

26 April 2024  
 Our Ref: 20GCT0106\_LT03  
 Your Ref: DEV2022/1323

Attention: Leo Mewing

Mewing Planning Consultants  
 by email

Dear Leo,

**RE: 5 Hercules Street, Hamilton – Traffic Engineering**

## 1. Introduction

TTM Consulting has been engaged to prepare a traffic engineering report investigating a proposed mixed use development within the Northshore Hamilton PDA. This report has been prepared in support of an application to Economic Development Queensland (EDQ).

This assessment provides updated response to the Further Issues Letter dated 19 March 2024, specifically item 8. A summary of the responses is set out below, with further detailed presented throughout the assessment.

Item	Response summary and report location
i. Compliance against the Northshore Hamilton PDA Development Scheme;	This assessment has been carried out in accordance with the PDA as required.
ii. Concept road layout plan if on-street parking will be lost. Quantify the loss of on-street car parks. The plan shall include sign and line markings, include kerb build-out for indented parking, etc.;	On street parking at the site frontage is not permitted due to single yellow line pavement markings that prohibit stopping/parking, therefore no loss of parking results.
iii. A fully dimensioned scale plan, including gradients, spot levels (for height clearance) for the access and carparking areas, in accordance with the standard prescribed in the development scheme;	Spot elevations have been added to the car parking plans. Refer to updated architectural plans for details.
iv. Denote proposed driveway location(s), type(s) and width(s);	The driveway is located at the south-east corner of the site to Main Street. Refer to Table 3 in Section 9 for details.
v. Accessible car park provisions and locations;	1 PWD space (2 total) has been provided on levels 1 and 2 immediately adjacent to the lifts. Refer to updated architectural plans for details.
vi. Label each parking bay on plan, including the number of PWD, visitor, staff car parking, slow and fast charging, etc.;	All parking spaces have been labelled on the updated plans.
vii. Adequate sight distance & queuing provisions ;	Sightline and queuing provisions are met. Refer to Table 3 in Section 9 for details.

viii. Adequate clear height clearance for service vehicles and PWD spaces;	Height clearances achieved have been annotated on the architectural plans. Refer to Section 6 and updated architectural plans for details.
ix. Compliance of End of Trip (EOT) facilities for pedestrians and cyclists, and illustrate the proposed location and number on plans;	EOT facilities are provided on level 2 for staff. Refer to Section 8 and updated architectural plans for details.
x. Compliance of service vehicle requirements and provide vehicle turn templates;	Refer to Section 10, attached drawing 08 and architectural plans for details.
xi. Turn around space at end of blind aisle (if required); and	Not applicable. All blind aisle spaces are allocated (ie. not for ad hoc visitor use) so do not require turnaround provisions.
xii. Any consideration/ provision for electric vehicle EV charging for all car park and location of a rapid charger in short term parking.	There is opportunity to upgrade spaces to include EV charging, however is not proposed at this time.
swept path diagrams certified by an RPEQ to demonstrate how vehicles manoeuvre at the security gate (especially visitors turning around); and	Swept path plans have been updated to include RPEQ certification.
identify speed humps and speed limit within the carpark and if any speed humps are to be provided they are to be concrete/bitumen, not metal, in accordance with the recommendation of the Acoustic Assessment Report.	Speed humps within the car park are not proposed. The speed limit throughout will be signed as 10kph, and the inclusion of hold points assists in limiting

## 2. Existing Site Conditions

The site is located at 5 Hercules Street, Hamilton, near the north-east corner of the intersection between Hercules Street and Main Street.



Figure 1: Site location

The property is described as Lot 1 on SP231749 and has road frontage to Hercules Street and Main Street and is currently occupied by a commercial property.

### 3. Existing Transport Infrastructure

**Roads** - All roads within 200m of the site are administered by Council – the exception being Main Street which is a private road. Neighbourhood/local roads are subject to a 50kph speed limit and generally have two traffic lanes plus kerbside parking lanes. Kingsford Smith Drive is the nearest arterial road located 150m to the north of the site. Kingsford Smith Drive provides access to the broader Brisbane network, is subject to a 60kph speed limit and is 3 lanes wide in both directions. The Kingsford Smith Drive / Hercules Street intersection is signalised.

**Public transport** - Doomben and Ascot train stations on the Doomben line are located approximately 1.2km to the northeast and northwest of the site respectively. Bretts Wharf Citycat ferry terminal is located 380m walk to the south west of the site.

The nearest on-street bus stop is located on Remora Road 350m east of the site. The stop services routes 303, 304 and 305, connecting the site with Doomben, Eagle Farm, Pinkenba, Newstead and Brisbane CBD.

Located 450m away on Kingsford Smith Drive near the Bretts Wharf Citycat ferry terminal, additional stops are provided that service routes 300, and 302, connecting the site with both Toombul Centro and the Brisbane CBD.

These routes provide a weekday service generally every 15-20 minutes, and weekend services are generally every 30 minutes.

**Cyclists** - An off-road cycle path extends across the site frontage along Hercules Street and also from the nearby cruise ship terminal westward toward Newstead, between Kingsford Smith Drive and the river's edge. Other on-street routes connect Kingsford Smith Drive to the Doomben and Ascot train stations.

**Pedestrians** - Formal pedestrian footpaths are located on both sides of all roads in the immediate vicinity of the site, and signalised pedestrian crossings are incorporated into nearby intersections with Kingsford Smith Drive and Remora Road.

**Planning** – Review of the Queensland Transport and Roads Investment Program (QTRIP) 2026-2027 shows no planned road upgrades in the immediate vicinity of the site, or other works which will impact upon or be impacted by the proposed development.

An indicative pedestrian pathway is proposed along Main Street and a proposed indicative cross block link opposite the site, connecting to the Brisbane River as per the proposed amendment (Oct 2022) to the Northshore Hamilton PDA Development Scheme.

### 4. Proposed Development

The development proposes 520m<sup>2</sup> GFA of commercial area, of which 289m<sup>2</sup> is at ground level, with 70 hotel rooms, 50 residential units and communal facilities on the levels above.

The ground and three podium levels provide parking for 91 car parking spaces. The site provides 73 bicycle spaces across the parking levels of which 17 freely accessible spaces are located at ground level. Standing for an MRV is also accommodated within a service bay at ground level.

The access arrangements include a 6.35m wide driveway crossover located on the southern boundary of the site direct to Main Street – to which the site has access easement rights. The access is priority controlled with all turns permitted.

## 5. Car Parking Supply

The Northshore Hamilton PDA Development Scheme identifies expected car parking rates for development, and these are outlined in Table 1 below. The rates are further defined by the October (2022) amendment to the Hamilton PDA, which for unspecified non-residential uses (ie. short term accommodation) refers to the City Frame rates identified within BCC TAPS PSP.

Table 1: Current Development Scheme Car Parking Supply Requirement

Land Use	Parking Rates	Extent	Required Spaces
Residential	Min 0.75 / Max 2.0 spaces per dwelling unit	50 units	38 min – 100 max
Residential - Visitor	0.15 spaces per dwelling unit	50 units	8
Residential – PWD	0.02 spaces per dwelling	50 units	1
Short term accommodation (BCC TAPS)	0.5 spaces per room, unit, or cabin, plus 0.5 spaces per staff	70 rooms	35 plus staff
Commercial *	Max. 2 spaces per 100m <sup>2</sup>	520m <sup>2</sup>	11
<b>Total</b>			<b>82 - 144 plus staff</b>

\* commercial parking is a maximum rate and is therefore not included within the minimum required spaces.

The development is proposing to provide 91 parking spaces. The number of car parking spaces proposed reflects the expected demand for the development and complies with requirements of both the PDA and BCC TAPS PSP.

## 6. Car Park Layout

The characteristics of the proposed car parking area with respect to the EDQ requirements are reviewed against AS2890.1. The key aspects of the parking area comply with the following designs standards:

- User class 1A resident bays – 5.4m x 2.4m
- User class 3 visitor bays – 5.4m x 2.6m
- User class 4 PWD bays – 5.4m x 2.4m plus 5.4m x 2.4m adjacent shared area
- Parking and circulation aisles – 5.8m (minimum)
- One way ramps – minimum 3.0m plus 0.3m clearance to walls

- Ramp grades – 1:5 (20%) with 1:8 (12.5%) summit and sag transitions
- Height clearances shall comply with the minimum 2.2m over aisles and standard spaces, and 2.5m over PWD spaces and adjacent shared area.

## 7. Ramp Operation

The site proposes a one way ramp between ground and podium. The ramp will be signal controlled due to its single lane width. It is proposed that inbound vehicles have priority, meaning outbound vehicles will be required to stop at a signal-controlled hold points on the podium level to allow inbound vehicles to enter.

The entry signal from Main Street will be default green to prioritise entry movements. When a vehicle on the podium approaches to exit, the ground entry signal will revert to red to allow the podium vehicle to exit. Upon exit the ground signal will revert back to green.

TTM have undertaken swept path analysis of the podium ramp entry and exit movement to demonstrate suitability of the proposed arrangement – refer to TTM Drawings 20GCT0017-05 to 07 attached.

Single lane ramps are also proposed between podium levels 1-2 and 2-3. These ramps will also be controlled via a signal system. Vehicles on an upper level (relative to the immediately lower level) will be stopped to allow upper level podium vehicles to exit – and in reverse for the opposite direction. These signals will operate independent of the ground level system. For those spaces located in front of hold points, the signal system is triggered by way of push buttons mounted on the columns/walls adjacent to the spaces. These button activations include additional timing to allow for users to access their vehicles. Proximity sensors over the spaces identify the vehicle is present (to avoid misuse) and the system is triggered to allow them to exit.

On entry from Main Street, the site provides a hold point that accommodates two queuing vehicles within the property boundary, whilst allowing vehicles to pass to exit.

To calculate the amount of queuing space required the probability of a number of vehicles in a queue  $n$  exceeding a specified number of vehicles  $N$  (ie. the design queue) at any instant must be calculated. This is achieved by the following formula, which is deconstructed in **Error! Reference source not found.**

$$\Pr (n > N) = \rho^{N+1} \leq \alpha$$

The 98th percentile queue is considered an adequate measure of an acceptable queue at access driveways where mechanical equipment is utilised. This infers that there is a 2% probability that the queue length will be exceeded.

The worst-case scenario of delay at the site is associated with the travel between ground and podium levels. The below table shows the calculation of time in which the worst-case movement takes. This is known as the service rate of the queuing system. This is based on a 10kph travel speed and a 60m clear distance between the hold point at ground and the hold point at podium level.

PM Peak - Trips based on trips						
Description	Calculation	Rate	Inbound		Outbound	
Arrival Ratio	$r$		27	vph	11	vph
Service rate	$s$		22	s	22	s
			166	vph	166	vph
Utilisation Factor	$\rho = r/s$		16.2%		6.6%	
98th Percentile design queue	$N = \lceil \log(\alpha) / \log(\rho) \rceil - 1$ Where $\alpha = 0.02$ (ie. 2%)		0.6		1.2	
Proportion of time during which ground signal is in use	$\rho_{total} = \rho_{in} + \rho_{out}$		22.9%			
Proportion of time during which an inbound queue of exactly $n$ vehicles occurs	$P_n = \rho_{total} \rho_{in}^n (1 - \rho_{in})$	$n = 1$	3.11%			
		$n = 2$	0.51%			
		$n = 3$	0.08%			

The development should be designed to allow for an inbound queue of 1 vehicle in the 98<sup>th</sup> percentile design and it is identified that the probability of a 1 vehicle inbound queue is only 3.11% - with ~0.51% probability for more than 1 vehicle. The development provides for a 1 vehicle queue within the site boundary. This provision is sufficient for the site.

The development trip generation during the PM peak hours provide the highest inbound flow of traffic. As identified within this letter (see Section 11), a conservative total of 38vph is expected to be generated by this development. This is equivalent to 1 vehicle every 1½ minutes. The travel time between the ground and next level is limited to less than 1 minute, therefore the potential for more than one vehicle queue at any one time is unlikely. Additionally, the signal defaults in the peak periods give priority to the peak flow movement further limiting incidents of queuing in the driveway.

## 8. Cycle Parking

The development cycle parking identified in the current development scheme as a deemed-to-comply outcome is presented in Table 2 below. The October amendment to the Hamilton UDA notes that cycle parking rates are to conform to BCC bicycle parking rates.

Table 2: Current Development Scheme Cycle Parking Supply Requirement

Land Use	Bicycle Parking Rates	Extent	Spaces
Residential	1 space per dwelling unit	50 units	50
Residential – Visitor	1 space per 4 units	50 units	13
Restaurant – Staff (Austroads)	1 per 100m <sup>2</sup> public area	179m <sup>2</sup>	2
Restaurant – Visitor (Austroads)	2 visitor spaces	-	2
Hotel – Staff (Austroads)	1 per 100m <sup>2</sup> lounge beer garden	135m <sup>2</sup> resident's lounge	2
Hotel – Visitor (Austroads)	1 per 100m <sup>2</sup> lounge beer garden	135m <sup>2</sup> resident's lounge	2
<b>Total</b>			<b>71</b>

Space for 73 bicycle parking spaces is provided throughout the development, of which 17 spaces are located at ground level for use by visitors, and the remainder distributed over podium carparking levels. All access to cycle parking beyond ground floor are resident or staff which are securely accessed via lifts which accommodate minimum internal dimension of 1.8m to accommodate a bicycle. All podium parking is

Cycle parking layout shall accord by standard with AS2890.3 requirements of a 500mm wide envelope per cycle and 1.5m access aisles.

The PDA advises provision be in accordance with Austroads Guide to Traffic Management Part 11 which for 6-10 long term bicycle spaces requires 6-10 lockers and 2 showers (one male, one female). End of trip (EOT) facilities are provided on level 2 for staff and include 2 showers with additional adjacent area for lockers. On this basis the EOT provision is compliant.

## 9. Site Access Arrangements

The site is accessed from a local road and serves 154 low turnover car park spaces. The proposed access driveway requirements are identified in Table 4.

Table 3: Driveway requirements

Design Aspect	Requirement	Main Access	Compliance
Distance from a minor intersection	6m (min) from tangent point.	20m	Compliant
Distance from another driveway	3.0m (min)	10m	Compliant
Sight Distance – 30kph (estimated for low speed road)	Desirable – 42m Minimum – 17m	60m in both directions	Compliant
Driveway Design Type (Local road, 25-100 spaces)	Category 2	Category 2	Compliant
Driveway Width	6.0m - 9.0m combined	6.35m	Compliant
Pedestrian Sight Triangle	2.5m by 2.0m	2.5m by 2.0m	Compliant

The site access arrangements are considered to be appropriate for the site use and location.

## 10. Service Vehicle Arrangements

The proposed development is comprised of multiple dwellings, short-term accommodation, retail and commercial land uses. Standing room for an MRV (8.8m L x 2.5m W x 4.5m H) on site is provided in the driveway – refer to TTM Drawing 20GCT0017-08 attached.

The site provides a 4.5m height clearance over the driveway which is sufficient to accommodate an MRV.

The bin room is located at ground level adjacent to the driveway. It is proposed that for collection, bins be moved to the temporary storage area and also collected through the roller doors adjacent to the ground floor loading bay. Collection from the Hercules Street frontage is not considered appropriate due to the presence of the cycle network at this frontage.



## Refuse Collections

All refuse will be collected on-site. Refuse collection vehicles will enter the site via Main Street and park in the loading bay on the ground floor, the gradient of the loading bay is at most 1:20. Residential and commercial bins are collected from their respective storage areas adjacent to the loading area for emptying and returned once emptied.

Residential bins will be serviced by Council whilst commercial bins will be serviced by a private contractor.

Refer to site specific waste management plan for details of quantities, room arrangements and servicing frequency.

## 11. Impact Assessment

TTM are aware that comprehensive planning was undertaken to inform the design of the upgraded road network in the vicinity of the site, which included accounting for traffic generated by the land uses and developments outlined within the sub-precinct plan. These upgrades were based on a Transport Study for the Hamilton Northshore PDA undertaken by Cardno in February 2016. The Transport Study details the Brookfield, Peleton, Pamada, Citimark, Wentworth (Precinct 3c) as generating a total of 1,020vph (including 306vph for residential, 221vph for commercial use, 359vph for retail use and 134vph for hotel) during the peak hour periods.

In the undertaken study, Cardno adopted the traffic generation rates outlined in RMS' Supplementary Guide to Traffic Generating Developments to calculate the traffic generating potential of the precinct. The AM and PM peak hour traffic generation rates adopted for the proposed residential land use were 0.19vph per unit.

The 306vph identified in the Cardno report represents 1,609 units, of which 132 units (25vph) were 'anticipated' across the development site.

The development proposes 50 residential units, which equates to a total trip generation in peak periods of 10vph. Additionally, the site proposes 70 short term accommodation units, which based on RTA trip generation rates of 0.4 evening peak hour trips per unit (Casual accommodation), equates to a further 28vph at 100%. It is noted that the RTA guide suggests a reduced rate of 85% occupation may be adopted, which would equate to 24vph.

This means the development is expected to generate between 34vph and 38vph during evening peak hours. This is 13vph more than that previously anticipated across the site, equating to 1 additional vehicle every 5 minutes. This is negligible when considering the separation of inbound and outbound movements and distribution throughout the wider network. The development is therefore considered to be provided at an acceptable limit and is not expected to impact on the design horizon of the local road network for which it has been designed. A detailed impact assessment is not warranted or required.



## 12. Conclusion

The development proposes 51 multiple dwelling units, 70 short term accommodation units, with ancillary commercial and retail uses. TTM have reviewed the traffic and transport aspects of the development throughout this report and provide the following conclusions.

- The car parking provisions are compliant with PDA and BCC TAPS PSP requirements and the layout is geometrically compliant.
- The internal ramps and access will be controlled via a series of hold points and stop/go signals.
- The cycle parking provisions are considered suitable for the site and location.
- The site access arrangements are geometrically compliant with requirements.
- Service requirements for the site can be achieved via vehicles up to and including size MRV to stand on site.

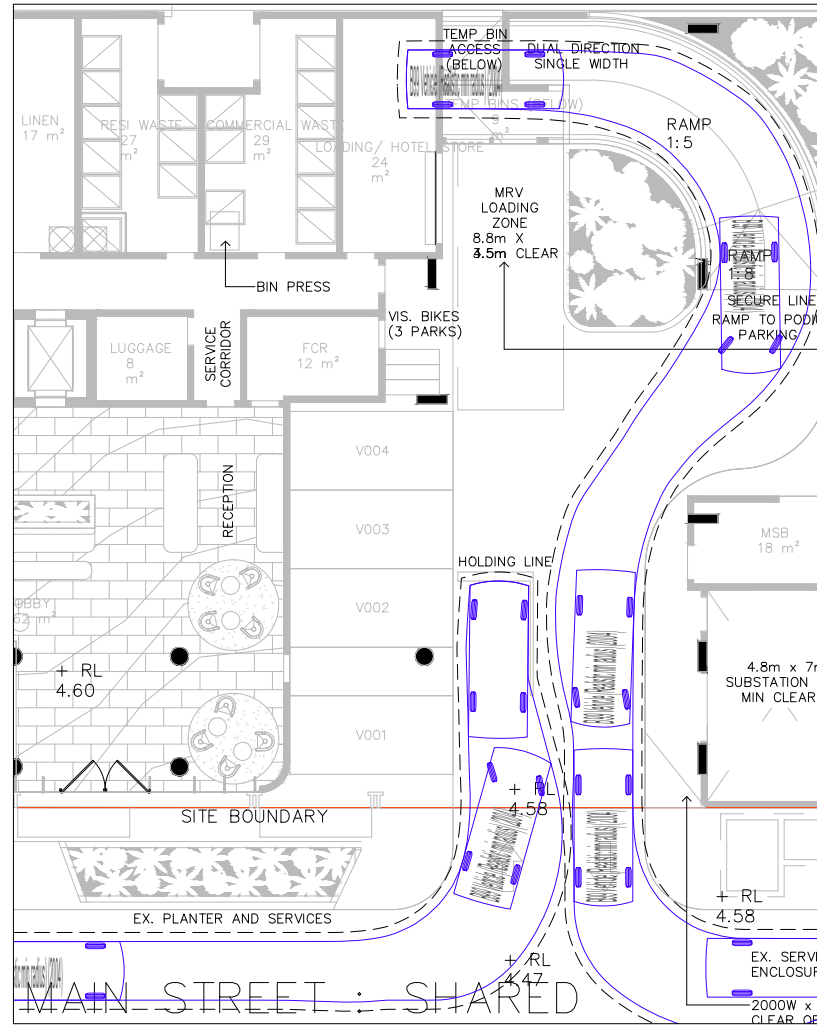
Based on this assessment, TTM see no traffic engineering reason why the relevant Development Approval cannot be granted.

Yours sincerely,

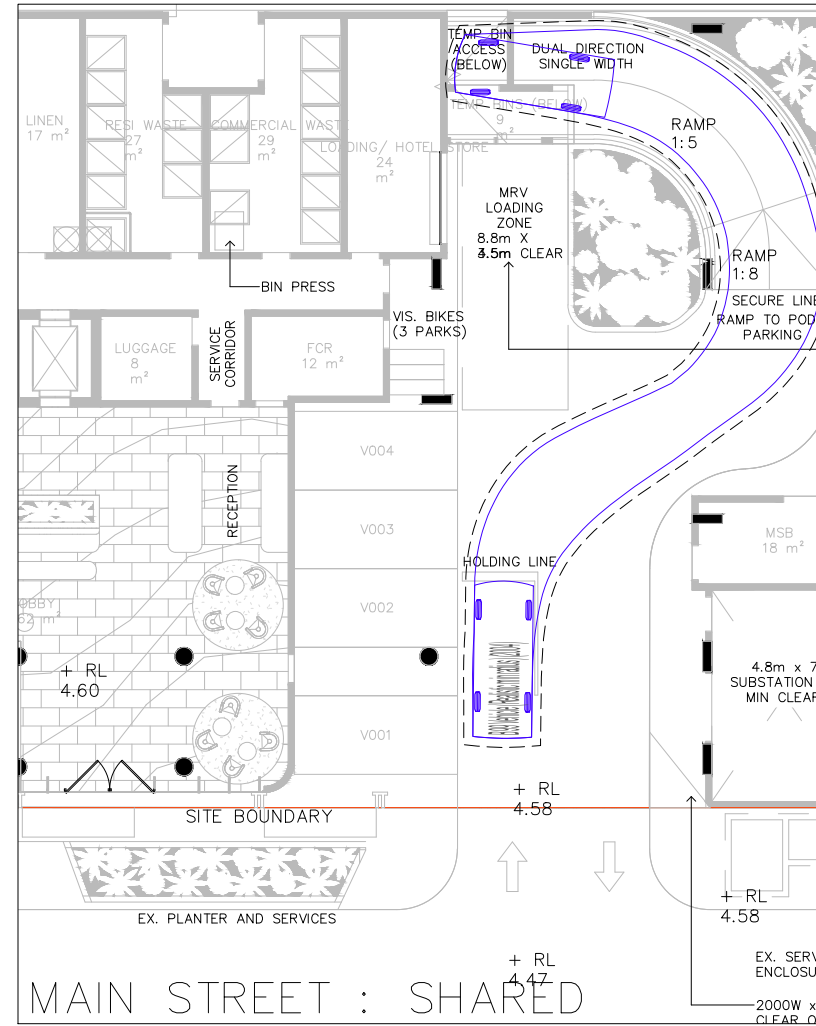


Ilona Blackburn  
Senior Associate Director | RPEQ 16879  
[TTM Consulting Pty Ltd](#)

Attachment 1 – Swept Path Analysis

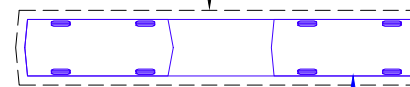


ENTRY TO HOLD POINT AND PODIUM EXIT

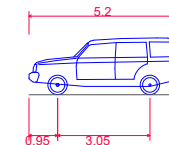


GROUND FLOOR RAMP ACCESS FROM HOLD POINT

VEHICLE CLEARANCE  
300mm (DASHED LINE)



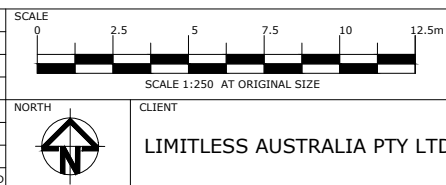
BLUE - VEHICLE BODY



**B99 Vehicle (Realistic min radius) (2004)**  
 Overall Length 5.200m  
 Overall Width 1.940m  
 Overall Body Height 1.878m  
 Min Body Ground Clearance 0.272m  
 Track Width 1.840m  
 Lock-to-lock time 4.00s  
 Curb to Curb Turning Radius 6.250m  
 Design Speed Forward 5.0km/h

*ILB*  
 SENIOR ASSOCIATE DIRECTOR  
 ILONA BLACKBURN RPEQ 16879  
 APPROVED 26 Apr 2024

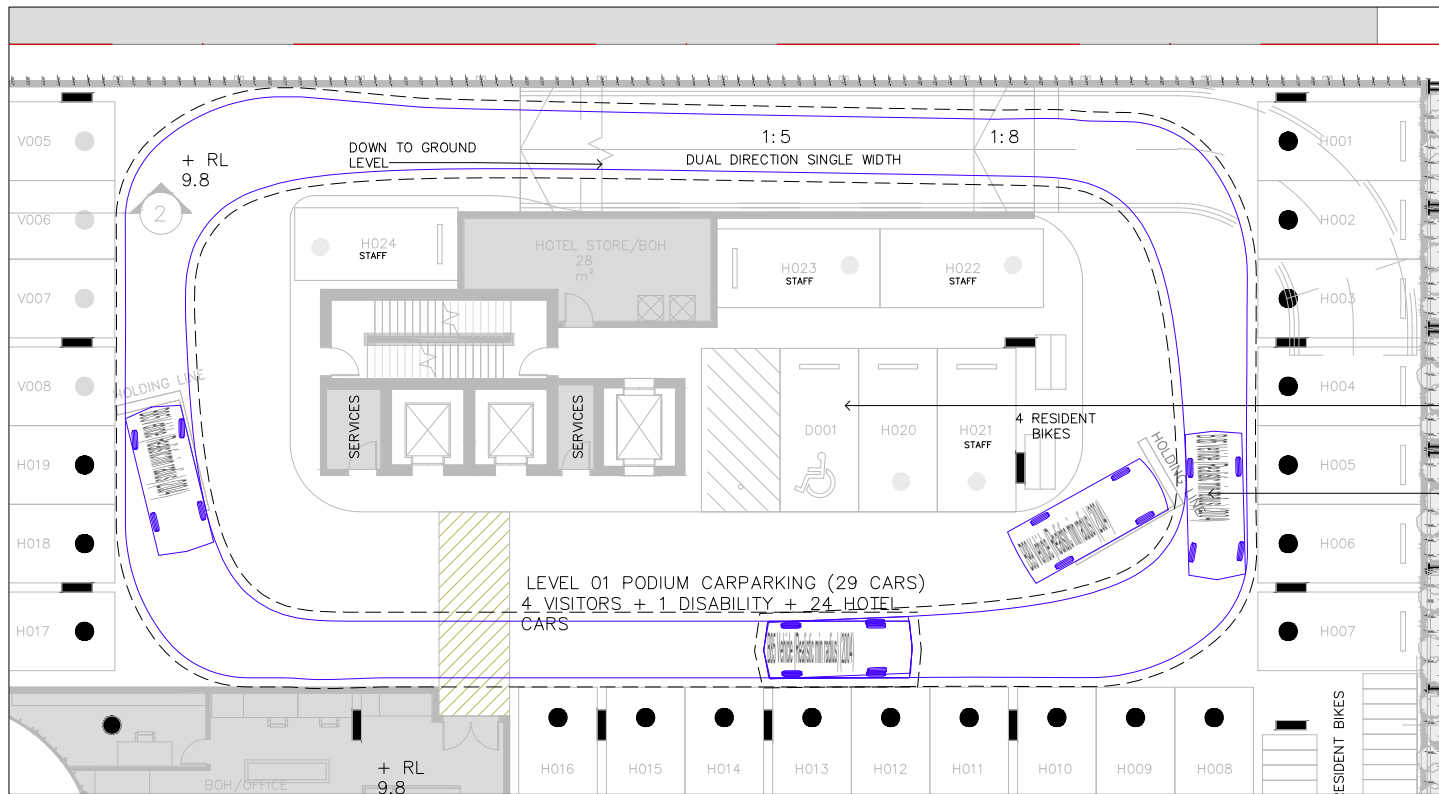
REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	26-04-24	RFI ISSUE	JS	IB	IB
A	06-12-23	ORIGINAL ISSUE	JS	IB	IB



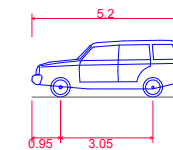
**ttm**  
 TTM CONSULTING PTY LTD  
 ABN 65 010 868 621  
 LEVEL 8, 369 Ann Street, BRISBANE QLD 4000  
 P.O. BOX 12015, BRISBANE QLD 4003  
 T: (07) 3327 9500 F: (07) 3327 9501  
 E: ttmbri@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT  
**5 HERCULES ST, HAMILTON**  
 DRAWING TITLE  
**SWEPT PATH ANALYSIS**  
 GROUND LEVEL - RAMP HOLD POINT OPERATION

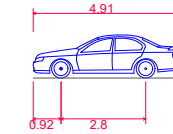
PROJECT NUMBER	ORIGINAL SIZE
20GCT0106	A3
DRAWING NUMBER	REVISION
20GCT0106-05	B
DATE	SHEET
26 Apr 2024	1 OF 1



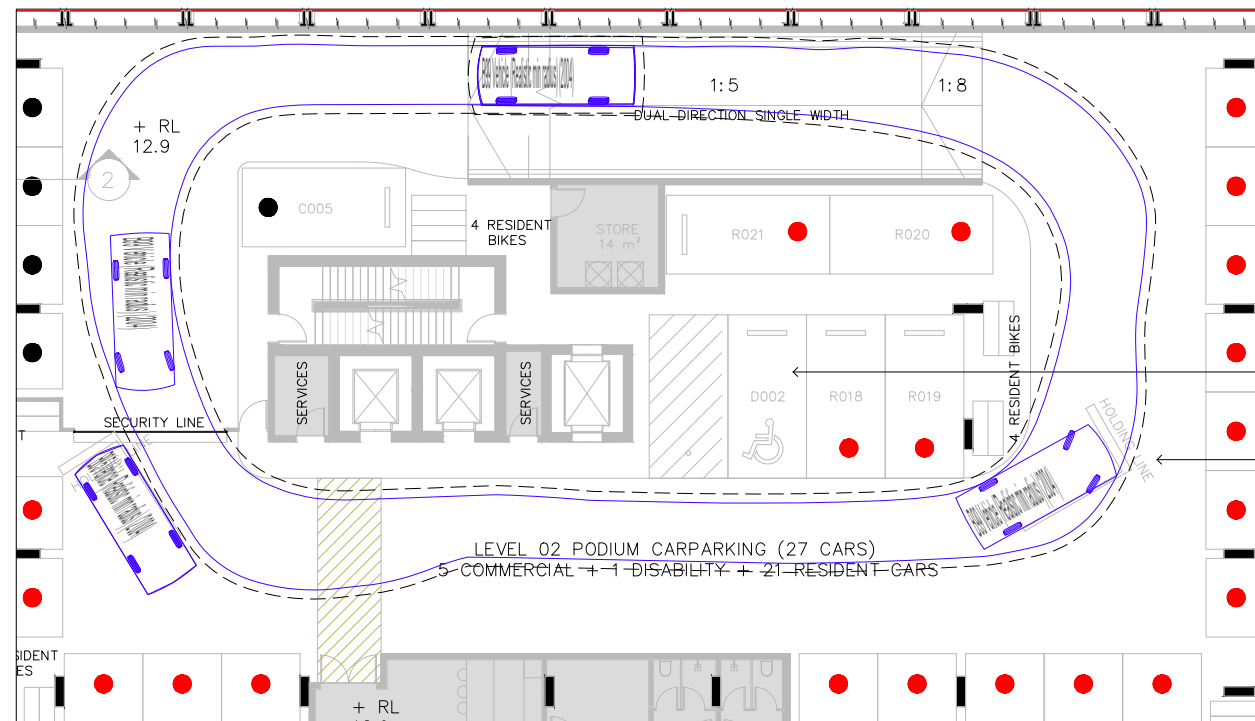
PODIUM LEVEL 1



**B99 Vehicle (Realistic min radius) (2004)**  
 Overall Length 5.200m  
 Overall Width 1.940m  
 Overall Body Height 1.878m  
 Min Body Ground Clearance 0.272m  
 Track Width 1.840m  
 Lock-to-lock time 4.00s  
 Curb to Curb Turning Radius 6.250m  
 Design Speed Forward 5.0km/h

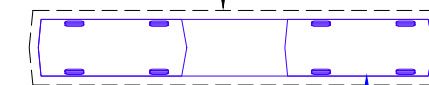


**B85 Vehicle (Realistic min radius) (2004)**  
 Overall Length 4.910m  
 Overall Width 1.870m  
 Overall Body Height 1.421m  
 Min Body Ground Clearance 0.159m  
 Track Width 1.770m  
 Lock-to-lock time 4.00s  
 Curb to Curb Turning Radius 5.750m  
 Design Speed Forward 5.0km/h



PODIUM LEVEL 2

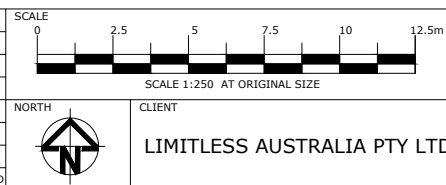
VEHICLE CLEARANCE  
 300mm (DASHED LINE)



BLUE - VEHICLE BODY

*ILONA BLACKBURN*  
 ILONA BLACKBURN  
 SENIOR ASSOCIATE DIRECTOR  
 RPEQ 16879  
 APPROVED 26 Apr 2024

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	26-04-24	RFI ISSUE	JS	IB	IB
A	06-12-23	ORIGINAL ISSUE	JS	IB	IB



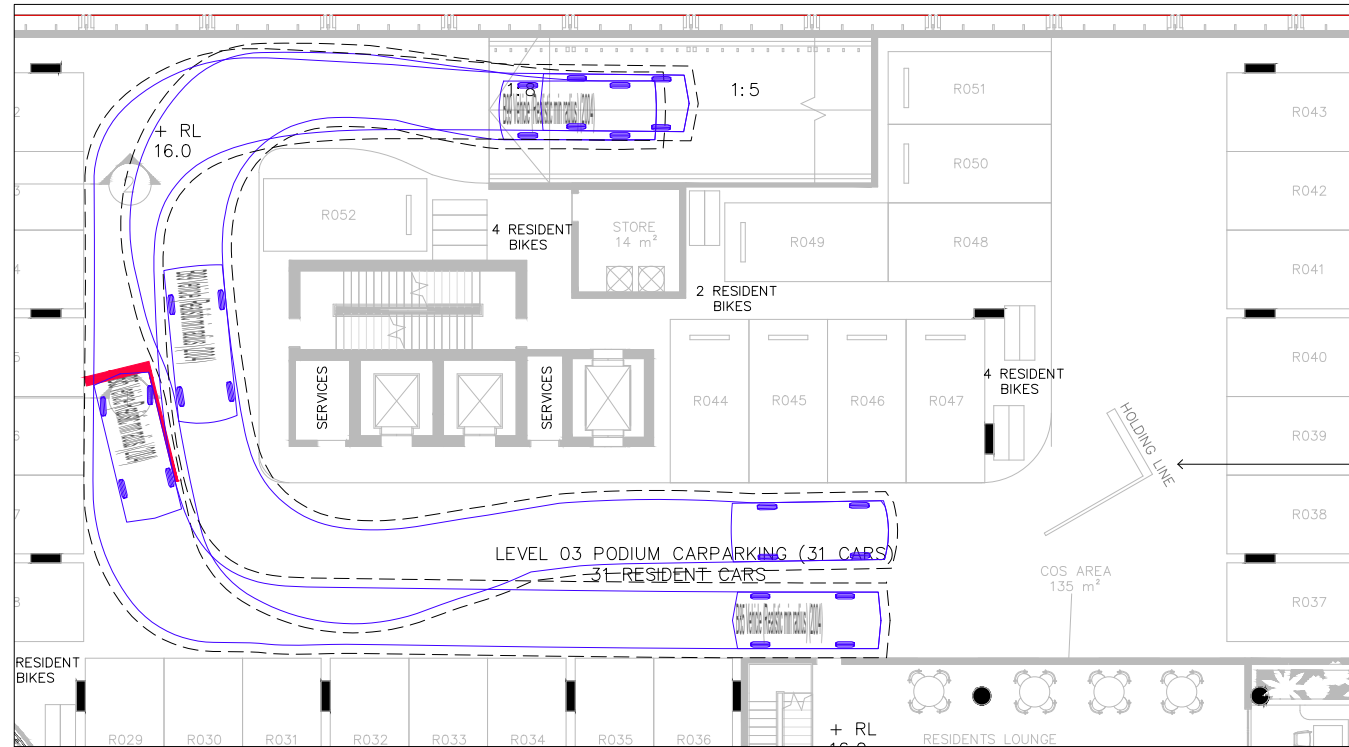
**TTM CONSULTING PTY LTD**  
 ABN 65 010 868 621  
 LEVEL 8, 369 Ann Street, BRISBANE QLD 4000  
 P.O. BOX 12015, BRISBANE QLD 4003  
 T: (07) 3327 9500 F: (07) 3327 9501  
 E: ttmbri@ttmgroup.com.au W: www.ttmgroup.com.au

**CLIENT**  
 LIMITLESS AUSTRALIA PTY LTD

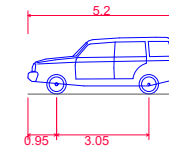
PROJECT  
**5 HERCULES ST, HAMILTON**

DRAWING TITLE  
**SWEPT PATH ANALYSIS**  
 PODIUM LEVELS - CIRCULATION AND HOLD POINT OPERATION

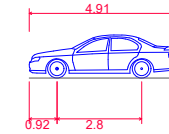
PROJECT NUMBER	ORIGINAL SIZE
20GCT0106	A3
DRAWING NUMBER	REVISION
20GCT0106-06	B
DATE	SHEET
26 Apr 2024	1 OF 1



PODIUM LEVEL 3

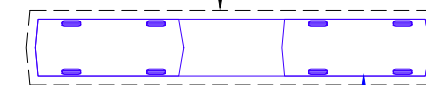


**B99 Vehicle (Realistic min radius) (2004)**  
 Overall Length 5.200m  
 Overall Width 1.940m  
 Overall Body Height 1.878m  
 Min Body Ground Clearance 0.272m  
 Track Width 1.840m  
 Lock-to-lock time 4.00s  
 Curb to Curb Turning Radius 6.250m  
 Design Speed Forward 5.0km/h



**B85 Vehicle (Realistic min radius) (2004)**  
 Overall Length 4.910m  
 Overall Width 1.870m  
 Overall Body Height 1.421m  
 Min Body Ground Clearance 0.159m  
 Track Width 1.770m  
 Lock-to-lock time 4.00s  
 Curb to Curb Turning Radius 5.750m  
 Design Speed Forward 5.0km/h

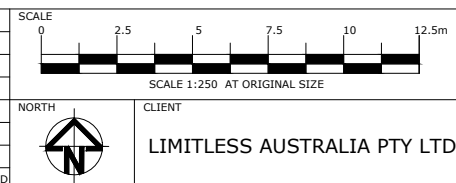
VEHICLE CLEARANCE  
 300mm (DASHED LINE)



BLUE - VEHICLE BODY

*ILONA BLACKBURN*  
 SENIOR ASSOCIATE DIRECTOR  
 ILONA BLACKBURN RPEQ 16879  
 APPROVED 26 Apr 2024

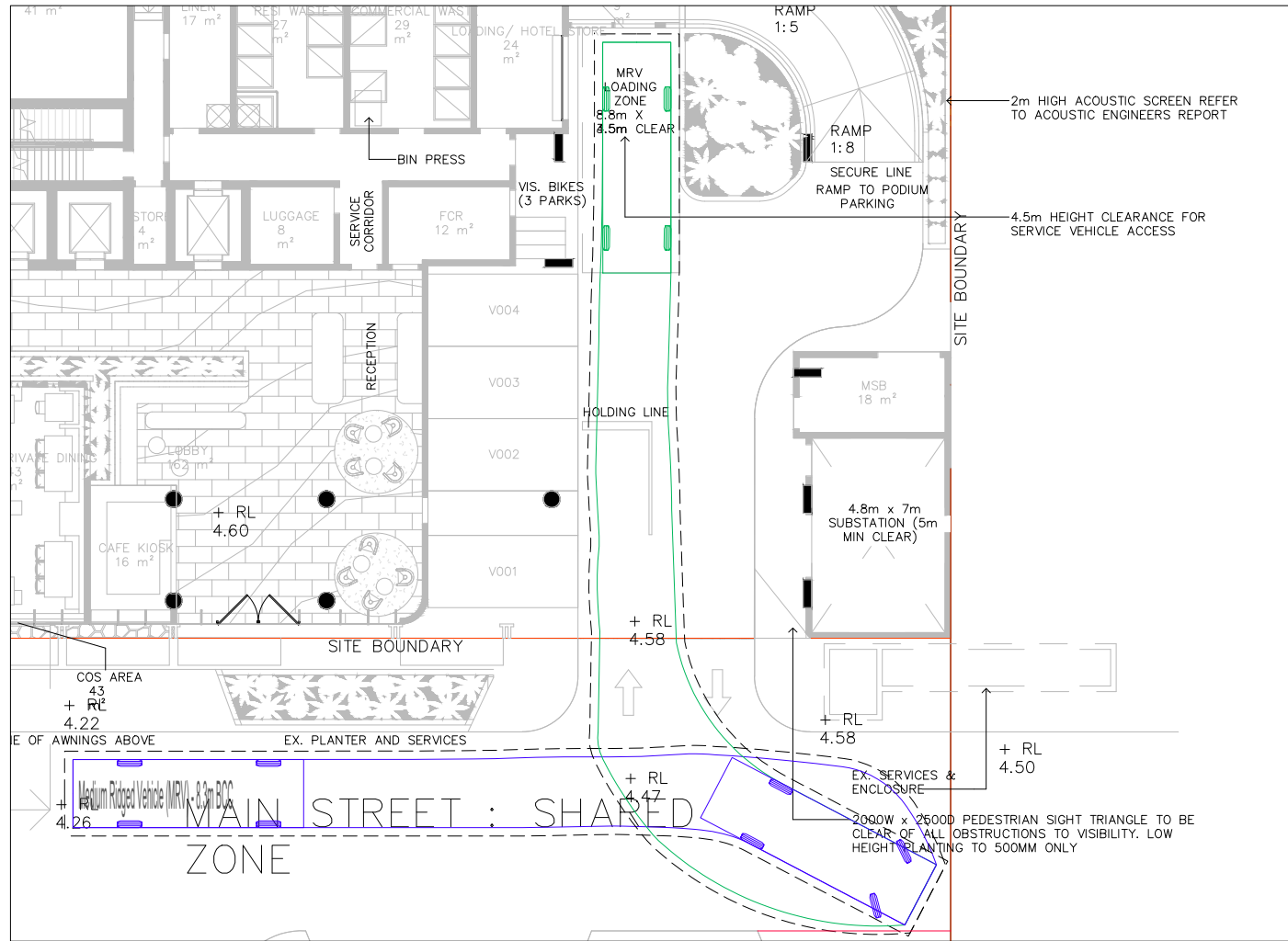
REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	26-04-24	RFI ISSUE	JS	IB	IB
A	06-12-23	ORIGINAL ISSUE	JS	IB	IB



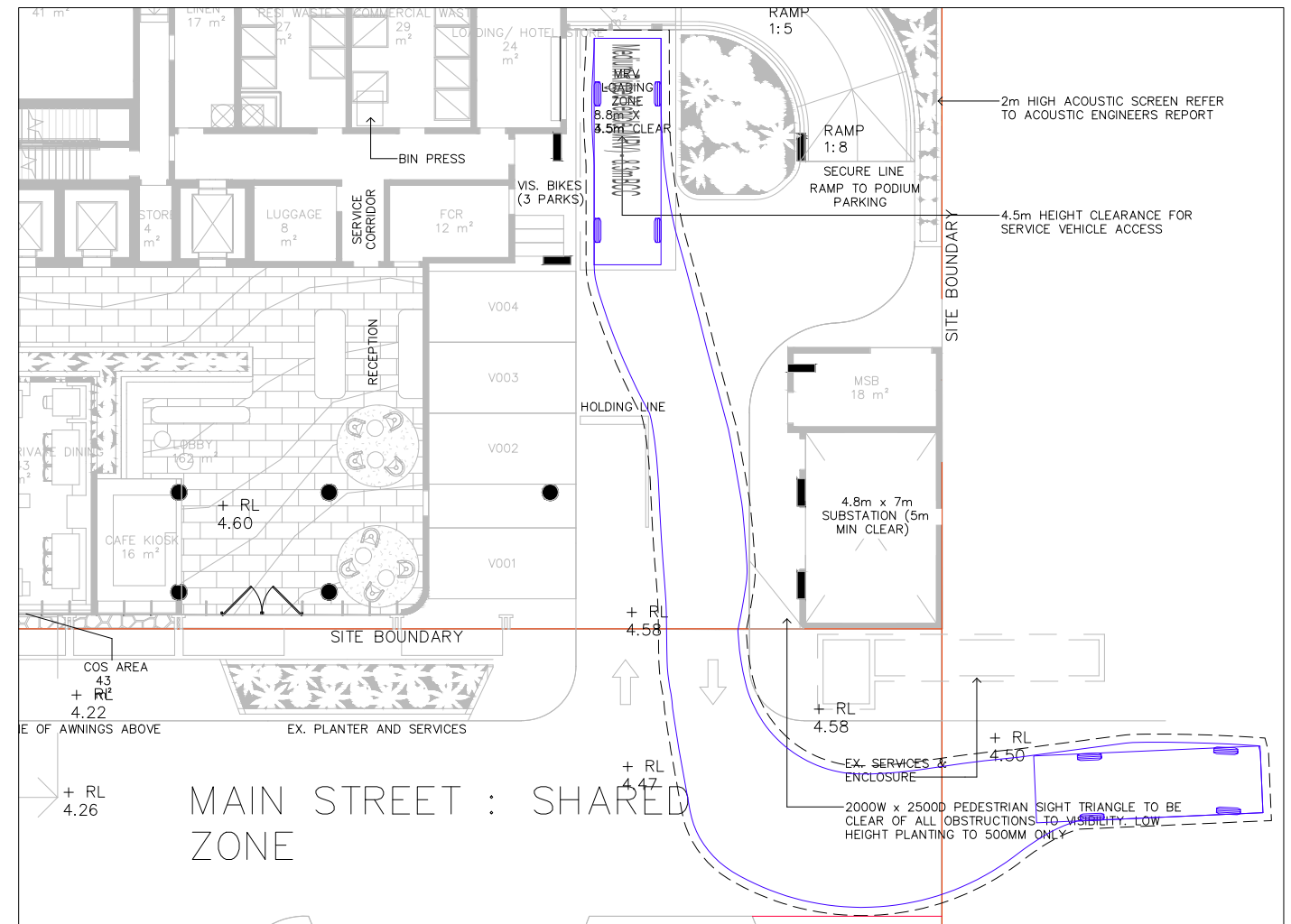
**ttm**  
 TTM CONSULTING PTY LTD  
 ABN 65 010 868 621  
 LEVEL 8, 369 Ann Street, BRISBANE QLD 4000  
 P.O. BOX 12015, BRISBANE QLD 4003  
 T: (07) 3327 9500 F: (07) 3327 9501  
 E: ttmbri@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT  
**5 HERCULES ST, HAMILTON**  
 DRAWING TITLE  
**SWEPT PATH ANALYSIS**  
 PODIUM LEVELS - CIRCULATION AND HOLD POINT OPERATION

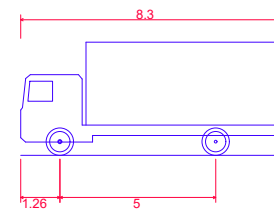
PROJECT NUMBER	ORIGINAL SIZE
20GCT0106	A3
DRAWING NUMBER	REVISION
20GCT0106-07	B
DATE	SHEET
26 Apr 2024	1 OF 1



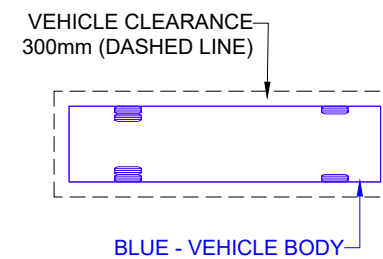
REVERSE ACCESS



FORWARD-OUT EGRESS

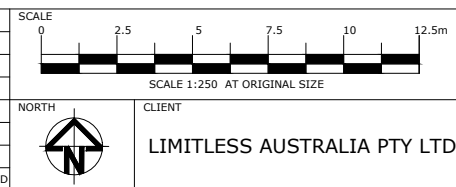


**MRV - 8.3m BCC**  
 Overall Length 8.300m  
 Overall Width 2.450m  
 Overall Body Height 3.633m  
 Min Body Ground Clearance 0.428m  
 Track Width 2.450m  
 Lock-to-lock time 4.00s  
 Curb to Curb Turning Radius 8.500m  
 Design Speed Forward 5.0km/h



*ILB*  
 SENIOR ASSOCIATE DIRECTOR  
 ILONA BLACKBURN RPEQ 16879  
 APPROVED 26 Apr 2024

REV.	DATE	AMENDMENT DESCRIPTION	DRAWN	CHECKED	APPROVED
B	26-04-24	RFI ISSUE	JS	IB	IB
A	06-12-23	ORIGINAL ISSUE	JS	IB	IB



**ttm**  
 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: ttbris@ttmgroup.com.au W: www.ttmgroup.com.au

PROJECT  
**5 HERCULES ST, HAMILTON**  
 DRAWING TITLE  
**SWEPT PATH ANALYSIS**  
 PODIUM LEVELS - CIRCULATION AND HOLD POINT OPERATION

PROJECT NUMBER	ORIGINAL SIZE
20GCT0106	A3
DRAWING NUMBER	REVISION
20GCT0106-08	B
DATE	SHEET
26 Apr 2024	1 OF 1