APPROVED DEVELOPMENT PLAN
PLANNING AND ENVIRONMENT ACT 1987
WELLINGTON PLANNING SCHEME
Clause 43.04 Schedule 1

DP NAME: DPO1 Development Plan - 28 Redbank Road, Stratford

DATE: 28 July 2025
SIGNED: Caragh Button
OFFICER TITLE: Strategic Planner

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Traffic Impact Assessment Report

28 Redbank Road, Stratford

Proposed Residential Development

24/02/2025

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Executive Summary

This report assesses the Proposed Residential Development at 28 Redbank Road, Stratford. The following provides an executive summary of the report.

Car Parking Provision

The statutory car parking requirement as specified under Clause 52.06-5 of the Planning Scheme is 26 car parking spaces. The proposal satisfies the parking requirement.

Car Parking Design

We recommend increasing the driveway space in front of Unit 16, as outlined in this report. Subject to this recommendation, the proposed car parking layout and vehicle access arrangements meet the criteria under Clause 52.06-9 of the Planning Scheme.

Bicycle Parking

The proposed development has no statutory bicycle requirement. Residents and visitors can store bicycles in each secure dwelling, garage, or private space. Accordingly, any bicycle parking demands are anticipated to be accommodated on-site.

Traffic Impacts

The development traffic is anticipated to peak in the evening, at 8 inbound and 4 outbound trips in the PM peak hour.

We recommend that the crossover is designed to enable two-way passing at the road carriageway. This recommendation may be provided via a permit condition.

Subject to the above recommendation, the right-turn inbound traffic is the only movement with potential to queue on Redbank Road. A right-turn into the site would occur approximately once every 12 minutes during the PM peak hour. This volume is minimal, and the frequency and length of any queuing is anticipated to be minimal. In the infrequent event that queuing occurs, there is unpaved area to the left of the traffic lane which may be used for passing.

Furthermore, if turn treatments are provided at this site access, it would not align with the majority of nearby accesses on Redbank Road, which can cause driver confusion.

Therefore, we consider that no turn treatments are required at the site access.

The post-development traffic volume is expected to remain well below the design volume of Redbank Road, and is anticipated to have negligible impact on the overall traffic capacity of Redbank Road.

Service Vehicles

Provision is made for fire rescue and waste collection vehicles to navigate the accessway, turn around on-site, and exit in a forwards direction.

Waste collection will be undertaken by council from Redbank Road. Considering the configuration of Redbank Road, the observed traffic conditions, and the existing waste collection arrangements of neighbouring properties, this is considered appropriate from a traffic perspective.

The loading requirements for dwellings are typically minimal, and can use on-site visitor spaces or stop briefly in front of the dwelling. A dedicated on-site loading bay is not considered necessary in this circumstance.

Summary of Opinions

Having undertaken all tasks necessary to adequately assess the traffic engineering impacts of the proposed residential development, we are of the view that there are no traffic engineering reasons that should preclude the issue of a permit, subject to appropriate conditions.

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1 Introduction

The following Traffic Impact Assessment Report (TIAR) reviews the critical matters pertaining to traffic engineering associated with the Proposed Residential Development at 28 Redbank Road, Stratford.

The proposal satisfies the statutory parking requirements.

2 Proposal

The proposal is for a townhouse development. Table 1 outlines the key attributes of the development from a traffic engineering perspective.

Table 1: Proposed Use Numbers

Attribute	Proposal
Land Use	
Dwellings	17 townhouses - 3 x 1-bedroom townhouses - 8 x 2-bedroom townhouses - 6 x 3-bedroom townhouses
Car Parking Provision, Allocation, and Location	
Provision and Allocation	26 spaces - 2 spaces per 3-bedroom townhouse - 1 space per 1 or 2-bedroom townhouse - 3 visitor spaces
Location	All parking accessed via a common accessway. Each dwelling is provided 1 car space within a single garage, and dwellings with a second space are provided the space in tandem with their garage.

Vehicle access is proposed via a new crossover to Redbank Road.

Development plans prepared by Matthew Franke Building Design and Drafting are attached in Appendix A.

3 Existing Conditions

3.1 Subject Site

The proposed development site is located at 28 Redbank Road, Stratford, on the south side of Redbank Road between Killeen Street and Lee Street.

Table 2 outlines the key existing features of the development site. An aerial photograph of the subject site and location map are provided at Figure 1 and Figure 2, respectively.

Table 2: Existing Features of Subject Site

Site Feature	Detail
Municipality & Referral Authorities	
Municipality	Wellington
Referral Authorities	N/A
Planning Scheme	
Zoning	GRZ1: General Residential Zone - Schedule 1
Overlays	DPO1: Development Plan Overlay - Schedule 1 DDO6: Design And Development Overlay - Schedule 6
PPTN Area	No
Critical Dimensions	
Total Site Area	4,300 sqm (approx.)
Site Frontage	15.0m to Redbank Road
Crossover Widths	
Frontage to Redbank Road	None existing
On-Street Car Parking	
Redbank Road	The unpaved surface on each side of Redbank Road may be used for on-street parking. It is not formally designated for parking and is unrestricted.
Surrounding area	The surrounding area is residential and on-street parking is typically unrestricted.
Nearby Land Use	
Within 100m	Residential
Significant parking/traffic generators	Primarily local residential traffic, plus some through-traffic connecting to the rural living zone to the east, via Redbank Road

Figure 1: Aerial Photograph of Subject Site (Source: NearMap)

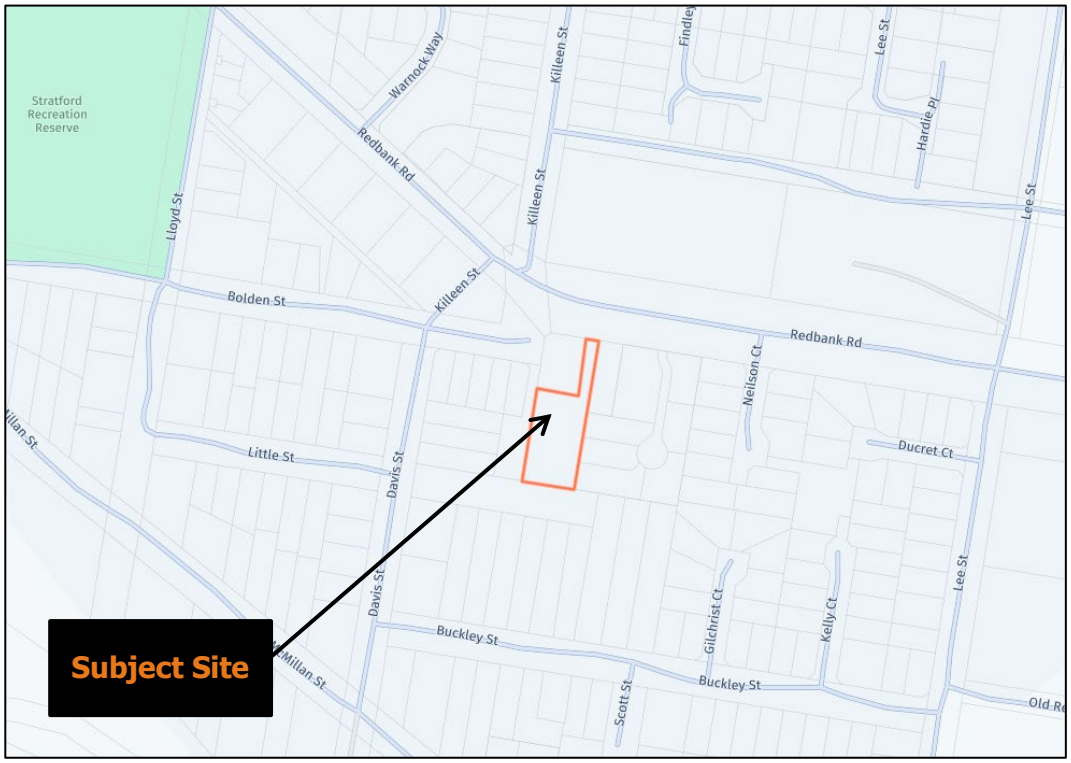


Figure 2: Location Map (Source: NearMap)

3.2 Road Network

Redbank Road

Redbank Road is a Collector Road under Wellington Shire Council's Register of Public Roads. Generally aligned in an east-west direction, it connects to Tyers Street (Princes Highway) via McAlister Street to the west and provides access to rural properties to the east of Stratford.

Proximate to the subject site, it consists of a single carriageway with a traffic lane in each direction. The unpaved area on each side of the road may be used for on-street parking.

A posted speed limit of 80km/h applied along the site frontage. The speed limit is reduced to 60km/h approximately 70m west of the site. It increases to 100km/h approximately 370m east of the site, past Lee Street.

Images of Redbank Road are provided in the following figures.

Figure 3: Redbank Rd (view east)

Figure 4: Redbank Rd (view west)

3.3 Alternative Transport

Walking and Cycling

Retail amenities in Stratford are primarily located along Tyers Street (Princes Highway), between McAlister Street and Dawson Street. This includes an IGA Supermarket, shops, restaurants, cafés, a medical centre, a pharmacy, and a post office. The walking and cycling times to this retail area, and other local amenities, is summarised in the following table.

Table 3: Walk/Cycle Travel Times to Nearby Infrastructure & Facilities

Accessing	Distance[1]	Walk Time	Cycle Time
Local Amenities			
Retail uses on Tyers St	1.2km	14 min	5 min
Stratford Primary School	900m	11 min	4 min
Stratford Football Ground and surrounding sports facilities	500m	6 min	2 min
Transport Nodes			
Stratford Railway Station	1.5km	18 min	6 min

Note [1]: The distance is measured based on travel path distance.

Considering the above, there is potential for some residents of 28 Redbank Road to walk or cycle to nearby amenities, however we expect the majority of residents would drive.

Public Transport

No public transport services operate within 1km of the site.

The nearest public transport stop is Stratford Railway Station, approximately 1.5km travel distance from the site. Whilst there is potential for some residents of 28 Redbank Road to walk or cycle to Stratford Railway Station, we expect the majority of residents would drive.

3.4 Existing Car Parking Conditions

The proposal satisfies the statutory car parking requirements (as discussed in this report) and does not rely on on-street parking. Accordingly, parking surveys are not warranted. Regardless, a review of aerial images (Nearmap) indicates that on-street parking demands on Redbank Road and nearby Killeen Street and Neilson Court are negligible.

3.5 Existing Traffic Conditions

Automatic traffic volume counts were undertaken on Redbank Road along the site frontage. The counts were undertaken from Sunday 27th October to Saturday 2nd November (inclusive) 2024.

The results are summarised in the following table.

Table 4: Summary of Traffic Counts

	Direction of Travel		
	Both directions	**Westbound**	**Eastbound**
Traffic Volume			
Weekdays Average	1,080	538	542
7 Day Average	1,016	503	513
AM Peak Hour (8:00-9:00)	90	67 (74%)	23 (26%)
PM Peak Hour (17:00-18:00)	112	36 (32%)	76 (68%)

The results indicate that the PM peak is most critical, with 112 passing movements in the hour.

A detailed summary of the results is attached in Appendix B.

4 Car Parking Assessment

4.1 Statutory Car Parking Requirements

Clause 52.06-5 outlines the statutory parking requirements applicable to the development. Table 5 outlines an assessment of the car parking provision against the statutory requirements.

Table 5: Statutory Car Parking Assessment

Use	No.	Statutory Rate	Requirement	Provision	Shortfall
Resident Parking					
Dwellings (1-2 BR)	11	1 per dwelling	11	11	0
Dwellings (3+ BR)	6	2 per dwelling	12	12	0
Visitors	17	1 per 5 dwellings	3	3	0
		TOTAL	**26**	**26**	**0**

Based on the above assessment, the development satisfies the statutory parking requirements, and no further assessment of car parking provision is warranted.

5 Car Park Layout Assessment

5.1 Recommendation

We recommend that the driveway area is increased in front of the Unit 16 Garage, as shown in the mark-up, below. The adjacent garden areas and bollard would be reshaped accordingly.

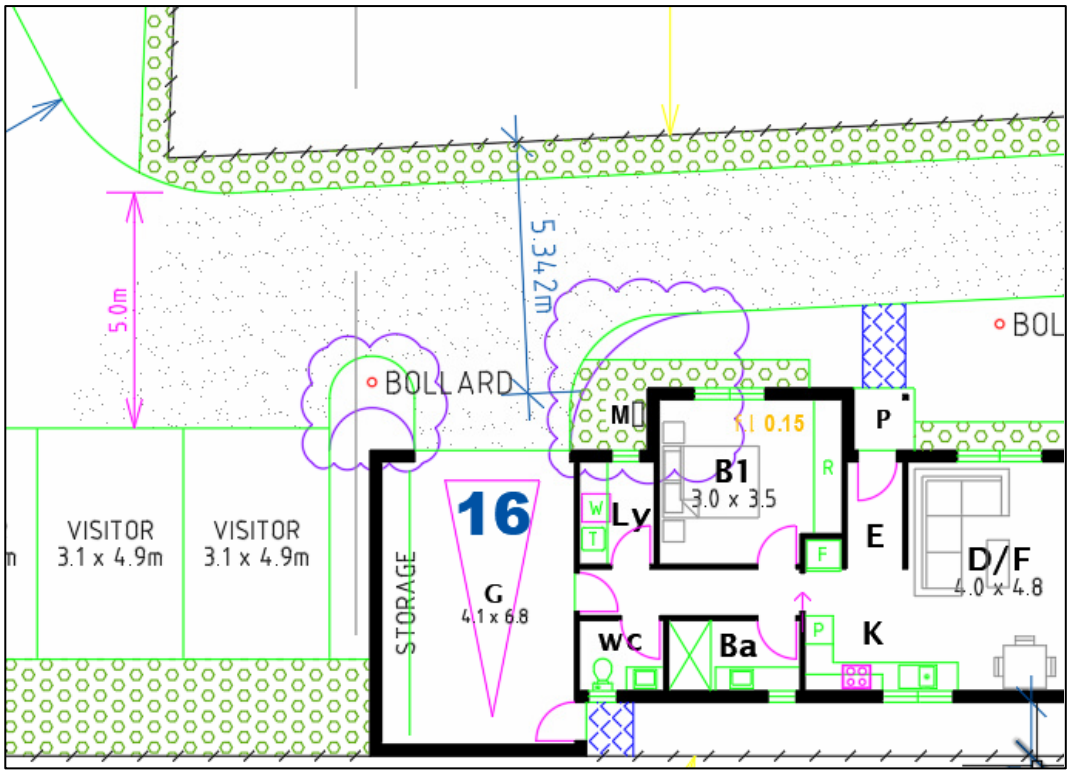


Figure 5: Mark-Up of Recommended Change

This recommendation provides sufficient space for cars turning in and out of Unit 16 and for service vehicles turning while passing in front of Unit 16.

This recommendation may be provided via a permit condition.

The following assessment is undertaken assuming that this recommendation is adopted.

5.2 Clause 52.06-9 Design Standards

The following table reviews the proposed car parking design against the design standards of Clause 52.06-9 of the Planning Scheme.

Table 6: Review of Car Park Design - Clause 52.06-9

Design Standard	Compliant	Comments
Design Standard 1 - Accessways		
Be at least 3 metres wide	Compliant	Minimum 3m provided
Have an internal radius of at least 4 metres at changes of direction or intersection or be at least 4.2 metres wide.	Compliant	Minimum 4m internal radius provided with wider (up to 5.1m) aisles at changes of direction
Allow vehicles parked in the last space of a dead-end accessway in public car parks to exit in a forward direction with one manoeuvre	Not Applicable	The proposed car park will not be accessible to the public.
Provide at least 2.1 metres headroom beneath overhead obstructions, calculated for a vehicle with a wheel base of 2.8 metres	Compliant	No overhead obstructions above the accessway
If the accessway serves four or more car spaces or connects to a road in a Transport Zone 2 or Transport Zone 3, the accessway must be designed so that cars can exit the site in a forward direction	Compliant	Accessways designed for cars to exit forwards
Provide a passing area at the entrance at least 6.1 metres wide and 7 metres long if the accessway serves ten or more car parking spaces and is either more than 50 metres long or connects to a road in a Transport Zone 2 or Transport Zone 3	Compliant	Passing area provided
Have a corner splay or area at least 50 per cent clear of visual obstructions extending at least 2 metres along the frontage road from the edge of an exit lane and 2.5 metres along the exit lane from the frontage, to provide a clear view of pedestrians on the footpath of the frontage road	Compliant	The areas required for visibility splays consist of landscaped area, letterboxes, and a side boundary fence. We recommend that these are designed no more than 900mm height to satisfy this criterion. This may be specified via a permit condition.

Design Standard	Compliant	Comments
If an accessway to four or more car parking spaces is from land in a Transport Zone 2 or Transport Zone 3, the access to the car spaces must be at least 6 metres from the road carriageway	Not Applicable	Redbank Road is not in a TRZ2 or TRZ3. However, access to the car spaces is greater than 6 metres from the road carriageway.
If entry to the car space is from a road, the width of the accessway may include the road	Not Applicable	All spaces are accessed via internal accessways.
Design Standard 2 – Car Parking Spaces		
Car parking spaces and accessways must have the minimum dimensions as outlined in Table 2.	Compliant	Visitor spaces are 4.9m long by 3.1m wide, accessed from a 5.0m wide aisle. Resident spaces (where provided) are provided as two spaces within a 4.9m long by 6.6m wide paved area, which equates to a parking space width of 3.3m. Measuring the front of the parking spaces to the opposite side of the accessway yields an effective aisle width of 4.8m, which satisfies this criterion.
A wall, fence, column, tree, tree guard or any other structure that abuts a car space must not encroach into the area marked 'clearance required' on Diagram 1, other than: • *A column, tree or tree guard, which may project into a space if it is within the area marked 'tree or column permitted' on Diagram 1.* • *A structure, which may project into the space if it is at least 2.1 metres above the space.*	Compliant	No obstructions in parking spaces
Car spaces in garages or carports must be at least 6 metres long and 3.5 metres wide for a single space and 5.5 metres wide for a double space measured inside the garage or carport.	Compliant	Garages are dimensioned in accordance with this criterion

Design Standard	Compliant	Comments
Where parking spaces are provided in tandem (one space behind the other) an additional 500 mm in length must be provided between each space	Not Applicable	There are no parking spaces behind another. Where a parking space is provided in front of a garage, additional length is not applicable, as there is no overhanging by the vehicle when the garage door is closed. This is no different from a parking space against a solid wall. Regardless, it is noted that these parking spaces are provided in a large, paved area. If a car overhangs the end of the parking spaces into the aisle, there is more than enough turning space for the neighbouring car.
Where two or more car parking spaces are provided for a dwelling, at least one space must be under cover	Compliant	Each dwellings is provided at least one single garage.
Disabled car parking spaces must be designed in accordance with Australian Standard AS2890.6-2009 (disabled) and the Building Code of Australia. Disabled car parking spaces may encroach into an accessway width specified in Table 2 by 500mm	Not Applicable	DDA spaces are not required for this use.
Design Standard 3 – Gradients		
Accessway grades must not be steeper than 1:10 (10 per cent) within 5 metres of the frontage.	Compliant	The site is generally flat, and no grades or ramps are proposed.
Ramps (except within 5 metres of the frontage) must have the maximum grades as outlined in Table 3 and be designed for vehicles travelling in a forward direction.	Compliant	The site is generally flat, and no grades or ramps are proposed.
Where the difference in grade between two sections of ramp or floor is greater that 1:8 (12.5 per cent) for a summit grade change, or greater than 1:6.7 (15 per cent) for a sag grade change, the ramp must include a transition section of at least 2 metres to prevent vehicles scraping or bottoming.	Compliant	The site is generally flat, and no grades or ramps are proposed.
Plans must include an assessment of grade changes of greater than 1:5.6 (18 per cent) or less than 3 metres apart for clearances, to the satisfaction of the responsible authority.	Not applicable	The site is generally flat, and no grades or ramps are proposed.

5.3 Swept Path Diagrams

Swept path diagrams using the B85 design vehicle have been prepared for critical car spaces and garages. These are:

- Car spaces of Dwellings #7 and #8, which are the rearmost spaces on the west side, and are representative of Dwellings #3 to #8. It is noted that Dwellings #1 and #2 have significantly greater setback and turning area than these dwellings.
- Garages of Dwellings #9 and #10, which are the rearmost spaces on the east side, and are representative of Dwellings #9 to #14.
- Garage of Dwellings #15, #16, and #17.

The diagrams are attached in Appendix C, demonstrating satisfactory car parking access has been provided.

Commentary on AS2890.1:2004

Under AS2890.1:2004, resident parking is classified under User Class 1A as outlined under Figure 6 below.

TABLE 1.1

CLASSIFICATION OF OFF-STREET CAR PARKING FACILITIES

User class	Required door opening	Required aisle width	Examples of uses (Note 1)
1	Front door, first stop	Minimum for single manoeuvre entry and exit	Employee and commuter parking (generally, all-day parking)
1A	Front door, first stop	Three-point turn entry and exit into 90° parking spaces only, otherwise as for User Class 1	Residential, domestic and employee parking
2	Full opening, all doors	Minimum for single manoeuvre entry and exit	Long-term city and town centre parking, sports facilities, entertainment centres, hotels, motels, airport visitors (generally medium-term parking)
3	Full opening, all doors	Minimum for single manoeuvre entry and exit	Short-term city and town centre parking, parking stations, hospital and medical centres
3A	Full opening, all doors	Additional allowance above minimum single manoeuvre width to facilitate entry and exit	Short term, high turnover parking at shopping centres
4	Size requirements are specified in AS/NZS 2890.6 (Note 2)		Parking for people with disabilities

Figure 6: AS2890.1:2004 Excerpt – Table 1, Page 9

Accordingly, for resident car parking, spaces/garages need to be designed such that residents can enter and exit the garage, allowing for a three-point turn as per AS2890.1:2004.

As residents will park their vehicles within their individual space(s) on a regular basis, they will be accustomed to manoeuvring in and out of bays in the most efficient way. This may include corrective manoeuvres.

All garages have been designed such that residents are able to enter and exit their individual car spaces, allowing for a three-point turn as per AS2890.1:2004.

5.4 Conclusion

Based on the above design assessment, we are satisfied the proposed car parking layout and vehicle access arrangements are appropriate and acceptably meet the aims of Clause 52.06-9 of the Planning Scheme.

6 Bicycle Parking Assessment

Clause 52.34 of the Planning Scheme sets out the provisional requirements for bicycle parking and End of Trip (EoT) facilities including showers and changerooms for the proposed uses.

Clause 52.34 specifies no requirements for dwellings in buildings under 4 storeys. Accordingly, no bicycle parking or EoT requirements apply.

The proposal does not include dedicated bicycle parking. However, residents and visitors may store bicycles within garages, private spaces, or within the dwellings themselves. These areas are conveniently accessible from the communal accessway onto the site. Accordingly, there is sufficient storage on-site for the anticipated bicycle parking demands.

7 Traffic Assessment

7.1 Projected Development Traffic

The NSW RMS has collected empirical data on trip generation for a variety of uses. This data is commonly used to assess trip generation for developments in Victoria.

The data includes 'low density residential' trip generation, collected during April and May 2010, from 6 sites in Sydney and 5 sites in regional NSW. We consider that the rates from regional NSW are most applicable.

Taking the average of the 5 regional sites, the site-generated peak rates were observed to be:

- AM Peak: 0.71 trips per dwelling at 8:00am-9:00am, with a directional split 25% inbound and 75% outbound.
- PM Peak: 0.74 trips per dwelling at 5:00pm-6:00pm, with a directional split 66% inbound and 34% outbound.

Accordingly, the site-generated traffic is calculated as follows.

Table 7: Traffic Generation Calculation

Use	No.	Rate	Total Volume	Volume In	Volume Out
Morning peak					
Low density residential	17 dwellings	0.71	12.1	3.0	9.1
Evening peak					
Low density residential	17 dwellings	0.74	12.6	8.3	4.3

The site is anticipated to generate 3 inbound and 9 outbound trips in the morning peak, and 8 inbound and 4 outbound trips in the evening peak.

7.2 Traffic Impacts

7.2.1 Turning Traffic at the Site Access

Potential for Queuing

To reduce the impact of any queuing, we recommend that the crossover is designed to enable two-way passing at the road carriageway. It is noted that the crossover should also be designed for service vehicles (waste collection and fire rescue vehicles), as per Section 8 of this report. This recommendation may be provided via a permit condition.

This enables the left-turn inbound traffic to flow without obstruction.

Subject to the above recommendation, the right-turn inbound traffic is the only movement that may need to wait on Redbank Road if a westbound car is passing.

The PM peak hour from 5pm to 6pm is the most critical period, with 8 inbound movements. The traffic counts indicate that during the PM peak hour, 68% of traffic on Redbank Road is eastbound. Adopting this directional split, the 8 trips to the site would be comprised of 5 trips approaching from the west (turning right into the site) and 3 trips approaching from the east (turning left into the site). Therefore, a right-turn into the site would occur approximately once every 12 minutes during the PM peak hour. This volume is minimal, and the frequency and duration of any queuing is anticipated to be minimal.

In the infrequent event that queuing occurs, there is unpaved area to the left of the traffic lane which may be used by through-traffic for passing.

Comparable Intersections

The following nearby intersections on Redbank Road are compared to the proposal:

- Neilson Court serves 11 dwellings. The dwellings on Neilson Court are larger than the proposed dwellings and appear to provide for multiple cars parked on each lot. Therefore, traffic volumes are likely to be similar to the proposal. Neilson Court is not provided turn treatments at the intersection with Redbank Road.
- Killeen Street (north) connects to multiple local streets and serves a significantly greater number of dwellings than the proposed site access. It is not provided turn treatments.
- Kileen Street (south) connects to multiple local streets and serves a significantly greater number of dwellings than the proposed site access. The opposite side of Redbank Road provides indented kerbside parking, which has sufficient width for passing when no cars are parked. However, there are no 'no stopping' restrictions. Therefore, if any cars are parked, the intersection would not have width to pass a queued car.

Of the three nearest intersections, only one provides a paved area where traffic can pass a queued car, and this intersection serves significantly more traffic than the proposal. The other two intersections serve greater or similar traffic volumes to the proposal and are not provided a paved passing treatment.

Other intersections more broadly are similar, with the majority provided no turn treatments.

If turn treatments are provided at this site access, it would not align with the majority of intersections on Redbank Road. This can cause driver confusion, because turn treatments are a visual suggestion to drivers that there is an upcoming intersection. In turn, this can cause drivers to make a wrong turn or become indecisive, which is an undesirable outcome for traffic flow and risk.

Conclusions

Considering the above, the following conclusions are reached:

- Queuing on Redbank Road at the site access is expected to be minimal.
- In the infrequent event that queuing occurs, there is unpaved area to the left of the traffic lane which may be used for passing.
- If turn treatments are provided at this site access, it would not align with the majority of nearby intersections on Redbank Road. This can cause driver confusion, because turn treatments are a visual suggestion to drivers of an upcoming intersection.

Therefore, we consider that no turn treatments are required at the site access.

7.2.2 Overall Traffic Volume on Redbank Road

The configuration of Redbank Road is comparable to a collector road under Clause 56.06 of the Planning Scheme. Collector roads are designed for a 3,000 to 7,000 vehicles per day, or 300 to 700 vehicles during each peak hour, before traffic volumes impact the amenity of the surrounding area.

The traffic counts summarised in Section 3.5 indicate that the PM peak hour from 5pm to 6pm is the most critical period, with 112 passing trips during the hour.

With the addition of 8 inbound and 4 outbound trips in the most critical peak hour, the traffic volume would remain well below the design volume of Redbank Road.

Thus, the proposal is anticipated to have negligible impact on the overall traffic capacity of Redbank Road.

8 Service Vehicles

8.1 Fire Rescue

Provision has been made for a fire rescue vehicle to turn around on-site.

Swept path diagrams demonstrate that the vehicle can navigate the accessways inbound, turnaround, and exit in a forwards direction. The diagrams are attached in Appendix D. The 8.8m long medium rigid vehicle from AS2890.2 has been used to simulate the turning movement of the fire rescue vehicle, as is common practice in regional Victoria.

8.2 Waste Collection

The Waste Management Plan (WMP) nominates waste collection by council from Redbank Road. The following considerations are noted:

- Redbank Road includes gravel verge where the waste vehicle can stop to collect the bins without obstructing through-traffic. The road is generally straight along the site frontage and curves towards the north to the west of the site. Therefore, a vehicle propped outside the traffic lane on the south side would not obstruct visibility along the road.
- In a worst-case scenario, if the driver props with the vehicle obstructing the through-traffic lane, the configuration of Redbank Road provides visibility and enables overtaking in accordance with the road rules. Collection would occur for a brief period (in the order of 1 minute). The traffic surveys indicate that the weekday morning peak hour occurs from 8am to 9am, when there were 67 westbound vehicles and 23 eastbound vehicles. This equates to an average in the order of 1 westbound vehicle per minute and 1 eastbound vehicle per 3 minutes. For these volumes, it is expected that there will be ample opportunities for overtaking. These conditions with ample opportunities for overtaking are unlikely to cause significant queuing or congestion.
- This collection arrangement aligns with the existing conditions of neighbouring properties.

Given the above factors, waste collection by council from the frontage of Redbank Road is considered appropriate from a traffic perspective.

8.3 Loading

The loading requirements for dwellings are typically minimal and associated with receiving the occasional delivery and when a resident moves in or out of a dwelling. Loading vehicles would consist of vans and small trucks, which can park in the visitor car parking spaces or stop briefly in front of the dwelling. A dedicated on-site loading bay is not considered necessary in this circumstance.

8.4 Crossover Design

The site crossover must be designed to enable entry and exit by service vehicles (waste collection and fire rescue vehicles). This may be provided via a permit condition.

9 Conclusions

Having undertaken a detailed traffic engineering assessment, the following conclusions are reached in relation to the mixed-use development at 28 Redbank Road, Stratford:

1. The statutory car parking requirement as specified under Clause 52.06-5 of the Planning Scheme is 26 car parking spaces. The proposal satisfies the parking requirement.

2. We recommend increasing the driveway space in front of Unit 16, as outlined in this report. Subject to this recommendation, the proposed car parking layout and vehicle access arrangements meet the criteria under Clause 52.06-9 of the Planning Scheme.

3. The proposed development has no statutory bicycle requirement. Residents and visitors can store bicycles in each secure dwelling, garage, or private space. Accordingly, any bicycle parking demands are anticipated to be accommodated on-site.

4. The development traffic is anticipated to peak in the evening, at 8 inbound and 4 outbound trips in the PM peak hour.

5. We recommend that the crossover is designed to enable two-way passing at the road carriageway. This recommendation may be provided via a permit condition.

6. Subject to the above recommendation, the right-turn inbound traffic is the only movement with potential to queue on Redbank Road. A right-turn into the site would occur approximately once every 12 minutes during the PM peak hour. This volume is minimal, and the frequency and length of any queuing is anticipated to be minimal. In the infrequent event that queuing occurs, there is unpaved area to the left of the traffic lane which may be used for passing.

7. Furthermore, if turn treatments are provided at this site access, it would not align with the majority of nearby accesses on Redbank Road, which can cause driver confusion.

8. Therefore, we consider that no turn treatments are required at the site access.

9. The post-development traffic volume is expected to remain well below the design volume of Redbank Road, and is anticipated to have negligible impact on the overall traffic capacity of Redbank Road.

10. Provision is made for fire rescue and waste collection vehicles to navigate the accessway, turn around on-site, and exit in a forwards direction.

11. Waste collection will be undertaken by council from Redbank Road. Considering the configuration of Redbank Road, the observed traffic conditions, and the existing waste collection arrangements of neighbouring properties, this is considered appropriate from a traffic perspective.

12. The loading requirements for dwellings are typically minimal, and can use on-site visitor spaces or stop briefly in front of the dwelling. A dedicated on-site loading bay is not considered necessary in this circumstance.

Having undertaken all tasks necessary to adequately assess the traffic engineering impacts of the proposed mixed-use development, we are of the view that there are no traffic engineering reasons that should preclude the issue of a permit, subject to appropriate conditions.

Appendix A

Development Application Plans

design response

1 : 250

Notes

- TOWNHOUSE FLOOR LEVELS TO BE A MINIMUM 150mm ABOVE FINISHED GROUND LEVEL
- ALL OVERLOOKING SITUATIONS AT GROUND LEVEL ARE SCREENED OUT BY FENCING. FENCES TO BE RAISED WITH SCREENS (IF REQUIRED), 1.7m ABOVE TOWNHOUSE FLOOR LEVELS
- 1.7 x 1.7 x 2.1m HIGH GARDEN SHED. 6m³ REQUIRED EXTERNAL STORAGE IN EACH REAR YARD

CL	CLOTHES LINE
M • BOLLARD	METERBOX LOCATION BOLLARD LIGHT
	GARDEN BED / NEW TREE'S, REFER TO LANDSCAPE PLAN
L A W N	GRASS / LAWN
	CONCRETE PAVING
P.O.S	SECLUDED PRIVATE OPEN SPACE (25m² MIN. SHOWN)

Areas	Units 3 - 8		Units 1 - 2 Units 9 - 14		Unit 15		Units 16, 17	
	m²	sq	m²	sq	m²	sq	m²	sq
LIVING	115.8	12.43	84.1	9.03	77.3	8.30	65.6	7.04
GARAGE	22.6	2.43	22.8	2.45	27.0	2.90	28.4	3.05
PORCH	4.0	0.43	6.3	0.67	2.0	0.21	1.7	0.18
TOTAL	142.20	15.29	113.20	12.15	106.3	11.41	95.7	10.27

Site Coverage Objective	
MAX. ALLOWED	60% - 2608.8 m²
ACHIEVED	47.4% - 2060.0 m²

Site Area	4348 m²

Permeability Objective	
MIN. ALLOWED	20% - 870 m²
ACHIEVED	32.5% - 1415.0 m²

Notes
17 DWELLINGS
1 BEDROOM - 3
2 BEDROOM - 8
3 BEDROOM - 6
3 x VISITOR CAR SPACES
SINGLE GARAGE: 3.5 x 6.0m

N

REDBANK ROAD (BITUMEN)

POWER POLE

APPROXIMATE TREE LOCATIONS

NEIGHBOURING SHED

NEIGHBOURING DWELLING
- SINGLE STOREY
- WEATHERBOARD CLAD
- COLORBOND ROOF

No. 26
REDBANK

NEIGHBOURING DWELLING
- SINGLE STOREY
- BRICK VENEER
- COLORBOND ROOF

No. 30
REDBANK

NEIGHBOURING SHED

TURNING POINT FOR EMERGENCY VEHICLE
REFER TO CFA GUIDELINE:
'REQUIREMENTS FOR WATER SUPPLIES AND ACCESS FOR SUBDIVISIONS IN RESIDENTIAL 1 AND 2 AND TOWNSHIP ZONES'

ALL OVERLOOKING BLOCKED FENCE
NEW 1.9m HIGH TIMBER PAILING FENCE

ALL OVERLOOKING BLOCKED FENCE
NEW 1.9m HIGH TIMBER PAILING FENCE

NEW CROSSOVER TO COUNCIL REQUIREMENTS

CONCRETE

LETTERBOX (17) SEE DETAILS

27.5m - FRONT BOUNDARY TO ROAD EDGE

DRIVEWAY CONCRETE

PASS

LAWN

BOLLARD

VISITOR 3.1 x 4.9m

STORAGE

GATE

BINS

CL

1.679m
3.53m
2.5m
272°15'
33.79m
4.0m
1.218m
8.0m
17.0m
4.8m
50.13m 177°20'40"
5.1m
5.0m
5.342m
6.308m
6.1m
7.0m
15.0m
80°
1.49m
10.86m
13.86m
1.14m
5.3m
3.0m
1.14m
5.0m
9.41m - DWELLING
13.6m

PLANNING PERMIT DRAWINGS
DATE - 15/11/2024

- DESIGN RESPONSE, PART 1

CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE COMMENCING CONSTRUCTION. DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY

MF MATTHEW FRANKE
BUILDING DESIGN & DRAFTING
DP - AD 22

project	address	client	date	scale	job no.	dwg no.
17 UNIT DEVELOPMENT	28 REDBANK ROAD STRATFORD	[redacted] -	15.10.24	1 : 250 -	202430	02

design response

1 : 250

N

NEIGHBOURING DWELLING
- SINGLE STOREY
- BRICK VENEER
- COLORBOND ROOF

ALL OVERLOOKING BLOCKED FENCE
NEW 1.9m HIGH TIMBER PAILING FENCE

NEIGHBOURING PROPERTY DRIVEWAY

THIS PROPERTY IN THE SAME OWNERSHIP
48 BOLDEN COURT

70.92m 359°36'40"

1.8m HIGH TIMBER FENCES

REAR YARD FOR PROPERTY 8 DAVIS ROAD.
NO BUILDINGS WITHIN 9.0m

REAR YARD FOR PROPERTY 32 REDBANK ROAD
NO BUILDINGS WITHIN 9.0m

ALL OVERLOOKING BLOCKED FENCE
NEW 1.9m HIGH TIMBER PAILING FENCE

ALL OVERLOOKING BLOCKED FENCE
NEW 1.9m HIGH TIMBER PAILING FENCE

ALL OVERLOOKING BLOCKED FENCE
NEW 1.9m HIGH TIMBER PAILING FENCE

NEIGHBOURING SHED

TURNING POINT FOR EMERGEN
REFER TO CFA GUIDELINE:
'REQUIREMENTS FOR WATER S
ACCESS FOR SUBDIVISIONS IN
1 AND 2 AND TOWNSHIP ZONE

DRIVEWAY CONCRETE

128.84m 180°

45.90m

33.79m 272°15'

PLANNING PERMIT DRAWINGS
DATE - 15/11/2024

- DESIGN RESPONSE, PART 2

CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE COMMENCING CONSTRUCTION. DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY

MF MATTHEW FRANKE BUILDING DESIGN & DRAFTING DP - AD 223 [redacted]

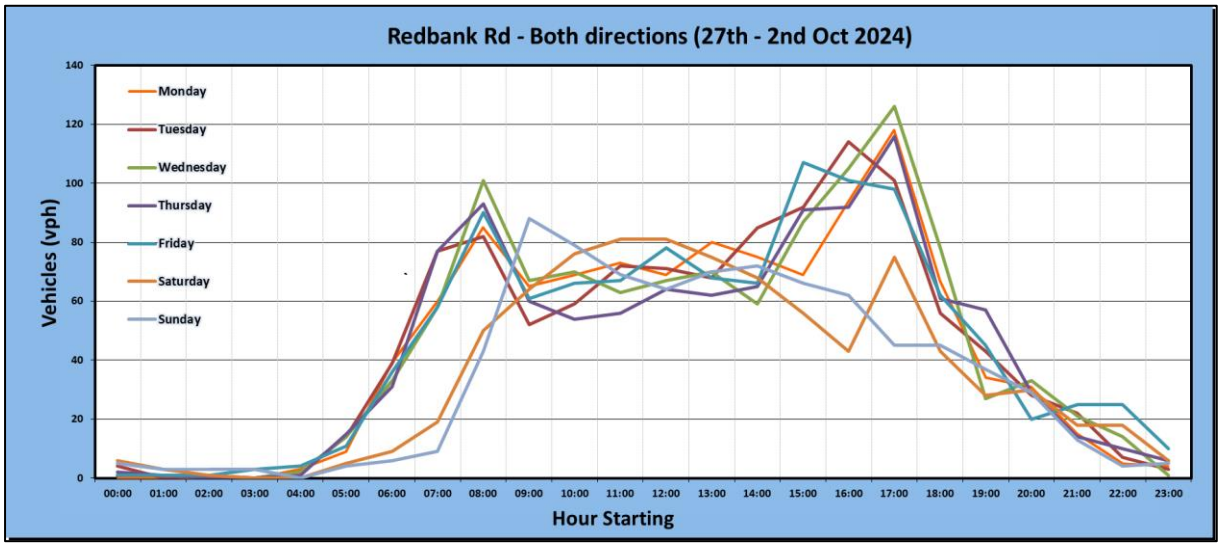
project	address	client	date	scale	job no.	dwg no.
17 UNIT DEVELOPMENT	28 REDBANK ROAD STRATFORD	[redacted] -	14.10.24	1 : 250 -	202430	03

Appendix B

Traffic Volume Data

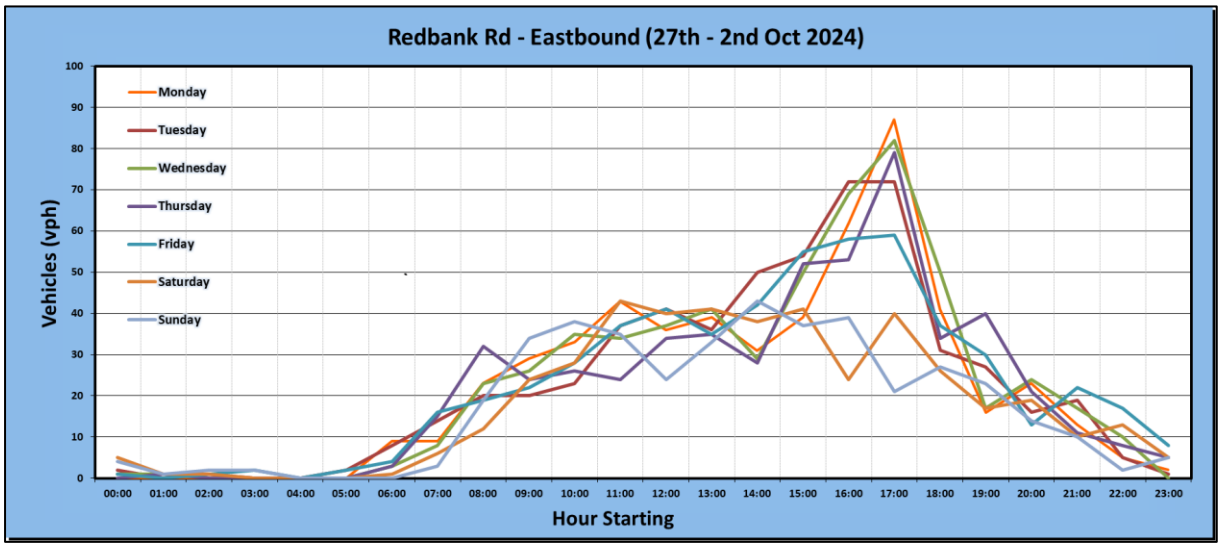
Traffic Volume Counts: Both Directions

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	########	########	30/10/2024	########	1/11/2024	2/11/2024	########	Total	Average	Total	Average	Total	Average
AM Peak	08:00	08:00	08:00	08:00	08:00	11:00	09:00	N/A	08:00	N/A	08:00	N/A	10:00
PM Peak	17:00	16:00	17:00	17:00	15:00	12:00	14:00	N/A	17:00	N/A	17:00	N/A	12:00
00:00	0	4	1	2	1	6	5	19	3	8	2	11	6
01:00	0	0	1	1	1	3	3	9	1	3	1	6	3
02:00	0	1	0	0	1	1	3	6	1	2	0	4	2
03:00	0	0	0	0	3	0	3	6	1	3	1	3	2
04:00	3	2	2	1	4	0	0	12	2	12	2	0	0
05:00	9	14	14	15	11	5	4	72	10	63	13	9	5
06:00	39	39	33	31	36	9	6	193	28	178	36	15	8
07:00	60	77	58	77	58	19	9	358	51	330	66	28	14
08:00	85	82	101	93	90	50	43	544	78	451	90	93	47
09:00	65	52	67	60	61	64	88	457	65	305	61	152	76
10:00	69	59	70	54	66	76	79	473	68	318	64	155	78
11:00	73	72	63	56	67	81	69	481	69	331	66	150	75
12:00	69	71	67	64	78	81	64	494	71	349	70	145	73
13:00	80	68	70	62	68	75	70	493	70	348	70	145	73
14:00	75	85	59	65	66	68	72	490	70	350	70	140	70
15:00	69	92	87	91	107	56	66	568	81	446	89	122	61
16:00	94	114	105	92	101	43	62	611	87	506	101	105	53
17:00	118	101	126	116	98	75	45	679	97	559	112	120	60
18:00	67	56	78	61	62	43	45	412	59	324	65	88	44
19:00	34	43	27	57	45	28	37	271	39	206	41	65	33
20:00	31	28	33	29	20	30	29	200	29	141	28	59	30
21:00	15	22	21	14	25	18	13	128	18	97	19	31	16
22:00	5	7	14	10	25	18	4	83	12	61	12	22	11
23:00	4	3	1	6	10	6	5	35	5	24	5	11	6
Total	1064	1092	1098	1057	1104	855	824	7094	1013	5415	1083	1679	840
%Heavy	10.43%	9.62%	8.83%	8.70%	9.78%	9.82%	7.40%	9.28%		9.47%		8.64%	



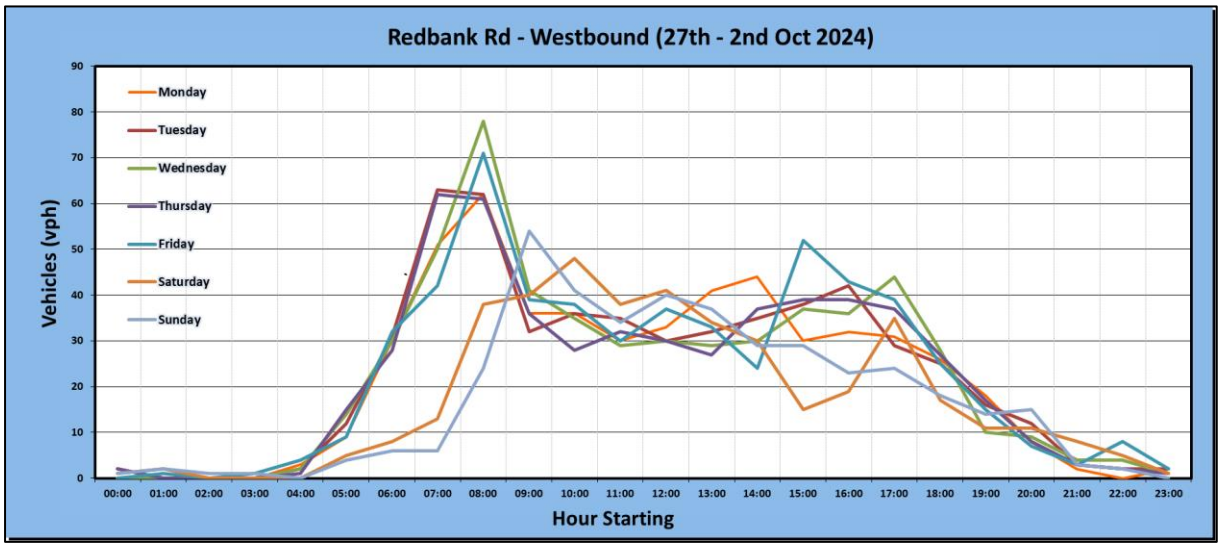
Traffic Volume Counts: Eastbound

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	########	########	30/10/2024	########	1/11/2024	2/11/2024	########	Total	Average	Total	Average	Total	Average
AM Peak	11:00	11:00	10:00	08:00	11:00	11:00	10:00	N/A	11:00	N/A	11:00	N/A	11:00
PM Peak	17:00	16:00	17:00	17:00	17:00	13:00	14:00	N/A	17:00	N/A	17:00	N/A	14:00
00:00	0	2	1	0	1	5	4	13	2	4	1	9	5
01:00	0	0	1	1	0	1	1	4	1	2	0	2	1
02:00	0	1	0	0	1	1	2	5	1	2	0	3	2
03:00	0	0	0	0	2	0	2	4	1	2	0	2	1
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00	0	2	0	0	2	0	0	4	1	4	1	0	0
06:00	9	8	3	3	4	1	0	28	4	27	5	1	1
07:00	9	14	8	15	16	6	3	71	10	62	12	9	5
08:00	23	20	23	32	19	12	19	148	21	117	23	31	16
09:00	29	20	26	24	22	24	34	179	26	121	24	58	29
10:00	33	23	35	26	28	28	38	211	30	145	29	66	33
11:00	43	37	34	24	37	43	35	253	36	175	35	78	39
12:00	36	41	37	34	41	40	24	253	36	189	38	64	32
13:00	39	36	41	35	35	41	33	260	37	186	37	74	37
14:00	31	50	29	28	42	38	43	261	37	180	36	81	41
15:00	39	54	50	52	55	41	37	328	47	250	50	78	39
16:00	62	72	69	53	58	24	39	377	54	314	63	63	32
17:00	87	72	82	79	59	40	21	440	63	379	76	61	31
18:00	41	31	50	34	37	26	27	246	35	193	39	53	27
19:00	16	27	17	40	30	17	23	170	24	130	26	40	20
20:00	23	16	24	21	13	19	14	130	19	97	19	33	17
21:00	13	19	17	11	22	10	10	102	15	82	16	20	10
22:00	5	5	10	8	17	13	2	60	9	45	9	15	8
23:00	2	1	0	5	8	5	5	26	4	16	3	10	5
Total	540	551	557	525	549	435	416	3573	510	2722	544	851	426
%Heavy	10.74%	9.62%	9.34%	8.95%	10.38%	10.57%	8.65%	9.77%		9.81%		9.64%	



Traffic Volume Counts: Westbound

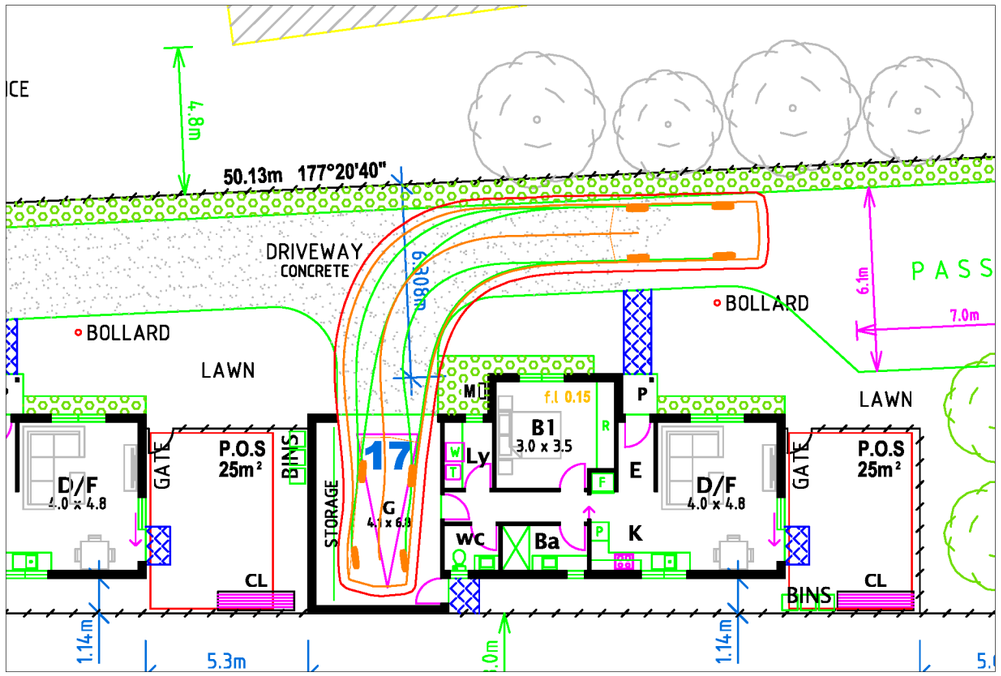
Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	7 days		Weekday		Weekend	
Date	########	########	30/10/2024	########	1/11/2024	2/11/2024	########	Total	Average	Total	Average	Total	Average
AM Peak	08:00	07:00	08:00	07:00	08:00	10:00	09:00	N/A	08:00	N/A	08:00	N/A	09:00
PM Peak	14:00	16:00	17:00	15:00	15:00	12:00	12:00	N/A	12:00	N/A	15:00	N/A	12:00
00:00	0	2	0	2	0	1	1	6	1	4	1	2	1
01:00	0	0	0	0	1	2	2	5	1	1	0	4	2
02:00	0	0	0	0	0	0	1	1	0	0	0	1	1
03:00	0	0	0	0	1	0	1	2	0	1	0	1	1
04:00	3	2	2	1	4	0	0	12	2	12	2	0	0
05:00	9	12	14	15	9	5	4	68	10	59	12	9	5
06:00	30	31	30	28	32	8	6	165	24	151	30	14	7
07:00	51	63	50	62	42	13	6	287	41	268	54	19	10
08:00	62	62	78	61	71	38	24	396	57	334	67	62	31
09:00	36	32	41	36	39	40	54	278	40	184	37	94	47
10:00	36	36	35	28	38	48	41	262	37	173	35	89	45
11:00	30	35	29	32	30	38	34	228	33	156	31	72	36
12:00	33	30	30	30	37	41	40	241	34	160	32	81	41
13:00	41	32	29	27	33	34	37	233	33	162	32	71	36
14:00	44	35	30	37	24	30	29	229	33	170	34	59	30
15:00	30	38	37	39	52	15	29	240	34	196	39	44	22
16:00	32	42	36	39	43	19	23	234	33	192	38	42	21
17:00	31	29	44	37	39	35	24	239	34	180	36	59	30
18:00	26	25	28	27	25	17	18	166	24	131	26	35	18
19:00	18	16	10	17	15	11	14	101	14	76	15	25	13
20:00	8	12	9	8	7	11	15	70	10	44	9	26	13
21:00	2	3	4	3	3	8	3	26	4	15	3	11	6
22:00	0	2	4	2	8	5	2	23	3	16	3	7	4
23:00	2	2	1	1	2	1	0	9	1	8	2	1	1
Total	524	541	541	532	555	420	408	3521	503	2693	539	828	414
%Heavy	10.11%	9.61%	8.32%	8.46%	9.19%	9.05%	6.13%	8.78%		9.13%		7.61%	



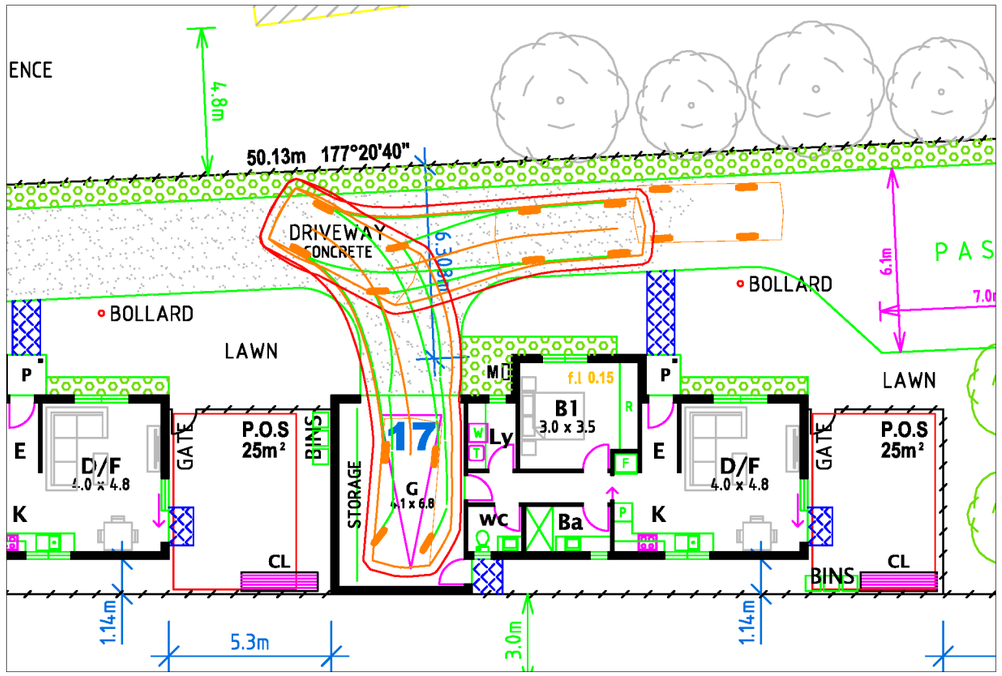
Appendix C

Swept Path Diagrams: Car Parking

Entry



Exit



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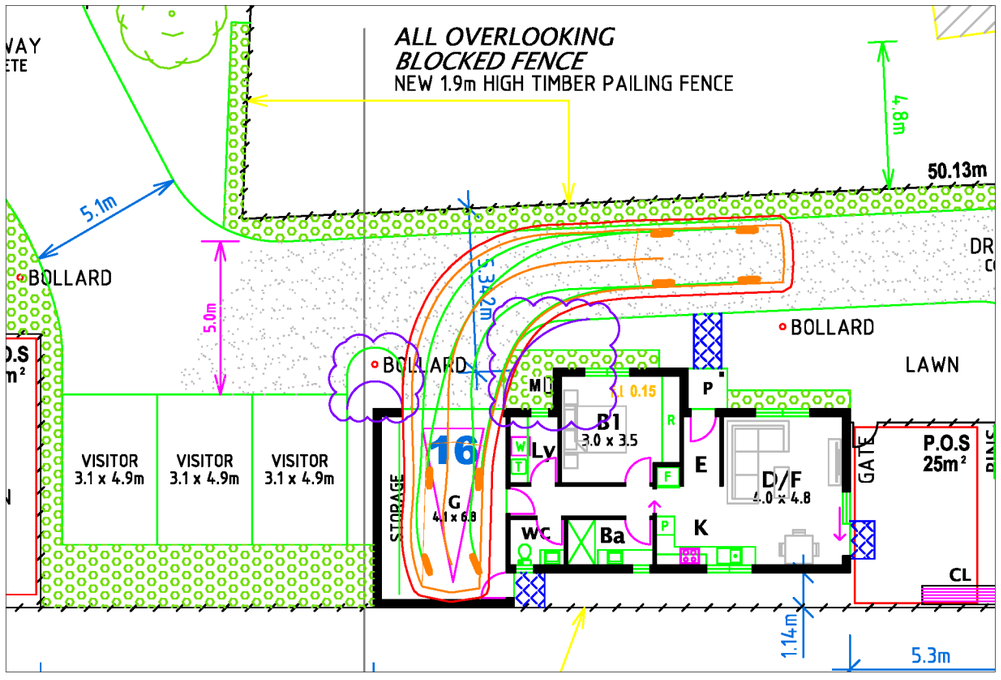

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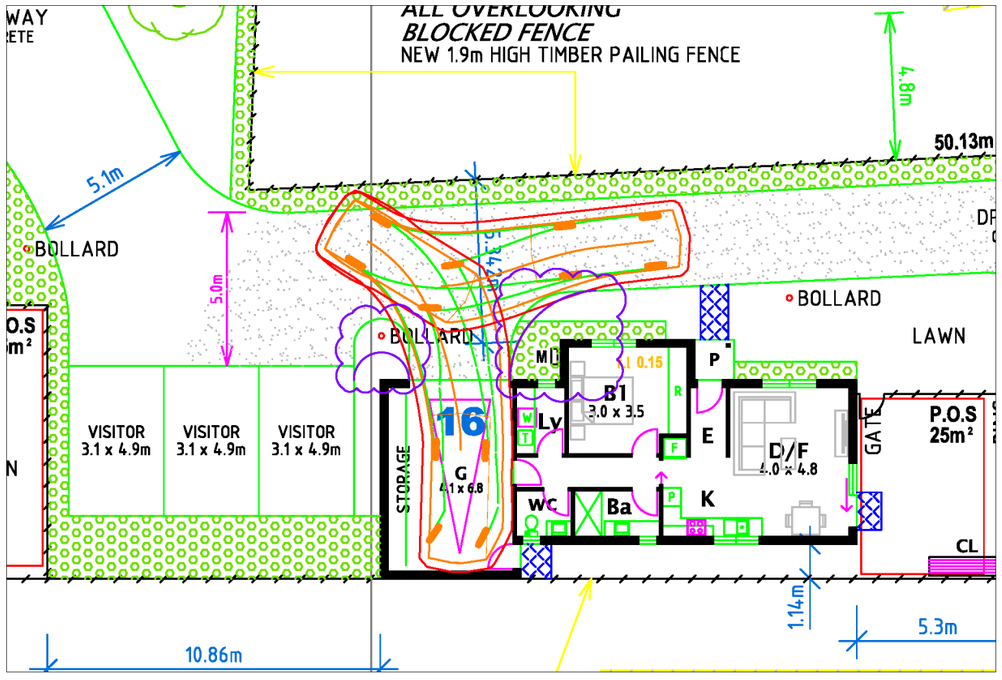
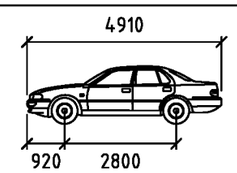


DESIGN VEHICLE USED IN SIMULATION



B85 Design Car - AS2890.1:2004

Width	:	**1870mm**
Track	:	**1770mm**
Lock to Lock Time	:	**6.0sec**
Steering Angle	:	**34.1degrees**
Design Speed	:	**5km/h**

LEGEND

- Vehicle Body
- Wheel Tracks
- Clearance Lines (300mm)
- Mark-Up of Recommended Changes

N

ISSUE	DATE	DESCRIPTION
A	18/11/2024	ORIGINAL ISSUE FOR PLANNING APPLICATION

DESIGNED	[redacted]
CHECKED	[redacted]
DATE	18/11/2024
PROJECT REF	24-0391

Quantum Traffic [redacted]

GENERAL NOTES

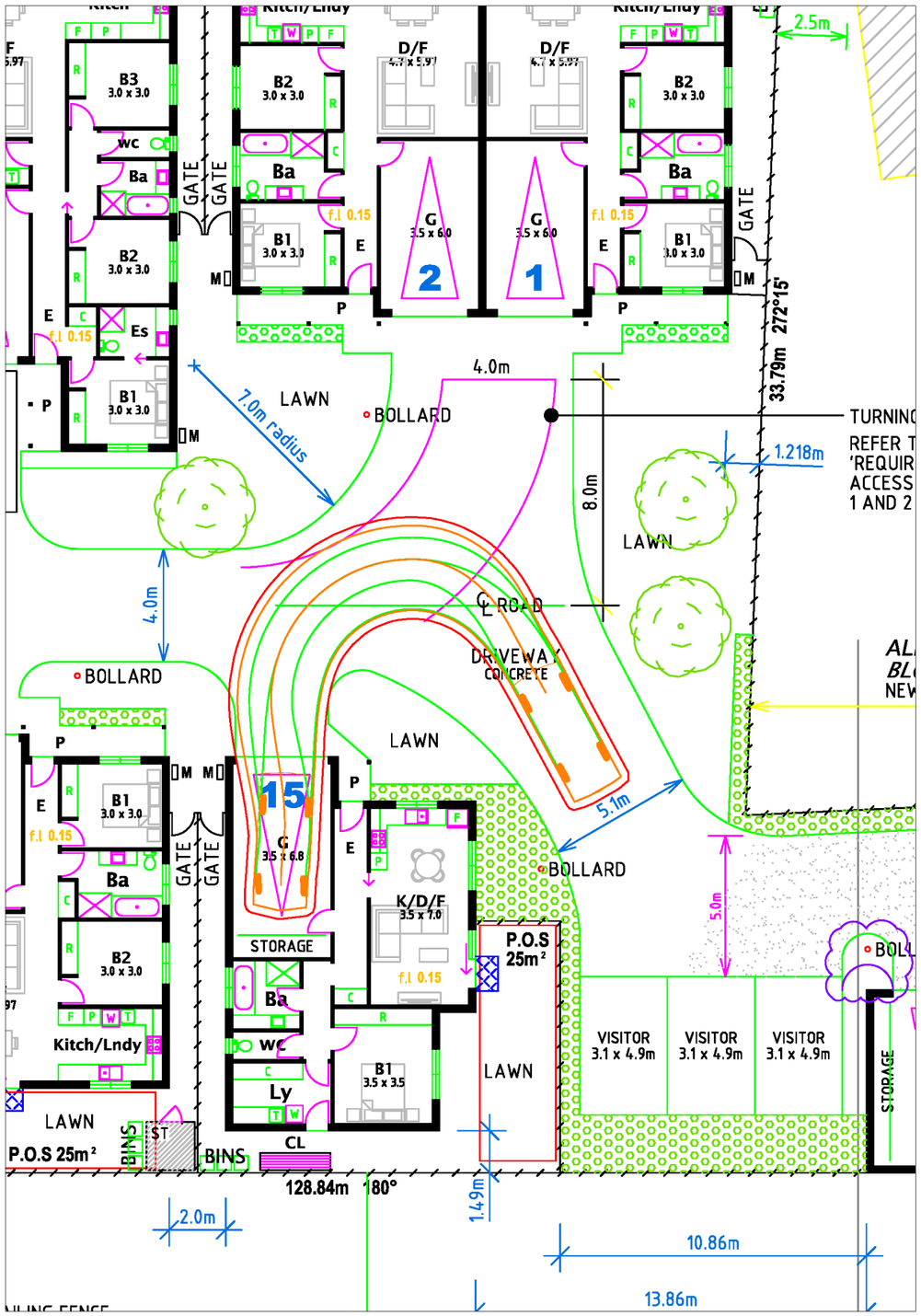
1.
2.
3.
4.
5.

PROPOSED DEVELOPMENT
28 REDBANK ROAD, STRATFORD
SWEPT PATH DIAGRAMS

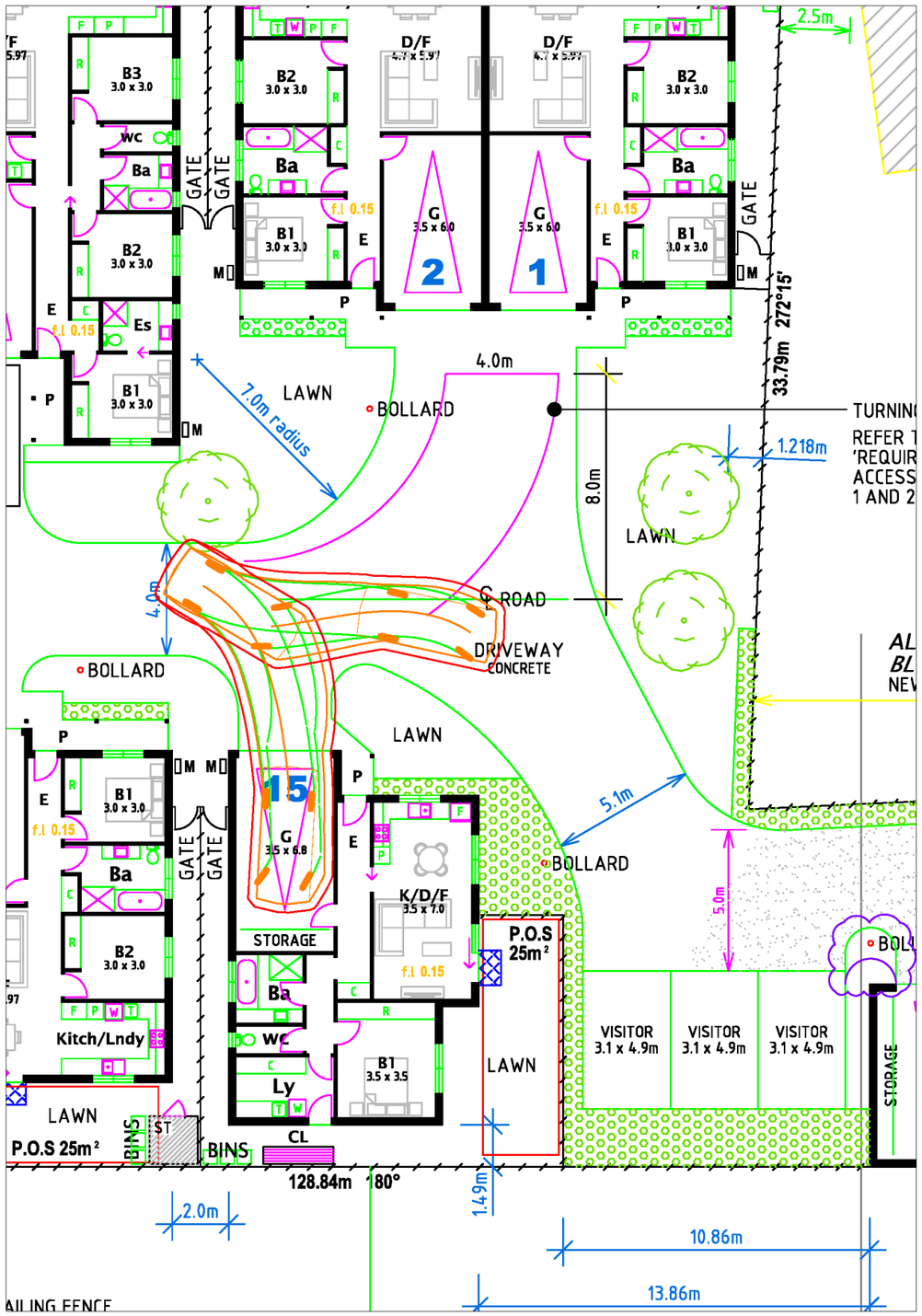
DRAWING NO.	ISSUE	SCALE
24-0391	A	1:200 @ A3

0 1 2 3 4

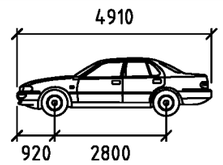
Entry



Exit



DESIGN VEHICLE USED IN SIMULATION



B85 Design Car - AS2890.1:2004

Width	:	**1870mm**
Track	:	**1770mm**
Lock to Lock Time	:	**6.0sec**
Steering Angle	:	**34.1degrees**
Design Speed	:	**5km/h**

LEGEND

- Vehicle Body
- Wheel Tracks
- Clearance Lines (300mm)

ISSUE	DATE	DESCRIPTION
A	18/11/2024	ORIGINAL ISSUE FOR PLANNING APPLICATION

DESIGNED	[redacted]
CHECKED	[redacted]
DATE	18/11/2024
PROJECT REF	24-0391

Quantum Traffic [redacted]

GENERAL NOTES

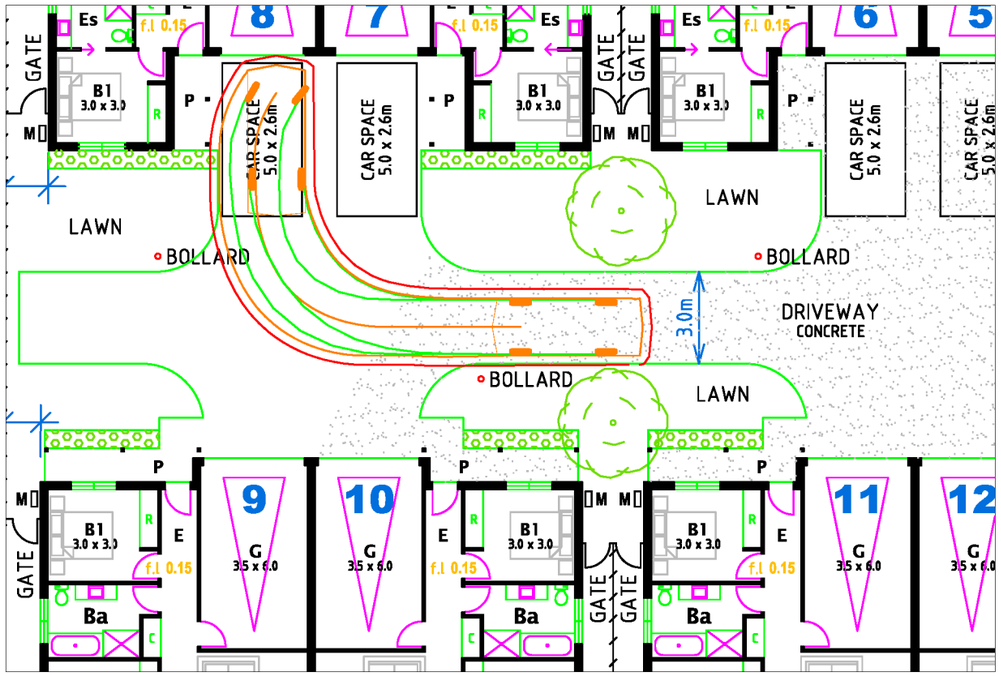
1.
2.
3.
4.
5.

PROPOSED DEVELOPMENT
28 REDBANK ROAD, STRATFORD
SWEPT PATH DIAGRAMS

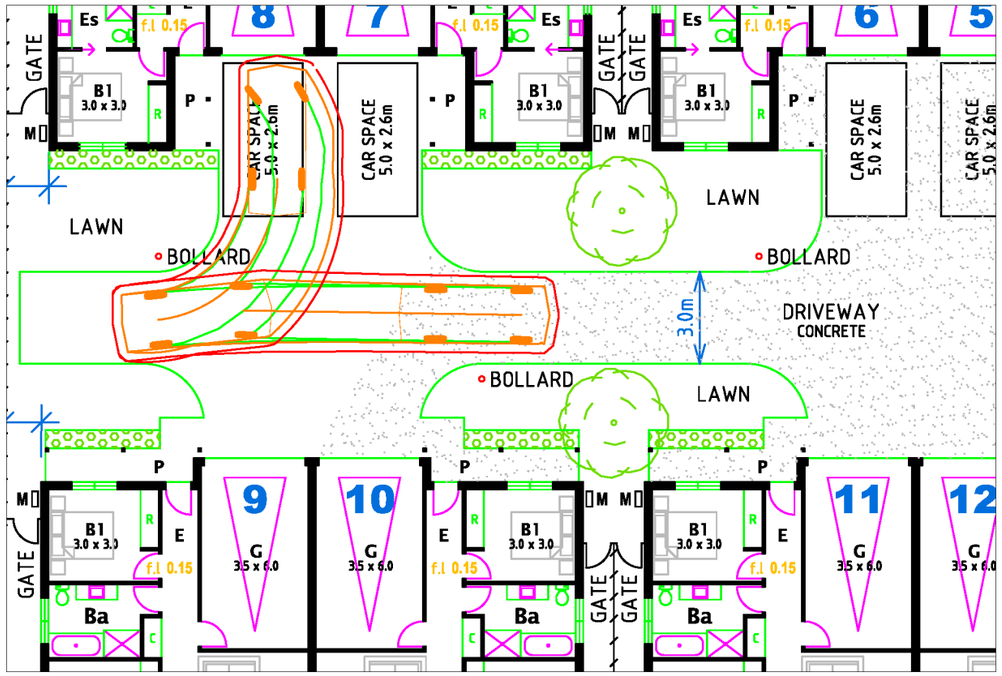
DRAWING NO.	ISSUE	SCALE
24-0391	A	1:200 @ A3

0 1 2 3 4

Entry

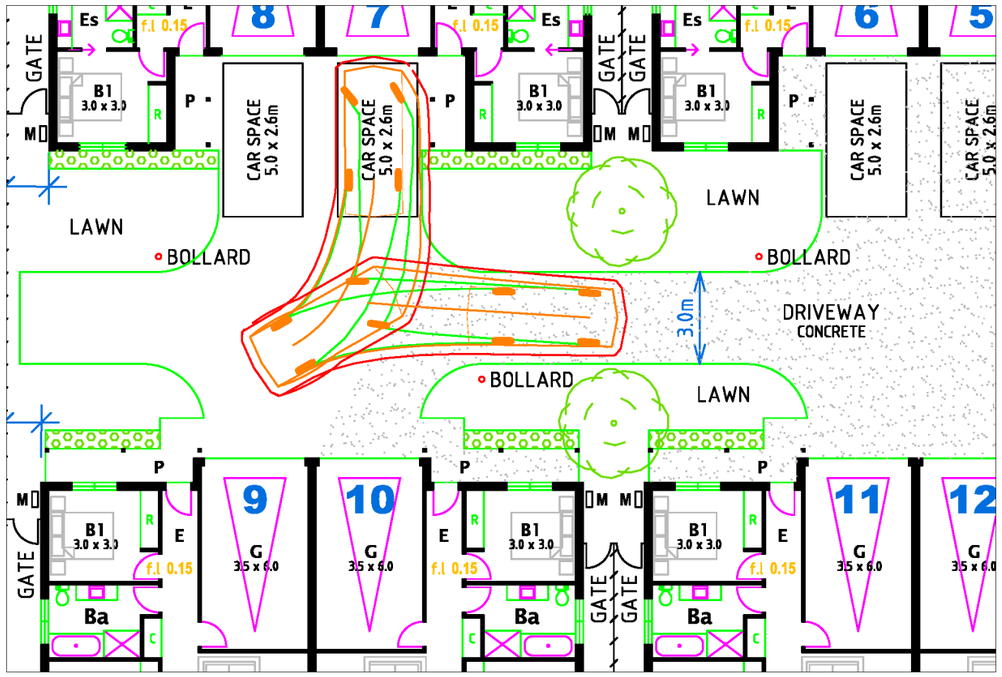


Exit

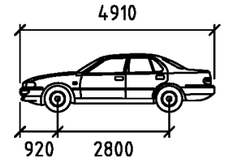


Entry

Exit



DESIGN VEHICLE USED IN SIMULATION



B85 Design Car - AS2890.1:2004

Width	:	**1870mm**
Track	:	**1770mm**
Lock to Lock Time	:	**6.0sec**
Steering Angle	:	**34.1degrees**
Design Speed	:	**5km/h**

LEGEND

Vehicle Body

Wheel Tracks

Clearance Lines (300mm)

N

ISSUE	DATE	DESCRIPTION
A	18/11/2024	ORIGINAL ISSUE FOR PLANNING APPLICATION

DESIGNED	[redacted]
CHECKED	[redacted]
DATE	18/11/2024
PROJECT REF	24-0391

Quantum Traffic [redacted]

GENERAL NOTES

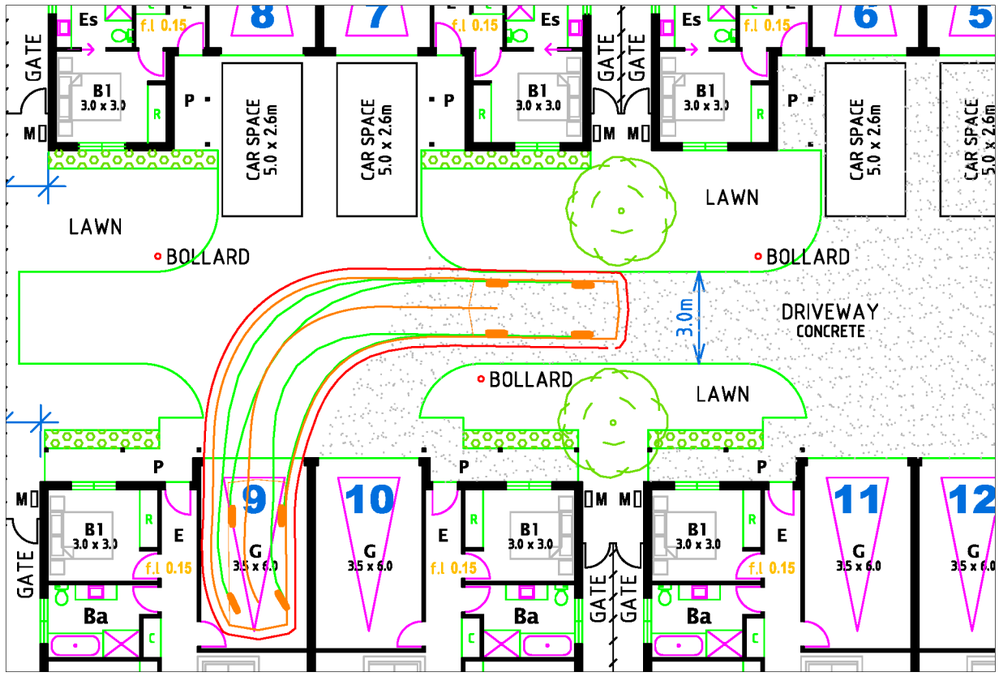
1.
2.
3.
4.
5.

PROPOSED DEVELOPMENT
28 REDBANK ROAD, STRATFORD
SWEPT PATH DIAGRAMS

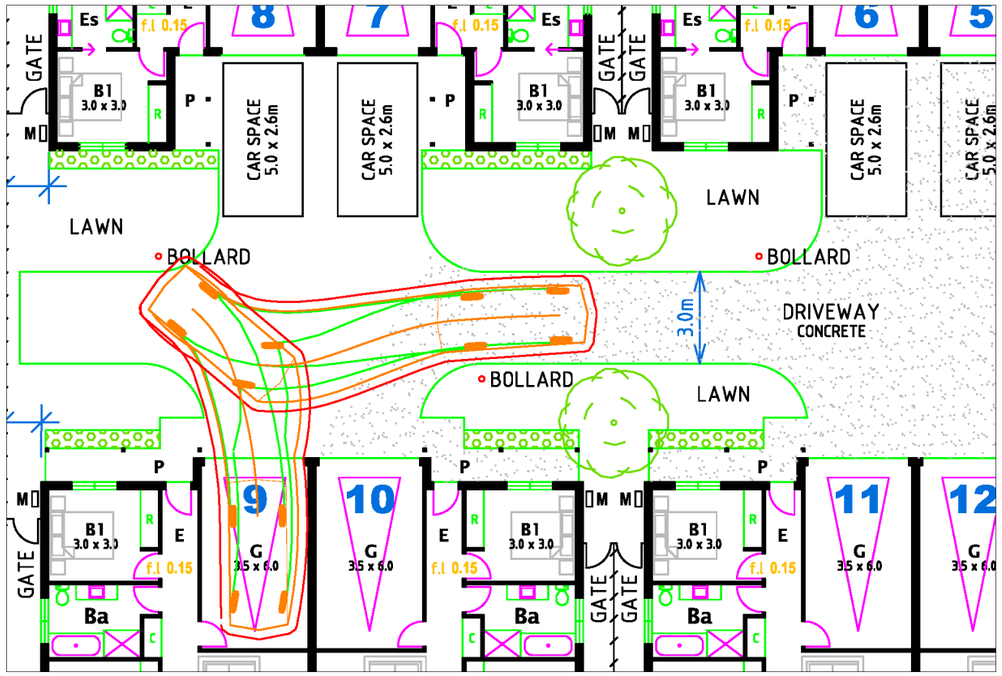
DRAWING NO.	ISSUE	SCALE
24-0391	A	1:200 @ A3

0 1 2 3 4

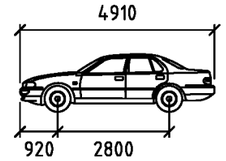
Entry



Exit



DESIGN VEHICLE USED IN SIMULATION



B85 Design Car - AS2890.1:2004

Width	:	**1870mm**
Track	:	**1770mm**
Lock to Lock Time	:	**6.0sec**
Steering Angle	:	**34.1degrees**
Design Speed	:	**5km/h**

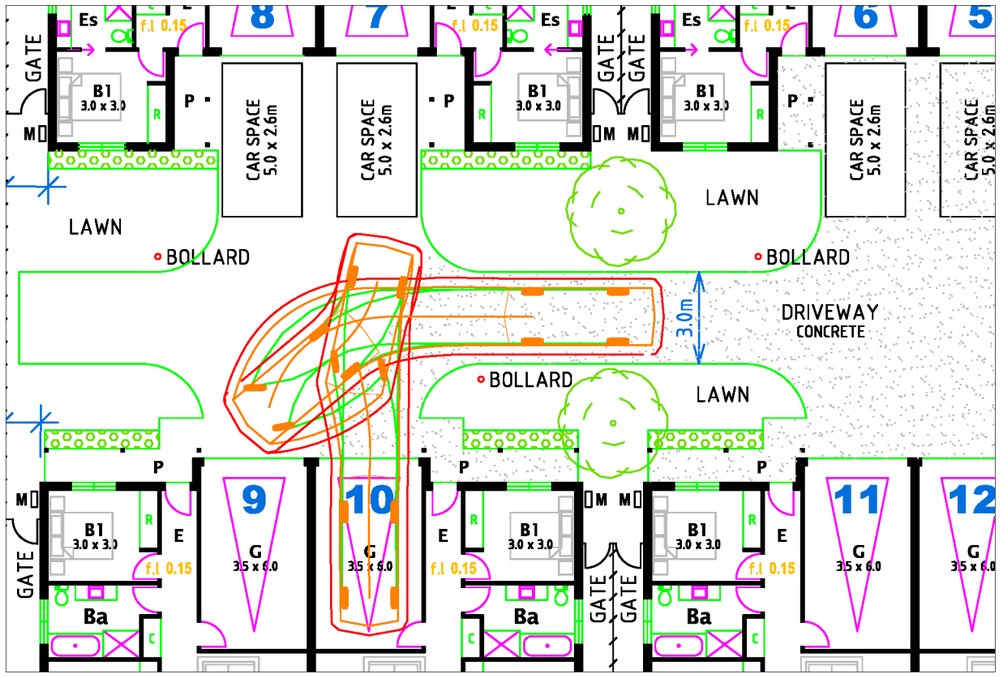
LEGEND

Vehicle Body

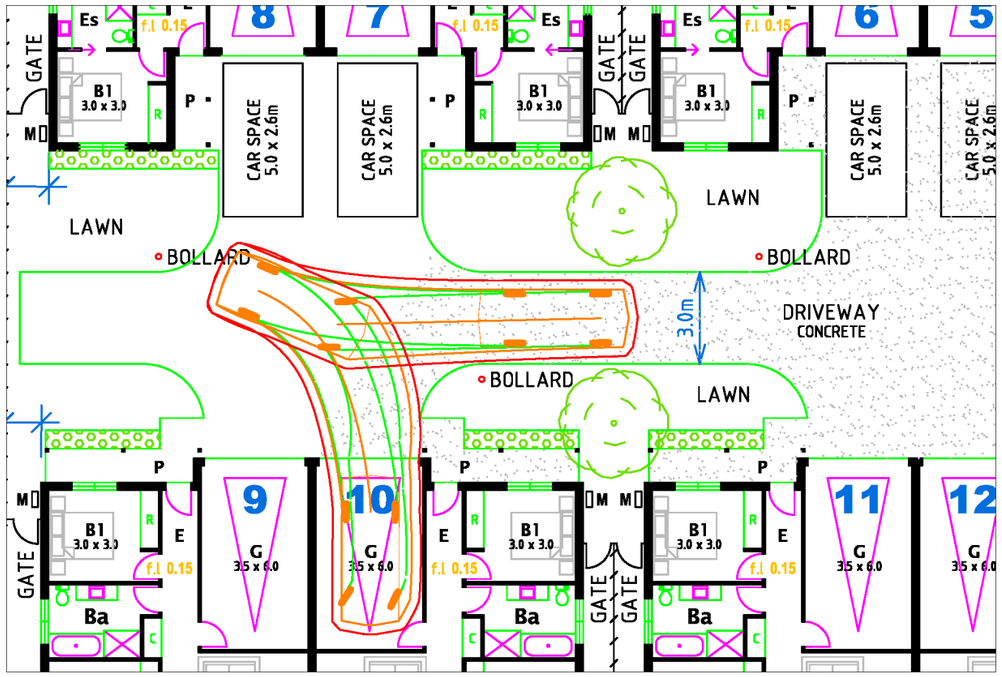
Wheel Tracks

Clearance Lines (300mm)

Entry



Exit



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ISSUE	DATE	DESCRIPTION
A	18/11/2024	ORIGINAL ISSUE FOR PLANNING APPLICATION

DESIGNED	[redacted]
CHECKED	[redacted]
DATE	18/11/2024
PROJECT REF	24-0391

Quantum Traffic [redacted]

GENERAL NOTES

1.
2.
3.
4.
5.

PROPOSED DEVELOPMENT
28 REDBANK ROAD, STRATFORD
SWEPT PATH DIAGRAMS

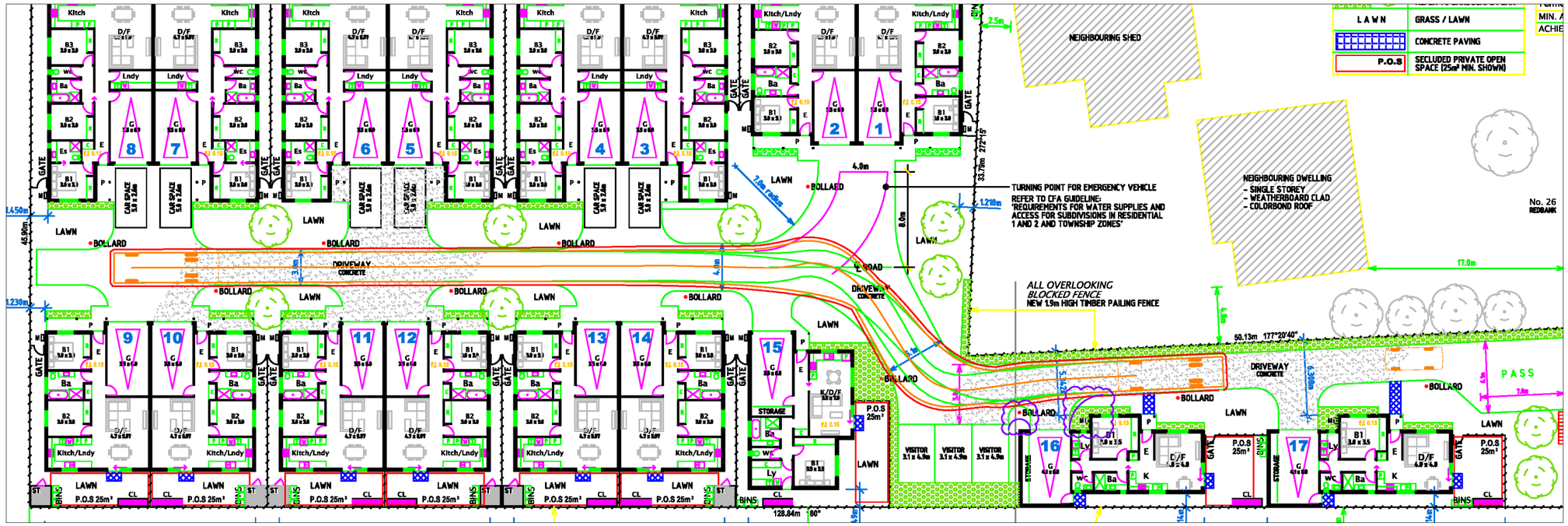
DRAWING NO.	ISSUE	SCALE
24-0391	A	1:200 @ A3

0 1 2 3 4

Appendix D

Swept Path Diagrams: Service Vehicles

Entry



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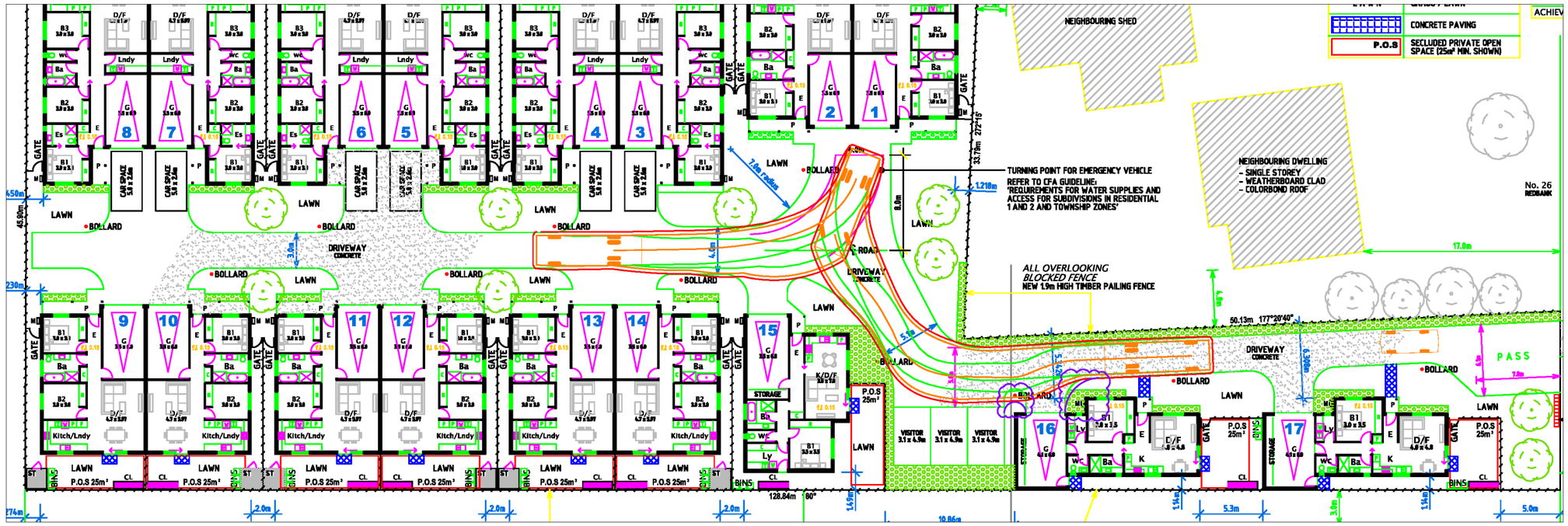
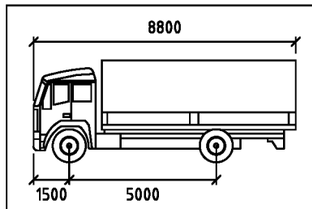


DESIGN VEHICLE USED IN SIMULATION



MRV (AS2890.2:2018)

Width	:	2500mm
Track	:	2500mm
Lock to Lock Time	:	6.0sec
Steering Angle	:	34.0degrees
Design Speed	:	5km/h

LEGEND

- Vehicle Body
- Wheel Tracks
- Clearance Lines (300mm)
- Mark-Up of Recommended Changes

ISSUE	DATE	DESCRIPTION
A	18/11/2024	ORIGINAL ISSUE FOR PLANNING APPLICATION

DESIGNED	[redacted]
CHECKED	[redacted]
DATE	18/11/2024
PROJECT REF	24-0391

Quantum Traffic [redacted]

GENERAL NOTES

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PROPOSED DEVELOPMENT
28 REDBANK ROAD, STRATFORD
SWEPT PATH DIAGRAMS

DRAWING NO.	ISSUE	SCALE
24-0391	A	1:200 @ A3

0 1 2 3 4