

Client
Studio BAAM

Date
15 September 2026

Planning

Transport

Urban Design

Waste

Transport Impact Assessment

7 Torquay Road, Belmont

Proposed Childcare Centre Development

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Project
 Childcare Centre Development – 7
 Torquay Road, Belmont

Prepared for

Our reference
 22590T

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Acknowledgement of Country

We acknowledge the Traditional Owners of the land we work, live and travel on, and appreciate the rich cultures of the Aboriginal and Torres Strait Islander Peoples and their enduring connection to country.

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AppendicesAppendix A : Swept Path Assessment

1. Introduction

1.1. Overview

Ratio Consultants has been referred through Studio BAAM to prepare a Transport Impact Assessment report for the proposed childcare centre development located at 7 Torquay Road in Belmont. The development involves an 80-place childcare centre with associated on-site car parking.

This report has been prepared to address the transport engineering considerations relevant to the town planning application.

1.2. Purpose and Structure of this Report

This report sets out an assessment of the anticipated parking, traffic and transport implications of the proposed use, including consideration of the following:

- Existing transport and parking conditions surrounding the site.
- Parking demand likely to be generated by the proposed development.
- Suitability of the proposed car parking in terms of supply and layout.
- Traffic generation characteristics of the proposed development.
- Proposed access arrangements for the site.
- Transport impact of the development proposal on the surrounding road network.

1.3. References

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

- Architectural Plans prepared by Studio BAAM, circulated in August 2026.
- The Greater Geelong Planning Scheme.
- Australian/New Zealand Standard, Parking Facilities Part 1: Off-Street Car Parking (AS2890.1:2004).
- Australian/New Zealand Standard, Parking Facilities Part 6: Off-Street Parking for People with Disabilities (AS2890.6:2022).
- Desktop site inspection of the subject site and surroundings.
- Other documents as nominated.

2. Existing Conditions

2.1. Site Location and Context

The subject site is situated on the northwest corner of the intersection of Torquay Road and Dorothy Avenue in Belmont. Figure 2-1 shows the location of the subject site relative to its surroundings.

Figure 2-1: Site Location and Surroundings



Source: Nearmap Imagery, 2025

The site is largely surrounded by residential dwellings. Oberon Primary School is located south of the site with frontage to Torquay Road.

The subject site is zoned in a General Residential Zone – Schedule 4 (GRZ4) and is not subject to any other planning and parking overlays. Torquay Road is categorised as a Transport Road Zone 3 (TRZ3).

The site comprises an area of 1,375 sqm with frontages to Torquay Road and Dorothy Avenue. It currently contains a single-story 3-bedroom dwelling with a double garage accessed via a 3.5 metre wide crossover to Torquay Road.

2.2. Road Network

Torquay Road is a Council-managed municipal road in a north-south alignment between Princes Highway in the south and its continuation as Corio Street in the north. Torquay Road has a road reserve of approximately 20.5 metres wide, accommodating one through traffic lane in each direction, on-road bicycle lanes, kerbside parking in designated locations and constructed pedestrian paths on both sides of the road.

Torquay Road has a posted speed limit of 60km/h, with a reduced speed limit of 40km/h applicable during school times. Torquay Road services bus routes 40 and 41 each to Geelong Station.

A raised wombat crossing is provided approximately 700m south of the subject site on Torquay Road at the frontage of Oberon Primary School.

Views of Torquay Road in the vicinity of the site are shown in Figure 2-2 and Figure 2-3, respectively.

Figure 2-2: View of Torquay Road facing North



Source: google.com/maps

Figure 2-3: View of Torquay Road facing South



Source: google.com/maps

Dorothy Avenue is a Council-managed local road that in an east-west alignment, located at the southern frontage of the subject site. Dorothy Avenue has a road reserve of approximately 15.5 metres wide, with a pavement width of 7.3 metres wide accommodating two way traffic and kerbside parking, constructed pedestrian paths are provided on both sides of the road.

Dorothy Avenue has a posted speed limit of 40km/h, and speed humps spaced at regular intervals.

Views of Dorothy Avenue in the vicinity of the site are shown in Figure 2-4 and Figure 2-5, respectively.

Figure 2-4: View of Dorothy Avenue facing East



Source: google.com/maps

Figure 2-5: View of Dorothy Avenue facing West



Source: google.com/maps

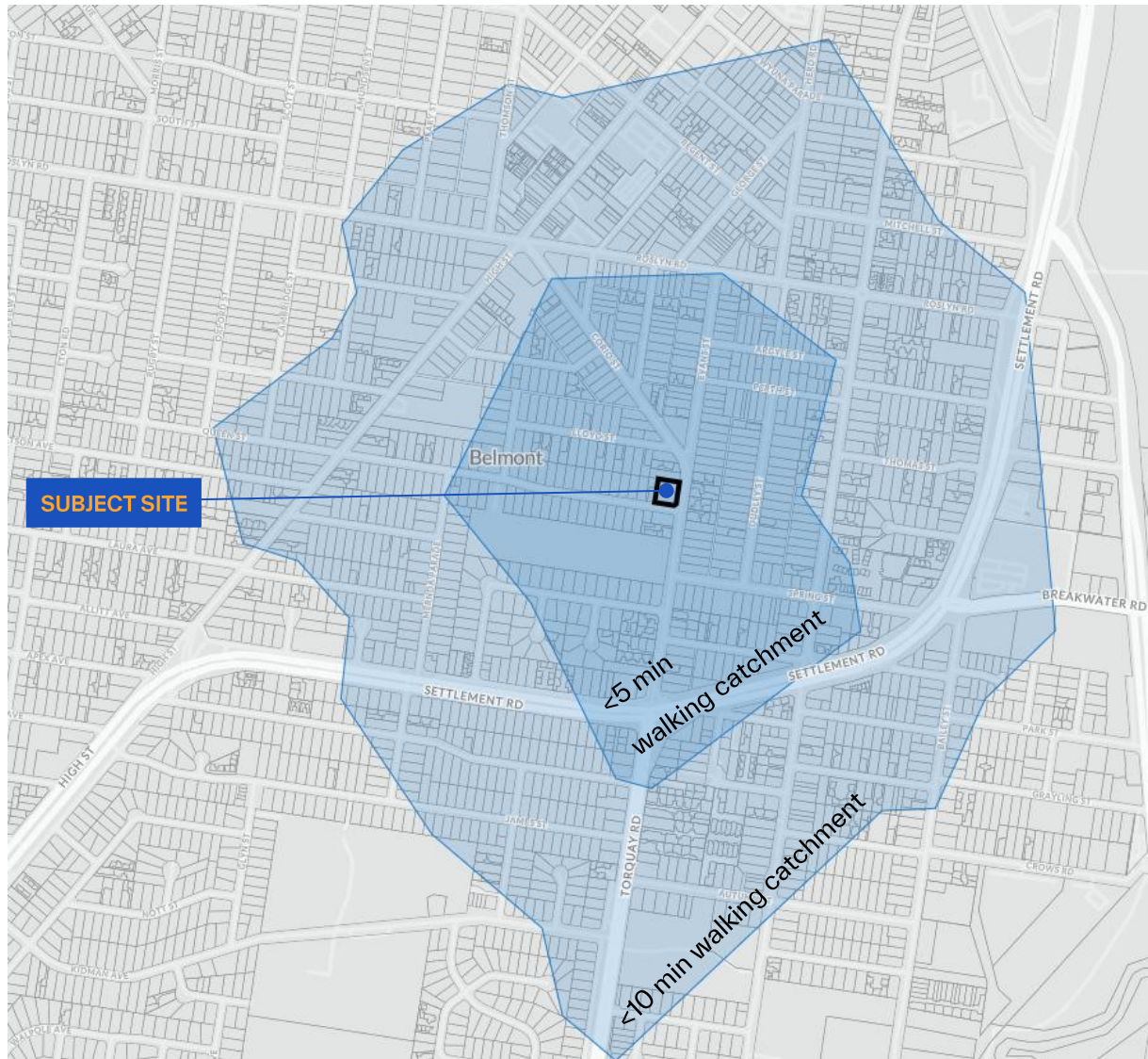
2.3. Sustainable Transport

Pedestrian Network

The surrounding road network is well serviced by footpaths with most streets in the vicinity being provided with footpaths on both sides of the road. Footpaths along each of the site frontages on Torquay Road and Dorothy Avenue provide pedestrian connection to the wider residential area, allowing local parents to walk to and from the childcare centre, and to the neighbouring Oberon Primary School. A raised wombat crossing allows pedestrians to cross with priority on Torquay Road, located approximately 700m south of the subject site at the frontage of Oberon Primary School.

Figure 2-6 displays the 5-minute and 10-minute walking catchment from the subject site, meaning that all dwellings located within the 5-min catchment are within 5 minutes' walk or less to the subject site, and dwellings within the 10-min catchment are within 10 minutes' walk or less to the subject site.

Figure 2-6: Walking Catchments: 5min and 10min Walking Catchments from Subject Site



Source: landchecker.com.au

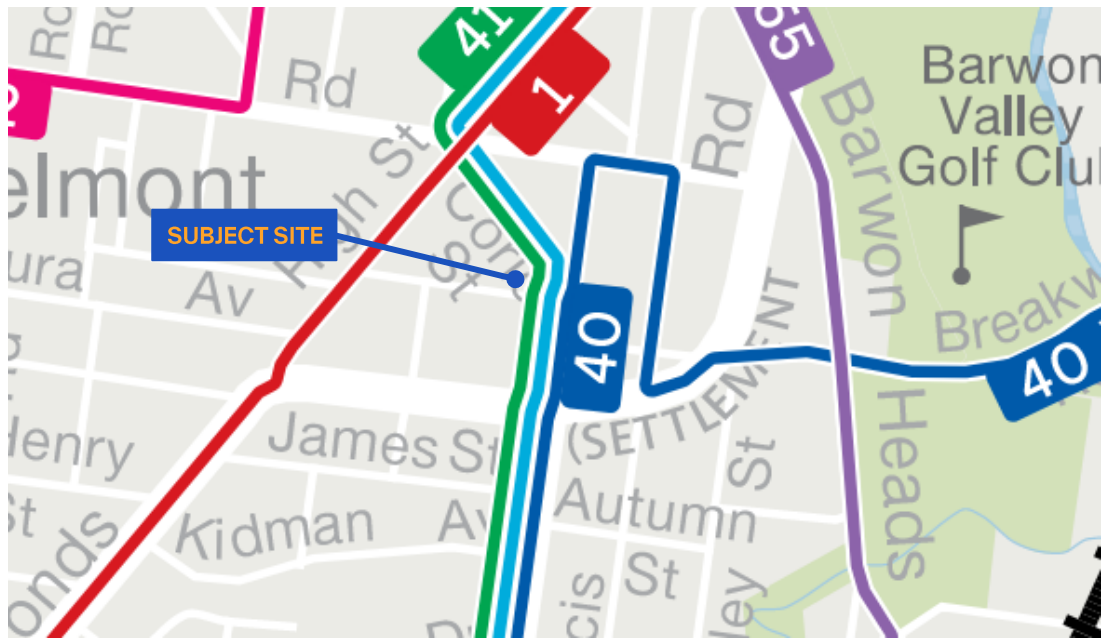
Public Transport

The site is serviced by bus routes 40, 41 and 53, with the nearest stop located on Torquay Road south of the site, approximately 120 metres or a 2-minute walk. The available public transport services summarised in Table 2-1 and shown in Figure 2-7.

Table 2-1: Public Transport Services

Service	Route No's	Route	Nearest Stop	Approximate Walking Distance
Bus	40	Geelong Station – Deakin University via Breakwater	Torquay Road	120m
	41	Geelong Station – Deakin University via Grovedale		~2 mins walk

Figure 2-7: Public Transport Services in the Vicinity of the Site



Source: Public Transport Victoria

3. Development Proposal

3.1. Overview

It is proposed to develop a childcare centre on the subject site located at 7 Torquay Road, Belmont. The proposal includes:

- 80 child capacity,
- 20 staff members,
- 10 on-site car parking spaces, including 1 DDA car parking space.

Access to the on-site car park is to be provided via a new double vehicle width crossover to Dorothy Avenue.

Waste is to be collected on-site via private collection service using a 6.6 metre long vehicle. The existing single vehicle width crossover to Torquay Road is to be closed with kerb, channel and verge reinstated.

4. Car Parking Assessment

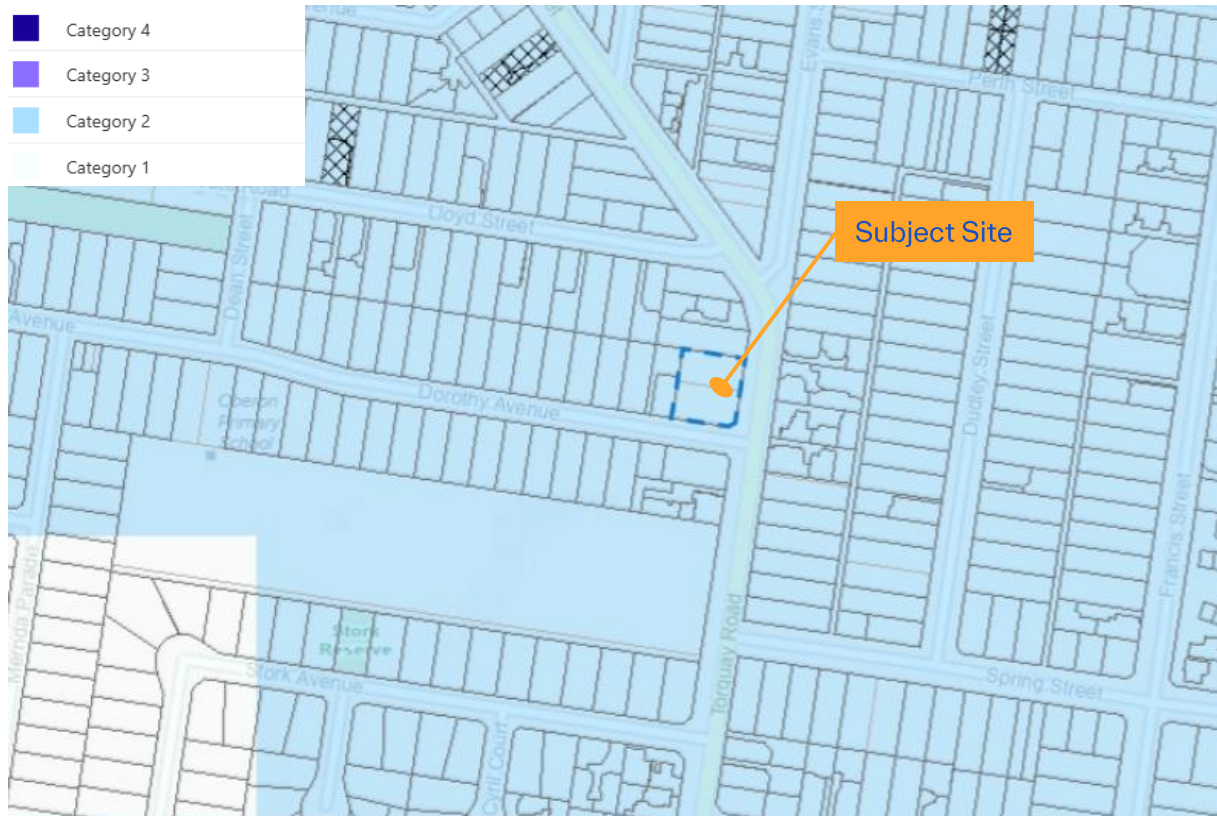
4.1. Car Parking Requirements

Parking requirements for the proposed development are set out under Clause 52.06 of the Greater Geelong Planning Scheme. The purpose of Clause 52.06, amongst other things, is:

- To ensure that car parking is provided in accordance with the Municipal Planning Strategy and the Planning Policy Framework.
- To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.
- To support sustainable transport alternatives to the motor car.
- To promote the efficient use of car parking spaces through the consolidation of car parking facilities.
- To ensure that car parking does not adversely affect the amenity of the locality.
- To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.

Table 1 of Clause 52.06 sets out the minimum and maximum requirements for new developments based on land use and the land category identified in the Car Parking Requirement Maps. The Car Parking Requirement Map at the location of the site is provided in Figure 4-1

Figure 4-1: Car Parking Requirement Map



The site falls under Category 2, which results in the following minimum parking requirements outlined in Table 4-1.

Table 4-1: Statutory Car Parking Requirements

Use	Size/No.	Parking Rate	Requirement
Childcare	20 Staff members	0.5 spaces for Staff Member	10 spaces
Total			10 spaces

As the development proposes to provide 10 parking spaces, meeting the minimum statutory requirement, the car parking provision is deemed appropriate.

5. Car Park Layout and Access

5.1. Clause 52.06-9 – Design Standard Assessment

The proposed development seeks to provide an at-grade car park with 10 spaces accessed via a new double-width crossover to Dorothy Avenue. The arrangements have been provided in accordance with the requirements of Clause 52.06-9 of the Greater Geelong Planning Scheme or relevant sections of AS2890 series, including:

- The 6.0m wide new crossover to Dorothy Avenue will allow for two-way vehicle passing (ingress and egress to the site), constructed in accordance with the City of Greater Geelong's 'Vehicle Crossings Preferred Layout'.
- Car parking spaces are provided at 4.9 metres long and 2.6 metres wide, accessed via an aisle width in excess of 6.4 metres, meeting the requirements of Table 2 of Clause 52.06.
- The DDA car parking space and adjacent shared space are provided at 2.4 metres wide and 5.4 metres long in AS/NZS 2890.6:2009, noting that disabled car parking spaces may encroach by 500mm into an accessway width specified in Table 2 of Design Standard 2.
- 300mm of additional clearance is provided between the long edge of car parking spaces and any adjacent structures in order to accommodate vehicle door opening, in accordance with Diagram 1 of Design Standard 2 of Clause 52.06.

Swept path diagrams have been prepared demonstrating that access to/from the site can be achieved for all critical car spaces as well as waste collection, as seen in Appendix A.

The proposed car parking and access arrangements are therefore considered satisfactory.

6. Loading Arrangements

6.1. Statutory Requirements

Clause 65.01 'Decision Guidelines' of the Greater Geelong Planning Scheme outlines the provision of loading requirements, and states the following:

"Before deciding on an application or approval of a plan, the responsible authority must consider, as appropriate:

- The adequacy of loading and unloading facilities and any associated amenity, traffic flow and road safety impacts."*

6.2. Loading Arrangements

The primary loading activities generated by the site are expected to be associated with food deliveries of the childcare centre. These types of deliveries are generally anticipated to be completed by a 6.4-metre-long small rigid vehicle (SRV) outside of peak drop-off and pick-up times within the on-site car park.

Other less frequent deliveries are anticipated on an ad-hoc basis by smaller vans or courier vehicles which can be accommodated within the car park in a standard car parking space.

A swept path assessment has been completed which demonstrates that a 6.4-metre-long SRV is able to complete a three-point turn within the car park, before departing the site in a forward direction. The swept path assessment can be found in Appendix A.

Larger deliveries may occur from time to time using an 8.8 metre long medium rigid vehicle (MRV). The MRV is to unload/load within the on-site car park outside of operating times of the childcare centre. The swept path assessment included in Appendix A shows that the MRV is able to enter the site in a forward direction, manoeuvre within the car park and collect waste, and egress the site in a forward direction in a satisfactory manner.

6.3. Waste Collection Arrangements

Waste collection is to occur on-site via private contractor using a 6.4 metre long small rigid vehicle (SRV). The SRV is to collect waste within the on-site car park outside of peak drop-off and pick-up times within the on-site car park. The swept path assessment included in Appendix A shows that the SRV is able to enter the site in a forward direction, manoeuvre within the car park and collect waste, and egress the site in a forward direction in a satisfactory manner.

7. Traffic Assessment

7.1. Traffic Generation

Childcare centres typically generate peak traffic movements during the morning drop-off period from approximately 8:00am to 9:00am and the afternoon pick-up period approximately 4:45pm to 5:45pm.

The Transport for NSW Guide to Transport Impact Assessment (September 2024) outlines that childcare centres typically generate in the order of 0.7-0.8 vehicle movements per child in the morning and afternoon peak periods.

The above rates have been validated by traffic survey results undertaken by our office at the existing Ariston childcare centre in Newtown (Geelong). Surveys indicated that the centre generated traffic at a rate of 0.8 vehicle movements per child during the PM peak hour.

For the purpose of a conservative assessment, a rate of 0.8 vehicle movements per child has been adopted during both peak hours.

As traffic movements during the peak hours is predominantly generated by parent pick-up / drop-off activity, an even 50:50 split between inbound and outbound movements has been applied.

Application of the above traffic generation rate and directional splits to the proposed 80 child places results in the peak hour vehicle movements summarised in Table 7-1.

Table 7-1: Estimated Traffic Generation

Direction	AM Peak Hour	PM Peak Hour
Inbound	32 vph	32 vph
Outbound	32 vph	32 vph
Total	64 vph	64 vph

7.2. Traffic Distribution and Impact

Traffic generated by a childcare centre during the road network peak hours is typically associated with parents dropping off and picking up children. Many of these trips form 'diverted trips' as part of the parents' trip to work, such that the diverted trips do not add new vehicle trips to the road network.

It is anticipated that the catchment area of the proposed childcare centre will mostly comprise the local residential area in proximity to the site. The surrounding residential catchment is provided with a permeable pedestrian network as discussed in Section 2.3, enabling future families who live within walking distance to walk to and from the site.

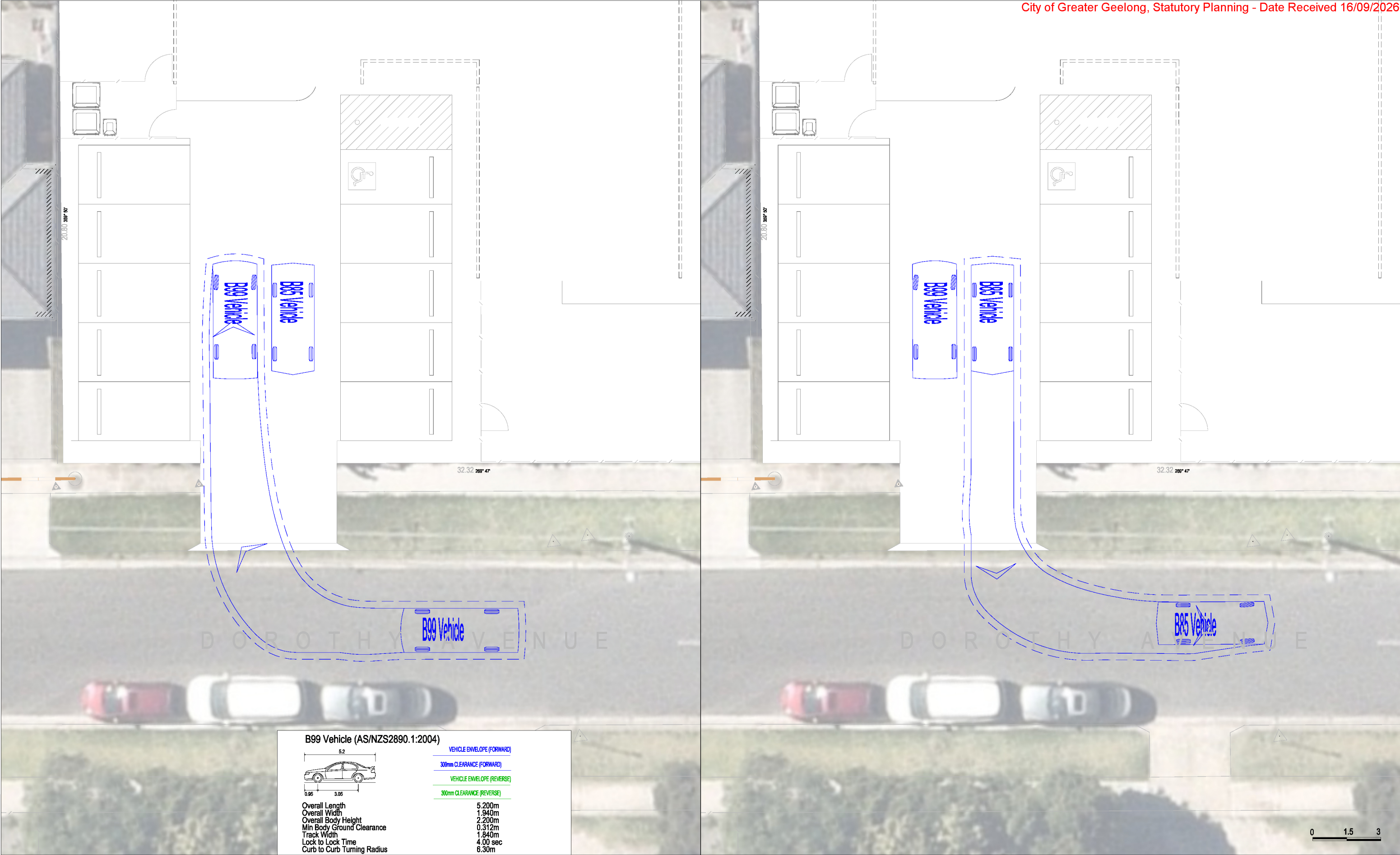
Accordingly, the proposed childcare centre is not anticipated to add new vehicle trips to the road network, but to redirect parents' trips on their way to work or redirect trips by local parents working from home who would have otherwise needed to drive outside of the precinct to take their children to childcare. The proposed development is therefore anticipated to have minimal net impact on the function of the surrounding road network.

8. Conclusion

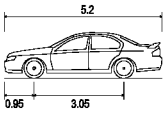
The application proposes to develop a childcare centre on the site located at 7 Torquay Road, Belmont. The childcare centre is to have a capacity of 80 children.

- The proposal seeks to provide 10 on-site car parking spaces meeting the minimum statutory requirement.
- The vehicle access arrangements and car park layout have been designed in accordance with the requirements set out within Clause 52.06 of the Greater Geelong Planning Scheme and relevant sections of the Australian Standard (AS2890 series);
- Loading is to be conducted with a vehicle up to the size of a 6.4 metre long small rigid vehicle (SRV) within the on-site car park outside of peak drop-off and pick-up times of the childcare centre. The swept path assessment shows that an SRV is able to enter the site in a forward direction, manoeuvre within the site, and egress the site in a forward direction in a satisfactory manner. Loading may occur from time to time using an 8.8 metre medium rigid vehicle (MRV) outside of operating times of the childcare centre. The swept path assessment shows that the MRV is able to enter the site in a forward direction, manoeuvre within the on-site car park and egress the site in a forward direction.
- Waste collection is to occur on-site by private contractor using a 6.4 metre small rigid vehicle (SRV) outside of peak drop-off and pick-up times of the childcare centre.
- The proposal is expected to generate in the order of 64 vehicle movements during both the AM and PM peak hours, which are anticipated to be mostly comprised of vehicle trips already on the road network by parents driving to and from work or local parents working from home who would have otherwise needed to drive their children to another childcare centre outside of the precinct. The proposed development is therefore anticipated to have minimal net impact on the function of the surrounding road network.

Appendix A : Swept Path Assessment



B99 Vehicle (AS/NZS2890.1:2004)



Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	6.30m

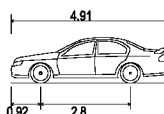
VEHICLE ENVELOPE (FORWARD)

300mm CLEARANCE (FORWARD)

VEHICLE ENVELOPE (REVERSE)

300mm CLEARANCE (REVERSE)

B85 Vehicle (AS/NZS2890.1:2004)



Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	5.80m

VEHICLE ENVELOPE (FORWARD)

300mm CLEARANCE (FORWARD)

VEHICLE ENVELOPE (REVERSE)

300mm CLEARANCE (REVERSE)

Proposed Childcare Centre 7 Torquay Road, Belmont Swept Path Assessment

NOTE:
1) Base Plan Supplied by studio BAAM on 16/04/2025
2) Maximum Design Speed 10km/h

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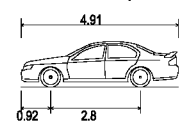






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B85 Vehicle (AS/NZS2890.1:2004)

	VEHICLE ENVELOPE (FORWARD) 300mm CLEARANCE (FORWARD) VEHICLE ENVELOPE (REVERSE) 300mm CLEARANCE (REVERSE)
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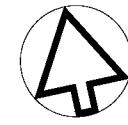
Proposed Childcare Centre

7 Torquay Road, Belmont

Swept Path Assessment

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B85 Vehicle (AS/NZS2890.1:2004)

Overall Length	4.91m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	5.80m

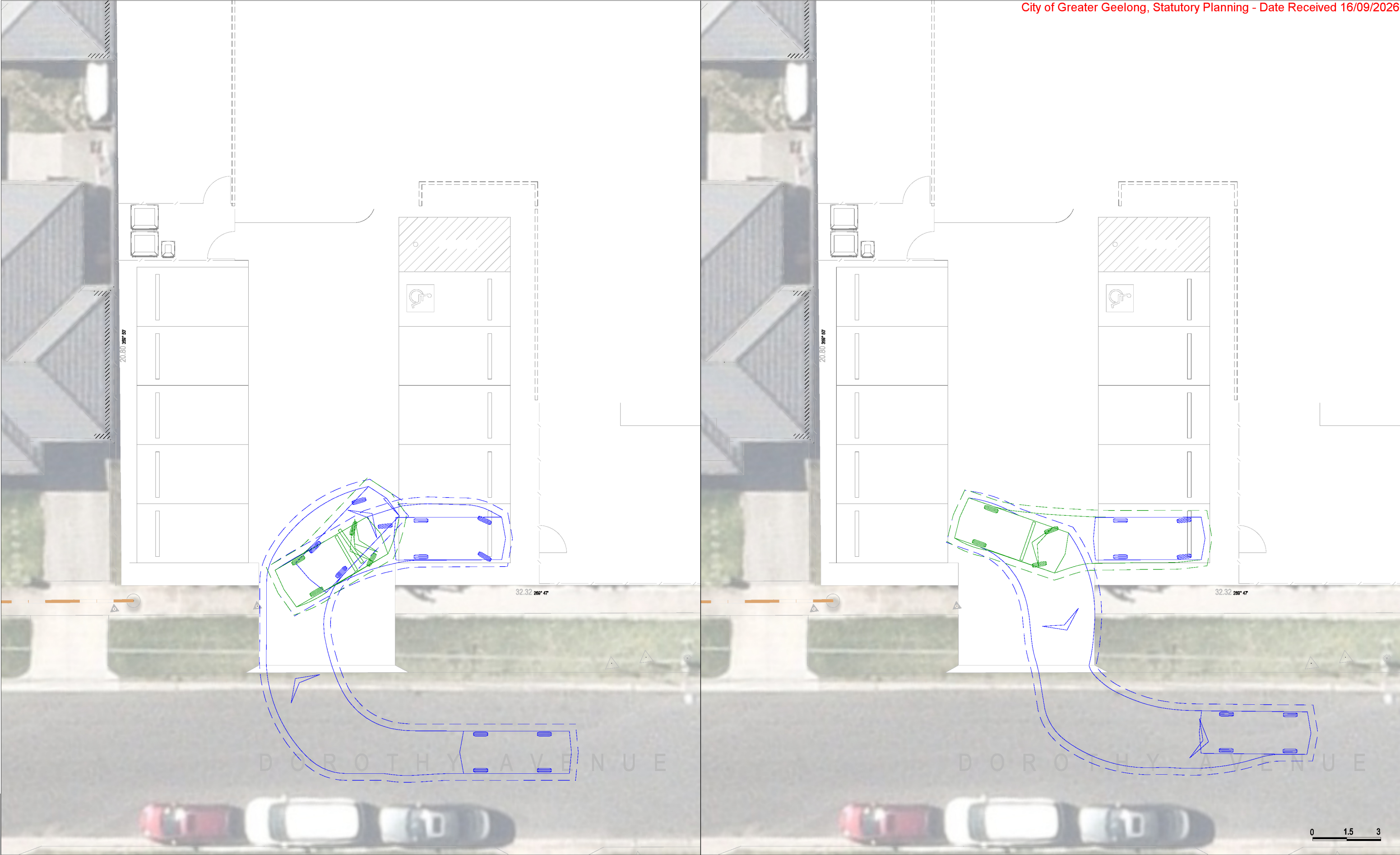
VEHICLE ENVELOPE (FORWARD)
300mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
300mm CLEARANCE (REVERSE)

Proposed Childcare Centre
7 Torquay Road, Belmont
Swept Path Assessment

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B85 Vehicle (AS/NZS2890.1:2004)

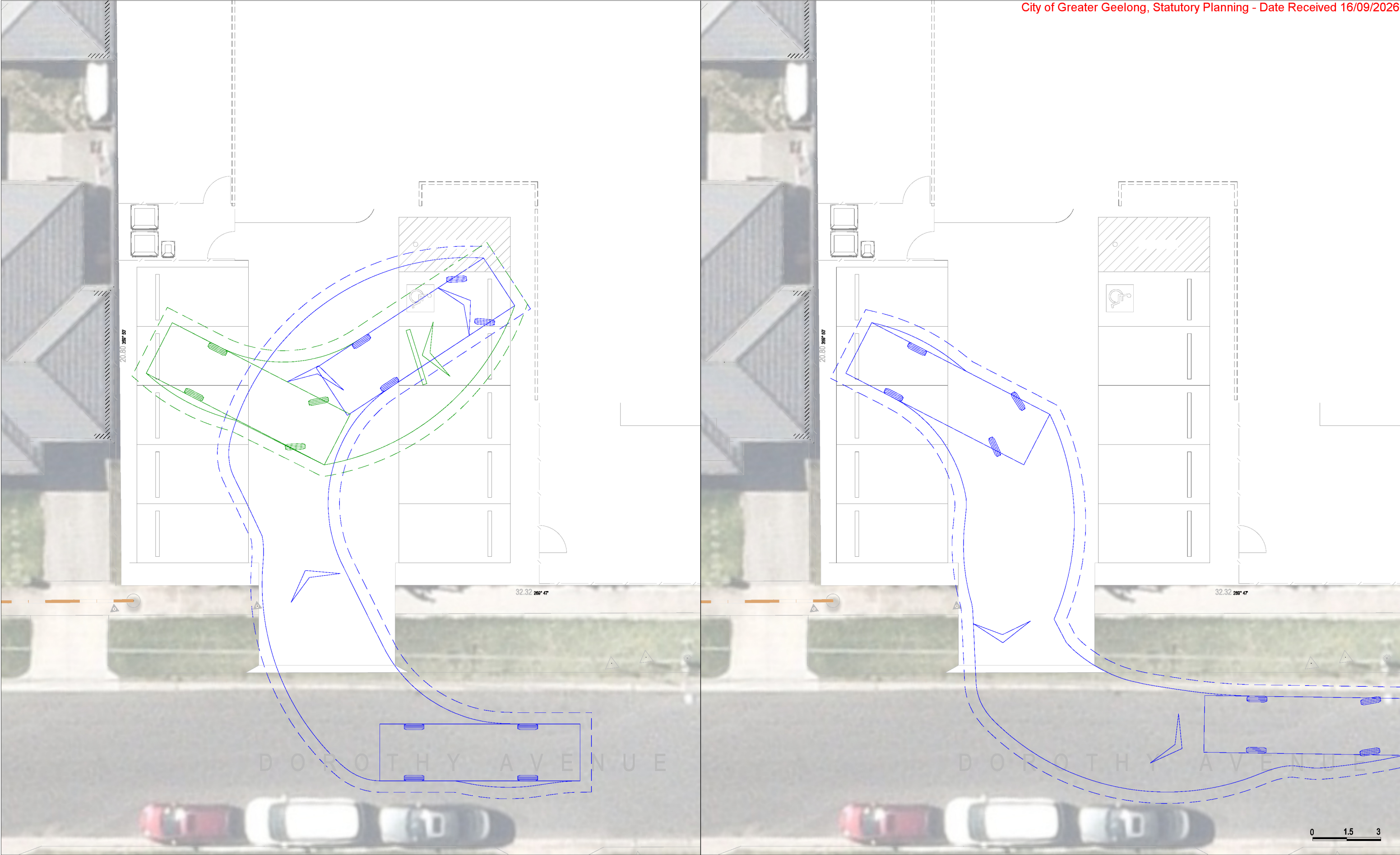
Overall Length	4.91m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	5.80m

VEHICLE ENVELOPE (FORWARD)
300mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
300mm CLEARANCE (REVERSE)

Proposed Childcare Centre
7 Torquay Road, Belmont
Swept Path Assessment

NOTE:
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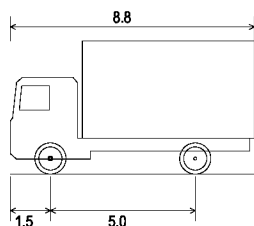
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MRV - Medium Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE (FORWARD)
500mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
500mm CLEARANCE (REVERSE)

Overall Length
Overall Width
Track Width
Lock to Lock Time
Curb to Curb Turning Radius

8.800m
2.500m
2.500m
4.00 sec
10.000m

Proposed Childcare Centre 7 Torquay Road, Belmont Swept Path Assessment

NOTE:
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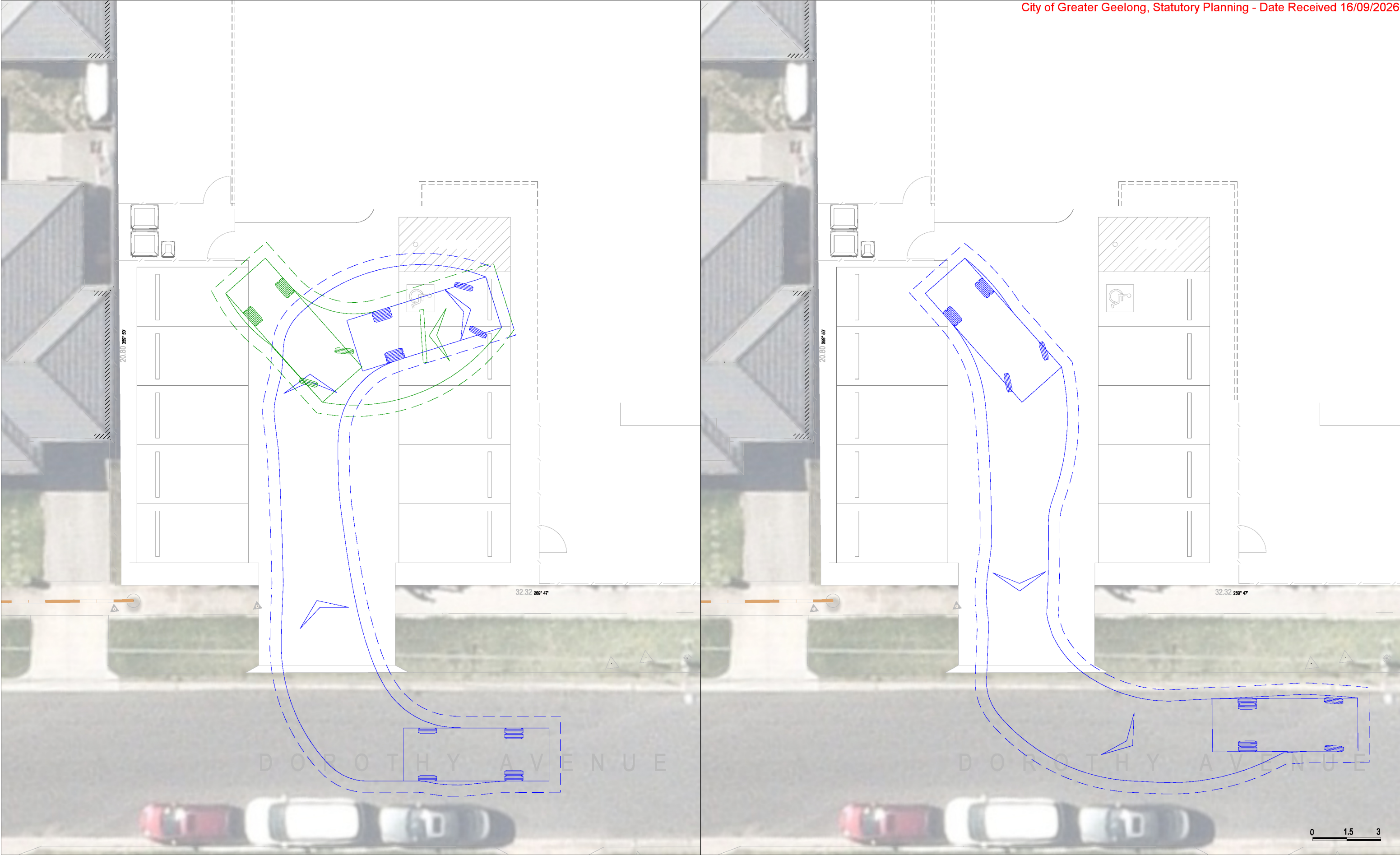
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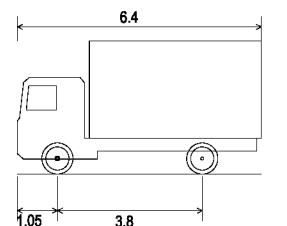






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SRV - Small Rigid Vehicle (AS/NZS2890.2:2002)



VEHICLE ENVELOPE (FORWARD)
500mm CLEARANCE (FORWARD)
VEHICLE ENVELOPE (REVERSE)
500mm CLEARANCE (REVERSE)

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