

**Technical Note:** No 1a  
**Project No:** t25.171  
**Project:** Lot 594 Ranworth Road, Hocking  
**Subject:** Proposed Residential Subdivision

**Date:** 05/08/2025

## Introduction

Transcore prepared a Transport Assessment (TA) in March 2021 for the proposed structure plan at the abovementioned site. The location of the subject site is depicted in **Figure 1** and a copy of the concept plan is included in **Appendix 1**. The structure plan amendment was approved by WAPC in July 2023.

The current Proponent for the project is proposing to convert the Special Use part of the structure plan along the frontage of Wanneroo Road to residential and as a result, the entire site will be a residential development except the south-west corner of the site that may be developed as a child care centre. A copy of the proposed residential subdivision is provided in **Appendix 2**.

Accordingly, this Technical Note is prepared as an Addendum to Transcore's TIA of March 2021 and addresses the net traffic generation difference as a result of the proposed subdivision, and the main subdivision intersection on Kirkstall Drive.



**Figure 1: Location of the subject site**

## Traffic Generation

The assumed land uses for the Special Use portion of the structure plan for the purpose of the traffic modelling were showrooms, fast food with drive-through and a service station.

The estimated trip generation for the Special Use component of the structure plan was about 3,500 vehicle trips per day. Based on the proposed residential subdivision, there are 20 residential lots which are located either fully or partially within the old Special Use area of the structure plan. The daily trip generation of 20 residential dwelling is 160 vehicular trips per day.

At present, there is no information available about the potential child care centre at the south-west corner of the subject site. However, based on Transcore's experience with child care centre projects, it is assumed that the total trip generation for the residential lots and the child care centre within the old Special Use area would be about 500 vehicles per day.

As a result, the proposed residential subdivision including the child care centre site will result in a trip generation reduction of 3,000 vehicles per day. Therefore, the traffic footprint of the proposal will be far less than that of the approved structure plan on Kirkstall Drive and its intersection with Wanneroo Road.


## Main Residential Subdivision Intersection

As evident from the proposed residential subdivision plan in [Appendix 2](#) of this Technical Note, the main entrance to the subdivision on Kirkstall Drive is located opposite Tenement Loop.

Tenement Loop is a local residential road which loops around 6 residential dwellings and connects back onto Kirkstall Drive further west. Based on review of the aerial image, it is estimated that the eastern leg of Tenement Loop generates about 30 vehicles per day. As a result, the southern leg of the four-way intersection of the proposed residential subdivision main access point and Kirkstall Drive intersection carries very low levels of traffic volume and the resulting subdivision four-way intersection on Kirkstall Drive would have operated satisfactorily without any issues.

Following liaison by the Proponent with City of Wanneroo, the City has requested that a roundabout should be investigated at the resulting residential subdivision four-way intersection on Kirkstall Drive. It is important that such a roundabout should be designed without any land take particularly considering that Kirkstall Drive is not a bus route and does not entail any large heavy vehicles.

Accordingly, Transcore has prepared a mini four-way roundabout concept that fits within the existing 18m reservation of Kirkstall Drive with appropriate truncations within the residential subdivision main access road. A copy of this concept is provided in [Appendix 3](#).



As evident from the design, the centre island of the mini roundabout is mountable, which will facilitate the movements of the adopted Design Vehicle of 12.5m rigid heavy vehicle.

Based on the proposed design, the construction vehicles for the residential subdivision will be limited to 12.5m rigid heavy vehicle. This size of Design Vehicle includes the longest waste management trucks and emergency services vehicles.

Considering the traffic volumes to be generated from the residential subdivision, the proposed roundabout is anticipated to work satisfactorily with Level of Service A and minimal queues and delays during peak periods. The details of the proposed mini roundabout can be finalised during the detailed design of the proposed subdivision.

## **Conclusion**

The proposed residential subdivision including the child care centre site will result in a trip generation reduction of 3,000 vehicles per day. Therefore, the traffic footprint of the proposal will be far less than that of the approved structure plan on Kirkstall Drive and its intersection with Wanneroo Road.

Considering the traffic volumes to be generated from the residential subdivision, the proposed roundabout intersection on Kirkstall Drive is anticipated to work satisfactorily with Level of Service A and minimal queues and delays during peak periods. The details of the proposed mini roundabout can be finalised during the detailed design of the proposed subdivision.

# Appendix 1

---

SITE CONCEPT PLAN INCLUDED IN APPROVED STRUCTURE  
PLAN



- LEGEND**
- Structure Plan Boundary
  - R60
  - R40
  - R30
  - R23
  - Special Use
  - POS / Conservation
  - Drainage
  - Retained Black Cockatoo Significant Tree
  - Continuous fencing / No vehicle access permitted
  - Pedestrian Connection
  - Bus Stop

Note: building footprints indicative only

**CONCEPT PLAN**  
**Lot 594 Ranworth Road, Hocking**  
 City of Wanneroo  
 JOB CODE SERVICE DOC TYPE DRAW NO. REV.  
**BARHOC DES DWG 002 L**

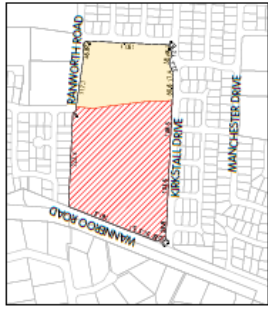
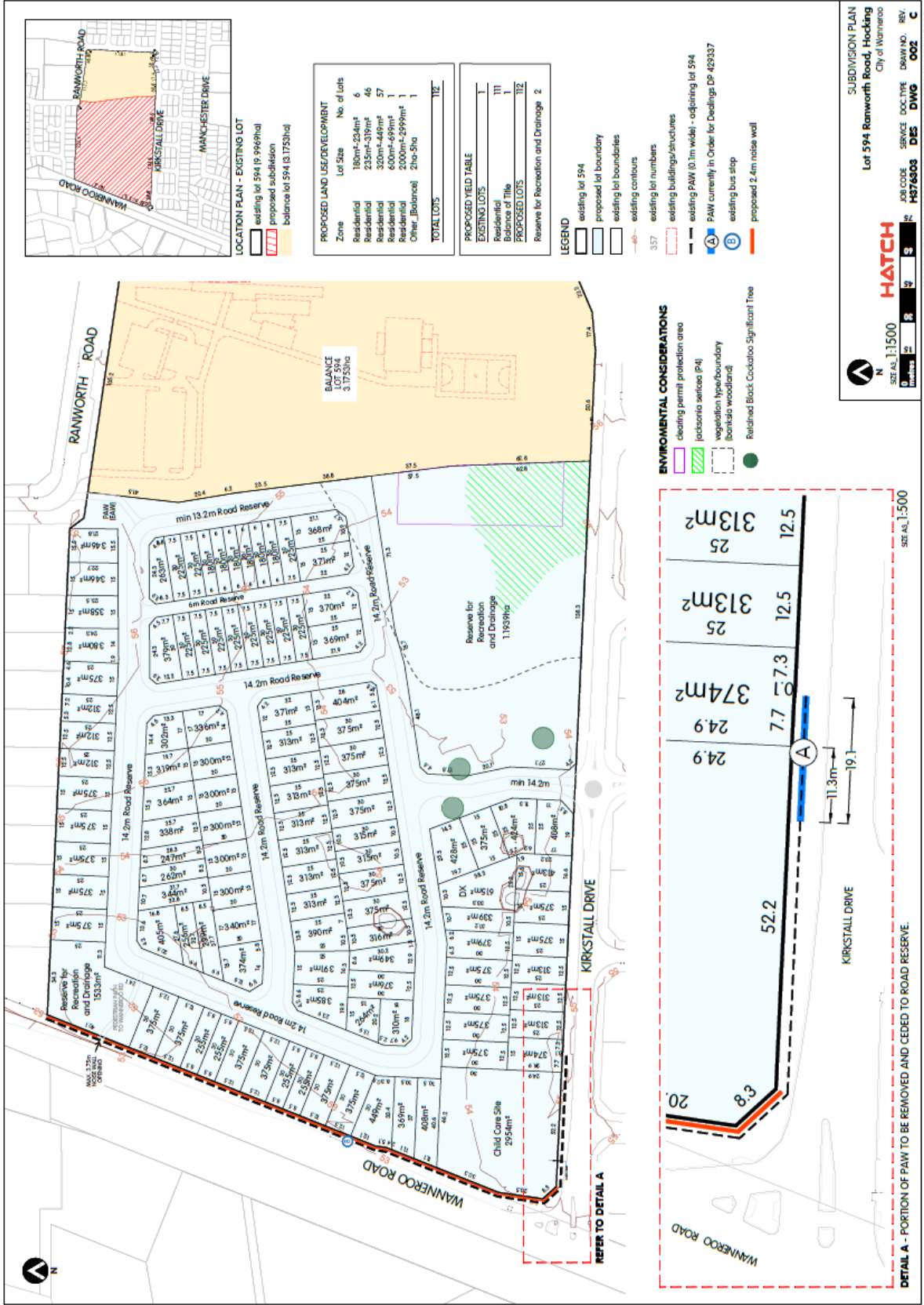
SCALE: 1:2000  
 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100  
 METRES  
 DOCUMENT PREPARED FOR DESIGN PURPOSE ONLY. ALL AREAS AND DIMENSIONS ARE SUBJECT TO DETAIL DESIGN AND SURVEY.



# Appendix 2

---

PROPOSED RESIDENTIAL SUBDIVISION PLAN



**LOCATION PLAN - EXISTING LOT**

- existing lot 594 (0.996ha)
- proposed subdivision
- balance lot 594 (3.1753ha)

**PROPOSED LAND USE DEVELOPMENT**

Zone	Lot Size	No. of Lots
Residential	180m <sup>2</sup> -234m <sup>2</sup>	6
Residential	235m <sup>2</sup> -378m <sup>2</sup>	46
Residential	320m <sup>2</sup> -440m <sup>2</sup>	57
Residential	600m <sup>2</sup> -699m <sup>2</sup>	1
Residential	2000m <sup>2</sup> -5999m <sup>2</sup>	1
Other (Balance)	2ha-5ha	1
<b>TOTAL LOTS</b>		<b>112</b>

**PROPOSED YIELD TABLE**

EXISTING LOTS	PROPOSED LOTS
Residential	111
Balance of Title	1
<b>PROPOSED LOTS</b>	<b>112</b>

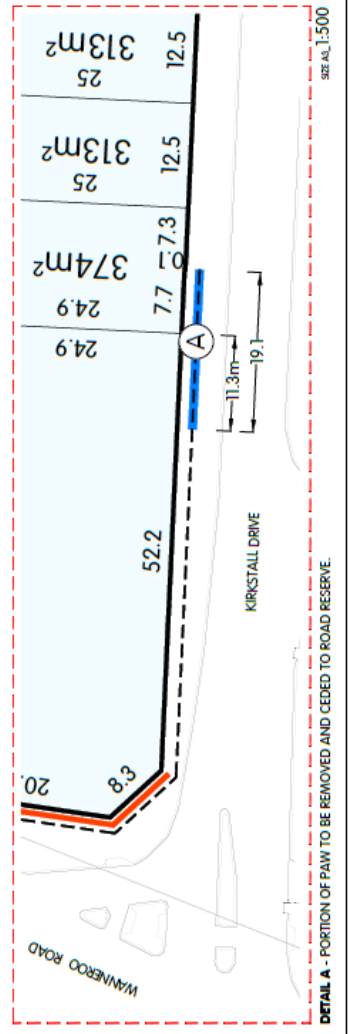
Reserve for Recreation and Drainage 2

**LEGEND**

- existing lot 594
- proposed lot boundary
- existing lot boundaries
- existing contours
- existing lot numbers
- existing buildings/structures
- existing PAW (0.1m wide) - adjoining lot 594
- PAW currently in Order for Dealings DP 429337
- existing bus stop
- proposed 2.4m noise wall

**ENVIRONMENTAL CONSIDERATIONS**

- clearing permit protection area
- Ischaemum sericeum (P4)
- vegetation type/boundary
- Ischaemum woodland
- Retained Black Cockatoo Significant Tree



**HATCH**

SCALE: 1:1500

DATE: 13/05/2024

PROJECT: Lot 594 Wanneroo Road, Hocking

CITY: City of Wanneroo

JOB CODE: H374903

SERVICE: DES

DOC TYPE: DWG

DRAW NO: 002

REV: C

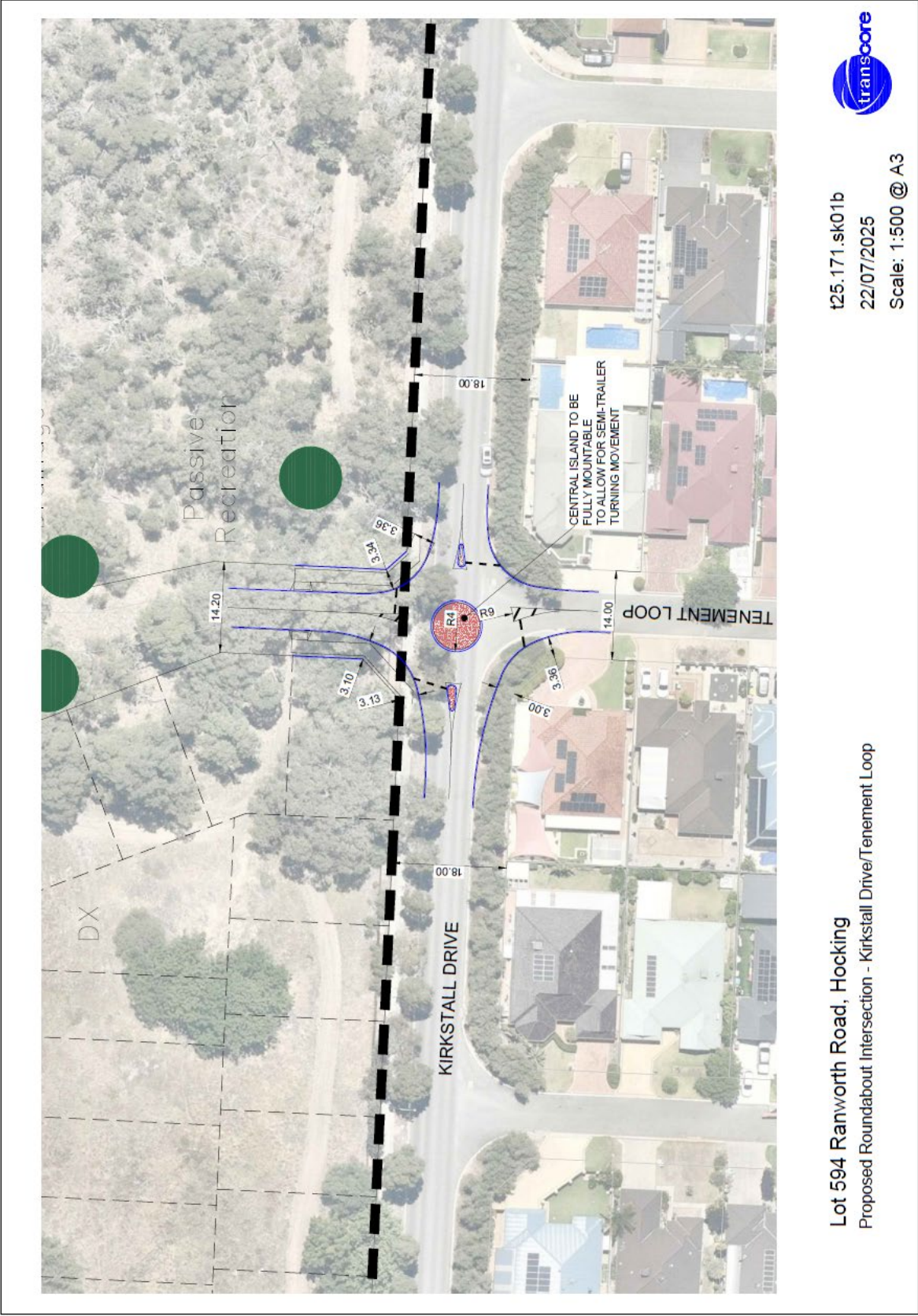
SCALE: 1:500

DETAIL A - PORTION OF PAW TO BE REMOVED AND CEDED TO ROAD RESERVE.

# Appendix 3

---

PROPOSED MINI ROUNDABOUT



t25.171.sk01b  
 22/07/2025  
 Scale: 1:500 @ A3

Lot 594 Ranworth Road, Hocking  
 Proposed Roundabout Intersection - Kirkstall Drive/Tenement Loop

