Traffic Engineering Report

To	Watland Pty Ltd	Date	17 March 2026
Prepared by	Afaf El Harda, Modus Traffic and Transport Engineer	Approved by	Harj Singh, Modus Executive Director (RPEQ 22364)
Location	21-23 Watland Street, Springwood		
Subject	Proposed Multiple Dwelling Development - Traffic Engineering Report		
Status	Draft	Attachments	**Appendix A:** Development Plans **Appendix B**: Swept Path Assessment

1 Introduction

1.1 Overview

Modus has been commissioned by Watland Pty Ltd to provide traffic and transport advice in relation to the proposed Multiple Dwelling development located at 21-23 Watland Street, Springwood.

This Traffic Engineering Report has been produced by Modus to assess the traffic and transport engineering items in support of the proposed development. A copy of the proposed development plans are provided at **Appendix A**.

Modus has completed this Traffic Engineering Report in accordance with the usual care and thoroughness of the consulting profession. The assessment is based on accepted traffic engineering practices and standards applicable at the time of undertaking the assessment. Modus disclaims responsibility for any changes to project planning or road conditions that may occur after completion of the assessment.

2 Existing Conditions

2.1 Site Location

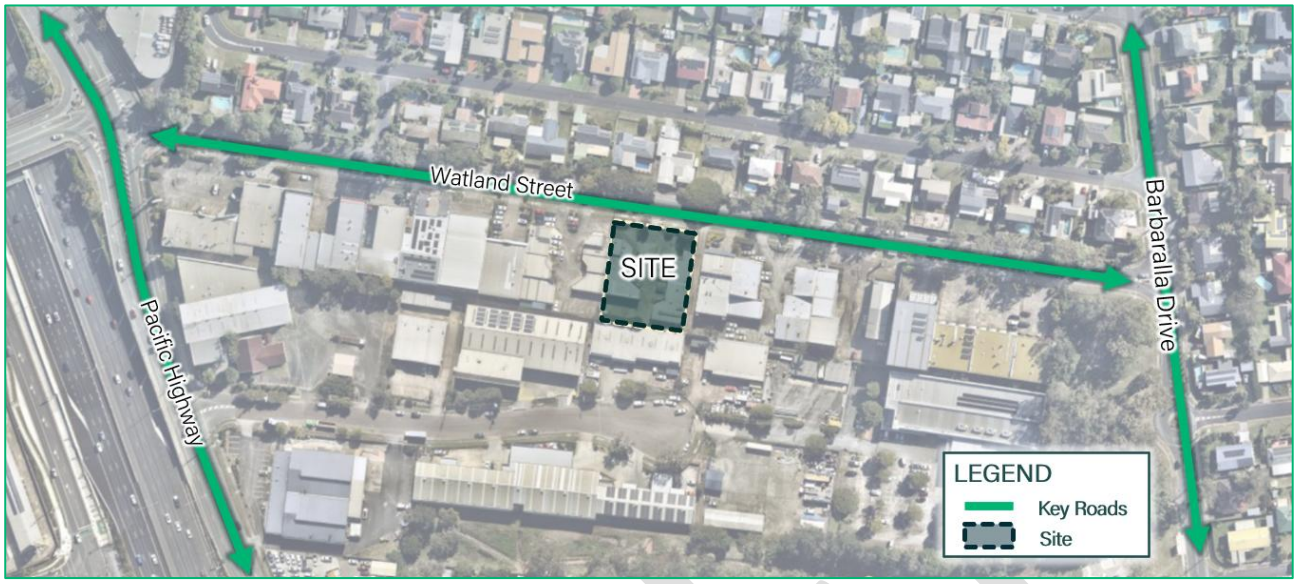
The development site is located at 21-23 Watland Street, Springwood and is bounded by Watland Street to the north and Commercial uses in all other directions.

Furthermore, the development site is currently zoned Specialised Centre within the Logan City Council (LCC) Local Government Area.

Additionally, the development site currently accommodates a Commercial use with two (2) crossovers provided onto Watland Street.

Figure 2-1 on the subsequent report page illustrates the development site location.

Figure 2-1 Development Site Location



2.2 Existing Road Network

Table 2-1 outlines characteristics of the existing road network in proximity to the development site.

Table 2-1 Key Road Characteristics

Road	Authority	Hierarchy	Speed Limit	Typical Form
Watland Street	Council	Urban Collector	60 km/hr	Two lanes, undivided
Pacific Highway	State	Highway	60 km/hr	Four lanes, divided
Barbaralla Drive	Council	Urban Collector	60 km/hr	Two lanes, undivided

2.3 Active and Public Transport Facilities

A dedicated pedestrian footpath is provided along the frontage of the site to connect to the wider pedestrian network. Additionally, there are no dedicated bicycle lanes provided along the frontage of the site.

Furthermore, there are five (5) bus stops within a 400m radius (a comfortable 5-minute walk) of the development site. The nearest bus stop is located along Barbaralla Drive approximately 360.0 southeast of the site.

3 Proposed Development

3.1 Overview

The proposed development will comprise a Multiple Dwelling use accommodating a total of 20 dwellings including:

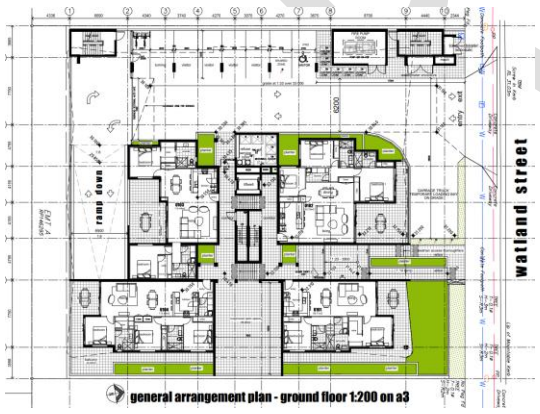
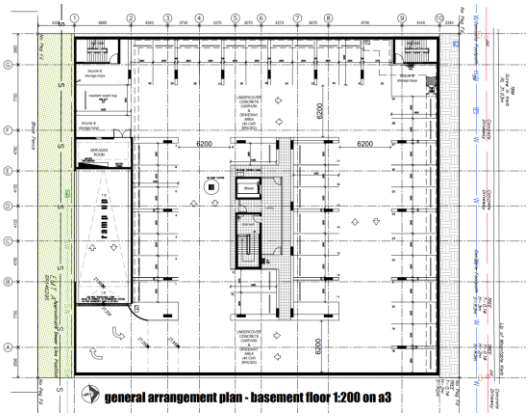
- 6 x 3-bedroom dwellings
- 14 x 2-bedroom dwellings

As part of the proposed development, vehicular access will be provided via one (1) 9.0m wide crossover onto Watland Street.

Furthermore, the proposed development will accommodate a total of 45 car parking spaces on-site, including 40 resident spaces and five (5) visitor spaces. Additionally, one (1) car wash bay and one (1) service vehicle bay are provisioned on-site.

Figure 3-1 illustrates the proposed development layout. A copy of the development plans is provided at **Appendix A**.

Figure 3-1 Proposed Development Layout

Ground Floor	Basement
	

4 Traffic and Transport Review

4.1 Access Design

4.1.1 Driveway Design

In accordance with Australian Standards 2890.1, the minimum driveway requirements for the proposed development are outlined in Table 4-1.

Table 4-1 Driveway Design Compliance

Road Frontage	AS2890.1 Driveway Design Compliance	Access Conditions
Watland Street	Site Conditions	Minor Road Frontage User Class 2 <25 Spaces
	Access Facility Category	2
	Required Driveway Widths	Minimum 6.0m – 9.0m
	Proposed Driveway Width	**9.0m**

Therefore, the proposed driveway width complies with Australian Standards 2890.1.

4.1.2 Crossover Design

The development crossovers accommodate crossover designs in accordance with the IPWEA Standard Drawings package and hence are considered acceptable.

4.1.3 Driveway Location

In accordance with Australian Standards 2890.1, development accesses with a Class 2 Access Facility Category are to achieve a 6.0m separation to any formal intersections. Provided that the proposed access location is not located within a 6.0m distance to any formal intersections, the proposed access location is considered acceptable.

Additionally, the driveway location accommodates the following separation requirements as per the Logan City Council (LCC) Planning Scheme.

- Minimum 0.6m separation to a stormwater pit,
- Minimum 0.8m separation to a utility / street pole,
- Minimum 6.0m to an adjacent intersection.

Therefore, the proposed driveway location is considered acceptable.

4.1.4 Pedestrian Sight Splays

In accordance with Australian Standards 2890.1, pedestrian sight splays should be provided at the egress point of a driveway and measure 2.5m in depth and 2.0m in width from the property boundary.

The proposed development accommodates pedestrian sight splay provision in accordance with Australian Standards 2890.1

Therefore, the proposed pedestrian sight provisions are considered acceptable.

4.1.5 Vehicle Sight Distance

In accordance with Australian Standards 2890.1, the minimum vehicle sight distance for an access driveway fronting a 60km/hr road is 65.0m.

The straight horizontal and vertical road alignment of Watland Street north of the site allows a minimum vehicle sight distance of 65.0m to be accommodated.

Therefore, the proposed vehicle sight distance on site is compliant.

4.2 Car Parking Provisions

In accordance with the LCC Planning Scheme, the minimum car parking requirements are outlined in Table 4-2.

Table 4-2 Minimum Car Parking Requirements

Land Use	Car Parking Rate	Yield	Car Parking Required	Car Parking Provided
Multiple Dwelling	2 resident spaces per dwelling comprising 2 or more bedrooms	20 dwellings	40 resident spaces	40 resident spaces
	0.25 visitor space per dwelling		5 visitor spaces	5 visitor spaces
		TOTAL	**45 spaces**	**45 spaces**

Therefore, the proposed car parking provisions are in accordance with the LCC Planning Scheme.

Additionally, the proposed development accommodates a total of one (1) PWD car parking space.

Furthermore, the proposed development accommodates a total of one (1) car wash space and one (1) loading bay accordance with the LCC Planning Scheme.

4.3 Bicycle Parking Provisions

In accordance with the LCC Planning Scheme, the minimum bicycle parking requirements are outlined in Table 4-3.

Table 4-3 Minimum Bicycle Parking Requirements

Land Use	Bicycle Parking Rate	Yield	Bicycle Parking Required	Bicycle Parking Provided	Compliant
Multiple Dwelling	1 resident space per 3 dwellings	20 dwellings	7 resident spaces	7 resident spaces	✓
	1 visitor space per 12 dwellings		2 visitor spaces	2 visitor spaces	✓
		TOTAL	9 spaces	9 spaces	✓

Therefore, the proposed bicycle parking provisions are in accordance with the LCC Planning Scheme.

4.4 Car Parking Design

4.4.1 Car Parking Layout

Modus has conducted a design review of the car parking layout against the design guidelines within Australian Standards 2890.1 and Australian Standards 2890.2, of which is summarised below in Table 4-4.

Table 4-4 Car Parking Layout Design Review

Design Criteria	AS2890 Requirement	Proposed Design	Compliant
Parking Spaces			
Car Space Length - General	Min 5.4m	Min 5.4m	✓
Car Space Length - PWD Space	Min 5.4m	Min 5.5m	✓
Car Space Width – Resident	Min 2.4m	Min 2.4m	✓
Car Space Width – Visitors	Min 2.5m	2.6m	✓
Car Space Width - PWD Space	Min 2.4m plus adjacent 2.4m shared zone	Min 2.4m plus adjacent 2.4m shared zone	✓
Car Parking Door Opening Clearances	Min 0.3m	Min 0.3m	✓
Roadways and Parking Aisles			
Minimum Two-Way Ramp Width	Min 6.1m	6.5m	✓
Minimum Two-Way Circulation Roadway	Min 5.5m	6.2m	✓
Minimum Car Parking Aisle Width	Min 5.8m	6.2m	✓
Maximum Car Parking Length	Max 100.0m	< 100.0m	✓

Parking Gradients and Height Clearances			
Ramp Gradient – Private Car Park (Ramp Less Than 20.0m)	Max 1:4	Max 1:4	✓
Ramp Gradient – Maximum Rate of Change	Max 1:8	Max 1:8	✓
Driveway Grade – Maximum Grade for First 6.0m	Max 1:20	Max 1:20	✓
General Parking Space – Minimum Height Clearance	Min 2.2m	Min 2.2m	✓
PWD Parking Space – Minimum Height Clearance	Min 2.5m	Min 2.5m	✓
Service Vehicle Provisions			
HRV Minimum Service Bay Length	Min 12.5m	Min 12.5m	✓
HRV Minimum Service Bay Width	Min 3.5m	Min 3.5m	✓
HRV Maximum Service Bay Grade	Max 1:25	Max 1:25	✓
HRV Minimum Height Clearance	Min 4.5m	Min 4.5m	✓

Therefore, the proposed car parking layout is designed in accordance with Australian Standards 2890.1 and Australian Standards 2890.2.

As such, the proposed car parking layout is considered acceptable.

4.4.2 Queueing Provisions

In accordance with LCC Planning Scheme, the minimum vehicle queuing requirement from the property boundary to the first parking space for a development with 26-60 car parking spaces is two (2) vehicles, equivalent to a length of 12.0m. The proposed development plans accommodate a minimum queueing provision of 12.0m.

As such, the proposed queuing provisions are considered acceptable.

4.5 Servicing Requirements

In accordance with the LCC Planning Scheme, the minimum service vehicle requirement for the proposed development is a Heavy Rigid Vehicle (HRV).

The proposed development accommodates on-site servicing for the abovementioned service vehicles.

As detailed within Section 4.4 of this report, the proposed parking layout is able to accommodate sufficient service vehicle design requirements for the abovementioned service vehicles.

Furthermore, Modus has undertaken a swept path assessment (provided at **Appendix B**) which confirms an HRV is able to safely and efficiently manouevre to, within and from the site in forward movement while ensuring a minimum 0.3m to any permanent obstructions.

Therefore, the proposed development servicing arrangements are considered acceptable.

4.6 Development Traffic Generation

The proposed development traffic generation has been informed based on tfNSW Guide to Transport Impact Assessment (2024) document.

Therefore, the adopted peak hour traffic generation rates and anticipated development traffic generation volumes are outlined in Table 4-5.

Table 4-5 Development Traffic Generation

Land Use	Yield	Peak Hour Traffic Generation Rate	Development Traffic Generation
Medium Density Residential Dwellings	20 dwellings	0.6 trips per dwelling	12 vehicles per hour

Therefore, the proposed development is anticipated to generate up to 12 vehicles per hour (vph) in the peak hour period. On average, this corresponds to a new vehicle on the external road network once every five (5) minutes over the peak hour period.

On this basis, the proposed development traffic generation will not compromise the safety nor efficiency of the external road network.

5 Summary

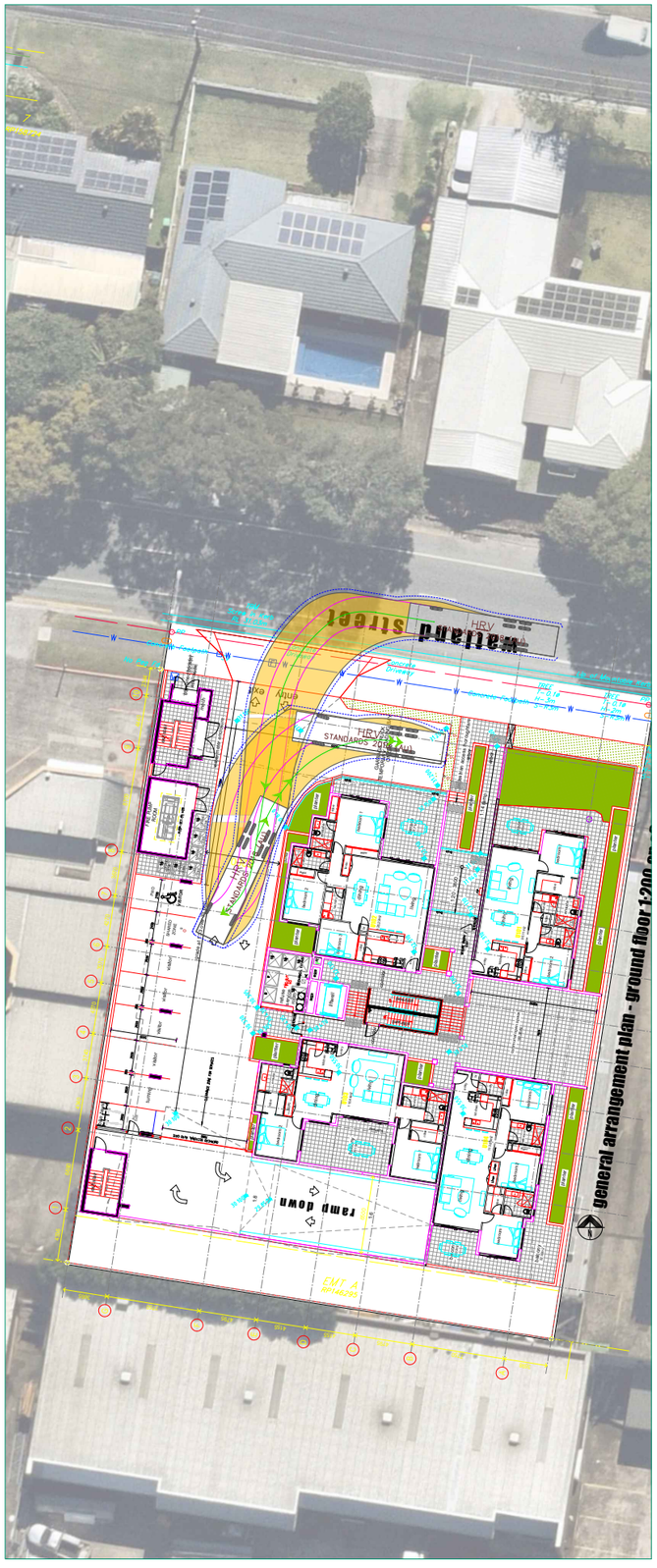
Therefore, Modus is of the opinion that the proposed development is acceptable from a traffic engineering perspective and will not have a substantial impact on the safety or efficiency of the external road network.

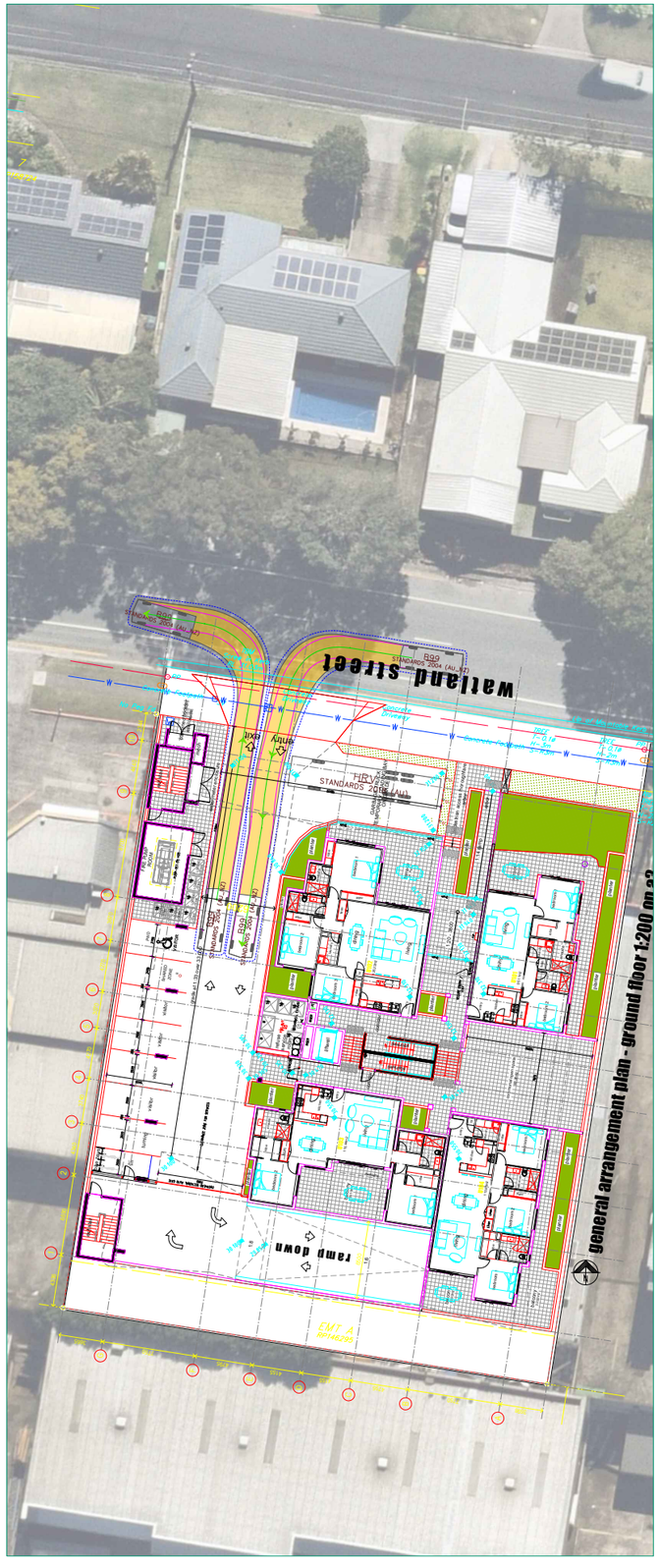
Should there be any issue with the above, please contact the undersigned.

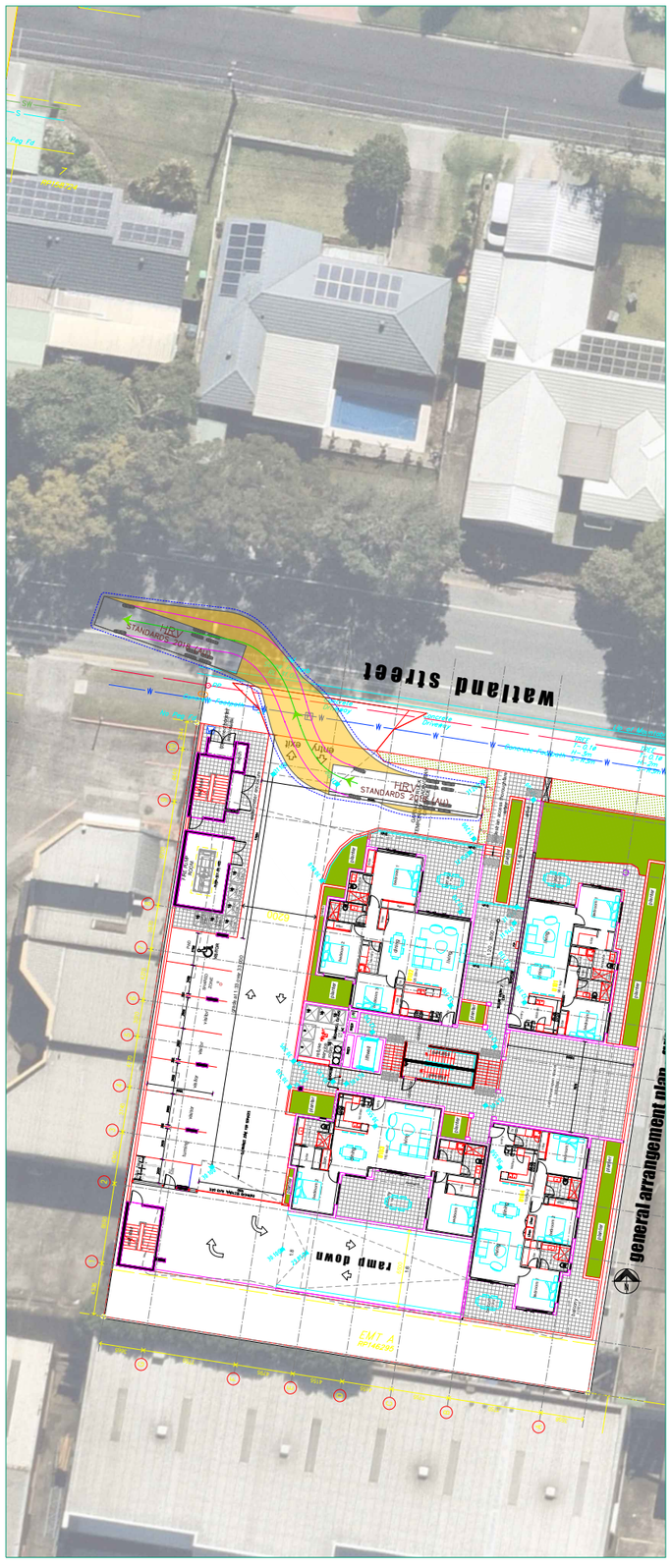
Yours sincerely,

MODUS TRANSPORT AND TRAFFIC ENGINEERING

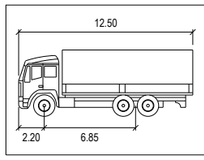
Harj Singh
Executive Director (RPEQ 22364)







DESIGN VEHICLE ADOPTED



HRV

	Meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6
Turning Radius (Kerb to Kerb)	: 12.50

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED

N

0 5 10 15 20 25m

5 4 3 2 1

SCALE 1:500

PROJECT

21 - 23 WATLAND STREET, SPRINGWOOD

CLIENT

WATLAND PTY LTD

DRAWING TITLE

HRV SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD25368QLD - SK02

DATE	REVISION
17 03 2026	A

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

PRELIMINARY ADVICE ONLY

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GENERAL NOTES:

1.PRELIMINARY DESIGN ISSUED FOR COMMENT ONLY.

2.ALL DIMENSIONS ARE PROVIDED IN METERS UNLESS NOTED OTHERWISE.

RPEQ Certified

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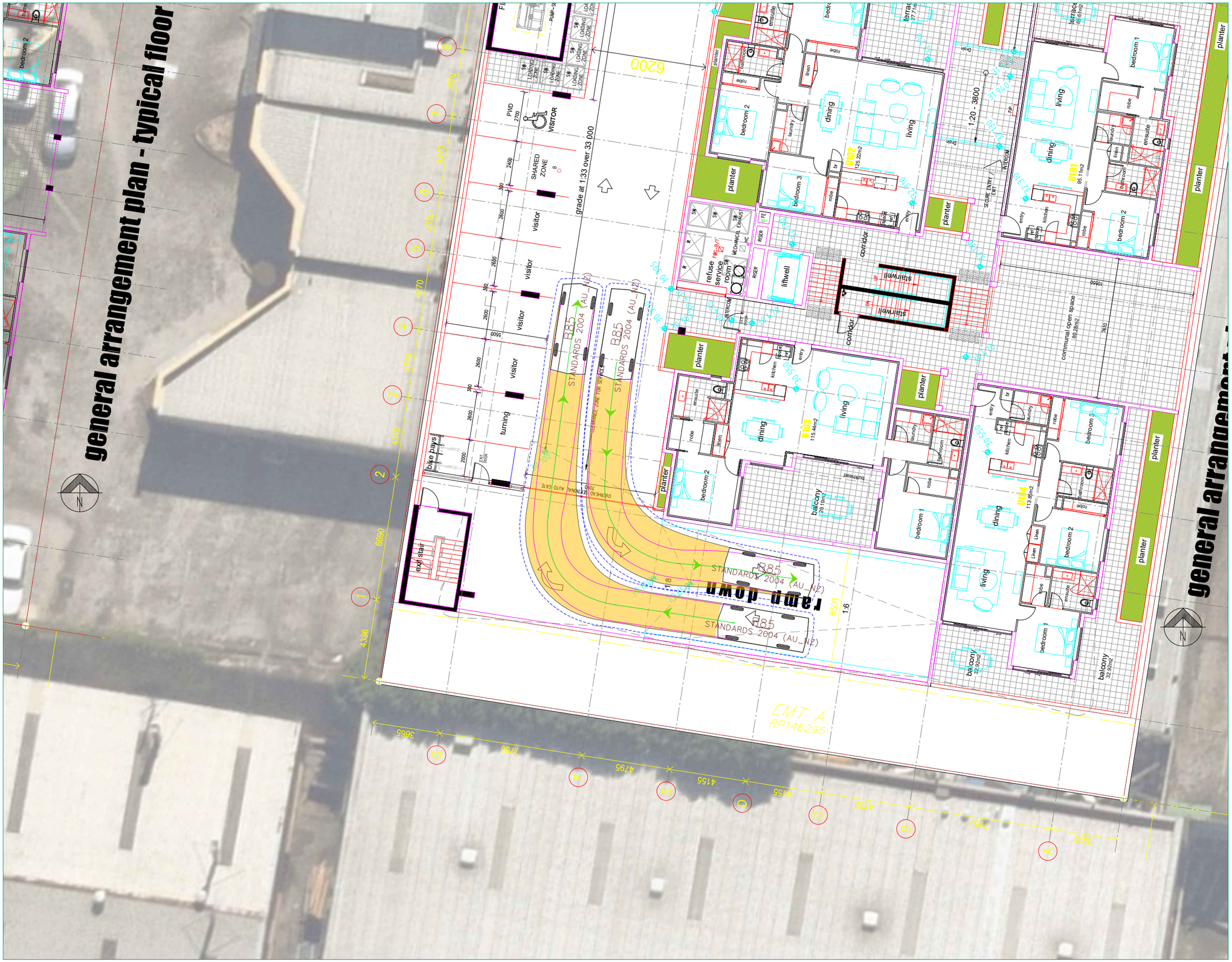
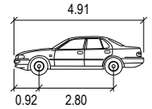


DESIGN VEHICLE ADOPTED



B85

	Meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.0
Turning Radius (Kerb to Kerb)	: 5.80

SWEPT PATH LEGEND

- VEHICLE BODY
- FRONT TIRES
- VEHICLE PATH
- VEHICLE CLEARANCE (300mm)
- VEHICLE CLEARANCE (600mm)
- VEHICLE
- 5KM/H DESIGN SPEED

N

0 1 2 3 4 5 6 7 8 9 10m
2 1.5 1 0.5
SCALE 1:200

PROJECT

21 - 23 WATLAND STREET, SPRINGWOOD

CLIENT

WATLAND PTY LTD

DRAWING TITLE

B85 SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD25368QLD - SK03

DATE	REVISION
17 03 2026	B

REV	DRAWN BY	APPROVED	DATE	AMENDMENT DETAILS

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