Appendix D

Transport Impact Statement

Engineering a better future for over 20 years!

Proposed Subdivision

Lot 12 Sultana Road East, Forrestfield

Transport Impact Statement

PREPARED FOR:
Acott Equities Pty Ltd

April 2024

Document history and status

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TABLE OF CONTENTS

1 INTRODUCTION 1

2 PROPOSED SUBDIVISION 3

3 PROPOSED AMENDMENT TO OUTLINE DEVELOPMENT PLAN 4

4 VEHICLE ACCESS 5

5 PROVISION FOR SERVICE VEHICLES 6

6 DAILY TRAFFIC VOLUMES AND VEHICLE TYPES 7

6.1 Future Traffic on the Surrounding Road Network 7
6.2 Trip Generation 7
6.3 Traffic Distribution 8
6.4 Traffic Changes on the Surrounding Road Network 8
6.5 Impact on Surrounding Roads 11

7 TRAFFIC MANAGEMENT ON THE FRONTAGE STREETS 12

8 PUBLIC TRANSPORT ACCESS 13

9 PEDESTRIAN AND CYCLE ACCESS 14

10 SITE SPECIFIC ISSUES 15

11 SAFETY ISSUES 16

12 CONCLUSIONS 17

APPENDIX A: PROPOSED SUBDIVISION PLAN

APPENDIX B: OUTLINE DEVELOPMENT PLAN AGREEMENT AREAS 2, 3, & 4 FORRESTFIELD U7

REPORT FIGURES

Figure 1: Location of the subject site 1
Figure 2: Proposed road network modification 4
Figure 3: Proposed subdivision road network 5
Figure 4: Location of Lots 7, 8 and 18 of proposed subdivision 6
Figure 5: Traffic flows based on the approved ODP 9
Figure 6: Traffic flows based on the proposed subdivision 10
Figure 7: North-westbound view of Sultana Road East 12
Figure 8: South-eastbound view of Sultana Road East 12
Figure 9: Existing public transport services (Source: Transperth) 13
Figure 10: Extract of Perth Bike Map (Source: Department of Transport) 14

1 Introduction

This Transport Impact Statement (TIS) has been prepared by Transcore on behalf of Acott Equities Pty Ltd with regard to the proposed subdivision application for Lot 12 Sultana Road East, Forrestfield, in the City of Kalamunda.

The subject site is located southwest of Sultana Road East and northeast of Canopy Circuit, as shown in **Figure 1**.

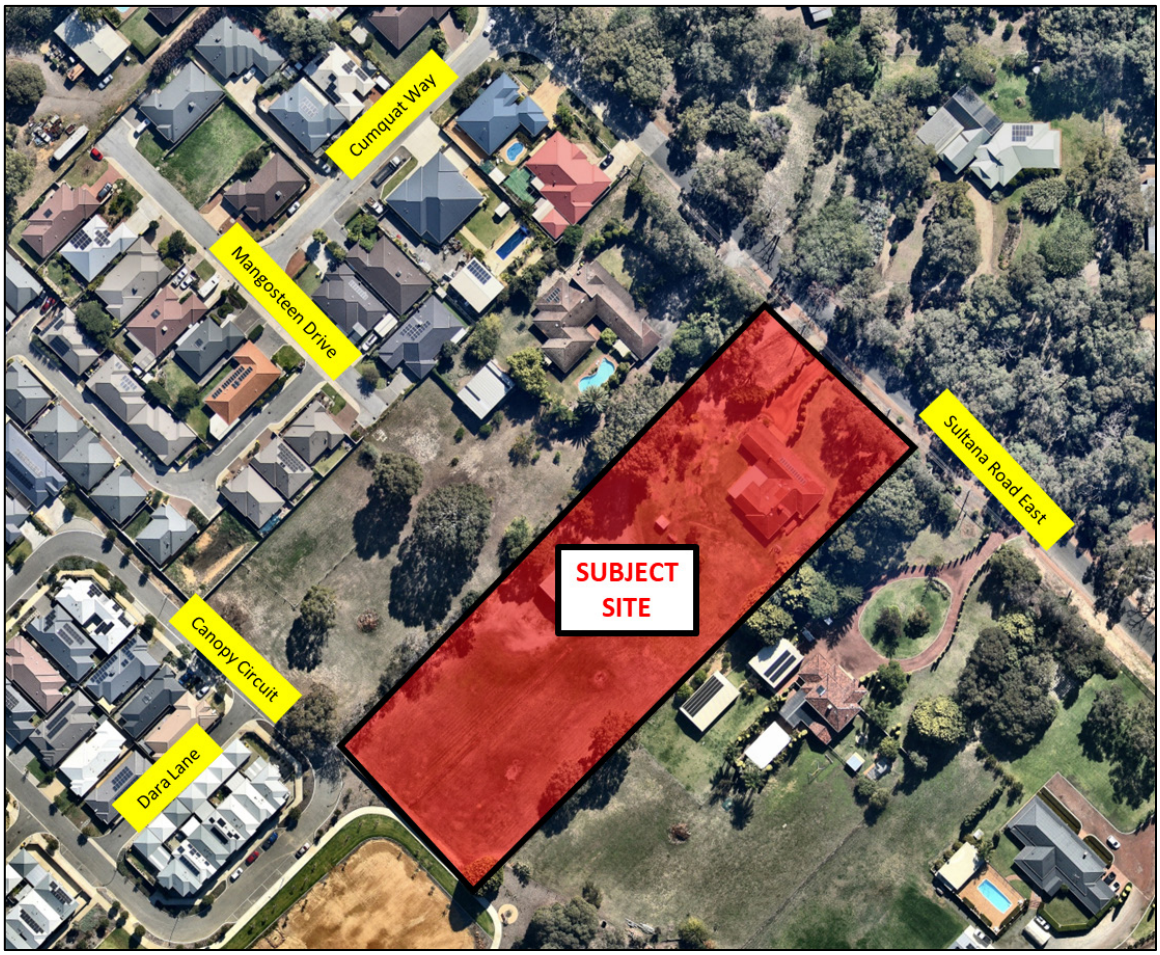


Figure 1: Location of the subject site

The Transport Impact Assessment Guidelines (WAPC, Vol 3 – Subdivisions, August 2016) states *"A Transport Impact Statement is required for those subdivisions 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"* and Table 1 of Volume 3 indicates for residential subdivisions a Transport Impact Statement is required for subdivisions that will yield 10 – 100 dwellings.

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

The proposed subdivision of the subject site will accommodate 18 residential lots, so a Transport Impact Statement is the appropriate level of assessment for this proposed subdivision.

However, as part of the proposal, there will also be a structure plan amendment over the abovementioned site. The purpose of the amendment is to improve the road network in this area and improve lot yield and lot shapes. This TIS will also be used for the structure plan amendment.

2 Proposed Subdivision

The subject site currently has one dwelling on the Sultana Road East frontage and the remainder of the site is currently undeveloped.

The proposed subdivision will yield 18 residential lots (including one triplex lot and one grouped housing site) with areas of 180m^2 (smallest residential lot) – 2,397m^2(grouped housing lot).

The existing dwelling on site will be removed.

The proposed subdivision plan is shown in **Appendix A**.

Other residential subdivision development has progressed to the south of the subject site with Setosa Drive and Gala Way connecting to Canopy Circuit which would eventually connect to the proposed subdivision.

3 Proposed Amendment to Outline Development Plan

The subject site is currently within the Urban Cell 7 (Landowner Area 4) of the Forrestfield Outline Development Plan. The existing approved Outline Development Plan is included in **Appendix B** for reference.

This amendment proposes modifications to the existing Outline Development Plan as it applies to the subject site within Landowner Area 4. The modifications involve changes to the road network through the subject site. This modification will result in better connectivity of the proposed subdivision with the existing 'The Hales' development and will provide regularised lot types and cell depths that will facilitate the development of affordable houses and land. Refer to **Figure 2** for the proposed road network modification.

This modification of the subdivision road network would include the change of residential density of R12.5 coded land to R20 and most of the R20 coded land to R30 and R40. This change would allow the subdivision to yield 18 lots ranging from 180m^2 to 2,937m^2. Based on the existing R-Code densities it is estimated Lot 12 would yield approximately 13 lots under the current ODP.

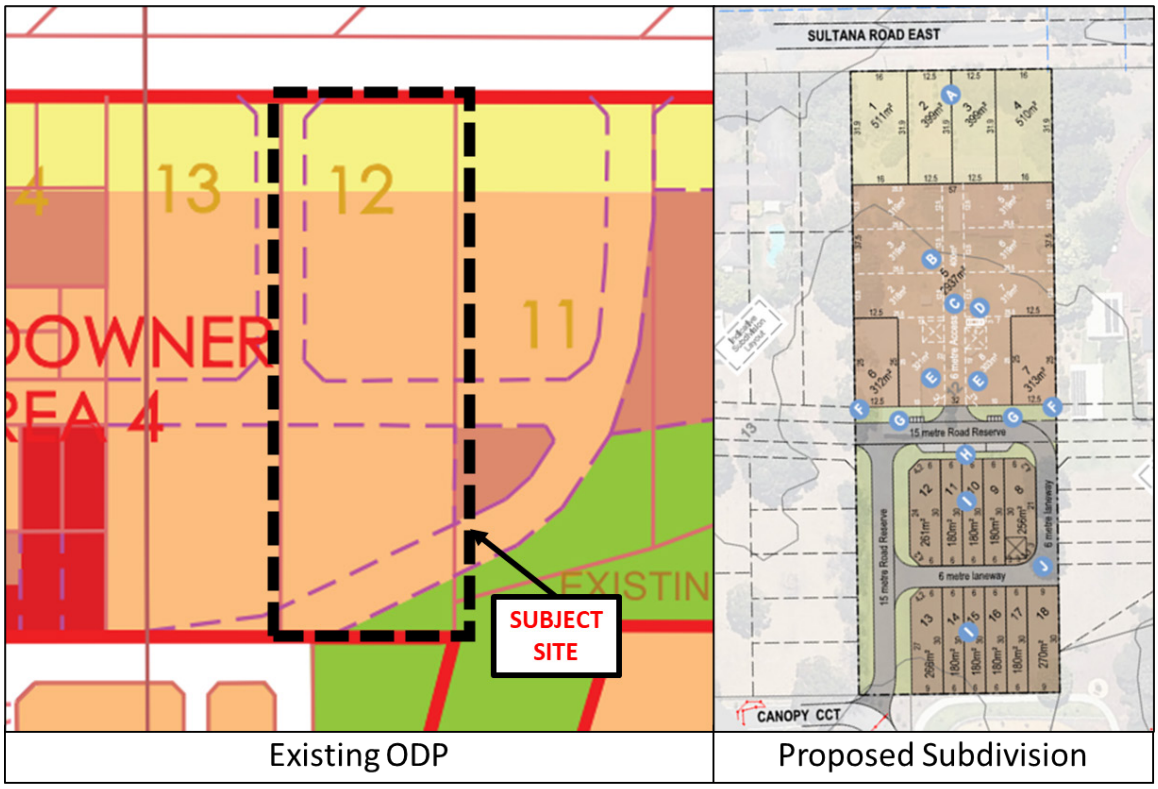


Figure 2: Proposed road network modification

4 Vehicle Access

Access to the subdivision will be provided via the proposed subdivision road network connecting the proposed subdivision to Sultana Road East and the adjacent subdivision to the east, west and south of the site via Canopy Circuit and Mangosteen Drive. Refer to **Figure 3** for more details.

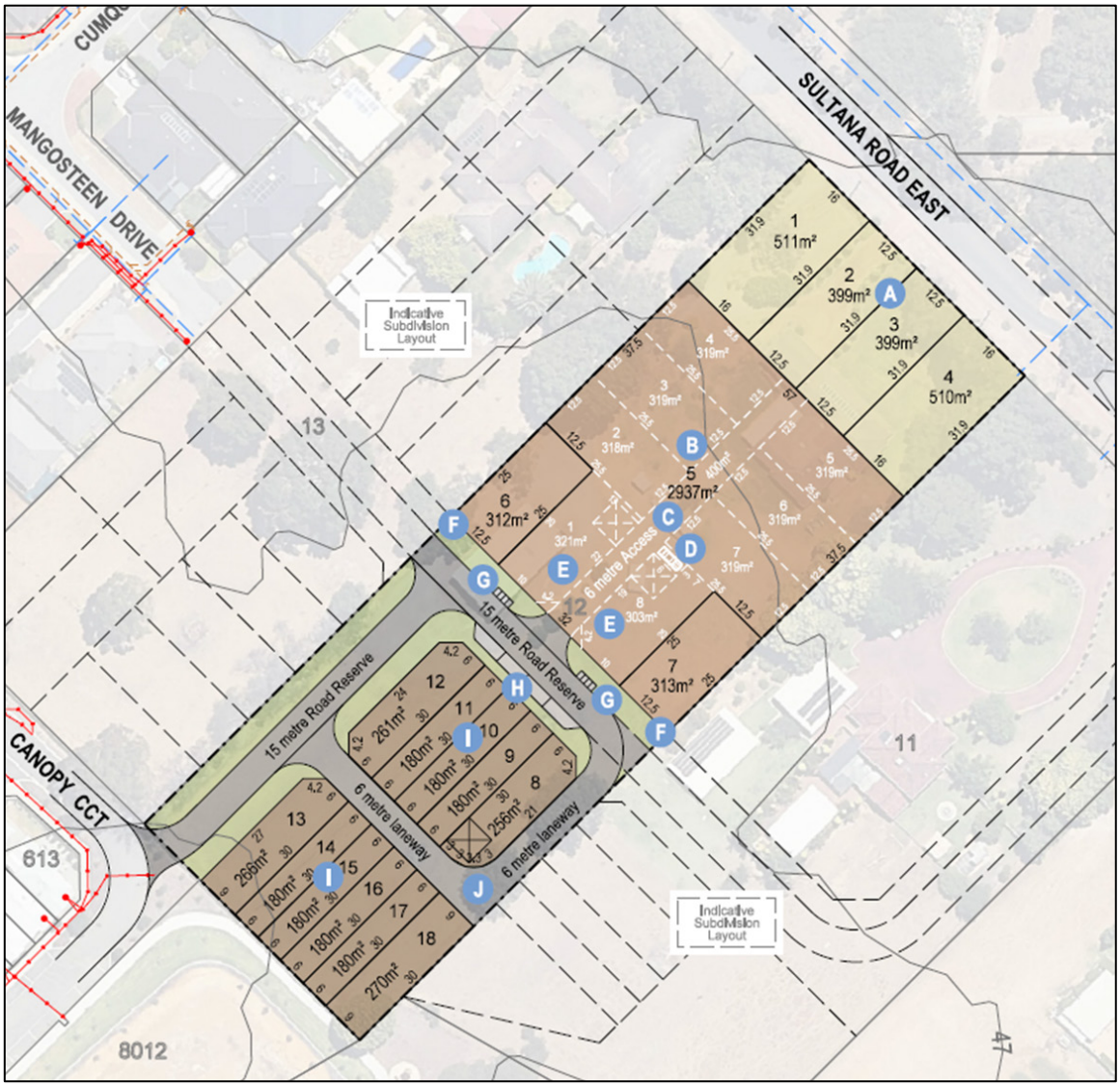


Figure 3: Proposed subdivision road network

5 Provision for Service Vehicles

The waste collection for the proposed subdivision will be the standard arrangement for residential subdivisions throughout the City of Kalamunda. This consists of rubbish bins wheeled out by the residents for verge collection on the designated collection day. The subdivision road network allows rubbish trucks access in both directions on all streets for rubbish collection on both sides of the street.

As part of the proposed subdivision, concrete crossovers will be constructed on Lots 7, 8 and 18 to enable rubbish collection vehicles to turn around whilst the balance of the structure plan road network is not constructed. Refer to **Figure 4** for the location of the aforementioned lots. This will enable these lots to be developed without being held off from the development of the adjacent subdivision due to the connected road network through the two sites.

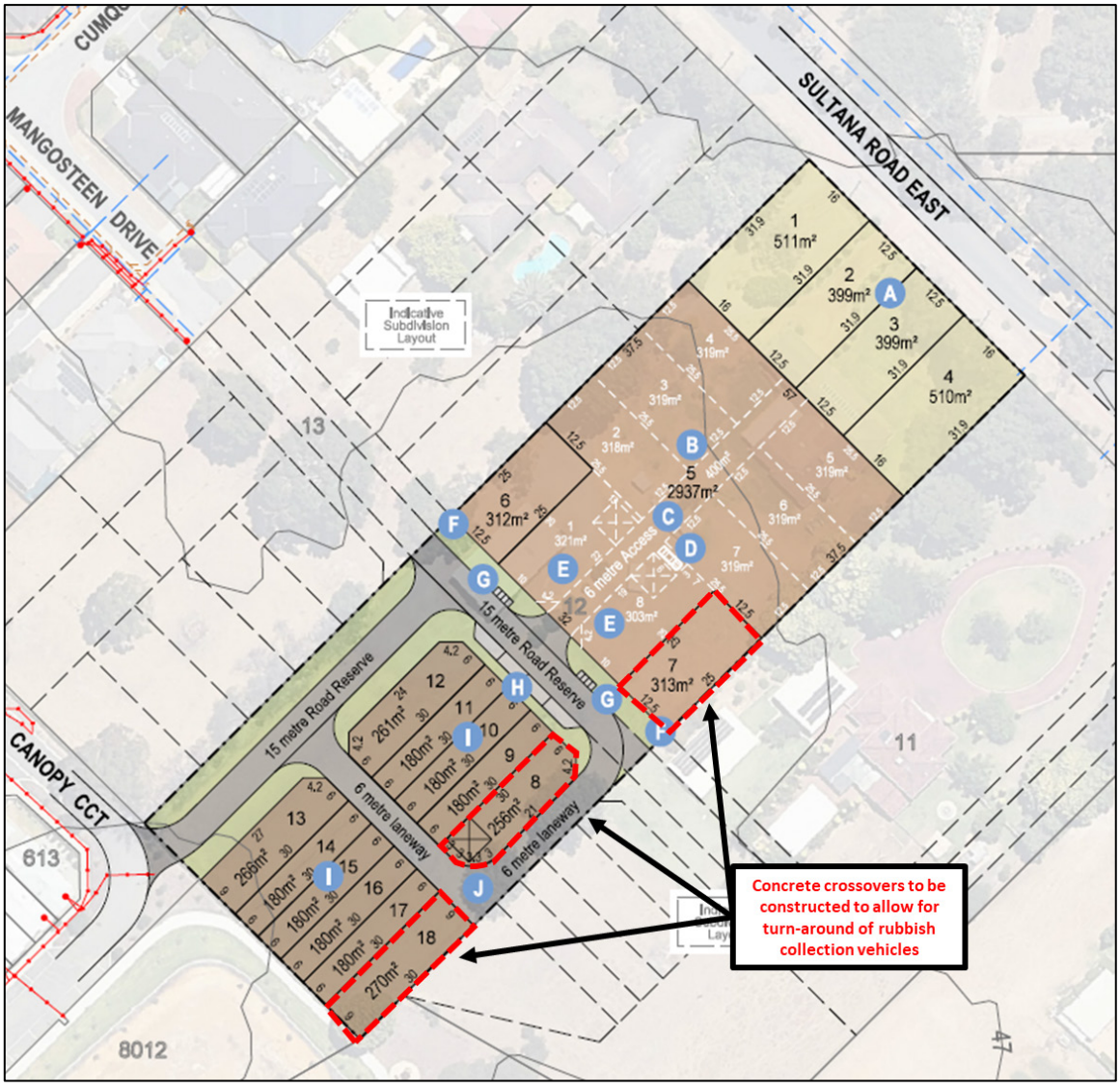


Figure 4: Location of Lots 7, 8 and 18 of proposed subdivision

6 Daily Traffic Volumes and Vehicle Types

6.1 Future Traffic on the Surrounding Road Network

The proposed subdivision is located within Urban Cell 7 – Landowner Area 4 of the Forrestfield Outline Development Plan (ODP). The recent Traffic Engineering Letter (KC00910.000) prepared by KCTT in January 2019 in relation to Lot 17 Sultana Road stated as follows:

"Based on traffic modelling performed by KCTT for KC00332.000 Maida Vale and KC00604.000 Forrestfield North, it is not expected that Sultana Road East would carry more than 3,000 vehicles per day. Based on anticipated traffic volumes, Sultana Road East can be deemed equivalent to a Liveable Neighbourhoods classification of Access Street "B". Therefore, there is no obstacle for lots having vehicular access directly from Sultana Road East."

6.2 Trip Generation

The proposed subdivision will yield 25 dwellings. The traffic generation rate used for the proposed subdivision is 8 vehicular trips per day (vpd) per dwelling, which corresponds to peak hour trip generation rates of 0.8 vehicular trips per hour per dwelling as recommended in the Western Australian Planning Commission (WAPC) *Transport Impact Assessment Guidelines (2016).*

Accordingly, it is calculated that the daily and peak hour traffic generation for the proposed subdivision is:

- Daily vehicle trips: 200vpd; and,
- Weekday peak hour trips: 20vph.

Therefore, it is estimated that the proposed subdivision would generate about **200** vehicular trips per day with approximately **20** trips during the typical weekday peak hour. These figures include both inbound and outbound vehicle movements.

In comparison, the estimated yield of 13 residential lots from Lot 12 under the approved ODP would yield 104vpd (daily) and 10vph (peak hour).

The increase in the residential density due to the modification of the road network will result in an increase in traffic volume that will be travelling on the surrounding road network. However, the increase is only minimal and there is no significant impact on the surrounding road network.

The traffic generation of other precincts relevant to this analysis is as follows:

- Lot 10: approximately 17 lots @ 8vpd = 136vpd;

- Lot 11: approximately 9 lots @ 8vpd = 72vpd (approved ODP) & approximately 12 lots @ 8vpd = 96vpd (indicative subdivision layout as shown in **Appendix A**);
- Lot 13: approximately 15 lots @ 8vpd = 120vpd (approved ODP) & approximately 17 lots @ 8vpd = 136vpd (indicative subdivision layout as shown in **Appendix A**);
- Lot 14 and 15: 51 lots @ 8vpd = 408vpd; and,
- Canopy Circuit subdivision: 45 lots @ 8vpd = 360vpd.

6.3 Traffic Distribution

For this assessment it is estimated that trip distribution from this area would be as follows:

- 60% to and from the west via Berkshire Road;
- 20% to and from the northeast via Sultana Road East; and
- 20% to and from the southeast via Gala Way or Sultana Road East.

The subdivision road through Lot 12 between Canopy Circuit and Sultana Road East (in both the existing ODP and the proposed subdivision pan) will provide a convenient through route for some trips from the existing Canopy Circuit subdivision area to the southwest and future Mangosteen Drive subdivision to the northwest (Lots 13 and 14) and Lots 10 and 11 to the east but is not expected to attract through traffic from other surrounding areas.

6.4 Traffic Changes on the Surrounding Road Network

Figure 5 and **Figure 6** show the future daily traffic flows generated by the Lot 12 subdivision, the existing Canopy Circuit subdivision and Lots 14 & 15, and the future subdivision of adjacent Lots 10, 11 and 13 in the existing approved ODP (**Figure 5**) and in the proposed subdivision concept plan (**Figure 6**). The traffic that will be generated by Lot 12 is included in those total traffic flows and is also shown separately in brackets.

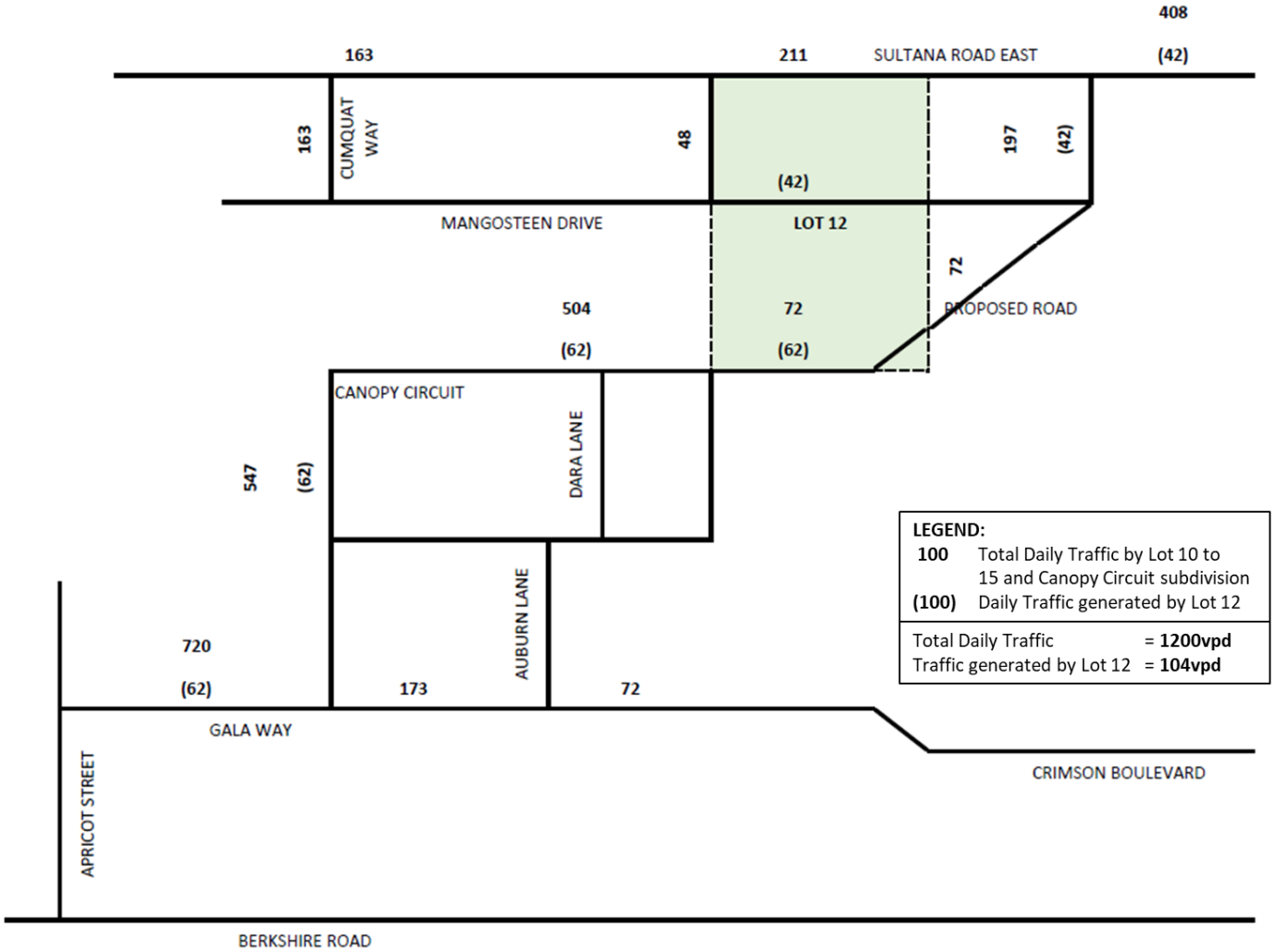


Figure 5: Traffic flows based on the approved ODP

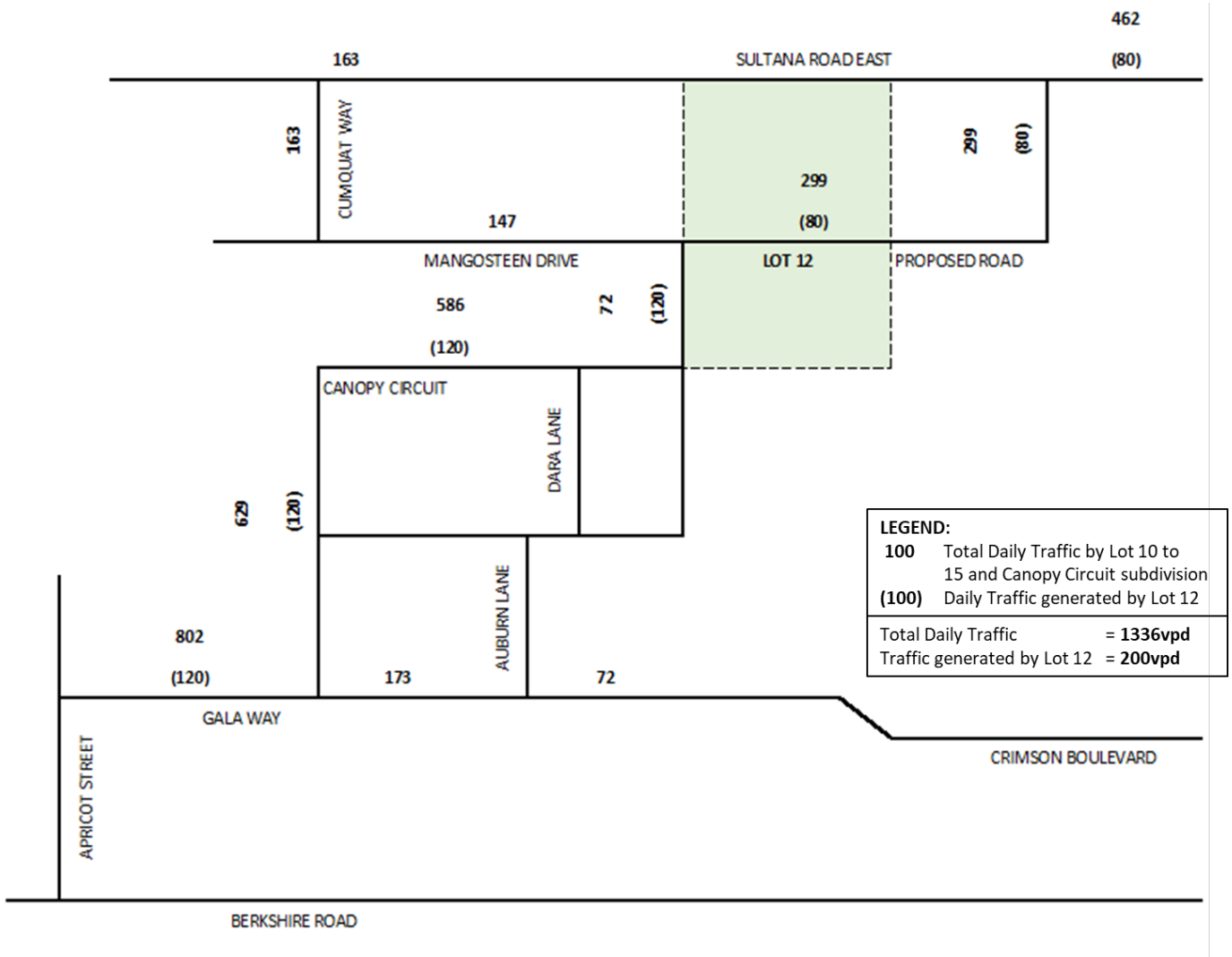


Figure 6: Traffic flows based on the proposed subdivision

6.5 Impact on Surrounding Roads

The WAPC *Transport Impact Assessment Guidelines* (2016) provides 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 changes to the ODP only result in net increases of 82vpd (8vph) on Canopy Circuit and 54vpd (6vph) on Sultana Road East.

The proposed subdivision 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

Sultana Road East, northeast of the subject site, is constructed as a 7.4m-wide single-carriageway, two-lane undivided road with unsealed shoulders. Within close proximity to the site is a slow point/horizontal deflection device.

Sultana Road East is classified as an *Access Road* in the Main Roads WA *Metropolitan Functional Road Hierarchy* and operates under the default, built-up speed limit of 50km/h. Refer **Figure 7** and **Figure 8** for more details.

According to the traffic count obtained from the City of Kalamunda, Sultana Road East, southeast of Brewer Road, carried 772 vehicles per day (vpd) in February 2018.



Figure 7: North-westbound view of Sultana Road East



Figure 8: South-eastbound view of Sultana Road East

The proposed subdivision road network is proposed to be connected to Sultana Road East, Mangosteen Drive and Canopy Circuit.

8 Public Transport Access

Public transport services in the vicinity of the subject site are shown in **Figure 9**. The closest existing bus service to the subject site is Bus Service 270 on Hawtin Road to the east of the site (approximately 1.2km east of the subject site). This bus route provides services between High Wycombe Station to Elizabeth Quay Station from Monday to Sunday including Public Holidays.

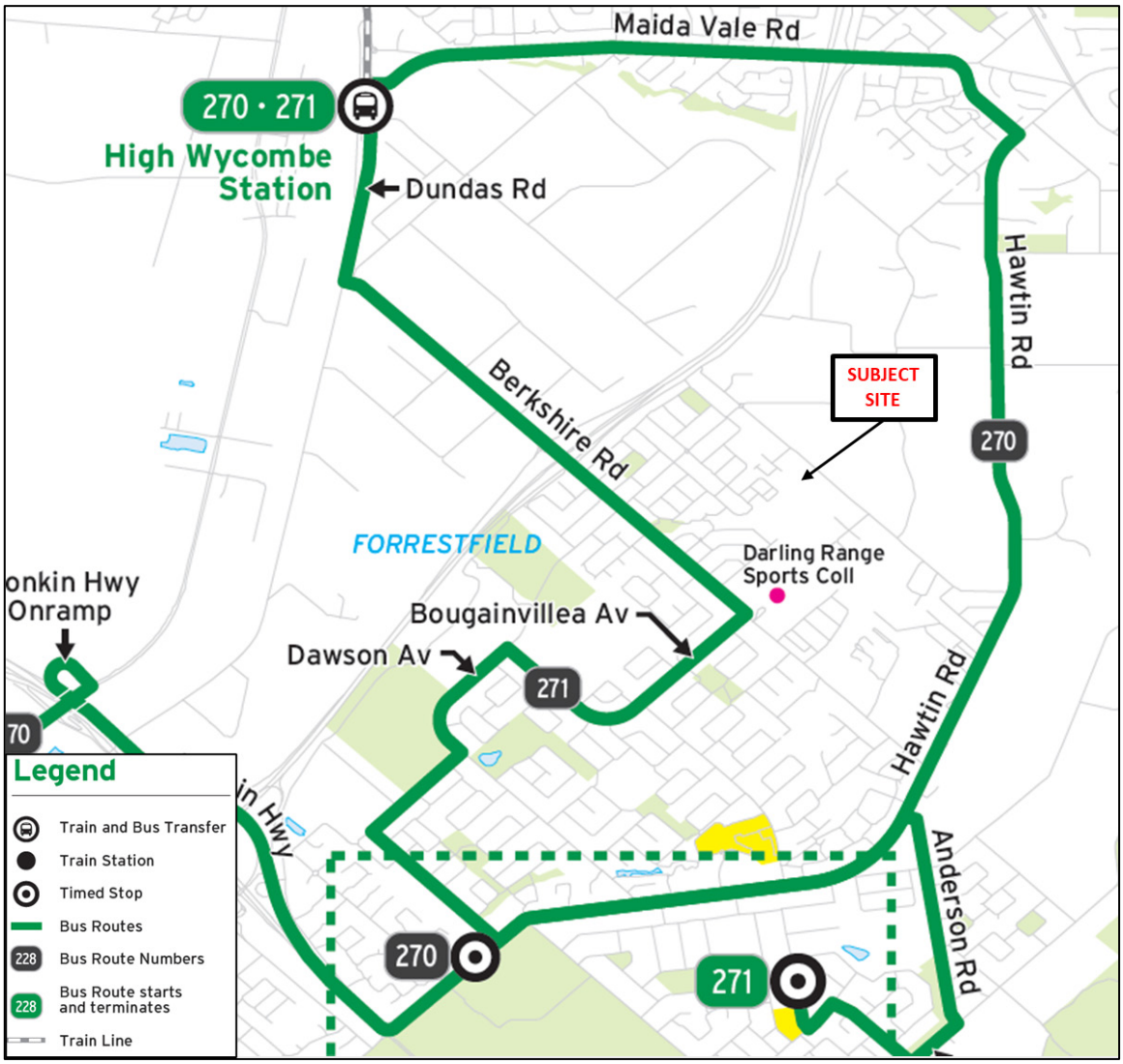


Figure 9: Existing public transport services (Source: Transperth)

9 Pedestrian and Cycle Access

There are no existing pedestrian facilities in the immediate frontage of the subject site along Sultana Road East, however, there is an existing 2m shared path on the south side of Sultana Road adjacent to the existing developments further west and east of the subject site.

In terms of cycling, Sultana Road East is considered a "good road riding environment" as shown in **Figure 10**, an extract of the Perth Bike Maps published by the Department of Transport. This provides further links to other bicycle lanes.

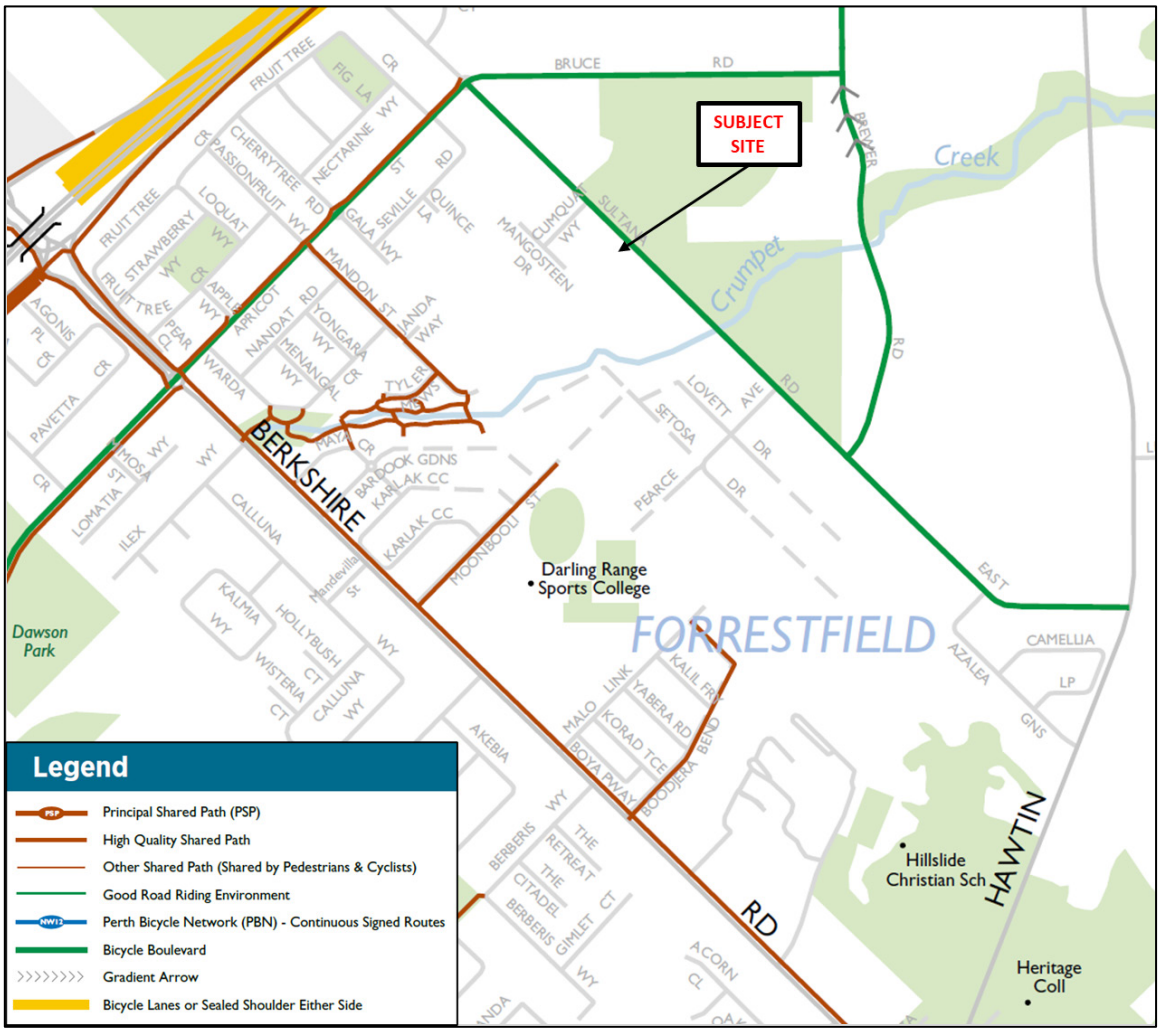


Figure 10: Extract of Perth Bike Map (Source: Department of Transport)

10 Site Specific Issues

The proposed subdivision entails the modification of the approved road network going through Lot 12.

- The proposed change of the road network will still connect Lot 12 to Canopy Circuit on the south and Mangosteen Drive on the west as shown in **Appendix A**;
- The modification to the road network allows for regularised lot types and cell depths that will facilitate the development of affordable houses and land for Lot 12 and the adjacent Lots 11 and 13;
- The modification to the road network allows seamless connectivity to the existing 'The Hales' development;
- The modification to the road network allows the proposed subdivision to progress independently without being dependent upon other parcels of land to be developed first; and,
- The modification to the road network improves road network and connectivity.

No other site-specific issues were identified within the scope of this assessment.

11 Safety Issues

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

12 Conclusions

This Transport Impact Statement (TIS) has been prepared by Transcore on behalf of Acott Equities Pty Ltd with regard to the proposed subdivision application for Lot 12 Sultana Road East, Forrestfield in the City of Kalamunda.

The proposed subdivision of the subject site will yield 18 residential lots (including one triplex lot) with areas of 180m^2 – 2,937m^2.

The proposal includes the amendment of the existing Urban Cell 7 (Landowner Area 4) of the Forrestfield Outline Development Plan as it applies to the subject lot. This includes the modification of the proposed road network through the site to allow for seamless connectivity to the existing "The Hales" development and to provide regularised lot types and cell depths that will facilitate the development of affordable houses and land.

Access to the subdivision will initially be provided via the proposed 15m wide internal subdivision road connecting to the existing Canopy Circuit on the southwest side of the subject site. The proposed 15m wide subdivision access road is proposed to also connect to the adjacent lot on the southeast side of the subject site in the future that will connect onto Sultana Road East.

The modification of the road network and the changes in the r-coding of the lots have increased the residential density of the subject site, as such, it has resulted in an increase in traffic generation. However, the increase in traffic generation is only minimal, as such, there is no significant impact on the surrounding road network.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed subdivision is relatively low and would not have any significant impact on the surrounding road network.

The subject site currently has direct access to Sultana Road East and will have good pedestrian, bicycle and public transport access as the planned movement networks of the surrounding area become more fully developed in future.

It is therefore concluded that traffic-related issues should not form an impediment to the approval of the proposed subdivision and amendment to the Outline Development Plan.

Appendix A

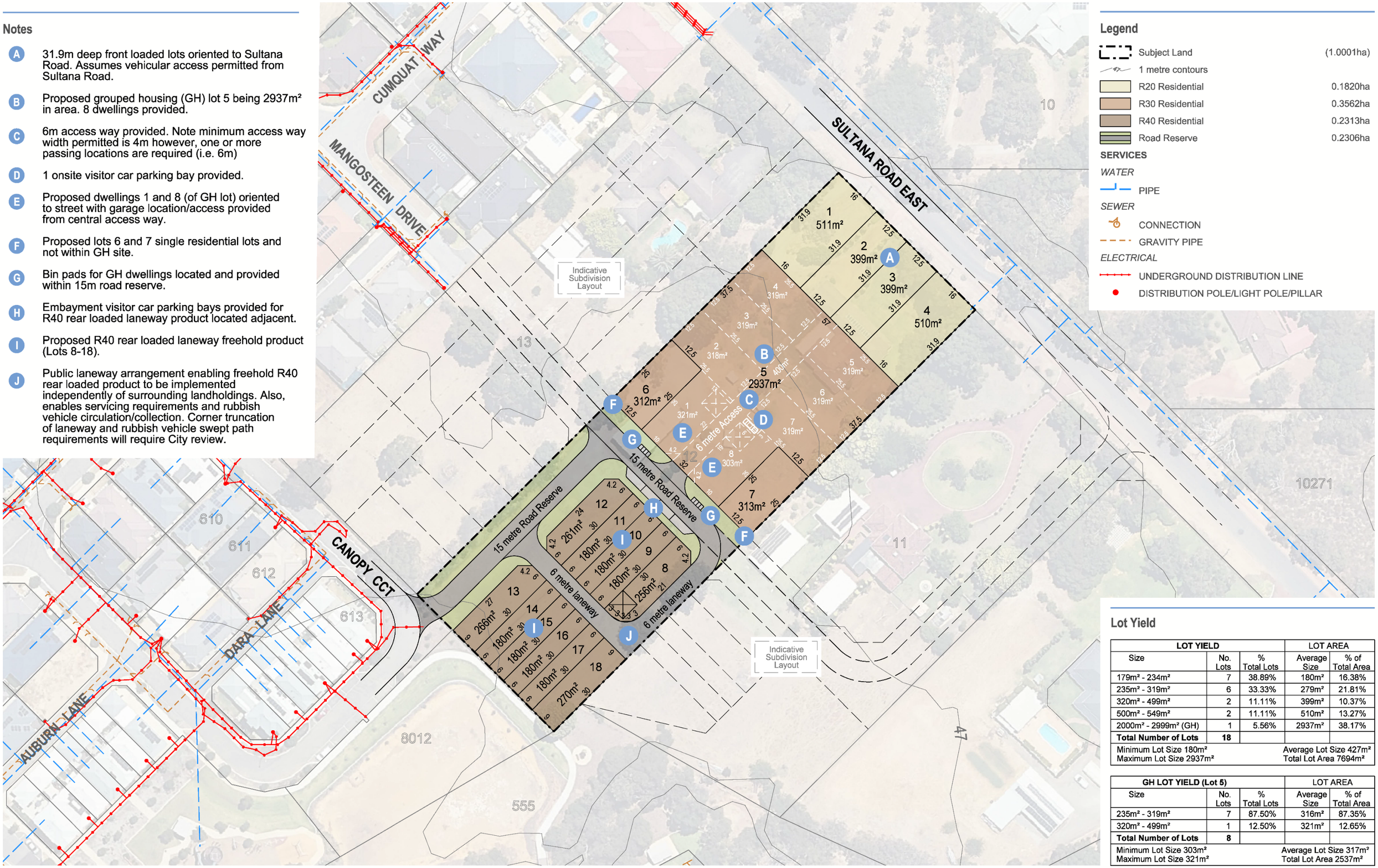
PROPOSED SUBDIVISION CONCEPT PLAN

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Notes

- **A** 31.9m deep front loaded lots oriented to Sultana Road. Assumes vehicular access permitted from Sultana Road.
- **B** Proposed grouped housing (GH) lot 5 being 2937m² in area. 8 dwellings provided.
- **C** 6m access way provided. Note minimum access way width permitted is 4m however, one or more passing locations are required (i.e. 6m)
- **D** 1 onsite visitor car parking bay provided.
- **E** Proposed dwellings 1 and 8 (of GH lot) oriented to street with garage location/access provided from central access way.
- **F** Proposed lots 6 and 7 single residential lots and not within GH site.
- **G** Bin pads for GH dwellings located and provided within 15m road reserve.
- **H** Embayment visitor car parking bays provided for R40 rear loaded laneway product located adjacent.
- **I** Proposed R40 rear loaded laneway freehold product (Lots 8-18).
- **J** Public laneway arrangement enabling freehold R40 rear loaded product to be implemented independently of surrounding landholdings. Also, enables servicing requirements and rubbish vehicle circulation/collection. Corner truncation of laneway and rubbish vehicle swept path requirements will require City review.



Legend

Subject Land	(1.0001ha)
1 metre contours	
R20 Residential	0.1820ha
R30 Residential	0.3562ha
R40 Residential	0.2313ha
Road Reserve	0.2306ha

SERVICES

WATER

PIPE

SEWER

CONNECTION

GRAVITY PIPE

ELECTRICAL

UNDERGROUND DISTRIBUTION LINE

DISTRIBUTION POLE/LIGHT POLE/PILLAR

Lot Yield

LOT YIELD			LOT AREA	
Size	No. Lots	% Total Lots	Average Size	% of Total Area
179m² - 234m²	7	38.89%	180m²	16.38%
235m² - 319m²	6	33.33%	279m²	21.81%
320m² - 499m²	2	11.11%	399m²	10.37%
500m² - 549m²	2	11.11%	510m²	13.27%
2000m² - 2999m² (GH)	1	5.56%	2937m²	38.17%
Total Number of Lots	**18**			
Minimum Lot Size 180m²			Average Lot Size 427m²	
Maximum Lot Size 2937m²			Total Lot Area 7694m²	

GH LOT YIELD (Lot 5)			LOT AREA	
Size	No. Lots	% Total Lots	Average Size	% of Total Area
235m² - 319m²	7	87.50%	316m²	87.35%
320m² - 499m²	1	12.50%	321m²	12.65%
Total Number of Lots	**8**			
Minimum Lot Size 303m²			Average Lot Size 317m²	
Maximum Lot Size 321m²			Total Lot Area 2537m²	

Subdivision Concept Plan

LOT 12 SULTANA ROAD EAST, FORRESTFIELD

DRAFT

scale: 1:1000@A3 | 1:500@A1

0 10 20m

plan: 23/070/018

date: 3/04/2024

aerial: Feb 2023

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Taylor Burrell Barnett

Appendix B

OUTLINE DEVELOPMENT PLAN AGREEMENT AREAS 2, 3 & 4 FORRESTFIELD U7

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LANDOWNER AREA 2A
LOT 504 SELF CONTAINED TO PROVIDE 10% POS (4000m²)
SUBDIVISION COMPLETE

THE OVER SUPPLY OF PUBLIC OPEN SPACE PROVIDED ON LOTS 532-534 IS TO BE RATIONALIZED THROUGH A LANDOWNER AGREEMENT WITH THE OWNER OF LOT 37 TO EXCHANGE AN EQUIVALENT LAND AREA AS THE OVER PROVISION

EXISTING SPECIAL RURAL SUBDIVISION

SULTANA ROAD
ROAD
EAST ROAD
PT LOC 2854
CARMELIA GLADE
AZELEA GARDENS
HAWTIN ROAD
LANDOWNER AREA 4
LANDOWNER AREA 4
POS
EXISTING POS
LOVETT DRIVE
PEARCE AVENUE
BAIN SQUARE
SENTOSA BLVD
LANDOWNER AREA 2A
504
QUINCE LANE
SEVILLE STREET
BLOSSOM VW
QUINCE WAY
CANOPY CIRT
POS
LANDOWNER AREA 2C
SUBJECT TO THE HALES LOCAL STRUCTURE PLAN
BALANCE PT LOT 37
LOTS PURCHASED BY WESTERN POWER FOR POSSIBLE TERMINAL SUB STATION SITE
LANDOWNER AREA 3
515
FORRESTFIELD CHRISTIAN SCHOOL TO REMAIN AND TO BE UPGRADED
GALA WAY
MANDON STREET
LANDOWNER AREA 2C
BOODJERA LINK
BEND
KALIL FAIRWAY
LANDOWNER AREA 2B
APRICOT
POS 534
GARDENS CIRCUIT
CRESCENT
MENANGAL WAY
DARLING RANGE COLLEGE
Reserve 32845
9109
LANDOWNER AREA 2D
WALRIDGE LODGE AGED PERSONS HOME
300
YABERA ROAD
KORAD TERRACE
MALO
MAYA
BARDOOK
KARLAK
MOONBOOLI
PT526
PT523
SUBJECT TO FURTHER INVESTIGATION
500
501
BRAY LANE
BERKSHIRE ROAD

LANDOWNER AREA 2B (LOTS 535 & 536)
DEVELOPED WITH JOINT AGREEMENT IN RESPECT TO POS PROVISION

TOTAL AREA OF 2 LOTS	8.1140ha
LESS COMMERCIAL SITE	0.1638ha
NET DEVELOPABLE AREA	7.9502ha
POS AT 10%	0.7950ha
COMMUNITY PURPOSE SITE CREDITED AS POS	0.2000ha
POS REQUIRED	0.5950ha
POS PROVIDED	0.7750ha
OVERPROVISION OF POS	0.1800ha

SUBDIVISION COMPLETE

LANDOWNER AREA 2C (LOTS 37 & LOTS 532-534)
TO BE DEVELOPED WITH A JOINT AGREEMENT IN RESPECT TO POS AND DRAINAGE

LAND AREAS	
LOT 37	21.5700ha
LESS AREA RETAINED FOR TERMINAL SUBSTATION	4.7128ha
	16.8572ha
LOTS 532-534	12.1710ha
NET DEVELOPABLE AREA	29.0282ha
POS REQUIRED AT 10%	2.9028ha
POS PROPOSED	
LOTS 532-534	1.8000ha (0.5829ha OVER PROVISION)
LOT 37	1.1028ha (0.5829ha UNDER PROVISION)
TOTAL	2.9028ha

SUBDIVISION APPROVED AND UNDER CONSTRUCTION

LANDOWNER AREA 2D - LOTS 527 & 528

TO BE DEVELOPED AS SELF CONTAINED SUB AREA WITH 10% PROVISION OF POS

DRAINAGE SWALE WTHIN POS 100% CREDIT

NOTE :
CALCULATION OF POS BASED UPON 10% OF NET DEVELOPABLE AREA EXCLUDING NON DEVELOPABLE WESTERN POWER EASEMENT

SUBDIVISION APPROVED

Amendment to Structure Plan Forrestfield Outline Development Plan - Cell 2 has been approved by the Western Australian Planning Commission on 27-Nov-2020.

Rosa Rigali

Signed by an officer duly authorised by the Western Australian Planning Commission pursuant to Section 16 of the Planning and Development Act 2005

OUTLINE DEVELOPMENT PLAN
AGREEMENT AREAS 2, 3 & 4
FORRESTFIELD U7

RESIDENTIAL CODES

RESIDENTIAL R12.5
RESIDENTIAL R20
RESIDENTIAL R30
RESIDENTIAL R40

0 100m
SCALE 1:5000 @ A3

DATE: 14 OCTOBER 2020

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