

# ARO INDUSTRIES

429 FICHERA ROAD  
WORKERS  
ACCOMMODATION  
TRAFFIC REPORT



## DOCUMENT CONTROL SHEET


<p><b>Title:</b> 429 Fichera Road Workers Accommodation Traffic Report</p> <p><b>Document No:</b> ARO0276</p> <p><b>Project Director:</b> Andrew Armstrong</p> <p><b>Author:</b> Andrew Armstrong</p> <p><b>Client:</b> Lakeshore Avocados</p> <p><b>Client Contact:</b> Neil Beck</p> <p><b>Client Reference:</b> 429 Fichera Road Workers Accommodation</p> <p><b>Purpose:</b> This engineering report has been prepared by ARO Industries to assess the traffic impacts of a proposed change of use to establish workers accommodation at 429 Fichera Road, Mareeba.</p>	<p><b>ARO Industries Pty Ltd</b> 51 Sheridan Street Cairns, QLD, 4870</p> <p>PO Box 6490 Cairns QLD 4870</p> <p>Phone: (07) 4281 6897 www.aroindustries.com.au</p>
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Recommendations contained in this report are based largely on our understanding of the information that has been supplied to us and should be balanced against additional information that you may hold or seek. The client is cautioned to exercise due commercial diligence in the interpretation of any material herein and accept our findings as suggestions given in good faith requiring interpretation within the context of the client's own enterprise environment.

Distribution	Document Revision Number								
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Neil Beck	1	1							
ARO Industries Record	1	1							

Revision History					
Revision No.	Author	Reviewer	Approved For issue		
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1	A. Armstrong	Kael Whitnell	21116		1/12/2022

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## INTRODUCTION

This engineering report has been prepared by ARO Industries to assess the traffic impacts of a proposed change of use to establish workers accommodation on Fichera Road, Mareeba. The workers accommodation will have a capacity of 144 workers and a manager's residence. The workers accommodation will service the farms and packaging centre located on Henry Hannam Drive, Mareeba and State Farm Road, Kairi.

The site is Lot 414 on RP835556, 429 Fichera Road, Mareeba. It is located approximately 6km southeast of the central Mareeba township and is shown in *Figure 1*. The site is located within the jurisdiction of the Mareeba Shire Council and is subject to its planning controls.



*Figure 1 – Locality Plan (Courtesy of Queensland Globe)*

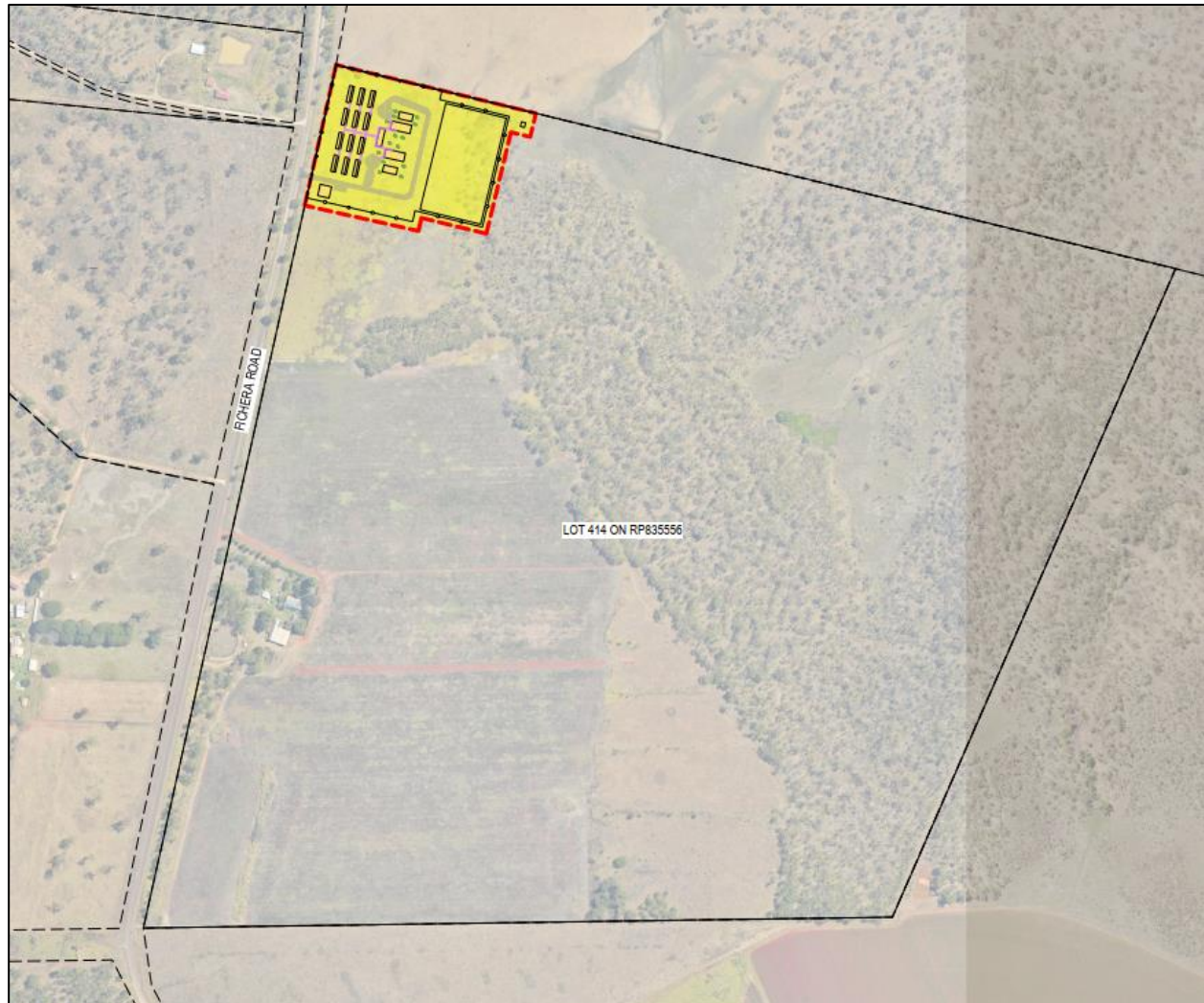
The traffic assessment has been commissioned to confirm traffic generation rates for the proposed development and investigate if upgrades on Fichera Road are necessary to ameliorate the impact of the development. vehicular access to the site, specifically sight distance and safe ingress/egress of the site will be assessed.

Plans for the development are attached in Appendix A.

## EXISTING USE OF SITE

Lot 414 on RP835556 is 102.6 hectares. The site of the proposed workers accommodation is located on unimproved vacant land in the northwestern corner of the lot. A single dwelling is located on the balance of the lot, approximately 500m south of the proposed development. The surrounding land use is rural/agricultural.

The proposed development on the lot is shown in *Figure 2*, below.



*Figure 2 – Site Location*

## TRAFFIC ENVIRONMENT ON FICHERA ROAD

Fichera Road is a local rural road intersecting Tinaroo Creek Road in the north and Henry Hannam Drive (via Lockwood Road) in the south. The formation of Fichera Road adjacent to the site consists of a sprayed seal, nominally 4m wide with 1.5m wide gravel shoulders which widens to a 5m seal approximately 200m south of the site. The seal width of Fichera Road varies between 3.8m to 6.5m along its length. The existing speed zone adjacent to the site is 80km/hr.

## TRAFFIC VOLUMES ON FICHERA ROAD

2021 traffic data has been obtained from Mareeba Shire Council for a survey location approximately 1km South of the development site on Lockwood Road. Traffic data is available for Fichera Road at a site near the intersection with Tinaroo Creek Road, however due to its proximity to the proposed development, the site on Lockwood Road is considered to more accurately reflect the actual traffic characteristics adjacent to the site. Traffic data at these survey locations is attached in Appendix B.

This data has been extrapolated for the year 2023 by assuming a linear growth rate of 2%. The diurnal pattern shows prominent AM and PM peaks. It is assumed that the traffic volume in each direction is equal during the peaks.

The background traffic volume on Fichera Road has been summarised in *Table 1* below.

*Table 1: Traffic Volumes for Fichera Road (Lockwood Road)*

Period	2021 Count	2023 forecast	Comments
AM Peak	14	15	AM Peak 6:00AM – 7:00AM 50:50 directional split
PM Peak	15	16	PM Peak 4:00PM – 5:00PM 50:50 directional split
Daily	107	112	Average Annual Daily Traffic 31.34% heavy vehicles

## TRAFFIC GENERATION

To analyse the impact of the workers accommodation on Fichera Road, it is necessary to assess the number of trips generated to and from the site and where they are likely to travel.

The potential development traffic generation from the site has been reviewed based on information provided by the applicant. This can be summarised as:

- Accommodation will be limited to a maximum of 144 workers with a manager's residence on site;
- Very low car ownership rates for the workers;
- Workers will be shuttled to and from work by 12 buses (12 seats) during AM and PM peaks;
- The buses will travel north and south along Fichera Road (Lockwood Road) to various farms and packing facilities;
- Buses will remain at the farms and packaging facilities until end of work shifts.
- Manager will use 1 light vehicle daily during peaks; and
- Workers will be transported to Mareeba Business District in the evenings by bus, as required outside of network peak.

The daily and peak hour traffic volumes are presented in *Table 2* below.

*Table 2: Development Traffic Volumes*

Vehicle type	Peak hour trips	Daily trips	Comments
Car	2	6	<b>AM Peak</b> – Approximately 60% of the development traffic exits the site and travels north along Fichera Road (right turn) <b>PM Peak</b> – Approximately 40% of the development traffic enters the site from the south (right turn)
Bus	12	26	
<b>Total</b>	<b>14</b>	<b>32</b>	

## ACCESS

It is acknowledged that the traffic volume on Fichera Road adjacent to the development is very low. However, the buses returning in the PM peak period increases the probability of conflict with the right turn into the development. The seal width adjacent to the development access will need to be increased to 6.0m to allow vehicles to pass. The widening will need to extend a minimum of 40m (including taper) in both directions from the access to take into account the storage length of a 12-seat bus. The functional layout is presented below in Figure 4.

The development access will be a rural allotment access in accordance with FNQROC Standard Drawing S1105(F).

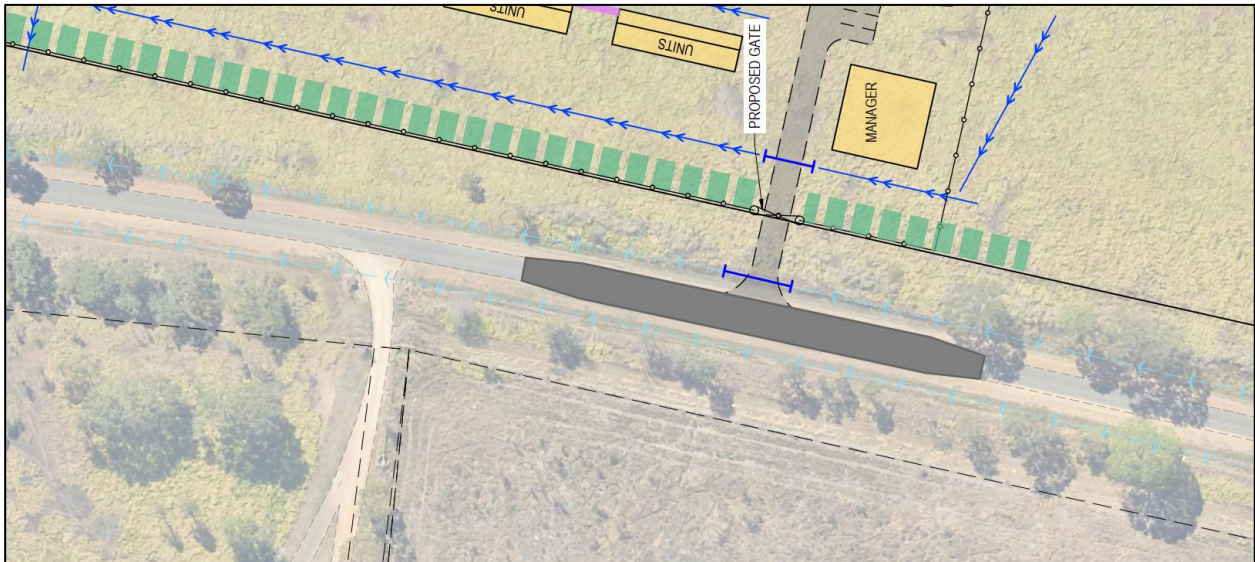


Figure 4: Fichera Road widening

### SIGHT DISTANCE

The approach sight distance to the access off Fichera Road is approximately 600m to the north and 1000m to the south. The requirements for Minimum Gap Sight Distance and Safe Intersection Sight Distance, in accordance with the Austroads Guide to Road Design Part 4A is 181m in an 80km/hr zone. These distances exceed the minimum requirements of the Austroads Guide. Sight distance is demonstrated in Figure 5 & 6 below.

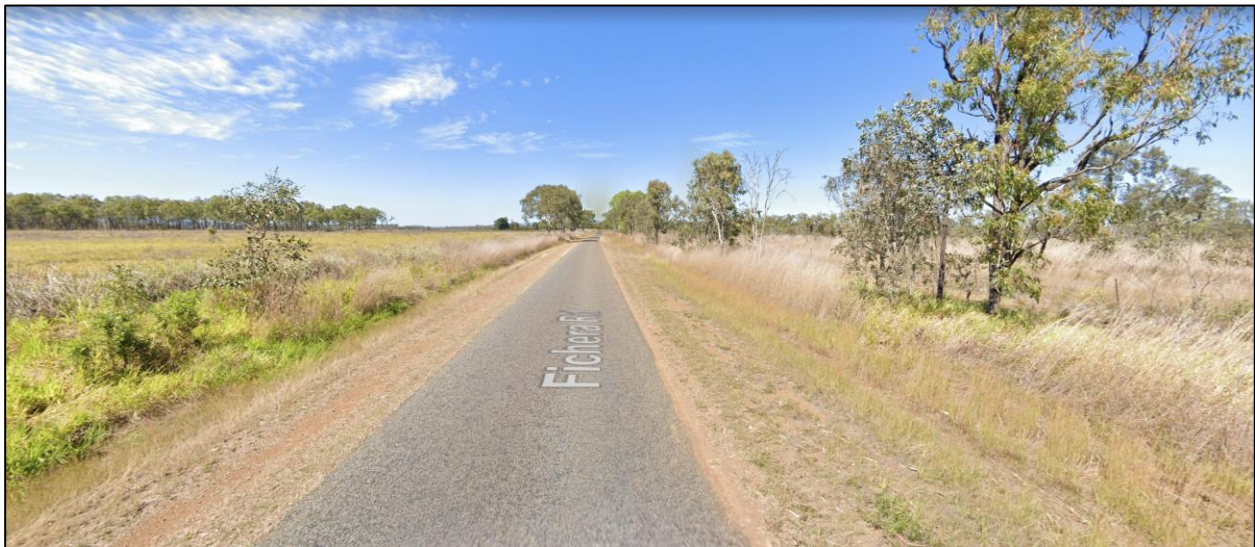


Figure 5 – Sight distance to the south from the proposed access location.



*Figure 6 – Sight distance to the North from the proposed access location.*

### **FICHERA ROAD GEOMETRY**

The Austroads Guide to Road Design Part 3: Geometric Design provides guidance on Rural Road widths. Accordingly, it is acceptable to have a single sealed lane of 3.7m minimum width where the traffic volumes are less than 150 vehicles per day, particularly where terrain is open and sparsely settled.

The traffic volume on the section of Fichera Road, adjacent to the proposed development is less than 150 vehicles per day including the forecast development traffic and background traffic growth to 2023. The terrain is open and sparsely settled. It is further noted that Fichera Road turns into Lockwood Road which is unsealed. Therefore, the development does not warrant the upgrade of Fichera Road.

### **CONCLUSION**

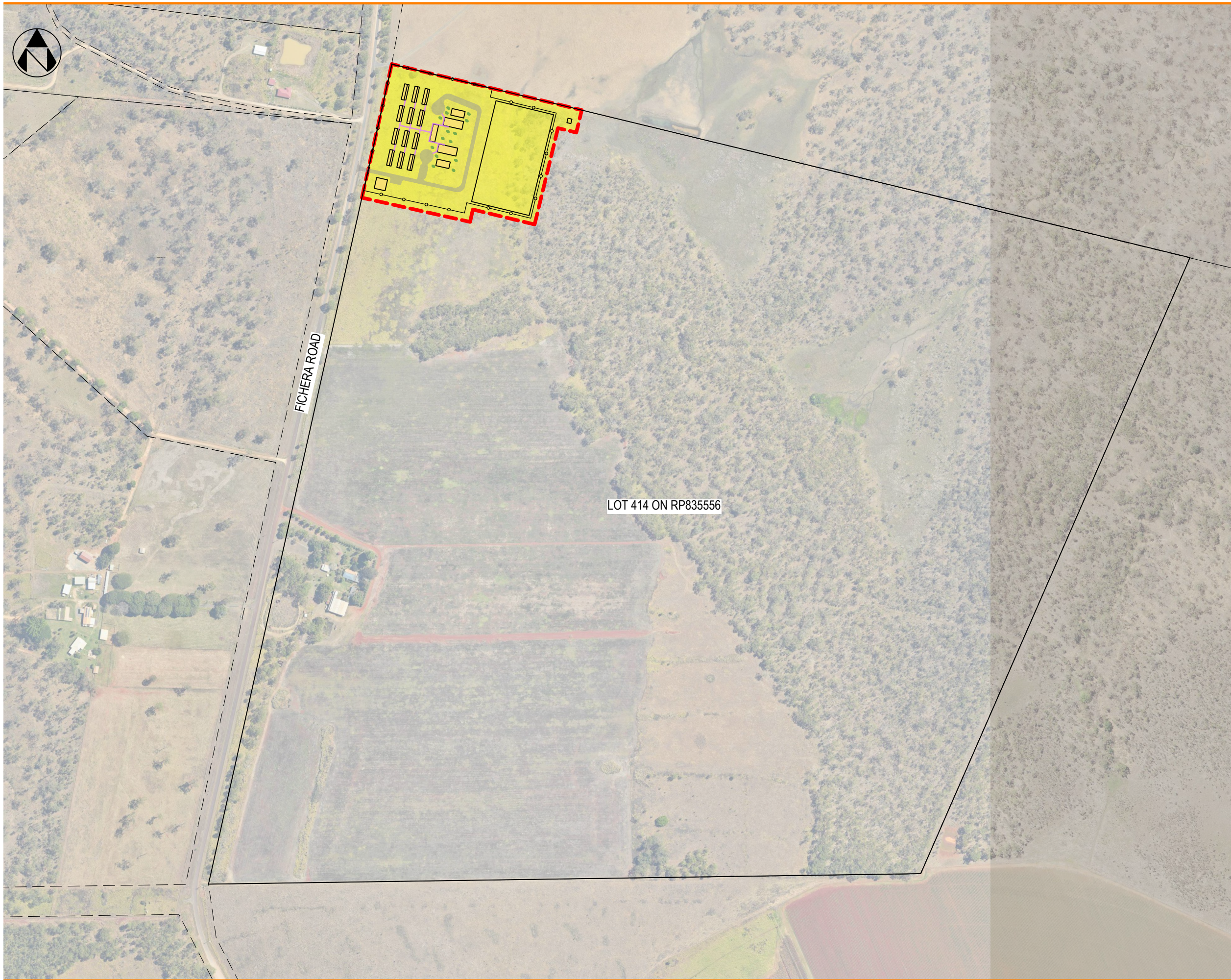
The proposed development of Lot 414 on RP835556, 429 Fichera Road, Mareeba consisting of workers accommodation and manager's residence, has been assessed as having a minor impact on the surrounding transport network. Accordingly, the impact of the development does not necessitate upgrading of Fichera Road.


The safe access to the development has been assessed using the Austroads Guide and the following works are required:

- Widening of Fichera Road adjacent to the site access; and
- Construction of a Rural allotment access in accordance with the FNQROC standard drawings.



**APPENDIX A  
DEVELOPMENT PLANS**



LEGEND  
 ACCOMMODATION SITE AREA

FICHERA ROAD

LOT 414 ON RP835556



MATTY KLEYN

WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS  
 OVERALL SITE PLAN

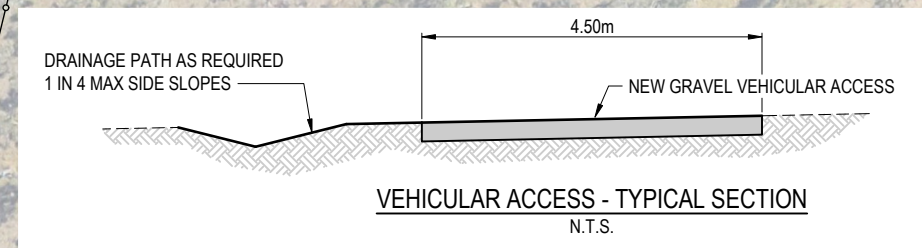
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PAM	PAM	CJC	CJC

A3 Full Size (Scale as shown)

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LEGEND	
	PROPOSED STRUCTURE
	PROPOSED GRAVEL ROAD/ACCESS
	PROPOSED PATHWAY/HARDSTAND
	PROPOSED FENCE
	PROPOSED PLANTED BUFFER
	PROPOSED PLANTING
	PROPOSED DRAIN
	PROPOSED CULVERT
	EXISTING DRAIN



MATTY KLEYN

WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS  
ACCOMMODATION AREA SITE PLAN

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

A3 Full Size (Scale as shown)

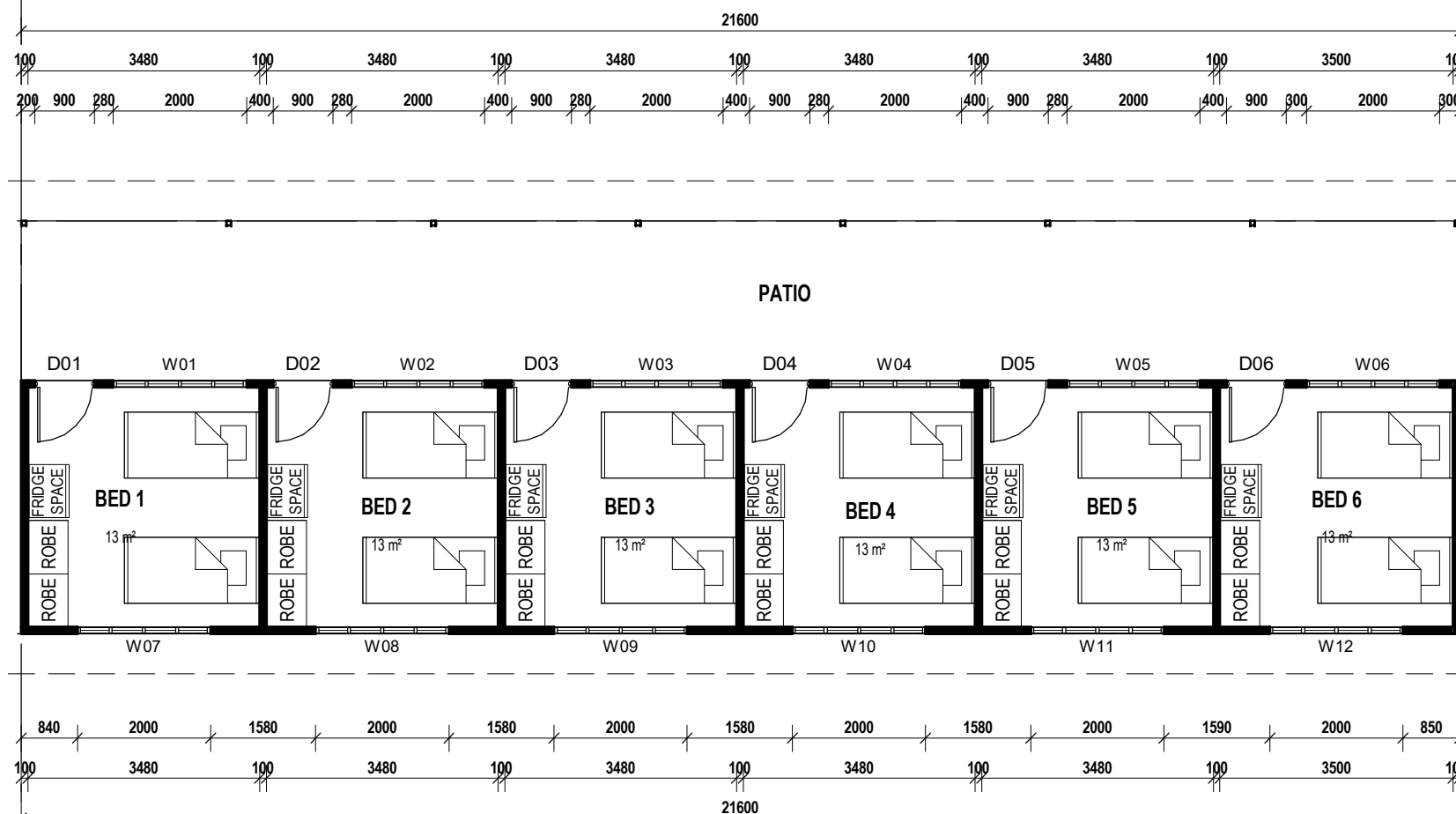
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**ELEVATION KEY**

FLOOR AREAS LEGEND	
BREEZEWAY	96.36 m <sup>2</sup>
UNITS 1, 2, 3	60.72 m <sup>2</sup>
UNITS 4, 5, 6	60.72 m <sup>2</sup>
KITCHEN	25.55 m <sup>2</sup>
	243.35 m <sup>2</sup>

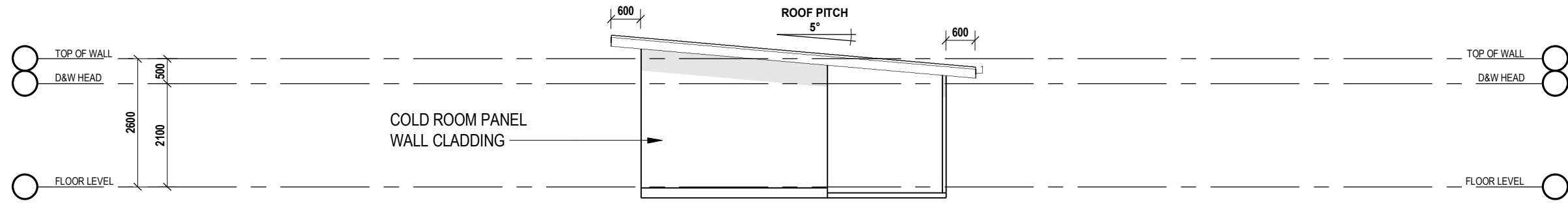
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D02	BED 2	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D03	BED 3	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D04	BED 4	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D05	BED 5	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D06	BED 6	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	



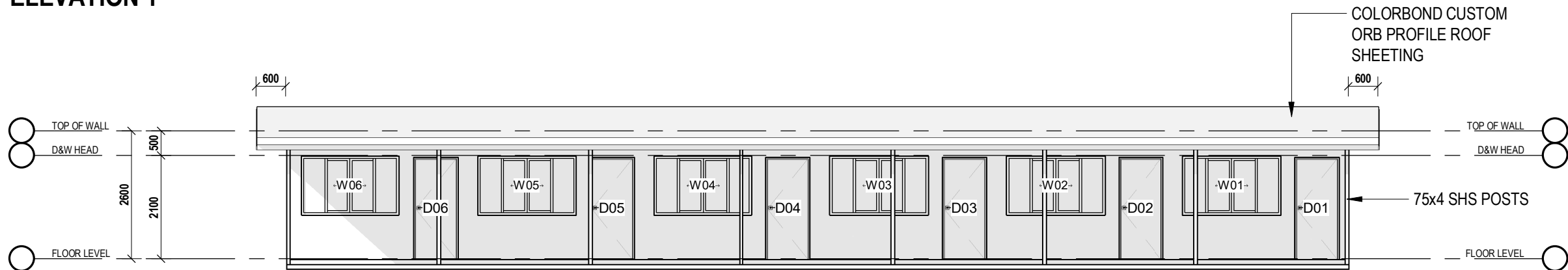
Window Schedule					
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W02	BED 2	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W03	BED 3	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W04	BED 4	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W05	BED 5	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W06	BED 6	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W07	BED 1	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W08	BED 2	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W09	BED 3	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W10	BED 4	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W11	BED 5	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW
W12	BED 6	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW

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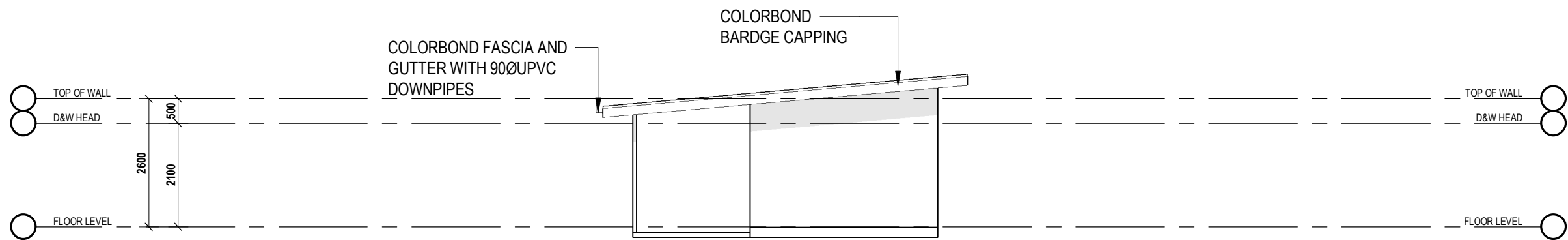
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**ELEVATION 1**



**ELEVATION 2**



**ELEVATION 3**



**ELEVATION 4**

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 Lot 414 on RP835556  
 429 FICHERA ROAD  
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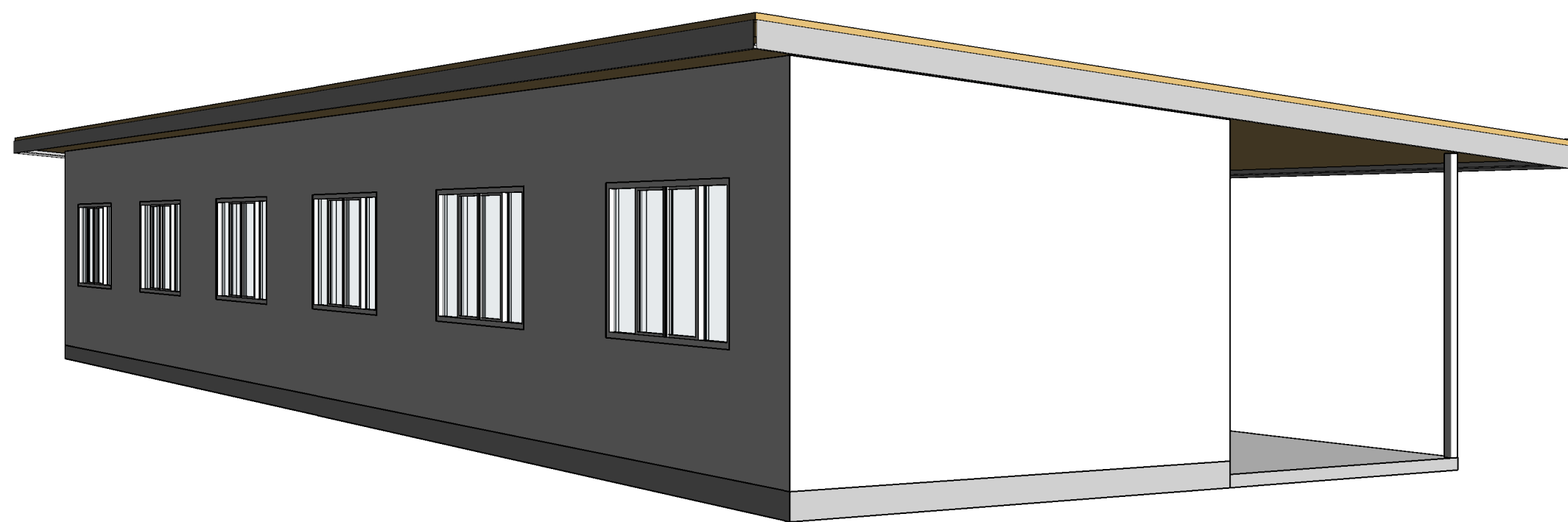
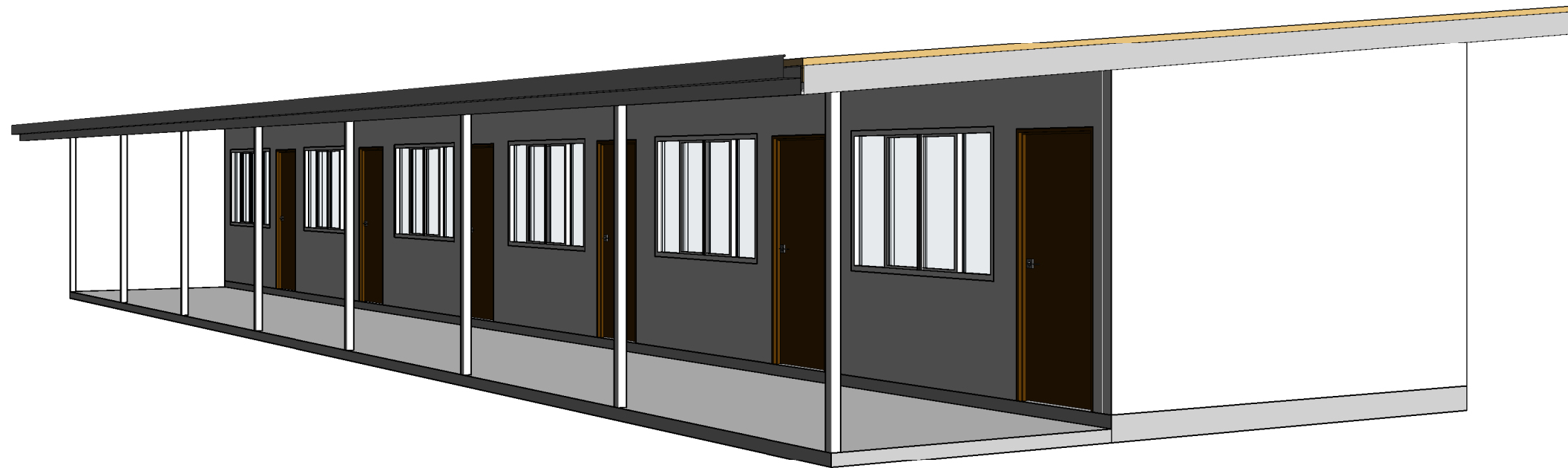
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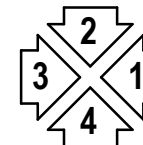
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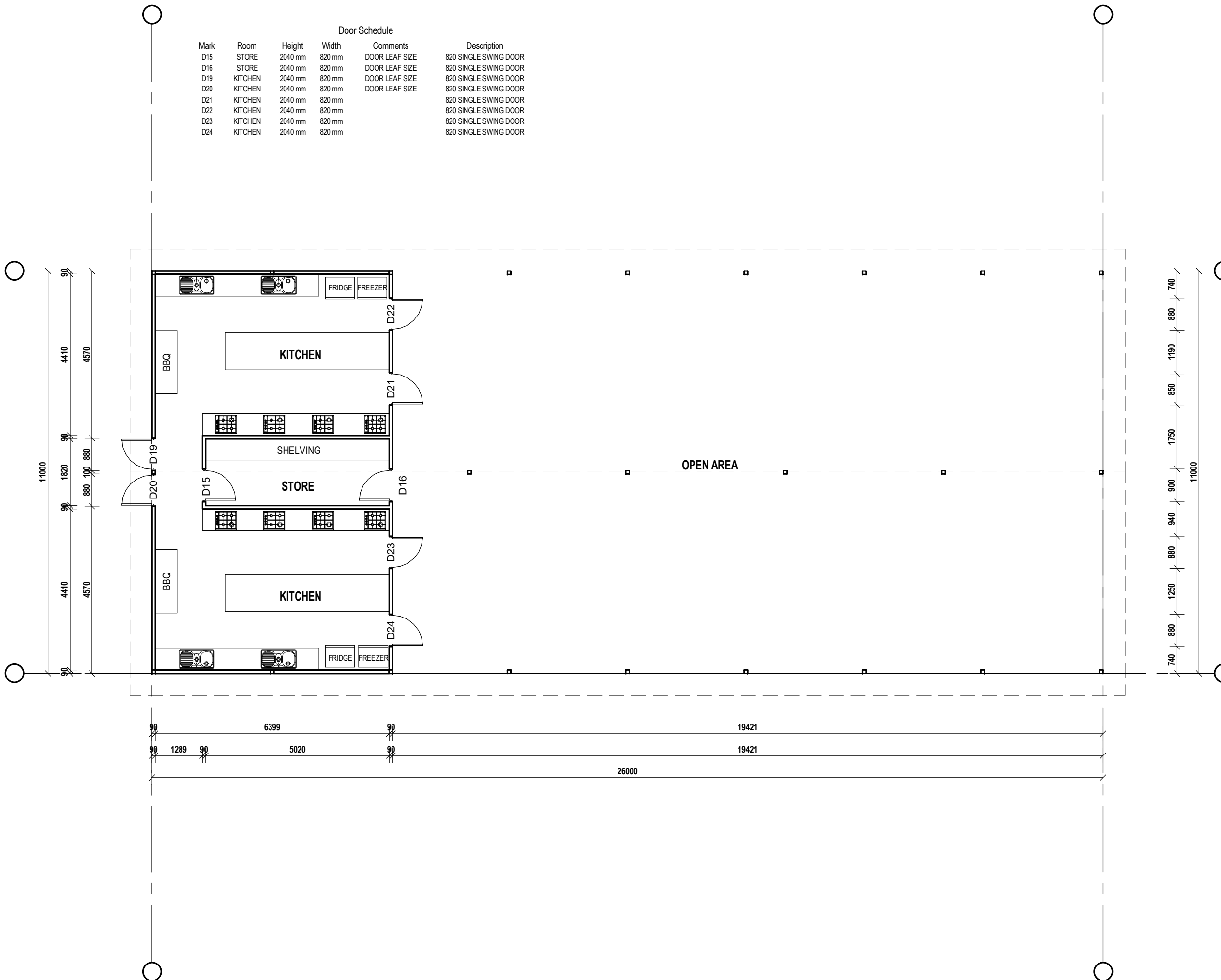
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**ELEVATION KEY**

FLOOR AREAS LEGEND	
KITCHEN	72.36 m <sup>2</sup>
OPEN AREA	213.64 m <sup>2</sup>
	286.00 m <sup>2</sup>

Mark	Room	Height	Width	Comments	Description
D15	STORE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D16	STORE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D19	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D20	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D21	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D22	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D23	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D24	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR



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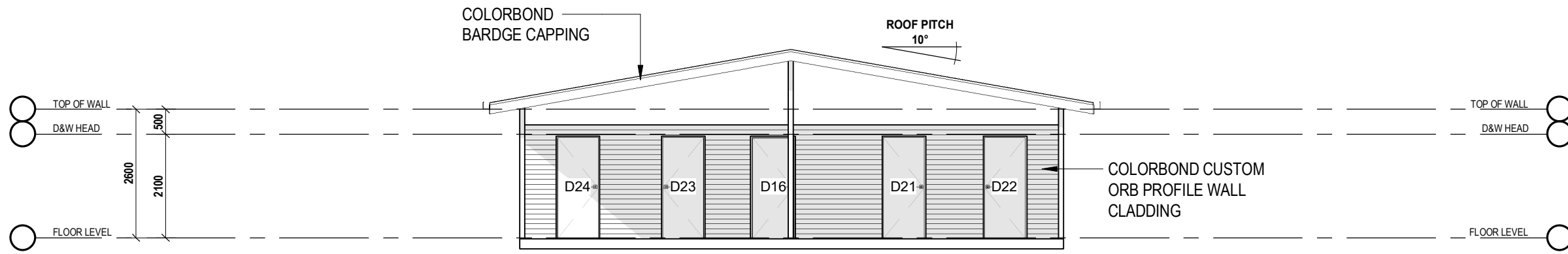


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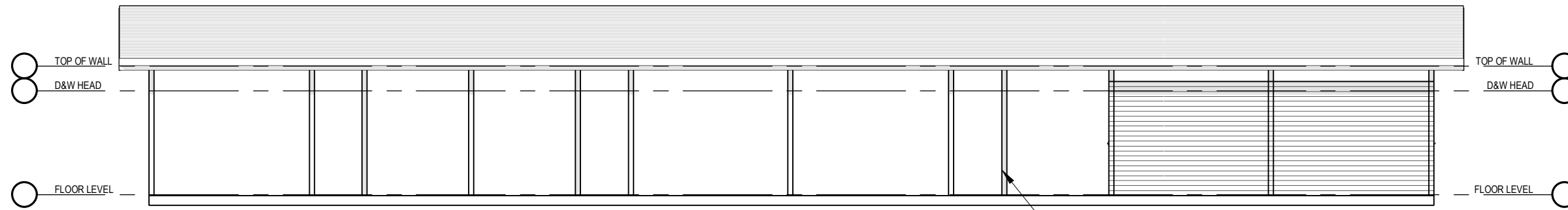
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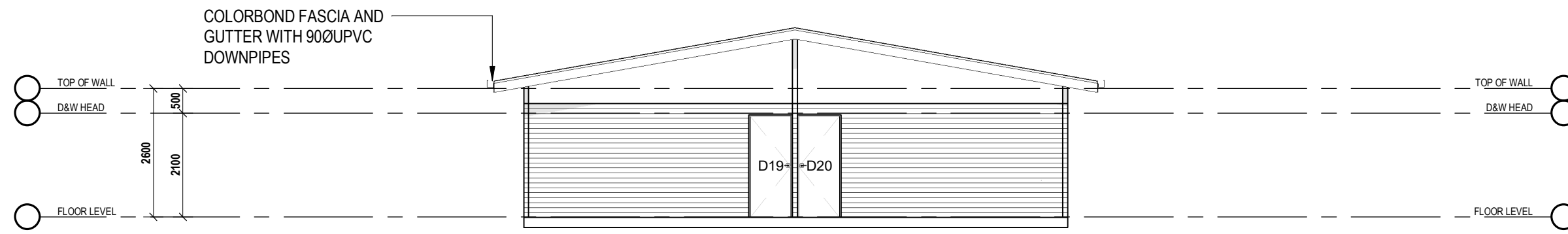
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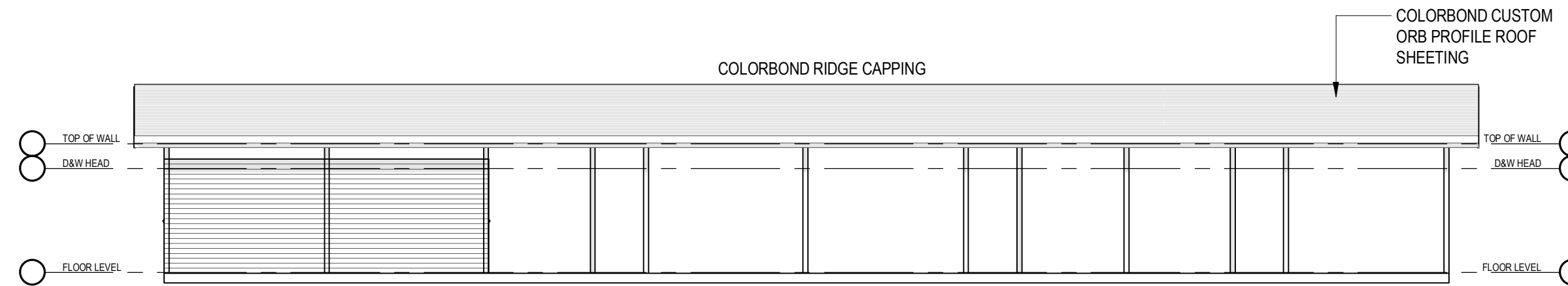
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**ELEVATION 3**



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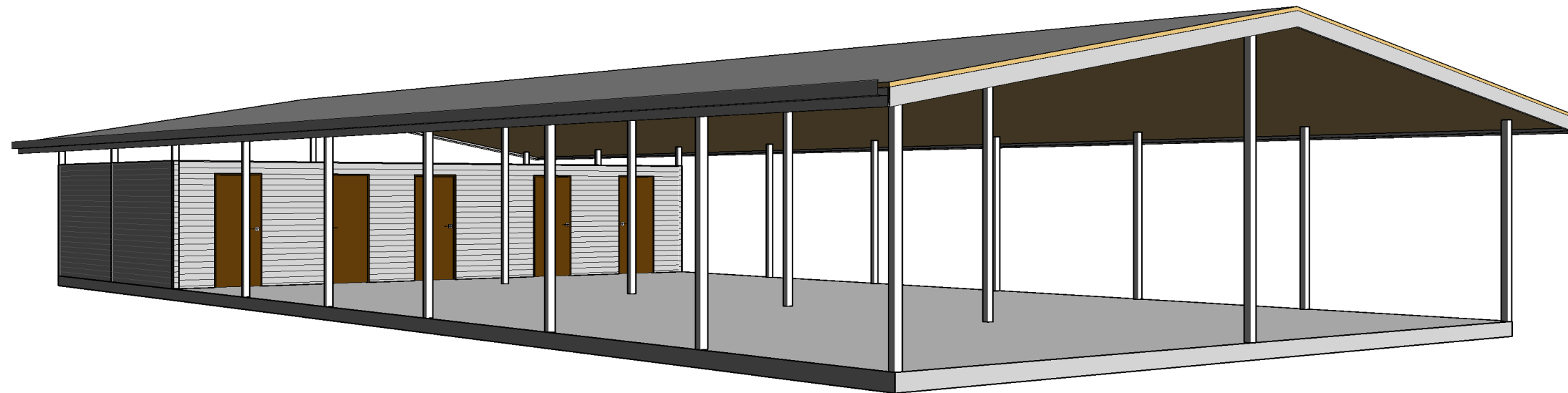
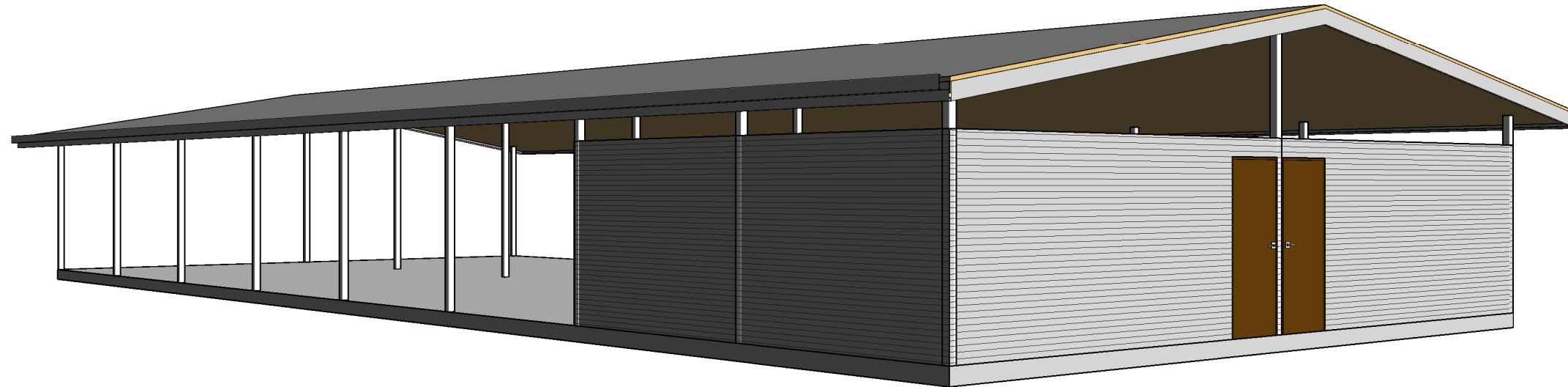



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 Document Set ID: 4172068  
 Version: 1, Version Date: 04/01/2023





DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
No.	DATE	DESCRIPTION	
VARIATIONS INCLUDED IN THIS DRAWING			
DRAWING TITLE			
3D VIEWS			
SHEET NO.	05	PRINT TIME:	12/07/2022 11:04:27 AM
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<b>A3</b>	SCALE:	ISSUE:	A
	NTS AT A3	DRAWN BY:	WE
<b>PRELIMINARY ISSUE</b>			
SSHQ JOB No.	-	DRAWING No.	21080401
<b>PROJECT</b>			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
<b>CLIENT</b>			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
TOLGA INDUSTRIAL ESTATE, QLD, 4882			
PH: 07 4095 4008			
EMAIL: info@sshq.com.au			
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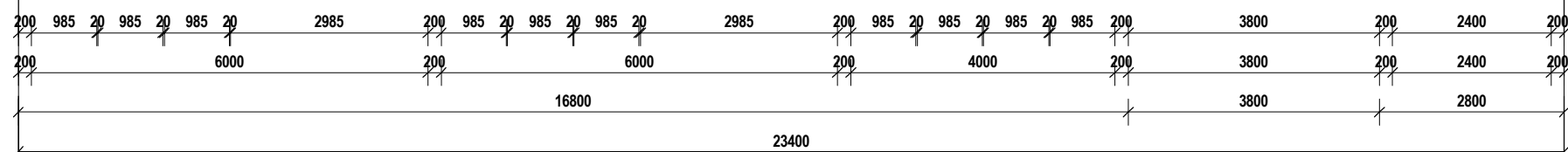
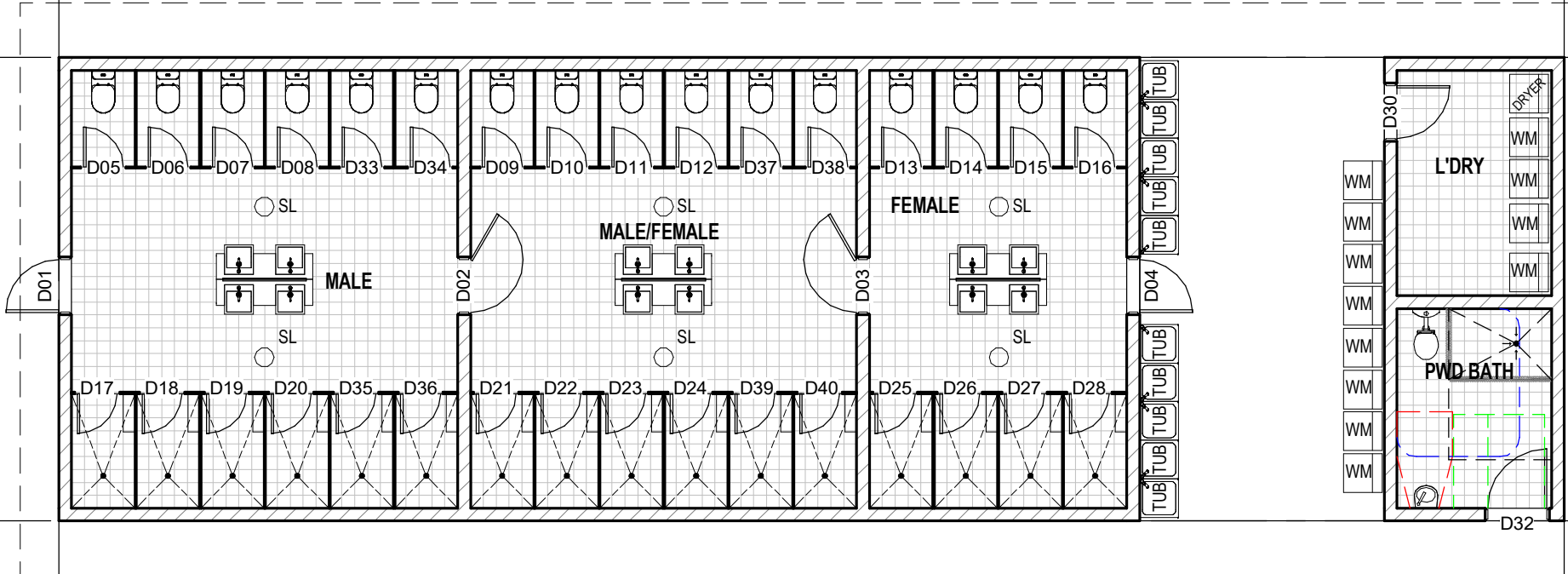
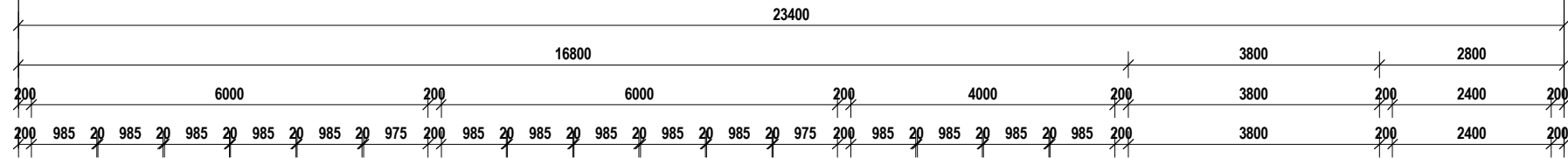


**ELEVATION KEY**

FLOOR AREAS LEGEND	
TOILET BLOCK	120.79 m <sup>2</sup>
BREZZEWAY	27.36 m <sup>2</sup>
L'DRY	20.17 m <sup>2</sup>
	168.32 m <sup>2</sup>

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D01	MALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D02	MALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D03	FEMALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D04	FEMALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D05	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D06	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D07	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D08	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D09	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D10	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D11	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D12	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D13	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D14	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D15	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR



Door Schedule					
Mark	Room	Height	Width	Comments	Description
D16	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D17	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D18	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D19	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D20	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D21	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D22	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D23	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D24	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D25	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D26	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D27	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D28	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D30	L'DRY	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D32	PWD BATH	2040 mm	920 mm	DOOR LEAF SIZE	920 SINGLE SWING DOOR
D33	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D34	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D35	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D36	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D37	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D38	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D39	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D40	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
No.	DATE	DESCRIPTION	
VARIATIONS INCLUDED IN THIS DRAWING			
DRAWING TITLE			
<b>FLOOR PLAN</b>			
SHEET NO.	03	PRINT TIME:	12/07/2022 6:54:06 AM
PRELIMINARY:	11/07/22	CONSTRUCTION:	-
<b>A3</b>	SCALE:	ISSUE:	A
	1:100 AT A3	DRAWN BY:	WE

**PRELIMINARY ISSUE**

SSHQ JOB No.	-	DRAWING No.	21040101
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**PROJECT**  
**PROPOSED TOILET BLOCK**  
 Lot 414 on RP835556  
 429 FICHERA ROAD,  
 MAREEBA

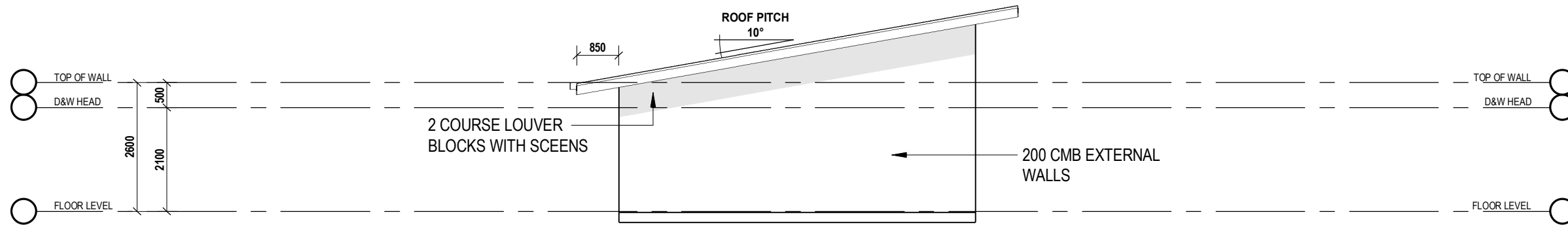
**CLIENT**  
**LAKESHORE AVOCADOS**



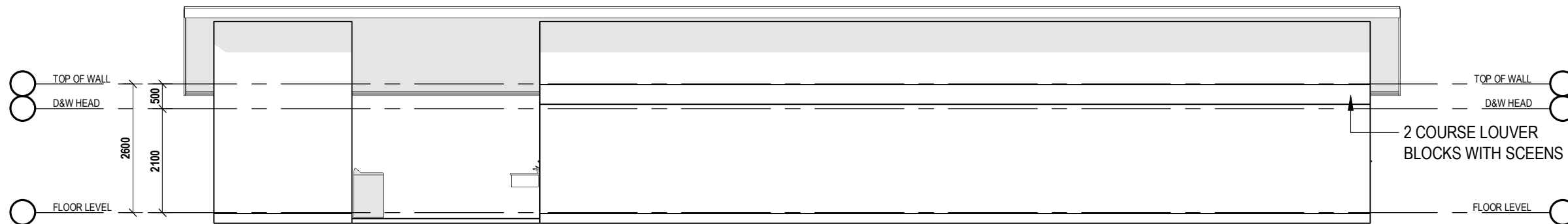
PO BOX 876 QBC. 1097802  
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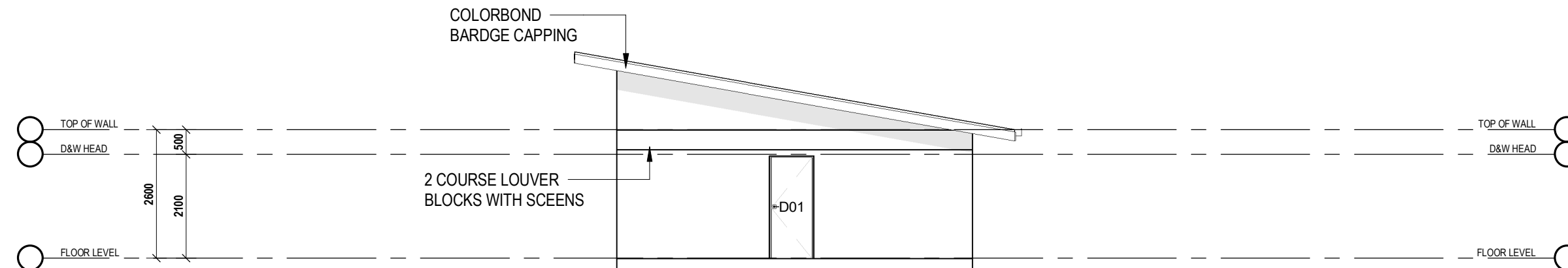
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**ELEVATION 1**



**ELEVATION 2**



**ELEVATION 3**



**ELEVATION 4**

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
No.	DATE	DESCRIPTION	

**VARIATIONS INCLUDED IN THIS DRAWING**

**DRAWING TITLE**  
**ELEVATIONS**

SHEET NO. **04** PRINT TIME: 12/07/2022 6:54:08 AM

PRELIMINARY: 11/07/22 CONSTRUCTION: -

**A3** SCALE: 1:100 AT A3 ISSUE: **A**  
DRAWN BY: **WE**

**PRELIMINARY ISSUE**

SSHQ JOB No. - DRAWING No. **21040101**

**PROJECT**  
**PROPOSED TOILET BLOCK**  
Lot 414 on RP835556  
429 FICHERA ROAD,  
MAREEBA

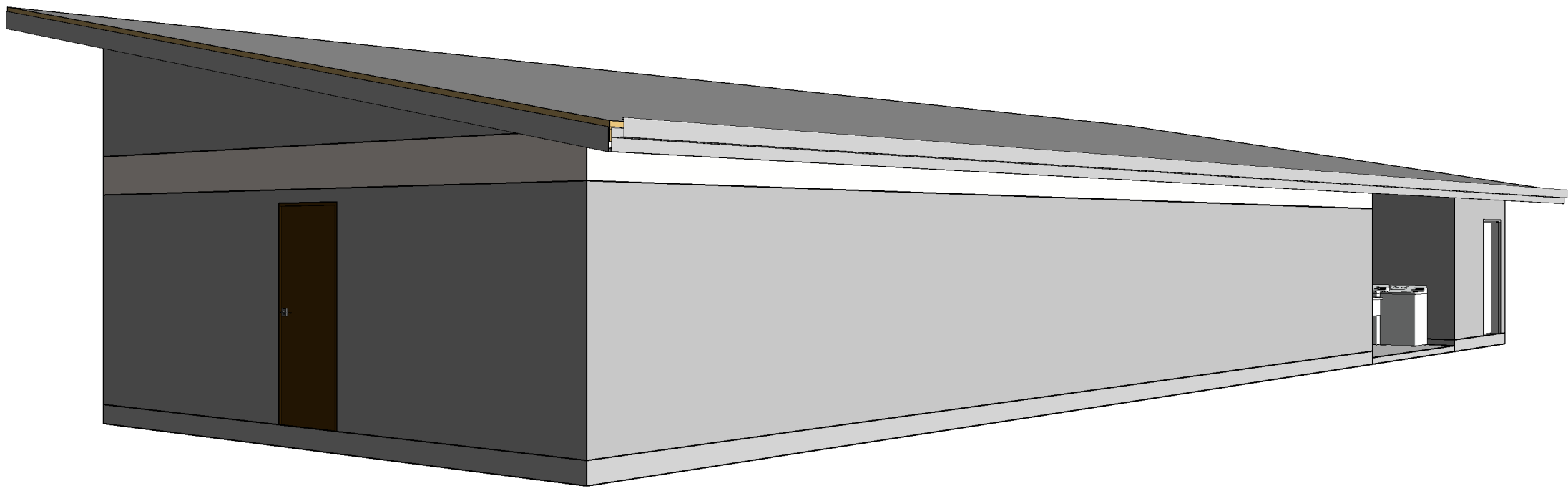
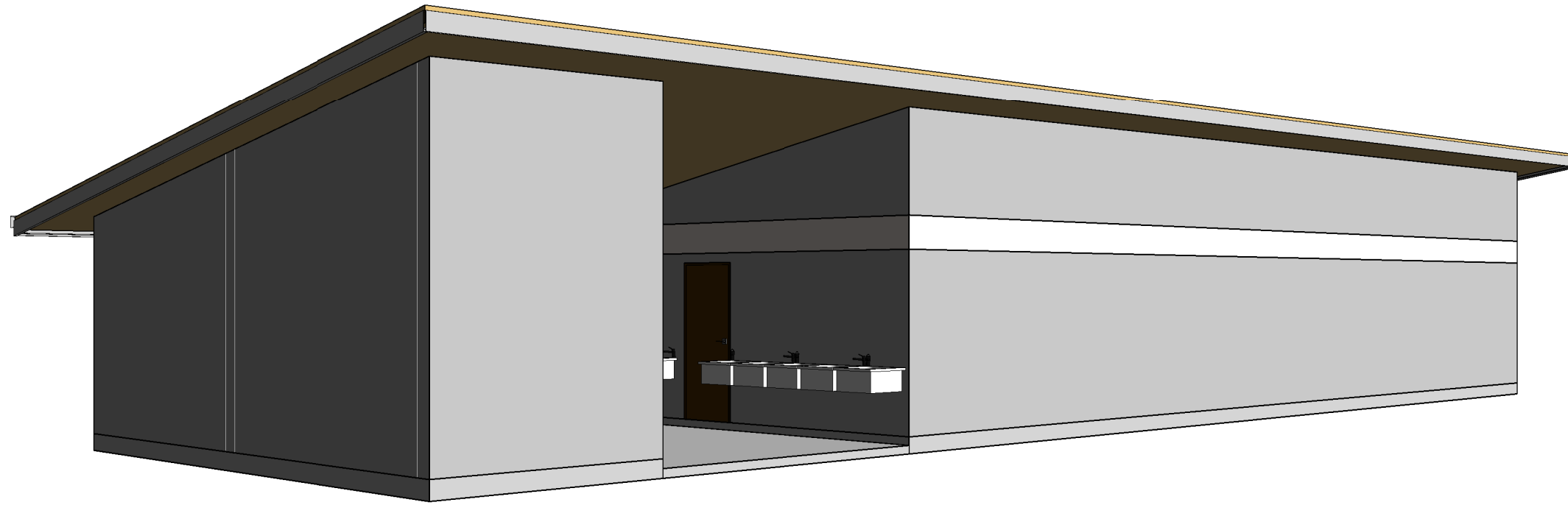
**CLIENT**  
**LAKESHORE AVOCADOS**




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DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
No.	DATE	DESCRIPTION	
VARIATIONS INCLUDED IN THIS DRAWING			
DRAWING TITLE			
<b>3D VIEWS</b>			
SHEET NO.	05	PRINT TIME:	12/07/2022 6:54:10 AM
PRELIMINARY:	11/07/22	CONSTRUCTION:	-
<b>A3</b>	SCALE:	ISSUE:	A
	NTS AT A3	DRAWN BY:	WE
<b>PRELIMINARY ISSUE</b>			
SSHQ JOB No.	-	DRAWING No.	21040101
<b>PROJECT</b>			
PROPOSED TOILET BLOCK			
Lot 414 on RP835556			
429 FICHERA ROAD,			
MAREEBA			
<b>CLIENT</b>			
LAKESHORE AVOCADOS			
			
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Document Set ID: 4172068  
Version: 1, Version Date: 04/01/2023

**APPENDIX B  
TRAFFIC DATA**



## Lockwood Rd - TC Location Ch 45

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## MetroCount Traffic Executive Class Speed Matrix

### ClassMatrix-419 -- English (ENA)

#### Datasets:

**Site:** [Lockwood Road] Intersection Fichera Road @ Ch 45 <100>  
**Attribute:** Mareeba  
**Direction:** 7 - North bound A>B, South bound B>A. Lane: 0  
**Survey Duration:** 14:22 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021,  
**Zone:**  
**File:** Lockwood Road 0 2021-06-28 1034.EC0 (Plus )  
**Identifier:** FN47XFS5 MC56-L5 [MC55] (c)Microcom 19Oct04  
**Algorithm:** Factory default axle (v5.07)  
**Data type:** Axle sensors - Paired (Class/Speed/Count)

#### Profile:

**Filter time:** 14:23 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021 (6.84134)  
**Included classes:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12  
**Speed range:** 10 - 160 km/h.  
**Direction:** North, East, South, West (bound), P = North, Lane = 0-16  
**Separation:** Headway > 0 sec, Span 0 - 100 metre  
**Name:** Default Profile  
**Scheme:** Vehicle classification (AustRoads94)  
**Units:** Metric (metre, kilometre, m/s, km/h, kg, tonne)  
**In profile:** Vehicles = 734 / 737 (99.59%)

## Class Speed Matrix

**ClassMatrix-419**

**Site:** Lockwood Road.0.1NS  
**Description:** Intersection Fichera Road @ Ch 45 <100>  
**Filter time:** 14:23 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021  
**Scheme:** Vehicle classification (AustRoads94)  
**Filter:** Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

km/h	Class												Total	
	SV 1	SVT 2	TB2 3	TB3 4	T4 5	ART3 6	ART4 7	ART5 8	ART6 9	BD 10	DRT 11	TRT 12		
10- 20	5	.	2	.	.	.	.	.	.	.	.	.	7	1.0%
20- 30	14	.	2	1	1	.	.	.	2	2	.	.	22	3.0%
30- 40	20	.	1	1	.	.	.	.	2	15	.	.	39	5.3%
40- 50	28	4	5	.	1	.	.	.	2	59	.	.	99	13.5%
50- 60	86	2	13	1	1	.	1	.	5	69	.	.	178	24.3%
60- 70	142	.	12	1	1	.	.	.	2	6	.	.	164	22.3%
70- 80	147	2	8	.	.	.	.	.	2	2	.	.	161	21.9%
80- 90	47	2	9	.	.	.	.	.	.	.	.	.	58	7.9%
90-100	5	.	1	.	.	.	.	.	.	.	.	.	6	0.8%
100-110	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
110-120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120-130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130-140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140-150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150-160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
<b>Total</b>	<b>494</b>	<b>10</b>	<b>53</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>153</b>	<b>0</b>	<b>0</b>	<b>734</b>	
	<b>67.3%</b>	<b>1.4%</b>	<b>7.2%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.0%</b>	<b>0.1%</b>	<b>0.0%</b>	<b>2.0%</b>	<b>20.8%</b>	<b>0.0%</b>	<b>0.0%</b>		
<b>ESA</b>	0.0	0.0	106.0	8.0	8.0	0.0	3.0	0.0	45.0	612.0	0.0	0.0	782.0	
<b>Raw axle</b>	988	36	106	12	18	0	4	0	90	1367	0	0	2621	
<b>Single</b>	986	24	106	4	0	0	2	0	15	151	0	0	1288	
<b>T steer</b>	0	0	0	0	4	0	0	0	0	2	0	0	6	
<b>Double</b>	1	6	0	4	3	0	1	0	15	165	0	0	195	
<b>Triple</b>	0	0	0	0	2	0	0	0	15	294	0	0	311	
<b>Quad+</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total vehicles = 734, Total heavies = 230 (31.34%), Average ESA per heavy = 3.40  
 Twinsteers = 2.61% of heavies, 0.82% of total.



## MetroCount Traffic Executive Weekly Vehicle Counts (Virtual Week)

### VirtWeeklyVehicle-420 -- English (ENA)

#### Datasets:

**Site:** [Lockwood Road] Intersection Fichera Road @ Ch 45 <100>  
**Attribute:** Mareeba  
**Direction:** 7 - North bound A>B, South bound B>A. **Lane:** 0  
**Survey Duration:** 14:22 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021,  
**Zone:**  
**File:** Lockwood Road 0 2021-06-28 1034.EC0 (Plus )  
**Identifier:** FN47XFS5 MC56-L5 [MC55] (c)Microcom 19Oct04  
**Algorithm:** Factory default axle (v5.07)  
**Data type:** Axle sensors - Paired (Class/Speed/Count)

#### Profile:

**Filter time:** 14:23 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021 (6.84134)  
**Included classes:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12  
**Speed range:** 10 - 160 km/h.  
**Direction:** North, East, South, West (bound), P = North, Lane = 0-16  
**Separation:** Headway > 0 sec, Span 0 - 100 metre  
**Name:** Default Profile  
**Scheme:** Vehicle classification (AustRoads94)  
**Units:** Metric (metre, kilometre, m/s, km/h, kg, tonne)  
**In profile:** Vehicles = 734 / 737 (99.59%)

## Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-420

**Site:** Lockwood Road.0.1NS  
**Description:** Intersection Fichera Road @ Ch 45 <100>  
**Filter time:** 14:23 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021  
**Scheme:** Vehicle classification (AustRoads94)  
**Filter:** Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages	
								1 - 5	1 - 7
0000-0100	3.0	0.0	0.0	0.0	1.0	5.0	0.0	0.8	1.3
0100-0200	1.0	2.0	0.0	0.0	1.0	1.0	0.0	0.8	0.7
0200-0300	2.0	0.0	0.0	0.0	6.0	0.0	0.0	1.6	1.1
0300-0400	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.6	0.4
0400-0500	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.2	0.4
0500-0600	1.0	0.0	2.0	1.0	0.0	0.0	2.0	0.8	0.9
0600-0700	12.0	<b>19.0</b>	<b>13.0</b>	14.0	12.0	2.0	5.0	<b>14.0</b>	<b>11.0</b>
0700-0800	5.0	2.0	2.0	3.0	7.0	0.0	0.0	3.8	2.7
0800-0900	7.0	7.0	7.0	<b>16.0</b>	4.0	5.0	0.0	8.2	6.6
0900-1000	6.0	10.0	9.0	3.0	2.0	<b>7.0</b>	6.0	6.0	6.1
1000-1100	3.0	3.0	5.0	2.0	9.0	6.0	<b>7.0</b>	4.4	5.0
1100-1200	*	5.0	2.0	2.0	<b>15.0</b>	6.0	3.0	6.0	5.5
1200-1300	*	5.0	4.0	1.0	7.0	10.0	7.0	4.3	5.7
1300-1400	*	6.0	4.0	6.0	<b>15.0</b>	7.0	7.0	7.8	7.5
1400-1500	4.0	5.0	2.0	5.0	3.0	<b>13.0</b>	5.0	3.8	5.3
1500-1600	9.0	6.0	3.0	9.0	5.0	5.0	6.0	6.4	6.1
1600-1700	21.0	<b>15.0</b>	<b>18.0</b>	<b>15.0</b>	7.0	5.0	6.0	<b>15.2</b>	<b>12.4</b>
1700-1800	12.0	12.0	5.0	11.0	6.0	5.0	<b>10.0</b>	9.2	8.7
1800-1900	12.0	2.0	5.0	8.0	7.0	4.0	7.0	6.8	6.4
1900-2000	6.0	3.0	0.0	4.0	6.0	4.0	0.0	3.8	3.3
2000-2100	4.0	2.0	0.0	5.0	4.0	3.0	3.0	3.0	3.0
2100-2200	5.0	0.0	0.0	7.0	1.0	4.0	4.0	2.6	3.0
2200-2300	3.0	0.0	0.0	3.0	4.0	5.0	2.0	2.0	2.4
2300-2400	1.0	0.0	0.0	3.0	5.0	3.0	1.0	1.8	1.9
<b>Totals</b>									
0700-1900	*	78.0	66.0	81.0	87.0	73.0	64.0	81.8	78.1
0600-2200	*	102.0	79.0	111.0	110.0	86.0	76.0	105.2	98.4
0600-0000	*	102.0	79.0	117.0	119.0	94.0	79.0	109.0	102.7
0000-0000	*	105.0	83.0	118.0	127.0	101.0	82.0	113.8	107.5
<b>AM Peak</b>	*	0600	0600	0800	1100	0900	1000		
	*	19.0	13.0	16.0	15.0	7.0	7.0		
<b>PM Peak</b>	*	1600	1600	1600	1300	1400	1700		
	*	15.0	18.0	15.0	15.0	13.0	10.0		

\* - No data.



## Fichera Rd - TC Location Ch 70

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## MetroCount Traffic Executive Class Speed Matrix

### ClassMatrix-432 -- English (ENA)

#### Datasets:

**Site:** [Fichera Road] Intersection Tinaroo Creek Road @ Ch 70 <100>  
**Attribute:** Mareeba  
**Direction:** 7 - North bound A>B, South bound B>A. **Lane:** 0  
**Survey Duration:** 10:53 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021,  
**Zone:**  
**File:** Fichera Road 0 2021-07-09 1334.EC0 (Plus )  
**Identifier:** FN47XFS5 MC56-L5 [MC55] (c)Microcom 19Oct04  
**Algorithm:** Factory default axle (v5.07)  
**Data type:** Axle sensors - Paired (Class/Speed/Count)

#### Profile:

**Filter time:** 10:54 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021 (11.1116)  
**Included classes:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12  
**Speed range:** 10 - 160 km/h.  
**Direction:** North, East, South, West (bound), P = North, Lane = 0-16  
**Separation:** Headway > 0 sec, Span 0 - 100 metre  
**Name:** Default Profile  
**Scheme:** Vehicle classification (AustRoads94)  
**Units:** Metric (metre, kilometre, m/s, km/h, kg, tonne)  
**In profile:** Vehicles = 5703 / 5766 (98.91%)

## Class Speed Matrix

**ClassMatrix-432**

**Site:** Fichera Road.0.1NS  
**Description:** Intersection Tinaroo Creek Road @ Ch 70 <100>  
**Filter time:** 10:54 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021  
**Scheme:** Vehicle classification (AustRoads94)  
**Filter:** Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

km/h	Class												Total	
	SV 1	SVT 2	TB2 3	TB3 4	T4 5	ART3 6	ART4 7	ART5 8	ART6 9	BD 10	DRT 11	TRT 12		
10- 20	182	5	34	19	1	.	3	2	8	10	.	.	264	4.6%
20- 30	659	63	119	41	3	.	9	3	17	20	.	.	934	16.4%
30- 40	1678	138	257	36	4	3	33	3	16	4	.	.	2172	38.1%
40- 50	1520	54	216	13	5	.	8	.	3	.	.	.	1819	31.9%
50- 60	403	3	60	1	.	.	.	.	.	.	.	.	467	8.2%
60- 70	38	.	8	.	.	.	.	.	.	.	.	.	46	0.8%
70- 80	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
80- 90	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
90-100	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
100-110	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
110-120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120-130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130-140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140-150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150-160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
<b>Total</b>	<b>4481</b>	<b>263</b>	<b>694</b>	<b>110</b>	<b>13</b>	<b>3</b>	<b>53</b>	<b>8</b>	<b>44</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>5703</b>	
	<b>78.6%</b>	<b>4.6%</b>	<b>12.2%</b>	<b>1.9%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>0.9%</b>	<b>0.1%</b>	<b>0.8%</b>	<b>0.6%</b>	<b>0.0%</b>	<b>0.0%</b>		
<b>ESA</b>	0.0	0.0	1388.0	220.0	26.0	9.0	159.0	24.0	132.0	136.0	0.0	0.0	2094.0	
<b>Raw axle</b>	8962	1003	1388	330	60	9	212	40	264	300	0	0	12568	
<b>Single</b>	8918	577	1388	110	0	9	106	11	49	34	0	0	11202	
<b>T steer</b>	0	0	0	0	13	0	0	1	0	0	0	0	14	
<b>Double</b>	29	210	1	110	8	0	53	12	43	40	0	0	506	
<b>Triple</b>	0	2	0	0	8	0	0	1	43	62	0	0	116	
<b>Quad+</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total vehicles = 5703, Total heavies = 959 (16.82%), Average ESA per heavy = 2.18  
 Twinsteers = 1.46% of heavies, 0.25% of total.

## MetroCount Traffic Executive Weekly Vehicle Counts (Virtual Week)

### VirtWeeklyVehicle-431 -- English (ENA)

#### Datasets:

**Site:** [Fichera Road] Intersection Tinaroo Creek Road @ Ch 70 <100>  
**Attribute:** Mareeba  
**Direction:** 7 - North bound A>B, South bound B>A. **Lane:** 0  
**Survey Duration:** 10:53 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021,  
**Zone:**  
**File:** Fichera Road 0 2021-07-09 1334.EC0 (Plus )  
**Identifier:** FN47XFS5 MC56-L5 [MC55] (c)Microcom 19Oct04  
**Algorithm:** Factory default axle (v5.07)  
**Data type:** Axle sensors - Paired (Class/Speed/Count)

#### Profile:

**Filter time:** 10:54 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021 (11.1116)  
**Included classes:** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12  
**Speed range:** 10 - 160 km/h.  
**Direction:** North, East, South, West (bound), P = North, Lane = 0-16  
**Separation:** Headway > 0 sec, Span 0 - 100 metre  
**Name:** Default Profile  
**Scheme:** Vehicle classification (AustRoads94)  
**Units:** Metric (metre, kilometre, m/s, km/h, kg, tonne)  
**In profile:** Vehicles = 5703 / 5766 (98.91%)

## Weekly Vehicle Counts (Virtual Week)

**VirtWeeklyVehicle-431**

**Site:** Fichera Road.0.1NS  
**Description:** Intersection Tinaroo Creek Road @ Ch 70 <100>  
**Filter time:** 10:54 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021  
**Scheme:** Vehicle classification (AustRoads94)  
**Filter:** Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages	
								1 - 5	1 - 7
0000-0100	3.0	0.5	0.0	3.5	5.0	8.0	2.0	2.3	2.8
0100-0200	1.0	1.5	0.0	0.0	2.5	6.0	4.0	1.0	1.7
0200-0300	6.0	0.0	0.0	0.0	2.0	3.0	0.0	1.1	1.2
0300-0400	1.0	0.0	0.5	0.5	0.5	1.0	2.0	0.4	0.6
0400-0500	1.0	0.5	1.0	2.0	2.0	2.0	1.0	1.3	1.4
0500-0600	6.0	7.0	7.5	8.5	7.0	5.0	1.0	7.3	6.5
0600-0700	18.0	25.0	23.5	26.0	28.0	6.0	4.0	24.8	21.2
0700-0800	22.0	12.5	15.5	20.0	26.0	11.0	8.0	18.9	17.2
0800-0900	26.0	30.0	24.5	36.0	31.5	27.0	16.0	30.0	28.5
0900-1000	<b>37.0</b>	<b>40.5</b>	<b>44.0</b>	42.0	39.5	<b>47.0</b>	41.0	<b>41.0</b>	<b>41.5</b>
1000-1100	20.5	38.0	43.0	34.5	42.0	40.0	<b>48.0</b>	35.6	37.0
1100-1200	34.5	39.5	41.0	<b>45.5</b>	<b>44.0</b>	39.0	37.0	40.9	40.4
1200-1300	32.0	<b>53.5</b>	35.5	39.5	<b>50.0</b>	35.0	<b>50.0</b>	42.1	42.2
1300-1400	41.0	36.5	41.5	42.0	34.5	<b>43.0</b>	30.0	39.1	38.7
1400-1500	29.0	43.0	<b>46.0</b>	43.5	39.0	38.0	47.0	40.2	40.6
1500-1600	45.5	39.0	38.0	38.0	44.0	37.0	45.0	40.6	40.6
1600-1700	<b>47.5</b>	47.5	43.0	<b>51.5</b>	37.0	33.0	46.0	<b>46.2</b>	<b>45.0</b>
1700-1800	35.5	40.5	44.0	44.5	45.0	18.0	29.0	41.6	38.3
1800-1900	17.5	21.0	23.0	22.5	27.0	19.0	21.0	21.7	21.4
1900-2000	11.5	14.0	16.5	12.5	7.0	13.0	9.0	12.9	12.5
2000-2100	6.0	12.5	7.5	12.0	10.0	14.0	11.0	9.6	10.1
2100-2200	3.5	3.0	3.0	11.5	14.0	8.0	6.0	6.2	6.4
2200-2300	5.0	1.0	3.5	6.0	12.0	9.0	7.0	4.8	5.4
2300-2400	2.0	0.5	0.0	2.0	10.0	8.0	5.0	2.1	2.9
<b>Totals</b>									
0700-1900	388.0	441.5	439.0	459.5	459.5	387.0	418.0	437.8	431.3
0600-2200	427.0	496.0	489.5	521.5	518.5	428.0	448.0	491.3	481.5
0600-0000	434.0	497.5	493.0	529.5	540.5	445.0	460.0	498.1	489.8
0000-0000	452.0	507.0	502.0	544.0	559.5	470.0	470.0	511.7	504.1
<b>AM Peak</b>	0900	0900	0900	1100	1100	0900	1000		
	37.0	40.5	44.0	45.5	44.0	47.0	48.0		
<b>PM Peak</b>	1600	1200	1400	1600	1200	1300	1200		
	47.5	53.5	46.0	51.5	50.0	43.0	50.0		

\* - No data.

27 July 2023

Chief Executive Officer  
Mareeba Shire Council  
65 Rankin Street  
**MAREEBA QLD 4880**

**Attention** – Carl Ewin

Dear Carl,

**FURTHER RESPONSE TO COUNCIL REGARDING TRAFFIC INVESTIGATION -  
WORKFORCE ACCOMMODATION – 429 FICHERA ROAD MAREEBA**

Reference is made to the workshop with Council held on 3<sup>rd</sup> May 2023 and the further meeting with technical staff regarding traffic considerations associated with the proposed development. Officers requested that the traffic impact assessment be reviewed and modified to the extent necessary to:

- Remove the heavy vehicle counts (given the short duration over which these vehicles operate on the road);
- Consider service vehicles attending the site; and
- Further consider the current formation of Fichera Road.

As discussed at the meeting, the further investigation requested by Council was not going to make a material change to the traffic numbers generated by the development to that already established. Nonetheless, it was agreed that further investigations would be completed.

This further investigation has now been completed by ARO Industries. Please see attached Traffic Addendum which is to be read in conjunction with the previous traffic impact assessment dated 1 December 2022.

As detailed in the attached submission, the additional daily traffic movements generated by the development represents an increase of approximately 3% when compared to the current daily traffic movements. As detailed in the submission, the current daily traffic movements on Fichera Road are approximately 4 times greater than that guided by Austroads. It is therefore the position of the Applicant that it is not reasonable to require substantial upgrades to Fichera Road when the development increases vehicle movements by approximately 3% and having regard to the number of vehicle movements on Fichera Road predevelopment.



In order to look at opportunities to ameliorate traffic impacts generated by the development, critical sections of Fichera Road were reviewed to look at opportunities to improve the conveyance of vehicles on the road. The traffic engineer observed that widening of the road at these locations had already taken place. The traffic engineer has also observed that while the existing sealed pavement ranges between 4m to 5.5m, the vertical alignment of Fichera Road is flat, with wide and well graded shoulders allowing vehicles to safely pass. It is also recommended that the speed limit of the road be sign posted to 80km/hr to improve road safety.

It is also important to note that the Applicant intends to produce grapes at the Fichera Road property which will reduce vehicle movements due to workers remaining onsite as opposed to travelling elsewhere to work.

Please be advised this concludes the response to those matters raised by Council officers.

Yours Sincerely



Neil Beck  
Town Planner  
0477006782

### **Attachments**

1. Traffic Addendum

# ATTACHMENT 1 –TRAFFIC ADDENDUM

# ARO INDUSTRIES

429 FICHERA ROAD  
WORKERS  
ACCOMMODATION  
TRAFFIC ADDENDUM



## DOCUMENT CONTROL SHEET


<p><b>Title:</b> 429 Fichera Road Workers Accommodation Traffic Report</p> <p><b>Document No:</b> ARO0276</p> <p><b>Project Director:</b> Andrew Armstrong</p> <p><b>Author:</b> Andrew Armstrong</p> <p><b>Client:</b> Lakeshore Avocados</p> <p><b>Client Contact:</b> Neil Beck</p> <p><b>Client Reference:</b> 429 Fichera Road Workers Accommodation</p> <p><b>Purpose:</b> This is an addendum to the traffic impact assessment for the proposed change of use to establish workers accommodation at 429 Fichera Road, Mareeba.</p>	<p><b>ARO Industries Pty Ltd</b>                      51 Sheridan Street                      Cairns, QLD, 4870</p> <p>PO Box 6490                      Cairns QLD 4870</p> <p>Phone: (07) 4281 6897                      www.aroindustries.com.au</p>
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Recommendations contained in this report are based largely on our understanding of the information that has been supplied to us and should be balanced against additional information that you may hold or seek. The client is cautioned to exercise due commercial diligence in the interpretation of any material herein and accept our findings as suggestions given in good faith requiring interpretation within the context of the client's own enterprise environment.

Distribution	Document Revision Number								
	0	1	2	3	4	5	6	7	8
Neil Beck		1	1						
ARO Industries Record	1	1	1						

Revision History					
Revision No.	Author	Reviewer	Approved For issue		
			RPEQ No.	Signature	Date
2	A. Armstrong		21116		13/7/2023

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## INTRODUCTION

This addendum seeks to address Council’s feedback to the Traffic Report for the proposed workers accommodation at 429 Fichera Road Mareeba. Specifically, the addendum will review the impact of the following points on the findings of the original traffic report:

- Adjacent Developments;
- Reduce the heavy vehicles in the Fichera Road and Lockwood Road traffic counts;
- Increase the development traffic to account for service vehicles; and
- Review the current formation of Fichera Road.

These issues were raised by Council Officers and Councillors during the workshop conducted on Wednesday 3 May 2023. Each issue is discussed further below.

This addendum should be read in conjunction with the Traffic Report (rev B) dated 1 December 2022.

## ADJACENT DEVELOPMENTS

A number of similar traffic generating developments were identified along Fichera Road. Most of these developments are currently operational and were so during the period of the traffic survey conducted in 2021. The De Bruey’s Boutique Wines Tourist Accommodation is currently under construction. As such, the traffic surveys do not consider the increased traffic volumes generated by the tourist accommodation.

According to the Australian Bureau of Statistics, the population of Mareeba has increased by approximately 0.4% per annum between the census years 2016 and 2021. The traffic volume on the Kennedy Highway (32A) Cairns to Mareeba has increased on average by 0.5% per annum between 2016 and 2021. The traffic volume on Kennedy Highway (32B) Mareeba – Atherton has increased on average by 1.5% per annum between 2016 and 2021.

The Forecast volumes have been extrapolated for the opening year of 2024 and 2034 (+ 10 years) by assuming a conservative linear growth rate of 2%, consistent with recent traffic growth rates on the Kennedy Highway, population growth and planned traffic generating developments.

## HEAVY VEHICLES

Council officers identified that the traffic counts provided to the applicant included heavy vehicle traffic associated with the seasonal hauling of sugar cane. Therefore, the average annual heavy vehicle traffic is over-represented during this period. Council officers requested that the heavy vehicles (B-doubles) be omitted from the background traffic volumes. A breakdown of the average b-double volumes on Fichera Road and Lockwood Road is presented in the table below.

2021 Count	Fichera Road	Lockwood Road
Average Daily Traffic Volume	504.1	107.5
B-Double Volume (%)	3 (0.6%)	22.4 (20.8%)
Amend Average traffic Volume	501.1	85.1

The background traffic volume at opening (2023) and 10-year design horizon (2033) is presented below.

### Fichera Road

Period	2021 Count	2024 forecast	2034 forecast	Comments
Weekday AM Peak	24.7	25.7	30.8	AM Peak 6:00AM – 7:00AM 50:50 directional split
Weekday PM Peak	45.9	47.7	57.3	PM Peak 4:00PM – 5:00PM 50:50 directional split
Daily	501.1	521.1	625.4	Average Annual Daily Traffic 16.8% heavy vehicles

### Lockwood Road

Period	2021 Count	2024 forecast	2034 forecast	Comments
Weekday AM Peak	11.1	11.5	13.8	AM Peak 6:00AM – 7:00AM 50:50 directional split
Weekday PM Peak	12	12.5	15	PM Peak 4:00PM – 5:00PM 50:50 directional split
Daily	85.1	88.5	106.2	Average Annual Daily Traffic 10.3% heavy vehicles

### DEVELOPMENT TRAFFIC

Services vehicles had been omitted from the development traffic generation rates. It is acknowledged that the development will be serviced by deliveries, cleaners, lawn care, etc. It is assumed that the development will receive, on average, 1 service vehicle per day.

The Lakeshore Farms packaging facility and farms are located on Henry Hannam Drive and State Farm Road, in Kairi. Therefore, the majority of the worker transport will head south onto Lockwood Road from the accommodation. Likewise, the majority of the workers will be transport from the south in the afternoons. Worker transport will be via minibuses commensurate with Toyota Hiace vans.

It is proposed that the workers accommodation will be utilised by other local farms during the avocado off-season.

It is understood that car ownership will not be accommodated at the facility and controlled use of the minibuses will be permitted.

The following assumptions are made regarding traffic generations and movement.

- Accommodation will be limited to a maximum of 144 workers with a manager’s residence on site;
- Workers will be shuttled to and from work by 12 minibuses (12 seats);
- AM peak is 6:00AM to 7:00AM
- PM peak is 4:00PM to 5:00PM
- The workers transport will travel south along Lockwood Road to various farms and packing facilities;
- Workers transport will remain at the farms and packaging facilities until end of work shifts.
- Manager will use 1 light vehicle daily during peaks; and
- Workers will be transported to Mareeba Business District in the evenings by minibuses, as required outside of network peak at 3 trips per day.
- Allowance for evening and weekend visitor trips outside peak hours.

Based on the aforementioned assumptions, the development traffic figures are presented below.

Vehicle type	Peak hour trips	Daily trips	Comments
Service vehicles	1	2	100% trips to and from the North
Workers Transport	12	30	60% of trips will be to and from the South (Lockwood Road) 40% of trips will be to and from the North (Fichera Road)
Visitor Vehicles	1	5	Visiting and private vehicle use is expected to be outside peak hours
Managers Vehicle	2	6	50% trips to and from the South
<b>Total</b>	<b>16</b>	<b>43</b>	

The additional traffic on Fichera Road and Lockwood Road as a result of the development is summaries below.

#### 2024 Average Daily Traffic

	Fichera Road	Lockwood Road
Background Traffic	521.1	88.5
Development Traffic	17.2	25.8
Total Traffic	538.3	114.3

#### 2034 Average Daily Traffic

	Fichera Road	Lockwood Road
Background Traffic	625.4	106.2
Development Traffic	17.2	25.8
Total Traffic	642.6	132.0

The development generated traffic represents **3%** and **23%** of the total traffic on Fichera Road and Lockwood Road, respectively.

## ROAD GEOMETRY

Adjacent to the site, Fichera Road consists of a 4m wide sealed pavement with 1.5m wide gravel shoulders. Approximately 2.3km North along Fichera Road the seal widens to 6.5m. The seal at critical sections, such as horizontal curves, of Fichera Road is widened to 5.5m - 6m.

South of the site, Fichera Road seal width ranges between 4m to 5.5m. Approximately 1.2km south of the site Fichera Road turns into Lockwood Road which consists of an unsealed pavement nominally 8m wide.

Fichera Road and Lockwood Road traverse flat terrain. The shoulders are wide and well graded, providing opportunity for vehicles to pass each other safely. The roads are unposted (no speed limit advised) and therefore default to 100km/h for rural roads. It is recommended that the speed limit be posted at 80km/hr in consideration of driving conditions, horizontal geometry and to improve road safety.



The Austroads Guide to Road Design Part 3: Geometric Design provides guidance on Rural Road widths. Accordingly, it is acceptable to have a single sealed lane of 3.7m minimum width where the traffic volumes are less than 150 vehicles per day, particularly where terrain is open and sparsely settled.

While the total traffic on Lockwood Road is within the limits set out by the Austroads Guide, it is noted that the existing traffic on Fichera Road is over four (4) times greater than the prescribed limit, during seasonal peaks. The development traffic will only marginally increase the traffic on Fichera Road.

## **CONCLUSION**

The traffic report and the changes implemented in this addendum has demonstrated that the impact on Fichera Road north of the site is marginal, resulting in a traffic volume increase of 3%. While it is acknowledged that most of the development traffic will impact Fichera Road south of the site and Lockwood Road, the traffic volume (including the development generated traffic) is very low at less than 150 vehicle per day.