

KINDIRA MONARCH GLEN ROL05



Traffic Impact Assessment

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1. INTRODUCTION

1.1 Background

Bitzios Consulting has been engaged to undertake a Traffic Impact Assessment (TIA) for the proposed ROL05 subdivision within Kindira, Monarch Glen (formerly Undullah). The location of the subject site with respect to the Monarch Glen boundary is illustrated in Figure 1.1.

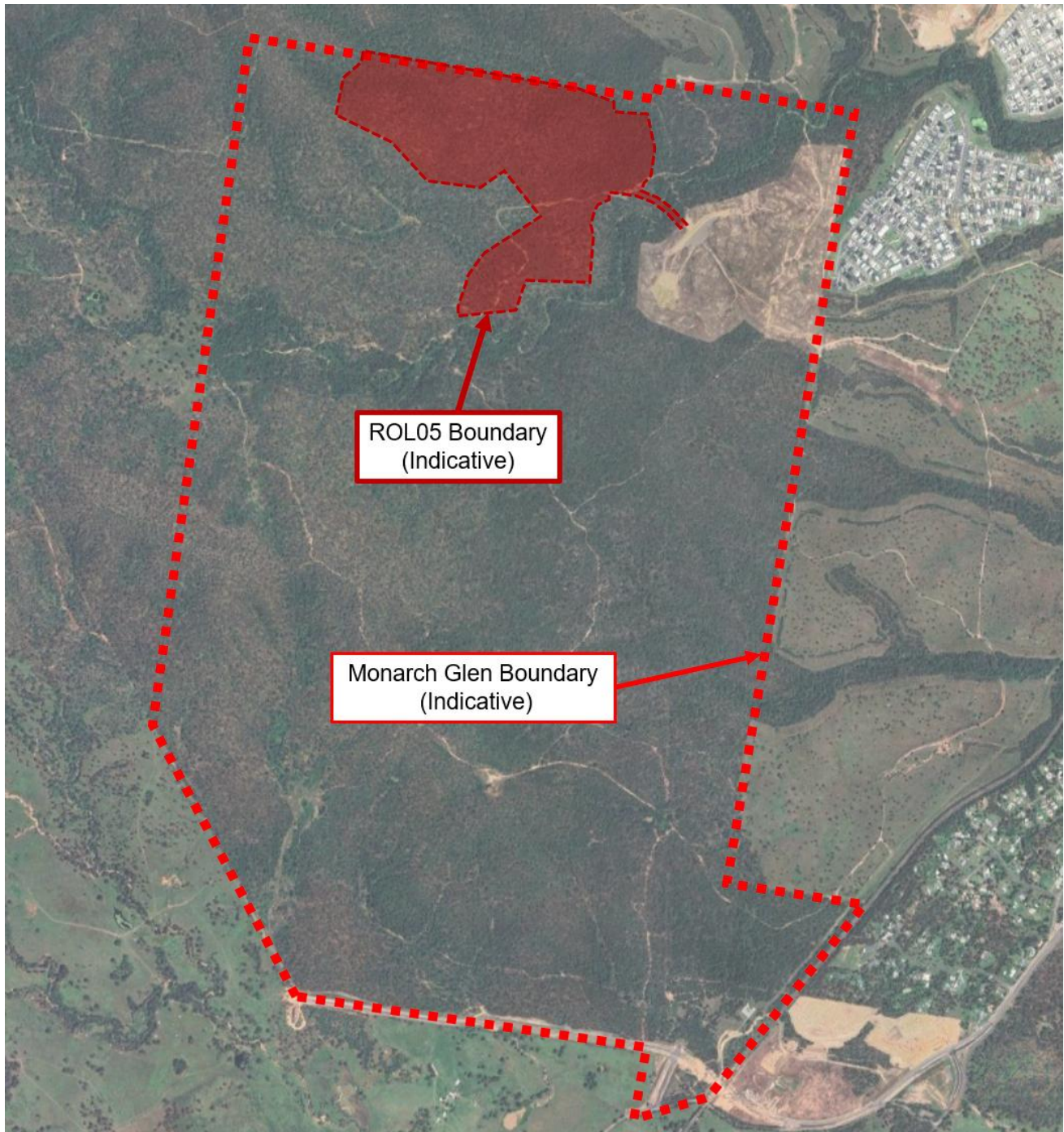


Figure 1.1: Site Location

This report documents the proposed transport network and its integration with the surrounding network and future planning in the region. It includes an assessment of key intersections and identifies the necessary active transport and public transport provisions to suitably service the development.

1.2 Development Summary

ROL05 is a subdivision comprising of 670 residential allotments, a state school site and accompanying parklands / open space. The lot plan of the subject site is provided at **Appendix A** and illustrated in Figure 1.2.

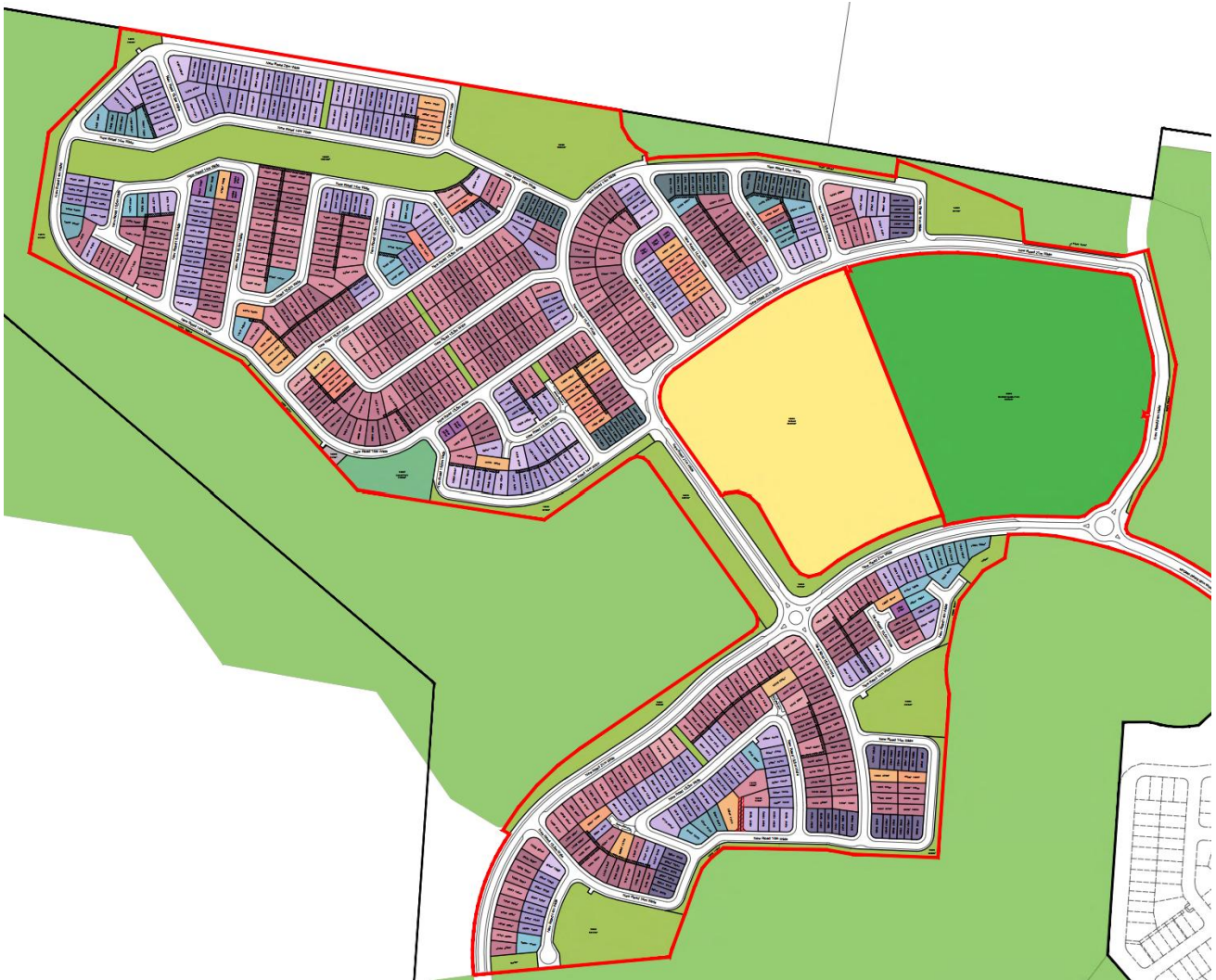


Figure 1.2: Proposed Development Layout

1.3 Scope of Assessment

The purpose of this assessment is to provide an overview and analysis of traffic and transport related elements of the subject site with the following scope of assessment:

- A review of the development's context with relation to transport planning within Monarch Glen, the Greater Flagstone PDA, and overarching transport planning in the South Logan area
- A review of the proposed development against relevant planning to date
- Detailing previous strategic modelling undertaken to identify and evaluate appropriate road layout and road cross-sections within the subject site
- Intersection modelling to assess key intersections within the subject site
- Review alternate transport provisions throughout the site, including consideration of public and active transport facilities and connections.

1.4 Reference Material

The following planning documents have been considered as a part of this assessment, including (but not limited to):

- Endorsed Monarch Glen Movement Network IMP (*P6607.003R Monarch Glen Movement Network IMP*) – 14 July 2025
- Endorsed Monarch Glen Context Area Plan, drawing no. 11731 P 22 Rev M – CON 01 endorsed 31 October 2025
- Greater Flagstone Urban Development Area: Development Scheme – 28 February 2025
- The Greater Flagstone PDA Infrastructure Planning and Background Report (IPBR) – July 2022
- Greater Flagstone Priority Development Area: Development Charges and Offset Plan (DCOP) – July 2025
- South Logan Strategic Transport Model: Model Development and Network Apportionments – June 2020, and associated model network files
- Economic Development Queensland (EDQ) development guidelines, including PDA guideline no. 6: Street and Movement Network – February 2019.

2. SITE LOCATION & PLANNING CONTEXT

2.1 Greater Flagstone Priority Development Area

2.1.1 Overview

The Greater Flagstone PDA was declared on 8 October 2010 and is located west of Jimboomba within the southern part of Local City Council's LGA. Key PDA information is as follows:

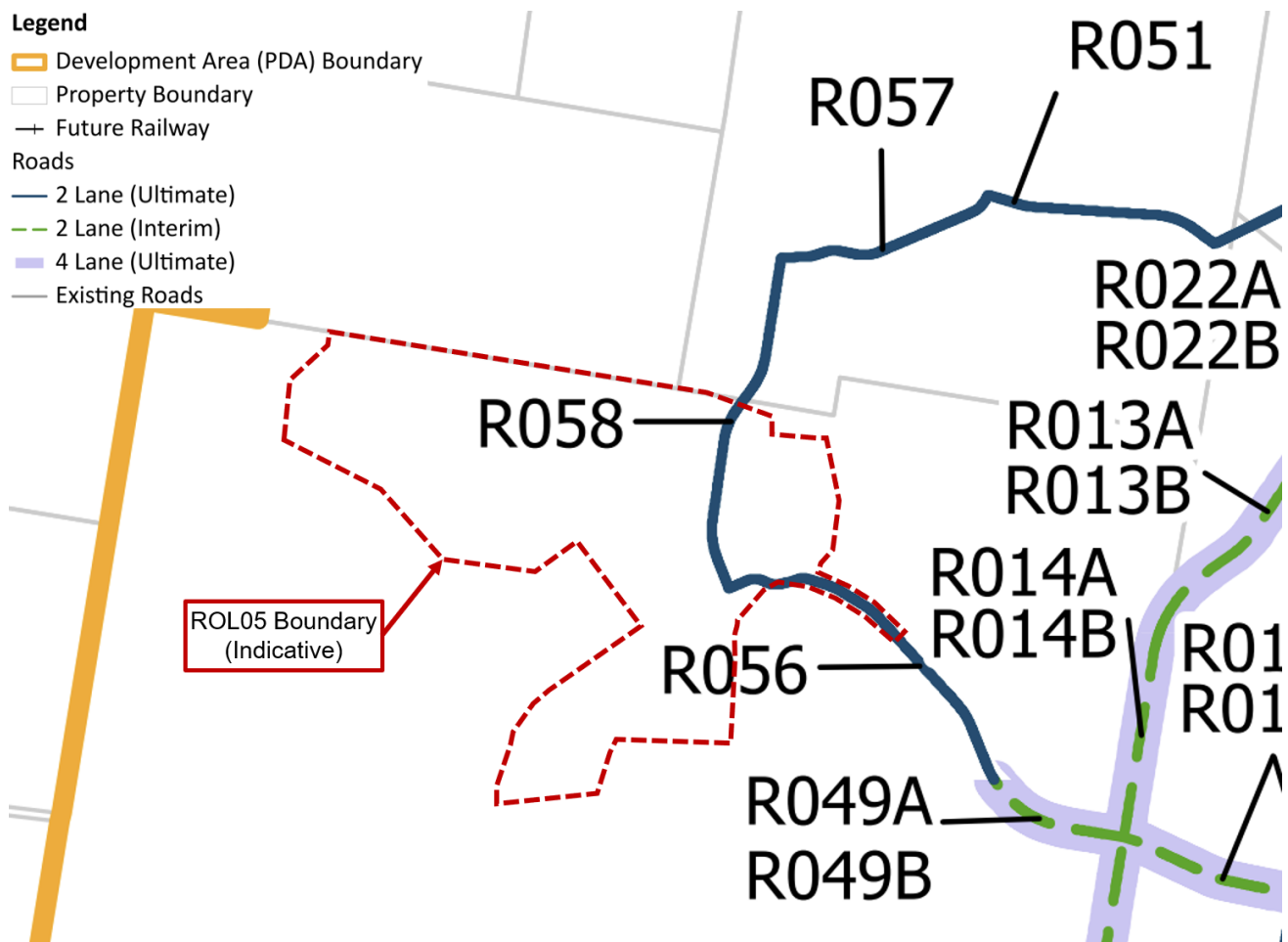
- The PDA is made up of three (3) separate land areas totalling 7,188ha
- It is projected to experience significant growth in employment and industry
- It is estimated to accommodate approximately 51,500 dwellings & 138,000 residents.

The larger PDA land area is bordered by the Brisbane-Sydney rail line (which is predominately a freight line at present), located east of the subject site, while the Mount Lindesay Highway is located further to the east. The proposed Town Centre Masterplan forms a key portion of the PDA employment area.

2.1.2 Greater Flagstone Development Charges and Offset Plan (DCOP)

To ensure infrastructure delivery and funding is suitably allocated, EDQ developed the Greater Flagstone PDA Development Charges and Offset Plan (DCOP), effective July 2022. This document provides guidance to trunk infrastructure planning through the PDA.

Planned trunk transport infrastructure in the vicinity of the subject site is illustrated in Figure 2.1.



Source: EDQ DCOP Maps (edited by Bitzios)

Figure 2.1: DCOP Transport (Roads) Trunk Infrastructure

2.2 Monarch Glen Approvals

2.2.1 Context Area Plan

The Monarch Glen Context Area Plan was endorsed on 31 October 2025. The location of the subject site, with respect to the Monarch Glen Context Area Plan, is illustrated in Figure 2.2.

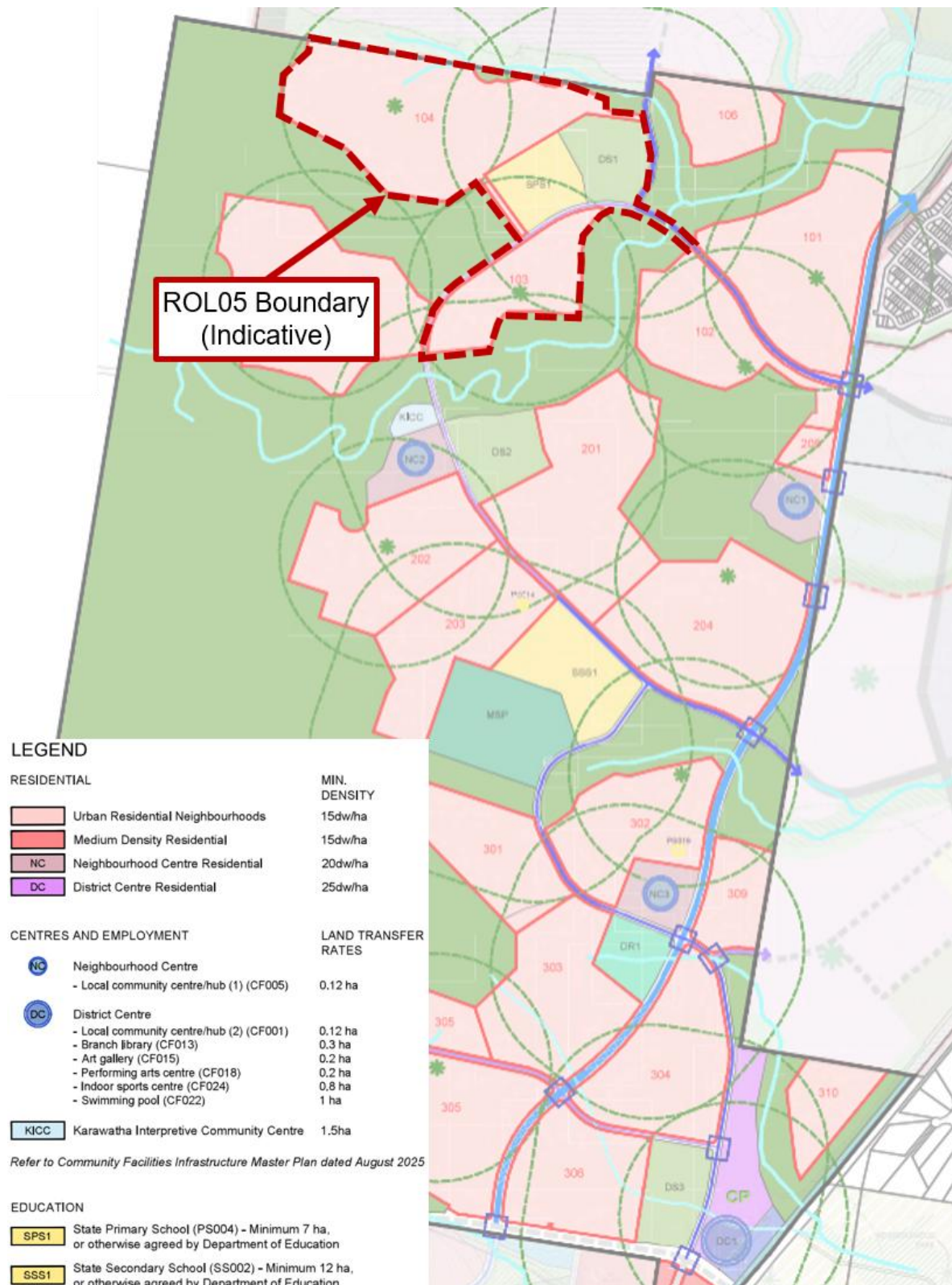


Figure 2.2: Monarch Glen Context Area Plan

As shown, ROL05 contains the western portion of R056 and the southern portion of R058 two-lane trunk roads.

2.2.2 Movement Network Infrastructure Master Plan (IMP)

The endorsed Monarch Glen Movement Network IMP was considered when developing the transport infrastructure requirements of the subject site. The endorsed Movement Network IMP considers:

- Road hierarchy and alignment
- Public transport network
- Active transport network.

The endorsed IMP road network in the vicinity of ROL05 is illustrated in Figure 2.3

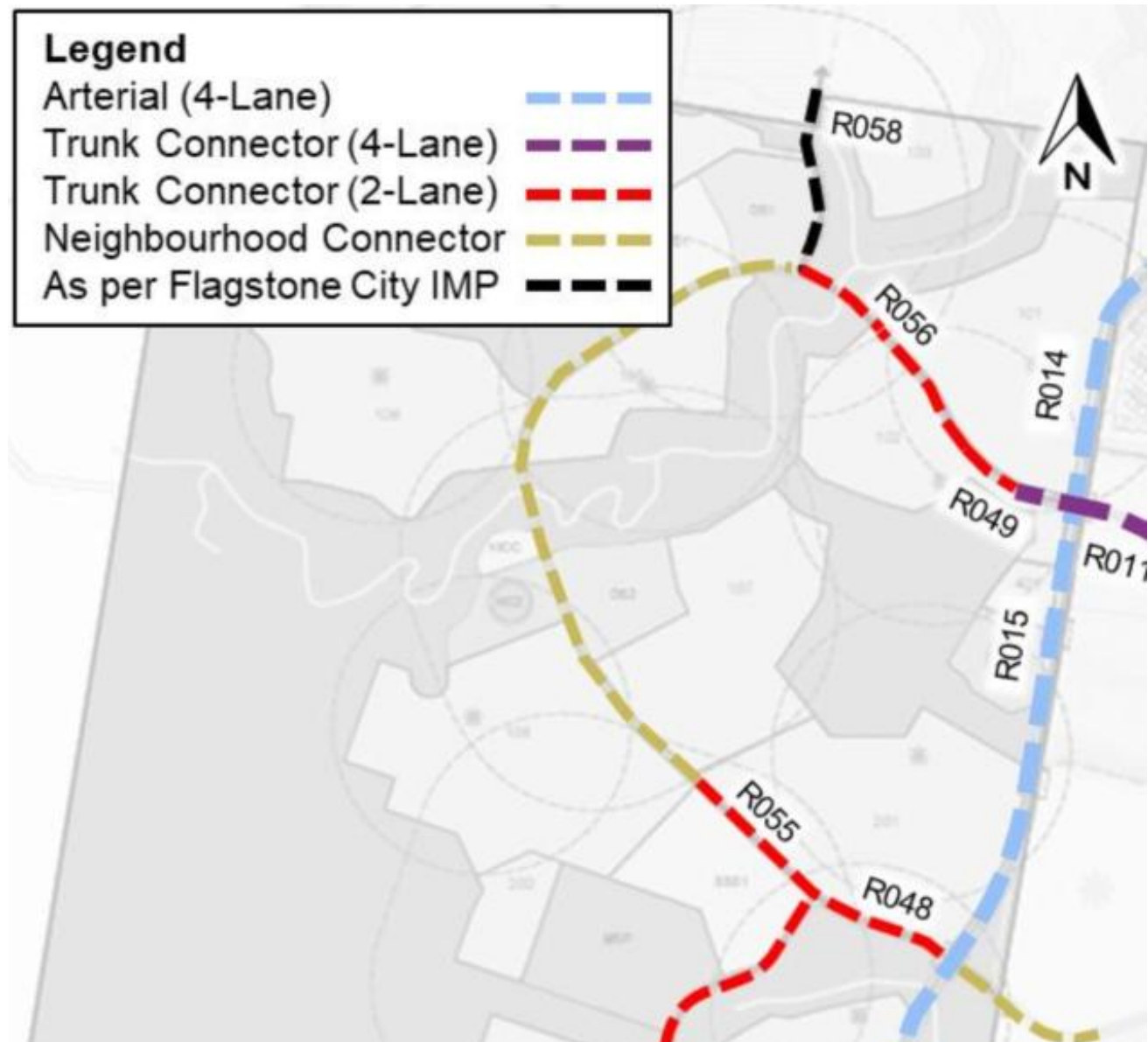


Figure 2.3: Endorsed Movement IMP Road Network

2.2.3 ROL04 Approval

The proposed ROL05 subdivision continues west from the approved ROL04 subdivision. The Kindira, Monarch Glen ROL04 approval plan is illustrated in Figure 2.4.

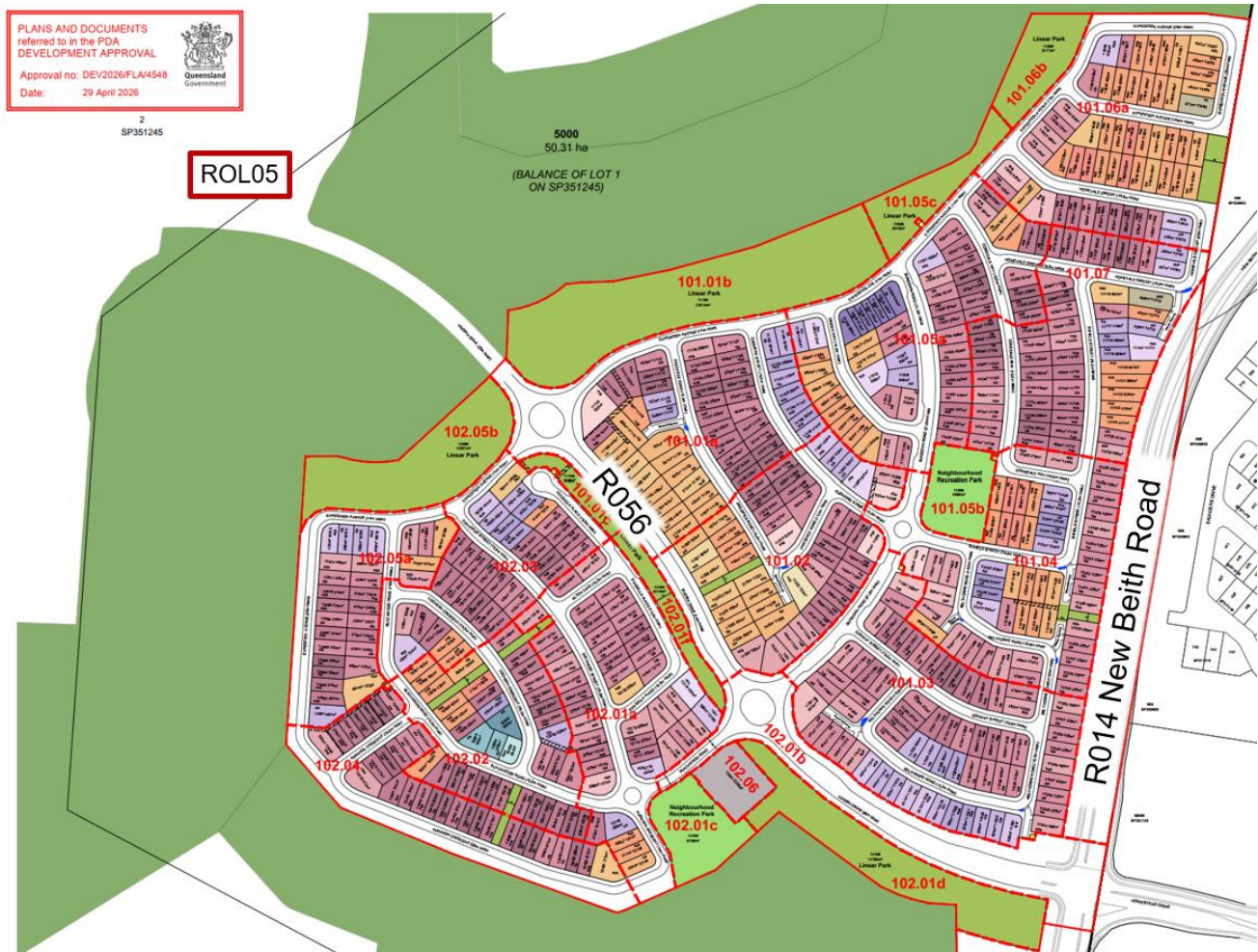


Figure 2.4: ROL04 Approval Plan

3. DEVELOPMENT DETAILS

3.1 Proposed Development

The proposed ROL05 subdivision comprises of two residential areas, being Precinct 103 and Precinct 104. Development yields in these precincts are as follows:

- **Precinct 103:** 200 Low Density Residential Lots
- **Precinct 104:** 470 Low Density Residential Lots.

In addition to residential allotments, a 6.65-hectare state primary school site and a district sports park site are both proposed within ROL05. Accompanying these uses are road reserve, detention / drainage lots, local parks and pedestrian / green space linkages. The ROL05 plan prepared by Saunders Havill Group is provided at **Appendix A**.

3.2 Road Hierarchy

3.2.1 Overview

The proposed road hierarchy for the subject site is illustrated in Figure 3.1.



Figure 3.1: Road Hierarchy Plan

The above road hierarchy plan, as well as detailed typical cross-sections for the proposed road types (prepared by Stantec), are provided at **Appendix B**. Proposed design parameters for each of the specific proposed road hierarchies are detailed in Table 3.1.

Table 3.1: Typical Road Cross Sections

Road Hierarchy	Road Reserve	Seal Width	Lanes	Median	Parking Lanes	Bus	Footpath	Cycle	Lot Access
Trunk Connector: 2-Lane With Parking (24m)	24.0m	11.8m	2	No	Yes	Yes	1.5m (both sides)	2m one-way (both sides)	Yes if <10,000vpd & <60km/h
Trunk Connector: 2-Lane Bridge (20m)	20.0m	10m	2	No	No	Yes	1.5m (both sides)	2m one-way (both sides)	Yes if <10,000vpd & <60km/h
Trunk Connector: 2-Lane Bridge (16.2m)	16.2m	9m	2	No	No	Yes	2.5m Shared Path (both sides)		No
Neighbourhood Connector (21m)	21.0m	12.0m	2	No	Yes	Yes	1.5m (one side)	2.5m Shared Path (one side)	Yes
Access Street (15.5m)	15.5m	7.5m	2	No	No	No	1.5m (one side)	No	Yes
Access Street (14m)	14.0m	7.5m	2	No	No	No	2m (one side)	No	Yes
Neighbourhood Access (Conservation) (20m)	20.0m	7.5m	2	No	No	No	2m (one side)	No	Yes
Driveway Reserve (10m)	10.0m	5.5m	2	No	No	No	No	No	Yes

As shown, road cross-sections proposed are consistent with typical cross-sections outlined in the endorsed movement network IMP and the approved adjacent ROL04 subdivision currently under construction. Details of specific 2-lane trunk road cross-sections are below.

3.2.2 R056 Trunk Connector (Bridge)

For the eastern portion of R056 within the subject site reduced width trunk connector cross-sections are required considering the need to construct a substantial bridge at this location and avoid impacts to adjacent environmentally significant lands. Clear of the bridge structure, the proposed R056 cross-section is proposed to be consistent with the endorsed IMP, as shown in Figure 3.2. This road cross-section will tie into the approved ROL04 subdivision.

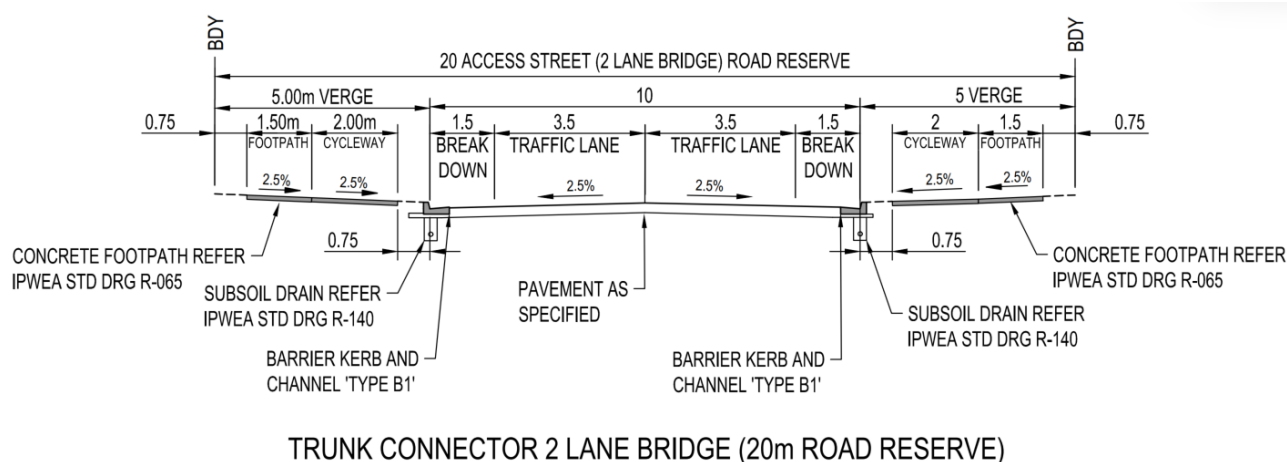


Figure 3.2: Trunk Connector (20m) Cross-Section

The bridge structure itself is further reduced to a 16.2m total width. The road cross-section over the bridge is illustrated in Figure 3.3.

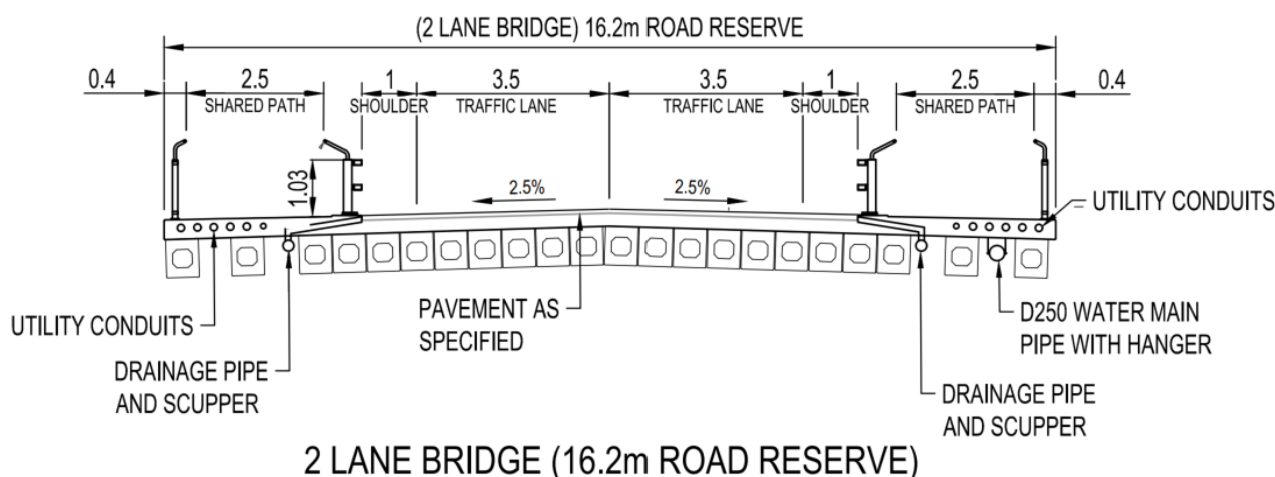


Figure 3.3: Trunk Connector (16.2m) Cross-Section

As shown, on all trunk connector road cross-sections proposed, traffic lanes are maintained at the standard 3.5m width, consistent with existing approvals and the EDQ Street and Movement Network Guideline. Over the bridge structure, shoulder widths are proposed to be narrowed to a 1m width and active transport provisions consolidated to a 2.5m shared path on each side of the bridge. These modifications to the approved 20m cross-section width along are considered appropriate noting:

- The total length of the bridge is expected to be in the order of 63m long and therefore comprises of a very small portion of R056
- In accordance with the Austroads Guide to Road Design Part 3, “*Shoulder widths may be locally narrowed where there are overpass bridge piers or similar large constraint. Designers should maintain at least minimum clearances/offsets from traffic lanes to barriers where locally narrowing shoulders*”. A minimum clearance of 0.5m is required to barriers and as such, the 1m shoulder width proposed is suitable. Breakdown lanes are also present on the road at each end of the relatively short bridge span providing a pull over area for vehicles in case of emergency
- Proposed shared path widths comply with desirable minimum widths specified in the Austroads Guide to Road Design Part 6A providing suitable active transport provisions on each side of the road for constrained bridge location.

The proposed 16.2m bridge cross-section is therefore considered appropriate at the location of the proposed bridge noting the constraints associated with delivery of the bridge structure. Appropriate signage and line marking shall be provided at each end of the bridge at the locations where cycleways and footpaths are consolidated to the shared path over the bridge.

3.2.3 R058 Trunk Connector (24m)

The R058 2-lane Trunk Connector is proposed as a 24m cross-section illustrated in Figure 3.4.

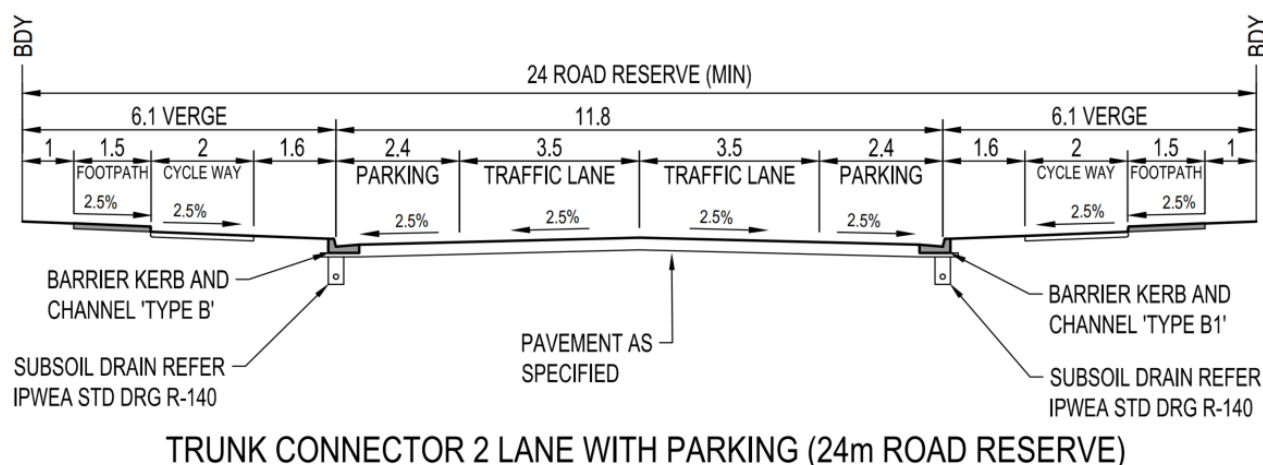


Figure 3.4: Trunk Connector (24m) Cross-Section

This cross-section is consistent with the typical 2-lane trunk connector cross-section shown in Figure 5B of the EDQ Street and Movement Network Guide. This cross-section extends from the intersection with R056 north to the first intersection with the neighbourhood connector road within ROL05. This link does not extend to the boundary with the neighbouring Flagstone City context area to the north. As this road link does not extend to the boundary, this cross-section does not need to consider alignment with the potential R058 trunk cross-section within the Flagstone City Context Area 3.

3.3 Intersections

Key principles for the proposed intersection forms and their locations are as follows:

- The number of four-way intersections should be minimised, with four-way intersections signalised or provided as a roundabout, where servicing primarily residential uses
- Intersection spacing shall generally comply with those specified in EDQ's Guideline No. 6: Street and Movement Network, unless otherwise constrained and proposed spacing appropriately justified.

Specific to Precinct 103 and Precinct 104, the following is proposed:

- A single four-way roundabout at the intersection of neighbourhood connector roads on the southern corner of the proposed school site
- A three-legged roundabout is proposed on the south-east corner of the proposed regional recreation park at the intersection of R056 and R058
- All other intersections are T-intersections
- Minimum intersection spacing of 300m is achieved on trunk connector roads, consistent with EDQ guidelines.

Based on the above, the proposed intersection forms are considered to achieve a well-resolved road network and appropriate intersection performance without adverse impacts to safety and efficiency.

Forecast performance of key intersections is assessed in Section 4.3.

3.4 Access Considerations

A base set of principles was adhered to when determining access locations throughout the development and provided generally in accordance with the following requirements:

- Property accesses shall be provided on a property's lower order frontage road where practical
- Direct property access should be minimised on Trunk Connector roads where traffic volumes are >10,000 vehicles per day or posted speeds are >60km/h
- Property accesses shall be clear of prohibited access locations, in particular:
 - Be located clear of nearby intersections as per AS2890.1
 - Be located outside of the functional area of an intersection to avoid queuing impacts
 - Be provided perpendicular to the road unless designed as a one-way access for ease of manoeuvring
- Vehicle crossover design and separation of vehicle crossovers shall be as per the relevant requirements of IPWEAQ Standard Drawings RS-049, RS-050 and RS-051 and Logan City Council requirements.

No direct lot access is proposed on trunk roads aligning with the above. Detailed access design shall also be undertaken with each future development application and apply the above general principles to ensure there is no adverse impact to the surrounding road network and that safety is not compromised.

4. TRAFFIC ASSESSMENT

4.1 Strategic Modelling

4.1.1 Overview

Veitch Lister Consulting Pty Ltd (VLC) has previously developed the South Logan Strategic Transport Model (SLSTM) to inform transport and land use planning in the south Logan region, including the Greater Flagstone PDA. The details of this strategic modelling methodology are documented in the *South Logan Strategic Transport Model: Model Development and Network Apportionments* report.

More recently, VLC was engaged by EDQ to investigate the realignment of Wyatt Road (DCOP ID R017) using the SLSTM. Scenario 3 of the Wyatt Road realignment Review undertaken by VLC was identified as the preferred option going forward, with EDQ advising that this scenario should be adopted for future traffic forecasting. As such, a cordon of the Scenario 3 Wyatt Road Investigation model, based on the SLSTM, was sourced for the Monarch Glen Context Area for the ultimate (2066) design horizon.

4.1.2 Land Use Plan

The land use patterns within Monarch Glen, from the SLSTM Scenario 3 Wyatt Road Investigation model, are illustrated in Figure 4.1.

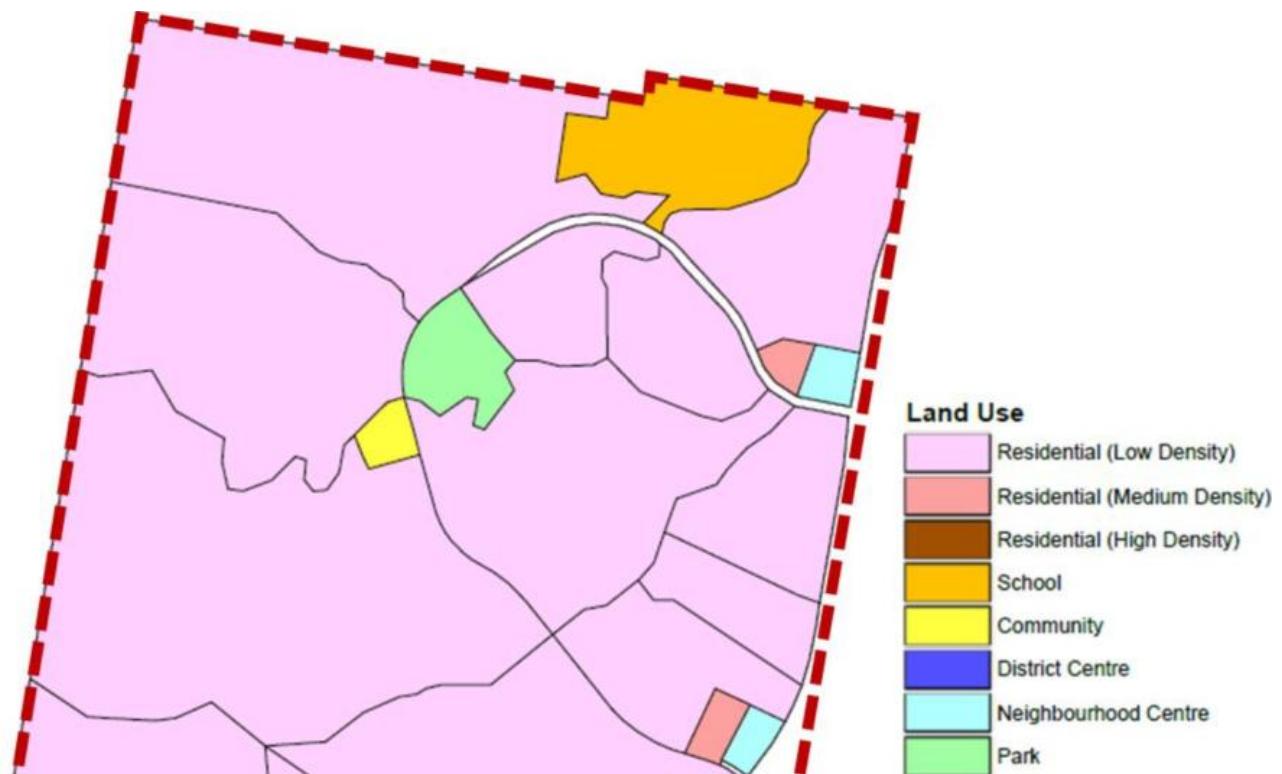


Figure 4.1: 2066 Monarch Glen Strategic Model Land Use Plan

As shown in proposed development plans, the school and park sites have been relocated within the subject site to be adjacent and provide a central consolidated destination. Otherwise, the scale and type of uses shown is generally consistent with the endorsed context area plan.

4.1.3 Daily Traffic Volume Plots

Forecast ultimate (2066) daily traffic volumes on trunk and neighbourhood connector roads, as sourced from the SLSTM, are illustrated in Figure 4.2.



Figure 4.2: SLSTM Forecast Ultimate (2066) Daily Traffic Volumes

As shown, forecast ultimate (2066) traffic volumes on neighbourhood connector roads proposed are under the maximum threshold for traffic volumes on this road type (7,500 vehicles per day). In accordance with the EDQ Street and Movement Network Guide, direct lot access is permissible on proposed connector roads with the proposed road types and forecast volumes.

4.2 Microsimulation Modelling

4.2.1 Overview

A 2066 microsimulation model of the Monarch Glen area was prepared by Bitzios using Aimsun Next traffic modelling software. This model was prepared to evaluate route choice and provide detailed insight into vehicle trip movements within Monarch Glen. This facilitates analysis of road link and intersection performance at a higher level of detail than possible with strategic modelling. This model was developed as a part of the development of the now endorsed movement network IMP and further refined for subsequent Kindira applications.

The Kindira road network, as modelled in Aimsun, is illustrated in Figure 4.3.

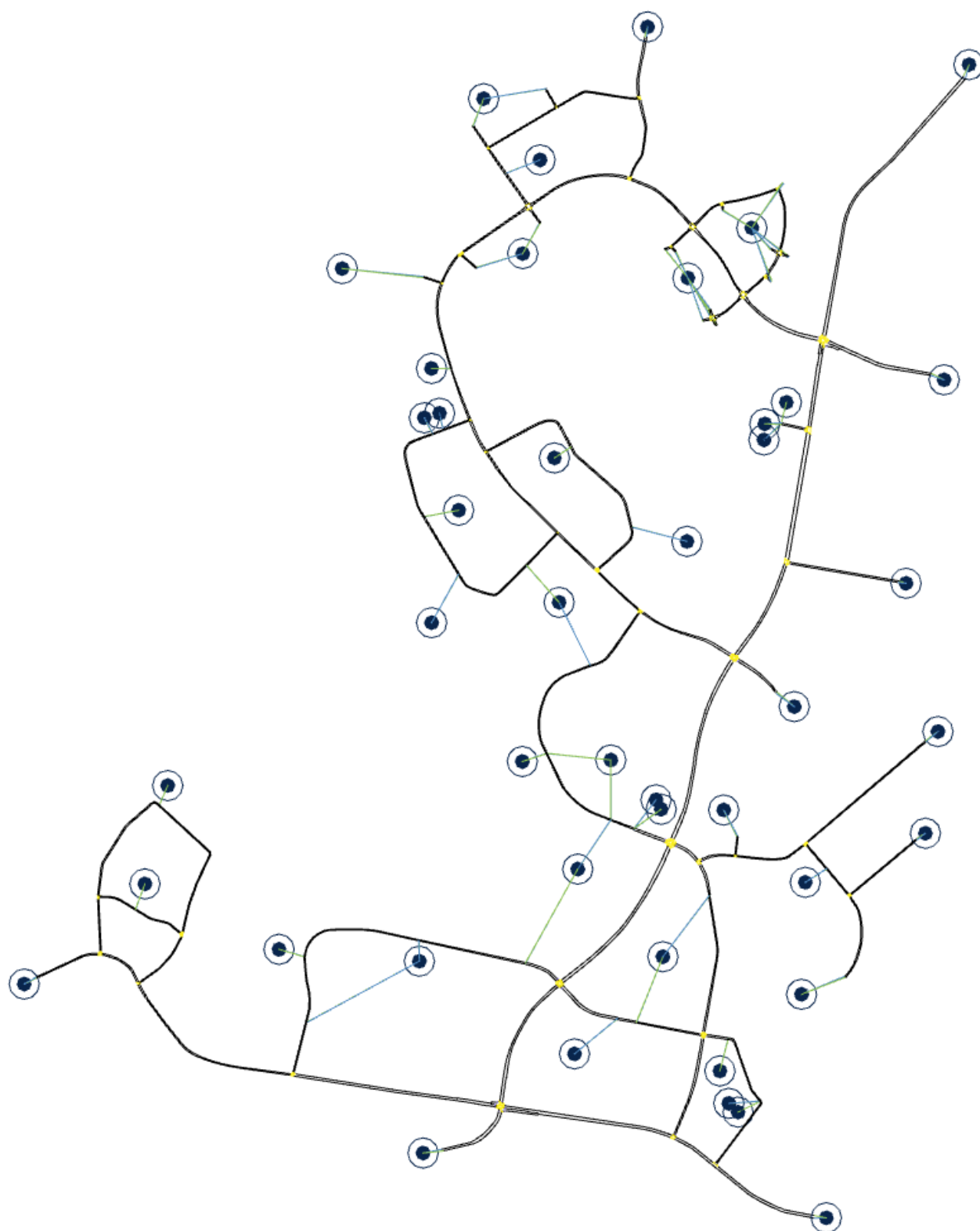


Figure 4.3: Kindira Microsimulation (Aimsun) Model Network

The model network above is consistent with the Aimsun model used in the development of the Movement Network IMP, with updates made to reflect the proposed ROL05 layout.

4.2.2 Model Time Periods & Profiling

Hourly AM and PM peak traffic volumes were sourced from the strategic model with a factor of 0.53 applied to two-hour peak volumes. Given the study area of the model is predominantly greenfield, network peak hours are unknown. As such, AM and PM peak hours are arbitrarily assumed as follows:

- AM Peak: 08:00 – 09:00
- PM Peak: 16:30 – 17:30.

The model also includes a 30-minute 'warm-up' and 'cool-down' period for each peak.

4.2.3 Zone System & Traffic Generation

The zone system for the microsimulation model was generally adopted as per the cordon from the Scenario 3 Wyatt Road Investigation model. Modifications to the zone system and yields within these zones were modified where proposed / approved yields within ROL04 & ROL05 vary from the cordon yields.

Kindira ROL05 zones are shown graphically in Figure 4.4.



Figure 4.4: ROL05 Microsimulation Model Zones

Scaling of OD demands for zones within ROL05 are outlined in Table 4.1, based on dwelling numbers for residential zones. Traffic generation to / from the school zone is not modified from the cordon demands as enrolment numbers are not yet confirmed.

Table 4.1: Aimsun Model 2066 OD Demand Updates

Zone ID	Land Use	VLC Cordon Model		ROL05 Proposal		Zone Scaling
		Enrolments	Dwellings	Enrolments	Dwellings	
1141	Low Density Residential	-	665	-	470	70.7%
3844	Low Density Residential	-	124	-	200	161.3%

Overall, a reduced number of dwellings are proposed compared to yields in the SLSTM cordon. Traffic volumes with consideration to the updated yields are used to inform intersection modelling as detailed further.

4.3 Intersection Assessment

4.3.1 Overview

Key intersection layouts were assessed in SIDRA Intersection (v10) using peak hour traffic movements extracted from the Aimsun model. This was to gain an indication of critical peak performance at the intersection level. Intersections on trunk connector roads and the roundabout on the southern corner of the school site are considered key intersections for assessment purposes, with the locations of these assessed intersections shown in Figure 4.5.

**Figure 4.5: Key Intersections Assessed**

Details of resultant intersection forms and layouts are indicative only, with factors such as turn pocket lengths indicated on SIDRA layouts subject to detailed design requirements to accommodate queuing,

deceleration and operational factors. Importantly, it should be noted that ultimate intersection forms are based on 2066 planning (40 years into the future) which may be subject to change over time.

4.3.2 Intersection 1

The intersection 1 layout as modelled in SIDRA is shown in Figure 4.6.

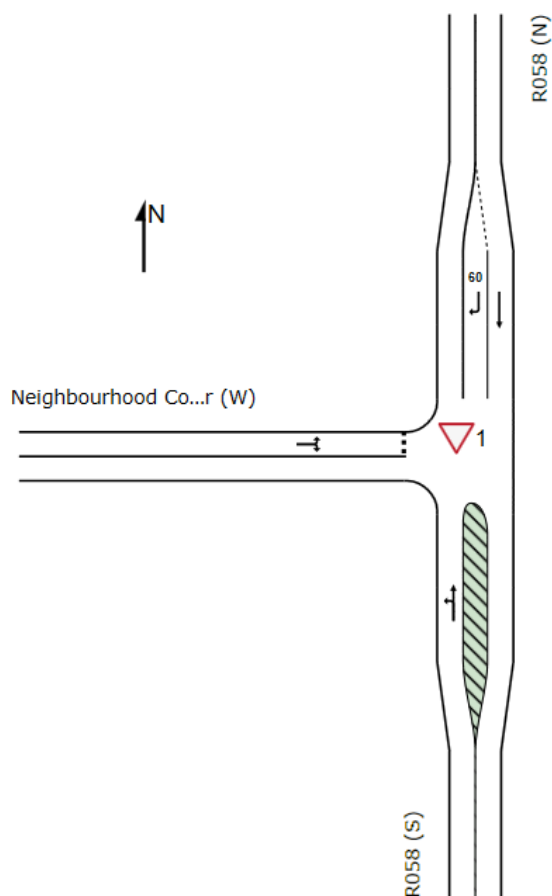


Figure 4.6: Intersection 1 SIDRA Intersection Layout

A summary of SIDRA intersection results for intersection 1 is shown in Table 4.2 with detailed outputs provide at **Appendix C**.

Table 4.2: Intersection 1 SIDRA Results Summary

Approach	AM Peak				PM Peak			
	Veh	DOS	Delay	LOS	Veh	DOS	Delay	LOS
South	412	0.21	0	NA	355	0.18	0	NA
North	418	0.15	2	NA	520	0.22	1	NA
West	94	0.11	7	A	45	0.05	7	A
Total	923	0.21	2	A	920	0.22	1	A

As shown, intersection 1 is expected to operate within acceptable performance limits to the ultimate (2066) design horizon.

The intersection 2 layout as modelled in SIDRA is shown in Figure 4.7.



Table 4.3: Intersection 2 SIDRA Results Summary

As shown, intersection 2 is expected to operate within acceptable performance limits to the ultimate (2066) design horizon.

4.3.4 Intersection 3

The intersection 3 layout as modelled in SIDRA is shown in Figure 4.8.

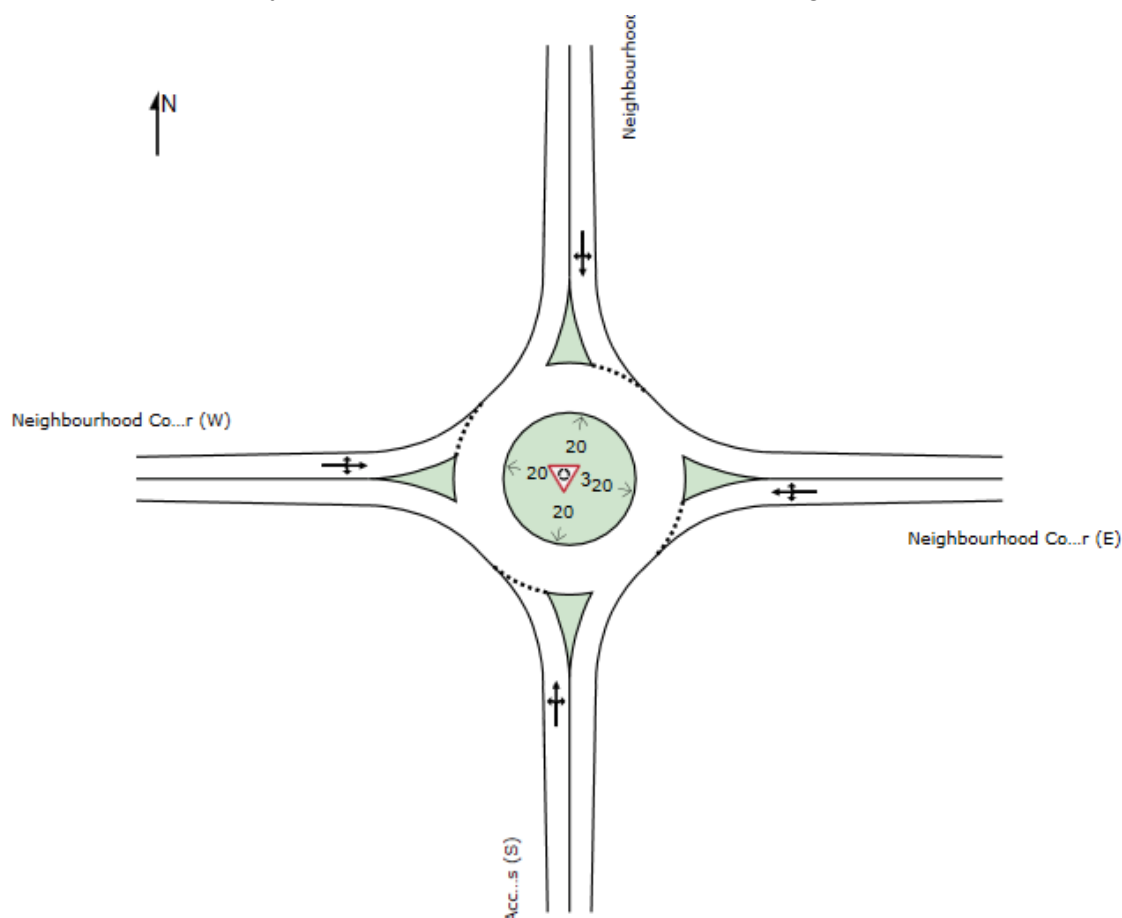


Figure 4.8: Intersection 3 SIDRA Intersection Layout

A summary of SIDRA intersection results for intersection 3 is shown in Table 4.3 with detailed outputs provide at **Appendix C**.

Table 4.4: Intersection 3 SIDRA Results Summary

Approach	AM Peak				PM Peak			
	Veh	DOS	Delay	LOS	Veh	DOS	Delay	LOS
South	63	0.06	8	A	17	0.02	8	A
East	322	0.22	4	A	508	0.34	4	A
North	178	0.18	6	A	180	0.14	4	A
West	389	0.31	4	A	152	0.12	3	A
Total	953	0.31	5	A	857	0.34	4	A

As shown, intersection 3 is expected to operate within acceptable performance limits to the ultimate (2066) design horizon.

5. PUBLIC & ACTIVE TRANSPORT PROVISIONS

5.1 Public Transport

In accordance with the endorsed movement network IMP, local bus routes are expected on trunk and neighbourhood connector roads through the subject site. Specific bus routes through the development are subject to consultation with TMR / TransLink, however bus stops have been proposed within the development to maximise public transport accessibility and coverage. Bus stop locations, consistent with the endorsed IMP, that service the subject site are shown in Figure 5.1.

In addition to bus stops identified in the movement network IMP, an on-street bus stop facility is expected to be required to service the public school site. School bus services may be subject to change based on the school's design to be undertaken by the Department of Education at a later date. However, considering the characteristics of the subject site, it is recommended that the school bus facility be provided on the northern frontage of the school. All bus stop locations, and the 400m catchment area from these bus stops are illustrated in Figure 5.1.



Figure 5.1: Proposed Bus Stop Locations & Catchment

As shown, the majority of the proposed development area is located within reasonable walking distance of a future public transport stop. However, approximately 180 dwellings are located outside of the 400m walking radius of the bus stop locations shown above. This portion of dwellings is located at the western portion of the site where bus access would be impractical owing to grade constraints and the lower order nature of the road servicing these few dwellings. Importantly, the proposed bus stop provisions are consistent with the provisions in the endorsed movement network IMP which demonstrated that Kindira, Monarch Glen can, as a whole, achieve sufficient servicing of residential dwellings by public transport as per the requirements of the Flagstone Development Scheme.

In accordance with the TransLink Public Transport Infrastructure Manual (PTIM), bus stops in a suburban location such as the subject site should be provided as 'regular' bus stops. As such, bus stops shall be provided within the parking lane. Bus stops within the parking lane are required to be a minimum of 2.5m wide. As such, bus stops may be provided on neighbourhood connector roads without any widening of the sealed carriageway or road reserve. At a bus stop location on the 2-lane trunk connector (24m), localised widening of 100mm will be required to cater for the minimum width of the regular bus stop.

5.2 Active Transport Provisions

Pedestrian infrastructure will be provided throughout the subject site both within the road reserve and outside the road reserve, through park linkages and open space. An active transport strategy was developed for the site area to deliver a hierarchy of active transport provisions. The strategy is based on:

- Key active transport attractors
- Relevant user types
- Key active transport desire line routes.

The centralised school and district sports park sites are the key attractors for active transport trips within the subject site. Bus stops and local parks are also expected to attract some active transport trips from the local area. Major employment areas are present within the Greater Flagstone PDA to the east and northeast of the subject site and as such, the desire line for commuter type active transport movements is via trunk roads R056 and R058

The key attractors and key pedestrian desire line routes through the site area are depicted in Figure 5.2.



Figure 5.2: Key Attractors and Active Transport Desire Line Routes

Based on the above attractors and desire line routes, an active transport route hierarchy was developed to specify a set of criteria and relevant infrastructure based on route classification.

The overarching hierarchy classification considers three levels, being:

- Major
- Medium
- Low.

The hierarchy does not suggest any lower level of importance or quality of infrastructure, rather defines the type of trip attractors/generators and user types that are most likely to use the prevailing facility, and therefore assist in the determination of an appropriate facility/infrastructure type.

For example:

a Major classification applies to routes / infrastructure that service multiple trip attractors such as connections between schools, parklands and major retail centres. This hierarchy may warrant a wider treatment due to a higher volume of active transport users.

a Low classification applies to routes / infrastructure that primarily service the immediate catchment, are not expected to service a large number of user types and warrant pathway treatments within the road reserve e.g. 1.5m footpath(s).

The route hierarchy criteria are summarised in Table 5.1.

Table 5.1: Criteria to Determine Route Hierarchy

Classification	Criteria	Infrastructure
Major	Provides connections: ▪ Within or between key centres ▪ To schools, shopping centres, transit hubs/stops ▪ Along major, higher volume transport routes	Includes: ▪ Separated cycleways ▪ Shared paths outside road reserve ▪ Shared paths $\geq 3\text{m}$ inside road reserve both sides of road
Medium	Provides connections: ▪ Within and between residential areas ▪ To major active transport routes ▪ To open space / parks ▪ To public transport stops	Includes: ▪ Shared path inside road reserve one side ▪ Shared paths $\leq 3\text{m}$ inside road reserve both sides of road
Low	Provides connections: ▪ Within immediate catchment (400m) ▪ On lower order, lower volume transport routes	Includes: ▪ Pathways inside road reserve one side (e.g. 1.5m footpath)

The key active transport linkages throughout the site area were therefore developed adopting the strategy of key attractors, key desire line routes and the criteria outlined in the route hierarchy classification. The key active transport linkages and route hierarchy is shown in Figure 5.3.

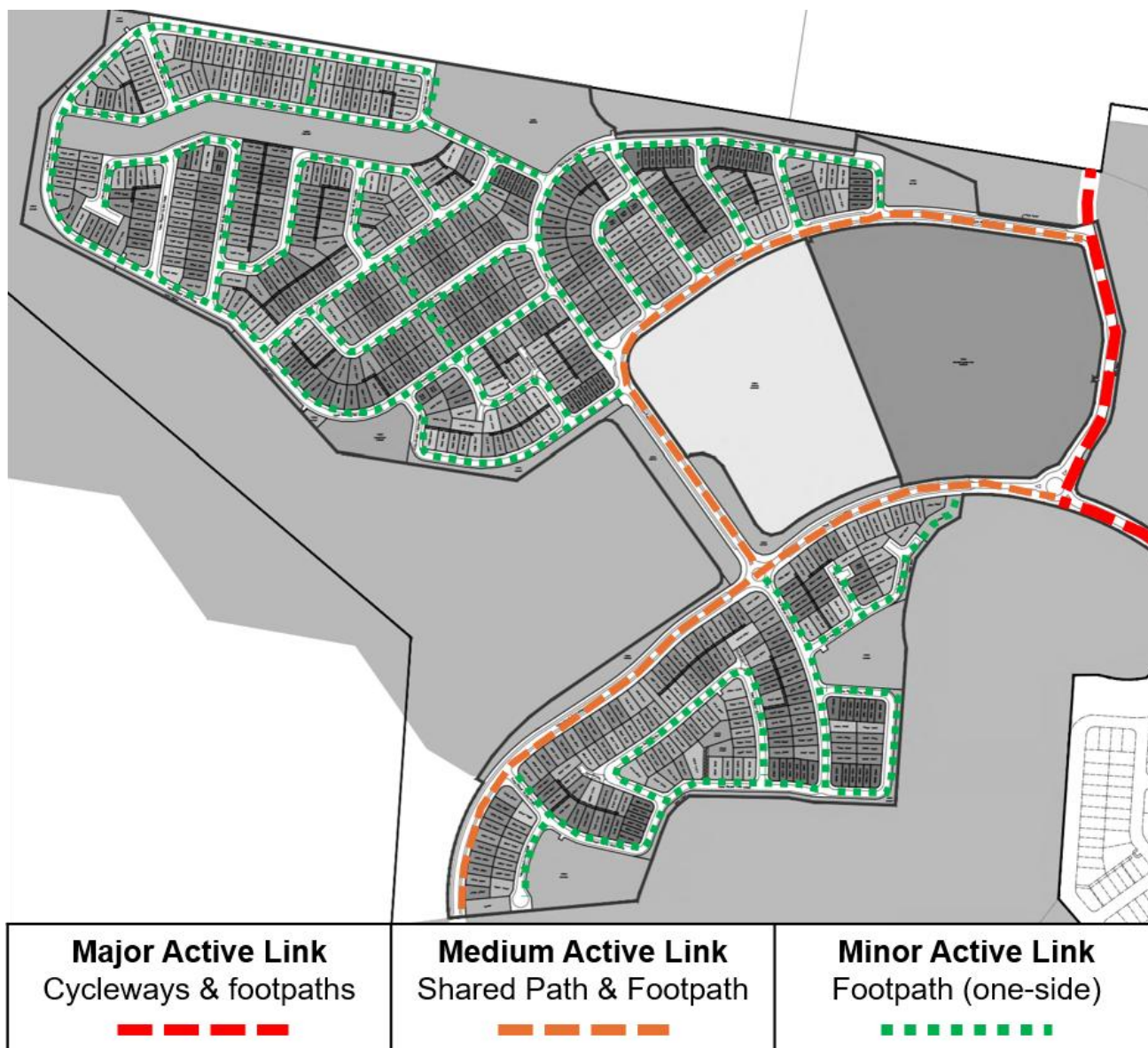


Figure 5.3: Active Transport Linkages

As shown, the proposed key active transport linkages are considered to provide a high-level of service and accessibility for the subject site and provide connectivity to surrounding services and properties. The proposed connections also generally align with the active transport components of the current Movement Network IMP.

6. SUMMARY & CONCLUSIONS

The traffic and transport findings for Precincts 103 and 104 of Kindira, Monarch Glen are summarised as follows:

- The proposed development is located in the north-west portion of Kindira, Monarch Glen on Lot 2 SP351245
- The proposed development comprises of a total of 670 residential dwellings spread across two precincts, as well as a state school and district sports park site
- Proposed road hierarchies are generally in accordance with the endorsed Monarch Glen movement network IMP and the EDQ Street and Movement Network Guideline as required
- Strategic traffic modelling was undertaken by VLC to provide forecast ultimate (2066) daily traffic volumes, informing road hierarchy requirements and lot access considerations
- Microsimulation and intersection modelling demonstrates that key intersections within the subject site can cater for forecast ultimate (2066) traffic volumes
- The western portion of the site is constrained such that bus access is not practically achievable regardless, bus stops are proposed within ROL05 consistent with the provisions specified in the endorsed Movement Network IMP
- ROL05 is considered to provide a highly accessible active transport network with proposed connections also aligning with the active transport components of the Movement IMP.

Based on the above assessment, it is concluded that the proposed road network, intersection arrangements and active transport and public transport provisions will accommodate transport demands associated with the proposed Kindira, Monarch Glen precinct 103 and 104 development.

Appendix A: Development Plan



ROL5: PRECINCT 103 & 104



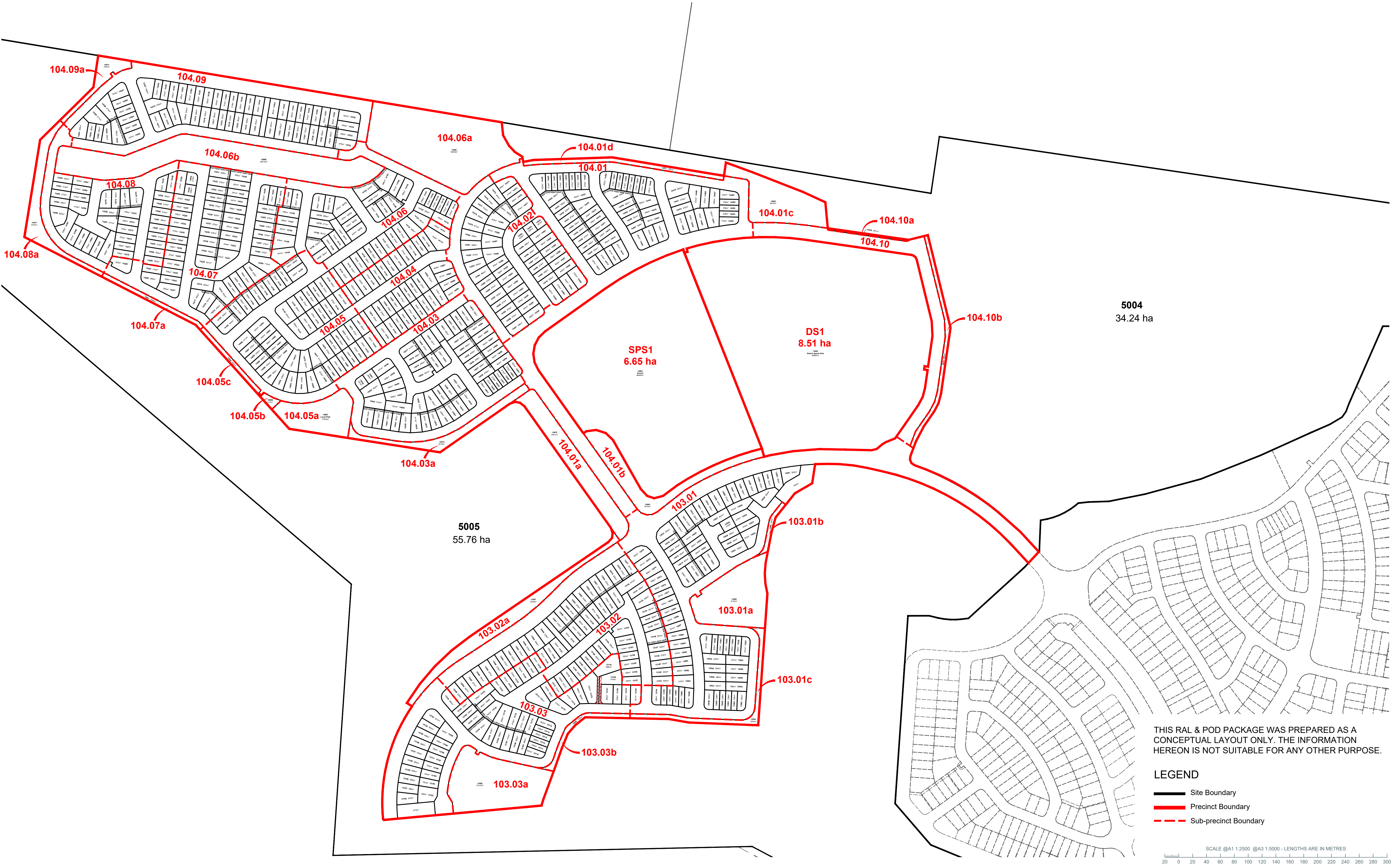
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LEGEND
— Site Boundary
— ROL5 Boundary

SCALE @A1 1:10000 @A3 1:20000 - LENGTHS ARE IN METRES
100 0 100 200 300 400 500 600 700 800 900 1000 1100 1200



ROL5: PRECINCT 103 & 104 - SUB-PRECINCT PLAN



ROL5: RECONFIGURATION OF A LOT PLAN

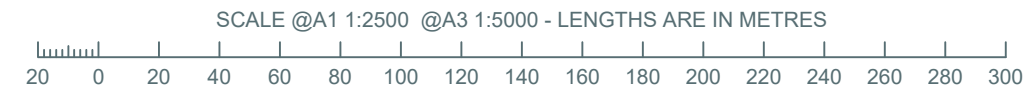


LEGEND

- Site Boundary
- Precinct Boundary

DEVELOPMENT STATISTICS					
RESIDENTIAL ALLOTMENTS		Typical Width	No. Lots	%	Net Area
16m Deep Lots					
Urban Lots	U16	16.0m	9	1.3%	0.252 ha
Sub Total			9	1.3%	0.252 ha
RESIDENTIAL ALLOTMENTS		Typical Width	No. Lots	%	Net Area
25m Deep Lots					
Terrace - Front Loaded	T25	8.5m	29	4.3%	0.707 ha
Villa	V25	11.2m	4	0.6%	0.131 ha
Premium Villa	PV25	12.5m	15	2.2%	0.671 ha
Courtyard	C25	14m	12	1.8%	0.603 ha
Premium Courtyard	PC25	16m	3	0.4%	0.149 ha
Sub Total			63	9.4%	2.261 ha
RESIDENTIAL ALLOTMENTS		Typical Width	No. Lots	%	Net Area
28m Deep Lots					
Terrace - Front Loaded	T28	8.5m	30	4.5%	0.824 ha
Villa	V28	11.2m	55	8.2%	1.874 ha
Premium Villa	PV28	12.5m	84	12.5%	3.128 ha
Courtyard	C28	14m	45	6.7%	2.001 ha
Premium Courtyard	PC28	16m	14	2.1%	0.702 ha
Sub Total			228	34.0%	8.529 ha
RESIDENTIAL ALLOTMENTS		Typical Width	No. Lots	%	Net Area
30m Deep Lots					
Villa	V30	11.2m	103	15.4%	3.694 ha
Premium Villa	PV30	12.5m	148	22.1%	5.968 ha
Courtyard	C30	14m	68	10.1%	3.253 ha
Premium Courtyard	PC30	16m	13	1.9%	0.707 ha
Sub Total			332	49.6%	13.622 ha
RESIDENTIAL ALLOTMENTS		Typical Width	No. Lots	%	Net Area
32m Deep Lots					
Villa	V32	11.2m	10	1.5%	0.380 ha
Premium Villa	PV32	12.5m	13	1.9%	0.560 ha
Courtyard	C32	14m	13	1.9%	0.673 ha
Premium Courtyard	PC32	16m	2	0.3%	0.117 ha
Sub Total			38	5.7%	1.730 ha
Total Allotments			670	100%	26.394 ha
Land Budget			Area (Ha)	%	
Area of Subject Site / Stage			69.286 ha	—	
Net Residential Area (no roads)			26.394 ha	38.1%	
Linear Park / Pedestrian Linkage			9.169 ha	13.2%	
Neighbourhood Recreation Park			0.511 ha	0.7%	
Road Areas			16.987 ha	24.5%	
Major Road Areas			1.036 ha	1.5%	
Utility Lot 14986			0.032 ha	0.0%	
School Lot 14983			6.649 ha	9.6%	
District Sports Park Lot 14982			8.508 ha	12.3%	
Total Area			69.286 ha	100%	
Average Lot Size (m²)			393.9 m²		
Net Density (dw/ha)			15.3 dw/ha		

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Appendix B: Road Cross Sections & Hierarchy



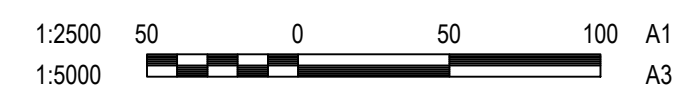
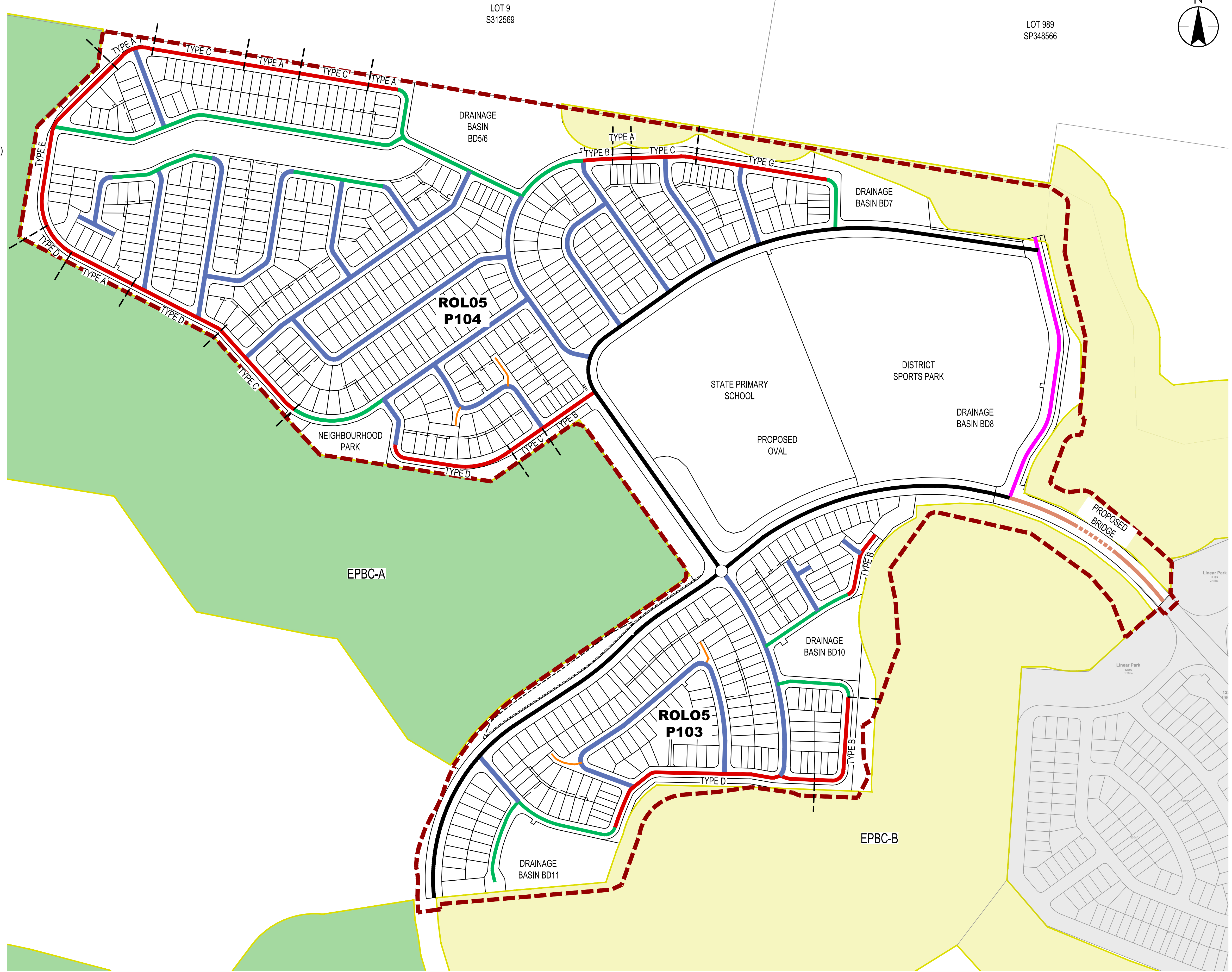
1. DESIGN BASED ON FS94 COORDINATE SYSTEM.
2. REFER DRAWINGS 01-CI-510021-510024 FOR ROAD TYPICAL SECTIONS AND TYPES.

LEGEND - PROPOSED:

- | | |
|---|--|
|  | TRUNK CONNECTOR (24m ROAD RESERVE) |
|  | NEIGHBOURHOOD CONNECTOR (21m ROAD RESERVE) |
|  | TRUNK CONNECTOR 2 LANE BRIDGE (20m ROAD RESERVE) |
|  | 2 LANE BRIDGE (16.2m ROAD RESERVE) |
|  | ACCESS STREET (15.5m ROAD RESERVE) |
|  | ACCESS STREET (14m ROAD RESERVE) |
|  | ACCESS STREET CONSERVATION (14m ROAD RESERVE) |
|  | ACCESS DRIVEWAY (10m RESERVE) |
|  | ACCESS LANEWAY (6.5m RESERVE) |
|  | PROPOSED LOT BOUNDARY |
|  | EPBC CONSERVATION AREA |
|  | LIMIT OF WORK |
|  | EPBC-A CONSERVATION AREA |
|  | EPBC-B CONSERVATION AREA |

LEGEND - EXISTING:

- EXISTING LOT BOUNDARY

[illegible]

Issue Status

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Client/Project Logo



Client/Project

KINDARA - MONARCH GLEN
MIRVAC MONARCH GLEN
R.O.L. 05 LOT 2 ON SP351245
MONARCH GLEN (JOTOWN) HOMESTEAD DRIVE, FLAGSTONE

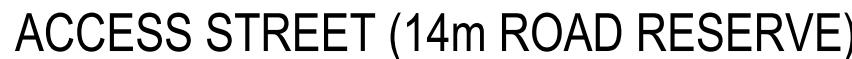
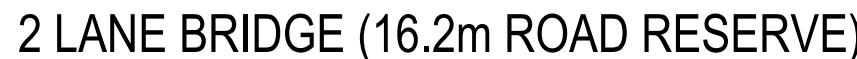
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Authorised	Ref #	YYYY.MM.DD	Dwn.	Desgn.	Chkd.	Appd.	YYYY.MM.DD

Title ROAD HEIRARCHY PLAN

Project No.
304702212

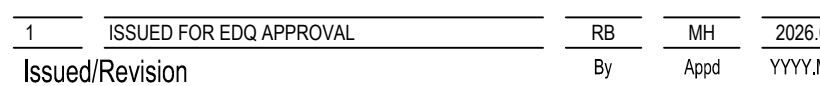
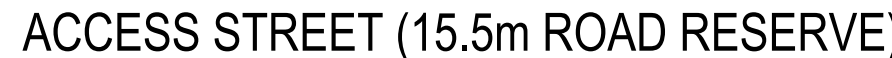
Drawing No.
01-CI-510020

1



Road Type	Length (m)
TRUNK CONNECTOR ROAD	24.0m
NEIGHBOURHOOD CONNECTOR	21.0m
TRUNK CONNECTOR (2 LANE BRIDGE)	20.0m
TRUNK CONNECTOR (2 LANE BRIDGE)	15.5m
ACCESS ROAD	15.5m
ACCESS STREET	14.0m
ACCESS DRIVEWAY	10.0m
ACCESS LANEWAY	6.5m

1. ADD 2m LANDSCAPE BUFFER IF INTERFACING WITH ACOUSTIC FENCE. IF $\Rightarrow$ 15m LINEAR PARK ADJACENT: REDUCE VERGE TO 4m AND MOVE PATHS TO PARK REFER TO MONARCH GLEN ROAD CROSS SECTION ASSESSMENT DOCUMENT FOR MORE
2. FOR KERB TYPES REFER TO IPWEA STANDARD DRAWING RS-080.
3. FOR SUBSOIL DRAIN TYPES REFER IPWEA STANDARD DRAWING RS-140.
4. FOR CONCRETE FOOTPATH DETAILS REFER IPWEA STD DRG R-065.



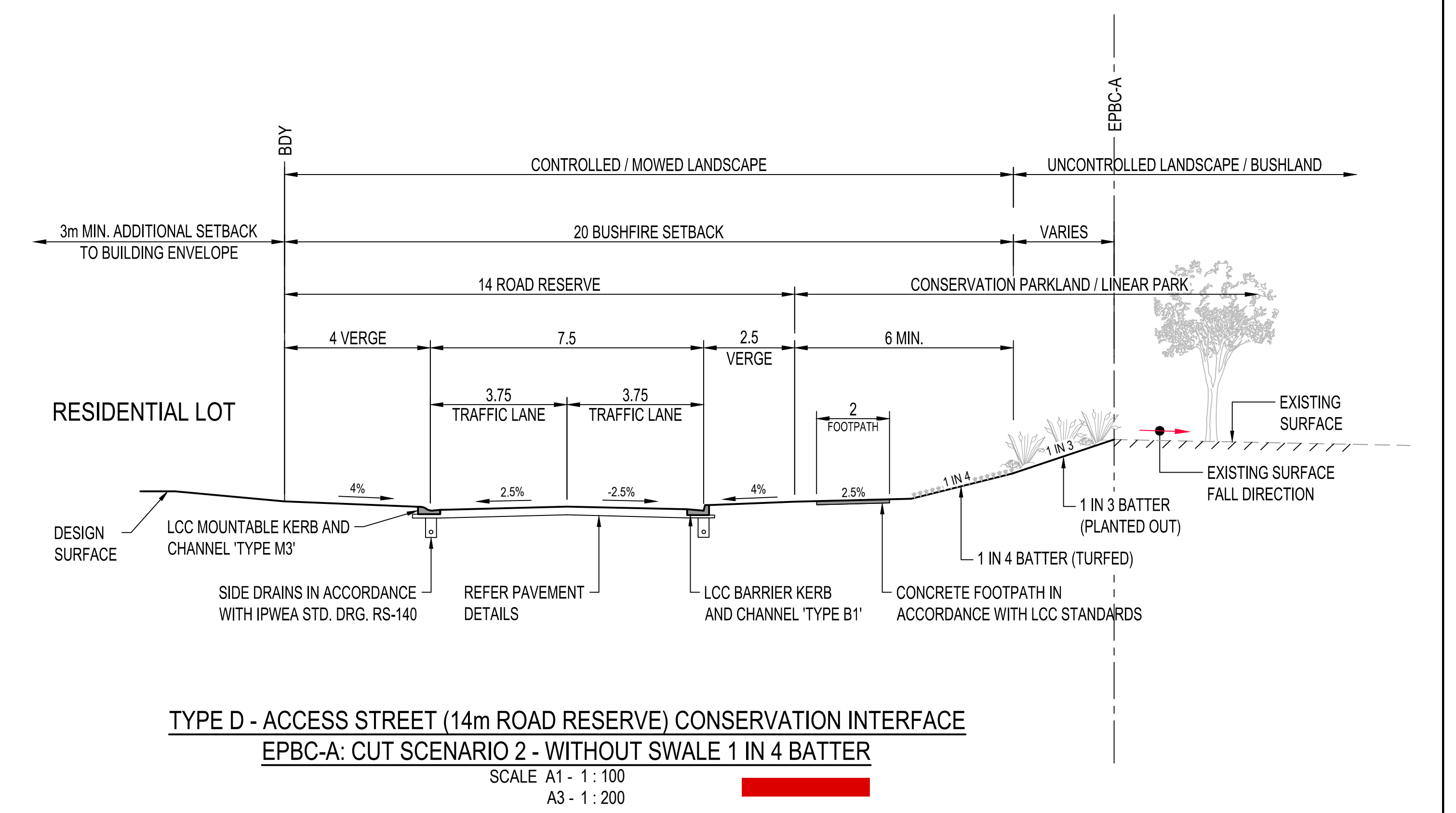
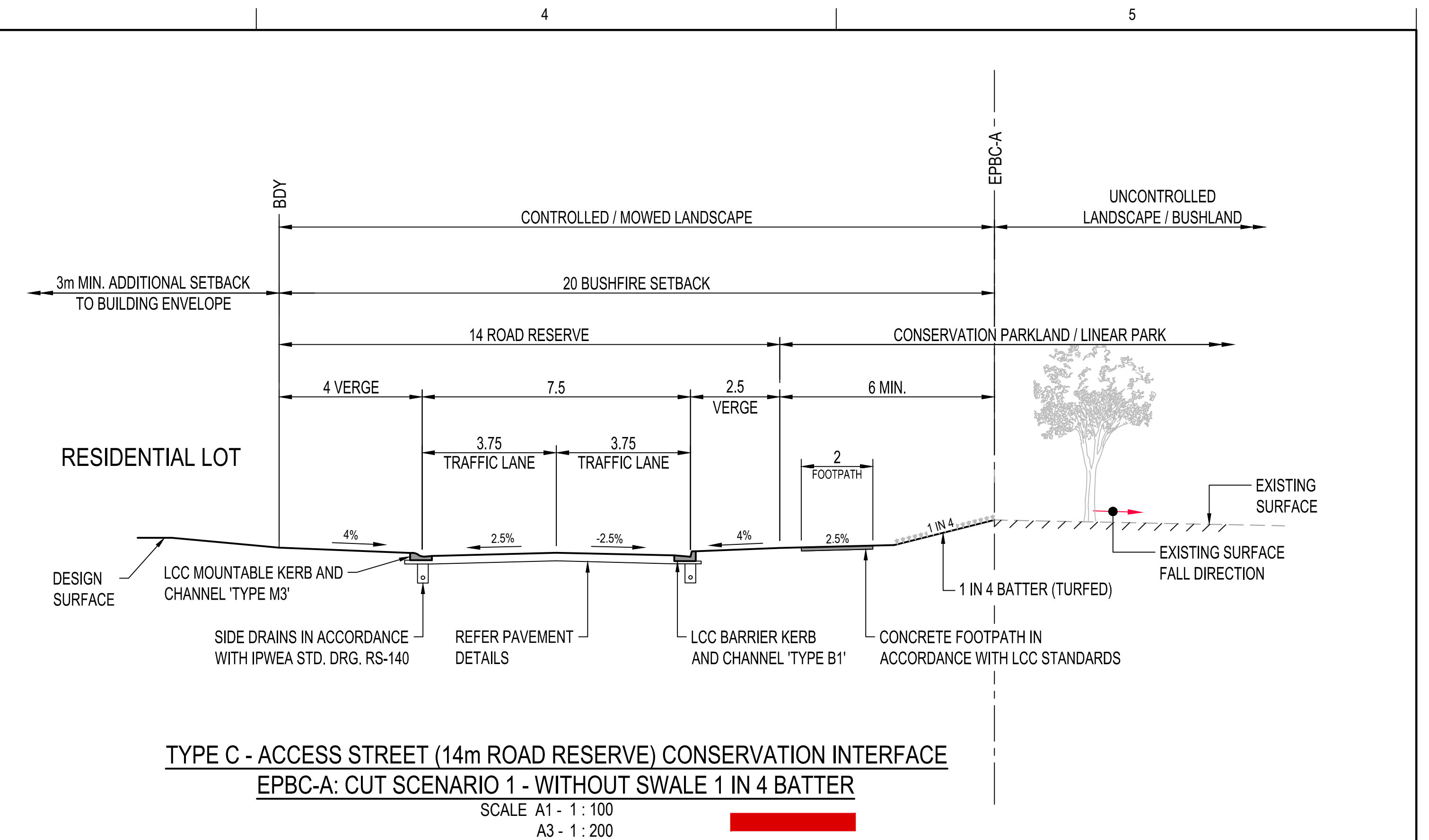
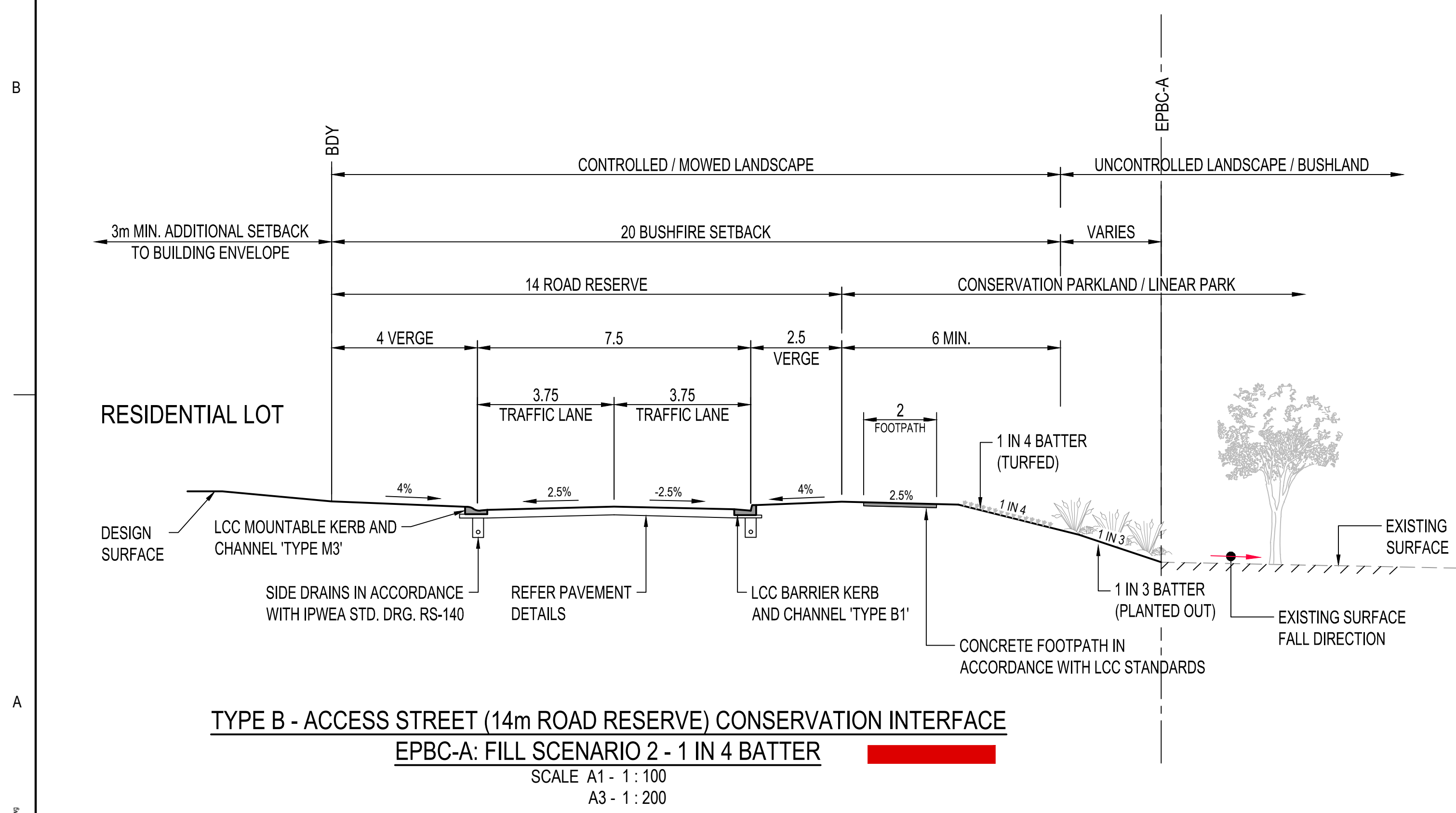
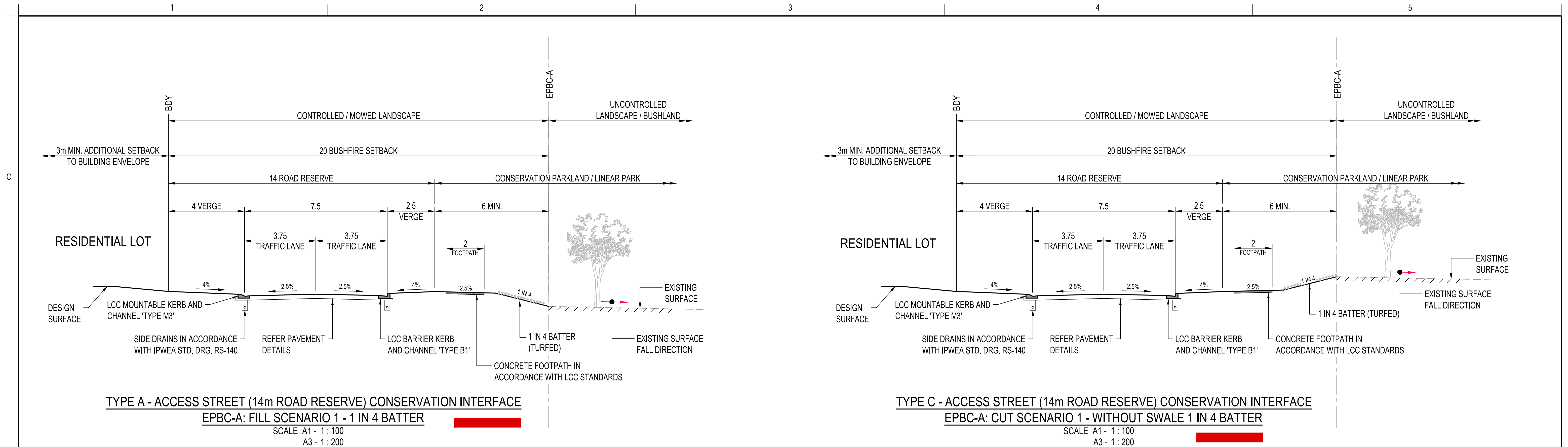
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			Dwn	Dsn	Chkd	Annd	YYYY MM DD

Drawing No.	Revision
01-CI-510021	1



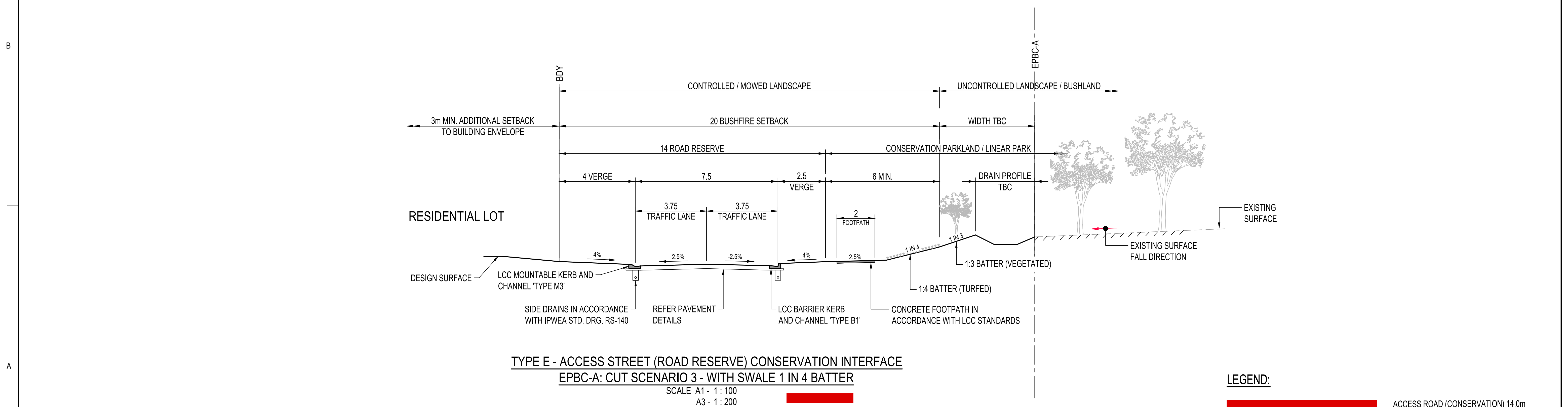
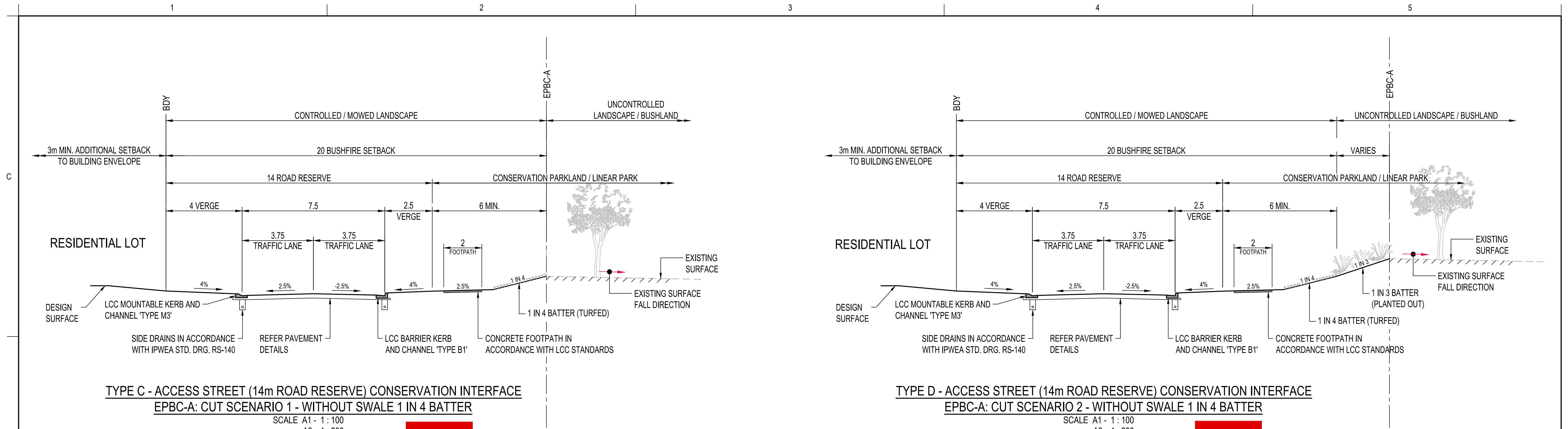
LEGEND:

ACCESS ROAD (CONSERVATION) 14.0m

- NOTE:
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 2. FOR KERB TYPES REFER TO IPWEA STANDARD DRAWING RS-080.
 3. FOR SUBSOIL DRAIN TYPES REFER IPWEA STANDARD DRAWING RS-140.
 4. FOR CONCRETE FOOTPATH DETAILS REFER IPWEA STD DRG R-065.

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Plot: B10101.dwg
Date: 10/06/2023 10:00:00 AM
User: j\j\j

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Issued/Revision	By	MH	2026.06.03																									
1	ISSUED FOR EDQ APPROVAL	RB																										
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			Own.	Desgn.	Chkd.	Appd.																						



LEGEND:

ACCESS ROAD (CONSERVATION) 14.0m

NOTE:

1. ADD 2m LANDSCAPE BUFFER IF INTERFACING WITH ACOUSTIC FENCE. IF => 15m LINEAR PARK ADJACENT; REDUCE VERGE TO 4m AND MOVE PATHS TO PARK REFER TO MONARCH GLEN ROAD CROSS SECTION ASSESSMENT DOCUMENT FOR MORE
2. FOR KERB TYPES REFER TO IPWEA STANDARD DRAWING RS-080.
3. FOR SUBSOIL DRAIN TYPES REFER IPWEA STANDARD DRAWING RS-140.
4. FOR CONCRETE FOOTPATH DETAILS REFER IPWEA STD DRG R-065.

1:100 1:200

1 0 1 2 3 4 5 A1 A3

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mirvac

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KINDARA - MONARCH GLEN

MIRVAC MONARCH GLEN

R.O.L. 05 LOT 2 ON SP351245

MONARCH GLEN (JOTOWN) HOMESTEAD DRIVE, FLAGSTONE

Authorised	Ref #	YYYY.MM.DD	RB	HS	MH	2026.06.03
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Title

ROAD HEIRARCHY TYPICAL SECTIONS

SHEET 3

Project No.

304702212

Drawing No.

01-CI-510023

Scale at A1

AS SHOWN

Revision

1

Appendix C: SIDRA Outputs



SITE LAYOUT

▽ Site: [1] 1_2066 AM (Folder1)

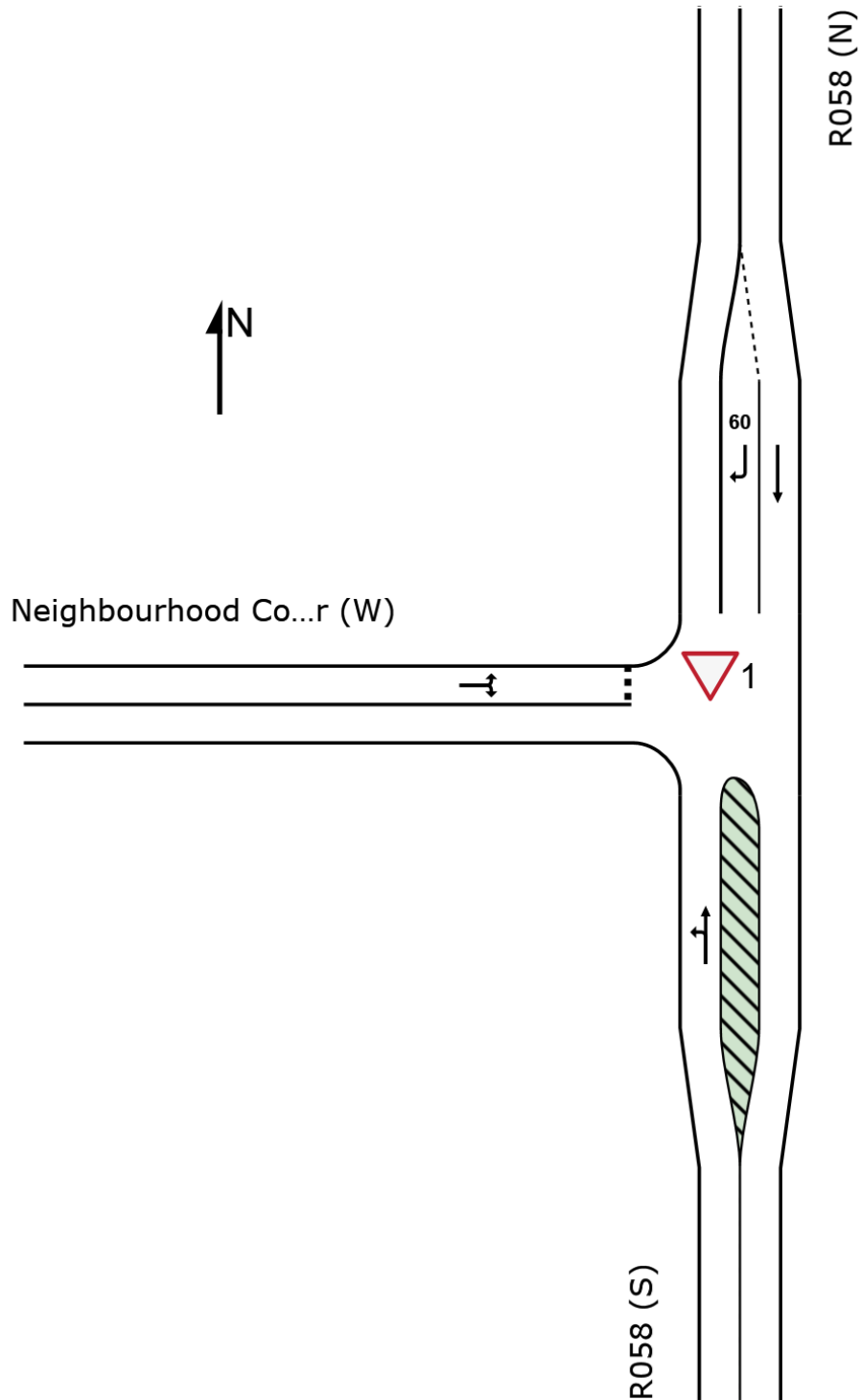
Intersection 1

Site Category: (None)

Give-Way (Two-Way)

Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY



Site: [1] 1_2066 AM (Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Intersection 1
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	[Total HV]	[Veh. veh	Dist] m									
			veh/h	%	veh/h	%				v/c	sec				km/h
South: R058 (S)															
1	L2	All MCs	4	0.0	4	0.0	0.210	5.6	LOS A	0.0	0.0	0.00	0.01	0.00	57.4
2	T1	All MCs	407	1.0	407	1.0	0.210	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	59.8
Approach			412	1.0	412	1.0	0.210	0.1	NA	0.0	0.0	0.00	0.01	0.00	59.8
North: R058 (N)															
8	T1	All MCs	282	2.2	282	2.2	0.145	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
9	R2	All MCs	136	0.0	136	0.0	0.113	7.0	LOS A	0.5	3.5	0.47	0.67	0.47	47.9
Approach			418	1.5	418	1.5	0.145	2.3	NA	0.5	3.5	0.15	0.22	0.15	55.4
West: Neighbourhood Connector (W)															
10	L2	All MCs	78	0.0	78	0.0	0.109	6.1	LOS A	0.4	2.9	0.50	0.67	0.50	47.5
12	R2	All MCs	16	0.0	16	0.0	0.109	12.4	LOS A	0.4	2.9	0.50	0.67	0.50	47.4
Approach			94	0.0	94	0.0	0.109	7.2	LOS A	0.4	2.9	0.50	0.67	0.50	47.5
All Vehicles			923	1.1	923	1.1	0.210	1.8	NA	0.5	3.5	0.12	0.17	0.12	56.3

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (2)] 1_2066 PM (Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Intersection 1
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: R058 (S)															
1	L2	All MCs	21	0.0	21	0.0	0.181	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.1
2	T1	All MCs	334	0.3	334	0.3	0.181	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	59.6
Approach			355	0.3	355	0.3	0.181	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.4
North: R058 (N)															
8	T1	All MCs	423	0.2	423	0.2	0.215	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
9	R2	All MCs	97	1.1	97	1.1	0.076	6.7	LOS A	0.3	2.3	0.43	0.63	0.43	48.0
Approach			520	0.4	520	0.4	0.215	1.3	NA	0.3	2.3	0.08	0.12	0.08	57.2
West: Neighbourhood Connector (W)															
10	L2	All MCs	39	2.7	39	2.7	0.049	5.7	LOS A	0.2	1.3	0.45	0.60	0.45	47.7
12	R2	All MCs	6	0.0	6	0.0	0.049	12.6	LOS A	0.2	1.3	0.45	0.60	0.45	47.7
Approach			45	2.3	45	2.3	0.049	6.7	LOS A	0.2	1.3	0.45	0.60	0.45	47.7
All Vehicles			920	0.5	920	0.5	0.215	1.2	NA	0.3	2.3	0.07	0.11	0.07	57.5

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

SITE LAYOUT

 Site: [2] 2_2066 AM (Folder1)

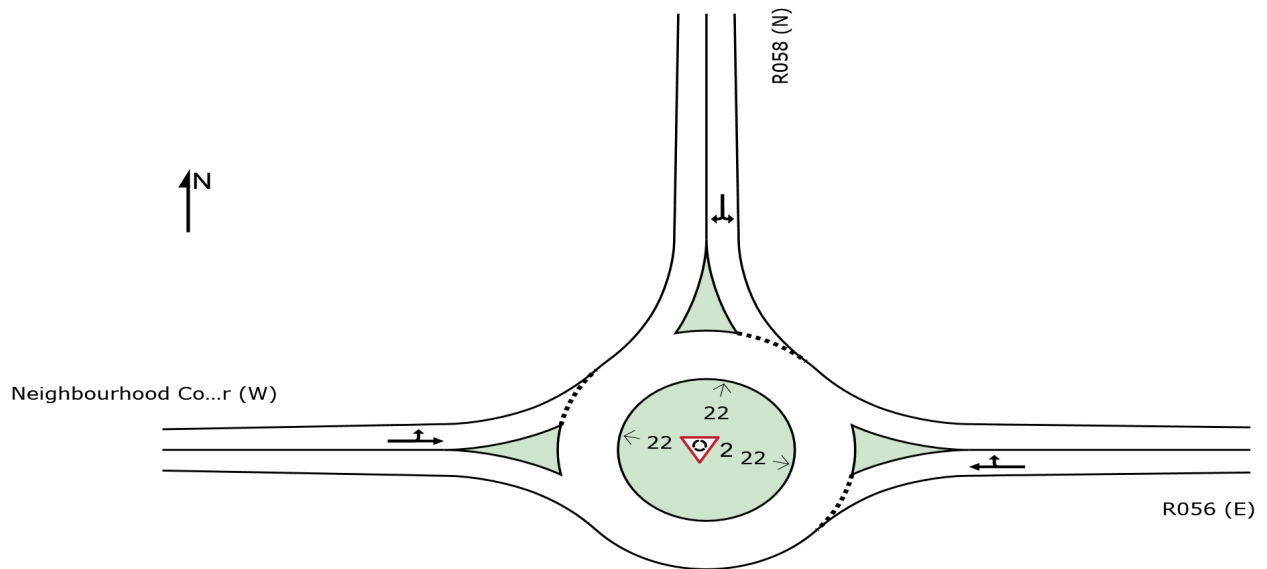
R056 / R058 / ROL5 Neighbourhood Connector

Site Category: (None)

Roundabout

Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY



Site: [2] 2_2066 AM (Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

R056 / R058 / ROL5 Neighbourhood Connector

Site Category: (None)

Roundabout

Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist] m				
			veh/h	%	veh/h	%									
East: R056 (E)															
5	T1	All MCs	239	2.6	239	2.6	0.341	4.4	LOS A	2.4	17.1	0.30	0.52	0.30	48.9
6	R2	All MCs	237	0.9	237	0.9	0.341	9.2	LOS A	2.4	17.1	0.30	0.52	0.30	51.7
Approach			476	1.8	476	1.8	0.341	6.8	LOS A	2.4	17.1	0.30	0.52	0.30	50.2
North: R058 (N)															
7	L2	All MCs	218	2.4	218	2.4	0.264	5.1	LOS A	1.7	11.8	0.47	0.56	0.47	52.6
9	R2	All MCs	80	1.3	80	1.3	0.264	10.1	LOS A	1.7	11.8	0.47	0.56	0.47	48.5
Approach			298	2.1	298	2.1	0.264	6.4	LOS A	1.7	11.8	0.47	0.56	0.47	51.4
West: Neighbourhood Connector (W)															
10	L2	All MCs	269	0.8	269	0.8	0.422	4.3	LOS A	2.9	20.6	0.53	0.48	0.53	49.4
11	T1	All MCs	225	0.0	225	0.0	0.422	4.1	LOS A	2.9	20.6	0.53	0.48	0.53	49.7
Approach			495	0.4	495	0.4	0.422	4.2	LOS A	2.9	20.6	0.53	0.48	0.53	49.5
All Vehicles			1268	1.3	1268	1.3	0.422	5.7	LOS A	2.9	20.6	0.43	0.51	0.43	50.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: P:\P7284 Monarch Glen ROL5 TIA\Technical\Models\SIDRA\P7284.002 ROL5 Key Intersection Models.sipx

MOVEMENT SUMMARY



Site: [2 (3)] 2_2066 PM (Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

R056 / R058 / ROL5 Neighbourhood Connector

Site Category: (None)

Roundabout

Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	[Total HV]						[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
East: R056 (E)															
5	T1	All MCs	237	0.0	237	0.0	0.413	5.7	LOS A	2.8	20.0	0.56	0.60	0.56	48.2
6	R2	All MCs	228	0.5	228	0.5	0.413	10.6	LOS A	2.8	20.0	0.56	0.60	0.56	50.9
Approach			465	0.2	465	0.2	0.413	8.1	LOS A	2.8	20.0	0.56	0.60	0.56	49.5
North: R058 (N)															
7	L2	All MCs	155	0.7	155	0.7	0.319	4.4	LOS A	2.2	15.1	0.34	0.56	0.34	51.7
9	R2	All MCs	273	0.0	273	0.0	0.319	9.4	LOS A	2.2	15.1	0.34	0.56	0.34	47.8
Approach			427	0.2	427	0.2	0.319	7.6	LOS A	2.2	15.1	0.34	0.56	0.34	49.2
West: Neighbourhood Connector (W)															
10	L2	All MCs	128	0.8	128	0.8	0.211	3.9	LOS A	1.3	8.9	0.46	0.46	0.46	49.6
11	T1	All MCs	109	0.0	109	0.0	0.211	3.8	LOS A	1.3	8.9	0.46	0.46	0.46	49.9
Approach			238	0.4	238	0.4	0.211	3.9	LOS A	1.3	8.9	0.46	0.46	0.46	49.8
All Vehicles			1131	0.3	1131	0.3	0.413	7.0	LOS A	2.8	20.0	0.45	0.55	0.45	49.4

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: P:\P7284 Monarch Glen ROL5 TIA\Technical\Models\SIDRA\P7284.002 ROL5 Key Intersection Models.sipx

SITE LAYOUT

 Site: [3] 3_2066 AM (Folder1)

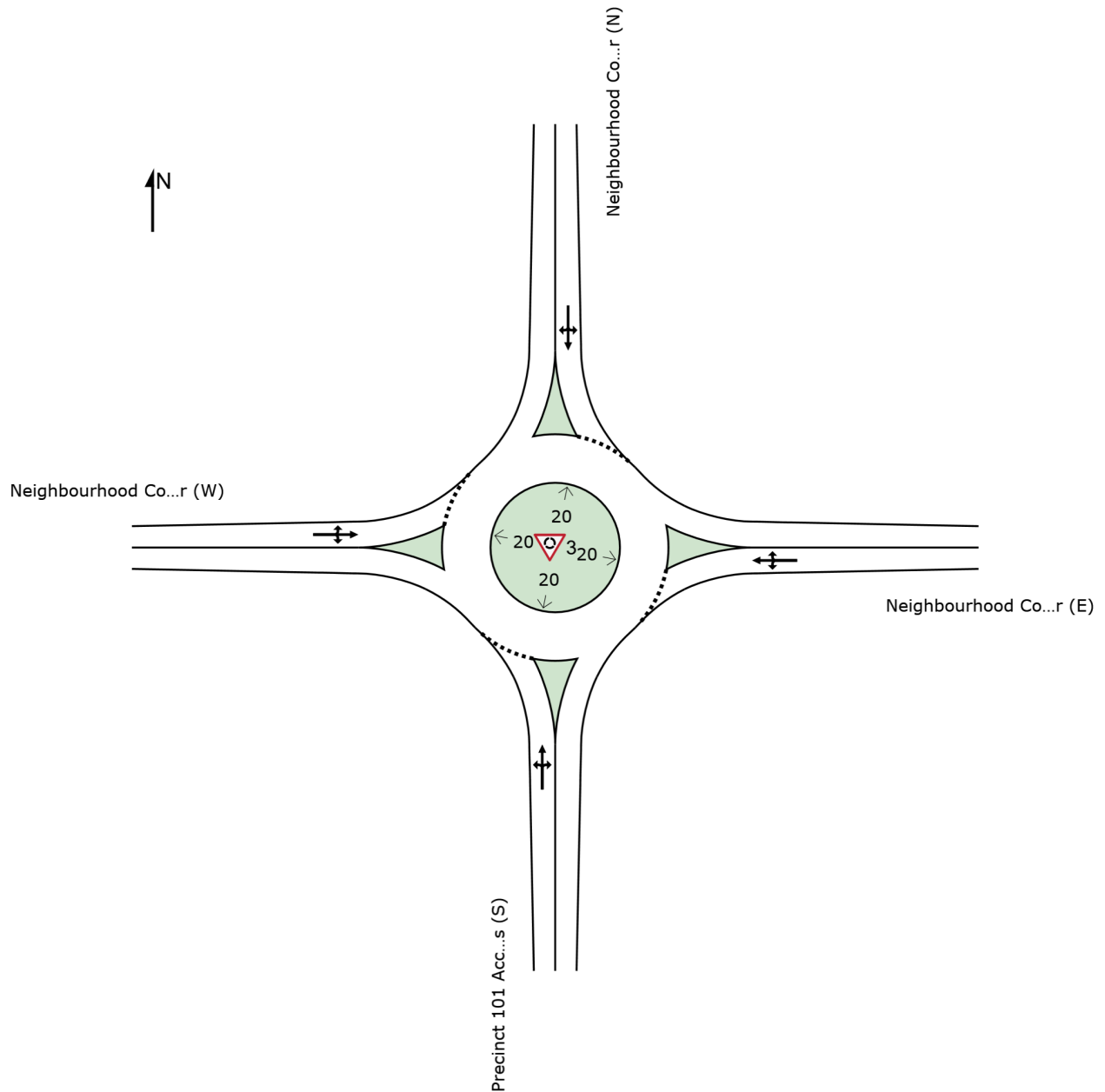
Intersection 3

Site Category: (None)

Roundabout

Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY



Site: [3] 3_2066 AM (Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Intersection 3
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Cycles	Number of Depart	Aver. Speed
			[Total HV]	[Total HV]						[Veh. veh	Dist] m				km/h
South: Precinct 101 Access (S)															
1	L2	All MCs	11	0.0	11	0.0	0.060	4.5	LOS A	0.3	2.1	0.46	0.61	0.46	44.6
2	T1	All MCs	4	0.0	4	0.0	0.060	4.4	LOS A	0.3	2.1	0.46	0.61	0.46	44.8
3	R2	All MCs	48	0.0	48	0.0	0.060	8.9	LOS A	0.3	2.1	0.46	0.61	0.46	44.3
Approach			63	0.0	63	0.0	0.060	7.8	LOS A	0.3	2.1	0.46	0.61	0.46	44.3
East: Neighbourhood Connector (E)															
4	L2	All MCs	15	0.0	15	0.0	0.220	3.0	LOS A	1.4	10.0	0.18	0.41	0.18	46.3
5	T1	All MCs	217	2.4	217	2.4	0.220	2.9	LOS A	1.4	10.0	0.18	0.41	0.18	46.6
6	R2	All MCs	91	2.3	91	2.3	0.220	7.5	LOS A	1.4	10.0	0.18	0.41	0.18	46.0
Approach			322	2.3	322	2.3	0.220	4.2	LOS A	1.4	10.0	0.18	0.41	0.18	46.4
North: Neighbourhood Connector (N)															
7	L2	All MCs	141	0.7	141	0.7	0.175	4.7	LOS A	1.0	6.9	0.52	0.57	0.52	45.7
8	T1	All MCs	1	0.0	1	0.0	0.175	4.6	LOS A	1.0	6.9	0.52	0.57	0.52	46.0
9	R2	All MCs	36	0.0	36	0.0	0.175	9.1	LOS A	1.0	6.9	0.52	0.57	0.52	45.4
Approach			178	0.6	178	0.6	0.175	5.6	LOS A	1.0	6.9	0.52	0.57	0.52	45.7
West: Neighbourhood Connector (W)															
10	L2	All MCs	81	0.0	81	0.0	0.305	3.6	LOS A	1.9	13.1	0.36	0.40	0.36	46.4
11	T1	All MCs	307	0.3	307	0.3	0.305	3.6	LOS A	1.9	13.1	0.36	0.40	0.36	46.6
12	R2	All MCs	1	0.0	1	0.0	0.305	8.1	LOS A	1.9	13.1	0.36	0.40	0.36	46.0
Approach			389	0.3	389	0.3	0.305	3.6	LOS A	1.9	13.1	0.36	0.40	0.36	46.6
All Vehicles			953	1.0	953	1.0	0.305	4.5	LOS A	1.9	13.1	0.34	0.45	0.34	46.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY



Site: [3 (2)] 3_2066 PM (Folder1)

Output produced by SIDRA INTERSECTION Version: 10.0.9.250

Intersection 3
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop of Cycles Rate to Depart	Number of Cycles	Aver. Speed
			[Total HV]		[Total HV]					[Veh. veh	Dist] m				km/h
			veh/h	%	veh/h	%	v/c	sec							
South: Precinct 101 Access (S)															
1	L2	All MCs	6	0.0	6	0.0	0.018	5.2	LOS A	0.1	0.7	0.55	0.59	0.55	44.7
2	T1	All MCs	1	0.0	1	0.0	0.018	5.1	LOS A	0.1	0.7	0.55	0.59	0.55	45.0
3	R2	All MCs	9	0.0	9	0.0	0.018	9.6	LOS A	0.1	0.7	0.55	0.59	0.55	44.4
Approach			17	0.0	17	0.0	0.018	7.7	LOS A	0.1	0.7	0.55	0.59	0.55	44.6
East: Neighbourhood Connector (E)															
4	L2	All MCs	47	0.0	47	0.0	0.341	3.1	LOS A	2.3	16.2	0.21	0.38	0.21	46.5
5	T1	All MCs	388	0.3	388	0.3	0.341	3.0	LOS A	2.3	16.2	0.21	0.38	0.21	46.8
6	R2	All MCs	73	0.0	73	0.0	0.341	7.5	LOS A	2.3	16.2	0.21	0.38	0.21	46.2
Approach			508	0.2	508	0.2	0.341	3.7	LOS A	2.3	16.2	0.21	0.38	0.21	46.7
North: Neighbourhood Connector (N)															
7	L2	All MCs	135	0.8	135	0.8	0.141	3.4	LOS A	0.7	5.2	0.27	0.47	0.27	46.2
8	T1	All MCs	2	0.0	2	0.0	0.141	3.3	LOS A	0.7	5.2	0.27	0.47	0.27	46.5
9	R2	All MCs	43	0.0	43	0.0	0.141	7.8	LOS A	0.7	5.2	0.27	0.47	0.27	45.9
Approach			180	0.6	180	0.6	0.141	4.4	LOS A	0.7	5.2	0.27	0.47	0.27	46.2
West: Neighbourhood Connector (W)															
10	L2	All MCs	54	0.0	54	0.0	0.115	3.2	LOS A	0.6	4.1	0.23	0.37	0.23	46.8
11	T1	All MCs	95	0.0	95	0.0	0.115	3.1	LOS A	0.6	4.1	0.23	0.37	0.23	47.0
12	R2	All MCs	3	0.0	3	0.0	0.115	7.6	LOS A	0.6	4.1	0.23	0.37	0.23	46.4
Approach			152	0.0	152	0.0	0.115	3.3	LOS A	0.6	4.1	0.23	0.37	0.23	46.9
All Vehicles			857	0.2	857	0.2	0.341	3.8	LOS A	2.3	16.2	0.23	0.40	0.23	46.6

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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