# APPENDIX F

Transport
Impact
Statement

# Traffic Impact Statement

## 26A Harris Street, Bicton

CW1131500

Prepared for
Armada Property Services

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Cardno®

## Contact Information

**Cardno (WA) Pty Ltd**
ABN 77 009 119 000

11 Harvest Terrace
West Perth WA 6005
Australia

www.cardno.com
Phone +61 8 9273 3888
Fax +61 8 9486 8664

## Document Information

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Author(s):

Jessie Moore
Transport Planner

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Approved By:

Ray Cook
Business Leader – Traffic and Transport Planning

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# Table of Contents



# Appendices



# Tables

# Figures

# 1 Introduction

## 1.1 Background

Cardno have been commissioned by Armada Property Services ('the Client') to prepare a Transport Impact Statement (TIS) to support the proposed childcare centre, located at 26A Harris Street, Bicton ('the Site'). The development will host a maximum total of 74 children and 15 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

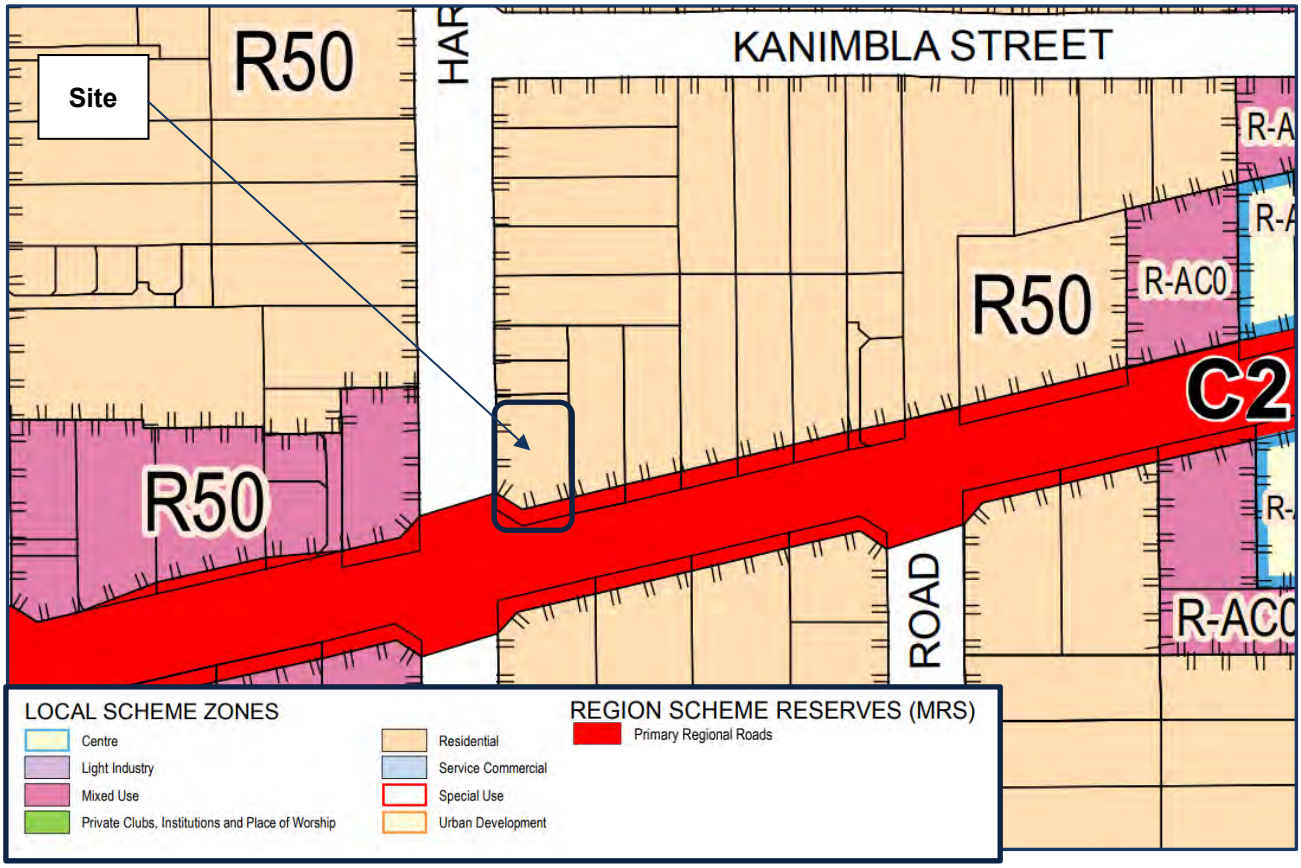
The Site is located in Bicton within in the City of Melville, at the northeast corner of the intersection with Canning Highway and Harris Street. The Site is shown in the aerial view in **Figure 1-1**.

Figure 1-1 Site Location


Under the provisions of the City of Melville Local Planning Scheme No. 6, the Site is zoned for residential uses, with a small section of the Site as 'Primary Regional Road' Reserve under the Metropolitan Region Scheme.

The site is surrounded by residential development, with mixed use zoning to the west.

Figure 1-2 City of Melville Local Planning Scheme Map




## 1.3 Existing Road Network

The Site is bound by Harris Street and Canning Highway. 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) |
|---|---|---|---|---|---|---|
| Harris Street | Access Road | Local Government | 2 | 2 | 5.5 | 50 km/h applied |
| Canning Highway | Primary Distributor | MRWA | 4 | 2 | 13.5 | 60km/h |
| Kanimbla Street | Access Road | Local Government | 2 | 1 | 6m | 50 km/h applied |

Figure 1-3 Road Hierarchy Map


*Source: Main Roads: Road Information Mapping System*

### 1.3.2 Existing Traffic Volumes

Existing traffic volumes were sourced from the Main Roads WA Traffic Map. The data is summarised in **Table 1-2** below.

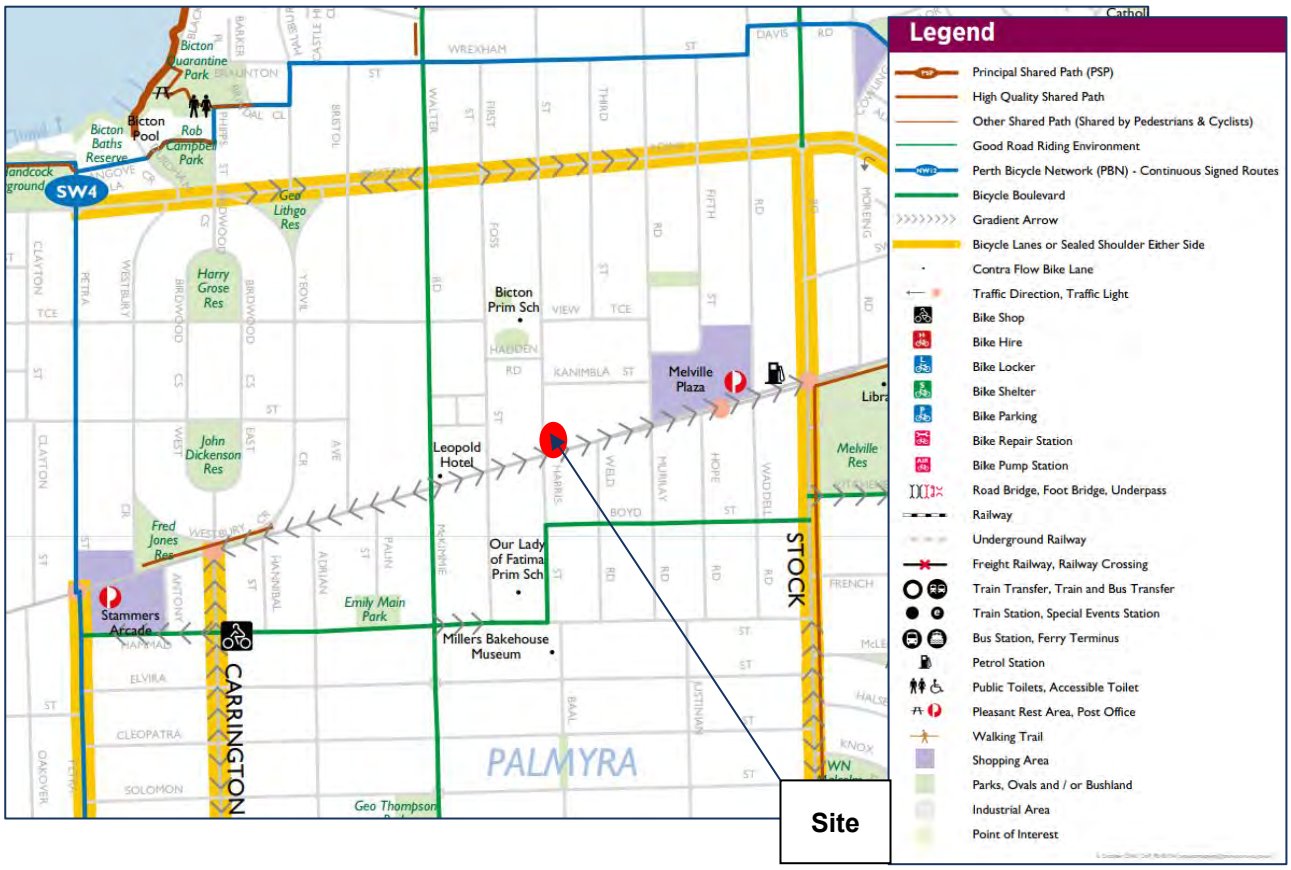
Table 1-2 Existing Traffic Volumes (two-way)

| Road Name | Date | Average Weekday Two-way Traffic Volume | Vehicles - AM Peak Hour | Vehicles - PM Peak Hour |
|---|---|---|---|---|
| Canning Highway west of Murray Road | 2016/17 | 25,306 | 1,752 | 1,976 |

## 1.4 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 average and there is no direct cycling links from the Site to cycling paths, however much 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




## 1.5 Existing Public Transport Facilities

There are two bus routes that provide access to the site, Route Numbers 111 and 910. The nearest bus stop along Canning Highway is located approximately 30m from the Site.

Figure 1-5 Existing Public Transport Network Map


**Table 1-3** provides a summary of services operating on Canning Highway and their service frequencies.

Table 1-3 Bus Route and Frequency

| Bus Routes | Route Description | Frequencies | | |
|---|---|---|---|---|
| | | Weekdays | Saturdays | Sundays and Public Holidays |
| 111 | East Perth to Fremantle Station | Every 30 mins | Every 15 mins | Every 30 mins |
| 910 | Perth Busport to Fremantle Station | Every 15 mins | Every 15 mins | Every 15 mins |

# 2 Proposed Development

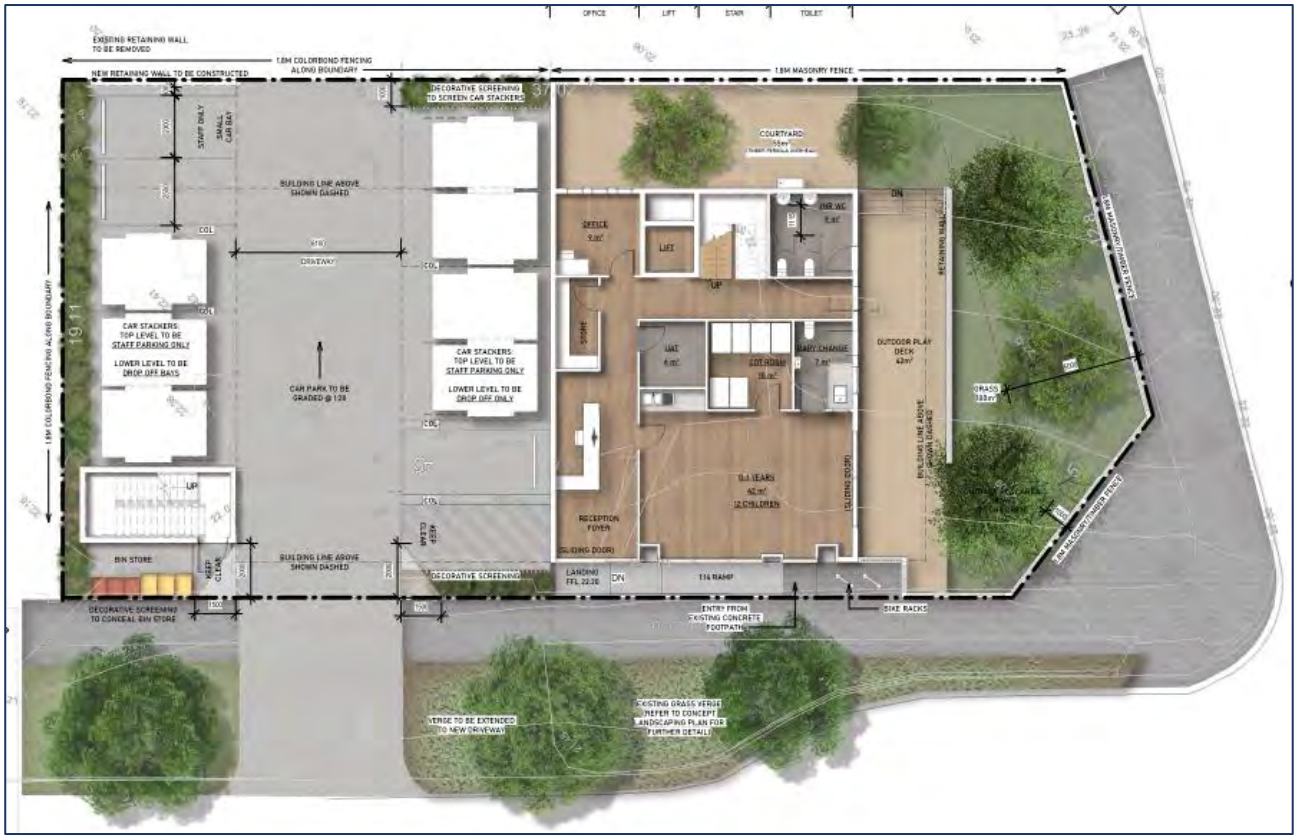
## 2.1 Land Use

The proposed development consists of the following:

- A child care centre accommodating a maximum of 74 children and 15 staff members
- A total of 17 car parking spaces including 1 ACROD bay and 7 car stacker bays (accommodating 14 cars).

The site layout is shown in **Figure 2-1** below, with detailed plans in **Appendix B**.

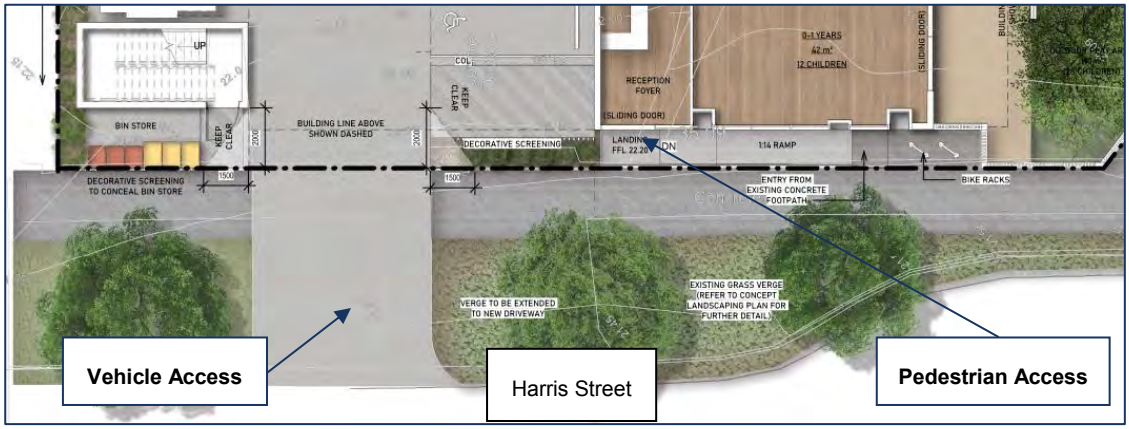
Figure 2-1 Site Layout




## 2.2 Access Arrangements

Access to the Site is shown in **Figure 2-2**. Vehicular access to the Site is provided via the existing crossover on Harris Street. Pedestrian access will be via the existing concrete footpath on Harris Street.

Figure 2-2 Access Arrangements



## 2.3 Development Traffic Generation

Trip generation has been calculated for the development which using the following sources:

> Institute of Transportation Engineers (ITE) "Trip Generation" 10th Edition

> Roads and Traffic Authority Guide to Traffic Generating Developments.

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 |
|---|---|---|---|
| Day Care | RTA/ITE | 0.8 trips per child | 0.7 trips per child |

Table 2-2 Directional Split

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Day Care | 53% | 47% | 47% | 53% |

Table 2-3 Development Traffic Generation

| | AM Peak | | PM Peak | |
|---|---|---|---|---|
| | In | Out | In | Out |
| Day Care | 31 | 28 | 24 | 27 |

As summarised above, the proposed development, which caters for a maximum of 74 children) is expected to generate maximums of approximately 59 and 52 trips (two-way) during the weekday AM and PM peak hours, respectively.

## 2.4 Provision for Service Vehicles

The location of the bin store is shown in **Figure 2-3**. Waste collection is proposed to be on-street via Harris Street. During collection days, bins will be brought out to the street and returned to the bin store when empty.

Figure 2-3 Bin Store Location


## 2.5 Parking

### 2.5.1 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 2-4**.

*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 2-4**.

Table 2-4 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. | 7.4 bays required for 74 children<br>7.5 bays for 15 staff<br>Drop-off and pick-up area to the satisfaction of the Council | 17 bays including 7 car stackers bays, 1 small car bay and 1 ACROD bay |
| **Total** | | **15 car bays (14.9 car bays)** | **17 car bays** |

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. The site does, however provides 2 additional bays above the policy requirement to better cover the peak pick-up / drop-off periods.

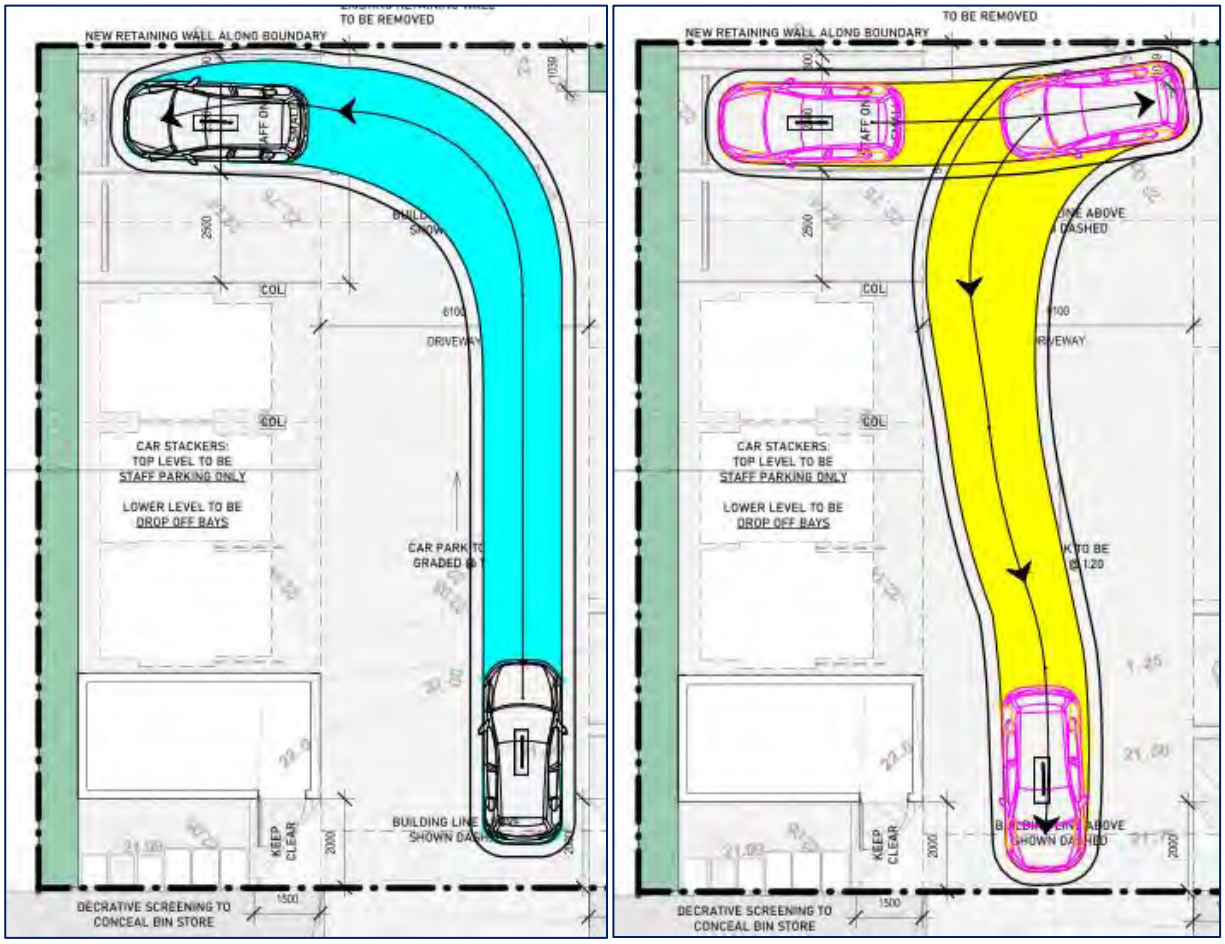
### 2.5.2 Provision of Parking in Car Stackers

The development provides for a total of 7 car stacking bays. The top level will be expected to be reserved for Staff Parking, meaning 8 bays (including small car bay) are provided exclusively for staff. The lower level will be used for drop off only.

### 2.5.3 Swept Paths

A swept path assessment was conducted for the small car bay, demonstrating that a small car is able to enter and exit the bay appropriately.

Figure 2-4 Small Car Swept Path Assessment



### 2.5.4 Motorcycle Parking Requirements and Provision

A summary of the City's LPP1.6 with respect to motorcycle/scooter parking requirements is provided in **Table 2-5**.

Table 2-5 Motorcycle/Scooter Parking Requirements and Provision

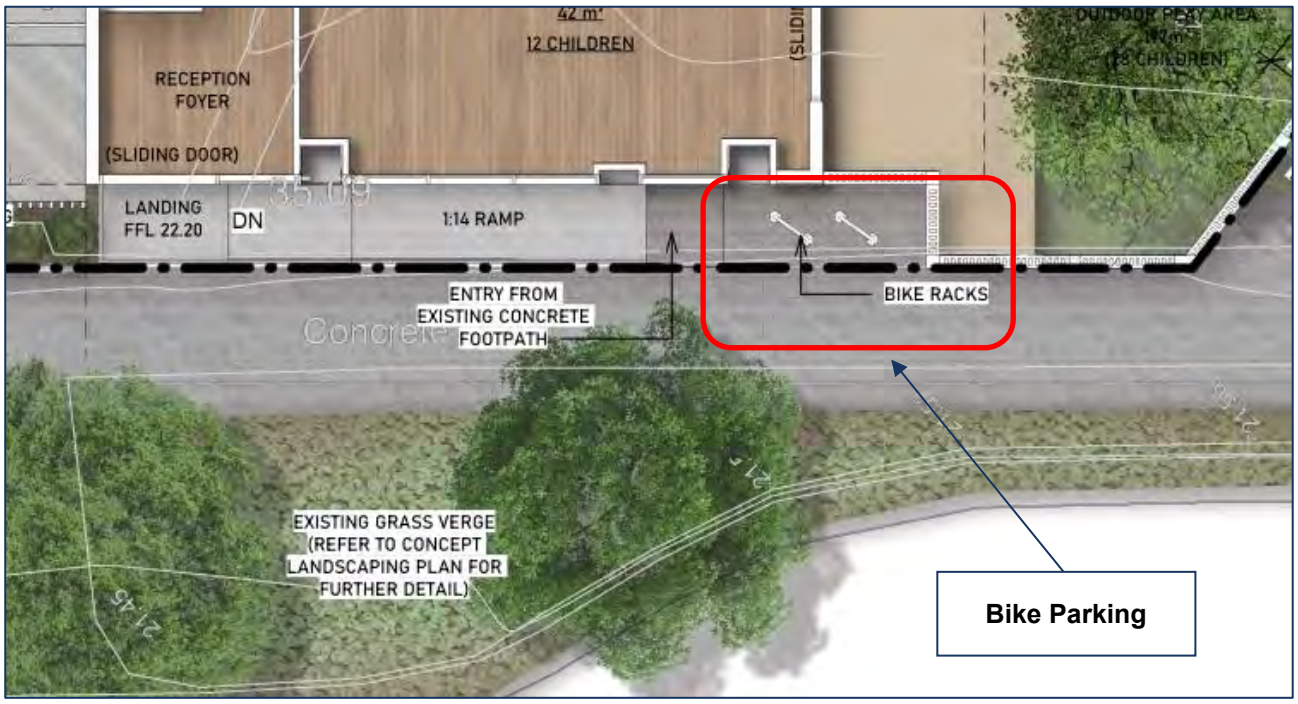
| Car Bays Required | Motorcycle/Scooter Parking Bays Required | Motorcycle/Scooter Parking Provision |
|---|---|---|
| 15 – 29 | 2 | 0 |

The target demographic for childcare is unlikely to travel by motorcycle. This, combined with the short dwell-time of parent parking, suggests that motorcycle bays would not be beneficial in this instance.

### 2.5.5 Bicycle Parking Requirements and Provision

Two U-Rails (four bicycle parking facilities) are provided on Harris Street next to the pedestrian entrance to the development, as shown in **Figure 2-5**.

Figure 2-5 Bicycle Parking




A summary of the City's LPP 1.6 with respect to bicycle parking requirements is provided in **Table 2-6**.

Table 2-6 Bicycle Parking Requirements and Provision

| Land Use | Bike Parking Requirements | Car Parking Bays | Bike Parking Provision |
|---|---|---|---|
| 15 – 29 | 2 per 10 car parking bays | 17 | 4 |

The bike parking provided appears generally consistent with AS2890.3, provided bike racks are installed as per manufacturer's guidelines.

# 3 Site-Specific Issues

## 3.1 Crash Assessment

5-year crash data (2015 to 2019) was obtained from MRWA website. Crashes which occurred within the vicinity of the Site were plotted in a heat map shown in **Figure 3-1**. Crashes were grouped into four categories: Medical, Hospital, Property Damage Only (PDO) Minor, and PDO Major.

Figure 3-1 Intersection and Midblock Crash Map


**Table 3-1** and **Table 3-2** also provide breakdown of the crash type and severity for the Intersection and midblock, respectively.

Table 3-1 Harris Street Midblock (between Canning Highway and Kanimbla Street)

| Type of Crash (RUM Code) | Fatal | Hospital | Medical | Major Property Damage | Minor Property Damage | Total Crashes |
|---|---|---|---|---|---|---|
| Sideswipe Same Direction | - | - | - | - | 1 | **1** |
| **Total** | **-** | **-** | **-** | **-** | **1** | **1** |

Table 3-2 Harris Street Midblock (between Canning Highway and Kanimbla Street)

| Type of Crash (RUM Code) | Fatal | Hospital | Medical | Major Property Damage | Minor Property Damage | Total Crashes |
|---|---|---|---|---|---|---|
| Right Angle | - | - | - | 6 | - | **6** |
| Rear End | - | - | - | - | 2 | **2** |
| Right Turn Thru | - | - | 1 | 1 | - | **2** |
| Unspecified | - | - | - | - | 1 | **1** |
| **Total** | **-** | **-** | **1** | **7** | **3** | **11** |

Of these crashes, the majority relate to property damage, with only one crash requiring medical attention. There were no recorded fatalities or crashes resulting in hospitalisations at either the intersection or midblock.

Overall, the number of crashes within the surrounding road network is relatively low and is unlikely the development will cause any material change to road safety in the area.

# 4 Summary

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 average as there is no direct 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 59 and 52 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 using the existing crossover location on Harris Street;
- Seven car stackers will be used, with the top layer expected to be used for staff parking;
- One small car bay will be provided and reserved for staff parking
- On-street waste collection is proposed for the Site along Harris Street.
- Overall, the number of crashes within the surrounding road network is relatively low and is unlikely the development will cause any material change to road safety in the area.

# APPENDIX

# A

## WAPC CHECKLIST

Checklist for a Traffic Impact Statement

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