

# Traffix Group

## Memorandum of Opinion

Proposed Residential Development  
517 High Street Road, Mount Waverley

Prepared for  
Kamrun Nesa Hossain

July 2021

G30275A-01B

## Document Control

Our Reference: G30275A-01B

Issue No.	Type	Date	Prepared By	Approved By
A	Draft	21/07/2021	M. O'Shea / M. Huynh	M. Huynh
B	Final	22/07/2021	M. O'Shea / M. Huynh	M. Huynh

COPYRIGHT: The ideas and material contained in this document are the property of Traffix Group (Traffix Group Pty Ltd – ABN 32 100 481 570). Use or copying of this document in whole or in part without the written permission of Traffix Group constitutes an infringement of copyright.

LIMITATION: This report has been prepared on behalf of and for the exclusive use of Traffix Group's client and is subject to and issued in connection with the provisions of the agreement between Traffix Group and its client. Traffix Group accepts no liability or responsibility whatsoever for or in respect of any use of or reliance upon this report by any third party.

# Table of Contents

- 1. Instructions ..... 4
- 2. Review Documents ..... 4
- 3. Proposal..... 4
- 4. Subject Site ..... 5
- 5. Car Parking Design Consideration ..... 6
  - 5.1. Layout Review..... 6
    - 5.1.1. Design Standard 1 - Accessways ..... 6
    - 5.1.2. Design Standard 2 - Car Spaces ..... 7
    - 5.1.3. Design Standard 3 - Gradients..... 7
    - 5.1.4. Design Standard 6 – Safety & Pedestrian Access ..... 7
- 6. Conclusions..... 7

# List of Figures

- Figure 1: Locality Map (source: Melways) ..... 5

# List of Appendices

- Appendix A Development Plans
- Appendix B Swept Path Diagrams

## 1. Instructions

Traffix Group have been instructed to undertake a traffic engineering design review of the proposed residential development at 517 High Street Road, Mount Waverley.

The review undertaken by our office has included the following tasks:

- Design review of the car parking and vehicle access arrangements against the relevant design standards,
- Preparation of swept paths demonstrating suitable access to the on-site car parking areas (amended layout based on our recommendations), and
- Preparation of Memorandum of Opinion summarising our investigations and recommendations.

## 2. Review Documents

As part of our investigations, we have had considered of the following documents:

- Application Plans by Planning and Design Pty Ltd (dated 21 July, 2021)
- Notice of Refusal for Application No. TPA/51717 (dated 24<sup>th</sup> December, 2020).
- Department of Transport Referral Appeal Acknowledgement for Application TPA/51717 (dated 29<sup>th</sup> April, 2021).

## 3. Proposal

The proposal is for the construction of a three-storey residential development comprising four dwellings.

On-site car parking is proposed to accommodate 8 car spaces via a double garage to each dwelling. Car parking has been provided to accord with the minimum requirements set out under Clause 52.06-5 for 'dwellings' which is:

*2 car spaces to each three or more bedroom dwelling (with studies or studios that are separate rooms counted as a bedroom).*

No visitor car parking is provided in accordance with Clause 52.06-5.

Vehicle access to the site is provided via an existing shared crossover to High Street Road.

This review provides a concise summary of the plans (dated 21 July, 2021) from a design and access perspective.

### 4. Subject Site

The subject site is located on the east side of High Street Road, Mount Waverley. A locality plan is presented at Figure 1.

The subject site is currently occupied by single storey dwelling. Car parking for the existing building is provided via at-grade hard stand areas.

Vehicle access to the site is provided via a shared crossover (with No. 515 High Street Road) to High Street Road.

The subject site is located within a General Residential Zone – Schedule 3 (CDZ3) under the Planning Scheme.

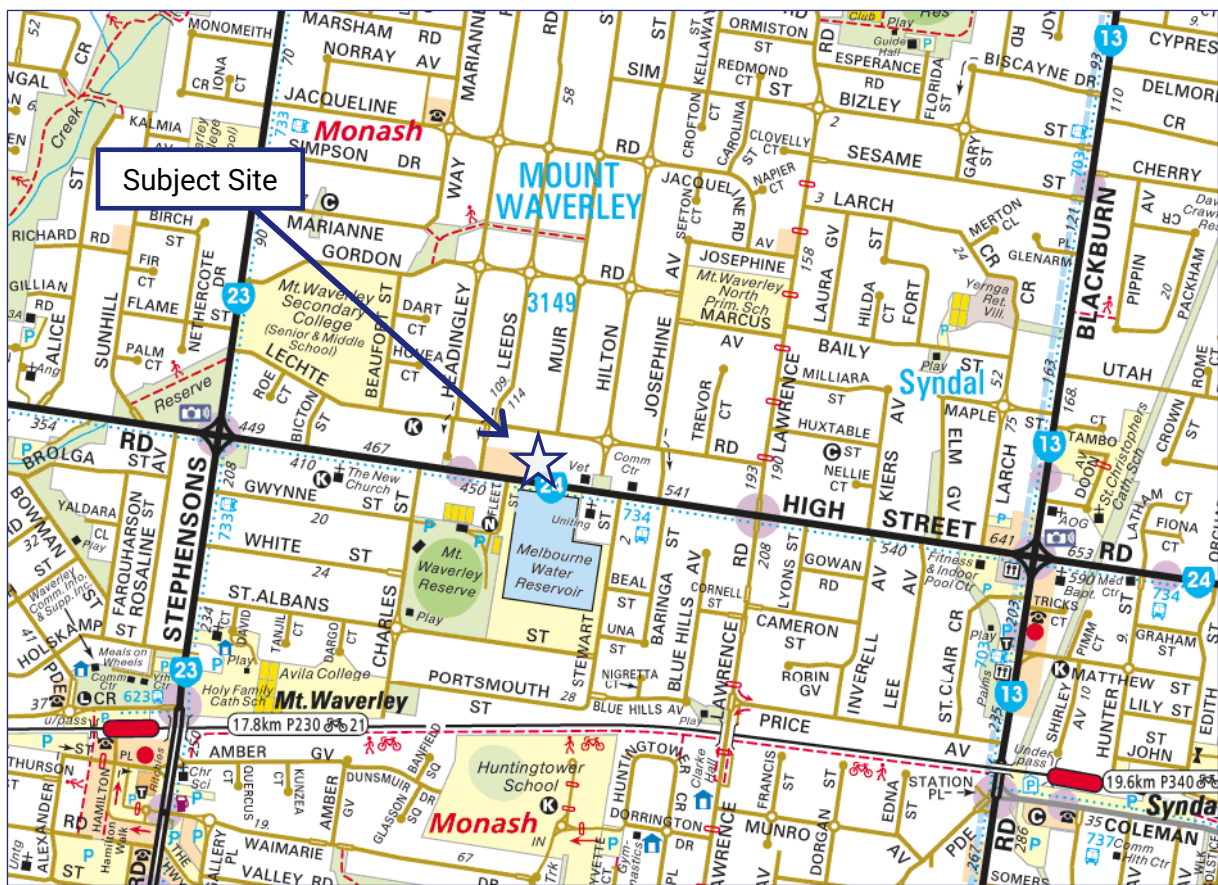


Figure 1: Locality Map (source: Melways)

## 5. Car Parking Design Consideration

### 5.1. Layout Review

The proposed car parking layout and access arrangements have been assessed under the following guidelines:

- Clause 55.03-9 (Access objectives) and Clause 55.03-10 (Parking location objectives) of the Planning Scheme,
- Clause 52.06-9 (Design standards for car parking) of the Planning Scheme, and
- AS2890.1-2004 – Part 1: Off-Street car parking, where relevant.

Our assessment are based on the plans prepared by Planning & Design Pty Ltd (dated 21 July, 2021). A copy of these plans is attached at Appendix A.

The key elements of the car parking and access layout are outlined below.

#### 5.1.1. Design Standard 1 - Accessways

- The proposal includes the use of a 3.0m wide accessway and existing crossover in accordance with Clause 52.06-9 (Design Standard 1) and AS2890.1-2004 for a single-lane, two-way accessway. Based on the low number of traffic movements a single lane driveway is acceptable.

Localised widening to 5.15-5.50m is provided adjacent to garages. We are satisfied that this will facilitate two-way passing at low speeds. Although the site takes access to a road in Road Zone Category 1, only 8 car spaces are provided which does not trigger the requirement for a two-way passing area at the property boundary.

Nevertheless, swept path diagrams have been provided to demonstrate an internal prop-and-pass arrangement between B99 design vehicles in the case that there are two vehicles travelling in opposite directions. The swept paths are attached at Appendix B.

- All cars can enter or exit the site in a forwards direction in accordance with Clause 52.06-9.
- Standard B14 of Clause 55.03-9 requires that the width of accessways or car spaces should not exceed 40% if the width of the street frontage is less than 20 metres. The 3m wide crossover will not exceed this requirement.
- Standard B15 of Clause 55.03-10 requires that shared accessways or carparks of other dwellings and residential buildings should be located at least 1.5m from the windows of habitable rooms. This requirement is met on the plans.
- Car parking for residents is attached to each dwelling, with two secure garaged spaces available for each dwelling.
- A full pedestrian sight triangle is provided on the eastern side of the existing accessway in accordance with Clause 52.06-9.
- The pedestrian sight triangle on the western side of the existing accessway is located within the adjacent site (No. 515 High Street Road) however we are satisfied with this

arrangement given that no fence is provided within the first approx. 9m from the site's boundary to Beverley Street. If a fence is to be provided in the future, it must be no higher than 900mm within at least the first 2.5m from the site's boundary to Beverley Street.

### 5.1.2. Design Standard 2 - Car Spaces

- A minimum headroom clearance of 2.2m is provided to the garages and along the access aisle in accordance with the requirements of Clause 52.06-9.
- Garages accord with the requirements of Clause 52.06-9, specifically double garages are at least 5.8m wide x 6.0m long.
- The garage openings and associated manoeuvring areas have been specifically designed to accommodate suitable access by the B85 design vehicle presented at AS2890.1-2004.

Whilst car spaces will require an additional manoeuvre to access, this is expressly permitted by AS2890.1-2004 for long-term, resident parking.

A copy of swept paths that demonstrate entry and exit movements from the car spaces of each garage is attached at Appendix B.

### 5.1.3. Design Standard 3 - Gradients

- A maximum change in grade of 1:20 (5%) is provided immediately at the entry to each garage in accordance with Clause 52.06-9.
- Suitable gradients for drainage (i.e. 1 in 200) will be provided within the flat car parking areas for drainage purposes.

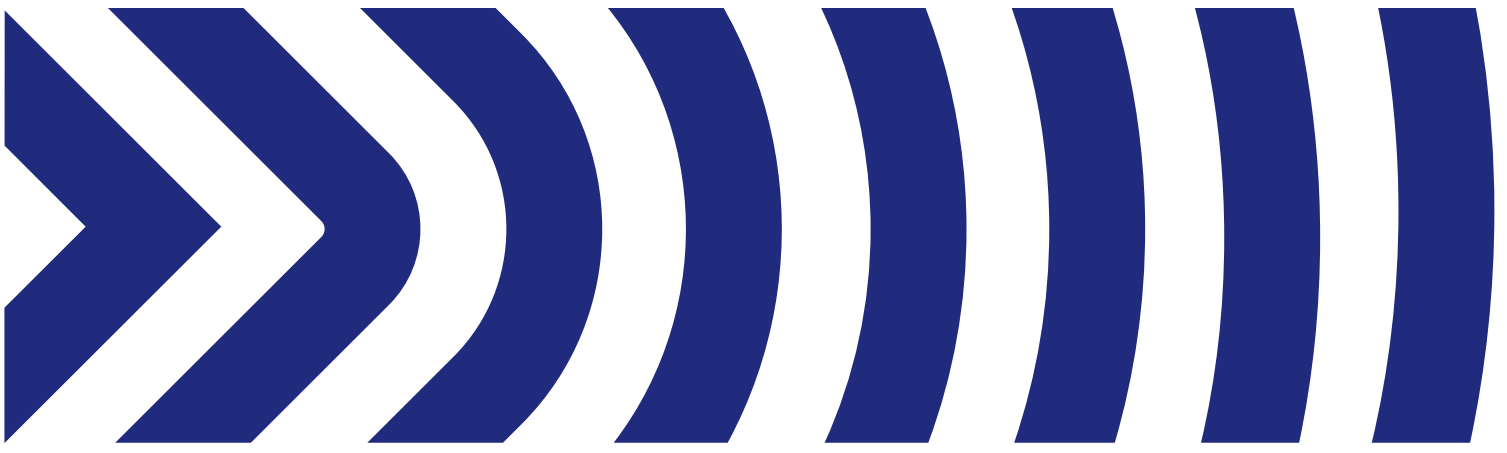
### 5.1.4. Design Standard 6 – Safety & Pedestrian Access

- Primary pedestrian access from High Street Road is provided via independent internal pedestrian footpath which is provided along the site's eastern boundary.
- The shared use of the ramp between pedestrians and vehicles is acceptable given the low frequency of vehicle movements along the driveway.

## 6. Conclusions

Having undertaken a detailed traffic engineering assessment of the proposed residential development at 517 High Street Road, Mount Waverley, we are of the opinion that:

- a) the provision of car parking will accord with the relevant requirements under Clause 52.06-5 of the Monash Planning Scheme,
- b) the proposed parking layout and vehicle access arrangements accord with the requirements of the Planning Scheme, Australian Standards (where relevant) and current practice,
- c) there are no traffic engineering reasons why a planning permit for the proposed residential development at 517 High Street Road, Mount Waverley should be refused, subject to appropriate conditions.



# Appendix A

## Development Plans



# AREA SCHEDULE:

**UNIT 1**

GROUND FLOOR AREA:	31.7 m <sup>2</sup>
FIRST FLOOR AREA:	75.9 m <sup>2</sup>
SECOND FLOOR AREA:	51.4 m <sup>2</sup>
GARAGE:	41.4 m <sup>2</sup>
PORCH:	2.1 m <sup>2</sup>
BALCONY:	11.0 m <sup>2</sup>
<b>TOTAL AREA:</b>	<b>23.0 SQ 213.5 m<sup>2</sup></b>
POS:	88.4 m <sup>2</sup>
SPOS (BALCONY):	10.2 m <sup>2</sup>

**UNIT 2**

GROUND FLOOR AREA:	21.1 m <sup>2</sup>
FIRST FLOOR AREA:	71.8 m <sup>2</sup>
SECOND FLOOR AREA:	52.8 m <sup>2</sup>
GARAGE:	43.6 m <sup>2</sup>
BALCONY:	10.0 m <sup>2</sup>
<b>TOTAL AREA:</b>	<b>21.5 SQ 199.3 m<sup>2</sup></b>
SPOS:	10.0 m <sup>2</sup>

**UNIT 3**

GROUND FLOOR AREA:	21.1 m <sup>2</sup>
FIRST FLOOR AREA:	71.8 m <sup>2</sup>
SECOND FLOOR AREA:	52.8 m <sup>2</sup>
GARAGE:	43.6 m <sup>2</sup>
BALCONY:	10.0 m <sup>2</sup>
<b>TOTAL AREA:</b>	<b>21.5 SQ 199.3 m<sup>2</sup></b>
SPOS:	10.0 m <sup>2</sup>

**UNIT 4**

GROUND FLOOR AREA:	79.7 m <sup>2</sup>
FIRST FLOOR AREA:	77.4 m <sup>2</sup>
GARAGE:	37.5 m <sup>2</sup>
BALCONY:	8.3 m <sup>2</sup>
<b>TOTAL AREA:</b>	<b>19.0 SQ 176.7 m<sup>2</sup></b>
POS:	84.5 m <sup>2</sup>
SPOS:	99.6 m <sup>2</sup>

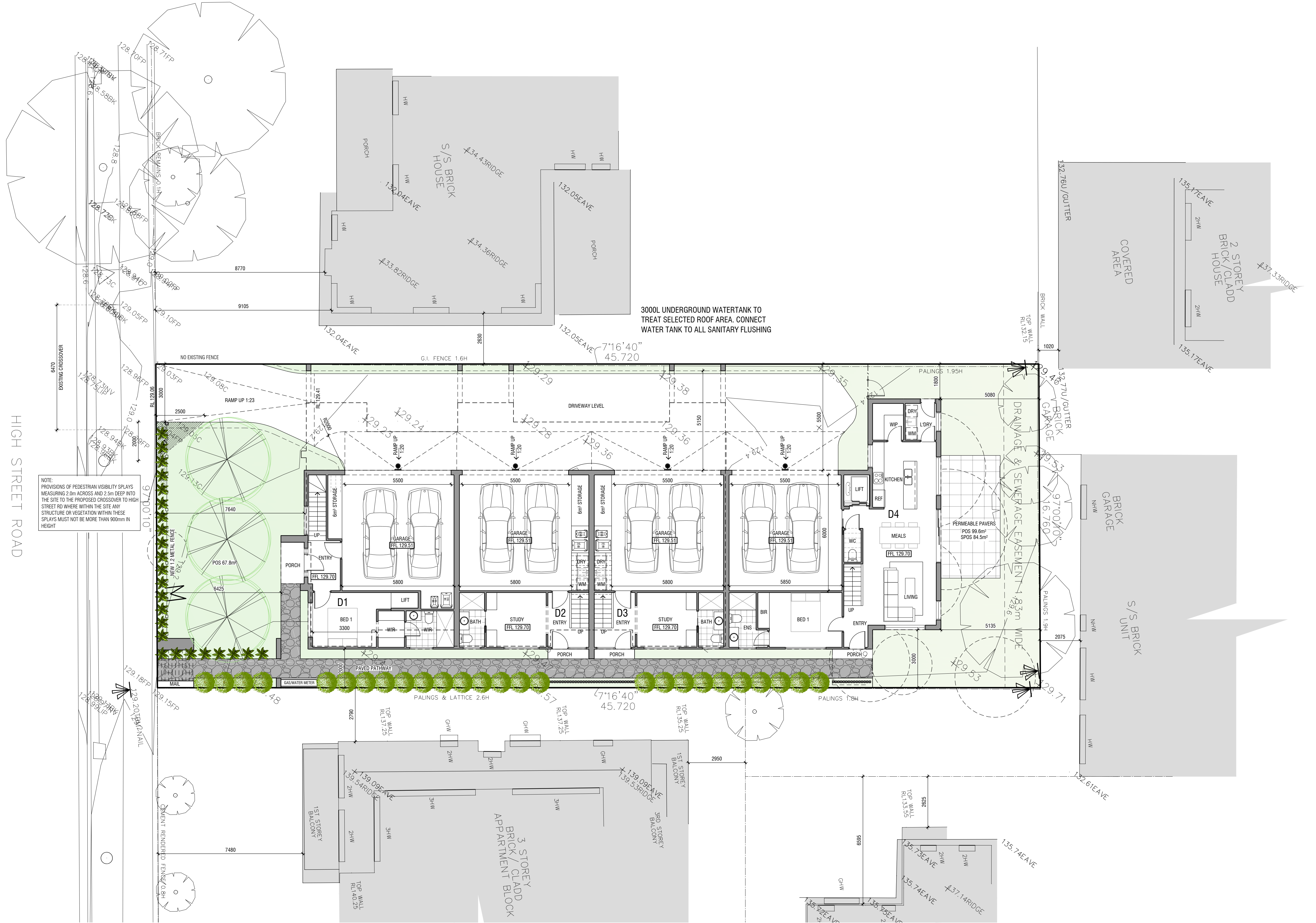
**SITE**

SITE AREA:	766.3 m <sup>2</sup>
SITE COVERAGE:	49.2% 377.2 m <sup>2</sup>
SITE PERMEABILITY:	37.6% 287.8 m <sup>2</sup>
GARDEN AREA:	35.0% 268.5 m <sup>2</sup>
VEGETATED AREA:	29.7% 227.9 m <sup>2</sup>

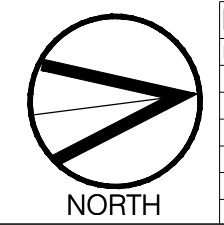
- A/C AIR CONDITIONING UNIT
- SL SKYLIGHT

HIGH STREET ROAD

NOTE:  
PROVISIONS OF PEDESTRIAN VISIBILITY SPLAYS  
MEASURING 2.0m ACROSS AND 2.5m DEEP INTO  
THE SITE TO THE PROPOSED CROSSOVER TO HIGH  
STREET RD WHERE WITHIN THE SITE ANY  
STRUCTURE OR VEGETATION WITHIN THESE  
SPLAYS MUST NOT BE MORE THAN 900mm IN  
HEIGHT



3000L UNDERGROUND WATERTANK TO TREAT SELECTED ROOF AREA. CONNECT WATER TANK TO ALL SANITARY FLUSHING



Revisions

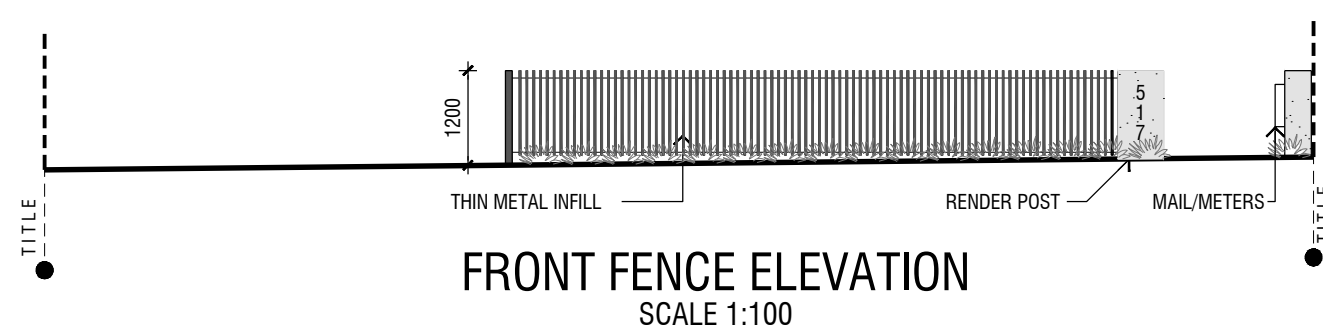
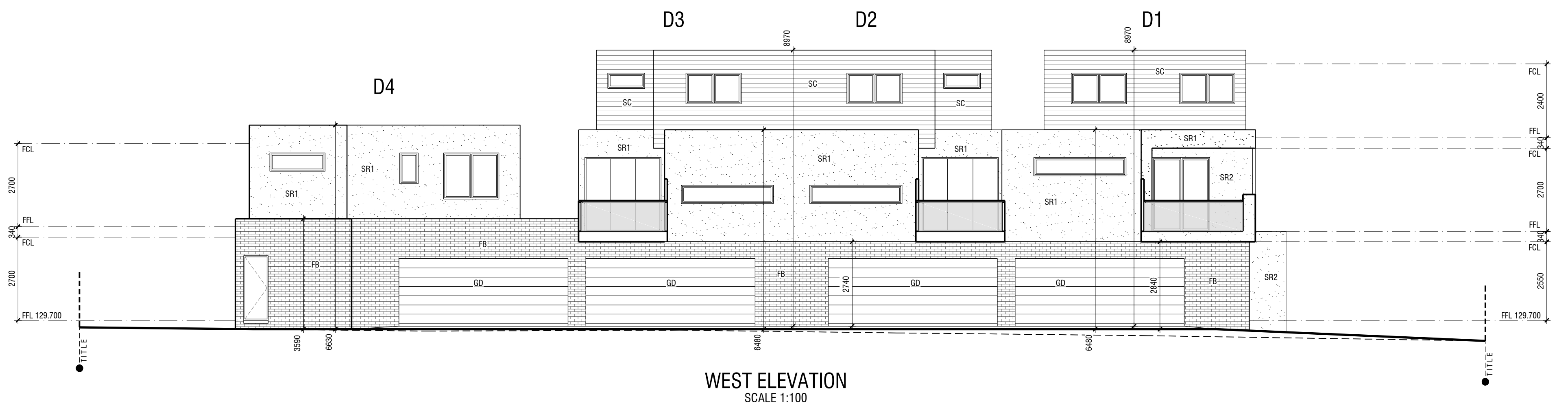
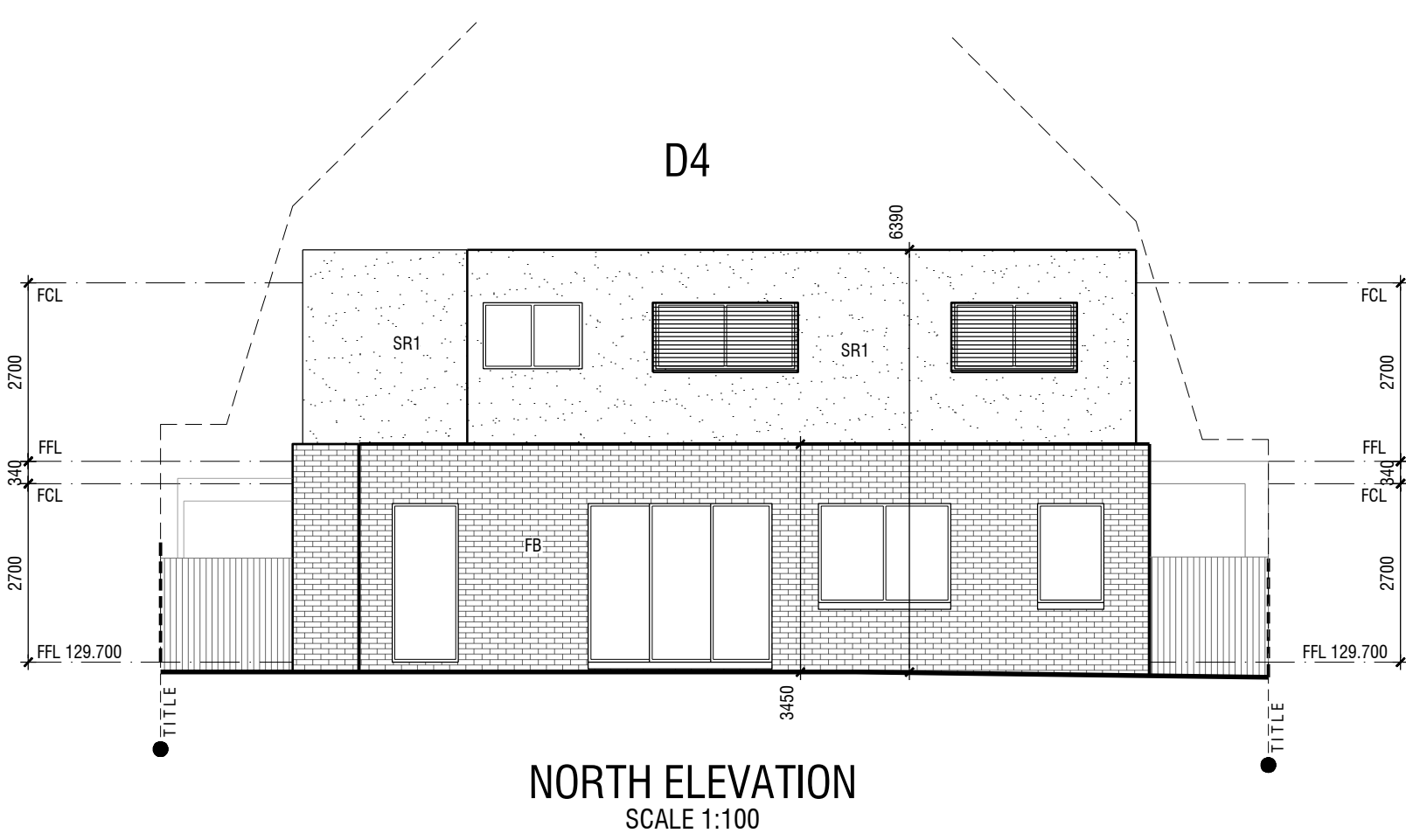
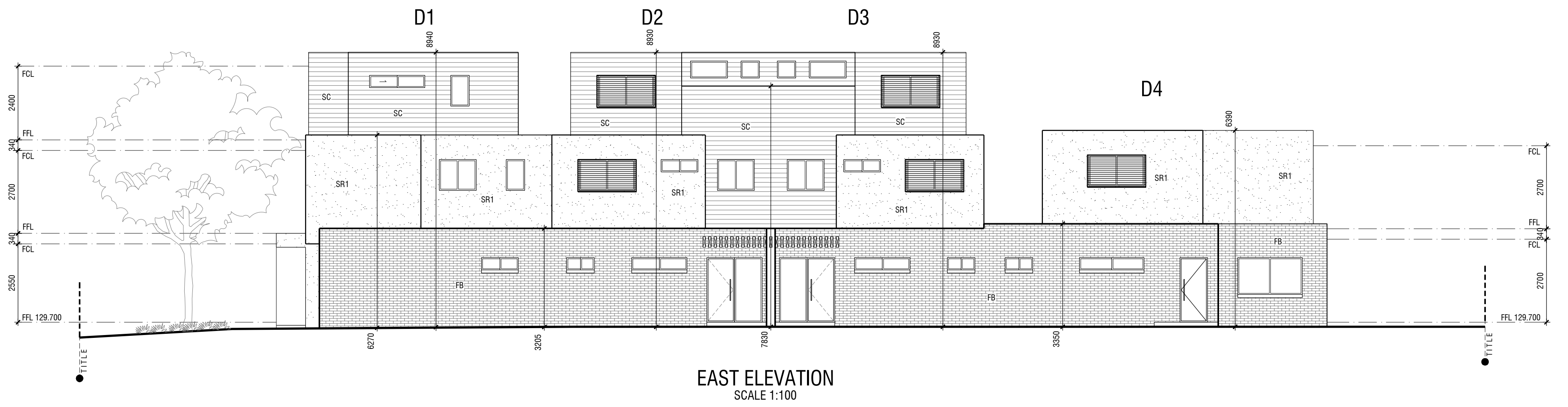
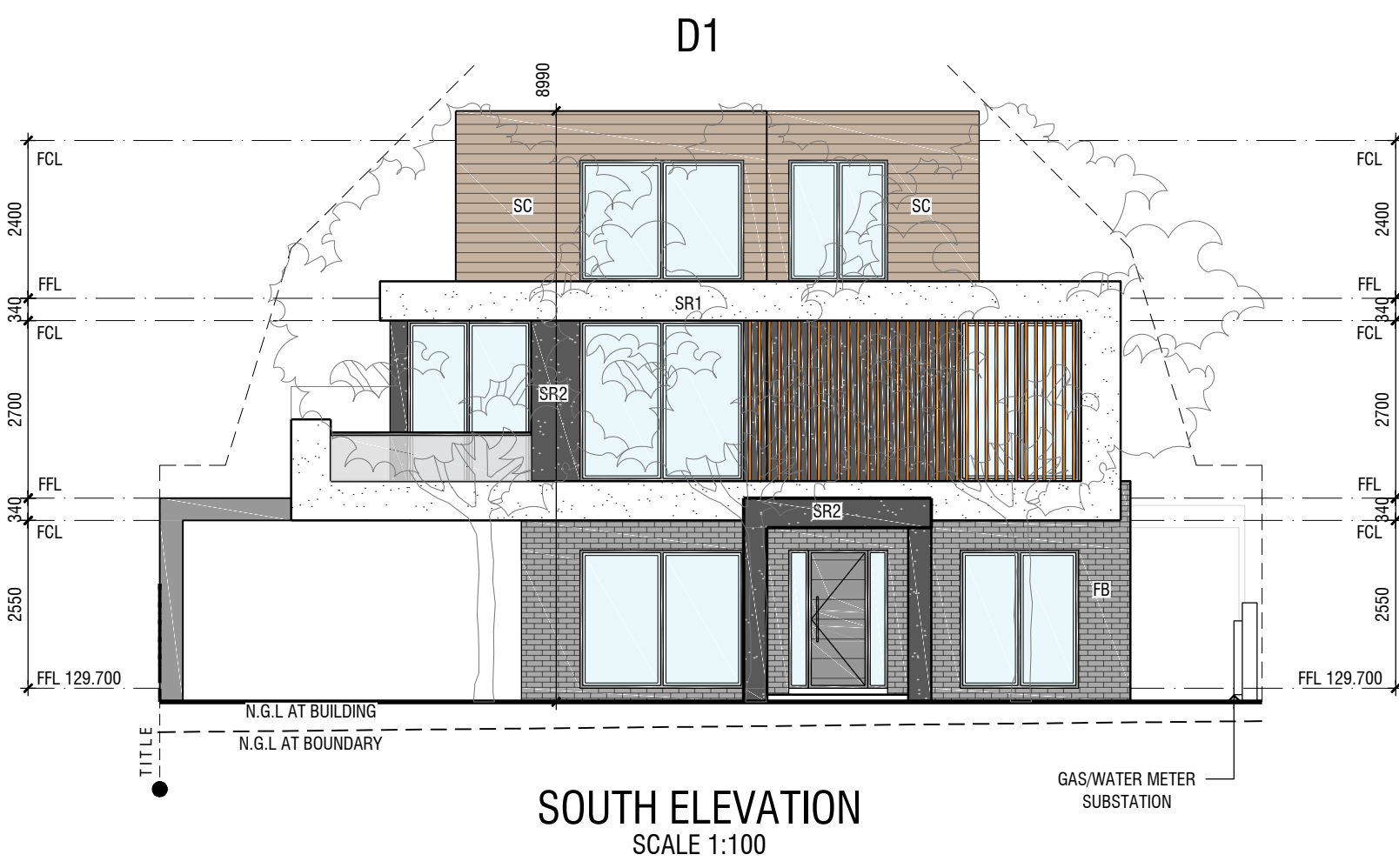
Rev. #	15.06.2020	ISSUE FOR TP SUBMISSION

PLANNING & DESIGN PL  
31 Enfield Av Preston 3072 T:9018 1529  
E: admin@planninganddesign.com.au

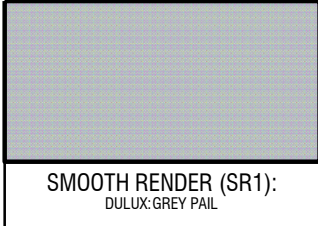




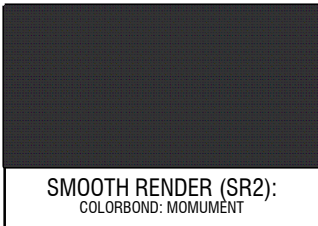
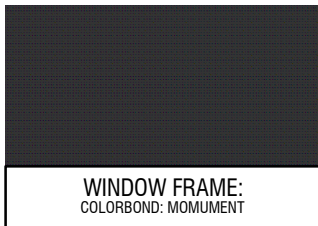
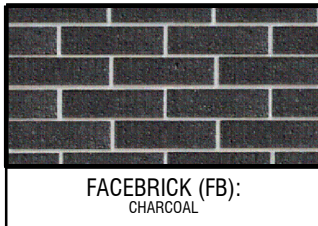
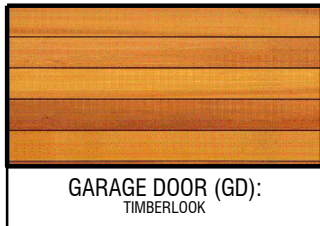

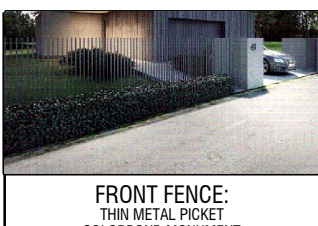



DATE	SCALE	DRWN	CHK	PROJECT NO.
APRIL 2020	1:100@A1	CL	CM	6496
GROUND FLOOR PLAN				
UNIT DEVELOPMENT 517 HIGH STREET ROAD, MOUNT WAVERLEY				
TP01				REV. A





**MATERIAL/COLOUR SCHEDULE:**

 SMOOTH RENDER (SR1): DULUX GREY FAL	 STRIA CLADDING (SC): TIMBER LOOK	 COLORBOND ROOF (CB): COLORBOND MONUMENT	 TIMBER PERGOLA: POLISHED HARDWOOD	 CONCRETE DRIVEWAY: EXPRESSED AGGREGATE GREY
 SMOOTH RENDER (SR2): COLORBOND MONUMENT	 WINDOW FRAME: COLORBOND MONUMENT	 FACEBRICK (FB): CHARCOAL	 GARAGE DOOR (GD): TIMBERLOOK	 GLASS BALCONY (GB): OBSCURED GLASS BLACK FRAME
 FRONT FENCE: THIN METAL PICKET COLORBOND MONUMENT	 PAVED PATHWAY: IRREGULAR STEP-STONES	<b>GLAZING NOTE:</b> DOUBLE GLAZING (DG) TO ALL HABITABLE ROOM WINDOWS		

<b>Revisions</b> Rev A 15.06.2020 ISSUE FOR TP SUBMISSION	<b>PLANNING &amp; DESIGN P/L</b> 31 Enfield Av Preston 3072 T-9018 1529 E: admin@planninganddesign.com.au	<b>PLANNING &amp; DESIGN</b>	DATE: APRIL 2020 SCALE: 1:100@A1 DRAWN: CL CHK: CM PROJECT No: 6496
UNIT DEVELOPMENT 517 HIGH STREET ROAD, MOUNT WAVERLEY			<b>TP04</b> REV_A

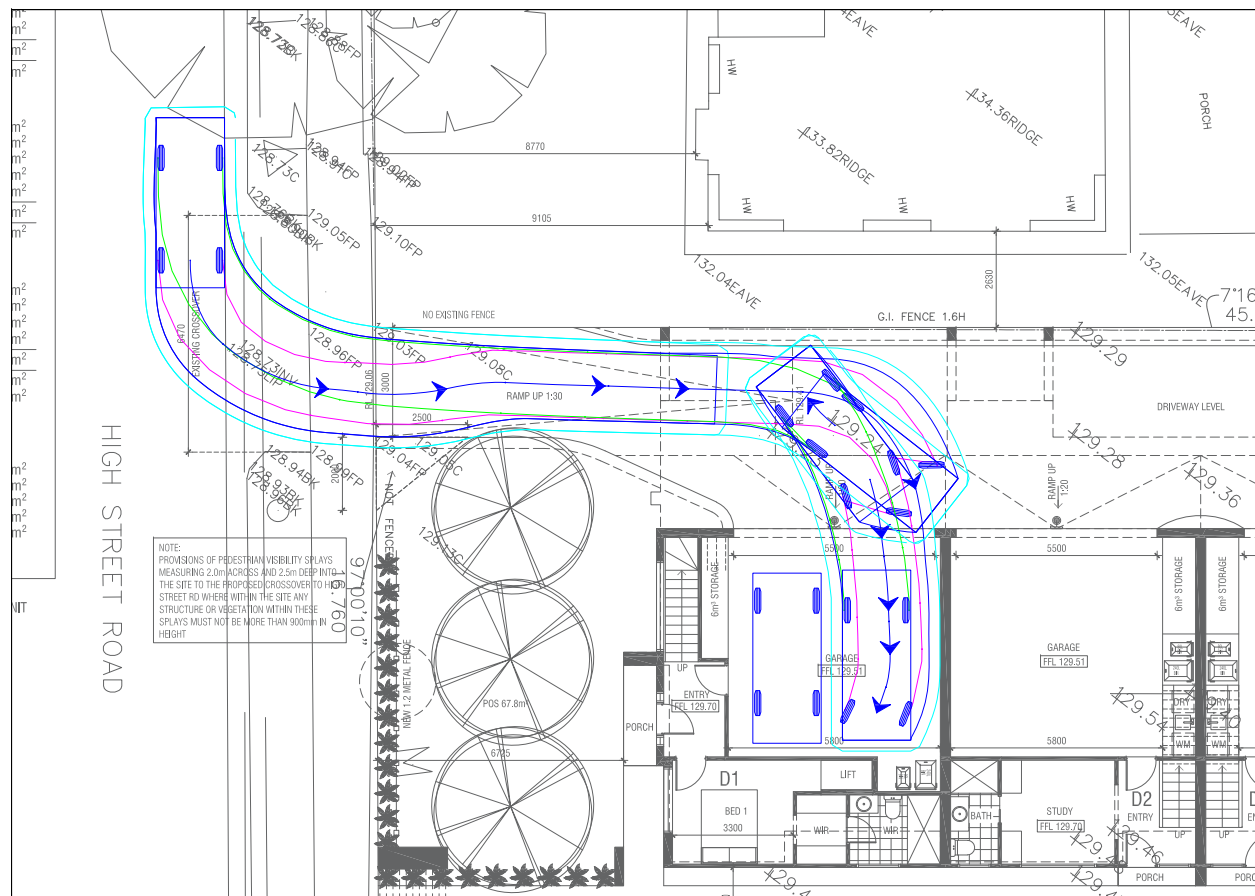


# Appendix B

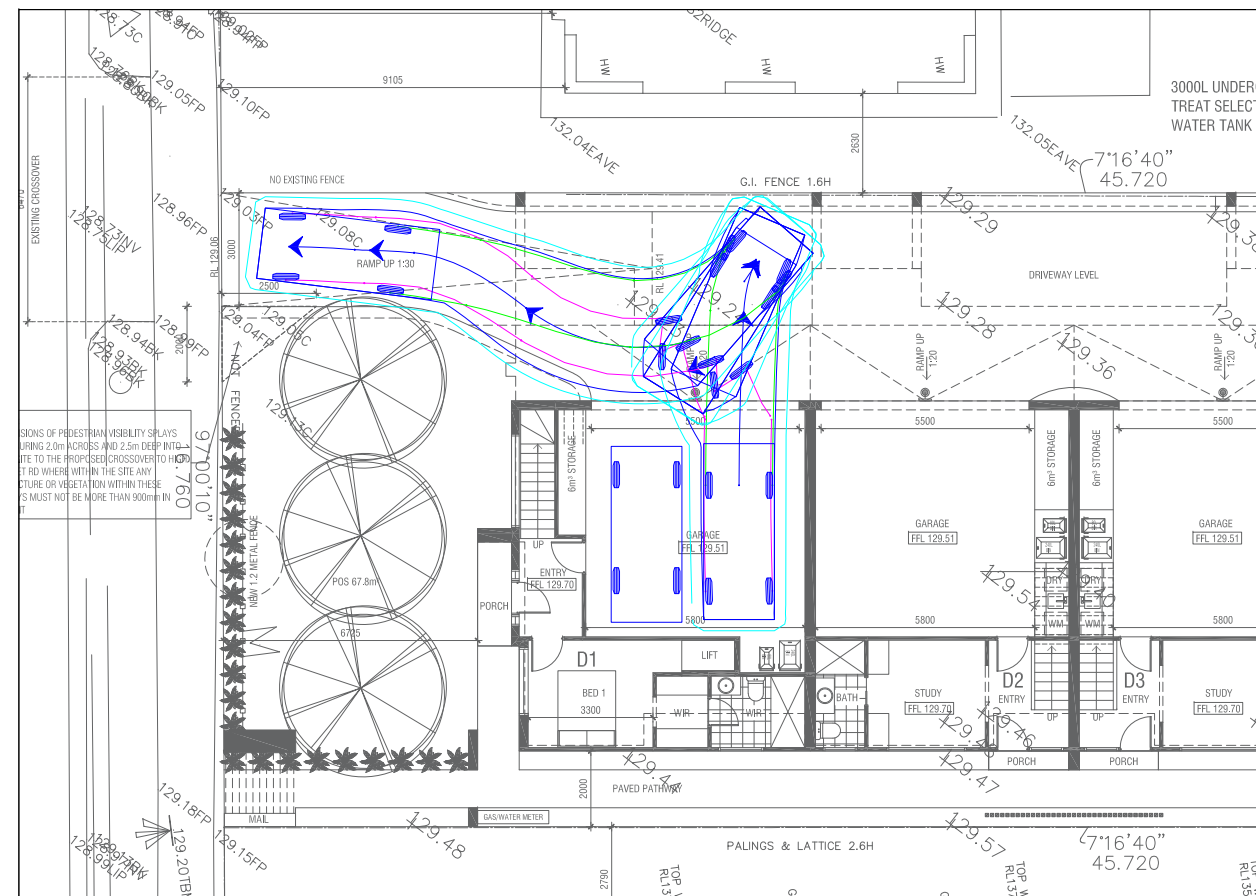
## Swept Path Diagrams



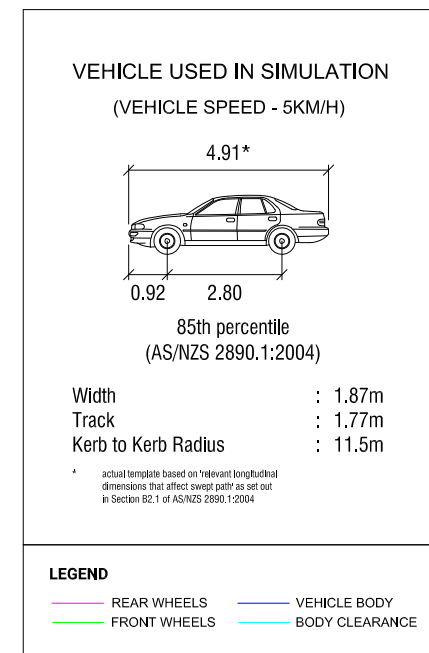
DWELLING 1 GARAGE - CAR SPACE 1 - INGRESS



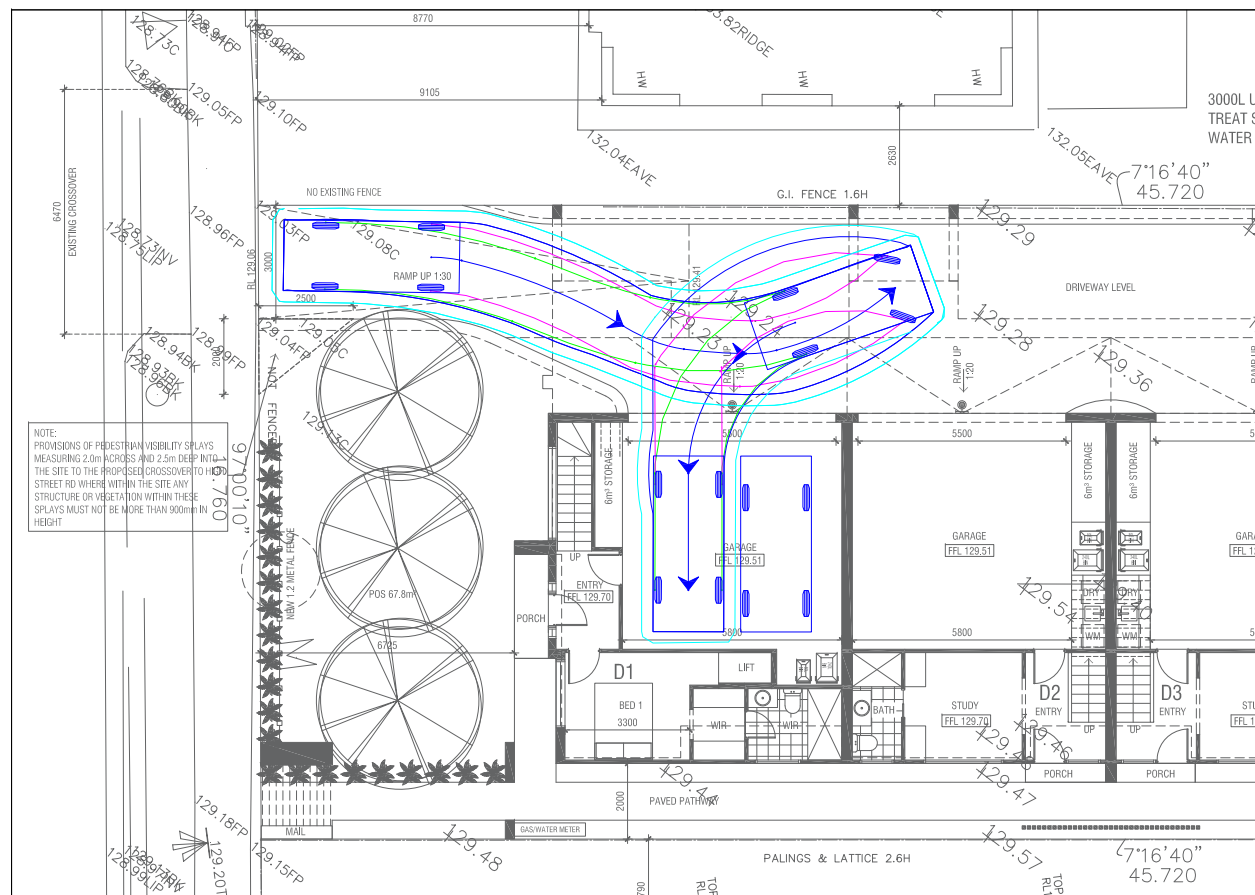
DWELLING 1 GARAGE - CAR SPACE 1 - EGRESS



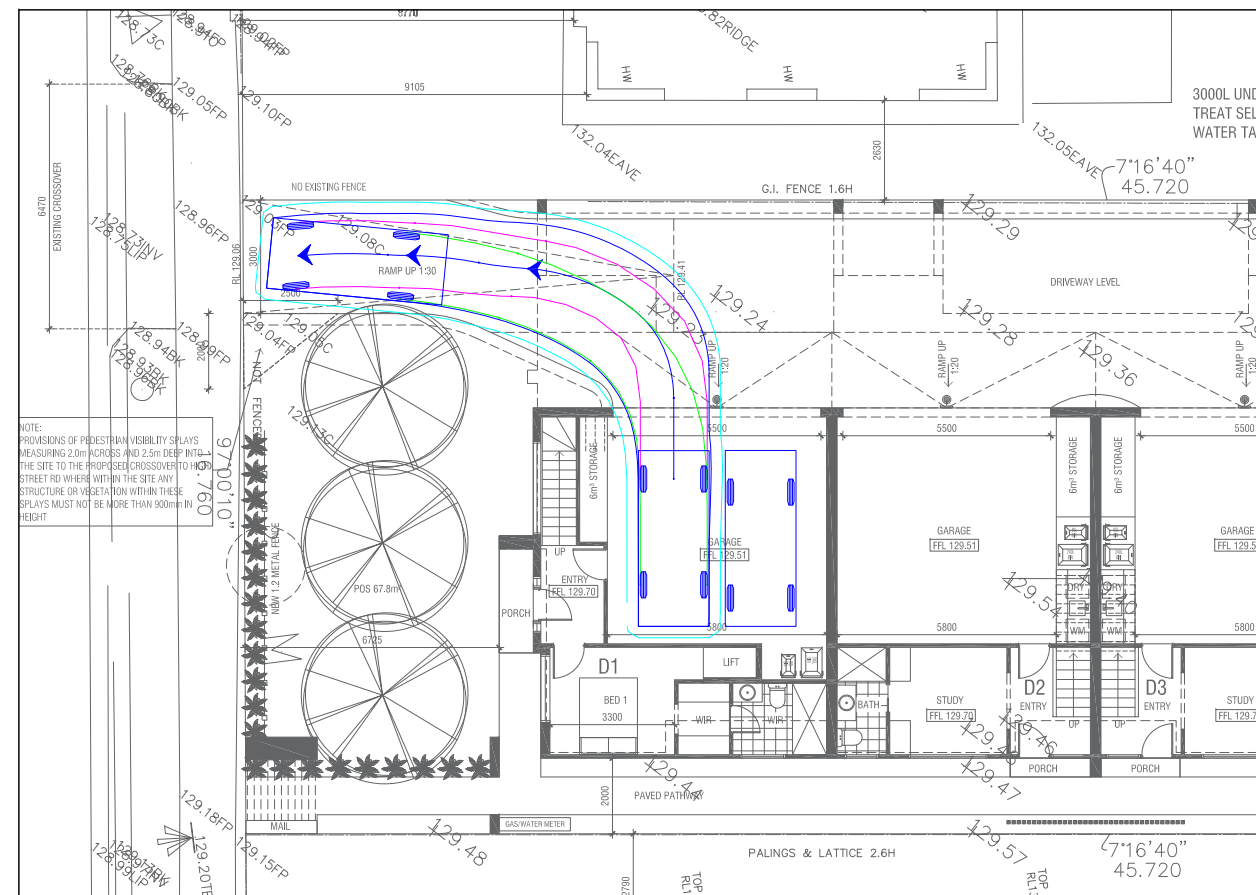
VEHICLE PROFILE



DWELLING 1 GARAGE - CAR SPACE 2 - INGRESS



DWELLING 1 GARAGE - CAR SPACE 2 - EGRESS



REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	22/07/2021	TOWN PLANNING	M. HUYNH	M. O'SHEA

**517 HIGH STREET ROAD, MOUNT WAVERLEY**  
PROPOSED RESIDENTIAL DEVELOPMENT

GENERAL NOTES:  
INFORMATION BASED ON "517 HIGH ST RD  
MOUNT WAVERLEY - CLEAN.dwg"

FILE NAME: G30275-01  
SHEET NO.: 01

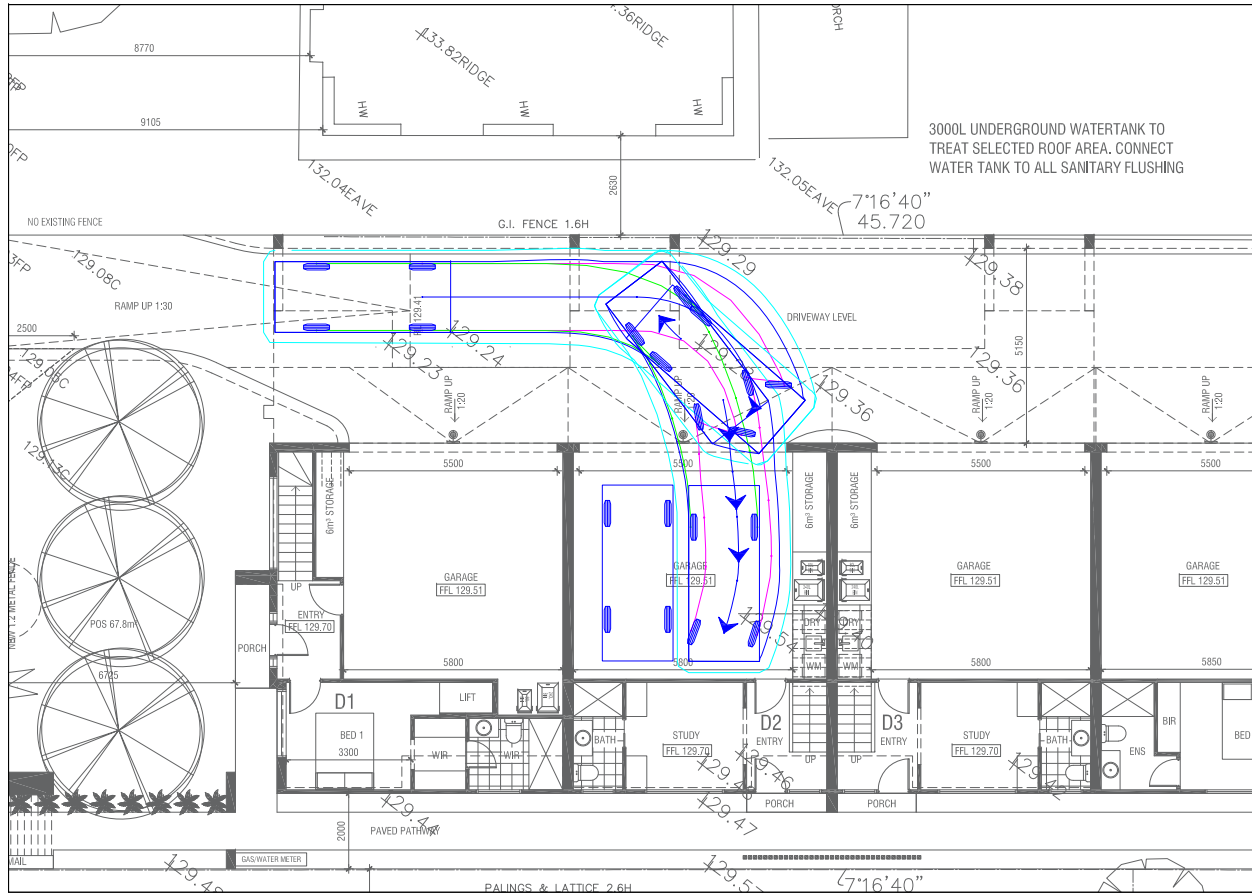


SCALE: 1:200 (A3)

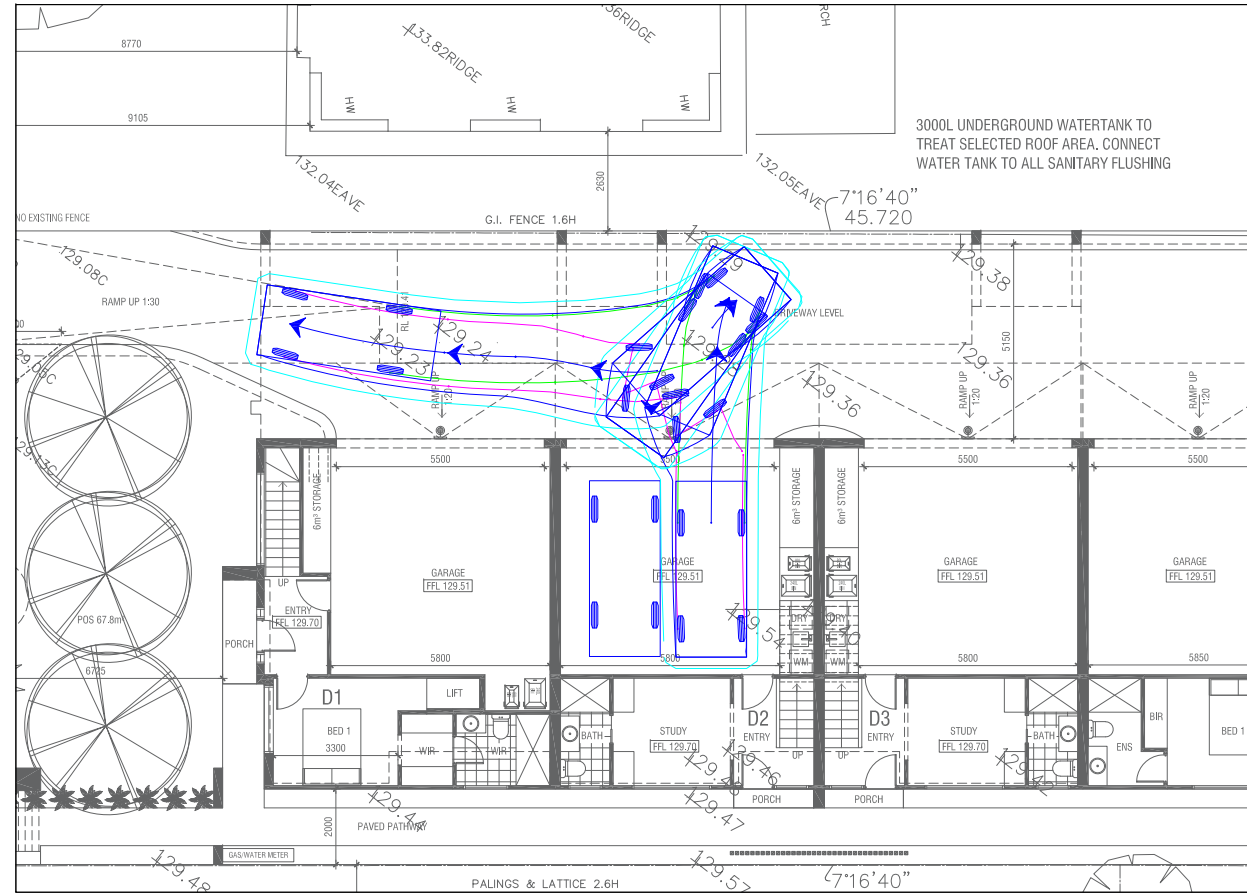
COPYRIGHT: The ideas and material contained in this document are the property of Traffix Group (Traffix Group Pty Ltd - ABN 32 100 481 570). Use or copying of this document in whole or in part without the written permission of Traffix Group constitutes an infringement of copyright.

**Traffix Group**  
Level 28, 459 Collins St, MELBOURNE VIC 3000  
T: (03) 9822 2888  
www.traffixgroup.com.au

DWELLING 2 GARAGE - CAR SPACE 1 - INGRESS

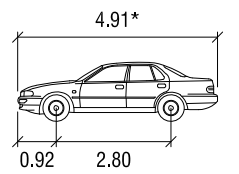


DWELLING 2 GARAGE - CAR SPACE 1 - EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION  
(VEHICLE SPEED - 5KM/H)



85th percentile  
(AS/NZS 2890.1:2004)

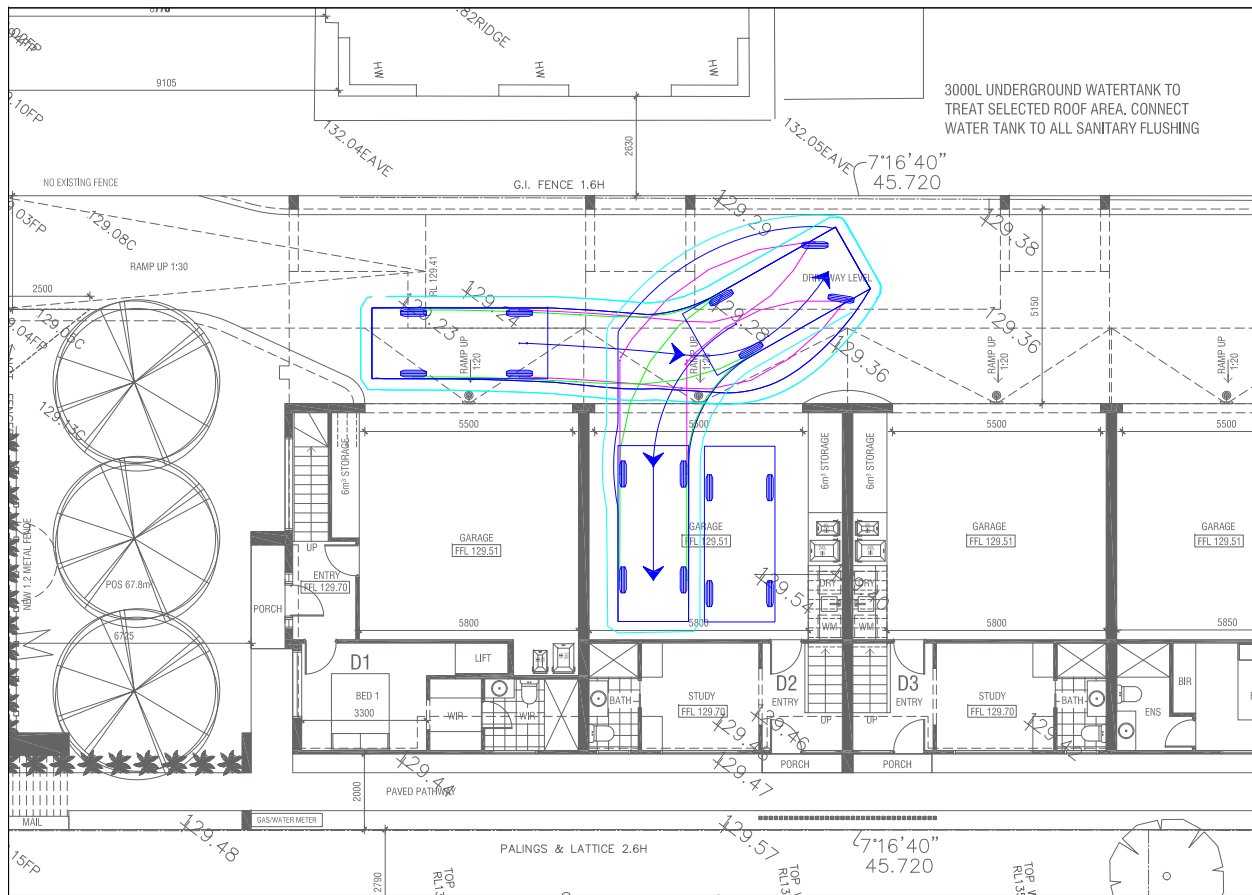
Width : 1.87m  
Track : 1.77m  
Kerb to Kerb Radius : 11.5m

\* actual template based on relevant longitudinal dimensions that affect swept path as set out in Section B2.1 of AS/NZS 2890.1:2004

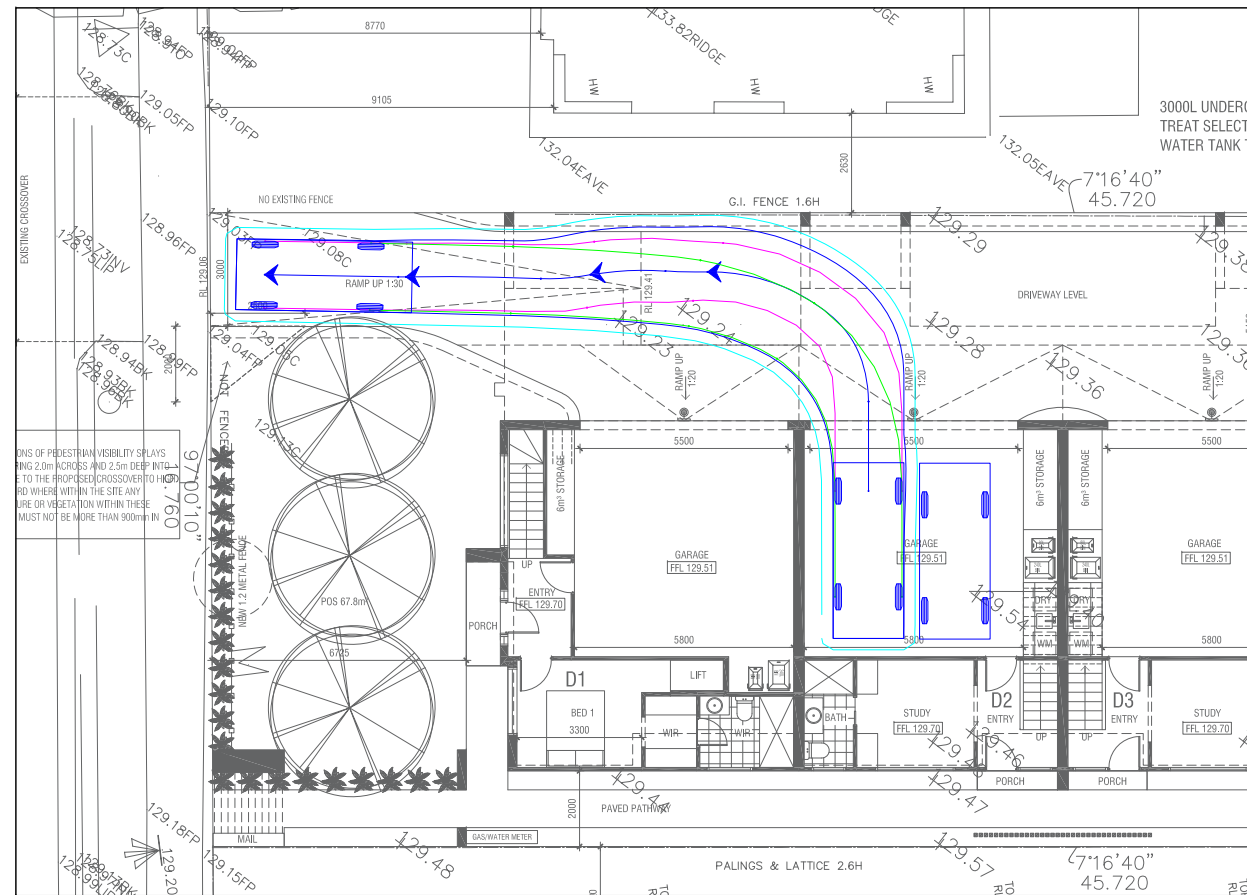
**LEGEND**

<span style="color: magenta;">—</span> REAR WHEELS	<span style="color: blue;">—</span> VEHICLE BODY
<span style="color: green;">—</span> FRONT WHEELS	<span style="color: cyan;">—</span> BODY CLEARANCE

DWELLING 2 GARAGE - CAR SPACE 2 - INGRESS



DWELLING 2 GARAGE - CAR SPACE 2 - EGRESS



REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	22/07/2021	TOWN PLANNING	M. HUYNH	M. O'SHEA

**517 HIGH STREET ROAD, MOUNT WAVERLEY**  
PROPOSED RESIDENTIAL DEVELOPMENT

**GENERAL NOTES:**  
INFORMATION BASED ON "517 HIGH ST RD MOUNT WAVERLEY - CLEAN.dwg"

**FILE NAME:** G30275-01  
**SHEET NO.:** 02



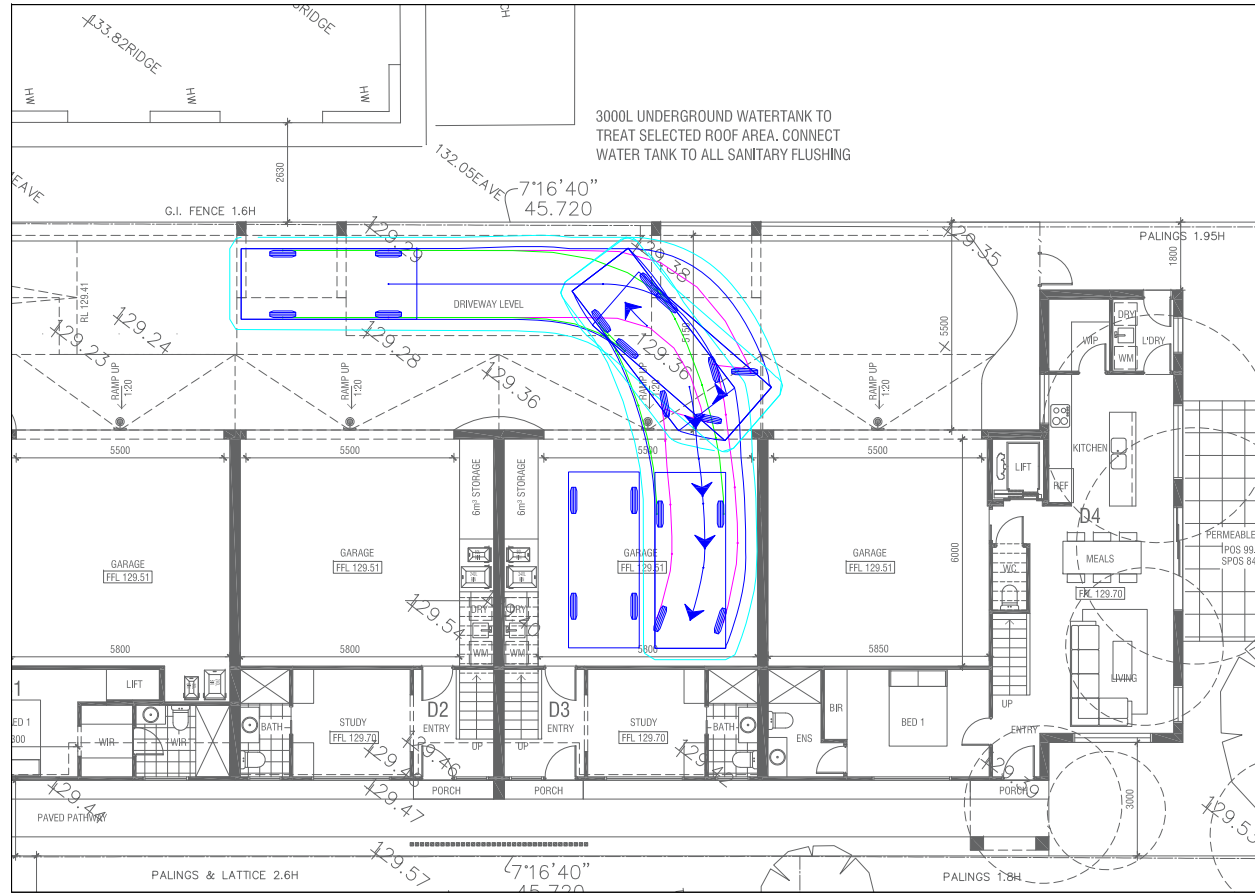
**SCALE:** 1:200 (A3)

COPYRIGHT: The ideas and material contained in this document are the property of Traffix Group (Traffix Group Pty Ltd - ABN 32 100 481 570). Use or copying of this document in whole or in part without the written permission of Traffix Group constitutes an infringement of copyright.

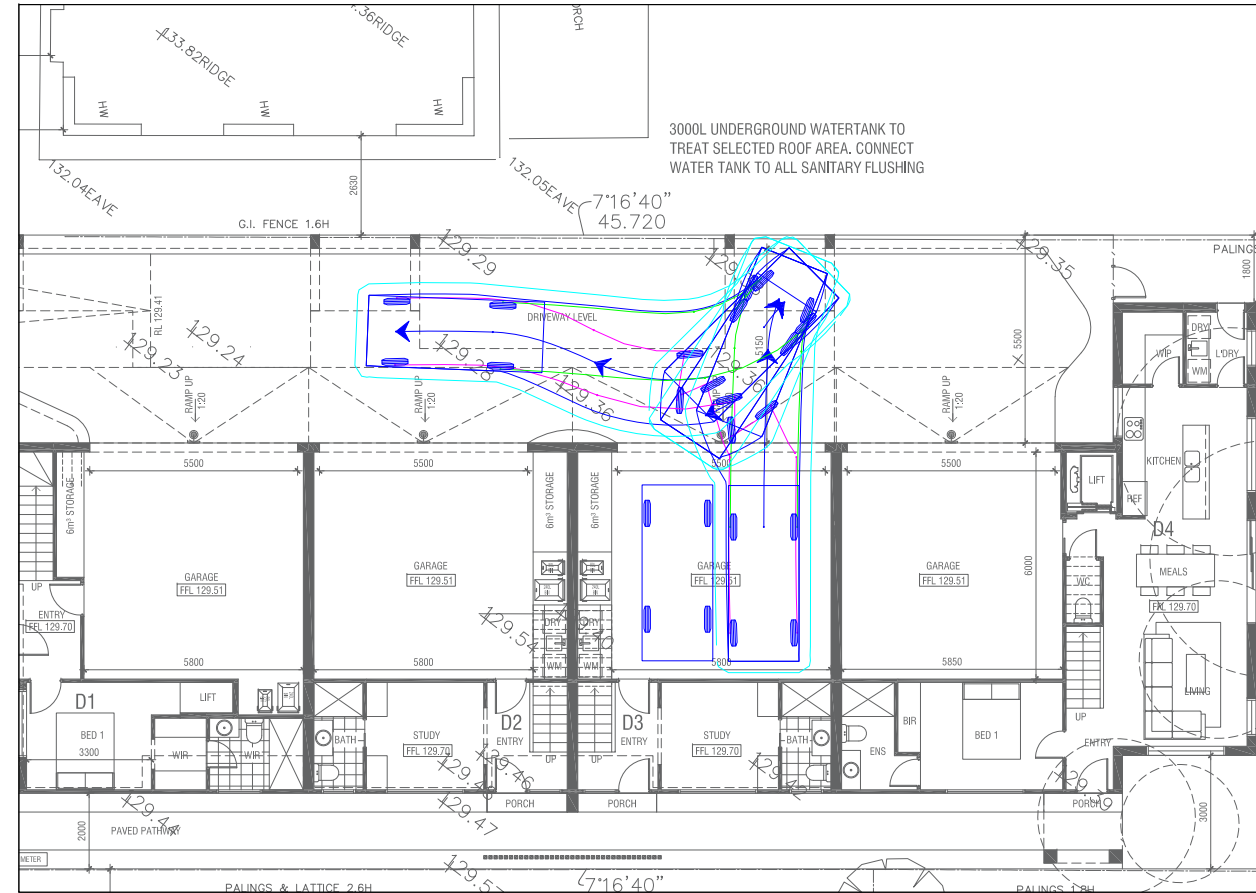
**Traffix Group**  
Level 28, 459 Collins St, MELBOURNE VIC 3000  
T: (03) 9822 2888  
www.traffixgroup.com.au



DWELLING 3 GARAGE - CAR SPACE 1 - INGRESS

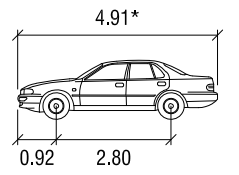


DWELLING 3 GARAGE - CAR SPACE 1 - EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION  
(VEHICLE SPEED - 5KM/H)



85th percentile  
(AS/NZS 2890.1:2004)

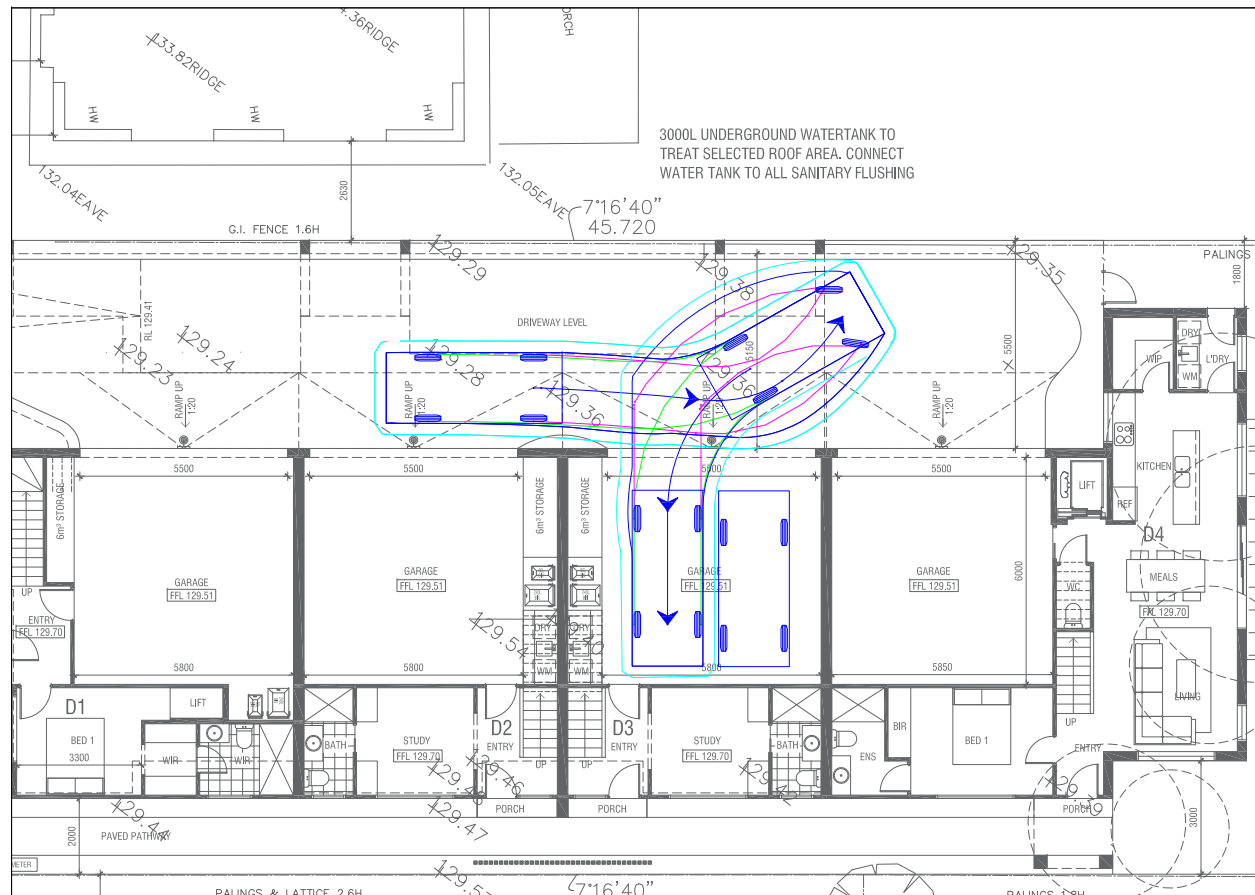
Width : 1.87m  
Track : 1.77m  
Kerb to Kerb Radius : 11.5m

\* actual template based on relevant longitudinal dimensions that affect swept path as set out in Section B2.1 of AS/NZS 2890.1:2004

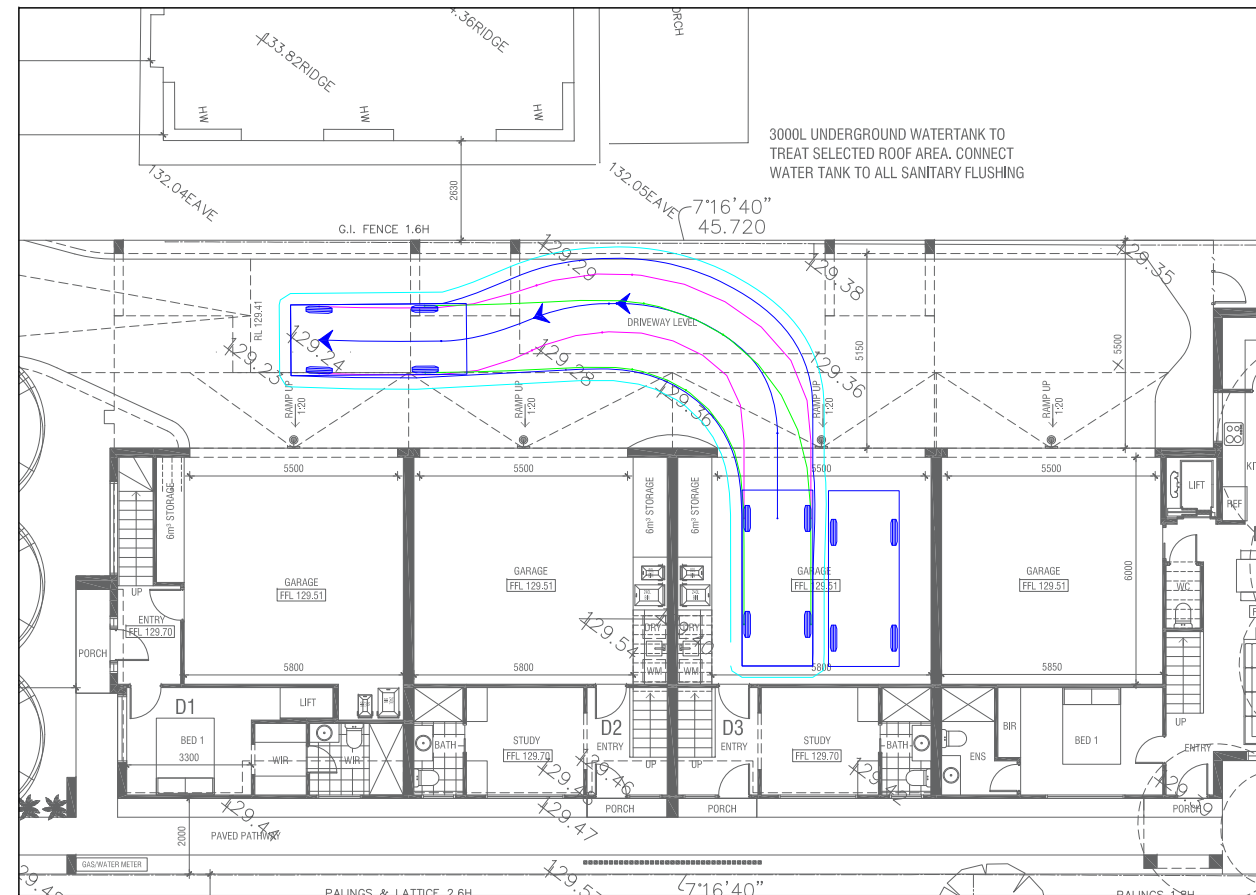
LEGEND

- REAR WHEELS
- FRONT WHEELS
- VEHICLE BODY
- BODY CLEARANCE

DWELLING 3 GARAGE - CAR SPACE 2 - INGRESS



DWELLING 3 GARAGE - CAR SPACE 2 - EGRESS



REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	22/07/2021	TOWN PLANNING	M. HUYNH	M. O'SHEA

**517 HIGH STREET ROAD, MOUNT WAVERLEY**  
PROPOSED RESIDENTIAL DEVELOPMENT

GENERAL NOTES:  
INFORMATION BASED ON "517 HIGH ST RD  
MOUNT WAVERLEY - CLEAN.dwg"

FILE NAME: G30275-01  
SHEET NO.: 03

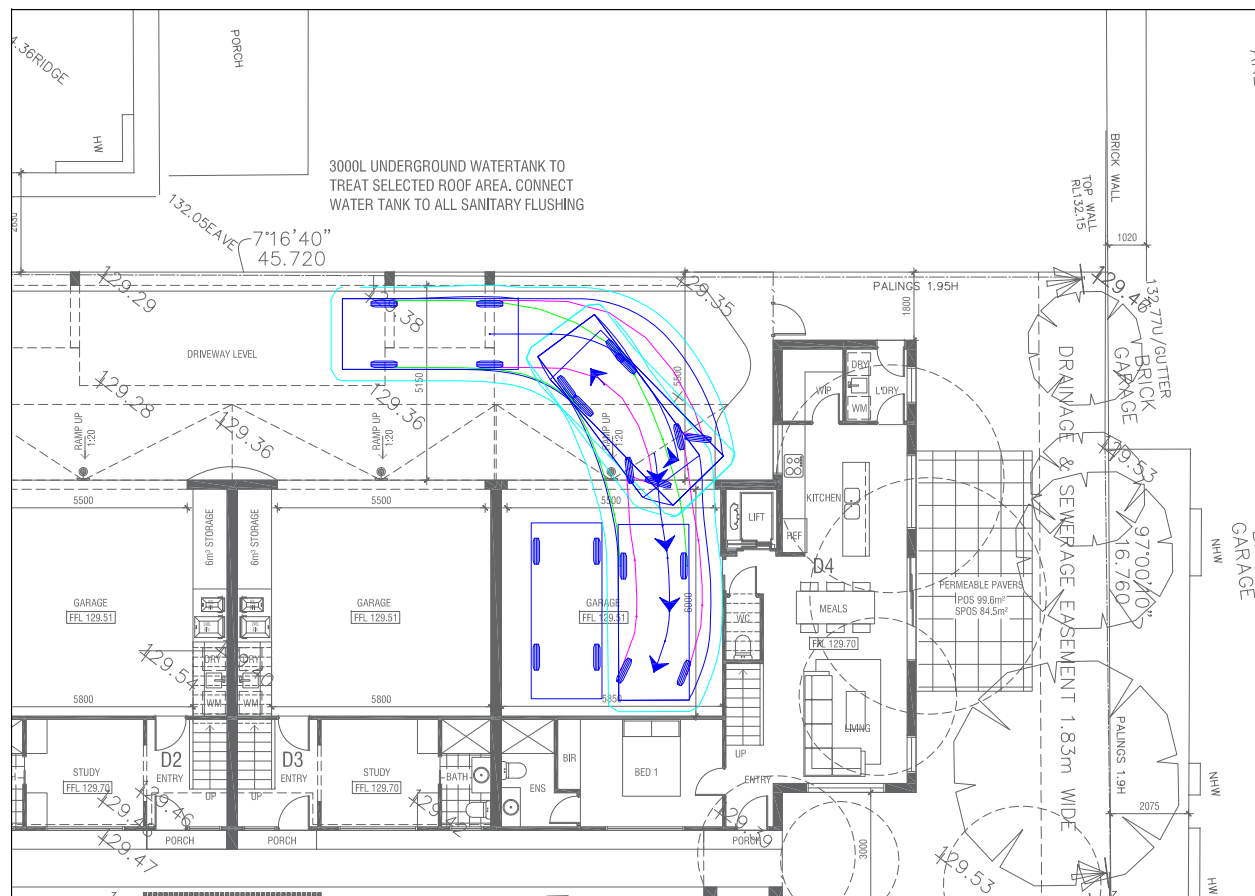


SCALE: 1:200 (A3)

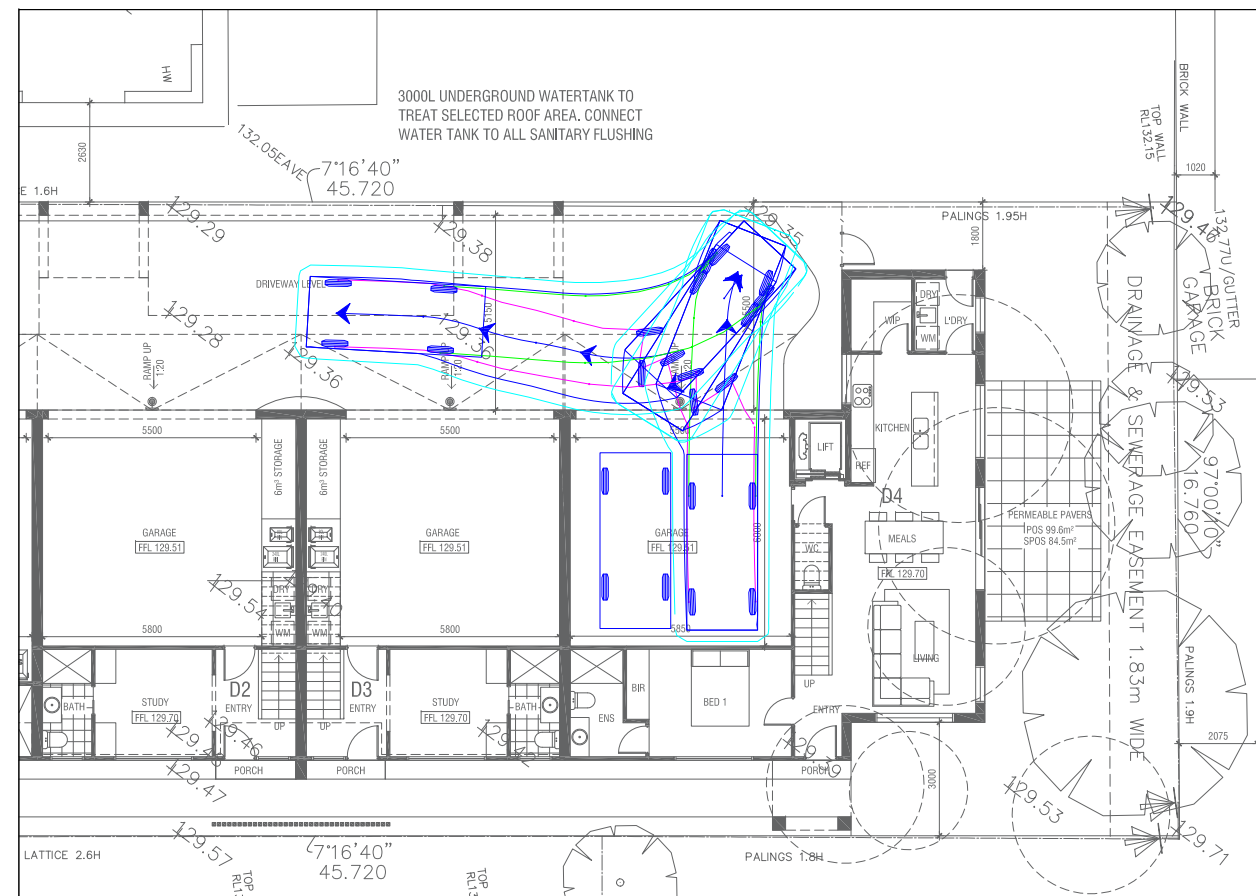
COPYRIGHT: The ideas and material contained in this document are the property of Traffic Group (Traffic Group Pty Ltd - ABN 32 100 481 570). Use or copying of this document in whole or in part without the written permission of Traffic Group constitutes an infringement of copyright.

**Traffic Group**  
Level 28, 459 Collins St, MELBOURNE VIC 3000  
T: (03) 9822 2888  
www.trafficgroup.com.au

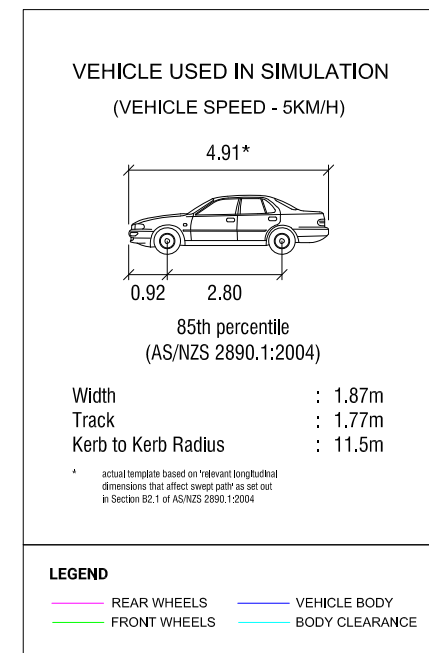
DWELLING 4 GARAGE - CAR SPACE 1 - INGRESS



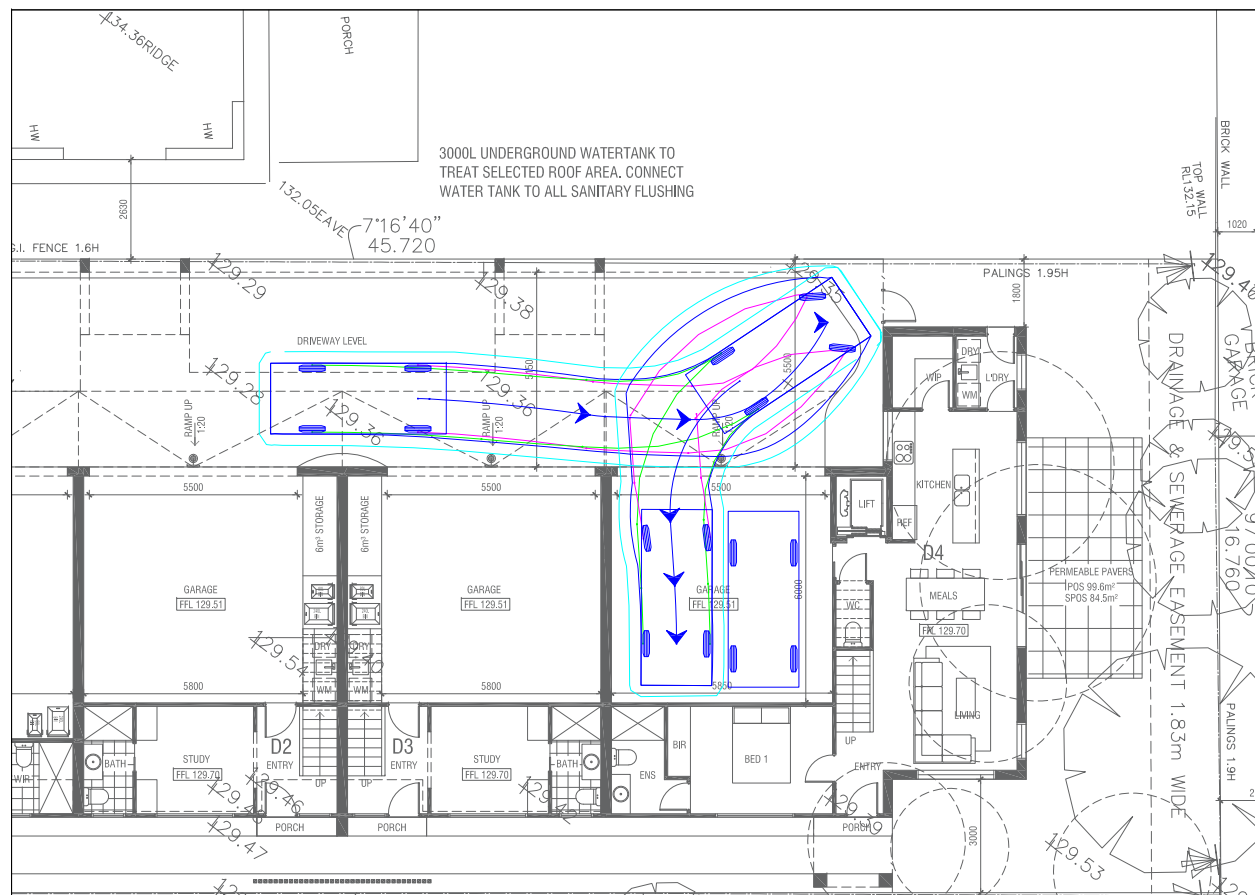
DWELLING 4 GARAGE - CAR SPACE 1 - EGRESS



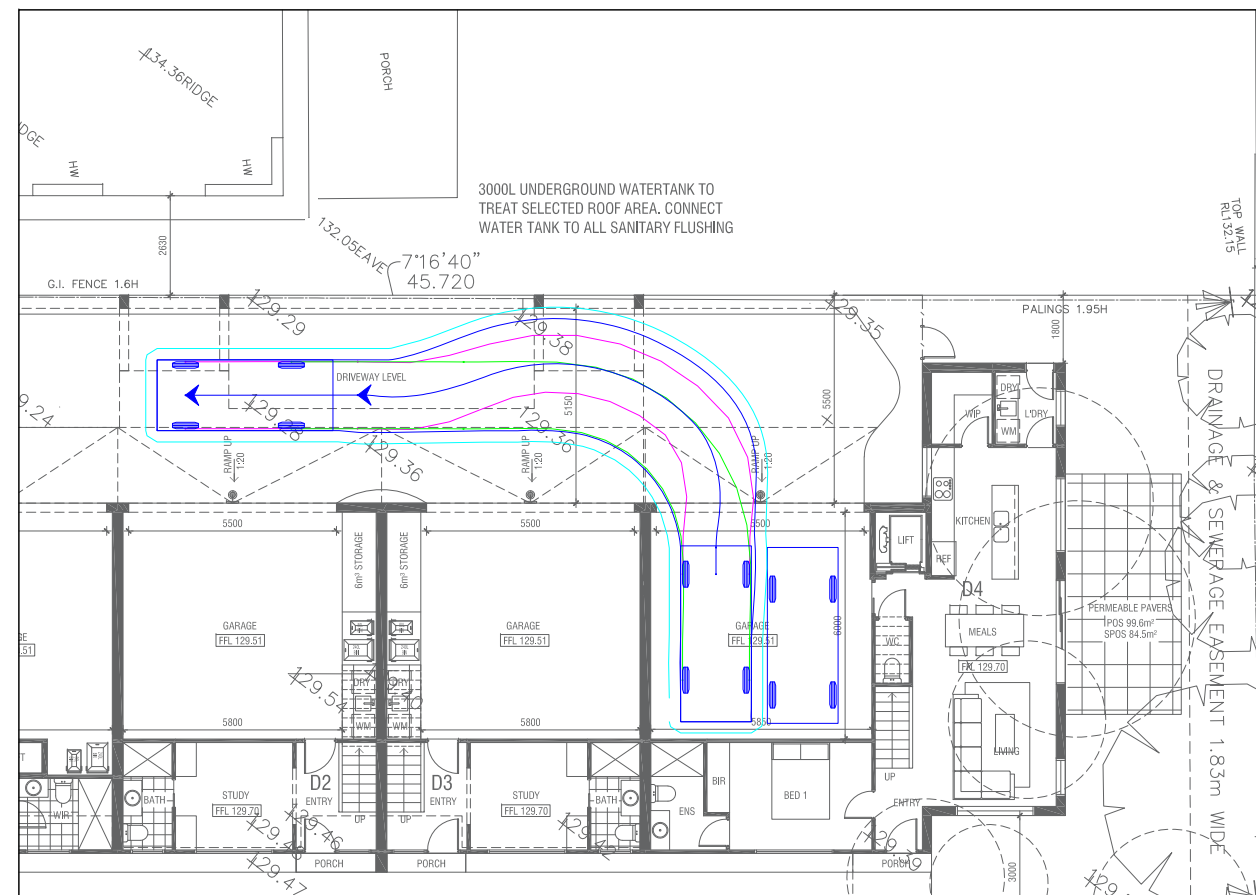
VEHICLE PROFILE



DWELLING 4 GARAGE - CAR SPACE 2 - INGRESS



DWELLING 4 GARAGE - CAR SPACE 2 - EGRESS

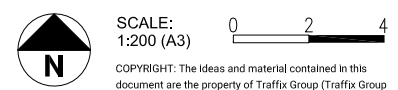


REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	22/07/2021	TOWN PLANNING	M. HUYNH	M. O'SHEA

**517 HIGH STREET ROAD, MOUNT WAVERLEY**  
PROPOSED RESIDENTIAL DEVELOPMENT

GENERAL NOTES:  
INFORMATION BASED ON "517 HIGH ST RD  
MOUNT WAVERLEY - CLEAN.dwg"

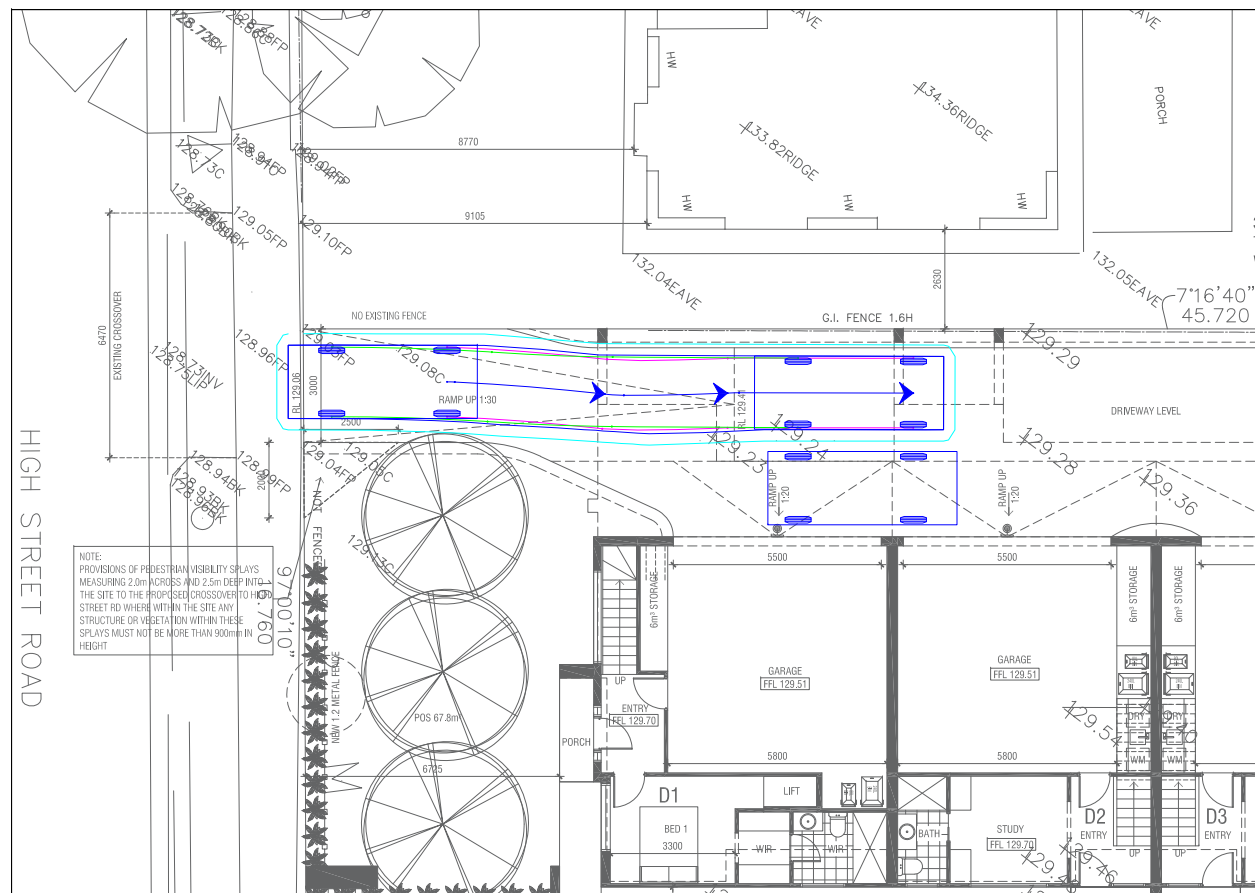
FILE NAME: G30275-01  
SHEET NO.: 04



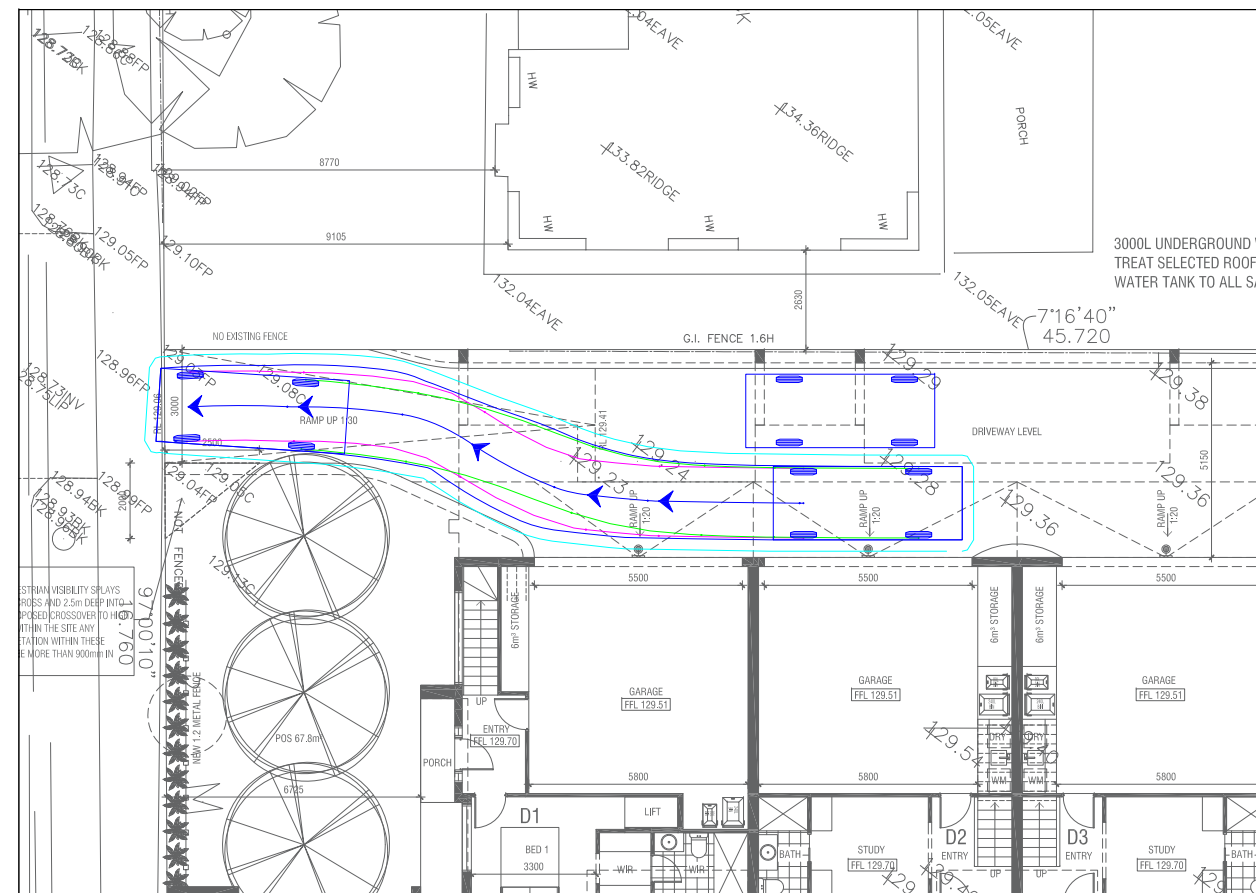
COPYRIGHT: The ideas and material contained in this document are the property of Trafficx Group (Trafficx Group Pty Ltd - ABN 32 100 481 570). Use or copying of this document in whole or in part without the written permission of Trafficx Group constitutes an infringement of copyright.

**Trafficx Group**  
Level 28, 459 Collins St, MELBOURNE VIC 3000  
T: (03) 9822 2888  
www.trafficxgroup.com.au

TWO-WAY PASSING - PROP AND PASS - B99 INGRESS



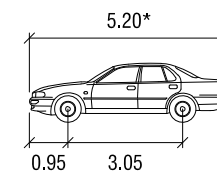
TWO-WAY PASSING - PROP AND PASS - B99 EGRESS



VEHICLE PROFILE

VEHICLE USED IN SIMULATION

(VEHICLE SPEED - 5KM/H)



99th percentile  
(AS/NZS 2890.1:2004)

Width : 1.94  
Track : 1.84  
Kerb to Kerb Radius : 12.5m

\* actual template based on relevant longitudinal dimensions that affect swept path as set out in Section B2.1 of AS/NZS 2890.1:2004

LEGEND

- REAR WHEELS
- VEHICLE BODY
- FRONT WHEELS
- BODY CLEARANCE

REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	22/07/2021	TOWN PLANNING	M. HUYNH	M. O'SHEA

**517 HIGH STREET ROAD, MOUNT WAVERLEY**  
PROPOSED RESIDENTIAL DEVELOPMENT

GENERAL NOTES:  
INFORMATION BASED ON "517 HIGH ST RD  
MOUNT WAVERLEY - CLEAN.dwg"

FILE NAME: G30275-01  
SHEET NO.: 05



SCALE: 1:200 (A3)

COPYRIGHT: The Ideas and material contained in this document are the property of Traffix Group (Traffix Group Pty Ltd - ABN 32 100 481 570). Use or copying of this document in whole or in part without the written permission of Traffix Group constitutes an infringement of copyright.



Level 28, 459 Collins St, MELBOURNE VIC 3000  
T: (03) 9822 2888  
www.traffixgroup.com.au