

# Transport Impact Statement

15 Willcock Street, Ardross

CW1169600

Prepared for  
Willcock 15 ATF Pty Ltd

30 June 2021



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## Document Information

Prepared for	Willcock 15 ATF Pty Ltd
Project Name	15 Willcock Street, Ardross
File Reference	CW1169600-TR-R001-B-TIS_15_Willcock_St-V5CRL-BS.docx
Job Reference	CW1169600
Date	30 June 2021
Version Number	B

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Effective Date 30/06/2021

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Date Approved 30/06/2021

## Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
A	27/04/2021	For Issue	BS/CRL	SJL
B	30/06/2021	Update	BS	SJL

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Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

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# 1 Introduction

## 1.1 Background

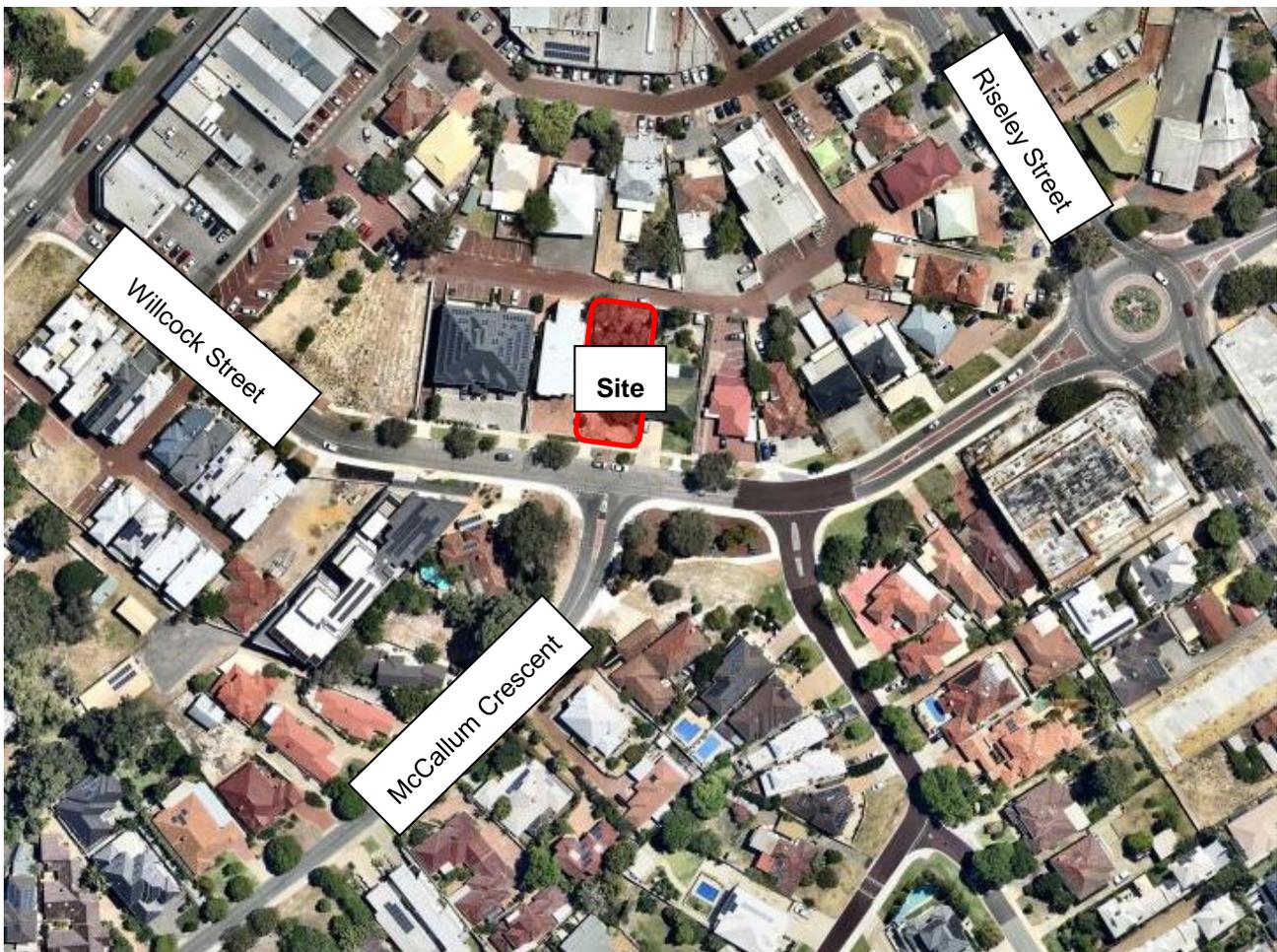
Cardno have been commissioned by Willcock 15 PTY LTD ('the Client') to prepare a Transport Impact Statement (TIS) to support the proposed childcare centre, located at 15 Willcock Street Ardross ('the Site'). The development will host a maximum total of 62 children and 10 staff members.

This TIS has been prepared in accordance with the *Western Australian Planning Commission (WAPC) Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments (2006)* and the checklist is included in **Appendix A**.

## 1.2 Existing Site

The Site is located in the suburb of Ardross within in the City of Melville, Opposite the intersection of Willcock Street and McCallum Crescent, west of Riseley Street. The Site is shown in the aerial view in **Figure 1-1**.

Figure 1-1 Site Location

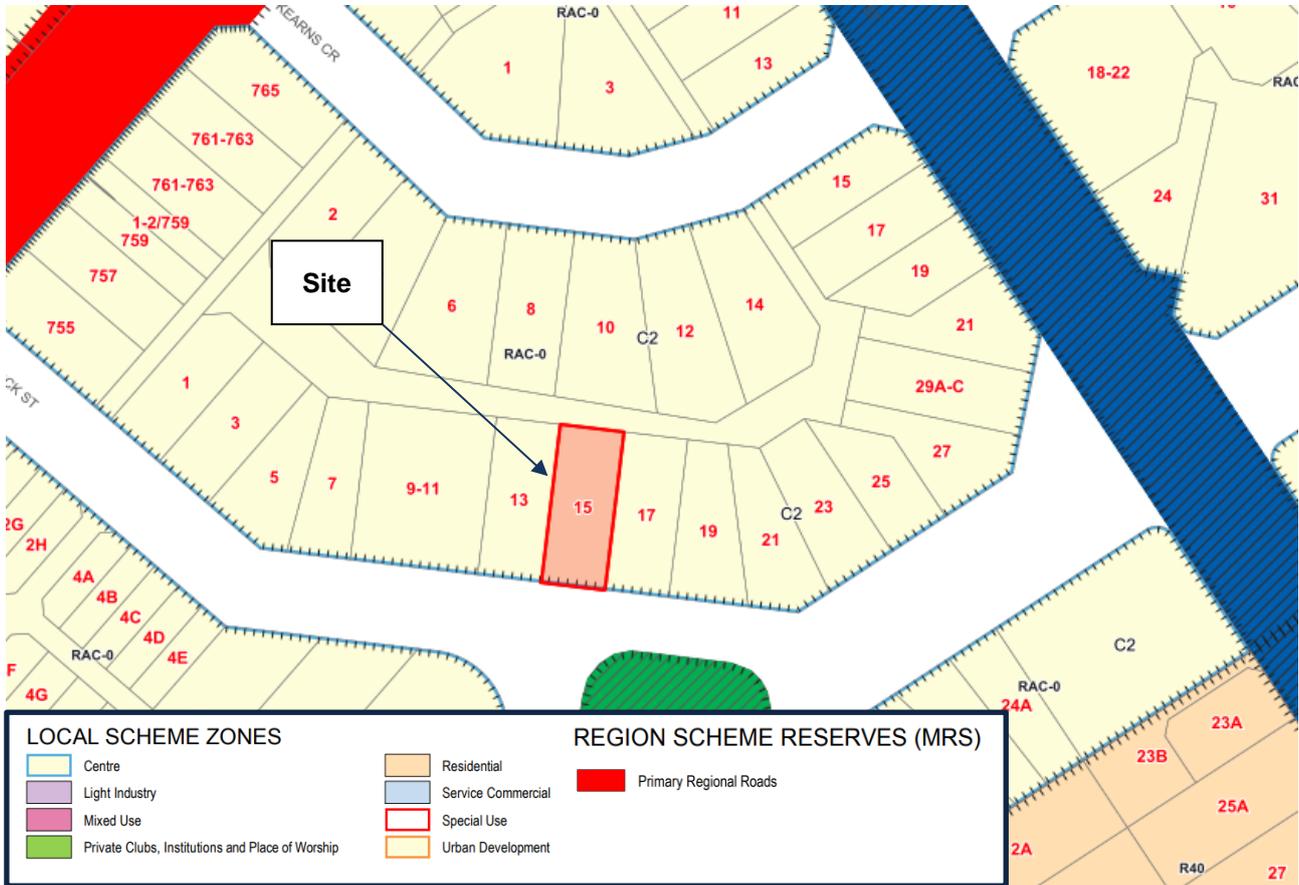


Source: Nearmap

Under the provisions of the City of Melville Local Planning Scheme No 6, the Site is zoned Centre (C2) and limited to 4 story development under the Riseley Activity Centre Structure Plan.

The site is surrounded by residential dwellings, mixed use / commercial developments in the vicinity.

Figure 1-2 City of Melville Local Planning Scheme Map



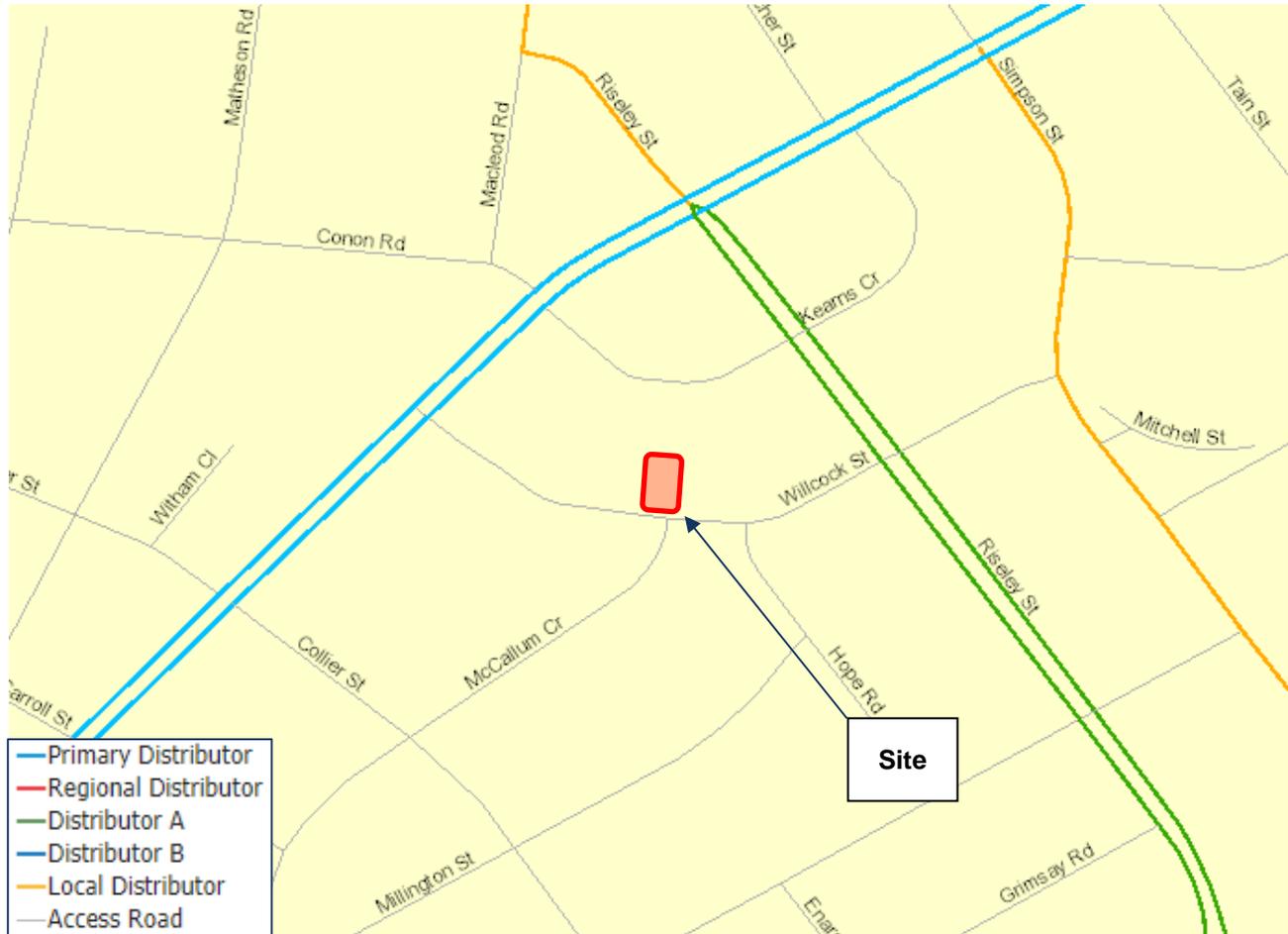
### 1.3 Existing Road Network

The Site is bound by Willcock Street and Post Lane. These and other nearby roads are described in **Table 1-1** and illustrated in **Figure 1-3**

Table 1-1 Surrounding Road Network

Road Name	Road Hierarchy	Jurisdiction	No of Lanes	No of Footpaths	Approximate Width (m)	Posted Speed Limit (km/h)
Willcock Street	Access Road	Local Government	2	2	8.6m	50 km/h applied
Canning Highway	Primary Distributor	MRWA	4	2	7.3m (x2)	60km/h
Riseley Street	Distributor A	Local Government	4	2	6m (x2)	60 km/h applied

Figure 1-3 Road Hierarchy Map



Source: Main Roads: Road Information Mapping System

## 1.4 Existing Vehicle Traffic Volumes

Existing traffic volumes were sourced from the *Main Roads WA Traffic Map*, manual traffic counts conducted by Cardno and video survey conducted by Matrix. The data is summarised in **Table 1-2**.

Table 1-2 Existing Traffic Volumes (two-way)

Road Name	Date	Average Weekday Two-way Traffic Volume	Vehicles - AM Peak Hour	Vehicles - PM Peak Hour
Canning Highway west of Riseley Street*	2018/19	35,562	2,494	2,744
Riseley Street*	2018/19	13,858	1,153	1,198
Post Lane (Site Frontage) **	2021	~<100	7	10
Post Lane (approx. 75m west of the Site) ***	2021	-	15	26
Post Lane (south of Kearns Crescent) ***	2021	-	13	11
Kearns Crescent***	2021	-	72	155

\* MRWA Traffic Map

\*\* Manual Traffic Count (Cardno)

\*\*\* Video Count (Matrix)

## 1.5 Existing Pedestrian Traffic

Cardno conducted a site inspection on the 31<sup>st</sup> of March to identify the existing pedestrian volume along Post Lane, during the peak hours of the proposed development 7:30am - 8:30am (AM Peak) and 4:30pm – 5:30pm (PM Peak). The pedestrian volume surveys were conducted adjacent to the Site. The observation results are summarised as following:

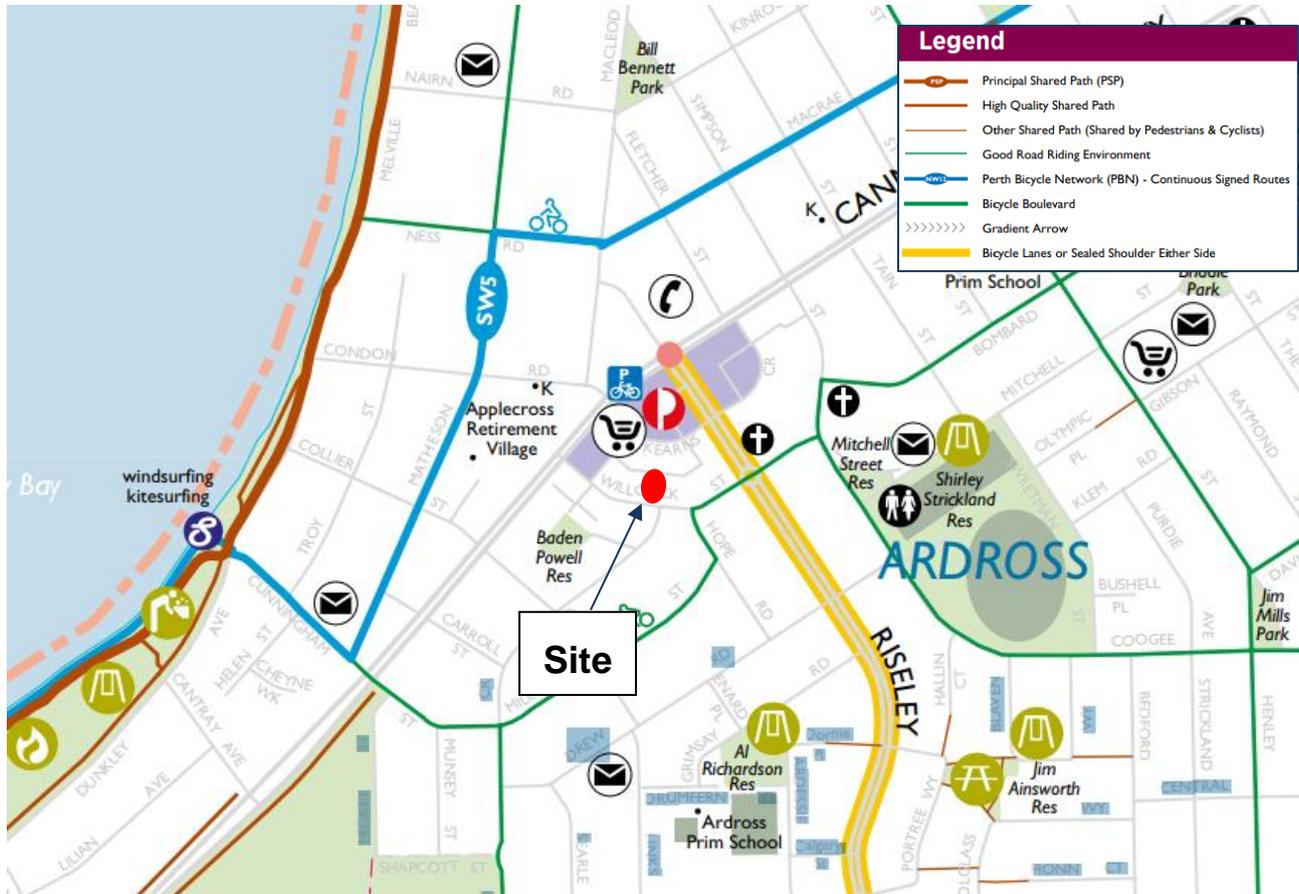
- > No pedestrians were observed during the AM peak
- > 1 pedestrian was observed during the PM Peak

The result shows that the existing pedestrian volume along Post Lane is extremely low, and is unlikely to increase significantly without any substantial change to surrounding land uses or developments.

### 1.6 Existing Pedestrian/Cycling Network

The Site is in close proximity to good road riding environments which allow for convenient north-south and east-west movement. Overall, cycling amenity within the immediate vicinity is considered to be above average with direct cycling links from the Site to cycling paths. In addition, many of the surrounding road network are low traffic volume residential streets. The local regional cycle and pedestrian routes are shown in Figure 1-4.

Figure 1-4 Existing Pedestrian and Cycling Environment Near Site



### 1.7 Existing Public Transport Facilities

There are six bus routes that provide access to the site, Route Numbers 111, 910, 148, 158 along Canning Highway and 114, 115 along Riseley Street. The nearest bus stops are located approximately 200m east of the Site, along Riseley Street. The public transport routes in the vicinity of the Site are shown in Figure 1-5.

Figure 1-5 Existing Public Transport Network Map



Source: Public Transport Authority

Table 1-3 provides a summary of bus services operating along Canning Highway and Riseley Street and their service frequencies.

Table 1-3 Bus Route and Frequency

Bus Routes	Route Description	Frequencies			
		Weekday Peak Period	Weekday Off-peak Period	Saturdays	Sundays and Public Holidays
111	East Perth to Fremantle Station	10-15 mins	N/A	N/A	N/A
910	Perth Busport to Fremantle Station	5-10 mins	15 min	15 mins	15 mins
148	Fremantle station to Como	30 mins	60 mins	60 mins	60 mins
158	Fremantle station to Elizabeth Quay bus station	10 mins	30 mins	N/A	N/A
114	Munster to Elizabeth Quay bus station	15 mins	30 mins	60 mins	60 mins
115	Hamilton hill to Elizabeth Quay bus station	15 mins	15 mins	30 mins	30 mins



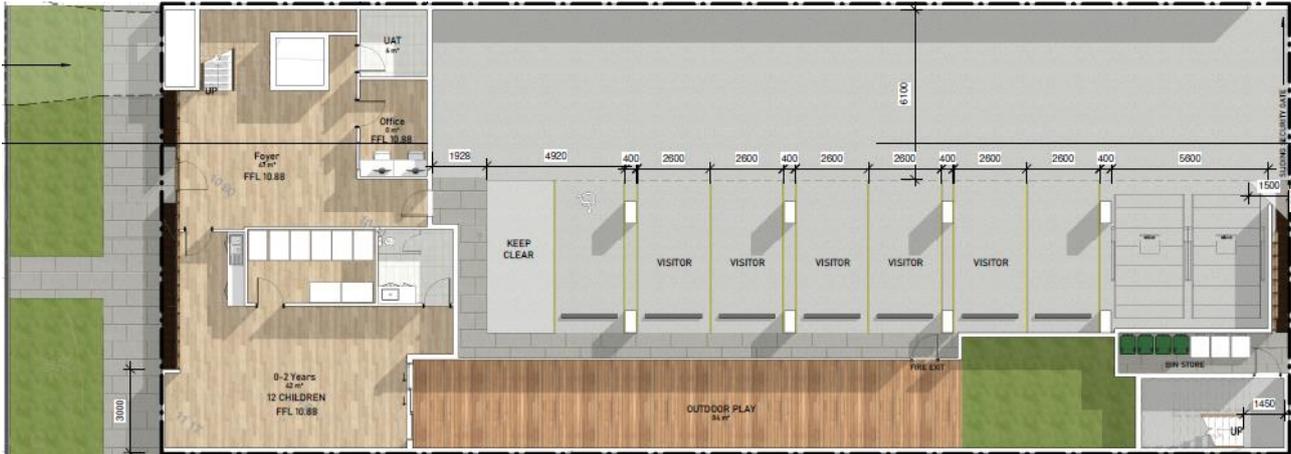
## 2 Proposed Development

### 2.1 Land Use

The proposed development is a child care centre, accommodating a maximum of 62 children and 10 staff members. The child care will operate within general business hours. A total of 11 car parking spaces including 4 car stacker bays (staff parking) and 1 ACROD bay is proposed

The site layout is shown in **Figure 2-1** below.

Figure 2-1 Site Layout (Ground Floor)



### 2.2 Access Arrangements

The existing vehicle crossover via Willcock Street will be removed, with the new vehicular access to the Site via Post Lane with access provided into the building from the car park for those arriving by vehicles. Pedestrian access is provided to the south, via Willcock Street existing footpath. Access arrangements of the proposed development is shown in **Figure 2-2**. Visually permeable 1.5m x 1.5m minimum truncations are provided for the access points to ensure sufficient sightlines are provided.

Figure 2-2 Access Arrangements



### 2.3 Provision for Service Vehicles

The proposed bin store is located to the northeast of the Site as shown in **Figure 2-3**. The bins will be collected by private contractor along Post Lane. During collection times, bins will be brought out to the Lane and returned to the bin store when emptied.

It is proposed that the contractor will undertake waste pickup during Saturday or Sunday, when the childcare is not operating. In addition to that, it is also noted that the traffic and parking activity along Post Lane on weekend, particularly in the morning is very low, allowing easy access for the waste collection vehicle.

Figure 2-3 Bin Store Location



## 2.4 Development Traffic Generation

### 2.4.1 Vehicle Traffic Generation

The trip generation for the proposed development (Childcare) has been calculated using the traffic generation rates suggested in *Guide to Traffic Generating Developments – V2.2 (RTA)*.

The resulting estimated trip volumes for the proposed development are presented in **Table 2-3**.

Table 2-1 Trip Generation Rate

	Source	AM Peak	PM Peak
Long-day Care	RTA – Table 3.6	0.8 trips per child	0.7 trips per child

Table 2-2 Directional Split

	Yield	AM Peak		PM Peak	
		In	Out	In	Out
Childcare	62 Children	53%	47%	47%	53%

Table 2-3 Development Traffic Generation

	Yield	AM Peak		PM Peak	
		In	Out	In	Out
Childcare	62 Children	26	24	20	23

As summarised above, the proposed development, which caters for a maximum of 62 (children) is expected to generate maximums of approximately **50** and **43** trips (two-way) during the weekday AM and PM peak hours respectively.

### 2.4.2 Pedestrian Traffic Generation

The pedestrian access of the Site is located at Willcock Street. Hence, the primary pedestrian traffic to and from the proposed development is expected to occur along Willcock Street, away from Post Lane. As shown in **Section 1.6**, the existing pedestrian volume along Post Lane is extremely low, and the proposed development is unlikely to generate additional pedestrian traffic along the laneway. Therefore, it is expected that the risk of conflict between the pedestrians and the increased vehicle traffic along Post Lane is extremely low.

### 3 Parking Provision

#### 3.1 Car Parking Requirements and Provision

Car parking requirements as per the *City of Melville Local Planning Policy 1.6 Car Parking and Access* and the proposed provision by the development are presented in **Table 3-1**.

*City of Melville Local Planning Policy 1.6 Car Parking and Access* sets out the following with respect to on-site car parking for non-residential development:

“2.1 Car parking bays are to be provided in accordance with the ratios set out in Table 1 below for:

(a) all new developments; or

(b) modifications to existing developments which result in an increase to the NLA or PFA; or

(c) a change of use to a use which requires more car parking than existing.”

Car parking requirements as per the LPP1.6 and the proposed provision by the development are presented in **Table 3-1**. The number of parking bays provided by the proposed development generally satisfy the car parking requirements set out in the *City of Melville Local Planning Policy 1.6 Car Parking and Access*.

Table 3-1 Car Parking Requirements and Provision

Land Use	Car Parking Requirements	Bays Required	Bays Provided
Child Minding Centres	One bay per 10 children, plus 0.5 bays per staff member, and drop-off and pick-up area to the satisfaction of the Council.	6.2 bays required for 62 children 5 bays for 10 staff Drop-off and pick-up area to the satisfaction of the Council	11 bays on site including 4 car stacker bays and 1 ACROD bay
<b>Total</b>		<b>11 car bays (11.2 car bays)</b>	<b>11 car bays</b>

The car parking bays proposed (2.6m x 5.5m) with an aisle width of 6.1m, generally satisfies the dimension suggested in *AS2890.1 – User Class 3A*.

The 6 regular car parking bays will be allocated for parent parking (including ACROD bay), with one shared by the staff when required. The 4 car stacker bays will be allocated for staff only, who will be more familiar with the operation of car stackers, and would generally arrive earlier prior to parents dropping off their children.

As there is a requirement for parents / guardians to escort their children into and out of a childcare facility, there is no useful need for a drop off pickup zone as part of this development. There are however, a number of existing on street parking along Willcock Street in close proximity to the Site. While these bays are not required to satisfy the parking requirements for the development, it is likely that some parents may utilise these bays if they are more convenient, reducing the additional traffic generated along Post Lane.

The bays located within the development site will be clearly marked as “Staff” or “Visitor” and parents will be provided with information on the car park operation and management, when their children are enrolled.

### 3.2 Site Access / Parking Management

As shown in **Section 1.8**, historical crash data indicates that Kearns Crescent has recorded a number of crashes for the previous 5-year period. Based on the traffic counts conducted, it is noted that the existing traffic volume along Kearns Crescent is 10 times greater than Post Lane.

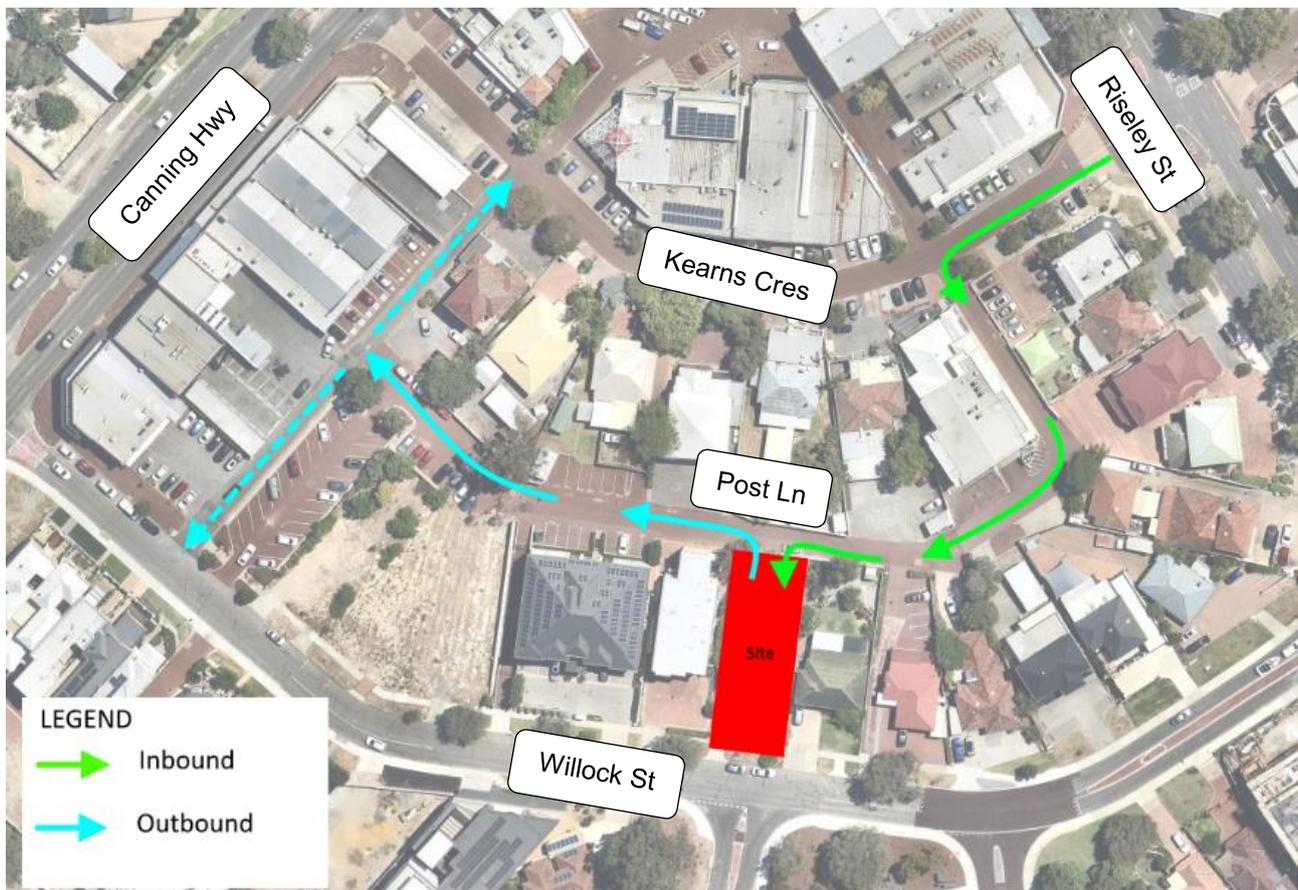
During the Site visit, it was observed that vehicles were parked along Post Lane resulting in reduced lane width at certain points. These vehicles parked on the side of the road have indirectly introduced traffic calming, which slows vehicles down, and provides a safer traffic environment.

However, with the expected trips generated by the proposed development, particularly during the peak hours, the narrowed lane width could result in undesirable congestion should vehicles travel in both directions. Therefore, it is the developer's intention to introduce a one-way traffic flow for users of the proposed development. As previously mentioned, all parents will be briefed on these proposed traffic arrangements to ensure safe and efficient car park operation.

As shown in **Figure 3-1**, vehicles accessing the proposed development will be instructed to access Post Lane via the intersection of Riseley Street / Kearns Crescent, before turning left into the on-site car park. When exiting, vehicles are required to turn left onto Post Lane, and exit via Willock Street or Kearns Crescent.

By introducing a one-way flow, the reduced lane width will have less impact, and by encouraging vehicles to turn left from Kearns Crescent is also expected to reduce the risk of right-turn-thru or right-angle crashes.

Figure 3-1 Proposed Vehicle Flow



To further improve the on-site carpark operation, it is recommended that a sensor-lighting system be installed where the system aims to inform parents/patrons where empty bays are available in the car park at time of entry.

As an example, a LED light can be installed over each parking bay on the ceiling, with sensors detecting the presence of a car within the bay. The light will remain 'green' when the bay is empty, and will turn 'red' when occupied. Drivers entering the driveway can easily see the lighting system and be informed if there're any parking bays available within the car park. On the rare occasion where no bays are available, a driver will be able to remain within the lane way and circle the block to allow for the car park to empty.



## 4 Summary

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This Transport Impact Statement outlines the transport aspects of the proposed development focusing on traffic operations, access, and car parking. Discussion regarding pedestrian, cycle, and public transport considerations is also provided.

This statement has been prepared in accordance with the *WAPC Transport Assessment Guidelines for Developments: Volume 4 – Individual Developments (2016)* for lodgement with the City. From the Statement the following conclusions have been made:

- > Overall, cycling amenity within the immediate vicinity is considered to be above average with good cycling links from the Site to surrounding cycling routes;
- > The Site has good accessibility to public transport services, with reasonable frequency;
- > The Site will generate approximately of 50 and 43 vehicle movements in the AM and PM peak periods, respectively which is unlikely to have even a moderate impact on the surrounding road network;
- > Vehicle access is provided along Post Lane with a new proposed crossover; and pedestrian access is located along Willcock Street.
- > Waste collection for the Site is expected to be collected along Post Lane by private contractor. During collection days (weekends likely), bins will be brought out to the Lane and returned to the bin store when emptied.
- > The number of recorded crashes is considered significant, particularly along Kearns Crescent. However, the development aims to introduce a one-way traffic flow along Post Lane, to reduce the risk of vehicle crashes.
- > Parents will be instructed on parking operation of the development when their children are enrolled.

APPENDIX

A

WAPC CHECKLIST

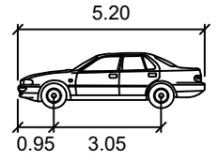
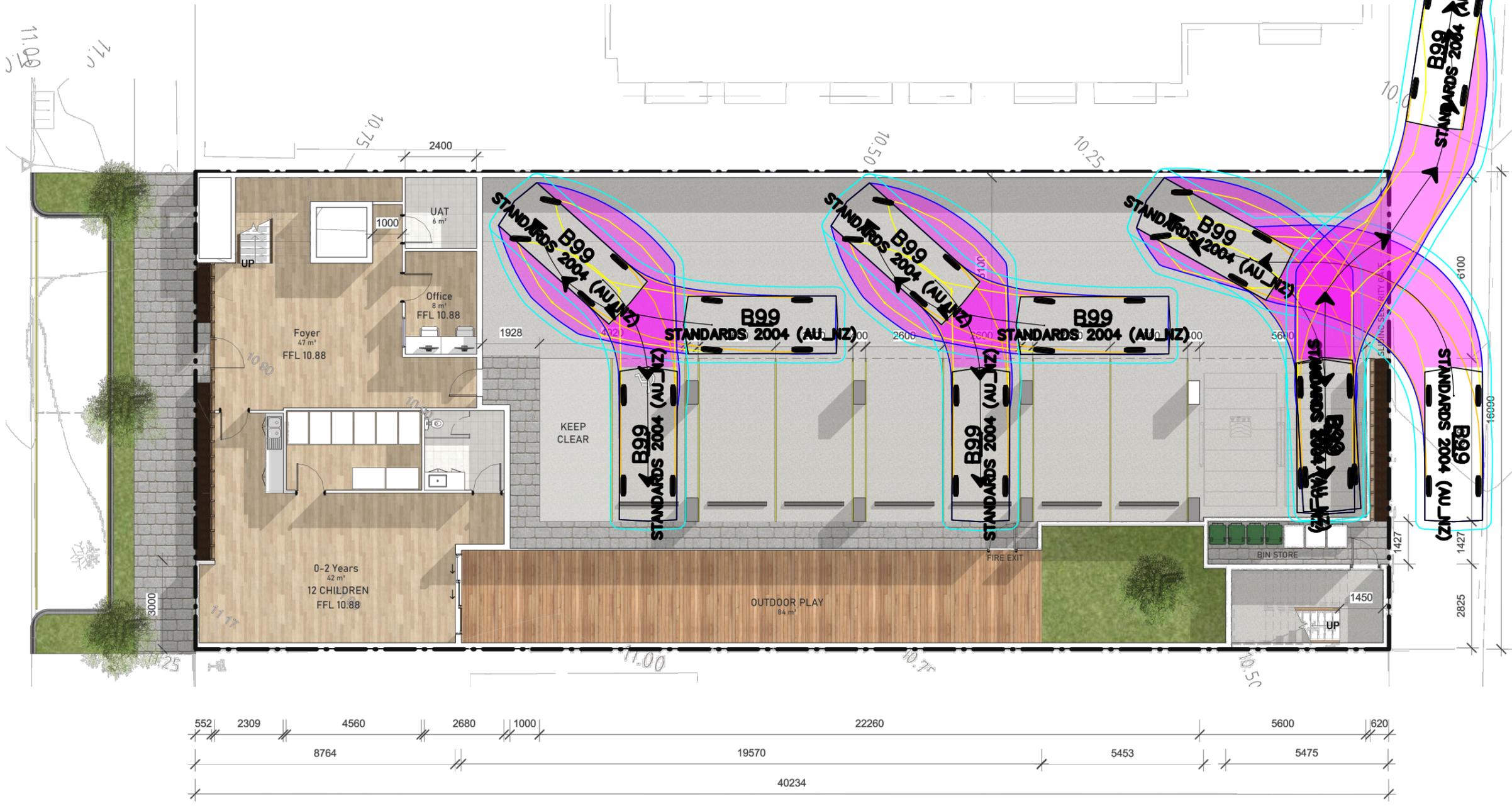
## Checklist for a Traffic Impact Statement

Item	Status	Comments/Proposals
<b>Proposed development</b>		
proposed land use	Section 2	
existing land uses	Section 1	
context with surrounds	Section 1	
<b>Vehicular access and parking</b>		
access arrangements	Section 2	
public, private, disabled parking set down / pick up	Section 3	
<b>Service vehicles (non-residential)</b>		
access arrangements	Section 2	
on/off-site loading facilities	N/A	
<b>Service vehicles (residential)</b>		
rubbish collection and emergency vehicle access	N/A	
<b>Hours of operation (non-residential only)</b>		
	Section 2	
<b>Traffic volumes</b>		
daily or peak traffic volumes	Section 1	
type of vehicles (e.g. cars, trucks)	Section 1	
<b>Traffic management on frontage streets</b>		
<b>Public transport access</b>		
nearest bus/train routes	Section 1	
nearest bus stops/train stations	Section 1	
pedestrian/cycle links to bus stops/train station	Section 1	
<b>Pedestrian access/facilities</b>		
existing pedestrian facilities within the development (if any)	Section 1	
proposed pedestrian facilities within development	N/A	
existing pedestrian facilities on surrounding roads	Section 1	
proposals to improve pedestrian access	N/A	
<b>Cycle access/facilities</b>		
existing cycle facilities within the development (if any)	Section 1	
proposed cycle facilities within the development	N/A	
existing cycle facilities on surrounding roads	Section 1	
proposals to improve cycle access	N/A	
<b>Site specific issues</b>		
	N/A	
<b>Safety issues</b>		
identify issues	Section 1	
remedial measures	N/A	

APPENDIX

# B

SWEPT PATH ANALYSIS



B99		units
Width	: 1.94	meters
Track	: 1.84	
Lock to Lock Time	: 6.0	
Steering Angle	: 33.9	

DATE PLOTTED: 21 June 2021 11:16 AM BY: RAYMOND RACHMAT CAD File: K:\Projects\CV1169600\_Wilcock 15 ATF The Gamma Unit Trust\_TIS Wilcock St\_Ardisas Technical\Traffic\CAD Map-Swept Path\_B99 V2.dwg



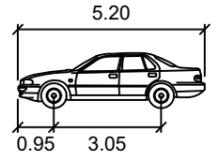
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WILCOCK 15 PTY LTD  
 PROPOSED CHILD CARE - 15 WILCOCK STREET  
 SWEEP PATH  
 B99-PAKRING  
 SHEET 1

Date  
 21.06.2021  
 CW1169600-TR-SP1  
 Drawing Number

Scale  
 1:150  
 Size  
 A3  
 Revision  
 A



<b>B99</b>	
Width	: 1.94 meters
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

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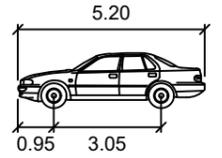
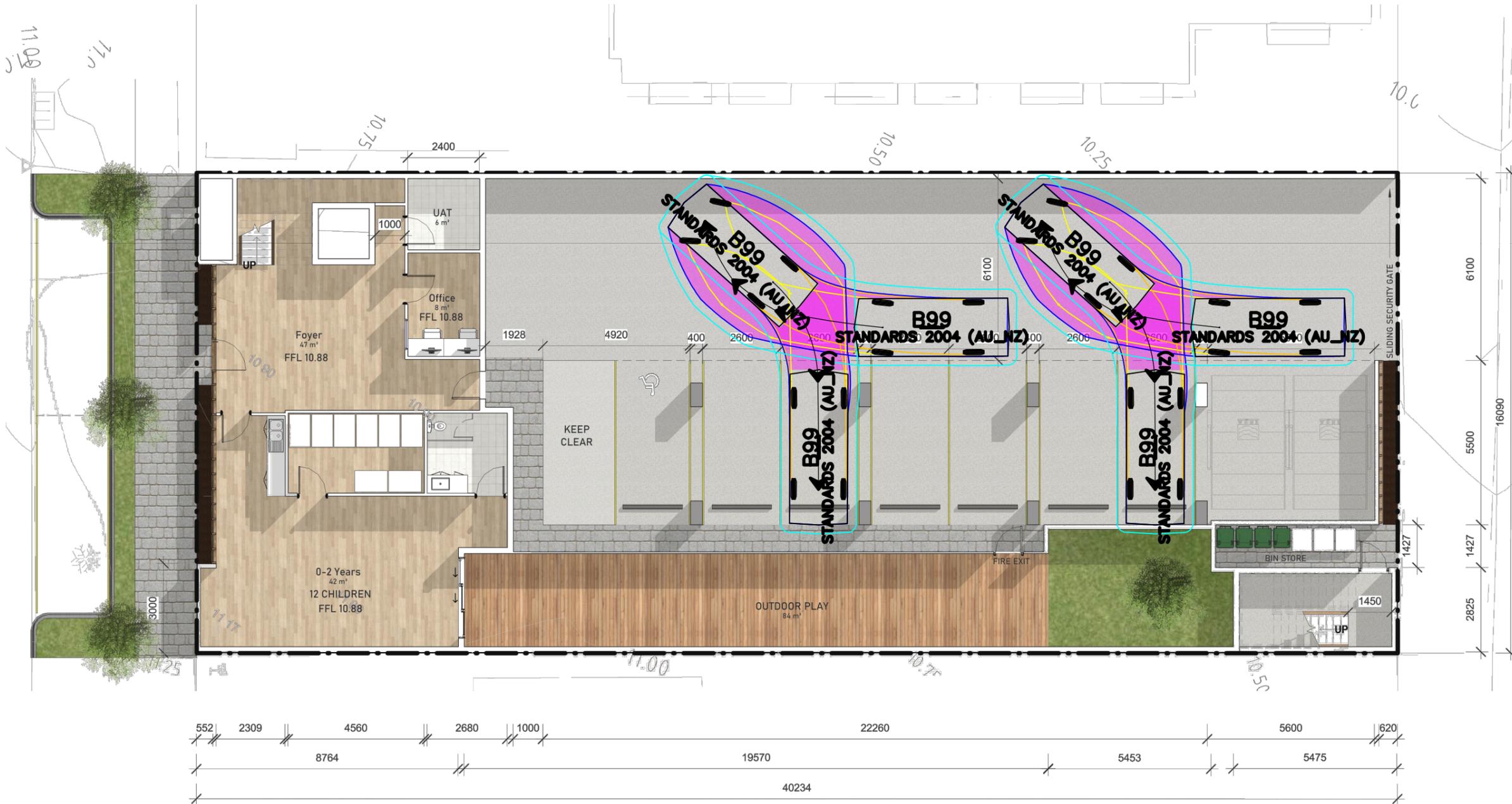
**WILCOCK 15 PTY LTD**  
**PROPOSED CHILD CARE - 15 WILCOCK STREET**  
 SWEEP PATH  
 B99-PAKRING  
 SHEET 2

Date  
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Size  
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 Revision  
 A



<b>B99</b>		units
Width	: 1.94	meters
Track	: 1.84	
Lock to Lock Time	: 6.0	
Steering Angle	: 33.9	

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SWEEP PATH  
B99-PAKRING  
SHEET 3

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A3  
  
Revision  
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