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Proposed Childcare centre

1 Islip Court and 2A & 2B Broadhurst Cresent, Bateman

Transport Impact Statement

PREPARED FOR:

Hindle Properties

December 2024

Document history and status

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1 Introduction

This Transport Impact Statement (TIS) has been prepared by Transcore for Hindle Properties for the proposed childcare centre to be located on the corner of 1 Islip Court and 2A & 2B Broadhurst Cresent, Bateman in the City of Melville.

The subject site is a corner lot bounded by Islip Court at the south, Broadhurst Crescent at the east and Marsengo Road to the north as shown in Figure 1.

Figure 1: Location of the subject site

The proposed childcare centre is proposed to cater for 107 children and 18 full time staff members. The development's access is via a proposed crossover on Islip Court. The development plan is presented in Appendix A for reference.

The Transport Impact Assessment Guidelines (WAPC, Vol 4 – Individual Developments, August 2016) states: "A Transport Impact Statement is required for those developments that would be likely to generate moderate volumes of traffic[1] and therefore would have a moderate overall impact on the surrounding land uses and transport networks".

[1] *Between 10 and 100 vehicular trips per hour*

Section 6.2 of Transcore's report provides details of the estimated trip generation for the proposed development. Accordingly, as the total peak hour vehicular trips are estimated to be less than 100 trips, a Transport Impact Statement is deemed appropriate for this development.

Key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, access and egress movement patterns and parking demand and supply.

2 Development Proposal

The development proposal is for a childcare centre with an basement carpark to be located at 1 Islip Court, Bateman in the City of Melville. At full capacity, the childcare centre is planned to accommodate 107 children and 18 full-time staff.

The proposed childcare centre includes the following elements:

- Five children activity rooms (one room for 0-12 months, two rooms for 12-36 months, and two rooms for 3-year-olds);
- Two Cot Rooms;
- Entry / Waiting Foyer;
- Reception;
- Meeting Room;
- Office;
- Staff Room;
- Kitchen with Pantry;
- Laundry;
- Store Rooms;
- Toilets and Bathroom amenities;
- Outdoor Play Areas; and,
- basement Car Park with 20 bays (inclusive of one ACROD bay and one Turning Bay)

According to the development plan provided in Appendix A, a total of 20-on site, basement parking bays including one ACROD bay is proposed to address the parking demand of the proposed childcare centre. A turnaround bay is also proposed to provide efficient vehicular circulation within the car park.

Vehicular access to the subject site is proposed via a single full-movement crossover on Islip Ct. Pedestrian access to the childcare centre is available via the existing external footpath network along Islip Ct and Broadhurst Cr.

The bin store is provided on the northside of the basement car park. The collection of waste and building deliveries are expected to be accommodated within the carpark. It is proposed that servicing will be conducted outside the operating hours of the childcare centre.

3 Vehicle Access and Parking

3.1 Access

The subject site currently entails three existing full-movement crossovers, two on Broadhurst Crescent and one on Islip Court. As part of the development proposal, the two existing crossovers on Broadhurst Crescent are proposed to be removed and the crossover on Islip Court is proposed to be retained. The Islip court crossover will be widened to approximately 6.2m to allow for two-way traffic movement.

In accordance with AS2890.1, this crossover should be located 6.0m from the tangent point of the intersection of Broadhurst Crescent. The proposed crossover is 5.2m from the tangent point and therefore technically does not meet the requirement of AS2890.1. However, as Islip Court is a very short cul-de-sac road serving only 3 other properties in addition to the proposed childcare centre, the location of the proposed Islip Court crossover is considered acceptable.

A turning bay is provided within the basement carpark to facilitate carpark manoeuvrability. Refer to the location of the proposed crossover in Figure 2.

Figure 2: Location of development crossover

3.2 Parking

The proposed development proposes an basement car park, within the subject site, which has a provision of 20 parking bays inclusive of an ACROD bay plus a Turning Bay.

The City of Melville *Local Planning Policy LPP1.6* provides the car parking requirements for various land uses. The parking provision applicable to the proposed childcare centre is as follows:

- 1 car bay is required per 10 children, plus;
- 0.5 car bay per staff member.

The proposed childcare centre will accommodate 107 children and 18 staff members. According to the City's policy, the childcare centre requires a parking provision of 20 parking bays (11 bays for children drop off/pick up and 9 bays for staff).

The childcare centre basement carpark has also been designed with 20 parking bays which include one ACROD bay. Moreover, a turning bay is also proposed to enable exit from the carpark in forward gear.

Therefore, the proposed childcare centre parking provision satisfies the relevant parking requirement.

4 Hours of Operation

Based on the information provided to Transcore, the proposed childcare centre is expected to operate on weekdays between 6:30AM and 6:00PM.

5 Provision for Service Vehicles

The bin storage area is proposed at the northwest portion of the basement carpark, as is shown in the development plan attached in Appendix A. Based on the advice provided to Transcore, the waste collection for the proposed development will be undertaken using a private contractor.

The waste collection will be undertaken using 8.0m rear loader collection vehicle, which has a 2.5m height, and a 3.4m operating height. The operating height will be achieved at the rear of the car park where the clearance is at its highest. The waste collection truck will enter the carpark in forward gear, via the proposed full-movement crossover, on Islip Court, will turn around, within the adequate confines of the basement carpark, and reverse to the bin store for waste collection. The waste truck will then exit the carpark, via the same crossover in forward gear.

It is proposed that servicing will be conducted during after-hours of the childcare centre operation to allow for the service vehicle to manoeuvre within the car park. It is recommended that smaller vehicles, such as vans, should be used for general deliveries.

Turn path analysis has been undertaken for a 8.0m waste collection truck and is included in Appendix B. It shows satisfactory access and egress of the waste collection vehicle via Islip Ct.

6 Daily Traffic Volumes and Vehicle Types

6.1 Existing Development Trip Generation

The subject site is occupied by residential dwellings. It is assumed that the residential dwellings do not generate any traffic at present.

6.2 Proposed Development Trip Generation

To establish accurate traffic generation rates for the proposed childcare centre, traffic surveys undertaken by Transcore at similar centres in the Perth metropolitan area were sourced.

Discussions with the respective centre managers revealed that the peak drop-offs and pick-ups for these centres occur between the hours of 7:30 AM – 9:30 AM and 3:00 PM – 5:00 PM.

From the total number of children at each of the centres on the surveyed days, the following average generation rates were established for the morning and afternoon surveyed periods:

- 7:30AM–9:30AM: 1.25 trips per child (57% in / 43% out); and,
- 3:00PM–5:00PM: 1.10 trips per child (49% in / 51% out).

From this information, the traffic generation rate for the combined period of 07:30AM–09:30AM and 3:00PM–05:00PM was calculated as 2.36 trips per child. To convert this figure to a daily generation rate, this figure was increased to 3.5 trips per child to account for any trips outside of the surveyed times. It was assumed that the daily in and out split for vehicle trips was 50/50.

Furthermore, the following peak hour generation rates were established from the surveys for the childcare centres:

- AM peak hour: 8:00AM – 9:00AM: 0.87 trips per child (57% in / 43% out); and,
- PM peak hour: 04:00PM – 05:00PM: 0.71 trips per child (47% in/ 53% out).

A comparison of the four-hour generation rates and the peak-hour generation rates confirms that the distribution of traffic from these centres is spread over the peak periods and that the full concentration of traffic does not occur in one peak hour.

Accordingly, the following number of trips was estimated for the proposed Bateman Childcare centre, assuming a maximum scenario of 107 children being present (i.e., centre at full capacity):

- AM peak hour: 93 trips generated (53 in / 40 out);

- PM peak hour: 76 trips generated (36 in / 40 out); and,
- Daily traffic generation: 375 trips generated (188 in / 187 out).

6.3 Traffic Flow

Based on the site location and residential areas in the immediate locality, the permeability of the local road network, the centre's traffic distribution adopted for this analysis is as follows:

- 40% to/from the residential areas to the north on Dean Road;
- 40% to/from the residential areas to the west/ northwest on Murdoch Drive; and,
- 20% to/from the residential areas to the east on Marsengo Road.

Figure 3 illustrates trip generation and distribution of the development-generated traffic over the local road network. The trip distribution confirms all patrons will access the childcare centre from Islip Cr. Patrons from the north, east and west/ northwest will access the site from Marsengo Road through to Broadhurst Cresent.

It is anticipated no patrons will access the site from the south of South Street as there are established childcare centres within proximity of the Murdoch medical and university precincts.

Figure 3: Estimated traffic movements for the proposed childcare centre

6.4 Impact on Surrounding Roads

The WAPC *Transport Impact Assessment Guidelines* (2016) offers the following guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road but increases over 10 percent may. All sections of road with an increase greater than 10 percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The proposed Bateman childcare centre will not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vph to warrant further analysis. Therefore, the impact of development traffic on the surrounding road network will not be significant.

7 Traffic Management on the Frontage Streets

Islip Ct, south of the subject site, is constructed as a 7.5m wide single carriageway two-lane road forming a cul-de-sac. A pedestrian path is currently available on the northern side of the road.

Islip Ct is classified as an *Access Road* in the Main Roads *Metropolitan Functional Road Hierarchy.* It operates under the default, built-up area speed limit of 50km/h.

Islip Ct forms an unsignalised T-intersection with Broadhurst Crescent to the east. Refer to Figure 4 for more details.

Figure 4: Eastbound view of Islip Ct

Broadhurst Crescent, east of the subject site, is constructed as a 10.0m wide single-carriageway road. A Pedestrian path is currently available on the western side of the road.

Broadhurst Crescent is classified as an *Access Road* in the Main Roads *Metropolitan Functional Road Hierarchy.* It operates under the default, built-up area speed limit of 50km/h.

Broadhurst Crescent forms an unsignalised T-intersection with Islip Ct and Marsengo Road. Refer to Figure 5 for more details.

Figure 5: Northbound view of Broadhurst Cr & Marsengo Rd T-Intersection

Marsengo Rd, north of the subject site, is constructed as an 11.4m wide dual-carriageway two-lane road. Pedestrian paths and dedicated bycycle lanes are available on both sides of the road.

Marsengo Rd is classified as a *Local Distributor* in the Main Roads *Metropolitan Functional Road Hierarchy.* It operates under the default, built-up area speed limit of 50km/h.

Marsengo Rd forms an unsignalised T-intersection with Broadhurst Crescent and Murdoch Drive. Refer to Figure 6 for more information.

Figure 6: Westbound view of Marsengo Rd

8 Public Transport Access

The closest bus stop to the subject site is no. 19975 which is situated directly in front of the proposed childcare centre on Broadhurst Cr (before Marsengo Road). The bus service available at this location is Transperth Route 505 as shown in Figure 7. This bus service provides a direct connection to Murdoch and Bull Creek Train Stations.

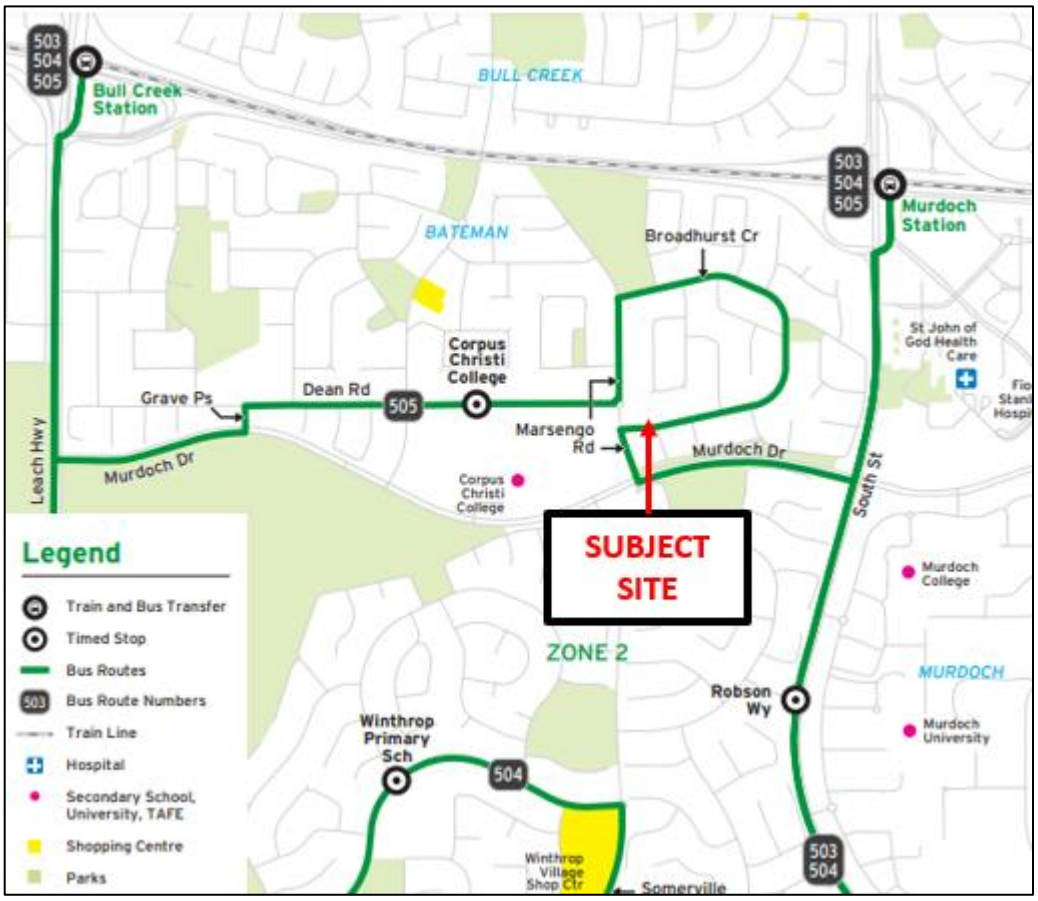

Figure 7: Bus Service 505 (Transperth Maps)

9 Pedestrian Access

Pedestrian access to the proposed development is available via the existing external footpath network along Islip Court, Broadhurst Crescent and Marsengo Road as shown in Figure 8 below. The proposed childcare centre will provide two direct connections for pedestrians on Broadhurst Cres. The walking distance via the existing footpath network to Murdoch Train Station is approximately 20 minutes.

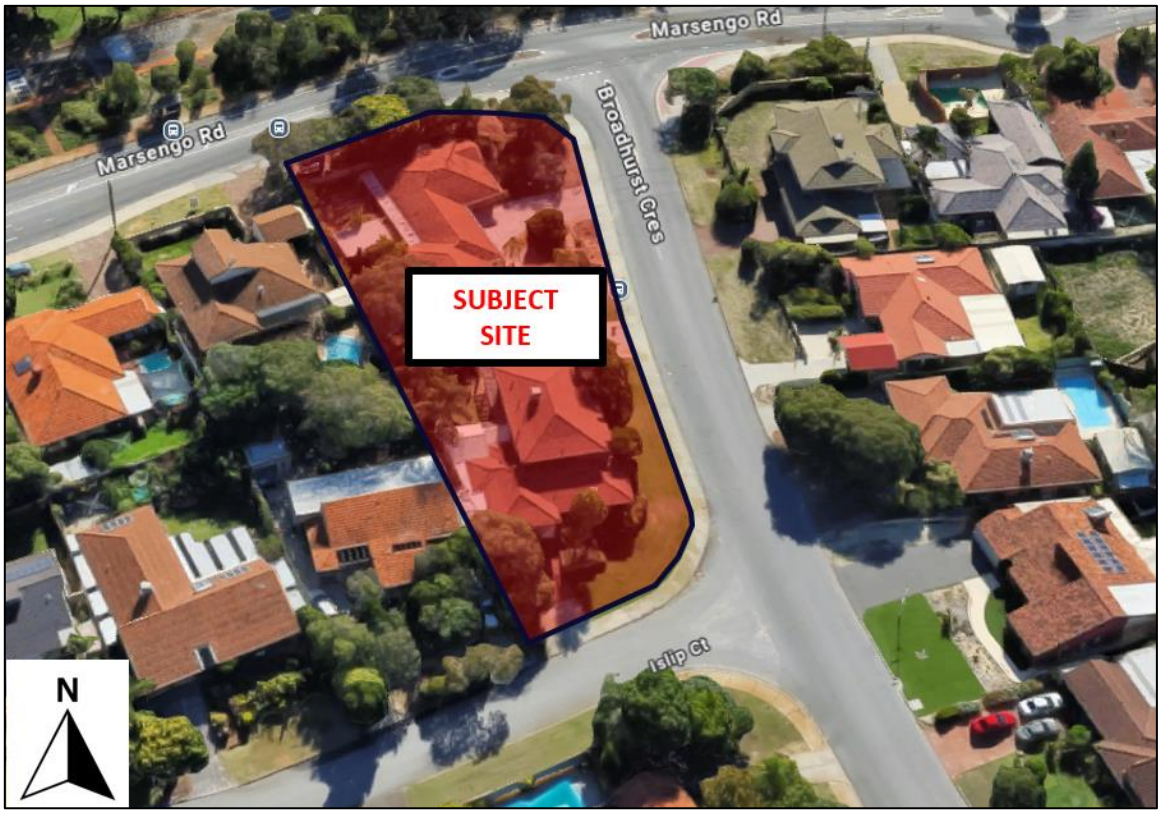

Figure 8: Islip Ct, Broadhurst Cres and Marsengo Rd Existing Footpath Network

10 Cycle Access

The Perth Bicycle Network Map illustrated in Figure 8 shows the existing cyclist connectivity to the subject site. Marsengo Rd and Broadhurst Cr, north and east of the subject site respectively, are shown to have Perth Bicycle Network (PBN) and High-Quality Shared Paths. This provides further links to other bicycle paths and cycle access to the Murdoch Train Station.

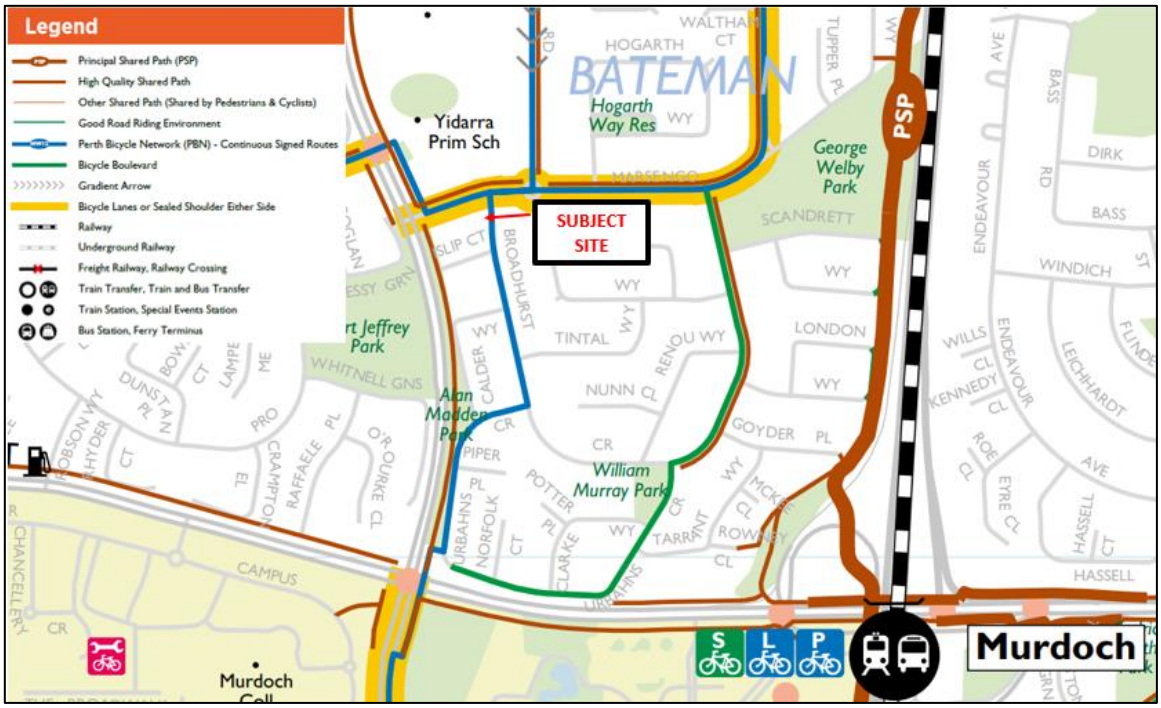

Figure 8: Extract from Bicycle Network Map (Department of Transport)

11 Site Specific Issues

Other than the minor non-conformance issue for the Islip Court crossover, no other site-specific issues were identified within the scope of this assessment.

12 Safety Issues

No safety issues were identified within the scope of this assessment.

13 Conclusions

This Transport Impact Statement (TIS) has been prepared by Transcore for Meyer Shircore Architects regarding the proposed childcare centre development to be located at 1 Islip Court and 2A & 2B Broadhurst Cresent, Bateman in the City of Melville.

The proposal entails the construction of a childcare centre with on-site, basement parking. The proposed development crossover is to be positioned on the corner of Islip Ct and Broadhurst Cr. The proposed childcare centre is to cater to 107 children and 18 staff.

The development on-site, basement car park entails parking provision of 20 parking bays (inclusive of one ACROD bay).

The traffic analysis undertaken in this report demonstrates that the estimated traffic generation of the proposed development is below the critical threshold set by WAPC and as such, would not have any significant impact on the surrounding road network.

The waste collection will be undertaken using 8.0m rear loader collection vehicle, which has a 2.5m height, and a 3.4m operating height. The operating height will be achieved at the rear of the car park where the clearance is at its highest. The waste collection truck will enter the carpark in forward gear, will turn around and reverse to the bin store for waste collection. The waste truck will then exit the carpark in forward gear.

The site features excellent connectivity with the existing road, path and cyclist network and public transport coverage via the existing bus service operating directly in front of the site.

No transport or safety issues have been identified for the proposed development.

It is concluded that the findings of this Transport Impact Statement are supportive of the proposed development.

Appendix A

PROPOSED DEVELOPMENT PLAN

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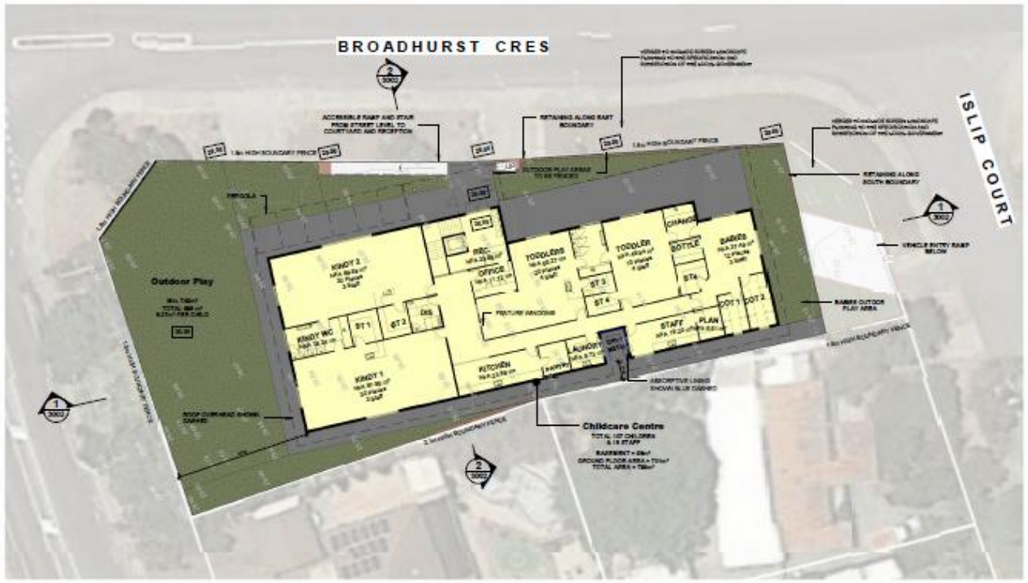
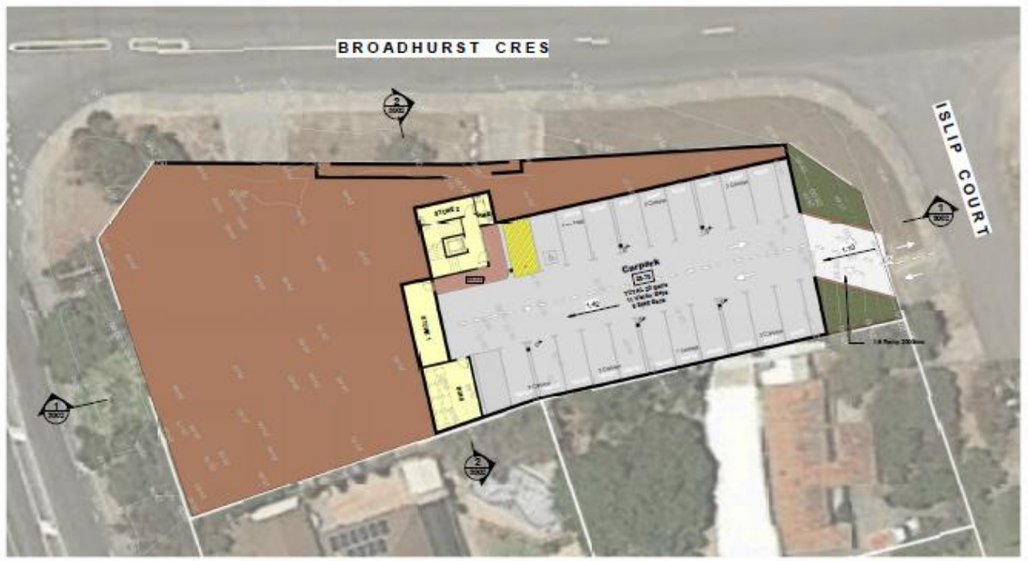


GROUND FLOOR PLAN



BASEMENT/UNDERCROFT FLOOR PLAN

SITE CRITERIA

1. Site Area
a. Site Area — 1,756m²

2. Floor Area (GFA)
a. Basement Entry — 110.9m²
b. Ground Floor — 302m²
Total Area — 636.9m²

3. Carparking
i. Bays Required
a. Childcare Centre
10 Staff @ 1:2 — 5 Bays
1:10 Children — 11 Bays
Total Bays Required — 26 Bays
Total Bays Provided — 26 Bays

CHILD CARE CRITERIA

1. Centre Capacity
a. Number of Places — 107 places

2. Landscaping
a. Landscaping Required (7m²/Child) — 749m²
b. Landscaping Provided — 1560m²
Total m² provided per child — 7.84m²

3. Rooms Distribution
a. Room 0-12m
Number of Places — 12 Places
Staff Required 1:4 — 3 Staff
Staff Provided — 3 Staff
b. Room 24-36m
Number of Places — 15 Places
Staff Required 1:5 — 3 Staff
Staff Provided — 3 Staff
c. Room 24-36m
Number of Places — 20 Places
Staff Required 1:5 — 4 Staff
Staff Provided — 4 Staff
d. Room +3y
Number of Places — 30 Places
Staff Required 1:10 — 3 Staff
Staff Provided — 3 Staff
e. Room +3y
Number of Places — 30 Places
Staff Required 1:10 — 3 Staff
Staff Provided — 3 Staff
Total Places — 107 Places
Total Staff — 10 Staff
(Includes + 2 Staff for Chef & Manager)

SITE DESIGN CHECKLIST

- [ ] 1. MAINS WATER LOCATION TO BE DETERMINED
- [ ] 2. FIRE MAIN PRESSURE TEST REQUIRED
- [ ] 3. FIRE TANKS OR PUMPS TO BE DETERMINED
- [ ] 4. WESTERN POWER TRANSFORMER LOCATION TO BE DETERMINED
- [ ] 5. CROSSOVER & ACCESS TO STREET TO BE DETERMINED BY LOCAL AUTHORITY
- [ ] 6. FULL FEATURE SITE SURVEY REQUIRED
- [ ] 7. DIAL BEFORE YOU DIG REQUIRED
- [ ] 8. BUMPER ATTACH LEVEL (BAL) TO BE DETERMINED
- [ ] 9. STREET POWER POLES TO BE DETERMINED
- [ ] 10. SITE ZONING & USE TO BE DETERMINED

NOTE: Any of the following items that do not have an 'X' in the provided square require determination.

PRELIMINARY

meyer shircore architects

PROPOSED CHILDCARE DEVELOPMENT
LOCATION : 1 ISLIP CRT 2A&2B BROADHURST CR, BATEMAN
FOR : ATLANTIS INDOOR PLAY CENTRE

DATE: OCT 2024 PROJECT NUMBER
REVISION: SK009 **23-9288**
SHEET: A - 1002
SCALE: As indicated@B1

Appendix B

TURN PATH ANALYSIS

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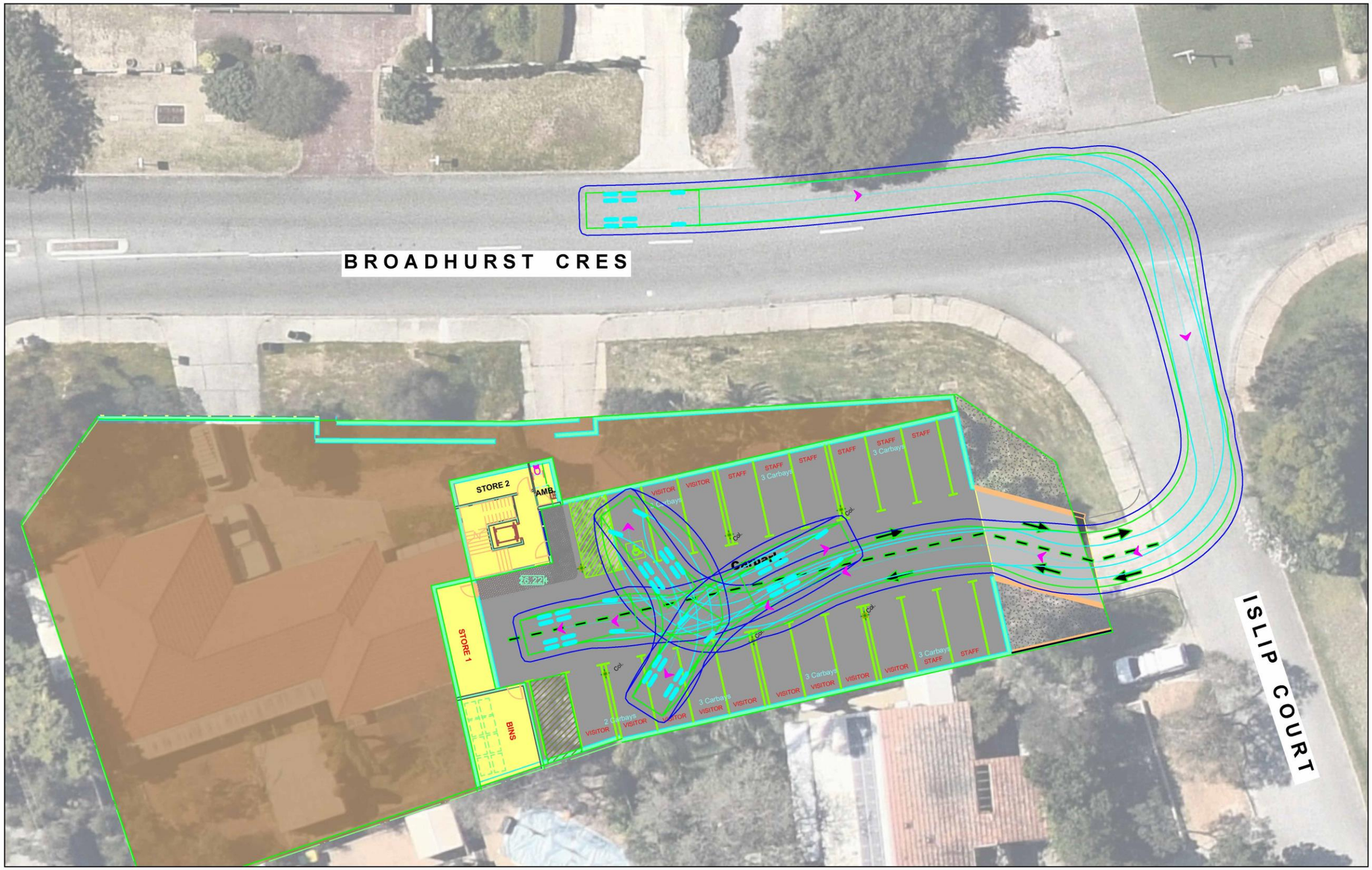

Cnr Broadhurst Cres & Islip Court, Bateman

8.0m Waste Collection Truck

Bins Area Access

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

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Scale: 1:250 @ A3

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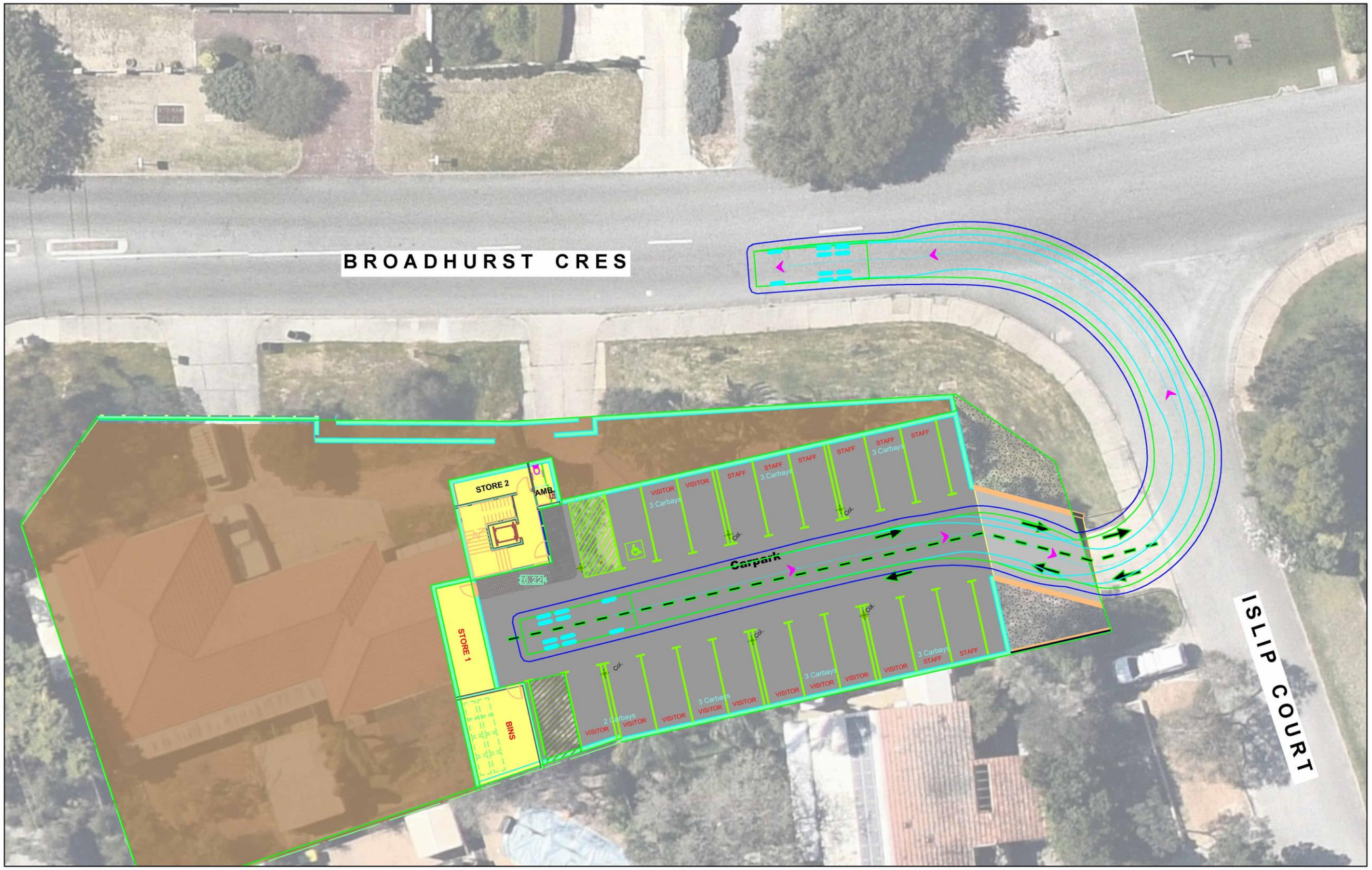

Cnr Broadhurst Cres & Islip Court, Bateman

8.0m Waste Collection Truck

Bins Area Egress

LEGEND

Vehicle Body

Wheel Path

500mm Clearance

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13/12/2024

Scale: 1:250 @ A3

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