NK TRAFFIC
TRAFFIC AND TRANSPORT CONSULTANTS

ACCESS AND DRIVEWAY ASSESSMENT

ACCESS AND SISD ASSESSMENT
106 School Lane Budgee Budgee NSW

IN ACCORDANCE WITH
Council's Access to Properties Policy **& AS/NZS 2890.1**

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INTRODUCTION

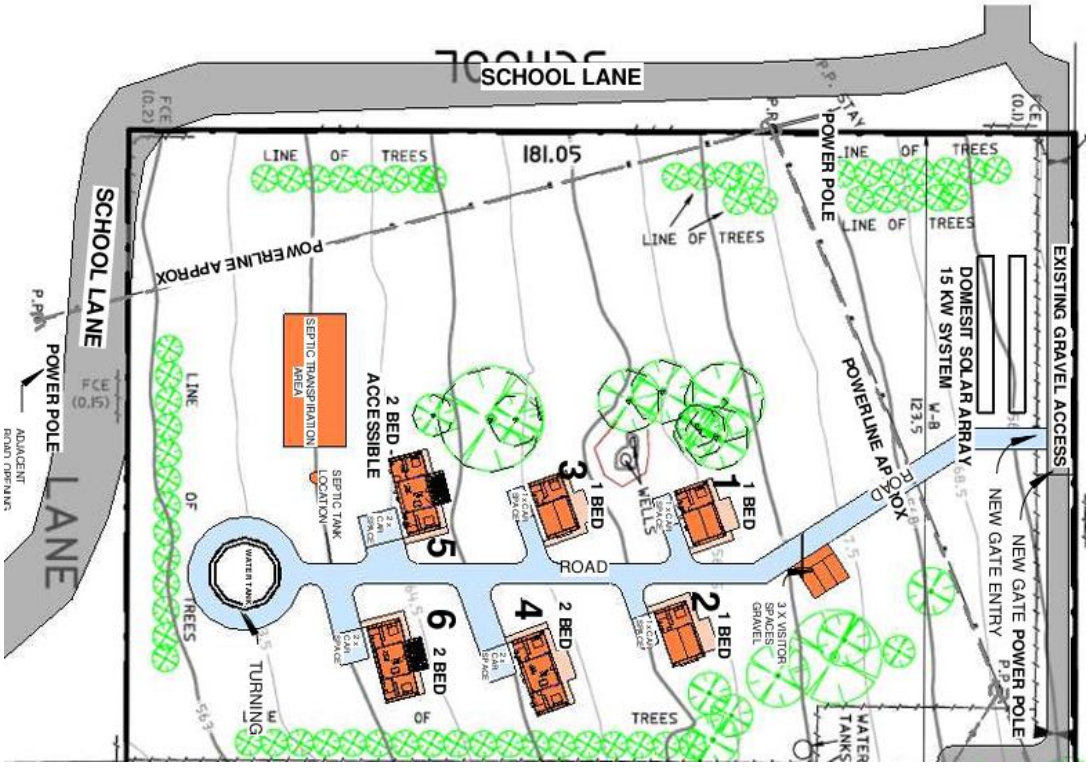
NK TRAFFIC was commissioned by Play Studio Design Architects to prepare a traffic report for the designed access of the parking and driveway areas of the proposed development at 106 School Lane Budgee Budgee NSW.

The planning controls at the site are:

The proposal includes multi – dwelling housing within a site 62209 m². The design includes six dwellings (3 x 1 bedrooms and 3 x 2 bedrooms).

LEP: Mid-Western Regional Local Environmental Plan 2012.
Land Zoning: R5 – Large Lot Residential.

The Design of the parking area, including the access areas and driveways are assessed in accordance with the provided drawing designs issued by Play Studio Design Architects.



Proposed design at 106 School Lane Budgee Budgee

The following has been considered to determine compliance with AS/NZS 2890.1-2004, AS/NZS2890.1:2004, AS 2890.2, AS 2890.6 and the RMS Guide to Traffic Generating Developments.

Council has provided the following comments to the applicant:

A report from a practicing professional engineer is to be submitted that demonstrates that the proposed access achieves compliance with SISD requirements as per Austroads Guide to Road Design (Unsignalized and signalized intersection part 4A) and Councils Access to Properties Policy. Access to Properties Policy Mid-Western Regional Council (nsw.gov.au)

Council's Access to Property Policy

Council's Access to Property Policy states the following objectives:

To ensure that accesses to private property are constructed to a uniform, practical and safe standard such as will protect roadside drainage, services in footpaths, pedestrians and the travelling public.

The policy aims to assist Council in achieving Theme 4, Goal 4.1 of the Community Plan, 'Connecting our Region High Quality Road Network that is Safe and Efficient"

Council provides the following advice related to sight distances in accordance with Council's Access to Properties Policy:

Access to rural properties is to be constructed at a location such as to provide adequate sight distances, so that road users can see vehicles entering or leaving access in time to brake or take evasive action. Council staff will provide advice, and if necessary, on-site inspections, on the location of proposed accesses.

Intersection Sight Distance

Austroads Guide to Road Design Part 4A: Unsignalized and Signalised Intersections provide guides to determine safe intersection sight distances (SISD). The following table provides SISD in accordance with the Design Speed along the road frontage.

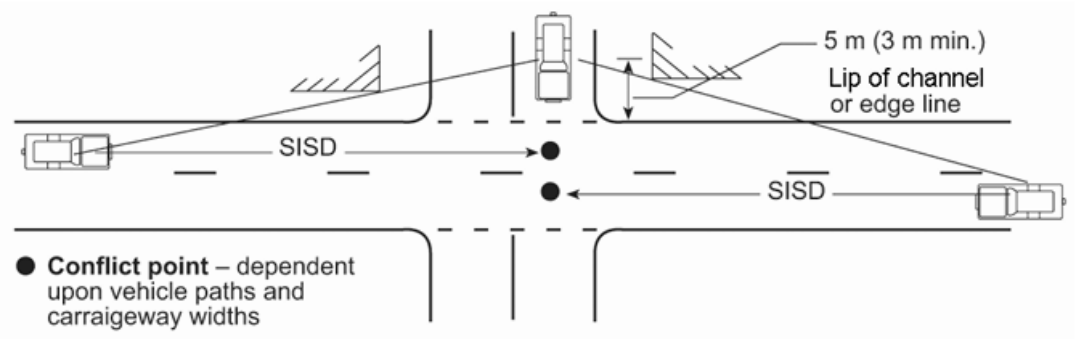
The safe intersection sight distance (SISD) corresponds to the following Design Speeds.

Design speed (km/h)	Based on safe intersection sight distance for cars[1] h_1 = 1.1; h_2 = 1.25, d = 0.36[2]; Observation time = 3 sec					
	R_T = 1.5 sec[3]		R_T = 2.0 sec		R_T = 2.5 sec	
	SISD (m)	*K*	SISD (m)	*K*	SISD (m)	*K*
40	67	4.9	73	6	–	–
50	90	8.6	97	10	–	–
60	114	14	123	16	–	–
70	141	22	151	25	–	–
80	170	31	181	35	–	–
90	201	43	214	49	226	55
100	234	59	248	66	262	74
110	–	–	285	87	300	97
120	–	–	324	112	341	124
130	–	–	365	143	383	157

Safe Intersection Sight Distance (SISD) and Speeds

In addition to the site distance information provided by Austroads based on design speeds the following information is provided which examines the sight distance which applies to intersections and driveways which intersect with the road frontage.

The diagram below shows the Safe Road Intersection Sight Distance (SISD) in accordance with the Austroads Guide to Road Design Part 4A. The sight distance is measured from point 1.1 m (driver's eye height) to a point of 0.65 m (object height – typically a vehicle indicator light) above a travelled way.



Safe Intersection Sight Distance (SISD)

The intersection where the development's driveway meets with the main road is assessed below based on the above Austroads Guidelines and standards.

SIGHT DISTANCES AT THE ROAD SITE FRONTAGE

The sight distances are examined at the designed access point located at the northern side of the property for both the unpaved (gravel) access road and examining the site distance and speeds for the paved road leading to the access road.

Frontage Roads at along the site

The swept path has been analysed to determine whether the vehicles can turn into and out of the property in a safe manner. The swept paths are shown at the proposed site's driveway using the Austroads templates.

The following swept path drawings show vehicles exiting the driveway and vehicles entering the driveway. The illustration shows that using the 6-metre width of the gravel road is adequate, to allow vehicles to enter and exit the proposed design in a practical manner.

The site distance along the road frontages along the site is adequate and provides a safe site distance for vehicles to enter and exit the site in a safe manner.

Swept paths at the access driveway

The sight distance is more than 50 m on each side of the proposed driveway. The access driveway is located with adequate entering sight distance to traffic on the frontage road. Clear sight lines are provided at the property line ensuring adequate visibility between vehicles leaving the car parking at the road frontage.

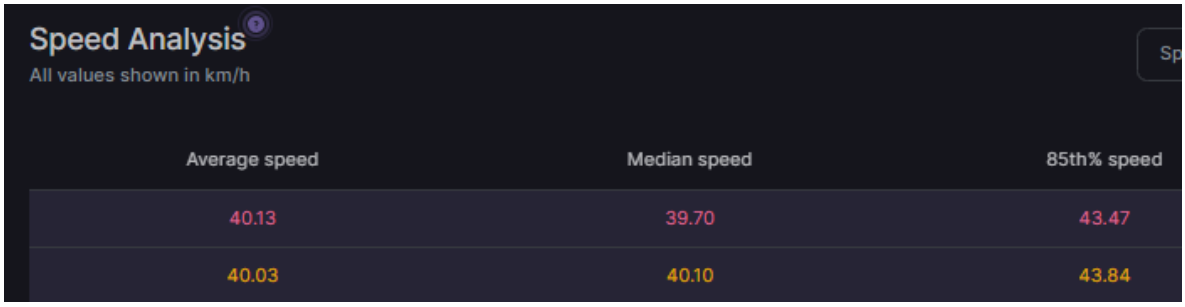
SISD distance shown at the driveway frontage

Site lines along road frontages

The following sites lines have been checked in accordance with Austroads Guidelines.

>>40 m site distance

>> 50 m site



Compass IoT speed data.

Average, Median and 85% Speed

The speed data at the front of the road leading to the new access is approximately 43 km/h as seen in the speed survey using Compass connected vehicle data technology. These are low speeds and there is a clear line of site from the entry gate to both approaches of the paved road.

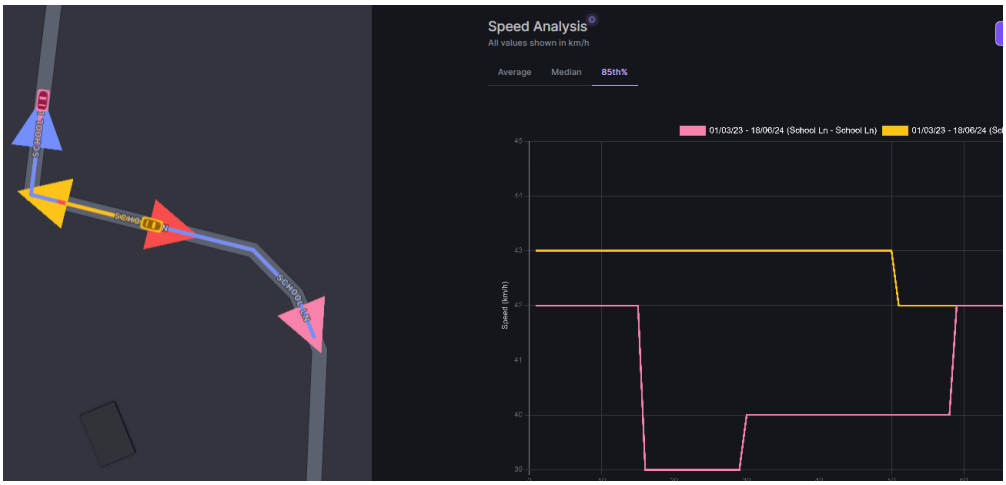
The above assessment indicates that there is a Safe Intersection Site Distance (SISD) for vehicles manoeuvring in and out of the proposed access of the designed driveway and for vehicles travelling along the paved roadway leading to the access laneway.

SOUTH ACCESS ASSESSMENT (Potential location)

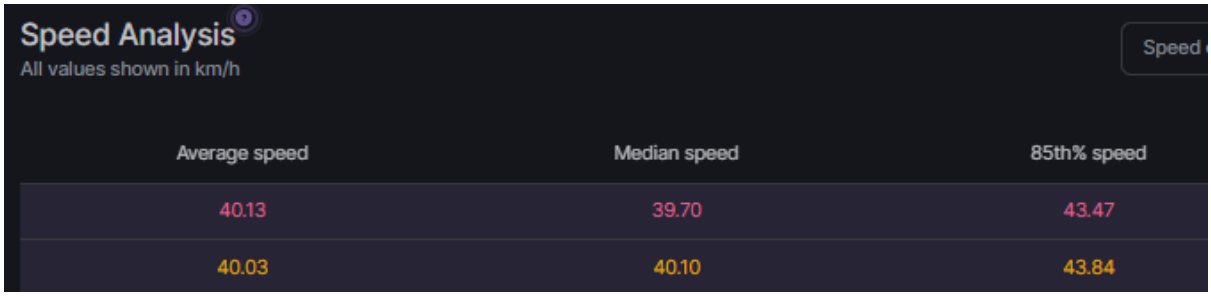
The south access has been considered for the purpose of investigating the sight distances as this is a potential for future access assessment.

The site distances at a potential driveway access point are in excess of 60 metres to the east and approximately 30 metres to the west. To achieve the SISD to the west of the exit 4 – 5 trees located west of the driveway requires to be trimmed. This will allow Safe Intersection Sight Distance (SISD) for both sides of the intersection.

The access and manoeuvring areas have been assessed in relation to vehicles entering and exiting the site at the south side of the property. Swept paths have been applied to the plans to assess how vehicles can enter and exit in a forward direction in a safe and practical manner.



Speed Chainage at the site's frontage



The vehicle operating speed is very low due to the narrow with of the road pavement. Traffic counts (Compass IoT surveys) that were undertaken at the site's frontage showing low speeds.

The sight distances at the location of the driveway indicate that with a site distance on the east side of more than 60 m and with some tree removal on the western side, a new driveway would comply with the Austroads SISD guidelines.

SISD distance shown at the south side of the property

ON SITE PARKING CONSIDERATION

The development's designed parking area, access and driveway has been assessed.

The manoeuvring parking swept paths have been applied from the provided Architectural Design and been assessed as per AS 2890.1 – 2004.

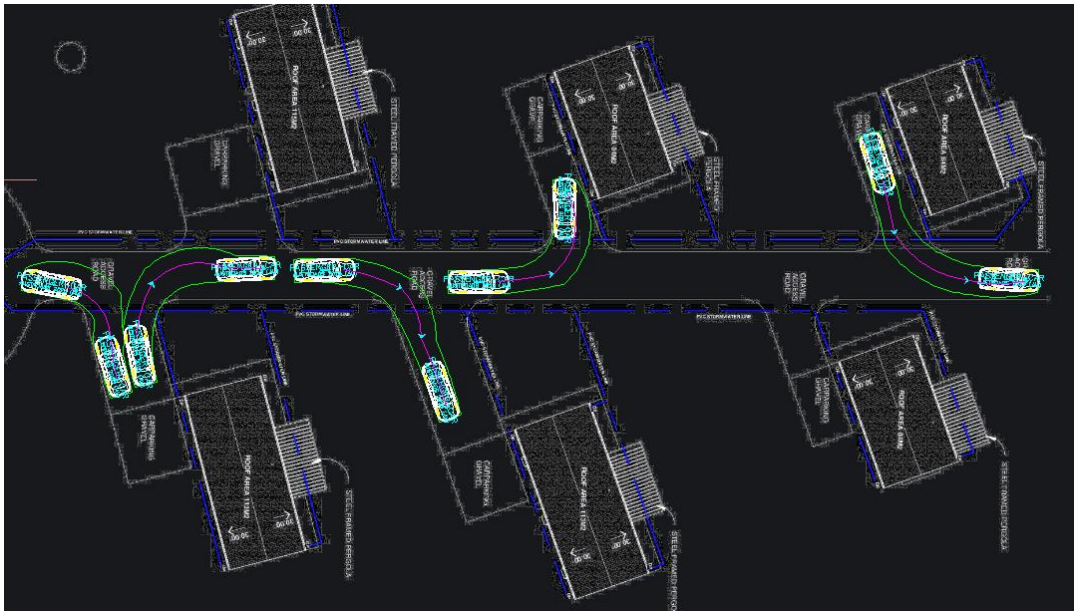
Internal Driveway, Parking and Manoeuvring

The access driveway, parking area and manoeuvring areas are also assessed and as per the designed plans. The existing gravel road access driveway on the north side of the property is the access road leading to the new site's driveway. The applied swept paths indicate that vehicles can enter an dexit the driveway in a safe way.

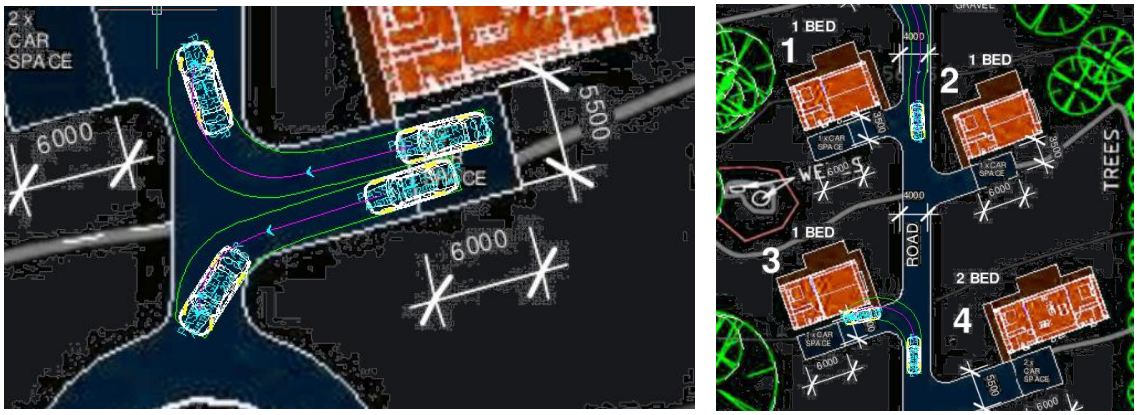
Access and Manoeuvrings area

The driveway, access and manoeuvrings areas are compliant and in accordance with AS 2890.1 - 2004. Vehicles can enter the site, enter forward and/or reverse into the parking spaces and exit the site in a forward direction.

The following design of the swept paths illustrate that vehicles can enter and exit the parking bays in a practical and safe manner.

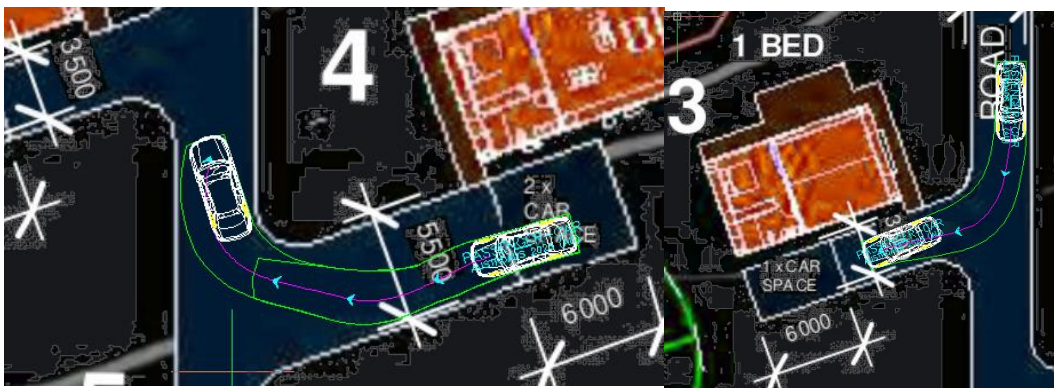


Swept paths within the site in accordance AS 2890.1



Swept path Passenger Car

The parking spaces are at 3.5 minimum and the double-parking spaces 4 m wide circulation accessway. These dimensions are in accordance with the Australian Standard for parking Facilities AS 2890.1:2004.



Swept path Passenger Car AS 2890.4

CONCLUSION

NK TRAFFIC was commissioned by Play Studio Design Architects to prepare a traffic report to assess the designed driveway access of the proposed development at 106 School Lane Budgee Budgee NSW.

The access to the designed driveway parking area is assessed in accordance with AS/NZ 2890.1 – 2004, Councl's policy in achieving Theme 4, Goal 4.1 of the Community Plan, 'Connecting our Region High Quality Road Network that is Safe and Efficient'

The vehicle operating speed is very low due to the narrow with of the road pavement. Traffic counts (Compass IoT surveys) that were undertaken at the site's frontage showing low speeds. The sight distances at the location of the driveway indicate that they comply with the Austroads SISD guidelines.

The access driveway, parking and manoeuvring areas are assessed as per the designed plans. The existing gravel road access driveway on the north side of the property is the access road leading to the new site's driveway. The swept paths indicate that vehicles can enter and exit the driveway.

The access, servicing and internal layout is in accordance with AS 2890.1:2004. The access driveway, parking area and manoeuvring areas are also assessed and as per the designed plans. The applied sinternal swept paths indicate that vehicles can enter an dexit the parking bays in a safe and practical matter.

The south access has been considered for the purpose of investigating the sight distances as this is a potential for future access assessment. The access and manoeuvring areas have been assessed in relation to vehicles entering and exiting the site at the south side of the property. Swept paths have been applied to the plans to assess how vehicles can enter and exit in a forward direction in a safe and practical manner.

The assessment of the proposed north and the potential future driveway on the south site indicated that the designed parking access and driveway areas are in accordance with the above Australian Standards.

In conclusion, the design of the proposal at 106 School Lane Budgee Budgee NSW been assessed and complies with AS/NZ 2890.1 The proposed access achieves compliance with SISD requirements as per Austroads Guide to Road Design (Unsignalized and signalized intersection part 4A) and Councils Access to Properties Policy.

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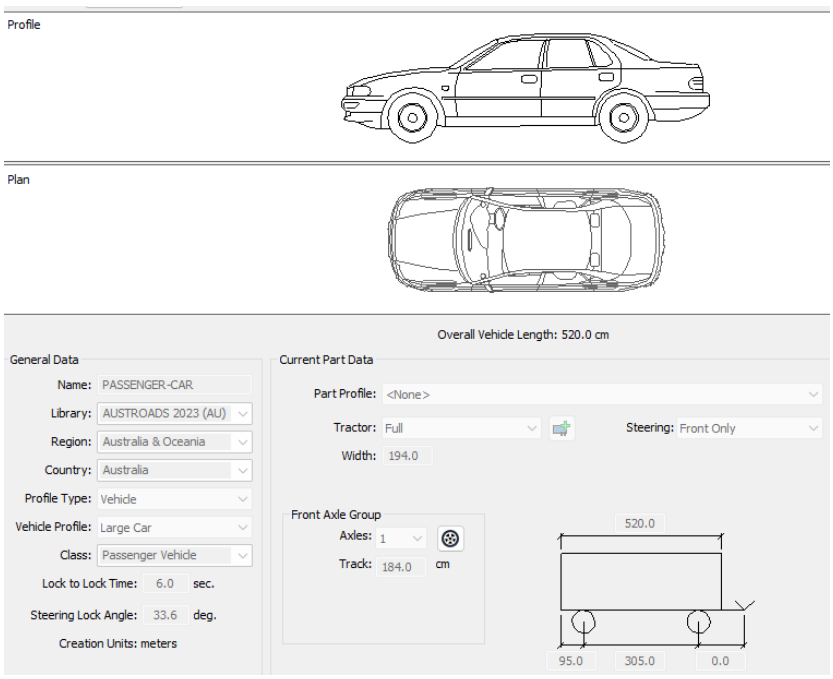
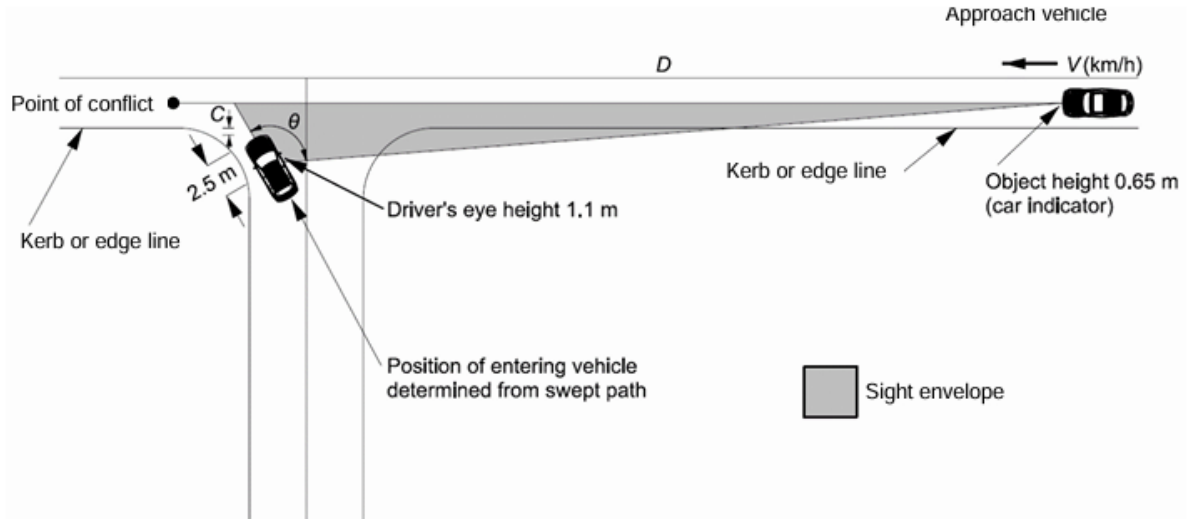
Director
Sen. Traffic and Transportation Engineer
MEng. Sc (UNSW)

Date: 5.07.2024



Profile of Vehicle

Figure 3.6: Sight distance to a through vehicle from a vehicle turning left



Sight distance standards
Guide to Road Design Part 4A: Unsignalized and Signalized Intersections

Mid-Western Regional Council

POLICY

ACCESS TO PROPERTIES

A prosperous and progressive community

ADOPTED		VERSION NO	**3.0**
COUNCIL MEETING	**314/23**	REVIEW DATE	**DECEMBER 2027**
DATE:	**13 DECEMBER 2023**	FILE NUMBER	**ROA100072, DEV700013**

Objective

- To ensure that accesses to private property are constructed to a uniform, practical and safe standard such as will protect roadside drainage, services in footpaths, pedestrians and the travelling public.
- This policy will assist Council in achieving Theme 4, Goal 4.1 of the Community Plan, *'Connecting our Region High Quality Road Network that is Safe and Efficient"*

Policy

An access to property is to be constructed to the same standard as the road to which it abuts and complies with Council's requirements as detailed in the standard drawings available from Council.

Site Analysis Plan