

Annexure 7

Transport Review Assessment

TRAFFIC REVIEW
ASSESSMENT

LOT 889 RODOREDA
CRESCENT,
RAVENSWOOD

Porter



LOT 889 RODOREDA CRESCENT

**TRAFFIC REVIEW OF PROPOSED ALTERATIONS FROM THE
OUTLINE DEVELOPMENT PLAN**

REPORT PREPARED FOR

Realise Residential WA

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Appendix A – Ravenswood Outline Development Plan
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1.0 INTRODUCTION

1.1 Background

The Ravenswood East Outline Development Plan (ODP) for Lot 889 Rodoreda Crescent (formally Lot 1620 Old Mandurah Road) was endorsed by the Shire of Murray in 2013. The ODP guided the development of the lot with various subdivision approvals. In January 2023 the ODP was updated to reflect the various subdivisional approvals to date and also incorporate an area that was previously noted as “subject to further planning.

At present there is still an undeveloped portion of Lot 889 that is currently proposed to be subdivided however both the layout and residential densities differ slightly from that documented in the current ODP. **Figure 1.1** shows an aerial image of the undeveloped portion of Lot 889.

1.2 Scope of Assessment

The purpose of this assessment is to examine the traffic operation of the proposed subdivision of Lot 889 where it may differ from that accessed within the ODP and thereby provide the approving authority with sufficient traffic information to confirm that the proponent has adequately considered the traffic aspects of the development.

Appendix A and B include a copy of the ODP layout and proposed Masterplan layout.



Figure 1.1: Undeveloped Portion of Lot 889

2.0 SUBDIVISION PROPOSAL

The ODP as defined in January 2023 provided a total of 357 dwellings comprising of both R20 and R30 lots. By comparison, the current proposal is for 513 dwellings comprising of R20 lots, a grouped dwelling lot and a lifestyle village with 295 dwellings as summarised in **Table 2.1**.

The proposed lifestyle village is the key difference from the ODP. The lifestyle village will cater for over 50's and is most likely to attract more active persons than a typical aged care facility but less trips than typical residential dwellings. The lifestyle village will include facilities that are for the resident use (including their visitors) and most likely will include a clubhouse, bowling green, pickle ball and community garden.

The grouped dwelling Site is anticipated to accommodate up to 50 dwelling.

Table 2.1: Comparison of No of Dwellings.

Land Use	ODP – January 2023	January 2026
Residential R20	238	168
Residential R30	119	-
Lifestyle Village	-	295
Grouped Dwelling	-	50
Total Dwellings	357	513

3.0 EXISTING ROAD NETWORK SITUATION

3.1 Road Infrastructure and Road Hierarchy Classification

The Main Roads Western Australia road hierarchy classification for the surrounding road network is shown in **Figure 3.1** outlining roads within a 1km radius. Key distributor roads in proximity to the Site include Old Mandurah Road to the north that connects to the higher order primary distributor road network i.e. Pinjarra Road.

The key roads servicing the Site from the primary road network include Drakesbrook Avenue via Old Mandurah Road and Nancarrow Way from Pinjarra Road. In the ODP, Drakesbrook Avenue is defined as a Neighbourhood Connector B road and Nancarrow Way is defined as an Access Street.

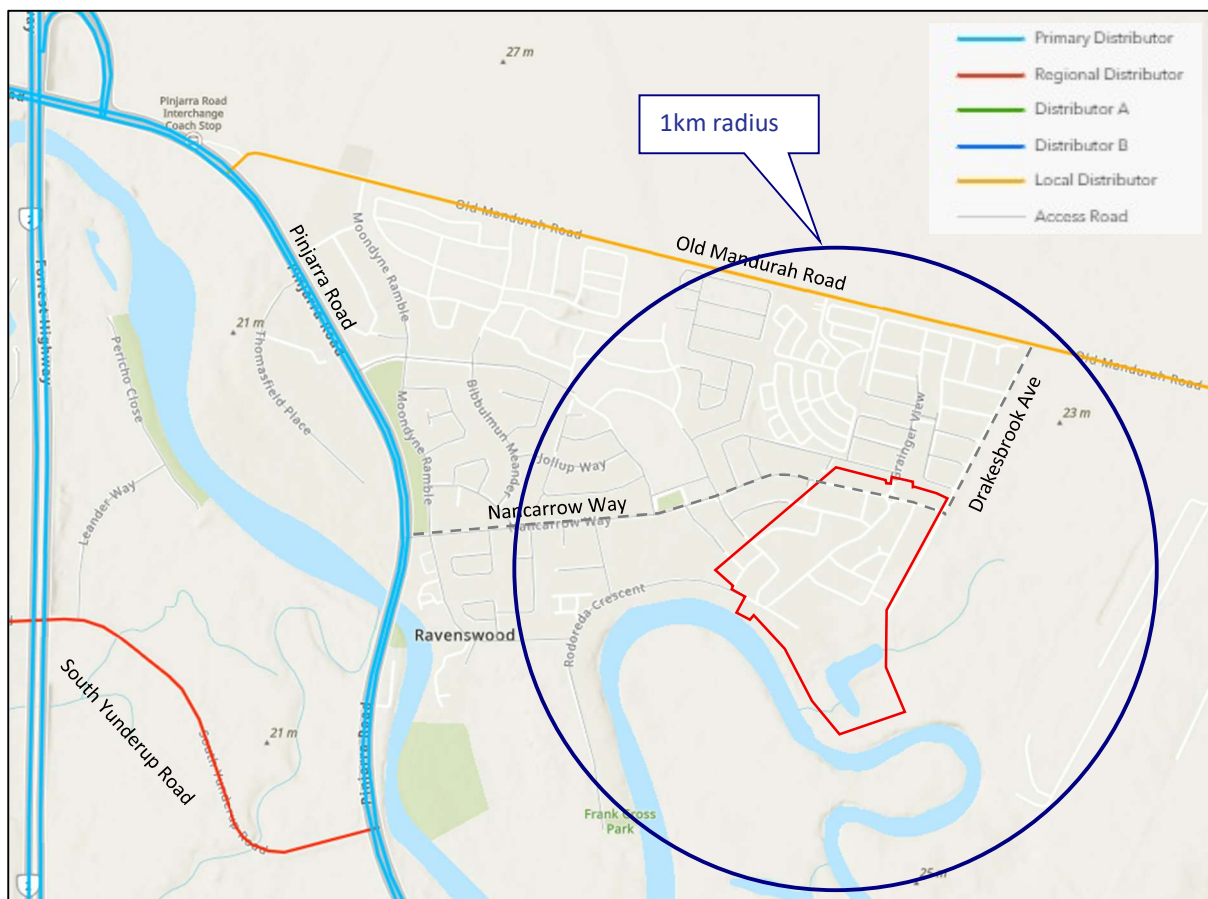


Figure 3.1: Existing Traffic Volumes on the Surrounding Road Network

Old Mandurah Road

Old Mandurah Road, is currently classified as a local distributor road under Main Roads WA's Functional Road Hierarchy. Roads within this category are intended *"to distribute traffic between access streets and the wider district distributor/arterial road network. These roads carry traffic belonging to or serving the area."* Old Mandurah Road connects to Pinjarra Road (primary distributor) and Paterson Road (local distributor) at its ends, with a number of midpoint connections which includes Drakesbrook Avenue that connects to the Site. All these roads are controlled by the Local Authority, Shire of Murray.

Old Mandurah Road is currently constructed to 2 lane unkerbed single carriageway standard with unsealed shoulders. Its intersection with Drakesbrook Avenue has been recently upgraded to provide a channelised right turn lane treatment along Old Mandurah Road.

Table 3.1. Old Mandurah Road Key Features

Feature	Description
Road Hierarchy	Local Distributor Road
Carriageway	2 lane unkerbed single carriageway with unsealed shoulders
Orientation	West-east
Speed Limit	90km/hr
Traffic Volume	1,329 vpd AWT
Public Transport	Not a current public transport route
Pedestrian/ Facilities	No pedestrian facilities
Bicycle Facilities	No dedicated cyclist facilities



Figure 3.2: Old Mandurah Road and Drakesbrook Ave Intersection (Streetview Sept 2025)

Drakesbrook Avenue

Drakesbrook Avenue is currently classified as a local access road under Main Roads WA's Functional Road Hierarchy. By definition the function of this category of road is *"to provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function."* Drakesbrook Avenue connects to Old Mandurah Road at its northern end. It currently ends at Murchison Drive however the planning is that it will extend further south and connect to Rodoreda Crescent.

Drakesbrook Avenue is currently constructed to two lane kerbed single carriageway standard with unsealed shoulders. Its intersection with Old Mandurah Road Avenue has been recently upgraded to provide a channelised right turn lane treatment along Old Mandurah Road and a sealed shoulder.

Table 3.2. Drakesbrook Avenue Key Features

Feature	Description
Road Hierarchy	Local Access Road
Carriageway	two lane kerbed road with solid median, includes cycle lanes
Orientation	North-south
Speed Limit	50km/hr
Traffic Volume	No current volumes
Public Transport	Not a designated public transport route
Pedestrian/ Facilities	Path provided on the western side
Bicycle Facilities	On-road cycling lanes provided



Figure 3.3: Drakesbrook Ave and Eliza Way Intersection (Streetview Sept 2025)

3.2 Existing Traffic Volumes

The latest available traffic counts for the developing area have been sought from the Shire of Murray and Main Roads WA and are shown in **Figure 3.4**.

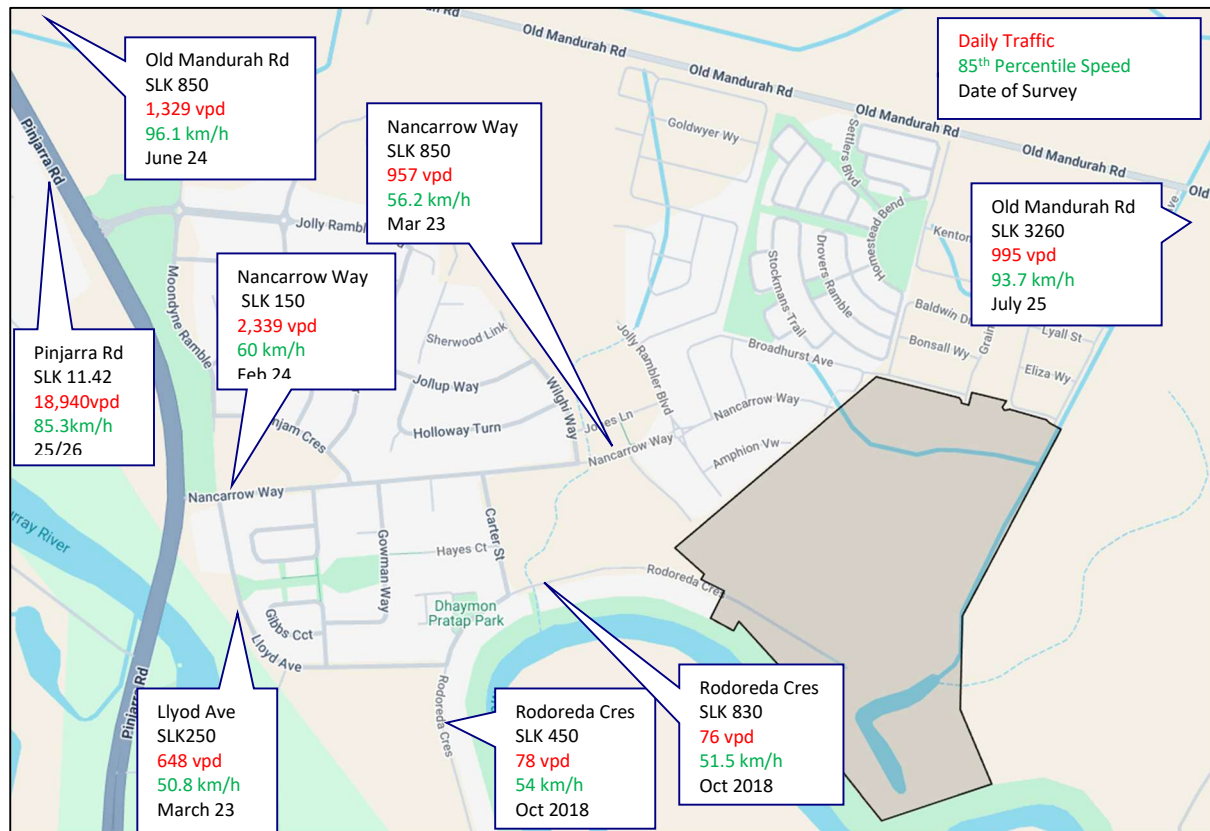


Figure 3.4: Existing Traffic Volumes on the Surrounding Road Network

3.3 Crash History

A review of the recent crash history for the surrounding road in the vicinity to the site has been conducted for the five year period to the end of December 2024 from the Main Roads Western Australia Integrated Road Information System (IRIS) crash database. There have been 42 recorded crashes as shown in **Figure 3.5** and are summarised in **Table 3.3**.

Table 3.3: Severity and Nature of Intersection Crashes on the Surrounding Road Network

Location/Nature	Severity					
	Fatal	Hospital	Medical	Property Damage Only (Major)	Property Damage Only (Minor)	Total
Old Mandurah Road – midblock crashes						
Non-Collision		2	1			3
Head On		2		1		3
Right Angle			1			1
Right Turn Thru			1			1
Hit Object				1		1
Hit Animal		1				1
Sub-total		5	3	2		10
Pinjarra Road – midblock crashes						
Head On	1					1
Hit Object				2		2
Sideswipe Same Direction				1		1
Sub-total	1			3		4
Jolly Rambler Boulevard – midblock crashes						
Non-Collision				1		1
Rear End				2		2
Sub-total				3		3
Other Roads – midblock crashes						
Lloyd Av, unknown					1	1
Haynes Ct, unknown				1		1
Montgomery Pwy, hit object					1	1
Sub-total				1	2	3
Pinjarra Road and South Yunderup Road -intersection crashes						
Rear End				4	1	5
Right Angle		1	1			2
Right Turn Thru			1			1
Sideswipe Same Direction				1		1
Hit Object				1		1
Sub-total		1	2	6	1	10
Pinjarra Road and Nancarrow Way -intersection crashes						
Right Angle			4	3		7
Sub-total			4	3		7
Pinjarra Road and Jolly Rambler Bvd -intersection crashes						
Rear End				2		2
Right Turn Thru			1			1
Sub-total			1	2		3
Other Intersections – intersection crashes						
Pinjarra Rd/Old Mandurah Rd, right turn thru				1		1
Nancarrow Way/Lloyd Ave, hit object					1	1
Sub-total				1	1	2
Total	1	6	10	21	4	42

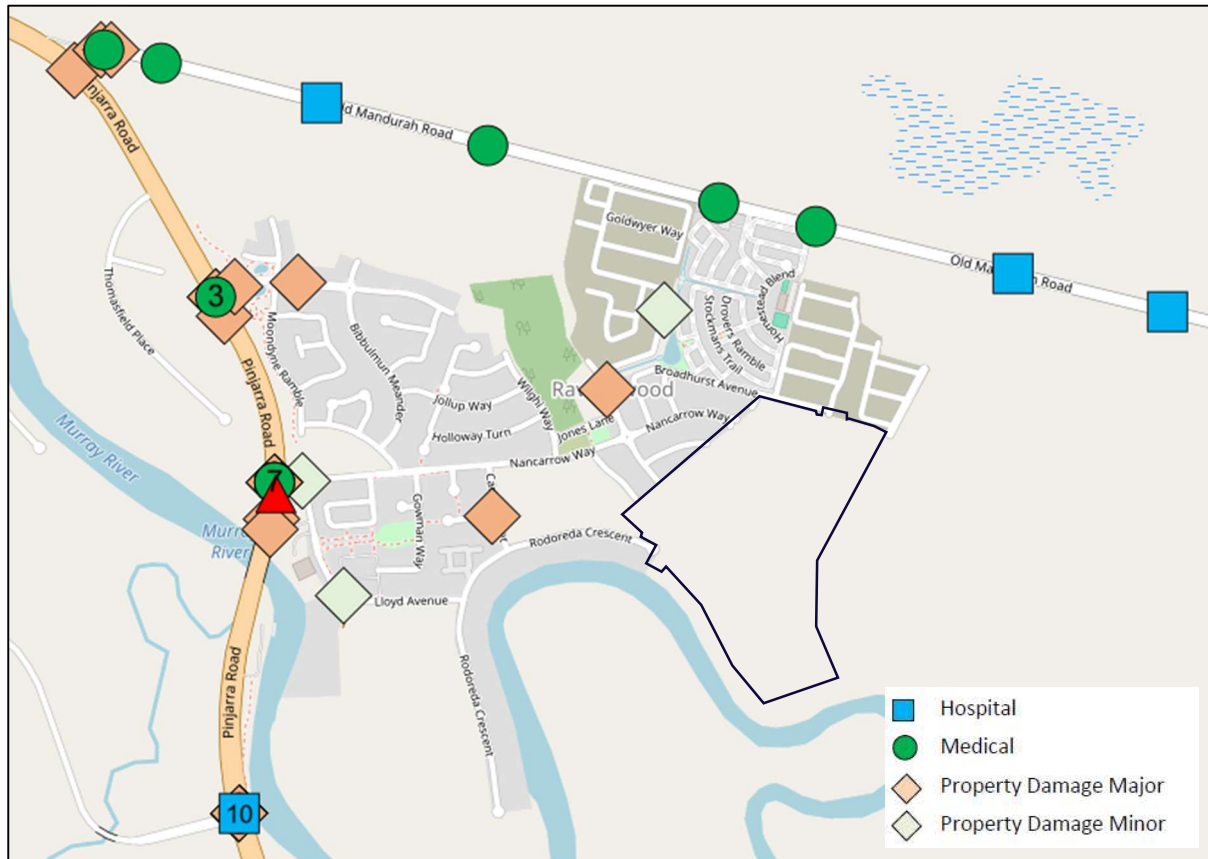


Figure 3.5: Location and Severity of Crashes on the Surrounding Road Network

3.4 Existing Pedestrian/Cyclist Network

Typically the local roads within Ravenswood have all been constructed with a path on at least one side of the road that facilitate pedestrian and cyclists as required.

The Department of Transport (DoT) has developed a Long-Term Cycle Network (LTCN) in conjunction with Local Authorities. The objective of this aspirational plan is to deliver a continuous cycling network designated by path hierarchy function. The three hierarchy classifications are primary, secondary and local routes. Pinjarra Road has been identified as a primary route whilst Old Mandurah Road is a secondary route, however the current plan also acknowledges that typically these routes within Ravenswood are inadequate/non-existing. No local routes have been identified in this plan within Ravenswood.

3.5 Existing Public Transport

There are some areas of Ravenwood currently serviced by public transport with the nearest bus stops located at:

- Bus Stop ID 27145, 27146 on Nancarrow Way
- Bus Stop ID 27147, 27148 on Carter Street

These bus stops form part of bus routes 600 and 605 that operate between Mandurah Station and Pinjarra.

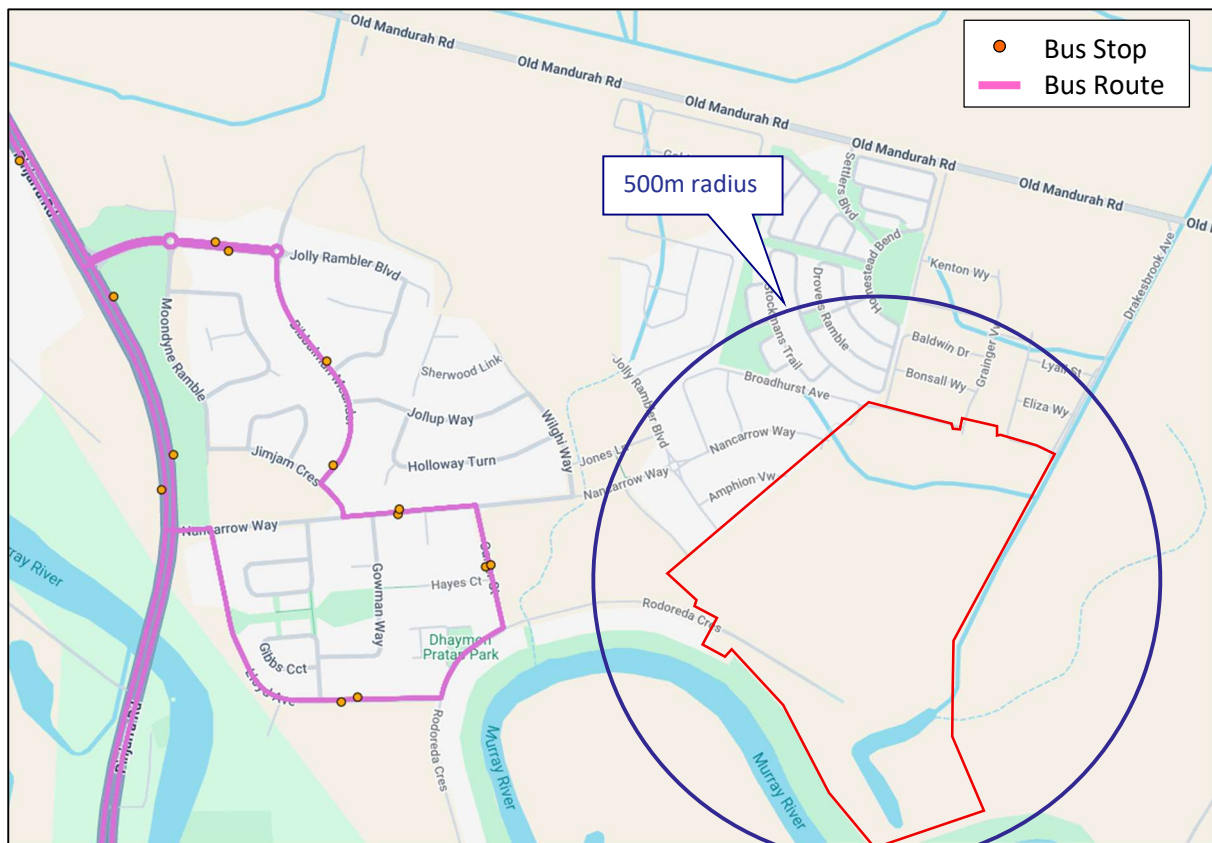


Figure 3.6: Existing Public Transport Bus Stops and Routes

4.0 PROPOSED INTERNAL ROAD NETWORK

4.1 Connections to the Existing Road Network

The connections to the existing road network as outlined by the ODP remain unchanged with a total of 8 new connections as shown in Figure 4.1 and described as follows:

1. Drakesbrook Avenue: on road cycle lanes, 2 x traffic lanes, central median refuge path located on the western side.
2. Grainger View at Broadhurst Avenue: 2 x traffic lanes with path located on the eastern side.
3. Wylie Road: 2 traffic lanes with path on the western side.
4. Nancarrow Way: 2 x traffic lanes with path located on the northern side.
5. Amphion View: 2 x traffic lanes with path located on the northern side.
6. Jolly Rambler Boulevard: 2 x traffic lanes with path located on the eastern side
7. Rutherford Vista: 2 x traffic lanes with path located on the eastern side.
8. Rodoreda Crescent: 2 x traffic lanes, no path



Figure 4.1: Connections to the Existing Road Network

4.2 Internal Road Network Layout

Whilst the existing external road network connections as shown on the ODP remain unchanged there is a slight difference in the internal layout as shown in the overlay in **Figure 4.2**. The primary change is the creation of a large lot containing a lifestyle village.



Figure 4.2: Indicative road network layout overlaid on the ODP (2023)

4.3 Road Hierarchy, Road Reservation Widths and Cross Sections

The road hierarchy, as outlined in the ODP will remain unaltered with all roads within the area classified as Access Street (D) with the following exceptions:

- Nancarrow Way - Access Street (C) and
- Drakesbrook Avenue, north of Nancarrow Way – Neighbourhood Connector B.

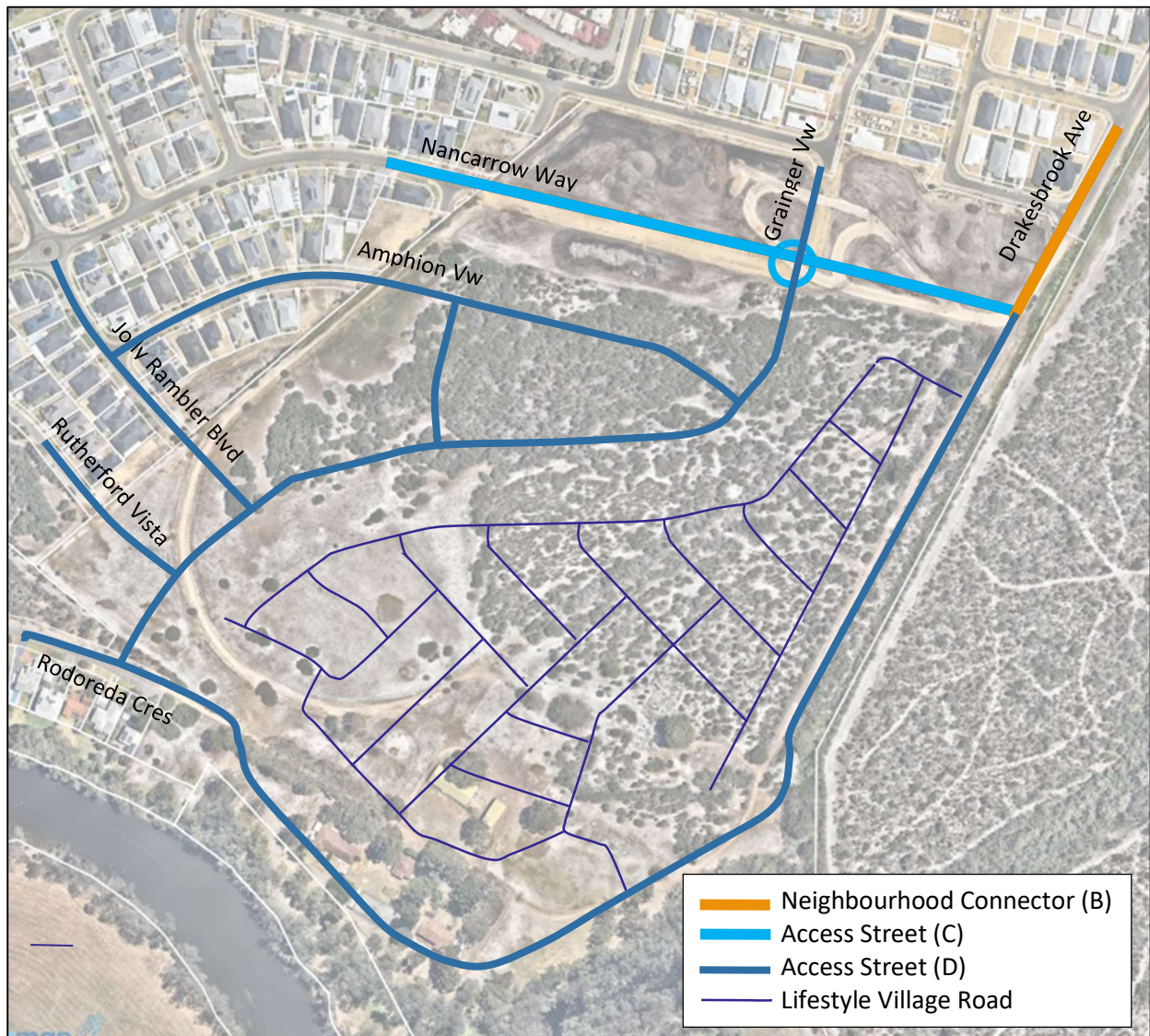


Figure 4.3: Proposed New Road Network and Hierarchy

Liveable Neighbourhoods (WAPC 2009) and the more recent *Draft Liveable Neighbourhoods* (2015) show a range of road reserve widths for these road classifications as per the internal road network. These are shown in **Figures 4.4 to 4.5**.

All new internal roads within the development are likely to carry less than 1,000 vehicles per day and hence it would be considered appropriate to adopt a 5.5m to 7.2m wide pavement with consideration of the existing adjoining external road network standard. Based on a 15m road reserve, a verge width of 5m to 3.9m remains respectively based on these pavement widths. The reserve width is adequate to provide a path but must also be adequate to contain the appropriate services. The development servicing report should be referred to in this instance. The detailed road cross section should be refined in consultation with the Shire of Murray as

required during the detailed design process to ensure new roads align with existing standards and roads already constructed.

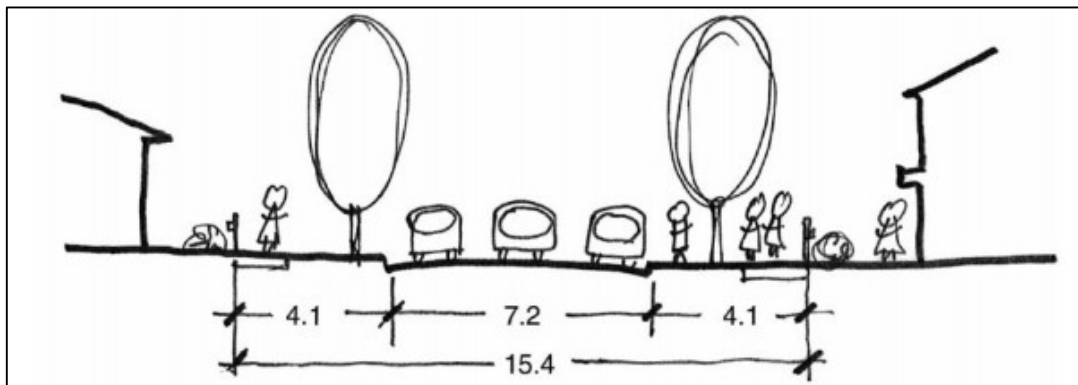


Figure 4.4a: Access Road C, 40km/hr, <3,000 vpd, *Liveable Neighbourhoods* (2009)

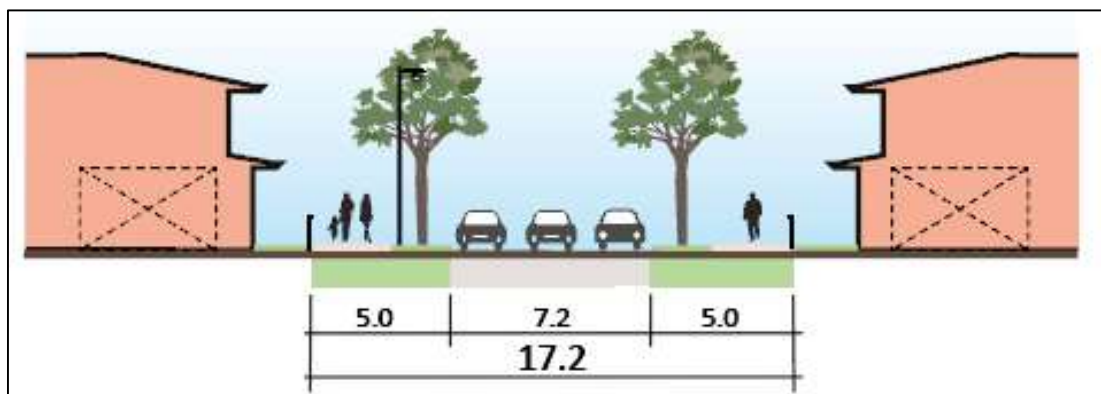


Figure 4.4b: Access Road C, 40km/hr, <3,000 vpd, *Draft Liveable Neighbourhoods* (2015)

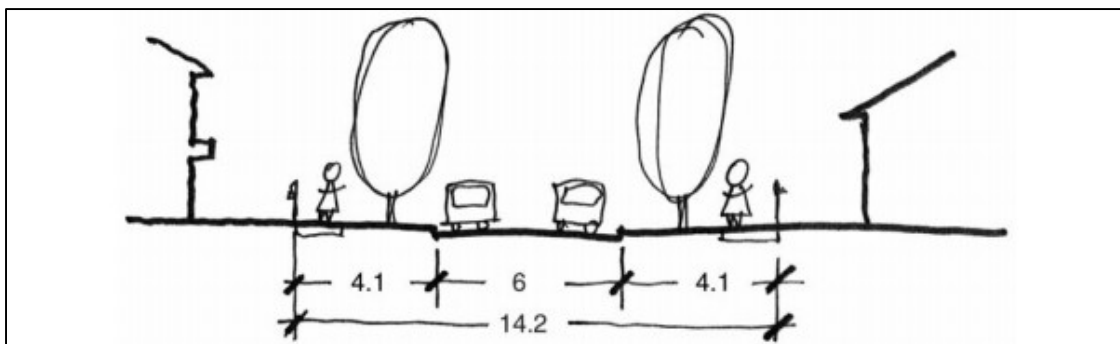


Figure 4.5a: Access Road D: 30km/hr, <1,000 vpd, *Liveable Neighbourhoods* (2009)

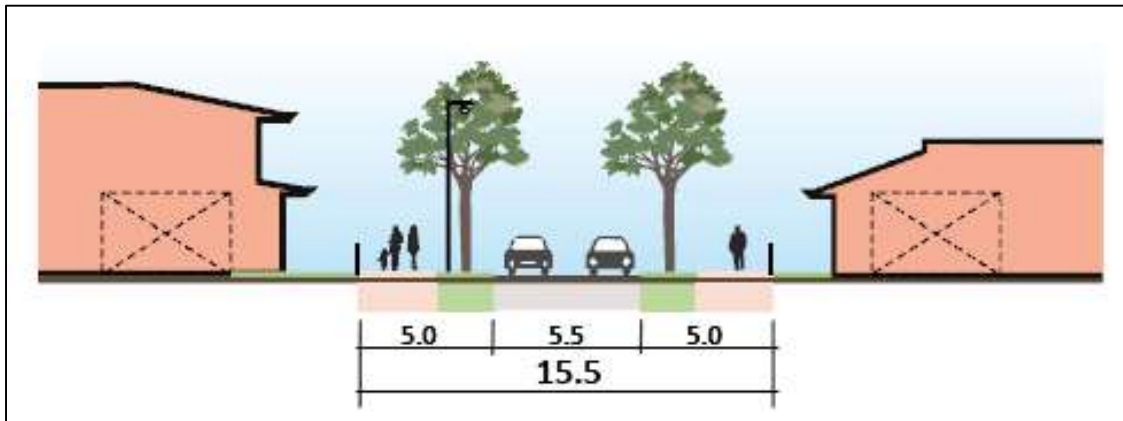


Figure 4.5b: Access Road D, 30km/hr, <1,000 vpd, *Draft Liveable Neighbourhoods (2015)*

The Lifestyle Village roads are typically proposed to be 6m in width. The Lifestyle Village will generate 940 vehicles daily with traffic volumes decreasing progressively from the main entry/exit to/from the Lifestyle Village. A 6m carriageway will be adequate to accommodate reversing manoeuvres from driveways. A 6m pavement is also adequate to pass a parked vehicle or slow moving vehicle however vehicles have to be parked appropriately i.e. vehicles cannot be parked directly opposite each other or near intersections.

The Drakesbrook Avenue and Rodoreda Crescent extension is slightly sinuous in its design at some locations. Whilst a sinuous design can assist in slowing traffic due to reduced sight distances it should be noted that this can result in drivers travelling along the center of the road to minimise steering. The outcome can be insufficient road space for two-way opposing thoroughfare and this increases crash risk. However, based on the volume of traffic on the internal road network and the subsequent design speed, the sinuous design is likely to be considered “low risk”. Good practice would be to include road widening to separate vehicular movements on bends (in particular a garbage truck). Adequate sight distance is required at bends to ensure that two opposing vehicles have adequate time to stop should a vehicle fail to drive lane correct. The road design should be refined during the detailed design process and may involve localized widening and/or wide aprons for truck movements.

Truncations on corner lots at intersection should be checked during the detailed design process to ensure that appropriate sight lines through and around bends are available for the design speed of the curve.

4.4 Service Vehicles

As previously outlined, the sinuous layout of the road network will necessitate a review of service vehicle swept paths during the detailed design stage to confirm that pavement widths are sufficient for opposing traffic, noting that wider swept paths may be required on bends. Localised pavement widening is expected to be easily accommodated within the available road reserve widths.

Conversely, the Lifestyle Village does not contain a formal road reserve. Indicative swept paths for a garbage truck through the Lifestyle Village suggests the road alignment may need refinement during the detailed design process to ensure its adequacy for two-way traffic through the adjustment of house sites in particular the swept paths of garbage trucks. During detailed design, mitigation measures may include one or a combination of the following: localised pavement widening, adjustment to lot sizes, flattening of horizontal curves, implementation of a one-way system, or targeted traffic management measures. Additionally, rubbish collection within “No Through Road” sections will need to be addressed. Options may include: bin pads to allow for collection kerbside; driver physically collecting the bins from outside the residences and/or provision of adequate cul-de-sac or turn around facility.

Within the village community, the low-speed environment influences driver behaviour by promoting caution and attentiveness. Drivers are conditioned to expect frequent give-way situations, pedestrian presence, and local vehicle movements, which encourages reduced speeds, regular yielding, and a heightened level of situational awareness.

4.5 On Street Parking

Consideration should also be given to the provision of on-street parking embayments along the extension of Drakesbrook Avenue and Rodoreda Crescent due to the potential for an on-street parking desire associated with the river foreshore area and recreational activities particularly abutting the Regional Open Space.

The Lifestyle Village should also consider visitor parking provision. It is understood that some residences will allow for visitor parking within their driveway whilst others will not. Once again, during the detailed design phase on-street parking should be strategically located around the village to ensure that all residences have access to convenient parking for visitors.

The operational requirements of the proposed caravan and boat trailer parking bays within the northeast corner of the Lifestyle Village will also need to be further evaluated during the detailed design process.

4.6 Intersection Controls

Internal intersection control remains unchanged and are as per the ODP i.e. all internal intersections are designed to be t-junctions operating under give way control with the exception of Nancarrow Way and Grainger View which will be a 4-way intersection under roundabout control.

4.7 Pedestrian and Cyclist Network

A shared path (minimum 2.0m) should be provided on at least one side of the internal road network. An indicative path network is shown in **Figure 4.6**. The path along Drakesbrook Avenue and Rodoreda Crescent is proposed along the southern side abutting the public open space which is likely to be a local attractor for pedestrians. The path along the extension of Grainger View continues on the southern side of the road and whilst this doesn't abut the POS it is a continuous path, south of Nancarrow Way with only driveways and no additional side road crossings.

There is an existing on-road cycle lane along Drakesbrook Avenue to Murchinson Drive that will need to be transitioned to the off-road shared path facility located on the southern side of the Drakesbrook Avenue and Rodoreda Crescent extension.

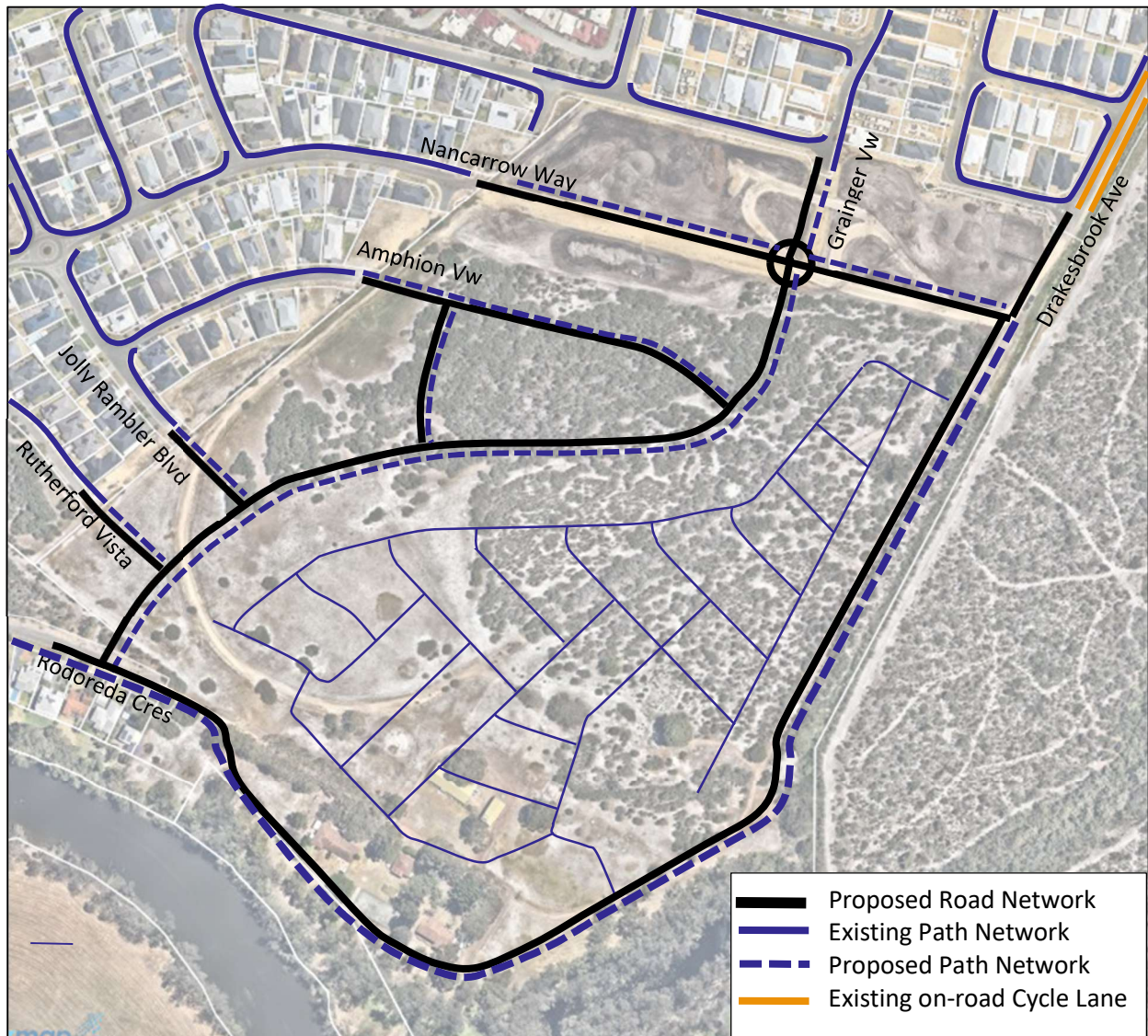


Figure 4.6: Proposed New Road Network and Hierarchy

4.8 Public Transport

If it is deemed to be needed in the future, Nancarrow Way and Drakesbrook Avenue are appropriate to be used as an extension of the PTA bus network. Swept path analysis (**Appendix C**) confirms modifications to the existing road network will not be required if the PTA choose to extend the public transport network in the future. Future bus stops located along Nancarrow Way have the potential to service existing residents north of the road and the proposed new residents south of Nancarrow Way.

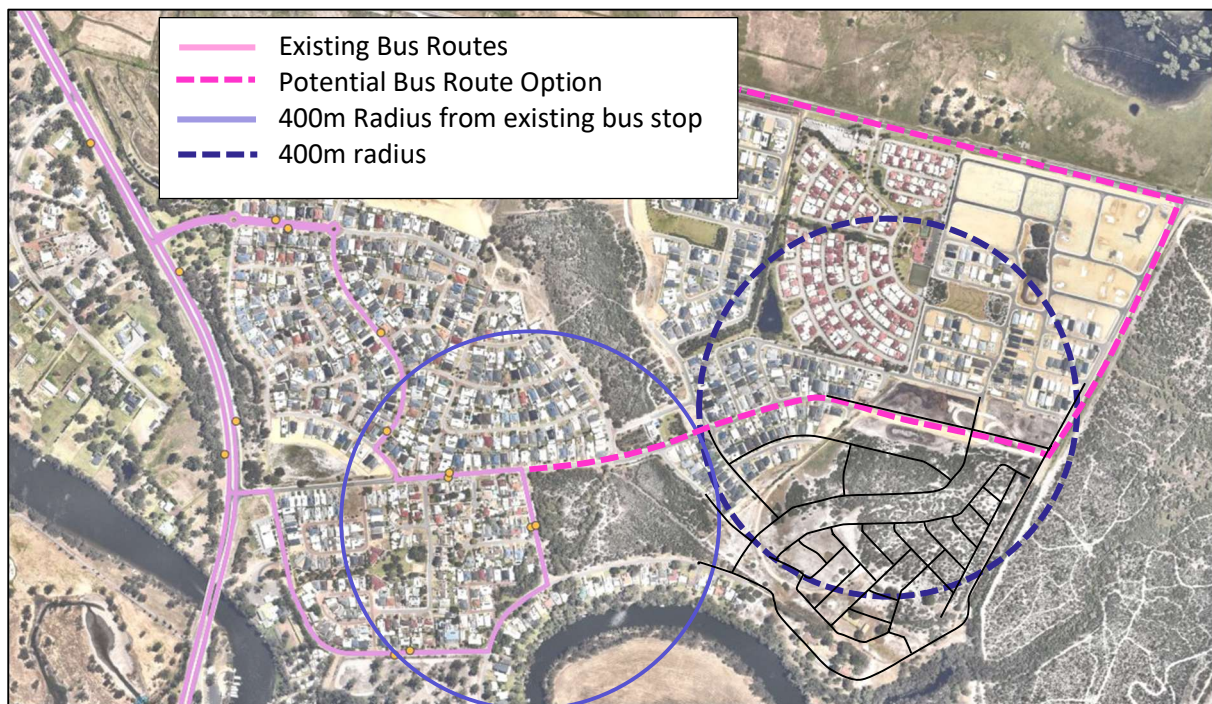


Figure 4.7: Existing and Potential New Bus Routes

5.0 ANALYSIS OF TRANSPORT NETWORK

In order to assess the potential traffic impacts associated with the proposed Site and those previously considered within the ODP, a traffic generation exercise was undertaken.

5.1 Trip Generation

The Site is proposed to include a lifestyle village accommodating 295 units. Reviewing recognised data from the *Trip Generation and Parking Generation Surveys, Housing for Seniors, Analysis Report, RTA, 2009* suggests that self-care only units can be expected to generate between 1.97 to 3.1 daily trips. The proposed development of a lifestyle village will be attractive to younger and more active people and hence a higher trip rate would be expected.

A previous survey of the National Lifestyle Village at Joondalup indicated the following trip generation data:

- Daily trip generation rate = 3.18 trips per unit
- AM road network peak hour trip rate (8-9am) = 0.20 trips per unit, 33% in / 67% out
- PM road network peak hour trip rate (5-6pm) = 0.18 trips per unit, 63% in / 38% out
- Site peak hour trip rate (9-10am, 11am-12noon) = 0.27 trips per unit, 33% in / 67% out

The daily trip generation rate surveyed of 3.18 trips per unit is slightly higher than the highest documented trip generation rate for self-care only units i.e. 3.1 daily trips per unit hence is considered appropriate for use in this assessment.

The trip generation adopted for the single dwelling lots is in line with previous reporting within the ODP i.e. 8 daily trips per dwelling and 0.8 peak hour trips per dwelling. A grouped housing site is also proposed which potentially may have a slightly lower trip generation rate as suggested by documented rates. To ensure a robust assessment, the trip generation was assumed to be the same as that adopted for single residential dwellings.

Table 5.1 outlines the comparison between the trip generation for the current ODP and those as proposed. The estimated trip generation for the ODP was 2,856 vehicles daily with 285 and 285 trips during the am and pm peak hours respectively. Whilst the new proposal is estimated to generate less than the ODP with 2,682 vehicles daily with 233 and 228 trips during the am and pm peak hours respectively.

Table 5.1: Trip Generation Comparison with ODP

Land Use	ODP – January 2023						January 2026					
	No	Daily	Am Peak		Pm Peak		No	Daily	Am Peak		Pm Peak	
			In	Out	In	Out			In	Out	In	Out
Undeveloped Balance of Lot 889												
Residential R20	238	1,904	48	143	120	70	168	1,344	34	101	85	50
Residential R30	119	952	24	71	60	35						
Village Dwellings							295	938	19	40	33	20
Grouped Dwelling R40							50	400	10	30	25	15
Total =	357	2,856	71	214	180	106	513	2,682	63	170	143	84
			285		285				233		228	

5.2 Design Traffic Flows

The trip distribution for the proposed development takes into consideration the location of retail and community services, the surrounding road network and access points, and the likely travel patterns of future residents based on these destinations.

Figure 5.1 shows the indicative design flows for the development traffic.

5.3 External Traffic Network

The proposed road network connection created between Nancarrow Way and Drakesbrook Avenue may result in a slight redistribution of traffic i.e. those wanting to use Old Mandurah Road to the east of the Site.

Nancarrow Avenue currently carries in the order of 2,300 vehicles per day at its westernmost end. Assuming 15% would use Old Mandurah Road eastbound this equates to an additional 350 vehicles per day being redistributed to the east through the Site along Nancarrow Way.

Similarly, Lloyd Avenue currently carries in the order of 650 vehicle per day at its westernmost end. Assuming 15% would use Old Mandurah Road eastbound this equates to an additional 65 vehicles per day being redistributed to the east through the Site along Rodoreda Crescent.

Drakesbrook Avenue

Drakesbrook Avenue, north of Nancarrow Avenue is anticipated to carry an additional 1,250 vehicles per day from the development plus the additional 350 + 65 vehicles per day redistribution of existing traffic increasing the total volume to 1,670 vehicles per day north of

Nancarrow Way. This volume remains within the traffic volume expected on a Neighbourhood Connector (B) or Local Distributor road.

Nancarrow Way

Nancarrow Way, east of Pinjarra Road is anticipated to carry an additional 1,450 vehicles per day from the development. Once again, the proposed connection created between Nancarrow Way and Drakesbrook Ave this would result in a slight redistribution of traffic. On this basis, the anticipated traffic volume on Nancarrow Avenue at its westernmost end is anticipated to be in the order of 3,450 vehicles per day i.e. $2,300 - 350 + 1,450$. Traffic volumes will naturally decrease to the east as the road network disperses the traffic load with traffic volumes typically in the range expected for a local access road.

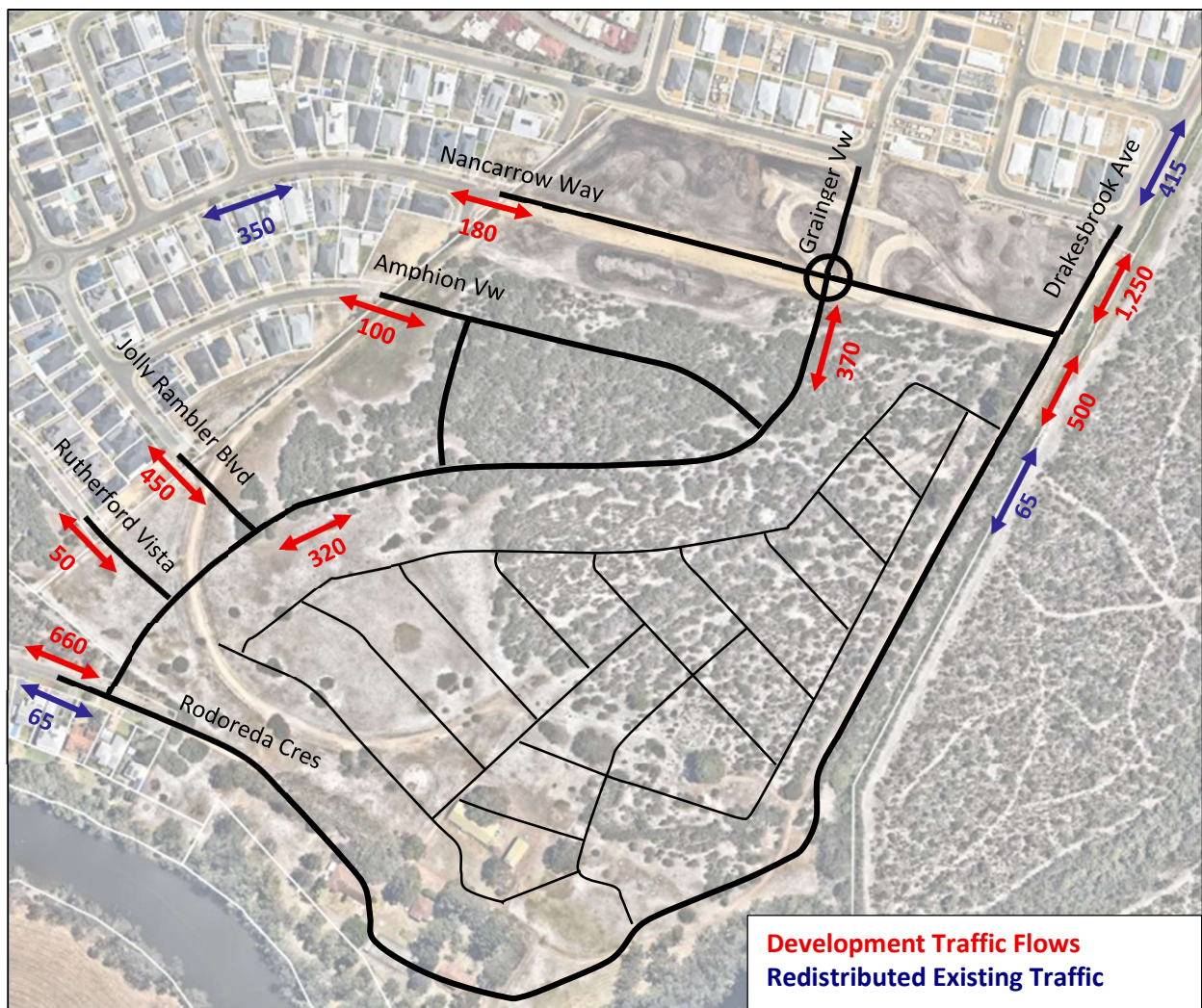


Figure 5.1: Indicative Design Flow of Development Traffic

External Intersection Connections

The intersection of Mandurah Road and Drakesbrook Avenue has recently been upgraded to provide a channelised right turn lane treatment along Old Mandurah Road whilst the intersection of Pinjarra Road and Nancarrow Road has dedicated left and right turning lanes on Pinjarra Road.

Whilst there are more dwellings outlined within the proposal than that in the ODP the total trip generation is less given the lower trip generation of the Lifestyle Village daily and during the road network am and pm peak periods. For this reason the previous analysis of the external intersection connections (SIDRA assessment) does not need to be re-analysed.

6.0 SUMMARY AND CONCLUSION

Porter Consulting Engineers has been engaged to prepare a Transport Impact Assessment (TIA) to examine the traffic operation of the proposed subdivision of Lot 889 where it may differ from that accessed within the ODP and thereby provide the approving authority with sufficient traffic information to confirm that the proponent has adequately considered the traffic aspects of the development.

The key points in regard to the proposed development are as follows:

- The ODP as defined in January 2023 provided a total of 357 dwellings comprising of residential lots (R20/R30) whilst the current proposal is for 513 dwellings comprising of R20 lots (168 dwellings), a grouped dwelling lot (50 dwellings) and a lifestyle village (295 dwellings).
- The proposed lifestyle village is the key difference from the ODP. The lifestyle village will cater for over 50's and is most likely to attract more active persons than a typical aged care facility but less trips than typical residential dwellings.
- The existing external road network connections remain unchanged (8 external road connections) however there is a slight difference in the internal layout primarily relating to the large lot containing the lifestyle village.
- The road hierarchy remains unchanged from that outlined within the ODP i.e. Nancarrow Way: Access Road C and Drakesbrook Avenue: Neighbourhood Connector B.
- The Drakesbrook Avenue and Rodoreda Crescent extension is slightly sinuous in its design at two locations. Good practice would be to include road widening to separate vehicular movements on bends (in particular a garbage truck). This should be further refined during the detailed design process and may involve localized widening and/or wide aprons for truck movements.
- Indicative swept paths for a garbage truck through the Lifestyle Village suggest the road alignment may need refinement during the detailed design process to ensure its adequacy for two-way traffic and intersections.
- Consideration should also be given to the provision of on-street parking embayments along the extension of Drakesbrook Avenue and Rodoreda Crescent due to the potential

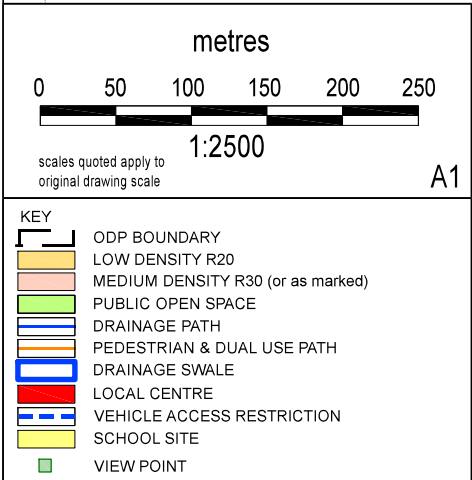
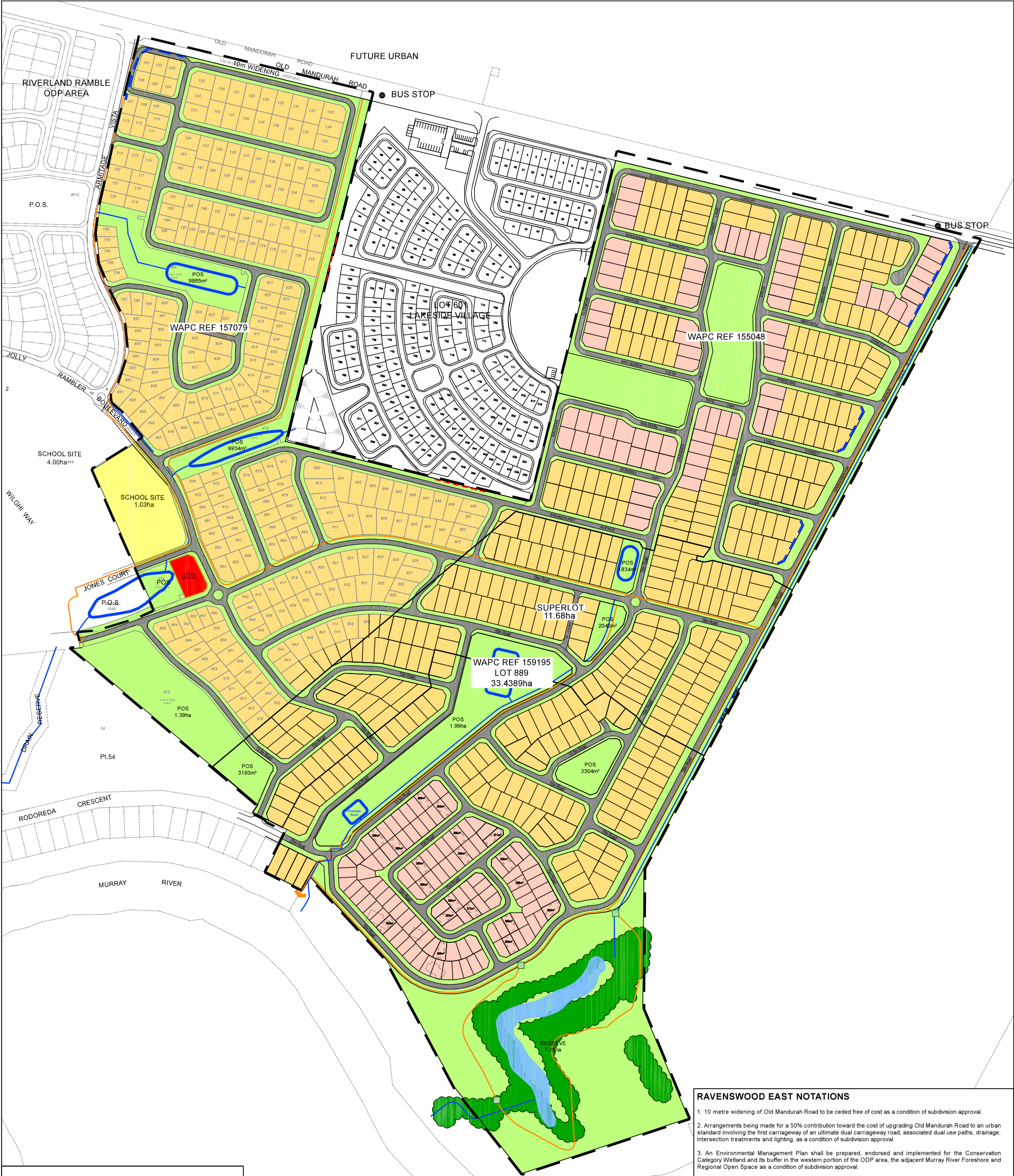
for an on-street parking desire associated with the river foreshore area and recreational activities particularly abutting the Regional Open Space.

- The Lifestyle Village should also consider visitor parking provisions to ensure that all residences have access to convenient parking for visitors.
- A shared path (minimum 2.0m) should be provided on at least one side of the internal road network within the road reserve.
- There are existing on-road cycle lanes along Drakesbrook Avenue that will need to be transitioned to the off-road shared path facility located on the southern side of the Drakesbrook Avenue and Rodoreda Crescent extension.
- If it is deemed to be needed in the future, Nancarrow Way and Drakesbrook Avenue are appropriate to be used as extension of the PTA bus network.
- The Site is anticipated to generate in the order of 2,700 vehicles daily or 233 and 228 vehicles in the am and pm peak hours respectively. This is less than that previously allowed for within the ODP.
- The traffic volumes anticipated on the external road network (i.e. Nancarrow Way and Drakesbrook Avenue) are typical of those expected on these classifications of roads and can be accommodated within the mid-block capacity of a two way road.

The proposed development is anticipated to function safely and efficiently and integrate effectively with the surrounding road network (as per the ODP) subject to the detailed design process addressing the matters outlined within this report.

APPENDIX A

Outline Development Plan



THIS PLAN FOR DISCUSSION PURPOSES ONLY. SUBJECT TO APPROVALS AND SURVEY
**LOT 889 (FORMERLY LOTS 619, 620 & 9010) OLD MANDURAH ROAD
RAVENSWOOD -
EAST OUTLINE DEVELOPMENT PLAN (ODP)** Date: 10th January 2023
p. 0438 337 359 PLAN-IT TOWN PLANNING & DEVELOPMENT

RAVENSWOOD EAST NOTATIONS

- 10 metre widening of Old Mandurah Road to be ceded free of cost as a condition of subdivision approval.
- Arrangements being made for a 50% contribution toward the cost of upgrading Old Mandurah Road to an urban standard involving the first carriageway of an ultimate dual carriageway road, associated dual use paths, drainage, intersection treatments and lighting, as a condition of subdivision approval.
- An Environmental Management Plan shall be prepared, endorsed and implemented for the Conservation Category Wetland and its buffer in the western portion of the ODP area, the adjacent Murray River Foreshore and Regional Open Space as a condition of subdivision approval.
- Finished floor levels to be 0.5m above 1/100 year flood level.
- The dedication and construction of the eastern link road to connect with Old Mandurah Road to be undertaken as part of appropriate staging as a condition of subdivision approval.
- Conditions of subdivision approval will include such matters as: acid sulphate soils assessment, ceding of foreshore areas, ceding of the primary school site and mosquito management.
- The proponent will be required to demonstrate that a 10% public open space contribution is achieved in accordance with WAPC policy as part of the subdivision application. As part of this the proponent is to demonstrate that proposed water management can be accommodated without a significant impact on the recreational use of the open space areas proposed under the plan with open space areas being modified if necessary to accommodate this.
- All lots abutting public open space shall have visually permeable fencing and dwellings shall be designed to provide surveillance of the open space.
- Any proposed changes to the existing fencing at the interface between the Lakeside Village on Lot 601 and the ODP are to be undertaken in consultation with the owners of the Lakeside Village and be approved by the Shire prior to construction.
- Lots directly abutting Old Mandurah Road and those lots with dual road frontages will be subject of a Local Development Plan (LDP) to address street presentation to all street frontages through treatments including visually permeable masonry walls, landscaping and built form.
- An Urban Water Management Plan shall be prepared, endorsed and implemented as a condition of subdivision approval.
- No drainage infrastructure is to be constructed on the proposed school site without prior consent of the Department of Education.
- Road reserve widths and the design of the local road network to be subject to review at the subdivision design stage.
- An updated Traffic Management Plan shall be prepared and endorsed at the subdivision design stage which addresses both onsite traffic management issues and any offsite traffic management requirements. The plan is to be implemented to the specification of the Shire.
- A Fire Management Plan shall be prepared and endorsed prior to subdivision approval, with relevant provisions implemented during relevant subdivision or development stages.
- The detailed location of the mature trees in the southern portion of the Structure Plan area in the vicinity of the existing buildings to be identified and where practical retained as part of the subdivision design.

APPENDIX B

Masterplan Layout



RICHARD HAMMOND ARCHITECT
1B LITTLE HOWARD ST, FREMANTLE, 6160
E. RICHARD@HRARCHITECTS.COM.AU
M. 0438 918 753



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LEGEND

LANDSCAPING

COMMUNITY FACILITY

RECREATION FACILITY

LAND LEASE BOUNDARY

GATE & FENCE

STANDARD LOTS

POTENTIAL DUPLEX LOTS

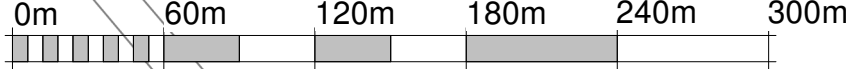
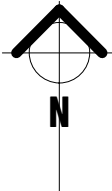
COMMUNITY ROADS

REGIONAL / PUBLIC OPEN SPACE

'LIVING STREAM'

RAVENSWOOD MASTERPLAN
FOR THE ASPEN GROUP
LOT 899 RODOREDO CRESENT

JUNE 2026
1:3000 @ A3
LAND LEASE COMMUNITY - 281 HOME SITES (14 POTENTIAL DUPLEX SITES)
TOTAL LAND LEASE COMMUNITY SITE 110,885.0m²
COMMUNITY OPEN SPACE 11,886.5m² (10.7%)



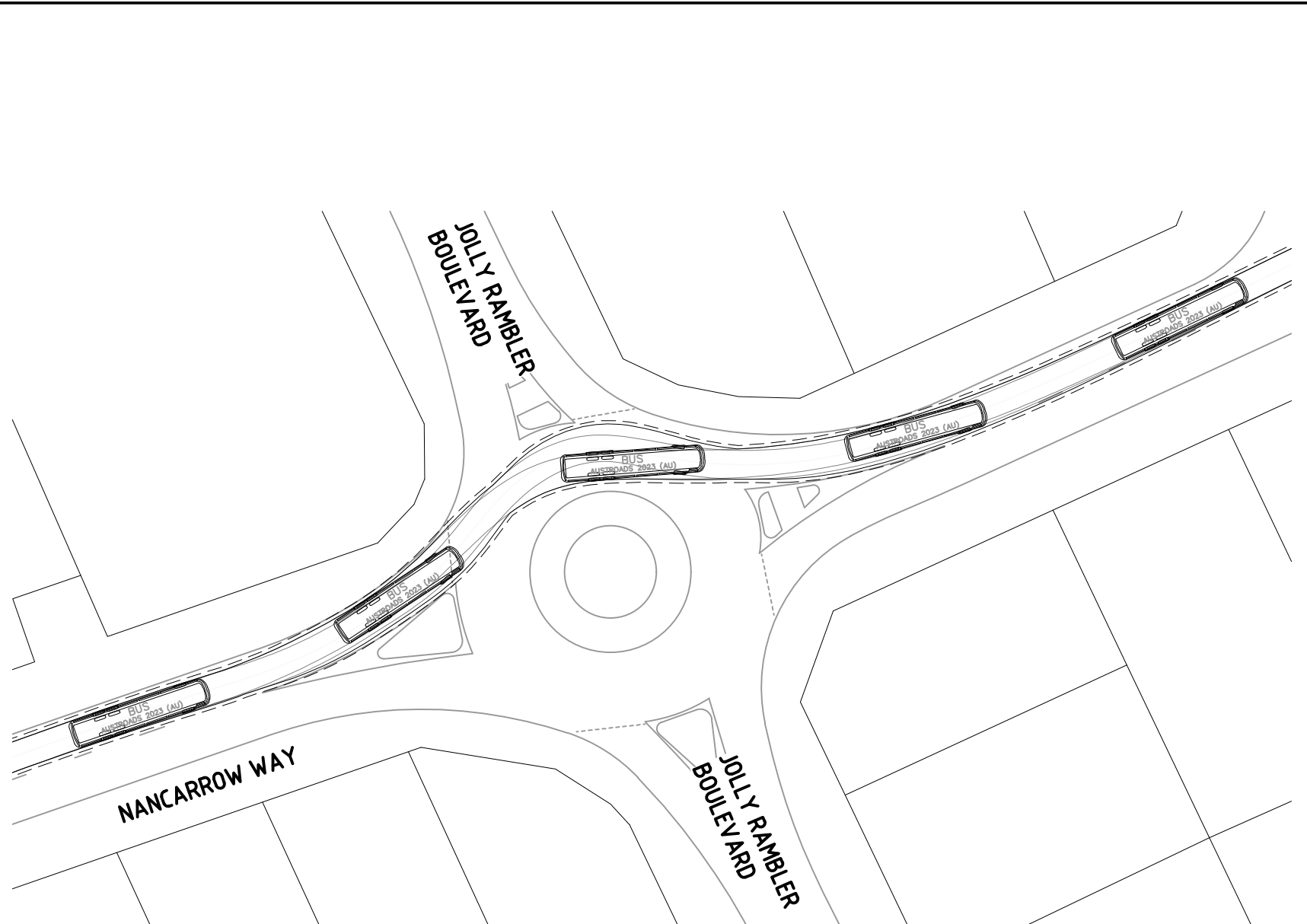
SUMMARY TABLE	
Total Site Area:	33.4389ha
Total No. of Lots:	168
Minimum Lot Area:	312m²
Maximum Lot Area:	844m²
Average Lot Area:	478m²
No. of Balance Lots:	2
Total Area:	1054m²
No. of POS Lots:	3
Total Area:	1.54ha
No. of Regional Open Space Lots:	1
Total Area:	6.77ha
No. of Group Housing Sites:	1
Total Area:	9574m²
No. of Land Lease Lots:	1
Total Area:	11.1ha
Land Lease Community Lot Sizes (avg):	12.5m x 21m
Community Open Space Area:	1.18ha
Community Open Space percentage of Land Lease Lot Area:	10.7%
No. of Land Lease Dwelling Lots:	281
	295 (incl. duplex sites)

Allerding & Associates
Town Planners, Advocates
and Subdivision Designers

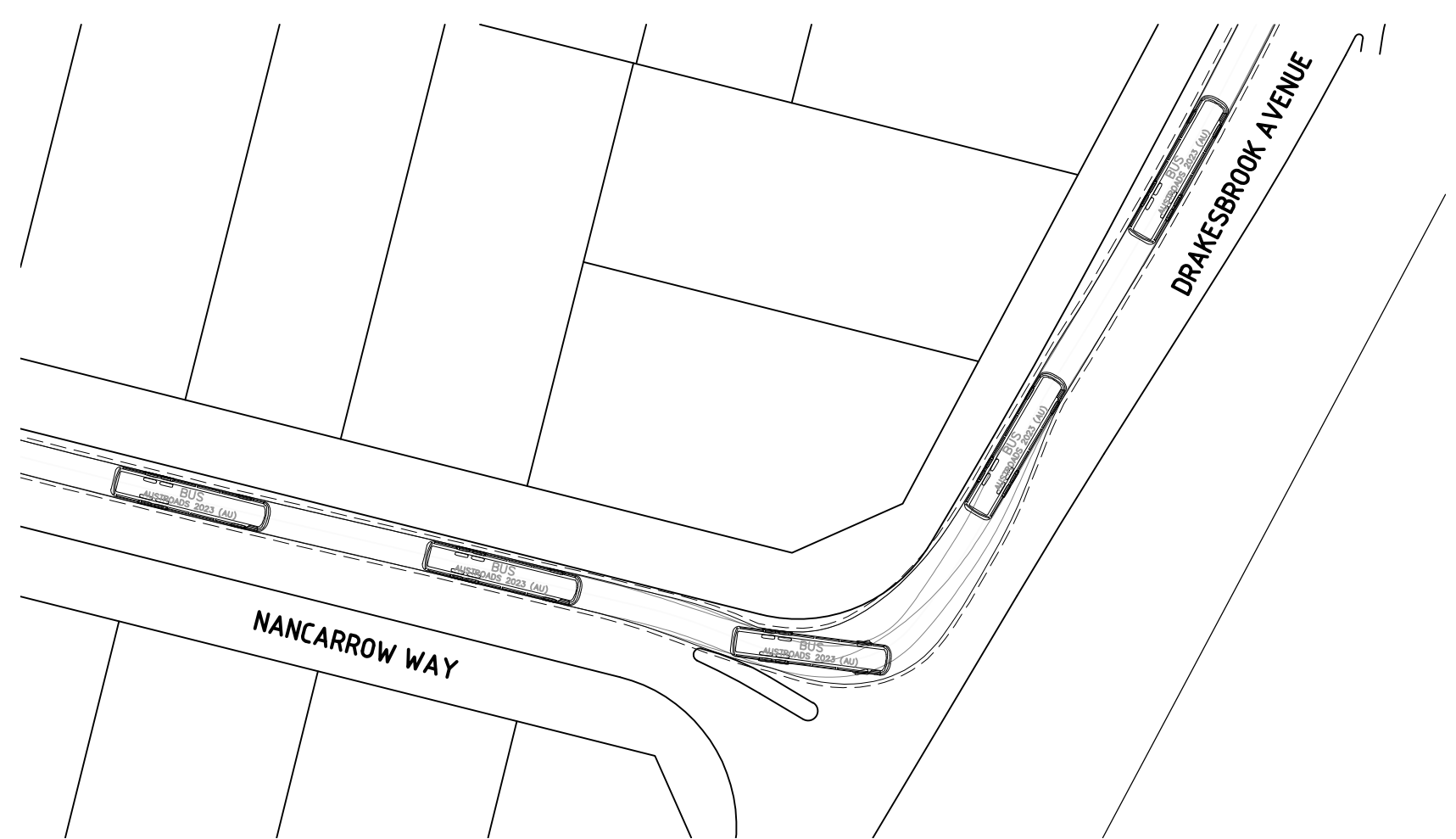
125 Hamersley Road, Subiaco WA 6008
T: (08) 9382 3000 | W: allerdingassoc.com

APPENDIX C

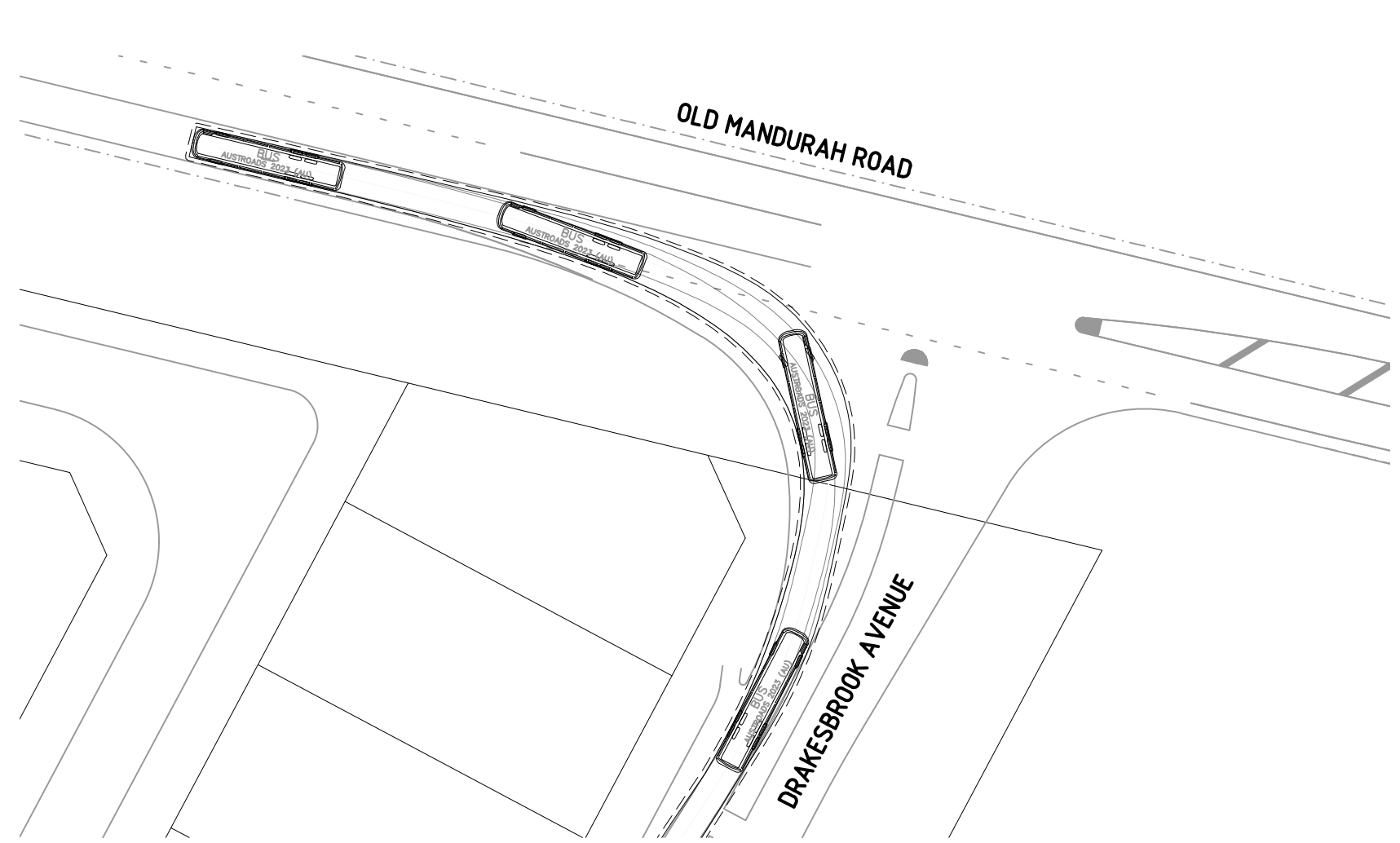
Bus Swept Paths



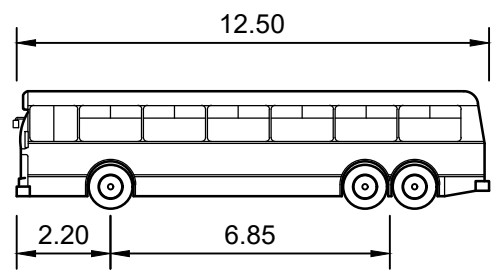
NANCARROW WAY AND JOLLY RAMBLER BLVD ROUNDABOUT
SCALE 1:500



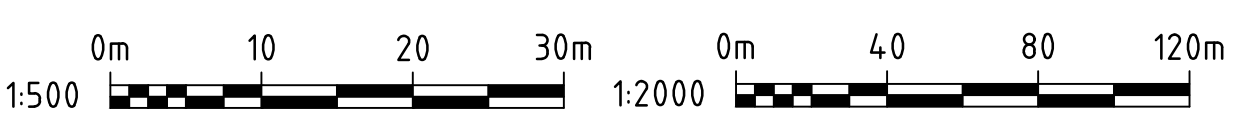
NANCARROW WAY AND DRAKESBROOK INTERSECTION
SCALE 1:500



DRAKESBROOK AVENUE AND OLD MANDURAH ROAD INTERSECTION
SCALE 1:500



Bus	
AUTOTURN: AUSTRROADS 2013 (AU)	
OVERALL LENGTH	12.50m
WIDTH	2.50m
TRACK	2.50m
LOCK TO LOCK TIME	6.0s
STEERING ANGLE	36.6°



PROJECT:		LOT 889 RODOREDA CRESCENT RAVENSWOOD		A		16-1-2026	ISSUED FOR INFORMATION		MEG		BY		COPYRIGHT COPYRIGHT © PORTER CONSULTING ENGINEERS. ALL RIGHTS RESERVED. CAD DRAWING DO NOT MANUALLY ALTER. THE USER SHALL BE RESPONSIBLE FOR "SITE CHECKING" ALL DIMENSIONS BEFORE COMMENCEMENT OF WORK. THE CLIENT HAS LICENSE TO USE THIS DRAWING FOR THE PROJECT ONLY. ONLY PLANS WITH NUMERICAL REVISION (REV "1" OR HIGHER) AND PRINTED IN FULL COLOUR SHALL BE USED FOR CONSTRUCTION. IF THIS PLAN IS PRINTED IN BLACK AND WHITE OR GREY SCALE IT IS NOT TO BE USED FOR CONSTRUCTION.		 Level 2 Wishart Court 58 Wishart Road Mt Pleasant 6153 WA PO Box 1036 Canning Bridge 6153 WA Tel (08) 9315 9955 Email: office@portereng.com.au www.portereng.com.au		CLIENT: REALISE RESIDENTIAL WA 2 PTY LTD		DRAWING 12.5m BUS SWEEP PATH		SCALE: 1:2000		DRAWING No.		REV No.		ORIGINAL DRAWING SIZE	
DATE		16-1-2026		A		DATE		Jan-26		24-12-163/0/900		A		A1		DESIGN		SCH		DRAWN		MEG		FILE NAME: .63\ACAD\STAGE 0\2412163-0-900.dwg		NORTH ARROW		
STATUS:		FOR INFORMATION		CHECK		APPD																						



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