirements, it is noted that the proposed access location is the only achievable access point, given the permanent road closure along the Albert Street frontage due to the Cross River Rail development and the public transport infrastructure works associated with the Cross River Rail Albert Street Station along the Mary Street frontage. Furthermore, the access location provides maximum separation to the nearby signalised Albert Street/Mary Street intersection.

TTM notes that the development access arrangements are not dissimilar to other developments in the CBD with frontage restrictions. The number of development movements are considered to be very low (16vph) and will generally flow in a tidal manner (i.e. majority inbound for the AM peak, majority outbound for the PM peak), whilst the generation for the adjacent site is also considered low. Additionally, the development provides boom gates at the access, which further controls vehicle speeds approaching the crossover, creating a low-speed environment. As such, the potential for vehicle conflicts at the access point is considered negligible.

Based on this assessment, the proposed crossover location is considered acceptable in this instance.

Driveway Sight Splays

As a performance solution, where a driveway is two-way and two-lane, AS2890.1 notes that the sight splay triangle on the entry side of the driveway is not required. On this basis, the proposed provision of a 2.0m by 2.0m sight splay on the exit side is compliant with AS2890.1, and therefore considered an acceptable performance solution.

Gradient from Boundary

Typically, 6.0m at 1:20 (5%) is required for a upward gradient from the property boundary, thereby ensuring suitable sightlines to pedestrians. The development scheme proposes a gradient of 1:16 (6.25%) for 4.8m from the property boundary into the site, transitioning to a flat bund for 1.5m. These gradients have been provided in order to achieve compliant flood immunity levels whilst allowing for service vehicle access.

Whilst the TAPS PSP doesn't differentiate between up/down grades, it is noted that BCC Standard Drawing BSD-2025 "Vehicle Crossing (Driveway) Grades (4.25m Wide Footpath)" allows for steeper upgrades from the boundary, per the "Maximum Grades: Non-Residential Vehicular Entrances & Residential (Other Than Single Dwelling)" driveway profile. Based on this, the proposed access gradients comply with the requirements of BSD-2025.

It is noted that this provision is also in accordance with Section 3.3 (a) of AS2890.1, which notes that a maximum gradient of 1:8 (12.5%) for the first 6.0m within the property boundary is considered suitable if the grade is a downgrade for exiting traffic, is for user Class 1 car parking and provides access for less than 100 parking spaces to a local road.

Further Commentary – Pedestrian Conflicts

The access is generally compliant with the TAPS PSP requirements, as outlined above, including compliant sight splays. Furthermore, the access location provides maximum separation to the nearby signalised Albert Street/Mary Street intersection.

In terms of managing the pedestrian safety of the access, surface treatments on the driveway ensure the crossover is differentiated from the footpath on either side, as indicated in the development plans. This differentiation in surface treatment provides a visual prompt for pedestrians as to the potential for cars to be entering / exiting the site.

As such, the potential for vehicle/pedestrian conflicts at the access point is considered negligible.

Conclusion

Overall, the proposed Mary Street access is designed generally in accordance with the TAPS PSP, apart from the minor design performance solutions, which are deemed to be fit-for-purpose.

5. Service Vehicle Arrangements

To assess the required the service provisions for the development, TTM has referred to the requirements as set out in BCC's TAPS PSP.

5.1. Council Requirements

The TAPS PSP specifies the following requirements in terms of access/design vehicles for the respective land uses.

Office Uses

- Regular access for an LRV; &
- Occasional access for an RCV.

Retail Uses

- Regular access for an VAN; &
- Occasional access for an RCV.

Food & Drink Outlet Uses

- Regular access for an MRV; &
- Occasional access for an RCV.

With respect to the requirements for service vehicle bays, these also vary depending on the size and types of land uses being proposed. A summary of the TAPS PSP service vehicle bay provisions for each land use, including total/maximum of all land uses, is detailed in Table 5.1.

Table 5.1: Summary of TAPS PSP Service Vehicle Bay Requirements

Land-Use	Extent	Number of Service Vehicle Bays			
		VAN	SRV	MRV	LRV/RCV
Office	50,318m² GFA	6	2	2	1
Retail/Food & Drink Outlet	1,299m² GFA	2	1	1	-
Total		**8**	**3**	**3**	**1**
Maximum of Any Single Land Use		**6**	**2**	**2**	**1**

It is common practice in mixed-use developments that the servicing requirements of the largest component are facilitated. This rationale is acknowledged in Section 3.3 of the TAPS PSP, which states that "large multi-use developments with centralised service vehicle areas may require fewer service bays than the sum of the individual component requirements". Furthermore, it is stated that "if fewer service vehicle bays are proposed, satisfactory operation of the service vehicle area is to be demonstrated and supported by a Registered Professional Engineer Queensland".

5.2. Practical Demands

Office Uses

Service vehicle demands for office uses typically include deliveries of stock, equipment and consumables (typically by Vans, SRVs and MRVs). Given the scale of office uses, it is expected that these vehicles will likely access the site a number of times daily. Regarding delivery of larger items, such as furniture delivers, it is expected that this will be facilitated via MRVs.

Retail/Food & Drink Outlet Uses

Given the scale of the retail/food & drink outlet land uses on site (i.e. GFA of approximately 120m^2), these uses are considered ancillary to the office uses. As such, operations for these uses will be smaller in scale then typical retail/food & drink outlet tenancies, with deliveries typically managed via VANs or SRVs.

5.2.1. Conclusion

Based on the above uses, it is expected that the development will generate regular and occasional MRV service vehicle demands.

5.2.2. Loading Bay Provisions

As illustrated on the development plans included in Appendix A, it is proposed that 10 service vehicle bays will be provided on-site, including:

- 1 MRV/RCV bay
- 1 MRV bay
- 2 SRV bays
- 6 VAN bays

Shared access of the SRV and MRV bays for commercial refuse collection is also proposed.

All loading bays are provided in the service vehicle loading area on Basement Level 1, in close proximity to the goods lift and the refuse storage area.

Given the provision of the centralised service vehicle area, it is proposed that a loading dock manager is employed at the facility and a comprehensive Service Vehicle Management Plan is adopted to assist the efficient servicing of the development.

Whilst it is anticipated that the Service Vehicle Management Plan will be further developed as part of the detailed design stage, key aspects of the plan are outlined in Appendix C.

It should be noted that the strategies outlined in the Service Vehicle Management Plan are consistent with that successfully implemented at other commercial office towers of a similar scale within the CBD/fringe area.

5.2.3. Refuse Collection Provisions

In general, the site will employ bulk bins (600-1100L) for the proposed uses, which will be collected by a commercial waste contractor, typically with the use of rear-loading RCVs. Rear-loading RCVs operated by most commercial waste contractors are similar in size to a MRV (if not smaller). As such, it is expected that these RCVs will be able to park in the MRV bays.

A suitably sized bin storage area is provided on Basement Level 1 for the proposed uses. The bins will be transported from this storage area to the service vehicle area when collection is required. Refer to the waste management report for further details regarding waste collection.

5.3. Design for Service Vehicles

5.3.1. Service Area Layout

The service vehicle area is provided with 1 MRV/RCV bay and 1 MRV bay (each measuring 3.5m x 9.0m each) plus 2 SRV bays (measuring 3.5m x 7.0m), which meet the requirements set out in the TAPS PSP.

The service vehicle loading bays and the adjacent manoeuvring areas are generally flat, which satisfies the requirements set out in the TAPS PSP.

The height clearance over the service vehicle bays (and any associated manoeuvring areas) is a minimum of 4.5m, which satisfies the requirements set out in the TAPS PSP to facilitate access by MRVs/RCVs. This height clearance is confirmed in the sections provided as part of the development plans (Dwg No DA2600), included as Appendix A.

Overall, the design of the circulation road/ramps and the layout of the service vehicle area is considered acceptable.

5.3.2. Vehicle Manoeuvring

Detailed swept path analysis (using Autotrack software) showing manoeuvring to and from the service vehicle bays is shown on Drawing No.'s 22BRT0276-02 included in Appendix B.

5.4. Conclusion

Overall, TTM considers that the proposed on-site servicing provisions are sufficient to cater for the expected demands generated by the development.

6. Development Transport Demands

6.1. Development Traffic Demands

The proposed development consists of office and retail uses, with the car parking provisions servicing staff only. As such, traffic generation for this commercial car parking supply is based on the RMS GTGD traffic generation expectations for commercial/office developments, which were derived from surveys of 10 office block sites within the Sydney area. Using the parking supply and traffic generation for each site, the equivalent "per parking space" peak hour traffic generation has been derived, as detailed in Table 6.1.

Table 6.1: RMS Traffic Generation for Office Blocks on "Per Parking Space" Basis

Office Site	Size (m2 GFA)	Parking Supply	Survey Date	AM Road Peak Period				PM Road Peak Period			
				IN	Out	Total	Generation (vph/space)	IN	Out	Total	Generation (vph/space)
100 Arthur Street, North Sydney	31400	136	Dec-09	44	0	44	0.324	0	33	33	0.243
9 Help Street, Chatswood	10214	142	Dec-09	42	0	42	0.296	1	49	50	0.352
2-4 Dawn Fraser Avenue, Sydney	34131	574	Nov-09	155	3	158	0.275	5	122	127	0.221
33 Macmahon Street, Hurstville	3254	66	Dec-09	27	0	27	0.409	0	17	17	0.258
16 Giffnock Avenue, Macquarie Park	5748	269	Dec-09	74	4	78	0.290	7	56	63	0.234
1 Smith Street, Parramatta	27000	252	Feb-10	53	10	63	0.250	10	48	58	0.230
13-15 Moore Street, Liverpool	2817	28	Dec-09	8	1	9	0.321	2	6	8	0.286
10-12 Lexington Drive, Bella Vista	4500	83	Dec-09	16	2	18	0.217	0	6	6	0.072
22 Honeysuckle Drive, Newcastle	12182	200	Feb-10	86	3	89	0.445	4	76	80	0.400
77 Market Street, Wollongong	12921	133	Feb-10	45	0	45	0.338	6	44	50	0.376
Staff parking number only				**Average Generation**			**0.317**	**Average Generation**			**0.267**
				85th Percentile Generation			**0.384**	**85th Percentile Generation**			**0.368**

Based on the information contained in Table 6.1, a conservative traffic generation rate of 0.40vph per parking space is considered an appropriate rate to adopt for the existing commercial premises/office parking in both the AM and PM road peak periods. When this rate is applied to the proposed parking supply of 38 spaces, the resultant peak hour traffic generation for the proposed development scheme is 16vph in both peaks.

6.2. Warrants for Traffic Impact Assessment

Acceptable Solution A02 of the Road Hierarchy Overlay Code details that that the development traffic impacts be quantified and mitigated for an 'assessable development for material change of use' which meets any of the following triggers:

- is classified as a major development; or
- involves an access driveway to a major road; or
- involves an access driveway within 100m of a signalised intersection.

Note: The TAPS PSP defines a 'major development' as one with a total peak hour vehicle generation rate greater than 25vph.

The maximum net change in generation for the proposed development is expected to be 16vph at most, and so is not considered a 'major development'. Furthermore, Mary Street is classified as a 'Neighbourhood Road', per the BCC Road Hierarchy Overlay, and so is not considered a major road.

Overall, TTM considers the traffic generation of the development will have a negligible impact on the surrounding road network.

7. Summary and Conclusions

7.1. Car Parking Arrangements

The proposed development provides 38 parking spaces, consistent with the maximum provisions allowed under the *Albert Street Cross River Rail PDA Development Scheme*. Consequently, the parking supply for the proposed development is considered acceptable.

Overall, the design provisions adopted for the car parking areas generally comply with BCC requirements, with some minor performance solutions in compliance with AS2890.1.

7.2. Access Arrangements

Vehicular access to the development will be achieved via a 7.5m Modified Type B1 driveway crossover to Mary Street. The proposed access arrangements are generally consistent with the requirements of the BCC TAPS PSP, with the exception of some minor items, resolved as performance solutions. Swept path analysis provided by TTM demonstrates the access provisions are suitable for access for vehicles up to the size of an MRV/RCV.

Overall, the access arrangements at Mary Street are generally in accordance with the provisions of BCC's TAPS PSP and are therefore considered acceptable.

7.3. Service Vehicle Arrangements

Overall, the proposed service vehicle arrangements are considered adequate to meet the needs of the proposed development based on the provision of the centralised service vehicle area, the employment of a loading dock manager and the implementation of a comprehensive Service Vehicle Management Plan.

7.4. Active Transport Facilities

The current public transport infrastructure and proposed site provisions for pedestrian/bicycle facilities is considered to be suitable for the development.

7.5. Impact on Surrounding Road Network

The redevelopment of the subject site is anticipated to result in a net increase of 16vph in traffic generation in the peak-hour periods compared to the existing situation. Once this net increase is distributed (both in terms of arrivals/departures and route assignment) the increases in turning movements at adjacent intersections will be negligible. For this reason, the proposed development's impact on adjacent intersection capacity is also considered to be negligible.

7.6. Conclusion

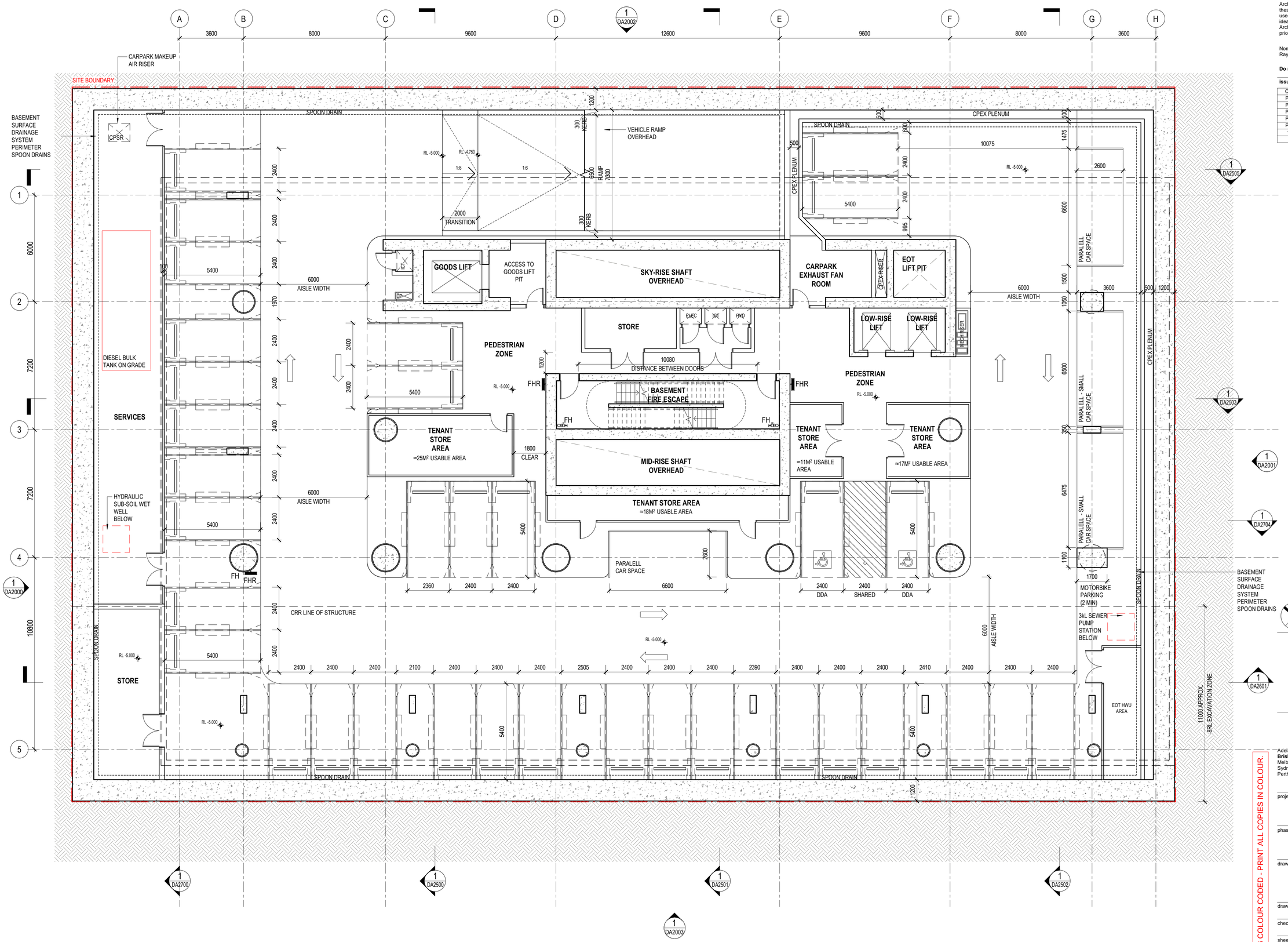
Based on the assessment contained within this report, TTM sees no traffic engineering reason why the relevant approval should not be granted.

Appendix A Development Plans

Nominated Architect
Ray Brown, NSWARB 6359

Do not scale drawings. Verify all dimensions on site

issue	amendment	date
C4	ISSUE FOR INFORMATION	20.10.2022
P2	ISSUE FOR COORDINATION	25.10.2022
P4	ISSUE FOR COORDINATION	31.10.2022
P5	ISSUE FOR COORDINATION	08.11.2022
P6	ISSUE FOR COORDINATION	02.12.2022
P7	OWNERS CONSENT ISSUE	08.12.2022
1	DEVELOPMENT APPLICATION ISSUE	14.12.2022



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ABN 90 131 245 684

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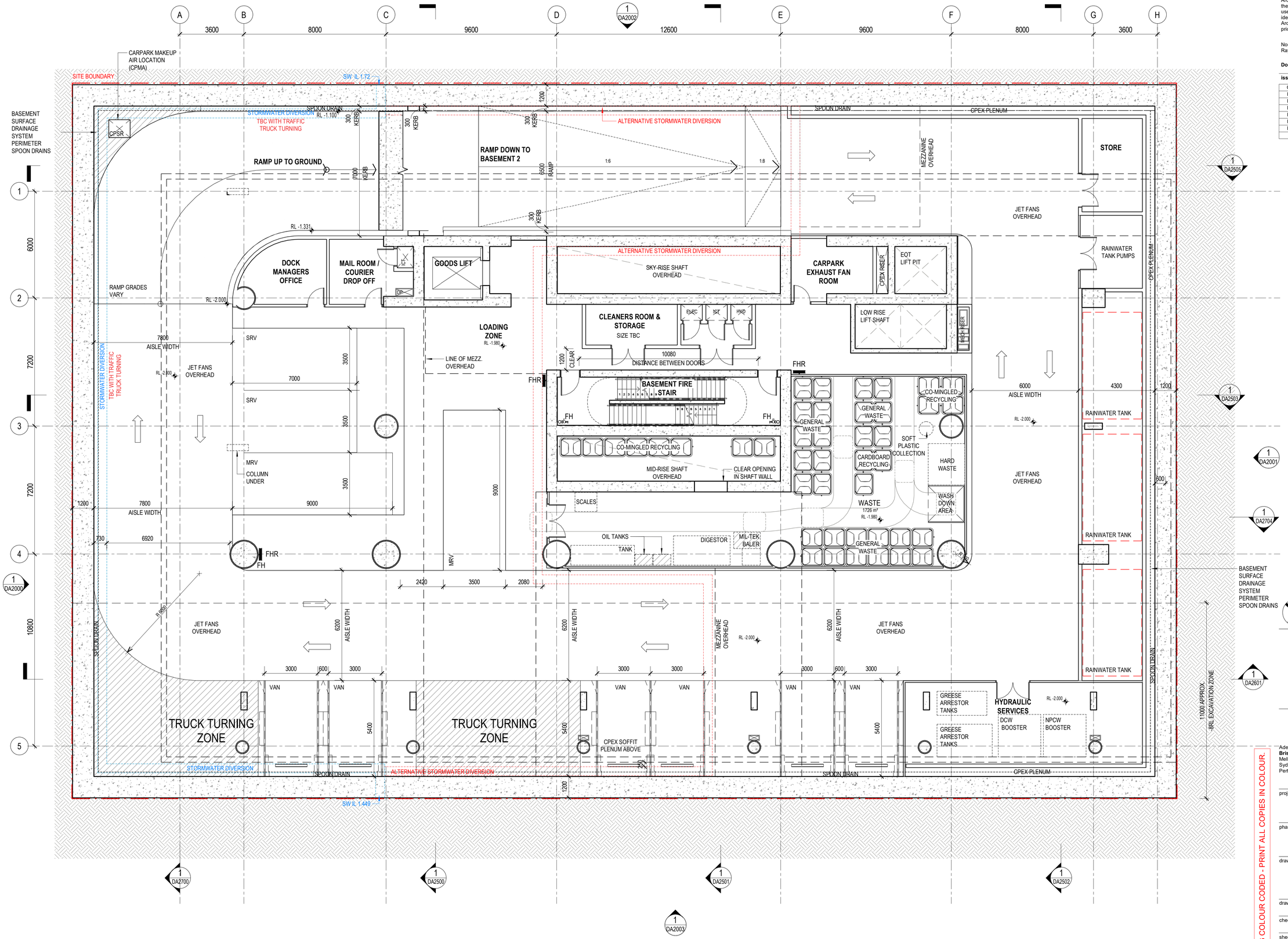
project
101 ALBERT STREET, BRISBANE

phase
DEVELOPMENT APPLICATION

drawing
LEVEL B2 - CARPARK

drawn	TC	drawing no. short	**DA1000**
checked	KN	drawing no. long	**ALB-ARC-DRW-DA1000**
sheet issue date	10/11/2022		
scale	1 : 100@A1	issue	**1**
project no	200048.00		



Nominated Architect
Ray Brown, NSWARB 6359

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issue	amendment	date
C4	ISSUE FOR INFORMATION	20.10.2022
P2	ISSUE FOR COORDINATION	25.10.2022
P3	ISSUE FOR COORDINATION	27.10.2022
P4	ISSUE FOR COORDINATION	31.10.2022
P5	ISSUE FOR COORDINATION	08.11.2022
P6	ISSUE FOR COORDINATION	02.12.2022
P7	OWNERS CONSENT ISSUE	08.12.2022
1	DEVELOPMENT APPLICATION ISSUE	14.12.2022

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project

101 ALBERT STREET, BRISBANE

phase

DEVELOPMENT APPLICATION

drawing

LEVEL B1 - LOADING SERVICES

drawn	TC	drawing no. short	**DA1001**
checked	KN	drawing no. long	**ALB-ARC-DRW-DA1001**
sheet issue date	21/10/2022		
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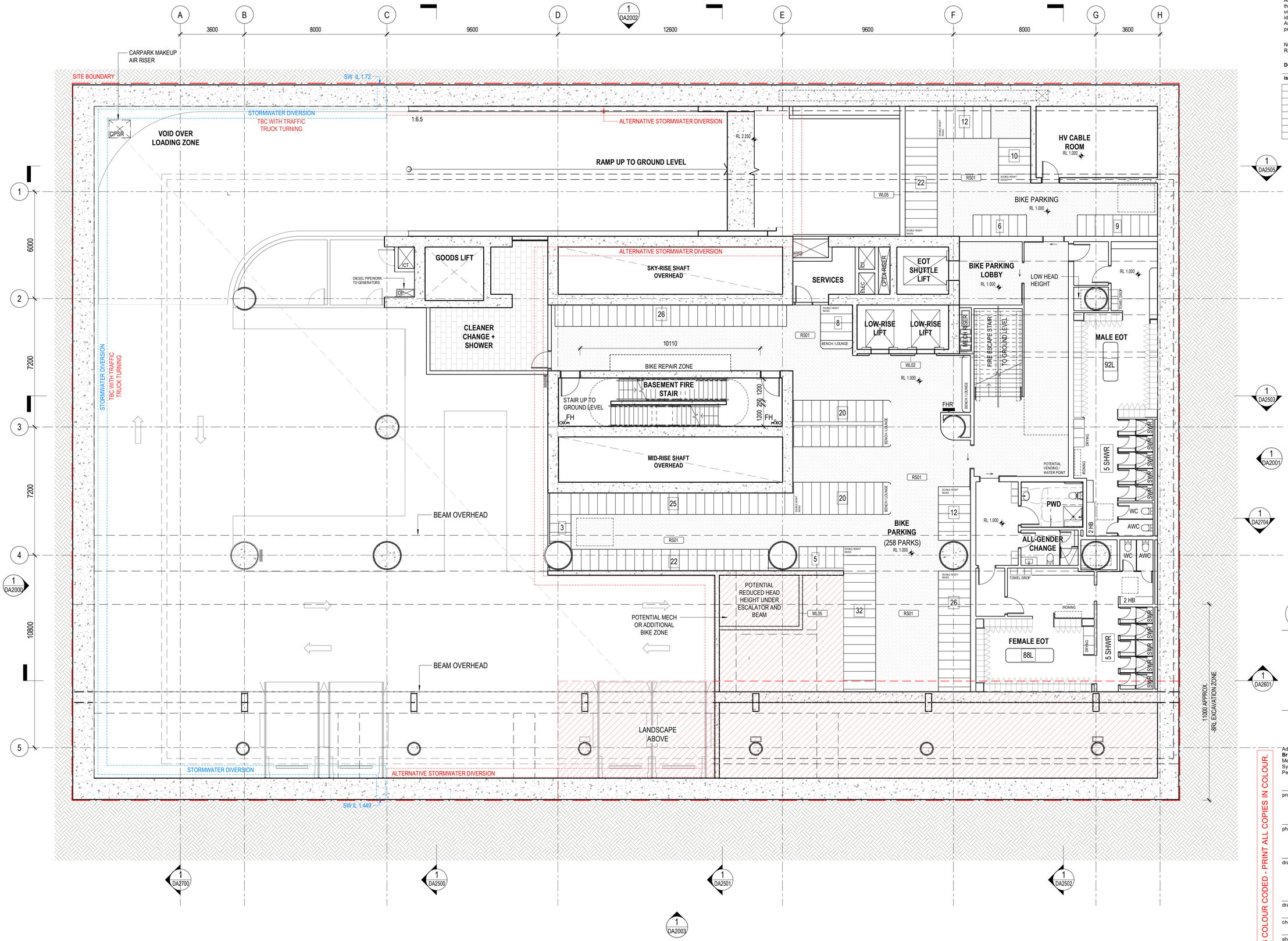
project no	200048.00		



Nominated Architect
Ray Brown, NSWARB 6359

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issue	amendment	date
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P2	ISSUE FOR COORDINATION	25.10.2022
P4	ISSUE FOR COORDINATION	31.10.2022
P5	ISSUE FOR COORDINATION	08.11.2022
P6	ISSUE FOR COORDINATION	02.12.2022
P7	OWNERS CONSENT ISSUE	08.12.2022
1	DEVELOPMENT APPLICATION ISSUE	14.12.2022
2	DEVELOPMENT APPLICATION REISSUE	21.12.2022

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phase
DEVELOPMENT APPLICATION

drawing
LEVEL BM - EOT BIKES MEZZ

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checked	KN	drawing no. long	**ALB-ARC-DRW-DA1002**
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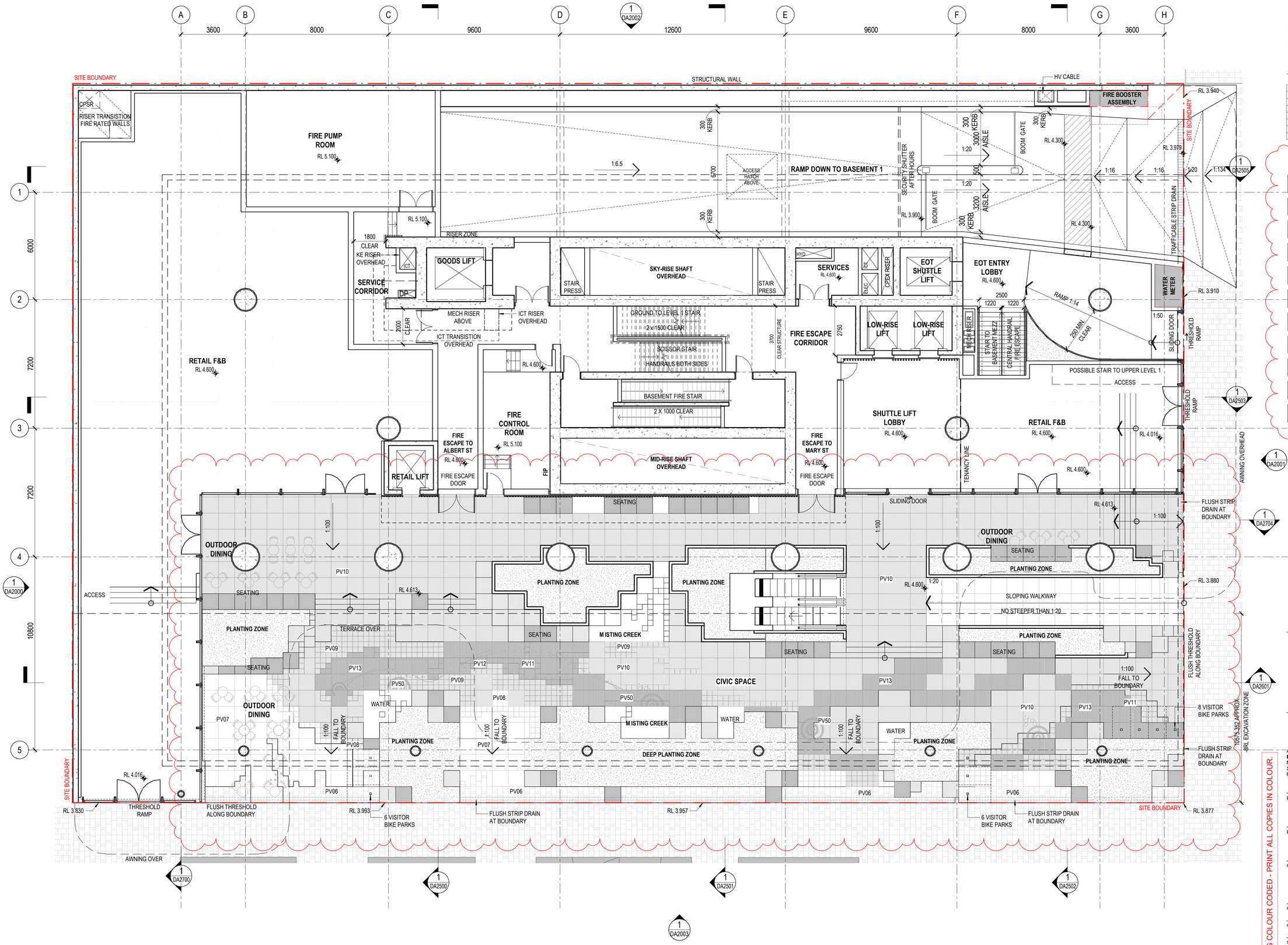

FINISH FLOOR TYPES LEGEND

- PV01_PAVING ON PAVER POD 900X900MM (LEVEL 01)
- PV02_PAVING ON PAVER POD 1200X600MM (LEVEL 02)
- PV03_PAVING ON PAVER POD 1200X600MM (LEVEL 03)
- PV04_PAVING ON PAVER POD 1200X600MM (LEVEL 04-05)
- PV05_PAVING ON PAVER POD 1200X600MM (LEVEL 06-07)
- PV06_PAVING ON SCREED 300X600MM (ALBERT STREET)
- PV07_PAVING ON SCREED 900X900MM (ALBERT STREET)
- PV08_PAVING ON SCREED 300X300MM (ALBERT STREET)
- PV09_PAVING ON SCREED 300X300MM (DARKER)
- PV10_PAVING ON SCREED 900X900MM (DARKER)
- PV11_PAVING ON SCREED 300X300MM (CREEK)
- PV12_PAVING ON SCREED 600X600MM (CREEK)
- PV13_PAVING ON SCREED 900X900MM (CREEK)
- PV14_ PAVING ON PAVER POD 900X900MM ACCENTS (LEVEL 01)
- PV15_ PAVING ON PAVER POD 1200X900MM (LEVEL 37)
- PV16_ PAVING ON PAVER POD 600X600MM ACCENTS (LEVEL02)
- PV20_ PAVING ON PAVER POD 600X600MM (ROOF AREAS)
- PV50_ INLAID BRASS INSERT (GROUND)
- SL01_CONCEPTUAL SOIL 500MM
- PV50 - BRONZE INLAID - (DWC storytelling)

Nominated Architect
Ray Brown, NSWARB 6359

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issue	amendment	date
P1	ISSUE FOR COORDINATION	24.10.2022
P2	ISSUE FOR COORDINATION	25.10.2022
P4	ISSUE FOR COORDINATION	31.10.2022
P5	ISSUE FOR COORDINATION	08.11.2022
P6	ISSUE FOR COORDINATION	02.12.2022
P7	OWNERS CONSENT ISSUE	08.12.2022
1	DEVELOPMENT APPLICATION ISSUE	14.12.2022
3	DEVELOPMENT APPLICATION REISSUE	24.04.2023

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project

101 ALBERT STREET, BRISBANE

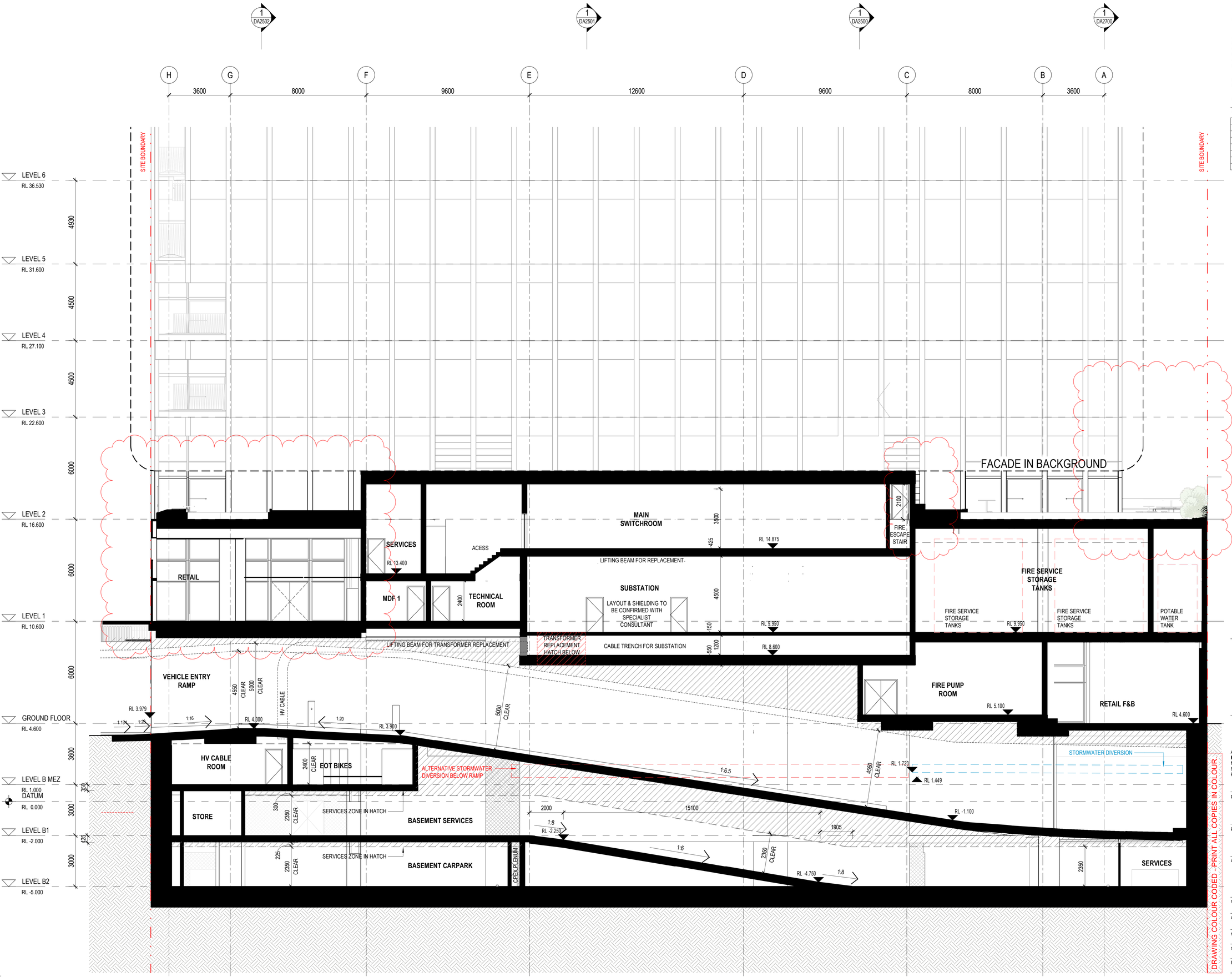
phase

DEVELOPMENT APPLICATION

drawing

LEVEL 00 - GROUNDFLOOR

drawn	TC	drawing no. short	**DA1003**
checked	KN	drawing no. long	**ALB-ARC-DRW-DA1003**
sheet issue date	21/10/2022		
scale	As indicated@A1	issue	
project no	200048.00		**3**



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issue	amendment	date
P5	ISSUE FOR COORDINATION	08.11.2022
P6	ISSUE FOR COORDINATION	02.12.2022
P7	OWNERS CONSENT ISSUE	08.12.2022
1	DEVELOPMENT APPLICATION ISSUE	14.12.2022
3	DEVELOPMENT APPLICATION REISSUE	24.04.2023

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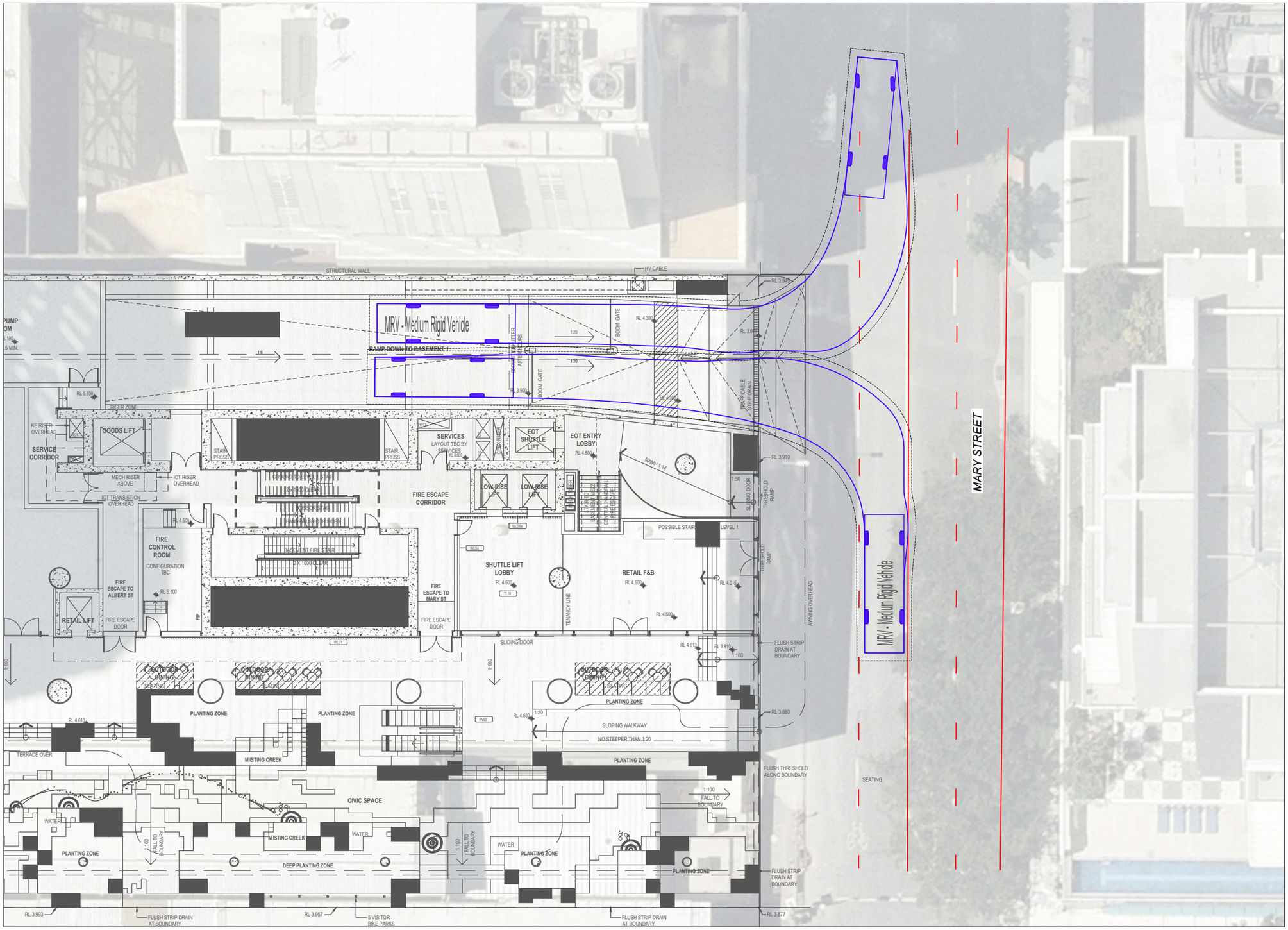
project
101 ALBERT STREET, BRISBANE

phase
DEVELOPMENT APPLICATION

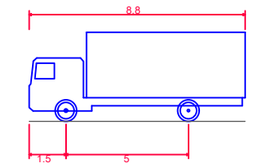
drawing
PODIUM SECTION - BASEMENT RAMP SECTION

drawn	TC	drawing no. short	**DA2600**
checked	KN	drawing no. long	**ALB-ARC-DRW-DA2600**
sheet issue date	15/11/2022		
scale	1 : 100@A1	issue	**3**
project no	200048.00		

Appendix B Vehicle Swept Path Diagrams

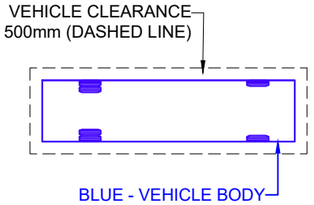


VEHICLE PROFILES



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m
Clearance Envelope	0.5m



NOTES:

1. MAPPING UNDERLAY PROVIDED BY NEARMAP. MAY BE SUBJECT TO DETAILED DESIGN & SITE SURVEY.

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	14-12-22	ORIGINAL ISSUE	TC	BC	BC

SCALE 0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

NORTH

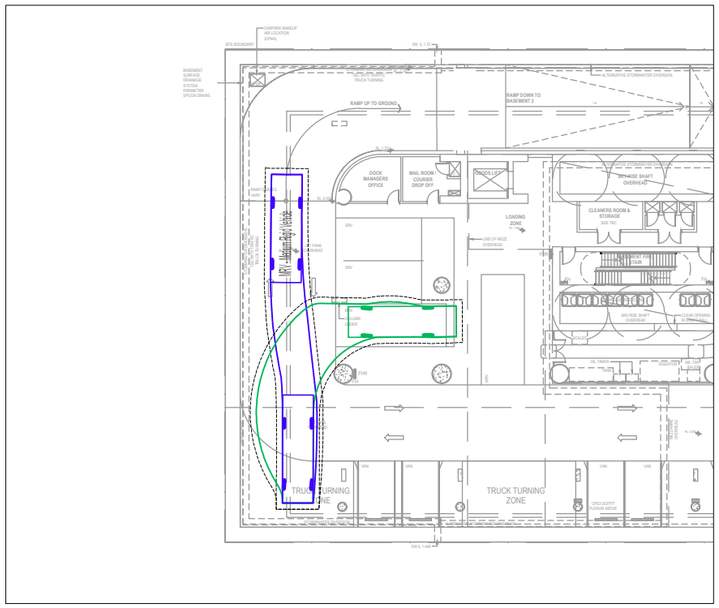
CLIENT: QIC

TTM CONSULTING PTY LTD
ABN 65 010 868 621
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000
P.O. BOX 12015, BRISBANE QLD 4003
T: (07) 3327 9500 F: (07) 3327 9501
E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

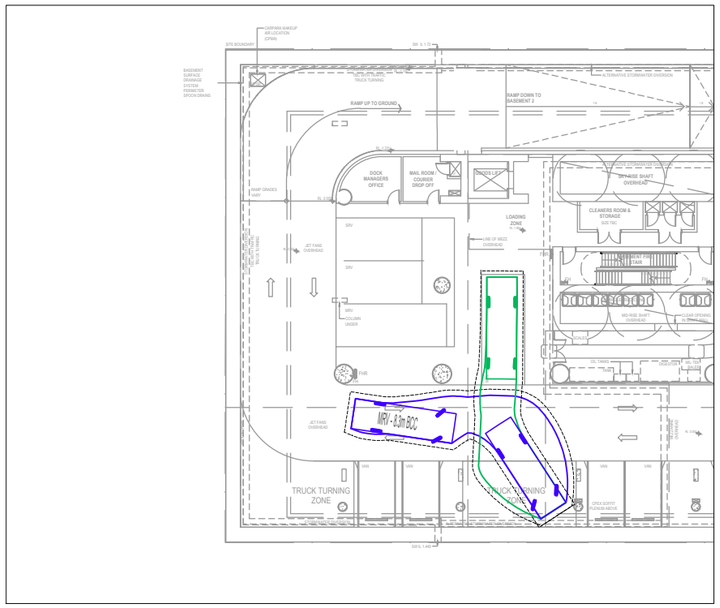
PROJECT: **ALBERT STREET CROSS RIVER RAIL PROJECT**

DRAWING TITLE: **VEHICLE SWEPT PATH ASSESSMENT**
SERVICE VEHICLE ACCESS - 8.8m MRV

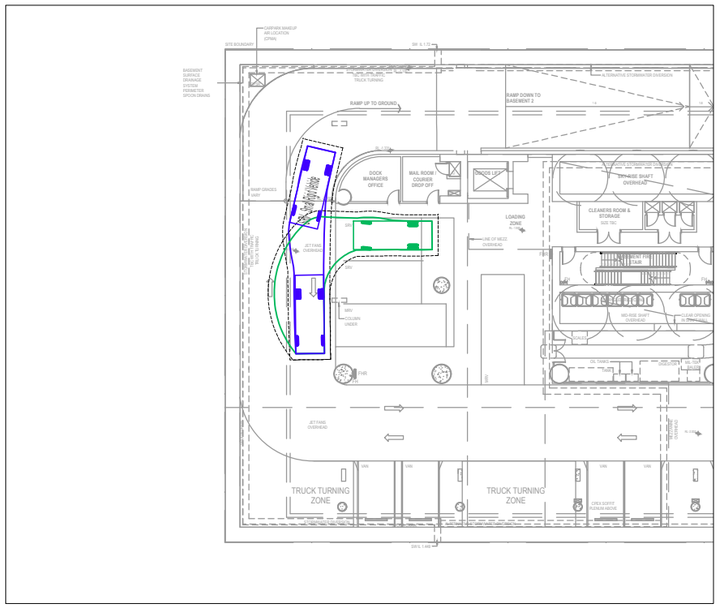
PROJECT NUMBER	22BRT0276
ORIGINAL SIZE	A3
DRAWING NUMBER	22BRT0276-01
REVISION	A
DATE	14 Dec 2022
SHEET	1 OF 1



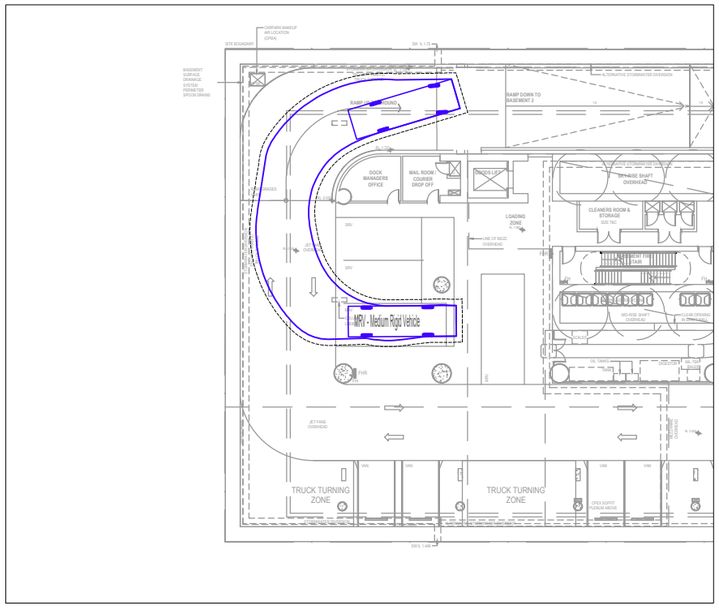
ACCESS SWEPT PATHS - 8.8m MRV



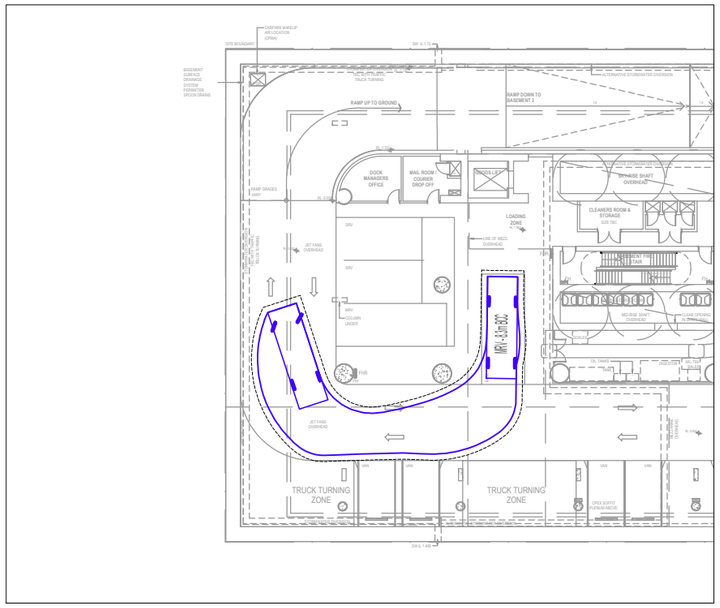
ACCESS SWEPT PATHS - 8.3m MRV



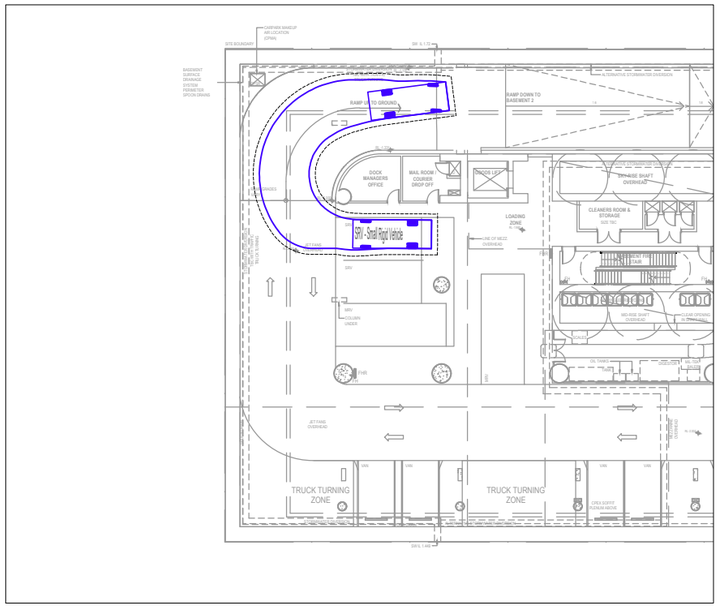
ACCESS SWEPT PATHS - 6.4m SRV



EGRESS SWEPT PATHS - 8.8m MRV

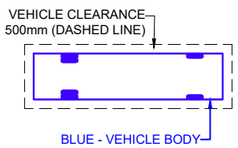


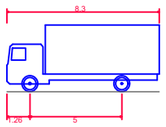
EGRESS SWEPT PATHS - 8.3m MRV



EGRESS SWEPT PATHS - 6.4m SRV

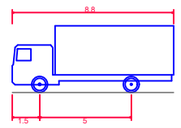
VEHICLE PROFILES





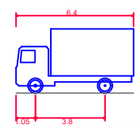
MRV - 8.3m BCC

Overall Length	8.300m
Overall Width	2.450m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.450m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	8.500m
Clearance Envelope	0.500m



MRV - Medium Rigid Vehicle

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m
Clearance Envelope	0.5m



SRV - Small Rigid Vehicle

Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m
Clearance Envelope	0.500m

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	14-12-22	ORIGINAL ISSUE	TC	BC	BC

SCALE 0 5 10 15 20 25m
SCALE 1:500 AT ORIGINAL SIZE

NORTH

CLIENT: QIC

TTM CONSULTING PTY LTD
ABN 65 010 868 621
LEVEL 8, 369 Ann Street, BRISBANE QLD 4000
P.O. BOX 12015, BRISBANE QLD 4003
T: (07) 3327 9500 F: (07) 3327 9501
E: ttmbris@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT: **ALBERT STREET CROSS RIVER RAIL PROJECT**

DRAWING TITLE: **VEHICLE SWEPT PATH ASSESSMENT**
LOADING DOCK MANOEUVRING - 6.4m SRV, 8.3m MRV & 8.8m MRV

PROJECT NUMBER	22BRT0276
ORIGINAL SIZE	A3
DRAWING NUMBER	22BRT0276-02
REVISION	A
DATE	14 Dec 2022
SHEET	1 OF 1

Appendix C Service Vehicle Management Plan

Service Vehicle Management Plan

Whilst it is expected that the Plan will be further developed through negotiations and discussions with the various tenants of the building, key aspects will potentially include:

Loading Dock Delivery Times

- Outside of normal business hours, deliveries will only be permitted if prior written approval is obtained at least 24 hours in advance, or on an ongoing basis if agreed with the loading dock manager (i.e. refuse collection contractors).
- The dock manager will reserve the right to temporarily close the loading dock, without warning, due to specific operational requirements or during times of peak demand/congestion. During these times, the dock manager has the power to turn away vehicles.
- To reduce the risk of delivery vehicles being denied access to the loading dock, it is recommended that tenants inform delivery contractors to schedule deliveries outside of the peak periods of operation.

Vehicle Size Restrictions

- The operational height clearance within the loading dock is 4.5m.
- Other than commercial refuse collection vehicles, access to the loading dock is only permitted for vehicles up to the size of an 8.3m long MRV.

Use of Loading Dock

- Access by larger service vehicles (up to the size of an MRV) is restricted to outside the weekday AM and PM peak-hour periods on the adjacent road network.
- The dock manager reserves the right to turn away any vehicles on arrival if no prior notice has been given.
- All vehicles are to report to the dock manager on arrival for instructions on which loading bay to park in.
- In general, all vehicles will be assigned a loading bay in order of arrival.
- Vehicles are only permitted to park within designated loading bays, unless otherwise instructed by the dock manager.
- All drivers are to provide the loading dock manager with an approximate duration of stay. Durations of stay will typically be restricted to 20 minutes, unless otherwise approved by the dock manager.
- All drivers are to follow instructions of the dock manager.
- No deliveries and/or removal of large quantities of furniture, etc. and no tenancy moves in and out of the development or delivery of fit-out materials are permitted during business hours.

- Outside normal business hours, large deliveries are permitted only if prior written approval is obtained, upon a period of at least 24 hours written notice.
- For large deliveries, a goods lift access form is required to access the main loading dock.
- Any maintenance/services contractors visiting the site and wishing to utilise the loading dock for the purposes of pick-up/drop-off of equipment may do so, as long as the vehicle is unloaded immediately and then removed from the loading dock. Contractors are not to leave vehicles parked within the loading dock unless agreed with the dock manager.
- Any delivery or contractors parking within the loading dock are to leave keys with the dock manager to allow for vehicles to be moved as required and provide an appropriate contact phone number.
- Contractors are not permitted to work from their vehicles within the loading dock, unless agreed with the dock manager.

Miscellaneous

- Storage of goods and/or materials within the loading dock is prohibited, unless agreed with the dock manager.
- Delivery drivers are responsible for disposal of any rubbish and materials created whilst on-site.
- No rubbish is to be deposited within the bins located in the loading dock without approval from the dock manager.

Loading Dock Manager

- The loading dock manager shall be present (at the dock) at all times during normal business hours.

Agreement with Above Conditions

- All users of the loading dock are expected to have read and agreed to the above information upon presenting themselves on site.
- If there is any uncertainty in relation to the meaning of or compliance with the above conditions, consult the dock manager.
- Failure to comply with the above terms may result in removal from site by the dock manager. Repeat non-conformance may also result in future access to the loading dock by individuals (or the companies they represent) being prohibited.

Dock Manager Details

Name:

Contact Number:

Email: