

Traffix Group

Traffic Engineering Assessment

Proposed Development Plan
72 Golf Course Road, Euroa

Prepared for
Enclave Living Pty Ltd

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1. Introduction

Traffix Group has been engaged by Enclave Living Pty Ltd to undertake a Traffic Engineering Assessment for the Proposed Development Plan at 72 Golf Course Road, Euroa.

The site is subject to the Schedule 4 of the Development Plan Overlay within the Strathbogie Planning Scheme, which requires a Development Plan to be prepared to the satisfaction of the responsible authority to guide the future subdivision, use and development of land known as Eastern Gateway Euroa.

This report provides a detailed traffic engineering assessment of the parking and traffic issues associated with the proposed development. It addresses the following requirements of the Traffic Impact Assessment report required by the Schedule to the Development Plan Overlay:

- *The appropriateness of proposed access and circulation of vehicles on the existing and future road network.*
- *The works necessary to accommodate traffic generated by the development and to mitigate any adverse impacts of the development.*
- *The considerations of traffic impact to the broader arterial road network in relation to the traffic generation of proposed development.*

The Draft Development Plan has also been submitted to Department of Transport (DoT) for comment. In a letter dated 12 April 2022, DoT provided comments and suggested permit conditions, should Council approve the Development Plan. In general, it appears that DoT is supportive of the Development Plan subject to further information and conditions.

From a traffic perspective, the following was noted/conditioned:

- 1. Only one accesses will be permitted from the subject land to the Euroa Main Road located at Subdivisional Road as shown on the plan appended to the application.*
- 2. Prior to the certification of the plan of subdivision, a Functional Layout Plan must be submitted to and approved by the Head, Transport for Victoria. When approved by the Head, Transport for Victoria, the plans must be endorsed by the Responsible Authority and will then form part of the permit. The plans must show the following:*
 - i Short Channelised Right-turn Treatment (CHR(S)) and Short Auxiliary Left-turn Treatment (AUL(S)) at the intersection of Subdivisional Road and Euroa Main Road.*
- 3. Prior to the release of a statement of compliance:*
 - a) The following roadworks must be completed at the intersection of Subdivisional Road and Euroa Main Road to the satisfaction of and at no cost to the Head, Transport for Victoria:*
 - i. Short Channelised Right-turn Treatment (CHR(S));*
 - ii. Short Auxiliary Left-turn Treatment (AUL(S));*
 - iii. Any other works required.*

In the course of undertaking this assessment, we inspected the subject site, reviewed development plans and background material and assessed the car parking and traffic impacts of the proposal. Our assessment follows.

2. Existing Conditions

2.1. Subject Site

The subject site, addressed as 72 Golf Course Road, Euroa, is a large parcel of land situated between Golf Course Road at the east and Euroa Main Road at the west. The site is bound by Hume Freeway at the south.

The subject site is irregular in shape and has a total area of approximately 83 hectares.

The frontage to Golf Course Road is approximately 1.4 kilometres with a northern abuttal to Euroa Main Road at approximately 1.0 kilometre and a southern abuttal of approximately 700 metres to Hume Freeway.

The subject site is currently a vacant farmland with a single vehicle access to Golf Course Road near the northern end of the eastern boundary. Access is prohibited to Hume Freeway.

A locality plan and an aerial image of the site are provided at Figure 1 and Figure 2, respectively.

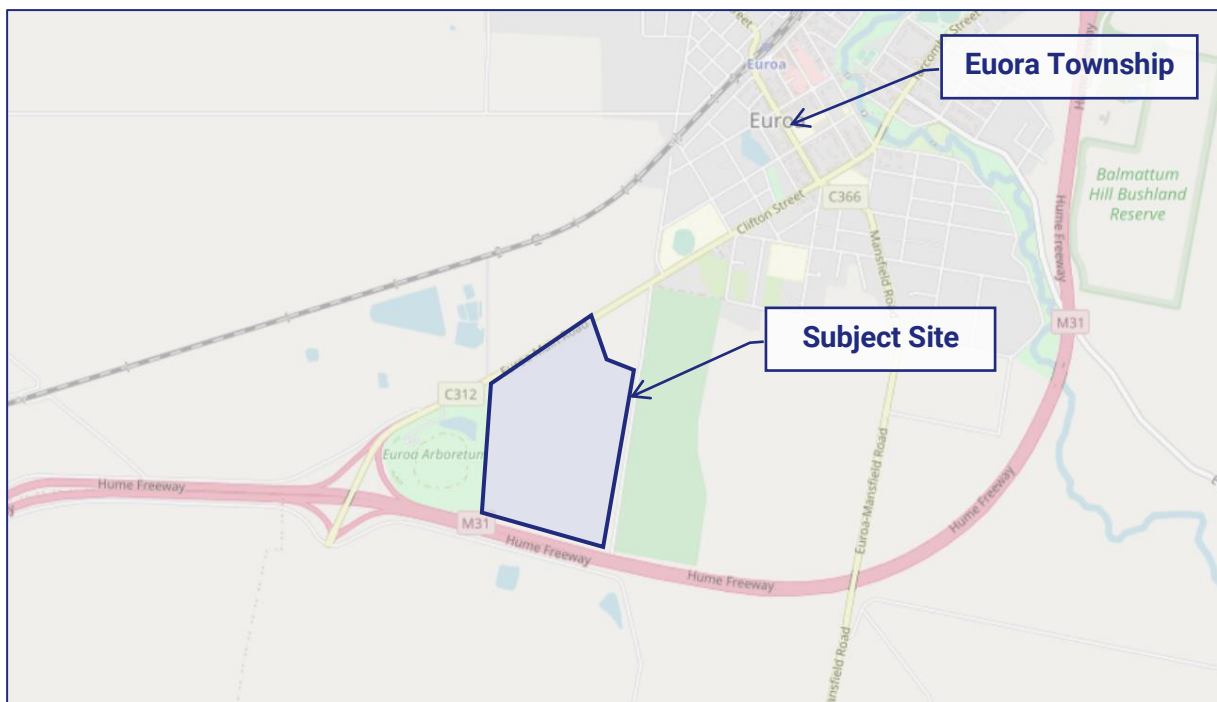


Figure 1: Locality Map

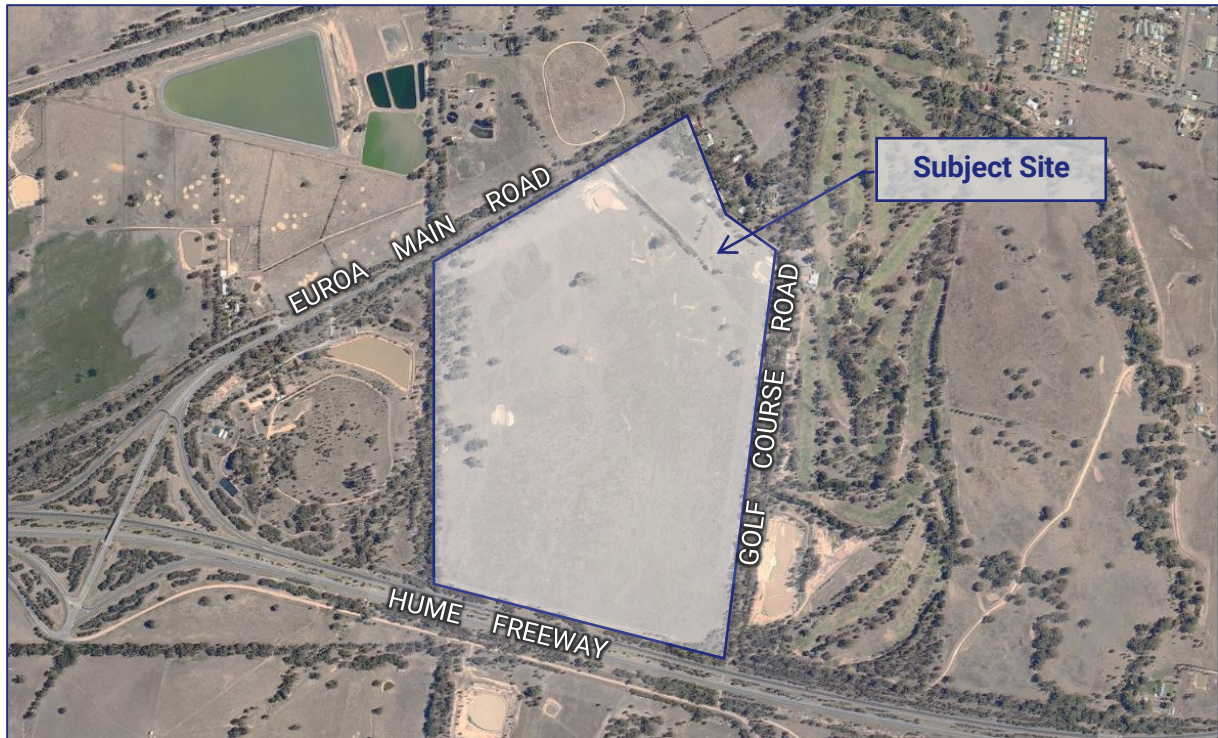


Figure 2: Aerial Image - Nearmap

2.2. Planning Scheme Zones & Surrounding Uses

The subject site comprises two different zones as presented at Figure 3. The northern half of the land is located within a Farming Zone (FZ), and the southern half of the land is located within a Low Density Residential Zone (LDRZ).

The site is subject to Schedule 4 of the Development Plan Overlay under the Strathbogie Planning Scheme.

This requires a Development Plan to be prepared to the satisfaction of the responsible authority to guide the future subdivision, use and development of land known as Eastern Gateway Euroa.

Land uses in the immediate vicinity of the subject site are generally farmland with public use zoning at the immediate northwest.

Euroa Town Centre is located approximately 2.0 kilometres to the northeast of the subject site.

Euroa Railway Station is located approximately 1.5 kilometres northeast of the subject site.

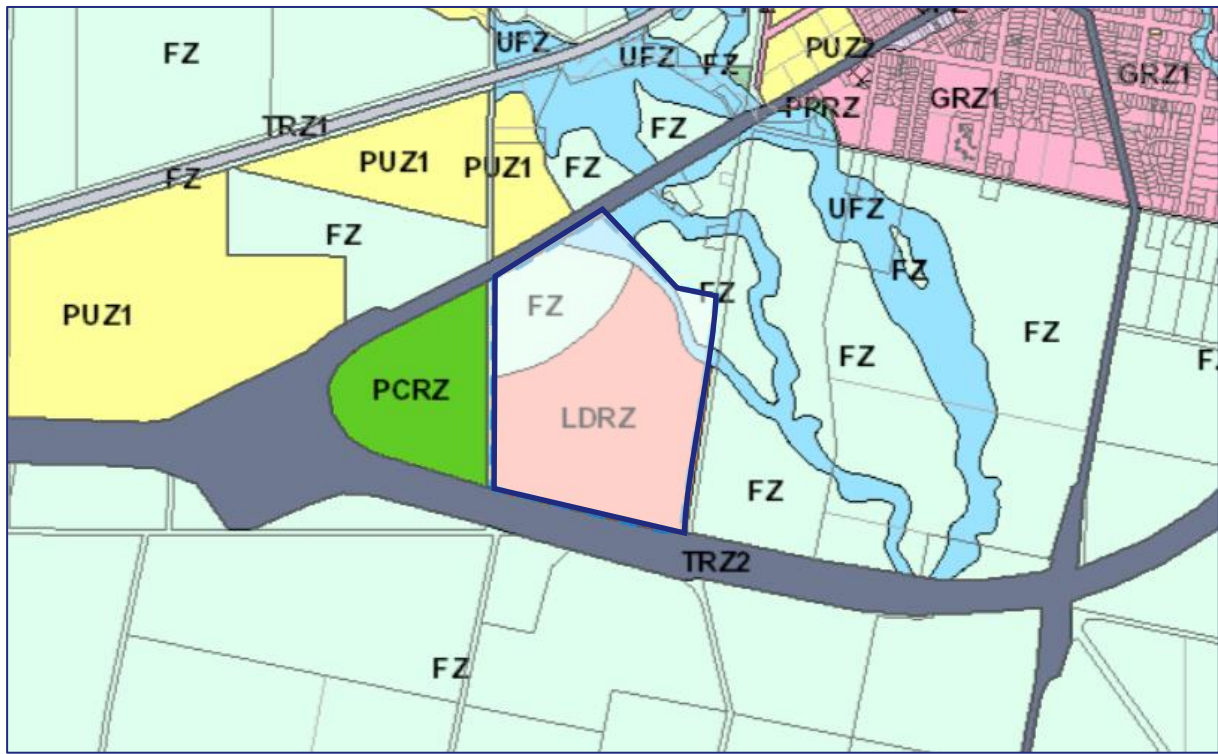


Figure 3: Planning Zone Map - Strathbogie

3. Proposed Development Plan

The Euroa Gateway Development Plan – Urban Structure Plan has been prepared by Urban Terrain identifying the development of the site for residential purposes.

The proposed development plan contemplates a yield of approximately 107 residential lots, a separate lifestyle (retirement) village with circa 150 dwellings and a farm site as shown in Figure 4.

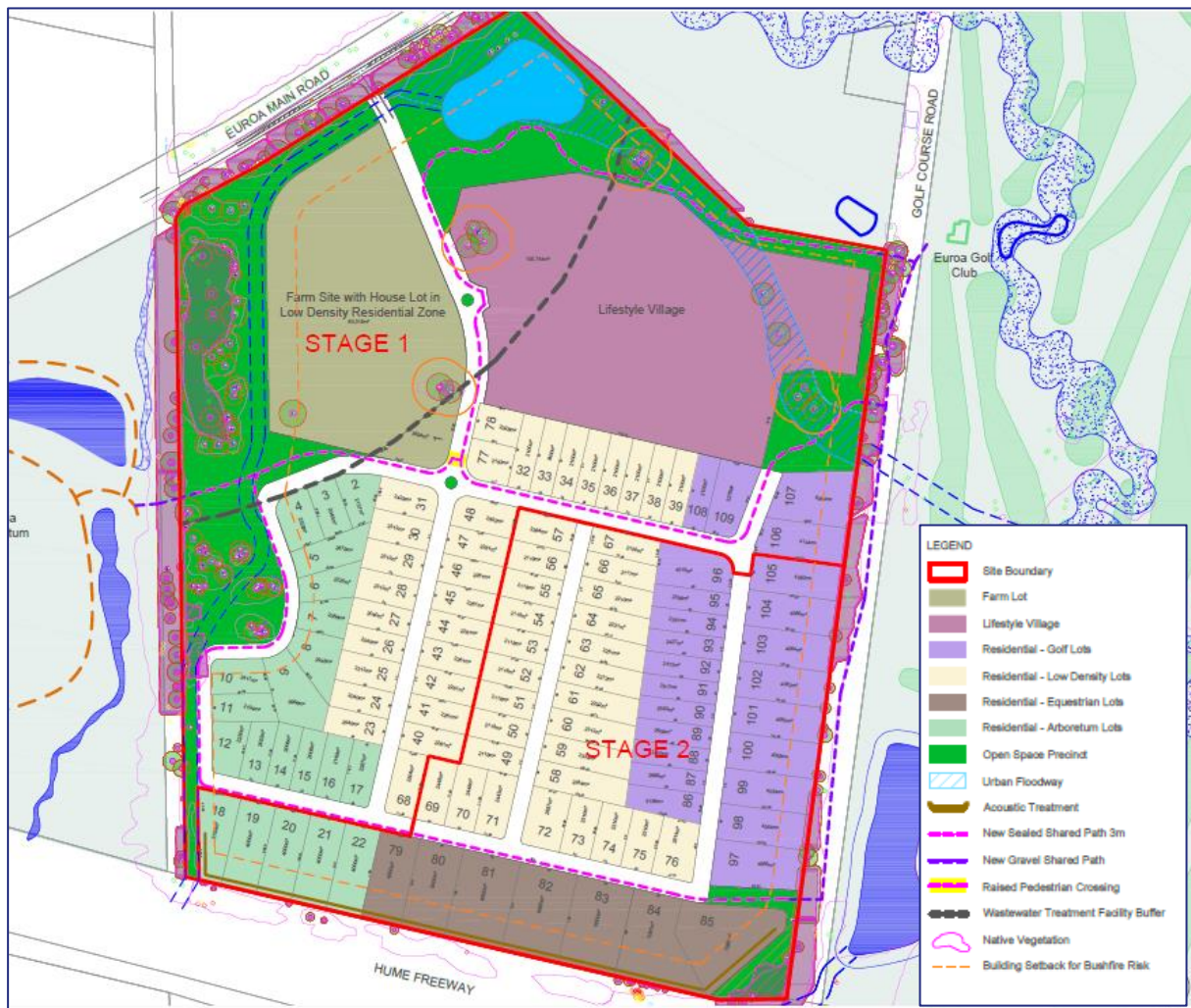


Figure 4: Proposed CDP – Euroa Gateway Development Plan

Main access to the development plan area is proposed via a new public road and intersection with Euroa Main Road.

The lifestyle village will have its primary access for residents from the new road. However, a second access from Golf Course Road will be provided for limited vehicle access for guest and deliveries associated with the community facility provided within the lifestyle village.

There will be no through vehicle connection between Golf Course Road and the new residential development.

The internal development of the site is supported by a network of new public roads of varying width and function. Pedestrian and shared path access links are also provided to the adjacent land at the east and west.

No vehicular access is proposed via Hume Freeway.

4. External Traffic Considerations

4.1. Existing Road Network

Euroa Main Road is a declared Arterial Road under the management of the Department of Transport, located within a Transport Road Zone 2 (TRZ2).

Euroa Main Road generally aligns in a north-east to south-west direction, extending from Hume Freeway in the southwest to Golf Course Road in the north-east, where it continues as Clifton Street.

Adjacent to the site, Euroa Main Road has a carriageway width of approximately 14 metres and provides a single traffic lane with shoulder width of approximately 3 metres in both directions.

The speed limit on Euroa Main Road varies along the site boundary. It is 100km/h adjacent at the south-western end of the site, reverting to 80km/h approximately central to the site boundary, and then to the immediate south-east of Golf Course Road, the speed limit reduces to 60km/h as it approaches the town centre.

Golf Course Road is a rural Council road generally aligned north-south direction between Euroa Main Road and Hume Freeway,

Golf Course Road operates two-way. In the northern section, it is provided with a paved surface of approximately 4.1 metres width, with gravel / grass shoulders.

Adjacent to the site, Golf Course Road reverts to gravel. This section of the road has a varying width, but is typically in the order of 4 metres, with sections of flat grass verges that would facilitate passing if necessary.

Golf Course Road narrows down at the southern end and there is no formal connection provided to Hume Freeway.

The intersection of Golf Course Road and Euroa Main Road is controlled with a stop sign. Basic turn treatments are provided on Euroa Main Road at the intersection, by widening of the shoulders for left and right turns.

Figure 7 and Figure 8 provide views of the road network in the vicinity of the site.



Figure 5: Euroa Main Road - View West



Figure 6: Euroa Main Road - View East



Figure 7: Golf Course Road (Paved) - View North



Figure 8: Golf Course Road (Paved) - View South



Figure 9: Golf Course Road (Gravel) - View North



Figure 10: Golf Course Road (Gravel) - View South

4.2. Existing Traffic Conditions

Due to COVID-19 restrictions, we have sourced traffic data from Strathbogie City Council to understand the typical existing traffic volume on Euroa Main Road near the proposed site access before the lockdown restrictions in March 2020.

The surveys were undertaken in 2019 and recorded an average daily two-way volume of 2,094 vehicles, inclusive of peak hour volumes of 210 vehicles. Limited information is available in relation to the direction of movements, however it is expected that movements are generally even in peaks, with a potential bias for movements south-westbound in the morning and north-eastbound in the afternoon.

We have also sought general traffic data from Department of Transport - DoT (formerly VicRoads) to confirm the overall peak hour and daily volumes above.

4.3. Crash Statistics

A review of the crash history has been undertaken for the past 5 years of available data (last updated February, 2021) for the area immediate to the subject site as shown in Figure 11.

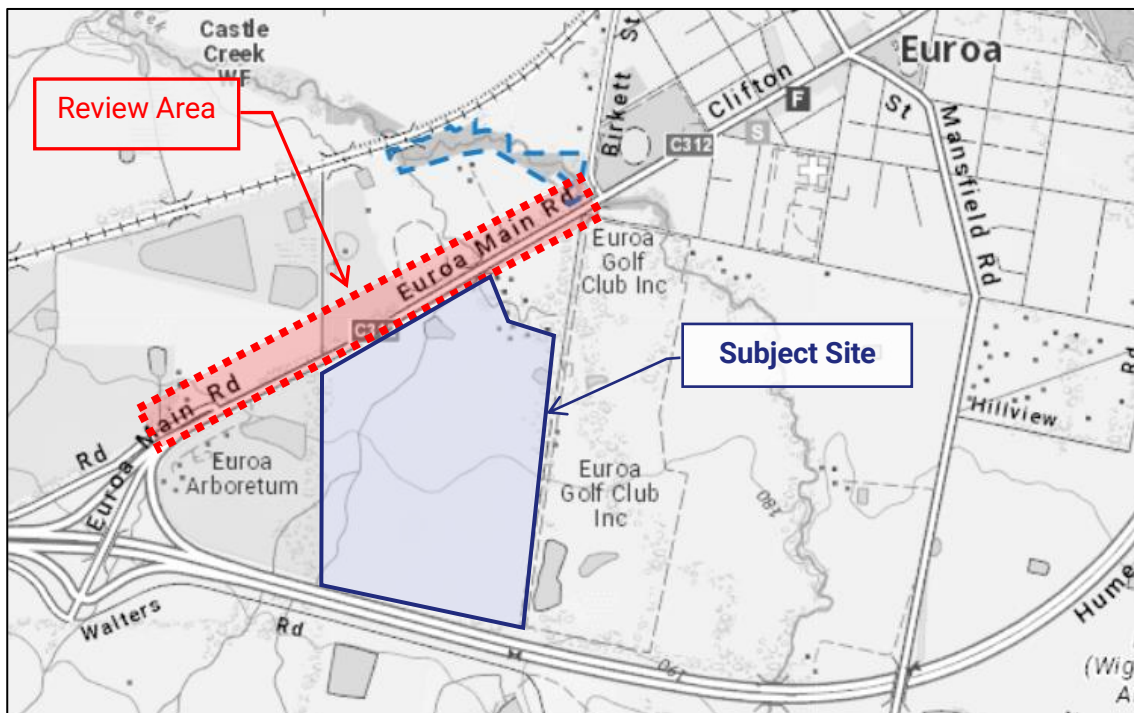


Figure 11: CrashStats Review Area

Only one (1) crash incident was recorded in the review area as detailed in Table 1.

Table 1: Crash Statistics

Location	Date	Time	Severity	Condition	DCA Code
1. Euroa Main Road 88m NE of Euroa Tip Road	10/05/2017	6:30 PM	Serious	Dark, No Street Lights, Clear, Dry	140 – U-Turn Collision (southwest bound U-turning car, southwest bound car)

Based on the above, we are of view that there are no existing road crash trends along this section of Euroa Main Road.

4.4. Access Provisions & Traffic Generation

4.4.1. Access & Speed Limit Reduction

Access to the proposed development is proposed via a new residential road forming a T-intersection with Euroa Main Road. The proposal includes localised widening of Euroa Main Road to provide for a separate channelised right turn lane from the south-west and an auxiliary left turn deceleration lane from the north-east.

The location of the access has been placed to balance sight distance and road widening requirements along Euroa Main Road with vegetation removal.

The speed limit along Euroa Main Road is currently 100km/h, reducing to 80 km/h immediately east of the proposed sight access location. This further reduces to 60km/h immediately south-west of Golf Course Road.

We understand that the applicant has had discussions with Council speed limit and conditions on Euroa Main Road and Council supports an extension of the 60km/h speed limit to the south-west of the site. We are also advised that the Euroa Arboretum are also seeking to reduce the speed limit across the frontage of their site.

This will require input from Department of Transport, however is considered supported in the context of this development effectively forming an extension to the existing Euroa Township. Extending the reduced speed limit to the freeway interchange to cover the Euroa Arboretum frontage is also logical.

This change will likely require translating the 80km/h speed limit transition further to the south-west of Euroa Main Road.

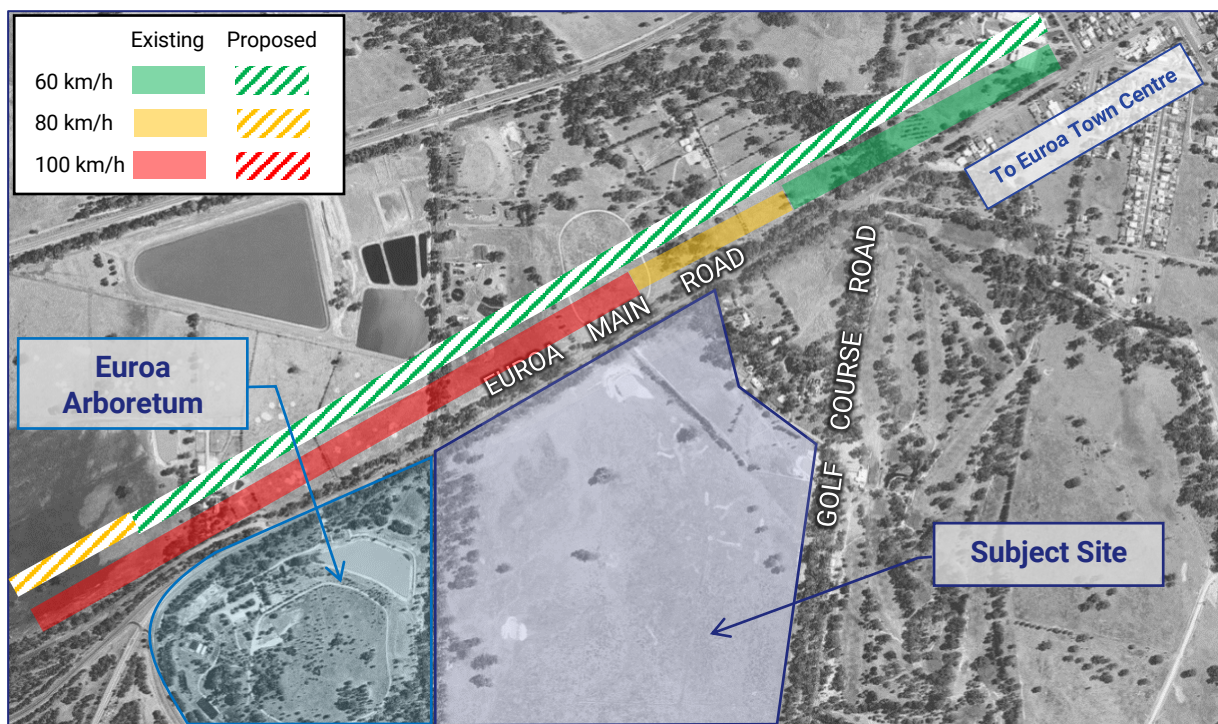


Figure 12: Existing Speed Limit – Euroa Main Road

An assessment of the proposed development traffic generation and turn warrants is provided as follows.

In its letter dated April 2022, where it provided comment on the Development Plan, the Department of Transport (DoT) confirmed that a single access to the site could be accepted subject to the following condition:

The following roadworks must be completed at the intersection of Subdivisional Road and Euroa Main Road to the satisfaction of and at no cost to the Head, Transport for Victoria:

- Short Channelised Right-turn Treatment (CHR(S));
- Short Auxiliary Left-turn Treatment (AUL(S));
- Any other works required.

4.4.2. Traffic Generation Rates

Residential Lots

Traffic generation rate for residential uses in rural or regional areas is typically 10 daily movements per dwelling, with a peak hour traffic generation rate of 1 movement per dwelling.

The development plan comprises a yield of 107 residential lots and a single dwelling within the farmland use.

Application of this rate to the total of 108 dwellings indicates a daily traffic generation of 1,080 vehicles per day, inclusive of 108 vehicle movements during peak hours.

Lifestyle Village

In our experience, it is often the case that some residents of the proposed lifestyle village may not own a car. Lifestyle villages often provide shuttle buses and other group transport options for residents.

In this regard, it is typical that these uses will generate lesser traffic when compared to standard residential housing.

For the purpose of this assessment, we have adopted a general daily traffic generation rate of 5 vehicle movements per dwelling, inclusive of a peak hour rate of 0.5 vehicle movements per dwelling to compromise the mixed of traffic movements mentioned above.

Application of this rate to the proposed yield of 150 dwellings within the lifestyle village indicates a daily traffic generation of 750 vehicles per day, inclusive of 75 vehicle movements during peak hours.

4.4.3. Total Traffic Generation

Based on the preceding, the intersection of the proposed site access and Euroa Main Road will experience up to 183 vehicle movements during each of the peak hours.

The primary access road will carry in the order of 1,830 vehicles per day, two way.

4.4.4. Peak Hour Traffic Distribution

During the AM peak hour, it is expected that 20% of this traffic would be generated inbound with the remaining 80% outbound. During the PM peak hour, 60% will be inbound and 40% outbound.

The traffic distribution model considers the layout of the surrounding road network (location and direction of arterial roads and freeways) and the likely destinations for vehicles arriving and departing from the subject land (Euroa Town Centre and local destinations on the island).

Given the location of the Euroa Township, we have presumed that there will be a bias for traffic to travel to/from Euroa Town Centre (east) in the peak hours.

For the purposes of this assessment, a traffic distribution of 70% to/from the east and 30% to/from the west has been adopted for traffic associated with the subject site.

Based on the preceding, Figure 13 has been prepared to model the projected traffic generation for the proposed site access to Euroa Main Road.

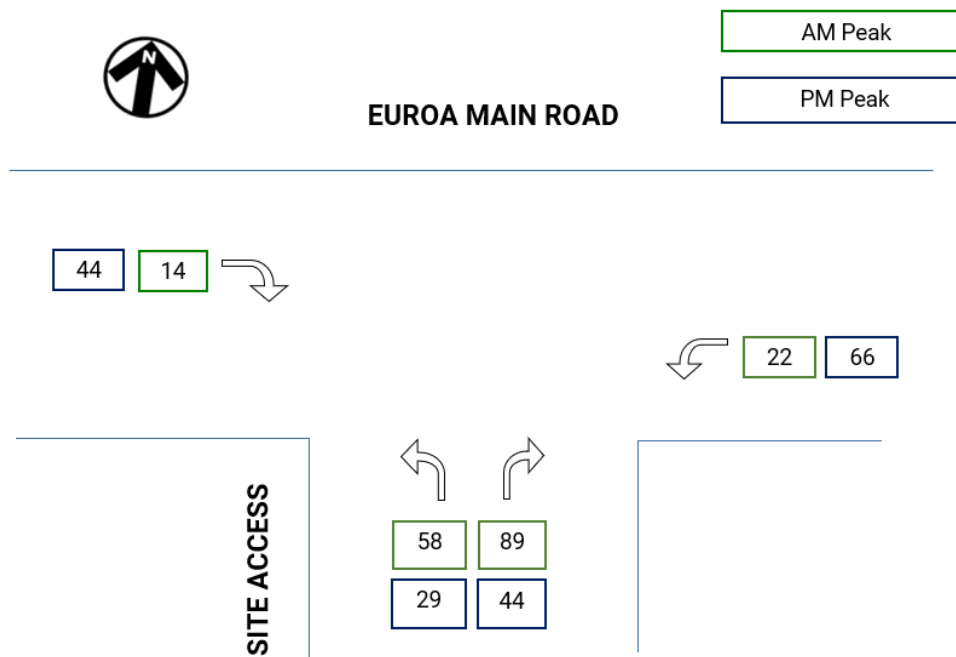


Figure 13: Projected Traffic Generation

These volumes have been superimposed on the existing through traffic volumes on Euroa Main Road¹ to identify the post development traffic volume at the intersection.

The expected volumes propose site access with Euroa Main Road is as shown in Figure 14.

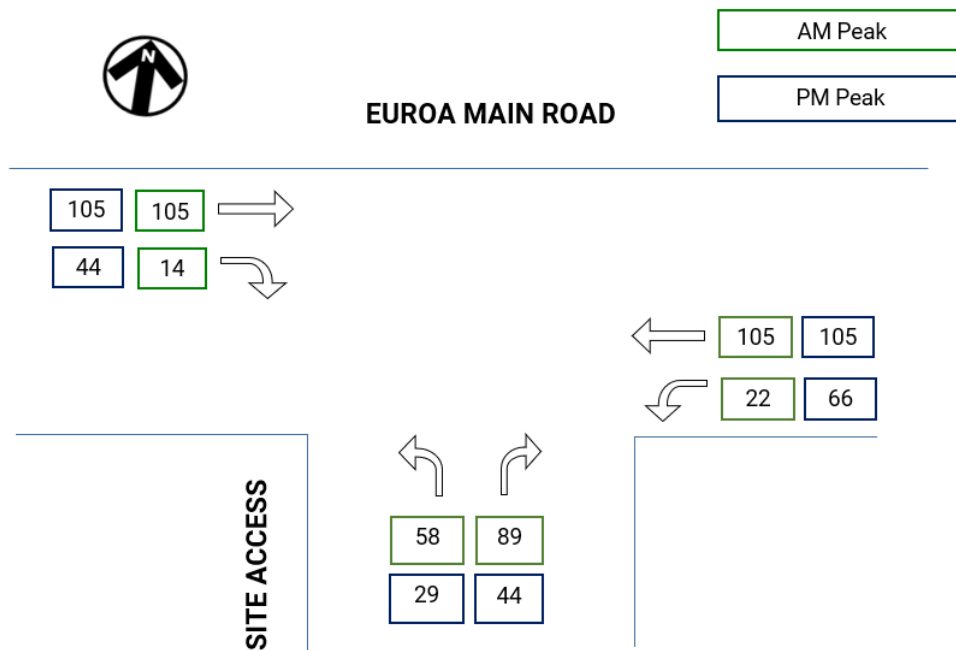


Figure 14: Post Development Traffic Volume

¹ Presumed to be generally evenly split in peak hours

4.4.5. Traffic Impact

Site Access

To demonstrate the traffic impact of the proposed development, and the appropriateness of the site access design, SIDRA Analysis has been undertaken for the site access.

SIDRA is a computer program originally developed by the Australian Road Research Board, which can be used to analyse the operation of intersections. SIDRA provides information about the capacity of an intersection in terms of a range of parameters, as described below:

Degree of Saturation (D.O.S.) is the ratio of the volume of traffic observed making a particular movement compared to the maximum capacity for that movement. Various values of degree of saturation and their rating are shown below.

Level of Service		Intersection Degree of Saturation	
		Unsignalised Intersection	Signalised Intersection
A	Excellent	≤ 0.60	≤ 0.60
B	Very Good	0.60 – 0.70	0.60 – 0.70
C	Good	0.70 – 0.80	0.70 – 0.90
D	Acceptable	0.80 – 0.90	0.90 – 0.95
E	Poor	0.90 – 1.00	0.95 – 1.00
F	Very Poor	≥ 1.0	≥ 1.0

The **95th Percentile Queue** represents the maximum queue length, in metres, that can be expected in 95% of observed queue lengths in the peak hour.

Average Delay (seconds) is the average delay time that can be expected for all vehicles making a particular movement in the peak hour.

The results of the post-development intersection analysis for the site access are summarised in Table 2.

Table 2: Intersection Analysis – Euroa Main Road/Site Access – Post Development Traffic Volumes

Approach	Move.	AM Peak			PM Peak		
		DoS	Ave. Delay (s)	95% queue (m)	DoS	Ave. Delay (s)	95% queue (m)
Site Access (S)	L	0.17	6	5	0.09	6	3
	R	0.17	7	5	0.09	7	3
Euroa Main Road (E)	L	0.01	0	0	0.04	6	0
	T	0.06	0	0	0.06	0	0
Euroa Main Road (W)	T	0.06	0	0	0.06	0	0
	R	0.01	6	0	0.04	6	1

The above analysis demonstrates that the site access operates under 'excellent' conditions during the AM, PM and Saturday peak hours.

In this regard, we are of the view that the proposed access arrangements are acceptable and that the traffic generated by the proposal will be acceptably accommodated by the network.

Whilst the growth of the Euroa Township is not expected to be significant in the context of road network volumes, and this development is likely to be part of that growth, we have further tested the site access volumes by doubling the existing through volumes on Euroa Main Road. The intersection continues to operate under 'excellent' conditions in both peaks.

Consideration of Additional Mitigating Works

We have considered any future additional mitigating works that may be required in the area surrounding the site.

Based on the expected traffic volumes, we are of the view that there are no further works required to the road network as additional turning volumes generated to the freeway interchange are moderate and will not impact on the operation of the intersections to/from the south.

The additional volumes generated to and from the north are also considered relatively moderate in the peak hours, and will not significantly impact on the operation of the intersections to the north, including at Golf Course Road.

On this basis, the proposed site access arrangements, and the proposed speed reduction along Euroa Main Road are considered sufficient to support the development.

4.4.6. Access Design

The proposed access is located centrally at the northwest boundary of the site to Euroa Main Road.

The Austroads Guide to Traffic Management – Part 6 Intersections, Interchanges and Crossings (2017) includes warrants on when turn lanes are required at public road intersections.

Figure 15 below provides an assessment of the likely volumes based on the diagram from the ARGTM relating to lower speed rural and urban fringe roads based on the expected peak hour turning volumes and existing data from Council.

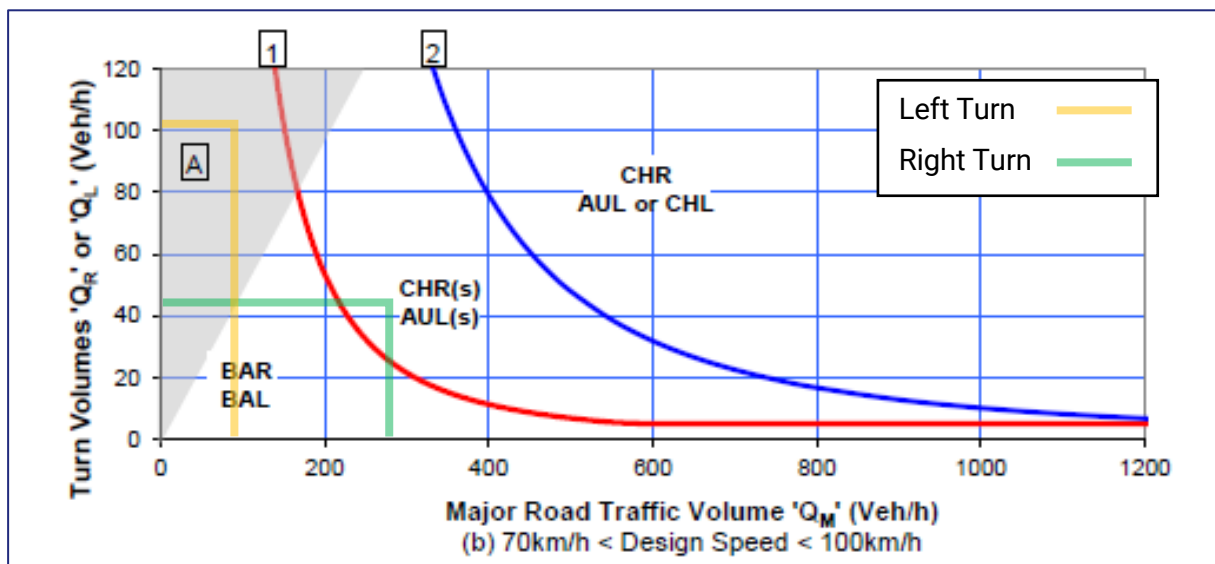


Figure 15: Warrants for Auxiliary turn lanes (Austroads, 2017)

The graph above shows that there are requirements to provide for a short Auxiliary Left turn lane (AULs). The right turn volumes warrant only basic road widening.

Notwithstanding the above, given the location of the site at the transition of speed limits and expectations from Council, the proposal includes widening to provide for full auxiliary and channelised left and right turn lanes, designed for a 60km/h speed limit.

A functional layout plan has been prepared by Traffix Group as attached in Appendix A.

4.4.7. Sight Distance Provisions

In relation to the proposed access arrangements, it is noted that there are no significant crests and dips along Euroa Main Road. Sight distance at the access point in both directions is therefore relatively unobstructed, with the exception of some existing verge side vegetation.

Based on our observations, the proposed access provides a minimum sight distance of approximately 300 metres in both directions, which is in excess of the requirements for a 60km/h speed zone.

Requirements for vegetation removal can be addressed at the Functional Layout Plan approval stage with Department of Transport.

Based on the preceding, we are of the view that the location of the proposed site access is considered acceptable.

We are also of the view that this would address the conditions set out by Department of Transport.

4.4.8. Lifestyle Village Golf Course Road Access

An access to Golf Course Road is provided to the community facilities of the Lifestyle Village. This facilities are intended to operate as a informal extension to the existing golf course facilities on the eastern side of the road.

Access in the location shown in proximity to the existing golf course car parking is therefore the most logical location and this will facilitate the creation of the recreational hub of the precinct.

Given that there is no through connection to the new residential subdivision, access to Golf Course Road in this arrangement is appropriate.

5. Internal Traffic Considerations

5.1. Proposed Internal Network

The proposed road network provides for a convenient and well-connected road network that provides for appropriate vehicle, pedestrian and cyclist connections.

The proposed road network plan is shown in Figure 16 identifying the relevant future road network of the development and a discussion of the adequacy and appropriateness of the design is provided in the following sections.

These cross-sections are detailed in Appendix A of the report.



Figure 16: Proposed Road Network Plan

5.1.1. Entry Road

The proposed road network plan contemplates 3 cross-sections for the Entry Road to suit the use adjacent to the road and improve bicycle and pedestrian connections as detailed below.

This road provides generally provides for a 7.3 metre wide two-way traffic carriageway with a 3.0 metre wide shared path on the eastern side of the road despite varying reserve widths.

As development occurs on one side of the road only, the path on the single side is considered appropriate.

Entry Road North Adjacent to Open Space -Section A

The entry road north adjacent to open space (Section A) within the subject site is proposed at 20.3 metres width with a cross section as shown in Figure 17.

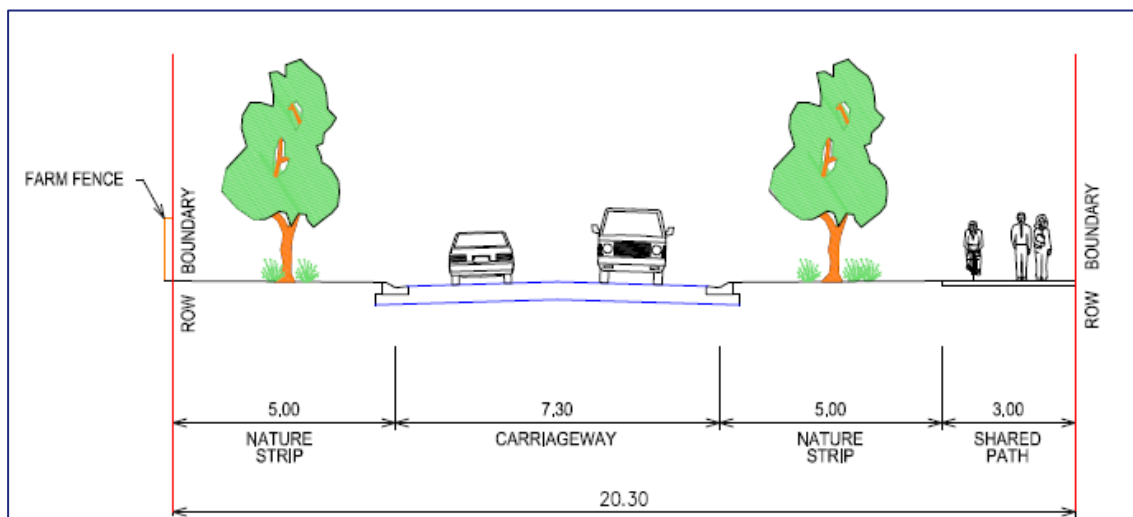


Figure 17: Entry Road North Adjacent to Open Space – Section A

Entry Road Central Adjacent to Lifestyle Village -Section B

The entry road adjacent to the lifestyle village (Section B) is proposed at 25.3 metres width with a cross section as shown in Figure 18.

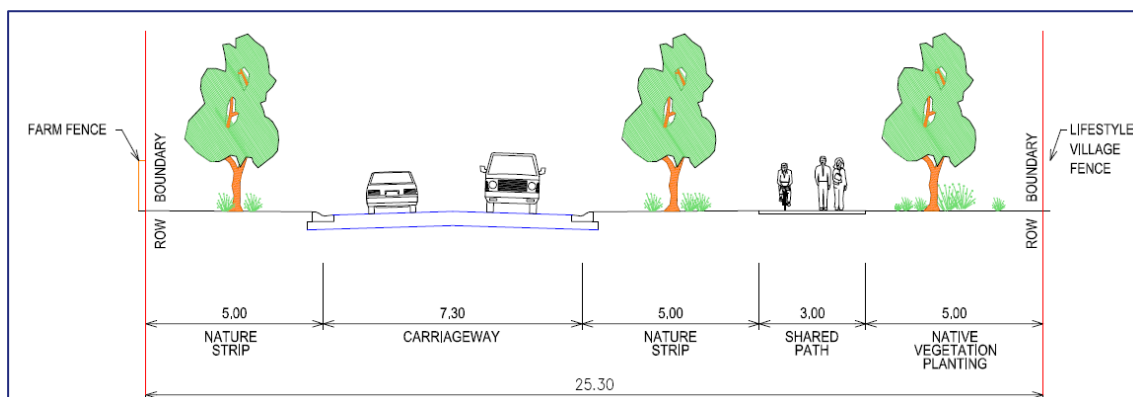


Figure 18: Entry Road North Adjacent to Open Space – Section B

Entry Road Adjacent to Residential Lots -Section C

The entry road adjacent to residential lots (Section C) is proposed at 21.3 metres width, with a cross section as shown in Figure 19.

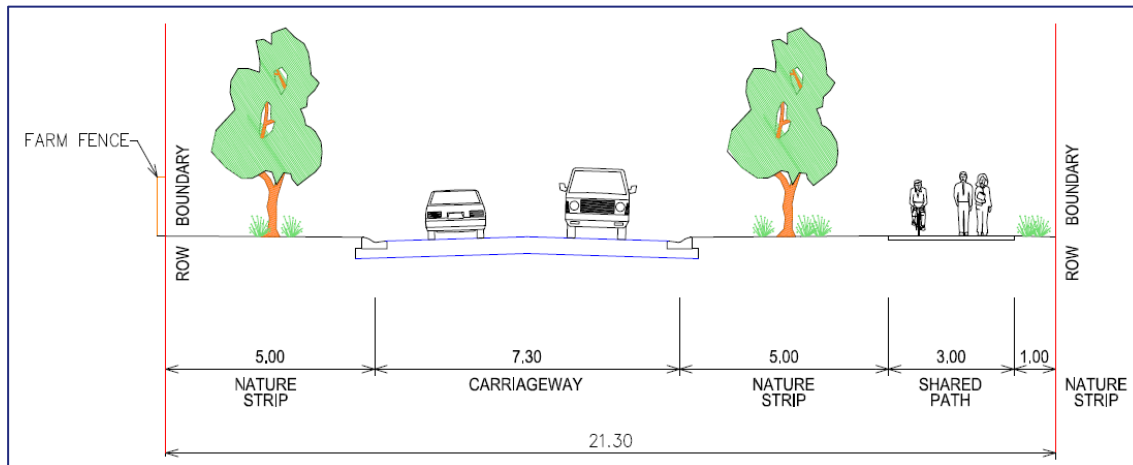


Figure 19: Entry Road North Adjacent to Open Space – Section C

Comparison of the above cross-sections with the requirements of Clause 55 of the Planning Scheme and the Engineering Design Manual suggests that this road is indicatively a Local Access Road/Street – Level 2 (Clause 55) or Access Street (EDM) which has an indicative daily capacity for between 1,000-3,000 vehicles per day (up to 2,500 is noted in the EDM).

The projected traffic volumes on this road in the northern section (Sections A and B) are in the order of 1,830 vehicle movements two-way per day. The volumes reduced through Section C to be in the order of 1,080 vehicles per day.

In both instances, the daily volumes are within the indicative capacities.

5.1.2. Local Road North – Section D

The local road at Section D is proposed with a 20 metre reserve with a cross section as shown in Figure 20.

This cross-section provides for a minimum carriageway width of 7.3 metres and 3.0 metre wide shared path on the northern side.

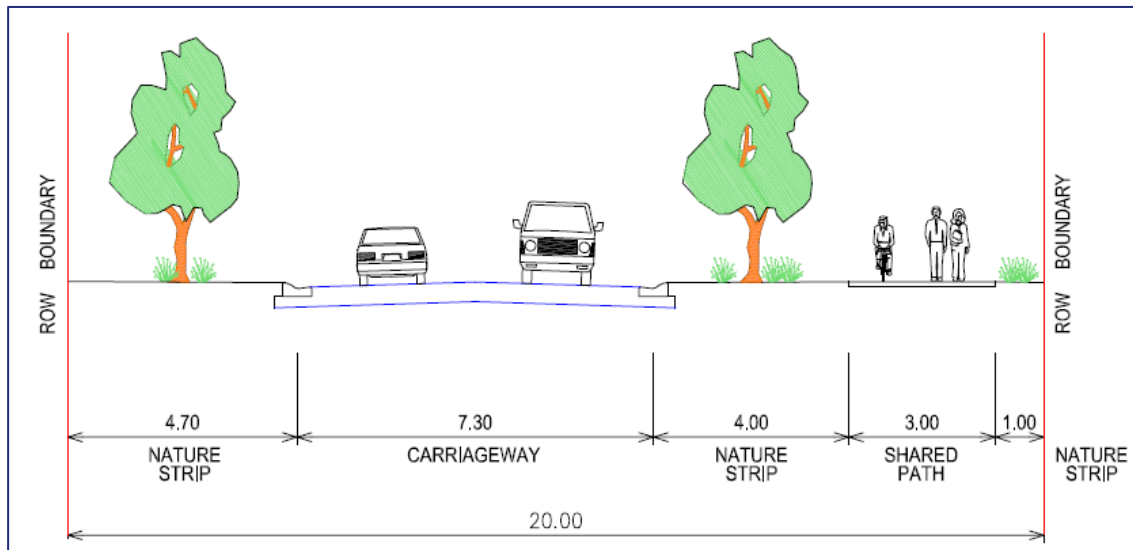


Figure 20: Local Road North – Section D

5.1.3. Local Road with Open Channel – Section E

The local road at Section E within the subject site is proposed at 31.8 metres width with a cross section as shown in Figure 21. This cross-section provides for a minimum carriageway width of 7.3 metres and 3.0 metre wide shared path on the western side. It also includes a 15.0 metre wide drainage channel on the western side.

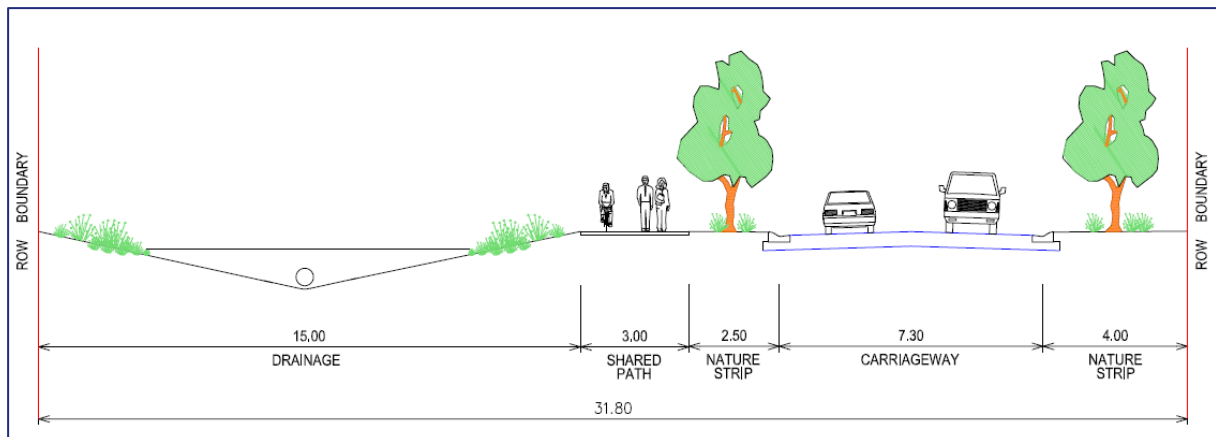


Figure 21: Local Road with Drainage Channel – Section E

5.1.4. Local Road South – Section F

The local road at Section F within the subject site is proposed at 20 metres width with a cross section as shown in Figure 22. This cross-section provides for a minimum carriageway width of 7.3 metres and 3.0 metre wide shared path on the southern side.

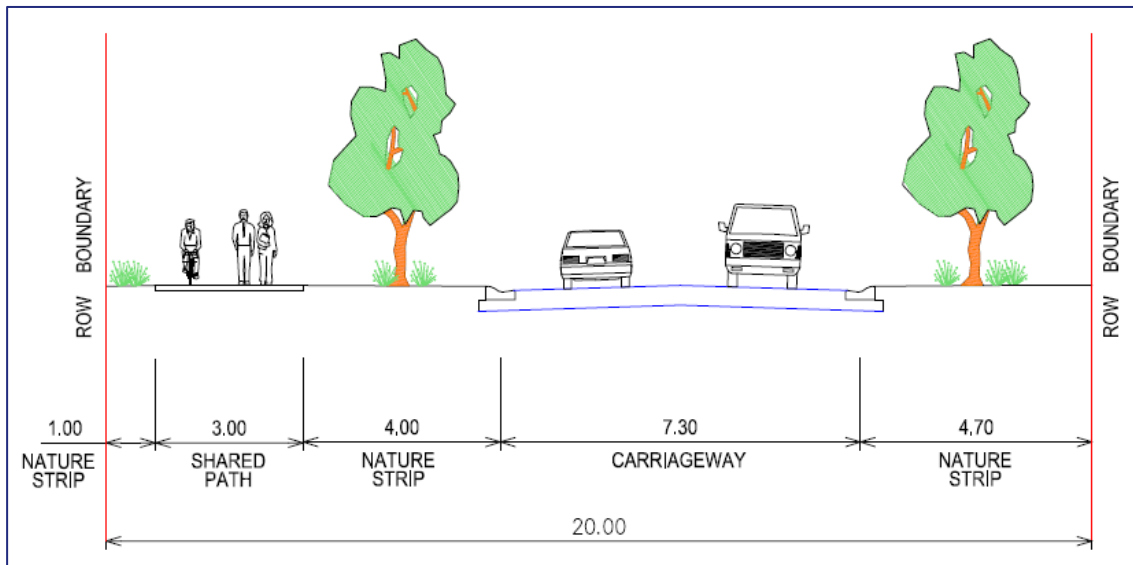


Figure 22: Local Road South – Section F

5.1.5. Local Road Golf Precinct – Section G

The local road at Section G within the subject site is proposed at 20 metres width with a cross section as shown in Figure 23. This cross-section provides for a minimum carriageway width of 7.3 metres and 1.5 metre wide footpath on the eastern side.

Given the size of lots, we are comfortable that a footpath on one-side is appropriate.

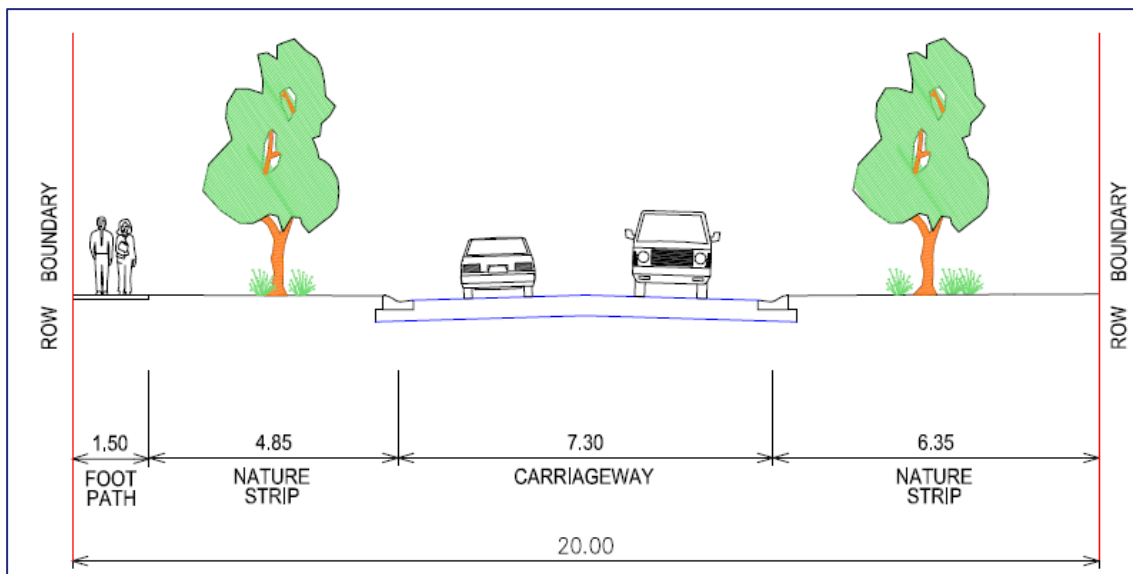


Figure 23: Local Road Golf Precinct – Section G

5.1.6. Local Road Standard Lot Precinct – Section H

The local road at Section H within the subject site is proposed at 18.3 metres width with a cross section as shown in Figure 24. This cross-section provides for a minimum carriageway width of 7.3 metres, with pedestrian path on both sides.

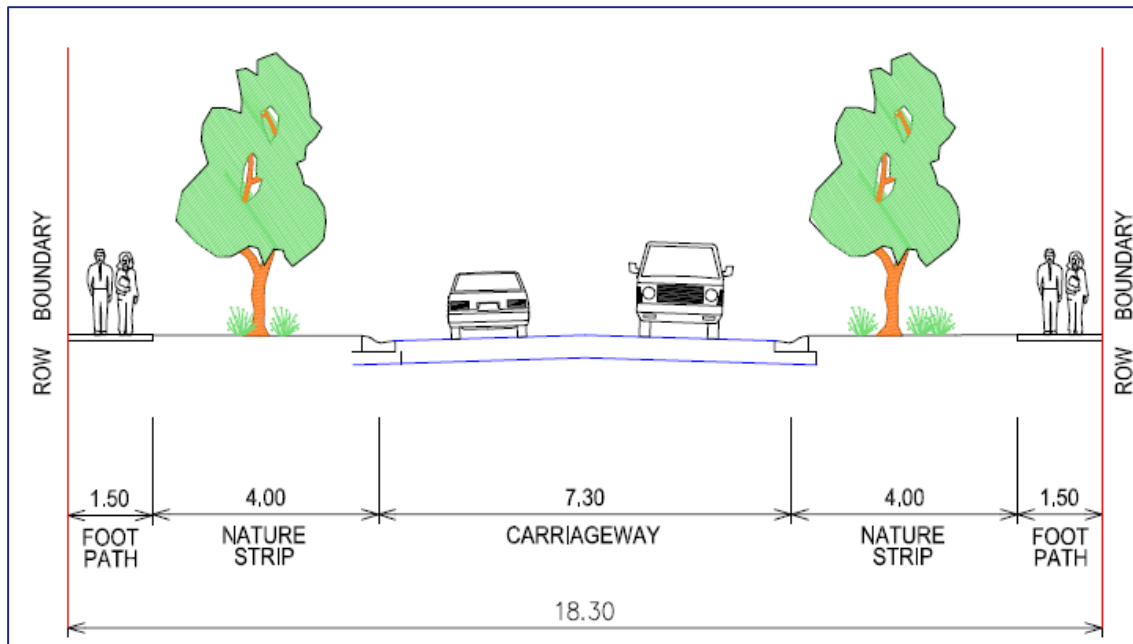


Figure 24: Local Road North – Section H

5.1.7. Shared Driveway and Drainage Channel – Section I

The shared driveway at Section I is proposed at a reserve width of 24.5 metres as illustrated in Figure 25. This cross-section provides for a minimum carriageway width of 5.5 metres and 1.5 metre wide footpath on the western side.

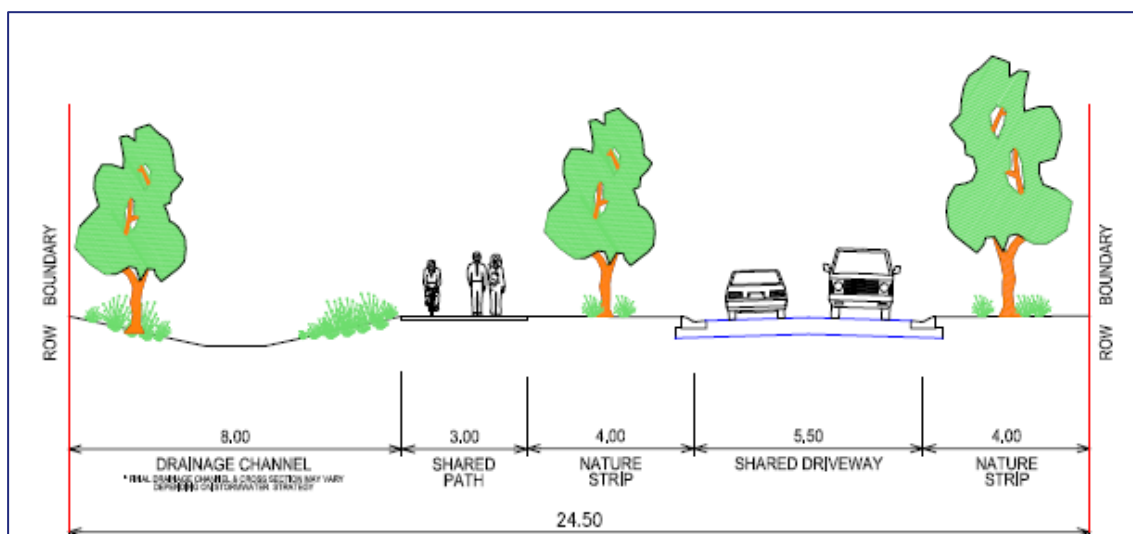


Figure 25: Shared Driveway with Drainage Channel – Section I

5.1.8. Emergency Access to Golf Course Road– Section J

Section J provides access for emergency vehicles to the residential subdivision of the site via Golf Course Road and it is proposed with a reserve width of 24.5 metres.

This cross-section will be provided with a minimum shared path of 4.0 metres, which will be provided with removeable bollards to restrict this section for emergency vehicle use only as shown in Figure 20.

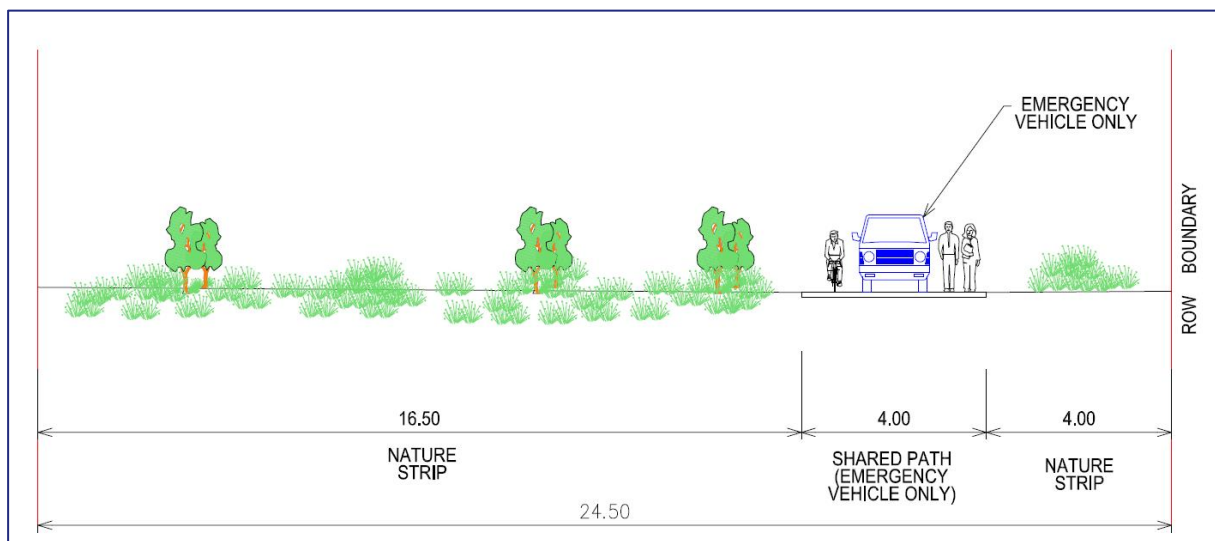


Figure 26: Emergency Access to Golf Course Road– Section J

5.1.9. Local Road Adjacent to Native Vegetation Area – Section K

The local road at Section K is proposed with a 20.3 metre reserve with a cross section as shown in Figure 20.

This cross-section provides for a minimum carriageway width of 7.3 metres and 3.0 metre wide shared path on the western side with vegetation planting to the west of the road reserve boundary.

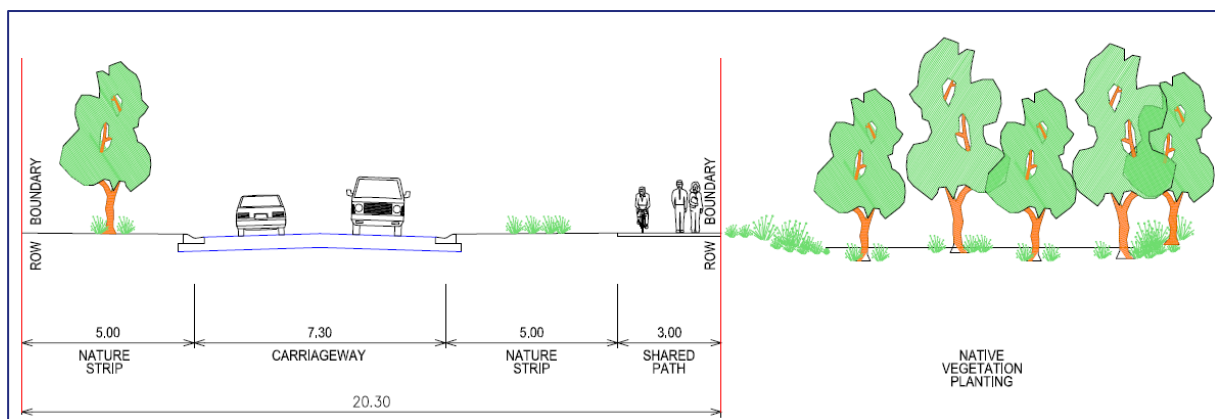


Figure 27: Local Road Adjacent to Native Vegetation Area – Section K

5.2. Local Area Traffic Management

To minimise traffic conflict within the internal road network, Local Area Traffic Management (LATM) treatments will be provided and these may include slow points and modified T-intersections.

The design of these treatments will ultimately be subject to Council approval.

A suggested Local Area Traffic Management Plan is as shown in Figure 28.

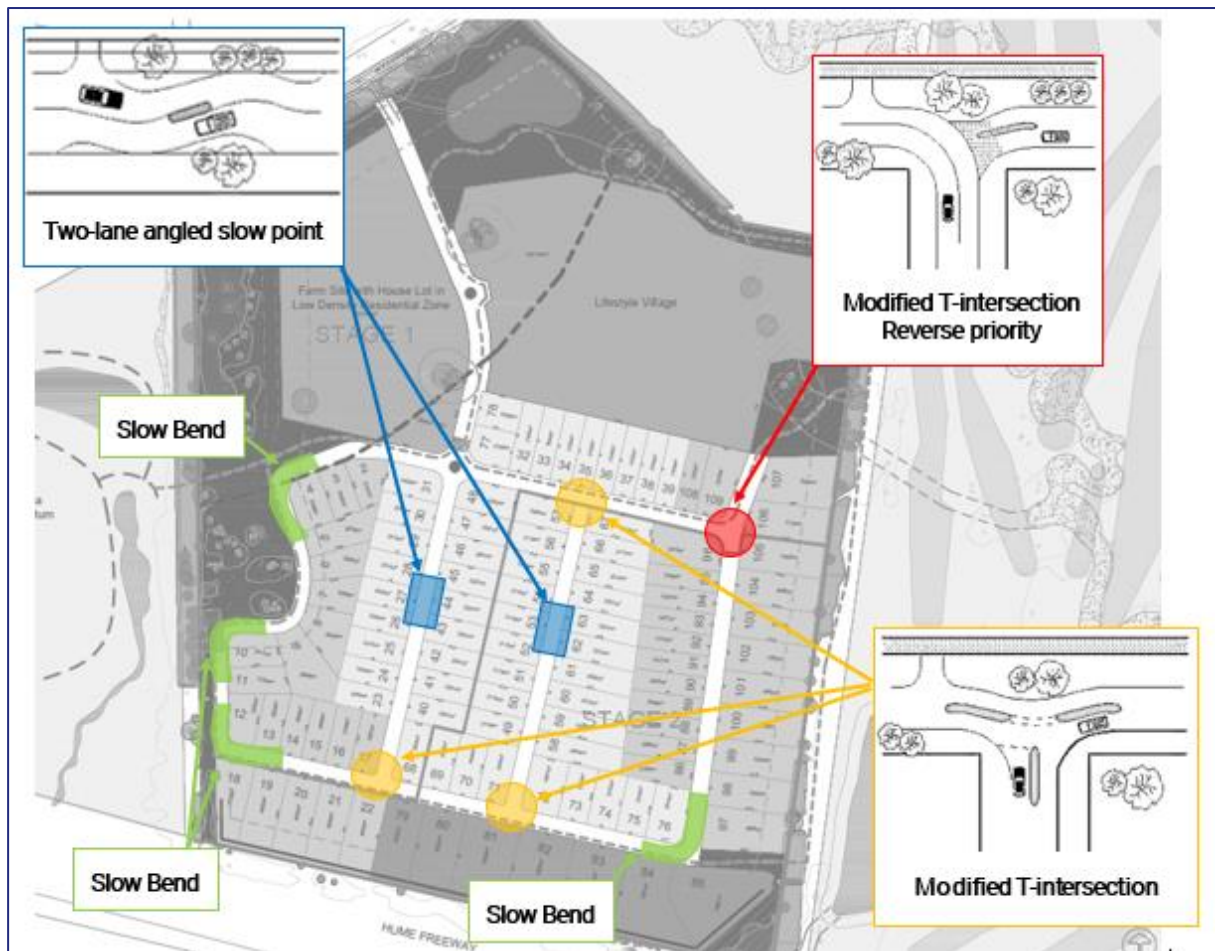


Figure 28: Proposed Local Traffic Management Plan

6. Conclusions

Having undertaken a detailed traffic engineering assessment of the proposed development plan at 72 Golf Course Road, Euroa, we are of the opinion that:

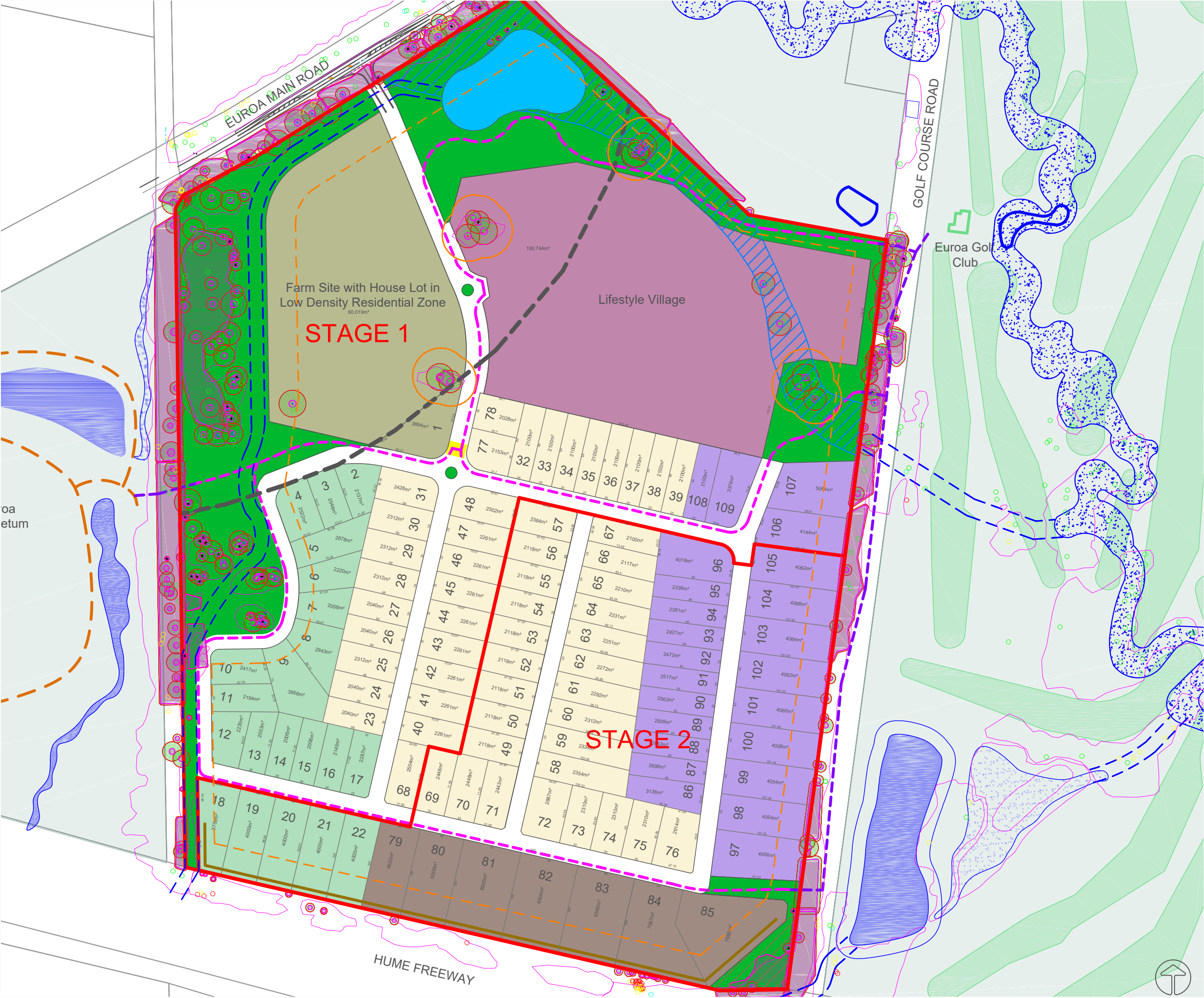
- a. The proposed development plan generally complies with the requirements set out in the Planning Scheme.
- b. The proposed development is expected to generate some 183 vehicle movements during each of the peak hours and this level of traffic can be accommodated by the existing road network and the proposed side access arrangements in all peak periods.
- c. The proposed main site access includes appropriate turning treatments from Euroa Main Road and is acceptably located.
- d. The secondary access to Golf Course Road provides access to the Lifestyle Village community centre parking and given that it is limited to vehicle associated with the Lifestyle Village only it is considered appropriate.
- e. The internal road network has been appropriately designed to cater for the expected volumes and transport functions through the residential subdivision.
- f. Appropriate Local Area Traffic Management (LATM) treatments are proposed to minimise traffic conflict.
- g. There are no traffic engineering reasons why the proposed development plan at 72 Golf Course Road, Euroa, should not be endorsed.
- h. The level of detail on the development plan and within this report is sufficient to allow a town planning permit to be issued for a development application so long as it is generally in accordance with the plan.



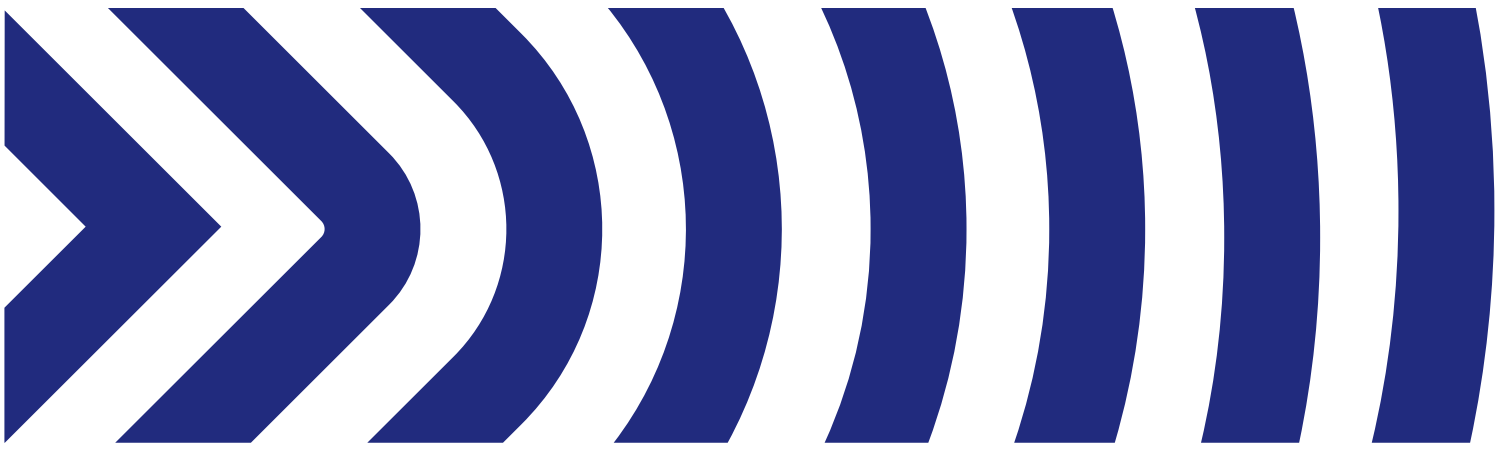
Appendix A

Development Site Plan

Subdivision Plan: 72 Golf Course Road, Euroa



- LEGEND
- Site Boundary
 - Farm Lot
 - Lifestyle Village
 - Residential - Golf Lots
 - Residential - Low Density Lots
 - Residential - Equestrian Lots
 - Residential - Arboretum Lots
 - Open Space Precinct
 - Urban Floodway
 - Acoustic Treatment
 - New Sealed Shared Path 3m
 - New Gravel Shared Path
 - Raised Pedestrian Crossing
 - Wastewater Treatment Facility Buffer
 - Native Vegetation
 - Building Setback for Bushfire Risk



Appendix B

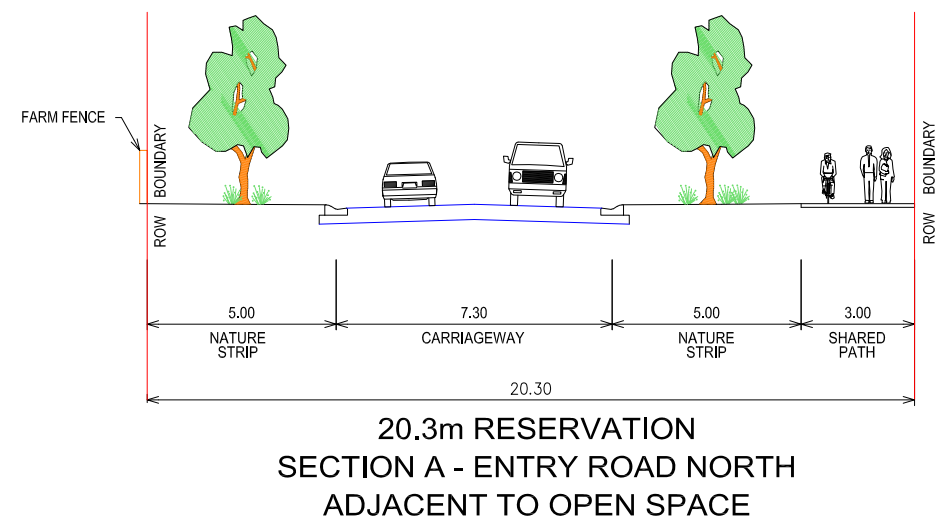
Concept Access Plan



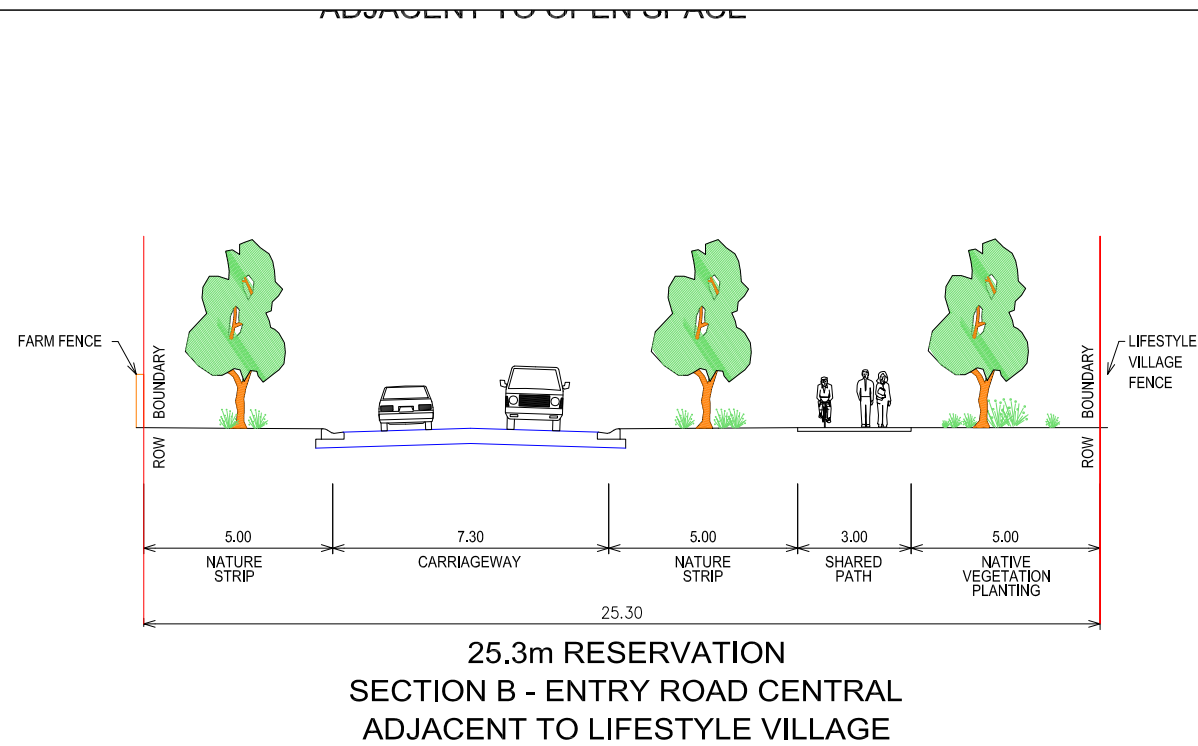
Appendix C

Internal Road Network Cross-Sections

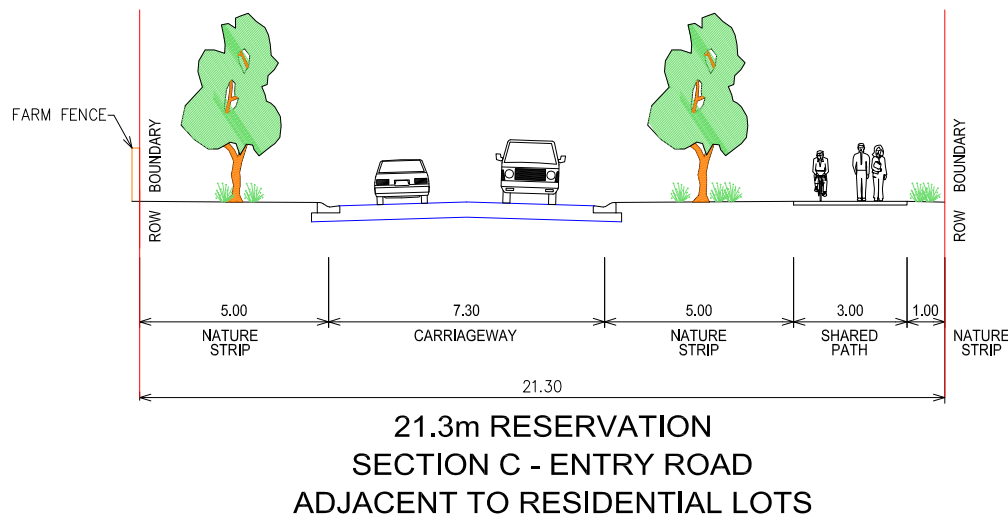
SECTION A



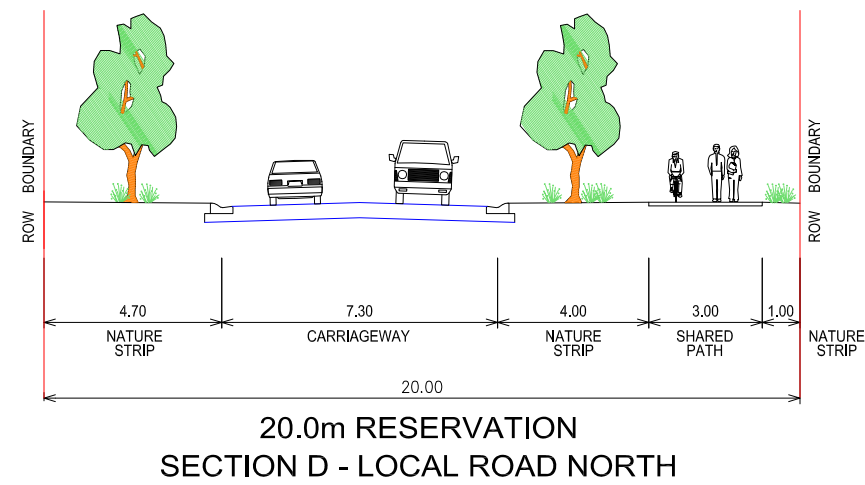
SECTION B



SECTION C



SECTION D



REV	DATE	NOTES	DESIGNED BY	CHECKED BY
A	28/07/2021	PRELIMINARY	S.GOH	C.MORELLO
B	06/07/2022	AMENDED PLAN	S.GOH	C.MORELLO

72 GOLF COURSE ROAD, EUROA
PROPOSED DEVELOPMENT & RESIDENTIAL SUBDIVISION
TYPICAL SUBDIVISION ROADS CROSS SECTION

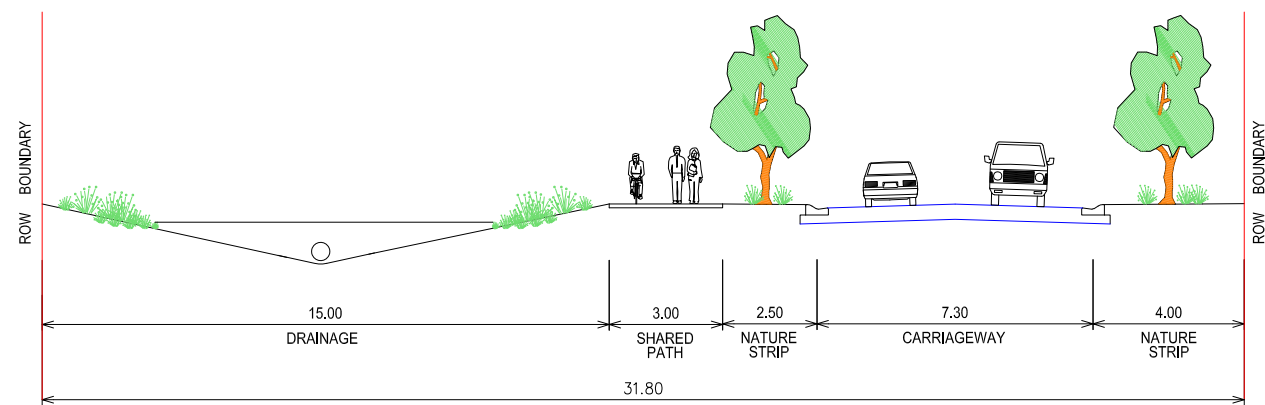
- GENERAL NOTES:
- PRELIMINARY CROSS SECTIONS ONLY, SUBJECT TO DETAILED DESIGN.
 - VARIATIONS IN CROSS SECTIONS POSSIBLE DEPENDENT ON LOCATION AND SPECIFIC DESIGN OUTCOMES
 - ANNOTATIONS FOR MEASUREMENT ARE IN UNIT METRES.
 - ALTERNATIVE CROSS SECTIONS MAY BE PERMITTED, SUBJECT TO APPROVAL OF THE RESPONSIBLE AUTHORITY AND MUST ENSURE THAT:
 - MINIMUM REQUIRED CARRIAGEWAY DIMENSIONS ARE MAINTAINED TO ENSURE SAFE AND EFFICIENT OPERATION OF EMERGENCY VEHICLES ON ALL STREET.
 - THE PERFORMANCE CHARACTERISTICS OF STANDARD CROSS SECTIONS AS THEY RELATE TO PEDESTRIAN AND CYCLE USE ARE MAINTAINED.
 - RELEVANT MINIMUM ROAD WIDTHS FOR THE TYPE OF STREET ARE MAINTAINED.

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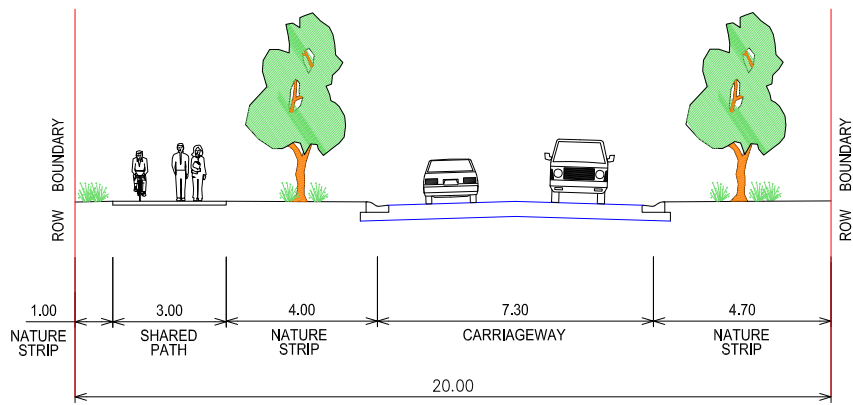
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SECTION E



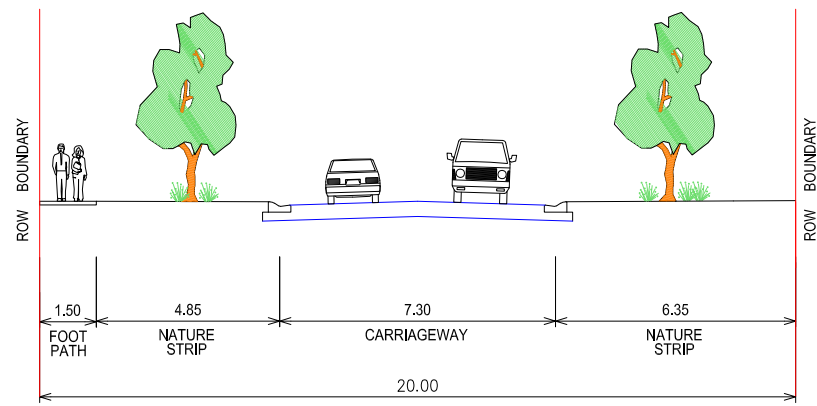
31.8m RESERVATION
SECTION E - LOCAL ROAD WITH OPEN CHANNEL

SECTION F



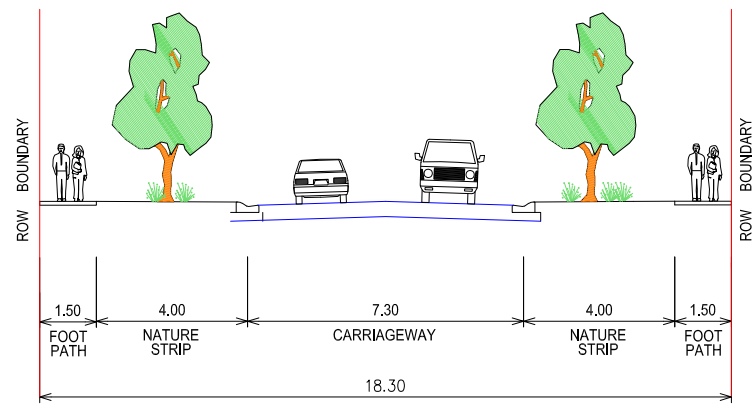
20.0m RESERVATION
SECTION F - LOCAL ROAD SOUTH

SECTION G



20.0m RESERVATION
SECTION G - LOCAL ROAD
GOLF PRECINCT

SECTION H



18.3m RESERVATION
SECTION H - LOCAL ROAD
STANDARD LOT PRECINCT

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72 GOLF COURSE ROAD, EUROA
PROPOSED DEVELOPMENT & RESIDENTIAL SUBDIVISION
TYPICAL SUBDIVISION ROADS CROSS SECTION

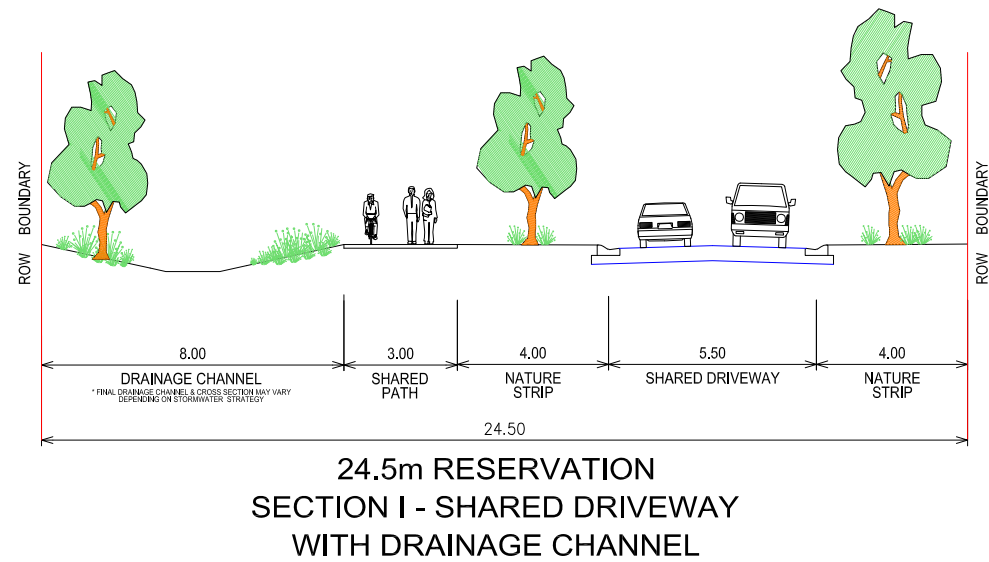
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 - 4.3. RELEVANT MINIMUM ROAD WIDTHS FOR THE TYPE OF STREET ARE MAINTAINED.

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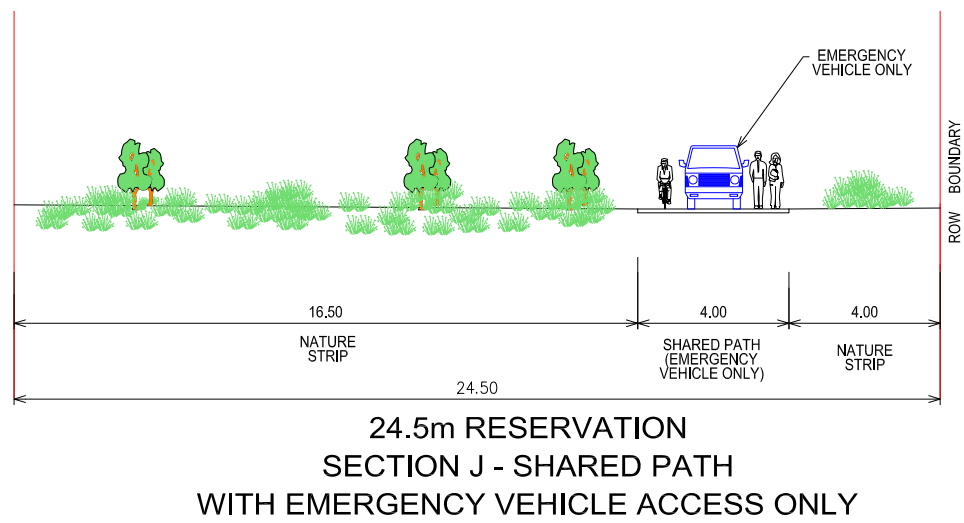
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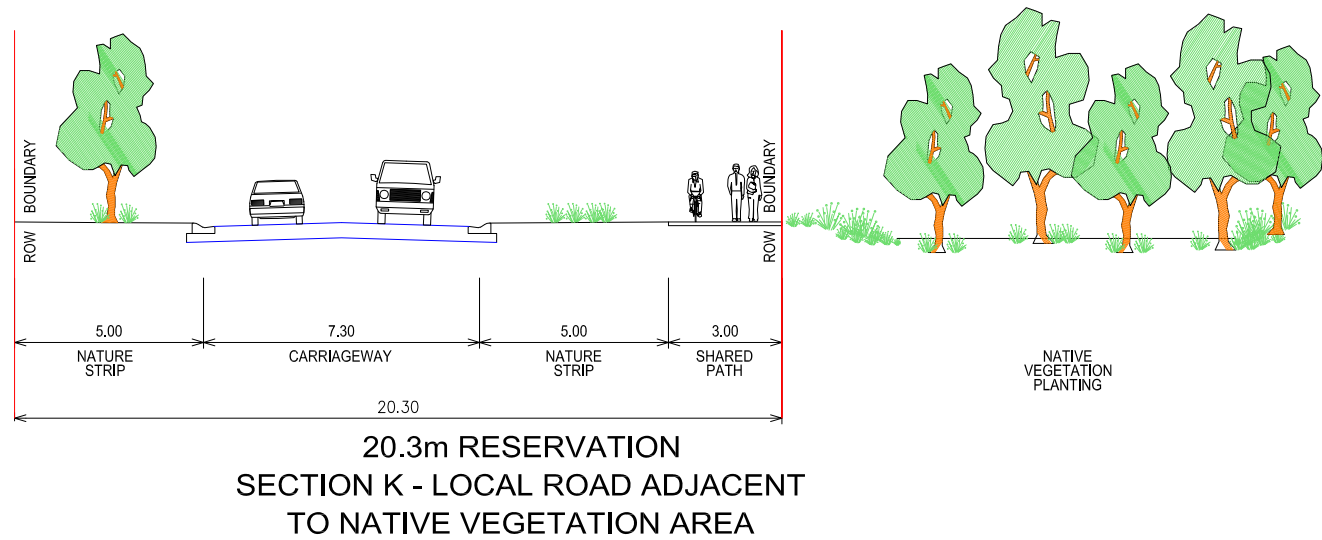
SECTION I



SECTION J



SECTION K



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PROPOSED DEVELOPMENT & RESIDENTIAL SUBDIVISION
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