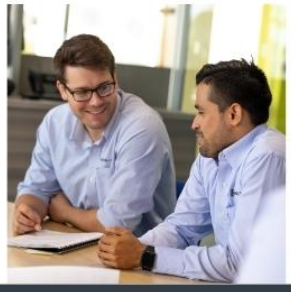
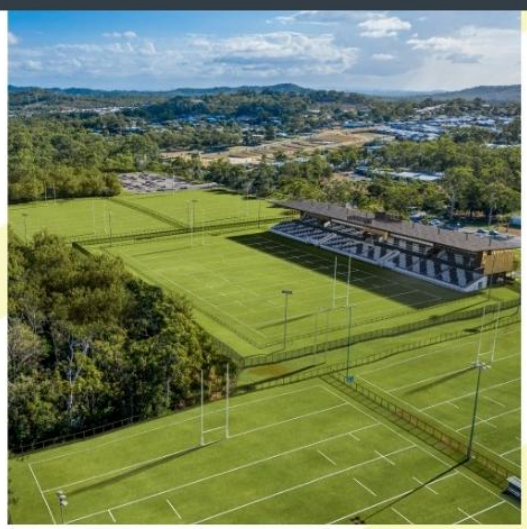
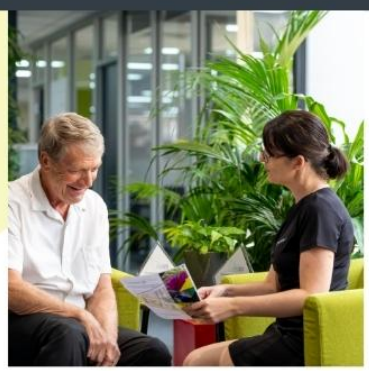
creating liveable communities

BURCHILLS
ENGINEERING SOLUTIONS



The experience **you deserve**





BHC Aura, Aura Precinct 15.2 Lot 8000, Coppice Crescent, Banya, Sunshine Coast
Traffic Impact Assessment

Client:	BHCL
Project Number:	BE250174
Document Number:	BE250174-RP-TIA-01.1
Date of Issue:	16 December 2025

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV-2025-CAS-4188
Date: 9 February 2026

Queensland Government

Document Control Record

Prepared by:	Giada Rendina
Position:	Traffic Engineer
Signed:	
Date:	27/11/2025

Approved by:	Angela Wood
Position:	Principal Traffic Engineer
Signed:	
Date:	27/11/2025

Version No.	Description	Date	Prepared	Approved
00	Draft for client review	5/11/2025	AP	AW
01	Final for submission	27/11/2025	GR	AW
01.1	Revised Final Submission	16/12/2025	GR	AW

Recipients are responsible for eliminating all superseded documents in their possession.

Coote Burchills Engineering Pty Ltd ACN: 166 942 365

GOLD COAST – Level 2, 26 Marine Parade Southport QLD 4215 - PO Box 3766, Australia Fair Southport QLD 4215
BRISBANE – Level 25, 215 Adelaide Street Brisbane QLD 4000 – GPO Box 3083, Brisbane QLD 4001
TOOWOOMBA – Unit 4, 462 Ruthven Street Toowoomba QLD 4350 - PO Box 1439, Toowoomba QLD 4350

MORETON BAY I SUNSHINE COAST I IPSWICH I BANGALOW

Table of Contents

Tables

Figures

Appendices

1. Introduction

1.1 Project Overview

Burchills Engineering Solutions have been engaged by Brisbane Housing Company Limited (BHC) to provide a Traffic Impact Assessment to support a Development Application (DA) for a proposed 40 Unit Social Housing Development on Lot 10 on SP349924 on Coppice Crescent in Banya, which is within the Sunshine Coast Council local government area.

The subject site is within the Caloundra South Priority Development Area (PDA), which was adopted by Economic Development Queensland in 2024. A Plan of Development has been prepared by Urbis in conjunction with Stockland for the Aura Southern Locality within the Caloundra South PDA, which includes the subject site, as shown in Figure 1.1.

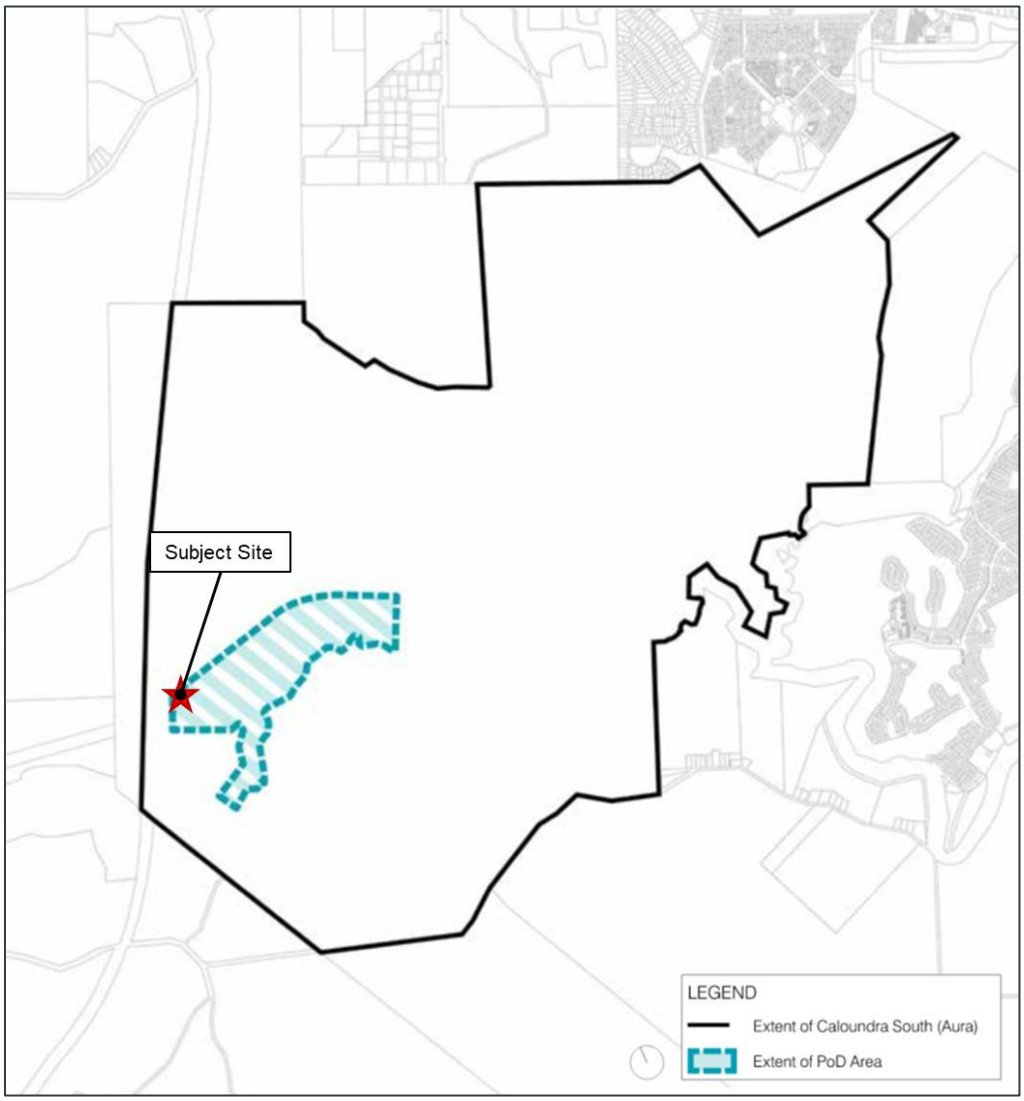


Figure 1.1 Caloundra South PDA and PoD Location (Source: PoD, Urbis, 2022)

The purpose of this report is to investigate the potential traffic impacts associated with the proposed development against the requirements the Plan of Development (PoD) and other documents as necessary.

1.2 References

In the course of preparing this report, reference has been made to the following:

- Australian Standards AS2890 series;
- Department of Transport and Main Roads Guide to Traffic Impact Assessments (2018);
- Roads and Maritime Services (RMS) Technical Direction Guide to Traffic Generating Developments, August 2013;
- Stockland Aura Southern Locality Plan of Development;
- Caloundra South Urban Development Area Development Scheme; and
- Other documents as specified.

1.3 Report Constraints

Burchills Engineering Solutions has carried out this traffic report that complies with industry standard traffic engineering practices and standard applicable during the assessment in November 2025. The report was based on the available project information and conditions at the time of the assessment. However, Burchills Engineering Solutions cannot be held responsible for any changes to the project planning or road conditions that occur after the report's completion, which may affect the accuracy of the assessment's findings.

2. Existing Conditions

2.1 Site Location

The subject site is located on Coppice Street in the Acacia Region of the Aura Precinct as shown in Figure 2.1 below.

Figure 2.1 Subject Site Location (Source: MetroMap, 2025)

It is noted that the subject site is currently vacant land and is surrounded by low density residential land uses.

2.2 Road Network

Details of the proposed road network surrounding the subject site are outlined in Table 2.1 below.

Table 2.1 Local Road Network

Road Name	Authority	Posted Speed Limit	Typical Form
Coppice Crescent	SCC	50km/h	Two-lane, two-way
Dune Way	SCC	50km/h	Two-lane, two-way
Attenborough Drive	SCC	50km/h	Two-lane, two-way
Western Drive	SCC	60km/h	Two-lane, two-way

2.3 Public Transport Facilities

Public transport accessibility for the Aura Precinct, including the subject site was assessed as part of the overarching PDA process. As such, public transport accessibility has not been reviewed in detail as part of this assessment.

It is understood that the proposed CAMCOS (Caboolture to Maroochydore Corridor Options Study) Railway corridor passes by the subject site, with the proposed future Transport Hub likely to be located approximately 3.3km to the east of the subject site.

2.4 Active Transport Facilities

There are footpaths along Coppice Crescent, as well as a footpath along the site frontage connecting to the shared path along Western Drive.

3. Proposed Development

3.1 Development Yield

The development is comprised of 40 units of affordable housing. This includes:

- 12 x 1-bedroom units;
- 24 x 2-bedroom units; and
- 4 x 3-bedroom units

The ground floor development layout is shown in Figure 3.1 below, and development plans are included in Appendix A.

Figure 3.1 Development Layout – Ground Floor (Source: Archipelago, December 2025)

3.2 Access Arrangements

Access to the development is proposed via a new 5.8m wide crossover onto Coppice Crescent. The suitability of the access arrangements is reviewed in detail in Section 6.2 of this report.

3.3 Parking Provision

The development provides 50 car parking spaces, including:

- 40 residential parking spaces;
- 10 visitor parking spaces, including 1 x PWD parking space

The suitability of the car parking provision is reviewed in Section 5.

4. Traffic Impacts

4.1 Traffic Generation

In order to determine the traffic likely to be generated by the development, reference has been made to the RMS Guide to Traffic Generating Developments Technical Direction (August 2013). The average regional rate for one- and two-bedroom medium density residential dwellings has been used for the development.

Table 4.1 summarises the trip generation rates, and trip generation adopted for the traffic assessment.

Table 4.1 Traffic Generation

Land Use	Yield	Trip Generation Rate		Trip Generation		Source
		AM Peak	PM Peak	AM Peak	PM Peak	
Medium density residential	40 units	0.5 trips per unit	0.5 trips per unit	20 vph	20 vph	GTGD 2013

As shown above, the proposed development is anticipated to result in an increase of 20 vehicles per hour during the AM and PM peak periods.

4.2 Qualitative Traffic Impact

The development is expected to add an additional 20 trips to the surrounding road network during the AM and PM peak hours. This is in the order of 1 additional trip on the road network every 3 minutes during the peak periods. This is a negligible impact to the road network and does not warrant further assessment or mitigation measures. As such, the development is not expected to generate a significant impact on the efficiency of the surrounding road network.

5. Parking Assessment

5.1 Car Parking Requirements

The Aura Southern Locality Plan of Development specifies the following car parking spaces.

Table 5.1 Aura Southern Precinct Plan of Development Car Parking Requirements

Land Use	Type	Yield	Parking Rate	Parking Requirement
Multiple dwelling	Resident	40 units	1 space per dwelling	40 spaces
	Visitor		1 space per 4 dwellings	10 spaces
			Total	**50 spaces**

As shown above, the development generates a requirement for 50 parking spaces.

5.2 Adequacy of Parking

The development provides 50 on-site car parking spaces, including 10 visitor parking bays and 40 resident parking bays, which satisfies the requirements of the Aura Southern Locality Plan of Development and is considered suitable from a traffic engineering perspective.

5.3 Bicycle Parking Requirements

The Aura Southern Locality Plan of Development specifies the following bicycle parking spaces:

Table 5.2 Aura Southern Locality Plan of Development Bicycle Parking Requirements

Land Use	Yield	Parking Type	Parking Rate	Parking Requirement
Multiple dwelling	40 units	Resident	1 space per dwelling	40 spaces
		Visitor	1 space per 4 dwellings	10 spaces
			Total	**50 spaces**

As shown above, the development generates a requirement for 50 bicycle parking spaces.

5.4 Bicycle Parking Provision

The development provides 52 bicycle parking spaces, including 12 visitor parking spaces and 40 resident parking spaces, which satisfies the requirements of the Aura Southern Locality Plan of Development and is considered suitable from a traffic engineering perspective.

The visitor bicycle parking spaces have been provided at the ground floor, in accordance with the requirements of the Aura Southern Locality Plan of Development. Furthermore, the resident bicycle parking spaces are proposed to be located in a secured space in accordance with the requirements of Australian Standards AS2890.3.

6. Design Review

6.1 Overview

Burchills Engineering Solutions has undertaken a detailed review of the proposed site layout to ensure compliance with relevant standards and guidelines including:

- Aura Southern Locality Plan of Development
- IPWEA Street Design Manual
- Australian / New Zealand Standard AS2890.1:2004 Parking Facilities
- Australian / New Zealand Standard AS2890.2:2002 Off-street Commercial Vehicle Facilities
- Australian / New Zealand Standard AS2890.3:2015 Bicycle Parking

6.2 Access Review

6.2.1 Geometry

The 5.8m wide vehicle access exceeds the minimum requirements of AS2890.1 for a Category 1 access (25-100 resident car parking spaces, with access to a local road: minimum 3m – 5.5m width).

Furthermore, the internal roadway connecting the vehicle access and car parking areas achieves the minimum requirements of AS2890.1 (5.5m width) to accommodate two-way vehicle movements. It is noted that an additional 0.3m of clearance is required between the internal roadway and a vertical structure located adjacent to the roadway. This can be addressed as a condition of permit.

In addition, pedestrian sight triangles shall be provided in accordance with Figure 3.3 of AS2890.1.

6.2.2 One Way Access Configuration

It is noted that a one-way access arrangement has been proposed at the ground floor level of the development where outbound vehicles will be required to give-way to inbound vehicles. The proposed one-way access roadway provides over 3.5m in width and therefore achieves compliance with the minimum requirement (3m width) of AS2890.1.

Furthermore, Burchills has conducted a swept path assessment demonstrating that a WCV is able to safely access the one-way roadway and pass a parked vehicle while maintaining 300mm of clearance. The swept path assessment has been provided at Appendix B.

6.2.3 Sight Distance

The stopping sight distance (SSD) at the proposed site access has been assessed via desktop assessment in accordance with AS2890.1. The sight distance assessment is tabulated in Table 6.1 below.

Table 6.1 Sight Distance Assessment

Direction	Minimum SSD Requirement @ 50km/h	Sight Distance Available	Compliance
Looking east	45m	>100m	Yes
Looking west		~47m	Yes

As shown above, the SSD at the proposed site access accords with the requirements of AS2890.1.

6.2.4 Queueing Assessment

It is noted that the proposed one-way access arrangement will require outbound vehicles to give-way to inbound vehicles. Therefore, vehicle queueing is not likely to be generated at the ground floor level of the development.

However, Burchills has reviewed the vehicle queueing requirements in accordance with AS2890.1. AS2890.1 prescribes a minimum queue length of the greater of a minimum of 2 cars or 3% of capacity. As such, a minimum queueing distance of 2 car lengths (equating to 12m in length) is required between the control point (first visitor space) and the property boundary.

The development provides 12m of queueing distance between the one-way access arrangement and the property boundary and thus achieves compliance with AS2890.1.

6.2.5 Pedestrian Access

Pedestrian access to the site is proposed via a separated pedestrian path connecting to the existing pedestrian footpath along the Coppice Crescent frontage of the site. The proposed footpath (minimum 1.2m wide) connects all of the dwellings with the external footpath network.

6.3 Car Parking Layout Review

The car parking layout has been reviewed against AS2890 as summarized in Table 6.2 below.

Table 6.2 Car Parking Layout Review

Design Element	Proposed	AS2890 Requirement	Compliant
Car parking spaces (Class 1)	Min. 2.4m x 5.4m	Min. 2.4m x 5.4m	**Yes**
Car parking space (PWD)	Min. 2.4m x 5.4m with adjacent 2.4m x 5.4m shared zone	Min. 2.4m x 5.4m with adjacent 2.4m x 5.4m shared zone	**Yes**
Car parking aisle width	6.2m	6.2m	**Yes**
Blind aisle extension	1.0m	1.0m	**Yes**
Column locations	In accordance with Fig. 5.2 of AS2890.1	In accordance with Fig. 5.2 of AS2890.1	**Yes**
Clearance from vertical obstructions	Min. 0.3m	Min. 0.3m	**Yes**
Grades within car parks	Not specified	Parallel to angle of parking: max 5% Any other direction: max 6.25%	**Yes**
Overhead clearance	> 2.2m	2.2m	**Yes**

As shown above, the layout generally accords with AS2890.

6.4 Servicing Arrangements

6.4.1 Service Vehicle Requirements

The Aura Southern Locality Plan of Development specifies the following service vehicle requirements for multiple dwelling developments (more than 10 dwellings):

- Medium Rigid Vehicle (MRV)
- A van
- Waste collection vehicle (WCV)

6.4.2 Service Vehicle Provision

The proposed MRV loading zone is shown in Figure 6.1 below.

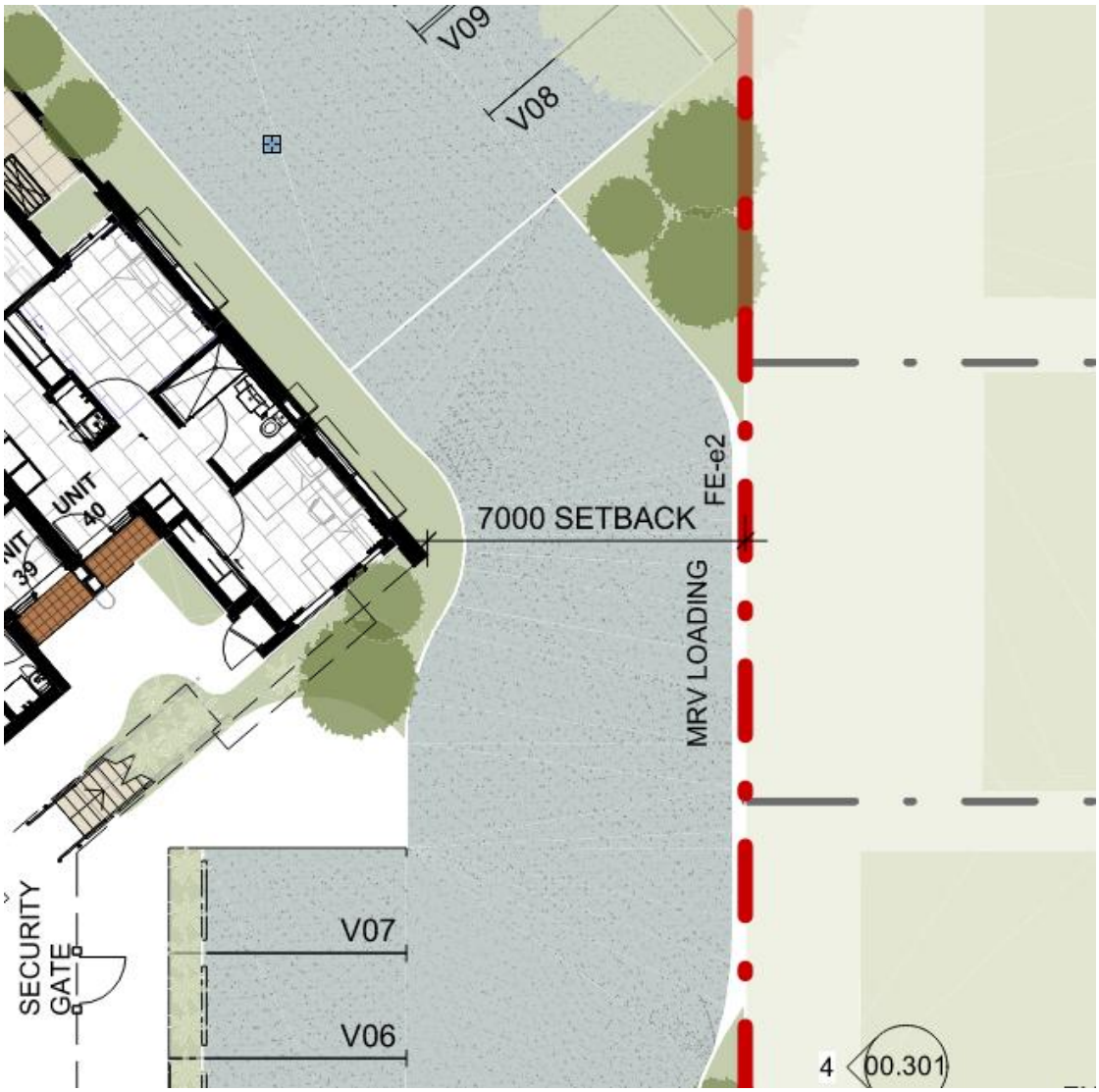


Figure 6.1 Proposed MRV Parking Zone

The MRV parking bay dimensions meet the minimum requirements of AS2890.2 (3.5m x 8.8m). Furthermore, it is noted that a minimum width of 3.2m is provided adjacent to the MRV parking bay to ensure that a standard vehicle is able to safely pass the parked MRV while maintaining 300mm of clearance. The MRV will be required to access the site, turnaround within the site to access the service bay and exit in a forward gear.

Burchills conducted a swept path assessment utilising a 9.9m Waste Collection Vehicle (WCV) which determined that it is able to safely turnaround within the site. Therefore, the MRV will be able to safely turn around within the site provided that a larger WCV is able to do so.

Furthermore, it is anticipated that vans can either park within short term visitor parking bays or within the on-site loading zone when required. Nothing this is an infrequent occurrence, this is considered acceptable from a traffic engineering perspective.

6.4.3 Waste Collection

Waste is proposed to be stored in bulk bins and collected by a front-loading waste collection vehicle (WCV) on street. Swept paths indicate that the front-loading WCV can enter and exit the site in a forward gear. Swept paths are attached in Appendix B.

7. Conclusion

Burchills Engineering Solutions has been engaged by BHC to provide a Traffic Impact Assessment (TIA) for the proposed affordable housing multiple dwelling development at Coppice Crescent in the Aura Southern Locality.

The following key points summarise the findings of the traffic impact assessment undertaken herein:

- The proposed development is comprised of 40 units, including 12 x 1-br units, 24 x 2-br units, and 4 x 3-br units;
- Vehicular access to the development is proposed via Coppice Crescent;
- The development includes 50 car parking spaces which meets the minimum requirements of the Stockland Aura Southern Locality Plan of Development;
- The development includes 52 bicycle parking spaces (40 secure resident parking spaces and 12 visitor parking spaces) in compliance with the minimum requirements of the Stockland Aura Southern Locality Plan of Development;
- The development is expected to generate 19 vehicle trips during the AM peak and 19 trips during the PM peak;
- The traffic generated by the development is anticipated to have a negligible impact on the surrounding road network;
- The vehicle access design achieves compliance with the design requirements of AS2890.1.
- The car parking layout is generally in compliance with AS2890.1, with the exception of one (1) aisle extension. This is to be addressed as a condition of permit.
- The MRV service bay has been provided in accordance with the design requirements of AS2890.2.
- Waste will be stored in bulk bins and collected on site by a front-loading waste collection vehicle (WCV). Swept paths indicate that the WCV can enter and exit the site in a forward gear.

Appendix A – Development Plans

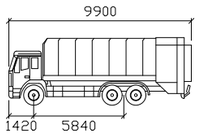
Appendix B – Swept Paths

LEGEND

WHEELS

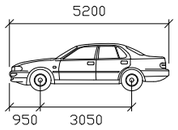
BODY

0.3m BODY CLEARANCE



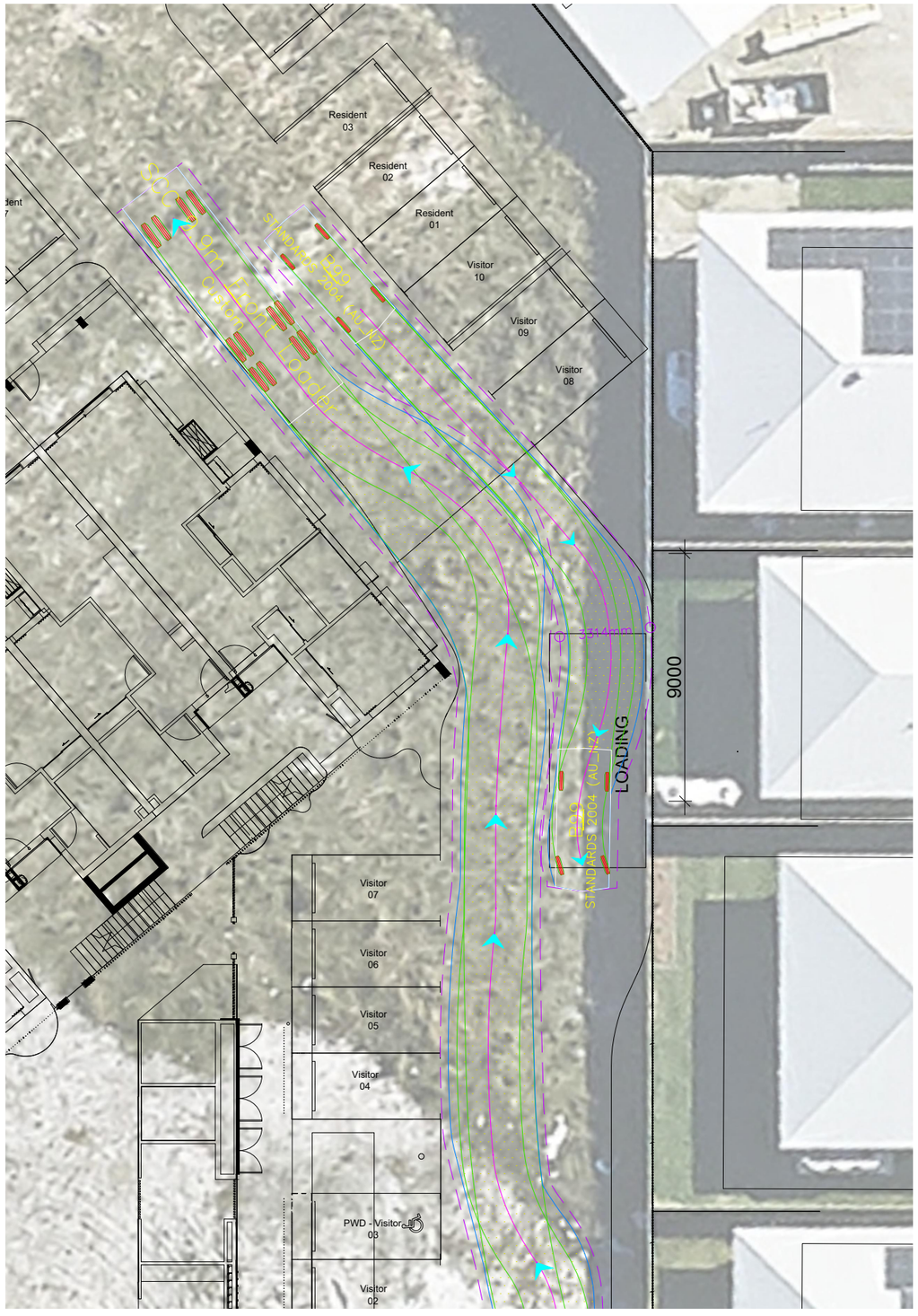
SCC 9.9m Front Loader

	mm
Width	: 2490
Track	: 2470
Lock to Lock Time	: 6.0
Steering Angle	: 35.5



B99

	mm
Width	: 1940
Track	: 1840
Lock to Lock Time	: 6.0
Steering Angle	: 33.9



Prepared for : BHC PTY LTD

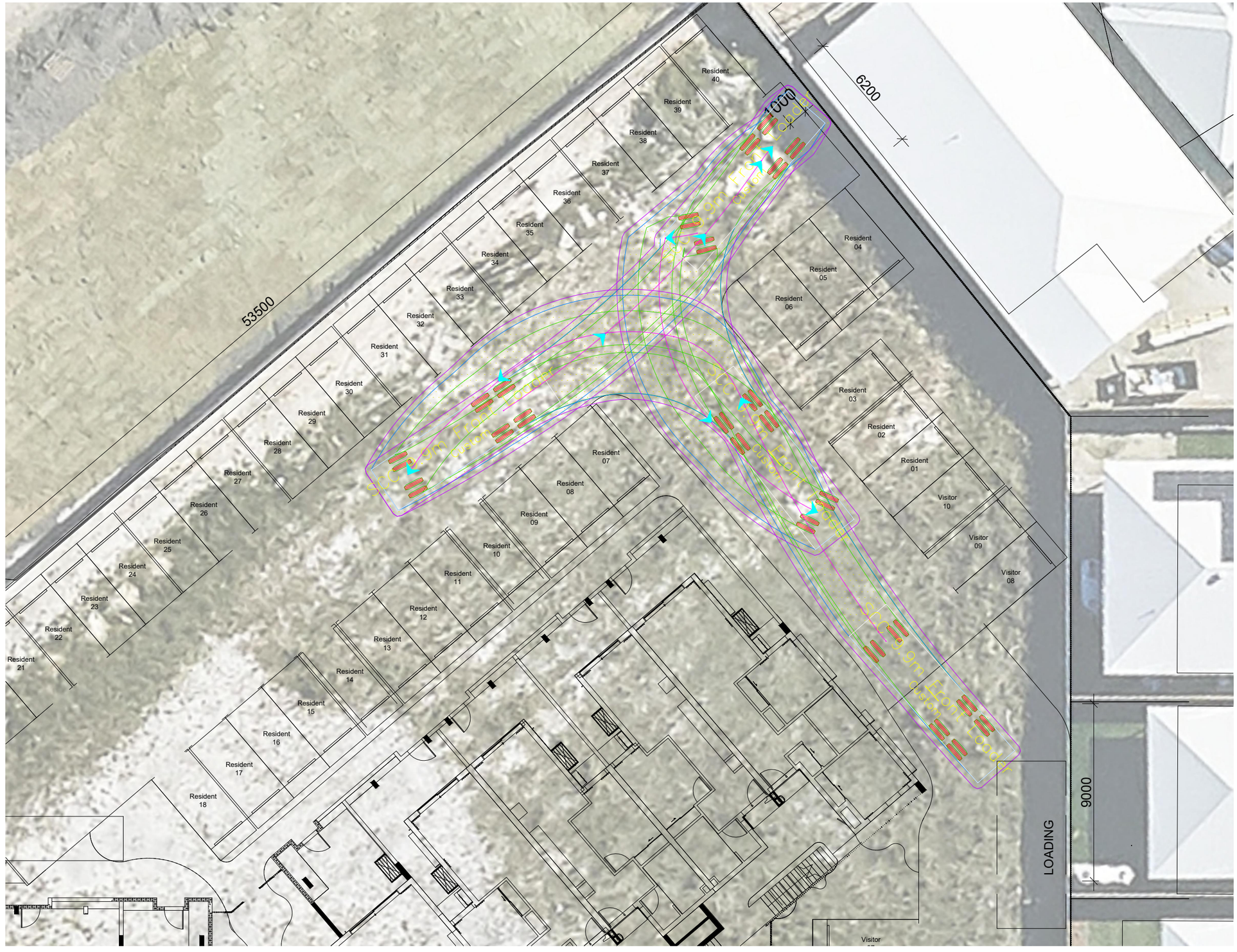
Designer : ADELE PACKER
Checked : ANGELA WOOD
Date : 27-11-2025

COPPICE CRESCENT, BANYA
ONE WAY ACCESS SWEPT PATHS

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)

BE250174-SK01

BURCHILLS ENGINEERING SOLUTIONS
Gold Coast I Brisbane I Toowoomba
Ipswich I Moreton Bay
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365



Prepared for : BHC PTY LTD

COPPICE CRESCENT, BANYA
WCV - TURNAROUND

SCALE 1 0 1 2 3 4 5 (metres)
1 : 100 (FULL SIZE)

BE250174-SK02

Designer : ADELE PACKER
Checked : ANGELA WOOD
Date : 27-11-2025

BURCHILLS ENGINEERING SOLUTIONS
Gold Coast I Brisbane I Toowoomba
Ipswich I Moreton Bay
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365