Transport Engineering Report

Proposed Commercial
8-18 Jamieson Street, Bowen Hills

New Urban Villages Pty Ltd

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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.

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T: (07) 3327 9500
F: (07) 3327 9501
E: ttmbris@ttmgroup.com.au

Revision Record

No.	Author	Reviewed/Approved	Description	Date
A	Ryan Bellamy	Darryl Watkins	DA Report (DRAFT)	18/12/2024
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1. Introduction

1.1. Purpose

Colliers International Engineering & Design (TTMC) Pty Ltd has been engaged by New Urban Villages to prepare a Transport Engineering Report (TER) for a proposed commercial development to be located at 8 - 18 Jamieson Street, Bowen Hills subject site). It is understood this report will accompany a Development Application (DA) to be lodged with Economic Development Queensland (EDQ), with referral to Brisbane City Council ('Council') City Planning & Sustainability Development Services.

1.2. Background

Prior to the completion of this report, Colliers has consulted with the development team to identify an efficient design for the site for traffic operations.

1.3. Scope

The scope of the transport aspects investigated includes:

- Reviewing the prevailing traffic and transport conditions surrounding the site.
- Identifying the parking supply required to cater for development demands.
- Assessing the parking layout to provide efficient and safe internal circulation and manoeuvring.
- Assessing the access configuration to provide efficient and safe manoeuvring between the subject site and the public road network for cars, service vehicles, cyclists and pedestrians.
- Identifying the service vehicle needs for the subject site and assessing the internal layout to provide efficiency and safety for on-site service vehicle operations.
- Identification of the likely traffic impacts of development on the surrounding road network.

The development plans have been assessed against the following guidelines and planning documents:

- EDQ Bowen Hills Priority Development Area (PDA) Development Scheme.
- Brisbane City Plan 2014, specifically the Transport, Access, Parking and Servicing (TAPS) Code and Planning Scheme Policy (PSP).
- Australian Standards for Parking Facilities (where required), specifically:
  - Part 1: Off-street car parking (AS2890.1:2004).
  - Part 2: Off-street commercial vehicle facilities (AS2890.2:2018).
  - Part 3: Bicycle parking (AS2890.3:2015).
  - Part 6: Off-street parking for people with disabilities (AS2890.6:2009).
- Department of Transport and Main Roads 'Guide to Traffic Impact Assessment' (GTIA).

2. Site Location

The subject site is located at 8 - 18 Jamieson Street, Bowen Hills, as shown in Figure 2.1. The real property description is Lots 36 and 38 on RP9895 and Lot 37 on RP115563. The subject site has road frontage to Edgar Street (north), Jamieson Street (east).

Figure 2.1: Site Location (Immediate Context)

Source: NearMap

The subject site currently contains several buildings, across all three (3) lots, which are primarily occupied by commercial (office) tenancies.

Typical cross-sections for the key roads surrounding the subject site (including frontages) are provided in Figure 2.2 overleaf.

Image 1 – Campbell Street (looking west – subject site on right)

Image 2 – Edgar Street (looking east – subject site on right)

Image 3 – Jamieson Street (looking south – subject site on right)

Image 4 – Abbotsford Road (looking north)

Figure 2.2: Carriageway Cross-Sections

Source: Google StreetView

3. Site Travel Environment

3.1. Public Transport Facilities and Services

3.1.1. Train Services

The subject site is located in close proximity to passenger rail infrastructure, with the Bowen Hills Train Station approximately 150m walking distance from the subject site, to the north. This station is serviced by all suburban and interurban lines within the network, which includes the Airport, Beenleigh, Caboolture, Cleveland, Doomben, Ferny Grove, Gold Coast, Ipswich / Rosewood, Redcliffe Peninsula, Shorncliffe, Springfield and Sunshine Coast lines. The exception of the Exhibition line (including Exhibition Train Station).

3.1.2. Bus Services

There are several bus services which operate in the Bowen Hills area, in the vicinity of the subject site.

Figure 3.1 identifies TransLink bus stops in the immediate vicinity of the subject site, located along Abbotsford Road, Hamilton Place and O'Connell Terrace.

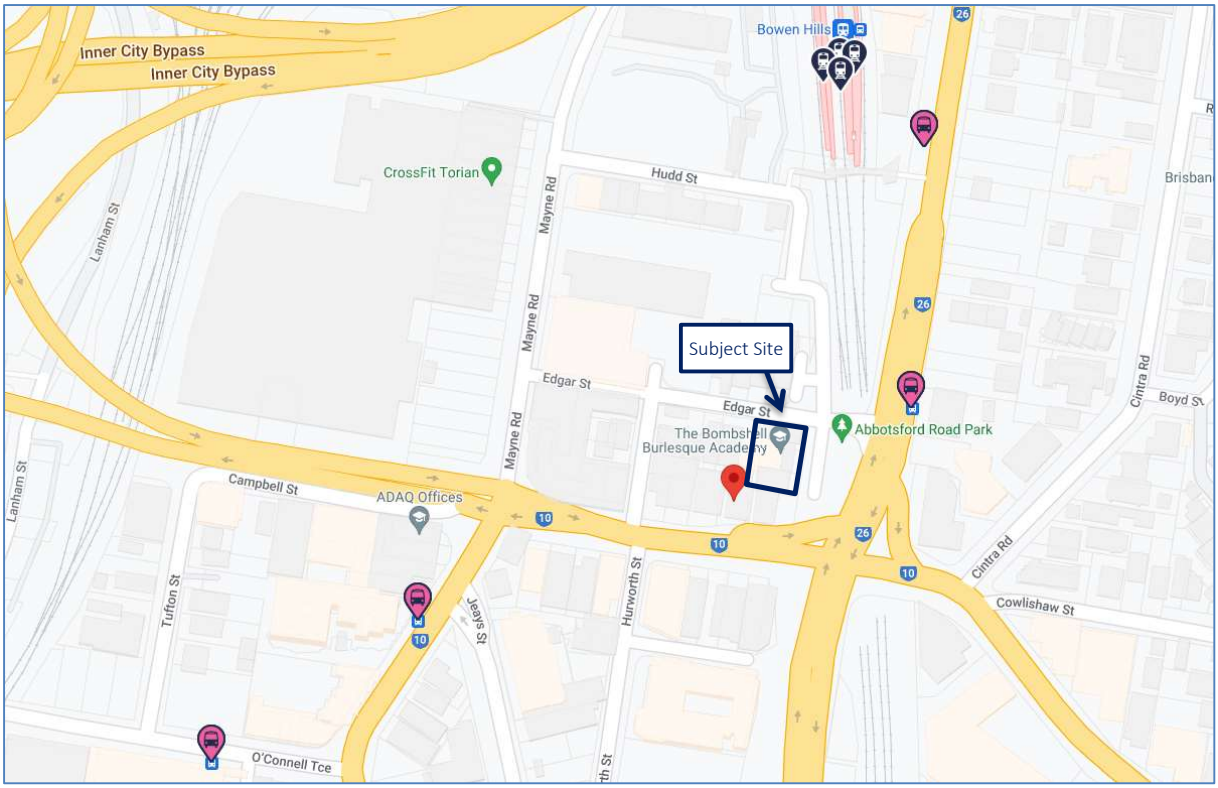


Figure 3.1: TransLink Bus Stops in the Vicinity of the Subject Site

Source: TransLink

Table 3.1 outlines the routes that service these nearby stops, detailing their respective weekday and weekend headways (peak and off-peak) as well as operating hours. It is noted that several other routes that utilise these stops are school services only (924 and 928 to 931).

Table 3.1: Bus Routes and Operating Hours/Frequency Near the Subject Site

Route	Description	Weekday	Saturday	Sunday + Public Holidays
301	Toombul to City	6:00am to 11:15pm Peaks ~ 30 min Off-peak ~ 60 min	7:30am to 11:15pm All-day ~ 45-60 min	8:30am to 8:15pm All-day ~ 60-90 min
320	Chermside to City	5:15am to 10:15pm Peaks ~ 15-20 min Off-peak ~ 30-45 min	7:00am to 6:45pm All-day ~ 90 min	10:00am to 6:00pm All-day ~ 80 min
393	Teneriffe ferry terminal to Kelvin Grove and RBWH (loop)	6:30am to 6:45pm Peaks ~ 15-20 min Off-peak ~ 60 min	N/A	N/A

In addition to these services, there are a significant number of other services which travel along Breakfast Creek Road and Wickham Terrace / Ann Street, approximately 500m walking distance to the east of the subject site.

3.1.3. Summary

The subject site is generally well serviced by public transport options, particularly train services, which is typical for development in inner-city Brisbane.

The subject site's location has been assessed using the "Transit Score" location performance tool. This tool assesses the relative "usefulness" of nearby routes, based on the distance to the nearest stop on the route, the frequency of the route and type of route. It provides a numerical score between 1 and 100, with 1 being heavily car-dependent.

The site achieves a score of 89 out of 100, which is considered as "Excellent Transit", whereby "transit is convenient for most trips".

3.2. Active Transport Facilities

3.2.1. Bicycles

Figure 3.2 overleaf illustrates the surrounding cycle routes, as defined by Council's Bicycle Network Overlay.

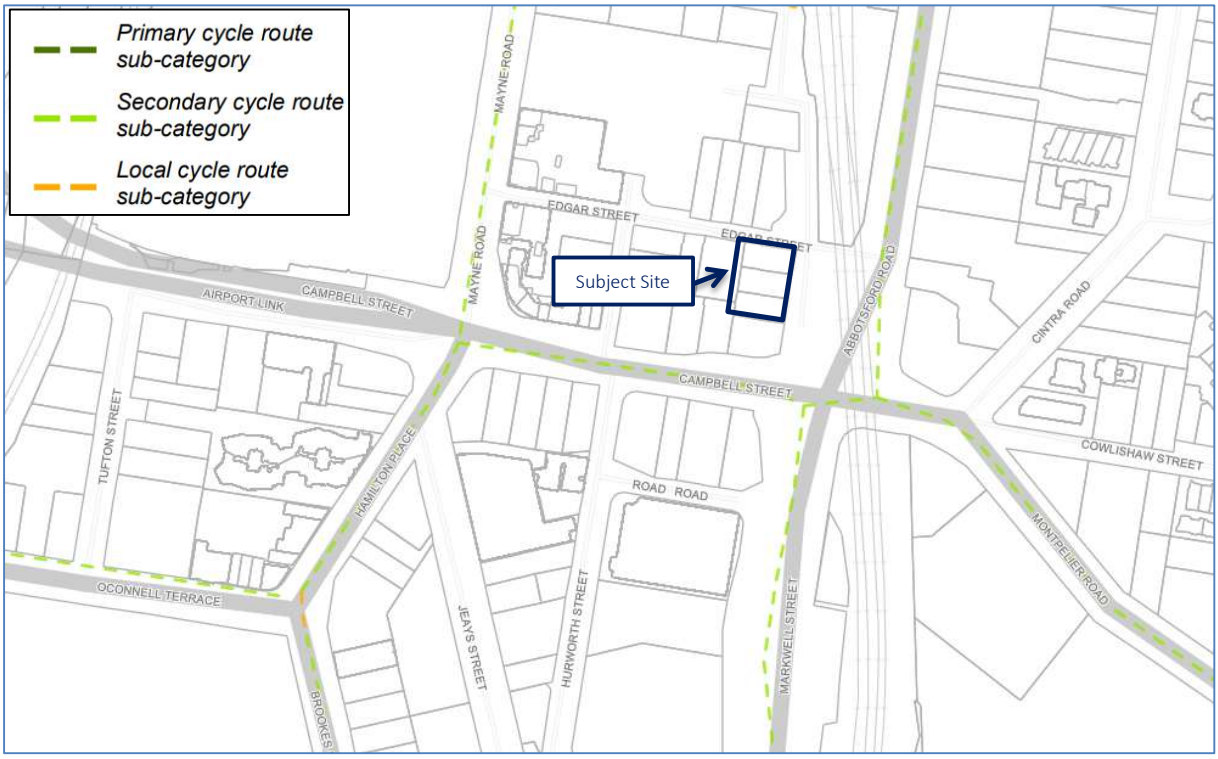


Figure 3.2: Bicycle Network Overlay in the Vicinity of the Subject Site

Source: Council's Interactive Mapping – Bicycle Network Overlay

This bicycle overlay identifies that most roads in the surrounding local network have a 'secondary cycle routes' designation.

Cycling accessibility for the subject site is satisfactory, with both on- and off-road cycling infrastructure / facilities surrounding the site.

3.2.2. Pedestrians

Pedestrian footpaths are currently provided within both verges of all roads in the vicinity of the subject site. Connections are provided to public transport infrastructure / facilities. Signalised crossings are provided at all major intersections, to facilitate movement across all major roads and access to these facilities.

Existing walkability surrounding the subject site is reasonably good, with connections also provided to surrounding public transport facilities.

The subject site's location has been assessed using the "Walk Score" location performance tool. This tool considers the number of facilities and amenities in close proximity and provides a numerical score between 1 and 100, with 1 being heavily car-dependent and 100 reflecting a location that is easily accessible to abundant facilities by foot.

The site achieves a score of 85 out of 100, which is considered as "Very Walkable", whereby "most errands can be accomplished on foot".

3.3. Road Network

3.3.1. Road Hierarchy

The characteristics of the existing road network surrounding the subject site are summarised in Table 3.2. It is noted that all roads within the vicinity of the subject site are under Council jurisdiction.

Table 3.2: Characteristics of the Surrounding Road Network

Road	Speed Limit	Road Configuration			Classification
		Reserve Width	Carriageway Width	Lane Configuration	
Jamieson Street	50km/h[1]	N/A	6.5m	Two-way, two-lane, undivided	Neighbourhood
Campbell Street	60km/h	20.0m-27.0m	12.5m	Two-way, four-lane, undivided	Suburban
Edgar Street	50km/h[1]	8.0m-11.0m	4.0m	Two-way, one-lane, undivided	Neighbourhood
Hazelmount Street	50km/h[1]	9.0m	5.5m	Two-way, two-lane, undivided	Neighbourhood
Abbotsford Road	60km/h	25.0m	20.0m	Two-way, six-lane, undivided	Arterial

[1] Default speed limit on unsigned roads in built-up areas in Queensland.

A summary of the various intersection treatments along Campbell Street, Montpelier Road, Abbotsford Road and Hamilton Place, surrounding the subject site, is shown in Figure 3.3.

Figure 3.3: Existing Intersection Treatments

Source: NearMap

3.4. Alternative Parking

In addition to the car parking supply provided on-site, there is a limited supply of kerbside parking within the surrounding road network, which is located within the Brisbane Central Traffic Area. The parking restrictions within this area are active between 7:00am and 6:00pm Monday to Friday, as well as 7:00am and 12:00pm on Saturday, for a two-hour parking limit.

There is also a small amount of off-street paid parking facilities in the vicinity of the subject site, including along Jeays Street and Montpelier Road.

3.5. Transport Planning

Council's Local Government Infrastructure Plan (LGIP) has been reviewed, indicating that there are no planned works in the vicinity of the subject site which will impact upon or be impacted by the proposed development.

3.6. Anticipated Travel Patterns

The proposed development is heavily public and active transport-centric, with its close proximity to major public and active transport infrastructure reflected by its location within the City Frame and subsequent maximum car parking requirements. The site is also in close proximity to the Brisbane CBD and other major attractors.

4. Proposed Development

4.1. Development Profile

The proposed commercial development is comprised of a single building with seven (7) levels. A total GFA of 3,295m^2 is proposed on-site.

Architectural plans for the proposed development, prepared by Nettletontribe, are included in Appendix A.

4.2. Parking

The architectural plans include the following parking supply:

- 13 car spaces, including one (1) PWD space, located across the Ground Level only.
- Ten (10) bicycle spaces – split between eight (8) employee bicycle parking spaces and two (2) visitor bicycle parking spaces.

Further details regarding the proposed parking provisions are included in Section 5.

4.3. Access

The architectural plans include the following access arrangements:

- Modified Type B1 (5.8m) crossover at the southern edge of the site's Jamieson Street frontage, accommodating all car movements – all movements / turns permitted.
- Modified Type B2 (6.4m) crossover at the western edge of the site's Edgar Street frontage, accommodating service vehicle movements only.
- Pedestrian access via the Jamieson Street and Edgar Street frontages.
- Cyclist access via the Jamieson Street frontage.

Further details regarding the proposed access arrangements are included in Section 6.

4.4. Servicing

The development plans allow for occasional access of vehicles up to the size of a 10.24m rear-lift Refuse Collection Vehicle (RCV) and regular access for vehicles up to the size of an 8.8m Medium Rigid Vehicle (MRV) for deliveries.

A formal loading bay is also provided on the Ground Level, directly accessible via Edgar Street.

Further details regarding the proposed servicing arrangements are included in Section 7.

5. Parking Arrangements

5.1. Parking Supply

5.1.1. Car Parking

The car parking supply requirements for the proposed commercial land use have been determined in line with Council's Traffic, Access, Parking and Servicing (TAPS) Planning Scheme Policy (PSP), as identified by Schedule 3 of the Bowen Hills PDA Development Scheme.

Table 5.1 outlines the car parking requirements for the proposed development and the proposed provisions.

Table 5.1: Council's TAPS PSP Car Parking Requirements and Provisions

Land Use	Car Parking Requirement	Extent	Requirement	Provision
Commercial	Maximum 1 space per 100m² GFA	3,295m² GFA	33 spaces (max)	13 spaces

As seen in Table 5.1, the development scheme proposes a total of 13 car parking spaces, including one (1) PWD bay, which is less than the maximum requirement of 33 car parking spaces.

Overall, the proposed car parking supply is compliant with the Bowen Hills PDA Development Scheme.

5.1.2. PWD Parking

Council's TAPS PSP identifies the following requirements for PWD parking:

- A provision rate of one (1) PWD space for every 50 'ordinary' spaces, with a minimum of one (1) space.
- PWD spaces are provided as close as possible to the main building entrance.

For the proposed development, the number of 'ordinary' parking spaces is considered to be 13, which is equal to the proposed car parking supply. Based on a total of 13 'ordinary' spaces, a minimum of one (1) PWD space is therefore required.

The proposed development includes an allowance for one (1) PWD space in the Ground Level car park, satisfying the requirements of Council's TAPS PSP and the National Construction Code (NCC).

5.1.3. Motorcycle Parking

Council's TAPS PSP identifies that 2% of the parking provision shall be provided in the form of motorcycle spaces, in car parks with more than 50 spaces. In this instance, as the proposed car park only contains 13 spaces, motorcycle parking is not required and therefore not proposed.

5.1.4. Bicycle Parking

The Bowen Hills PDA Development Scheme refers to Council's TAPS PSP for relevant bicycle parking rates. The bicycle parking supply requirements for the proposed development land use have therefore been determined in line with Table 21 of Council's TAPS PSP.

Table 5.2 outlines the bicycle parking requirements for the proposed development, including employee and visitor parking, and the proposed provisions.

Table 5.2: Council's TAPS PSP Bicycle Parking Requirements and Provisions

User	Bicycle Parking Requirement	Extent	Requirement	Provision
Employee	1 space per 200m^2 GFA	3,295m^2 GFA	17 spaces	8 spaces
Visitor	1 space per 500m^2 GFA		7 spaces	2 spaces
Total		**3,295m^2 GFA**	**24 spaces**	**10 spaces**

As displayed in Table 5.2, the proposed development scheme includes a total of ten (10) bicycle spaces, which is a shortfall compared to the minimum TAPS PSP requirement.

However, given the subject site's inner city location and availability of public transport options, a reduced bicycle parking supply (for both employees and visitors) is considered appropriate, given that there is a high pedestrian connectivity (particularly with public transport – train) within the surrounding area.

This bicycle parking provision is proposed to be accommodated as wall racks at the rear of the Ground Level car park.

In addition, end-of-trip facilities would be required for employees. A minimum of four (4) shower cubicles (provision for both females and males) is required, along with two (2) lockers per employee bicycle space. With a total of 17 employee bicycle spaces required, 34 lockers would be required on-site.

Overall, the bicycle parking supply for the proposed development is considered acceptable.

5.2. Parking Layout

The proposed development will provide car parking within the Ground Level only.

Table 5.3 overleaf identifies the characteristics of the proposed parking layout, with respect to Council's TAPS PSP design provisions, as identified by the Bowen Hills PDA Development Scheme. Consideration of Australian Standards (AS) 2890.1:2004 design parameters was also applied as appropriate.

Table 5.3: Council's TAPS PSP Parking Design Requirements and Provisions

Design Aspect	TAPS PSP Requirement	Proposed Provision	Compliance
Parking space length: • Employee space (Class 1) • PWD space (Class 5)	 • 5.4m (min) • 5.4m (min)	 • 5.4m • 5.4m	 TAPS PSP compliant TAPS PSP compliant
Parking space width: • Employee space (Class 1) • PWD space (Class 5)	 • 2.4m (min) • 2.4m + 2.4m 'Shared Area'	 • 2.5m • 2.4m + 2.4m 'Shared Area'	 TAPS PSP compliant TAPS PSP compliant
Aisle width: • Parking aisle	 • 6.2m (min)	 • 5.8m	 See Parking Design Aspect 1
Parking envelope clearance	Located as per Figure m of TAPS PSP	Located as per Figure 5.2 of AS2890.1:2004	See Parking Design Aspect 2
Maximum Gradient: • PWD parking • Parking aisle	 • 1:40 (2.5%) • 1:20 (5.0%)	 • Flat • Flat	 TAPS PSP compliant TAPS PSP compliant
Parking aisle extension	2.0m beyond the last bay or 8.0m aisle width	1.25m beyond the last bay	See Parking Design Aspect 3
Minimum height clearance: • General minimum • Absolute minimum • Over PWD space	 • 2.3m • 2.1m • 2.5m	 • >2.3m • >2.3m • >2.5m	 TAPS PSP compliant TAPS PSP compliant TAPS PSP compliant

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

Parking Design Aspect 1

Council's TAPS PSP requires parking aisles to have a minimum width of 6.2m. Employee spaces are classified as User Class 1 / 1A within AS2890.1:2004, with a corresponding minimum parking bay width of 2.4m, noting that the parking spaces are provided at 2.5m width for the proposed development. The reduction in parking aisle width to 5.8m, is offset by the increased employee car bay width of 2.5m and is compliant with AS2890.1:2004.

Parking Design Aspect 2

The proposed development plans make allowance for structure / walls within the allowable envelopes adjacent to car spaces, as per Figure 5.2 of AS2890.1:2004. This differs slightly from the provision of Figure m within Council's TAPS PSP.

Notably, there is only a 50mm difference in acceptable column locations closest to the parking aisle. However, this difference is not expected to have any adverse impacts on the ability for vehicles to manoeuvre into or out of car spaces or open doors, the two key considerations driving these design envelopes around car spaces.

The provisions of AS2890.1:2004 are based on extensive research of the particular needs for both front- and rear-door opening, irrespective of whether vehicles enter in a forward gear or reverse-in. As such, this is considered an acceptable design solution to adopt.

Parking Design Aspect 3

Council's TAPS PSP requires that terminated aisles extend for at least 2.0m past the last car bay in an aisle, to provide sufficient manoeuvring area for the last bay. While the proposed aisle extension of 1.25m is less than Council's TAPS PSP minimum requirement, it does meet and exceed the minimum 1.0m aisle extension requirement of AS2890.1:2004 (refer to Figure 2.3) and is therefore considered appropriate.

Parking Layout Summary

Overall, the proposed parking layout is generally designed in accordance with Council's TAPS PSP, apart from the performance solutions identified above, which are deemed fit-for-purpose.

6. Access Arrangements

6.1. Introduction

The development plans include the following access arrangements:

- Modified Type B1 (5.8m) crossover at the southern edge of the site's Jamieson Street frontage, accommodating all car movements – all movements / turns permitted.
- Modified Type B2 (6.4m) crossover at the western edge of the site's Edgar Street frontage, accommodating service vehicle movements only.
- Pedestrian access via the Jamieson Street and Edgar Street frontages.
- Cyclist access via the Jamieson Street frontage.

Further details in relation to the design provisions of these accesses are provided below.

6.2. Jamieson Street Vehicular Access

The design provisions of the Jamieson Street access and the respective provisions of Council's TAPS PSP are detailed in Table 6.1.

Table 6.1: Jamieson Street Access Arrangements

Design Aspect	TAPS PSP Requirement	Proposed Provision	Compliance
Width / crossover type to accommodate: • Cars[1,2]	Type B1	Type B2 (5.8m)	See Access Design Aspect 1
Distance from: • Minor intersection[1] • Adjacent driveway[1]	 10m (min) 3m (min)	 ~25m ~3m	 TAPS PSP compliant TAPS PSP compliant
Sight distance[1,2]	90m (desirable) 70m (minimum)	Clear sight to the Edgar Street intersection	TAPS PSP compliant
Driveway sight splays	2.0m wide x 2.0m deep (on each side)	2.0m wide x 2.0m deep (on each side)	See Access Design Aspect 2
Minimum queuing provisions	4 vehicles / 24m	0 vehicles / 4m (on-site) 1 vehicle / 6m (to kerb)	See Access Design Aspect 3
Maximum driveway grade	1:20 (5.0%) maximum within first 6m	1:20 (5.0%) section for portion of first 6m	TAPS PSP compliant

[1] Based on Jamieson Street being classified as a 'minor road' and a speed limit of 50km/h.

[2] Based on the access servicing low/medium turnover car parking spaces.

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

Access Design Aspect 1

Council's *CityPlan 2014* requires that Type B1 driveways are provided with a width between 6.0m and 7.0m.

The proposed crossover (5.8m) is considered acceptable, noting that the use's car parking will be low turnover and only has 13 carparking spaces and also considering the operations of the Jamieson Street frontage (dead-end, low volumes, extra carriageway width). Manoeuvring will be optimised with the provision of Type B2 splays.

Access Design Aspect 2

Council's TAPS PSP outlines pedestrian sight splay of 2.0m by 2.0m at vehicle accesses from the property boundary.

For the Jamieson Street car park access, it is noted that there is no pedestrian sight splay is provided on the entry (southern) side of the crossover, which is permissible under AS2890.1:2004. For the exit (northern) side of the crossover, there is some impediment to pedestrian / driver inter-visibility due to a column located on the property boundary, however, the layout incorporates a gap between the column and adjacent wall to maximise sight lines.

The proposed arrangement is considered satisfactory, noting that there would be limited car movements over the crossover (based on parking supply and User Class) and also noting that pedestrian movements tend to occur more along the Abbottsford Road footpath on the opposite side of Jamieson Street.

Access Design Aspect 3

It is noted that the proposed development scheme does not include sufficient internal queuing provision between the new property boundary (after verge widening) and the first car space, for a full car length (6.0m) of queuing – only approximately 4.0m is available. Notwithstanding, this is considered acceptable given:

- Car parking for the proposed land use is low turnover and queuing (either ingress or egress) will rarely occur, as well as not impacting the surrounding road network.
- The access crossover connects to Jamieson Street, which is a dead-end road and which only one (1) additional property gains access. Therefore, any occasional pause between ingressing and egressing vehicles would be limited to vehicles associated with the proposed development and the adjacent property. This will not impact the surrounding road network.
- There is sufficient space within the site frontage for turnaround and corrective manoeuvres, given the form of the Jamieson Street dead-end effectively operating as a cul-de-sac.

6.3. Edgar Street Vehicular Access

The design provisions of the Edgar Street access and the respective provisions of Council's TAPS PSP are detailed in Table 6.2.

Table 6.2: Edgar Street Access Arrangements

Design Aspect	TAPS PSP Requirement	Proposed Provision	Compliance
Width / crossover type to accommodate: • Service Vehicles[1,3]	Type B2 (7m)	Modified Type B2 (6.4m)	See Access Design Aspect 1
Distance from: • Minor intersection[1] • Adjacent driveway[1]	10m (min) 3m (min)	~15m ~3m	TAPS PSP compliant TAPS PSP compliant
Sight distance[1,2]	90m (desirable) 70m (minimum)	Clear sight to the Hazelmount Street and Jamieson Street intersections	TAPS PSP compliant
Driveway sight splays	2.0m wide x 2.0m deep (on each side)	2.0m wide x 2.0m deep (on each side)	TAPS PSP compliant
Maximum driveway grade	1:20 (5.0%) maximum within first 6m	Flat	TAPS PSP compliant

[1] Based on Edgar Street being classified as a 'minor road' and a speed limit of 50km/h.

[2] Based on the access servicing low/medium turnover car parking spaces.

[3] Based on the access servicing design service vehicles up to the size of an RCV/MRV.

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

Access Design Aspect 1

It is noted that the proposed access crossover only provides access to a single loading bay, directly from the Edgar Street carriageway. Given that a service aisle does not exist within the development (direct access to / from the Loading Bay from the street frontage, a 6.5m width crossover is not considered to be required.

The proposed crossover dimensions (6.4m width) and form (B1 tapers) are provided based on the functional requirements of the design service vehicles / swept paths which are illustrated in Colliers Drawings provided within Appendix B.

6.4. Active Transport Access

Pedestrian accesses are provided along both the Jamieson Street and Edgar Street frontages, connecting to the proposed development's Ground Level lobby.

Cyclists will be able to use the Jamieson Street vehicular crossover to access the site, with all bicycle parking provided at the rear of the Ground Level car park.

7. Service Vehicle Arrangements

7.1. Council Requirements

Section 3 of Council's TAPS PSP identifies the following requirements in relation to design service vehicles and loading bays for the proposed development use. These requirements, along with the proposed provisions, are summarised in Table 7.1.

Table 7.1: Council's TAPS PSP Service Vehicle Requirements and Provisions

Land Use	Design Vehicle		Loading Bay Requirements			
	Regular Access	Occasional Access	RCV	MRV	SRV	VAN
Commercial	MRV	RCV	-	1	1	2
Proposed Provisions	**MRV**	**RCV**	**1 (shared use of bay)**			

MRV = 8.8m Medium Rigid Vehicle | SRV = 6.4m Small Rigid Vehicle | RCV = Refuse Collection Vehicle

Council's TAPS PSP also details the following with respect to vehicle manoeuvring and on-site standing:

Occasional Access Service Vehicles

- The design service vehicle can perform a reverse movement, regardless of frontage road classification, for one (1) movement to / from the site.
- The vehicle can stand wholly contained within the site, clear of the verge.
- No formal loading bay provision is required.

Regular Access Service Vehicles

- This vehicle can access the site with any on-street manoeuvring by the regular design service vehicle can be limited to safe reversing onto the site in one movement only.
- The regular design service vehicle can stand wholly contained within the site.
- A minimum of one (1) loading bay is required for the regular access vehicle for each land use.

7.2. Proposed Loading Provisions

7.2.1. Design Vehicles

The development scheme proposes to adopt an MRV as the regular access service vehicle and a rear-lift Council RCV (10.24m length) as the occasional access service vehicle. This is consistent with Council's TAPS PSP requirements identified above.

7.2.2. Loading Bay Provisions

The development scheme makes allowance for one (1) loading bay on the Ground Level, directly accessible via Edgar Street. This would be shared between the anticipated rear-lift 10.24m RCV and MRV design service vehicles. Given the anticipated infrequent demand for service vehicles, this provision is considered acceptable.

7.2.3. Refuse Collection Provisions

A site-specific Refuse Management Plan has been developed for this site, which will be submitted to EDQ as part of this Development Application.

Given the nature and scale of the development use, bulk bins serviced by a rear-lift RCV has been considered the optimal strategy for refuse collection. A permanent bin store would be located on the Ground Level, which would access the rear of the loading bay.

The rear-lift RCV – Council 10.24m RCV design service vehicle – would enter the site in reverse gear, to align with the bin store at the loading bay rear. Once refuse collection has been completed, the vehicle would exit the subject site in a forward gear.

It is noted that while there is a wide design service vehicle swept path to / from Edgar does swept across the proposed verge, there are adequate sight lines along Edgar Street and compliant pedestrian sight splays to / from the Loading Dock which will mitigate potential risks for the relatively low expected number of service vehicle movements for the proposed development.

7.3. Proposed Service Vehicle Design Provisions

In terms of service vehicle operations for the proposed development, all vehicles will be required to enter the subject site in reverse gear, before exiting in a forward gear. Swept path analysis for the RCV and MRV design service vehicles to access the site and loading bay are demonstrated by Colliers Drawings within Appendix B.

Table 7.2 overleaf identifies the service vehicle design provisions, with respect to Council's TAPS PSP requirements.

Table 7.2: Council's TAPS PSP Service Vehicle Design Requirements and Provisions

Design Aspect	TAPS PSP Requirement	Proposed Provision	Compliance
Loading bay length: • MRV bay • RCV bay	 • 9.0m (min) • 10.5m (min) + 1.5m for operations = 12m total	 • 12.6m • 12.6m	 TAPS PSP compliant TAPS PSP compliant
Loading bay width: • MRV bay • RCV bay	 • 3.5m (min) • 3.5m (min)	 • 4.4m • 4.4m	 TAPS PSP compliant TAPS PSP compliant
Loading grades: • MRV standing • RCV standing	 • 1:25 (4.0% max) • 1:20 (5.0% max)	 • Flat • Flat	 TAPS PSP compliant TAPS PSP compliant
Height clearance: • MRV • RCV (rear-lift)	 • 4.5m (min) • 3.6m (min)	 • >4.5m • >4.5m	 TAPS PSP compliant TAPS PSP compliant
Vehicle manoeuvring	Occasional access vehicles can complete reverse-in movement from road for one (1) movement. Regular access vehicles are required to turn around wholly on-site. Demonstrate access to all loading bays for the design vehicles, while maintaining minimum 0.3m manoeuvring clearance to all obstructions.	All service vehicles would need to enter the site in reverse gear, with exit in a forward gear. All service vehicles can access loading bays, while maintaining the minimum 0.3m manoeuvring clearance to all obstructions.	TAPS PSP compliant – noting that regular access vehicles would be required to undertake a reverse manoeuvre for entry.

The proposed servicing arrangements are therefore considered appropriate and generally consistent with the requirements of Council's TAPS PSP.

8. External Road Network Impact

8.1. Existing Development Traffic Generation

It is recognised that, within the City Frame, where maximum parking provisions are applied to all non-residential uses, a development's on-site car parking provision will dictate its peak hour traffic generations, rather than total floor area, as is typical outside of the City Frame. Therefore, instead of utilising peak hour traffic generation rates based on floor area ('per m^2'), it is considered more appropriate to estimate the anticipated peak hour traffic generations of the existing development based on car parking ('per car space').

In order to estimate the traffic generation of the existing development, reference is made to the Roads & Maritime Services (RMS) *Guide to Traffic Generating Developments – Updated Traffic Surveys* (2013) and the relevant survey data taken for office / commercial developments.

A total of ten (10) office blocks were surveyed within the Sydney area. With the peak hour traffic generations and on-site car parking provisions identified for each of the sites surveyed, an equivalent 'per parking space' generation rate can be calculated for each. These calculations are outlined in Table 8.1.

Table 8.1: RMS Peak Hour Traffic Generations 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)
OB1	100 Arthur Street, North Sydney	31400	136	Dec-09	44	0	44	0.324	0	33	33	0.243
OB2	9 Help Street, Chatswood	10214	142	Dec-09	42	0	42	0.296	1	49	50	0.352
OB3	2-4 Dawn Fraser Avenue, Sydney	34131	574*	Nov-09	155	3	158	0.275	5	122	127	0.221
OB4	33 Macmahon Street, Hurstville	3254	66	Dec-09	27	0	27	0.409	0	17	17	0.258
OB5	16 Giffnock Avenue, Macquarie Park	5748	269	Dec-09	74	4	78	0.290	7	56	63	0.234
OB6	1 Smith Street, Parramatta	27000	252	Feb-10	53	10	63	0.250	10	48	58	0.230
OB7	13-15 Moore Street, Liverpool	2817	28	Dec-09	8	1	9	0.321	2	6	8	0.286
OB8	10-12 Lexington Drive, Bella Vista	1200	83	Dec-09	16	2	18	0.217	0	6	6	0.072
OB9	22 Honeysuckle Drive, Newcastle	12182	200	Feb-10	86	3	89	0.445	4	76	80	0.400
OB10	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 outlined above, it is considered appropriate to adopt a 'per parking space' generation rate of 0.4 vehicles per hour (vph) per car space, for both the weekday AM and PM peak hour periods.

It has been assumed that there are currently 13 car spaces available to the existing uses over the subject site – 11 spaces fronting Jamieson Street for the three tenancies and two (2) spaces fronting Edgar Street for the northern-most tenancy. As the proposed parking supply is analogous to the existing parking supply and the uses are comparable, changes to traffic generation as a result of the proposed development will be negligible.

8.2. Warrants for Further Assessment

Acceptable Outcome AO2 of the Road Hierarchy Overlay Code identifies that development traffic impacts be quantified and mitigated for an 'assessable development for material change of use' which meets any of the following triggers:

- classified as a 'major development' – Council's TAPS PSP defines a 'major development' as one with a total peak hour traffic generation exceeding 25 vph; or
- involves an access driveway to a major road; or
- involves an access driveway within 100m of a signalised intersection.

The proposed development's access driveways are not within 100m of a signalised intersection. The proposed development's traffic generation is projected to be the same as the existing uses and therefore will not have negligible impact on the operation or safety of the surrounding road network.

Based on the above information, Colliers does not consider a detailed Traffic Impact Assessment (TIA) to be necessary and it is expected the proposed development will have no adverse impacts on the surrounding road network.

9. Summary of Findings

The following is a summary of the findings of the transportation engineering assessment for the proposed commercial development, to be located at 8 - 18 Jamieson Street, Bowen Hills.

9.1. Proposed Development

The proposed commercial development is comprised of a single building, with seven (7) levels and a total GFA of 3,295m^2.

Architectural plans for the proposed development, prepared by Nettletontribe, are included in Appendix A.

9.2. Parking Arrangements

Car parking supply requirements for the proposed development – located in the City Frame – have been determined in accordance with Council's TAPS PSP, as referenced by the Bowen Hills PDA Development Scheme. A maximum rate is applicable to all non-residential land uses.

The proposed development includes an on-site car parking provision of 13 spaces, which does not exceed Council's maximum requirement of 33 spaces.

One (1) PWD space is provided in the Ground Level car park, which meets the requirements of Council's TAPS PSP and the BCA.

Car parking is provided across the Ground Level only. The proposed car parking layout is generally compliant with the requirements of Council's TAPS PSP and AS2890.1:2004 (where applicable).

9.3. Access Arrangements

The proposed development includes provision of two (2) vehicular accesses – one (1) each to / from Jamieson Street and Edgar Street, which would be utilised by cars and service vehicles respectively.

The proposed vehicular access arrangements are generally consistent with Council's TAPS PSP.

Pedestrian access points are provided along the site's Jamieson Street and Edgar Street frontages, while cyclists would utilise the Jamieson Street vehicular crossover to access bicycle parking.

9.4. Service Vehicle Arrangements

Council's TAPS PSP identifies occasional and regular access for an RCV and MRV respectively.

The development scheme proposes to accommodate a 10.24m rear-lift RCV and 8.8m MRV for occasional and regular access respectively, matching Council's requirement. A loading bay is also provided on-site, directly accessible via the Edgar Street access.

All service vehicles will need to enter the subject site in reverse gear, before exiting in a forward gear.

Bulk bins are to be serviced by a rear-lift RCV, with a permanent bin store located at the rear of the loading bay on the Ground Level.

The proposed servicing arrangements (vehicles and loading bays) are generally consistent with Council's TAPS PSP and are therefore considered appropriate.

9.5. Traffic Impact Assessment

There are currently 13 car spaces available to the existing uses over the subject site, similar to the car parking supply of the proposed development. As the car parking supplies and land uses are comparable between the existing and proposed developments, any change to the peak hour traffic generation of the subject site is anticipated to be negligible.

Noting Acceptable Outcome AO2 of the Road Hierarchy Overlay Code, further assessment of the external road network surrounding the proposed development is not considered warranted, given the access driveways are to minor roads and not within 100m of a signalised intersection.

Therefore, Colliers does not consider detailed traffic impact assessment to be necessary and it is expected the proposed development will have no adverse impacts on the surrounding road network.

9.6. Conclusion

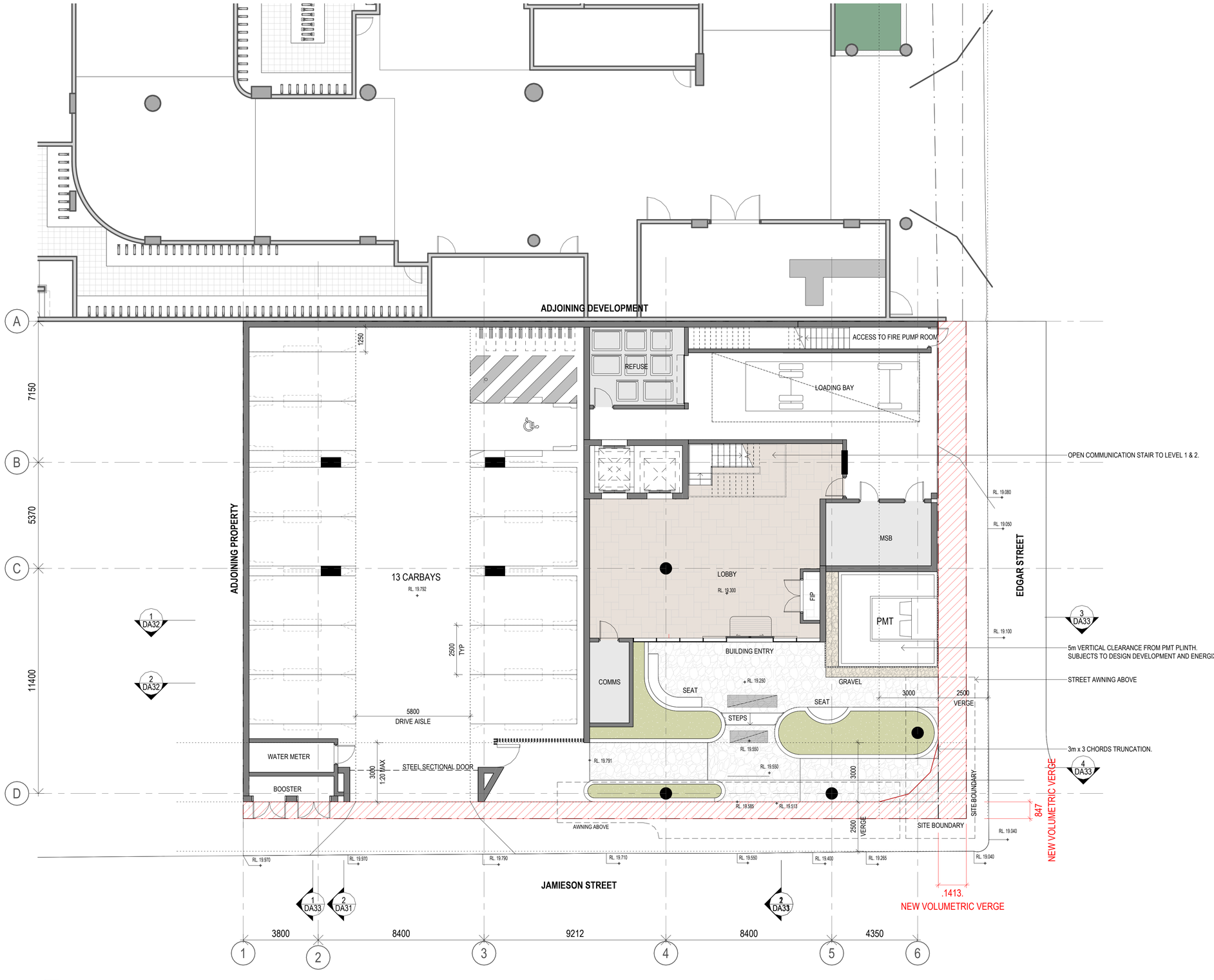
From the assessments undertaken and outlined in this report and provided that the recommendations identified are adopted, Colliers does not see any transport engineering reason that would prohibit approval of the proposed development.

Appendix A Development Plans

PROJECT SUMMARY

BUILDING INFORMATION:	8-16 Jamieson Street, Bowen Hills
	Lot 36, 38 on RP9895 and Lot 37 on RP115563
ZONING:	Bowen Hills PDA, Mixed Use Zone
SITE AREA:	922 m^2 (Combined)

PROPOSED GFA	3,295 sqm
PROPOSED NLA	2,965 sqm
PROPOSED STOREYS	7
PROPOSED PLOT RATIO	3.6:1
TOWER SITE COVER (EXCLUDES SUNSHADES)	515 sqm, 56%
TOTAL CAR PARKS	13



1 GENERAL ARRANGEMENT LEVEL 00
1 : 100

Client

CFMEU CONSTRUCTION

Issue	Description	Date
3	ADDED TRUNCATION	12.12.2024
2	AMENDED STRUCTURE	11.12.2024
1	DRAFT DA	10.12.2024

DEVELOPMENT APPLICATION

Builder

Project Name
JAMIESON STREET

Project Address
8-16 JAMIESON STREET, BOWEN HILLS, QLD, 4006

Key Plan
0 2000 5000

Drawing Title:
GROUND FLOOR FLOORPLAN

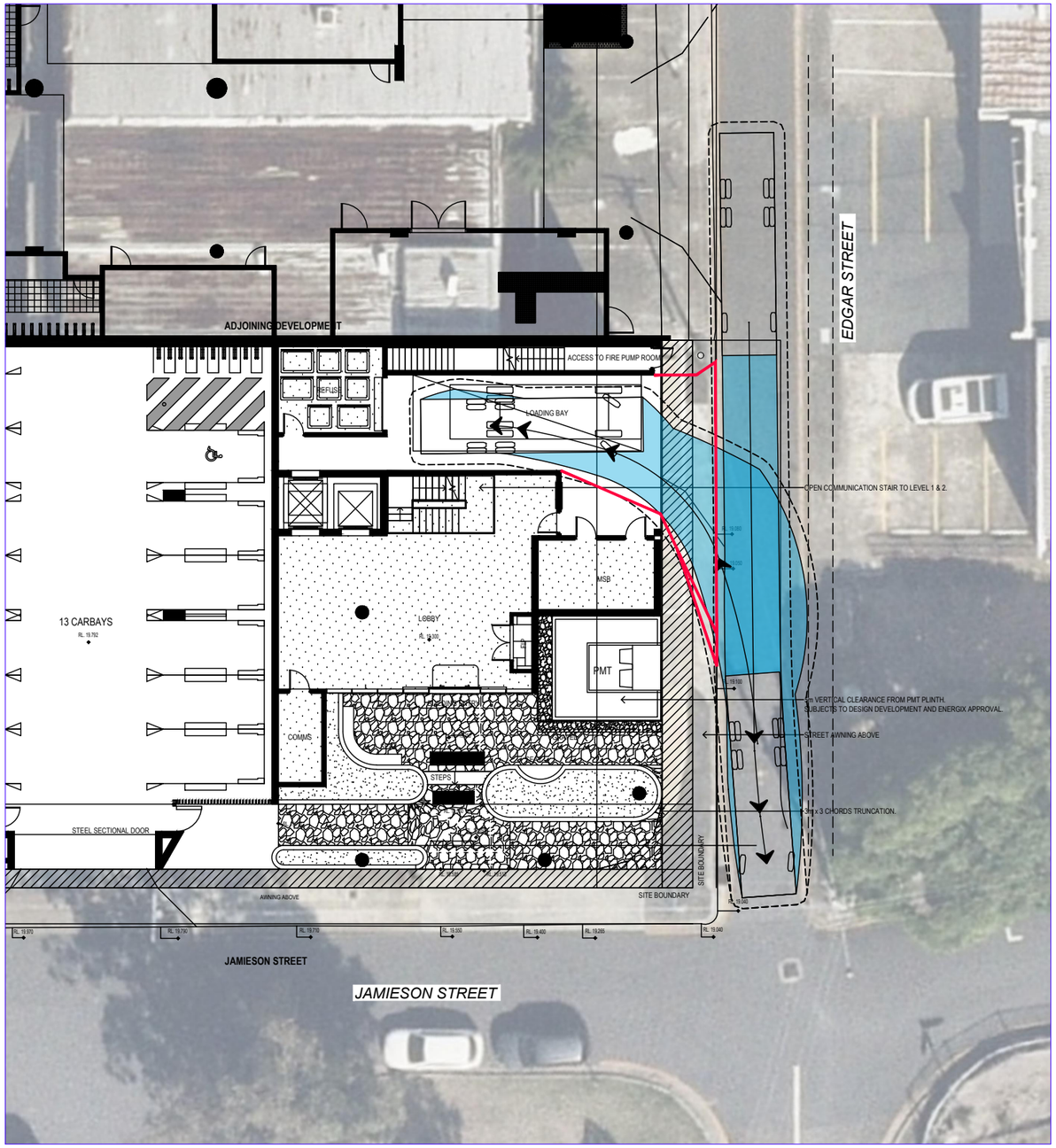
Checker:	Sheet Size:	Scale:
TT	A1	1:100

Drawing Number: **14217_DA01**
Issue: **3**

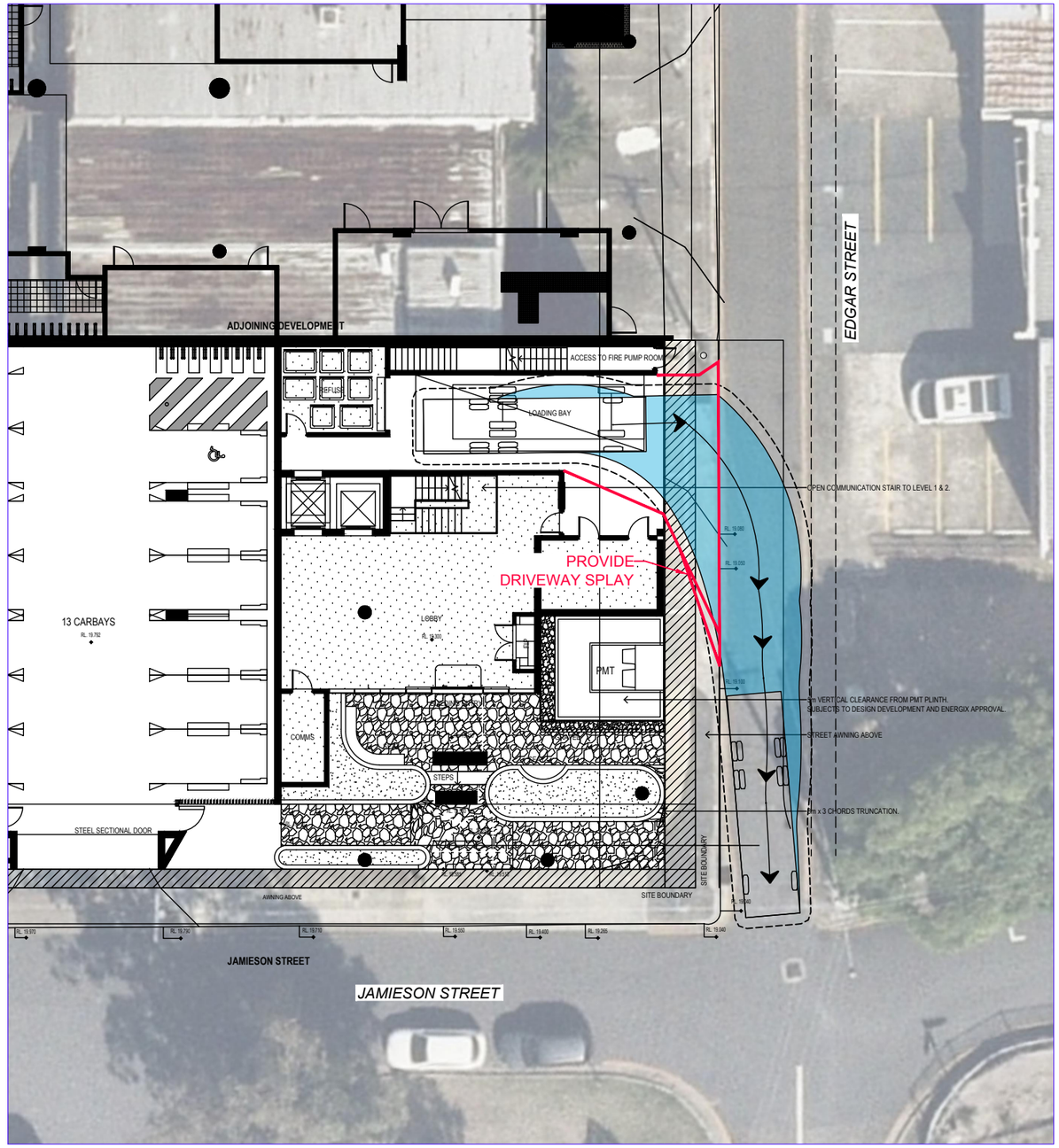
nettletontribe

nettleton tribe partnership pty ltd ABN 58 161 683 122
85 Bowen Street, Spring Hill, QLD 4000
t +61 7 3239 2444
e: brisbane@nettletontribe.com.au w: nettletontribe.com.au

Appendix B Colliers Drawings



INGRESS MANOEUVRE



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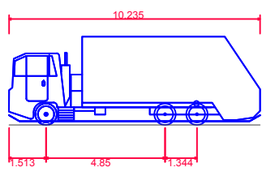


BCC Fleet 2020 (Rear Loader)

Overall Length	10.235m
Overall Width	2.500m
Overall Body Height	3.600m
Min Body Ground Clearance	0.260m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	9.757m
Design Speed Forward	5.00km/h
Clearance Envelope	0.500m

PRELIMINARY
ADVICE ONLY
16 December 2024

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

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	16-12-24	ORIGINAL ISSUE	DSF	RNB	DW

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

NORTH

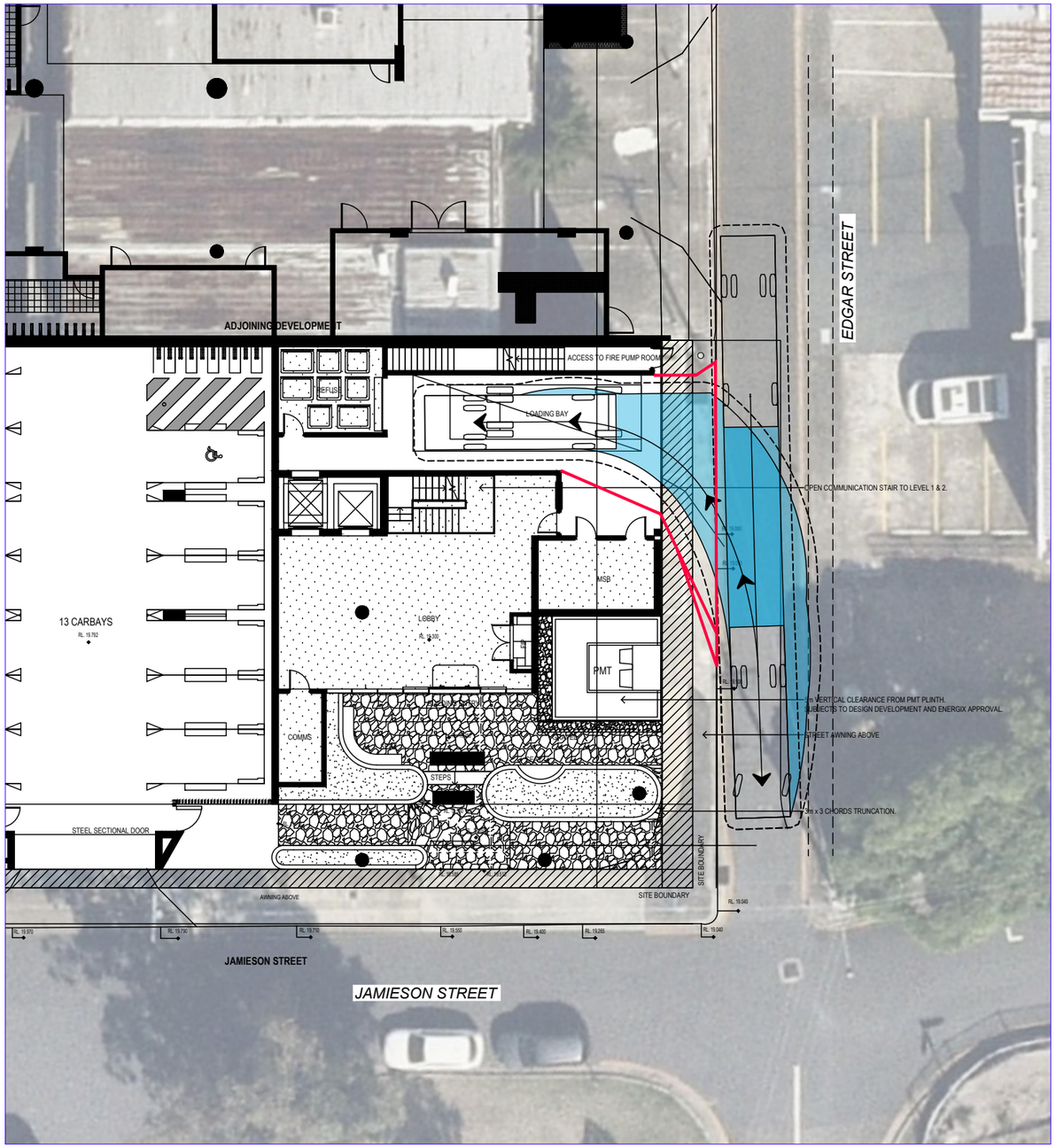
CLIENT
NEW URBAN VILLAGES

Colliers International Engineering & Design (TTMC) 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
8-18 JAMIESON STREET, BOWEN HILLS

DRAWING TITLE
SWEPT PATH ANALYSIS
10.2m REAR LOADING REFUSE COLLECTION VEHICLE

PROJECT NUMBER	24BRT0528
ORIGINAL SIZE	A3
DRAWING NUMBER	24BRT0528-01
REVISION	A
DATE	16 Dec 2024
SHEET	1 OF 1



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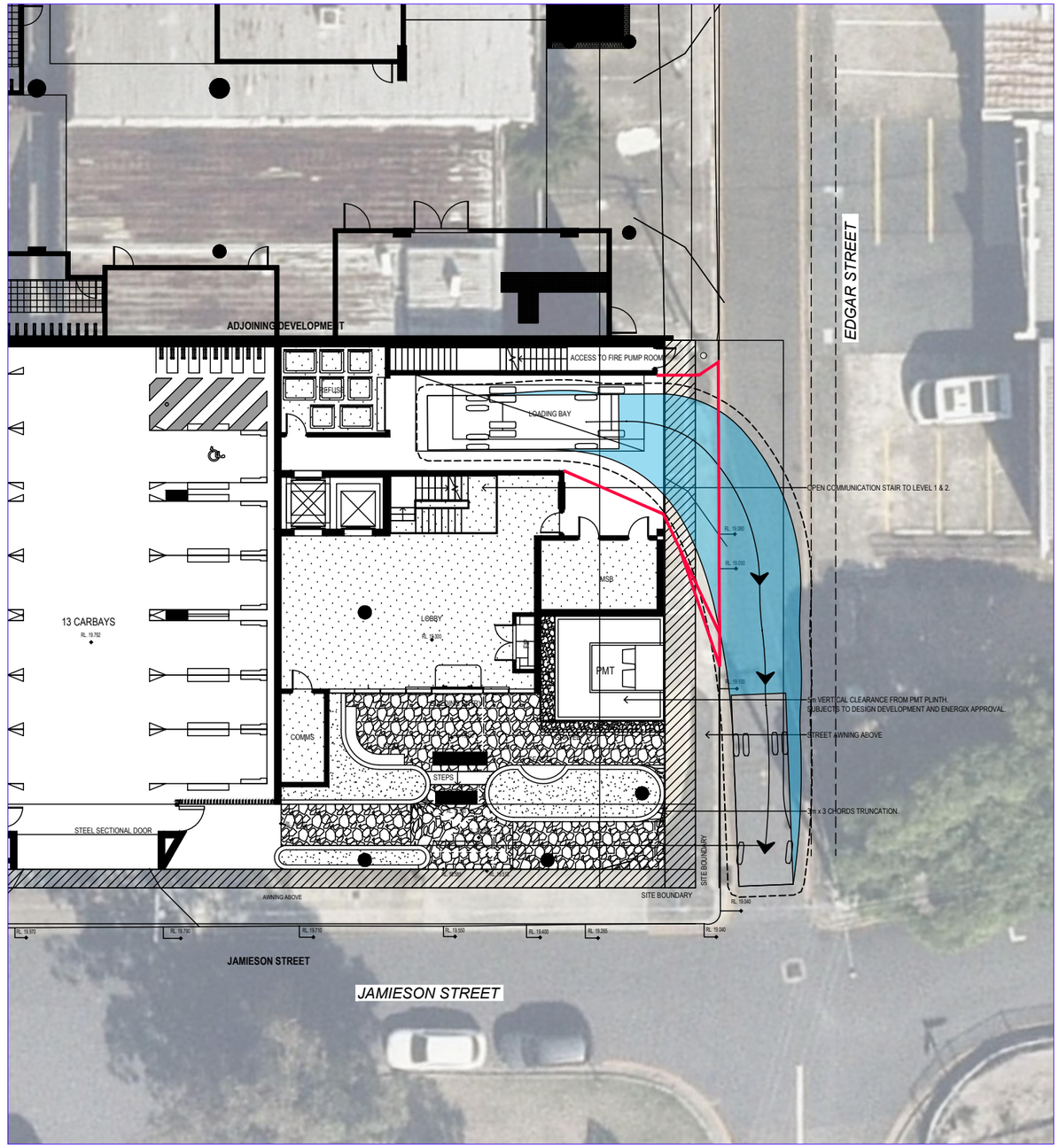

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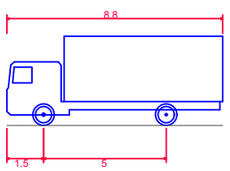

MRV - Medium Rigid Vehicle

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	6.00s
Curb to Curb Turning Radius	10.000m
Design Speed Forward	5.00km/h
Clearance Envelope	0.500m

PRELIMINARY ADVICE ONLY

16 December 2024

0 2.5 5 7.5 10 12.5m

SCALE 1:250 AT ORIGINAL SIZE

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
A	16-12-24	ORIGINAL ISSUE	DSF	RNB	DW

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

NORTH

CLIENT: NEW URBAN VILLAGES

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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: **8-18 JAMIESON STREET, BOWEN HILLS**

DRAWING TITLE: **SWEPT PATH ANALYSIS**
8.8m MEDIUM RIGID VEHICLE

PROJECT NUMBER	24BRT0528
ORIGINAL SIZE	A3
DRAWING NUMBER	24BRT0528-02
REVISION	A
DATE	16 Dec 2024
SHEET	1 OF 1