

Traffic Engineering Report

To	ZoiQ	Date	17 July 2026
Prepared by	Afaf El Harda, Modus Traffic and Transport Engineer	Approved by	Harj Singh, Modus Executive Director (RPEQ 22364)
Location	70 Cloverdale Road, Doolandella		
Subject	Proposed Subdivision Development - Traffic Engineering Report		
Status	Final	Attachments	Appendix A: Development Plans Appendix B: Swept Path Assessment Appendix C: SISD Assessment

1 Introduction

1.1 Overview

Modus has been commissioned by ZoiQ to provide traffic and transport advice in relation to the proposed Subdivision development located at 70 Cloverdale Road, Doolandella.

This Traffic Engineering Report has been produced by Modus to assess the traffic and transport engineering items in support of the proposed development. A copy of the proposed development plans is provided at **Appendix A**.

Modus has completed this Traffic Engineering Report in accordance with the usual care and thoroughness of the consulting profession. The assessment is based on accepted traffic engineering practices and standards applicable at the time of undertaking the assessment. Modus disclaims responsibility for any changes to project planning or road conditions that may occur after completion of the assessment.

2 Existing Conditions

2.1 Site Location

The development site is located at 70 Cloverdale Road, Doolandella and is bounded by Cloverdale Road to the north, Ewingsdale Street and Residential uses to the east, vacant land to the south and a Residential use to the west.

Furthermore, the development site is currently zoned Emerging Community within the Brisbane City Council (BCC) Local Government Area.

Additionally, the development site currently accommodates two (2) Residential uses with one (1) crossover provided onto Cloverdale Road and one (1) crossover provided onto Ewingsdale Street.

Figure 2-1 on the subsequent report page illustrates the development site location.

Figure 2-1 Development Site Location



2.2 Existing Road Network

Table 2-1 outlines characteristics of the existing road network in proximity to the development site.

Table 2-1 Key Road Characteristics

Road	Authority	Hierarchy	Speed Limit	Typical Form
Cloverdale Road	Council	Neighbourhood Road	50 km/hr	Two lanes, undivided
Ewingsdale Street	Council	Local Road	50 km/hr	Two lanes, undivided

2.3 Active and Public Transport Facilities

A dedicated pedestrian footpath is provided along the surrounding roads to connect to the wider pedestrian network. Additionally, there are no dedicated bicycle lanes provided along the frontage of the site.

Furthermore, there are no bus stops within a 400.0m radius (a comfortable 5-minute walk) of the development site. The nearest bus stop is located along College Avenue approximately 950.0m southwest of the site.

3 Proposed Development

3.1 Overview

The proposed development comprises a one (1) Lot into an eight (8) Lot Subdivision. As part of the proposed development, a new 14.0m wide road is proposed via Ewingsdale Street.

Figure 3-1 illustrates the proposed development layout. A copy of the development plans is provided at **Appendix A**.

Figure 3-1 Proposed Development Layout



4 Traffic and Transport Review

4.1 Internal Road Network

4.1.1 Road Design

As part of the proposed development, the new road has been designed in accordance with the road design requirements for Local Road under the BCC Infrastructure Design Planning Scheme Policy, including:

- ▶ Minimum reserve width of 14.0m,
- ▶ Minimum carriageway width of 5.5m,
- ▶ Minimum verges width of 4.25m.

Furthermore, the proposed road incorporates an intersection design with 10.0m radii consistent with the surrounding minor road to minor road intersections.

On this basis, the proposed road design is considered acceptable.

4.1.2 Speed Control

In accordance with the IPWEA Street Design Manual (2020), it is recommended that the speed control devices (such as road humps, chicanes etc.) are to be implemented at an approximate 120.0m spacings.

The proposed development plans illustrate that the proposed road runs straight for less than 120.0m. Therefore, the proposed road does not require speed control devices.

4.1.3 Emergency Access

In accordance with Queensland Streets, alternative routes for an emergency use are required when a development provides more than 100 lots. The proposed development provides a total of 8 lots and therefore a secondary emergency vehicle access is not required.

4.2 Pedestrian Network

Modus recommends extending the existing pedestrian footpaths along the surrounding roads through the 4.25m-wide verges on both sides of the proposed road.

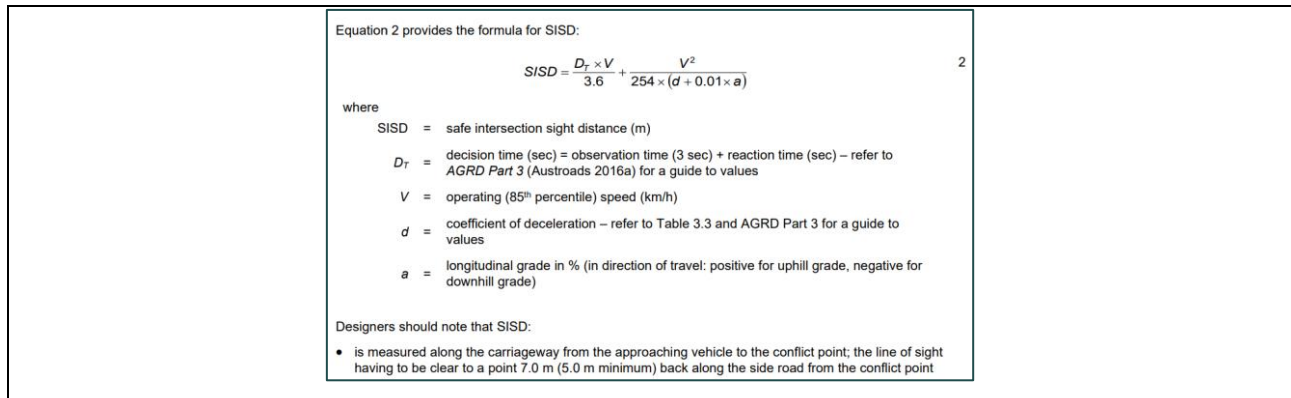
4.3 Vehicular Access

4.3.1 Vehicle Sight Distance

To ensure the proposed access / intersection location accommodates sufficient sight distance, Modus has determined the required Safe Intersection Sight Distance (SISD) in accordance with the Austroads Guide to Road Design series.

For ease of reference, the SISD requirement is determined by the equation illustrated on Figure 4-1.

Figure 4-1 Austroads SISD Requirement



Therefore, the minimum SISD requirement for the northern approach to the proposed site access is outlined in Table 4-1, as well as the corresponding parameters adopted to inform the SISD requirements.

Table 4-1 Minimum SISD Requirements

Approach Direction to Site Access	SISD Requirement Parameter Adopted				SISD Requirement
	Decision Time	Design Speed	Coefficient of Deceleration	Longitudinal Grade*	
Northern Approach	5 seconds	60 km/hr	0.36	0.07%	122.62m

*Approximated using grade information from Nearmap Aerial Imagery

The proposed access location provides approximately 57.1m of available SISD on the northern approach, as illustrated on the SISD assessment drawings included in **Appendix C**.

While the available SISD is less than the Austroads requirement of 122.62m, the proposed access arrangement is considered acceptable for the following reasons:

- Ewingsdale Street terminates at the Cloverdale Road intersection approximately 62.3m north of the proposed intersection. As such, there are no through northbound vehicle movements beyond this intersection that would require the full Austroads SISD to be achieved.

- Ewingsdale Street is a short local road that terminates at Nunderi Crescent approximately 128.0m east of the subject site, resulting in a low traffic volume and limited vehicle movements.
- The combination of the road hierarchy, low traffic volumes, and the proximity to intersections significantly reduces the likelihood of high-speed conflicting vehicle movements at the proposed access.

On this basis, the available sight distance is considered sufficient to safely accommodate the anticipated vehicle movements associated with the proposed development.

4.3.2 Lot Driveway Design

Modus recommends that all lot driveways be designed in accordance with the following requirements:

- ▶ A minimum width of 2.5m, in accordance with BCC Standard Drawing BDS-2022,
- ▶ With 0.9m x 0.6m driveway splays, in accordance with BCC Standard Drawings BDS-2022.

The proposed development plans include crossovers for Lots 2 and 6 that are consistent with the width and geometric design of BCC Standard Drawing BDS-2022. Therefore, the proposed driveway design is acceptable.

4.3.3 Lot Driveway Locations

In accordance with Australian Standards 2890.1, development accesses with a Class 1 Access Facility Category are to achieve a 6.0m separation to any formal intersections. Provided that the proposed access location for the corner lots (lot 2 and 6) is not located within a 6.0m distance to any formal intersections, the proposed access locations are considered acceptable.

Additionally, Modus recommends that all individual lot driveway locations accommodate a minimum separation of 3.0m from any adjacent driveway, in accordance with BCC Transport, Access, Parking and Servicing Planning Scheme Policy (TAPS PSP).

4.3.4 Pedestrian Sight Splays

In accordance with Australian Standards 2890.1, pedestrian sight splays should be provided at the egress point of a driveway and measure 2.5m in depth and 2.0m in width from the property boundary.

Modus recommends that individual lot driveways design ensure the provision of sight splays in accordance with Australian Standards 2890.1.

4.4 Servicing Requirements

In accordance with the BCC City Plan, the minimum service vehicle requirements for the proposed development are as follows:

- ▶ Refuse Collection Vehicle (RCV),
- ▶ Emergency Vehicle.

The proposed development accommodates on-street refuse collection services via a side-loading RCV.

Furthermore, Modus has undertaken a swept path assessment (provided at **Appendix B**) which confirms the above-mentioned vehicles are able to safely and efficiently manoeuvre to, within and from the site ensuring a minimum 0.3m - 0.6m to any permanent obstructions, while ensuring a forward-in / forward-out arrangement occurs.

Therefore, the proposed development servicing arrangements are considered acceptable.

4.5 Development Traffic Generation

In accordance with the tfNSW Guide to Transport Impact Assessment, 2024, the peak hour traffic generating potential of the existing use and proposed development is outlined in Table 4-2.

Table 4-2 Existing Use and Proposed Development Traffic Generation Volumes

Scenario	Land Use	Yield	Peak Hour Traffic Generation Rates	Peak Hour Traffic Generation Volumes
Existing	Low Density Dwelling	2 dwellings	0.84 vehicles per hour	2 vehicles per hour
Proposed		8 dwellings		7 vehicles per hour
Net Increase:				5 vehicles per hour

Therefore, the proposed development will accommodate a net increase in five (5) vehicles per hour compared to the existing site use.

On average across the peak hour period, this corresponds to one (1) new vehicle on the external road network every 12 minutes.

On this basis, the proposed development traffic generation will not compromise the safety nor efficiency of the external road network.

5 Summary

Therefore, Modus is of the opinion that the proposed development is acceptable from a traffic engineering perspective and will not have a substantial impact on the safety or efficiency of the external road network.

Should there be any issue with the above, please contact the undersigned.

Yours sincerely,



MODUS TRANSPORT AND TRAFFIC ENGINEERING

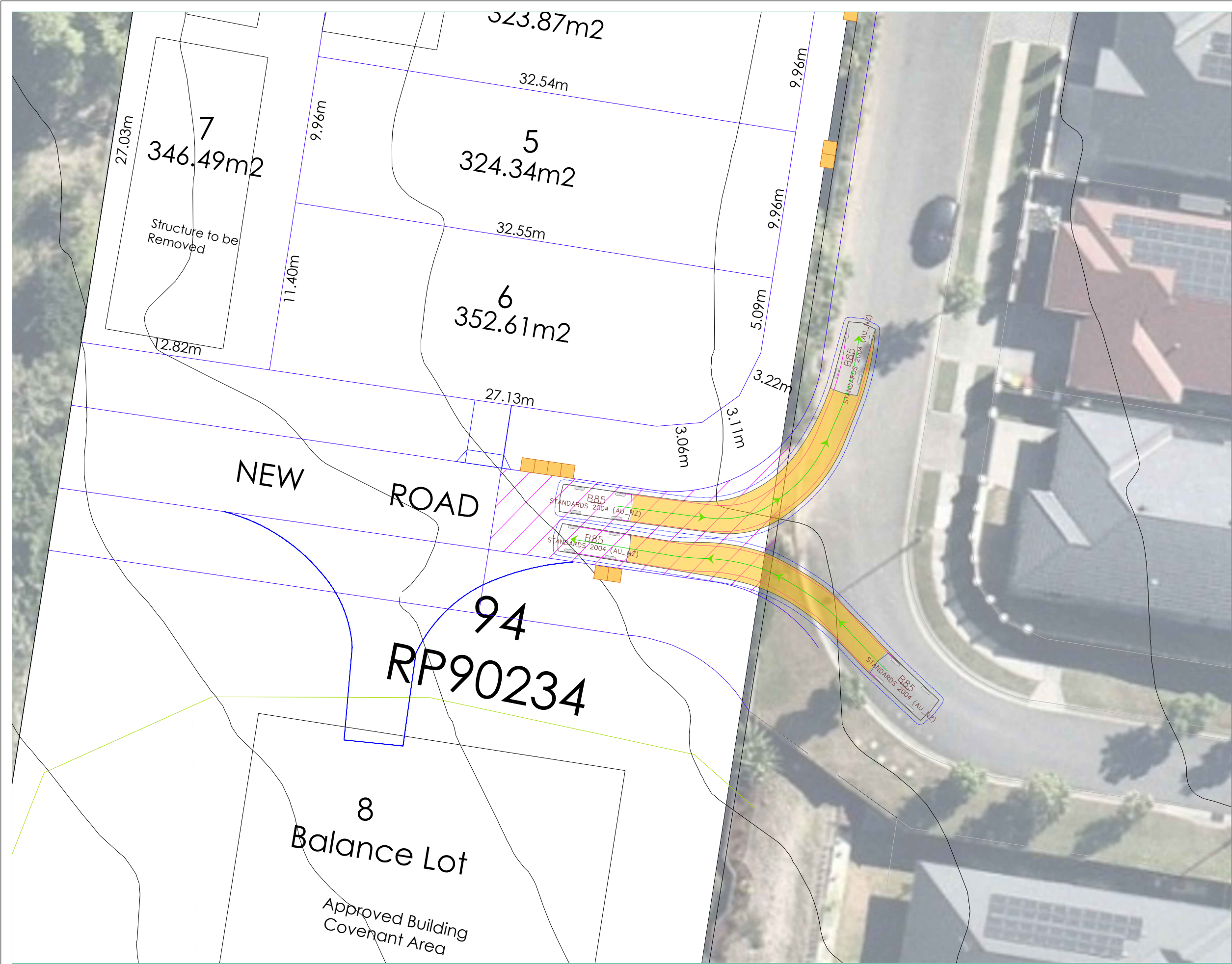
Harj Singh
Executive Director (RPEQ 22364)

APPENDIX A

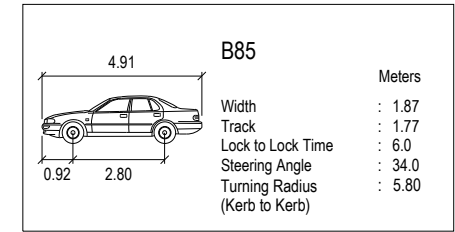
DEVELOPMENT PLANS

APPENDIX B

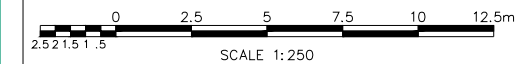
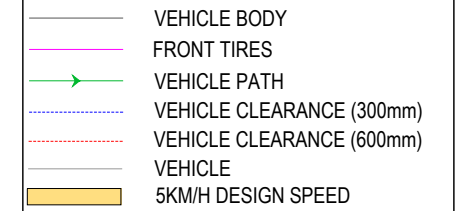
SWEPT PATH ASSESSMENT



DESIGN VEHICLE ADOPTED



SWEPT PATH LEGEND



PROJECT

70 CLOVERDALE ROAD,
DOOLANDELLA

CLIENT

ZOIQ

DRAWING TITLE

B85 SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD25731QLD - SK02

DATE

14 07 2026

REVISION

C

REV	DATE	DESIGNER	APPROVED BY
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C	14 07 2026	AE	BF
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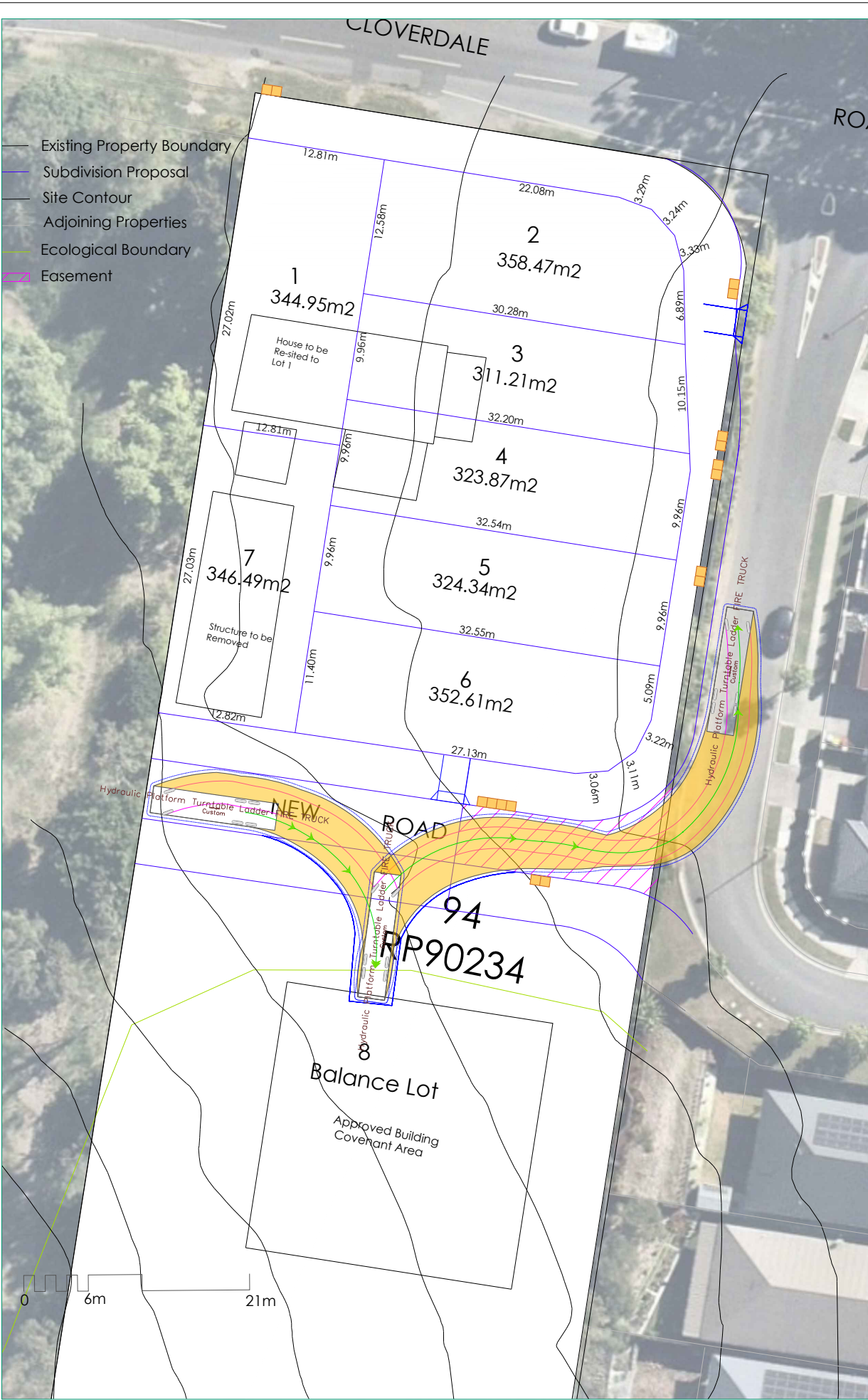
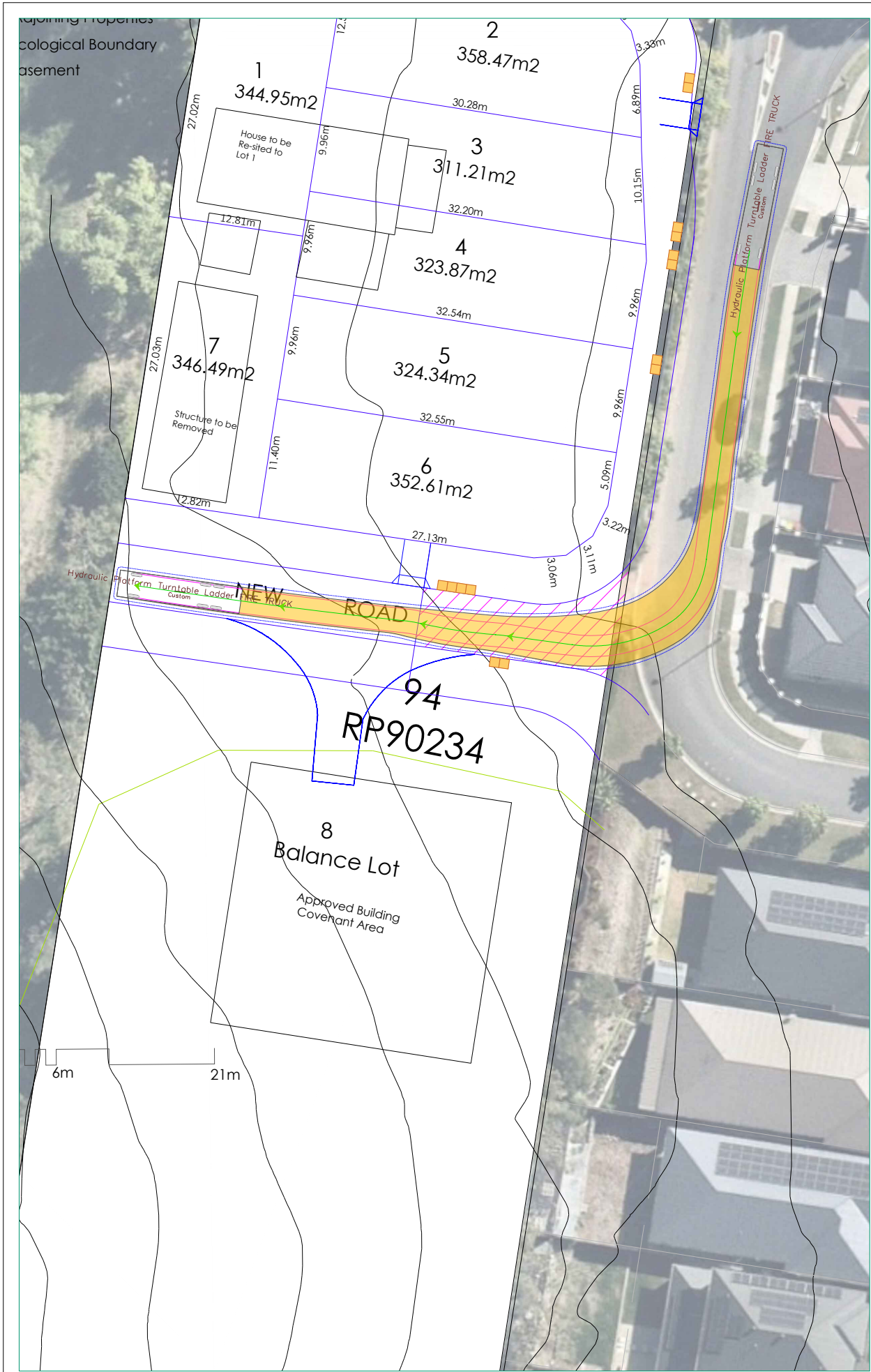
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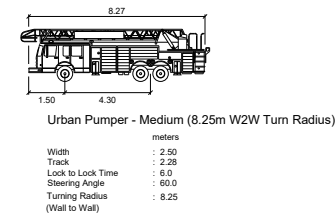
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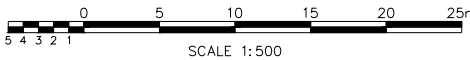
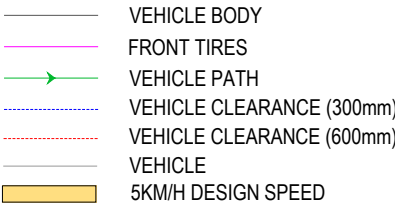
RPEQ CERTIFICATION



DESIGN VEHICLE ADOPTED



SWEPT PATH LEGEND



PROJECT

70 CLOVERDALE ROAD,
DOOLANDELLA

CLIENT

ZOIQ

DRAWING TITLE

EMERGENCY VEHICLE SWEEP PATH
ASSESSMENT

DRAWING NUMBER

MOD25731QLD - SK03

DATE

14 07 2026

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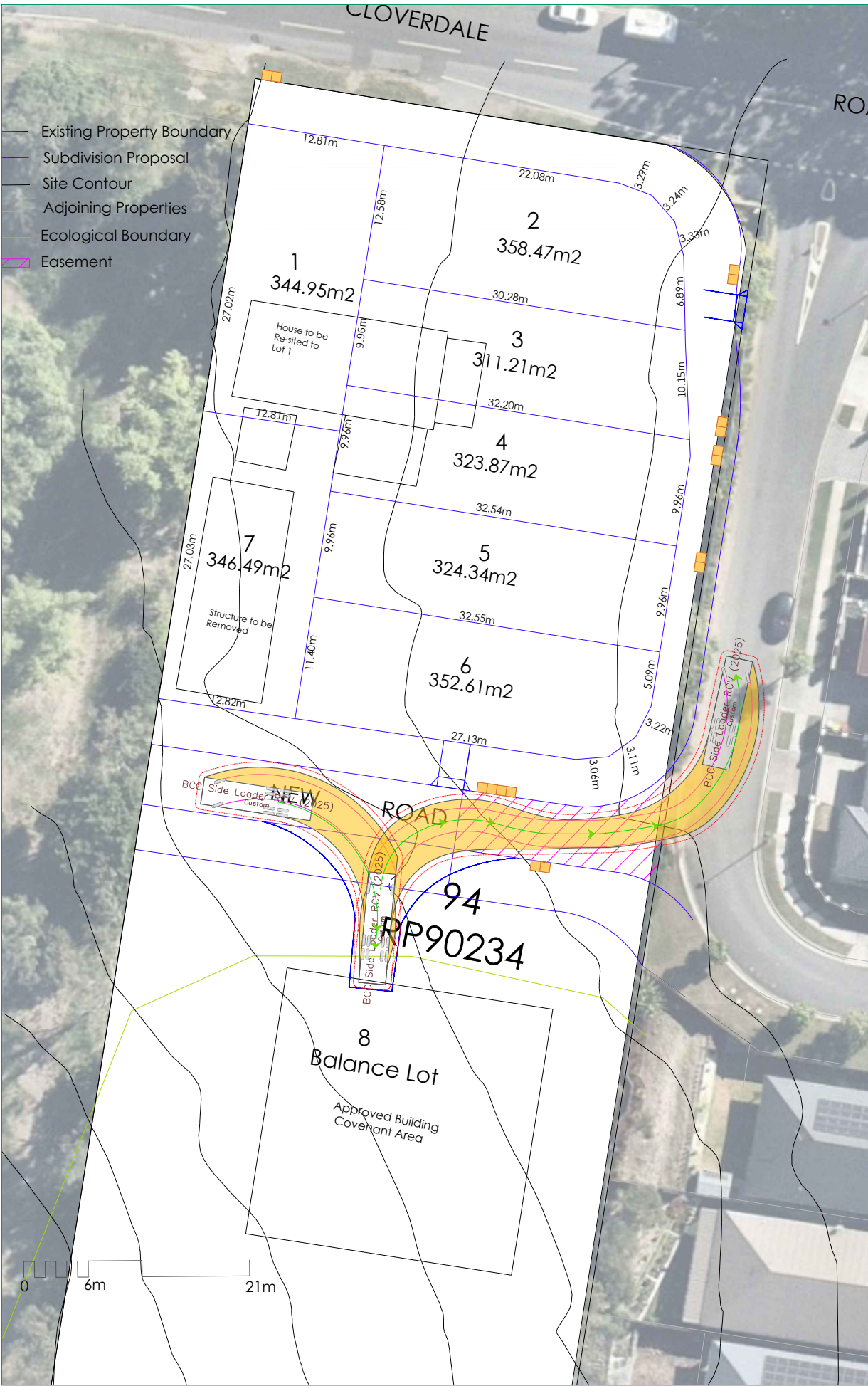
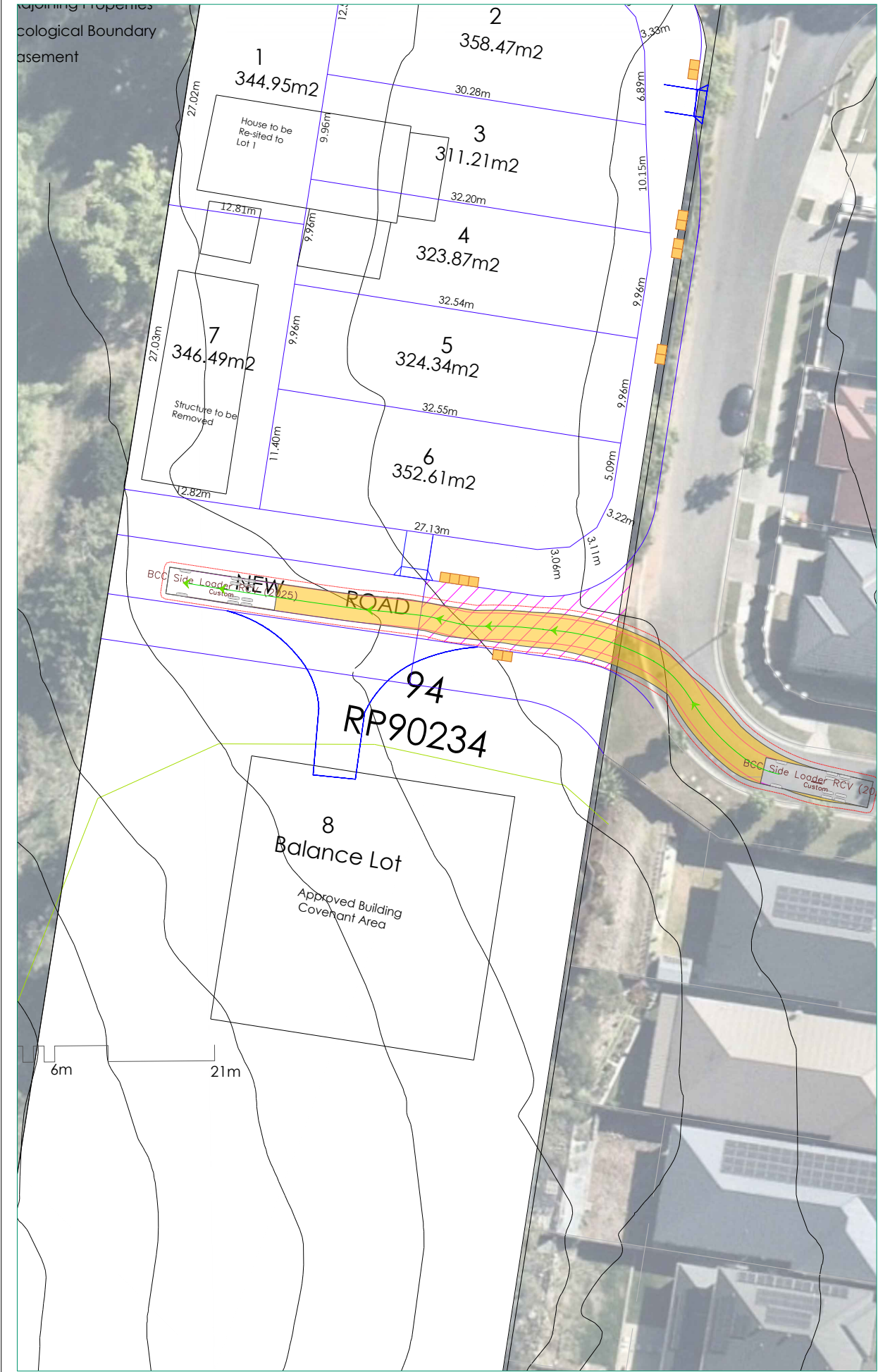
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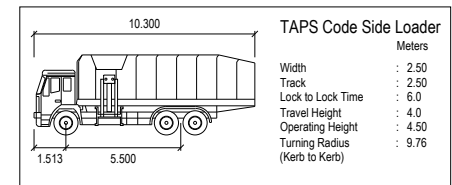
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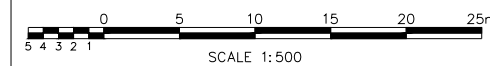
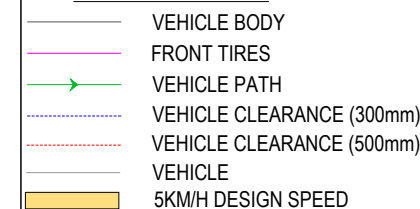
RPEQ CERTIFICATION



DESIGN VEHICLE ADOPTED



SWEPT PATH LEGEND



PROJECT

70 CLOVERDALE ROAD,
DOOLANDELLA

CLIENT

ZOIQ

DRAWING TITLE

RCV SWEPT PATH ASSESSMENT

DRAWING NUMBER

MOD25731QLD - SK04

DATE

14 07 2026

REVISION

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APPENDIX C

SISD ASSESSMENT



SISD NORTHERN APPROACH

Equation 2 provides the formula for SISD:

$$SISD = \frac{D_r \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)}$$

where

- SISD = safe intersection sight distance (m)
- D_r = decision time (sec) = observation time (3 sec) + reaction time (sec) – refer to AGRD Part 3 (Austroads 2016a) for a guide to values
- V = operating (85th percentile) speed (km/h)
- d = coefficient of deceleration – refer to Table 3.3 and AGRD Part 3 for a guide to values
- a = longitudinal grade in % (in direction of travel: positive for uphill grade, negative for downhill grade)

Designers should note that SISD:

- is measured along the carriageway from the approaching vehicle to the conflict point; the line of sight having to be clear to a point 7.0 m (5.0 m minimum) back along the side road from the conflict point

RT:	2
DT:	5
V:	60
d:	0.36
a:	0.07

SISD = 122.6229774 m

PROJECT

70 CLOVERDALE ROAD,
DOOLANDELLA

CLIENT

ZOIQ

DRAWING TITLE

SISD ASSESSMENT

DRAWING NUMBER

MOD25731QLD - SK05

DATE	REVISION
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