

# TRANSPORT IMPACT STATEMENT

Lot 57 Briggs Road

Byford

April 2023

Rev D



**Transport Impact Statement**  
**KC01522.000 57 Briggs Road, Byford**

**HISTORY AND STATUS OF THE DOCUMENT**

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Rev B	23.02.2023	M Kleyweg	M Kleyweg	23.02.2023	Amended in Accordance with the Received Comments
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**Appendix 1** - The layout of the proposed development

**Appendix 2** - Transport Planning and Traffic Plans

**Appendix 3** - Vehicle Turning Circle Plans

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## 1. Executive Summary

### Site Context

- The project location is Lot 57 Briggs Road, Byford. The subject site is currently occupied by a single residence.
- The subject lot is a part of the Byford Area D Local Structure Plan.
- Stage 1 includes the construction of the Childcare facility with an interim driveway access to Briggs Road.
- Stage 2 includes the ultimate development scenario around the site as per the local structure plan, including the delivery of Indigo Parkway (north) and local access road (east). This will involve the minor reconfiguration of crossovers to the car park.
- The proposed development will be a childcare centre with a capacity for 104 children and 18 staff members.

### Technical Findings

- The proposed development is expected to generate up to 452 vehicular trips per day, 83 vehicle trips in the AM peak and 73 vehicular trips in the PM peak.
- According to WAPC this is considered as a moderate traffic impact to the surrounding road network.
- Two major routes are expected to be utilised for access to development:
  - To/from the north via Briggs Road
  - To/from the south via Briggs Road

### Relationship with Policies

- According to the Shire of Serpentine – Jarrahdale TPS No. 2 requirements, the proposed development requires 21 carparking bays. According to the Draft Local Planning Scheme No.3 the proposed development would require 29 parking bays.
- The subject development will propose 31 parking bays in stage 1 and 29 in Stage 2.
- Therefore, the proposed development will meet the requirement in both Stages and in accordance with both relevant parking requirement documents.
- Building Code of Australia ACROD Provision – the proposed development will meet the requirement for 1 ACROD bay.

### Conclusion

- As stated above the additional traffic attracted to the subject site is expected to increase by a maximum of 452 vehicular trips per day and 83 vehicular trips in the peak hour.
- Briggs Road is classified as Local Distributor as per MRWA classification with the maximum desirable volume of 6,000 vehicles per day. Available traffic counts show approximately 3,900 VPD on Briggs Road south of Thomas Road. Therefore, with the added traffic from the subject site the street would remain well under the maximum desirable traffic volume for Local Distributor roads.
- Other surrounding roads would absorb significantly less traffic than Briggs Road, moreover, the traffic would be dispersed so that the impact can be considered negligible.
- In summary KCTT believe that the proposed development will not have a negative impact on the surrounding road network.

## 2. Transport Impact Statement

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### 2.1 Location

Lot Number	57
Street Number	/
Road Name	Briggs Road
Suburb	Byford
Description of Site	The subject site is currently occupied by a single residence. The proposed development will be a childcare centre with a capacity for 104 children and 18 staff members.

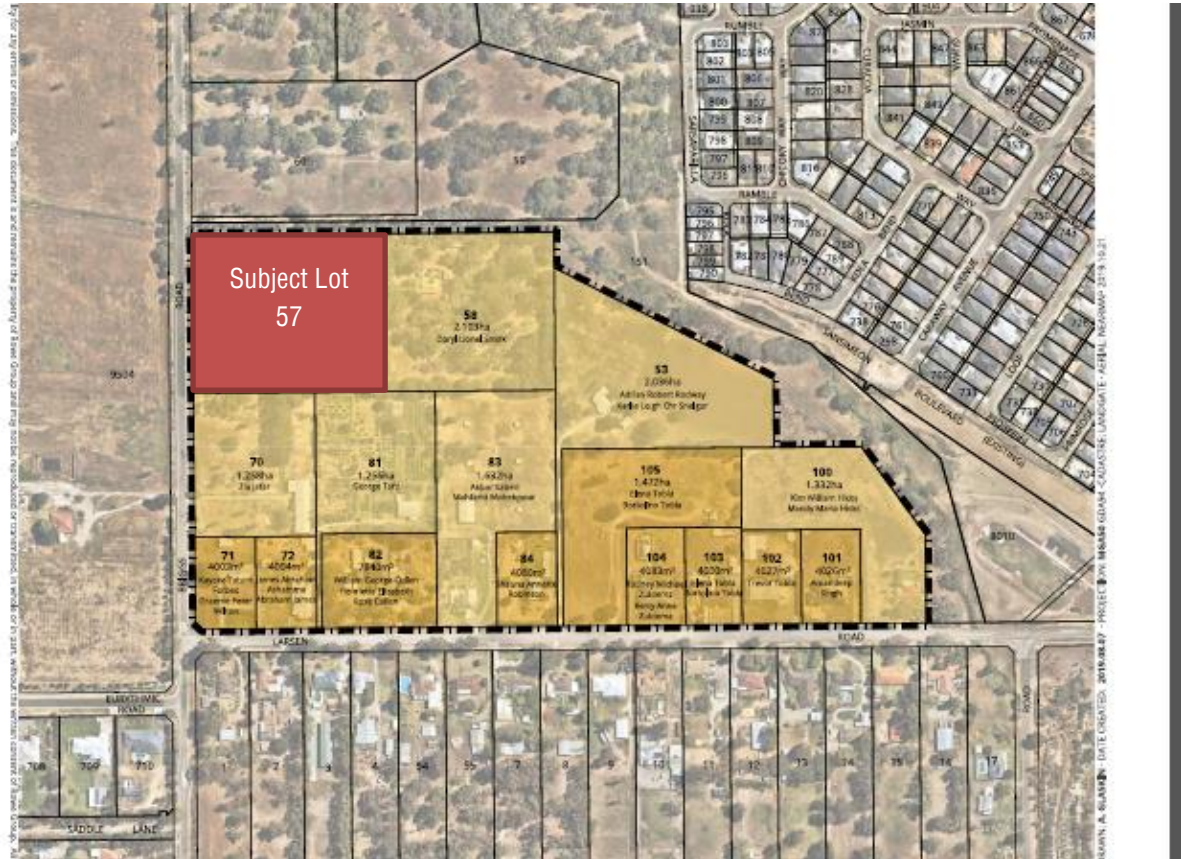
### 2.2 Technical Literature Used

Local Government Authority	Shire of Serpentine-Jarrahdale
Type of Development	Individual Development – Childcare Centre
Is the NSW RTA Guide to Traffic Generating Developments Version 2.2 October 2002 (referenced to determine trip generation / attraction rates for various land uses) referenced?	YES
Which WAPC Transport Impact Assessment Guideline should be referenced?	Volume 4 - Individual Developments
Are there applicable LGA schemes for this type of development?	YES
<i>If YES, Nominate:</i>	
Name and Number of Scheme	Town Planning Scheme No. 2
Are Austroads documents referenced?	YES

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**2.3 Review of the Available Planning Documents**

**Which Structure Plan / Subdivision is the development part of?** Byford Area D – Briggs Larsen Precinct Local Structure Plan (Document by Rowe Group Design – March 2021)



**Describe the major changes of the surrounding area associated with the completion of the Structure Plan**

- Byford Area D is expected to include 161 residential dwellings.
- Indigo Parkway, currently located to the west of Briggs Road without an intersection with this road is expected to be extended to the east side of Briggs Road.
- Additional internal road will be constructed to intersect with Briggs Road. This road will provide access to Briggs Road for residential developments within Byford Area D.

**Describe the expected changes to the proposed development**

The proposed development will have an additional crossover to the new road perpendicular to Indigo Parkway.

This will allow for a more comfortable manoeuvring within the internal driveway while keeping the minimum required carparking bays.

**Changes to the surrounding road network**

Based on the information from the Shire of Serpentine-Jarrahdale, a median is expected to be constructed on Indigo Parkway, allowing only LILLO movements from/to Briggs Road. The timeframe of this amendment is currently unknown.

Furthermore, travel to the south towards Briggs Road will be rerouted as Briggs Road is expected to be closed between Saddle Lane and unnamed path below the training complex.

This report will mainly focus on the Stage 1 of this development, where only Childcare Centre and an interim driveway access to Briggs Road are completed, as the timeframe of Byford Area D completion is not mentioned in the Local Structure Plan document.

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## 2.4 Land Uses

Are there any existing Land Uses YES  
 If YES, Nominate: 1 single residence

### Proposed Land Uses

How many types of land uses are proposed? One (1)  
 Nominate land use type and yield Childcare Centre  
 - 104 children  
 - 18 staff members

Are the proposed land uses complementary with the surrounding land-uses? YES

## 2.5 Local Road Network Information

How many roads front the subject site? One (1)

*Name of Roads Fronting Subject Site / Road Classification and Description:*

### Road Name

Number of Lanes	two way, one lane (no linemarking), undivided
Road Reservation Width	20m
Road Pavement Width	7m
Classification	Local Distributor
Speed Limit	50kph
Bus Route	NO
On-street parking	NO

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## 2.6 Traffic Volumes

Road Name	Location of Traffic Count	Vehicles Per Day (VPD)	Vehicles per Peak Hour (VPH)				Heavy Vehicle % <i>If HV count is Not Available, are HV likely to be in higher volumes than generally expected?</i>	Date of Traffic Count	<i>If older than 3 years multiply with a growth rate</i>
			AM Peak Time	AM Peak VPH	PM Peak Time	PM Peak VPH			
Briggs Road	South of Thomas Road	3,829	08:00 – 449		15:15 – 411		3%	Mar 2022	–
Thomas Road	West of Briggs Road	11,373	08:00 – 1,020		15:15 – 1,040		8%	Mar 2022	–
	East of Briggs Road	8,362	08:00 – 671		15:15 – 689		10%	Mar 2022	–

*Note\** - These traffic counts have been obtained from the MRWA Traffic Map

## 2.7 Vehicular Crash Information

Is Crash Data Available on Main Roads WA website?	NO
<i>If YES, nominate important survey locations:</i>	
Location 1	Briggs Road [SLK 1.20 – 1.53]
Period of crash data collection	01/01/2017 - 31/12/2021
Comment	No crashes were reported for the above location in the 5-year collection period



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## 2.8 Vehicular Parking

Local Government

Shire of Serpentine-Jarrahdale

Local Government Document Utilised

Town Planning Scheme No. 2;

Draft Local Planning Scheme No. 3

Description of Parking Requirements in accordance with Scheme:

**TPS No. 2:**

*Child Minding Centre - 1 space per 5 children accommodated*

**Draft LPS No. 3:**

*Child Care Premises - 1 per 10 children accommodated under maximum occupancy and 1 bay per employee\* with a minimum of 3 spaces*

**Calculation of Parking in Accordance with TPS No. 2**

Land Use	Requirements	Yield	Total Parking
Childcare Centre	1 space per 5 children	104	21
<b>Total Car Parking Requirement</b>			<b>21</b>
<b>Total Volume of Parking Provided by Proponent</b>			<b>31 in Stage 1; 29 in Stage 2</b>

**Calculation of Parking in Accordance with Draft LPS No. 3**

Land Use	Requirements	Yield	Total Parking
Childcare Centre	1 space per 10 children; 1 bay per employee	104 children; 18 staff members	29
<b>Total Car Parking Requirement</b>			<b>29</b>
<b>Total Volume of Parking Provided by Proponent</b>			<b>31 in Stage 1; 29 in Stage 2</b>

**Justification**

According to the Shire of Serpentine – Jarrahdale TPS No. 2 requirements, the proposed development requires 21 carparking bays.

According to the Draft Local Planning Scheme No.3 the proposed development would require 29 parking bays.

The subject development will propose 31 parking bays in stage 1 and 29 in Stage 2 (two bays will be deleted to allow for addition of a crossover).

Therefore, the proposed development will meet the requirement in both Stages and in accordance with both relevant parking rates.

**Have Vehicle Swept Paths been checked for Parking? YES**

*If YES, provide description of performance:*

The layout for the proposed development has been checked with a B99 Passenger Vehicle (5.2m) and a Service/Waste Vehicle (8.8m). The waste vehicle will have to enter the site after hours of operations as it will require to use the empty carparking bays for manoeuvring.

No navigability issues have been presented. Refer to Appendix 3 for swept path drawings.

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**2.9 Compliance with AS2890.1:2004 and AS2890.6**

Number of Parking Bays on-site 29  
 Are Austroads documents referenced? YES  
 If YES, Nominate:

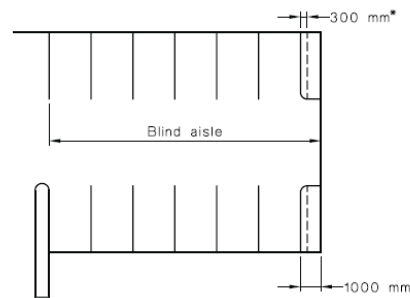
- Australian/New Zealand Standard, Parking facilities, Part 1: Off-street car parking - Originated as AS 2890.1—1986.
- Australian/New Zealand Standard, Parking facilities, Part 6: Off-street parking for people with disabilities - Originated as AS2890.6

Proposed development User Class User Class 1A (Residential, domestic and employee parking)  
 User Class 3 (visitors' parking)  
 User Class 4

AS2890.1:2004 Off-street car parking						
AS2890.6 Off-street parking for people with disabilities						
Parking Bay Type	Parking Bay Length		Parking Bay Width		Aisle Width	
	Required	Proposed	Required	Proposed	Required	Proposed
All bays at 90° (User Class 1A)	5.4m	5.4m	2.4m	2.4m	5.8m	6.2m
All bays at 90° (User Class 3)	5.4m	5.4m	2.6m	2.6m	5.8m	6.2m
ACROD Parking	5.4m	5.4m	2.4m-ACROD 2.4m-shared space	2.4m-ACROD 2.4m-shared space	5.8m	6.2m

Name the other requirements in the AS2890.1:2004 document.

*‘At blind aisles, the aisle shall be extended a minimum of 1 m beyond the last parking space, as shown in Figure 2.3, and the last parking space widened by at least 300 mm if it is bounded by a wall or fence.*  
*In car parks open to the public, the maximum length of a blind aisle shall be equal to the width of six 90 degree spaces plus 1 m, unless provision is made for cars to turn around at the end and drive out forwards.’*



\*Additional widening required if there is a wall or fence at the side of the last space, see Clause 2.4.1(b)(ii)

DIMENSIONS IN MILLIMETRES

FIGURE 2.3 BLIND AISLE EXTENSION

KCTT comment:

Blind aisle
Reversing bay

Extended by a minimum of 1 m  
 Provided

Does the parking area meet the requirements set in AS2890.1:2004?

KCTT reviewed the proposed development layout and concluded that dimensions of all car parking bays and aisle width comply with the Australian Standard AS/NZS 2890.1/2004.

Does the parking area meet the requirements set in AS2890.6?

YES

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## 2.10 Bicycle Parking

Local Government Shire of Serpentine-Jarrahdale  
 Reference Document Utilised Local Planning Policy 4.15: Bicycle Facilities Policy

Description of Parking Requirements in accordance with the Relevant Document:

*No requirements*

### Justification

The Shire's Local Planning Policy 4.15: Bicycle Facilities Policy applies to the proposed development. LPP 4.15, Schedule 1 specifies rates for the provisions of bicycle parking facilities for certain land uses. A 'Child Minding Centre' is not included in Schedule 1.

Given the location of the proposed development, it is unlikely that the residents or staff members arrive to the Child Care Centre using bicycles.

## 2.11 ACROD Parking

Class of Building Class 9b  
 Does this building class require specific provision of ACROD Parking? YES  
 Reference Document Utilised Building Code of Australia

Description of Parking Requirements:

*Class 9b — (b) Other assembly building — (i) up to 1000 carparking spaces; - 1 space for every 50 carparking spaces or part thereof*

### Parking Requirement in accordance with regulatory documents

Land Use	Requirements	Yield	Total Parking
Childcare Centre	<i>1 space for every 50 carparking spaces or part thereof</i>	29	1
<b>Total Volume of ACROD Parking Required</b>			<b>1</b>
<b>Total Volume of ACROD Parking Provided by Proponent</b>			<b>1</b>

### Justification

The proposed development meets the requirement for 1 ACROD bay.

## 2.12 Delivery and Service Vehicles

Guideline Document used as reference NSW RTA Guide to Traffic Generating Developments  
 Requirements

*Other uses - 1 space per 2,000m<sup>2</sup>*

### Parking Requirement in accordance with regulatory documents

Land Use	Minimum Requirements	Yield	Total Parking
Childcare Centre	<i>1 space per 2,000m<sup>2</sup></i>	615m <sup>2</sup>	1
<b>Total Volume of Service and Delivery Parking Required</b>			<b>1</b>
<b>Total Volume of Service and Delivery Parking Provided by Proponent</b>			<b>N/A</b>

### Justification

The proposed development will not require a dedicated delivery parking bay.

Waste vehicle is expected to enter the development outside of hours of operation and turnaround on site using empty parking spaces.

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## 2.13 Calculation of Development Generated / Attracted Trips

What are the likely hours of operation?	06:30 - 18:30
What are the likely peak hours of operation?	AM peak 07:30 - 08:30 PM peak 16:30 - 17:30
Do the development generated peaks coincide with existing road network peaks?	YES
If YES, Which:	Partially AM peak
Guideline Document Used	NSW RTA Guide to Traffic Generating Developments

Rates from above document:

**Child Day Care:**

- 0.8 trips in AM Peak per child
- 0.7 trips in PM Peak per child

*It should be noted that these rates are given for a 2-hour peak period. For the purposes of this report KCTT will use the worst-case scenario where the two-hour traffic volume will be attracted to the development within one hour.*

Given that the WAPC Transport Assessment Guidelines and NSW RTA Guide to Traffic Generating Developments do not offer daily vehicular trip generation rate for these land uses KCTT have assumed the following to apply:

**Childcare centres** vehicular daily trips can be assumed to be 4 VPD per child and 2 VPD per employee. Each parent will make 2 vehicular trips when dropping off the child to the day care centre and 2 vehicular trips when picking the child up. Employees will make 1 vehicular trip arriving to work, and another vehicular trip when leaving work. For the calculations below, a conservative approach has been applied **showing the theoretical maximum number of children, under assumption that all children are driven to school, there are no siblings in the centre and there are no sick children absent from the centre.**

Land Use Type	Rate above	Yield	Daily Traffic Generation	Peak Hour Traffic Generation	
				AM	PM
Childcare Centre	4 VPD per child+2 VPD per employee 0.8 VPH AM Peak per child 0.7 VPH PM Peak per child	104 children 18 staff members	452	83	73

Does the site have existing trip generation / attraction?	YES Single residence 9 vehicular trips per day; 1 vehicular trip per hour in both Peak Hours
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What is the total impact of the new proposed development?	The proposed development is expected to generate 443 vehicular trips per day, 82 vehicle trips in the AM peak and 72 vehicular trips in the PM peak (deduction of existing traffic from the proposed traffic). According to WAPC this is considered as a moderate traffic impact to the surrounding road network.
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**2.14 Traffic Flow Distribution**

How many routes are available for access / egress to the site? Two (2)

**Route 1 / Movement 1**

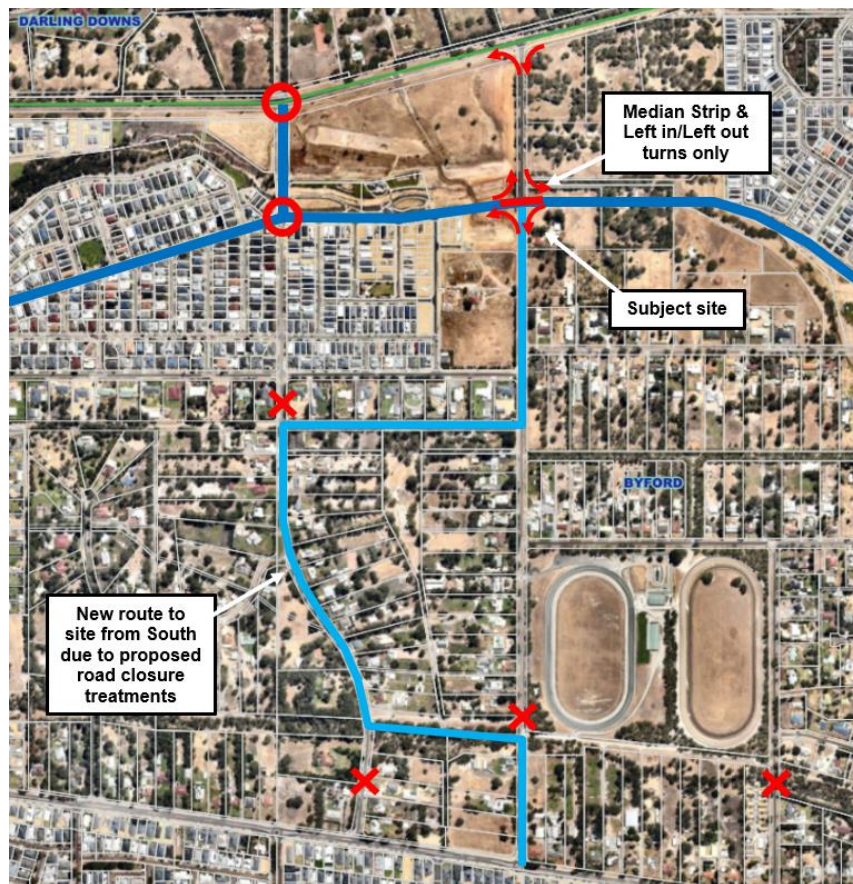
Provide details for Route No 1 To/from the north via Briggs Road  
 Percentage of Vehicular Movements via Route No 1 60% [271 VPD; AM 50 VPH; PM 44 VPH]

**Route 2 / Movement 2**

Provide details for Route No 2 To/from the south via Briggs Road  
 Percentage of Vehicular Movements via Route No 2 40% [181 VPD; AM 33 VPH; PM 29 VPH]

**Note\*** - The distribution is likely to change after complete development of the Local Structure Plan and Subdivisions, including the extension of Indigo Parkway. Furthermore, based on the information from the Shire of Serpentine-Jarrahdale, a median is expected to be constructed on Indigo Parkway, allowing only LILLO movements from/to Briggs Road. This amendment would change the traffic distribution to future routes which would be available for reaching the site. For example, for reaching Thomas Road, vehicles would go through via Indigo Parkway and via future extension of Malarkey Road.

However, the timeframe of this amendment is currently unknown and there is limited information on how the traffic would reroute to reach the site. Therefore, this report and Appendix 2 show the traffic distribution with a full movement intersection of Briggs Road and Indigo Parkway (extended driveway). Below is a screenshot showing the future amendments to the surrounding road network.



Screenshot received from the Shire of Serpentine-Jarrahdale.

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## 2.15 Surrounding Area Developments

<p>Nominate the significant developments in the vicinity of the proposed development.</p>	<p>Future Childcare centre for 110 children on Lots 367 to 373 of the Byford Meadows Stage 7 Development Plan.</p> <p>This lots are fronting Indigo Parkway (west of Briggs Road), Briggs Road and Caspian Chase</p> <p>This proposed development will be located directly across the proposed childcare centre which is the subject of this report.</p>
<p>What is the expected traffic impact from the nominated development</p>	<p>As per Shawmac's TIS report (February 2023), the proposed childcare will generate up to 450 vehicular trips per day and 87 vehicular trips per hour in peak hours.</p>
<p>Will the peak hours of the developments coincide?</p>	<p>Yes. The two childcare centres will have similar traffic impact and given it is the same land use, peak hours will coincide.</p>
<p>Impact on Briggs Road</p>	<p>KCTT believe that having two childcare centres on opposite sides of Briggs Road will not have a negative impact on the traffic flow conditions and traffic safety of this road section.</p> <p>Both childcare centres will have their access points away from Briggs Road.</p> <p>The childcare centre west of Briggs Road will have two crossovers and two connections with Briggs Road:</p> <ul style="list-style-type: none"> <li>- 1 LILO crossover from/to Indigo Parkway</li> <li>- 1 full movement crossover from/to Caspian Chase.</li> </ul> <p>Therefore, traffic will be dispersed from Indigo Parkway / Briggs Road intersection as vehicles will have to use Caspian Chase crossover to reach Briggs Road.</p>
<p>Conclusion</p>	<p>KCTT believe that Briggs Road will successfully absorb both childcare centres' generated traffic.</p> <p>After the expected addition of median on Indigo Parkway (timeframe unknown), traffic volume on Briggs Road will significantly decrease as there will be no direct route via Briggs Road to Thomas Road.</p>

## 2.16 Vehicle Crossover Requirements

<p>Are vehicle crossovers required onto existing road networks?</p>	<p>YES</p>
<p>How many existing crossovers?</p>	<p>One (1)</p>
<p>How many proposed crossovers?</p>	<p>One full movement crossover will be proposed in the Stage 1 (before the completion of the entire Structure Plan area)</p> <p>One additional full movement is envisioned for the ultimate scenario.</p>
<p>How close are proposed crossovers to existing intersections?</p>	<p>More than 50m</p>
<p>Does this meet existing standards?</p>	<p>YES</p>

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## 2.17 Public Transport Accessibility

How many bus routes are within 400 metres of the subject site? One (1)  
 How many rail routes are within 800 metres of the subject site? None

Bus Route	Description	Peak Frequency	Off-Peak Frequency
254	Armadale Station – Byford via Kardan Boulevard	15 minutes	60 minutes

Walk Score Rating for Accessibility to Public Transport

22 | Minimal Transit. It is possible to get on a bus.

## 2.18 Pedestrian Infrastructure

Describe existing local pedestrian infrastructure within a 400m radius of the site:

Currently there is no pedestrian path on Briggs Road.

It is expected that pedestrian path will be added within Byford Area D works on both existing Briggs Road and Indigo Parkway extension.

What is the Walk Score Rating?

2 | Car-Dependent. Almost all errands require a car.

## 2.19 Cyclist Infrastructure

Are there any PBN Routes within an 800m radius of the subject site? YES

If YES, describe:

Classification	Road Name
“Other Shared Path (Shared by Pedestrians and Cyclists)”	Thomas Road
“Good Road Riding Environment”	Masters Road

Are there any PBN Routes within a 400m radius of the subject site? NO

Does the site have existing cyclist facilities? NO

Does the site propose to improve cyclist facilities? The bicycle infrastructure is likely to improve with the completion of the entire Byford Area D.

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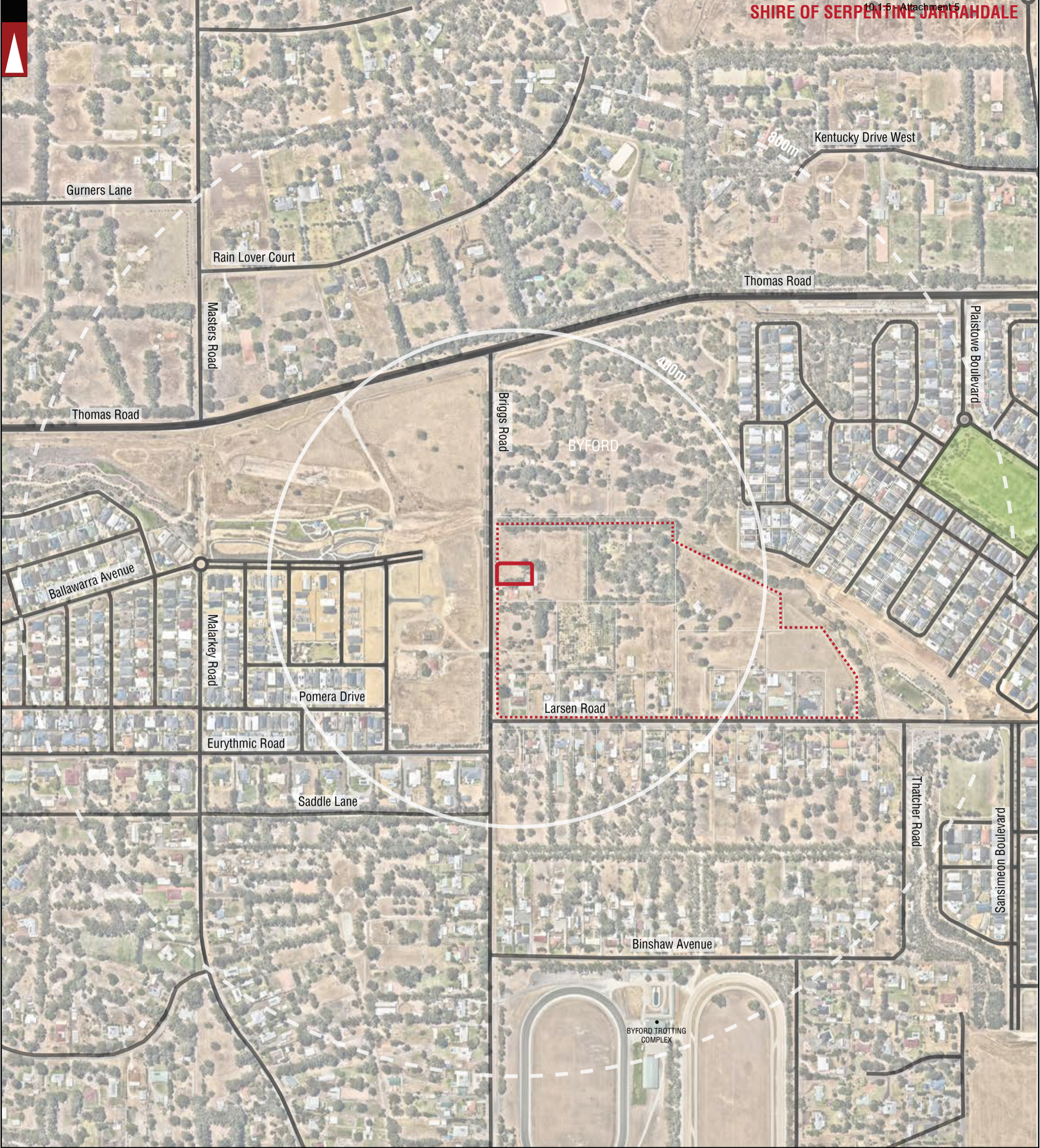
## 2.20 Site-Specific Issues and Proposed Remedial Measures

How many site-specific issues need to be discussed?	One (1)
<b>Site-Specific Issue No 1</b>	Traffic Impact
Remedial Measure / Response	<p>As stated above the additional traffic attracted to the subject site is expected to increase by a maximum of 452 vehicular trips per day and 83 vehicular trips in the peak hour.</p> <p>Briggs Road is classified as Local Distributor as per MRWA classification with the maximum desirable volume of 6,000 vehicles per day. Available traffic counts show approximately 3,900 VPD on Briggs Road south of Thomas Road. Therefore, with the added traffic from the subject site the street would remain well under the maximum desirable traffic volume for Local Distributor roads.</p> <p>Other surrounding roads would absorb significantly less traffic than Briggs Road, moreover, the traffic would be dispersed so that the impact can be considered negligible.</p>



# **Appendix 2**

## **Transport Planning and Traffic Plans**



	PARKS AND RECREATION		STRUCTURE PLAN AREA
	ROAD		DISTANCE FROM LOCATION
	HAY STREET STREET NAME	<b>SHIRE OF SERPENTINE JARRAHDALE</b>	LOCAL GOVERNMENT NAME
	SUBJECT SITE	BYFORD	SUBURB NAME

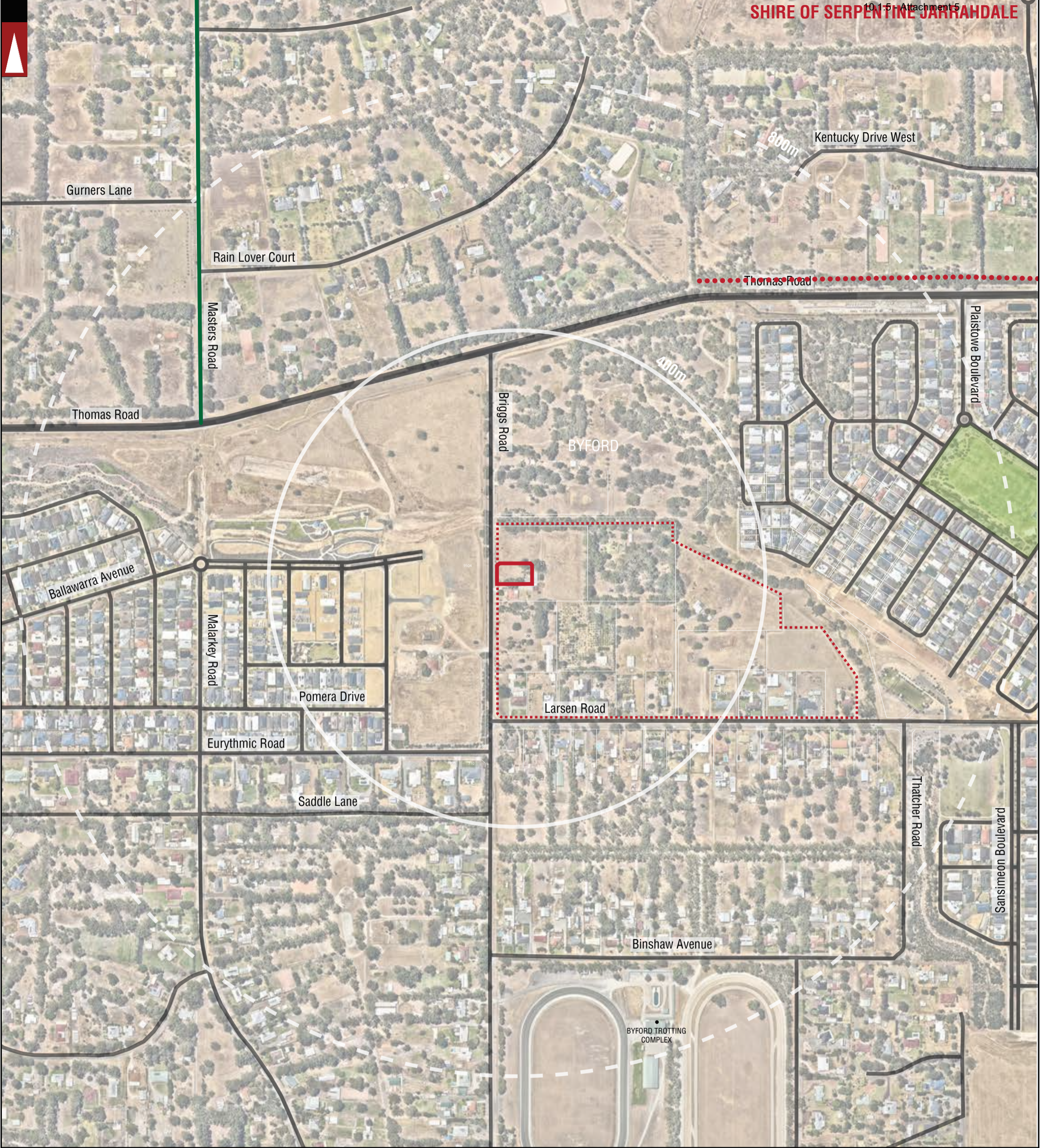
**LEGEND**

No	DATE	AMENDMENT
A	08-02-2023	ISSUED FOR REVIEW

PROJECT: <b>LOT 57 BRIGGS ROAD, BYFORD</b>	DRAWN BY: <b>Civil &amp; Traffic Engineering Consultants KCTT (Trading as KC Traffic and Transport Pty Ltd) PO Box 1456 Scarborough WA 6922</b>
TITLE: <b>LOCALITY PLAN - 800M RADIUS</b>	
DRAWING NUMBER: <b>KC01522.000_S01</b>	A.M.

PH: 08 9441 2700  
WEB: www.kctt.com.au





	PARKS AND RECREATION		STRUCTURE PLAN AREA		OTHER SHARED PATH (SHARED BY PEDESTRIANS & CYCLISTS)
	ROAD		DISTANCE FROM LOCATION		GOOD ROAD RIDING ENVIRONMENT
	HAY STREET		SHIRE OF SERPENTINE JARRAHDALE		
	SUBJECT SITE		LOCAL GOVERNMENT NAME		
			BYFORD		
			SUBURB NAME		

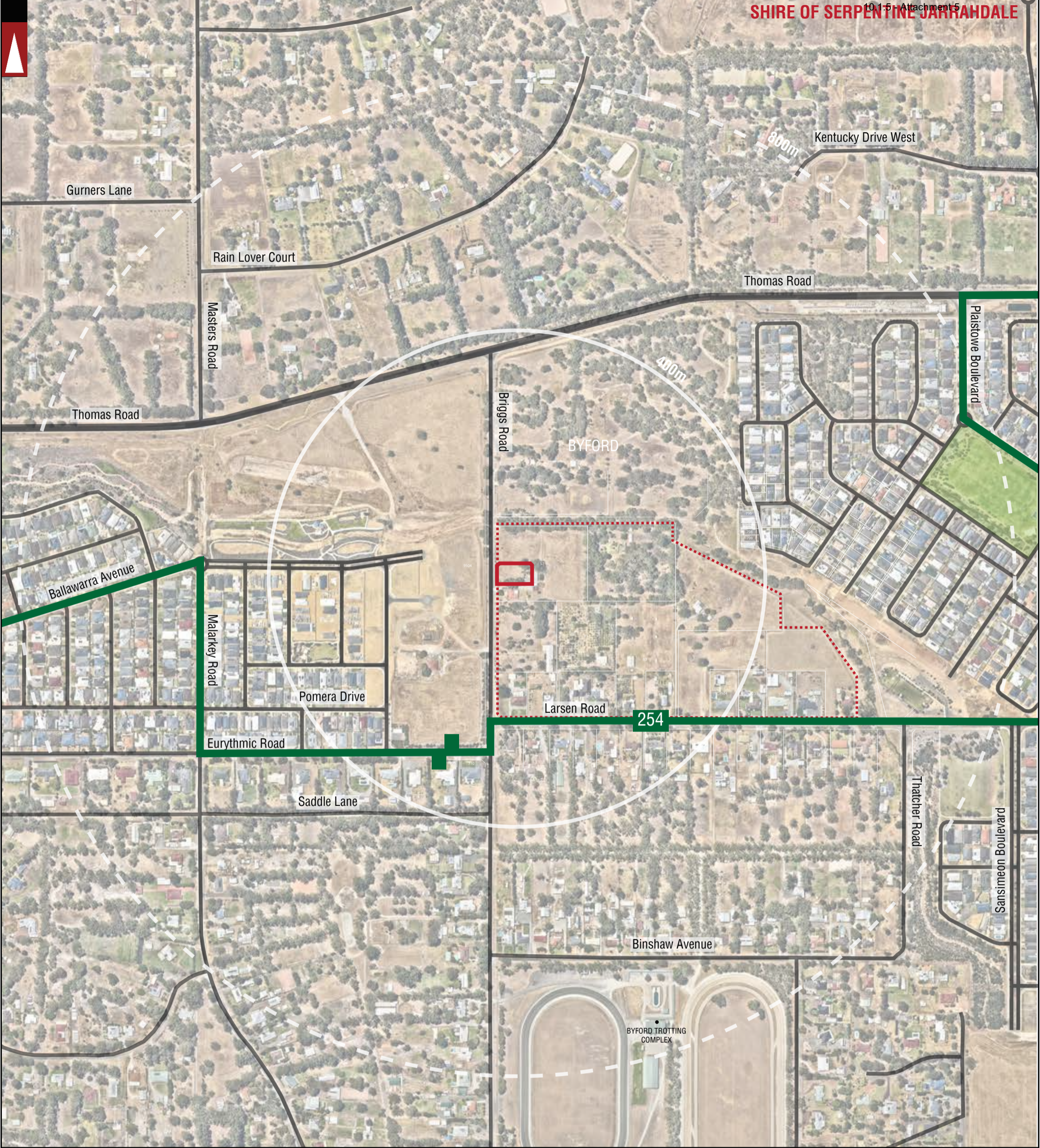
**LEGEND**

A	08-02-2023	ISSUED FOR REVIEW
No	DATE	AMENDMENT

PROJECT:	LOT 57 BRIGGS ROAD, BYFORD
TITLE:	BICYCLE NETWORK PLAN - 800M RADIUS
DRAWING NUMBER:	KC01522.000_S02

DRAWN BY:	Civil & Traffic Engineering Consultants KCTT (Trading as KC Traffic and Transport Pty Ltd) PO Box 1456 Scarborough WA 6922
A.M.	
	PH: 08 9441 2700 WEB: www.kctt.com.au





	PARKS AND RECREATION		STRUCTURE PLAN AREA		BUS ROUTES
	ROAD		DISTANCE FROM LOCATION		BUS STOPS (WITHIN 400M)
	HAY STREET STREET NAME	<b>SHIRE OF SERPENTINE JARRAHDALE</b>	LOCAL GOVERNMENT NAME		<b>103</b> BUS ROUTE NUMBER
	SUBJECT SITE	BYFORD	SUBURB NAME		

NOTE: FOR MORE INFORMATION REGARDING THE DESCRIPTION OF BUS ROUTES AND THEIR INDICATIVE PEAK AND OFF-PEAK FREQUENCIES REFER TO THE REPORT.

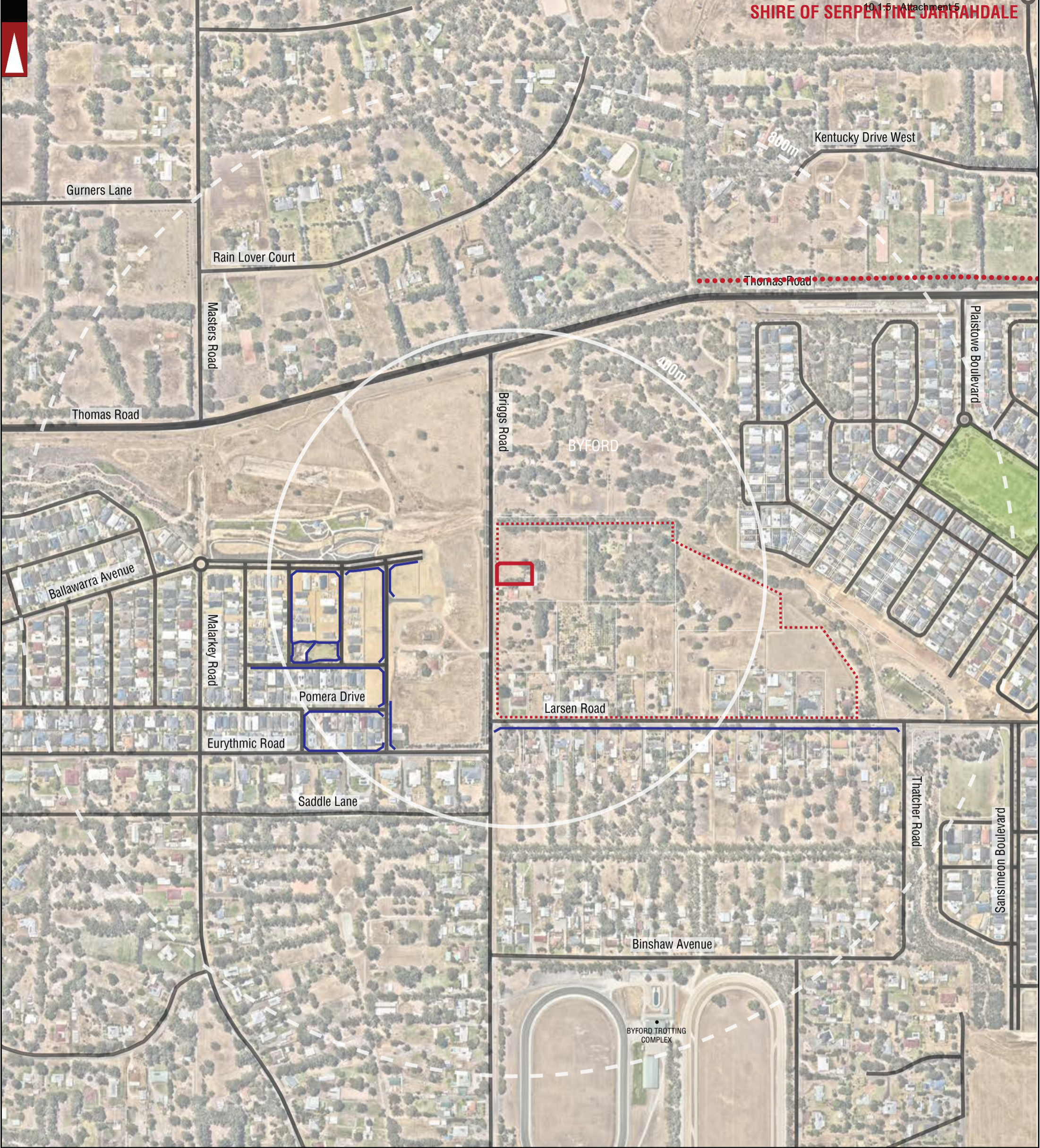
**LEGEND**

**Civil & Traffic Engineering Consultants**  
**KCTT** (Trading as KC Traffic and Transport Pty Ltd)  
 PO Box 1456 Scarborough WA 6922

PH: 08 9441 2700  
 WEB: www.kctt.com.au

			PROJECT: <b>LOT 57 BRIGGS ROAD, BYFORD</b>	DRAWN BY:
			TITLE: <b>PUBLIC TRANSPORT PLAN - 800M RADIUS</b>	A.M.
A	08-02-2023	ISSUED FOR REVIEW	DRAWING NUMBER: <b>KC01522.000_S03</b>	
No	DATE	AMENDMENT		





	PARKS AND RECREATION		STRUCTURE PLAN AREA		OTHER SHARED PATH (SHARED BY PEDESTRIANS & CYCLISTS)
	ROAD		DISTANCE FROM LOCATION		PEDESTRIAN PATH
	HAY STREET		SHIRE OF SERPENTINE JARRAHDALE		
	SUBJECT SITE		LOCAL GOVERNMENT NAME		
			BYFORD		BYFORD
			SUBURB NAME		

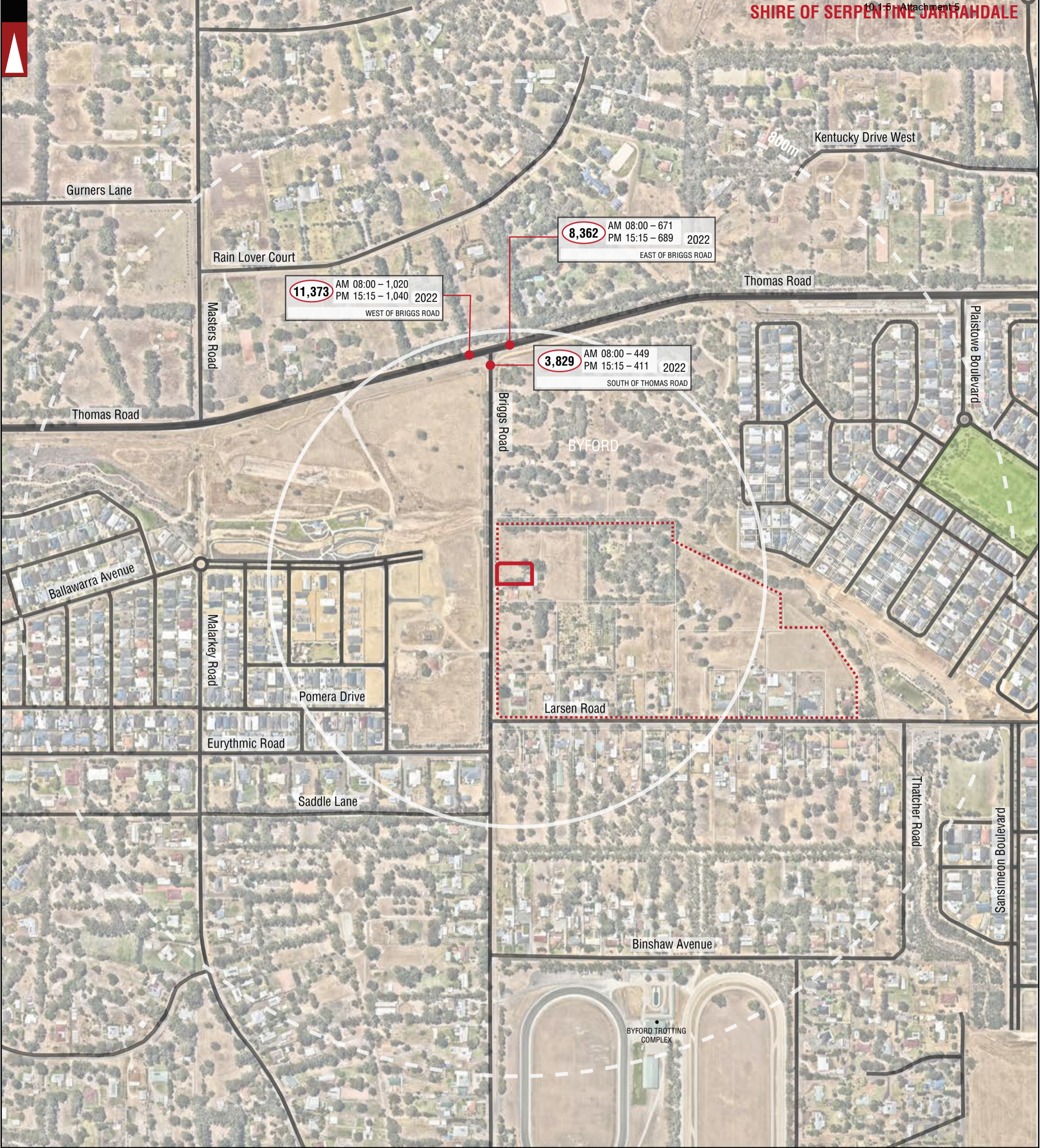
**LEGEND**

A	08-02-2023	ISSUED FOR REVIEW
No	DATE	AMENDMENT

PROJECT:	LOT 57 BRIGGS ROAD, BYFORD
TITLE:	PEDESTRIAN PATHS PLAN - 800M RADIUS
DRAWING NUMBER:	KC01522.000_S04

DRAWN BY:	<b>Civil &amp; Traffic Engineering Consultants</b> KCTT (Trading as KC Traffic and Transport Pty Ltd) PO Box 1456 Scarborough WA 6922
A.M.	
	PH: 08 9441 2700 WEB: www.kctt.com.au



	PARKS AND RECREATION		STRUCTURE PLAN AREA	<b>5,512</b>	NUMBER OF VEHICLES PER DAY
	ROAD		DISTANCE FROM LOCATION	AM 1145 - 381	NUMBER OF VEHICLES PER AM PEAK HOUR
	HAY STREET		SHIRE OF SERPENTINE JARRAHDALE	PM 1630 - 480	NUMBER OF VEHICLES PER PM PEAK HOUR
	SUBJECT SITE		LOCAL GOVERNMENT NAME	2014	YEAR
			BYFORD	EAST OF HARLOW ROAD	LOCATION

**LEGEND**

Drawn by: **Civil & Traffic Engineering Consultants KCTT** (Trading as KC Traffic and Transport Pty Ltd)  
 PO Box 1456 Scarborough WA 6922




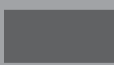


A.M.

PH: 08 9441 2700  
 WEB: www.kctt.com.au

PROJECT:			LOT 57 BRIGGS ROAD, BYFORD		
TITLE:			EXISTING TRAFFIC COUNTS - 800M RADIUS		
DRAWING NUMBER:			KC01522.000_S05		
A	08-02-2023	ISSUED FOR REVIEW			
No	DATE	AMENDMENT			





	LOCATION BOUNDARY		Total Expected Traffic Generation from the proposed development		Traffic Flow IN Direction
	ROAD (VARIED WITH ROAD WIDTH)		Total Expected Traffic Generation from Subject Site on the specific section of road - IN and OUT direction		Traffic Flow OUT Direction
Lewis Road	ROAD NAME				

**LEGEND**

			PROJECT: LOT 57 BRIGGS ROAD, BYFORD	DRAWN BY: Civil & Traffic Engineering Consultants KCTT (Trading as KC Traffic and Transport Pty Ltd) PO Box 1456 Scarborough WA 6922
			TITLE: TRAFFIC FLOW DIAGRAM	A.M.
A	08-02-2023	ISSUED FOR REVIEW	DRAWING NUMBER: KC01522.000_S06	
No	DATE	AMENDMENT		

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**LEGEND**

- LOCATION BOUNDARY
- ROAD (VARIED WITH ROAD WIDTH)
- ROAD NAME
- Traffic Flow IN Direction
- Traffic Flow OUT Direction
- Total Expected Traffic Generation from the proposed development - AM peak

			PROJECT: LOT 57 BRIGGS ROAD, BYFORD	DRAWN BY: Civil & Traffic Engineering Consultants KCTT (Trading as KC Traffic and Transport Pty Ltd) PO Box 1456 Scarborough WA 6922
			TITLE: TRAFFIC FLOW DIAGRAM - AM PEAK	A.M.
			DRAWING NUMBER: KC01522.000_S07	
A	08-02-2023	ISSUED FOR REVIEW		
No	DATE	AMENDMENT		

**LEGEND**

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PH: 08 9441 2700  
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**LEGEND**

- LOCATION BOUNDARY
- ROAD (VARIED WITH ROAD WIDTH)
- Lewis Road** ROAD NAME
- Traffic Flow IN Direction
- Traffic Flow OUT Direction
- Total Expected Traffic Generation from the proposed development - PM peak

			PROJECT: LOT 57 BRIGGS ROAD, BYFORD	DRAWN BY: Civil & Traffic Engineering Consultants KCTT (Trading as KC Traffic and Transport Pty Ltd) PO Box 1456 Scarborough WA 6922
			TITLE: TRAFFIC FLOW DIAGRAM - PM PEAK	A.M.
			DRAWING NUMBER: KC01522.000_S08	
A	08-02-2023	ISSUED FOR REVIEW		
No	DATE	AMENDMENT		

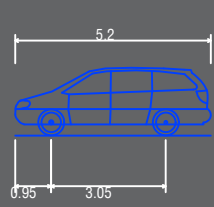
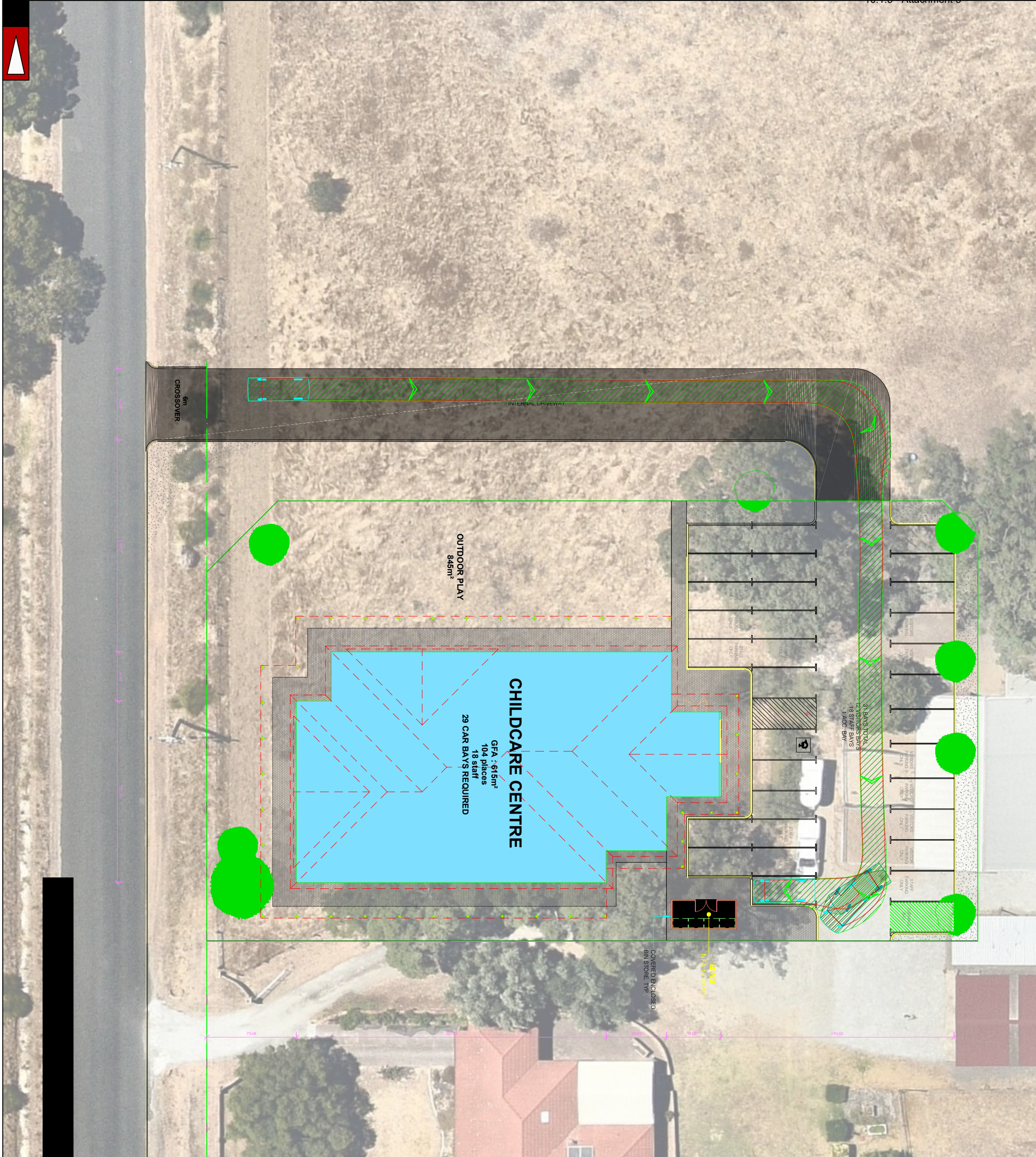
**Civil & Traffic Engineering Consultants**  
KCTT (Trading as KC Traffic and Transport Pty Ltd)  
PO Box 1456 Scarborough WA 6922

PH: 08 9441 2700  
WEB: www.kctt.com.au



# **Appendix 3**

## **Vehicle Turning Circle Plan**



Passenger vehicle (5.2 m)  
 Overall Length 5.200m  
 Overall Width 1.940m  
 Overall Body Height 1.804m  
 Min Body Ground Clearance 0.295m  
 Track Width 1.840m  
 Lock to Lock Time 4.00s  
 Kerb to Kerb Turning Radius 6.300m

- - - - - Lot boundary
- — — — — Wheel Path (Forward Vehicle Motion)
- — — — — Vehicle Chassis Envelope (Forward Vehicle Motion)
- — — — — Wheel Path (Reverse Vehicle Motion)
- — — — — Vehicle Chassis Envelope (Reverse Vehicle Motion)

**LEGEND**

NO	DATE	AMENDMENT
A	09-02-2023	ISSUED FOR REVIEW

PROJECT:  
 Lot 57 Briggs Road, Byford

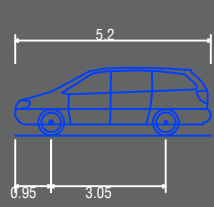
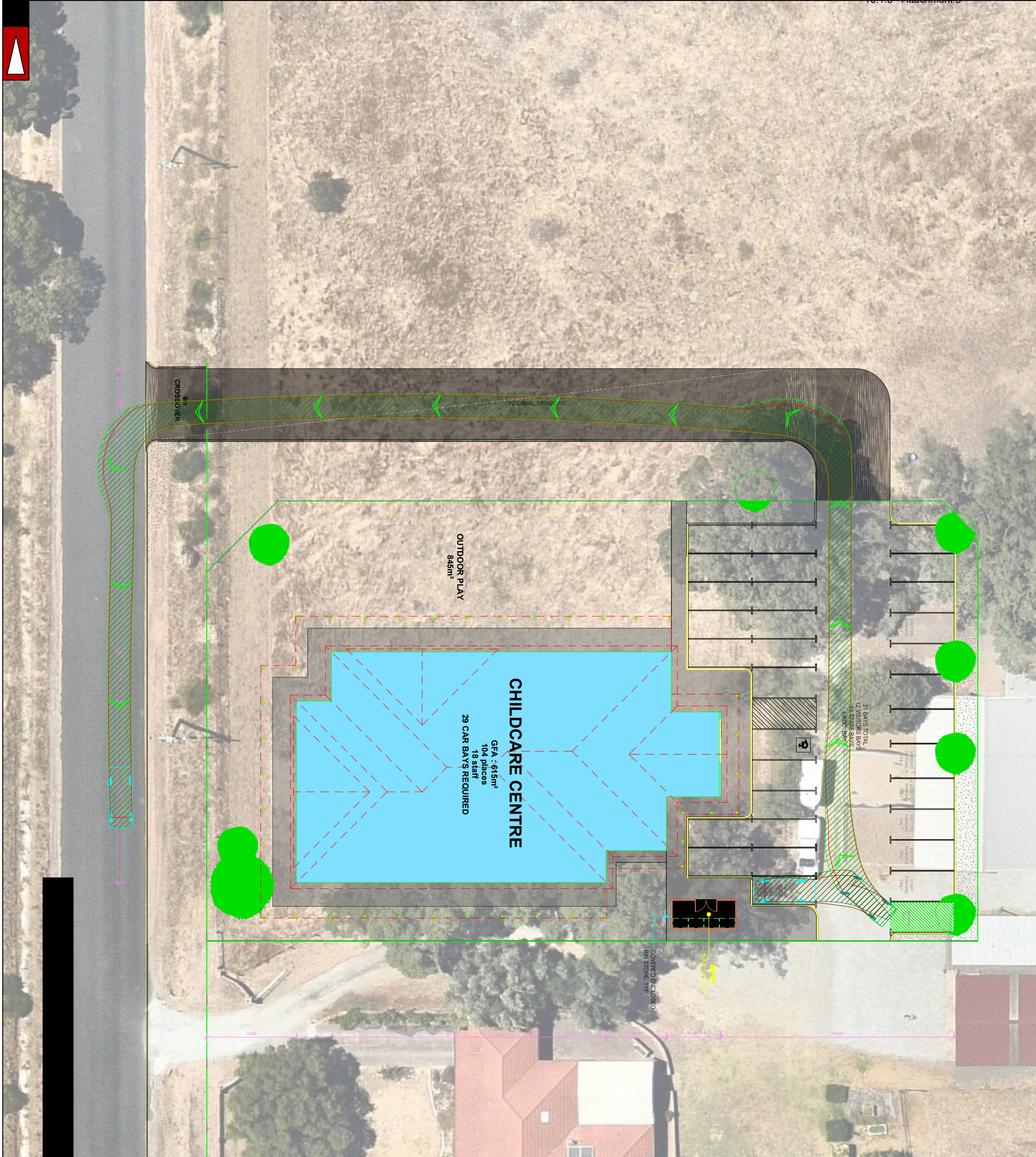
TITLE:  
 Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)

DRAWING NUMBER:  
 KC01522.000\_S20

DRAWN BY:  
 N.M.

Civil & Traffic Engineering Consultants  
 PO Box 1456 Scarborough WA 6922

PH: 08 9441 2700  
 WEB: www.kctt.com.au



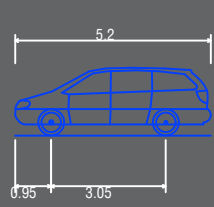
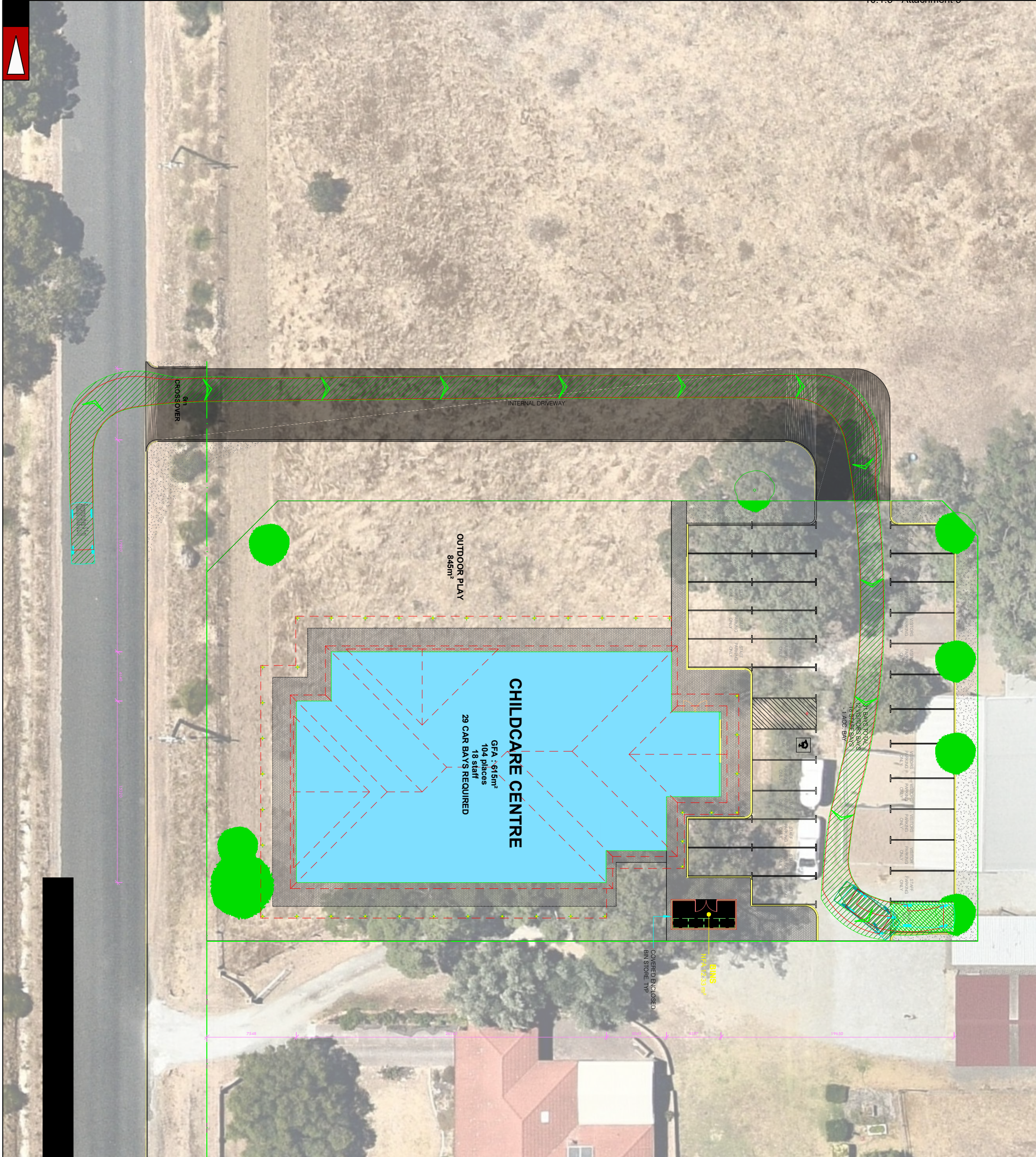
Passenger vehicle (5.2 m)  
 Overall Length 5.200m  
 Overall Width 1.940m  
 Overall Body Height 1.804m  
 Min Body Ground Clearance 0.295m  
 Track Width 1.840m  
 Lock to Lock Time 4.00s  
 Kerb to Kerb Turning Radius 6.300m

- - - - - Lot boundary
- — — — — Wheel Path (Forward Vehicle Motion)
- — — — — Vehicle Chassis Envelope (Forward Vehicle Motion)
- — — — — Wheel Path (Reverse Vehicle Motion)
- — — — — Vehicle Chassis Envelope (Reverse Vehicle Motion)

**LEGEND**

			PROJECT: Lot 57 Briggs Road, Byford	DRAWN BY: Civil & Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	N.M.
A	09-02-2023	ISSUED FOR REVIEW	DRAWING NUMBER: KC01522.000_S21	
NO	DATE	AMENDMENT		PH: 08 9441 2700 WEB: www.kctt.com.au





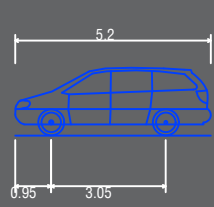
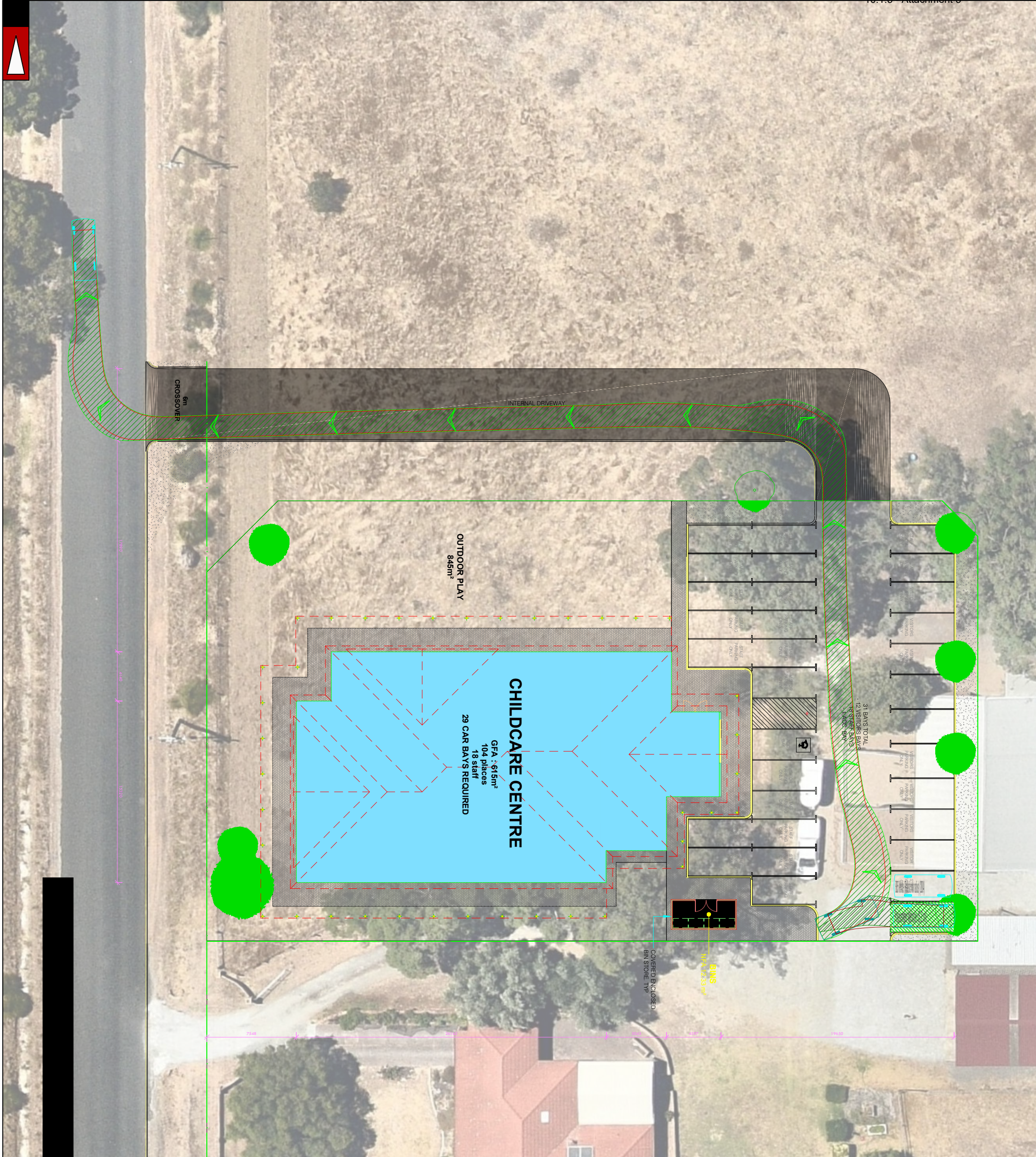
Passenger vehicle (5.2 m)  
 Overall Length 5.200m  
 Overall Width 1.940m  
 Overall Body Height 1.804m  
 Min Body Ground Clearance 0.295m  
 Track Width 1.840m  
 Lock to Lock Time 4.00s  
 Kerb to Kerb Turning Radius 6.300m

- - - - - Lot boundary
- — — — — Wheel Path (Forward Vehicle Motion)
- — — — — Vehicle Chassis Envelope (Forward Vehicle Motion)
- — — — — Wheel Path (Reverse Vehicle Motion)
- — — — — Vehicle Chassis Envelope (Reverse Vehicle Motion)

**LEGEND**

			PROJECT: Lot 57 Briggs Road, Byford	DRAWN BY: Civil & Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922
			TITLE: Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)	N.M.
A	09-02-2023	ISSUED FOR REVIEW	DRAWING NUMBER: KC01522.000_S22	
NO	DATE	AMENDMENT		PH: 08 9441 2700 WEB: www.kctt.com.au





Passenger vehicle (5.2 m)  
 Overall Length 5.200m  
 Overall Width 1.940m  
 Overall Body Height 1.804m  
 Min Body Ground Clearance 0.295m  
 Track Width 1.840m  
 Lock to Lock Time 4.00s  
 Kerb to Kerb Turning Radius 6.300m

- - - - - Lot boundary
- — — — — Wheel Path (Forward Vehicle Motion)
- — — — — Vehicle Chasis Envelope (Forward Vehicle Motion)
- — — — — Wheel Path (Reverse Vehicle Motion)
- — — — — Vehicle Chasis Envelope (Reverse Vehicle Motion)

**LEGEND**

NO	DATE	AMENDMENT
A	09-02-2023	ISSUED FOR REVIEW

PROJECT:  
 Lot 57 Briggs Road, Byford

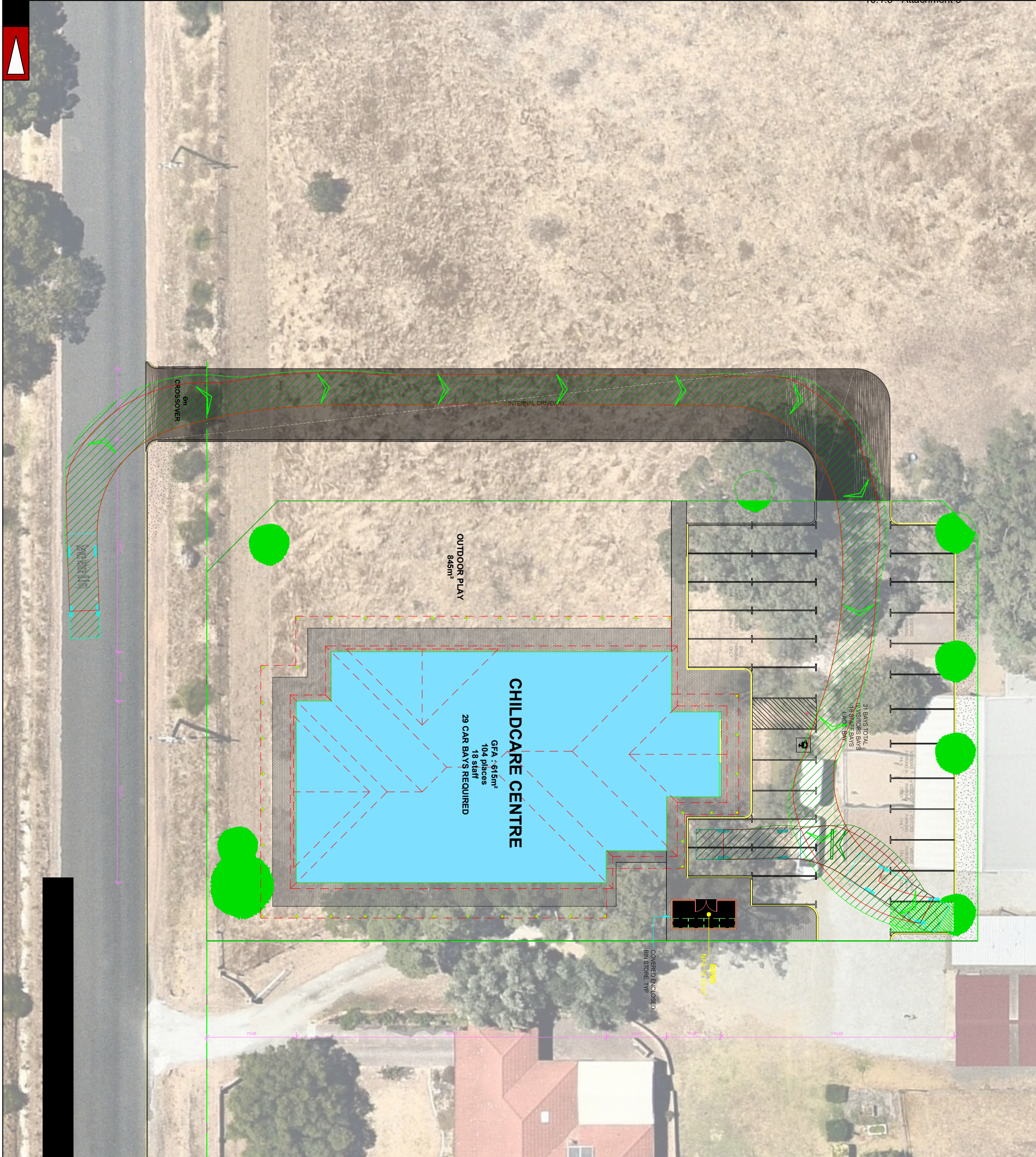
TITLE:  
 Vehicle Turning Circle Plan - B99 Passenger Vehicle (5.2m)

DRAWING NUMBER:  
 KC01522.000\_S23

DRAWN BY:  
 Civil & Traffic Engineering Consultants  
 PO Box 1456 Scarborough WA 6922

N.M.

PH: 08 9441 2700  
 WEB: www.kctt.com.au

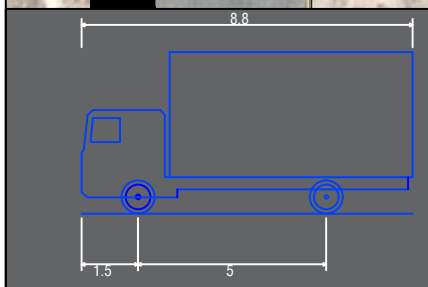
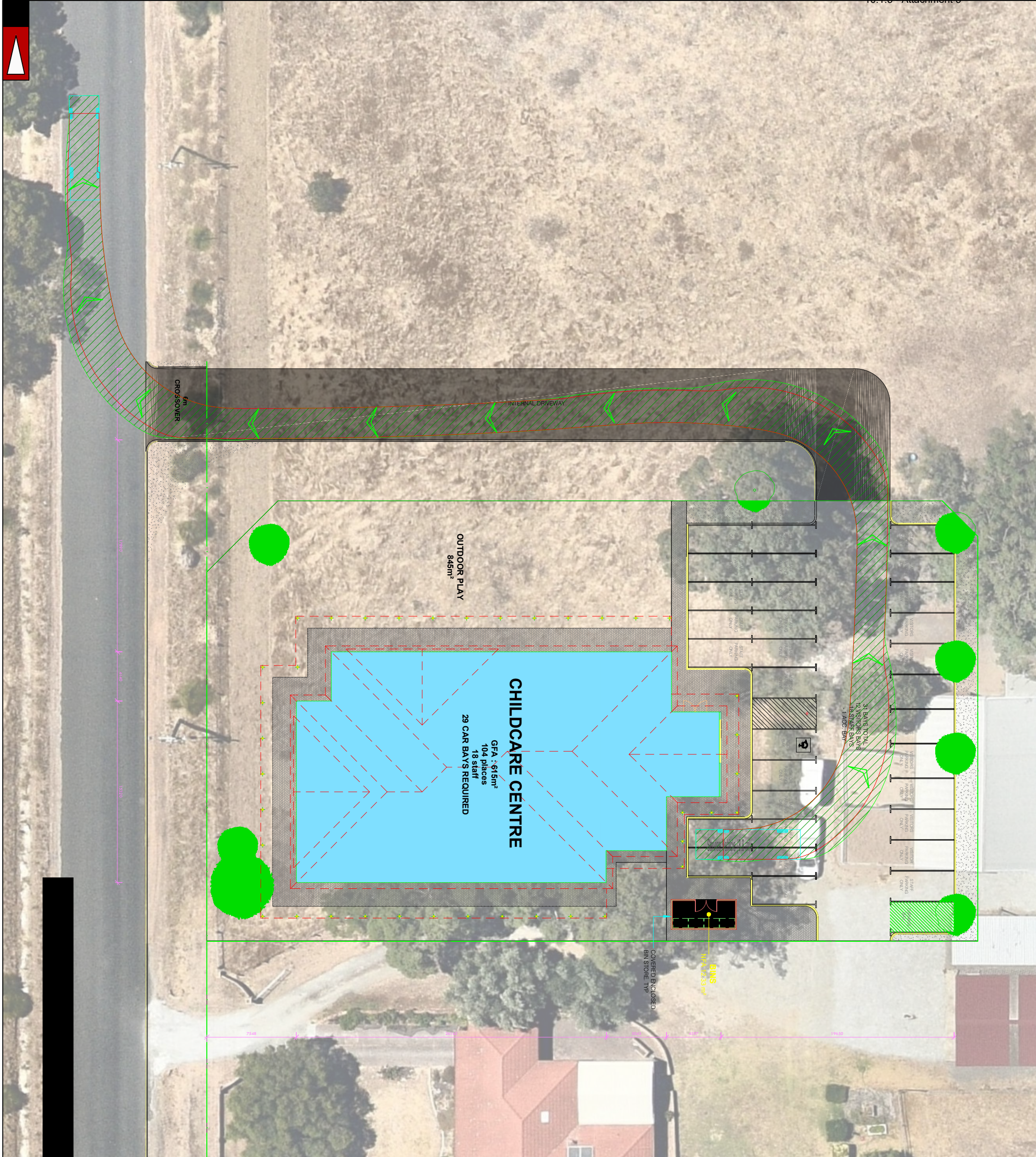


Service Vehicle (8.8 m)		
Overall Length	8.800m	--- --
Overall Width	2.500m	---
Overall Body Height	4.300m	---
Min Body Ground Clearance	0.427m	---
Track Width	2.500m	---
Lock to Lock Time	4.00s	---
Kerb to Kerb Turning Radius	12.500m	---

Lot boundary	---
Wheel Path (Forward Vehicle Motion)	---
Vehicle Chassis Envelope (Forward Vehicle Motion)	---
Wheel Path (Reverse Vehicle Motion)	---
Vehicle Chassis Envelope (Reverse Vehicle Motion)	---

**LEGEND**

			<p>PROJECT: Lot 57 Briggs Road, Byford</p>	<p>DRAWN BY:</p>	<p>Civil &amp; Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922</p>
			<p>TITLE: Vehicle Turning Circle Plan - Service Vehicle (8.8m)</p>		
A	09-02-2023	ISSUED FOR REVIEW	<p>DRAWING NUMBER: KC01522.000_S24</p>	N.M.	<p>PH: 08 9441 2700 WEB: www.kctt.com.au</p>
NO	DATE	AMENDMENT			



Service Vehicle (8.8 m)			Lot boundary
Overall Length	8.800m		Wheel Path (Forward Vehicle Motion)
Overall Width	2.500m		Vehicle Chassis Envelope (Forward Vehicle Motion)
Overall Body Height	4.300m		Wheel Path (Reverse Vehicle Motion)
Min Body Ground Clearance	0.427m		Vehicle Chassis Envelope (Reverse Vehicle Motion)
Track Width	2.500m		
Lock to Lock Time	4.00s		
Kerb to Kerb Turning Radius	12.500m		

**LEGEND**

			PROJECT: Lot 57 Briggs Road, Byford	DRAWN BY: Civil & Traffic Engineering Consultants PO Box 1456 Scarborough WA 6922
			TITLE: Vehicle Turning Circle Plan - Service Vehicle (8.8m)	N.M.
			DRAWING NUMBER: KC01522.000_S25	
A	09-02-2023	ISSUED FOR REVIEW		
NO	DATE	AMENDMENT		

PH: 08 9441 2700  
WEB: www.kctt.com.au